CALCULATIONS

Location Wheatfield

Project Number 5-1862

Lot No: 11

No. of Bedrooms 4

Design Flow 480 $^{gal}/_{day}$

Soil LTAR 0.3 $^{gal}/_{ft^2\ day}$

EZ-Lay? (YES OR NO) no

Supply Line Length 128 ft.

Supply Line Volume 22.27 gal.

Required Feet of Line 533 ft. (460)
Amount of Line from Layout 546 ft.

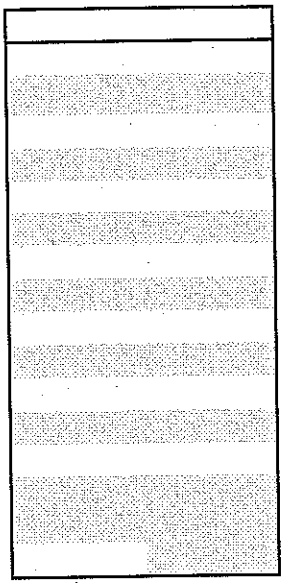
Gallons per Minute 28.44 33.92 $^{gal}/_{min}$

Required Septic Tank Capacity 1500 gal.
Minimum Standard Tank Size 1500

Lateral Line Volume ~~356.538~~ 260 gal.

Dosing Volume 231.75 228 gal. – 266

Note: Dosing Volume based on 65% of the lateral line volume. 195



Tank Draw Down 8.0 (6.9) *Generic Draw Down of 29 gal.per in.*

Pump Run Time 6.83 (5.75) minutes ✓

Estimated Elevation Head 20.2 ft.
Pressure Head 2 ft.
Friction Factor 2.37 ft./100 ft.
Friction Head 3.030 ft.

Total Dynamic Head (+15%) ~~29.01~~ 30.27 (+20%) ft.

[30.27 @ 29GPM]

Wheatfield
PRESSURE MANIFOLD DESIGN

DESIGN FLOW:	480
SOIL APPLICATION RATE:	0.3 gpd/ft.^{2}
TOTAL AREA TRENCH BOTTOM:	1638
TOTAL LATERAL LENGTH:	546
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	533
SUPPLY LINE LENGTH:	128
TOTAL DYNAMIC HEAD:	29.01
MANIFOLD SIZE:	4 in.SCH 80 PVC
DOSING VOLUME:	231.75
PUMP TANK DRAW DOWN*:	8.0
SEPTIC TANK SIZE:	1500
PUMP TANK SIZE:	1500
RECOMMENDED PUMP:	Myers Model ME50 or County Approved Effluent Rated Pump Capable of Delivering ~29.01 ft.of Head at ~33.92 gpm Total Flow [30.2'@33.92]

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

Wheatfield Lot 11

Project No. 5-1862

LAYOUT FOR 4 BEDROOM HOME

April-08

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH
TBM		1.6			100.00	
INSTR. 1			101.60			
			System			
1	Yellow			13.60	88.00	105
2	Blue			11.70	89.90	110
3	Pink			9.00	92.60	120
4	Red			7.10	94.50	125
5	Orange			5.60	96.00	86
					Total	**546**
			Repair			
6	Yellow			4.50	97.10	100
7	Blue			3.60	98.00	85
8	Pink			2.80	98.80	80
9	Red			2.20	99.40	85
10	Orange			1.50	100.10	50
11	Yellow			1.10	100.50	40
						440

	LINE LENGTH	Soil LTAR	SYSTEM TYPE	Innovative Type	DISTRIBUTION	Trench Depth
SYSTEM	546	0.3	Conventional	NA	Pressure Manifold	~~24~~ 36
REPAIR	440	0.3	Innovative	25%	Pressure Manifold	~~24~~ 36

Notes:

**TBM is top of stump

**Nitrification lines are demonstrated on contour via colored pin flags

**BS, HI, and FS indicate rod readings

**Lines may be longer in field than design requires

Wheatfield Lot 11

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/Tap	gpd	Trench Area	Line LTAR
1	Yellow	88	105	SCH 40 1/2	7.11	100.61	315	0.32
2	Blue	89.9	110	SCH 40 1/2	7.11	100.61	330	0.30
3	Pink	92.6	120	SCH 40 1/2	7.11	100.61	360	0.28
4	Red	94.5	125	SCH 40 1/2	7.11	100.61	375	0.27
5	Orange	96.0	86	SCH 80 1/2	5.48	77.55	258	0.30
	total	feet =	546	gal/min =	33.92			
			Des. Flow	480				
			Pump Run=	14.15				
			soil LTAR	0.3				
			5%	0.32				

Wheatfield Lot 11
REPAIR

Line #	Color	Elev	Length	Hole Size	Flow/Tap	gpd	Trench Area	Flow/Foot
6	Yellow	97.1	100	SCH 40 3/4	12.5	111.61	300	0.37
7	Blue	98	85	SCH 80 3/4	10.1	90.18	255	0.35
8	Pink	98.8	80	SCH 80 3/4	10.1	90.18	240	0.38
9	Red	99.4	85	SCH 80 3/4	10.1	90.18	255	0.35
10	Orange	100.1	50	SCH 80 1/2	5.48	48.93	150	0.33
11	Yellow	100.5	40	SCH 80 1/2	5.48	48.93	120	0.41
	total	feet =	440	gal/min =	53.76			
			Des. Flow	480				
			Pump Run=	8.93				
			LTAR	0.3				
			EZLAY	0.40				
			Innovative + 5%	0.42				