ROLLANS *SOIL & ENVIRONMENTAL SERVICES*

2120 Graham Road, Mount Ulla, NC 28125 *Phone/Fax (704) 278 – 0989*

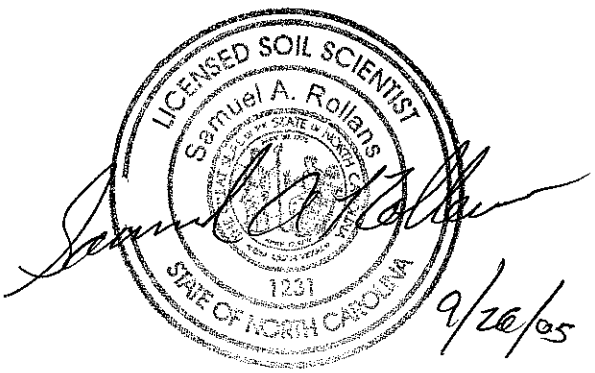
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Attached is a design proposal for a gravity 25% reduction Septic System for a 3 bedroom single family residence on Lot #2 of Shepherd's Bluff Subdivision in Iredell County, North Carolina.

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September 26, 2005
Project No. 01-1064
Design By: Samuel A. Rollans, LSS

GRAVITY 3-BEDROOM SYSTEM FOR WASTEWATER TREATMENT

Owner: Shepherd's Bluff, LLC
Attn: Billy Allen
Address: 111-B Raceway Dr.
Mooresville, NC 28117
Phone: (704) 664 - 7029
County: Iredell
Location: Shepherd's Bluff Subdivision Lot #2

Source of Wastewater Flow: 3 Bedroom Single Family Residence
Estimated Daily Wastewater Production: 360 gpd
System Flow: Gravity/On-Demand

Design Specifications

System Type: 25% Reduction
Drainfield Size: 245 Linear feet
Loading Rate: 0.4 gpd/ft.^{2}
Depth of Gravel in Trench: NA
Gravel Size: NA
Trench Depth: 36 in.
Trench Width: 36 in.
Septic Tank Size: 1000 min.
Pump Tank Size: NA

Estimated Supply Line Length: 40
Supply Line Diameter: 3 in. SCH 40 PVC
Supply Line Volume: NA
Dosing Volume: NA
Supply Manifold: NA
Supply Manifold Length: NA
Supply Manifold Volume: NA

Recommended Float Controls: NA

Recommended Control Panel:

Pressure Head: NA
Friction Head: NA
Elevation Head: NA
Total Dynamic Head: NA

Threaded Union: NA
Gate Valves: NA
NA
Check Valves: NA
Anti-Siphon Hole: NA

Recommended Pump: NA

NA
NA

Additional Comments: Soil suitability was performed by Rollans Soil & Environmental Services

SHEPHERD'S BLUFF LOT #2
DESIGN INFORMATION

DESIGN FLOW:	360
SOIL APPLICATION RATE:	0.4 gpd/ft.^{2}
TOTAL AREA TRENCH BOTTOM:	735sf
TOTAL LATERAL LENGTH:	245
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	225
DISTRIBUTION METHOD	Drop Boxes
SUPPLY LINE LENGTH:	40'
TOTAL DYNAMIC HEAD:	NA
MANIFOLD SIZE:	NA
DOSING VOLUME:	NA
PUMP TANK DRAW DOWN*:	NA
SEPTIC TANK SIZE:	1000 min.
PUMP TANK SIZE:	NA
RECOMMENDED PUMP:	NA

SHEPHERD'S BLUFF/LOT #2

Project #: 01-1064

LAYOUT FOR 3 BEDROOM HOME

Sept. 26, 2005

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		6.8			100.00		
INSTR. 1			106.80				
HOUSE CNR				5.70	101.10		
S. TANK				5.00	101.80		
1	ORANGE			1.30	105.50	40	40
2	BLUE			3.00	103.80	40	40
3	PINK			3.10	103.70	40	40
4	GREEN			4.80	102.00	40	40
5	ORANGE			5.60	101.20	40	40
6	BLUE			6.50	100.30	40	40
7	***PINK***			***6.70***	***100.10***	***110***	***110***
8	***ORANGE***			***8.20***	***98.60***	***83***	***83***
9	***BLUE***			***9.40***	***97.40***	***52***	***52***
					Total	**485**	**485**

	LINE LENGTH	LTAR GPD/FT^2	SYSTEM TYPE	SOIL LTAR GPD/FT^2	INNOVATIVE SYSTEM	DISTRIBUTION
****System***	***245***	***0.37***	***ACCEPT.***	***0.40***	***25% RED.***	***DROP BOXES***
Repair	240	0.37	ACCEPT.	0.40	25% RED.	PRESSURE MANIFOLD

Notes:

** TBM located on top of ground @ eip (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