ROLLANS *SOIL & ENVIRONMENTAL SERVICES*

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

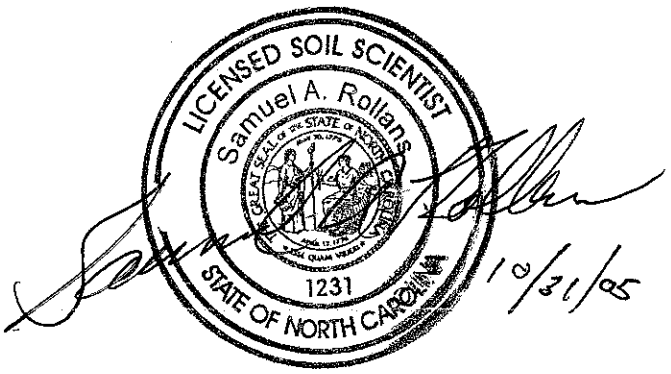
Ashley Rollans, NC Licensed Soil Scientist
Mobile: (704) 746-5046
E-mail: Rollansfortcj@aol.com

Brady Freeman, Registered Sanitarian
Mobile: (704) 746-6497
E-mail: bfree209@yahoo.com

Attached is a design proposal for a gravity 25% reduction Septic System for a 4 bedroom single family residence @ Twin Creeks lot 18 Iredell County, NC.

Contents:

	Page
Information for the Installer	1
Design Information	
Design Specifications	2-4
Layout Specifications	5
Site Plan/System Plan	6
Profile Descriptions	7-8



10/31/05

October 31, 2005
Project No. 01-11425
Design By: Rollans Soil & Environmental Services

GRAVITY 4-BEDROOM SYSTEM
FOR WASTEWATER TREATMENT

Owner or Applicant: Summerwood Homes

Address: 173 West Maranta Rd.
Mooresville, NC 28117
Phone: 704-799-8085
County: Iredell
Location: Twin Creeks
Lot 18
Source of Wastewater Flow: 4 Bedroom Single Family Residence
Estimated Daily Wastewater Production: 480 gpd
System Flow: Gravity/On-Demand

Design Specifications

System Type: 25% Reduction
Drainfield Size: 400 Linear feet
Loading Rate: 0.3 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: 10
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

TWIN CREEKS LOT 18
DESIGN INFORMATION

DESIGN FLOW:	480
SOIL APPLICATION RATE:	0.3 gpd/ft.^{2}
TOTAL AREA TRENCH BOTTOM:	1200SF
TOTAL LATERAL LENGTH:	400'
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	400'
DISTRIBUTION METHOD	Drop Boxes
SUPPLY LINE LENGTH:	10'
TOTAL DYNAMIC HEAD:	NA
MANIFOLD SIZE:	NA
DOSING VOLUME:	NA
PUMP TANK DRAW DOWN*:	NA
SEPTIC TANK SIZE:	1000min
PUMP TANK SIZE:	NA
RECOMMENDED PUMP:	NA

TWIN CREEKS LOT 18

Project #: 01-1142

LAYOUT FOR 4 BEDROOM HOME

October 31, 2005

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		3.7			100.00		
INSTR. 1			103.70				
HOUSE CNR				3.90	99.80		
S. TANK				6.00	97.70		
1	*BLUE*			*6.90*	*96.80*	*110*	*100*
2	*ORANGE*			*7.50*	*96.20*	*103*	*100*
3	*BLUE*			*8.80*	*94.90*	*102*	*100*
4	*ORANGE*			*10.40*	*93.30*	*102*	*100*
5	BLUE			11.90	91.80	96	90
6	ORANGE			13.20	90.50	94	90
7	BLUE			14.30	89.40	93	90
					Total	**700**	**670**

	LINE LENGTH	LTAR GPD/FT^2	SYSTEM TYPE	SOIL LTAR GPD/FT^2	TRENCH SYSTEM	DISTRIBUTION
** System*	*400'*	*0.30*	*ACCEPT.*	*0.30*	*25% RED.*	*GRAVITY*
Repair	270	0.30	*MOD.*	0.30	*PPBPS*	(DROP BOXES) LOW PRESSURE

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

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH
ON-SITE WASTEWATER SECTION

Sheet ___ of ___
PROPERTY ID #: _____
COUNTY: IREDELL

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: SUMMERWOOD HOMES
ADDRESS: 173 W. MARANTA RD. MOORESVILLE
PROPOSED FACILITY: RES
PROPOSED DESIGN FLOW (.1949): 480
LOCATION OF SITE: TWIN CREEKS LOT 18
WATER SUPPLY: ☒ Private ☒ Public ☒ Well ☐ Spring ☐ Other
EVALUATION METHOD: ☒ Auger Boring ☒ Pit ☐ Cut

APPLICATION DATE 10/05
DATE EVALUATED: 10/05
PROPERTY SIZE: .76AC
PROPERTY RECORDED: YES
TYPE OF WASTEWATER: ☒ Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) .1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
56 A 1	LINEAR 15%	0-10	BSCL GR	FRI SSSP SEP	NA	55'	NA	NA	PS .3 GPD/FTSQ
		10-24	RC SBK	FRI SSSP SEP					
		24-55	RCL WSBK	FRI SSSP SEP					
56 B 2	LINEAR 15%	0-6	BSCL GR	FRI SSSP SEP	NA	54"	NA	NA	PS .3 GPD/FTSQ
		6-24	RC SBK	FRI SSSP SEP					
		24-54	RCL WSBK	FRI SSSP SEP					
AH 1 3	LINEAR 15%	0-24	RCL MFSBK	FRI SSSP SEP	NA		NA	NA	PS .3 GPD/FTSQ
		24-48	RCL WSBK	FRI SSSP SEP					
AH 2 4	LINEAR 15%	0-38	RCL MFSBK	FRI SSSP SEP	NA		NA	NA	PS .3 GPD/FTSQ
		38-48	RCL WSBK	FRI SSSP SEP					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	1200FTSQ	540FTSQ
System Type(s)	25% RED.	PPBPS
Site LTAR	.3 GPD/FTSQ	.3 GPD/FTSQ

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: ROLLAN SOIL & ENVIRONMENTAL SERVICES
OTHER(S) PRESENT:

COMMENTS: