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Attached is a proposed design for an Accepted (25% reduction) Septic System with Gravity distribution for a 4 bedroom single family residence on Lot #65 NORMAN WOODS Subdivision, Iredell County, North Carolina.

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September 4, 2008
Project #: 01-1505
Design By: Rollans Soil and Environmental Services

INFORMATION FOR THE INSTALLER:

- The permit should be read very carefully prior to bidding. The following are details that must be considered along with all other considerations.
- Tanks shall be approved by NC DENR, and certification supplied by the manufacturer.
- Tanks shall be water tested prior to installation.
- The installer shall be responsible to the owner for placement of the tanks and to insure that final grades are returned to the original natural grade, with exception of added structural features.
- The supply trench shall be compacted to eliminate cavities left during initial fill placement.
- Installation of the system shall be during dry conditions in order to protect the soil structure.
- All fittings shall be pressure rated fittings.
- All joints shall be cleaned with PVC pipe cleaner and a heavy bodied glue applied to weld all joints.
- Where required by the county health department, post installation inspections by the designer must be scheduled 5 week days in advance.
- Trenches shall be carefully excavated so the bottom is within 2" from the highest to . the lowest points of elevation within the trench. If the bottom elevation needs adjusting after it has been trenched, it will be done by removing high points rather than filling low points. It is extremely important to insure that trenches are not over excavated during initial trenching. All fine grading within the trench will be hand done with a shovel. No loose material will be left in the trench
- All pipe openings in the tanks shall be properly grouted. This also applies to the joints around the riser.
- All tanks shall be properly back filled and compacted to prevent slump at a later date.
- Earth dams, constructed of relatively impervious material, shall be installed at the beginning and end of each lateral.
- No heavy equipment shall be used on the field during or after installation. The use of a small loader (i.e. Bobcat) or a trencher (i.e. Ditch Witch 2300/2310) may be used for installation.
- Elevations at pinflag locations should be checked by the installer prior to beginning trenches.
- Pumptank riser should be 6" above grade, control panel should be 12" above grade.
- Septic tank riser shall be a minimum of 6" above finished grade.
- Design precludes use of foundation drains on the residence.
- System is specified as a 25% reduction Gravity installation.
- Repair is specified as a PPBPS low pressure installation.
- Rake trench walls, lime sidewalls, install trenches 36" wide and have no more than 1/4" fall in 10 feet.

Gravity 25% Reduction
FOR WASTEWATER TREATMENT

Owner:	Jean Guess
Address:	PO Box 160 Mt. Mourne, NC 28123
Phone:	704-650-9959
County:	Iredell
Location:	NORMAN WOODS Lot 65
Source of Wastewater Flow:	4 Bedroom Single Family Residence
Estimated Gallons Per Day Flow:	480
System Flow:	NA

Design Specifications

Drainfield Size:	405
Loading Rate (gpd/ft.^{2}):	0.30
Depth of Gravel in Trench:	NA (25% reduction)
Gravel Size:	NA (25% reduction)
Trench Depth:	36 in.
Trench Width:	36 in.
Septic Tank Size:	1000
Pump Tank Size:	N/A
Estimated Supply Line Length:	10
Supply Line Diameter:	3 in. SCH 40 PVC
Supply Line Volume:	3.60
Dosing Volume:	NA
Supply Manifold:	DROP-BOX
Supply Manifold Length:	NA
Supply Manifold Volume:	N/A
Recommended Float Controls:	NA
Recommended Control Panel:	NA
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
Additional Comments:	Soil suitability was performed by Rollans Soil & Environmental Services.

NORMAN WOODS Lot 65
GRAVITY DISTRIBUTION

DESIGN FLOW (gpd):	480
SOIL APPLICATION RATE (gpd/ft.^{2}):	0.3
TOTAL AREA TRENCH BOTTOM:	1215
TOTAL LATERAL LENGTH:	405
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	400
SUPPLY LINE LENGTH:	10
TOTAL DYNAMIC HEAD:	NA
MANIFOLD SIZE:	NA
DOSING VOLUME:	NA
PUMP TANK DRAW DOWN*:	NA
SEPTIC TANK SIZE:	1000
PUMP TANK SIZE:	NA

NORMAN WOODS Lot 65

Project #: 01-1505

LAYOUT FOR 4 BEDROOM HOME

September 4, 2008

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		NA			NA		
INSTR. 1			NA				
HOUSE CRN				NA	NA		
P. TANK				NA	NA		
1	RED			NA	NA	40	40
2	ORANGE			NA	NA	54	54
3	BLUE			NA	NA	57	57
4	PINK			NA	NA	52	52
5	RED			NA	NA	60	40
6	*ORANGE*			*NA*	*NA*	*54*	*50*
7	*BLUE*			*NA*	*NA*	*51*	*50*
8	*PINK*			*NA*	*NA*	*54*	*50*
9	*RED*			*NA*	*NA*	*71*	*70*
10	*ORANGE*			*NA*	*NA*	*75*	*75*
11	*BLUE*			*NA*	*NA*	*116*	*110*
12	PINK			NA	NA	86	86
					Total	**770**	**734**

* *System*	LINE LENGTH *405*	LTAR GPD/FT² *0.30*	SYSTEM TYPE *ACCEPT.*	SOIL LTAR GPD/FT² *0.30*	TRENCH SYSTEM *25% RED.*	DISTRIBUTION GRAVITY DISTRIBUTION
Repair	329	0.30	*MOD.*	0.30	PPBPS	LOW PRESSURE

Notes:

** TBM Is Not Required.

**All measures in feet

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

**BS, HI, and FS indicate rod readings

I Lance D. Schamback, certify that this plat was drawn under my supervision from an actual survey made under my supervision (deed description and/or Map Book: 50, Page 76. That the boundaries not surveyed are clearly indicated as drawn from information as shown survey; that the ratio of precision as calculated is 1: 10,000+ that this plat was prepared in accordance with G.S. 89–C as amended. Witness my original signature, registration number and seal this 3 day of September, A.D. 2008.

Notes:

1) This property may be subject to any Easements, Rights–of–way, and/or Restrictive Covenants.

2) Boundary information based on Map Book: 50 at Page: 76 as recorded in the Iredell County Register of Deeds.

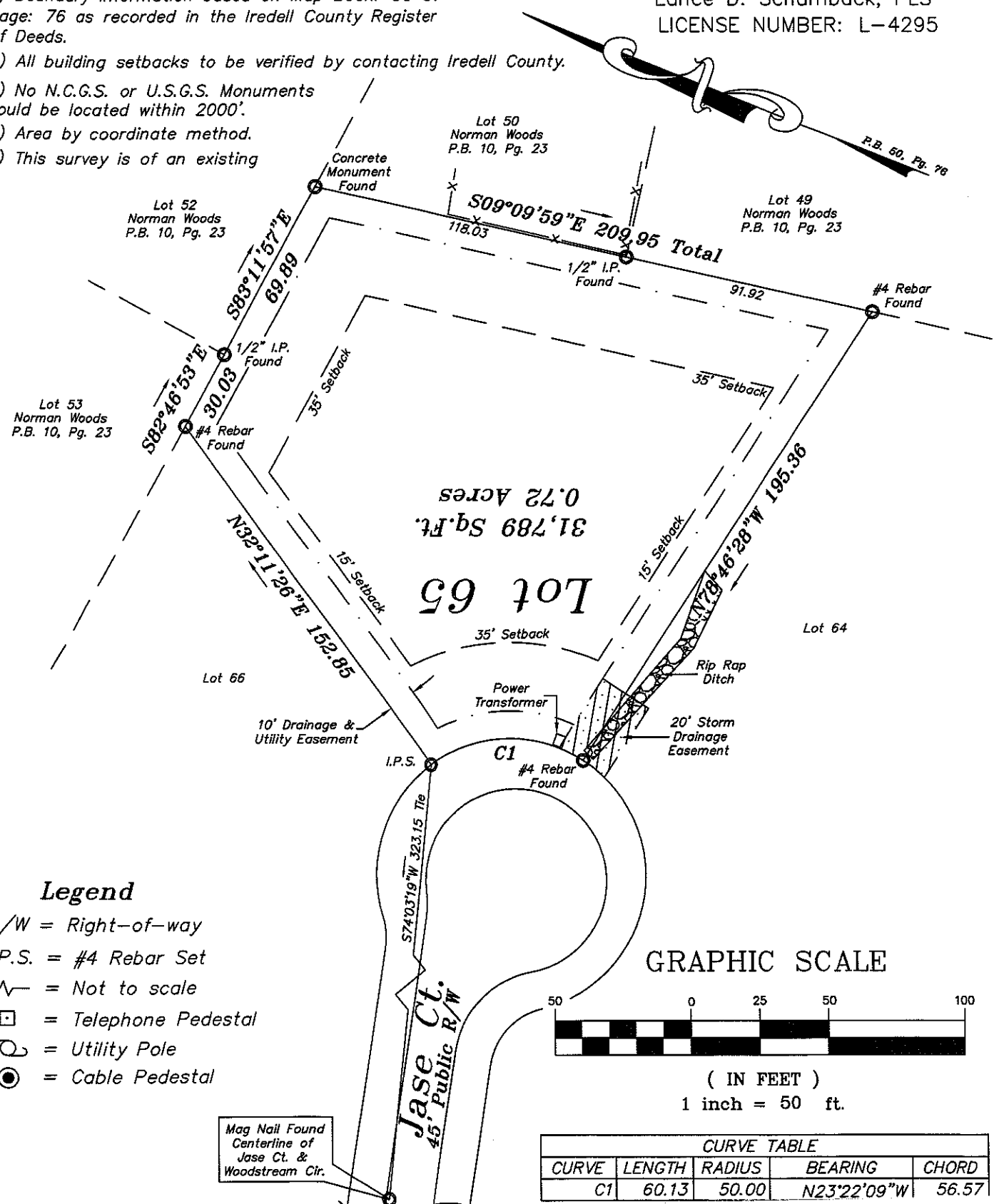
4) All building setbacks to be verified by contacting Iredell County.

5) No N.C.G.S. or U.S.G.S. Monuments could be located within 2000'.

6) Area by coordinate method.

7) This survey is of an existing

Lance D. Schamback, PLS
LICENSE NUMBER: L–4295



Legend

R/W = Right–of–way
I.P.S. = #4 Rebar Set
—∿— = Not to scale
⊡ = Telephone Pedestal
= Utility Pole
◉ = Cable Pedestal

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

CURVE TABLE				
CURVE	LENGTH	RADIUS	BEARING	CHORD
C1	60.13	50.00	N23°22'09"W	56.57