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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 # 72 BELLSCROSSING Subdivision, Iredell County, North Carolina.

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September 4, 2008
Project No. 01-1429
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.
- 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.
- System is specified as a GRAVITY 25% reduction installation.
- Repair is specified as a PPBPS installation.
- Rake trench walls, lime sidewalls, install trenches 36" wide and have no more than 1/4" fall in 10 feet.

PRESSURE MANIFOLD SYSTEM
FOR WASTEWATER TREATMENT

Owner: Bells Crossing, LLC

Address: 127B Promenade Dr.
Mooresville, NC 28117
Phone: 704 361 1084
County: Iredell
Location: BELLS CROSSING LOT 72

Source of Wastewater Flow: 4 Bedroom Single Family Residence
Estimated Daily Wastewater Production: 480 gpd
System Flow: N/A

Design Specifications

Drainfield Size: 400
Loading Rate: 0.3
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: 6
Supply Line Diameter: 3 in. SCH 40 PVC
Supply Line Volume: 1.04
Dosing Volume: N/A
Supply Manifold: DROP BOX
Supply Manifold Length: N/A
Supply Manifold Volume: N/A

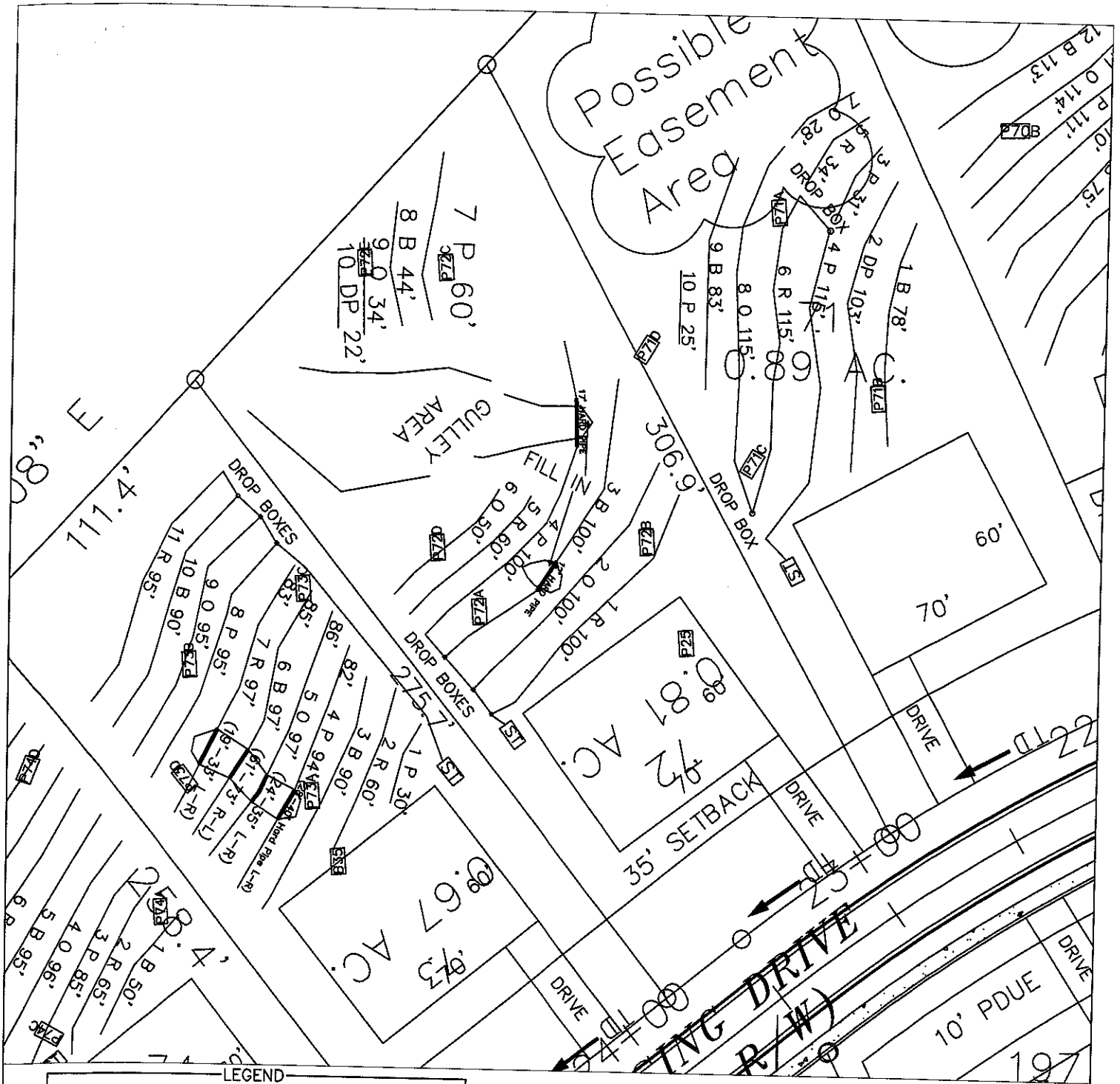
Recommended Float Controls: N/A
N/A
Recommended Control Panel: N/A
N/A

Pressure Head: N/A
Friction Head: N/A
Elevation Head: N/A
Total Dynamic Head: N/A

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.

BELLS CROSSING LOT 72
GRAVITY DISTRIBUTION DESIGN

DESIGN FLOW:	480	
SOIL APPLICATION RATE:	0.3	
TOTAL AREA TRENCH BOTTOM:	1200	
TOTAL LATERAL LENGTH:	400	
NUMBER OF FIELDS:	1	
LATERAL LENGTH REQUIRED PER FIELD:	400	
SUPPLY LINE LENGTH:	6	
TOTAL DYNAMIC HEAD:	N/A	
MANIFOLD SIZE:	N/A	
DOSING VOLUME:	N/A	
PUMP TANK DRAW DOWN*:	N/A	
SEPTIC TANK SIZE:		1000
PUMP TANK SIZE:	N/A	



LEGEND

House Box.

System lines.

Repair lines.

GRAPHIC SCALE
1" = 50'

50 0 50 100

FOR PRELIMINARY PLANNING PURPOSES ONLY. ALL LOTS WILL REQUIRE FINAL APPROVAL BY THE COUNTY HEALTH DEPARTMENT ON A LOT BY LOT BASIS. THIS MAP SHOULD BY USED AS A GENERAL GUIDE. SOME ADJUSTMENTS WILL BE NECESSARY IN THE FIELD DUE TO SOIL VARIABILITY AND COMPLEX TOPOGRAPHIC FEATURES.
THIS MAP ONLY REFLECTS EXISTING SOIL SUITABILITY FOR ON-SITE SEPTIC TANK SYSTEMS.

PLEASE REFER TO ATTACHED SOIL REPORT FOR ADDITIONAL SITE SPECIFIC INFORMATION

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MAP TITLE: SITE PLAN & DRAINFIELD AREAS

PROJECT NAME: BELLS CROSSING, LLC / BELLS CROSSING

LOCATION/DATE: PERTH RD IREDELL COUNTY, NORTH CAROLINA SEP 2006

JOB # : 01-1429
FILE: C:\JOBS\01-1429
PROJECT MGR.: C.B.F.
FIELD WORK: C.B.F., A.L.P. & M.D.B.
DRAWN BY: C.B.F. & M.D.B.

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: Bells Lot 72
ADDRESS: See Zoning
PROPOSED FACILITY: ___ PROPOSED DESIGN FLOW (.1949): ___ APPLICATION DATE: 9/5/08
LOCATION OF SITE: See Zoning DATE EVALUATED: ___
WATER SUPPLY: ☐ Private ☒ Public ☐ Well ☐ Spring ☐ Other ___ PROPERTY SIZE: ___
EVALUATION METHOD: ☐ Auger Boring ☒ Pit ☐ Cut TYPE OF WASTEWATER: ☐ Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
P 1	LSS 10-15%	0-26	RC MF SBK/GR	fri SSSP					
		26-42	RCR wfsbk	fri SSSP mass SAP	Inc.				
		42-60	V.RSAP M	fri SSSP	–	42	PS	–	.3-.35
P 2	LSS 10-15%	0-22	BRSCL/C wsbk	fri SSSP					
		22-43	RYC wfsbk	fri SSSP –					
		43-52	RYC/wfsbk	fri SSSP-fa SAP		52	–	–	.3
P 3	N/ 10-15%	0-12	BRC/wsbk	fri SSSP					
		12-26	RC wsbk	fri SSSP					
		26-56	RYC/wsbk	fri SSSP	– com SAP	56	–	–	.3-.35
P 4	SS 10-15%	0-5	B SCL GR	SS, SP, FR SEXP					
		5-31	RC MFSBK	SS SP FR SP		49"	–	–	
		31-49	RYC WFSBK	" " " "	com SAP				.3

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

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948):
EVALUATED BY: Rollins Soil & Environmental
OTHER(S) PRESENT:

COMMENTS: