IREDELL COUNTY HEATLH DEPARTMENT

PAGE 2: *SITE PLAN WORKSHEET*

SEE THE SAMPLE SITE PLAN BELOW. INCOMPLETE SITE PLANS WILL BE RETURNED TO YOU FOR COMPLETION AND MAY RESULT IN A DELAY IN THE ISSUANCE OF YOUR SEPTIC SYSTEM PERMIT!!!

Place an (X) beside each item as you complete the site plan:

- X — Property Line measurements are clearly identified…
- X — All proposed structures are indicated…
  SHOW: proposed house or business footprint, wells, water lines, patios, pools and decks, and any other item that will occupy space on the site
- X — Front and side setbacks from property line…
- X — Preferred driveway location and configuration, preferred well location…
- X — Area you prefer your septic system to be placed…
- X — North arrow, or other sufficient indicator of direction…

Circle N/A on the following if appropriate:

- ____ Location of septic systems and wells within 100' of your property… (N/A)
- ____ Location of easements and rights of ways on your property… (N/A)
- ____ Location of any designated wetlands on the property… (N/A)

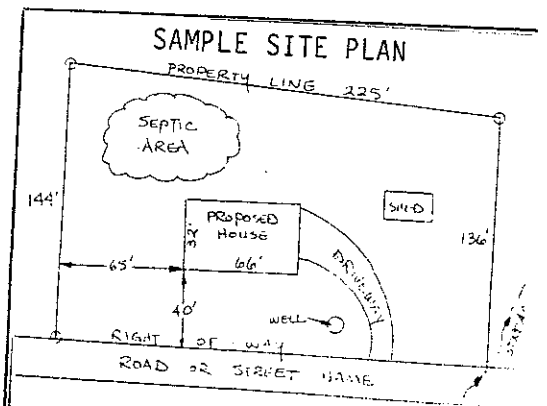
Signature: Wayne A Wansley

Property owner or owner's legal representative signature (SIGNATURE REQUIRED)

5/16/08
DATE

USE THIS SPACE TO DRAW YOUR SITE PLAN

See Attached SITE PLAN



ROLLANS ***Soil & Environmental Services, Inc.***
470 N Broad Street, Suite D, Mooresville, NC 28115 Phone: (704) 658-1723 Fax: (704) 658-1724

Ashley Rollans, NC Licensed Soil Scientist
Mobile: (704) 746-5046
Email: rollans.ashley@yahoo.com

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

Attached is a proposed design for an Accepted (25% reduction) Septic System with gravity distribution for a 4 bedroom single family residence on Lot # 195 BELLSCROSSING Subdivision, Iredell County, North Carolina.

Contents:

	Page
Information for the Installer	1
Design Information	
Design Specifications	2-3
Layout Specifications	4
Site Plan/System Plan	5
Calculations	6
Profile Descriptions	7-Jan

May 8, 2008
Project No. 01-1429
Design By: Rollans Soil and Environmental Services

FOR WASTEWATER TREATMENT

Owner: Ryon-West Developers

Address: 127B Promenade Dr.
Mooresville, NC 28117

Phone: 704 361 1084

County: Iredell

Location: BELLS CROSSING LOT 195

Source of Wastewater Flow: 4 Bedroom Single Family Residence

Estimated Daily Wastewater Production: 480 gpd

System Flow: N/A

Design Specifications

Drainfield Size: 510

Loading Rate: 0.25

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: 63

Supply Line Diameter: 3 in. SCH 40 PVC

Supply Line Volume: 10.96

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 195
PRESSURE MANIFOLD DESIGN

DESIGN FLOW:	480
SOIL APPLICATION RATE:	0.25
TOTAL AREA TRENCH BOTTOM:	1530
TOTAL LATERAL LENGTH:	510
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	480
SUPPLY LINE LENGTH:	63
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

**Pump tank draw down based on a volume basis of 31 gallons per inch. Draw down may vary among pump tank manufacturers.*

BELLS CROSSING LOT # 195

Project #: 01-1429

LAYOUT FOR 4 BEDROOM HOME

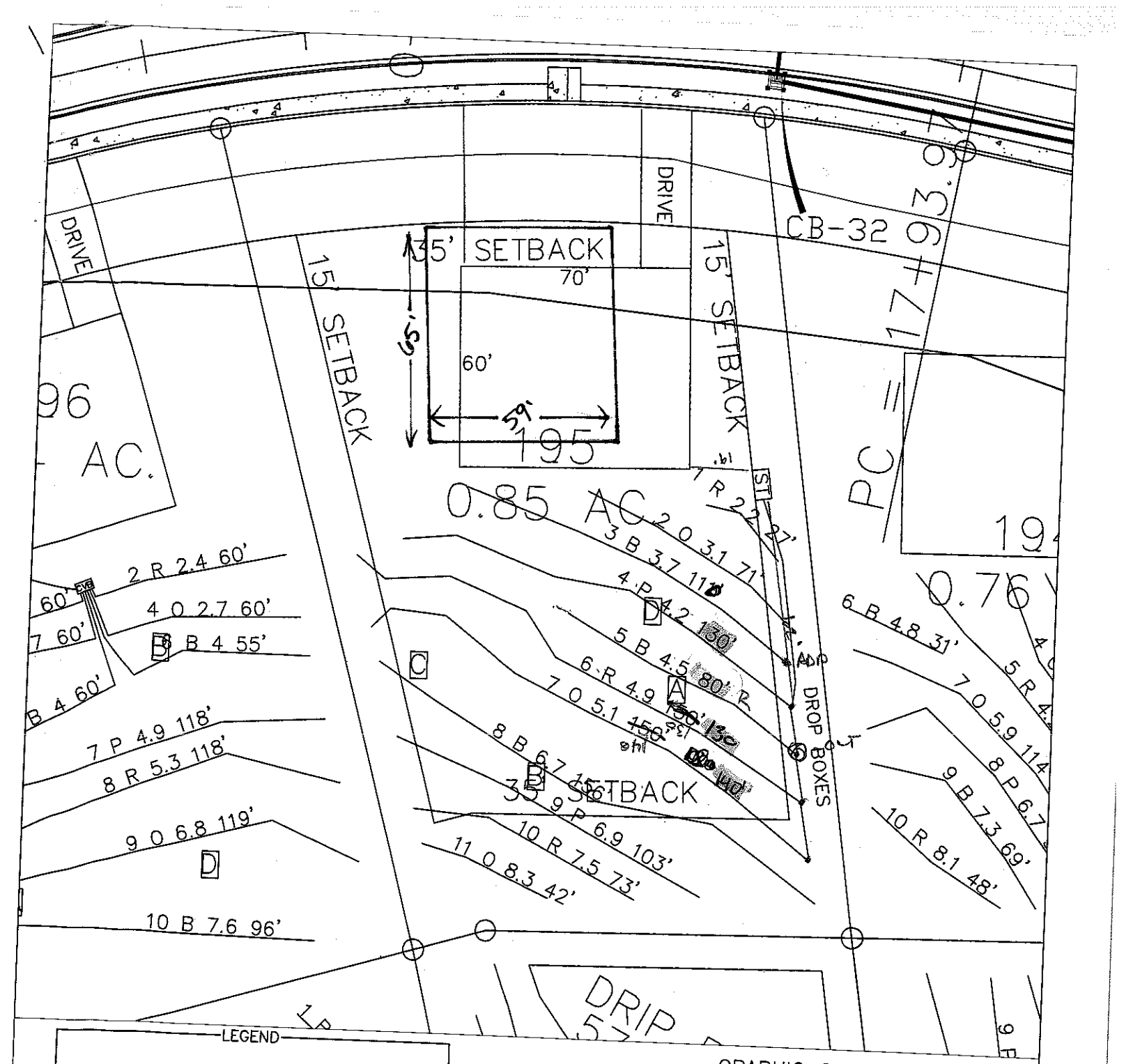
May 8, 2008

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		N/A			N/A		
INSTR. 1			N/A				
HOUSE CNR				N/A	N/A		
P. TANK				N/A	N/A		
1	RED			N/A	N/A	27	27
2	ORANGE			N/A	N/A	71	71
3	BLUE			N/A	N/A	111	110
4	*PINK*			*N/A*	*N/A*	*132*	130 130
5	*BLUE*			*N/A*	*N/A*	*82*	80 80
6	*RED*			*N/A*	*N/A*	*160*	130 150 130
7	*ORANGE*			*N/A*	*N/A*	*158*	140 150 130 496 500
8	BLUE			N/A	N/A	156	156
9	PINK			N/A	N/A	103	103
10	RED			N/A	N/A	73	73
11	ORANGE			N/A	N/A	42	42
					Total	**1115**	**1093**

	LINE LENGTH	LTAR GPD/FT²	SYSTEM TYPE	SOIL LTAR GPD/FT²	TRENCH SYSTEM	DISTRIBUTION
** System*	~~510~~ 500	*0.250*	*ACCEPT.*	*0.250*	*25% RED.*	**GRAVITY**
Repair	583	0.250	*ACCEPT.*	0.250	25% RED.	**DISTRIBUTION** GRAVITY DISTRIBUTION

Notes:

** TBM located on angle point of lot (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



LEGEND

House Box.

System lines.

Repair lines.

GRAPHIC SCALE

1" = 40'

40 0 40 80

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

ROLLANS SOIL & ENVIRONMENTAL SERVICES

170 NORTH BROAD STREET SUITE D
MOORESVILLE, NC 28115
PHONE: (704) 658-1723
FAX: (704) 658-1724

BRADY FREEMAN, R.S.
MOBILE: (704) 746 - 6699
EMAIL: BFREE599@YAHOO.COM

ASHLEY ROLLANS, NC LICENSED SOIL SCIENTIST
MOBILE: (704) 746 - 5046
EMAIL: ROLLANS@WINDSTREAM.NET

MAP TITLE: SITE PLAN & DRAINFIELD AREAS

PROJECT NAME: RYAN-WEST DEVELOPERS/ BELLS CROSSING

LOCATION/DATE: PERTH RD, IREDELL COUNTY, NORTH CAROLINA, JUNE 2008

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.

CALCULATIONS

Location BELLS CROSSING

Project Number 01-1429

Lot No: Lot 195

No. of Bedrooms 4

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

LTAR 0.25 $^{gpd/ft^2}$

25% RED.? (YES OR NO) YES

Supply Line Length 63 ft.

Supply Line Volume 10.962 gal.

Required Feet of Line 480 ft.
Amount of Line from Layout 510 ft.

Gallons per Minute N/A $^{gal}/_{min}$

Required Septic Tank Capacity 1000 gal.
Minimum Standard Tank Size 1000

Lateral Line Volume 333.03 gal.

Dosing Volume N/A gal.

Note: Dosing Volume based on70% of lateral line volume

Tank Draw Down N/A *Generic Draw Down of 31 gal.per in.*

Pump Run Time N/A minutes

Elevation Head N/A ft.
Pressure Head N/A ft.
Friction Factor N/A ft./100 ft. *(From the interpolater.)*
Friction Head N/A ft.

Total Dynamic Head (+15%) N/A ft.

FRICTION FACTOR
INTERPOLATER
2" SCH 40 PVC

GPM	*f*
20	0.84
	-0.88
25	1.27
	-1.28
30	1.78
	-1.76
35	2.37
	-2.25
40	3.03
43.07	3.48
45	3.77
48.14	4.28
50	4.58
57.11	5.89
60	6.42