



Soil & Environmental Consultants, PA

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www.SandEC.com

FACSIMILE SHEET FAX NO. (919) 846-9467

DATE: 7-27-06 (resend) Project Number: 2939.51

TO: NAME: Oliver T. CC: _____

COMPANY: Hannett Col. Env. Services _____

FAX NUMBER: 910-893-~~9371~~ 9371 _____

FROM: JASON WOOD SUBJECT: BALLARD WOODS LOT 91

The following items are being faxed. Number of pages including transmittal sheet: 6

- | | |
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JW

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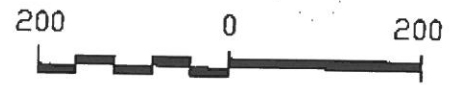
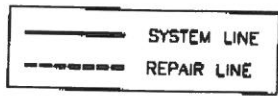
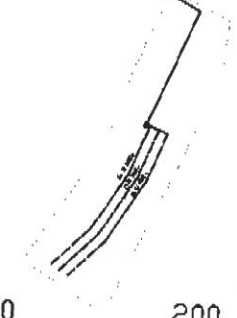
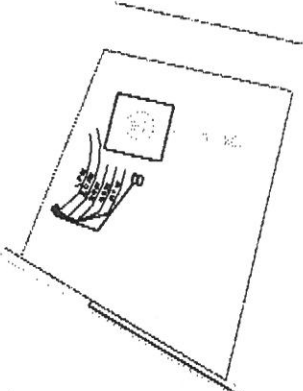
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3817-E Lawndale Drive
Greensboro, NC 27455
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Fax: (336) 540-8235

3-BEDROOM INNOV. PRESSURE MANIFOLD SYSTEM
LINES 1,2,3,4 .3 LTAR W EZ-FLOW
3-BEDROOM PUMP TO D-BOX REPAIR
LINES 5,6,7 (3 X 100'+) .3 LTAR W-EZFLOW

NO FOUNDATION DRAINS



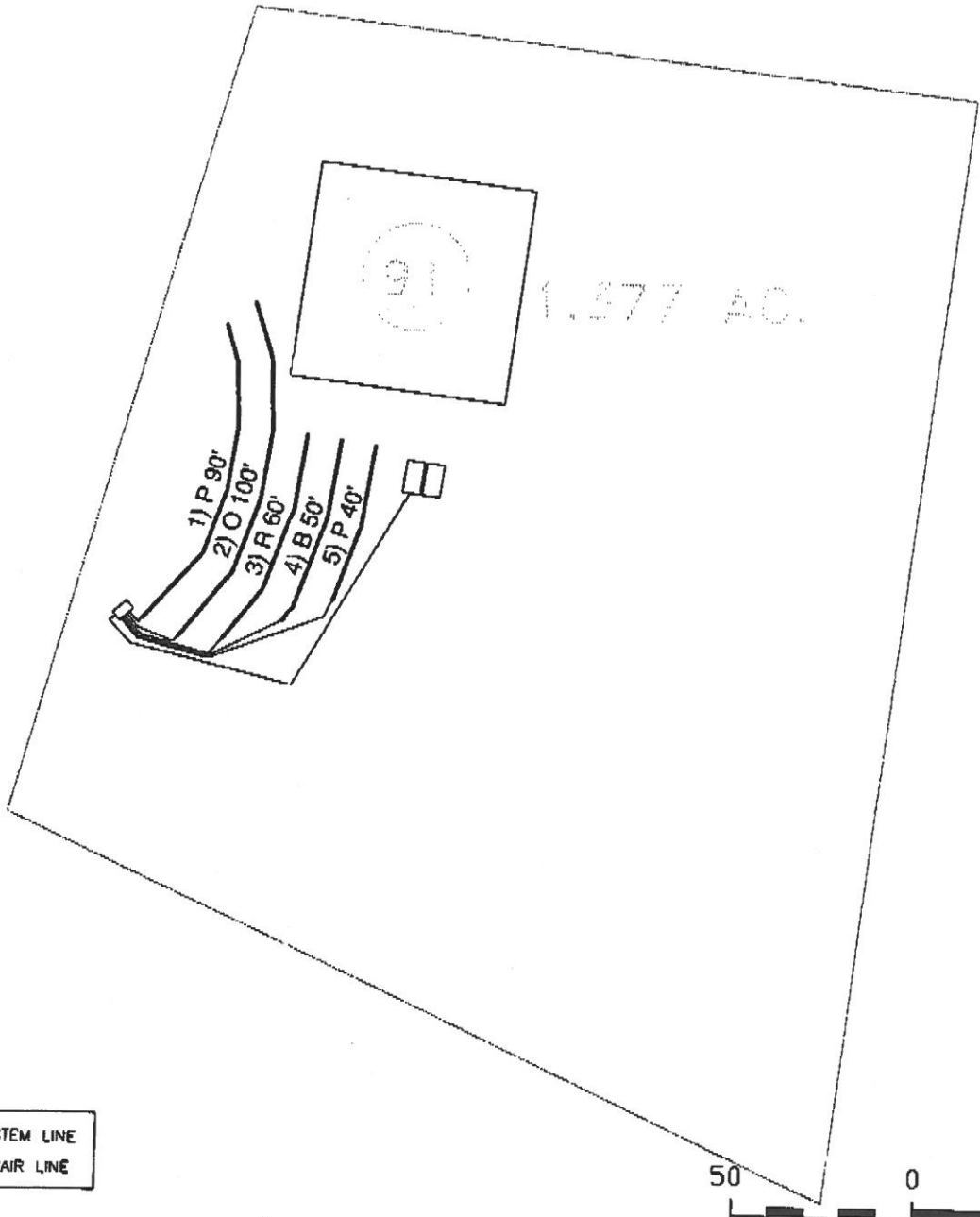
PROJECT NO. 0030.S1	SCALE 1" = 50'	SHEET TITLE: LOT 91 SEPTIC SYSTEM LAYOUT
PROJECT MGR. DW	FIELD WORK JW,CO	PROJECT NAME: OAK CITY HOMES BALLARD WOODS HARNETT COUNTY, NORTH CAROLINA MAY 2008
DRAWN BY JW		
10030.S1/BALLAR.DWG		





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3-BEDROOM INNOV. PRESSURE MANIFOLD SYSTEM
LINES 1,2,3,4,5 .3 LTAR W/ EZ-FLOW
3-BEDROOM PUMP TO D-BOX REPAIR
LINES 6,7,8 .3 LTAR W-EZ-FLOW

NO FOUNDATION DRAINS



	SYSTEM LINE
	REPAIR LINE

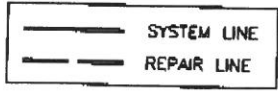
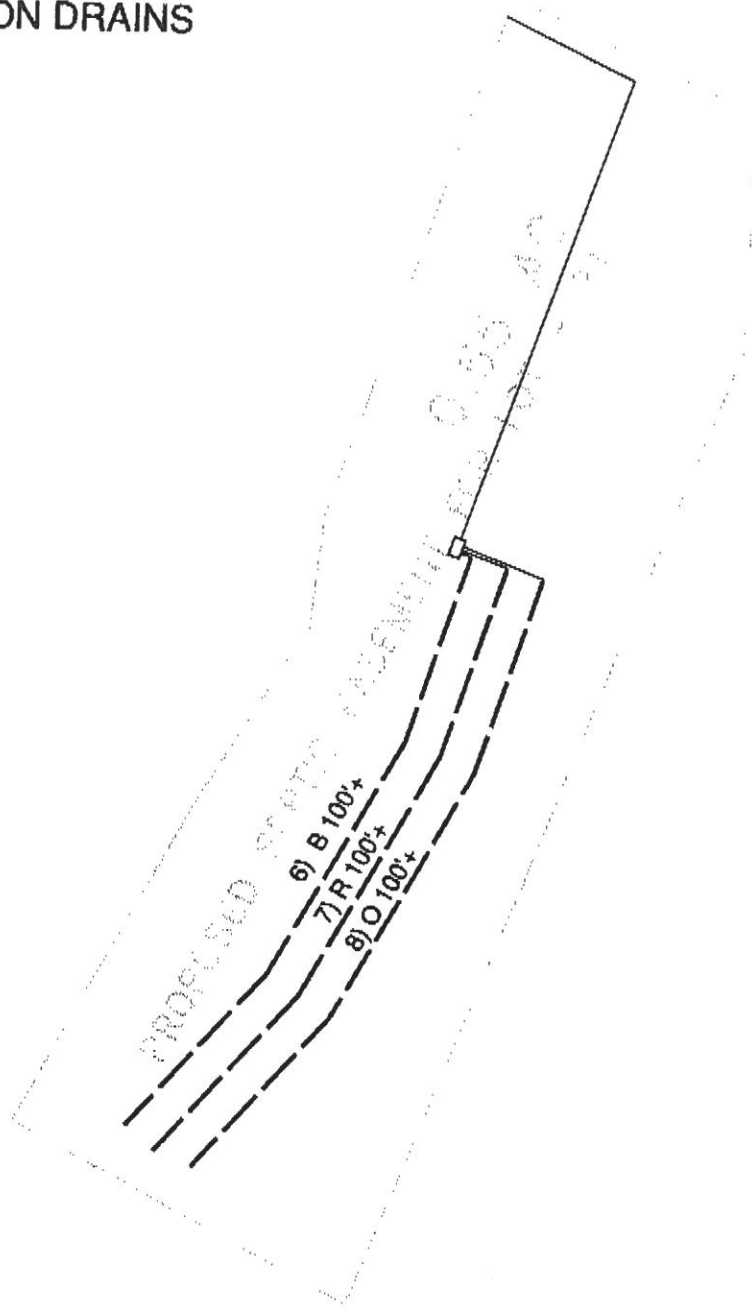


PROJECT NO. 9838.S1	SCALE 1" = 30'	SHEET TITLE: LOT B1 SEPTIC SYSTEM LAYOUT	 Soil & Environmental Consultants, PA 11010 Raven Ridge Road • Raleigh, North Carolina 27614 • Phone: (919) 846-5900 • Fax: (919) 846-9467 www.SandEC.com
PROJECT MGR, DW	FIELD WORK JW,CO	PROJECT NAME: OAK CITY HOMES BALLARD WOODS HARNETT COUNTY, NORTH CAROLINA MAY 2005	
DRAWN BY JW			
109279.S1\BALLAR.DWG			

3-BEDROOM INNOV. PRESSURE MANIFOLD SYSTEM
LINES 1,2,3,4,5 .3 LTAR W/ EZ-FLOW
3-BEDROOM PUMP TO D-BOX REPAIR
LINES 6,7,8 .3 LTAR W-EZFLOW

REPAIR SITE PLAN

NO FOUNDATION DRAINS



PROJECT NO. 9838.91	SCALE 1" = 80'	SHEET TITLE: LOT 91 SEPTIC SYSTEM LAYOUT
PROJECT MGR. DW	FIELD WORK JW,CO	PROJECT NAME: OAK CITY HOMES BALLARD WOODS HARNETT COUNTY, NORTH CAROLINA MAY 2008
DRAWN BY JW		
18939.S1BALLAR.DWG		



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BALLARD WOODS LOT 91

Project No. 9939.S1

LAYOUT FOR 3 BEDROOM HOME

May 6, 2006

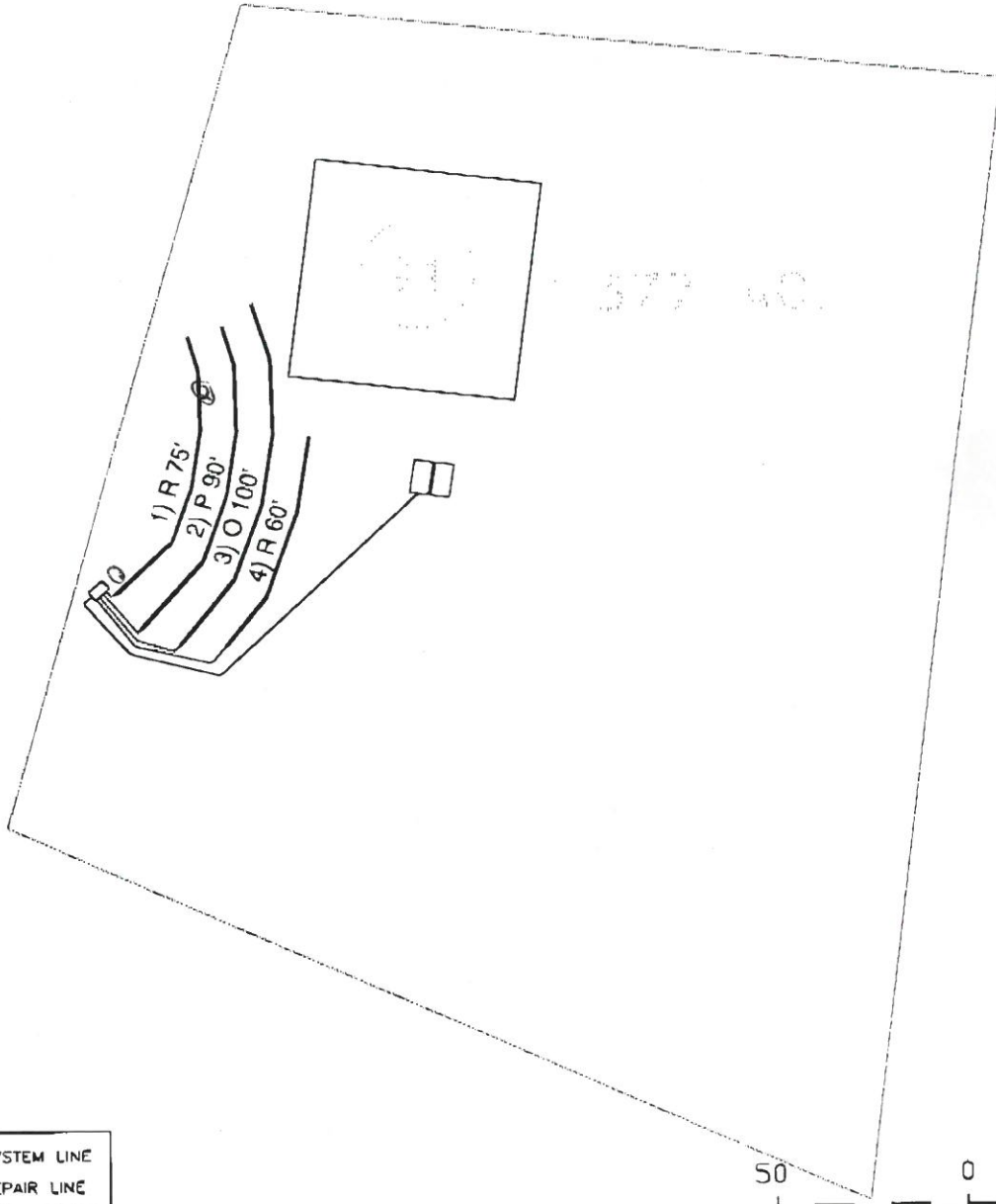
<u>LINE #</u>	<u>FLAG</u> <u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>FLAGGED</u> <u>LINE LENGTH</u>	<u>DESIGN</u> <u>LINE LENGTH</u>
TBM		4.7			100.00		
INSTR. 1			104.70				
*1	PINK			2.90	101.80	90	90
*2	ORANGE			3.10	101.60	100	100
*3	RED			3.40	101.30	60	60
*4	BLUE			4.60	100.10	50	50
*5	PINK			6.40	98.30	40	40
		-8.1					
6	BLUE			7.00	97.70	100+	105
7	RED			9.60	95.10	100+	105
8	ORANGE			12.30	92.40	100+	105
Total						340	655

	<u>LINE</u> <u>LENGTH</u>	<u>LTAR</u> <u>GPD/FT²</u>	<u>SYSTEM</u> <u>TYPE</u>	<u>SOIL</u> <u>LTAR</u> <u>GPD/FT²</u>	<u>INNOVATIVE</u> <u>SYSTEM</u>	<u>DISTRIBUTION</u>
* System	340	0.30	INNOV.	0.30	EZ-Flow	Pressure Manifold
Repair	315	0.30	Innov.	0.30	EZ-Flow	PUMP TO D-BOX

- Notes:**
- ** TBM ON TOP OF METER BOX; REPAIR= IN "V" OF TREE ABOVE FIELDS
 - **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.

3-BEDROOM INNOV. PRESSURE MANIFOLD SYSTEM
 LINES 1,2,3,4 .3 LTAR W/ EZ-FLOW
 3-BEDROOM PUMP TO D-BOX REPAIR
 LINES 5,6,7 .3 LTAR W-EZFLOW

NO FOUNDATION DRAINS



①
 0-08" G SCL RES/P 10%
 22" ~ 50% P/P 16"
 US

②
 0-13 G SCL VFR 10%
 13-17 50K SCL RES/P US
 17" 50K C F 15%
 W/P CR2 @ 17"

—	SYSTEM LINE
- - -	REPAIR LINE



PROJECT NO. 9839.91	SCALE 1" = 50'	SHEET TITLE: LOT 91 SEPTIC SYSTEM LAYOUT
PROJECT MGR. DW	FIELD WORK JW,CO	PROJECT NAME: OAK CITY HOMES BALLARD WOODS HARRETT COUNTY, NORTH CAROLINA MAY 2001
DRAWN BY JW		
19839.91BALLAR.DWG		



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**BALLARD WOODS LOT 91
SYSTEM**

<u>Line #</u>	<u>Color</u>	<u>Elevation</u>	<u>Length</u>	<u>Hole Size</u>	<u>Flow/Tap</u>	<u>and</u>	<u>Trench Area</u>	<u>Line LTAR</u>
1	PINK	2.9	90	SCH 80 3/4	10.1	89.40	270	0.331
2	ORANGE	3.1	100	SCH 40 3/4	12.5	110.65	300	0.369
3	RED	3.4	80	SCH 40 1/2	7.11	62.94	180	0.350
4	BLUE	4.6	60	SCH 80 1/2	5.48	48.51	150	0.323
5	PINK	6.4	40	SCH 80 1/2	5.48	48.51	120	0.404

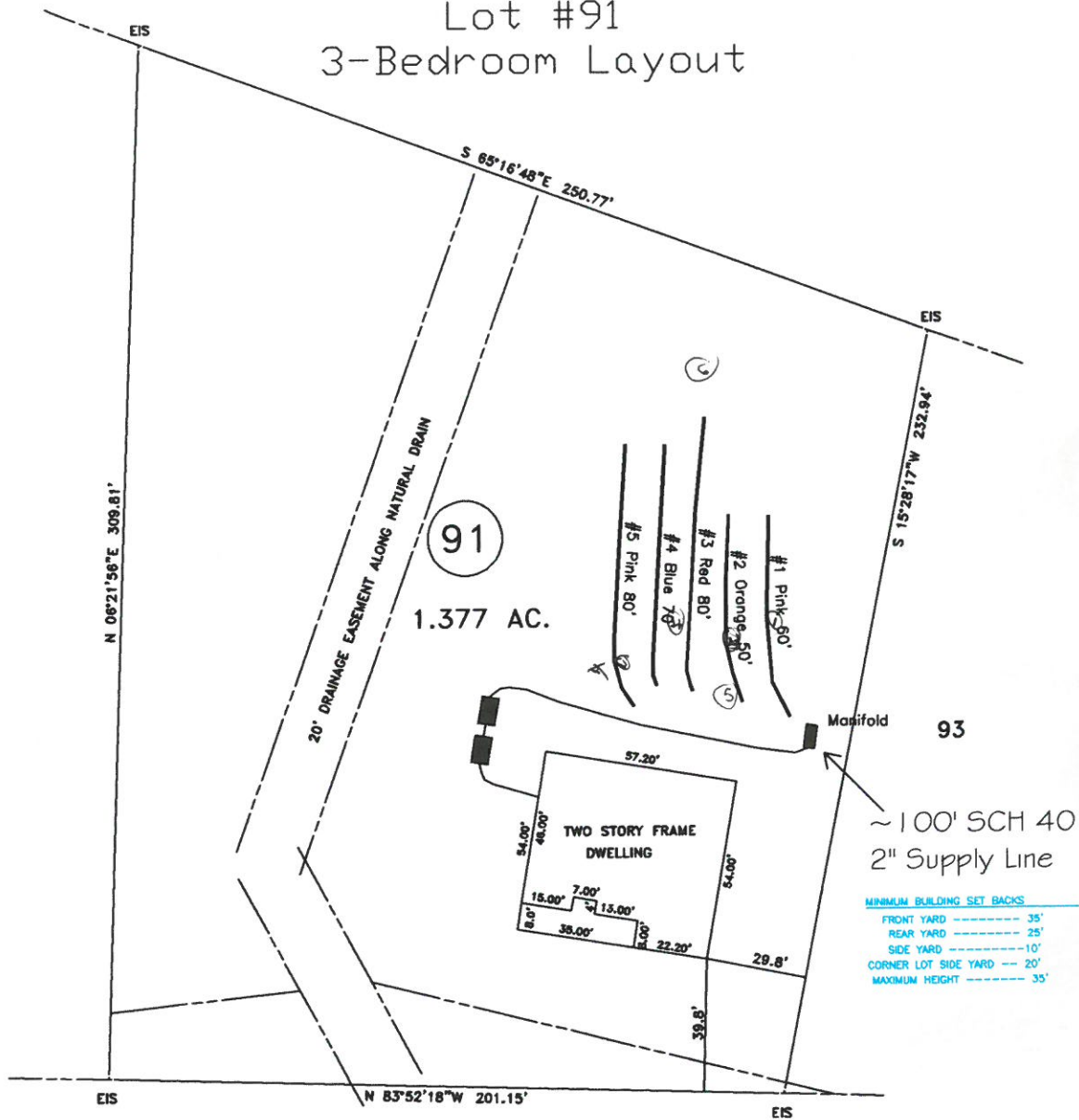
total feet = 340 gal/min = 40.87

Des. Flow 360
 Pump Run= 8.85
 soil LTAR 0.3
 (EZLAY Itar +6%) 0.318
 LTAR with INNOV. + 6% 0.4
 LTAR with INNOV. 0.42

100% Dose Volume 221.26
 Percent Dose Volume 75%
 Total 165.94

Pump Run Time 4.08

Ballard Woods Subdivision
 Oak City Homes
 Lot #91
 3-Bedroom Layout



~100' SCH 40
 2" Supply Line

MINIMUM BUILDING SET BACKS

FRONT YARD	-----	35'
REAR YARD	-----	25'
SIDE YARD	-----	10'
CORNER LOT SIDE YARD	-----	20'
MAXIMUM HEIGHT	-----	35'

"RUTH CIRCLE" 50' R/W

GRAPHIC SCALE
 1" = 50'



System: Pressure Manifold
 Lines: 1-5, (340')
 Accepted Status System
 0.3 Soil LTAR
 12" Trench Bottom
 8" of approved fill material required of drain field.
 Repair located in an off-site area on the original septic permit.

Central Carolina
 Soil Consulting
 919-784-9449
 Project # 399

Ballard Woods

Lot 91

3-Bedroom Home (360 gal./day)

<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		0.0		100.0		<u>in field</u>	<u>installation</u>
INST. 1			100.0				
1	<i>Pink</i>			4.3	95.7	62	60
2	<i>Orange</i>			4.7	95.3	54	50 ←
3	<i>Red</i>			4.9	95.1	80	80 100
4	<i>Blue</i>			5.7	94.3	72	70 70
5	<i>Pink</i>			7.5	92.5	80	80 80
Total						348	340

System

Lines 1-5

System Type

Accepted Status System
EZ-FLOW

Suggested Soil LTAR 0.300
(gal/day/ft²)

System Installation LTAR 0.27

Total Line Length 340

Square Footage 1020

Proposed Trench Bottom 12"
8" of approved fill material required over drain field.

Distribution Method Pressure Manifold

Notes: No foundation drains

**Ballard Woods, Lot 91
System, Tap Chart**

Bench Mark	0.00	is = 100.00 Location of BM		Elevation Head					16.70
Pump tank elev.	15	85.00	Pump elev.	80.00	Manifold elev.			96.70	
line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR
1	Pink	4.30	95.70	60	1/2in SCH 80	5.48	61.10	180	0.3394
2	Orange	4.70	95.30	50	1/2in SCH 80	5.48	61.10	150	0.4073
3	Red	4.9	95.10	80	1/2in SCH 40	7.11	79.27	240	0.3303
4	Blue	5.70	94.30	70	1/2in SCH 40	7.11	79.27	210	0.3775
5	Pink	7.50	92.50	80	1/2in SCH 40	7.11	79.27	240	0.3303

	total	feet =	340	gal/min =	32.29	LTAR =	0.3000
						LTAR + %5	0.3150
% of Dose Vol.	75	<u>Des. Flow</u>	360			(ltar W/ INOV)	0.4000
Dose Volume	165.75	Pump Run=	11.15			(ltar W/ INOV + 5%)	0.4200
Dose Pump Time	5.13	Tank Gal/IN	21				
Drawdown in Inches	7.89						