IREDELL COUNTY HEALTH DEPARTMENT - *ENVIRONMENTAL HEALTH* ☐ STATESVILLE OFFICE 704-878-5305 ☐ MOORESVILLE OFFICE 704-664-5281

IMPROVEMENT PERMIT / AUTHORIZATION TO CONSTRUCT / OPERATION PERMIT / EXISTING SYSTEM INSPECTION

PERMIT # 168138 PIN # 4715-53-7294 DATE 29 AUGUST 2011

OWNER FRANK Palmer APPLICANT: PHONE: Home/Cell # (786) 236-9629 Business #

SITE ADDRESS 159 DRAPER Dr. Statesville OWNER / APPLICANT ADDRESS

SITE DIRECTIONS Hwy 64 TL WOODBRIDGE TL Russell Ridge Rd. TR Draper Dr. ON LOFT.

SUBDIVISION WOODBRIDGE EST. BLOCK / SECTION LOT # 26 LOT AREA 0.935ac. DESIGN FLOW 480gpd L.T.A.R. 0.35gpd/FT2

Septic Tank 1000 Gallons: STB 525 Date 1-10-12

Pump Tank Gallons: PT Date

Pump Make Model Serial #

No. Nitrification Fields: 1 No. Lines 7 Linear Feet 350

Trench Width 36" Max. Trench Bottom Depth 36" Gravel Depth NA

☑ New System ☐ Repair ☐ Expansion System Type I II (III) IV V VI

System Description: 2590 Reduction System

Repair System Description: LPP PPBPS

Maintenance Agreement Required ☐ YES ☑ NO

☑ GRAVITY ☐ PRESSURE

☑ Residence No. Bedrooms 4

☐ Business No. Persons

☐ Other No. Employees

☐ Slab ☑ Crawl Space

☐ Basement w/plumbing ☐ Basement w/o plumbing

Water Supply: ☐ Private ☑ Public ☐ Community

Comments / Conditions

INITIAL SITE SKETCH

* Install system as designed by Rollins Soil and Environmental Services, PA.

* Please see attached design for NON-expiring IP.

* Project # 01-163

AS BUILT SKETCH

L1 = 25'

L2 = 14'

L3 = 15'

L4 = 13'

L5 = 12'

L6 = 10'

5' 5'

Permit can be suspended or revoked if any false information is supplied toward securing the permit / any unauthorized changes are made to the site / any unauthorized changes are made in the installation of the system.

☑ ***IMPROVEMENT PERMIT*** *with plat valid without expiration.* ☑ ***IMPROVEMENT PERMIT*** *with plat valid without expiration.* ***site plan valid 60 mo.*** ☑ ***AUTHORIZATION TO CONSTRUCT*** valid for period equal to IMPROVEMENT PERMIT--not to exceed 60 mo.

Owner / Applicant Signature: Date

IMPROVEMENT PERMIT by: REHS Date 29 Aug. 11

AUTHORIZATION TO CONSTRUCT by: REHS Date 6 Sept. 11

Installed by: Rowan Septic

OPERATION PERMIT by: REHS Date 3-8-12

Existing System Inspected by: REHS Date

YOU SHOULD CONTACT A LOCATOR SERVICE PRIOR TO ANY EXCAVATION

White Copy – Environmental Health YELLOW COPY (Final) Owner / Applicant PINK COPY (Initial) Owner / Applicant

ROLLANS ***Soil & Environmental Services, Inc.***
PO Box 832, Mooresville, NC 28115 Phone: (704) 278-0989 Fax: (704) 278-0989

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

Adrian Pruett, NC Licensed Soil Scientist
Mobile: (704) 202-5791
Email: adrianpruett@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 #26 Woodbridge Estates Subdivision, Iredell County, North Carolina.

Contents: **Page**

Information for the Installer---------- 1

Design Information
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September 8, 2011
Project #: 01-1673
Design By: Rollans Soil and Environmental Services

Gravity 25% Reduction
FOR WASTEWATER TREATMENT

Owner:	Frank Palmer
Address:	883 East Monbo Rd Statesville, NC 28677
Phone:	786-236-9629
County:	Iredell
Location:	WOODBRIDGE ESTATES LOT 26
Source of Wastewater Flow:	4 Bedroom Single Family Residence
Estimated Gallons Per Day Flow:	480
System Flow:	NA

Design Specifications

Drainfield Size:	350
Loading Rate (gpd/ft.^{2}):	0.35
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:	12
Supply Line Diameter:	3 in. SCH 40 PVC
Supply Line Volume:	4.32
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.

WOODBRIDGE ESTATES LOT 26

DESIGN FLOW (gpd):	480
SOIL APPLICATION RATE (gpd/ft.^{2}):	0.35
TOTAL AREA TRENCH BOTTOM:	1050
TOTAL LATERAL LENGTH:	350
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	342.8571429
SUPPLY LINE LENGTH:	12
TOTAL DYNAMIC HEAD:	NA
MANIFOLD SIZE:	NA
DOSING VOLUME:	NA
PUMP TANK DRAW DOWN*:	NA
SEPTIC TANK SIZE:	1000
PUMP TANK SIZE:	NA

WOODBRIDGE ESTATES LOT 26

Project #: 01-1673

LAYOUT FOR 4 BEDROOM HOME

September 8, 2011

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM					888.66		
INSTR. 1 HOUSE CRN					NA		
P. TANK					NA		
1	ORANGE				893.85	34	34
2	BLUE				891.69	55	55
3	PINK				889.88	73	73
4	RED				887.48	89	89
5	ORANGE				885.42	50	50
5	***ORANGE***				***885.42***	***55***	***55***
6	***BLUE***				***883.69***	***63***	***63***
7	***PINK***				***881.91***	***57***	***57***
8	***RED***				***879.97***	***53***	***53***
9	***ORANGE***				***877.66***	***46***	***46***
10	***BLUE***				***876.40***	***42***	***42***
11	***PINK***				***873.92***	***34***	***34***
					Total	**651**	**651**

	LINE LENGTH	LTAR GPD/FT^2	SYSTEM TYPE	SOIL LTAR GPD/FT^2	TRENCH SYSTEM	DISTRIBUTION
**** System***	***350***	***0.35***	***ACCEPT.***	***0.35***	***25% RED.***	**GRAVITY**
Repair	301	0.30	*MOD.*	0.30	PPBPS	**DISTRIBUTION** 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

CALCULATIONS

Location WOODBRIDGE ESTATES

Project Number 01-1673

Lot No: Lot 26

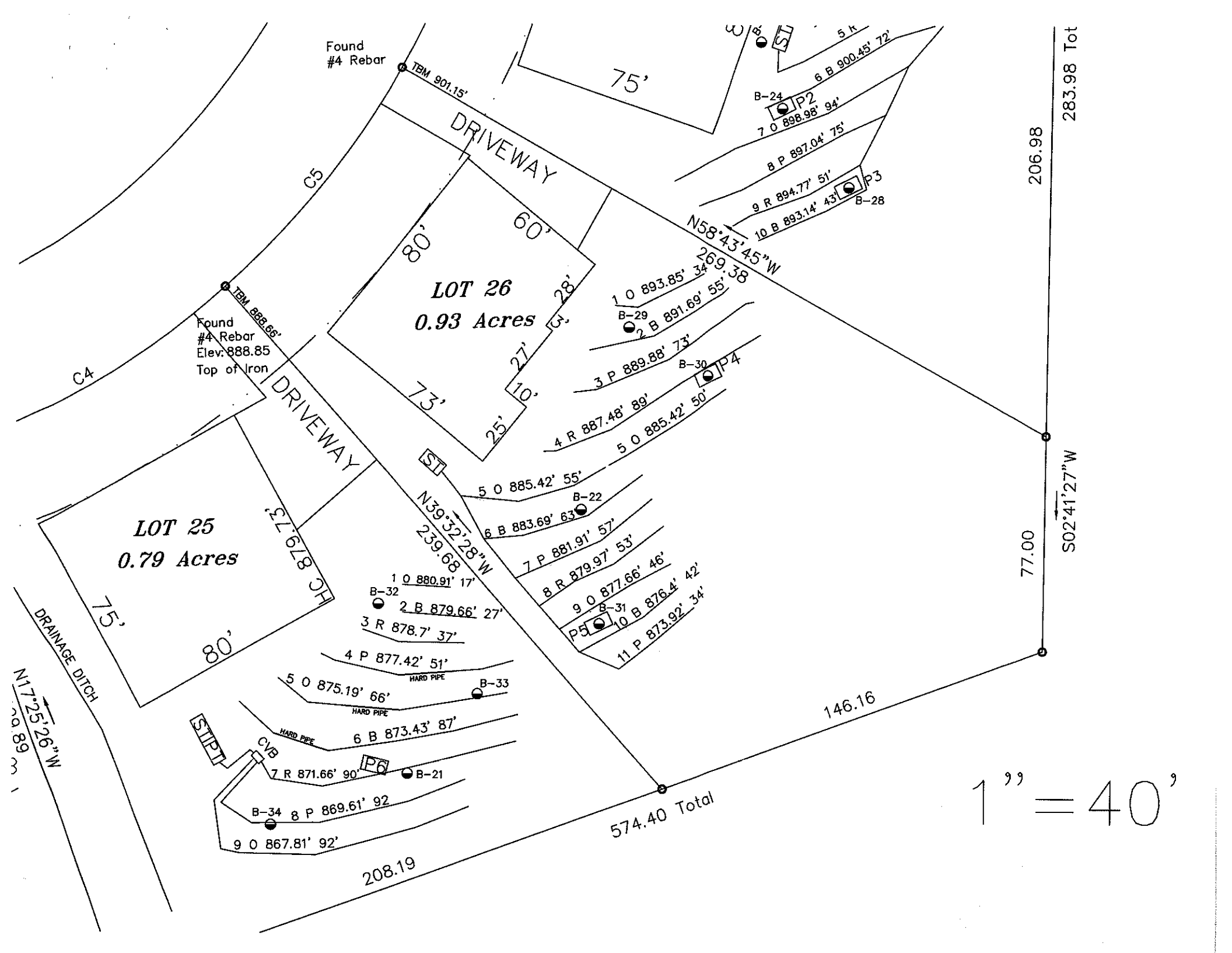
No. of Bedrooms	4	
Design Flow	480	$^{gal}/_{day}$
LTAR	0.35	$^{gal}/_{ft^2\ day}$
25% RED.? (YES OR NO)	YES	
Supply Line Length	12	ft.
Supply Line Volume	4.32	gal.
Required Feet of Line	342.8571	ft.
Amount of Line from Layout	350	ft.
Gallons per Minute	NA	$^{gal}/_{min}$
Required Septic Tank Capacity	1000	gal.
Minimum Standard Tank Size	1000	
Lateral Line Volume	228.55	gal.
Dosing Volume	NA	gal.

Note: Dosing Volume based on70% of lateral line volume

Tank Draw Down	NA	*Generic Draw Down of 21 gal.per in.*
Pump Run Time	NA	minutes
Elevation Head	NA	ft.
Pressure Head	NA	ft.
Friction Factor	NA	ft./100 ft. *(From the interpolater.)*
Friction Head	NA	ft.
Total Dynamic Head (+15%)	NA	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


Found
#4 Rebar
TBM 901.15'
DRIVEWAY
C5
75'
B-24
P2
6 B 900.45' 72'
7 O 898.98' 94'
8 P 897.04' 75'
9 R 894.77' 51'
P3
B-28
10 B 893.14' 43'
283.98 Tot
206.98
N58°43'45"W
269.38
60'
80'
28'
27'
10'
25'
73'
LOT 26
0.93 Acres
1 O 893.85' 34'
B-29
2 B 891.69' 55'
3 P 889.88' 73'
B-30
P4
4 R 887.48' 89'
5 O 885.42' 50'
5 O 885.42' 55'
B-22
6 B 883.69' 63'
7 P 881.91' 57'
8 R 879.97' 53'
9 O 877.66' 46'
B-31
P5
10 B 876.4' 42'
11 P 873.92' 34'
S02°41'27"W
77.00
TBM 888.66'
Found
#4 Rebar
Elev: 888.85
Top of Iron
C4
DRIVEWAY
HC 879.73'
LOT 25
0.79 Acres
75'
80'
ST
N39°32'28"W
239.68
1 O 880.91' 17'
B-32
2 B 879.66' 27'
3 R 878.7' 37'
4 P 877.42' 51'
HARD PIPE
5 O 875.19' 66'
B-33
HARD PIPE
HARD PIPE
6 B 873.43' 87'
STPT
CVB
7 R 871.66' 90'
P6
B-21
B-34
8 P 869.61' 92'
9 O 867.81' 92'
DRAINAGE DITCH
N17°25'26"W
208.19
574.40 Total
146.16
1" = 40'