LP PPBPS SYSTEM
FOR WASTEWATER TREATMENT

APPROVED JAN 11 2016

Owner/Applicant:	Pinnacle Builders
Current Address:	127 Promenade Drive Mooresville, NC 28117
Phone:	704.361.1084
County:	Iredell
Location:	CRESCENT LAND & TIMBER CORP. LOT # 312 124 BIRDSONG LN, MOORESVILLE, NC 28117
Source of Wastewater Flow:	4 Bedroom Single Family Residence
Estimated Gallons Per Day Flow:	480
System Flow:	29.11

Design Specifications

Drainfield Size:	308
Loading Rate (gpd/ft.^{2}):	0.3
Depth of Gravel in Trench:	NA (PPBPS)
Gravel Size:	NA (PPBPS)
Trench Depth:	30 in.
Trench Width:	24 in.
Septic Tank Size:	1000
Pump Tank Size:	1000
Estimated Supply Line Length:	121
Supply Line Diameter:	2 in. SCH 40 PVC
Supply Line Volume:	21.05
Dosing Volume:	171.25
Supply Manifold:	N/A
Supply Manifold Length:	N/A
Supply Manifold Volume:	N/A
Recommended Float Controls:	SJE Sensor Float Control Switches as Required for Control Panel or County Approved Equivalents
Recommended Control Panel:	SJE-Rhombus Model 112 (NEMA 4x) Control Panel or County Approved Control Panel.
Pressure Head:	2 ft.
Friction Head:	2.15
Elevation Head:	14.00
Total Dynamic Head:	20.88
Threaded Union:	In Tank
Gate Valves:	1 in Tank 1 per lateral
Check Valves:	In Tank
Anti-Siphon Hole:	NA
Additional Comments:	Soil suitability was performed by Rollans Soil & Environmental Services

CRESCENT LAND & TIMBER CORP. LOT # 312
LP PPBPS

DESIGN FLOW (gpd):	480
SOIL APPLICATION RATE (gpd/ft.^{2}):	0.3
TOTAL AREA TRENCH BOTTOM:	616
TOTAL LATERAL LENGTH:	308
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	266.6666667
SUPPLY LINE LENGTH:	121
TOTAL DYNAMIC HEAD:	20.88
MANIFOLD SIZE:	N/A
DOSING VOLUME:	171.25
PUMP TANK DRAW DOWN*:	8.2
SEPTIC TANK SIZE:	1000
PUMP TANK SIZE:	1000

APPROVED JAN 11 2016

**Pump tank draw down based on a volume basis of 21 gallons per inch. Draw down may vary among pump tank manufacturers.*

CRESCENT LAND & TIMBER CORP. LOT # 312

Project #: 01-3073

LAYOUT FOR 4 BEDROOM HOME

December 23, 2015

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM							
INSTR. 1							
HOUSE CNR					774.00		
P. TANK					767.86		
1	***RED***				***776.16***	***67***	***67***
2	***ORANGE***				***775.83***	***79***	***79***
3	***BLUE***				***775.59***	***99***	***99***
4	***YELLOW***				***775.29***	***63***	***63***
5	PINK				774.80	119	119
6	RED				774.26	125	125
7	ORANGE				774.04	36	36
8	BLUE	(EXTRA)			773.91	29	29
					Total	**617**	**617**

	LINE LENGTH	LTAR GPD/FT2	SYSTEM TYPE	SOIL LTAR GPD/FT2	TRENCH SYSTEM	DISTRIBUTION
** System*	***308***	***0.300***	***MOD.***	***0.300***	***PPBPS***	***LOW PRESSURE***
Repair	280	0.300	MOD.	0.300	PPBPS	LOW PRESSURE

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Notes: ** All septic lines, soil borings and house envelope located via survey
**All measures in feet
**Nitrification lines are demonstrated on contour via colored pin flags

LP PPBPS TAPSHEET -CRESCENT LAND & TIMBER CORP. LOT# 312

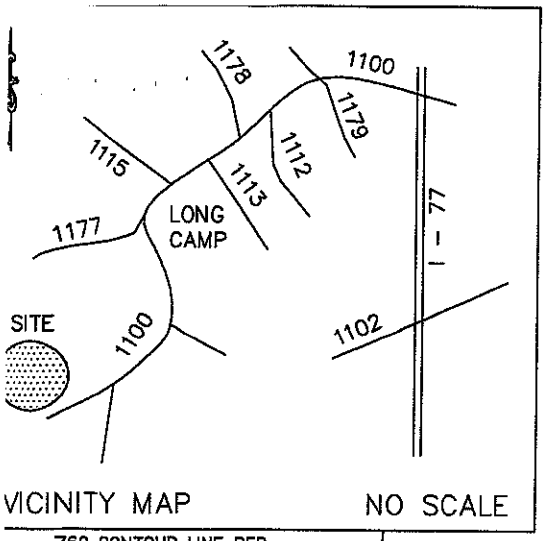
SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/hole	Trench Area	Number of Panels
1	*RED*	*776.16*	*67*	*0.156*	*0.41*	*201*	*15*
2	*ORANGE*	*775.83*	*79*	*0.156*	*0.41*	*237*	*18*
3	*BLUE*	*775.59*	*99*	*0.156*	*0.41*	*297*	*23*
4	*YELLOW*	*775.29*	*63*	*0.156*	*0.41*	*189*	*15*
	total	feet =	308	gal/min =	29.11		71

Des. Flow	600
Pump Run=	5.88
soil LTAR	0.3
LTAR +5%	0.315
LTAR with mod.	0.6
LTAR with mod.. + 5%	0.63

.156 equals 5/32 inch hole

APPROVED JAN 11 2016



VICINITY MAP NO SCALE

APPROVED JAN 11 2016

PB. 34 PG. 22

LAKE NORMAN

11.44
12.22
17.63
PIER
N12°29'31"W
25.39
CP
N47°24'00"W
125.01
#5 REBAR FOUND

760 CONTOUR LINE PER ACTUAL FIELD SURVEY

TOP OF RIP RAP

#5 REBAR FOUND

N75°49'29"W
39.40

LOT 312
0.70 AC.

EXISTING SYSTEM MUST BE PRPERLY ABANDONED PER IREDELL COUNTY HEALTH DEPT.

617'

50' LAKE SETBACK

ST
PT
774'

196.38

GARAGE SLAB MUST HAVE OUTSIDE FINISHED ELEVATION BELOW SLAB LEVEL WITH NO FOUNDATION DRAIN

PORCH

FRAME BLDG.

56.3'

EXISTING BED (10' X 112')

PROPOSED HOUSE

15' SIDE SETBACK

LOT 314
JEROME R. MCNINCH & BARBARA B. MCNINCH
4738/751

WELL

ST

35' FRONT SETBACK

GARAGE

21.9'

N55°45'29"E

LOT 311
EARL JACKSON
JERALDINE B. JACKSON
7812/923

(BASE BEARING)
S50°25'45"W
111.29

#5 REBAR FOUND

NEIGHBORS WELL

R=50.00

(CHORD BEARING)
S05°58'16"W
69.85

L=77.33'

(TIE ONLY)
S50°38'57"W
79.98'

#2 REBAR FOUND

8 B 29° 773.91 (EXTRA)
7 O 36° 774.04'
6 R 25° 774.26
5 P 11R 774.80'
4 Y 63° 775.59'
3 B 99° 775.58'
2 O 79° 775.83'
1 R 67° 776.15'

55' FRONT SETBACK

65.8'

GRAVEL DRIVE ENCROACHES 2.5'

CVB

BENT #5 REBAR FOUND

C1

CP

S36°52'00"E
100.06

R/W

WELL MUST BE PROPERLY ABANDONED PER NCDWR REGULATIONS.

BIRDSONG LANE
(60' PUBLIC R/W)

60.00'

R/W

POWER POLE

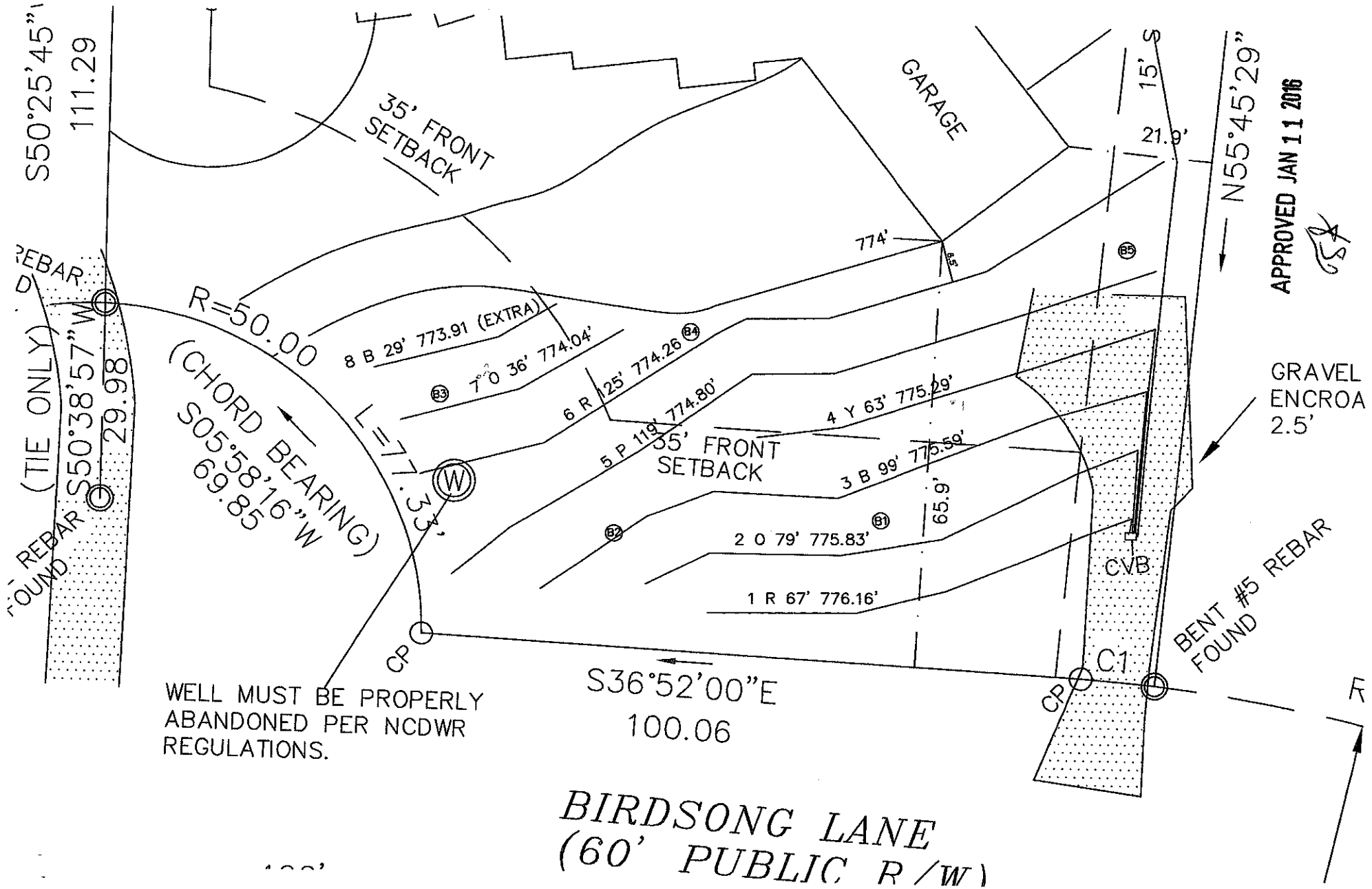
LEGEND
- P.P. = POWER POLE
- = DUKE POWER TRANS.
- I.P. = EXISTING IRON FOUND
- P.S. = #4 REBAR SET
- R/W = RIGHT-OF-WAY
- W = WELL
- CP = COMPUTED POINT

0' 20' 40' 100'

SCALE IN FEET

NOTES
1) THIS PROPERTY MAY BE SUBJECT TO ANY EASEMENT AND/OR RIGHTS-OF-WAY OF RECORD.
2) AREA COMPUTED BY THE COORDINATE METHOD.
3) EXISTING 760' & 761' CONTOUR ELEVATION BASED ON LAKE NORMAN LAKE LEVEL AT COWAN'S FORD DAM (READING ON 1/26/12) ELEVATION: 756.1'
4) NO GRID MONUMENT FOUND WITHIN 2000 FEET.
5) SETBACKS ARE PER IREDELL COUNTY

CURVE TABLE				
CURVE	RADIUS	LENGTH	BEARING	CHORD
C1	245.17'	11.15'	S 34°58'33" E	11.15'


S50°25'45"
111.29
35' FRONT SETBACK
GARAGE
15'
21.9'
N55°45'29"
APPROVED JAN 1 1 2016
774'
REBAR
(TIE ONLY)
S50°38'57"W
29.98
R=50.00
(CHORD BEARING)
S05°58'16"W
69.85
L=77.33'
8 B 29' 773.91 (EXTRA)
7 O 36' 774.04'
6 R 25' 774.26
5 P 119' 774.80'
4 Y 63' 775.29'
3 B 99' 775.59'
2 O 79' 775.83'
1 R 67' 776.16'
35' FRONT SETBACK
65.9'
GRAVEL ENCROA 2.5'
CVB
BENT #5 REBAR FOUND
CP
C1
CP
S36°52'00"E
100.06
WELL MUST BE PROPERLY ABANDONED PER NCDWR REGULATIONS.
BIRDSONG LANE
(60' PUBLIC R/W)

CALCULATIONS

Location CRESCENT LAND & TIMBER CORP. LOT # 312
124 BRIDSONG LN, MOORESVILLE, NC 28117
Project Number 01-3073

APPROVED JAN 11 2016

Lot No:	312	
No. of Bedrooms	4	
Design Flow	480	$^{gal}/_{day}$
LTAR	0.300	$^{gal}/_{ft^2\ day}$
PPBPS? (YES OR NO)	YES	
Supply Line Length	121	ft.
Supply Line Volume	21.054	gal.
Required Feet of Line	266.6667	ft.
Amount of Line from Layout	308	ft.
Gallons per Minute	29.11	$^{gal}/_{min}$
Required Septic Tank Capacity	1000	gal.
	1000	gal.
Panel Volume	3.6	gal.
# of Panels	71	
Dosing Volume	171.25	gal.

Note: Dosing Volume based on 67% of # of panels times 3.6 gal/panel

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

Tank Draw Down	8.2	*Generic Draw Down of 21 gal.per in.*
Pump Run Time	5.88	minutes
Elevation Head	14	ft.
Pressure Head	2	ft.
Friction Factor	1.78	ft./100 ft. *(From the interpolater.)*
Friction Head	2.15	ft.
Total Dynamic Head (+15%)	20.88	ft.

ON-SITE WASTEWATER SECTION

PROPERTY ID #: 1/29/1 4614723401
COUNTY: Iredell

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

18A

APPROVED APR 28 2015

OWNER: Jeffrey Arnold
ADDRESS: ~~120 Backcountry~~ 178 Mariner Point Ln, Mooresville NC 28117
PROPOSED FACILITY: Residential 4BR
LOCATION OF SITE: 124 Birdsong Ln, Mooresville NC 28117
WATER SUPPLY: ☐ Private ☐ Public ☑ Well ☐ Spring ☐ Other
EVALUATION METHOD: ☑ Auger Boring ☐ Pit ☐ Cut

APPLICATION DATE 4/15
PROPOSED DESIGN FLOW (.1949): 480 gpd
DATE EVALUATED: 4/16
PROPERTY SIZE: ~.90 AC
PROPERTY RECORDED: 1975

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
B 1	4/3%	0-5	BL Gr	Fr SS SP		48"			PS .3
		5-12	BRCL wfsbk	Fr SS SP					
		12-48	RBCL-C wfsbk	Fr SS SP					
B 2	4/7%	0-8	BL Gr	Fr SS SP		48"			PS .3
		8-13	Br CL wfsbk	Fr SS SP					
		13-48	RB CL-C wfsbk	Fr SS SP	+ Few organics				
B 3	4/3%	0-5	BSL Gr	Fr SS SP		48"			PS .3
		5-10	BRCL wmsbk	Fr SS SP					
		10-48	RBC wmsbk	Fr SS SP	+ Few organics				
B 4	4/4%	0-3	BL Gr	Fr SS SP		48"			PS .3
		3-7	BRCL wfsbk	Fr SS SP					
		7-48	RBC wmsbk	Fr SS SP					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	PS	PS
System Type(s)	PPBB	PPBB
Site LTAR	0.3	0.3

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948): B
EVALUATED BY: S. Ashley Rollins
OTHER(S) PRESENT: Chad Wagner

COMMENTS:

for ON-SITE WASTEWATER SYSTEM

APPLICATION DATE: 12-23-15
OWNER: Jeff + Stephanie Arnold
DATE EVALUATED: 12-31-15
ADDRESS: P.O. Box 832 Mooresville NC 28115
PROPERTY SIZE:
PROPOSED FACILITY: 4 BR House
PROPOSED DESIGN FLOW (.1949):
PROPERTY RECORDED: Yes
LOCATION OF SITE: 124 Birdsong Lane Mooresville, NC
WATER SUPPLY: ☒ Private ☐ Public ☐ Well ☐ Spring ☐ Other
TYPE OF WASTEWATER: ☒ Sewage ☐ Industrial Process ☐ Mixed
EVALUATION METHOD: ☒ Auger Boring ☐ Pit ☐ Cut

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
1	1 Adjacent Privacy 6%	0-5	Clay Loam Weak SBK	Slightly Firm, SS, SP, SOP	some gravels mixed BG+	48	—	—	0.3
		5-20	Clay Weak SBK	Slightly Firm, SS, SP, SOP					
		20-48+	Clay Loam Weak SBK	Slightly Firm, SS, SP, SOP					
2	Dist. Bedroom elev/pump 6%	0-25	Clay Weak SBK	Firm, Sticky, SP, SOP	—	48	—	—	0.3
		25-48	Clay Loam Weak SBK	Slightly Firm, SS, SP, SOP					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	Yes	Yes
System Type(s)	PPBPS-LP	PPBPS-LP
Site LTAR	0.3	0.3

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: Tom Shuck
OTHER(S) PRESENT:

COMMENTS: Well (existing) in proposed septic area. Must be abandoned prior to septic being installed (CAC)