

MICHAEL ATHANAS & ASSOCIATES
LICENSED SOIL SCIENTIST
361 Ennis Rd.
Weddington, NC 28173
(704) 576-3887

Reference: Data Sheet for Davidson Downes Lot 68
House Footprint: See attached plan
Building Setbacks: 35' front/rear, 15' side
Water Source: Community well
Number of Bedrooms: 4/480 GPD
Predetermined LTAR: 0.3 GPD/FT2 initial (ICHD), 0.25 GPD/FT2 repair (ICHD)
Proposed System Type: PPBPS
Proposed Repair System Type: PPBPS
Distribution: Low pressure-CVB
Flow per Orifice: 0.59 GPM
Orifice Size: 3/16"
System Flow: 37.2 GPM
Dosing Volume: 226.8 gallons
Pump Run Time: 6.1 minutes
Elevation Head: 11'
Friction Head: 2.7'
Pressure Head: 2'
Total Dynamic Head: 15.7'
Supply Line Length: 85'
Septic/Pump Tank Size: 1000/1000 gallons
Proposed Trench Bottom: 36"

Line	Design Length	# of Panels	Actual Length	Elevation
Red 1			18'	2.1'
Pink 2			44'	2.6'
Orange 3			65'	3.2'
Blue 4			82'	3.6'
Orange 5	**90'**	**21**	**90'**	**4.3'**
White 6	**90'/20'**	**21**	**115'**	**5.2'**
Red 7	**90'/35'**	**21**	**130'**	**6.2'**
Blue 8			52'	7.2'
White 9			28'	8.0'

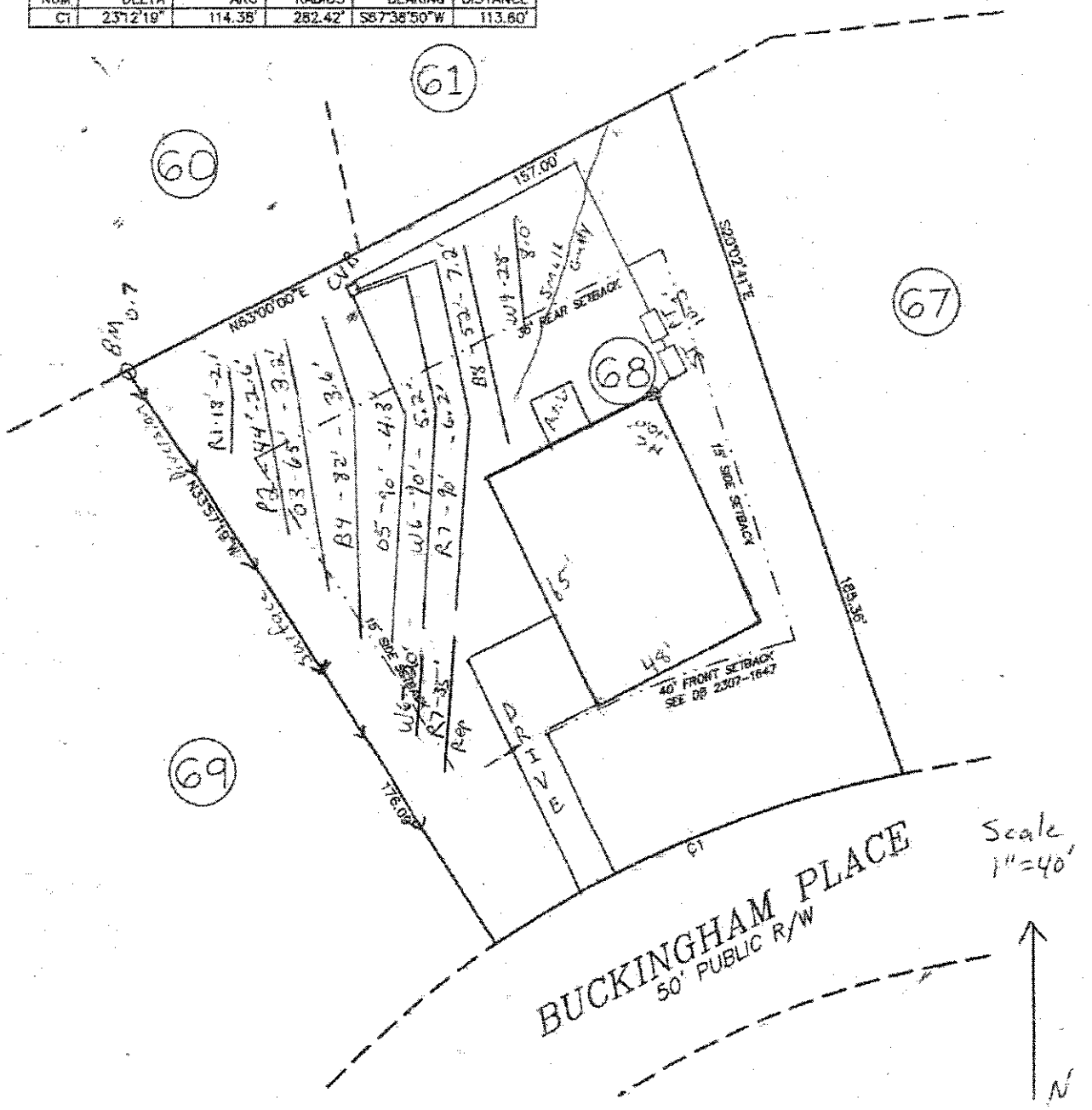
Initial System: 270' **Repair System:** 344'

Pump Tank: 10.3' **House Corner:** 10.0' **Benchmark:** 0.7'

Comments:
The purpose of this evaluation is to change the permit from a three bedroom residence to a four bedroom. The small gully at the rear of the lot should be filled.

-PRELIMINARY PLAT-
NOT FOR RECORDATION,
CONVEYANCES, OR SALES

NUM	DELTA	ARC	RADIUS	BEARING	DISTANCE
C1	23°12'19"	114.38'	282.42'	S87°38'50"W	113.60'



IREDELL COUNTY HEALTH DEPARTMENT

Statesville Office (704) 878-5305 Mooresville Office (704) 660-3625 PERMIT # 178120

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

PIN # 4654-87-7657

APPLICANT: DAVIDSON DOWNS INC. APPLICANT ADDRESS: 4643 MARINER LN. DENVER NC

SITE ADDRESS: 210 BUCKINGHAM PL. MOORESVILLE PHONE: 980-297-2787 ALT. PHONE:

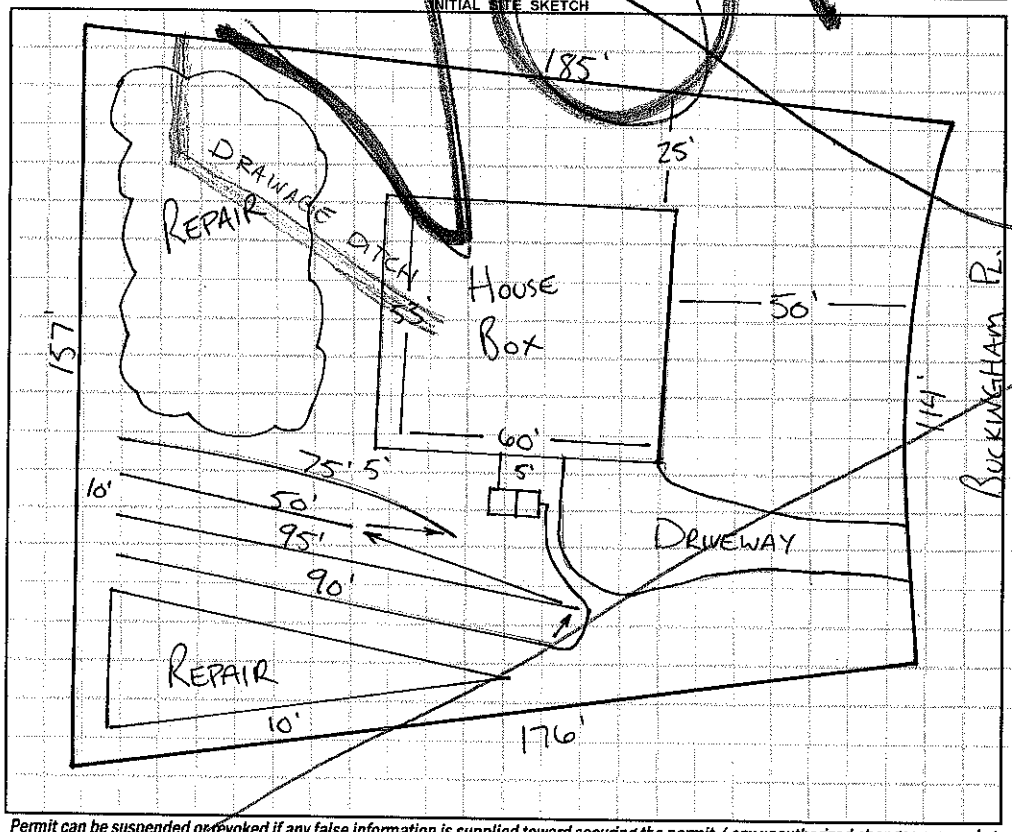
SITE DIRECTIONS: SHEARERS, TR PRESBYTERIAN, TL SINK FARM, TL BUCKINGHAM, ON L

SUBDIVISION: DAVIDSON DOWNS SECTION: LOT # 68 LOT AREA: .556 DESIGN FLOW: 360 L.T.A.R.: .3 / .25R

Septic Tank 1000 (gal)	STB	Date	☒ New System ☐ Repair ☐ Expansion System Type: I II (III) IV V VI	☒ Residence	No. Bedrooms 3	Water Supply
Pump Tank (gal)	PT	Date	System Description: 25% REDUCTION	☐ Business	No. Persons	☐ Private
Pump Make	Model	Serial #	Repair System Description: PANEL BLOCK	☐ Other	No. Employees	☐ Public
# Nitrification Fields 1	# Lines 4	Linear Ft: 300'	Maintenance Agreement Required: ☐ YES ☒ NO	☐ Slab	☒ Crawl Space	☒ Community
Trench Width 36"	Max. Trench Bottom Depth ★ 28" ★	Gravel Depth	☒ GRAVITY ☐ PRESSURE	☐ Basement w/plumbing		☐ Basement w/o plumbing

Comments / Conditions:

INITIAL SITE SKETCH



AS BUILT SKETCH

★ MUST CHECK TO SEE IF GRAVITY WILL WORK PRIOR TO AC ★

---IMPROVEMENT PERMIT ONLY---

DO NOT ISSUE BUILDING PERMIT!

DRAINAGE DITCH TO BE GRADED AWAY BEFORE INSTALL

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. **CONTACT A LOCATOR SERVICE PRIOR TO ANY EXCAVATION**

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

Owner / Applicant Signature: Date: 6-4-13 Installed by:

IMPROVEMENT PERMIT by: Date: 5-15-13 OPERATION PERMIT by: Date:

AUTHORIZATION TO CONSTRUCT by: Date: Existing System Inspected by: Date:

Health Dept. Copy - WHITE Applicant (Final Approval) - YELLOW Applicant (Conditional Approval) - PINK

10/15/2014 Revision



MICHAEL ATHANAS & ASSOCIATES
LICENSED SOIL SCIENTIST
361 Ennis Rd.
Weddington, NC 28173
(704) 576-3887

Gary 310 1832

Reference: Data Sheet for Davidson Downes Lot 68
House Footprint: See attached plan
Building Setbacks: 35' front/rear, 15' side
Water Source: Community well
Number of Bedrooms: 4/480 GPD
Predetermined LTAR: 0.3 GPD/FT2 (ICHD)
Proposed System Type: PPBPS
Proposed Repair System Type: PPBPS
Distribution: Low pressure-CVB
Flow per Orifice: 0.59 GPM
Orifice Size: 3/16"
System Flow: 37.2 GPM
Dosing Volume: 226.8 gallons
Pump Run Time: 6.1 minutes
Elevation Head: 11'
Friction Head: 2.7'
Pressure Head: 2'
Total Dynamic Head: 15.7'
Supply Line Length: 85'
Septic/Pump Tank Size: 1000/1000 gallons
Proposed Trench Bottom: 36"

REVOKED

Line	Design Length	# of Panels	Actual Length	Elevation
Red 1			18'	2.1'
Pink 2			44'	2.6'
Orange 3			65'	3.2'
Blue 4			82'	3.6'
Orange 5	**90'**	**21**	**90'**	**4.3'**
White 6	**90'**	**21**	**90'**	**5.2'**
Red 7	**90'**	**21**	**90'**	**6.2'**
Blue 8			52'	7.2'
White 9			28'	8.0'

Initial System: 270'
initial has .3 LTAR

Repair System: 289'
repair has .25 LTAR layout ammended to add at least 31' for 320' total repair

10/15/2014 Revesion

Pump Tank: 10.3' **House Corner:** 10.0' **Benchmark:** 0.7'

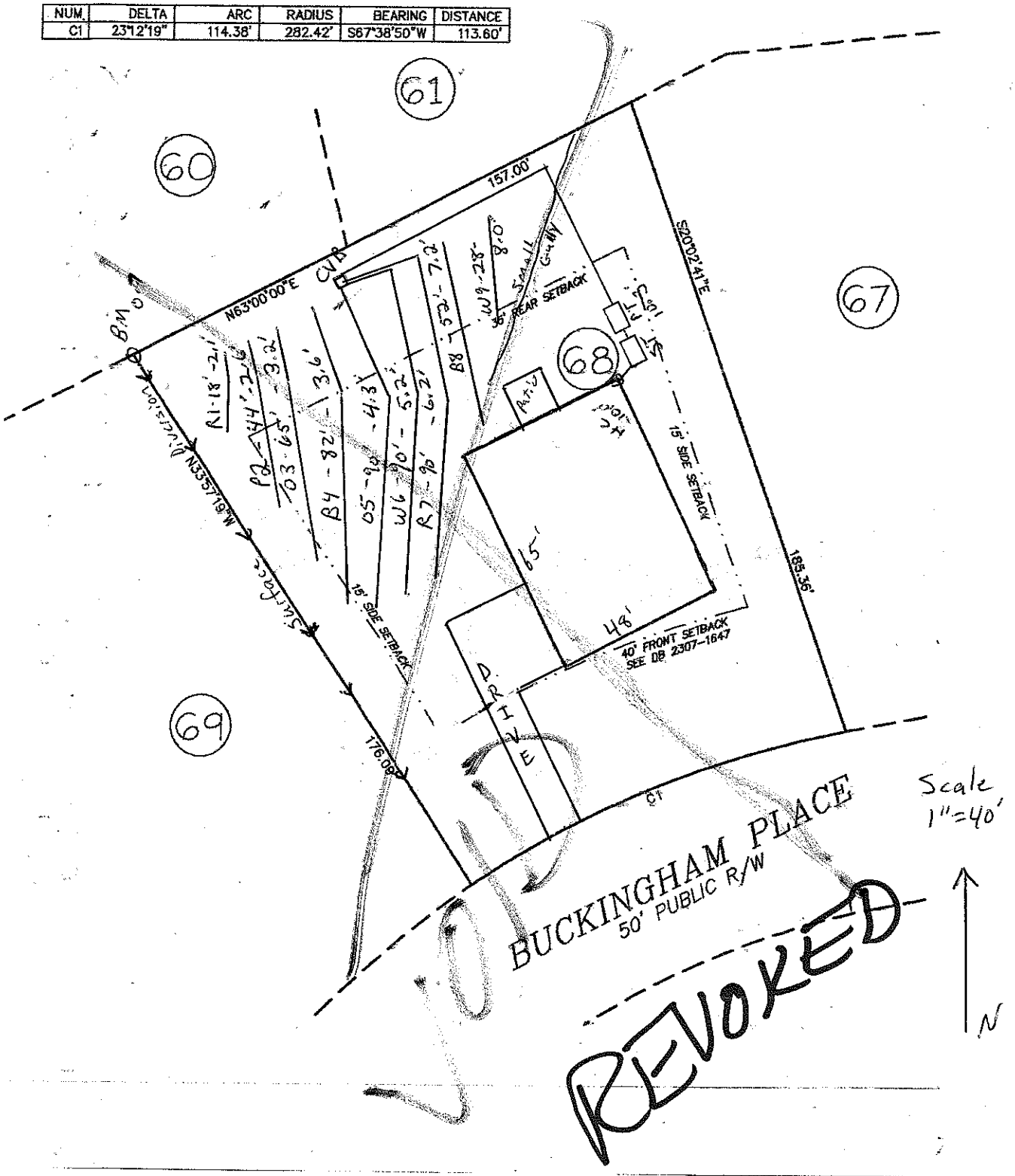
Comments:
The purpose of this evaluation is to change the permit from a three bedroom residence to a four bedroom. The small gully at the rear of the lot should be filled.

REVOKED

-PRELIMINARY PLAT-
NOT FOR RECORDATION.
CONVEYANCES. OR SALES

10/15/14 Revision

NUM.	DELTA	ARC	RADIUS	BEARING	DISTANCE
C1	23°12'19"	114.38'	282.42'	S67°38'50"W	113.60'





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Proposed System Type: PPBPS
Proposed Repair System Type: PPBPS
Distribution: Low pressure-CVB
Flow per Orifice: 0.59 GPM
Orifice Size: 3/16"
System Flow: 37.2 GPM
Dosing Volume: 226.8 gallons
Pump Run Time: 6.1 minutes
Elevation Head: 11'
Friction Head: 2.7'
Pressure Head: 2'
Total Dynamic Head: 15.7'
Supply Line Length: 85'
Septic/Pump Tank Size: 1000/1000 gallons
Proposed Trench Bottom: 36"

Line	Design Length	# of Panels	Actual Length	Elevation
Red 1			18'	2.1'
Pink 2			44'	2.6'
Orange 3			65'	3.2'
Blue 4			82'	3.6'
Orange 5	**90'**	**21**	**90'**	**4.3'**
White 6	**90'/20'**	**21**	**115'**	**5.2'**
Red 7	**90'/35'**	**21**	**130'**	**6.2'**
Blue 8			52'	7.2'
White 9			28'	8.0'

Initial System: 270' **Repair System:** 344'

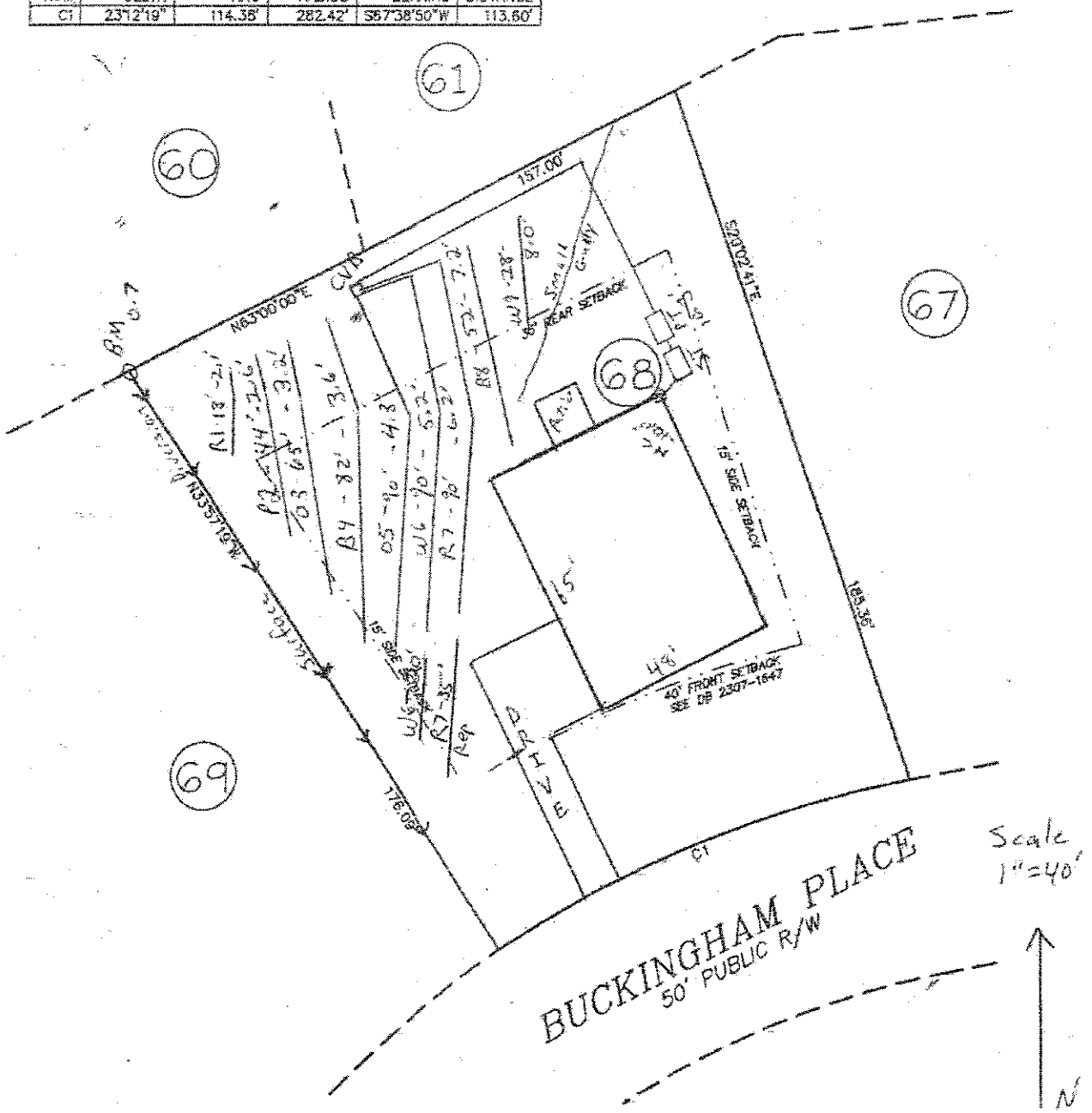
Revision recieved and approved 10/16/14

Pump Tank: 10.3' **House Corner:** 10.0' **Benchmark:** 0.7'

Comments:
The purpose of this evaluation is to change the permit from a three bedroom residence to a four bedroom. The small gully at the rear of the lot should be filled.

-PRELIMINARY PLAT-
NOT FOR RECORDATION,
CONVEYANCES, OR SALES

NUM.	DELTA	ARC	RADIUS	BEARING	DISTANCE
C1	23°12'19"	114.35'	282.42'	S67°38'50"W	113.60'



Repair layout ammendment
Received 10/16/14 addition of 20' to W-6 and 35' to R7 as repair



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LICENSED SOIL SCIENTIST
361 Ennis Rd.
Weddington, NC 28173
(704) 576-3887 Gary (704) 310 1832

VOID
REVOKED

Reference: Data Sheet for Davidson Downes Lot 68
House Footprint: See attached plan
Building Setbacks: 35' front/rear, 15' side
Water Source: Community well
Number of Bedrooms: 4/480 GPD
Proposed LTAR: 0.3 GPD/FT2 (initial-ICHD), 0.25 GPD/FT2 (repair)
Proposed System Type: PPBPS
Proposed Repair System Type: PPBPS
Distribution: Low pressure-CVB
Flow per Orifice: 0.59 GPM
Orifice Size: 3/16"
System Flow: 35.4 GPM
Dosing Volume: 216 gallons
Pump Run Time: 6.1 minutes
Elevation Head: 11'
Friction Head: 3.9'
Pressure Head: 2'
Total Dynamic Head: 16.9'
Supply Line Length: 160'
Septic/Pump Tank Size: 1000/1000 gallons
Proposed Trench Bottom: 36" (initial), 28" (repair)

Line	Design Length	# of Panels	Actual Length	Elevation
repair Red 1			18'	2.1'
repair Pink 2			44'	2.6'
Orange 3	**65'**	**15**	**66'**	**3.2'**
Blue 4	**82'**	**18**	**83'**	**3.6'**
Orange 5	**40'**	**9**	**43'**	**4.3'**
White 6	**40'**	**9**	**43'**	**5.2'**
Red 7	**40'**	**9**	**43'**	**6.2'**
repair Blue 8			40'	7.2'
repair White 9			28'	8.0'
repair Red 10			25'	5.8'
repair Pink 11			59'	6.4'

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH
ON-SITE WASTEWATER SECTION

PROPERTY ID #: 4654877657
COUNTY: Iredell

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: Crane Realty APPLICATION DATE
ADDRESS: Denver, NC DATE EVALUATED:
PROPOSED FACILITY: 4 bdrm PROPOSED DESIGN FLOW (.1949): 480 GPD PROPERTY SIZE: 0.556 AC
LOCATION OF SITE: Davidson Downes, Lot 68 PROPERTY RECORDED: 7/21/1983
WATER SUPPLY: ☐ Private ☒ Public ☒ Well ☐ Spring ☐ Other
EVALUATION METHOD: ☒ Auger Boring ☐ Pit ☐ Cut TYPE OF WASTEWATER: ☒ Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR
			.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	
1	LS 8%	0-3	Br CL WSBK	FR SS SP	N/A	48"	F-C SAP	N/A	PS 0.3
		3-28	R C SBK	FR SS SP					
		28-48	R CL WSBK	FR SS SP					
2	LS 8%	0-3	Br CL WSBK	FR SS SP	N/A	48"	F-C SAP	N/A	PS 0.3
		3-30	R C SBK	FR SS SP					
		30-48	R CL WSBK	FR SS SP					
3	LS 5%	0-12	Br SCL WSBK	FR SS SP	F-C YB	48"	N/A	N/A	PS 0.25
		12-48	R C ABK	FR SS SP					
4	LS 3%	0-19	Br SCL WSBK	FR SS SP	N/A	48"	Few SAP	N/A	PS 0.25
		19-36	YR C WSBK	FR SS SP					
		36-48	RY CL WSBK	FR SS SP					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	801 FT2	1014 FT2
System Type(s)	PPBPS	PPBPS
Site LTAR	0.3 (ICHD)	0.25

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: M A & Associates
OTHER(S) PRESENT:

COMMENTS:

Line	Design Length	# of Panels	Actual Length	Elevation
Blue 12			26'	7.1'
White 13			20'	9.4'
Pink 14			60'	9.8'
Red 15			18'	10.3'

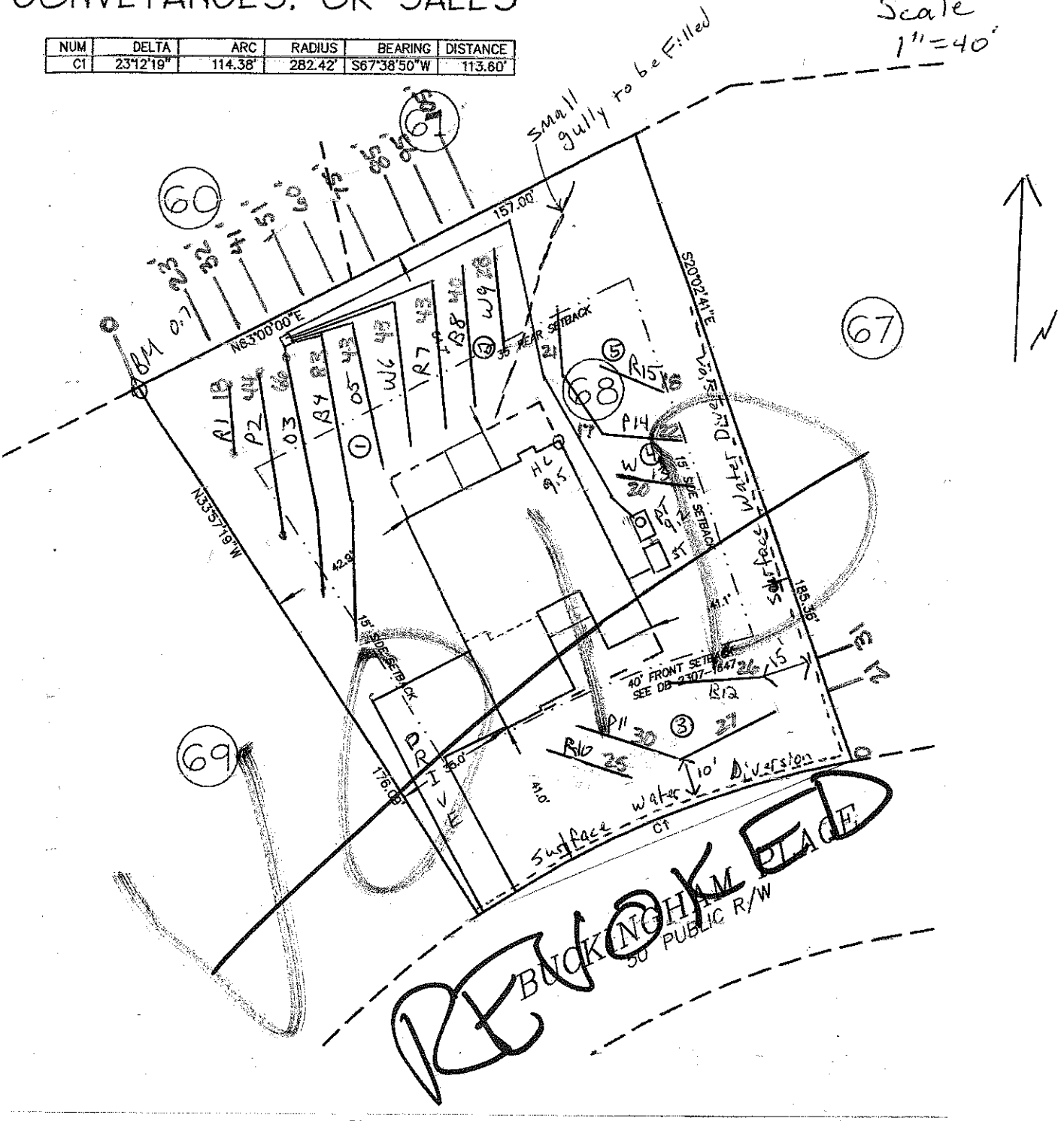
Initial System: 267' **Repair System:** 338'
Pump Tank: 9.2' **House Corner:** 9.5' **Benchmark:** 0.7'

Comments:
The purpose of this evaluation is to change the permit from a three bedroom residence to a four bedroom. A surface water diversion is required along the front and the side of the lot (see plan). The house stakes on the lot represent the outer boundaries of the house. The small gully at the rear of the lot should be filled.

VOID
REVOKED

-PRELIMINARY PLAT-
NOT FOR RECORDATION, CONVEYANCES, OR SALES

NUM	DELTA	ARC	RADIUS	BEARING	DISTANCE
C1	23°12'19"	114.38'	282.42'	S67°38'50"W	113.60'



Line	Design Length	# of Panels	Actual Length	Elevation
Red 1			18'	2.1'
Pink 2			44'	2.6'
Orange 3	**65'**	**15**	**66'**	**3.2'**
Blue 4	**82'**	**18**	**83'**	**3.6'**
Orange 5	**40'**	**9**	**43'**	**4.3'**
White 6	**40'**	**9**	**43'**	**5.2'**
Red 7	**40'**	**9**	**43'**	**6.2'**
Blue 8			40'	7.2'
White 9			28'	8.0'
Red 10			25'	5.8'
Pink 11			59'	6.4'
Blue 12			26'	7.1'
White 13			20'	9.4'
Pink 14			60'	9.8'
Red 15			18'	10.3'

DENR/DEH

ON-SITE WASTEWATER SECTION

Sheet 1 of 1
PROPERTY ID #: 4654877657
COUNTY: _____

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: Mozeley c/o Athanas and Assoc. APPLICATION DATE 9/23/14
ADDRESS: 361 Ennis Rd Weddington NC 28173 DATE EVALUATED: 10/6/14
PROPOSED FACILITY: 4 PROPOSED DESIGN FLOW (.1949): 480 PROPERTY SIZE: .556
LOCATION OF SITE: Davidson Downs lot 68 210 Buckingham PROPERTY RECORDED: _____
WATER SUPPLY: • Private • Public • (Well) • Spring • Other Community well
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	SOIL MORPHOLOGY (.1941) .1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
1	side	0-12	CL SB	fr SE	2.5YR 4/6				
		12-24	C SB	fr SE	"				
		24-48	CL + SAP BK	fr SE	"				
2	natural drainage way	0-4	CL SB	fr SE	brown				
		4-18	L/SL gr	fr SE	brown				
		18-26	L SB	fr SE	brown				
		26-34	CL SB	fr SE	2.5YR 4/6				
		34-48	C w BK	fr SE	mn conc @ 37+ 2.5YR 4/6 (7.5YR 5/6-6/4)				
3	natural drainage way	0-12	L gr	fr SE	Brown				
		12-36	C BK	fi SE	2.5YR 4/6				
		36-48	C w BK	fi SE	7.5YR 5/4 (7.5YR 6/6)				
4									

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	S	u
System Type(s)	IVa	IVa
Site LTAR	.3	

OTHER FACTORS (.1946): _____
SITE CLASSIFICATION (.1948): _____
EVALUATED BY: Farris
OTHER(S) PRESENT: _____

COMMENTS: _____

Department of Environment, Health, and Natural Resources
Division of Environmental Health
On-site Wastewater Section

Sheet: 1 OF 1
PIN #: 4654-87-7657
Lot #: 68
Permit #: 178120
AppID:

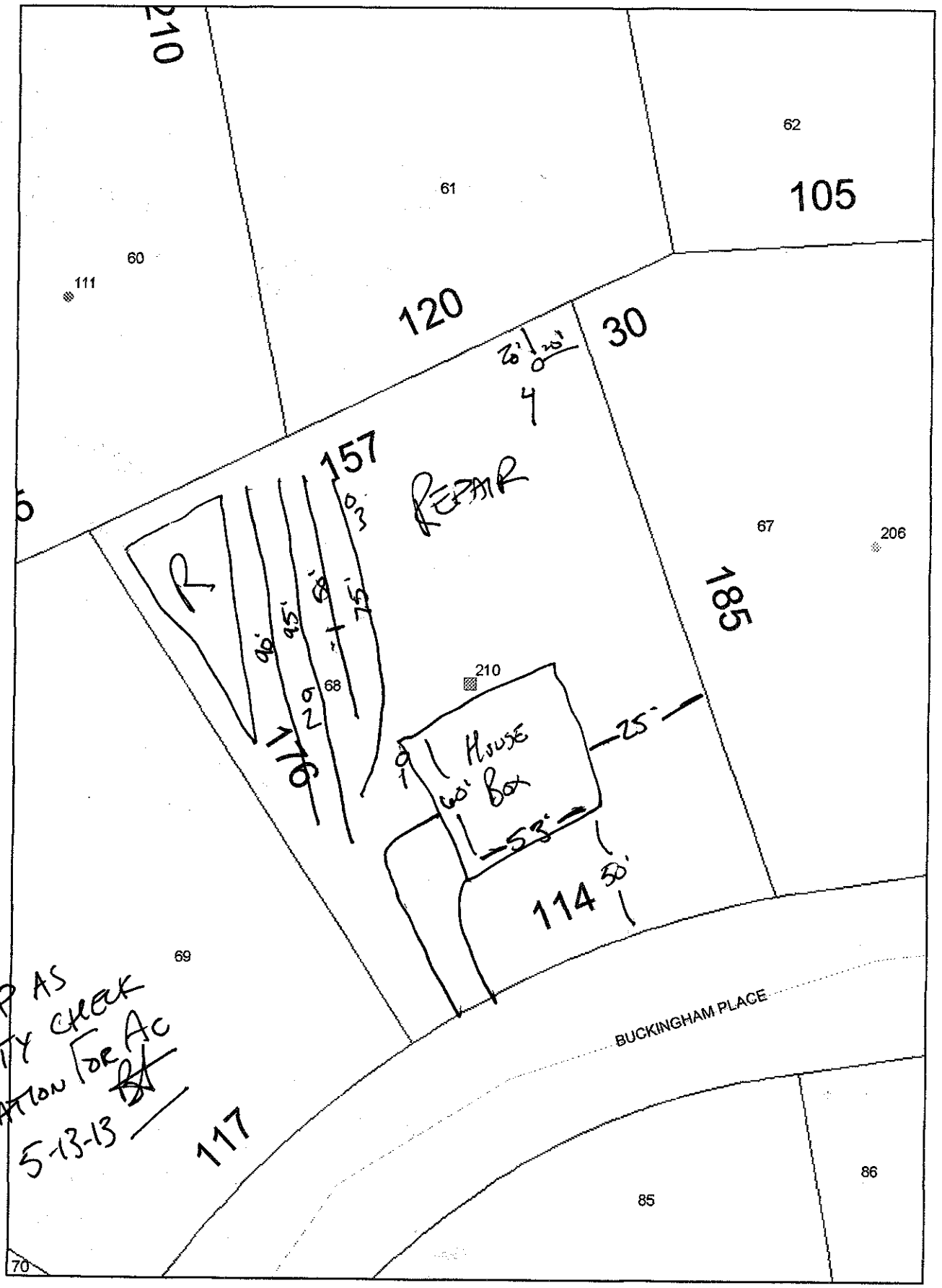
SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

Owner: DAVIDSON DOWNES INC.
Applicant: SAME
Address: 4643 MARINER LN. DENVER, NC
Date Evaluated: 5/13/2013
Proposed Facility: SFR
Design Flow (.1949) 360
Property Size: .556 AC
Location of Site: DAVIDSON DOWNES 68
Property Recorded: YES
Water Supply: [X] Public [ ] Individual [X] Well [ ] Spring [ ] Other
Evaluation Method: [X] Auger Boring [ ] Pit [ ] Cut
Type of Wastewater: [X] Sewage [ ] Industrial Process [ ] Mixed

PROFILE #	.1940 Landscape Position/ Slope%	Horizon Depth (IN.)	SOIL MORPHOLOGY .1941 Structure/ Texture	SOIL MORPHOLOGY .1941 Consistence Mineralogy	b PROFILE FACTORS .1942 Soil Wetness/ Color	.1943 Soil Depth (IN.)	.1956 Sapro Class	.1944 Restr Horiz	Profile Class & LTAR
AB 1	LINEAR 5%	0-24	SCL,W,SBK	SS	NA	48"	INC @ 40"	48+	.3
		24-40	C,W,SBK	SS					
		40-48	SC,W,SBK	SS					
AB 2	LINEAR 5%	0-36	SCL,W,SBK	SS	NA	40"	U	40"	.3 TO 40" U @ 40+
		36-40	SC,W,SBK	SS					
		40-48	CSAP,MASS	STICKEY					
AB 3	LINEAR 5%	0-24	C,M,SBK	SS	NA	24"	S	48+	.35
		24-48	SLSAP	SS					
AB 4	LINEAR 5%	0-18	SCL,W,SBK	SS	YELLOW	48"	NA	48+	.3 TP 36" .2 @ 36"
		18-36	C,M,SBK	SS					
		36-48	SC,W,SBK	STICKEY					

Description	Initial System	Repair System
Available Space (.1945)	PS	PS
System Type(s)	G-25%	SAME
Site LTAR	.3	.3

Other Factors (.1946):
Soil Evaluation By: BEN ALDRIDGE
Others Present: CHRIS MOZELY
Site Classification (.1948): PS
Site Evaluation By: BEN ALDRIDGE
Others Present: CHRIS MOZELY


62
105
61
60
111
120
30
157
REPAIR
67
206
185
210
68
House
60' Box
25'
53'
114
50'
69
BUCKINGHAM PLACE
117
86
85
70
DRAW IP AS GRAVITY CHECK ELEVATION FOR AC
5-13-13

AB1

0-24 SCLWSBK SS

24-40 CWSBK SS

40-48 SCWSBK SS SAP INC

AB2

0-36 SCLWSBK .3 TO 40"

34-40 SC WSBK

40-48 CSAP @ 040'

AB3

0-24 C MSBK .35

24-48 SCSAP

AB4

0-18 SCLWSBK .3 TO 36"

18-36 CMSBK

36-48 YELLOW SCWSBK STICKEY .2 36"+