IREDELL COUNTY HEALTH DEPARTMENT

STATESVILLE 704-878-5305 (at) MOORESVILLE 704-664-5281

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

PERMIT# 147760 PIN# ~~4761594113.000~~ 4761594113.000 DATE 1-17-08

OWNER OR APPLICANT ABMS DEVELOPMENT, INC PHONE: Business 704-202-5791 Home 704-664-1029

ADDRESS 111B RACEWAY DRIVE MOORESVILLE, NC 28117

LOCATION US 70 EAST, TR1 BETHESDA ROAD, TL NORTHLAKE DR, LOT AT END ON RIGHT

SUBDIVISION NORTHLAKE BLOCK / SECTION ____ LOT 6 LOT AREA 0.51 ACRE SITE CLASS. PS DESIGN FLOW 480 L.T.A.R. 0.25 GPD/FT²

Septic Tank: 1000 Gallons: STB 312 Date 10-8-07

Pump Tank: 1000 Gallons: PT 27 Date 1-29-08

Pump Make. Cavco Model EQ-480312 Serial No. V3haae

Nitrification Field: No. Fields 1 Square Feet 1600 Linear Feet 330

No Lines FOUR Trench Width (36") Max Trench Bottom Depth 36" Min. Depth 24"

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

System Description: 50% REDUCTION, LOW PRESSURE

Repair System Description: 50% REDUCTION, LOW PRESSURE

Maintenance Agreement Required: ☑ Yes ☐ No

☑ House/Mod. Home ☐ Mobile Home ☐ Business ☐ Other

No. Bedrooms 4 No. Persons ____ No. Employees ____

Water Supply: ☐ Individual ☑ Public ☐ Community

☐ Gravity ☑ Pressure ☐ Slab ☑ Crawl Space ☐ Basement w/plumbing ☐ Basement wo/plumbing

Comments./Conditions: ① INSTALL 50% REDUCTION SYSTEM USING 76 PPBPS PANELS WITH LOW PRESSURE DISTRIBUTION ② A CONTRACT SHALL BE EXECUTED BETWEEN SYSTEM OWNER & A MANAGEMENT ENTITY PRIOR TO ISSUANCE OF O.P.

INITIAL SITE SKETCH

SEE ATTACHED "FAST TRACK" SITE PLAN PREPARED BY ROWANS SOIL & ENVIRONMENTAL SERVICES, INC PROJECT #: 01-1391

Comments./Conditions: Blue Poly Tank Poly Tank Septic Riser Pump Riser 3 Bedroom Home

AS BUILT SKETCH

Installed As Designed.

Maintenance contract Attached

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 site plan valid for sixty months ☑ Authorization to Construct is valid for a period equal to that of Improvement Permit – not to exceed sixty months.

Signed: _____ date 1/17/08 Installed by: _____

Improvement Permit by: STEVE HENDRICK date 1-17-08 Operation Permit by: _____, RS date 27 June 08

Authorization to Construct by: STEVE HENDRICK date 1-17-08 Existing System Inspection by: _____ date _____

HEALTH DEPT. COPY: WHITE OWNER COPY (FINAL): YELLOW OWNER COPY (INITIAL): PINK

ROLLANS *Soil & Environmental Services, Inc.*

470 North Broad St., Suite D, Mooresville, NC 28115 Phone: (704) 658-1723 Fax: (704) 658-1724

Ashley Rollans, NC Licensed Soil Scientist
Mobile: (704) 746-5046
E-mail: Rollansfortcj@aol.com

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

Attached is a proposed design for a PPBPS Septic System with low pressure distribution for a 4 bedroom single family residence on Lot #61 in Northlake Subdivision, Iredell County, North Carolina.

Contents: **Page**

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

Design Information
- Design Specifications---------- 2-3
- Layout Specifications---------- 4
- System Tapsheet---------- 5

Site Plan/System Plan---------- 6-7

Calculations---------- 8

Profile Descriptions---------- 9

January 14, 2008
Project #: 01-1391
Design By: Rollans Soil & Environmental Services

LP PPBPS SYSTEM
FOR WASTEWATER TREATMENT

Owner/Applicant:	ABMS Development, Inc
Address:	111-B Raceway Drive Mooresville, NC 28117
Phone:	704-664-7029
County:	Iredell
Location:	Northlake LOT #61
Source of Wastewater Flow:	4 Bedroom Single Family Residence
Estimated Gallons Per Day Flow:	480
System Flow:	31.16

Design Specifications

Drainfield Size:	330
Loading Rate (gpd/ft.^{2}):	0.25
Depth of Gravel in Trench:	NA (PPBPS)
Gravel Size:	NA (PPBPS)
Trench Depth:	36 in.
Trench Width:	36 in.
Septic Tank Size:	1000
Pump Tank Size:	1000
Estimated Supply Line Length:	27
Supply Line Diameter:	2 in. SCH 40 PVC
Supply Line Volume:	4.70
Dosing Volume:	183.31
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:	0.64
Elevation Head:	8.70
Total Dynamic Head:	13.04
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

Northlake LOT #61

LP PPBPS

DESIGN FLOW (gpd):	480
SOIL APPLICATION RATE (gpd/ft.^{2}):	0.25
TOTAL AREA TRENCH BOTTOM:	990
TOTAL LATERAL LENGTH:	330
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	320
SUPPLY LINE LENGTH:	27
TOTAL DYNAMIC HEAD:	13.04
MANIFOLD SIZE:	N/A
DOSING VOLUME:	183.31
PUMP TANK DRAW DOWN*:	8.7
SEPTIC TANK SIZE:	1000
PUMP TANK SIZE:	1000

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

Northlake LOT #61

Project #: 01-1391

LAYOUT FOR 4 BEDROOM HOME — January 14, 2008

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		7.8			100.00		
INSTR. 1			107.80				
HOUSE CNR				9.50	98.30		
P. TANK				10.90	96.90		
1	RED			3.30	104.50	31	31
2	ORANGE			4.70	103.10	53	53
3	PINK			5.80	102.00	75	75
4	***RED***			***7.20***	***100.60***	***95***	***90***
5	***ORANGE***			***8.50***	***99.30***	***105***	***100***
6	***PINK***			***9.80***	***98.00***	***102***	***100***
7	RED			11.30	96.50	50	50
7	***RED***			***11.30***	***96.50***	***40***	***40***
8	ORANGE			12.50	95.30	65	65
9	PINK			13.80	94.00	40	40
10	RED			15.20	92.60	20	20
					Total	676	664

	LINE LENGTH	LTAR GPD/FT2	SYSTEM TYPE	SOIL LTAR GPD/FT2	TRENCH SYSTEM	DISTRIBUTION
****System***	***330***	***0.25***	***MOD.***	***0.25***	***PPBPS***	***LOW PRESSURE***
Repair	334	0.25	MOD.	0.25	PPBPS	LOW PRESSURE

Notes:
** TBM located top of ground at EIP at corner 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

LP PPBPS TAPSHEET -NORTHLAKE LOT#61

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/hole	Trench Area	Number of Panels
4	*RED*	100.6	*90*	0.156	**0.41**	270	21
5	*ORANGE*	99.3	*100*	0.156	**0.41**	300	23
6	*PINK*	98.0	*100*	0.156	**0.41**	300	23
7	*RED*	96.5	*40*	0.156	**0.41**	120	9
							76
	total	**feet =**	**330**	**gal/min =**	**31.16**		

Des. Flow	**480**
Pump Run=	**5.88**
soil LTAR	**0.25**
LTAR +5%	**0.2625**
LTAR with mod.	**0.5**
LTAR with mod.. + 5%	**0.525**

.156 equals 5/32 inch hole

CALCULATIONS

Location Northlake

Project Number 01-1391

Lot No: Lot 61

No. of Bedrooms	4	
Design Flow	480	$^{gal}/_{day}$
LTAR	0.250	$^{gal}/_{ft^2\,day}$
PPBPS? (YES OR NO)	YES	
Supply Line Length	27	ft.
Supply Line Volume	4.698	gal.
Required Feet of Line	320	ft.
Amount of Line from Layout	330	ft.
Gallons per Minute	31.16	$^{gal}/_{min}$
Required Septic Tank Capacity	1000	gal.
Minimum Standard Tank Size	1000	
Panel Volume	3.6	gal.
# of Panels	76	
Dosing Volume	183.31	gal.
	Note: Dosing Volume based on 67% of # of panels times 3.6 gal/panel	
Tank Draw Down	8.7	*Generic Draw Down of 21 gal.per in.*
Pump Run Time	5.88	minutes
Elevation Head	8.70	ft.
Pressure Head	2	ft.
Friction Factor	2.37	ft./100 ft. *(From the interpolater.)*
Friction Head	0.64	ft.
Total Dynamic Head (+15%)	13.04	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

Iredell County
ZONING PERMIT

227 South Center St. PO Box 788 Statesville, NC 28687 Phone 704-878-3118

Call Sanitarian between 8 a.m. & 9 a.m. Statesville 704-878-5305 Mooresville 704-664-5281

Permit #:	147760ZO	Subdivision:	Northlake
Proposed Use:	Single Family	Township:	1300 Chambersburg
Location of Property:	000 Northlake Dr. Statesville NC 28677		
Parcel #:	4761596551.061	Zoning:	RA
Lot #:	61 Size: .51	Flood Plain:	No Watershed: None
Applicant:	ABMS Development, LLC	Owner:	ABMS Development, LLC
Address:	111-B Raceway Drive MOORESVILLE NC 28117	Address:	111-B Raceway Drive MOORESVILLE, NC 28117
Phone:		Phone:	
Property Recorded:	No Site Plan Reviewed:	Community Water:	Yes Community Sewer:

If permitted the following minimum requirements must be met, unless Health Department requires more land area, or other qualifications are indicated in the comments.

Min. Lot Area: 20000 Min. Front Yard: 35 ft Min. Left Side Yard: 15 ft

Min. Lot Width: 100 Min: Rear Yard: 35 ft Min: Right Side Yard: 15 ft

Min. Number Parking Spaces: Max. Built Upon Area:

Comments:

Hold building permit until plat is recorded.

Directions:

21S, left on Ostwalt Amity Rd, left on Bethesda Rd, right on Northlake Dr, on the right

FEES

Zoning Permit/Inspection Fee	☑	$45.00
Site Plan Review Fee	☐	$0.00
Environmental Health New System	☑	$275.00
Environmental Health Existing System	☐	$0.00
Total Fees:		$320.00

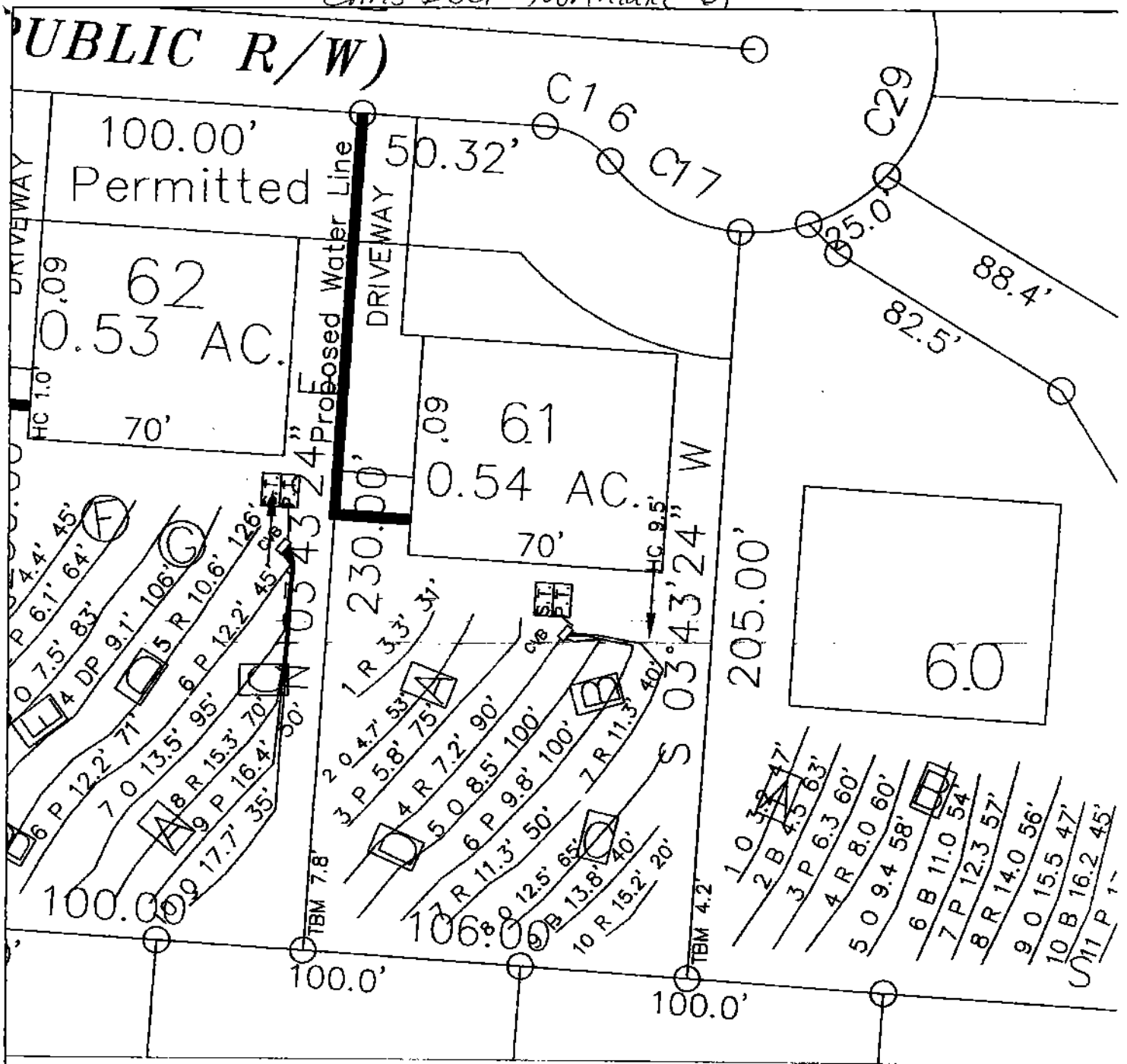
I certify that all statements made in this application and any attached documents are true, complete, and correct to the best of my knowledge and belief and are made in good faith. I understand that false information may be grounds for rejection of this application. Authorized Health Department and Planning & Enforcement Representatives are granted right of entry to make evaluations or inspections and to release information upon public request.

Applicant:_____ Date: _____

A non-refundable fee of $45.00 is charged on all permit applications.

STEPHANIE WHITLOCK Printed: 1/7/2008

Chris Ebel - Northlake 61



ROLLANS SOIL & ENVIRONMENTAL SERVICES
420 NORTH BROAD STREET SUITE D
MOORESVILLE, NC 28115
PHONE: (704) 658-1723

MAP TITLE: SITE PLAN & DRAINFIELD AREAS
PROJECT NAME: NORTHLAKE SUBDIVISION
LOCATION/DATE: IREDELL RD IREDELL COUNTY, NORTH CAROLINA
JOB #: 01-1301
FILE: C:\JOBS\01-130
PROJECT MGR.: A.L.P.
FIELD WORK: A.L.P.

IREDELL COUNTY HEALTH DEPARTMENT

Application For Improvement Permit and/or Authorization To Construct, Existing System Inspection

(THE ABOVE PERMIT DOCUMENTS WILL BECOME INVALID IF INFORMATION PROVIDED ON THIS APPLICATION IS FALSIFIED OR CHANGED, OR IF THE SITE IS ALTERED. THE IMPROVEMENT PERMIT IS VALID FOR EITHER 60 MONTHS OR WITHOUT EXPIRATION DEPENDING UPON DOCUMENTATION SUBMITTED - APPLICATION WITH SITE PLAN 60 MONTHS, APPLICATION WITH COMPLETE, SCALED PLAT WITHOUT EXPIRATION. SEE 15A NCAC 18A .1937(f) FOR DETAILS)

1. APPLICATION FOR: ✓ Improvement Permit ___Authorization To Construct ___BOTH ___Existing System Inspection

2. Page 2: *Site Plan Worksheet* Form MUST Accompany This Application
   The following optional attachments may also be submitted: ✓ Survey Plat, Scaled no more than 1 Inch = 60 Feet
   Place check ( ) beside whichever is submitted if applicable ✓ Custom Site Plan, Scaled no more than 1 Inch = 60 Feet

3. **Applicant Information:**

Applicant Name	Mailing Address	Home Phone	Work Phone
ABMS Development, Inc	111-B Raceway Dr. Mooresville, NC 28117		(704) 664-2029
Owner Name	Mailing Address	Home Phone	Work Phone
Same			

4. **Property Information:**

Street Address	Subdivision Name	Section/Phase and Lot Number
	Northlake	Lot 61

Driving Directions: Same as Zoning Permit

****

5. **RESIDENTIAL Site Development Information:** *(Check or Complete ALL that apply)*

(X) New, Single Family Residence
( ) New, Multi-Family Residence
( ) Expansion of Existing Septic System
( ) Repair To Failing Septic System

Maximum Number of Bedrooms 4
Maximum Number of Occupants 8
If Expansion, Current Number of Bedrooms ___

(✓) Crawl Space Foundation?
( ) Concrete Slab Foundation?
( ) Basement w/Plumbing?
( ) Basement w/out Plumbing?

IF Non- Residential Site Development: Type of Business ___
Square Footage of Building ___
Maximum Number of Employees ___
Maximum Number of Seats ___

****

6. **Proposed Water Supply:**

( ) New Well ( ) Existing Well (X) Community Well (X) City Water ( ) Other Public Water

****

7. **Desired Septic System Type:** *(You may rank in order of preference, if any)*

( ) Alternative ( ) Conventional ( ) Innovative ( ) Modified Conventional ( ) Other ___ (X) No Preference

****

8. **Please Answer The Following To The Best of Your Ability:**

( ) Yes (X) No Does the site contain any jurisdictional wetlands?
( ) Yes (X) No Is any non-domestic sewage (i.e. industry) to be generated?
( ) Yes (X) No Is the site subject to approval by any other public agency?

****

I have read this application and certify that the information provided herein is true, complete, and correct. Authorized county and state officials are granted right of entry to conduct necessary inspections to determine compliance with applicable laws and rules. I understand that I am solely responsible for the proper identification and labeling of all property lines and corners and making the site accessible so that a complete site evaluation can be performed.

9. Signature: Glen L. Pruitt — 12/12/07

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

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:

- ✓ Property Line measurements are clearly identified…
- ✓ 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*
- ✓ Front and side setbacks from property line…
- ✓ Preferred driveway location and configuration, preferred well location…
- ✓ Area you prefer your septic system to be placed…
- ✓ North arrow, or other sufficient indicator of direction…

Circle N/A on the following if appropriate:

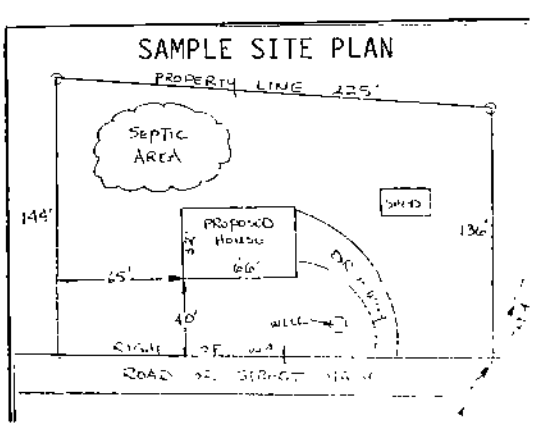
- ____ Location of septic systems and wells within 100' of your property… (N/A)
- ____ Location of easements and rights of ways on your property… (N/A)
- ____ Location of any designated wetlands on the property… (N/A)

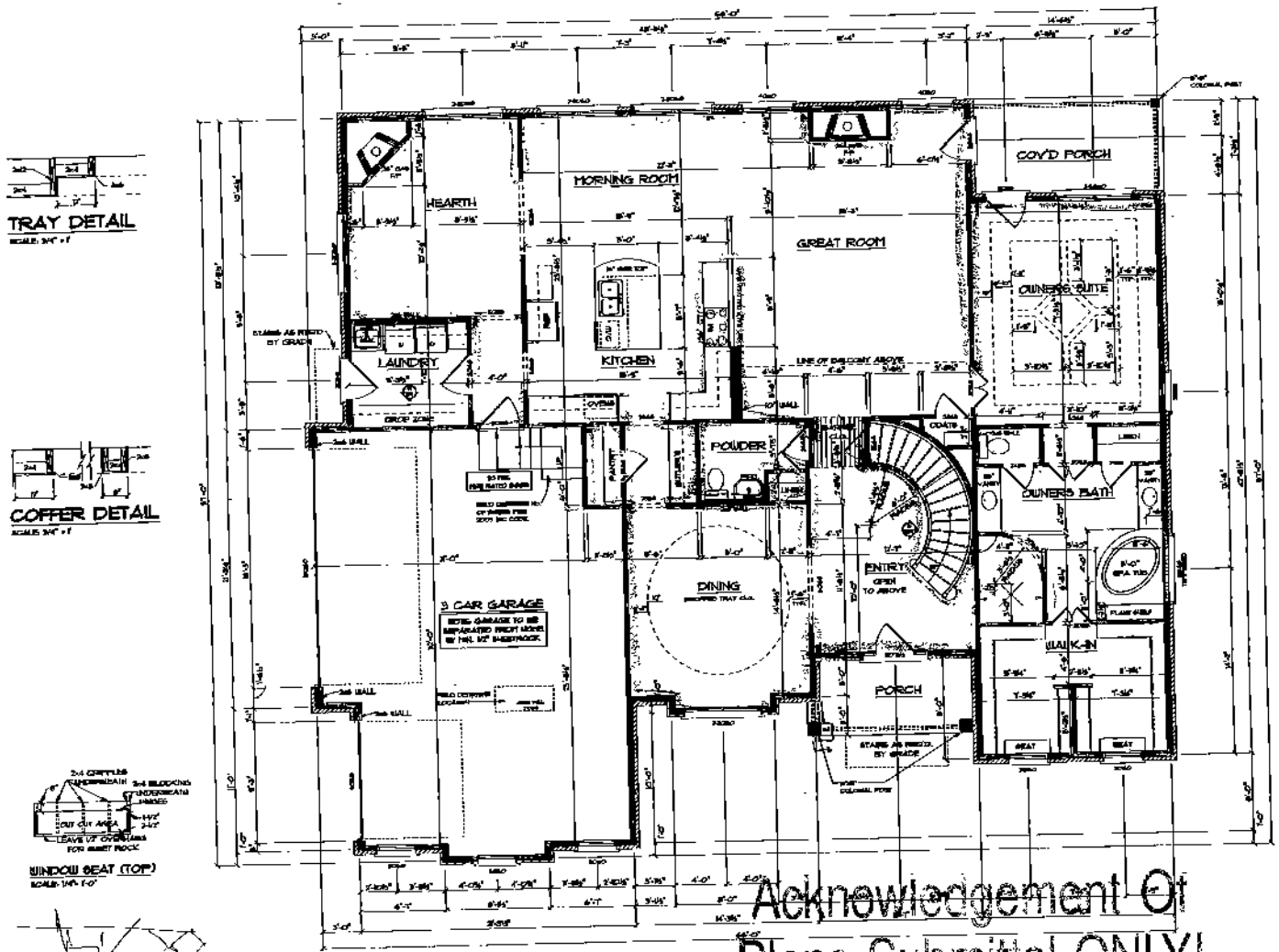
Signature: [signature] 12/12/07

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

USE THIS SPACE TO DRAW YOUR SITE PLAN

See Attached Site Plan.





TRAY DETAIL

COFFER DETAIL

WINDOW SEAT (TOP)

FIRST FLOOR WALLS

FLOOR SYSTEM

TUB DECK SECTION (TYP.)

TUB DECK DETAIL (TOP)

Acknowledgement Of
Plans Submittal ONLY!
STEVE HEDRICK Date 1-17-08
Date 1-17-08

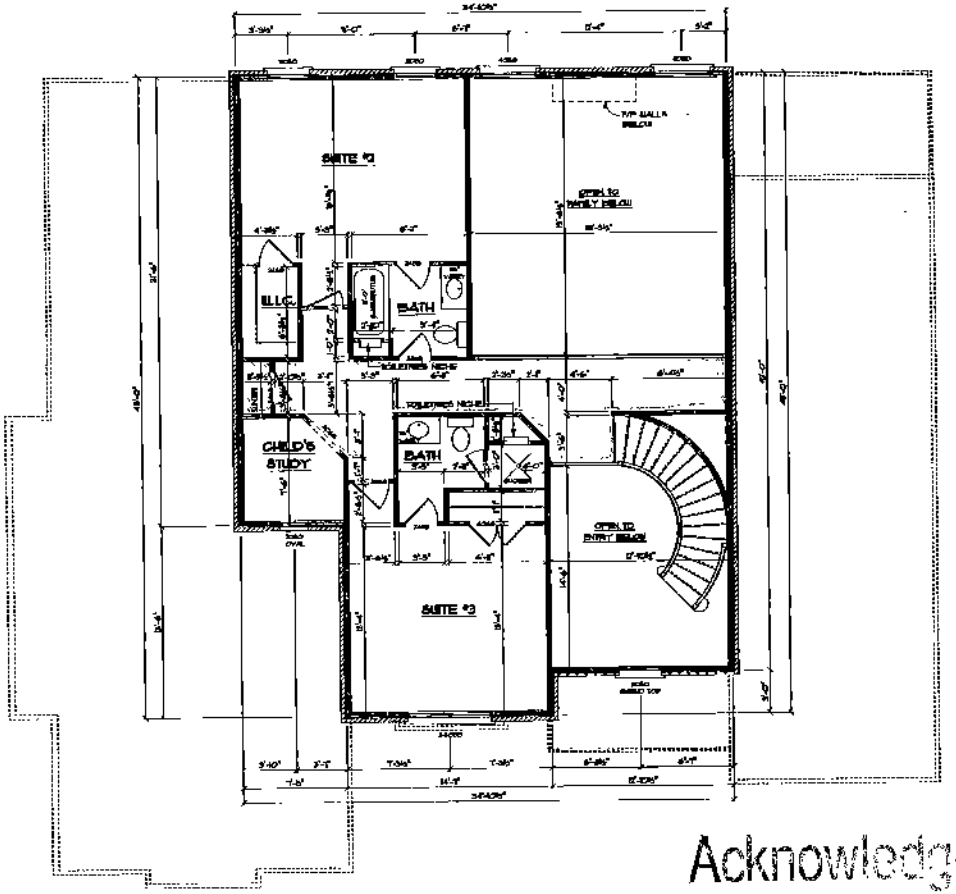
SQ FOOTAGE	
FIRST FLOOR	2552
SECOND FLOOR	854
TOTAL HEATED	3206
OPT. BONUS ROOM	361
3 CAR GARAGE	736
FRONT PORCH	72
COVERED PORCH	105
TOTAL UNDER ROOF	4472

First Floor Wall Plan
Regatta Plan

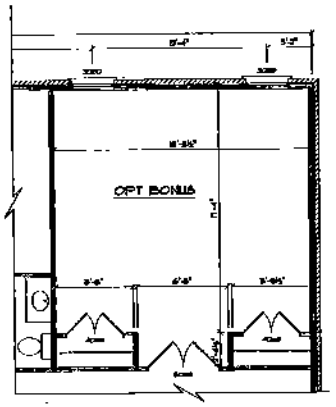
Sheet 1

LOT 61

* Reverse



SECOND FLOOR WALLS



OPTIONAL BONUS

Acknowledgement Of
Plans Submittal ONLY!
STEVE HENRICK Date 1-17-08
Date 1-17-08

Second Floor Wall Plan
Regatta Plan

Sheet
2

* Reverse

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

Sheet 1 of 1
PROPERTY ID #: 4761576551.00
COUNTY: Iredell

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: ABMS Development, Inc
ADDRESS: 111-B Raceway Drive Mooresville, NC 28117
PROPOSED FACILITY: 4BRM
PROPOSED DESIGN FLOW (.1949): 480
LOCATION OF SITE: Northlake Subdivision Lot 61
WATER SUPPLY: ☒ Private ☐ Public ☐ Well ☐ Spring ☐ Other Community Water / Public water
EVALUATION METHOD: ☐ Auger Boring ☒ Pit ☐ Cut
APPLICATION DATE: 12/07
DATE EVALUATED: 11/07
PROPERTY SIZE: 0.51 ac
PROPERTY RECORDED: yes
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
P 61 A	SS 10-15%	0-20	B SL Gr	SS,SP,Fr SExP	—	44"	PS	—	PS
		20-31	R C WFSBk	SS,SP,Fr SExP					
		31-44	R CL WFSBk	SS,SP,Fr SExP	com/many Sap				.275
		44-60	Var. SL Saphess	SS,SP,Fr SExP	com/many R CL incl.				
P 61 B	SS 10-15%	0-9	B SL Gr	SS,SP,Fr SExP	—	53"	—	—	PS
		9-41	R C WFSBk	SS,SP,Fr SExP	few Sap				
		41-53	R CL WFSBk	SS,SP,Fr SExP	com. Sap 36"-53" 30% WR/Rock incl.				.25
P 61 C	SS 10-15%	0-18	B SL Gr	SS,SP,Fr SExP	—	36"	PS	—	PS
		18-34	R B C WFSBk	SS,SP,Fr SExP	few Sap				
		34-36	R Y SCL WFSBk	SS,SP,Fr SExP	many Sap				.25
		36-50	Var. SL Saphess	SS,SP,Fr SExP	com R Clyk veins & incl.				
		50-68	Var. LS Saphess	NS,NP,Fr NExP	few WR, com Course Sap				
P 61 D	SS 10-15%	0-15	B SL Gr	SS,SP,Fr SExP	—	35"	PS	—	PS
		15-24	R C WFSBk	SS,SP,Fr SExP					
		24-35	R Y CL WFSBk	SS,SP,Fr SExP	com. Sap				.275
		35-72	Var. SL Saphess	SS,SP,Fr-Fr SExP	many R CL incl.				

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	PS	PS
System Type(s)	LP PBBPS	LP PPBPS
Site LTAR	.25	.25

OTHER FACTORS (.1946): None
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: Adrian Pruett
OTHER(S) PRESENT:

COMMENTS: