IREDELL COUNTY HEALTH DEPARTMENT

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

PIN # 4627615548

APPLICANT/OWNER: Harris Construction Group | APPLICANT ADDRESS: 9935 D Rea Rd #210 Charlotte, NC 28277

SITE ADDRESS: 312 Grasshopper Circle, Mooresville, NC 28117 | PHONE: 7042023797 | ALT. PHONE

SITE DIRECTIONS: Brawley School Rd TR McKendree TR Grasshopper TL fork on right | SAP CONTROLLED: ☒ YES ☐ NO

SUBDIVISION: The Farms | SECTION: 5 | LOT # 606 | LOT AREA: .889 Ac | DESIGN FLOW: 480 gpd | L.T.A.R.: .2

Septic Tank: 1500 (gal) | STB 338 | Date 1-9-17

Pump Tank: 1000 (gal) | PT 27 | Date 10-5-13

Pump Make: Myers | Model ME752L | Serial #

Nitrification Fields: 1 | # Lines 6 | Linear Ft: 600

Trench Width: 36 | Trench Bottom Depth(Low side) 24" | Gravel Depth N/A

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

System Description: Offsite Pump-25% Reduction

Repair System Description: TS-LD rip

Maintenance Agreement Required: ☐ YES ☒ NO

☐ GRAVITY ☒ PRESSURE

☒ Residence ☐ Business ☐ Other ☐ Slab ☐ Basement w/plumbing

No. Bedrooms: 4 | No. Persons: 8 | No. Employees | ☒ Crawl Space

Water Supply: ☐ Private ☐ Public ☒ Community

☐ Basement w/o plumbing

Comments / Conditions:
* See Specs. for Crescent Communities

Revisions to Site plan to include detached garage.

INITIAL SITE SKETCH

See attached Site drawing dated 5-17-17

AS BUILT SKETCH

* Tanks checked on 6-21-17 KW
* Electrical checked on 7/27/2017 M.A.D.

	Date	Initials
Drain Lines Checked	6-29-17	MD
Tanks Checked	6-21-17	KW
Pressure Manifold or Valve Box Checked 29#	6-30-17	MD
Pressure Head Set	6-30-17	MD
Electrical Checked	7/27/17	MAD
Floats Set	6-30-17	MD
Alarm Checked	6-30-17	MD
Maintenance Contract Y / N		
Comments: 6/30/17 Still needs Elect. Checked		

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: [signature] Date: 6/7/2017

IMPROVEMENT PERMIT by: Marian Dotson Date: 6/12/17

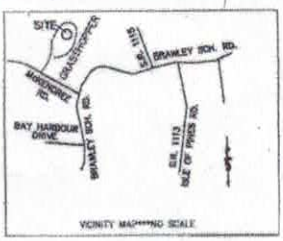
AUTHORIZATION TO CONSTRUCT by: Marian Dotson Date: 6/12/17

Installed by: Stanley Septic

OPERATION PERMIT by: [signature] Date: 7/27/2017

Existing System Inspected by: Date:

New Site Plan

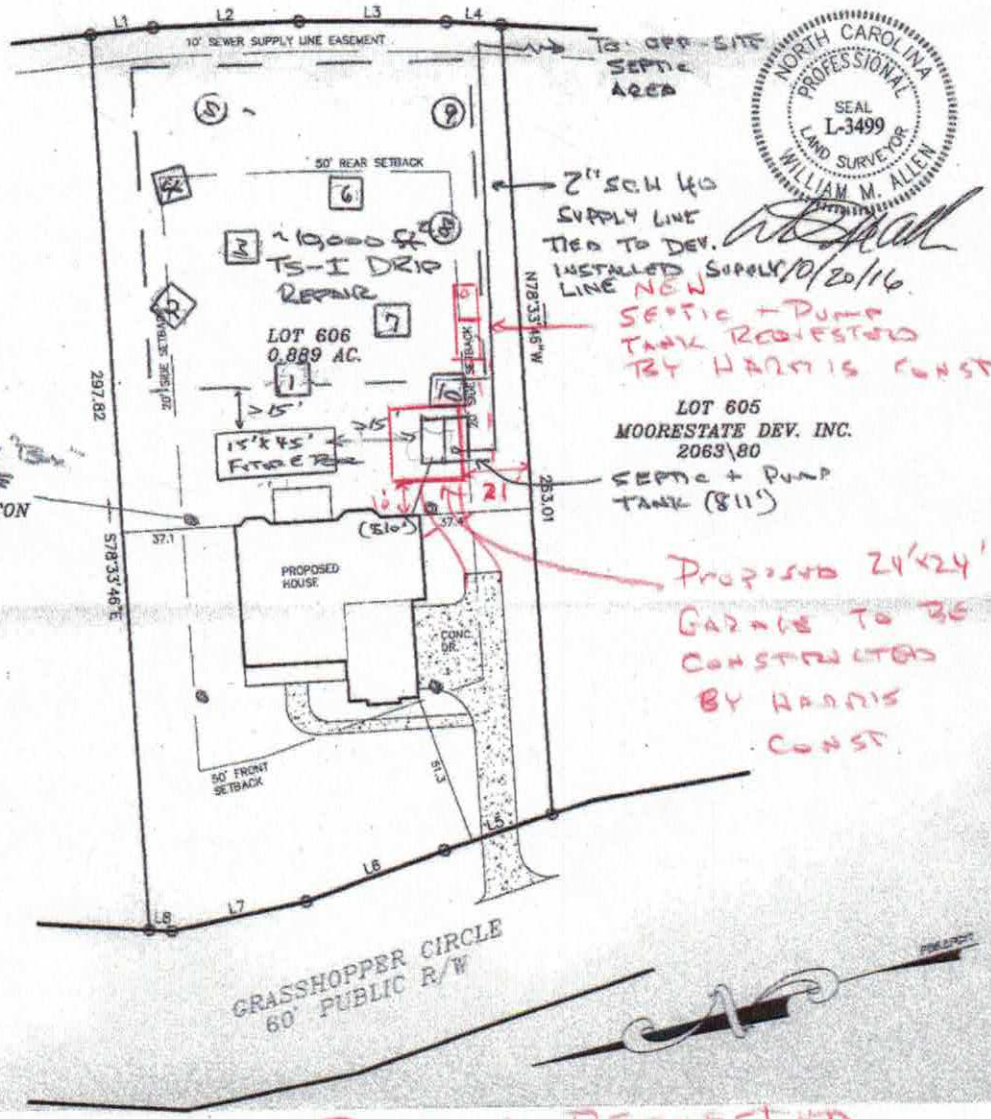


LINE TABLE		
LINE	BEARING	LENGTH
L1	S 08°10'05" W	20.69'
L2	S 12°18'28" W	48.34'
L3	S 14°51'38" W	48.96'
L4	S 17°47'41" W	18.08'
L5	N 03°59'34" W	37.71'
L6	N 05°15'21" W	48.97'
L7	N 02°30'38" E	45.74'
L8	N 18°08'26" E	7.44'

Approved MD 6/12/17

NOTES
1) THIS PROPERTY MAY BE SUBJECT TO ANY EASEMENTS AND/OR RIGHTS OF WAY OF RECORD.
2) ACREAGE COMPUTED BY THE COORDINATE METHOD.
3) UNDERGROUND POWER
4) NO GRID MONUMENT FOUND WITHIN 2000 FEET.
5) PARCEL # 4627615548
6) DEED REF. BOOK 2424 PAGE 845
7) PLAT BOOK 52 PAGE 16
8) ADDRESS 312 GRASSHOPPER CIR.

GRASSHOPPER CIRCLE
60' PUBLIC R/W



NORTH CAROLINA PROFESSIONAL SEAL L-3499 LAND SURVEYOR WILLIAM M. ALLEN

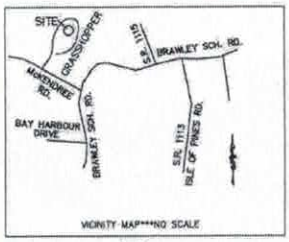
5-17-18 REVISION REQUESTED BY HARRIS CONST.

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

PLOT PLAN
OF
LOT 606 THE FARMS PHASE 5 MAP 2
DAVIDSON TWSP., IREDELL CO., N.C.
SCALE = 1" = 40' DATE: OCT. 14, 2016
UPDATED: OCT. 20, 2016 (ADDED SEWER EASEMENT)
OWNER: CYRAS CUSTOM HOMES

DAS
DON ALLEN & ASSOCIATES P.A.
"Since 1971"
Commercial * Residential * Mortgage Surveys * Multi-Family
Construction Staking * Subdivision Design * Topographical
131 CROSSLAKE PARK DR. SUITE 102* Mooresville, N.C. 28117
(704) 664-7029 (704) 664-8041 Fax

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

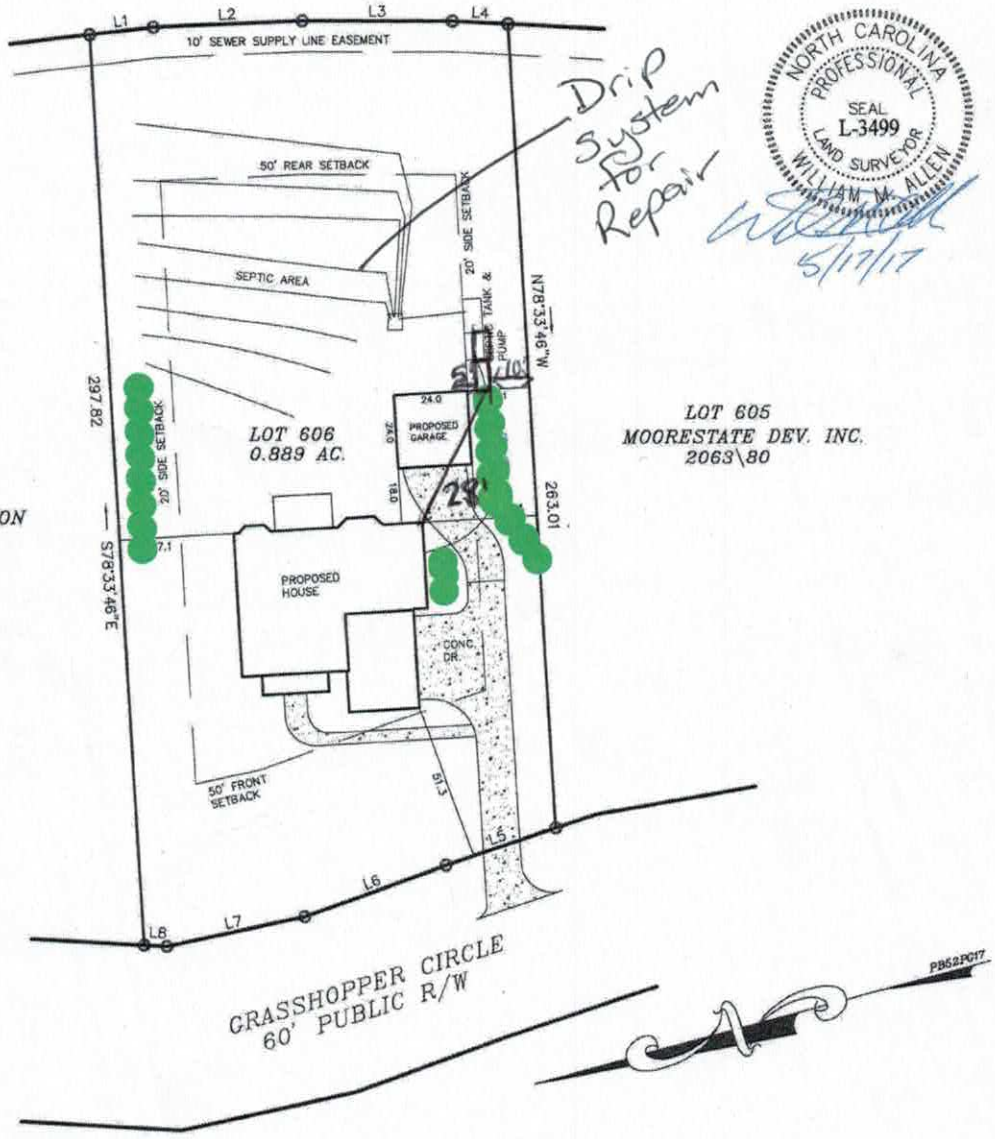


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GRASSHOPPER CIRCLE
60' PUBLIC R/W



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PLOT PLAN
OF

LOT 606 THE FARMS PHASE 5 MAP 2

DAVIDSON TWSP., IREDELL CO., N.C.

SCALE = 1" = 40' DATE: OCT. 14, 2016
UPDATED: OCT. 20, 2016 (ADDED SEWER EASEMENT)
REVISED : MAY 16, 2017 ADDED DETACHED GARAGE

OWNER: CYRAS CUSTOM HOMES

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

DAS
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"The Farm Lot 606 Septic
Site Plan 10-24-16
Hardis Const. Group

Summary of Primary Nitrification Lines

Line No.	Use	Line Color	System Type	Line Length (Ft.)	*Elevation (Ft.)
1	System	white	25% Reduction	100	794.0
2	System	red	25% Reduction	100	793.4
3	System	pink	25% Reduction	100	793.1
4	System	blue	25% Reduction	100	792.1
5	System	white	25% Reduction	100	791.3
6	System	pink	25% Reduction	100	790.8
				Total System: 600'	

Tank	1500 gal (2 compartment)	
Pump Tank	1000 gal.	810.0
House	left rear house box	811.0
TBM	water meter at septic area	795

Manifold Information	
Tap Size (In.)	1/2
Tap Material	SCH 80 PVC
No. Taps	6
Barrel Size (In.)	4
Barrel Material	SCH 80 PVC
Flow (gpm)/Tap	5.5

NOTES:

- *Elevations must be verified by installer at installation and final tank placement. Approximate elevations from GIS topo map, ESP 1 ft contour map, and rod readings. System pumping downhill and may experience variable head pressures during pump cycle. ICHD may propose surge box and D-box for distribution if concerned with manifold.
- Install system per ICHD, NCDHSS, and manufacturer permits, policies, and requirements.
- Expedited System Review information tables must accompany Penninger Soil Consulting written report dated October 24, 1018.



APPROVED NOV 04 2016

ICHD

Penninger Soil Consulting, PLLC
Ph: 704-996-6330 Email: pgpenninger@gmail.com

Call Pool for site visit

October 24, 2016

Harris Construction Group
9935D Rey Road, #210
Charlotte, North Carolina 28277

Attention: Mr. Bob Volles

Reference: **Technical Assistance with Septic Permitting**
Lot 606 The Farms Subdivision
Iredell County, North Carolina
Project No. 16-152

APPROVED NOV 04 2016

Dear Mr. Volles:

Penninger Soil Consulting, PLLC has provided technical assistance to obtain a possible new, 4-bedroom septic system Improvement Permit on the above referenced lot from the Iredell County Health Department (ICHD). The technical assistance was performed in general accordance with our written Proposal / Letter of Authorization dated August 3, 2016.

Lot 606 was issued a 4-bedroom gravity 25 Percent Reduction Improvement Permit by the ICHD in April 2007. This permit has expired and you have requested Penninger Soil Consulting, PLLC to assist with a obtaining a new ICHD Improvement Permit for a similar house pad.

We described 10 backhoe pits and four hand auger borings in the proposed septic and repair area. Because additional hard saprolite and weathered rock was observed on Lot 606 with the 2016 soil evaluation, the primary system is now proposed on the off-site septic area. Penninger Soil Consulting flagged a proposed 25 Percent Reduction, Pressure Manifold Distribution primary system on Lot 606A and is proposing a TS-I Drip Repair area on the building lot. The proposed system and repair are in the same general area as the 2007 permitted system. The site plan shows a possible future pool area if your home buyers want a pool. Your surveyor staked the property corners, the lot lines, and the house pad. The field terrace at the off-site septic area should be smoothed and any minor topographical features on the repair area should be smoothed if the repair is installed in the future.

Once the septic area is permitted, it should be fenced off for protection during home construction. Access to the lot should only be by the proposed drive. There shall not be cuts of 2 feet or greater within 15 feet of any part of the permitted septic system. The future pool should be at least 15 feet from the septic and pump tanks and the drainfield. The off-site primary system is downhill from the proposed house. Due to the length of the supply line and pumping downhill, the head pressure on the manifold may vary during the pump

cycle. The adjacent three lots are pumping to similar septic areas and the adjoining septic areas have similar installed systems. The ICHD may consider a surge box and distribution box if concerned about the variable head pressure on the manifold. The pressure manifold must be installed level. The developer installed the septic supply line from Lot 606 to the off-site septic area on Lot 606A. We recommend a preconstruction site meeting with the ICHD and installer.

Penninger Soil Consulting, PLLC appreciates the opportunity to provide these services to you. The attached information is not an Improvement Permit or Authorization to Construct, and is only to assist you with the Expedited Review site evaluation. The ICHD may show any changes or modifications they want to the proposed system on the ICHD Permits or attached site plan. The ICHD must approve each lot and only the ICHD can issue these permits. The ICHD should verify all soils and system specifications, required setbacks, and whether a professional engineer plan is required before permitting and/or septic system installation. The soil evaluation is only valid for the described backhoe pits and borings. Soil evaluations and system layouts are done based on interpretations of the rules governing wastewater treatment and disposal systems and are not guarantees for site approval or future septic system performance.

If you have any questions or require additional information please contact us at your convenience.

Sincerely,

Penninger Soil Consulting, PLLC

Paul G. Penninger, L.S.S.
Soil Scientist



APPROVED NOV 04 2016

Attachments:

1. Septic Permit Application
2. Proposed Site Plan and System Information
3. 2007 ICHD Septic Permit

C:\Users\Paul G. Penninger\Documents\2016 Projects\16-152 Harris Construction Farms Lot 38, 39, 439, and 606\606\Harris Const Group The Farms Lot 606 Septic Permitting Summary Letter.doc

Harris Construction - The Farms Lot 606 Expedited Review System Information
October 24, 2016

Number of Bedrooms	**4**
Basement or Crawl	**Crawlspace/Slab Garage**
Design Flow (gpd)	**480**
Primary System LTAR (gpd/sqft)	**0.2**
Primary System Type	**25% Reduction**
No. Lines	6 at 100 ft (see site plan)
Total Linear Feet	600
Trench Width	3' min.
Trench Spacing	9' min.
Trench Depth	24 in.
Pump Required	Yes
Distribution Device	Pressure Manifold
Maintenance Agreement Required	No
Length and Diameter of Supply Pipe	~2000' (3 inch installed from lot to septic are by developer - use 2 inch SCH 40 to tie in)
Flow Rate through the system (gpm)	33
Elevation head	*Approx. 8 ft (pumping downhill)
Pressure head	2.0'
Friction head	Approx. 15'
20% Contingency	5'
Total Head	30'
Pump Requirements	33 gpm @ 30 ft. of head

***To be verified by installer after final tank placement.**

Dosing Volume (gal) - 66% of drainfield capacity **	344
doses/day @ design flow	1.4
Volume of water pumped per dose	Calculated to specific tank by measure or dealer engineering specifications (1 cubic ft. of water equals 7.48 gal.)

APPROVED NOV 04 2016

Pump Run per dose (min)	10.4
Check Valve	Yes
Siphon Break hole	Yes
Repair System	**TS-I Drip (partial LPP T&J Panel)**
Total Linear Feet	10,000+ sqft shown (480 sqft required)
Repair Loading Rate (gpd/sqft)	0.1 Drip
Repair Proposed Trench Depth (in)	6 inch minimum

Harris Construction - The Farms Lot 606 Expedited Review System Information
October 24, 2016

Summary of Primary Nitrification Lines

Line No.	Use	Line Color	System Type	Line Length (Ft.)	*Elevation (Ft.)
1	System	white	25% Reduction	100	794.0
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4	System	blue	25% Reduction	100	792.1
5	System	white	25% Reduction	100	791.3
6	System	pink	25% Reduction	100	790.8
				Total System: 600'	

Tank	1500 gal (2 compartment)	
Pump Tank	1000 gal.	810.0
House	left rear house box	811.0
TBM	water meter at septic area	795

Manifold Information	
Tap Size (In.)	1/2
Tap Material	SCH 80 PVC
No. Taps	6
Barrel Size (In.)	4
Barrel Material	SCH 80 PVC
Flow (gpm)/Tap	5.5

NOTES:

- *Elevations must be verified by installer at installation and final tank placement. Approximate elevations from GIS topo map, ESP 1 ft contour map, and rod readings. System pumping downhill and may experience variable head pressures during pump cycle. ICHD may propose surge box and D-box for distribution if concerned with manifold.
- Install system per ICHD, NCDHSS, and manufacturer permits, policies, and requirements.
- Expedited System Review information tables must accompany Penninger Soil Consulting written report dated October 24, 1016.

APPROVED NOV 04 2016

DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH, ENVIRONMENTAL HEALTH SECTION
ON-SITE WATER PROTECTION BRANCH

Sheet 1 of 4
PROPERTY ID #:
COUNTY:

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM
(Complete all fields in full)

OFF-SITE

APPROVED NOV 04 2016

OWNER: HARRIS Coast
ADDRESS: Lot 606 A - OFF-SITE
PROPOSED FACILITY: 4 BR
PROPOSED DESIGN FLOW (.1949): 480
LOCATION OF SITE:
APPLICATION DATE: 10-24-16
DATE EVALUATED:
PROPERTY SIZE:
PROPERTY RECORDED: YES

WATER SUPPLY: ☐ Private ☒ Public ☐ Well ☐ Spring ☐ Other
EVALUATION METHOD: ☒ Auger Boring ☒ Pit ☐ Cut
TYPE OF WASTEWATER: ☐ Sewage ☐ Industrial Process ☐ Mixed

Soils good 11/4/16

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
1	L 25-10 PH	0-11	WSBK SCL	FR SS/SP	mix TOP/ BR				PS -.2-.25
		11-36	SBK/ABK C	FI: S/P	RED f 10YR 6/8				
		36-45	ABK C	FI: S/P	2.5YR 4/6 f-C 10YR 5/6				
					f- R-45"/ P-C-S				
		45+	Parent Structure		(-)	45"	(-)	-45"?	40"
2	L 25-10 PH	0-5	WSSBK SCL	FR SS/SP	BR				PS -.2-.25
		5-35	SBK/ABK C	FI S/P	2.5YR 4/6				
		35-50	ABK C	FI S/P	2.5YR 4/6, f SAP FI 10YR 6/8				
					(-)	50	(-)		
3	L 25-10 PH	0-11	WSBK SCL	FR SS/SP	5YR 5/6 f SAP, f 10YR 6/8				PS -.2 24" TB
		11-38	SBK C	FR S/P	5YR 4/6, C MN, C 10YR 5/6				
		38-48	ABK C	FR S/P	f SAP				
					Parent Structure 36-44	(-)		38"	
4	HAS 25	0-6	WSBK SCL	FR SS/SP	BR				PS .2 24" TB
		6-38	SBK C	FI: S/P	2.5YR 3/6 f 10YR 5/6 f HK MN				
		38-46	ABK C	FI: S/P	2.5YR 4/6				
					(-)	HK	(-)	38"	

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	PS	
System Type(s)	25B	
Site LTAR	-2	

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: PSP
OTHER(S) PRESENT: must be reviewed & Approved by LHD

COMMENTS:

Updated February 2014

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
3	L 102	0-5	SCL WSBK	FR SS/SP	BR				PS .12 Dry
		5-21	SBK/ABK C	FI S/P	RED				
		21-55	mod el SAP wl		mc				
			parent	mass	(-)	21	PS	(-)	
4	L 102	0-6	SCL WSBK	FR SS/SP					PS Dry -.125
		6-18	SBK/ABK C	FI S/P	RED f SAP			SH/ 18-24" most of pit	
		2	Zones WR (Saprolite)		15' +18"				
					(-)	18	PS-WR	(-)	

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)		R
System Type(s)		TS1 Dry
Site LTAR		-.1

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948):
EVALUATED BY: PSP
OTHER(S) PRESENT: must be Approved by LHD

COMMENTS:

Updated February 2014

DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH, ENVIRONMENTAL HEALTH SECTION
ON-SITE WATER PROTECTION BRANCH

PROPERTY ID #:
COUNTY:

For Lot 606

SOIL/SITE EVALUATION
***for* ON-SITE WASTEWATER SYSTEM**
(Complete all fields in full)

APPROVED NOV 04 2016

OWNER: Harris Craft
ADDRESS:
PROPOSED FACILITY: 4BR
PROPOSED DESIGN FLOW (.1949): 480
LOCATION OF SITE: 312 Grassbur

APPLICATION DATE 10-24-16
DATE EVALUATED:
PROPERTY SIZE:
PROPERTY RECORDED:

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) .1941 STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) .1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	OTHER PROFILE FACTORS .1943 SOIL DEPTH	OTHER PROFILE FACTORS .1956 SAPRO CLASS	OTHER PROFILE FACTORS .1944 RESTR HORIZ	PROFILE CLASS & LTAR
3 4 HOB	L -1=7	0-10	WSBK SL	FR SS/SE	BR	12	SAP		PS -12
		10-32	WSBK/PRISM C	FI SL/PL	RM MW				
6 2	L -1=2	0-6	WSBK SM	FR SL/SE	BR				PS -12 Drip
		6-14	ABK SCL	FI SL/PL	REDISH BR	IN 12	SAP		
		14-34	VWSBK/ MASSIVE	FR SS/SE MIX SOIL/ROCK	RM MW				
			ZONE	WET IN SPOTS	REDISH GRAY	NEAR SURFACE			
7 3	L -1=2	0-5	WSBK SL	FR SS/SP	BR				
		5-22	WSBK/PRISM SC-SCL	FI SL/PL	REDDISH BR	12	SAP		
		22-62	MASS SL	FR SS/SE	MC	22	PS		
8 4	HOS L -1=2	0-5	WSBK SL	FR SS/SE	BR				PS -12 Drip
		5-25	WSBK SC-SCL	FI SL/PL	REDDISH	C SAP			
			TO UNIFY			25			
			DRY DEPTH						

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)		PS
System Type(s)		TS, Drip
Site LTAR		-7

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948):
EVALUATED BY: DEH
OTHER(S) PRESENT: must be accessed by LCHD

COMMENTS:

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

Sheet ___ of ___
PROPERTY ID #: _____
COUNTY: _____

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: _____ APPLICATION DATE _____
ADDRESS: _____ DATE EVALUATED: _____
PROPOSED FACILITY: _____ PROPOSED DESIGN FLOW (.1949): _____ PROPERTY SIZE: _____
LOCATION OF SITE: _____ PROPERTY RECORDED: _____
WATER SUPPLY: ☐ Private ☐ Public ☐ Well ☐ Spring ☐ Other _____
EVALUATION METHOD: ☐ Auger Boring ☐ Pit ☐ Cut TYPE OF WASTEWATER: ☐ Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1949 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	AH #5 15%	0-16	Mo SBK SCL	FR SS/SP	Red Br		F/C sap		0.3
		16-30	WK SBK SCL	FR SS/SP	Br		C sap		
		30-48	MA CSL sap	FR SS/SP	Br				
2	AH #6								Rock @ 24" US
3	AH #7	0-30	WK SBK SCL	FR SS/SP	Red Br		C sap		0.3 to 40"
		30-40	MA CSL sap	FR/Fi NS/NP	Br				
		40"	Auger	Refusal					
4	AH #8								PS 0.3

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

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

COMMENTS: _____

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

Sheet ___ of ___
PROPERTY ID #: _____
COUNTY: _____

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: _____ APPLICATION DATE _____
ADDRESS: _____ DATE EVALUATED: _____
PROPOSED FACILITY: _____ PROPOSED DESIGN FLOW (.1949): _____ PROPERTY SIZE: _____
LOCATION OF SITE: _____ PROPERTY RECORDED: _____
WATER SUPPLY: ☐ Private ☐ Public ☐ Well ☐ Spring ☐ Other _____
EVALUATION METHOD: ☐ Auger Boring ☐ Pit ☐ Cut TYPE OF WASTEWATER: ☐ Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1949 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	
9	AH #9	0-24	Mo/WK SBK C	Fi S/P	Red				0.25 to 40"
1	L	24-32	Mo SBK C/CL	FR SS/SP	Red				
		32-40	Mo/WK SBK CL	FR SS/SP	Red; F/C	yel Br			
		40-48	WK SBK CL	FR SS/SP	Red C/M	2 chroma			
10		0-5	gr Brsl	fr ss np					TB 38" or less .2 - .225
2		5-12	WK sbk scl	fr ss sp	DK Br				
pit		12-50	wk-mo f	sbk/abk fr ss sp	com	mn few			
		50+	chroma	2		yel/br			24" TB .25
#11		0-10	gr scl	fr ss sp					.225 @ 24" fb
B	1%	10-24	WK SBK cl	fr ss sp	common black enc (manganese), brn mottles				
		24-36	MOD SBK BRN C	fr ss sp SEP					.2 or less >24"
		36-50	MABK C	fr ss sp	common y brn mottles, few red sp				
					ch 3 @ 40"				
#12		0-5	WK sbk BRN scl	fr ss sp					.2
4	4%	5-36	WK ABK RBRN C	fr ss sp	few-common manganese				
		36-53	WK SBK RBRN C	fr sp SEP	common y brn mottles				
					few common pale brn, few sp				

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

OTHER FACTORS (.1946): _____
SITE CLASSIFICATION (.1948): _____
EVALUATED BY: _____
OTHER(S) PRESENT: _____
Keep repair @ 24" max fb.

COMMENTS: _____

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

Sheet ___ of ___
PROPERTY ID #: ___
COUNTY: ___

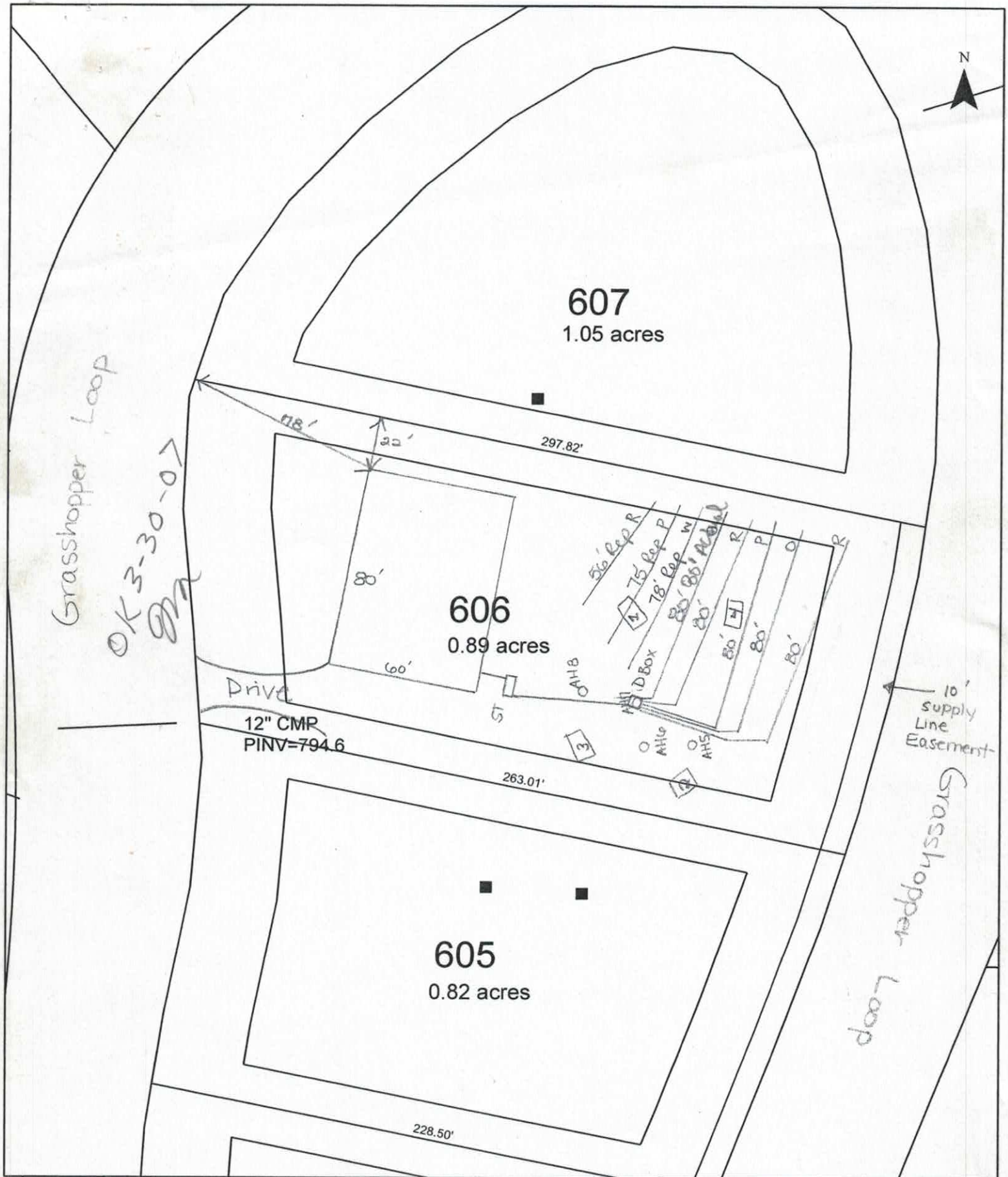
SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: Farms V — APPLICATION DATE ___
ADDRESS: ___ — DATE EVALUATED: 12-6-06
PROPOSED FACILITY: House — PROPOSED DESIGN FLOW (.1949): 480 — PROPERTY SIZE: ___
LOCATION OF SITE: Lot 606 — PROPERTY RECORDED: ___
WATER SUPPLY: ☐ Private ☒ Public ☒ Well ☐ Spring ☐ Other ___
EVALUATION METHOD: ☒ Auger Boring ☒ Pit ☐ Cut — TYPE OF WASTEWATER: ☒ Sewage ☐ Industrial Process ☐ Mixed

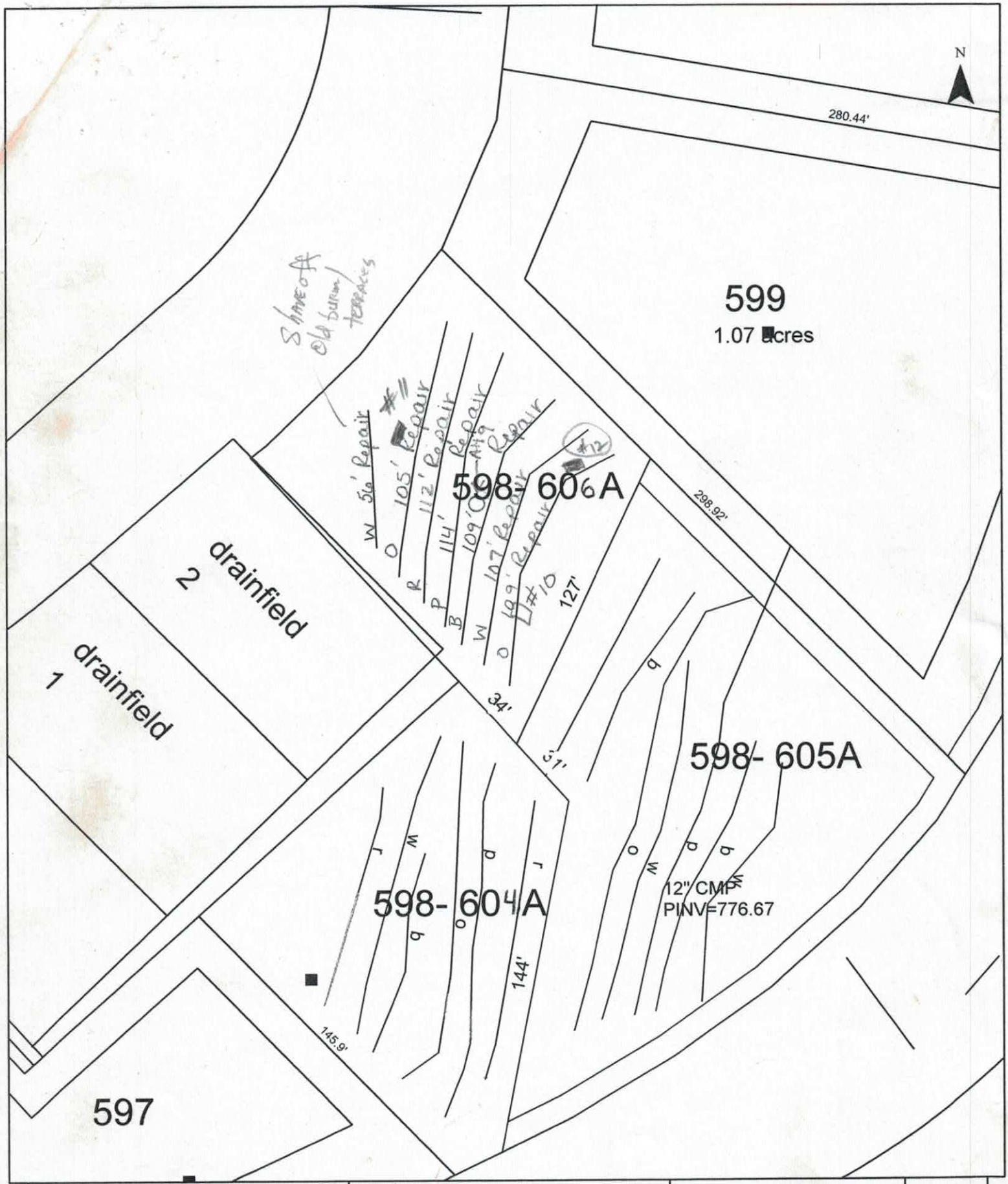
PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR
			.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1941 SOIL WETNESS/ COLOR	.1940 SOIL DEPTH	.1935 SAPRO CLASS	.1944 RESTR HORIZ	
1	L 6-12%	0-3	Mo GR SL	FR SS/SP	Br				0.3
		3-21	Mo SBK SC	FR SS/SP	Red		F sap		
		21-30	WK SBK SCL	FR SS/SP	Red		C sap		
		30-50	MA SL sap	FR/FI SS/NP	multi		F soil	inc.	
2	L 6-10%	0-30	WK SBK SCL	FR SS/SP	Red		F/C sap		0.25-0.3 to 30"
		30+	Cr						
3		0-6	gr SL	fr ss sp					
		6-22	wk sbk c	fr ss sp	few ind sap	(4)	(4) 22-42		(4)
		22-42	massive sl sap	fi ss sp					
		42-55	massive sl sap	fi ss sp					
4		0-4	gr scl	fr ss sp					
		4-23	mm sbk c	fr ss sp sap	common-many sap ind				.3
		23-52	massive sl sap	fr ss sp	few ind ch				

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1949)		
System Type(s)		
Site LTAR		

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



Scale: 1 inch equals 50 feet	S&ME	The Farms - Phase V	FIGURE
Drawn by: JBP		Lot 606	1
Reviewed by: KS		Iredell County, NC	
Date: February, 2007	ENVIRONMENTAL SERVICES • ENGINEERING • TESTING	S&ME Project #1588-05-070	



Scale: 1 inch equals 50 feet	S&ME	The Farms - Phase V	FIGURE
Drawn by: JBP		Lot 60	2
Reviewed by: KS		Iredell County, NC	
Date: February, 2007	ENVIRONMENTAL SERVICES · ENGINEERING · TESTING	S&ME Project #1588-05-070	

RECEIVED MAY 24 2017

IREDELL COUNTY HEALTH DEPARTMENT *ENVIRONMENTAL HEALTH DIVISION*

(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)

$105.00 EFT

1. APPLICATION FOR: X Improvement Permit ___ Authorization To Construct ___ Existing System Inspection

******** Limited Relayout

#222029

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 X Custom Site Plan, Scaled no more than 1 Inch = 60 Feet

3. Applicant Information:

Applicant Name	Mailing Address	Home Phone #	Alternate Phone #
Harris Const Group	9935-D Rea Rd St 210 Charlotte NC 28277	704-295-0094	704-202-3797
OHMS Properties, LLC (Owner Name)	9935-D Rea Rd St 210 Charlotte NC 28277	704-295-0094	704-202-3797

4. Property Information:

312 Grasshopper Circle, Mooresville, NC — Street Address

Farms — Subdivision Name

606 — Section/Phase and Lot Number

Driving Directions: Brawley School, right on McCandree, right on Grasshopper

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 due to _____
(✓) Other Detached 2 car garage - need to move ST/PT behind garage.

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

(X) 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 ( ) City Water ( ) Other Public Water

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

( ) Alternative (X) Conventional ( ) Innovative ( ) Modified Conventional ( ) Other _____

8. Please Answer The Following ( ) Yes ( ) No Does the site contain any jurisdictional wetlands?
To The Best of Your Ability: ( ) Yes ( ) No Is any non-domestic sewage (i.e. industry) to be generated?
( ) Yes ( ) 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: _____ _____

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

IREDELL COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH

DOCUMENTATION TO AUTHORIZE AN OWNER'S LEGAL REPRESENTATIVE

Applications for permits require the "signature of the owner or owner's legal representative" (15A NCAC 18A .1937). If the owner does not sign the application himself or herself, they can submit any one of the following documents to designate their legal representative:

Power of Attorney; Real Estate Contract; Estate executor; Bankruptcy trustee; Court ordered guardianship

In the absence of the above documentation, the property owner may provide the local health department with documentation that designates a legal representative. A property owner may:

Complete this form to document his or her legal representative, or provide his or her own form that contains the information in this form.

If there are multiple property owners, then all property owners must sign the form that designates a legal representative.

By signing a form that designates a legal representative for purposes of 15A NCAC 18A .1937, the property owner authorizes that representative to act on their behalf in matters pertaining to the application and permitting process, including signing or receiving any application, document or permit. The owner retains full responsibility to meet all permit conditions specified by the local health department.

I, Pavan Kumar, am the legal owner(s) of the property located at 312 Grosbeak Circle, Mooresville, NC 28117, identified as PIN (Parcel Identification Number) 4627615548, located in Iredell County, North Carolina.

I do hereby authorize (**print legal representative/company name**) Harris Court Group, LLC, Robert Valle Gen Mngr, to act as an agent on my behalf in applying for/signing/obtaining any of the documents described below. FAX PERMITS) RONNIE SEE Note

- Application for Improvement Permit (IP) / Authorization to Construct (AC)
- Improvement Permit (IP) / Authorization to Construct (AC)
- Application for soil-site evaluation (new/repair)
- Application/permit for private drinking water well/well abandonment
- Application for Compliance Inspection

I agree to abide by all decisions and/or conditions between the legal representative acting on my behalf and the Iredell County Department of Public Health, Environmental Health Division.

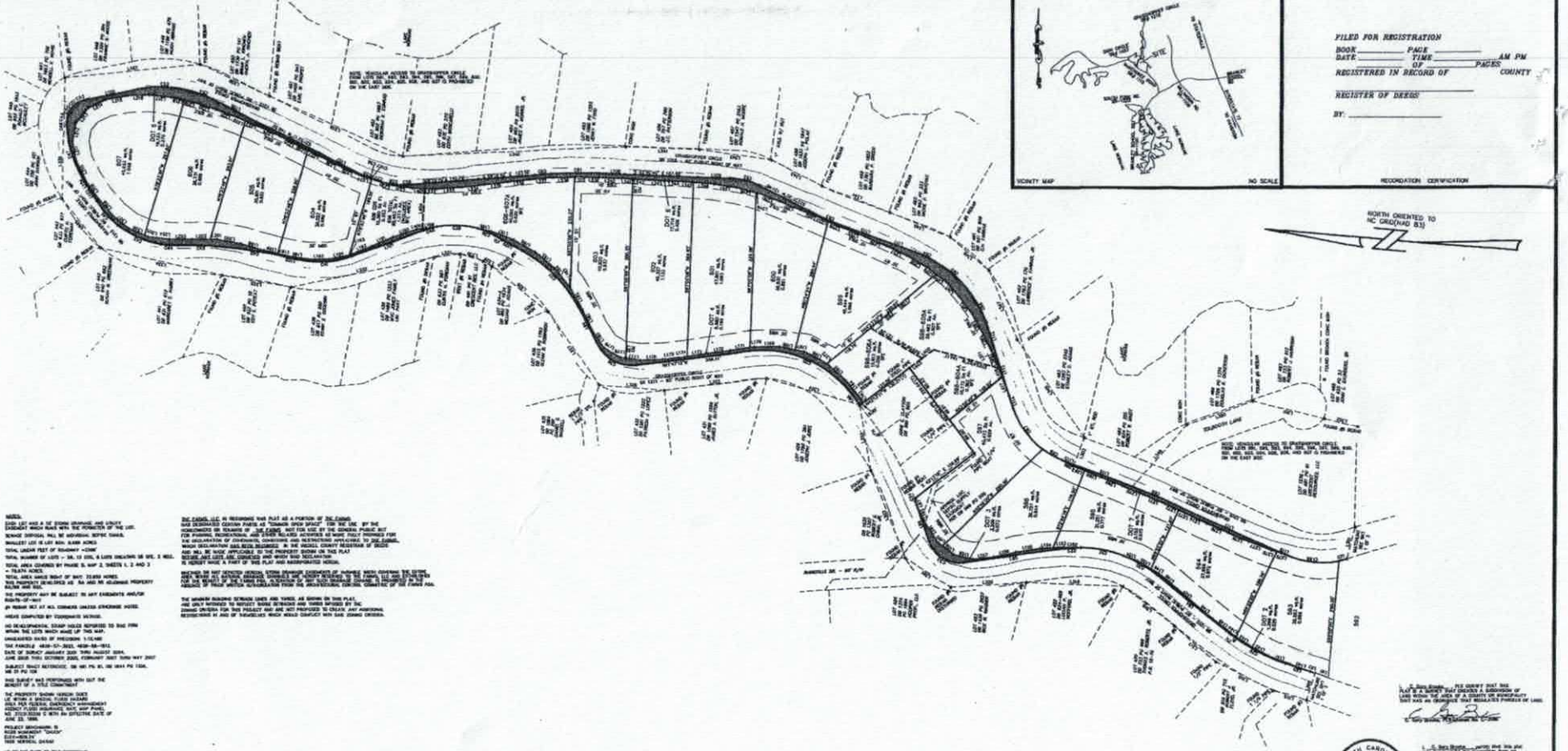
X _____ 9/22/2016 _____ 9/22/2016

Signature of Owner(s) Date Signature of Witness Date

Please return this signed form to the appropriate office:

Mooresville - Environmental Health
ronda.hart@co.iredell.nc.us
Fax: 704-662-3239
610 E. Center Avenue, Mooresville, NC 28115

Statesville - Environmental Health
adrienne.shea@co.iredell.nc.us
Fax: 704-871-3483
349 N. Center Street, Statesville, NC 28677



FILED FOR REGISTRATION
BOOK _____ PAGE _____
DATE _____ TIME _____ AM PM
OF _____ PAGES
REGISTERED IN RECORD OF _____ COUNTY
REGISTER OF DEEDS
BY: _____

RECORDATION CERTIFICATION

VICINITY MAP NO SCALE

NORTH ORIENTED TO NC GRID(NAD 83)

APPROVED NOV 04 2016

NO	DATE	REV	BY

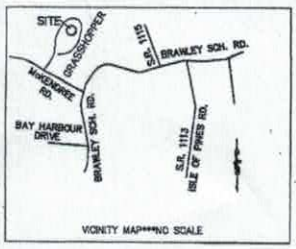
FINAL PLAT OF
THE FARMS PHASE 5 MAP 2
SHEET 2 OF 3
OWNER: THE FARMS, LLC
TAX PARCELS 4828-57-3025, 4828-58-1913
LOCATED IN DAVIDSON TOWNSHIP
IREDELL COUNTY
NORTH CAROLINA

THE FARMS, LLC.
2214 BRAMLEY SCHOOL ROAD
MOORESVILLE, N.C. 28115
(704) 660-1165

PROJECT NO. 3417.329
SCALE 1"=100'
FIELD DATE 05-27-07
DRAWN BY CLM
CHECKED BY CGS
DATE OF SURVEY
01-15 THRU 05-15
09-15 THRU 10-15
12-17 THRU 01-18
DRAWING NO. (PHASE 5, MAP 2 - 3-15-2016)
SHT 2 OF 3

ESP Associates, P.A.
P.O. Box 7030
Charlotte, NC 28241
3475 Lakemont Blvd
Fort Mill, SC 29708
704-583-4949 (NC)
803-802-2440 (SC)
www.espassociates.com

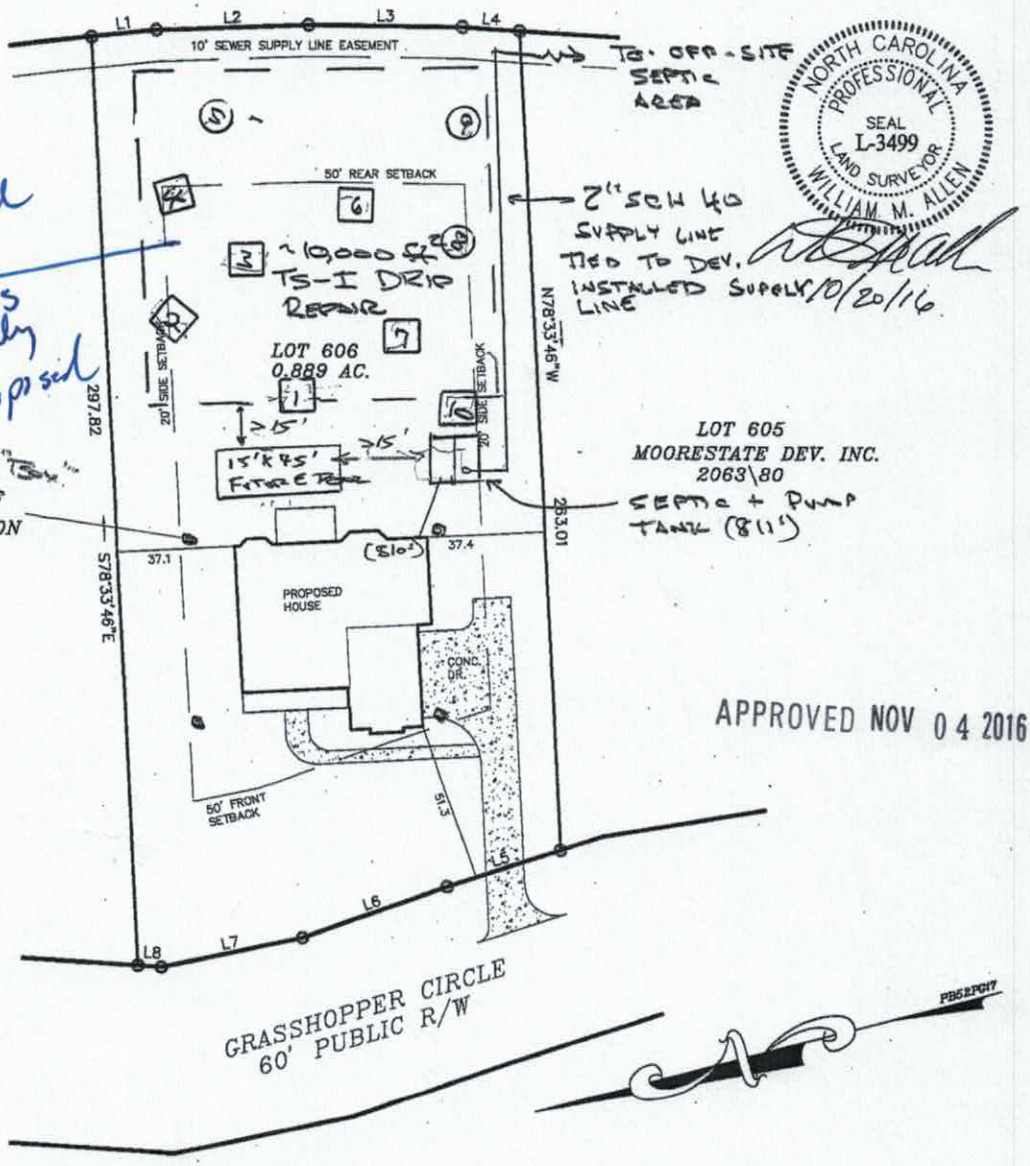
ESP ASSOCIATES, P.A.



LINE TABLE		
LINE	BEARING	LENGTH
L1	S 08°10'05" W	20.69'
L2	S 12°18'28" W	48.34'
L3	S 14°51'38" W	48.96'
L4	S 17°47'41" W	18.08'
L5	N 03°59'34" W	37.71'
L6	N 05°15'21" W	48.97'
L7	N 02°30'38" E	45.74'
L8	N 18°08'26" E	7.44'

NOTES
1) THIS PROPERTY MAY BE SUBJECT TO ANY EASEMENTS AND/OR RIGHTS OF WAY OF RECORD.
2) ACREAGE COMPUTED BY THE COORDINATE METHOD.
3) UNDERGROUND POWER
4) NO GRID MONUMENT FOUND WITHIN 2000 FEET.
5) PARCEL # 4627615548
6) DEED REF. BOOK 2424 PAGE 845
7) PLAT BOOK 52 PAGE 16
8) ADDRESS 312 GRASSHOPPER CIR.

GRASSHOPPER CIRCLE
60' PUBLIC R/W



Pits reviewed descriptions substantially as proposed

NORTH CAROLINA PROFESSIONAL SEAL L-3499 LAND SURVEYOR WILLIAM M. ALLEN

10/20/16

APPROVED NOV 04 2016

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

PLOT PLAN
OF
LOT 606 THE FARMS PHASE 5 MAP 2
DAVIDSON TWSP., IREDELL CO., N.C.
SCALE = 1" = 40' DATE: OCT. 14, 2016
UPDATED: OCT. 20, 2016 (ADDED SEWER EASEMENT)
OWNER: CYRAS CUSTOM HOMES

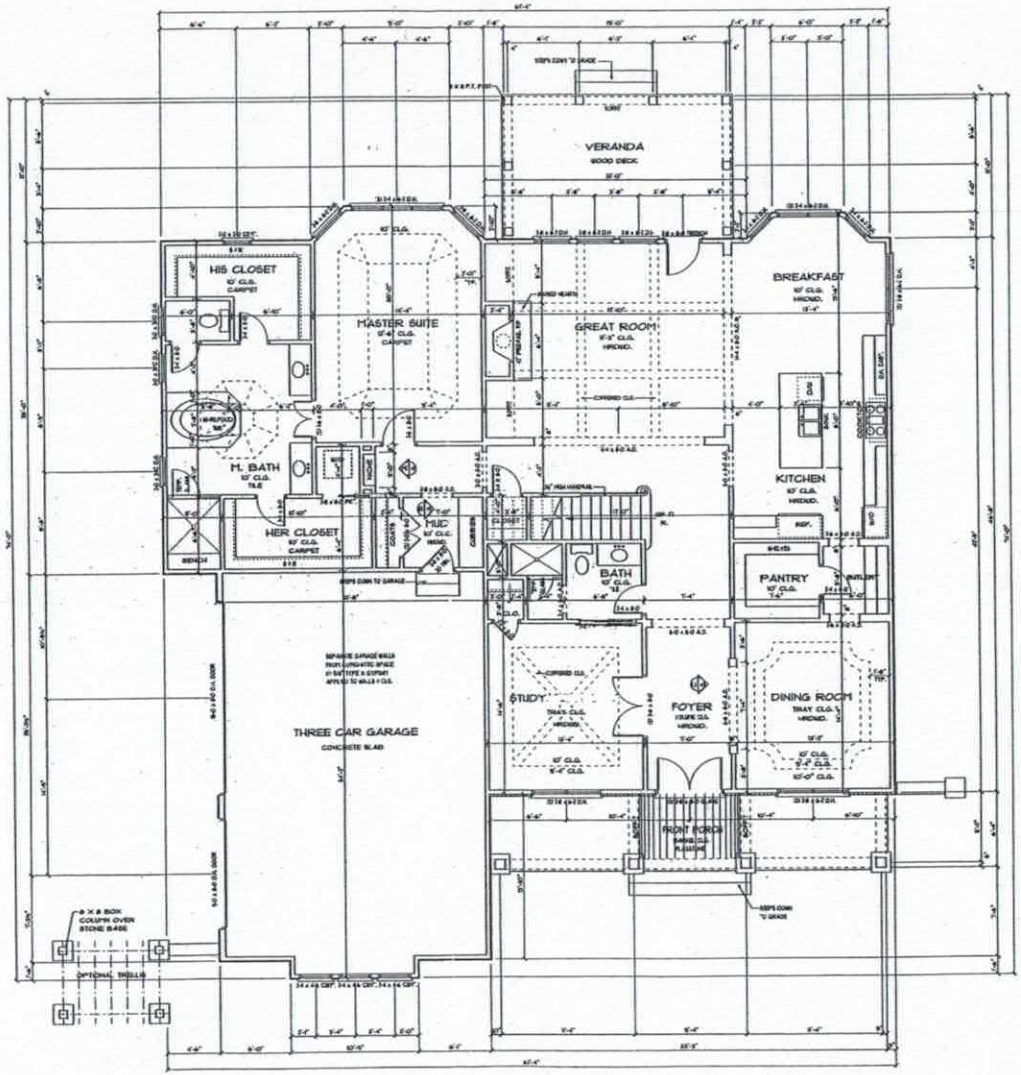
DAS
DON ALLEN & ASSOCIATES P.A
"Since 1971"
Commercial * Residential * Mortgage Surveys * Multi-Family
Construction Staking * Subdivision Design * Topographical
131 CROSSLAKE PARK DR. SUITE 102* Mooresville , N.C. 28117
(704) 664-7029 (704) 664-8041 Fax

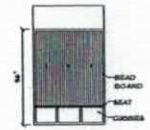
GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

Acknowledgement of
Plans Submittal ONLY!

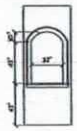
Date 10/21/16

Date 6/12/17

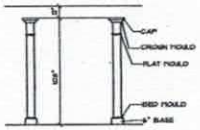




A/5 CUBBIES ELEVATION
SCALE: 1/4" = 1'-0"



B/5 NICHE OPENING DETAIL
SCALE: 1/4" = 1'-0"



C/5 OPENING DETAIL
SCALE: 1/4" = 1'-0"



TYPICAL ARCHED OPENING DETAIL
@ FIRST FLOOR SCALE: 1/4" = 1'-0"

FIRST FLOOR NOTES

- ALL INSIDE WALLS ARE 90 DEGREES OR 45 DEGREES UNLESS NOTED OTHERWISE
- ALL INTERIOR DOORS ARE 6" FROM WALL UNLESS OTHERWISE NOTED
- SEE SECOND FLOOR FRAMING PLAN FOR ALL SECOND FLOOR BEAM & FIRST FLOOR HEADER SIZES.
- ALL DOORS OF GLASS SHOULD BE TEMPERED + WINDOWS SHOULD BE TEMPERED PER IRC CODE
- ALL FRAMING OPENINGS FOR FIREPLACES SHOULD BE CHECKED FOR "HOL"

FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"

ENGINEERED BY:
Robert P. Queen, PE
2632 Pamlico Drive
Shelby, NC 28152
tel: 704-477-0105

Custom Residential Designs

P.O. Box 691286
Mint Hill, NC 28227
tel: 704-545-2928
fax: 704-545-0600

PROJECT:
Lot 606 Farms
Cyrus Custom Homes
312 Grasshopper Circle

©COPYRIGHT 2012

DRAWN BY:
JJ.BARJA/E.LEACH
DATE:
06/11/2012
REVISED:

SHEET 5 OF 14

Acknowledgement of
Plans Submittal ONLY!

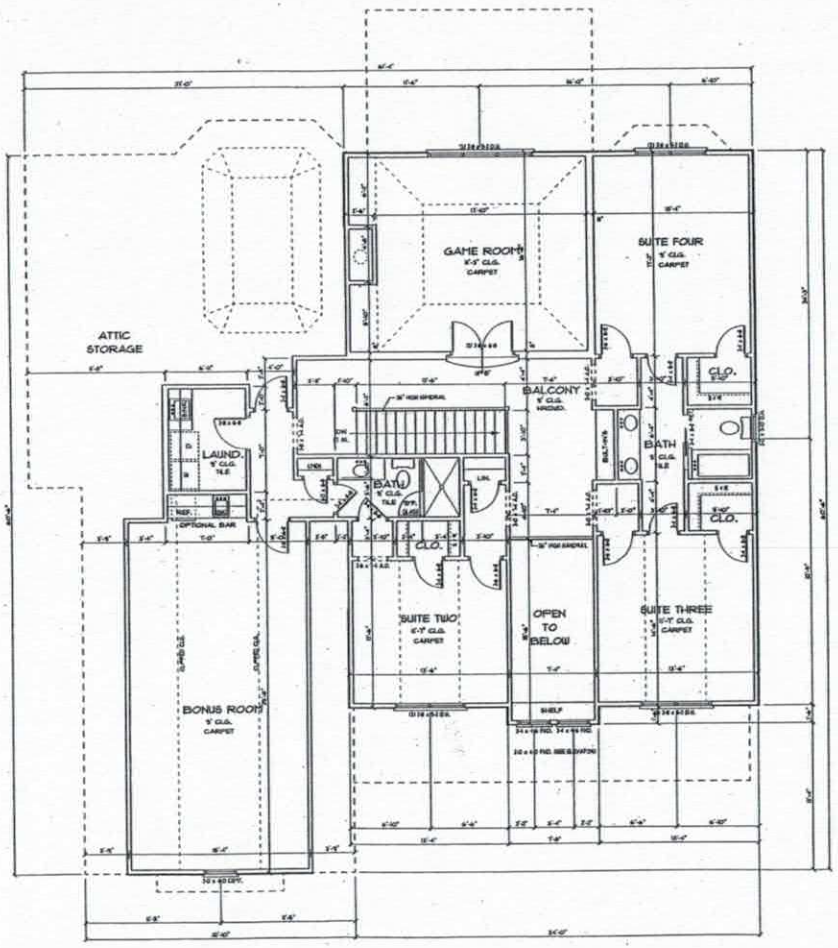
Date 10/31/16

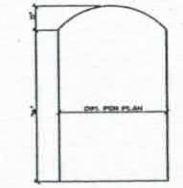
Date 6/12/17

ENGINEERED BY:
Robert P. Queen, PE
2632 Pamlico Drive
Shelby, NC 28152
tel: 704-477-0105

Custom Residential Designs

P.O. Box 691286
Mint Hill, NC 28227
tel: 704-545-2928
fax: 704-545-0600





SECOND FLOOR NOTES

- 9' CEILING HEIGHT TYP. UNLESS NOTED OTHERWISE
- 6'-8" DOOR AND WINDOW HEIGHT TYP. UNLESS NOTED OTHERWISE
- PROVIDE ATTIC ACCESS TO ALL ATTIC SPACES ACCORDING TO CODE.
- WALL BRACING REQUIREMENTS U WALL BRACING METHOD FOR ALL BRACED WALL LINES PER TABLE R 602.10.1 OR TABLE R 602.10.4.1 2) THE REQUIRED TOTAL WALL BRACING LENGTH PER TABLE R 602.10.1.3(1) 3) DIMENSIONED LENGTH + LOCATION OF INDIVIDUAL BRACED WALL PANELS PER R 602.10.4.3
- SEE SECOND FLOOR CEILING PLAN FOR ALL SECOND FLR. CLG. HEIGHT + SECOND FLOOR HEADER SIZES.
- ALL DOORS WITH GLASS SHOULD BE TEMPERED + WINDOWS SHOULD BE TEMPERED PER STATE CODE
- ALL FRAMING OPENINGS FOR FIREPLACES SHOULD BE CHECKED PER MFG.

SECOND FLOOR PLAN
SCALE 1/4" = 1'-0"

PROJECT:
Lot 606
Cross Custom Homes
312 Grasshopper Circle

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DRAWN BY:
J.I.BARJA/E.LEACH
DATE:
06/14/2012
REVISED:

SHEET 7
OF 14

IREDELL COUNTY

PO Box 788
349 North Center St.
Statesville, NC 28677

APPLICATION NUMBER
222029
Issue Date: 09/23/2016

ZONING PERMIT

Open Space

Parcel Number	Street Address	Jurisdiction
4627615548.000	312 GRASSHOPPER CIRCLE, MOORESVILLE, NC	IREDELL COUNTY

Owner Information	Applicant Information
Owner: MONAHAN EUGENE J	Applicant: HARRIS CONSTRUCTION GR
Address: 108 MISTY MEADOWS CT MOORESVILLE, NC 28117	Address: 9935-D REA ROAD SUITE 210 MOORESVILLE, NC 28277
Phone:	Phone:

Use Requested	Zone Code
SFD- FAST TRACK	RR

Lot Acreage	F Setback	B Setback	L Setback	R Setback	Watershed	Flood Zone
.889	35.00	35.00	15.00	15.00	CACL	X

Remarks:

The applicant certifies that there are no deed restrictions, contractual agreements or governmental regulations of any kind that interfere with or prohibit the use of the property or the use for which this permit is requested. The applicant further acknowledges that enforcement of deed restrictions, plat conditions and other contractual agreements will not be undertaken by Iredell County and is the sole responsibility of the affected parties.

Applicant: See Attached Date: _____

Permit Number	81353	TOTAL FEES:	$ 77.25