VERIFY ALL SETBACKS AND ZONING
IS PRIOR TO ANY PLANNING OR
ION.

: OF ALL IMPROVEMENTS SHOWN ON
SHOULD NOT BE SCALED OR RELIED
DESIGN OR CONSTRUCTION WITHOUT
RIFICATION OF ALL DIMENSIONS.

IES OF THIS FILE ARE FOR REFERENCE
MAY NOT BE USED FOR DESIGN WORK.
GROUND UTILITIES ARE NOT SHOWN HEREON.

OK LHP

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CHANNEL POINT LN 60' R/W

R/W

R/W

(348)

PB 34 - 23

(347)

(346)

PB 34 - 23

#5 PIN

GRAVEL

3.44'

C1

4.93'

GRAVEL

FENCE

0.761 AC.+-

WELL

N 43°52'00"E

42.15'

#5 PIN

BLDG

15.03'

2 STORY FRAME

DECK

PATIO

52.41'

N 52°43'07"W 211.47'

EXISTING BED (15'X65')

77.74'

50' BUFFER

Abandoned Bed in 50' Buffer.

C.R.W. Replace 15 tons with Gravel

S 67°28'00"E 227.45'

ASPHALT

#5 PIN

42.36'

S 16°16'00"W

CONCRETE

S 41°01'29"W 140.96'

DOCK

#5 PIN

BOUNDARY LINE
SANITARY SEWER LINE
NATURAL GAS LINE
UNDERGROUND POWER
OVERHEAD UTILITIES
UNDERGROUND TELEPHONE
WATER LINE
FENCE (TYPE NOTED)

CP = COMPUTED POINT (UNMARKED)
R/W = RIGHT-OF-WAY
E/P = EDGE OF PAVEMENT
C/L = CENTERLINE
ø = UTILITY POLE

PB 34-23

LAKE NORMAN
ANY DOCKS, PIERS OR OTHER IMPROVEMENTS BUILT ON LAKE ARE NOT SHOWN ON THIS SURVEY PLAT.

* A PORTION OF THIS PROPERTY IS LOCATED IN A 100 YEAR FLOOD PLAIN AS DESIGNATED BY FIRM PANEL # 3710461400E

40 0 40 80

INFORMATION FOR THE INSTALLER:

The permit should be read very carefully prior to bidding. The following are details that must be considered along with all other considerations.

- Tanks shall be approved by DENR, and certification supplied by the manufacturer.
- Tanks shall be water tested prior to installation.
- The installer shall be responsible to the owner for placement of the tanks and to insure that final grades are returned to the original natural grade, with exception of added structural features.
- The supply trench shall be compacted to eliminate cavities left during initial fill placement.
- Installation of the system shall be during dry conditions in order to protect the soil structure.
- All fittings shall be pressure rated fittings.
- All joints shall be cleaned with PVC pipe cleaner and a heavy bodied glue applied to weld all joints.
- Where required by the county health department, post installation inspections by the designer must be scheduled 5 week days in advance.
- Trenches shall be carefully excavated so the bottom is within 2" from the highest to . the lowest points of elevation within the trench. If the bottom elevation needs adjusting after it has been trenched, it will be done by removing high points rather than filling low points. It is extremely important to insure that trenches are not over excavated during initial trenching. All fine grading within the trench will be hand done with a shovel. No loose material will be left in the trench
- All pipe openings in the tanks shall be properly grouted. This also applies to the joints around the riser.
- All tanks shall be properly back filled and compacted to prevent slump at a later date.
- Earth dams, constructed of relatively impervious material, shall be installed at the beginning and end of each lateral.
- No heavy equipment shall be used on the field during or after installation. The use of a small loader (i.e. Bobcat) or a trencher (i.e. Ditch Witch 2300/2310) may be used for installation.
- Elevations at pinflag locations should be checked by the installer prior to beginning trenches.
- Pumptank riser should be 6" above grade, control panel should be 12" above grade.
- Septic tank riser shall be a minimum of 6" above finished grade.
- System is specified as a Hybrid Installation (Gravity PPBPS and an Existing 3BR Bed)
- Repair is specified as a PPBPS installation with Low Pressure Distribution
- Backfill 4 - 6" of material (Excavation material) over panels, lime sidewalls install trenches 24" wide to be level but have no more than 1/4" fall in 10 feet.
- **Distribution Devices must be bedded on level pads.**
- **Properly abandon existing septic tank per Iredell County requirements**
- **Remove driveway over Washer Bed System & install Bull Run Valve**

OK IcHD
APPROVED NOV 12 2015

GRAVITY PPBPS SYSTEM
FOR WASTEWATER TREATMENT

Owner/Applicant: John Mikesh

Address: 130 Landings Dr. Suite 106
Mooresville, NC 28117

Phone: 704.607.8871

County: Iredell

Location: 111 Channel Point Lane
Mooresville, NC 28117

Source of Wastewater Flow: 4 Bedroom Single Family Residence

Estimated Daily Wastewater Production: 480 gpd

System Flow: NA

Design Specifications

Drainfield Size (Upgrade Only): 67

Loading Rate: 0.3

Depth of Gravel in Trench: NA

Gravel Size: NA

Trench Depth: ~~30 in.~~ 28" LOWSIDE / 32" HIGHSIDE SL

Trench Width: 24 in.

Septic Tank Size: 1000 SEE MEMO

Pump Tank Size: NA

Estimated Supply Line Length: 30

Supply Line Diameter: 3 in. SCH 40 PVC

Supply Line Volume: 11.40

Dosing Volume: N/A

Supply Manifold: N/A

Supply Manifold Length: N/A

Supply Manifold Volume: N/A

Recommended Float Controls: N/A

Recommended Control Panel: N/A

O/L ICHD
APPROVED NOV 12 2015
SL

Pressure Head: N/A

Friction Head: N/A

Elevation Head: N/A

Total Dynamic Head: N/A

Threaded Union: N/A

Gate Valves: N/A

Check Valves: N/A

Anti-Siphon Hole: N/A

Additional Comments: Soil suitability was performed by Rollans Soil & Environmental Services

111 Channel Point Lane
GRAVITY PPBPS

DESIGN FLOW (Upgrade Only):	120
SOIL APPLICATION RATE:	0.3
TOTAL AREA TRENCH BOTTOM:	134
TOTAL LATERAL LENGTH:	67
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	67.00
SUPPLY LINE LENGTH:	30
TOTAL DYNAMIC HEAD:	N/A
MANIFOLD SIZE:	N/A
DOSING VOLUME:	N/A
PUMP TANK DRAW DOWN*:	N/A
SEPTIC TANK SIZE:	1000
PUMP TANK SIZE:	N/A

Ok ICHD

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SL

111 Channel Point Lane

Project #:01-3011

LAYOUT FOR 4 BEDROOM HOME

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	11/9/2015 DESIGN LINE LENGTH
TBM							
INSTR. 1							
HOUSE CNR							
P. TANK							
1	ORANGE					22	22
2	BLUE					22	22
3	RED					22	22
4	YELLOW					22	22
5	ORANGE					22	22
6	BLUE					36	36
7	RED					76	76
8	YELLOW					22	22
9A	*ORANGE*					*34*	*34*
9B	*ORANGE*					*33*	*33*
BED	*RED*	*EXISTING BED; (65' X 15' WIDE) 3BR*				*65' X 15'*	*65' X 15'*
					Total	67	67

	LINE LENGTH	LTAR GPD/FT2	SYSTEM TYPE	SOIL LTAR GPD/FT2	TRENCH SYSTEM	DISTRIBUTION
Existing Bed	65' x 15'		Conv. Bed		Bed	GRAVITY
* *System* (upgrade only)	*67*	*0.3*	MOD.	*0.300*	PPBPS	*GRAVITY*
Repair	244	0.3	MOD.	0.300	PPBPS	LOW PRESSURE

Notes:

**Lot recorded prior to January 1, 1983. See attached Plat dated 1976.

**Septic Permit Attached - Existing Bed permit illustrates 3 bedrooms.

**All septic lines, existing tank & existing bed located via licensed surveyor.

**All measures in feet

OK ICHD

APPROVED NOV 12 2015

SC

CALCULATIONS

Location 111 Channel Point Lane

Project Number 01-3011

Lot No: 347 (CL&T)

Total No. of Bedrooms 4

Design Flow for Upgrade (1 BR) 120 $^{gal}/_{day}$

LTAR 0.3 $^{gal}/_{ft^2\ day}$

OK Tcmp
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PPBPS? (YES OR NO) YES

Supply Line Length 30 ft.

Supply Line Volume 11.4 gal.

Required Feet of Line (Upgrade) 67 ft.
Amount of Line from Layout 67 ft.

Gallons per Minute NA $^{gal}/_{min}$

Required Septic Tank Capacity 1000 gal.
Minimum Standard Tank Size 1000

Panel Volume N/A gal.
# of Panels N/A
Dosing Volume N/A gal.

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 N/A

Pump Run Time N/A minutes

Elevation Head N/A ft.
Pressure Head N/A ft.
Friction Factor N/A ft./100 ft. *(From the interpolater.)*
Friction Head N/A ft.

Total Dynamic Head (+15%) N/A ft.

DIVISION OF ENVIRONMENTAL HEALTH
ON-SITE WASTEWATER SECTION

Sheet 1 of
PROPERTY ID #: 46149
COUNTY: Iredell

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: John Mikesh
ADDRESS: 130 Landings Dr. Suite 100, Mooresville NC 28115
PROPOSED FACILITY: Single-Family
LOCATION OF SITE: 111 Channel Point Ln, Mooresville NC 28117
WATER SUPPLY: ☑ Private ☐ Public ☑ Well ☐ Spring ☐ Other
EVALUATION METHOD: ☑ Auger Boring ☐ Pit ☐ Cut

APPLICATION DATE 10/2015
PROPOSED DESIGN FLOW (.1949): 480 gpd
DATE EVALUATED: 10/2015
PROPERTY SIZE: .701 AC
PROPERTY RECORDED: 1976
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
B1	L/15%	0-4	BL Gr	Fr SS SP	Minor Fill 2"-3"	48"	—	—	PS .3-.325 OK ICHD APPROVED NOV 12 2015 SC
		4-8	BRCL wmfsbk	Fr SS SP					
		8-48	RC mmsbk/ABk	Fr SS SP					
B2	L/15%	0-4	BRCL wmsbk	Fr SS SP	Some ABk SC	48"	—	—	PS .3 OK ICHD APPROVED NOV 12 2015 SC
		4-44	RC mmsbk	Fr SS SP					
		44-48	RYCL wmsbk	Fr SS SP					
B3	L/15%	0-3	BCL wmsbk	Fr SS SP		44"	—	—	PS .3
		3-32	RC mmsbk/ABk	Fr SS SP					
		32-44	RYCL wmsbk	Fr SS SP					
		44-AR	(Quartz Floater)						
B4	L/15%	0-5	RBL Gr	Fr SS SP		48"	—	—	PS .3-.35
		5-48	YRCL mmsbk/Mk	Fr SS SP					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	Hybrid PPPS/Mod PS	PPDPS PS
System Type(s)	↓	↓
Site LTAR	.3	.3

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

COMMENTS:

SOIL/SITE EVALUATION

(Continuation Sheet)

DEPARTMENT OF ENVIRONMENT
AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH

PROPERTY ID #: 4649235 9
DATE OF EVALUATION: 10/2015
COUNTY: Iredell

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
B5	4/17%	0-30	RC wmsbk	Fr SS SP		48"	—	—	PS .3 OK Tch
		30-48	RVCL wmsbk	Fr SS SP					

APPROVED NOV 12 2015 SC

COMMENTS: