Lincoln-Lancaster County Health Department
Environmental Public Health Division
3140 N Street • Lincoln NE 68510-1514
Phone: 402-441-8643

JUL 15 2015

A

Permit Number
HS001097

Onsite Wastewater Treatment System
Request for Site Clearance and Permit

Include Form B and C. Submit correct fee with this Application

3 acres or more required for: ☐ Septic System ☒ Lagoon ☐ Other (Refer to Form C)

The undersigned hereby requests site clearance and permit to construct a Wastewater Treatment System in conformance with appropriate regulations.

PLEASE PRINT OR TYPE

A. Onsite System Location

Address 1705 W Dive Creek Rd (no rural route) City Markell Ne, NE Zip 68404

Legal Description S16, T7, R6th Principal Meridian, Lot 1

1/4 1/4 Section Township Range Subdivison Addition Block (Lot)

PID 07-16-200-003-000

B. Owner

Name Marcus H. Forsgren Signature

Address 1970 W Panama Rd City/State/Zip markell, Ne 68404

Home Phone 402-560-4519 Work Phone 402-890-0142

C. Certified Installer

Name: Brian Privat Signature Brian Privat

Address 135 E 23rd City/State/Zip Crete, Ne 68333

Work Phone 402-826-0192

D. Engineer

☐ **Check and complete if engineer designed system** P.E. License Number:

Designer Name Firm Work Phone

E. This system will serve a

☑ Residential Dwelling Number of Bedrooms 3 Whirlpool Bathtub? ☐ Yes ☒ No Total Acres 5.8

Garbage Grinder? ☒ Yes ☐ No

☐ Commercial Establishment/Other Facility Specify Design flow in gallons per day

Type of Wastewater ☐ Domestic ☐ Non-Domestic

DO NOT WRITE BELOW THIS LINE

Approval Process ☐ Municipal Code 24.38 ☐ County Resolution No. 02-30

1. Health Department
Site visits Date rec'd **ACTION** ☐ Approved ☐ Disapproved
Date frwd Signature
Comments

2. Supt. Bldg. Insp. or Village Clerk
Comments Date rec'd **ACTION** ☐ Approved ☐ Disapproved
Date frwd Signature

3. City or County Engineer
Comments Date rec'd **ACTION** ☐ Approved ☐ Disapproved
Date frwd Signature

Installation Final Written Approval
By
Date

Business Office Use Only
Date Received 7-15-15 Amount Paid $375.00
Received By SB Cash/Check No. VISA

White - Health Department Yellow - Engineer Pink - Building & Safety

Lincoln-Lancaster County Health Department (LLCHD)
Environmental Public Health Division
3140 "N" Street • Lincoln, NE 68510-1514
Phone: 402-441-8022

B

Permit Number: HS001097

Onsite Wastewater Treatment System

Soil Evaluation Report

PLEASE PRINT OR TYPE

Onsite System Location

Address _____ City _____ NE, Zip _____
(no rural route)

Owner _____ Address _____

Date of Tests _____ to _____ Weather: Precipitation _____ Temperature _____

Percolation Test Data Table

A.	B.	C. D. E. F. Saturation/Swelling Time				G. H. I. J. K. Water Level Drop Last 30 mins of 4 hr or last 10 mins of 1 hr					L. M. N. Results		
		Start		End		Start		Initial	End				
Hole No.	Hole Depth (in)	Date (Mo/Da)	Time (Hr/Min)	Date (Mo/Da)	Time (Hr/Min)	Date (Mo/Da)	Time (Hr/Min)	Water Lev (in.)	Date (Mo/Da)	Time (Hr/Min)	Elapsed Time Interval	Water Level Drop (in)	Percolation Rates (Min/in = mpi)
								6					
								6					
								6					
								6					
								6					
								6					
								6					
								6					

Person Conducting Percolation Test

Name: _____

Phone: _____

Address _____

_____

Sum of Percolation Rates: _____

Average of Rates: _____

Rate Used for Calculation: _____

Soil type (NRCS Maps/Other) _____

Groundwater Depth _____

DO NOT WRITE BELOW THIS LINE

Reviewing Action

Comments (Soil type, groundwater, floodplain, etc.) _____

_____

_____

_____

_____

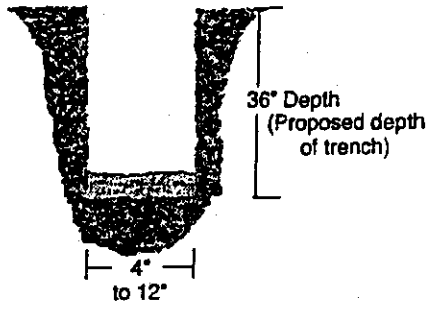
Signature of Reviewing Official _____ Date _____

READ THOROUGHLY

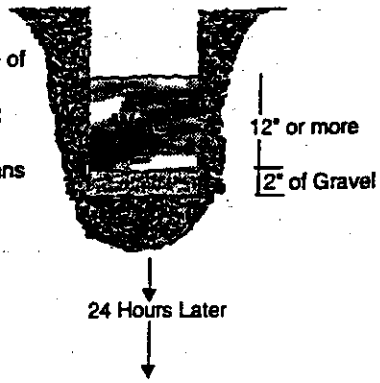
DIAGRAM OF PERCOLATION TEST PROCEDURE

Finished Grade or Natural Ground Level

I. Size, Number, and Location or Test Holes
   - A. Dig six or more holes spaced uniformly over proposed lateral field site.
   - B. Scratch smeared spots on sides of hole.
   - C. Remove loose material from hole.
   - D. Add 2" of gravel to hole.

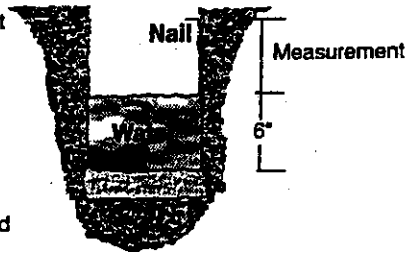


II. Saturation of Soil (Pre-soak)
   - A. Fill hole with 12" or more of water.
   - B. MAINTAIN THIS WATER LEVEL FOR 4 HOURS.
   - C. Record on Form B columns a thru f.



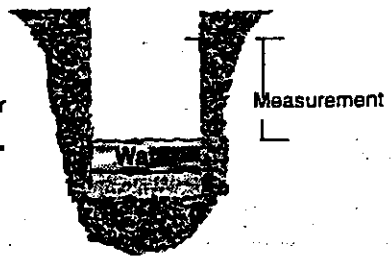
24 Hours Later

III. Percolation-rate Measurement **(refer to instructions 5a, 5b, or 5c.)**
   - A. Add 6" of water.
   - B. Measure from fixed reference point (nail) to water.
   - C. Record measurement and time on front of Form B.



½ hour later (30 minutes)

   - D. 30 minutes later remeasure and record time.
   - E. If water will be too low for another reading 30 minutes later, adjust to 6" of water and remeasure and record time.



   - F. Continue for 3½ hours taking readings every 30 minutes.
   - G. Last 30 minute reading is used in filling out Form B. Record date, time, intervals and water level drops in column g thru m.

Instructions

1. **Number and location of tests.** Percolation tests shall be made in 6 or more separate test holes which shall be spaced uniformly over the proposed lateral field site.
2. **Type of test hole.** Dig or bore a hole 3 feet deep with a diameter of 4 to 12 inches. (To save time, labor and the volume of water required per test, a 4-inch auger hole is recommended).
3. **Preparation of the test hole.** Scratch or roughen any smeared spots on the sides of the hole with a knife blade or sharp pointed instrument to provide a natural soil interface into which water may percolate. Remove all loose material from the hole. Add 2 inches of gravel to protect the bottom from scouring when water is poured into the hole.
4. **Saturation and swelling of the soil.** Fill the hole with clear water to a depth of 12 inches or more above the gravel and maintain this water level at least 4 hours and preferably overnight. The accuracy and true value of the percolation data depends on thorough saturation and swelling of the soil.
5. **Percolation-rate measurement.** Percolation-rate measurements shall be made 24 hours after starting the saturation and swelling procedure described above. Record results on the front of this form and complete all calculations.
   a. If water remains in the test hole after the overnight swelling period, adjust the depth to approximately 6 inches over the gravel. From a fixed reference point, measure the drop in water level over a 30 minute period to the nearest 1/8 of an inch. This drop is used to calculate the percolation rate.
   b. If no water remains in the test hole after the overnight swelling period, add clear water to bring the depth to approximately 6 inches over the gravel. From a fixed point, measure the drop in water level to the nearest 1/8 of an inch at 30-minute intervals for 4 hours. Refill to the 6 inch level over the gravel as often as necessary. The drop that occurs during the final 30 minutes is used to calculate the percolation rate.
   c. In sandy soils (or other soils in which the first 6 inches of water seeps away in less than 30 minutes after the overnight swelling period) the time interval between measurements shall be 10 minutes instead of 30 minutes and the test run for 1 hour instead of 4 hours. The drop that occurs during the final 10 minutes is used to calculate the percolation rate.
6. **Record the test results and complete all calculations on the front of this form.** The average of the percolation rates calculated for all holes in the last 30 (10) minutes will normally be the rate used for calculations to size the system. ***Exceptions are the use of the greatest percolation rate when rates vary more than 20 min/in between holes or when other soil analysis indicates potential percolation problems.***

LLCHD reserves the right to require additional testing based on knowledge of soil types, percolation tests results on nearby properties, or due to concerns with procedures followed. In some situations, LLCHD staff will require and perform on-site observation of percolation tests.

Lincoln-Lancaster County Health Department
Environmental Public Health Division
3140 "N" Street • Lincoln, NE 68510-1514
Phone: 402-441-8022

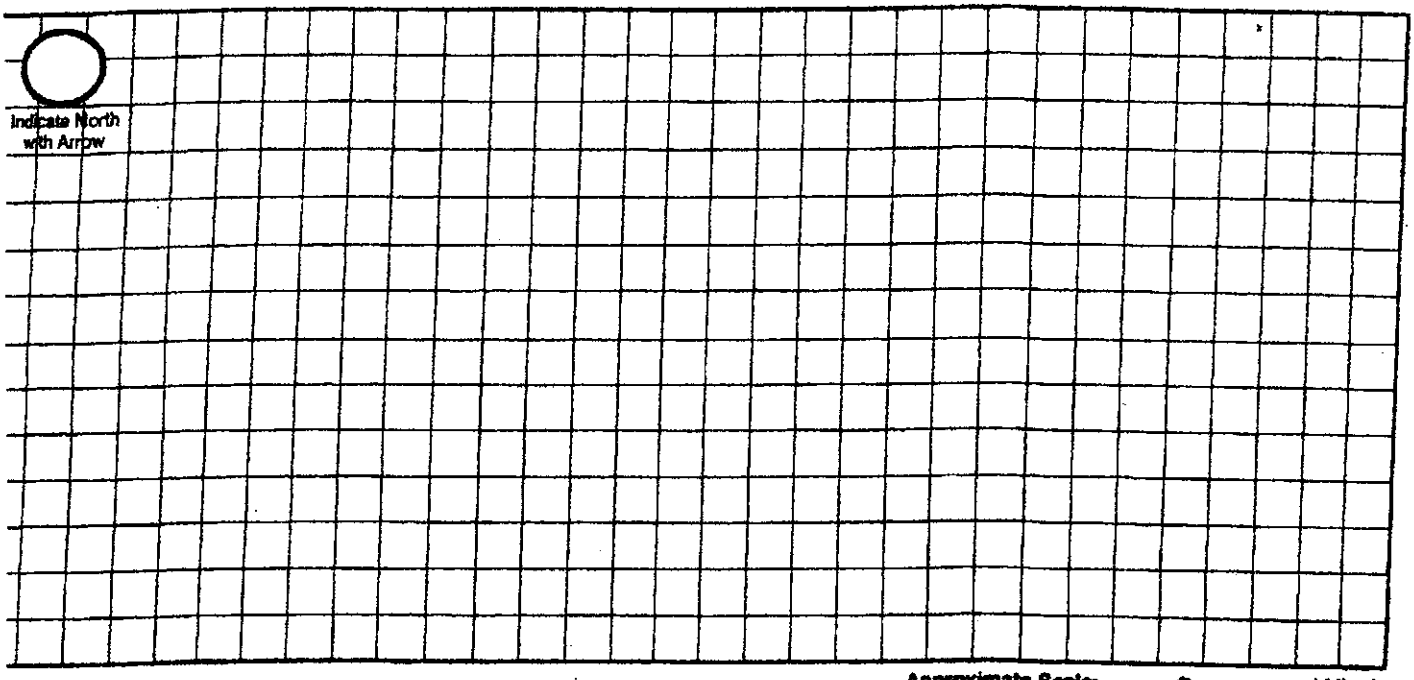
C

Permit Number: HS001097

Onsite Wastewater Treatment System

Preliminary Plan Specifications

Draw a plot plan showing onsite system sewer lines, drop of distribution boxes, tank, drainfields, percolation test holes, well, residence, direction of groundwater flow, property lines, and reserve area for replacement onsite system.



Approximate Scale: _____ ft. = _____ grid line/s

. Onsite System Location

ldress (no rural route) 1705 W Olive Circle City Sprague Markell NE, Zip 68454 04

. Proposed Septic Tank/s

ptic Tank Cap._____ gals Tank Material: ☐ Concrete ☐ Plastic ☐ Other_____ ☐ Lagoon(Max. seepage 1/8" per day)

. Reserve Area for Replacement Onsite System

Drainfield Absorption Area (percolation test required) ☐ Lagoon

. Drainfield Absorption System

rcolation Rate_____ (min/inch = mpi) No. of Bedrooms_____ Soil Type_____ Land Slope_____%

Trench ☐ Bed ☐ Non-Standard (engineer designed and NDEQ approved Total Square feet of drainfield_____sq.ft.

al length of laterals_____ Type of distribution: ☐ Perforated pipe ☐ Half-Round ☐ Chamber ☐ Other

of absorption trenches_____ Width_____ No. of drop boxes_____ Distrubtion Box_____

of absorption beds_____ Width_____ No of Distribution lines per bed_____

Setbacks Check the Boxes Below if the Required Setback has been Satisfied

stance rom	Private Well	Public Well	Surface Water	Gound Water	Pressure Water Lines	Property Lines	Foundations Yours	Foundations Neighbors	All Other Setbacks
nk (ft)	50 ☐	500 ☐	50 ☐	NA ☐	25 ☐	20 ☐	15 ☐	25 ☐	☐
ld (ft)	100 ☐	500 ☐	50 ☐	4 ☐	30 ☐	20 ☐	30 ☐	40 ☐	☐
on (ft)	100 ☑	500 ☑	50 ☑	N/A ☑	30 ☑	50 ☑	100 ☑	200 ☑	☑

Required Signatures

Lincoln-Lancaster County Health Department
Environmental Public Health Division (402) 441-8027
3140 N Street Lincoln, Nebraska 68510-1514

ON-SITE WASTE WATER SYSTEM
CONSTRUCTION - INSTALLATION PERMIT
No. HS001096

System Type: Lagoon

Situs: 1705 W OLIVE CREEK RD, RURAL, NE

Issued: 7/16/2015

Expires: 7/16/2016

Description: S16, T7, R6, 6th Principal Meridian, LOT 1 NE

Owner: FORSGREN, MARCUS HENRY
1970 W PANAMA RD
MARTELL, NE 68404

Judith A Halstead
Judith A. Halstead, MS, Health Director

Dear Applicant:

The above document is your permit to construct a new On-site Waste Water System at the location listed. Please contact this office once the sytem is complete in order to schedule a final inspection before use.

Judith A Halstead
Judith A. Halstead, MS
Health Director

MARCUS FORSGREN
1970 W PANAMA RD
MARTELL, NE 68404

Lincoln-Lancaster County Health Department
Environmental Public Health Division
3140 N Street • Lincoln NE 68510-1514
Phone: 402-441-8643

Exhibit 6

Permit Number: HS0010916

Onsite Wastewater Treatment System-Lagoon

Inspection Sheet

Date 11/25/15 Legal Description _____

¼ ¼ Section/Township/Range

Onsite System Location

Address (no rural route) 1705 W. Olive Creek Rd City Martell

Owner _____ Address _____

Mark One: ☒ Dwelling ☐ Non-dwelling

☒ New System ☐ Repair

☐ Temporary modification (Describe problem causing discharge and reason for temporary modification): _____

Lagoon constructed so not to receive surface water	Still under construction 3/30/16 KD	Yes X No X
Lagoon floor is level		Yes X No ___
Lagoon is equipped with a depth gage/concrete slab	Still under construction 3/30/16 KD	Yes X No X
Influent line is at least 4 inches and slopes no less than 1/8 inch		Yes X No ___
Clean outs located every 75 feet and one located 1 foot about highest water level		Yes X No ___
Inside slope not steeper than three horizontal to one vertical		Yes X No ___
Minimum width of the top of the dike shall be 4 feet		Yes X No ___
Fence installed		Yes X No X owners will install 3/30/16 KD

Top of the Dike_____ Bottom of Lagoon_____ Design Flow 300 gpd

Setbacks (Check the Boxes Below if the Required Setback has been Satisfied):

Surface Water distance from Water Mark	Private Drinking Water Wells	Public Drinking Water Supply Wells		All Other Water Wells	Property Lines	Trees and Brush	Neighbor's Foundation		All Other Setbacks
50 ft ☒	100 ft ☒	Non-Community	100ft ☒	100ft ☒	50ft ☒	50ft ☒	Class 1	200ft ☒	☒
		Community	* ☒				Class 2	200ft ☒	
							Class 3	100ft ☒	

*Evaluated by a professional engineer for potential impact on the well and submitted to Dept. for approval if less than 1000ft.

Geographical Coordinates to 6 Decimals: _____

Dike North side

Comments:

- Lagoon was finished & fence installed 3/30/16 KD

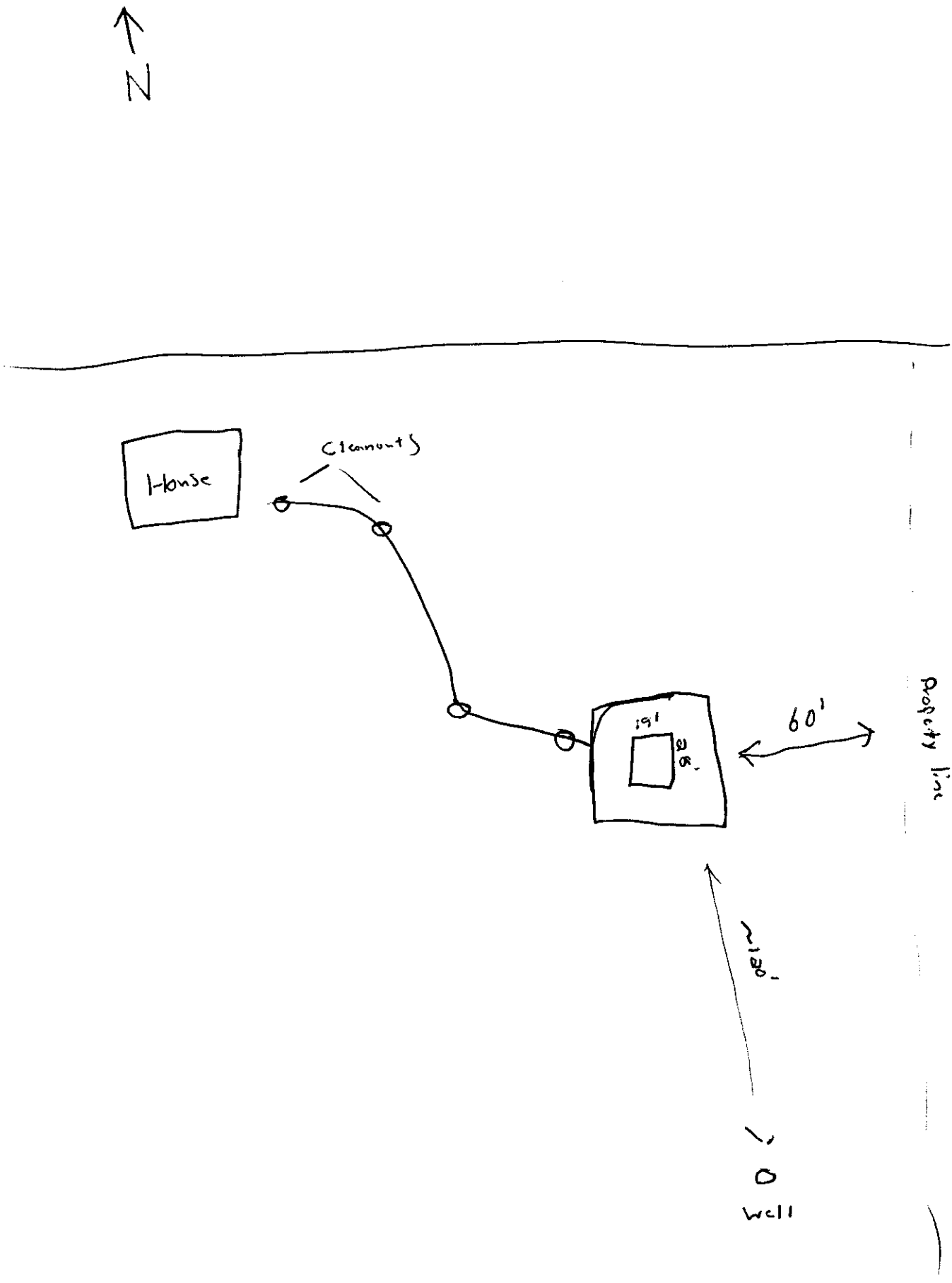
Inspections prior to Final Approval
Initial KD Date 11/25

Follow-Up _____ Date _____

Follow-Up _____ Date _____

Installation Final Written Approval
By KD

Date 3/30/16


N
House
Cleanouts
191'
8'
60'
Property line
~180'
Well

Lincoln-Lancaster County Health Department
Environmental Public Health Division
3140 N Street • Lincoln NE 68510-1514
Phone: 402-441-8643

JUL 15 2015

SCANNED

A

Permit Number HS001096

Onsite Wastewater Treatment System
Request for Site Clearance and Permit

Include Form B and C. Submit correct fee with this Application

3 acres or more required for: ☐ Septic System ☒ Lagoon ☐ Other (Refer to Form C)

The undersigned hereby requests site clearance and permit to construct a Wastewater Treatment System in conformance with appropriate regulations.

PLEASE PRINT OR TYPE

A. Onsite System Location

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(no rural route)

Legal Description S16, T7, R6th Principal Meridian, Lot 1
1/4 1/4 Section Township Range Subdivison Addition Block (Lot)

PID 07-16-200-003-000

B. Owner

Name Marcus H. Forsgren Signature

Address 1970 W Panama Rd City/State/Zip markell, Ne 68404

Home Phone 402-560-4519 Work Phone 402-890-0142

C. Certified Installer

Name: Brian Privat Signature Brian Privat

Address 135 E 23rd City/State/Zip Crete, Ne 68333

Work Phone 402-826-0192

D. Engineer

☐ **Check and complete if engineer designed system** P.E. License Number:

Designer Name Firm Work Phone

E. This system will serve a

☑ Residential Dwelling Number of Bedrooms 3 Whirlpool Bathtub? ☐ Yes ☒ No Total Acres 5.8
Garbage Grinder? ☒ Yes ☐ No

☐ Commercial Establishment/Other Facility Specify Design flow in gallons per day

Type of Wastewater ☐ Domestic ☐ Non-Domestic

DO NOT WRITE BELOW THIS LINE

Approval Process ☐ Municipal Code 24.38 ☐ County Resolution No. 02-30

1. Health Department
Site visits
Comments
Date rec'd 7/23/15
Date frwd 7/23/15
ACTION ☐ Approved ☐ Disapproved
Signature

2. Supt. Bldg. Insp. or Village Clerk
Comments
Date rec'd
Date frwd
ACTION ☐ Approved ☐ Disapproved
Signature

3. City or County Engineer
Comments
Date rec'd
Date frwd
ACTION ☐ Approved ☐ Disapproved
Signature

Installation Final Written Approval
By
Date 3/30/16

Business Office Use Only
Date Received 7-15-15 Amount Paid $375.00
Received By SB Cash/Check No. VISA

White - Health Department Yellow - Engineer Pink - Building & Safety

Form A Updated: 1/13