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

DEC 0 2 2016

A

Permit Number HS001377

Onsite Wastewater Treatment System Permit Application

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

☒ Septic System ☐ Lagoon ☐ Other (Refer to Form C)

PLEASE PRINT OR TYPE

A. Onsite System Location

Address* 4500 Waverly Rd City Lincoln, NE Zip 68514
(no rural route)

Legal Description _____

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

PID 18-08-300-007-000 SB *Approx. Address (If to be determined) _____

B. Owner

Name Dennis + Barbara Herman Signature Harry Muhlbach For owners

Address 4500 Waverly Rd City/State/Zip Lincoln NE 68514

Home Phone 402-466-0906 Work Phone _____

C. Certified Installer

Name: Harry Muhlbach Signature Harry Muhlbach

Address 5701 Vine St City/State/Zip Lincoln NE 68505

Work Phone 402-430-7304

D. Engineer

☐ **Check and complete if engineer designed system** P.E. License Number: 16274

Designer Name _____ Firm _____ Work Phone _____

E. This system will serve a

☒ Residential Dwelling Number of Bedrooms 4 Whirlpool Bathtub? ☐ Yes ☒ No Total Acres 5
Garbage Grinder? ☐ Yes ☐ No UK

☐ 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

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 12-2-16 Amount Paid $395
Received By SB Cash/Check No. 5504

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

Form A Updated: 4/15

DEC 0 2 2016

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

B

Permit Number: HS001377

Onsite Wastewater Treatment System
Soil Evaluation Report

PLEASE PRINT OR TYPE

Onsite System Location

Address 4500 Waverly Rd (no rural route) City Lincoln NE, Zip 68514

Owner Denis & Barbara Herman Address 4500 Waverly Rd, Lincoln NE 68514

Date of Tests 9-20-16 to 9-20-16 Weather: Precipitation Cloudy Temperature 74°

Percolation Test Data Table

A.	B.	C.	D.	E.	F.	G.	H.	I.	J.	K.	L.	M.	N.
		Saturation/Swelling Time				Water Level Drop Last 30 mins of 4 hr or last 10 mins of 1 hr					Results		
		Start		End		Start			End				
Hole No.	Hole Depth (in)	Date (Mo/Da)	Time (Hr/Min)	Date (Mo/Da)	Time (Hr/Min)	Date (Mo/Da)	Time (Hr/Min)	Initial Water Lev (in.)	Date (Mo/Da)	Time (Hr/Min)	Elapsed Time Interval	Water Level Drop (in)	Percolation Rates (Min/in = mpi)
1	30"					9-20	1:00 PM	6	9-20	5:00 PM	30 m	.75"	
2	30"					9-20	1:05	6	9-20	5:05	30 m	.85"	
3	30"					9-20	1:10	6	9-20	5:10	30 m	.60"	
4	30"					9-20	1:15	6	9-20	5:15	30 m	.85"	
								6					
								6					
								6					
								6					

Person Conducting Percolation Test

Name: Harry Muhlbach
Phone: 402-430-7304
Address 6701 Vine Str Lincoln, Ne 68505

Sum of Percolation Rates: 2,95
Average of Rates: 39,3
Rate Used for Calculation: 40 mpi

Soil type (NRCS Maps/Other) Judson silt loam - silty clay
Groundwater Depth More than 15'

DO NOT WRITE BELOW THIS LINE

Reviewing Action

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

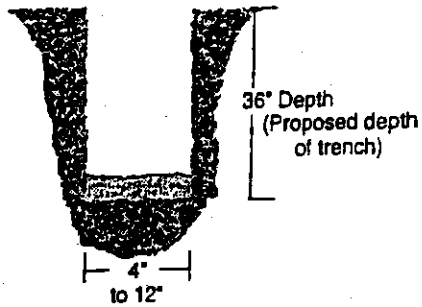
Signature of Reviewing Official _____ Date _____

READ THOROUGHLY

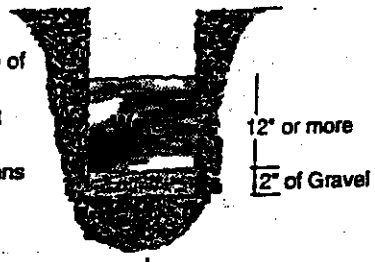
DIAGRAM OF PERCOLATION TEST PROCEDURE

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.

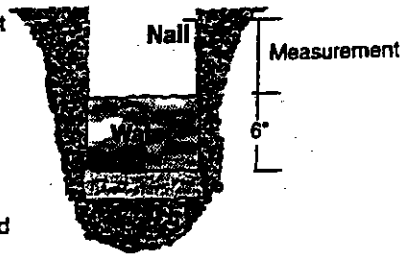


II. Saturation of Soil (Pre-soak)
   - A. Fill hole with 12" or more of water.
   - B. MAINTAIN THIS WATER LEVEL FOR 4 HOURS.
   - C. Record on Form B columns a thru f.



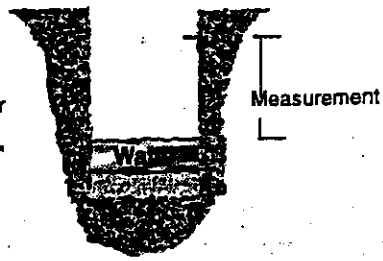
24 Hours Later

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
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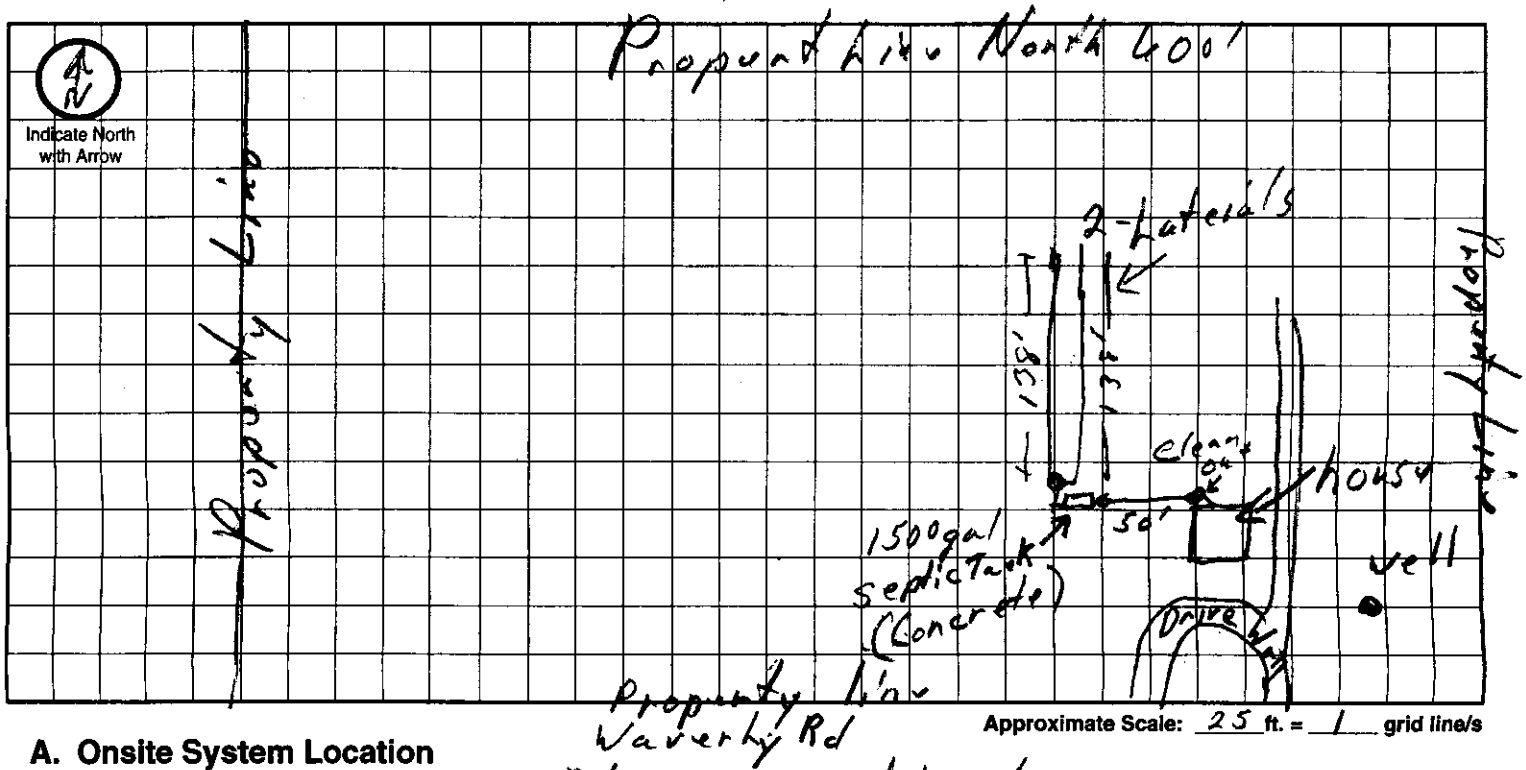
C

Permit Number: HS001377

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: 25 ft. = 1 grid line/s

A. Onsite System Location

Address (no rural route) 4500 Waverly Rd City Lincoln NE, Zip 68514

B. Proposed Septic Tank/s

Septic Tank Cap. 1500 gals Tank Material: ☑ Concrete ☐ Plastic ☐ Other _____ ☐ Lagoon (Max. seepage 1/8" per day)

C. Reserve Area for Replacement Onsite System

☑ Drainfield Absorption Area (percoloation test required) ☐ Lagoon

D. Drainfield Absorption System

Percolation Rate 39.3 (min/inch = mpi) No. of Bedrooms 4 Soil Type Judson Land Slope 2-3 %

☑ Trench ☐ Bed ☐ Non-Standard (engineer designed and NDEQ approved Total Square feet of drainfield 1100 sq.ft.

Total length of laterals 275 Type of distribution: ☐ Perforated pipe ☐ Half-Round ☑ Chamber ☐ Other

No. of absorption trenches 2 Width 48" No. of drop boxes — Distrubtion Box 1

No. of absorption beds — Width — No of Distribution lines per bed —

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

Distance From	Private Well	Public Well	Surface Water	Gound Water	Pressure Water Lines	Property Lines	Foundations Yours	Foundations Neighbors	All Other Setbacks
Tank (ft)	50 ☑	500 ☑	50 ☑	NA ☑	25 ☑	20 ☑	15 ☑	25 ☑	☑
Field (ft)	100 ☑	500 ☑	50 ☑	4 ☑	30 ☑	20 ☑	30 ☑	40 ☑	☑
Lagoon (ft)	100 ☐	500 ☐	50 ☐	N/A ☐	30 ☐	50 ☐	100 ☐	200 ☐	☐

F. Required Signatures

Home Building Contractor _____ Date _____

Installer D. J. Mathews Const Nancy J. Mathews Date 9-28-16

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

DEC 0 2 2016

D Exhibit 4

Permit Number: HS001377

Onsite Wastewater Treatment System
As-Built Description and Drawing

Type of Onsite Wastewater System: ☐ Lagoon (Skip to Back Page) ☑ Subsurface Septic ☐ Mound

Onsite Wastewater System Location

Address or Legal Description or Parcel Identification Number (PID): 4500 Waverly Rd, Lincoln Ne 68514

Owner: Denis Herman Address: 4500 Waverly Rd, Lincoln, Ne 68514

A. Wastewater Piping

1. Material: Sch 40 PVC Diameter: 4 in.
2. Distance between dwelling and septic tank: 50 ft.

B. Septic Tank

1. Material: Concrete
2. Capacity: 1500 gal
3. Depth to top of tank, below unfinished grade: 8 in.
4. Distance to:
   Well 140 ft.
   Pressure line 50 ft
   Property Line 250 ft.
   Foundation 55 ft.

C Distribution Box or Drop Box

Distance **and** Direction from septic tank: 10 ft. NW

D. Drainfield/Absorption Field

☑ Trench ☐ Bed

1. Type: ☐ Perforated Pipe ☐ Chamberless ☐ Other
   Material brand and inside width of Chamberless: 24" Prinsco HDPE H-10 Model 1100BP
2. Number of Laterals: 2
3. Length of each lataral (linear): ft. 138 ft. 138 ft. ____ ft. ____
4. Drainfield size: 1100 sq. ft.
5. Distance to:
   Well 110 ft.
   Pressure line 60 ft.
   Property line 260 ft.
   Depth of Groundwater 157 ft

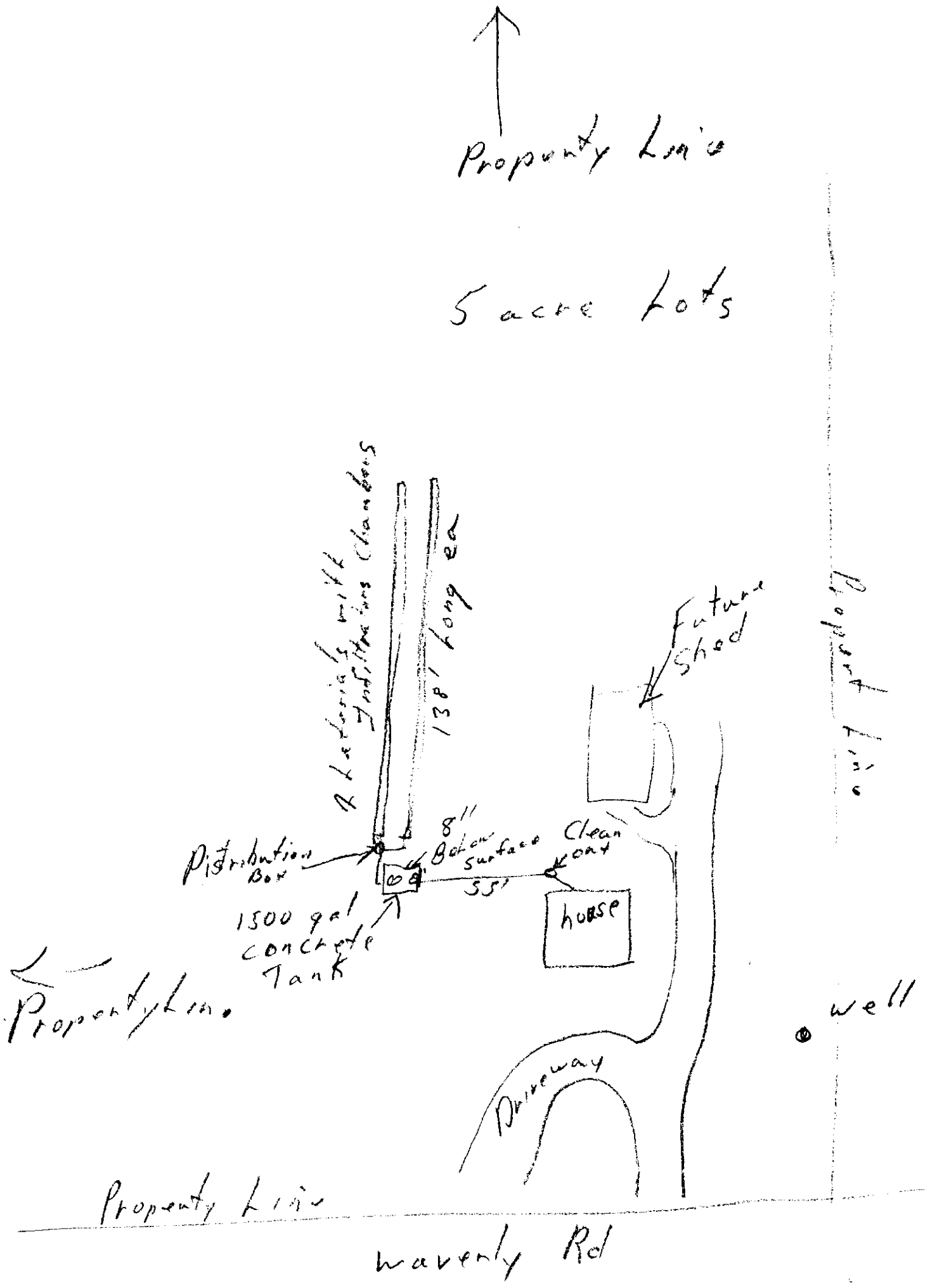
Was the Onsite Wastewater System covered prior to LLCHD inspection? ☐ Yes ☑ No

If Yes, the Certified Professional must sign below for final approval: Part of it was

I swear and affirm that the system complies with Lincoln Municipal Code (LMC) 24.38 and/or County Resolution R-13-0062 requirements and that the information and documentation submitted are true and accurate.

Certified Professional Signature: Nancy T. Mullbach Date: 11-7-16

Complete As-Built drawing on the back of this form.


Property Line
5 acre Lots
4 Leaching trenches
Trenches 1 ft wide
138' long ea
Future Shed
Property Line
8" Below surface
Clean out
Distribution Box
55'
1500 gal concrete Tank
house
Property Line
well
Driveway
Property Line
Waverly Rd

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. HS001377

System Type: Standard

Situs: 4500 WAVERLY RD, RURAL, NE

Issued: 12/2/2016

Expires: 12/2/2017

Description: S8, T11, R7, 6th Principal Meridian, LOT 26 SW

Owner: HERMAN, DENIS & BARBARA
4500 WAVERLY RD
LINCOLN, NE 68514

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

DENIS HERMAN
4500 WAVERLY RD
LINCOLN, NE 68516

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

016 PW 12/5/14

Exhibit 5

Permit Number: HS0013777

Onsite Wastewater Treatment System

Inspection Sheet

Date 12/2/16 Legal Description 11-7-8 Lot 26

¼ ¼ Section/Township/Range

Onsite System Location

Address (no rural route) 4500 Wendy Rd City _____

Owner _____ Address _____

Mark One: ☒ Dwelling ☐ Non-dwelling

☒ New System ☐ Alteration [☐ Tank Only ☐ Trench Only] ☐ Lateral Only

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

_____

Drainfield Absorption System:

☒ Lateral ☐ Bed ☐ Non-standard (engineer-designed and NDEQ approved) ☐ Holding Tank ☐ Trench

Total square feet of drainfield 1000 Sq. Ft. Tank Size 1500 gals

Total length of laterals 276 Type of Distribution: ☐ Chamber ☐ Perforated Pipe ☐ Other (describe) _____

No. of Absorption Laterals 2 Width 3' No. of Drop Boxes 0 Distribution Box 1

Leveling Method Used Laser

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

Distance From	Private Well	Public Well	Surface Water	Ground water	Pressure Water Lines	Property Lines
Tank (ft)	50 ☐	500 ☐	50 ☐	NA ☐	10 ☐	5 ☐
Field (ft)	100 ☐	500 ☐	50 ☐	4 ☐	25 ☐	5 ☐

Geographical Coordinates to 6 Decimals:

Tank _____

Lateral #1 _____ Lateral #3 _____

Lateral #2 _____ Lateral #4 _____

Inspections prior to Final Approval
Initial 11/22/16 Date 12/1/16

Follow-Up _____ Date _____

Follow-Up _____ Date _____

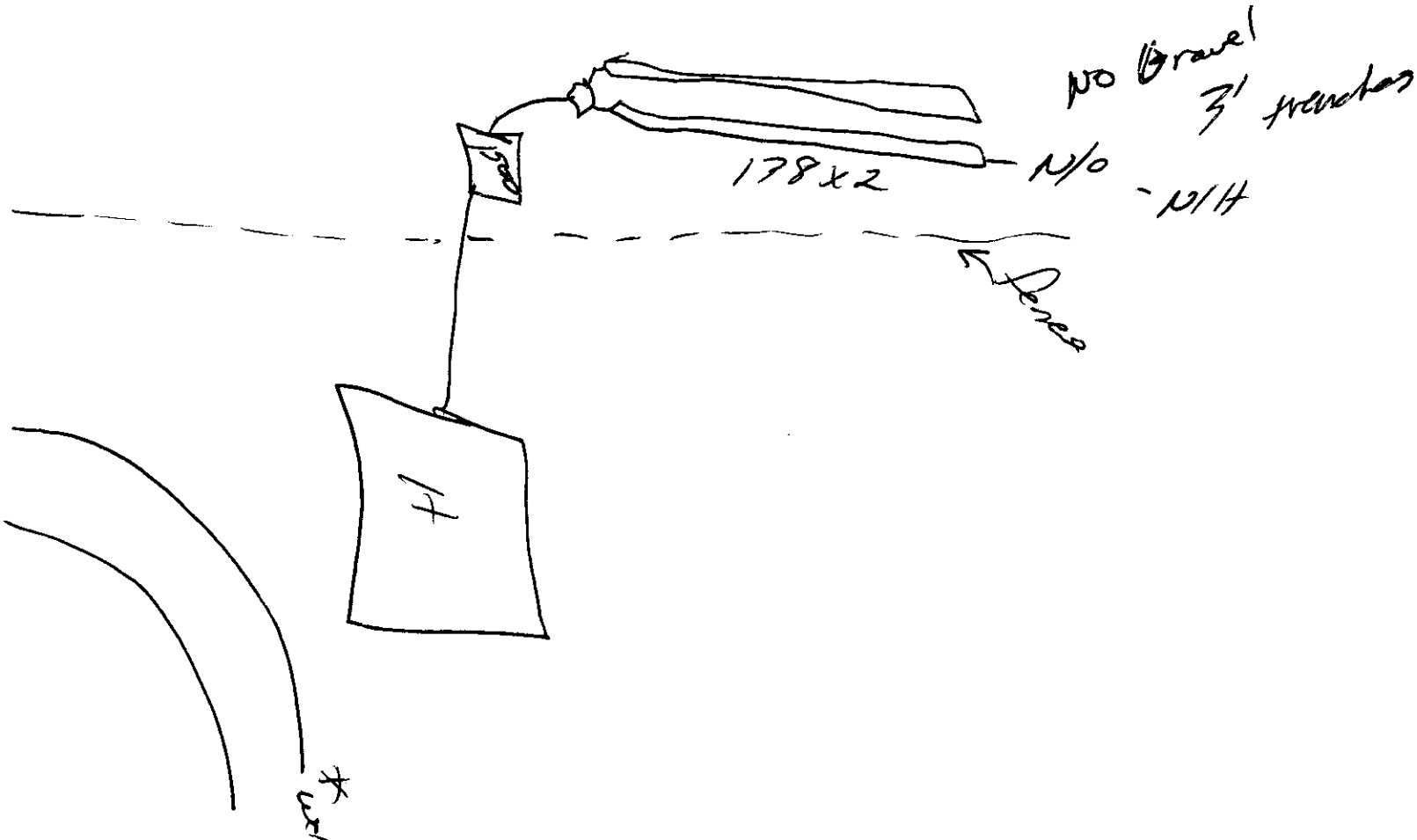
~~Installation Final Written Approval~~
By _____

Date 12/2/16

Comments:

Contractor erroned on sizing but home is only 2 bedroom - therefore, system is oversized - NH 12/2/16

Field Note Drawing (See Reverse Side):


No Gravel
3' trenches
178x2
N/O
-N/H
Fence
1

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

SCANNED

A

DEC 0 2 2016

Permit Number
HS001377

Onsite Wastewater Treatment System Permit Application

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

☒ Septic System ☐ Lagoon ☐ Other (Refer to Form C)

PLEASE PRINT OR TYPE

A. Onsite System Location

Address* 4500 Waverly Rd City Lincoln, NE Zip 68514
(no rural route)

Legal Description 8 11 7 26
1/4 1/4 Section Township Range Subdivison Addition Block Lot

PID 18-08-300-007-000 SB *Approx. Address (If to be determined)

B. Owner

Name Dennis + Barbara Herman Signature Harry Muhlbach For owners

Address 4500 Waverly Rd City/State/Zip Lincoln NE 68514

Home Phone 402-466-0906 Work Phone

C. Certified Installer

Name: Harry Muhlbach Signature Harry Muhlbach

Address 5701 Vine St City/State/Zip Lincoln NE 68505

Work Phone 402-430-7304

D. Engineer

☐ **Check and complete if engineer designed system** P.E. License Number: 1624

Designer Name Firm Work Phone

E. This system will serve a

☒ Residential Dwelling Number of Bedrooms ~~4~~ 3 per contractor 2 Bedroom per code Whirlpool Bathtub? ☐ Yes ☒ No Total Acres 5

Garbage Grinder? ☐ Yes ☐ No UK

☐ 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

1. Health Department
Site visits
Comments
Date rec'd 12/2/16
Date frwd 12/2/16
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 12/2/16

Business Office Use Only
Date Received 12-2-16 Amount Paid $395
Received By SB Cash/Check No. 5564

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