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

A

Permit Number HS001161

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 2905 W Denton Rd (no rural route) City Lincoln, NE Zip 68523

Legal Description

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

PID 09-20-202-002-000 SB

B. Owner

Name John Carlson Signature X

Address 2905 W Denton Rd City/State/Zip Lincoln NE 68523

Home Phone 402 797 2905 Work Phone 402 840 0282

C. Certified Installer

Name: Kevin Lewis Signature

Address 4810 W Claire Ave City/State/Zip Lincoln NE 68523

Work Phone 402 310 9160

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 5.3

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
Date frwd
Comments
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

Business Office Use Only
Date Received 11-3-15 Amount Paid $385.00
Received By SB Cash/Check No. 8039

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:

Onsite Wastewater Treatment System

Soil Evaluation Report

PLEASE PRINT OR TYPE

Onsite System Location

Address 2905 W Denton Rd City Lincoln NE, Zip 68523
(no rural route)

Owner John Carlson Address 2905 W Denton Rd lincoln 68523

Date of Tests Oct 27-15 to Oct 28-15 Weather: Precipitation -0- Temperature 60°

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			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	36	10-27	3:00	10-28	7:00	10-28	7:00	6	10-28	7:30	30m	3/4	40
2	35	"	"	"	"	"	"	6	"	"	"	1	30
3	33	"	"	"	"	"	"	6	"	"	"	3/4	40
4	36	"	"	"	"	"	"	6	"	"	"	1	30
5	32	"	"	"	"	"	"	6	"	"	"	1/2	60
6	33	"	"	"	"	"	"	6	"	"	"	3/4	40
								6					
								6					

Person Conducting Percolation Test

Name: Kevin Lewis
Phone: 402 310 9160
Address 4810 W Claire Ave
Lincoln NE 68523

Sum of Percolation Rates: 240
Average of Rates: 40
Rate Used for Calculation:

Soil type (NRCS Maps/Other)
Groundwater Depth over 12

DO NOT WRITE BELOW THIS LINE

Reviewing Action

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

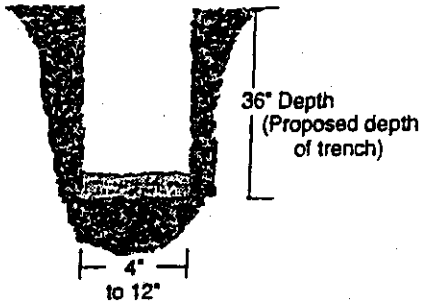
Signature of Reviewing Official Date

READ THOROUGHLY

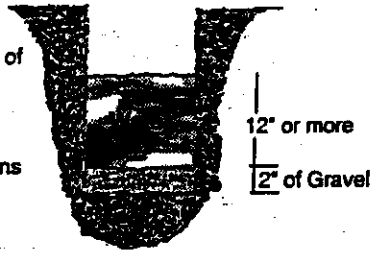
DIAGRAM OF PERCOLATION TEST PROCEDURE

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.

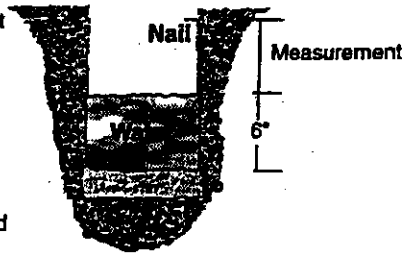


II. Saturation of Soil (Pre-soak)
   - A. Fill hole with 12" or more of water.
   - B. MAINTAIN THIS WATER LEVEL FOR 4 HOURS.
   - C. Record on Form B columns a thru f.



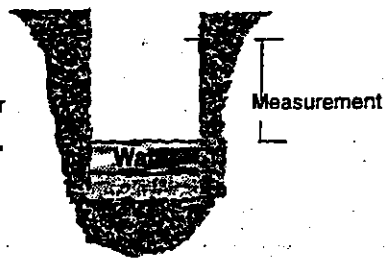
24 Hours Later

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.

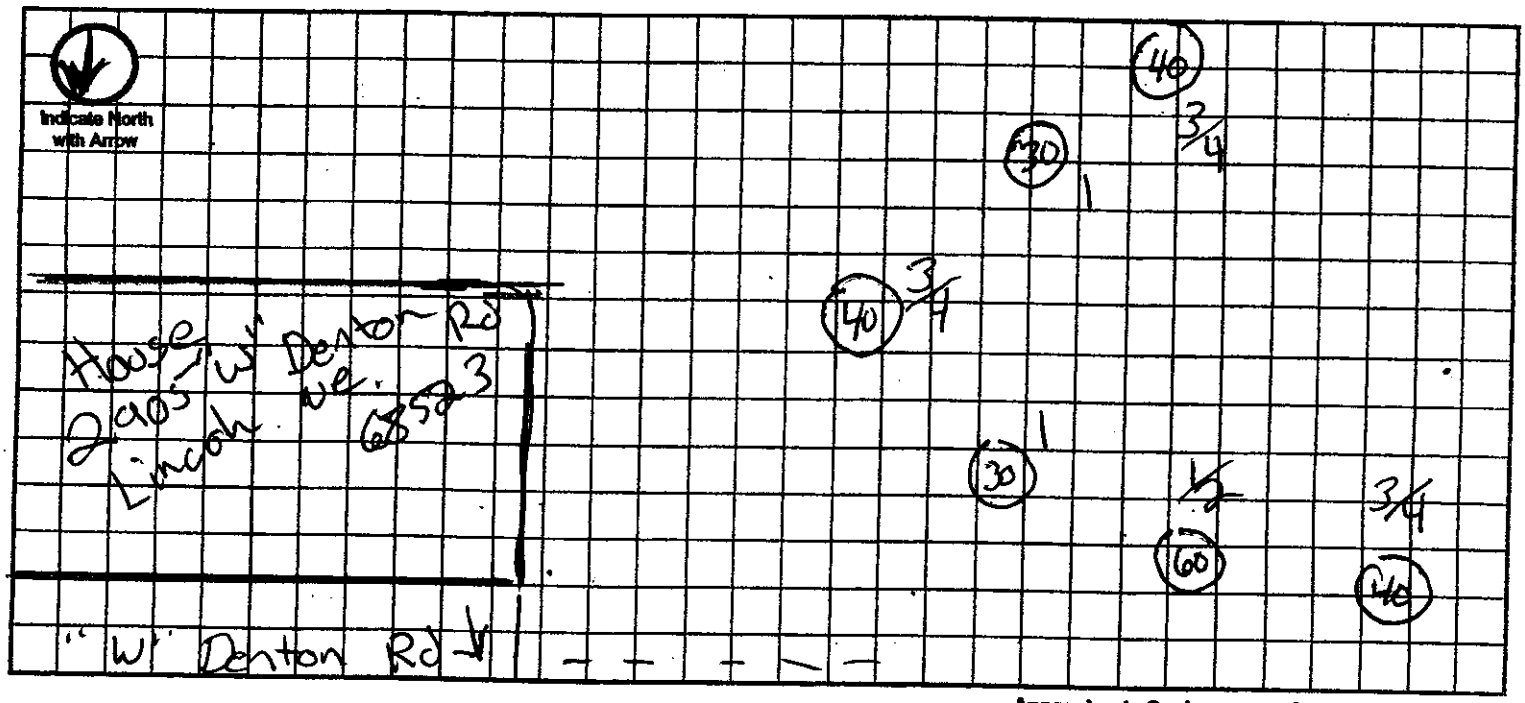
C

Permit Number: HS001161

Sewage Disposal System

Preliminary Plan Specifications

Draw a plot plan showing system location, lines, distribution box, tank and laterals, percolation test hole locations, well, residence, compass direction and property lines. Indicate on drawing if residence and well are existing or proposed.



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

A. System Location (Indicate correct number and street)

Address (no rural route) 2905 W Denton Rd City Lincoln NE, Zip 68523

B. Proposed Septic Tank/s

Tank Material: ☒ Concrete ☐ Plastic ☐ Other _____

C. Proposed Absorption System (See Form B for Percolation Information)

Percolation Rate _____ (min. per inch) Soil Type: _____ Land Slope: _____ %

Type of Absorption System: ☐ Trench ☐ Bed ☐ Other _____

Total Square Feet of Field Required: _____ sq. ft.

Type of Lateral: ☐ Half-Moon ☐ Perforated Pipe ☐ Other Lateral Material: _____

Capacity of Septic Tank _____ gals Number of Absorption Beds: _____ Number of Distribution Laterals per Bed _____

Total Length of Laterals _____ ft. Number of Trenches _____ Trench Width _____

D. 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 ☐	☐

E. Required Signatures

Home Building Contractor _____ Date _____

Installer _____ Date _____

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. HS001161

System Type: Standard

Situs: 2905 W DENTON RD, RURAL, NE

Issued: 11/4/2015

Expires: 11/4/2016

Description: WHISPERING PINES 1ST ADDITION, Lot 2, EX PT DESC IN INST #2013-30226

Owner: CARLSON, JON P & BARBARA
2905 W DENTON RD
LINCOLN, NE 68523

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

GAGNER CONSTRUCTION COMPANY INC
4510 W CLAIRE AVE
LINCOLN, NE 68523

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

SK 4/11-3/17

Exhibit 5

Permit Number: HS001161

Onsite Wastewater Treatment System

Inspection Sheet

Date 4/10/17

Legal Description ____ ¼ ____ ¼ 20/9/6 Section/Township/Range Lot 2

Onsite System Location

Address (no rural route) 2905 W Denton 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 1,058 Sq. Ft. Tank Size 1,250 gals

Total length of laterals 212 Type of Distribution: ❑ Chamber ❑ Perforated Pipe ❑ Other (describe) _____

No. of Absorption Laterals _____ Width _____ No. of Drop Boxes _____ Distribution Box _____

Leveling Method Used _____

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 NAD

Lateral #2 _____

Lateral #3 _____

Lateral #4 _____

Comments:

Inspections prior to Final Approval
Initial DS Date 4/6/17

Follow-Up _____ Date _____

Follow-Up _____ Date _____

Installation Final Written Approval
By Doug Rhine
Date 4/10/17

Field Note Drawing (See Reverse Side):

APR 1 0 2017

D

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

Permit Number: HS001161

Onsite Wastewater Treatment System

As Built Plans & Specifications

Date 4-7-17 Legal Description ____ 1/4 1/4 Section Township Range

Onsite System Location

Address (no rural route) 2905 W Denton City Lincoln NE, Zip 68523

Owner John Carlson Address " "

A. Sewer Pipe

1. Material: PVC
   Diameter: 4" in.
2. Distance above basement floor: 48 in.
   or distance below basement floor: ____ in.
3. Distance between dwelling and septic tank: ____ ft.
4. Number of clean-outs: 2
5. Distances to: well or suction line Over 100 ft.
   stream " ft.
   pressure line " ft.
   property line " ft.

B. Septic Tank

☐ Label with Manufacturer, address and gallon capacity

1. Material: Poly
   Number of compartments: 2
2. Capacity: 1250 gal.
3. Factory built: ☒ Yes ☐ No
4. Manholes: Over inlet, diameter 24 in.
   Over outlet, diameter 24 in.
   Riser: ☒ above ☐ below grade ____ in.
5. Inlet: ☒ baffle ☐ tee ☐ 6" dia. inspection pipe
6. Outlet: ☒ baffle ☐ tee ☐ 6" dia. inspection pipe
7. Depth to top of tank, below unfinished grade: 24 in.
8. Distances to: Well or suction line Over 100 ft.
   Stream " ft.
   Pressure line " ft.
   Property line " ft.

C. ☒ Distribution Box ☐ Drop Boxes

(≥ 12" inspection opening) (removable lid to inspect)

1. Material: Plastic
   Number available outlets: 5
2. Factory built: ☒ Yes ☐ No
3. Distance from septic tank: 43 ft.

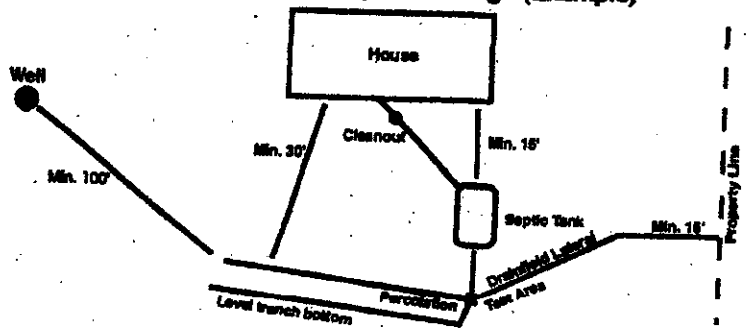
D. Drainfield Absorption

☒ Trench ☐ Bed ☐ Level Bottom

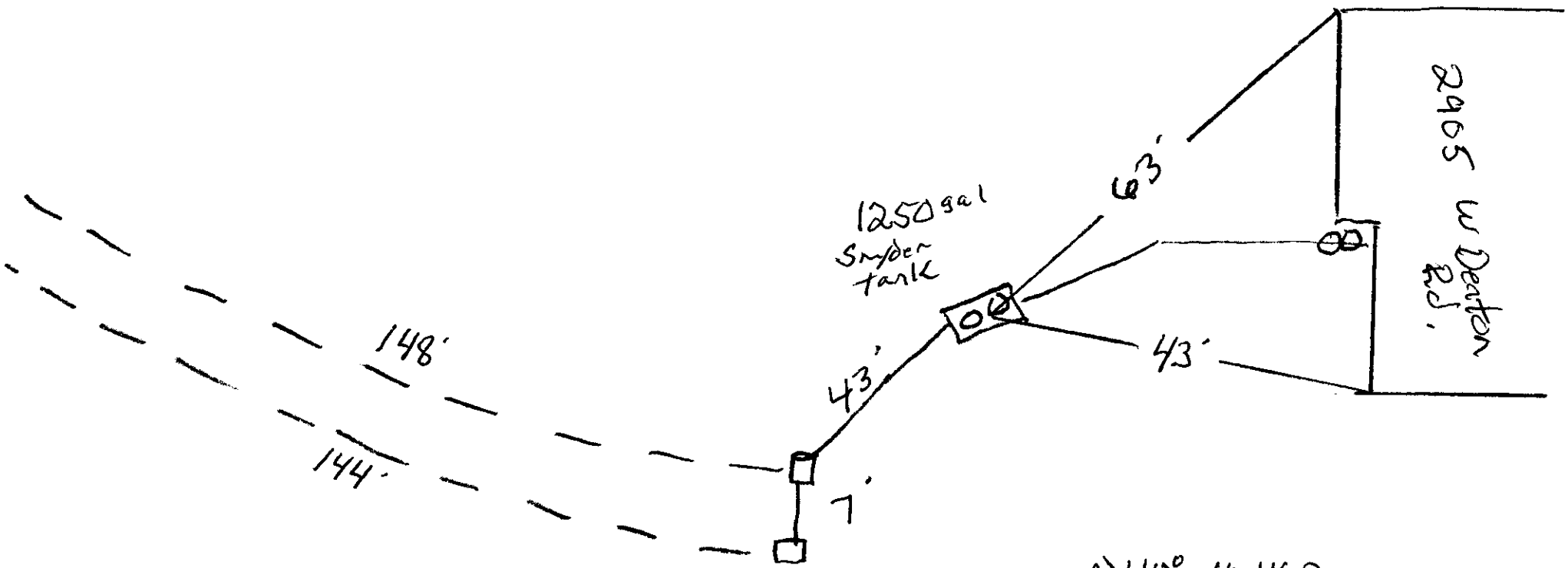
1. Type: ☐ Half rounds ☐ Perforated pipe ☐ Chambers
   Diameter or width: 24"
   Number of distribution lines in bed 2
   Material: ☐ fiberglass ☒ plastic ☐ concrete
   ☐ other ____
2. Drainfield Laterals: Number 2
   Length of each line: 148 ft. 144 ft.
   ____ ft. ____ ft., ____ ft.
3. Drainfield dimensions: Width 36 ft.
   Distribution Pipe Slope 14 in/100 ft.
   Average depth 30 in
4. Filter material: N/A
   Depth of material ____ in.
5. Distances to: Well or suction line ____ ft.
   Pressure line ____ ft.
   Property line ____ ft.
   House or building ____ ft.
   Lake or Stream ____ ft.

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

Onsite Wastewater System Design (Example)



icate North
ith Arrow



292' Infiltrator Quick 4 Plus

1058.5 sq'

N40° 40.462

W096° 45.686

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

ON-SITE WASTE WATER SYSTEM
CONSTRUCT/ INSTALL EXTENSION PERMIT
No. HS001161

System Type: Standard

Situs: 2905 W DENTON RD, RURAL, NE

Issued: 11/5/2016

Expires: 5/4/2017

Description: WHISPERING PINES 1ST ADDITION, Lot 2, EX PT DESC IN INST #2013-30226

Owner: CARLSON, JON P & BARBARA
2905 W DENTON RD
LINCOLN, NE 68523

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

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Judith A. Halstead, MS
Health Director

GAGNER CONSTRUCTION COMPANY INC
4510 W CLAIRE AVE
LINCOLN, NE 68523

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

SCANNED

Contacted Kevin Lewis of Lincoln Heating & Cooling and informed him the project must be started by the 7th or an extension must be filed

A

Permit Number HS001161

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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Legal Description: 1/4 | 1/4 | Section 20 | Township 9 | Range 6 SB | Subdivison | Addition | Block | Lot 2

PID 09-20-202-002-000 SB

B. Owner

Name John Carlson Signature X

Address 2905 W Denton Rd City/State/Zip Lincoln NE 68523

Home Phone 402 797 2905 Work Phone 402 840 0282

C. Certified Installer

Name: Kevin Lewis Signature

Address 4810 W Claire Ave City/State/Zip Lincoln NE 68523

Work Phone 402 310 9160

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 5.3

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 11/4/15
Date frwd 11/4/15
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 4/10/17
Exempt

Business Office Use Only
Date Received 11-3-15 Amount Paid $385.00
Received By SB Cash/Check No. 8039

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

Form A Updated: 1/13

SCANNED

B

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

Permit Number: HS001161

Onsite Wastewater Treatment System

Soil Evaluation Report

PLEASE PRINT OR TYPE

Onsite System Location

Address 2905 W Denton Rd (no rural route) City Lincoln NE, Zip 68523

Owner John Carlson Address 2905 W Denton Rd lincoln 68523

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		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)
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2	35	"	"	"	"	"	"	6	"	"	"	1	30
3	33	"	"	"	"	"	"	6	"	"	"	3/4	40
4	36	"	"	"	"	"	"	6	"	"	"	1	30
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6	33	"	"	"	"	"	"	6	"	"	"	3/4	40
								6					
								6					

Person Conducting Percolation Test

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Phone: 402 310 9160
Address 4810 W Claire Ave
Lincoln Ne 68523

Sum of Percolation Rates: 240
Average of Rates: 40
Rate Used for Calculation: 60 -NH 11/4/15

Soil type (NRCS Maps/Other)

Groundwater Depth Over 12

DO NOT WRITE BELOW THIS LINE

Reviewing Action

Comments (Soil type, groundwater, floodplain, etc.) * Told Kevin Lewis to size for 60 mpi as required. -NH

Signature of Reviewing Official Date