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

JUN 25 2018

A

Permit Number HS001693

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* 11511 Aspen Canyon Rd (no rural route) City Lincoln, NE Zip 68526

Legal Description: 1/4 SW 1/4 Section 10 Township 9 Range 8 Subdivison Whispering Creek Addition 1st Block 4 Lot 3

PID 22-18-208-003-000 *Approx. Address (If to be determined)

B. Owner

Name Britt A + Lindsey Shunkwiler Signature

Address 1318 Shire Ln City/State/Zip Eagle, NE 68347

Home Phone Work Phone

C. Certified Installer

Name: Marcus Hochstein Signature

Address 625 S 4th PO Box 142 City/State/Zip Eagle, NE 68347

Work Phone 402-730-7744

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 5 Whirlpool Bathtub? ☑ Yes ☐ No Total Acres 3.02

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

1. Health Department
Site visits
Comments
Date rec'd
Date frwd
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 6-25-18 Amount Paid $405.00
Received By JAD Cash/Check No. 116

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

Form A Updated: 4/15

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 11511 Aspen Canyon Rd (no rural route) City Lincoln NE, Zip 68526

Owner Brett Shunkwiler Address 1318 Shire Ln, Eagle, NE 68347

Date of Tests 6-13 to 6-14 Weather: Precipitation 0 Temperature 96-99

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	40	6-13	5:00	6-14	12:45	6-14	4:15	6	6-14	4:45	30 min	1½	20
2	"	"	"	"	"	"	"	6	"	"	"	10	3
3	"	"	"	"	"	"	"	6	"	"	"	2¼	13.33
4	"	"	"	"	"	"	"	6	"	"	"	11⅞	2.53
								6					
								6					
								6					
								6					

Person Conducting Percolation Test

Name: Marcus Hochstein
Phone: 402-730-7749
Address PO Box 142, Eagle, NE 68347

Sum of Percolation Rates: 38.86
Average of Rates: 9.71
Rate Used for Calculation: 45

Soil type (NRCS Maps/Other) Wymore silt clay loam 3-6%
Groundwater Depth 12'+

DO NOT WRITE BELOW THIS LINE

Reviewing Action

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

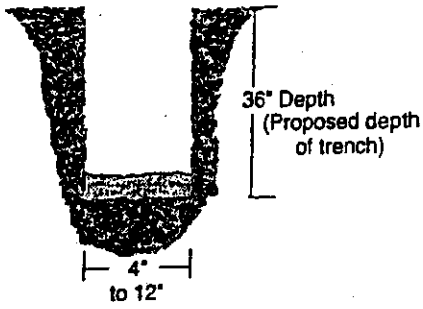
Signature of Reviewing Official _____ Date _____

READ THOROUGHLY

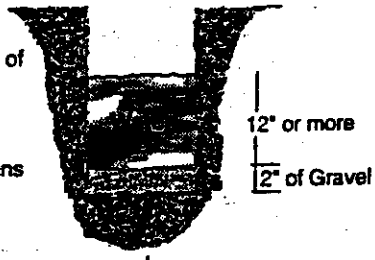
DIAGRAM OF PERCOLATION TEST PROCEDURE

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.

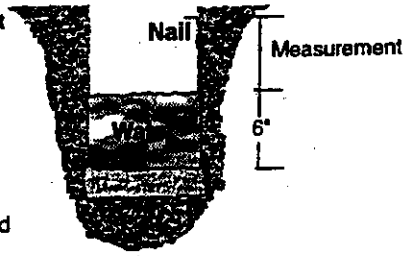


II. Saturation of Soil (Pre-soak)
   - A. Fill hole with 12" or more of water.
   - B. MAINTAIN THIS WATER LEVEL FOR 4 HOURS.
   - C. Record on Form B columns a thru f.



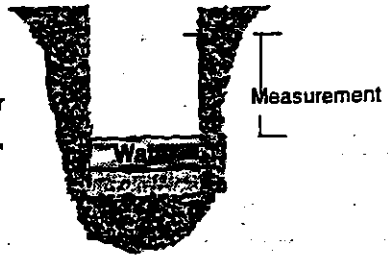
24 Hours Later

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

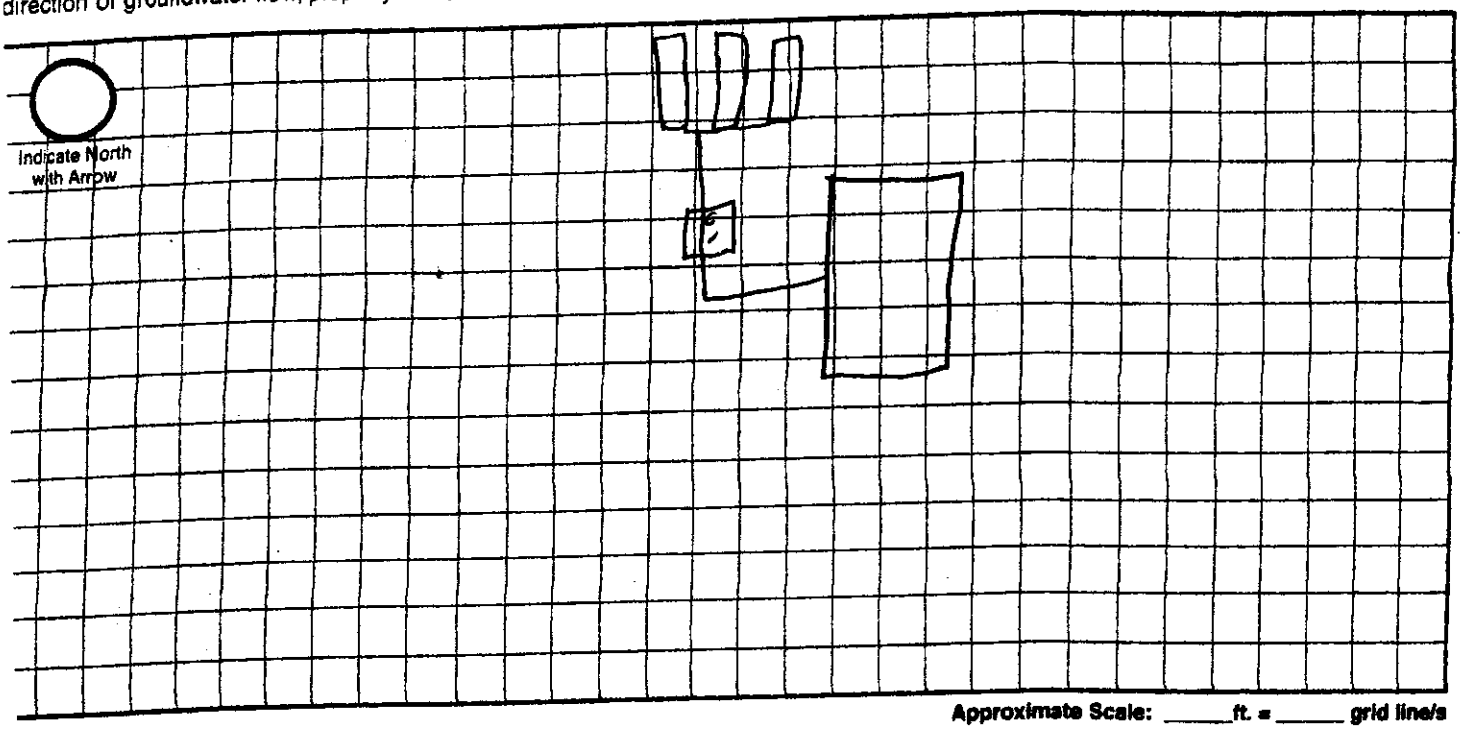
Lincoln-Lancaster County Health Department
Environmental Public Health Division
3140 "N" Street • Lincoln, NE 68510-1514
Phone: 402-441-8022

Permit Number:

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

A. Onsite System Location

Address (no rural route) 11511 Aspen Canyon Rd City Linda NE, Zip 68526

B. Proposed Septic Tank/s

Septic Tank Cap. 2aa gals Tank Material: ☑ Concrete ☐ Plastic ☐ Other_____ ☐ Lagoon (Max. seepage 1/8" per day)

C. Reserve Area for Replacement Onsite System

☑ Drainfield Absorption Area (percolation test required) ☐ Lagoon

D. Drainfield Absorption System

Percolation Rate 45 (min/inch = mpi) No. of Bedrooms 5 Soil Type Wymore silt clay loam Land Slope 3-6 %

☑ Trench ☐ Bed ☐ Non-Standard (engineer designed and NDEQ approved Total Square feet of drainfield 1665 sq.ft.

Total length of laterals 370 Type of distribution: ☐ Perforated pipe ☐ Half-Round ☐ Chamber ☑ Other

No. of absorption trenches 3 Width 36 No. of drop boxes 0 Distrubtion Box 1

No. of absorption beds _____ Width _____ No of Distribution lines per bed 0

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 ☐	☐

Required Signatures

Name Building Contractor _____ Date _____

Date 6-20-18

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

A

Permit Number
HS001693

JUN 2 9 2018

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* 11511 Aspen Canyon Rd City Lincoln, NE Zip 68526
(no rural route)

Legal Description Whispering Creek 1st 4 3
1/4 1/4 Section Township Range Subdivison Addition Block Lot

PID 22-18-208-003-000 *Approx. Address (If to be determined)

B. Owner

Name Brett A Shuntwiler Signature

Address 1318 Shire Ln City/State/Zip Eagle, NE 68347

Home Phone Work Phone

C. Certified Installer

Name: Marcus Hochstein Signature

Address 625 S 42, PO Box 142 City/State/Zip Eagle, NE 68347

Work Phone 402-730-7749

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 5 Whirlpool Bathtub? ☑ Yes ☐ No Total Acres 3.02
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

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 Amount Paid
Received By Cash/Check No.

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

JUN 2 9 2018

PLEASE PRINT OR TYPE

Onsite System Location

Address 11511 Aspen Canyon Rd (no rural route) City Lincoln NE, Zip 68526

Owner Brett Shunkwiler Address 1318 Shire Ln, Eagle, NE 68347

Date of Tests 6-27-18 to 6-28-18 Weather: Precipitation 0 Temperature 85-90 °F

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	40"	6-27	4:00	6-28	12:15	6-28	3:45	6	6-28	4:15	30m	3 1/2	8.57
2	"	"	"	"	"	"	"	6	"	"	"	5 7/8	5.11
3	"	"	"	"	"	"	"	6	"	"	"	3 1/4	9.23
4	"	"	"	"	"	"	"	6	"	"	"	1 1/4	24
								6					
								6					
								6					
								6					

Person Conducting Percolation Test

Name: Marcus Hochstein
Phone: 402-730-7749
Address 625 S. 4th, PO Box 142
Eagle, NE 68347

Sum of Percolation Rates: 46.91
Average of Rates: 11.73
Rate Used for Calculation: 24

Soil type (NRCS Maps/Other) Uly silt clay Loam 7-6%
Groundwater Depth 124

DO NOT WRITE BELOW THIS LINE

Reviewing Action

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

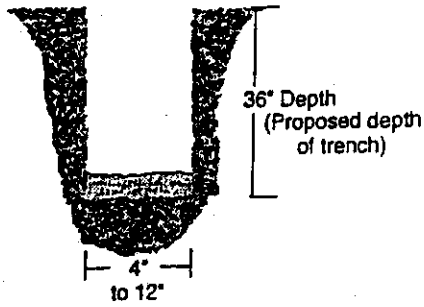
Signature of Reviewing Official _____ Date _____

READ THOROUGHLY

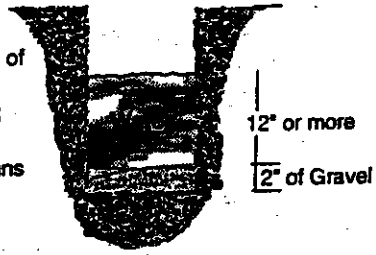
DIAGRAM OF PERCOLATION TEST PROCEDURE

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.

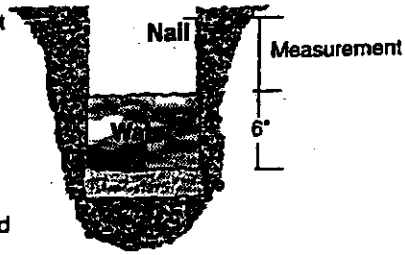


II. Saturation of Soil (Pre-soak)
   - A. Fill hole with 12" or more of water.
   - B. MAINTAIN THIS WATER LEVEL FOR 4 HOURS.
   - C. Record on Form B columns a thru f.



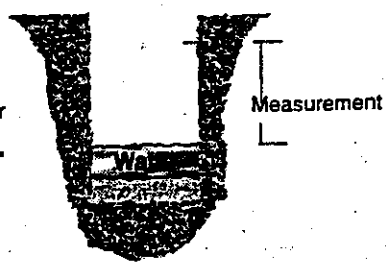
24 Hours Later

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.
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Instructions

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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.
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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

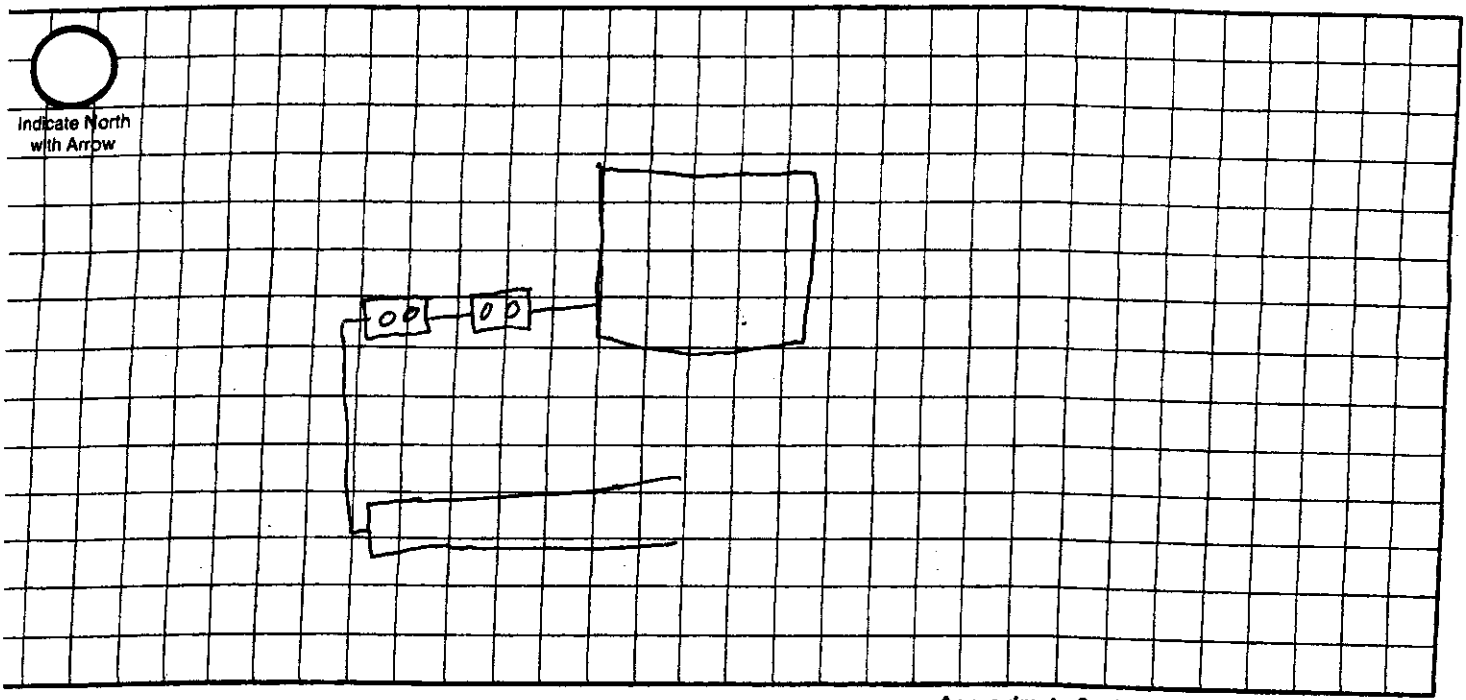
Permit Number:

Onsite Wastewater Treatment System

JUN 2 9 2018

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

A. Onsite System Location

Address (no rural route) 11511 Aspen Canyon Rd City Lincoln NE, Zip 68526

B. Proposed Septic Tank/s

Septic Tank Cap. 2000 gals Tank Material: ☑ Concrete ☐ Plastic ☐ Other_____ ☐ Lagoon(Max. seepage 1/8" per day)

C. Reserve Area for Replacement Onsite System

☑ Drainfield Absorption Area (percolation test required) ☐ Lagoon

D. Drainfield Absorption System

Percolation Rate 24 (min/inch = mpi) No. of Bedrooms 5 Soil Type Wymore Silt Clay Loam Land Slope 3-6 %

☑ Trench ☐ Bed ☐ Non-Standard (engineer designed and NDEQ approved Total Square feet of drainfield 1260 sq.ft.

Total length of laterals 280' Type of distribution: ☐ Perforated pipe ☐ Half-Round ☐ Chamber ☑ Other

No. of absorption trenches 2 Width 36 No. of drop boxes 0 Distrubtion Box 0

No. of absorption beds 0 Width 0 No of Distribution lines per bed 0

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 ☐	☐

Required Signatures

Licensed Building Contractor _____ Date _____

Date 6-28-18

Lincoln-Lancaster County Health Department
Environmental Public Health Division (402) 441-8027
3131 O Street Lincoln, Nebraska 68510-1514

ON-SITE WASTE WATER SYSTEM
CONSTRUCTION - INSTALLATION PERMIT
No. HS001693

System Type: Standard

Situs: 11511 ASPEN CANYON RD, LINCOLN, NE 68526

Issued: 7/10/2018

Expires: 7/10/2019

Description: WHISPERING CREEK 1ST ADDITION, BLOCK 4, Lot 3

Owner: SHUNKWILER, BRETT A & LINDSEY J
1318 SHIRE LN
EAGLE, NE 68347

Shavonna M. Lausterer, MPH, CPH, 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.

Shavonna M. Lausterer, MPH, CPH
Health Director

MARCUS HOCHSTEIN
625 S 4TH
PO BOX
EAGLE, NE 68347