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

SEP 05 2014

SEP 05 2014

A

Permit Number HS000967

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 21000 W Fresh Water Ln (no rural route) City Walton NE Zip 68461

Legal Description NW 4 7N 6E Four Stones 1 4

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

PID 07-04-101-064-000

B. Owner

Name Chad Denison (Denison) Signature

Address 400 Indian City/State/Zip Lincoln, NE 68505

Home Phone 402-430-8639 Work Phone

C. Certified Installer

Name: Lloyd Jakoubek, Raymond Contracting Inc Signature for Lloyd

Address 13800 NW 70th St City/State/Zip Raymond, NE 68428

Work Phone 402-890-6006 or 402-783-2663

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 ☐ 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 9-5-14 Amount Paid 365.00
Received By SD Cash/Check No. 8468

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

SEP 05 2014

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

B

Permit Number: HS000967

Onsite Wastewater Treatment System
Soil Evaluation Report

PLEASE PRINT OR TYPE

Onsite System Location

Address 2600 W Freshwater Ln (no rural route) City Markell NE, Zip 68404

Owner Chad Denison Address 460 Indian Rd Lincoln NE 68505

Date of Tests 8/20/14 to 8/21/14 Weather: Precipitation 1/4" morning prior to test Temperature 90°

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)
1	25	8/20	1:00p	8/20	5:00pm	8/21	5:30p	6	8/21	6:00p	30	1/2	60
2	25	"	"	"	"	"	"	6	"	"	"	2 1/8	14
3	24	"	"	"	"	"	"	6	"	"	"	1 1/2	20
4	37	"	"	"	"	"	"	6	"	"	"	1/2	60
5	24	"	"	"	"	"	"	6	"	"	"	9/16	53
6	24	"	"	"	"	"	"	6	"	"	"	1 3/16	25
								6					
								6					

Person Conducting Percolation Test

Name: Terri L. Jakoubek, Raymond Contracting Inc

Phone: 402-783-2663 or 402-890-3870

Address 13860 NW 70th St
Raymond, NE 68428

Soil type (NRCS Maps/Other) SCL

Groundwater Depth 76.7'

Sum of Percolation Rates: 232

Average of Rates: 39

Rate Used for Calculation: 1d2 (2 mpi variance)

DO NOT WRITE BELOW THIS LINE

Reviewing Action

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

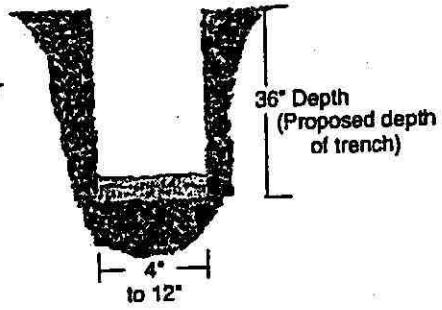
Signature of Reviewing Official _____ Date _____

READ THOROUGHLY

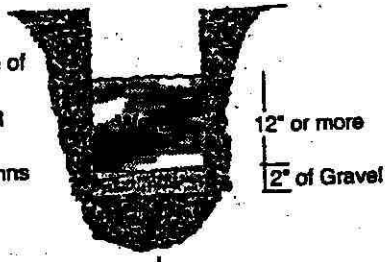
DIAGRAM OF PERCOLATION TEST PROCEDURE

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.

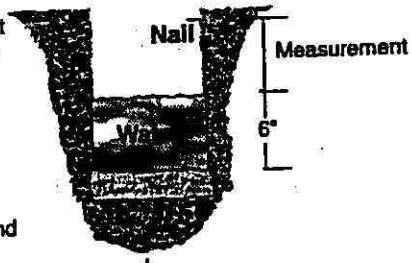


II. Saturation of Soil (Pre-soak)
   - A. Fill hole with 12" or more of water.
   - B. MAINTAIN THIS WATER LEVEL FOR 4 HOURS.
   - C. Record on Form B columns a thru f.



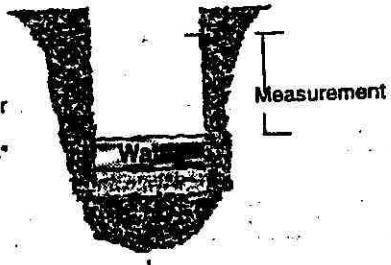
24 Hours Later

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.

SEP 05 2014

C

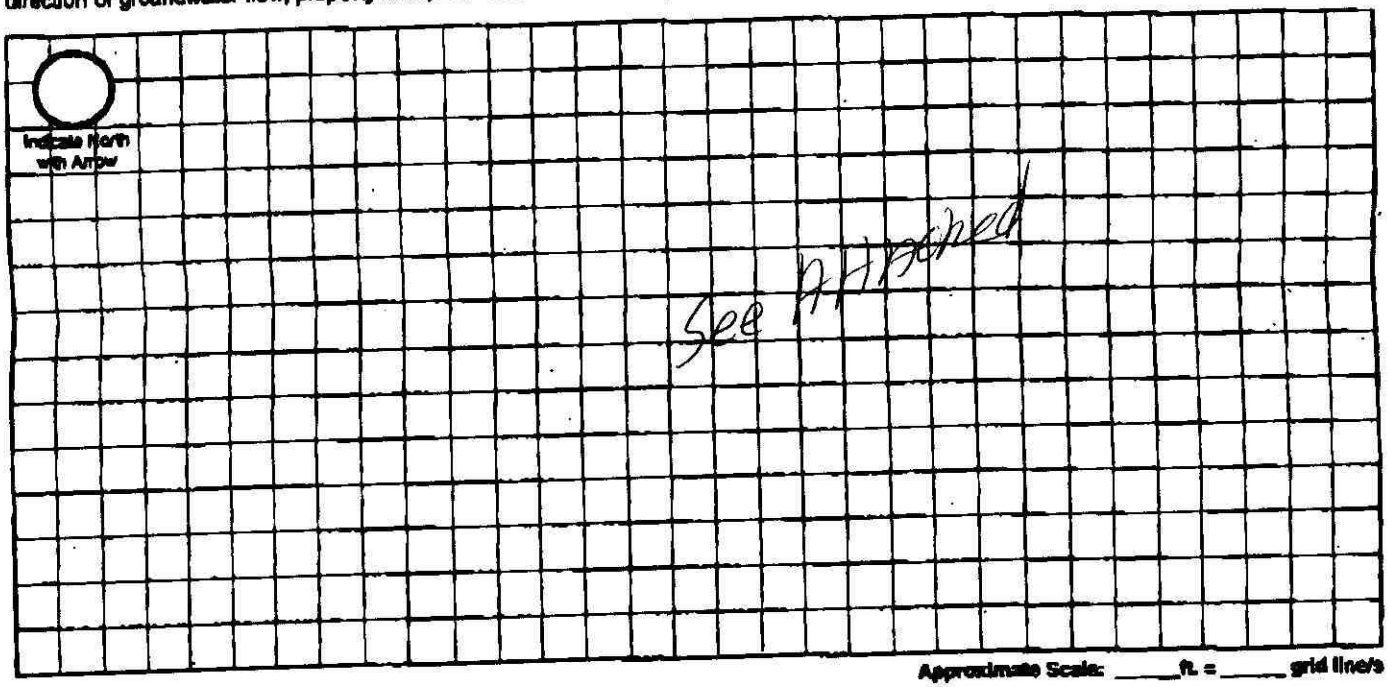
Lincoln-Lancaster County Health Department
Environmental Public Health Division
3140 "N" Street • Lincoln, NE 68510-1514
Phone: 402-441-8022

Permit Number: HS000967

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) 2400 W Fresh Water Ln City Markel NE. Zip 68404

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 102 (min/inch = mpi) No. of Bedrooms 5 Soil Type SCL Land Slope _____ %

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

Total length of laterals 440 Type of distribution: ☐ Perforated pipe ☐ Half-Round ☒ Chamber ☐ Other

No. of absorption trenches 4 Width 40" No. of drop boxes 4 Gravity Distrubtion Box _____

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 ☐	☐

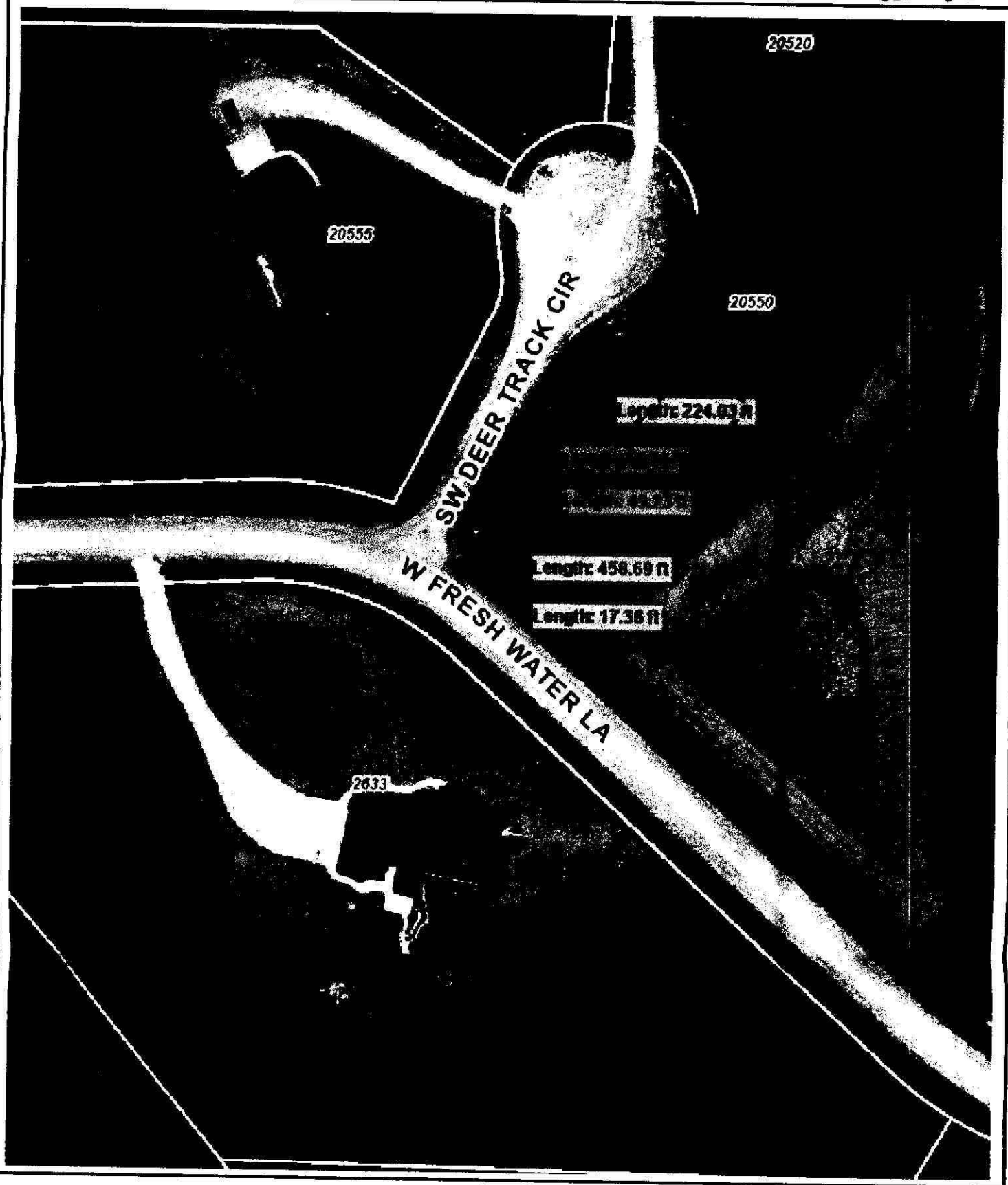
F. Required Signatures

Home Building Contractor Chris Collins Date 9-3-14

Installer _____ Date 9/5/14

Onsite Form C 12-08

SEP 05 2014



Lancaster County/City of Lincoln GIS Map

Chad Denison

N
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S

Printed: Sep 05, 2014

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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. HS000967

System Type: Standard

Situs: 2600 W FRESH WATER LN, RURAL, NE

Issued: 9/9/2014

Expires: 9/9/2015

Description: FOUR STONES ADDITION, BLOCK 1, Lot 4

Owner: GANA, PAUL & SHARON
21700 SW 14 ST
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

RAYMOND CONTRACTING
13800 NW 70TH ST
LINCOLN, NE

MAR 30 2015

D

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

Permit Number: HS000967

Onsite Wastewater Treatment System

As Built Plans & Specifications

Four Stones

Date March 20, 2015 Legal Description NW 1/4 4 1/4 7N Section 6E Township Range

Onsite System Location

Address (no rural route) 20250 W Deer Track Cir City Markell NE, Zip 68404

Owner Chad Denison Address 400 Indian Rd Linton, NE 68505

A. Sewer Pipe

1. Material: SDR 26
   Diameter: 4 in.
2. Distance above basement floor: _____ in.
   or distance below basement floor: 12" in.
3. Distance between dwelling and septic tank: 42' ft.
4. Number of clean-outs: one
5. Distances to: well or suction line 100 ft.
   stream 100 ft.
   pressure line 100 ft.
   property line 50 ft.

B. Septic Tank

☑ Label with Manufacturer, address and gallon capacity

1. Material: Concrete
   Number of compartments: one
2. Capacity: 2000 gal.
3. Factory built: ☑ Yes ☐ No
4. Manholes: Over inlet, diameter 24 in.
   Over outlet, diameter 24 in.
   Riser: ☐ above ☐ below grade AT 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: 12-18 in.
8. Distances to: Well or suction line 100 ft.
   Stream 100 ft.
   Pressure line 100 ft.
   Property line 50 ft.

C. ☐ Distribution Box ☑ Drop Boxes

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

1. Material: Plastic
   Number available outlets: 3 per emp
2. Factory built: ☑ Yes ☐ No
3. Distance from septic tank: 12' (Switch Box) ft.

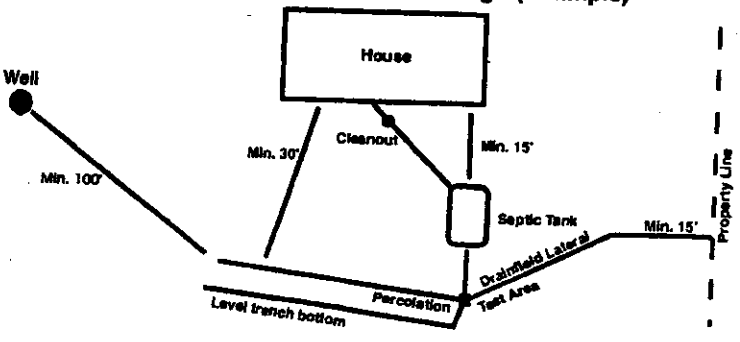
D. Drainfield Absorption

☑ Trench ☐ Bed ☐ Level Bottom

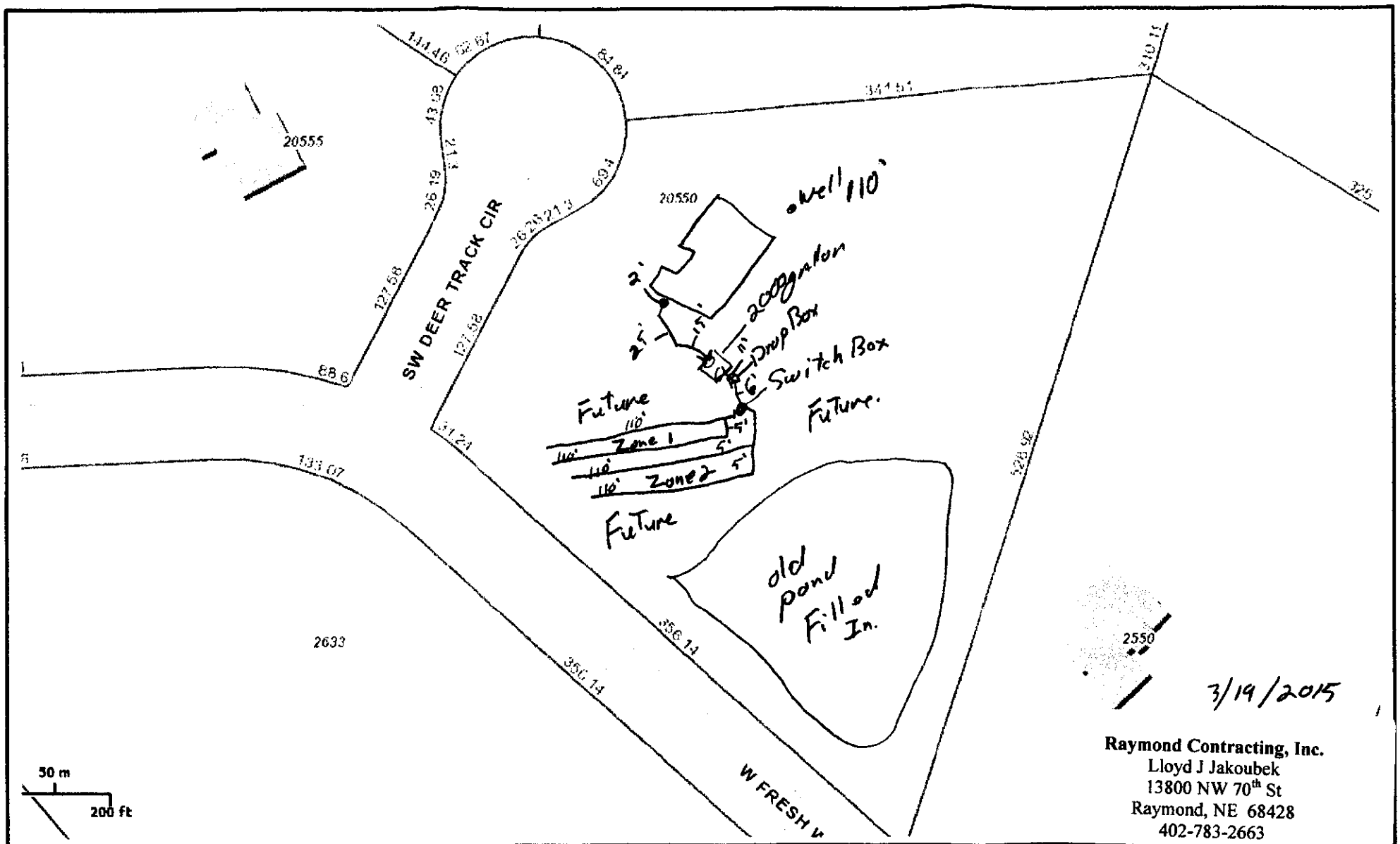
1. Type: ☐ Half rounds ☐ Perforated pipe ☐ Chambers
   Diameter or width: _____
   Number of distribution lines in bed _____
   Material: ☐ fiberglass ☑ plastic ☐ concrete
   ☐ other _____
2. Drainfield Laterals: Number 4
   Length of each line: 110' ft. 110' ft.
   110 ft. 110' ft., _____ ft.
3. Drainfield dimensions: Width 40 ft.
   Distribution Pipe Slope Flat in/100 ft.
   Average depth 24-28 in
4. Filter material: Soil
   Depth of material 24-28 in.
5. Distances to: Well or suction line 100 ft.
   Pressure line 100 ft.
   Property line 50+ ft.
   House or building 100 ft.
   Lake or Stream 100 ft.

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

Onsite Wastewater System Design (Example)



ıdicate North with Arrow



Raymond Contracting, Inc.
Lloyd J Jakoubek
13800 NW 70th St
Raymond, NE 68428
402-783-2663

Lancaster County/City of Lincoln GIS Map

Chad Denison

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Printed: Mar 24, 2015

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SCANNED

SEP 05 2014



Lancaster County/City of Lincoln GIS Map

Chad Denison

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Printed: Sep 05, 2014

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