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

MAY 28 2013

A

Permit Number H5000755

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 17151 SW 14th St (no rural route) City Markel, NE Zip 68404

Legal Description SE 21 8 6 41

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

PID 68-21-400-603-060

B. Owner

Name Curtis Shinn Signature curtis shinn

Address P.O. Box 41 City/State/Zip Markel, NE 68404

Home Phone 402-432-4137 Work Phone

C. Certified Installer

Name: Lloyd Jakoubek, Raymond Contracting Signature Kim L. Jakoubek for Lloyd

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

Work Phone 402-890-6009 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 2 Whirlpool Bathtub? ☐ Yes ☒ No Total Acres 3.55

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 5/28/13

Date frwd 5/28/13

ACTION ☑ Approved ☐ Disapproved

Signature

2. Supt. Bldg. Insp. or Village Clerk

Comments

Date rec'd

Date frwd

ACTION ☑ Approved ☐ Disapproved

Signature fax attached

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 5-29-13 Amount Paid 355.-

Received By BH Cash/Check No. 8110

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

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

B

Permit Number:

Sewage Disposal System

Soil Absorption Test Data Report

Annex to Application

PLEASE PRINT OR TYPE

System Location (Indicate correct number and street)

Address 17151 SW 14th St (no rural route) City Markell NE, Zip 68404

Owner Curtis Shoon Address P.O. Box 41 Markell NE 68404

Soil Type (SCS): wymore silty clay loam Percolation Rate: 5/6 min./inch

Date of Tests 5/13/13 to 5/14/13 Weather: Precipitation 0 Temperature 81°

Percolation Test Data Table

A.	B.	C. D. E. F. Pre-Saturation Period				G. H. I. J. K. Percolation Readings					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)	Water Lev (in.)	Date (Mo/Da)	Time (Hr/Min)	Elapsed Time (Min)	Water Level Drop (in)	Percolation Rates (Min/in)
1	22	5/13	8:00a	5/13	12:40p	5/14	11:30a	6	5/14	12:00p	30	1/2	60
2	24	"	"	"	"	"	"	"	"	"	"	5/8	48
3	21	"	"	"	"	"	"	"	"	"	"	1/2	60
4	44	"	"	"	"	"	"	"	"	"	"	9/16	54
5	21	"	"	"	"	"	"	"	"	"	"	9/16	54
6	43	"	"	"	"	"	"	"	"	"	"	1/2	60

Person Conducting Percolation Tests

Name: Terri L. Jahnebek, Raymond Contracting, Inc.

Phone: 402-783-2003 or 402-890-3870

Address 13800 NW 70th St

Raymond, NE 68428 # C1198

Sum of Percolation Rates: 336

Average of Rates: 56

Rate Used for Calculation: 56

DO NOT WRITE BELOW THIS LINE

Reviewing Action

Remarks _____

Signature of Reviewing Official _____ Date _____

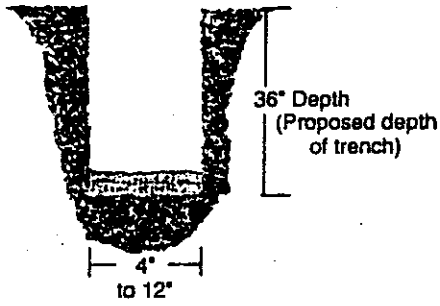
Instructions

READ THOROUGHLY

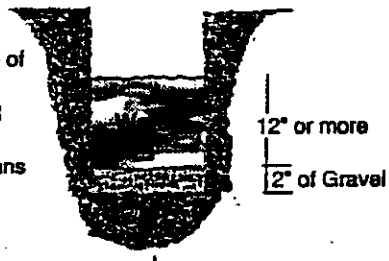
DIAGRAM OF PERCOLATION TEST PROCEDURE

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.

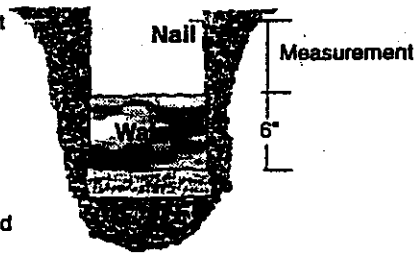


II. Saturation of Soil (Pre-soak)
   - A. Fill hole with 12" or more of water.
   - B. MAINTAIN THIS WATER LEVEL FOR 4 HOURS.
   - C. Record on Form B columns a thru f.



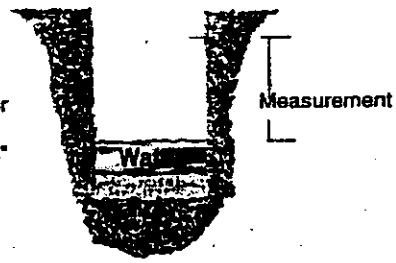
24 Hours Later

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 columns a thru m.

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 Health Division
3140 "N" Street • Lincoln, NE 68510-1514
Phone: 402-441-8022

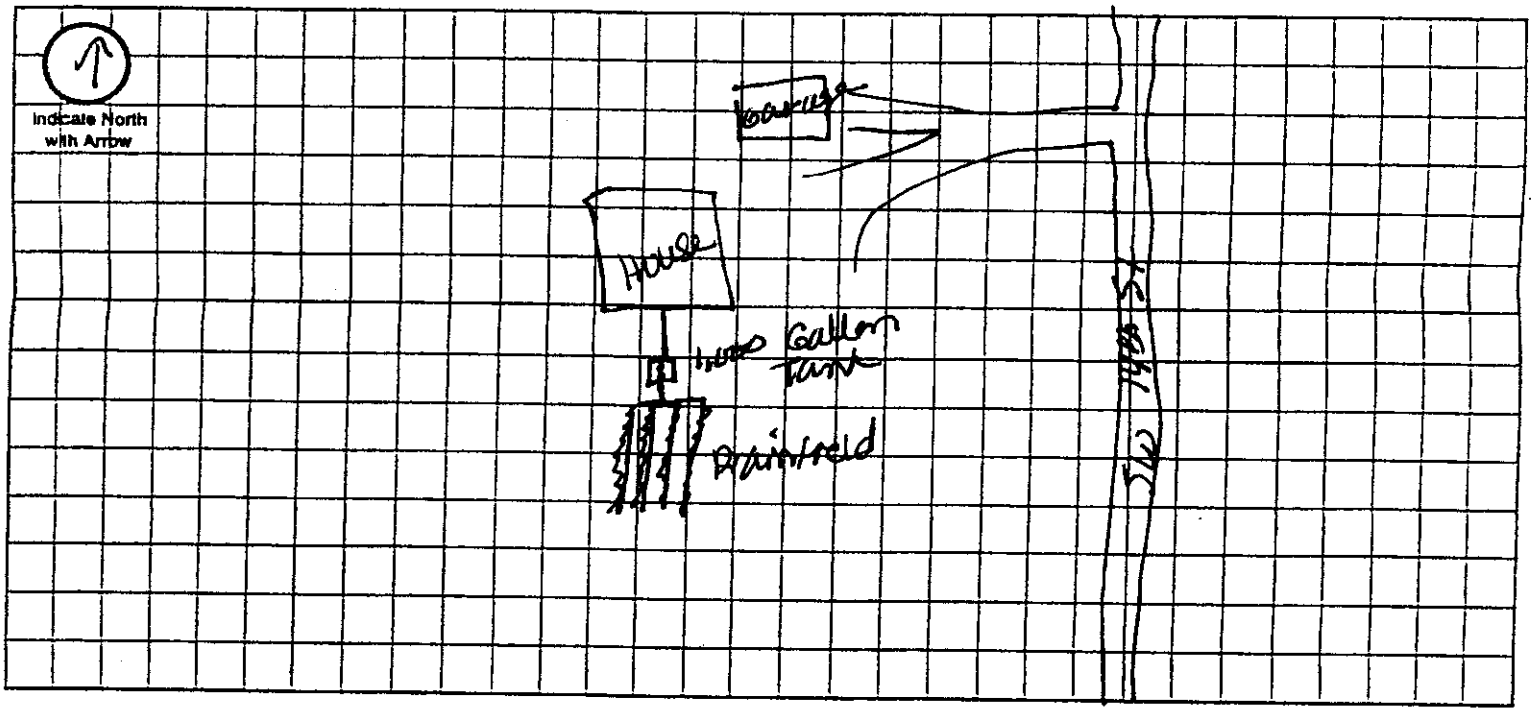
C

Permit Number:

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) 17151 SW 148th St City Markel NE, Zip 68404

B. Proposed Septic Tank/s

Tank Material: ☒ Concrete ☐ Plastic ☐ Other _____

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

Percolation Rate 60 (min. per inch) Soil Type: silty clay loam Land Slope: _____ %

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

Total Square Feet of Field Required: 700 sq. ft.

Type of Lateral: ☐ Half-Moon ☐ Perforated Pipe ☒ Other Lateral Material: ADS Graveless chambers

Capacity of Septic Tank 1000 gals Number of Absorption Beds: _____ Number of Distribution Laterals per Bed _____

Total Length of Laterals 175 ft. x2 Number of Trenches 4 Trench Width 40"

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 curtis shinn Date 5-21-13

Installer Kevin Jabenske Date 5/21/13

FORM 23-102 10-96

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. HS000755

System Type: Standard

Situs: 17151 SW 14 ST, RURAL, NE

Issued: 5/31/2013

Expires: 5/31/2014

Description: S21, T8, R6, 6th Principal Meridian, LOT 41 SE

Owner: SHINN, CURTIS L & SHEILA R
PO BOX 41
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
RAYMOND, NE 68428

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

MAY 28 2013

SCANNED
A

Permit Number
H5000755

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 17151 SW 14th St (no rural route) City Markel, NE Zip 68404

Legal Description SE 21 8 6 41

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

PID 68-21-400-603-000

B. Owner

Name Curtis Shinn Signature curtis shinn

Address P.O. Box 41 City/State/Zip Markel, NE 68404

Home Phone 402-432-4137 Work Phone

C. Certified Installer

Name: Lloyd Jakoubek, Raymond Contracting Signature Kim L. Jakoubek for Lloyd

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

Work Phone 402-780-6009 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 2 Whirlpool Bathtub? ☐ Yes ☒ No Total Acres 3.55

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 5/28/13
Date frwd 5/28/13
ACTION ☑ Approved ☐ Disapproved
Signature

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

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

Installation Final Written Approval
By Doug Ruhl
Date 6/11/13

Business Office Use Only
Date Received 5-29-13 Amount Paid 355.-
Received By BA Cash/Check No. 8110

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

Form A Updated: 1/13

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

MAY 28 2013

A

Permit Number

Onsite Wastewater Treatment System
Request for Site Clearance and Permit

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

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PLEASE PRINT OR TYPE

A. Onsite System Location

Address 17151 SW 148 St (no rural route) City Markel NE Zip 68404

Legal Description SE 21 8 6 41
1/4 | 1/4 | Section | Township | Range | Subdivison | Addition | Block | Lot

PID 08-21-400-003-000

B. Owner

Name Curtis Shinn Signature curtis shinn

Address P.O. Box 41 City/State/Zip Markel, NE 68404

Home Phone 402-432-4137 Work Phone

C. Certified Installer

Name: Lloyd Jakoubek, Raymond Contracting Signature Kim L. Jakoubek for Lloyd

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

Work Phone 402-590-6009 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 2 Whirlpool Bathtub? ☐ Yes ☒ No Total Acres 3.55
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
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2. Supt. Bldg. Insp. or Village Clerk
Comments
Date rec'd
Date frwd
ACTION ☒ Approved ☐ Disapproved
Signature Eugene Kelley Chairman of Board

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 Amount Paid
Received By Cash/Check No.

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

Form A Updated 1/13

JUN 13 2013

D

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

Permit Number: HS060755

Onsite Wastewater Treatment System

As Built Plans & Specifications

Date June 11, 2013 Legal Description 1/4 SE 1/4 21-8-6e Section Township Range Lot 41

Onsite System Location

Address (no rural route) 12151 SW 14th St City Markell NE, Zip 68404

Owner Curtis Shinn Address P.O. Box 41 Markell, NE 68404

A. Sewer Pipe

1. Material: SDR26
   Diameter: 4 in.
2. Distance above ~~basement~~ floor: 26 in.
   or distance below basement floor: _____ in.
3. Distance between dwelling and septic tank: 21' ft.
4. Number of clean-outs: one
5. Distances to: well or suction line 70' ft.
   stream 100 ft.
   pressure line 100 ft.
   property line 100 ft.

B. Septic Tank

☑ Label with Manufacturer, address and gallon capacity

1. Material: concrete
   Number of compartments: one
2. Capacity: 1000 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 in.
8. Distances to: Well or suction line 91' ft.
   Stream 100 ft.
   Pressure line 100 ft.
   Property line 100 ft.

C. ☐ Distribution Box ☐ Drop Boxes

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

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

D. Drainfield Absorption

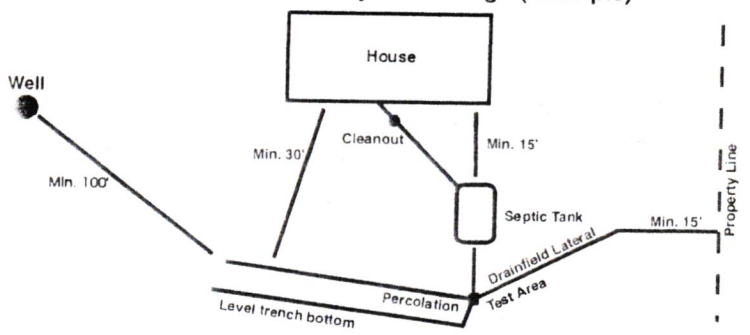
☑ Trench ☐ Bed ☐ Level Bottom

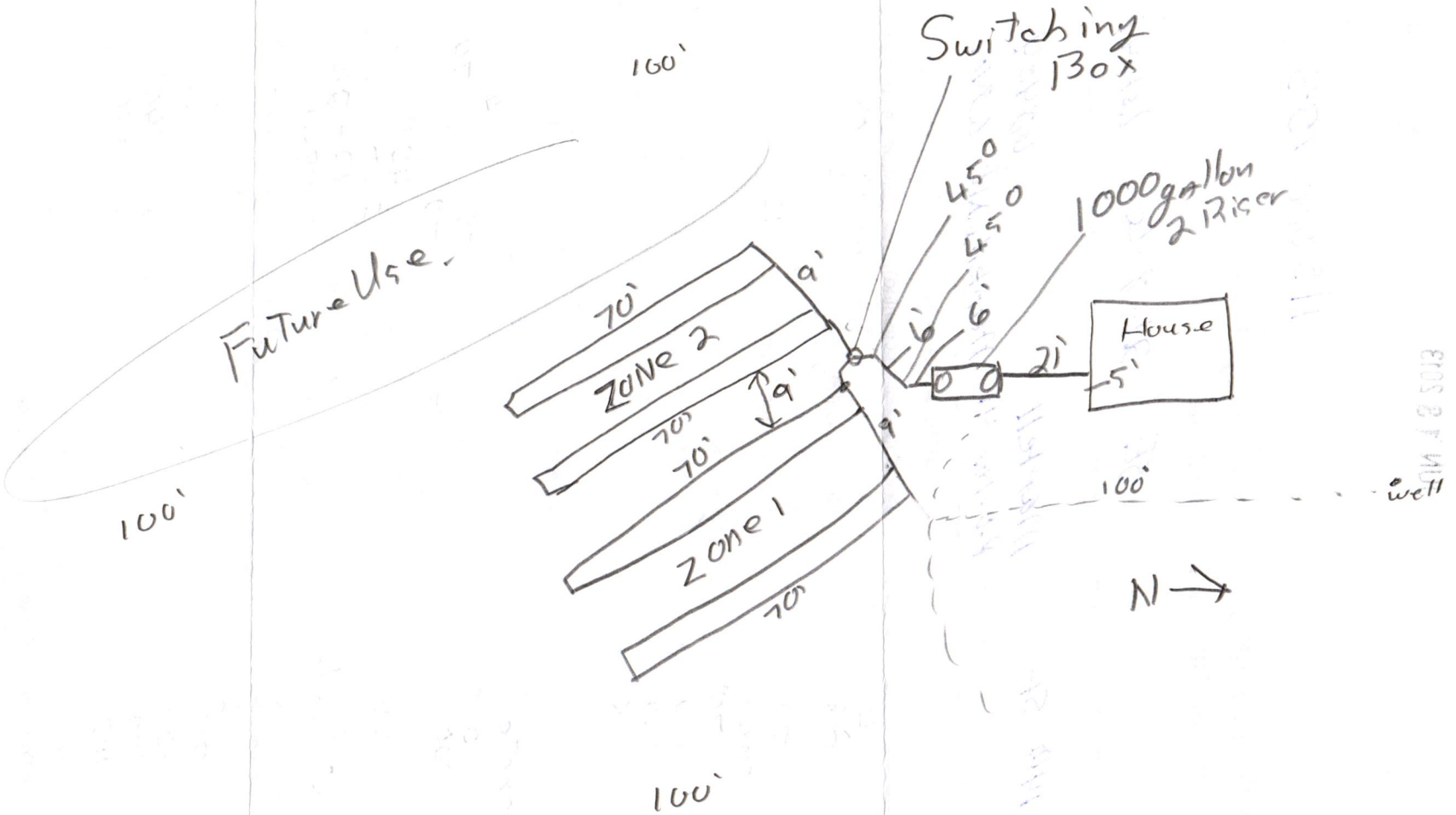
1. Type: ☐ Half rounds ☐ Perforated pipe _ ☐ Chambers
   Diameter or width: _____
   Number of distribution lines in bed _____
   Material: ☐ fiberglass ☑ plastic ☐ concrete
   ☐ other _____
2. Drainfield Laterals: Number 4
   Length of each line: 70 ft. 70 ft.
   70 ft. 70 ft., _____ ft.
3. Drainfield dimensions: Width 40" ft.
   Distribution Pipe Slope Flat in/100 ft.
   Average depth 32-24 in
4. Filter material: Soil
   Depth of material 32-24 in.
5. Distances to: Well or suction line 100 ft.
   Pressure line 100 ft.
   Property line 100 ft.
   House or building 40' ft.
   Lake or Stream 100 ft.

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

Indicate North with Arrow

Onsite Wastewater System Design (Example)





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

6/11/2013