



Becker County Planning & Zoning
915 Lake Ave
Detroit Lakes, MN 56501
(218) 846-7314
www.co.becker.mn.us



270146001-2021

Certificate of Compliance

Inspection Report - Permit #: SS2021-1253

Owner & Property Information

Owner Name:	LAWRENCE PARKHURST	Site Address:	35191 CO HWY 46
Mailing Address:	LAWRENCE PARKHURST 35007 COUNTY HIGHWAY 46 PARK RAPIDS MN 56470	Township - Sec/Twp/Rng:	SAVANNAH - 29/142/036
Parcel #:	270146001	Legal Description:	29-142-36 PT GOVT LOT 6: COMM SW COR SEC 29, N 334.03' TO POB; N 1004.56', E 653 TO BOOT LK, S 1008' AL LK, TO PT E OF POB, W 639' TO POB. PARCEL A.
Secondary Parcel #:		Designer:	Thelen's Excavating Inc, L534 (Leonard Thelen Jr)
		Installer:	Thelen's Excavating Inc, L534 (Leonard Thelen Jr)

Inspector Verified Specifications

Insp- Effluent Screen Installed:	No	Insp- Tank Nbr/Size:	2/2250/3 & 1000
Insp- Alarm Required:	Yes	Insp- Drainfield Type:	Pressure Bed
Insp- Lift Pump in System:	No	Insp- Drainfield Size:	20' X 39' = 780 square feet
Insp- Number of Bedrooms:	4	Insp- Soil Verification:	#1:attached #2:N/A #3:N/A

Inspector Verified Setbacks

Insp- Tank Dist to Road	200+	Insp- Drainfield Dist to Road	200+
Insp- Tank Dist to Nearest Prop Line	100+	Insp- Drainfield Dist to Nearest Prop Line	100+
Insp- Tank Dist to Nearest Structure	25	Insp- Drainfield Dist to Nearest Structure	50
Insp- Tank Dist to Well	150+	Insp- Drainfield Dist to Well	150+
Insp- Tank Dist to OHW	100+	Insp- Drainfield Dist to OHW	100+
Insp- Tank Dist to Pond/Wetland		Insp- Drainfield Dist to Pond/Wetland	
Insp- Tank Dist to Pressure Line		Insp- Drainfield Dist to Pressure Line	

Certificate of Compliance

(Yes) Certificate is hereby granted based upon the application, addendum from, plans, specifications and all other supporting data. With proper maintenance, this system can be expected to function satisfactory, however this is not a guarantee.

Certification Date: 10/26/2021

Zoning Office Signature:

Denise Gubrud

Denise Gubrud - ISTS Inspector

* Certificate of Compliance is not valid unless signed by a Registered Qualified Employee *

Field Review Form

Permit # SS2021-1253

Property and Owner

Owner: LAWRENCE PARKHURST

Parcel Number: 270146001

Site Address: 35191 CO HWY 46

Secondary Parcel:

Home Information

Does the structure contain any of the following elements?

Designer submitted

Inspector verified

Garbage disposal: Yes
Dishwasher: Invalid Field
Grinder pump: Invalid Field
Lift pump in bsmt: Invalid Field

Garbage disposal? Y ☒
Dishwasher? Y ☒
Grinder pump? ☒ N
Lift pump in basement? Y ☒

Number of bedrooms: 4

Review - Number of bedrooms: 4

Effluent screen

Effluent screen installed? Y ☒ Mfr:

Alarm: Yes Type: electric

Review - Alarm? ☒ N Type & Mfr: PS Patrol

Lift pump in system: Yes

Review - Lift pump in system? ☒ N Mfr: Zoeller BNS3

Component Information

Tank size: 2250/3

Review - Tank nbr: 2 size: 2250/3 Mfr: Thelen

Drainfield type: Pressure Bed

Review - Drainfield type: pressure bed

Drainfield size: Full size - 780
Reduced/warr. size - 780

Review - Drainfield status: none (installed) / next spring
Review - Drainfield size: 20' x 39'

Absorption area size: 12"

Review - Absorption area size: 780 sq ft

Chamber type/num:
Trench sqft/chamber -

Review - Chamber type: ☒ Num:
Review - Trench sqft/chamber:

Drainfield rock depth: 12"

Review - Rock depth: 12"

Soil Verification

Vertical separation verified

Boring #1: attached
Boring #2:
Boring #3:

Setback Verification

Distance to...	Designer submitted		Inspector verified	
	Tank	Drainfield	Tank	Drainfield
Road	200+	200+	200+	200+
Nearest prop line	100+	100+	100+	100+
Nearest structure	25	40	25	50
Well	90	120+	150+	150+
OHW	100+	100+	100+	100+
Pond/Wetland				
Pressure line				

Date System Installed: 10/26/2021 Installer: Thelen's

Inspector: Denise Gubrud

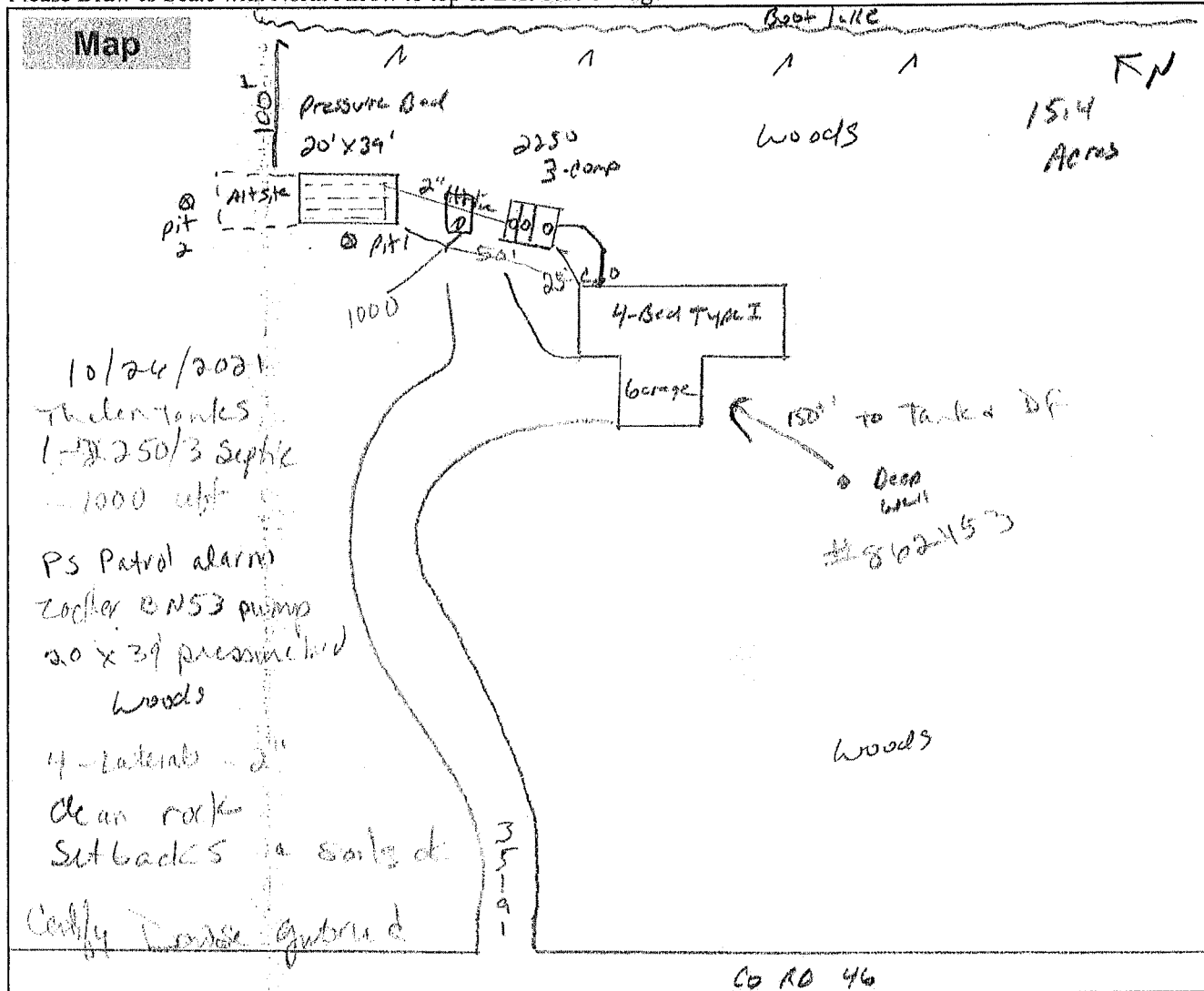
10/26/21
 2:00
 1253

Becker County Trench/Pressure Bed with Pump Design

Property Owner: John Parkhurst

Date: October 20, 2021

Please Draw to Scale with North Arrow to top or Left Side of Page



Please show all that apply (Existing or Proposed):

Wells within 100 ft. of a Drainfield
 Water lines within 10 ft. of a Drainfield
 Drainfield Areas
 Boring Locations

Disturbed/Compacted Areas
 Component Location
 OHW
 Lot Easements

Access Route for Tank Maintenance
 Property Lines
 Structures
 Setbacks

Elevations:

Benchmark Elevation:
 Elevation of Sewer Line at House:
 Tank Inlet Elevation:
 Drainfield Elevation:

Pump Elevation:
 Pump Discharge Elevation:
 Restricting Layer Elevation:

Designer Signature: *John G. Thelen*

Date: 10-20-21 License Number: L534

Submit Form

Click the "Submit Form" button to the left to submit the design sheet and an new e-mail message will open with the completed design sheet attached. Please attach the site drawing and any other necessary paperwork to this e-mail before submitting.

Reset Form

Click the "Reset Form" button to the left to clear any information you entered into the form.

Becker County Restrictive Layer Verification

Client: <u>John Parkhurst</u>	Parcel: <u>270146001</u>	Date: <u>10/26/2021</u>
Address: <u>35191 Co Hwy 46</u>		
Vegetation: <u>BLD site</u>		
Weather Conditions/Time of Day: <u>Cloudy 2:00</u> Observation#/Location/Method: <u>PT</u>		

Depth (in)	Texture	Matrix Color(s)	Mottle Color(s)
72"	CS	10 yr 6/4	none

Comments/Notes:

72" - no restrictive layer (depth of excavation)

Certified Statement: I hereby certify that I have completed this work in accordance with all applicable ordinance, rules and laws.		
(Designer) <u>Lenny Theken</u>	(Inspector) <u>Denise Gutrud</u>	(License #) <u>C8452</u> (Date) <u>10/26/21</u>

Becker County Trench/Pressure Bed with Pump Design

Property Owner: John Parkhurst

Date: October 20, 2021

Mailing Address: 7320 Whitestone Dr

City: Lincoln

State: NE

Zip: 68506

Phone Number:

Site Address: 35191 Co Hwy 46

City: Park Rapids

State: MN

Zip: 56470

Driving directions if no address issued:

Legal Description:

Sec: 29

Twp: 142

Range: 036

Twp Name: Savanah

Parcel Number: 270146001

Lake/ River: Boot Lake

Lake/River Classification: Recreational Development

Flow Data

Number of Bedrooms: 4

Dwelling Classification: I

System Type: I

GPD: 600

Estimated Flow in Gallons per Day (GPD)					
Bedrooms		Class I		Class II	Class III
2	☐	300	☐	225	☐ 180
3	☐	450	☐	300	☐ 218
4	☒	600	☐	375	☐ 256
5	☐	750	☐	450	☐ 294
6	☐	900	☐	525	☐ 332
7	☐	1050	☐	600	☐ 370
8	☐	1200	☐	675	☐ 408

Other GPD
Amount:

Wells

Deep Well: Existing Deep

Shallow Well: None

Wells to be sealed (if applicable)?

Setbacks

Tank(s) to: Well 90

House 25

Property Line 100+

Drainfield to: Well 120+

House 40

Property Line 100+

Sewer Line to well: 50+

Air Test: No

Additional System Notes and Information:

Email address laura.parkhurst@gmail.com

Designer Name: Leonard Thelen Jr

License Number: L534

Address: 32996 Co Rd 135

City: Park Rapids

State: MN

Zip: 56470

Phone Number: 218-732-0015

E-Mail Address: thelensexexcavating@gmail.com

Berkley County Trench/Pressure Bed with Pump Design

Property Owner: John Parkhurst

Date: October 20, 2021

Designer's Initials: LT

Tank Sizing

- A. Septic Tank Capacity: 2250 Gallons
Tank Type: 3 Compartments Filter: No
Garbage Disposal/Basement Lift Station: Disposal Only
- B. Pump Tank Capacity: 1000 Gallons (7080.2100)
a. Alarm Type: Electric

Septic Tank Capacity		
Bedrooms	Minimum	GD/BL
4 or less	1,000	1,500
5 or 6	1,500	2,250
7, 8 or 9	2,000	3,000

Soils

- C. Depth to Restricting Layer: 6 ft
Native SSF: 1.27 (Perc. Rate [Optional]: MPI)

Rock Trenches —————> Trench Width: ft

Choose which system size you will use by clicking the button to the left

- E. ☐ 6 in. Trench Depth: 762.0 sq. ft Cubic Yards of Rock: 28.2 yds³
F. ☐ 12 in. Trench Depth: 609.6 sq. ft Cubic Yards of Rock: 33.9 yds³
G. ☐ 18 in. Trench Depth: 502.9 sq. ft Cubic Yards of Rock: 37.3 yds³
H. ☐ 24 in. Trench Depth: 457.2 sq. ft Cubic Yards of Rock: 42.3 yds³
I. Lineal Feet:

Chamber Trenches —————> Dimensions of one chamber (L x W): ft x ft

- J. Brand:
K. ☐ 6-11 in. Chamber Depth: 762.0 sq. ft
L. ☐ 12 in. Chamber Depth: 609.6 sq. ft
M. Lineal Feet:
O. Total Chambers Needed: Chambers

Pressure Bed

- P. Pressure Bed: 762.0 sq. ft
i. Bed Dimensions: 20 ft x 39.0 ft —————> Rock Depth: 1.00 ft
ii. Cubic Yards of Rock: 29.0 yds³

Additional System Notes and Information:

Becker County Trench/Pressure Bed with Pump Design

Property Owner: John Parkhurst

Date: October 20, 2021

Designer's Initials: LT

Determine Pump Capacity

1) Gravity Distribution Pump Capacity Range: 10 - 45 GPM

*Skip to Pump Head Requirements if pumping to gravity

2) Pressure Distribution:

a) Number of laterals: 4

b) Lateral Size: 2.0 in.

c) Perforation spacing: 3.0 ft

d) Check Table 4 to see the maximum number of perforations per lateral.

3) Lateral Length (choose):

Rock Bed Length: 39 ft

a) End manifold: 37 ft

b) Center manifold: 19 ft

c) Choose 3a or 3b: 37 ft

4) Total Perforation Determination:

a) 13 Perforations / Lateral

b) 52 Total Number of Perforations

c) Select perforation discharge from Table 1: 0.74 GPM/Perf.

d) GPM/Perf. = 38.5 GPM

PUMP HEAD REQUIREMENTS

5) Elevation difference:

a) Elevation difference between pump and point of discharge 10.0 ft

b) If pumping to a pressure distribution system: 15.0 ft

c) Choose 5a if pumping to gravity or 5b for pressure: 15.0 ft

6) Friction loss:

a) Select a value from Table 2: 1.11 ft per 100 ft of pipe

b) Pipe length to drainfield: 25 ft $\times$ 1.25 = 31.3 ft

c) 0.3 Friction Loss

7) Drainback:

a) Actual Pipe length 31.3 ft $\times$ 0.17 gal/ft (Table 3) = 5.3 gal

8) Total Head Required: 15.3

9) Minimum Pump Size 38.5 GPM & 15.3 ft. of dynamic head

Pump Model: Zoeller BnN 53 or Liberty 253-2

Table 1

Perforation Discharge (GPM/perf.)

Ft. of Head	7/32 Perf Diameter	1/4 Perf Diameter
1.0	0.56 in.	0.74 in.
2.0	0.80 in.	1.04 in.

Table 2

Friction Loss in Plastic Pipe

Flow (GPM)	1.5"	2"	3"
20	2.47	0.73	0.11
25	3.73	1.11	0.16
30	5.23	1.55	0.23
35	6.96	2.06	0.30
40	8.91	2.64	0.39
45	11.07	3.28	0.48
50	13.46	3.99	0.58
55		4.76	0.70
60		5.60	0.82
65		6.48	0.95
70		7.44	1.09

Use 1.0 for single homes, 2.0 for everything else

Table 3

Volume of Liquid in Pipe

Pipe Diameter	Gal/Ft.
1.25 in.	0.078
1.5 in.	0.11
2.0 in.	0.17

Table 4

Max Perforations/Lateral

Perf. Spacing	1.25" Pipe	1.5" Pipe	2" Pipe
2.5 ft.	14	18	28
3 ft.	13	17	26
3.3 ft.	12	16	25
4 ft.	11	15	23
5 ft.	10	14	22

Subsurface Sewage Treatment System Management Plan

Property Owner: Laura Parkhurst Date: 10/20/21
Site Address: 35191 Co Hwy 46, Park Rapids, MN 56470 Parcel: 270146001

This management plan will identify the operation and maintenance activities necessary to ensure long-term performance of your septic system. Some of these activities must be performed by you, the homeowner. Other tasks must be performed by a licensed septic service provider.

System Designer: check every _____ months.
Local Government: check every _____ months.
State Requirement: check every 36 months.

**My System needs to be pumped
every 36 months.**

Homeowner Management Tasks

- Leaks* – Check (look, listen) for leaks in toilets and dripping faucets. Repair leaks promptly.
- Surfacing sewage* – Regularly check for wet or spongy soil around your soil treatment area.
- Effluent filter* – *Inspect and clean twice a year or more.*
- Alarms* – Alarm signals when there is a problem. Contact a service provider any time an alarm signals.
- Event counter or water meter* – Record your water use.

-recommend meter readings be conducted (Check one: DAILY WEEKLY MONTHLY)

Professional Management Tasks

- _____ Check to make sure tank is not leaking
- _____ Check and clean the in-tank effluent filter
- _____ Check the sludge/scum layer levels in all septic tanks
- _____ Recommend if tank should be pumped
- _____ Check inlet and outlet baffles
- _____ Check the drainfield effluent levels in the rock layer
- _____ Check the pump and alarm system functions
- _____ Check wiring for corrosion and function
- _____ Check dissolved oxygen and effluent temperature in tank
- _____ Provide homeowner with list of results and any action to be taken
- _____ Flush and clean laterals if cleanouts exist

"I understand it is my responsibility to properly operate and maintain the sewage treatment system on this property, utilizing the Management Plan. If requirements in the Management Plan are not met, I will promptly notify the permitting authority and take necessary corrective actions. If I have a new system, I agree to adequately protect the reserve area for future use as a soil treatment system."

X Property Owner Signature: Laura Parkhurst Date: 10.21.21
Designer Signature: James G. Nelson Date: 10/20/21

Decker County Trench/Pressure Bed with Pump Design

Property Owner: John Parkhurst

Date: October 20, 2021

Designer's Initials: LT

Proposed Site Boring #1

Depth (in)	Texture	Coarse Frag. %	Color	Structure	Redox
Plt 1 0-8	topsoil	-	10yr3/2	friable	-
8-29	med sandy loam	-	10yr5/4	med	-
29-36	db rocky sand	-	7.5yr4/6	loose	-
36-72	rocky sand	-	10yr6/3	loose	-

Proposed site Boring #2

Depth (in)	Texture	Coarse Frag. %	Color	Structure	Redox

Alternate Site Boring #1

Depth (in)	Texture	Coarse Frag. %	Color	Structure	Redox
Plt 2 0-9	topsoil	-	10yr3/2	friable	-
9-30	med sandy loam	-	10yr5/4	med	-
30-38	db rocky sand	-	7.5yr4/6	loose	-
38-72	rocky sand	-	10yr6/3	loose	-

Alternate Site Boring #2

Depth (in)	Texture	Coarse Frag. %	Color	Structure	Redox

Soil Sizing Factors/Hydraulic Loading Rates

Perc. Rate	Texture	SSF	HLR	Perc. Rate	Texture	SSF	HLR
<0.1	Coarse Sand			16 to 30	Loam	1.67	0.60
0.1 to 5	Sand	0.83	1.20	31 to 45	Silt Loam	2.00	0.50
0.1 to 5	Fine Sand	1.67	0.60	46 to 60	Clay Loam	2.20	0.45
6 to 15	Sandy Loam	1.27	0.78	> 60	Clay Loam	****	0.24

Description of Soil Treatment Areas

	Proposed Site		Alternate Site	
Disturbed Areas?	no		no	
Compacted Areas?	no		no	
Flooding Potential?	no		no	
Run-on Potential?	no		no	
Limiting Layer Depth	Proposed #1: 6'	Proposed #2:	Alternate #1: 6'	Alternate #2:
Slope % and Direction	0		0	
Landscape Position				
Vegetation Types	woods		woods	
Soil Texture	sandy loam / sand		sandy loam / sand	
Soil Sizing Factor	1.27		1.27	



Becker County Planning & Zoning
915 Lake Ave
Detroit Lakes, MN 56501
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Septic Permit

Permit #: SS2021-1253

Owner & Property Information

Owner Name:	LAWRENCE PARKHURST	Parcel #:	270146001
Mailing Address:	LAWRENCE PARKHURST 35007 COUNTY HIGHWAY 46 PARK RAPIDS MN 56470	Secondary Parcel #:	
Phone #:	none	Site Address:	35191 CO HWY 46
Lake/River(1000/300):	Yes	Township - Sec/Twp/Rng:	SAVANNAH - 29/142/036
Lake/River Name:	Boot (Two Inlets & Savannah) [RD]	Designer:	Thelen's Excavating Inc, L534 (Leonard Thelen Jr)
Pond/Wetland(50):	No	Installer:	Thelen's Excavating Inc, L534 (Leonard Thelen Jr)

Specifications

Tank to be Installed:	Compartmented Tank	Type of Drainfield:	Pressure Bed
Total # Tanks Installed:	1	Full Size of Drainfield:	780
System Status:	Replacement System	Reduced/Warrantied Size:	780
System Serves:	Full-Time Dwelling	Absorbition Area Size:	20' X 39' pressure bed
Number of Bedrooms:	4	Rock Depth:	12"
Design Flow/GPD:	600	Chamber Type and Number:	
Garbage Disposal?	Yes	Chamber Trench SqFt/Chamber:	
Size of Lift Pump:	Zoeller BN53 or Liberty 253-2	Is System Pressurized?	Yes
Size of Lift Line:	2"	Alarm?	Yes
Soil Sizing Factor:	1.27	Type of Alarm:	electric

Setbacks

Road Type:	County	Right of Way Marked:	No
Tank Dist to Road:	200+	Drainfield Dist to Road:	200+
Tank Dist to Closest Prop Line:	100+	Drainfield Dist to Closest Prop Line:	100+
Tank Dist to Nearest Structure:	25	Drainfield Dist to Nearest Structure:	40
Tank Dist to Well:	90	Drainfield Dist to Well:	120+
Tank Dist to OHW:	100+	Drainfield Dist to OHW:	100+
Tank Dist to Pond/Wetland:		Drainfield Dist to Pond/Wetland:	
Tank Dist to Pressure Line:		Drainfield Dist to Pressure Line:	

Other Information

Date Approved:	10/25/2021	Zoning Office Signature:	<i>Denise Gubrud</i>
Permit Fee:	225.00		
Receipt Number:	1798		
Date Paid:	11/1/2021		
Notes: Install a 2250/3 septic/lift tank and a 20' X 39' pressure bed			

PERMIT MUST BE POSTED AT JOB SITE. PERMIT EXPIRES ONE YEAR FROM DATE PAID.

** Please schedule for inspection prior to installation! **