

Preliminary & Field Evaluation Form

www.SepticResource.com vers 12.4

Owner Information			
Date	<u>8/20/2022</u>	Sec / Twp / Rng	<u>S-27, T-49, R-23</u>
Parcel ID	<u>29-1-298800</u>	LUG (county, city, township)	<u>Aitkin Co.</u>
Property Owner:	<u>Nancy Brown</u>	Owners address (if different)	
Property Address:	<u>18387 471st. Ln. McGregor MN 55760</u>		<u>22626 579th St.</u>
City / State / Zip:			<u>Jacobson MN 55752</u>

Flow Information and Waste Type / Strength			
Estimated Design flow	<u>450</u>	Anticipated Waste strength	<input type="checkbox"/> Hi Strength <input checked="" type="checkbox"/> Domestic
Comments:		Any Non-Domestic Waste	<input type="checkbox"/> Yes (class V) <input checked="" type="checkbox"/> No
Building a 2 bedroom house, and future shop with bathroom		Sewage ejector/grinder pump	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Installing a 3 bedroom septic for future upsizing .		Water softener	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
No Well on site Proposed well + 50 ft from septic system		Garbage Disposal	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Daycare / In home business	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

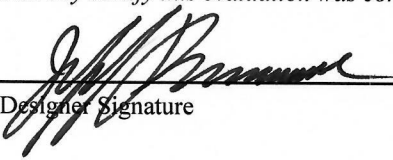
Site Information					
Existing & proposed lot improvements located (see site map)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Well casing depth	Proposed deep well	
Easements on lot located (see site map)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Drainfield w/in 100' of residential well	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Property lines determined (see site map) By Owner	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Site w/in 200' of transient noncommunity water supply (TNCWS)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Req'd setbacks determined (see site map)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Site w/in an inner wellhead mgmt zone (CWS/NTNCWS)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Utilities located & identified (gopher state one call)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Buried water supply pipe w/in 50' of system	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Access for system maintenance (shown on site map)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Site located in Shoreland (w/in 1000' of lake, 300' of river)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Soil treatment area protected	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Site map prepared with previous items included	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Construction related issues	<u>Gravity flow from slab on grade house</u>				

Soil Information

		Evidence of site:	
		Cut	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Filled	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Compacted	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Disturbed	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Original soils	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Soil logs completed and attached	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Perk test completed and attached (if applicable)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Soil loading rate (gpd/ft ²)	<u>0.78</u>	Percolation rate (if applicable)	_____
Depth/elev to SHWT	<u>63"</u>	Flooding or run-on potential (comments)	<input type="checkbox"/> Yes <input type="checkbox"/> No
Depth to system bottom maximum (or elev minimum)	<u>27"</u>	Flood elevation (if applicable)	_____
Depth/elev to standing water (if applicable)	_____	Elevation of ordinary high water level (if applicable)	_____
Depth/elev to bedrock (if applicable)	_____	Floodplain designation and elev - 100 yr/10 yr (if applicable)	<u>NA</u>
Soil Survey information determined (see attachment)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Differences between soil survey and field evaluation (if applicable)	_____ _____		

determined (see at)

I hereby certify this evaluation was completed in accordance with MN 7080 and any local req's.



Designer Signature

Brummer Septic LLC.
Company

L-1347
License #

determined (see at)

Soil Observation Log

Owner Information		
Property Owner / project:	<u>Nancy Brown</u>	Date <u>8/20/2022</u>
Property Address / PID:	<u>18387 471st. Ln. McGregor MN 55760</u>	

Soil Survey Information	
<input type="checkbox"/> refer to attached soil survey	
Parent mat'l's:	<input type="checkbox"/> Till <input checked="" type="checkbox"/> Outwash <input type="checkbox"/> Lacustrine <input type="checkbox"/> Alluvium <input type="checkbox"/> Organic <input type="checkbox"/> Bedrock
landscape position:	<input checked="" type="checkbox"/> Summit <input type="checkbox"/> Shoulder <input type="checkbox"/> Side slope <input type="checkbox"/> Toe slope
soil survey map units:	<u>564</u> slope <u>1</u> % direction- <u>NE</u>

Soil Log #1							
		<input checked="" type="checkbox"/> Boring <input type="checkbox"/> Pit	Elevation <u>101.9'</u>	Depth to SHWT <u>63"</u>			
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0- 6	Topsoil Sandy Loam	<35	10YR3/2		Loose	Loose	Granular
6 - 20	Med Sand	<35	10YR4/4		Loose	Loose	Granular
20 - 63	Med Sand	<35	10YR5/4		Loose	Loose	Granular
63 - 70	Med Sand	<35	10YR5/4	7.5YR5/6	Loose	Loose	Granular
70 - 63							

Comments:

18387 471st. Ln. McGregor MN 55760 **Soil Log #2**

		<input checked="" type="checkbox"/> Boring	<input type="checkbox"/> Pit	Elevation <u>101.6'</u>	Depth to SHWT <u>68"</u>		
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0 - 6	Topsoil Sandy Loam	<35	10YR3/2		Loose	Loose	Granular
6 - 23	Med Sand	<35	10YR4/4		Loose	Loose	Granular
23 - 68	Med Sand	<35	10YR5/4		Loose	Loose	Granular
68 - 72	Med Sand	<35	10YR5/4	7.5YR5/6	Loose	Loose	Granular

18387 471st. Ln. McGregor MN 55760 **Soil Log #3**

		<input type="checkbox"/> Boring	<input type="checkbox"/> Pit	Elevation _____	Depth to SHWT _____		
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive

I hereby certify this work was completed in accordance with MN 7080 and any local req's.



 Designer Signature

Brummer Septic LLC.

 Company

L-1347

 License #

Pressure Bed Design

contact Troy Johnson at
www.SepticResource.com
for questions or comments

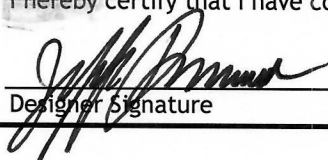
Property Owner: Nancy Brown Date: 8/20/2022
 Site Address: 18387 471st Ln. McGregor MN 55760 PID: 29-1-298800
 Comments: Multiple Lots

instructions: = req'd input = input or default = calculated field *** = installer info

- 1) bedroom Type Residential System
- 2) GPD design flow
- 3) Garbage disposal or pumped to septic Install 1650 Jacobson 2/Compartment tank
Install Jacobson 1650 Compartment tank
- 4) *** Gallon septic tank (minimum) Tank options:
- 5) GPD/ft² Soil Loading Rate ft² bed req'd, or ft² LUG minimum
(must match soil boring log)
- 6) *** ft desired bed width, leads to a ft bed length
(25' maximum)
- 7) *** ft lateral spacing ft perforation spacing (maximum 3 for both)
 manifold connection
- 8) *** laterals feet long perfs / lateral perfs total
(1/2 perf means the first perf starts at the middle feed manifold)
- 9) *** inch perfs at feet residual head gives gpm flow rate per perforation
(If bed has > 1' of cover, increase residual head for cleanout req's)
for this perf size & spacing, & pipe size on line 12, max perfs/lateral = , line #8 must be less --> OK
- 10) doses per day (4 minimum)
- 11) gallons per dose (treatment volume)
- 12) inch diameter laterals (or smaller) will meet "5x pipe volume"
*** inch diameter laterals (or smaller) must be used to meet "4x pipe volume" requirement
 inch diameter laterals (or smaller) will meet "3x pipe volume"
- 13) *** feet of inch supply line leads to gallons of drainback volume
("top feed" to control the drainback)
- 14) gallons TOTAL pump out volume (treatment + drainback)
- 15) feet vertical lift from pump to dispersal area, leads to a
- 16) *** GPM @ feet of head, Pump requirement
(>50 gpm may require additional 3-6' head allowance for discharge assy)

- 17) *** 533 gal Dose tank (minimum) at 12.69 gpi
- 18) *** 9.8 inch swing on Demand float, or Timed dosing of 3.6 min ON (confirm pump rate with drawdown
(<100% of design flow requires a larger OFF time) 5.9 hrs OFF test and adjust as necessary)
- 19) 12 inches of from bottom of tank to "pump OFF" float, and/or to cover pump
- 20) *** 22 inches from bottom of tank to "pump ON" float, or 12 inches to "timer ON" float
- 21) *** 25 inches from bottom of tank to "Hi Level" float (add 5-15 inches if Time Dosed)
- 22) 216 gallons reserve capacity (after High Level Alarm is activated)
- 23) 63 inches, or 5.25 ft. to Redox or other limiting condition (This must match the soil boring log)
- 24) 36 inches, or 3.00 ft. of vertical separation required
leads to bottom of rock no more than:
- 25) *** 27 inches, or 2.3 ft. Below existing grade **CRITICAL FOR FUTURE CERTIFICATIONS!!!**
- 26) *** 9 inches of rock below the pipe
3 inches of rock to cover the pipe
- 27) Overall Dimensions: 16.0 ft. wide by 36.1 ft. long Pressure Bed
- 28) *** Rock Bed materials:
16 ft. by 36.1 ft. by 12 inches total, plus 20% gives 26 yd³ or *1.4= 36 ton

I hereby certify that I have completed this work in accordance with all applicable ordinances, rules and laws.


Designer Signature

Brummer Septic LLC.
Company

L-1347
License#

8/20/2022
Date

Installer Summary

gallon Septic tank (minimum) none Install Jacobson 1650
Install 1650 Jacobson 2/Compartment tank
 gallon Dose tank (minimum) at gpi

GPM @ ft. of head, Pump required

inch swing on Demand float or minutes ON time & hours OFF time

inches from bottom of tank to "pump ON" float, or inches to "timer ON" float
 inches from bottom of tank to "Hi Level Alarm" float

ft. of inch supply line with manifold connection

laterals inch diameter feet long ft lateral spacing

inch perfs ft perforation spacing

Effluent filter & alarm
 clean out & valve box assembly

Pressure Bed:

ft. wide by ft. Long

Bottom of rock no more than:

inches, or ft. Below existing grade

inches of rock below the pipe

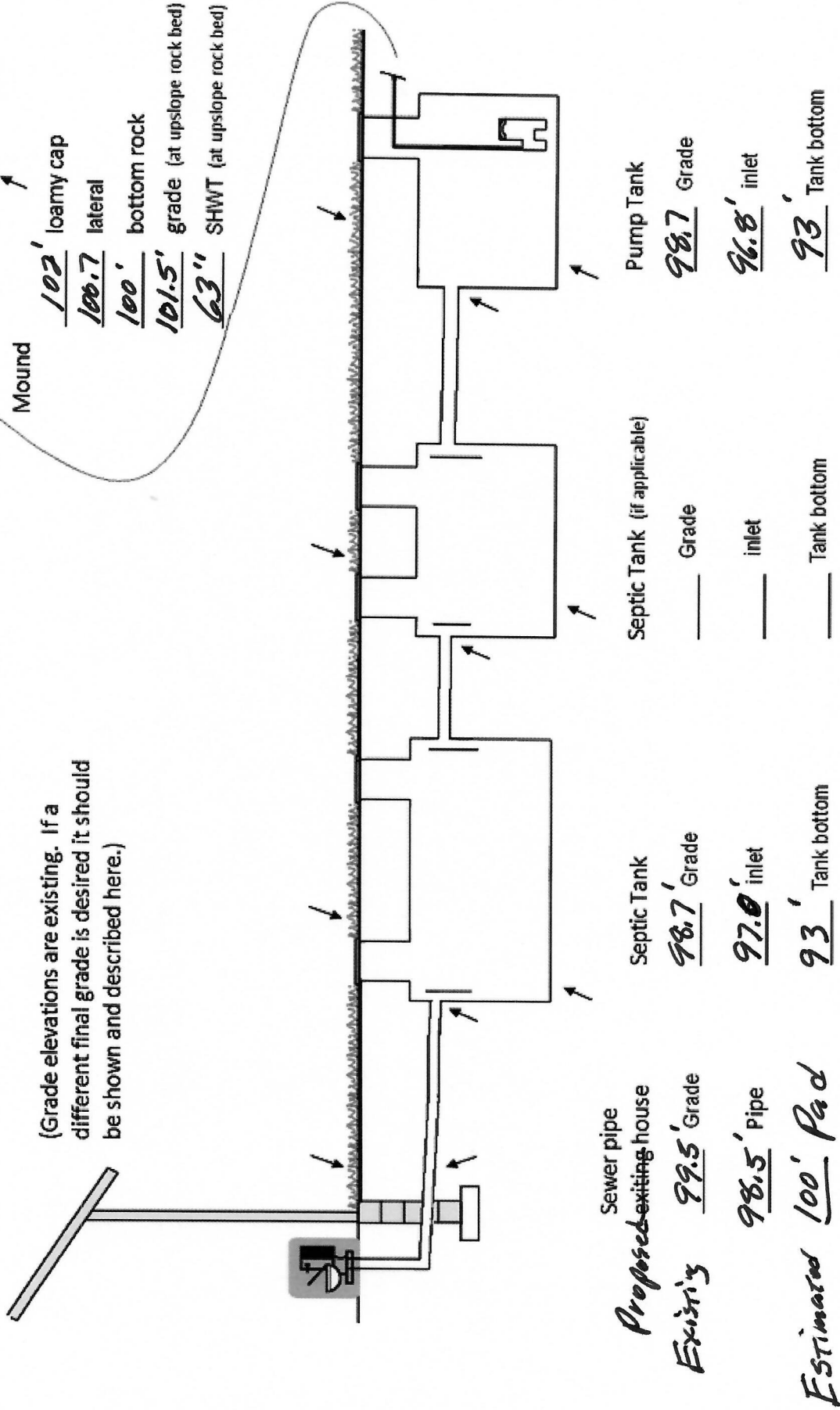
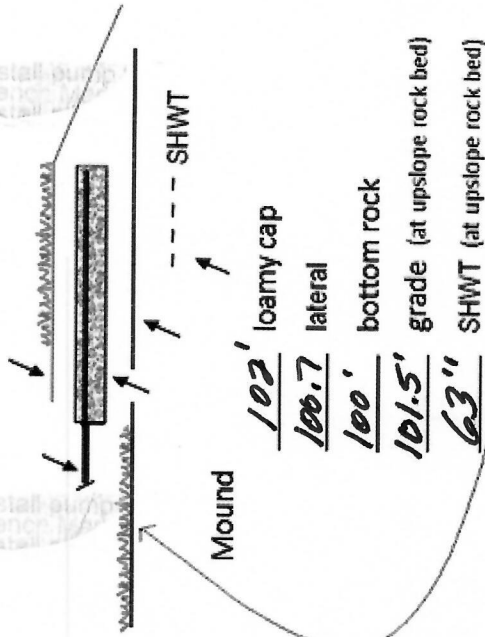
Overall Dimensions: ft. wide by ft. long Pressure Bed

Pressure
Rock Bed materials: yd³ or *1.4= ton

System Elevations

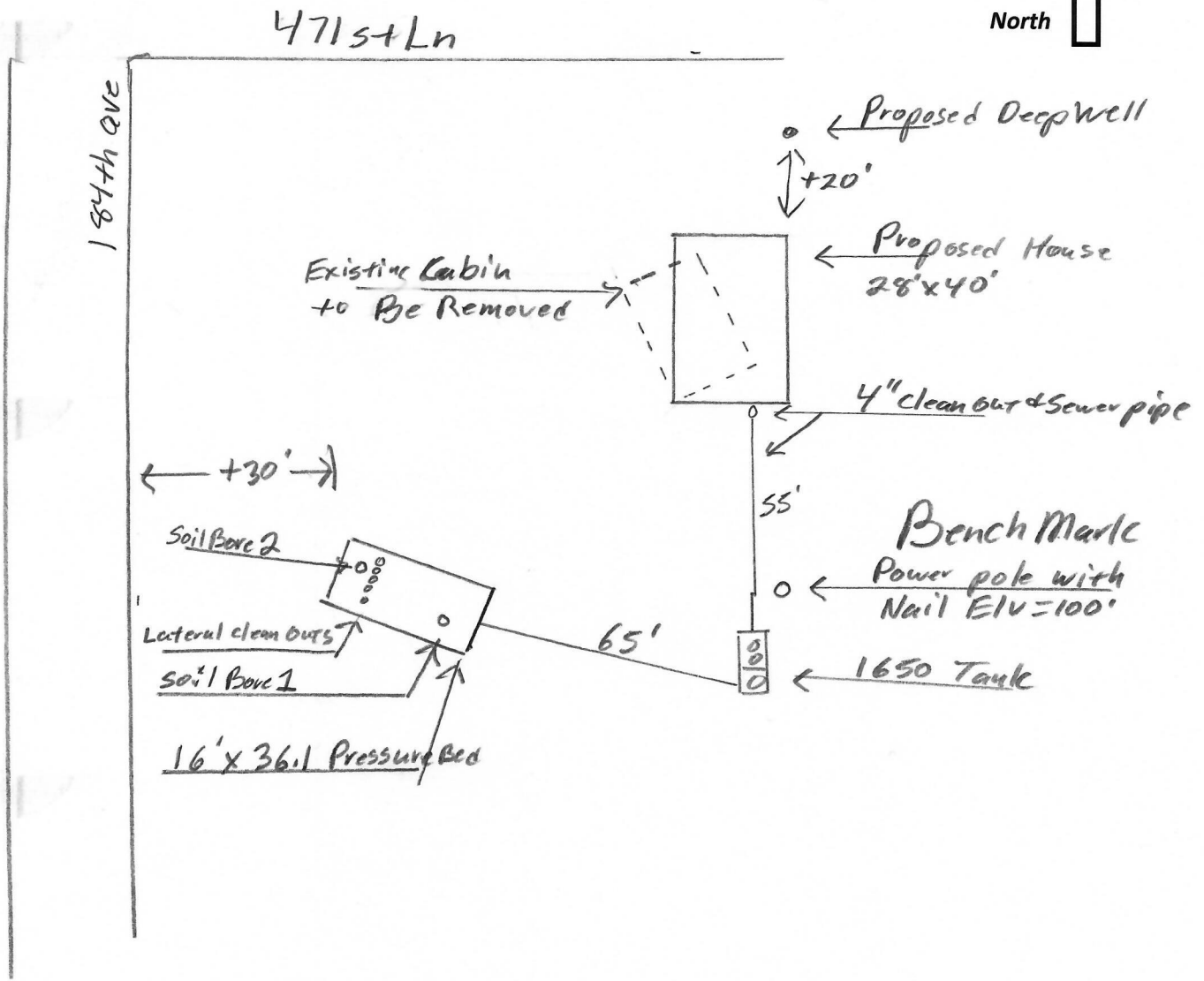
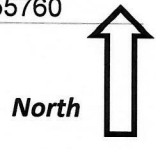
Elk = 100' benchmark Nail on Power pole

(Grade elevations are existing. If a different final grade is desired it should be shown and described here.)



{ Design Drawing }

Property Owner: Nancy Brown Date: 8/20/22 Designer's Initials: JB
 Parcel ID. Number: 29-1-298800 Address: 18387 471st. Ln. McGregor MN 55760
 one Inch = 40ft.



	Surface/ SHWT	Nail on power pole = Bench Mark 100'		Existing Grade Pressure bed corners	
Soil Bore 1	101.9' / 63"	Bench Mark	100'	NW Elv. = 101.6'	NE Elv. = 101.5'
Soil Bore 2	101.6' / 68"	Ground Elv. BM	99.3'	SW Elv. = 102.5'	SE Elv. = 101.5'
Soil Bore 3		Ground Elv. Tank	98.7'	Bottom of Pressure bed Elv. = 100'	
	Ground at	Proposed house	99.5'	South end	Elv. Of Sewer pipe at Cabin Elv. =

Please show all that apply (Existing)

Please Draw to Scale with North to Top or Left Side of Page:

- Wells within 100ft. Of Drain field.
- Water lines within 10 ft. of Drain field.
- Drain field Areas:

- Disturbed/Compacted Areas
- Component Location
- OHW ordinary high water
- Lot Easements

- Access Route for Tank Maintenance
- Property Lines
- Structures
- Setbacks

Mound Design Notes - Aitkin county

Property Owner: Nancy Brown

Date: 8/20/2022

Site Address: 18387 471st Ln. McGregor MN 55760

PID: 29-1-298800

Comments: Type I Pressure Bed / 3 bedroom

- 1 This is a type I Pressure Bed for a proposed 2 bedroom House. Owner wants 3 bedroom size installed
Soil separation is at 63" with a NE slope of 1.4' across pressure bed area.
- 2 Proposed new Deep well will meet all setbacks to the septic system.
- 3 Owner may build a shop with a bathroom in the future and connect into this system.
- 4 Bench Mark (Elv. = 100') is nail on power pole 65' East of proposed pressure bed.
- 5 The Pressure bed area will be 16 ft. wide and 36.1 ft. long. Bottom of rock Elv 100'.
The SW corner is the highest corner, Keep bottom of rock at Elv. = 100'
The area size of the rock bed is 16' x 36.1' .
Cover rock bed with fabric and 12" to 18" of soil.
- 6 Installer to double check bench mark. Installer should confirm bench mark height Elv. with inspector.
Installer should record bench mark Elv. and bottom of rockbed height on installation inspection form.
It is important that the soils do not get compacted, and area stays protected.
- 7 The Jacobson 1650 Combo tank will be gravity flow from dwelling. Install the pump for 4 demand doses per day. approx. 113 gallons per dose, 9.8 inches of tank level. Install alarm at 3 inches from pump on level.
Install pump with 34 GPM and 23 Ft. head.
- 4 Bench Mark
Install all manholes, inspection pipes and clean-outs to grade or above, recommend manhole 4" above.
- 8 Install a 2" supply pipe from tank to end manifold in rock bed, install so pipe drains back to tank.
- 9 Install 1.5" laterals with 9" of rock under them. (Install Lateral clean-outs at far end of laterals. Recommended)
- 10 **Drill 7/32" perf holes spaced 3 ft. apart.**
Install 4" inspection pipe to bottom of rock bed, secure in rock bed and raise to above final grade.
- 11 Owner is responsible to maintain protection of bed area through construction of house and septic system.

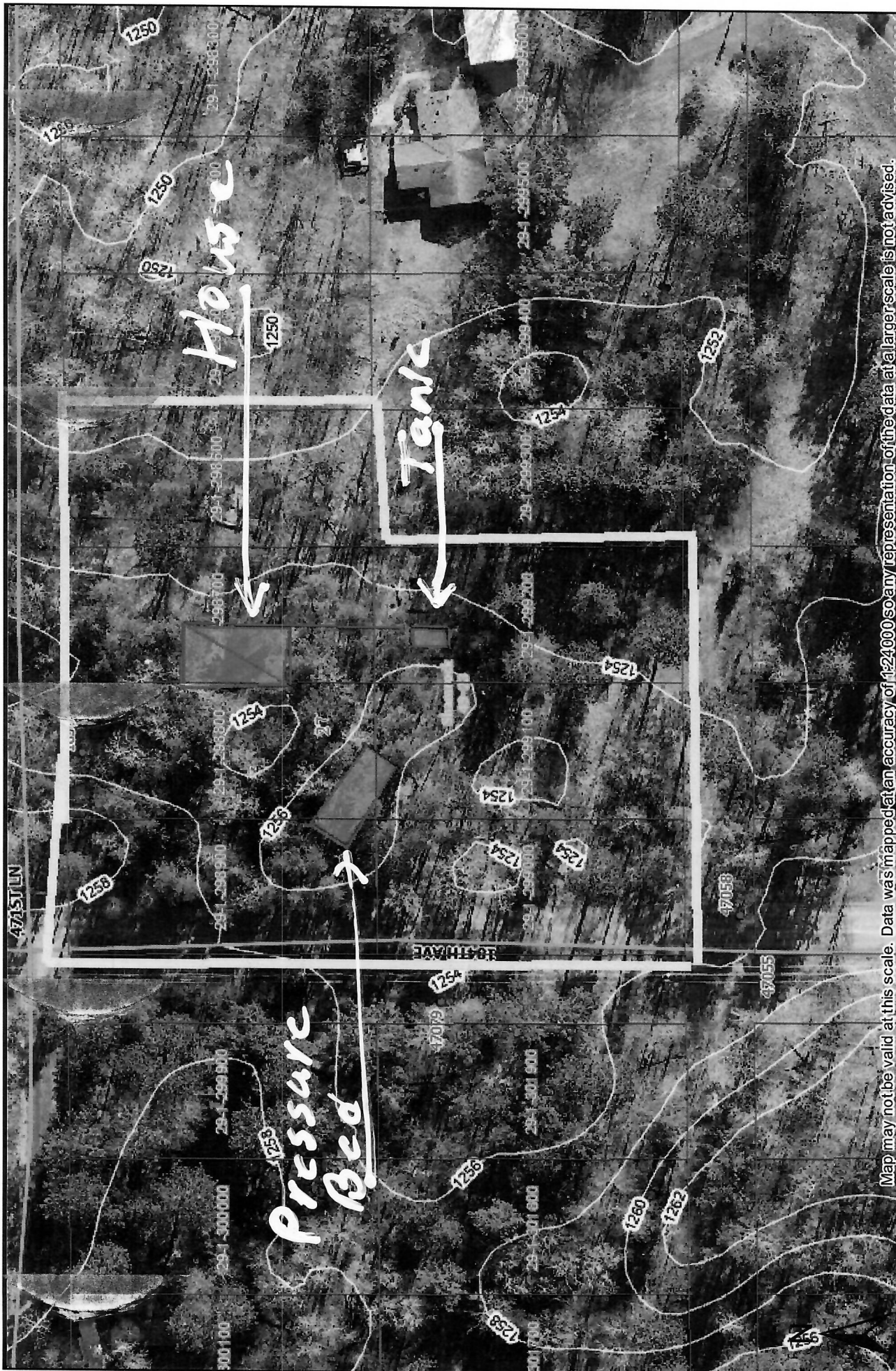
Designed to Aitkin Co. and MPCA recommendations and requirements.



Designer Signature

Brummer Septic LLC.
Design Company

L-1347
License#



Map may not be valid at this scale. Data was mapped at an accuracy of 1:24000 so any representation of the data at a larger scale is not advised.

These data are provided on an "AS-IS" basis, without warranty of any type, expressed or implied, including but not limited to any warranty as to their performance, merchantability, or fitness for any particular purpose.

Nancy Brown

Web App Builder for ArcGIS

1 inch = 94 feet

0 0.005 0.01 mi

1:1,128



Date: 8/2/2022



Detailed Parcel Report

Parcel Number: 29-1-298800

General Information

Lot with cabin.

Township/City:	SHAMROCK TWP	29-1-298900
Taxpayer Name:	WREDBERG, ADAM J	29-1-298800
Taxpayer Address:	7948 145TH AVE	29-1-298700
	MILACA MN 56353	29-1-298600
Property Address:	18387 471ST LN	29-1-299000
		29-1-299100
		29-1-299200
Township:	49	Lake Number: 1903300
Range:	23	Lake Name: MINNEWAWA - BACK LOT
Section:	27	Acres: 0.00
Green Acres:	No	School District: 4.00
Plat:	SHESHEBE POINT THIRD ADDITION	
Brief Legal Description:	LOT 8 BLK 48	

Tax Information

Class Code 1:	Non-Comm Seasonal Residential Recreational
Class Code 2:	Unclassified
Class Code 3:	Unclassified
Homestead:	Non Homestead
Assessment Year:	2022

Estimated Land Value:	\$4,500.00
Estimated Building Value:	\$8,300.00
Estimated Total Value:	<u>\$12,800.00</u>
Prior Year Total Taxable Value:	\$8,900.00
Current Year Net Tax (Specials Not Included):	\$72.00
Total Special Assessments:	\$0.00
**Current Year Balance Not Including Penalty:	\$6.72
Delinquent Taxes:	No

*** For more information on delinquent taxes, please call the Aitkin County Treasurer's Office at 218-927-7325.**

**** Balance Due on a parcel does not include late payment penalties.**

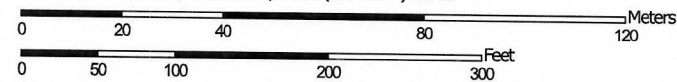
8/21/2022 7:33:33 PM

Soil Map—Aitkin County, Minnesota
(Brown)



Soil Map may not be valid at this scale.

Map Scale: 1:1,500 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

Aitkin County, Minnesota

564—Friendship loamy sand

Map Unit Setting

National map unit symbol: gjhw
Elevation: 980 to 1,640 feet
Mean annual precipitation: 25 to 30 inches
Mean annual air temperature: 39 to 45 degrees F
Frost-free period: 120 to 140 days
Farmland classification: Not prime farmland

Map Unit Composition

Friendship and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Friendship

Setting

Landform: Outwash plains
Landform position (two-dimensional): Summit, backslope
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Sandy outwash

Typical profile

E - 0 to 3 inches: loamy sand
Bw1 - 3 to 6 inches: loamy sand
Bw2,Bw3,BC - 6 to 39 inches: sand
C1,C2 - 39 to 60 inches: sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: About 41 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Forage suitability group: Sloping Upland, Low AWC, Acid (G090AN008MN)
Other vegetative classification: Sloping Upland, Low AWC, Acid (G090AN008MN)

Hydric soil rating: No

Minor Components

Leafriver and similar soils

Percent of map unit: 5 percent

Landform: Depressions

Hydric soil rating: Yes

Meehan and similar soils

Percent of map unit: 5 percent

Hydric soil rating: No

Menahga and similar soils

Percent of map unit: 5 percent

Hydric soil rating: No

Data Source Information

Soil Survey Area: Aitkin County, Minnesota

Survey Area Data: Version 22, Sep 10, 2021