

# Preliminary & Field Evaluation Form

www.SepticResource.com vers 12.4

Owner Information			
Date	<u>9/4/2019</u>	Sec / Twp / Rng	<u>S-31, T-47, R-27</u>
Parcel ID	<u>01-1-168700</u>	LUG (county, city, township)	<u>Aitkin Co.</u>
Property Owner:	<u>Sandy Blackledge</u>	Owners address (if different)	
Property Address:	<u>34908 455th PL. Aitkin Mn 56431</u>		
City / State / Zip:			

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: Type III mound		Any Non-Domestic Waste	<input type="checkbox"/> Yes (class V) <input checked="" type="checkbox"/> No
Will Require Aitkin Co Operating Permit		Sewage ejector/grinder pump	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Water softener	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		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 checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Well casing depth	Existing deep well	
Easements on lot located (see site map)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Drainfield w/in 100' of residential well	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Property lines determined (see site map) By Others	<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>Remove existing mound, construct new bigger mound in approx. same location</u>				

[illegible]

Designer Signature

L-1347  
License #

# Soil Observation Log

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## Owner Information

Property Owner / project: Sandy Blackledge

Date 9/4/2019

Property Address / PID: 34908 455th PL. Aitkin Mn 56431

## Soil Survey Information

☐ refer to attached soil survey

Parent mat'l's: ☒ Till ☒ Outwash ☐ Lacustrine ☐ Alluvium ☐ Organic ☐ Bedrock

landscape position: ☐ Summit ☐ Shoulder ☒ Side slope ☐ Toe slope

soil survey map units: 1353B & 625 slope 2 % direction- North

## Soil Log #1

☒ Boring

☐ Pit

Elevation 98.5

Depth to SHWT 18" Elv.=97'

Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0 - 6	Topsoil Sandy Loam	<35	10YR3/2		Loose	Loose	Granular
6 - 18	Sandy Loam	<35	10YR5/4		Friable	Loose	Granular
18 - 20	Sandy Loam	<35	10YR5/4	7.5YR5/6	Friable	Loose	Granular
		<35			Loose	Loose	Granular
		<35			Loose	Loose	Granular

Comments:

**34908 455th PL. Aitkin Mn 56431 Soil Log #2 West End of Existing Mound**

<input checked="" type="checkbox"/> Boring <input type="checkbox"/> Pit    Elevation <u>98.2'</u> Depth to SHWT <u>18"</u> Elv.= <u>96.7'</u>							
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0 - 3	Topsoil Sandy Laom	<35	10YR3/2		Loose	Loose	Granular
3 - 10	Sandy Loam	<35	10YR4/4		Loose	Loose	Granular
10 - 12	Topsoil Sandy Laom	<35	10YR3/2		Loose	Loose	Granular
12 - 18	Sandy Loam	<35	10YR4/3		Friable	Loose	Granular
18	Sandy Loam	<35	10YR4/3	7.5YR5/6	Friable	Loose	Granular

**34908 455th PL. Aitkin Mn 56431 Soil Log #3**

<input checked="" type="checkbox"/> Boring <input type="checkbox"/> Pit    Elevation <u>97.1'</u> Depth to SHWT <u>11"</u> Elv.= <u>96.2</u>							
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0 - 6	Topsoil Sandy Loam	<35	10YR3/2		Loose	Loose	Granular
6 - 11	Sandy Loam	<35	10YR4/3		Friable	Loose	Granular
11 - 13	Sandy Loam	<35	10YR4/4	7.5YR5/6	Friable	Loose	Granular
		<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 #

34908 455th PL. Aitkin Mn 56431

**Soil Log #4**

<input checked="" type="checkbox"/> Boring <input type="checkbox"/> Pit		Elevation <u>97.2'</u>		Depth to SHWT <u>10" Elv.= 96.4'</u>			
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0 - 8	Topsoil Loam	<35	10YR3/2		Loose	Loose	Granular
8 - 10	Loam	<35	10YR5/4		Friable	Loose	Granular
10 - 14	Loam	<35	10YR5/4	7.5YR5/6	Friable	Loose	Granular
		<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

34908 455th PL. Aitkin Mn 56431

**Soil Log #5**

<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

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 Designer Signature

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 Company

 L-1347  
 License #

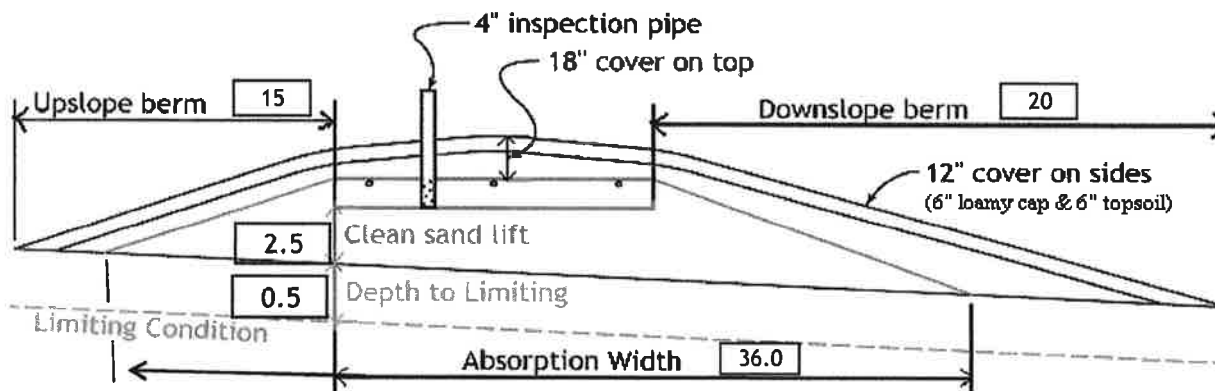
## Mound Design - Aitkin county

Property Owner: Sandy BlackledgeDate: 9/4/2019Site Address: 34908 455th PL. Aitkin Mn 56431PID: 01-1-168700Comments: Type III mound Remove Existing and construct bigger one in same placeInstructions:  = enter data  = adjust if desired  = computer calculated - DO NOT CHANGE!

- 1)  bedroom Type  Residential System
- 2)  GPD design flow
- 3)  Garbage disposal or pumped to septic Install Jacobson 1650 2/comaprtment tank
- 4)  Gal Septic tank (code minimum)  Gal Septic tank (design size / LUG req'd)  
Tank options: Effluent filter & alarm req'd
- 5)  GPD/ft<sup>2</sup> mound sand loading rate contour loading rate of  req's a min  ft. long rockbed
- 6)  ft rockbed width  ft rockbed length
- 7)  ft lateral spacing  ft perforation spacing (maximum of 3 for both)  
 manifold connection
- 8)  laterals  feet long  perfs / lateral  perfs total  
(1/2 a perf means the first perf starts at the middle feed manifold)
- 9)  inch perfs at  feet residual head gives  gpm flow rate per perforation  
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 must be used to meet "4x pipe volume" requirement
- 13)  feet of  inch supply line leads to  gallons of drainback volume  
(Tip: "top feed" manifold to control the drainback)
- 14)  gallons TOTAL pump out volume (treatment + drainback)
- 15)  feet vertical lift from pump to mound laterals, leads to a:
- 16)  GPM @  feet of head, Pump requirement (note: >50gpm may require an extra 3-6' of head)
- 17)  gal Dose tank (code minimum)  gal Dose tank (design size / LUG req'd) at  gpi  
leads to a
- 18)  inch swing on Demand float, or timed dosing of  min ON (confirm pump rate with drawdown  
(this delivers Average flow, =70% of Peak design flow)  hrs OFF test and adjust as necessary)
- 19)  inches from bottom of tank to "Pump OFF" float
- 20)  inches from bottom of tank to "Pump ON" float, or  inches to "Timer ON" float if time dosed
- 21)  inches from bottom of tank to "Hi Level" float, or  inches to "Hi Level" float if time dosed
- 22)  gallons reserve capacity (after High Level Alarm is activated)

System will have 2 alarms: 1 for pump and 1 for Effluent filter  
System will require an Event counter on the pump control.

- 23)  gpd/ft<sup>2</sup> Absorption area Soil Loading Rate, which gives a mound ratio of  (minimum)  
(this must match the soil boring log) desired mound ratio
- 24)  percent site slope (0-20% range)  (% downslope site slope, if different than upslope)
- 25)  inches, or  ft. to Redox or other limiting condition (need at least 12" to be a Type I)  
Treatment zone contains  inches of 0% soil credit, and  inches of 50% soil credit. Giving a:
- 26)  inch, or  ft. Sand Lift Mound **CRITICAL FOR FUTURE CERTIFICATIONS!!!**
- 27)  ft. base absorption width (with sand beyond rockbed as follows):  
 greater of: absorption width OR sand slope
- 28)  ft. upslope and sideslope sand upslope   
 ft. Downslope sand down slope
- Individual slope ratios give BERM widths (topsoil beyond rockbed) of:
- 29)  upslope ratio  ft. upslope berm Use 3.5: 1 Upslope Ratio 15 Ft.
- 30)  sideslope  ft. sideslope berms
- 31)  downslope  ft. downslope berm
- 32) Overall Dimensions:  ft. wide by  ft. long Rock bed  
 ft. wide by  ft. long Mound footprint



**Note:**

For 0 to 1% slopes, *Absorption Width* is measured from the *Bed* equally in both directions.  
For slopes >1%, *Absorption Width* is measured downhill from the upslope edge of the *Bed*.

- 33) Rock Bed:  
 ft. by  ft. by  inches under pipe, plus 20% gives  yd<sup>3</sup> or \*1.4=  ton
- 34) Mound Sand: (note: volume is based on 3:1/4:1 slope from top of rockbed, Exchange sand for loamy cap if desired)  
 up +  downslope +  ends +  under rock =  yd<sup>3</sup> or \*1.4=  ton  
plus 20%
- 35) Loamy Cap:  
 ft. by  ft. 6" deep, plus 20% gives  yd<sup>3</sup> or \*1.4=  ton
- 36) Topsoil:  
 ft. by  ft. 6" deep, plus 20% gives  yd<sup>3</sup> or \*1.4=  ton

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

*[Signature]*  
Designer Signature

Brummer Septic LLC.  
Company

L-1347  
License#

9/4/2019  
Date

# Installer Summary

1120

gallon Septic tank (minimum)

533

gallon Dose tank (minimum)

27

GPM @

19

ft. of head, Pump required

5.8

inch swing on Demand float

which translates to roughly

3.9

inches of float tether length

if time dosing is required -->

2.7

minutes ON time &

5.1

hours OFF time

18

inches from bottom of tank to "pump ON" float, or

12

inches to "timer ON" float

21

inches from bottom of tank to "Hi Level Alarm" or

31

inches to "Hi level alarm" if time dosed

50

ft. of

2.0

inch supply line

with

end feed

manifold connection

(Tip: "top feed" manifold to control drainback)

30

inch, or

2.5

ft. Sand Lift Mound

10.0

ft. wide by

37.5

ft. long Rock bed

3

laterals

1.50

inch diameter

35.5

ft. long

3.0

ft. lateral spacing

1/4"

inch perfs

3.0

ft. perforation spacing

Yes

Effluent filter & alarm

3

clean out & valve box assemblies

36.0

ft.Total sand ABSORPTION width (minimum)

9.9

ft. upslope and sideslope (sand beyond rockbed, minimum)

16.1

ft. Downslope (sand beyond rockbed, minimum)

Specific slope ratios give BERM widths (topsoil beyond rockbed) of:

3:1

upslope ratio

15

ft. upslope berm

4:1

sideslope

19

ft. sideslope berms

4:1

downslope

20

ft. downslope berm

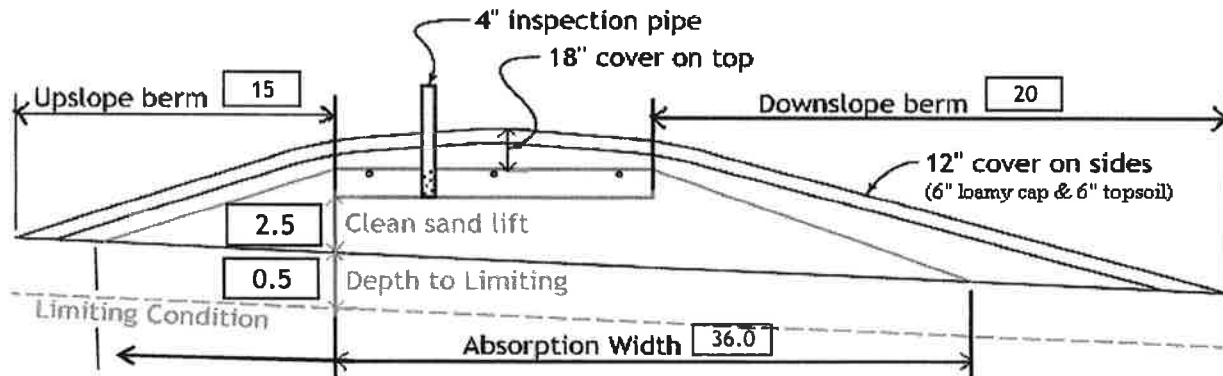
Tank options: Effluent filter & alarm req'd

Install Jacobson 1650 2/comaprtment tank

at

12.69

gpi



## Note:

For 0 to 1% slopes, *Absorption Width* is measured from the *Bed* equally in both directions.  
For slopes >1%, *Absorption Width* is measured downhill from the upslope edge of the *Bed*.

Rock Bed:	17.0 yd <sup>3</sup> or *1.4=	24 ton	9 inches under pipe
Mound Sand:	211 yd <sup>3</sup> or *1.4=	295 ton	calculation based on 3:1/4:1 slope from top of rockbe
Loamy Cap:	66 yd <sup>3</sup> or *1.4=	92 ton	6" deep
Topsoil:	76 yd <sup>3</sup> or *1.4=	106 ton	6" deep

System will have 2 alarms: 1 for pump and 1 for Effluent filter

System will require an Event counter on the pump control.



## INSPECTOR CHECKLIST - mound

34908 455th PL. Aitkin Mn 56431

- ☐ WELL setbacks: 20' to pressure tested sewer line (5 psi for 15 min)  
50' to everything 100' to dispersal area with shallow well
- ☐ PROPERTY LINES setback: 10' to everything
- ☐ Road setback: platted: 10' prop line. Metes & bounds: out of road easement, or outer ditch.
- ☐ LAKE / BLUFF setback: 20' for bluff. Lakes: GD \_\_\_\_, RD \_\_\_\_, NE \_\_\_\_\_. Protected wetland \_\_\_\_.
- ☐ Building setbacks: 10' for everything, 20' for dispersal area.
- ☐ WATER LINE under pressure se 10' to bed, tank & sewer line. (else sewer line > 12" below, else ok w/pvc)
- ☐ Sewer line & baffle connection (no 90's, 3' between 45's, slope min 1" in 8', max 2" in 8')  
(no depth req's, clean out every 100', Sch 40 pipe)
- ☐ Septic tank and risers (water tight, insulated, proper depth, existing verified by pumping)  
mfg \_\_\_\_\_ 1120 gallons Effluent filter & alarm req'd
- ☐ Riser over outlet, riser over inlet or center, and 6"+ inspection pipe over any remaining baffles.
- ☐ Yes effluent filter & alarm
- ☐ Dose tank risers and piping (water tight, insulated, proper depth, drainback)  
mfg \_\_\_\_\_ 533 gallons
- ☐ dose pump \_\_\_\_\_ 27 gpm 19 head VERIFY PUMP CURVE 2.7 min ON 5.1 hr OFF
- ☐ float setting drop 5.8 inches at 12.7 gpi "DESIGNED" 3.9 inches approx float tether length  
73.0 gal dose divided by \_\_\_\_\_ gpi "INSTALLED" = \_\_\_\_\_ inches float drop (field corrected)
- LABEL pump requirements and drawdown on riser or panel
- ☐ Cam lock reachable from grade - 30" max. J-hook weep hole. Supply line access (no hard 90's)
- ☐ 2.0 inch supply pipe: Sch40, sloped 1/8"+, supported by 4" sch40 sleeve or compacted, and buried 6"+.
- ☐ splice box / control panel / electrical connections
- ☐ flow measurement: CT, ETM, time dosed, home water meter
- ☐ mound absorption area rough up
- ☐ mound rock dimensions 10.0 X 37.5
- ☐ Sand lift depth 30 inches. (Jar test : 2" sand leaves < 1/8" silt after 30 min)
- ☐ Absorption Sand beyond rock 9.9 upslope 16.1 downslope
- ☐ Bermed topsoil beyond rockbed 15 upslope 19 sideslope 20 downslope
- ☐ cover depth of 12-18"+ VERIFY
- ☐ 3 laterals (1-2' from edge of rock)
- ☐ 1.50 inch pipe size (Sch40 pipe & fittings)
- ☐ 3.0 ft lateral spacing
- ☐ 1/4" inch perforations
- ☐ 3.0 ft perforation spacing
- ☐ Air inlet at end of laterals, and at top feed manifold if necessary. VERIFY
- ☐ clean outs (no hard 90's)
- ☐ 4" inspection pipe to bottom of rock, anchored VERIFY
- ☐ Abandon existing system - if necessary ☐ Re-use existing tank certification
- ☐ monitoring plan and type \_\_\_\_\_
- ☐ well abandonment form - if necessary \_\_\_\_\_

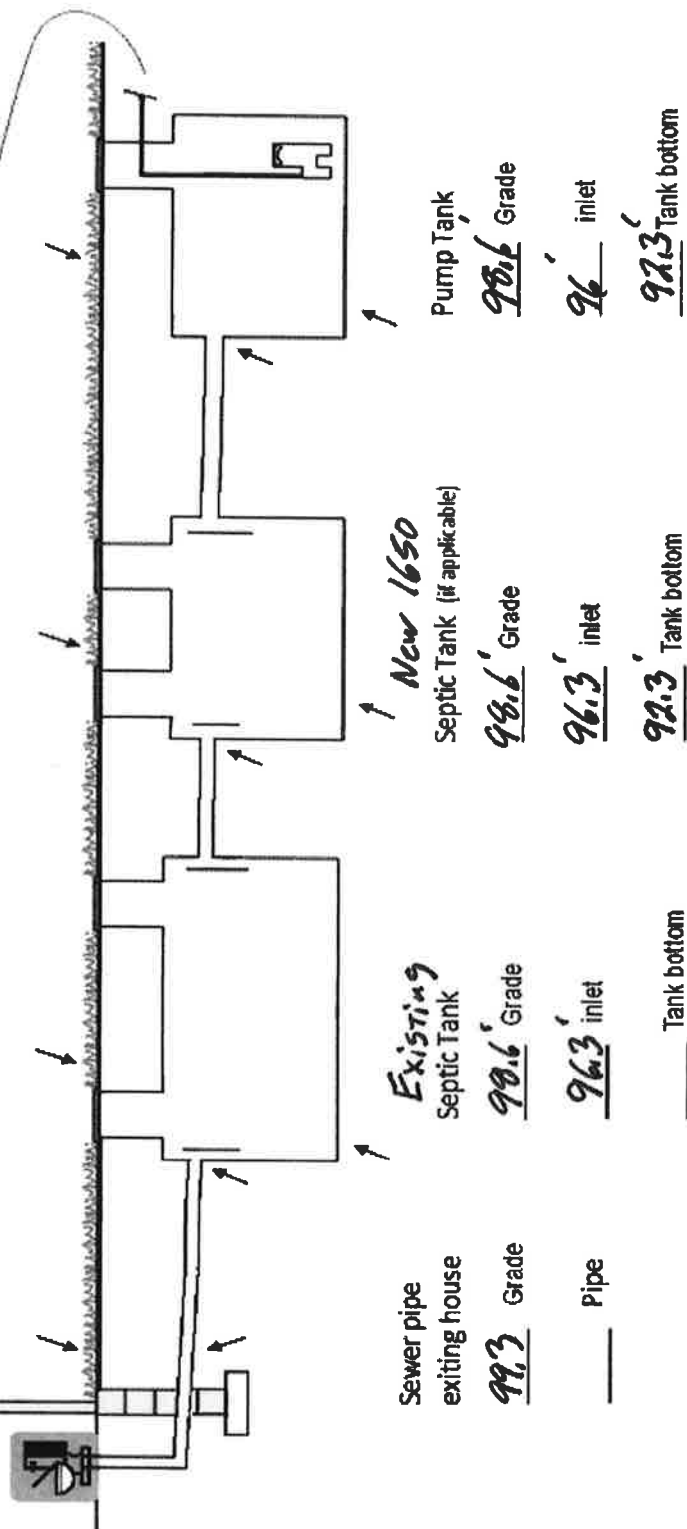
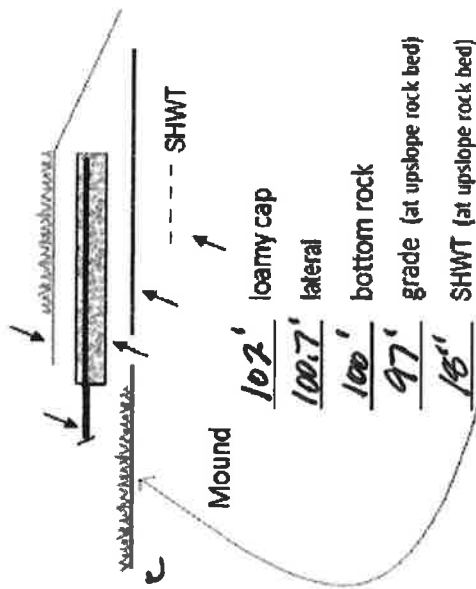
System will have 2 alarms: 1 for pump and 1 for Effluent filter

System will require an Event counter on the pump control.

# System Elevations

Elv = 100' benchmark Nail on Tree near Garage  
Top of Deep well cap Elv. = 99.7'

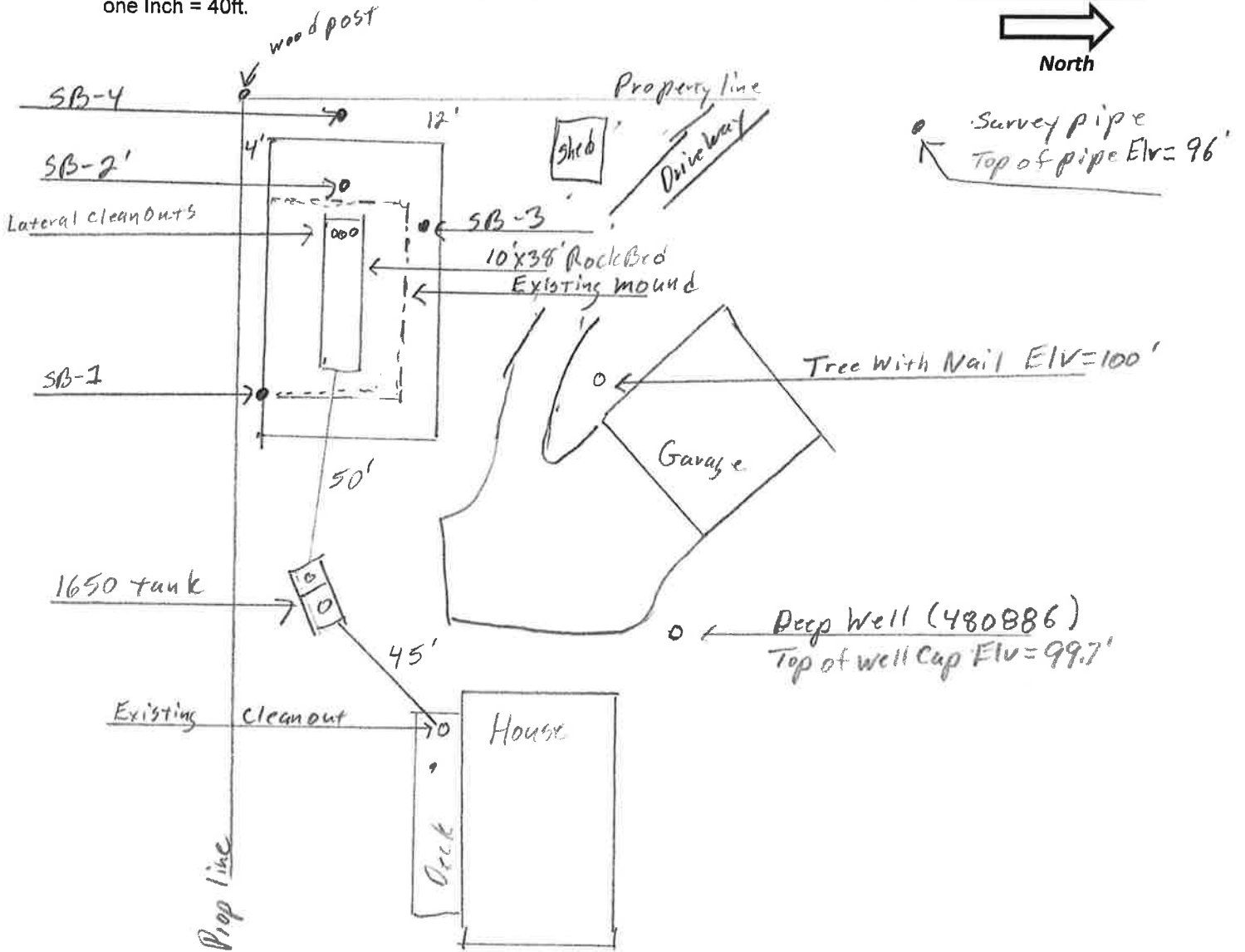
(Grade elevations are existing. If a different final grade is desired it should be shown and described here.)



# { Design Drawing }

Property Owner: Sandy Blackledge  
Parcel ID. Number: 01-1-168700  
one Inch = 40ft.

Date: 9/4/19 Designer's Initials: JB  
Address: 34908 455th PL. Aitkin Mn 56431



	Surface/ SHWT	Nail on Tree = Bench Mark 100'		Grade	
Soil Bore 1	98.5'/97'	Bench Mark	100'		
Soil Bore 2	98.2'/96.7'	Top of deep well Cap Elv.=	99.7'	Bottom of Rock	100'
Soil Bore 3	97.1'/96.2'	Ground Elv. Tank	98.6'	Top of Washed Sand Elv.=100'	
Soil Bore 3	97.2'/96.4'	SW house	99.3'	Existing tank inlet Elv.= 96.3'	

Please show all that apply ( Existing )

Wells within 100ft. Of Drain field.

Water lines within 10 ft. of Drain field.

Drain field Areas:

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

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: Sandy Blackledge

Date: 9/4/19

Site Address: 34908 455th PL. Aitkin Mn 56431

PID: 01-1-168700

Comments: Mound design may not follow Aitkin co. Auto fill form for mound design.

**1 This is a type III mound , (Constructed on fill ) sized for a 3 bedroom system.**

This system will require an Aitkin Co. Operating permit, event counter, effluent filter, 2 electric alarms.

**2 Existing deep well location is +80ft. From septic tank and mound.**

**3 Existing tank to be pumped, collapsed, filled or removed. Install new tank close to same location.**

Existing mound to be removed and construct a new bigger, higher mound in approx. same location.

**4 Designer did 4 soil borings around and through existing mound to come up with elevation of the rockbed.**

Based on SB-1 mottles at Elv. = 97' or 18" of sand, But based on the Elv. Off the West end of the mound it will take approx. 30" of sand. Designer use 30" for the Berm Calculations.

The mound is designed with a 3.5:1 ratio upslope ( 15ft.), and 4:1 down and end slopes.

**5 Install 1650 Jacobson compartment tank low enough for drainback from mound and tie into existing pipe.**

**6 Install effluent filter in septic tank outlet. Install alarm on Effluent filter. Insulate tank tops.**

**7 Elevation contour of rock bed upslope edge is 97' . South berm will be approx. 4 ft. from property line.**

The area size of the rock bed is 10' x 38' . Absorption area is 38' x 36'.

Sand absorption area is 9.9 ft. up slope + 10 ft. rockbed + 16.1 downslope = approx. 36 ft. wide sand base.

Berms are 15ft. Upslope, 20ft. Down slope, 10ft. Rock bed = approx. 45ft. Wide.

Overall mound size is approx. 45' wide x 76' long and approx. 4.5' high. End Berms are 19 ft.

**8 The bench mark is the nail on the tree near garage, BM = Elv. 100'.**

Installer to double check bench mark. Installer should confirm bench mark and sand height Elv. with inspector.

Installer should record bench mark Elv. and sand height on installation inspection form.

The top of the sand and bottom of rock bed is Elv. 100'.

**9 It is important that the soils do not get compacted, and that clean Washed sand is used.**

**10 The Jacobson 1650 tank will be gravity flow from dwelling. Install the pump for 7 demand doses**

per day. approx. 73 gallons per dose, 5.8 inches of tank level. Install alarm at 3 inches from pump on level.

Install all manholes, inspection pipes and clean-outs to grade or above. ( Recommend min. 4" above grade)

Install a 2" supply pipe from tank to end manifold in rock bed, install so pipe drains back to tank.

Install 1.5" laterals with 9" of rock under them. Install clean-outs at far end of laterals.

**Drill 1/4" perf holes spaced 3 ft. on center.**

Install inspection pipe to bottom of rock bed, secure in rock bed and raise to above final grade.

**11 Installer will pressure test and squirt height laterals when finished.**

**12 Install Event counter on Effluent pump, calibrate pump and give gallons per event to Owner.**

**13 Designer does not guarantee or warranty any Type III systems.**

Designed to Aitkin Co. and MPCA recommendations and requirements.

  
Designer Signature

Brummer Septic LLC.  
Design Company

L-1347  
License#

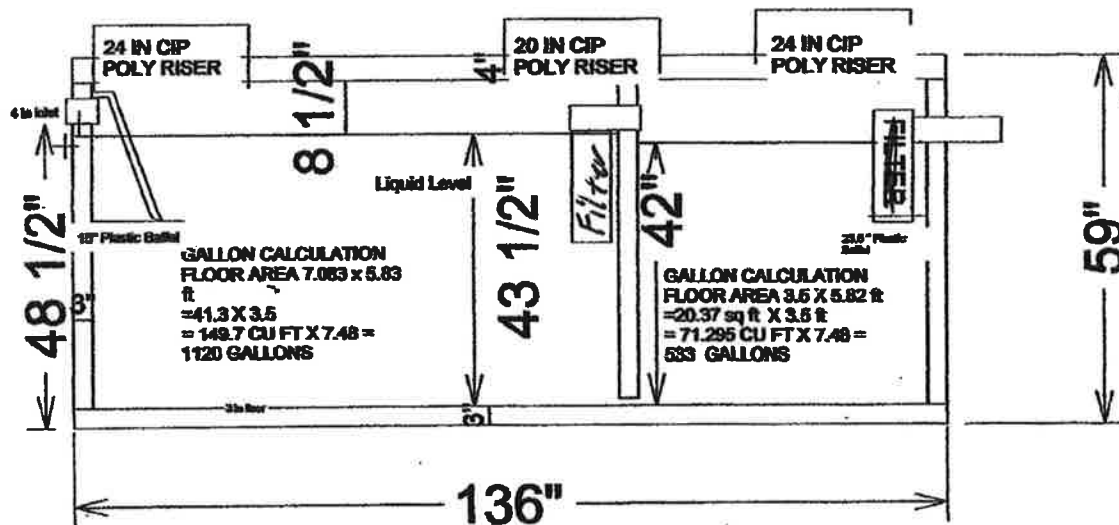
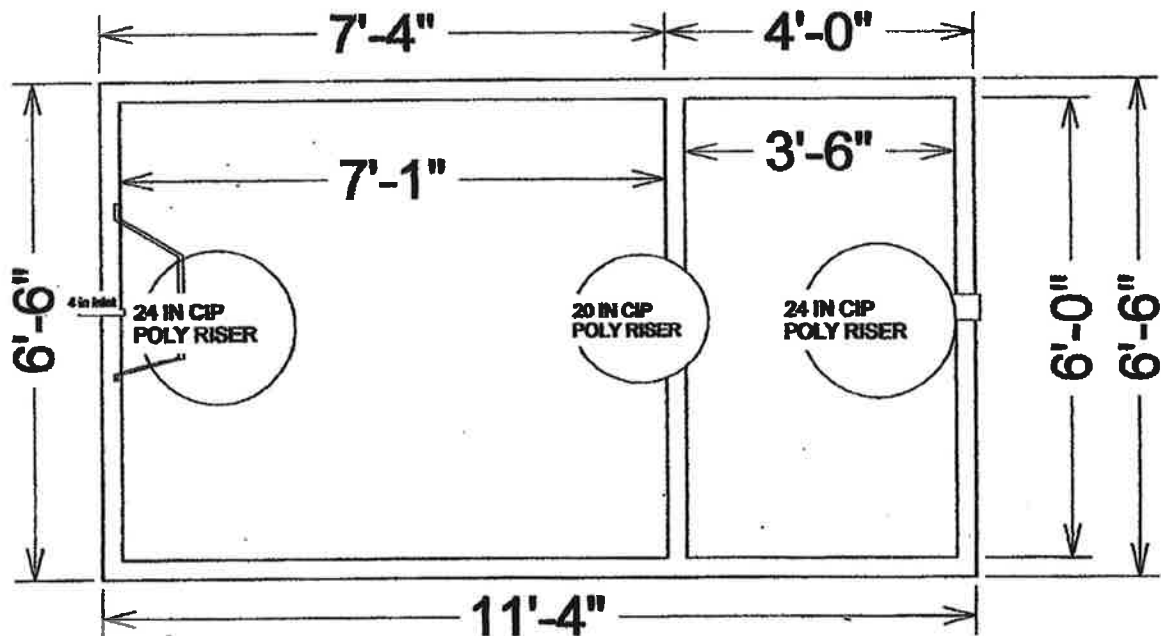
System will have 2 alarms: 1 for pump and 1 for Effluent filter

System will require an Event counter on the pump control.

System will Require Aitkin Co. Operator Permit

# 1650 Gallon 2 Compartment Septic Tank

TOP VIEW



$$533 / 42" = 12.69 \text{ GPI}$$

SIDE VIEW

Drawings Owned BY Jacobson Precast, Inc.  
36641 HWY 169, Aitkin, Mn 56431



Minnesota  
Department of  
Health

## Minnesota Well Index

### General Information

<b>Unique Well ID:</b>	<b>480886</b>	<b>Well Name:</b>	<b>BLACKLEDGE, JERRY</b>	<b>County:</b>	<b>Aitkin</b>	<b>Aquifer:</b>	<b>Quat. buried artes. aquifer</b>
<b>Well Elevation (msl in feet):</b>	<b>1229</b>	<b>Drilled Depth (ft):</b>	<b>110</b>	<b>Well Completed (ft):</b>	<b>110</b>	<b>Date Drilled:</b>	<b>04/28/1992</b>
<b>Township:</b>	<b>47</b>	<b>Range:</b>	<b>27</b>	<b>Dir:</b>	<b>W</b>	<b>Section:</b>	<b>31</b>
<b>Subsection:</b>	<b>ABCDDDB</b>	<b>Use:</b>	<b>domestic</b>	<b>Well Status:</b>	<b>Active</b>	<b>Depth To Bedrock:</b>	
<b>Driller:</b>	<b>Hasskamp Bros. Well</b>	<b>Entry Date:</b>	<b>03/05/1993</b>	<b>Update Date:</b>	<b>10/06/2017</b>		

### Related Resources:

[Go to MN Well Index Map](#)   [Well Log Report](#)   [Scanned Record\(s\)](#)   [Stratigraphy Report](#)

[More Details](#)
[Stratigraphy](#)
[Address](#)
[Chemical Data](#)
[Construction](#)
[Pump Test](#)
[Static Water](#)
[Comments](#)
[Location Changes](#)
[Overview Map](#)

Description	From(ft)	To(ft)	Color	Hardness	Lith Primary	Lith Secondary	Interpretation
SANDY LOAM	0	7	RED	MEDIUM	LOAM		clay/sand/silt-no pebb.-red
CLAY	7	38	BROWN	HARD	CLAY		clay-brown
SAND	38	47	BROWN	MEDIUM	SAND		sand-brown
CLAY & ROCKS	47	66	GRAY	HARD	CLAY		pebbly sand/silt/clay-gray
SAND	66	68	RED	MEDIUM	SAND		sand-red
ROCKS & CLAY	68	102	RED	HARD	COBL		pebbly sand/silt/clay-red
SAND	102	110	BROWN	MEDIUM	SAND		sand-brown



## Detailed Parcel Report

Parcel Number: 01-1-168700

### General Information

Township/City: AITKIN TWP  
Taxpayer Name: BLACKLEDGE, G A & S J  
Taxpayer Address: 34908 455TH PLACE  
AITKIN MN 56431  
Property Address: 34908 455th Pl  
Township: 47 Lake Number: 1020900  
Range: 27 Lake Name: CEDAR LAKE (AITKIN/FI TWPS)  
Section: 31 Acres: 0.00  
Green Acres: No School District: 1.00  
Plat: EDGEWATER BAY  
Brief Legal Description: LOT 4 BLK 2 & UND 1/19 INT IN OUTLOT B

### Tax Information

Class Code 1: Residential 1-3 units Previously SRR  
Class Code 2: Unclassified  
Class Code 3: Unclassified  
Homestead: Owner Homestead  
Assessment Year: 2019

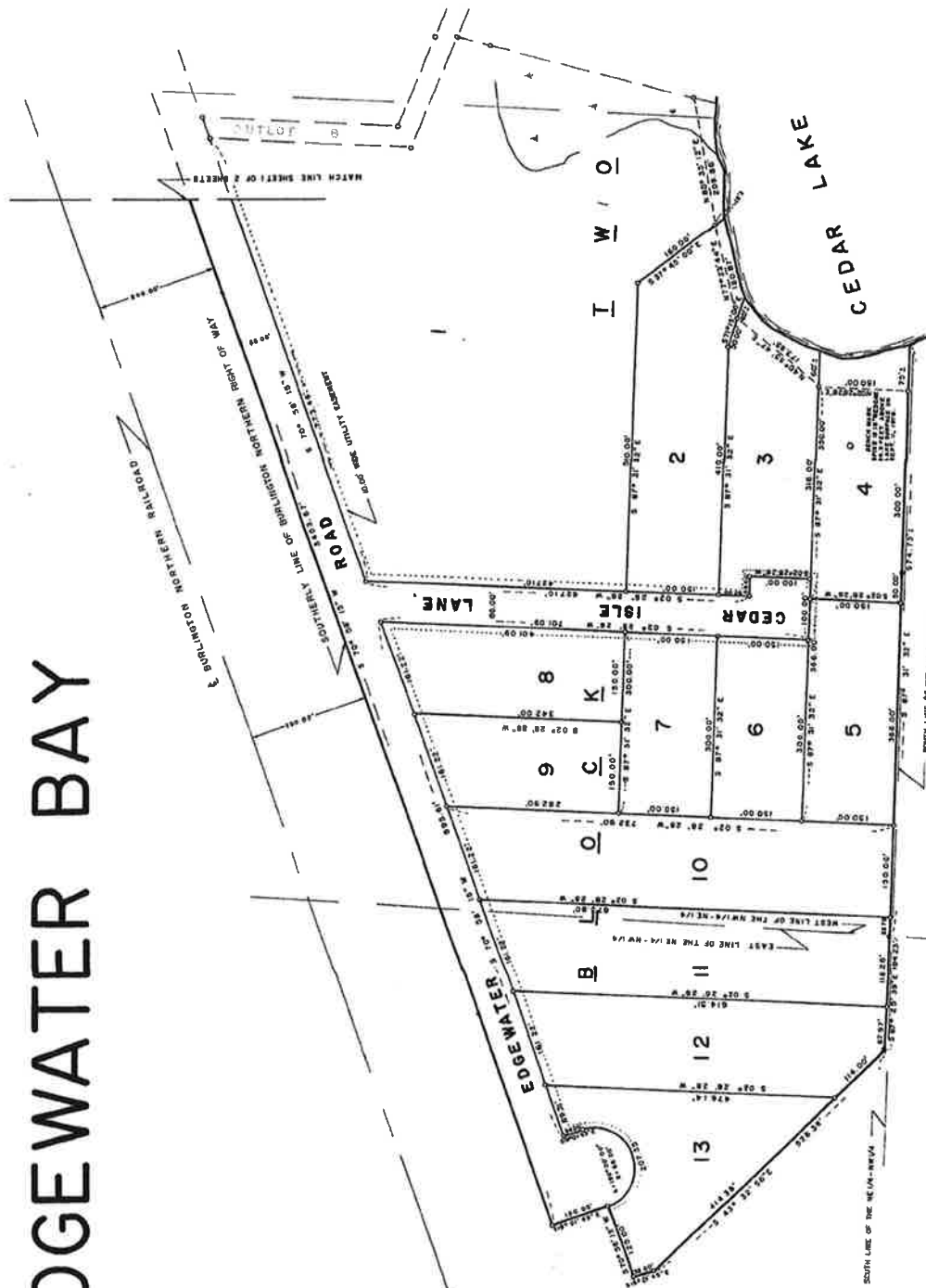
Estimated Land Value:	\$153,800.00
Estimated Building Value:	\$222,500.00
Estimated Total Value:	\$376,300.00
Prior Year Total Taxable Value:	\$37,000.00
Current Year Net Tax (Specials Not Included):	\$130.00
Total Special Assessments:	\$0.00
**Current Year Balance Not Including Penalty:	\$65.00
Delinquent 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.

ORIGINAL

# EDGEWATER BAY



BEARING DATUM ASSUMED  
SCALE 1"=100 FEET  
HIGH MEASUREMENT FOUND  
CORN MONUMENT ESTABLISHED

TOTAL AREA - 155.4 ACRES, MORE OR LESS

SHEET 2 OF 2 SHEETS





Map Unit Legend				
Aitkin County, Minnesota (MN001)				
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI	
504E	Duluth fine sandy loam, 12 to 25 percent slopes	0.1	17.5%	
625	Sandwich loamy sand	0.1	24.2%	
1353B	Cutaway loamy fine sand, 1 to 6 percent slopes	0.2	58.3%	
<b>Totals for Area of Interest</b>		<b>0.3</b>	<b>100.0%</b>	

Scale

(not to scale)

0 30 ft

**Warning: Soil Map may not be valid at this scale.**

You have zoomed in beyond the scale at which the soil map for this area is intended to be used. Mapping of soils is done at a particular scale. The soil surveys that comprise your AOI were mapped at 1:20,000. The design of map units and the level of detail shown in the resulting soil map are dependent on that map scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

## Aitkin County, Minnesota

### 1353B—Cutaway loamy fine sand, 1 to 6 percent slopes

#### Map Unit Setting

*National map unit symbol:* gjd4  
*Elevation:* 980 to 1,310 feet  
*Mean annual precipitation:* 20 to 27 inches  
*Mean annual air temperature:* 37 to 41 degrees F  
*Frost-free period:* 95 to 105 days  
*Farmland classification:* Farmland of statewide importance

#### Map Unit Composition

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

#### Description of Cutaway

##### Setting

*Landform:* Moraines  
*Landform position (two-dimensional):* Backslope, summit  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Sandy outwash over loamy till

##### Typical profile

*A - 0 to 2 inches:* loamy fine sand  
*E,Bw,E' - 2 to 26 inches:* loamy sand  
*2E/B,2B/E - 26 to 49 inches:* loam  
*2C - 49 to 60 inches:* loam

##### Properties and qualities

*Slope:* 1 to 6 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Moderately well drained  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately high to high (0.20 to 2.00 in/hr)  
*Depth to water table:* About 41 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 20 percent  
*Available water storage in profile:* Moderate (about 7.8 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 3s  
*Hydrologic Soil Group:* B  
*Forage suitability group:* Sloping Upland, Acid (G088XN006MN)  
*Hydric soil rating:* No

### **Minor Components**

#### **Northwood and similar soils**

*Percent of map unit:* 6 percent

*Landform:* Depressions

*Hydric soil rating:* Yes

#### **Sandwick and similar soils**

*Percent of map unit:* 6 percent

*Landform:* Swales

*Hydric soil rating:* Yes

#### **Dusler and similar soils**

*Percent of map unit:* 3 percent

*Hydric soil rating:* No

### **Data Source Information**

Soil Survey Area: Aitkin County, Minnesota

Survey Area Data: Version 19, Sep 12, 2018



## Aitkin County, Minnesota

### 625—Sandwick loamy sand

#### Map Unit Setting

*National map unit symbol:* gjj4  
*Elevation:* 980 to 1,310 feet  
*Mean annual precipitation:* 20 to 27 inches  
*Mean annual air temperature:* 37 to 41 degrees F  
*Frost-free period:* 95 to 105 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

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

#### Description of Sandwick

##### Setting

*Landform:* Swales on moraines  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave  
*Parent material:* Sandy outwash over loamy till

##### Typical profile

*E - 0 to 6 inches:* loamy sand  
*Bw,E' - 6 to 34 inches:* sand  
*2E/B,2Btg - 34 to 55 inches:* loam  
*2Cg - 55 to 60 inches:* loam

##### Properties and qualities

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Poorly drained  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately high (0.20 to 0.60 in/hr)  
*Depth to water table:* About 6 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 20 percent  
*Available water storage in profile:* Low (about 5.8 inches)

##### Interpretive groups

*Land capability classification (Irrigated):* None specified  
*Land capability classification (nonirrigated):* 3w  
*Hydrologic Soil Group:* C/D  
*Forage suitability group:* Level Swale, Low AWC, Acid  
(G088XN007MN)  
*Hydric soil rating:* Yes



### Minor Components

#### **Alstad and similar soils**

*Percent of map unit:* 3 percent

*Hydric soil rating:* No

#### **Cutaway and similar soils**

*Percent of map unit:* 3 percent

*Hydric soil rating:* No

#### **Dusler and similar soils**

*Percent of map unit:* 3 percent

*Hydric soil rating:* No

#### **Northwood and similar soils**

*Percent of map unit:* 3 percent

*Landform:* Depressions

*Hydric soil rating:* Yes

#### **Stuntz and similar soils**

*Percent of map unit:* 3 percent

*Hydric soil rating:* No

### Data Source Information

Soil Survey Area: Aitkin County, Minnesota

Survey Area Data: Version 19, Sep 12, 2018



## Aitkin County, Minnesota

### 504E—Duluth fine sandy loam, 12 to 25 percent slopes

#### Map Unit Setting

*National map unit symbol:* gjh9  
*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

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

#### Description of Duluth

##### Setting

*Landform:* Moraines  
*Landform position (two-dimensional):* Shoulder, backslope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Loamy till

##### Typical profile

*A - 0 to 3 inches:* fine sandy loam  
*E, Bw, 2BE, 2Bt - 3 to 37 inches:* clay loam  
*2C - 37 to 60 inches:* loam

##### Properties and qualities

*Slope:* 12 to 25 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately low to moderately high (0.06 to 0.60 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 5 percent  
*Available water storage in profile:* High (about 10.2 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6e  
*Hydrologic Soil Group:* C  
*Forage suitability group:* Steep; Fine Texture (G090AN017MN)  
*Hydric soil rating:* No

### Minor Components

#### **Blackhoof and similar soils**

*Percent of map unit:* 3 percent

*Landform:* Depressions

*Hydric soil rating:* Yes

#### **Mahtowa and similar soils**

*Percent of map unit:* 3 percent

*Landform:* Depressions

*Hydric soil rating:* Yes

#### **Rifle and similar soils**

*Percent of map unit:* 3 percent

*Landform:* Bogs

*Hydric soil rating:* Yes

#### **Cromwell and similar soils**

*Percent of map unit:* 2 percent

*Hydric soil rating:* No

#### **Dusler and similar soils**

*Percent of map unit:* 2 percent

*Hydric soil rating:* No

#### **Cutaway and similar soils**

*Percent of map unit:* 2 percent

*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Aitkin County, Minnesota

Survey Area Data: Version 19, Sep 12, 2018