

Preliminary & Field Evaluation Form

www.SepticResource.com vers 12.4

Owner Information			
Date	<u>5/12/2022</u>	Sec / Twp / Rng	<u>S-20, T-46, R-26</u>
Parcel ID	<u>24-0-040102</u>	LUG (county, city, township)	<u>Aitkin Co.</u>
Property Owner:	<u>Jeffrey Wetmore</u>	Owners address (if different)	
Property Address:	<u>30422 Oak Ave. Aitkin MN 56431</u>	<u>8040 Ensign Rd</u>	
City / State / Zip:	<u>Bloomington MN 55436</u>		

Flow Information and Waste Type / Strength			
Estimated Design flow	<u>600</u>	Anticipated Waste strength	<input type="checkbox"/> Hi Strength <input checked="" type="checkbox"/> Domestic
Comments: Slab on Grade Gravity flow from house Elevation of house not set at time of design		Any Non-Domestic Waste	<input type="checkbox"/> Yes (class V) <input checked="" type="checkbox"/> No
		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	Proposed deep well	
Easements on lot located (see site map)	<input type="checkbox"/> Yes	<input checked="" 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)	<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 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	_____				

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>26"</u>	Flooding or run-on potential (comments)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Depth to system bottom maximum (or elev minimum)	<u>(+12")</u>	Flood elevation (if applicable)	_____
Depth/elev to standing water (if applicable)	_____	Elevation of ordinary high water level (if applicable)	<u>NA</u>
Depth/elev to bedrock (if applicable)	_____	Floodplain designation and elev - 100 yr/10 yr (if applicable)	_____
Soil Survey information determined (see attachment)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Differences between soil survey and field evaluation (if applicable)	_____ _____		

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 #

Soil Observation Log

www.SepticResource.com vers 12.4

Owner Information	
Property Owner / project: <u>Jeffrey Wetmore</u>	Date <u>5/12/2022</u>
Property Address / PID: <u>30422 Oak Ave. Aitkin MN 56431</u>	

Soil Survey Information	
<input type="checkbox"/> refer to attached soil survey	
Parent matl's:	<input type="checkbox"/> Till <input type="checkbox"/> Outwash <input type="checkbox"/> Lacustrine <input type="checkbox"/> Alluvium <input type="checkbox"/> Organic <input type="checkbox"/> Bedrock
landscape position:	<input type="checkbox"/> Summit <input type="checkbox"/> Shoulder <input type="checkbox"/> Side slope <input type="checkbox"/> Toe slope
soil survey map units:	<u>685 & 302B</u> slope <u>2</u> % direction- <u>NE</u>

Soil Log #1							
		<input checked="" type="checkbox"/> Boring <input type="checkbox"/> Pit	Elevation <u>98.9'</u>	Depth to SHWT <u>26"</u>			
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		Loose	Loose	Granular
18 - 26	Med Sand	<35	10YR5/4		Loose	Loose	Granular
26 - 32	Med Sand	<35	10YR5/4	7.5YR5/6	Loose	Loose	Granular
Comments:							

30422 Oak Ave. Aitkin MN 56431

Soil Log #2

<input checked="" type="checkbox"/> Boring		<input type="checkbox"/> Pit		Elevation <u>99"</u>		Depth to SHWT <u>29"</u>	
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0 - 6	Topsoil Sandy Loam	<35	10YR3/2		Loose	Loose	Granular
6 - 22	Sandy Loam	<35	10YR5/4		Loose	Loose	Granular
22 - 29	Med Sand	<35	10YR5/4		Loose	Loose	Granular
29 - 33	Med Sand	<35	10YR5/4	7.5YR5/6	Loose	Loose	Granular

30422 Oak Ave. Aitkin MN 56431

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 #

Mound Design - Aitkin county

Property Owner: Jeffrey Wetmore

Date: 5/12/2022

Site Address: 30422 Oak Ave. Aitkin MN 56431

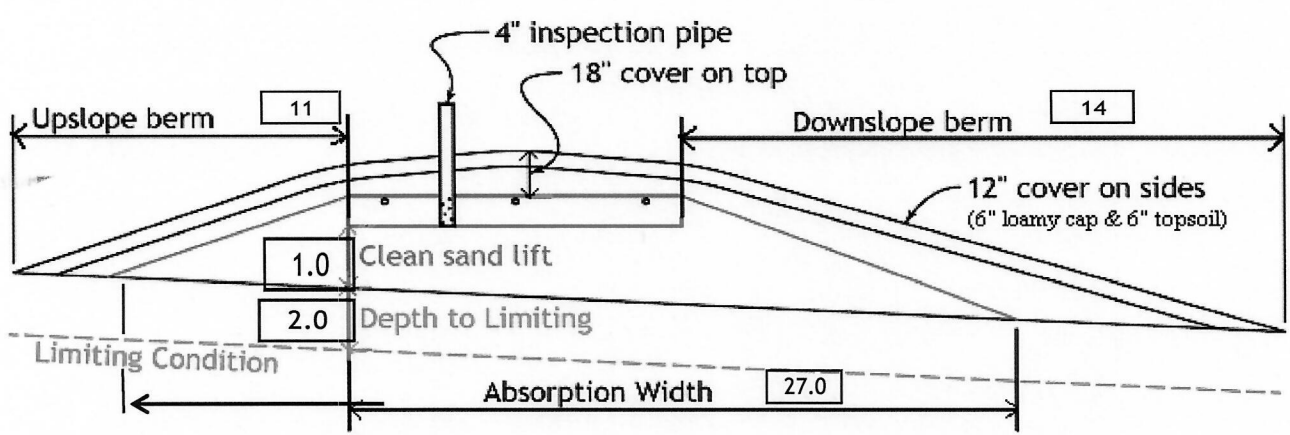
PID: 24-0-040102

Comments: _____

Instructions: = 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 1650 Jacobson 2/Compartment tank
- 4) Gal Septic tank (code minimum) Gal Septic tank (design size / LUG req'd)
Tank options: none
- 5) GPD/ft² 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) 1.50 5x
- 12) inch diameter laterals must be used to meet "4x pipe volume" requirement 2.00 3x
- 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)

- 23) gpd/ft² 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
- 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 yd³ 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 = yd³ or *1.4= ton
 plus 20%
- 35) Loamy Cap: ft. by ft. 6" deep, plus 20% gives yd³ or *1.4= ton
- 36) Topsoil: ft. by ft. 6" deep, plus 20% gives yd³ or *1.4= ton

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

[Signature] Brummer Septic LLC. L-1347 5/12/2022
 Designer Signature Company License# Date

Installer Summary

1000 gallon Septic tank (minimum)

Tank options: none

Install 1650 Jacobson 2/Compartment tank

533 gallon Dose tank (minimum)

at 12.69 gpi

29 GPM @ 23 ft. of head, Pump required

8.1 inch swing on Demand float which translates to roughly 5.1 inches of float tether length
if time dosing is required --> 3.6 minutes ON time & 5.1 hours OFF time

20 inches from bottom of tank to "pump ON" float, or 12 inches to "timer ON" float

23 inches from bottom of tank to "Hi Level Alarm" or 33 inches to "Hi level alarm" if time dosed

100 ft. of 2.0 inch supply line with end feed manifold connection

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

12 inch, or 1.0 ft. Sand Lift Mound

10.0 ft. wide by 50.0 ft. long Rock bed

3 laterals 1.50 inch diameter 48.0 ft. long 3.0 ft. lateral spacing

7/32 inch perfs 3.0 ft. perforation spacing

No Effluent filter & alarm

3 clean out & valve box assemblies

27.0 ft. Total sand ABSORPTION width (minimum)

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

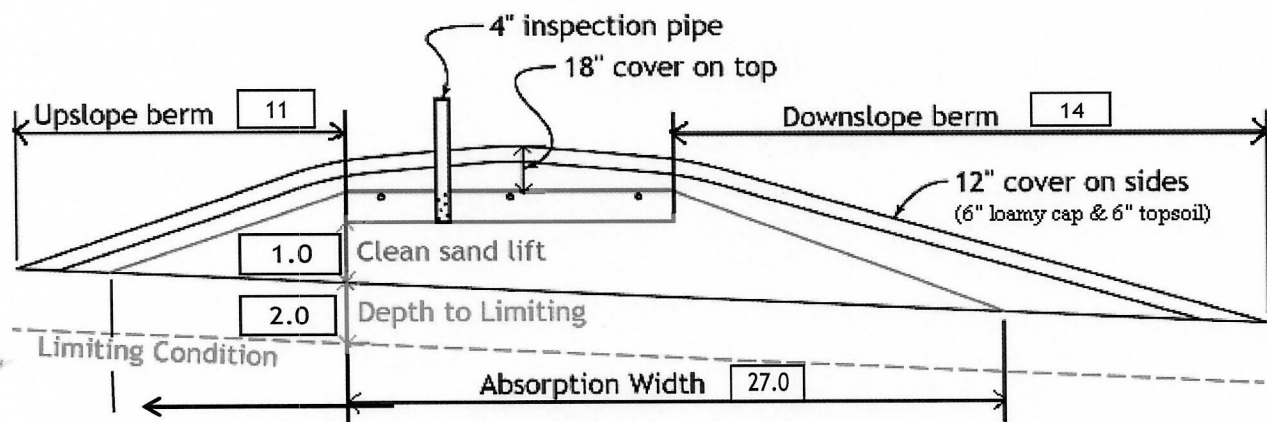
9.6 ft. Downslope (sand beyond rockbed, minimum)

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

4:1 upslope ratio 11 ft. upslope berm

4:1 sideslope 13 ft. sideslope berms

4:1 downslope 14 ft. downslope berm



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:	23.0 yd ³ or *1.4=	32 ton	9 inches under pipe
Mound Sand:	87 yd ³ or *1.4=	122 ton	
Loamy Cap:	50 yd ³ or *1.4=	70 ton	6" deep
Topsoil:	60 yd ³ or *1.4=	84 ton	6" deep

INSPECTOR CHECKLIST - mound

30422 Oak Ave. 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 _____ 1000 gallons none _____

- Riser over outlet, riser over inlet or center, and 6"+ inspection pipe over any remaining baffles.
- No _____ effluent filter & alarm
- Dose tank risers and piping (water tight, insulated, proper depth, drainback)
mfg _____ 533 gallons

- dose pump _____ 29 gpm 23 head VERIFY PUMP CURVE / 3.6 min ON 5.1 hr OFF

- float setting drop 8.1 inches at 12.7 gpi "DESIGNED" 5.1 inches approx float tether length
103.0 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 50.0
Sand lift depth 12 inches. (Jar test : 2" sand leaves < 1/8" silt after 30 min)

- Absorption Sand beyond rock 7.4 upslope 9.6 downslope

- Bermed topsoil beyond rockbed 11 upslope 13 sideslope 14 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

- 7/32 inch perforations
- 3.0 ft perforation spacing

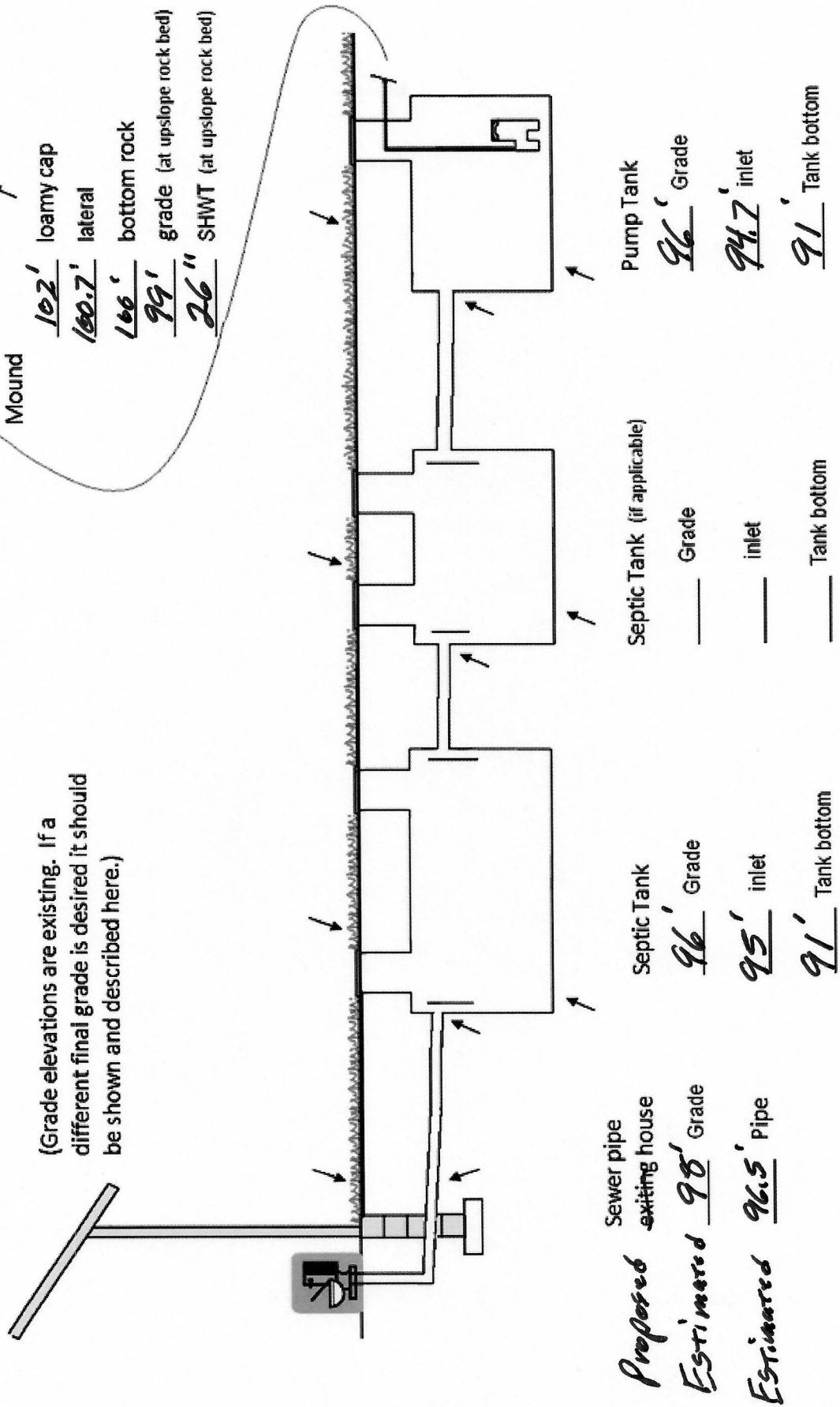
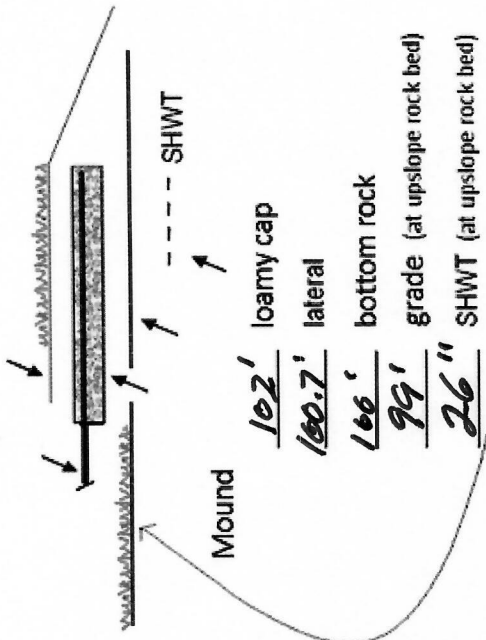
- Air inlet at end of laterals, and at top feed manifold if necessary. VERIFY
- clean outs (no hard 90's)
- 4" inspection pipe to bottom of rock, anchored VERIFY

- Abandon existing system - if necessary Re-use existing tank certification
- monitoring plan and type _____
- well abandonment form - if necessary _____

System Elevations

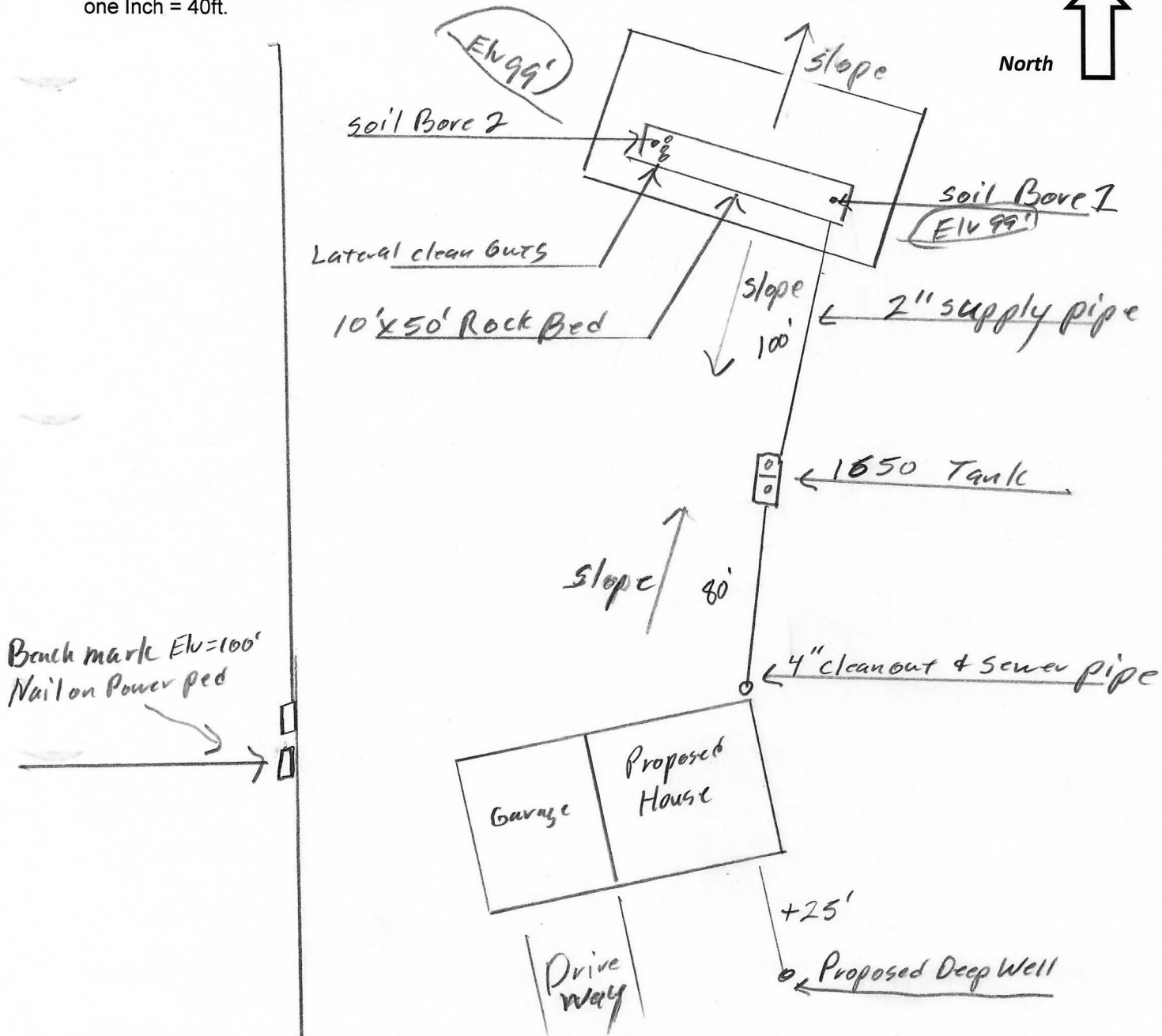
ELU = 100' benchmark Nail on Power Ped

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



{ Design Drawing }

Property Owner: Jeffrey Wetmore Date: 5/12/22 Designer's Initials: JB
 Parcel ID. Number: 24-0-040102 Address: 30422 Oak Ave. Aitkin MN 56431
 one Inch = 40ft.



	Surface/ SHWT	Nail on Power Ped = Bench Mark 100'		Existing Grade	
		Soil Bore 1	98.9' / 26"	Bench Mark	100'
Soil Bore 2	99' / 29"	Ground Elv. BM	99.4'	Bottom of Rockbed Elv.= 100'	
Soil Bore 3		Ground Elv. Tank	96'	Top of Washed Sand Elv.= 100'	
		Ground at Proposed house	98'	Estimated	Estimated Sewer pipe at house Elv.= 96.5'

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 | Access Route for Tank Maintenance |
| Component Location | Property Lines |
| OHW ordinary high water | Structures |
| Lot Easements | Setbacks |

Mound Design Notes - Aitkin county

Property Owner: Jeffrey Wetmore

Date: 5/12/22

Site Address: 30422 Oak Ave. Aitkin MN 56431

PID: 24-0-040102

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

- 1 This is a type I mound for a 4 bedroom House. Proposed deep well location will be South of House.
- 2 Gravity flow from slab on grade house, no Garbage disposal.
- 3 All property line are + 50 ft to septic system.
- 4 Bench Mark Elevation is a nail on Power Pedestal West of House SW of mound area.
- 5 Install Jacobson 1650 Compartment tank for gravity flow from Slab on grade house (Elv. not set)
- 6 Elevation contour of rock bed upslope edge is 99'.
The area size of the rock bed is 10' x 50' . Absorption area is 50' x 27'.
Sand absorption area is 7.4 ft. up slope + 10 ft. rockbed + 9.6 downslope = approx. 27 ft. wide sand base.
Berms are 11ft. Upslope, 14ft. Down slope, 10ft. Rock bed = approx. 35ft. Wide.
Overall mound size is approx. 35' wide x 76' long and approx. 3' high. End Berms are 13 Ft. wide.
- 7 The bench mark is the nail on the power Pedestal West of House , 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.
- 8 The top of the washed sand and bottom of rock bed is Elv. 100'.
It is important that the soils do not get compacted, and that clean washed sand is used.
- 9 The Jacobson 1650 compartment tank will be gravity flow from dwelling. Install the pump for 7 demand doses per day. approx. 86 gallons per dose, 8.1 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, insulate top of tank if less than 2 ft of cover soil.
- 10 **Recommend the Installation of an Effluent filter on septic tank outlet, install electric alarm on filter.**
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 Lateral clean-outs at far end of laterals. Recommended)
- 11 **Drill 7/32" holes for Perf sizing, 36" on centers.**
Install 4" inspection pipe to bottom of rock bed, secure in rock bed and raise to above final grade.

Designed to Aitkin Co. and MPCA recommendations and requirements.

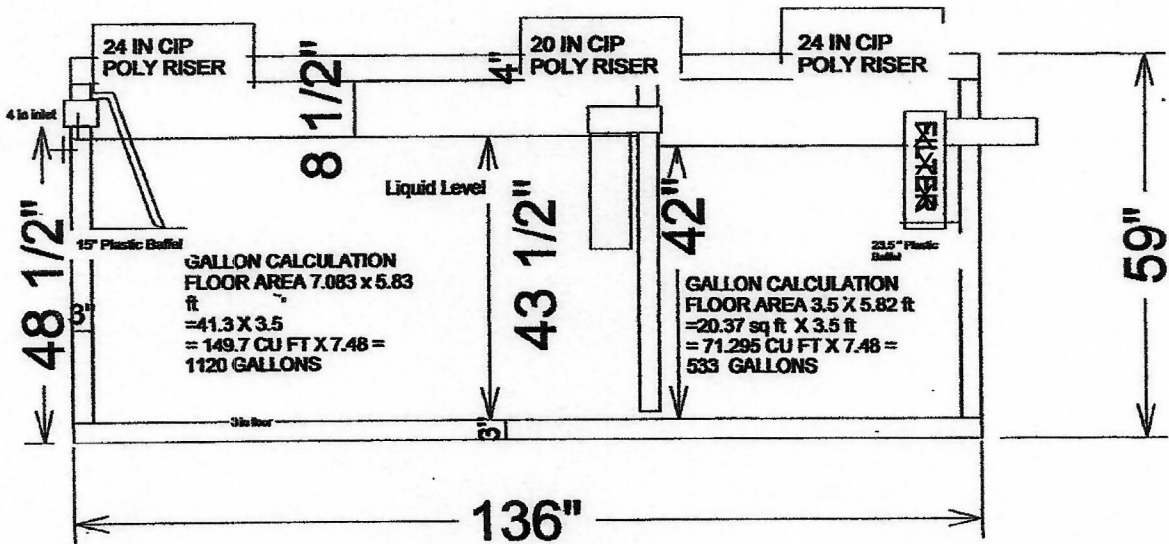
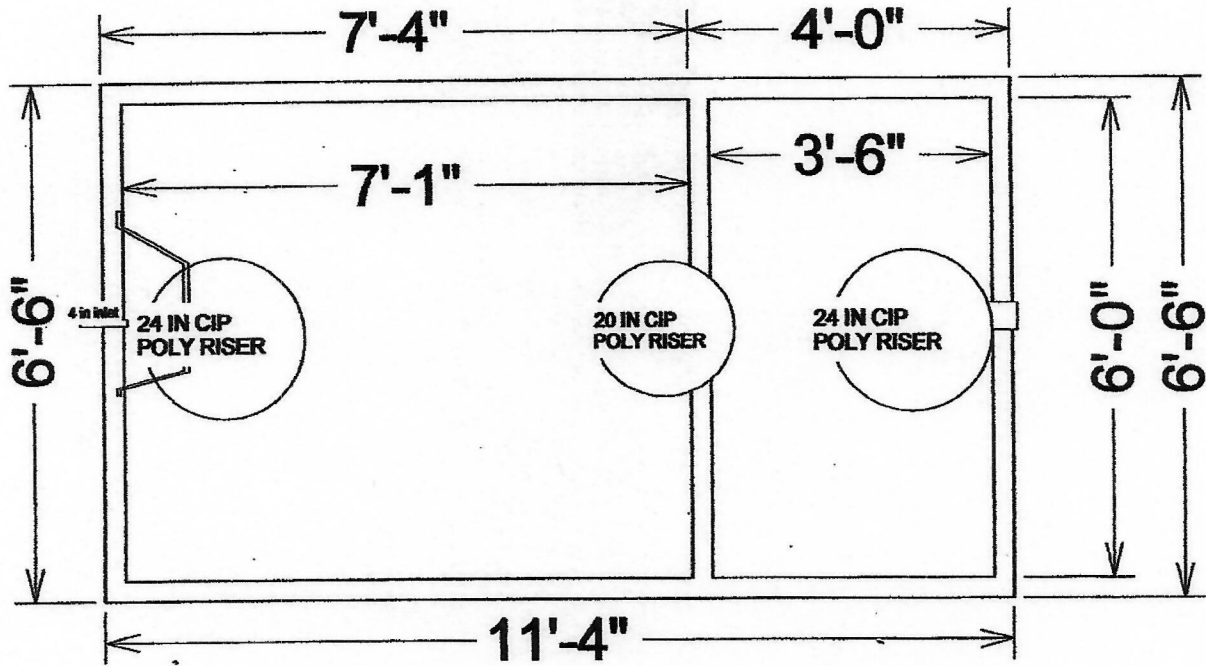

Designer Signature

Brummer Septic LLC.
Design Company

L-1347
License#

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



Detailed Parcel Report

Parcel Number: 24-0-040102

General Information

Township/City: NORDLAND TWP
Taxpayer Name: WETMORE, JEFFREY & CONNIE
Taxpayer Address: 8040 ENSIGN RD
 BLOOMINGTON MN 55436
Property Address: 30422 OAK AVE
Township: 46 **Lake Number:** 1912500
Range: 26 **Lake Name:** LONE LAKE - NORDLAND - BACK LOT
Section: 20 **Acres:** 5.91
Green Acres: No **School District:** 1.00
Plat:
Brief Legal Description: THAT PART OF LOT 4 N OF CSAH #52 LESS 1.78 AC R/W & LESS PT IN DOCS
 370458, 371077 & 376994

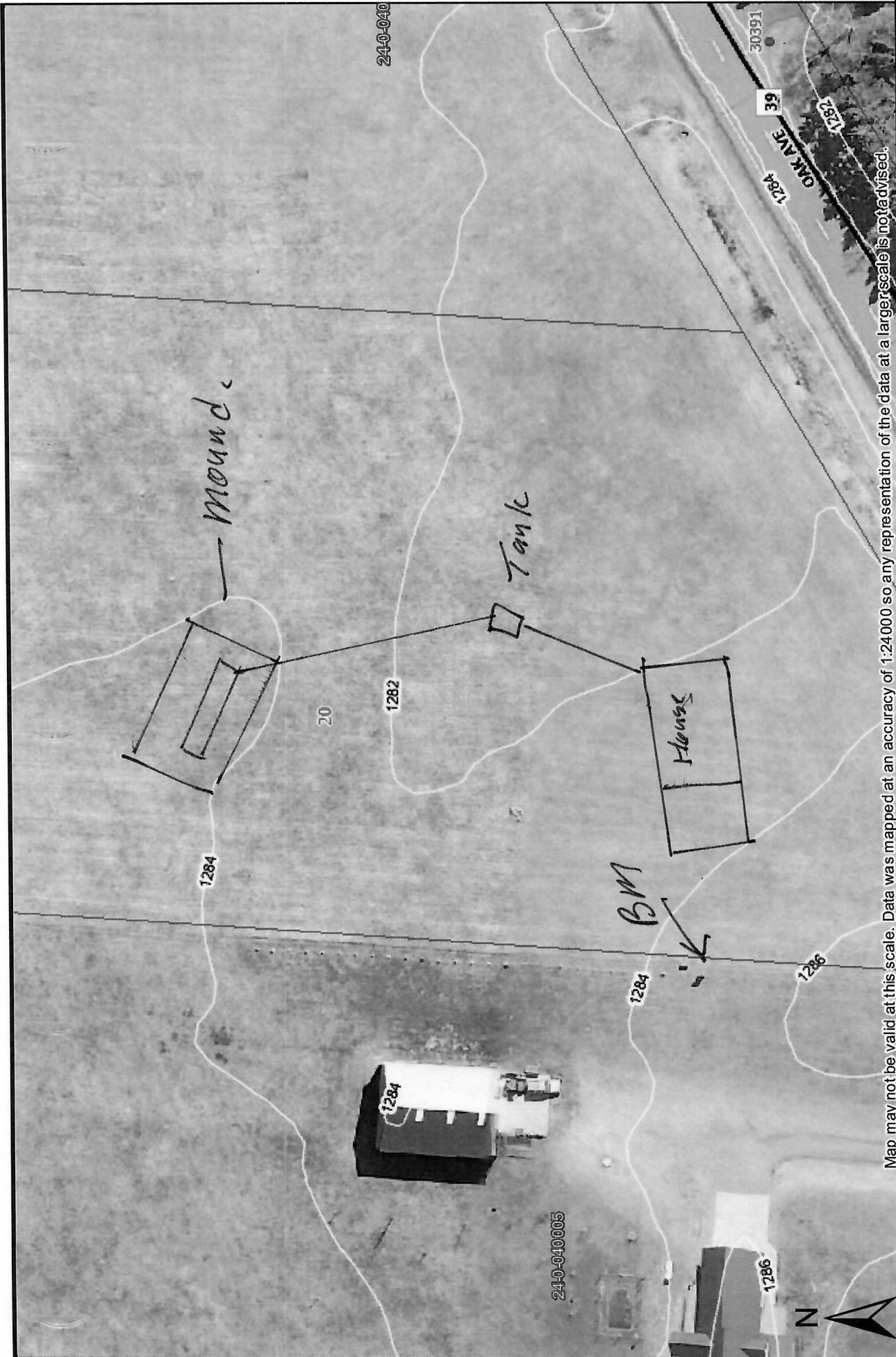
Tax Information

Class Code 1: Rural Vacant Land
Class Code 2: Unclassified
Class Code 3: Unclassified
Homestead: Non Homestead
Assessment Year: 2022

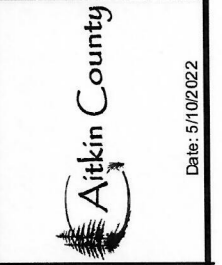
Estimated Land Value:	\$24,700.00
Estimated Building Value:	\$0.00
Estimated Total Value:	\$24,700.00
Prior Year Total Taxable Value:	\$21,600.00
Current Year Net Tax (Specials Not Included):	\$144.00
Total Special Assessments:	\$0.00
**Current Year Balance Not Including Penalty:	\$144.00
Delinquent 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.**



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.



Date: 5/10/2022

Wetmore

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.

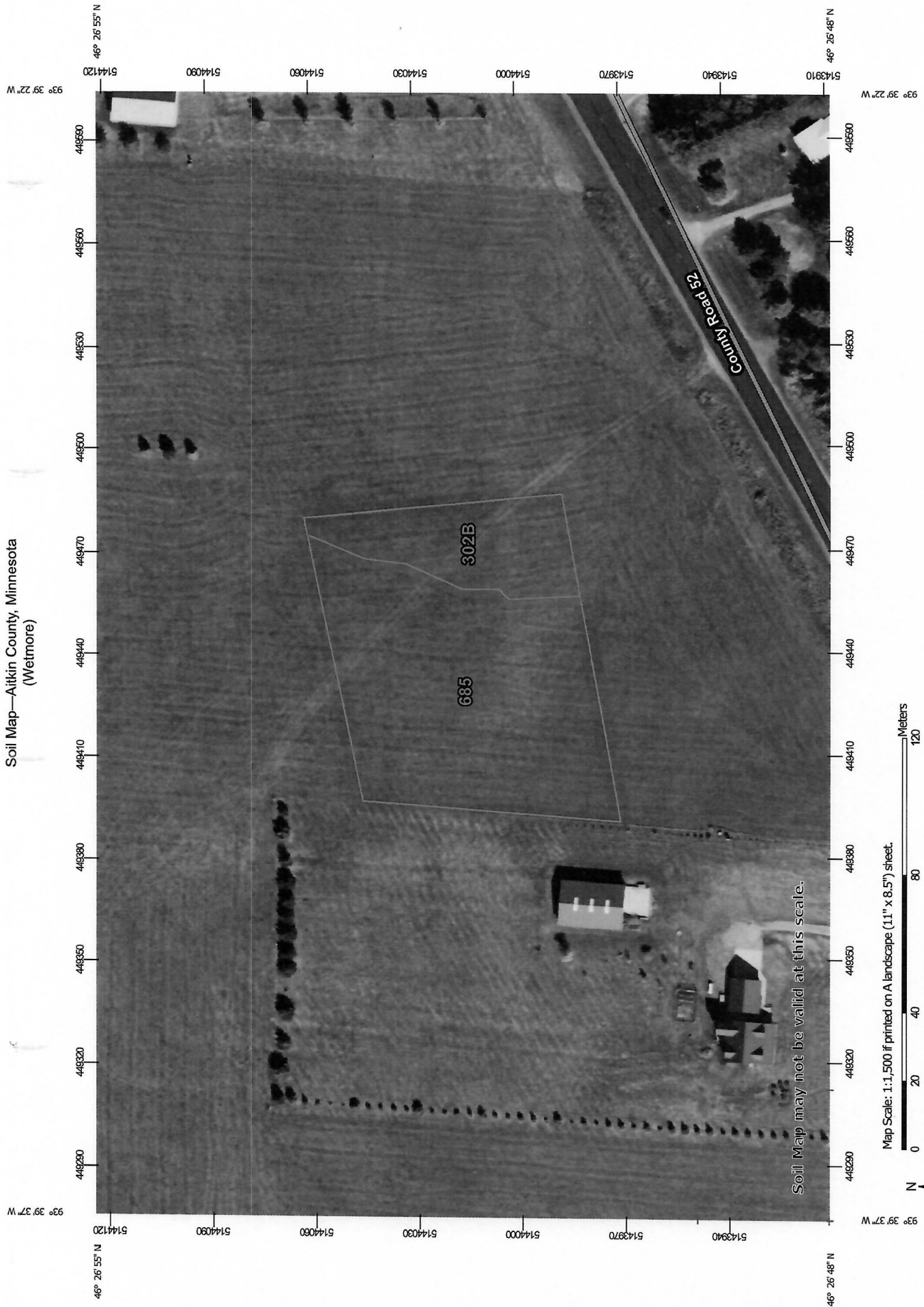
Web App Builder for ArcGIS

1 inch = 94 feet

0 0.005 0.01 mi

1:1,128

Soil Map—Aitkin County, Minnesota
(Westmore)



Soil Map may not be valid at this scale.

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

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



Web Soil Survey
National Cooperative Soil Survey

Aitkin County, Minnesota

685—Oesterle fine sandy loam

Map Unit Setting

National map unit symbol: gjjd
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: Prime farmland if drained

Map Unit Composition

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

Description of Oesterle

Setting

Landform: Outwash plains
Landform position (two-dimensional): Footslope, toeslope
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Sandy and gravelly outwash

Typical profile

A - 0 to 2 inches: fine sandy loam
E, E/B, B/E, Bt - 2 to 21 inches: sandy loam
Bt2 - 21 to 34 inches: stratified loamy coarse sand to gravelly sand
2C - 34 to 60 inches: gravelly sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: About 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: A/D
Forage suitability group: Level Swale, Low AWC, Acid (G090AN007MN)
Other vegetative classification: Level Swale, Low AWC, Acid (G090AN007MN)

Hydric soil rating: No

Minor Components

Loamy till substratum

Percent of map unit: 4 percent

Hydric soil rating: No

Meehan and similar soils

Percent of map unit: 4 percent

Hydric soil rating: No

Nemadji and similar soils

Percent of map unit: 4 percent

Hydric soil rating: No

Leafriver and similar soils

Percent of map unit: 3 percent

Landform: Depressions

Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Aitkin County, Minnesota
Survey Area Data: Version 22, Sep 10, 2021

Aitkin County, Minnesota

302B—Rosholt fine sandy loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: gjgl
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: All areas are prime farmland

Map Unit Composition

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

Description of Rosholt

Setting

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

Typical profile

E - 0 to 9 inches: fine sandy loam
E/B - 9 to 15 inches: fine sandy loam
Bt1 - 15 to 22 inches: sandy loam
2Bt2 - 22 to 30 inches: gravelly loamy sand
2C - 30 to 60 inches: stratified very gravelly coarse sand to extremely gravelly sand

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 2e
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: 8 percent

Landform: Depressions

Hydric soil rating: Yes

Oesterle and similar soils

Percent of map unit: 7 percent

Hydric soil rating: No

Data Source Information

Soil Survey Area: Aitkin County, Minnesota

Survey Area Data: Version 22, Sep 10, 2021