

# Preliminary & Field Evaluation Form

www.SepticResource.com vers 12.4

| Owner Information   |                                       |                               |                         |
|---------------------|---------------------------------------|-------------------------------|-------------------------|
| Date                | <u>5/7/2021</u>                       | Sec / Twp / Rng               | <u>S-6, T-44, R-24</u>  |
| Parcel ID           | <u>28-0-009300</u>                    | LUG (county, city, township)  | <u>Aitkin Co.</u>       |
| Property Owner:     | <u>Kevin Hamer</u>                    | Owners address (if different) |                         |
| Property Address:   | <u>21216 280th Ave. Isle Mn 56342</u> |                               | <u>21216 280th Ave.</u> |
| City / State / Zip: |                                       |                               | <u>Isle MN 56342</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     |
|  |            | 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 type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Well casing depth   | Existing deep well                      | Existing Shallow 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) <span style="float: right;">By Owner</span> | <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 type="checkbox"/> Yes            | <input checked="" 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  | <hr/> <hr/>                             |  |   |   |  |

### Soil Information

|  |   |   |
|--|---|---|
|  |   | Evidence of site:   |
| Original soils   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Cut <span style="float: right;"><input type="checkbox"/> Yes   <input checked="" type="checkbox"/> No</span><br>Filled <span style="float: right;"><input type="checkbox"/> Yes   <input checked="" type="checkbox"/> No</span><br>Compacted <span style="float: right;"><input type="checkbox"/> Yes   <input checked="" type="checkbox"/> No</span><br>Disturbed <span style="float: right;"><input type="checkbox"/> Yes   <input checked="" type="checkbox"/> No</span> |
| Soil logs completed and attached                                     | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Perk test completed and attached (if applicable) <span style="float: right;"><input type="checkbox"/> Yes   <input checked="" type="checkbox"/> No</span>   |
| Soil loading rate (gpd/ft <sup>2</sup> )                             | <u>0.50</u>   | Percolation rate (if applicable) _____  |
| Depth/elev to SHWT   | <u>14"</u>  | Flooding or run-on potential <span style="float: right;"><input type="checkbox"/> Yes   <input checked="" type="checkbox"/> No</span><br>(comments)   |
| Depth to system bottom maximum (or elev minimum)                     | <u>( + 24" )</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) _____  |
| 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

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| Owner Information   |                      |
|---|----------------------|
| Property Owner / project: <u>Kevin Hamer</u>                  | Date <u>5/7/2021</u> |
| Property Address / PID: <u>21216 280th Ave. Isle Mn 56342</u> |                      |

| Soil Survey Information                                |   |
|--|---|
| <input type="checkbox"/> refer to attached soil survey |   |
| Parent matl's:   | <input checked="" 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 checked="" type="checkbox"/> Side slope <input type="checkbox"/> Toe slope   |
| soil survey map units:                                 | <u>C9B</u> slope <u>5</u> %    direction- <u>East</u>   |

| Soil Log #1 |                 |  |                              |                        |                          |       |          |
|-------------|-----------------|--|------------------------------|------------------------|--------------------------|-------|----------|
|             |                 | <input checked="" type="checkbox"/> Boring | <input type="checkbox"/> Pit | Elevation <u>97.7'</u> | Depth to SHWT <u>15"</u> |       |          |
| Depth (in)  | Texture         | fragment %                                 | matrix color                 | redox color            | consistence              | grade | shape    |
| 0 - 6       | Topsoil<br>Loam | <35  | 10YR3/2                      |                        | Loose                    | Loose | Granular |
| 6 - 15      | Loam            | <35  | 10YR5/4                      |                        | Loose                    | Loose | Granular |
| 15 - 24     | Loam            | <35  | 10YR5/4                      | 7.5YR5/4 &<br>10YR6/2  | Loose                    | Loose | Granular |
|             |                 |  |                              |                        |                          |       |          |
|             |                 |  |                              |                        |                          |       |          |

Comments:

21216 280th Ave. Isle Mn 56342

**Soil Log #2**

|            |                 | <input checked="" type="checkbox"/> Boring | <input type="checkbox"/> Pit | Elevation <u>97.7'</u> |             | Depth to SHWT <u>14"</u> |          |
|------------|-----------------|--|------------------------------|------------------------|-------------|--------------------------|----------|
| Depth (in) | Texture         | fragment %                                 | matrix color                 | redox color            | consistence | grade                    | shape    |
| 0 - 6      | Topsoil<br>Loam | <35  | 10YR3/2                      |                        | Loose       | Loose                    | Granular |
| 6 - 14     | Loam            | <35  | 10YR5/4                      |                        | Loose       | Loose                    | Granular |
| 14 - 24    | Loam            | <35  | 10YR5/4                      | 7.5YR5/4 &<br>10YR6/2  | Loose       | Loose                    | Granular |
|            |                 |  |                              |                        |             |                          |          |
|            |                 |  |                              |                        |             |                          |          |

21216 280th Ave. Isle Mn 56342

**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<br>35 - 50<br>>50           |                              |                 | loose<br>friable<br>firm<br>rigid | loose<br>weak<br>moderate<br>strong | single grain<br>granular blocky<br>prismatic platy<br>massive |
|            |         | <35<br>35 - 50<br>>50           |                              |                 | loose<br>friable<br>firm<br>rigid | loose<br>weak<br>moderate<br>strong | single grain<br>granular blocky<br>prismatic platy<br>massive |
|            |         | <35<br>35 - 50<br>>50           |                              |                 | loose<br>friable<br>firm<br>rigid | loose<br>weak<br>moderate<br>strong | single grain<br>granular blocky<br>prismatic platy<br>massive |
|            |         | <35<br>35 - 50<br>>50           |                              |                 | loose<br>friable<br>firm<br>rigid | loose<br>weak<br>moderate<br>strong | single grain<br>granular blocky<br>prismatic platy<br>massive |
|            |         | <35<br>35 - 50<br>>50           |                              |                 | loose<br>friable<br>firm<br>rigid | loose<br>weak<br>moderate<br>strong | single grain<br>granular blocky<br>prismatic platy<br>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: Kevin Hamer

Date: 5/7/2021

Site Address: 21216 280th Ave. Isle Mn 56342

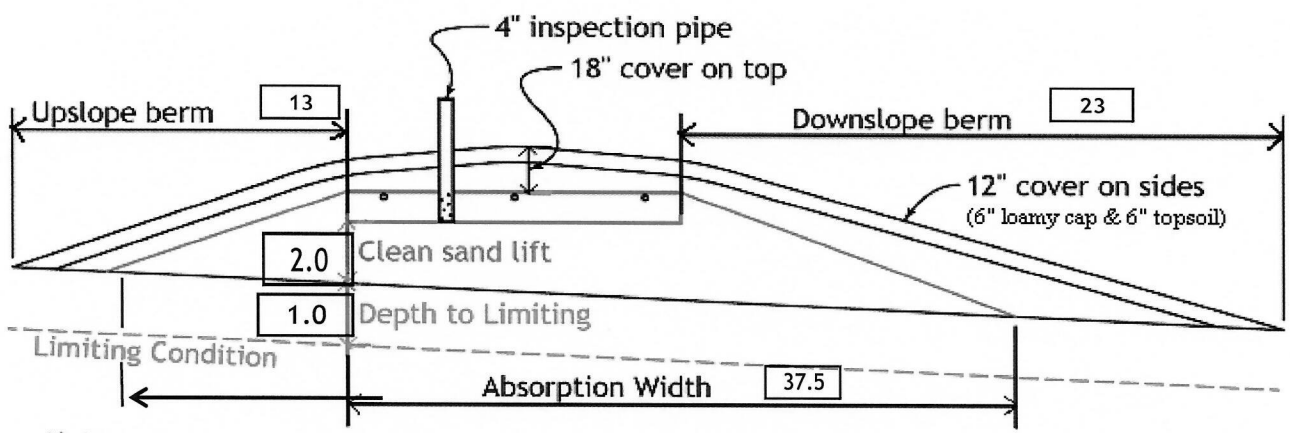
PID: 28-0-009300

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 Jacobson 1650 2/Compartment tank
- 4)  Gal Septic tank (code minimum)     Gal Septic tank (design size / LUG req'd)  
Tank options: none
- 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)    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/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
- 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]* Brummer Septic LLC. L-1347 5/7/2021  
 Designer Signature Company License# Date

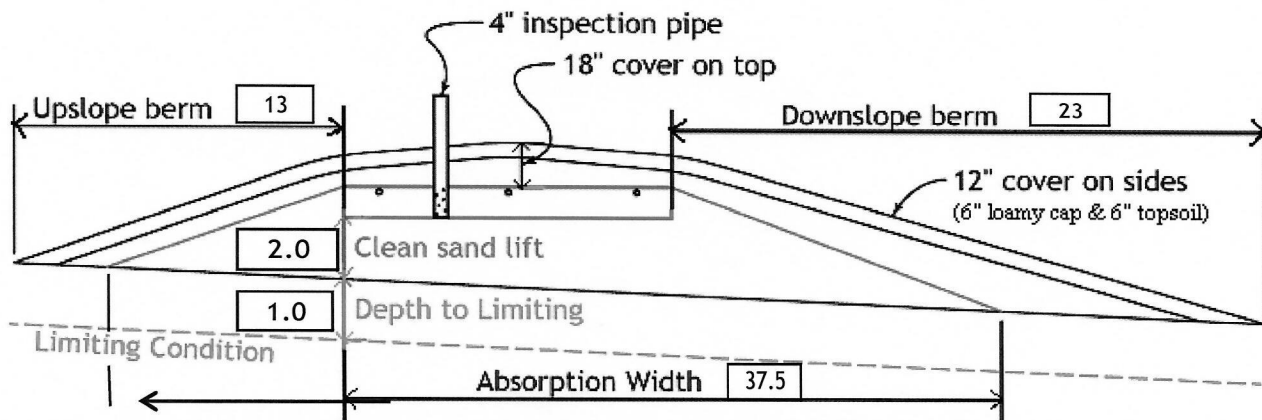
# Installer Summary

- 1120 gallon Septic tank (minimum) Tank options: none  
 Install Jacobson 1650 2/Compartment tank  
 533 gallon Dose tank (minimum) at 12.69 gpi
- 27 GPM @ 25 ft. of head, Pump required  
 7.4 inch swing on Demand float which translates to roughly 4.7 inches of float tether length  
 if time dosing is required --> 3.5 minutes ON time & 5.1 hours OFF time
- 19 inches from bottom of tank to "pump ON" float, or 12 inches to "timer ON" float  
 22 inches from bottom of tank to "Hi Level Alarm" or 32 inches to "Hi level alarm" if time dosed
- 175 ft. of 2.0 inch supply line with end feed manifold connection  
 (Tip: "top feed" manifold to control drainback)
- 24 inch, or 2.0 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
- No Effluent filter & alarm  
 3 clean out & valve box assemblies

- 37.5 ft. Total sand ABSORPTION width (minimum)  
 10.0 ft. upslope and sideslope (sand beyond rockbed, minimum)  
 17.5 ft. Downslope (sand beyond rockbed, minimum)

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

- |                   |                        |
|-------------------|------------------------|
| 4:1 upslope ratio | 13 ft. upslope berm    |
| 4:1 sideslope     | 18 ft. sideslope berms |
| 4:1 downslope     | 23 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:   | 17.0 yd <sup>3</sup> or *1.4= | 24 ton  | 9 inches under pipe                                    |
| Mound Sand: | 192 yd <sup>3</sup> or *1.4=  | 269 ton | calculation based on 3:1/4:1 slope from top of rockbed |
| Loamy Cap:  | 65 yd <sup>3</sup> or *1.4=   | 91 ton  | 6" deep  |
| Topsoil:    | 76 yd <sup>3</sup> or *1.4=   | 106 ton | 6" deep  |

## INSPECTOR CHECKLIST - mound

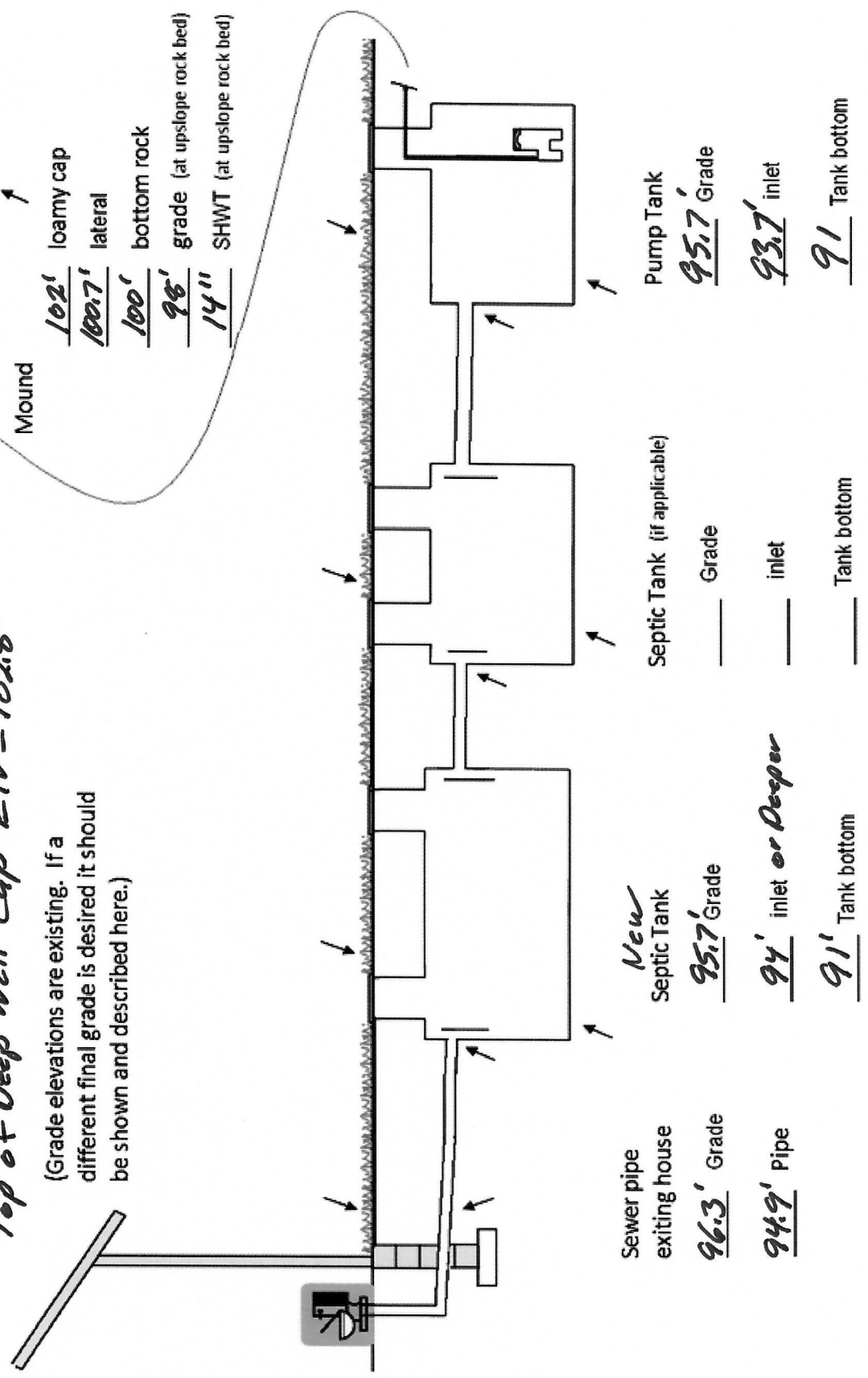
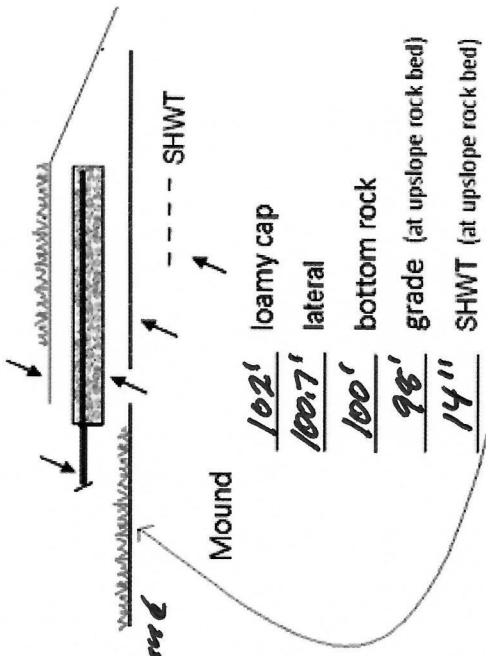
21216 280th Ave. Isle Mn 56342

- 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 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 \_\_\_\_\_ 27 gpm 25 head VERIFY PUMP CURVE 3.5 min ON 5.1 hr OFF
  
- float setting drop 7.4 inches at 12.7 gpi "DESIGNED" 4.7 inches approx float tether length  
94.0 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 24 inches. (Jar test : 2" sand leaves < 1/8" silt after 30 min)
  
- Absorption Sand beyond rock 10.0 upslope 17.5 downslope
  
- Bermed topsoil beyond rockbed 13 upslope 18 sideslope 23 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 Elevations

Elv = 100' benchmark *Nail on Tree North of Mound*  
 Top of Deep Well Cap Elv = 1028'

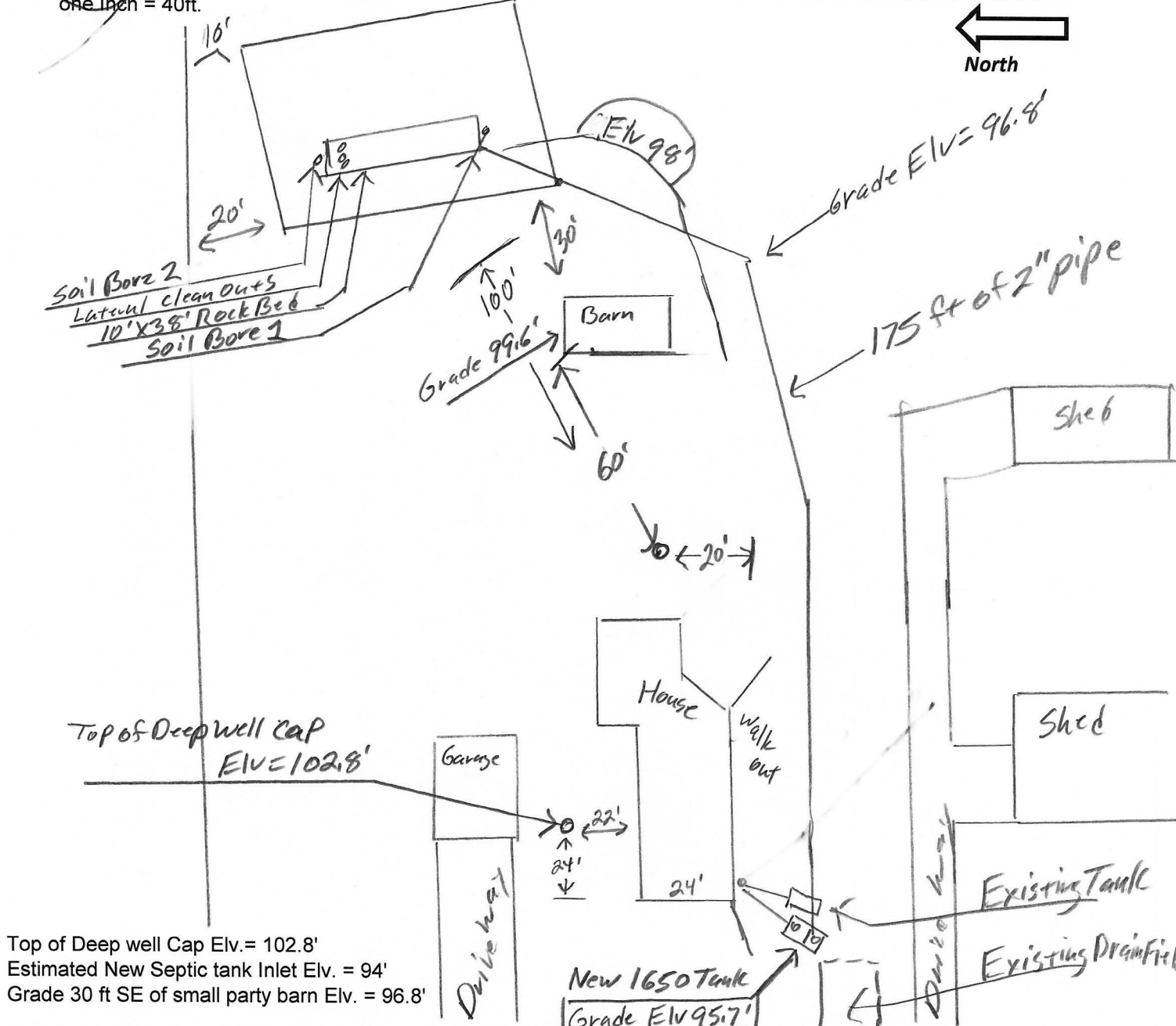
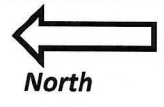
(Grade elevations are existing. If a different final grade is desired it should be shown and described here.)



wet land  
 ELV = 94.5'

{ Design Drawing }

Property Owner: Kevin Hamer Date: 5/7/21 Designer's Initials: JB  
 Parcel ID. Number: 28-0-009300 Address: 21216 280th Ave. Isle Mn 56342  
 one Inch = 40ft.



Top of Deep well Cap Elv. = 102.8'  
 Estimated New Septic tank Inlet Elv. = 94'  
 Grade 30 ft SE of small party barn Elv. = 96.8'

| Surface/ SHWT |             | Nail on Tree = Bench Mark 100' |       | Existing Grade                     |   |
|---------------|-------------|--------------------------------|-------|------------------------------------|---|
| Soil Bore 1   | 97.7' / 15" | Bench Mark                     | 100'  | Upslope Edge of Rockbed Elv. = 98' |   |
| Soil Bore 2   | 97.7' / 14" | Ground Elv. BM                 | 97.8' | Bottom of Rockbed Elv. = 100'      |   |
| Soil Bore 3   |             | Ground Elv. Tank               | 95.7' | new                                | Top of Washed Sand Elv. = 100'          |
| Ground at     |             | house                          | 96.2' | walkout                            | Existing Septic Tank Inlet Elv. = 94.6' |

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: Kevin Hamer

Date: 5/7/21

Site Address: 21216 280th Ave. Isle Mn 56342

PID: 28-0-009300

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

- 1 This is a type I mound for a 3 bedroom House. Existing deep well locations Between garage and house.
- 2 Existing shallow well is between house and small barn +100' to mound.
- 3 Existing septic is gravity flow from lower level of house.  
Existing drainfield to be abandon. Existing tank to be pumped, collapsed, filled or removed.
- 4 Bench Mark Elevation is a nail on a tree near NW corner of mound area.
- 5 Install Jacobson 1650 Compartment tank for gravity flow from house, may have to install deeper to maintain drainback from rock bed to pump tank.
- 6 Elevation contour of rock bed upslope edge is 98'.  
The area size of the rock bed is 10' x 38' . Absorption area is 38' x 37.5'.  
Sand absorption area is 10 ft. up slope + 10 ft. rockbed + 17.5 downslope = approx. 37.5 ft. wide sand base.  
Berms are 13ft. Upslope, 23ft. Down slope, 10ft. Rock bed = approx. 46ft. Wide. End berms are 18 ft wide.  
Overall mound size is approx. 46' wide x 74' long and approx. 4' high.
- 7 The bench mark is the nail on the tree near mound area, 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. 94 gallons per dose, 7.4 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.
- 10 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 1/4" 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

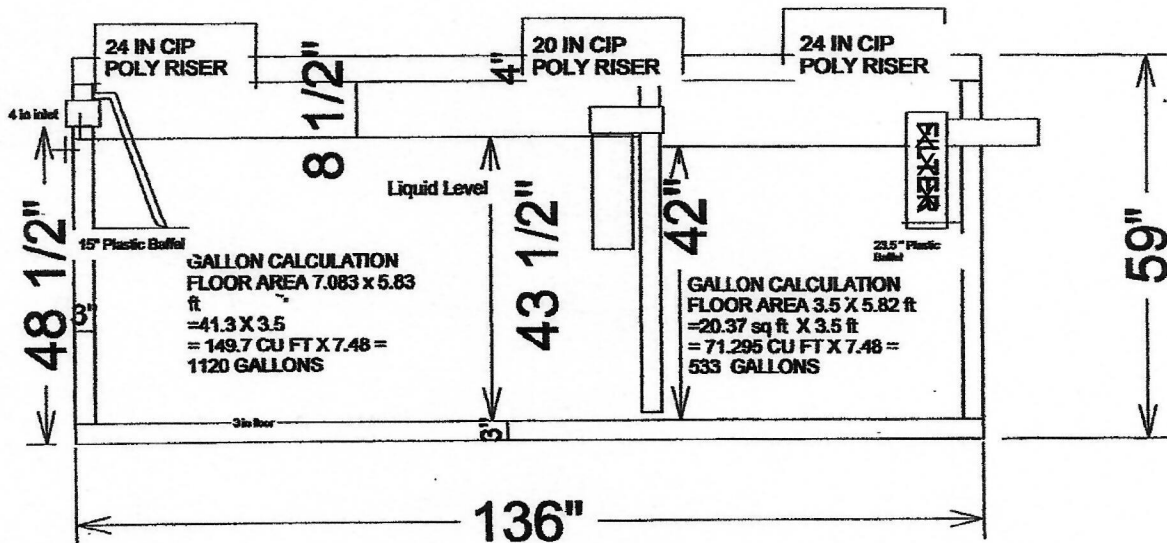
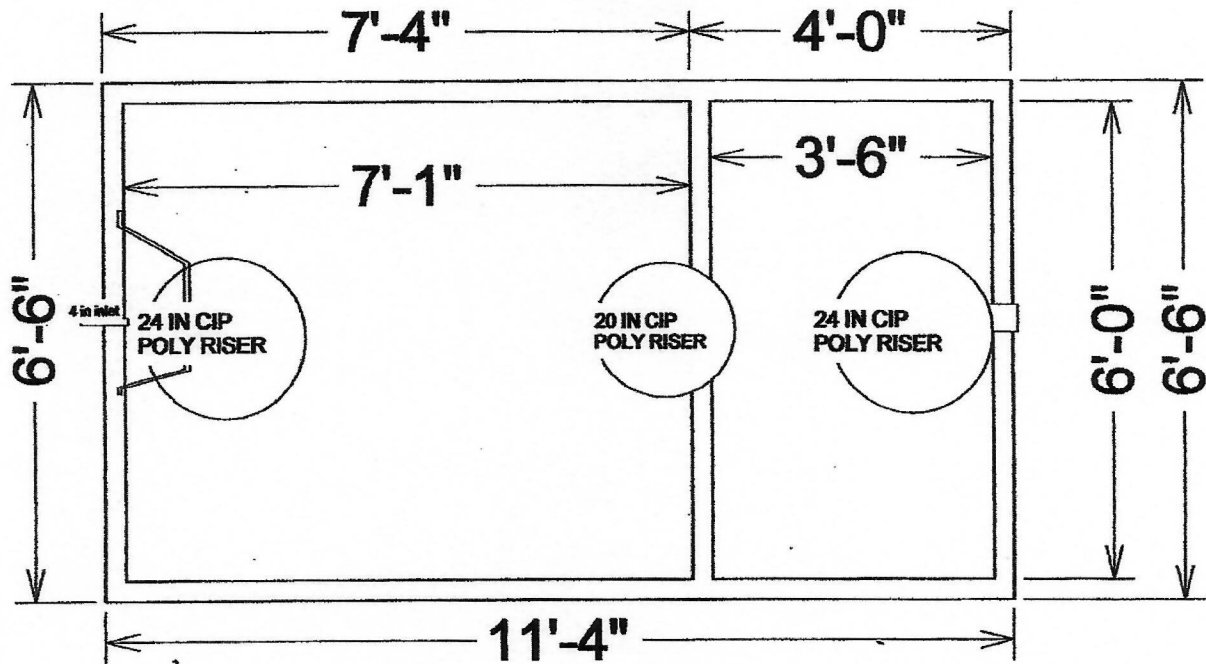
Brummer Septic LLC.  
Design Company

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: 28-0-009300

## General Information

Township/City: SEAVEY TWP  
Taxpayer Name: HAMER, KEVIN & DONNA  
Taxpayer Address: 21216 280TH AVE  
ISLE MN 56342  
Property Address: 21216 280th Ave  
Township: 44 Lake Number: 0  
Range: 24 Lake Name:  
Section: 6 Acres: 37.71  
Green Acres: No School District: 4.00  
Plat:  
Brief Legal Description: SW SW & S 60 FT OF NW SW

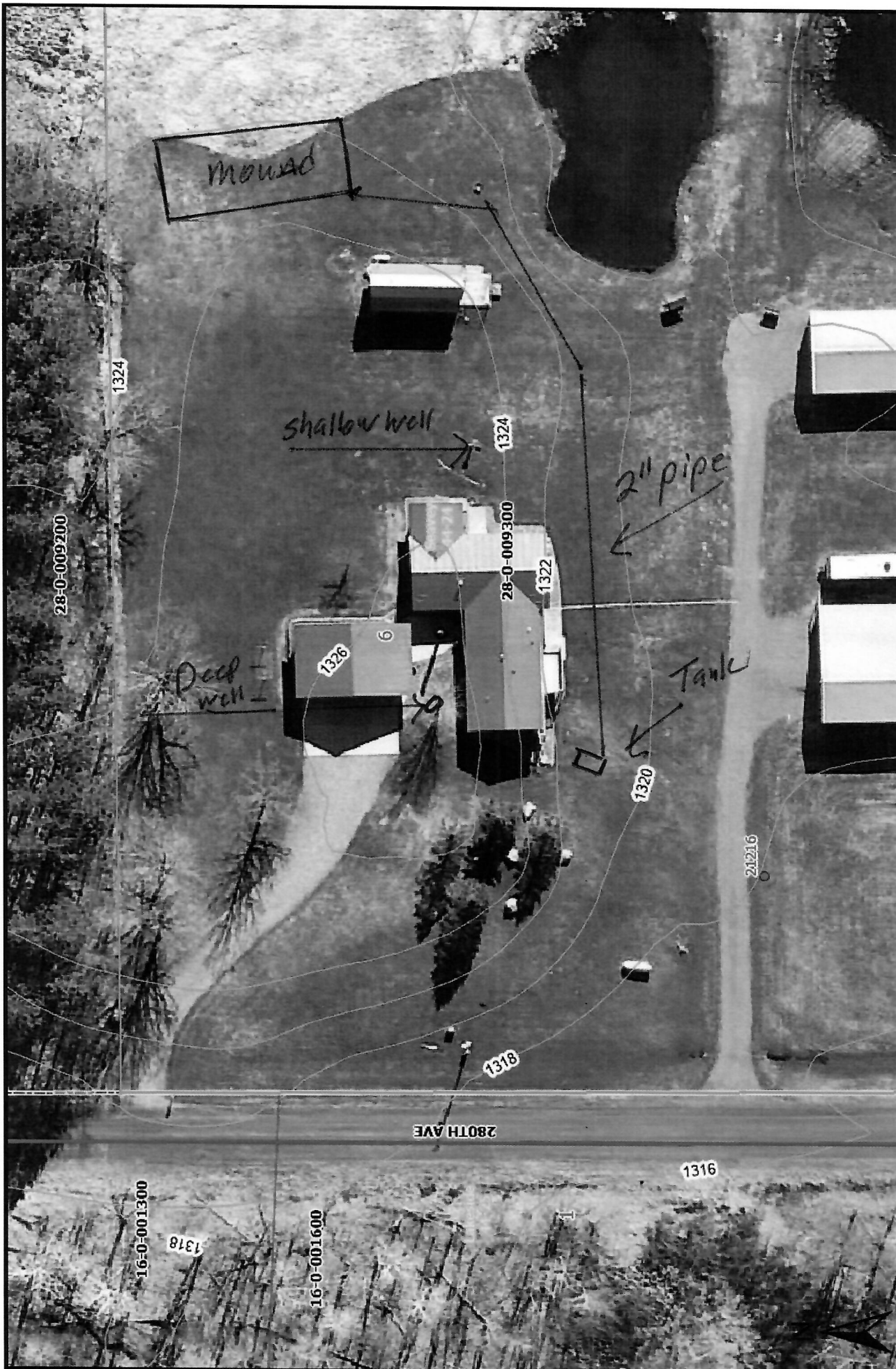
## Tax Information

Class Code 1: Agricultural  
Class Code 2: Ag Non-Productive Contiguous  
Class Code 3: Unclassified  
Homestead: Owner Homestead  
Assessment Year: 2021

|   |                     |
|---|---------------------|
| Estimated Land Value:                         | \$71,800.00         |
| Estimated Building Value:                     | \$196,100.00        |
| Estimated Total Value:                        | <u>\$267,900.00</u> |
| Prior Year Total Taxable Value:               | \$237,415.00        |
| Current Year Net Tax (Specials Not Included): | \$1,506.00          |
| Total Special Assessments:                    | \$0.00              |
| **Current Year Balance Not Including Penalty: | \$1,506.00          |
| 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.



Date: 3/20/2021

Hamer

0 25 50 ft 1 inch = 74 feet

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.

Soil Map—Aitkin County, Minnesota  
(Hamer)



Soil Map may not be valid at this scale.

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



Natural Resources  
Conservation Service

Web Soil Survey  
National Cooperative Soil Survey

3/20/2021  
Page 1 of 3

## Aitkin County, Minnesota

### C9B—Mora-Ronneby complex, 1 to 4 percent slopes, stony

#### Map Unit Setting

*National map unit symbol:* 2z19y

*Elevation:* 790 to 1,970 feet

*Mean annual precipitation:* 27 to 36 inches

*Mean annual air temperature:* 37 to 46 degrees F

*Frost-free period:* 80 to 150 days

*Farmland classification:* Farmland of statewide importance

#### Map Unit Composition

*Mora, stony, and similar soils:* 55 percent

*Ronneby, stony, and similar soils:* 30 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Mora, Stony

##### Setting

*Landform:* Moraines, drumlins

*Landform position (two-dimensional):* Backslope, summit

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Coarse-loamy lodgment till

##### Typical profile

*A - 0 to 8 inches:* silt loam

*E - 8 to 11 inches:* fine sandy loam

*B/E - 11 to 15 inches:* fine sandy loam

*Bt1 - 15 to 23 inches:* fine sandy loam

*Bt2 - 23 to 42 inches:* fine sandy loam

*BCd - 42 to 79 inches:* fine sandy loam

##### Properties and qualities

*Slope:* 1 to 4 percent

*Surface area covered with cobbles, stones or boulders:* 0.1 percent

*Depth to restrictive feature:* 31 to 52 inches to densic material

*Drainage class:* Somewhat poorly drained

*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately high (0.00 to 0.20 in/hr)

*Depth to water table:* About 16 to 24 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water capacity:* Moderate (about 6.1 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 3s  
*Hydrologic Soil Group:* B/D  
*Forage suitability group:* Level Swale, Acid (G090XN005MN)  
*Other vegetative classification:* Level Swale, Acid (G090XN005MN)  
*Hydric soil rating:* No

### Description of Ronneby, Stony

#### Setting

*Landform:* Moraines, drumlins  
*Landform position (two-dimensional):* Footslope  
*Landform position (three-dimensional):* Side slope, talf  
*Down-slope shape:* Concave  
*Across-slope shape:* Linear  
*Parent material:* Coarse-loamy lodgment till

#### Typical profile

*A - 0 to 10 inches:* silt loam  
*E - 10 to 11 inches:* fine sandy loam  
*B/E - 11 to 17 inches:* fine sandy loam  
*Bt - 17 to 45 inches:* fine sandy loam  
*BCd - 45 to 79 inches:* fine sandy loam

#### Properties and qualities

*Slope:* 1 to 3 percent  
*Surface area covered with cobbles, stones or boulders:* 0.1 percent  
*Depth to restrictive feature:* 31 to 54 inches to densic material  
*Drainage class:* Somewhat poorly drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately high (0.00 to 0.20 in/hr)  
*Depth to water table:* About 8 to 20 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Available water capacity:* Moderate (about 6.1 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 2w  
*Hydrologic Soil Group:* B/D  
*Forage suitability group:* Level Swale, Acid (G090XN005MN)  
*Other vegetative classification:* Level Swale, Acid (G090XN005MN)  
*Hydric soil rating:* No

### Minor Components

#### Cebana, stony

*Percent of map unit:* 8 percent

*Landform:* Interdrumlins, moraines  
*Landform position (two-dimensional):* Footslope, toeslope  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Concave  
*Across-slope shape:* Linear  
*Other vegetative classification:* Level Swale, Acid (G090XN005MN)  
*Hydric soil rating:* Yes

**Milaca, stony**

*Percent of map unit:* 5 percent  
*Landform:* Drumlins, moraines  
*Landform position (two-dimensional):* Shoulder, summit, backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex, linear  
*Other vegetative classification:* Sloping Upland, Acid (G090XN006MN)  
*Hydric soil rating:* No

**Giese, frequently ponded, stony**

*Percent of map unit:* 2 percent  
*Landform:* Moraines, interdrumlins  
*Landform position (three-dimensional):* Dip  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Concave  
*Other vegetative classification:* Ponded If Not Drained (G090XN013MN)  
*Hydric soil rating:* Yes

## Data Source Information

Soil Survey Area: Aitkin County, Minnesota  
Survey Area Data: Version 21, Jun 4, 2020