

Preliminary & Field Evaluation Form

24-003

www.SepticResource.com vers 12.4

Owner Information			
Date	<u>4/10/2024</u>	Sec / Twp / Rng	<u>S-18, T-48, R-24</u>
Parcel ID	<u>14-1-070800</u>	LUG (county, city, township)	<u>Aitkin Co.</u>
Property Owner:	<u>Townline DMP LLC. (Micheal Larson)</u>	Owners address (if different)	
Property Address:	<u>27871 438th Ln. Palisade Mn 56469</u>		<u>18059 Fillmore Drive NW</u>
City / State / Zip:			<u>Elk River MN 55330</u>

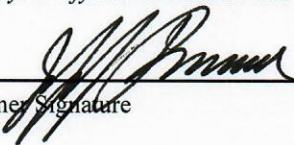
Flow Information and Waste Type / Strength			
Estimated Design flow	<u>300</u>	Anticipated Waste strength	<input type="checkbox"/> Hi Strength <input checked="" type="checkbox"/> Domestic
Comments: Septic tank location will need a variance from the lake use 50 ft from lake. Townline Lake is a NE Lake with 150 ft setback. Existing septic tank is 50 ft from lake. Install new tank in same location as existing tank.		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	
Easements on lot located (see site map)	<input type="checkbox"/> Yes	<input checked="" 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)	<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>Insulate supply pipe under road and driveway.</u> <u>Check with local road authority about crossing private road</u>				

Soil Information

		Evidence of site:	
		Cut	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Filled	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Compacted	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Disturbed	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Original soils	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Soil logs completed and attached	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Perk test completed and attached (if applicable)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Soil loading rate (gpd/ft ²)	<u>0.50</u>	Percolation rate (if applicable)	_____
Depth/elev to SHWT	<u>14"</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>(+ 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)	<u>NA</u>
Soil Survey information determined (see attachment)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Differences between soil survey and field evaluation (if applicable)	_____ _____		

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

Owner Information		
Property Owner / project:	<u>Townline DMP LLC. (Micheal Larson)</u>	Date <u>4/10/2024</u>
Property Address / PID:	<u>27871 438th Ln. Palisade Mn 56469</u>	

Soil Survey Information		<input type="checkbox"/> refer to attached soil survey
Parent mat'l's:	<input checked="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="checked" type="checkbox"/> Side slope <input type="checkbox"/> Toe slope	
soil survey map units:	<u>204B</u>	slope <u>6</u> % direction- <u>NW</u>

Soil Log #1							
	<input checked="checked" type="checkbox"/> Boring	<input type="checkbox"/> Pit	Elevation <u>97.2'</u>	Depth to SHWT <u>20"</u>			
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0 - 10	Topsoil Loam	<35	10YR3/2		Loose	Loose	Granular
10 - 20	Silt Loam	<35	10YR4/3		Loose	Loose	Granular
20 - 27	Silt Loam	<35	10YR5/2	7.5YR5/6	Loose	Loose	Granular

Comments: Frost just going out Texture was difficult, muddy, Mostly Friable, loose, blocky

27871 438th Ln. Palisade Mn 56469 **Soil Log #2**

		<input checked="" type="checkbox"/> Boring	<input type="checkbox"/> Pit	Elevation <u>97.5'</u>	Depth to SHWT <u>16"</u>		
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0 - 6	Topsoil Loam	<35	10YR3/2		Loose	Loose	Granular
6 - 16	Silt Loam	<35	10YR4/4		Loose	Loose	Granular
16 - 22	Silt Loam	<35	10YR4/4	7.5YR5/6	Friable	Loose	Granular

27871 438th Ln. Palisade Mn 56469 **Soil Log #3**

		<input checked="" type="checkbox"/> Boring	<input type="checkbox"/> Pit	Elevation <u>97.6'</u>	Depth to SHWT <u>14"</u>		
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0 - 6	Topsoil Loam	<35	10YR3/2		Loose	Loose	Granular
6 - 12	Silt	<35	10YR5/4		Friable	Loose	Granular
12 - 14	Silt and Clay Loam Blending	<35	10YR5/4 with blending 10YR4/4		Friable	Weak	Blocky
14 - 18	Clay Loam	<35	10YR4/4	7.5YR5.6	Friable	Weak	Blocky

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: Townline DMP LLC. (Micheal Larson)

Date: 4/10/2024

Site Address: 27871 438th Ln. Palisade Mn 56469

PID: 14-1-070800

Comments: _____

instructions: = enter data = adjust if desired = computer calculated - DO NOT CHANGE!

- 1) 2 bedroom Type I Residential System
- 2) 300 GPD design flow
- 3) No Garbage disposal or pumped to septic Install 1650 Jacobson 2/Compartment Septic/ pump tank
- 4) 1000 Gal Septic tank (code minimum) 1000 Gal Septic tank (design size / LUG req'd)
Tank options: none
- 5) 1.2 GPD/ft² mound sand loading rate contour loading rate of 12 req's a min 25 ft. long rockbed
- 6) 10.0 ft rockbed width 25.0 ft rockbed length
- 7) 3.0 ft lateral spacing 3.0 ft perforation spacing (maximum of 3 for both)
end feed manifold connection
- 8) 3 laterals 23.0 feet long 8.0 perfs / lateral 24 perfs total
(1/2 a perf means the first perf starts at the middle feed manifold)
- 9) 1/4" inch perfs at 1 feet residual head gives 0.74 gpm flow rate per perforation
for this perf size & spacing, & pipe size on line 12, max perfs/lateral = 16, line #8 must be less --> OK
- 10) 7.0 doses per day (4 minimum)
- 11) 43 gallons per dose (treatment volume) 1.50 5x
- 12) 1.50 inch diameter laterals must be used to meet "4x pipe volume" requirement 2.00 3x
- 13) 110 feet of 2.0 inch supply line leads to 19 gallons of drainback volume
(Tip: "top feed" manifold to control the drainback)
- 14) 62 gallons TOTAL pump out volume (treatment + drainback)
- 15) 18 feet vertical lift from pump to mound laterals, leads to a:
- 16) 18 GPM @ 25 feet of head, Pump requirement (note: >50gpm may require an extra 3-6' of head)
- 17) 500 gal Dose tank (code minimum) 533 gal Dose tank (design size / LUG req'd) at 12.69 gpi
leads to a
- 18) 4.9 inch swing on Demand float, or timed dosing of 3.4 min ON (confirm pump rate with drawdown
(this delivers Average flow, =70% of Peak design flow) 5.1 hrs OFF test and adjust as necessary)
- 19) 12 inches from bottom of tank to "Pump OFF" float
- 20) 17 inches from bottom of tank to "Pump ON" float, or 12 inches to "Timer ON" float if time dosed
- 21) 20 inches from bottom of tank to "Hi Level" float, or 30 inches to "Hi Level" float if time dosed
- 22) 279 gallons reserve capacity (after High Level Alarm is activated)

23) 0.50 gpd/ft² Absorption area Soil Loading Rate, which gives a mound ratio of 2.4 (minimum)
 (this must match the soil boring log) desired mound ratio 2.4

24) 6 percent site slope (0-20% range) 6 (% downslope site slope, if different than upslope)

25) 12 inches, or 1.0 ft. to Redox or other limiting condition (need at least 12" to be a Type I)

26) Treatment zone contains 0 inches of 0% soil credit, and 0 inches of 50% soil credit. Giving a:
 24 inch, or 2.0 ft. Sand Lift Mound **CRITICAL FOR FUTURE CERTIFICATIONS!!!**

27) 24.0 ft. base absorption width (with sand beyond rockbed as follows):
 38.6 greater of: absorption width OR sand slope

28) 0.0 ft. upslope and sideslope sand upslope 9.7
 14.0 ft. Downslope sand down slope 18.9

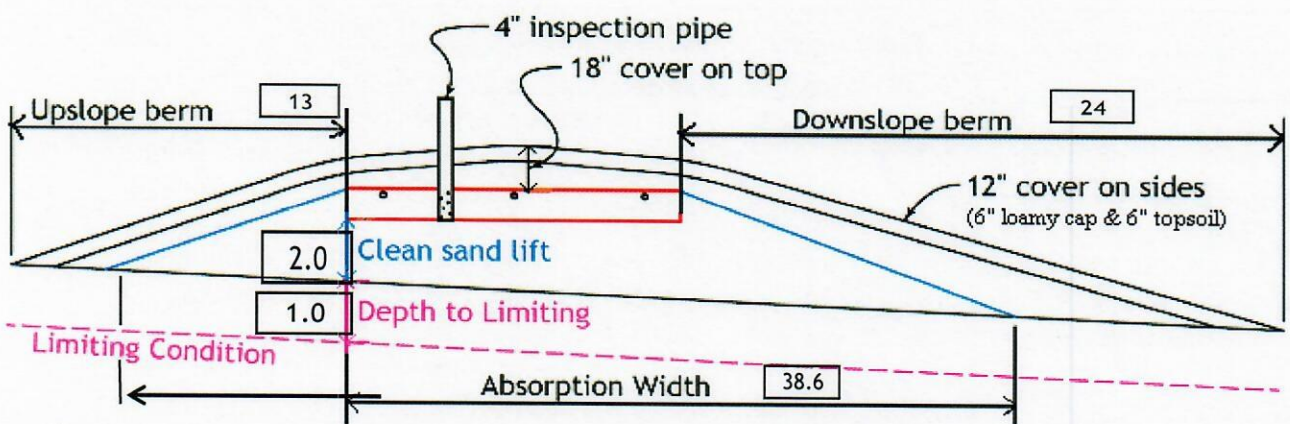
Individual slope ratios give BERM widths (topsoil beyond rockbed) of:

29) 4:1 upslope ratio 13 ft. upslope berm

30) 4:1 sideslope 18 ft. sideslope berms

31) 4:1 downslope 24 ft. downslope berm

32) Overall Dimensions: 10.0 ft. wide by 25.0 ft. long Rock bed
 47 ft. wide by 61 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: 10.0 ft. by 25.0 ft. by 9 inches under pipe, plus 20% gives 12 yd³ or *1.4= 17 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)
 28.5 up + 66.9 downslope + 19.2 ends + 21.3 under rock = 163 yd³ or *1.4= 228 ton
 plus 20%

35) Loamy Cap: 43 ft. by 57 ft. 6" deep, plus 20% gives 55 yd³ or *1.4= 77 ton

36) Topsoil: 47 ft. by 61 ft. 6" deep, plus 20% gives 64 yd³ or *1.4= 90 ton

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

Designer Signature: *[Signature]* Company: Brummer Septic LLC. License#: L-1347 Date: 4/10/2024

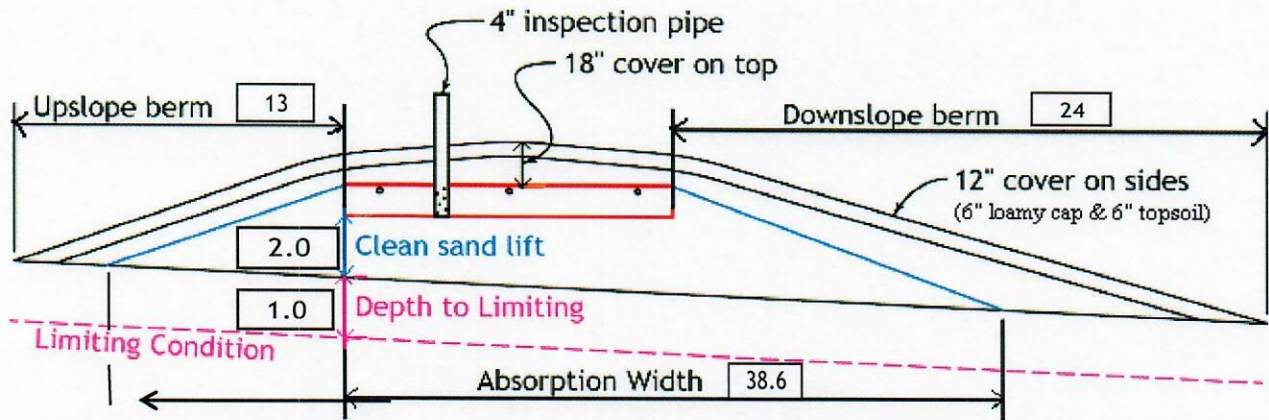
Installer Summary

- 1000 gallon Septic tank (minimum) Tank options: none
- 533 gallon Dose tank (minimum) Install 1650 Jacobson 2/Compartment Septic/ pump tank at 12.69 gpi
- 18 GPM @ 25 ft. of head, Pump required
- 4.9 inch swing on Demand float which translates to roughly 3.5 inches of float tether length if time dosing is required --> 3.4 minutes ON time & 5.1 hours OFF time
- 17 inches from bottom of tank to "pump ON" float, or 12 inches to "timer ON" float
- 20 inches from bottom of tank to "Hi Level Alarm" or 30 inches to "Hi level alarm" if time dosed
- 110 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 25.0 ft. long Rock bed
- 3 laterals 1.50 inch diameter 23.0 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

- 38.6 ft. Total sand ABSORPTION width (minimum)
- 9.7 ft. upslope and sideslope (sand beyond rockbed, minimum)
- 18.9 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 24 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:	12.0 yd ³ or *1.4=	17 ton	9 inches under pipe
Mound Sand:	163 yd ³ or *1.4=	228 ton	
Loamy Cap:	55 yd ³ or *1.4=	77 ton	6" deep
Topsoil:	64 yd ³ or *1.4=	90 ton	6" deep

INSPECTOR CHECKLIST - mound

2/8/1 438th Ln. Palisade Mn 56469

- 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 _____ 18 gpm 25 head VERIFY PUMP CURVE 3.4 min ON 5.1 hr OFF

- float setting drop 4.9 inches at 12.7 gpi "DESIGNED" 3.5 inches approx float tether length
62.0 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 25.0
Sand lift depth 24 inches. (Jar test : 2" sand leaves < 1/8" silt after 30 min)

- Absorption Sand beyond rock 9.7 upslope 18.9 downslope

- Bermed topsoil beyond rockbed 13 upslope 18 sideslope 24 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

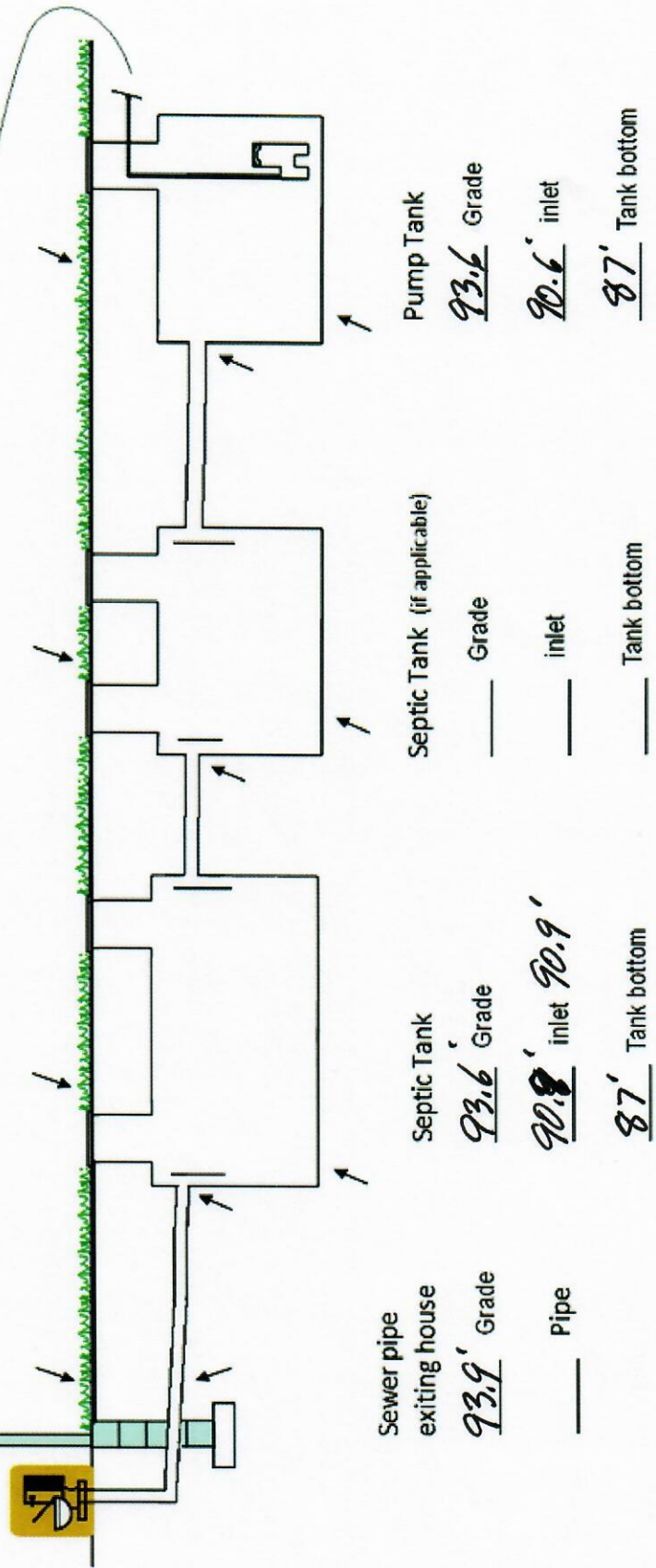
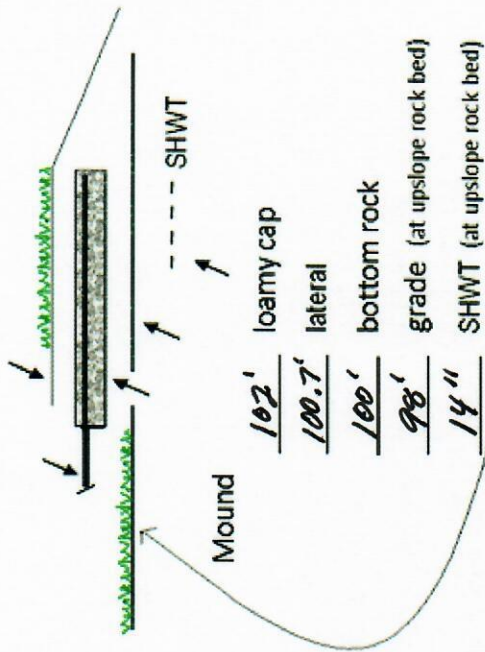
- Air inlet at end of laterals, and at top feed manifold if necessary. VERIFY
- clean outs (no hard 90's)
- 4" inspection pipe to bottom of rock, anchored VERIFY

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

System Elevations

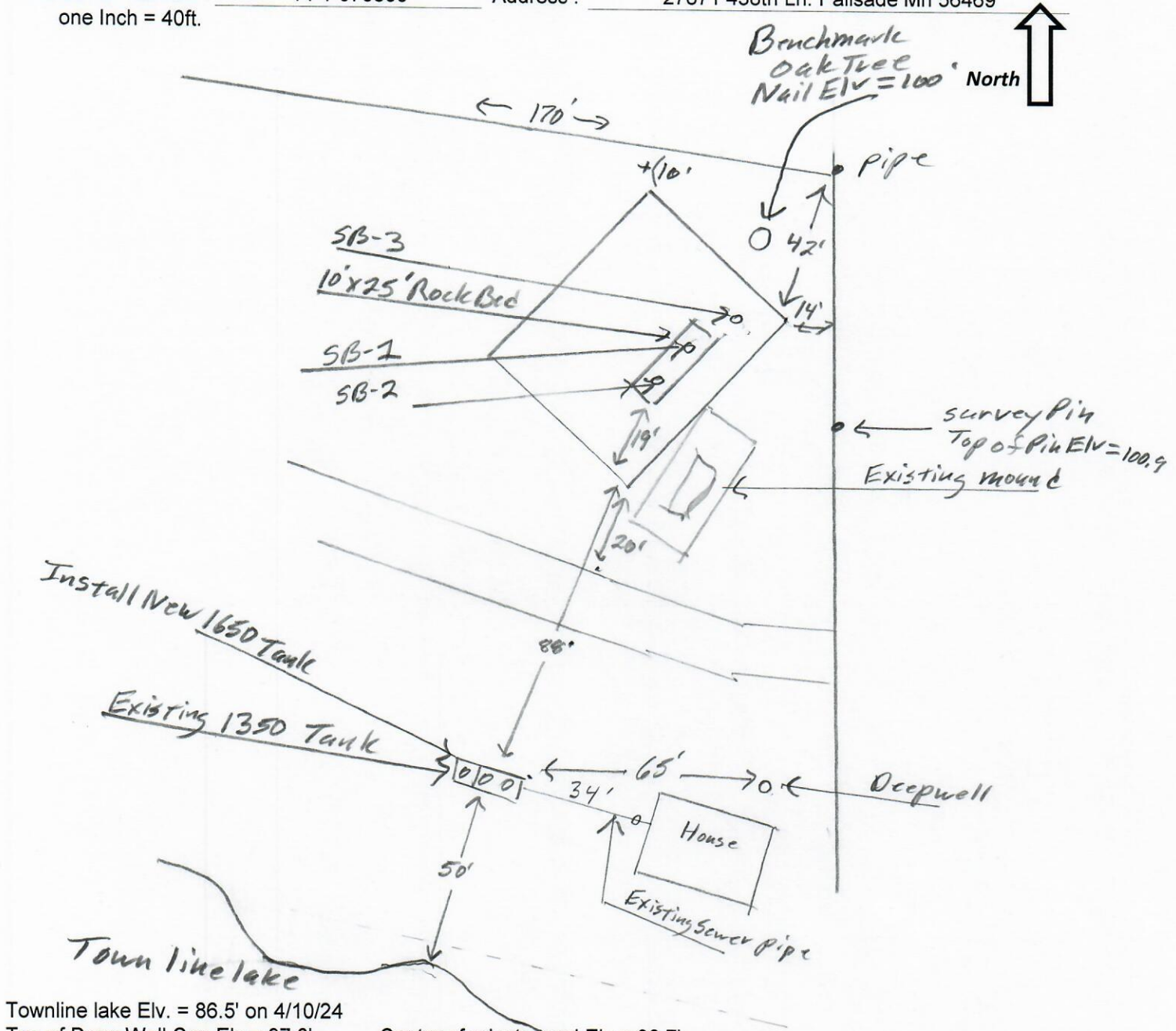
ELV = 100' benchmark Nail on Oak Tree
 ELV = 100.9' top of Deep well cap.

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



{ Design Drawing }

Property Owner: Townline DMP LLC. (Micheal Larson) Date: 4/10/24 Designer's Initials : JB
 Parcel ID. Number : 14-1-070800 Address : 27871 438th Ln. Palisade Mn 56469
 one Inch = 40ft.



Townline lake Elv. = 86.5' on 4/10/24
 Top of Deep Well Cap Elv. = 97.8' Center of private road Elv. = 98.7'

	Surface/ SHWT	Nail on Oak Tree = Bench Mark 100'		Existing Grade
Soil Bore 1	97.2' / 20"	Bench Mark	100'	Upslope Edge of Rockbed Elv. = 98'
Soil Bore 2	97.5' / 16"	Ground Elv. BM	98.5'	Bottom of Rockbed Elv. = 100'
Soil Bore 3	97.6' / 14"	Ground Elv. Tank	93.6'	Top of Washed Sand Elv. = 100'
	Ground at	Nw house	93.9' corner	Existing septic tank inlet pipe Elv. = 90.9'

Please show all that apply (Existing)

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

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

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

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

Mound Design Notes - Aitkin county

Property Owner: Townline DMP LLC. (Micheal Larson)

Date: 4/10/24

Site Address: 27871 438th Ln. Palisade Mn 56469

PID: 14-1-070800

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

- 1 This is a type I mound for a 2 bedroom House. Existing deep well location is on North side of house.
- 2 The septic system will need a variance for tank at 50 ft from lake. It will be in same location as existing tank. Because of the hill to the north of tank location it can not be moved up slope , (Bury depth will be to deep). Because of the existing sewer pipe location, elevation tank location can not be moved up-slope. Rockbed and absorption area makes the lake setback. End berm does not, (setback is to the rockbed, or absorption area.)
- 3 North property line has pipes on corners, Survey pin East of Mound Elv.= 100.9'
- 4 Bench Mark Elevation= 100', is a nail on a Oak tree near NE corner of mound area.
- 5 Install Jacobson 1650 Compartment tank for gravity flow from house in same location as existing tank. Installer should insulate 2" supply pipe under road and driveway. Recommend burying a tracer wire with pipe. Installer will mark where supply pipe crosses under road, to warn utilities of location.
- 6 Elevation contour of rock bed upslope edge is 98'.
The area size of the rock bed is 10' x 25' . Absorption area is 25' x 38.6'.
Sand absorption area is 9.7 ft. up slope + 10 ft. rockbed + 18.9 downslope = approx. 38.6 ft. wide sand base.
Berms are 13ft. Upslope, 24ft. Down slope, 10ft. Rock bed = approx. 47ft. Wide.
Overall mound size is approx. 47' wide x 61' long and approx. 4' high. End berms are 18 ft wide.
- 7 The bench mark is the nail on the Oak 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. 62 gallons per dose, 4.9 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 manhole 6" above grade).
- 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.
MPCA Recommend Installing an Effluent filter and Alarm on septic tank outlet.
MPCA Recommend installing an event counter on all systems with a pump.

Designed to Aitkin Co. and MPCA recommendations and requirements.



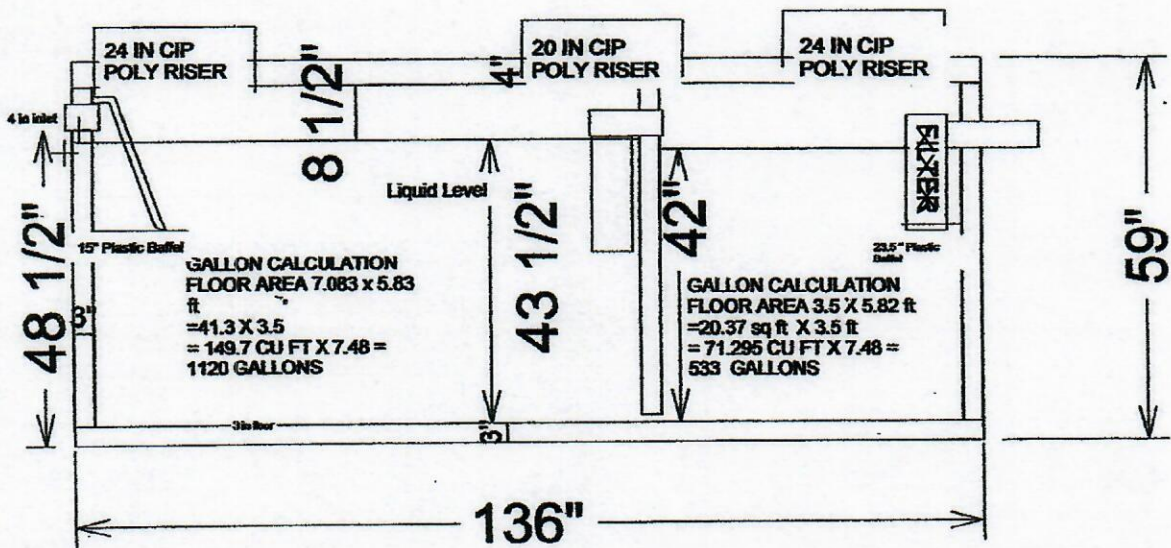
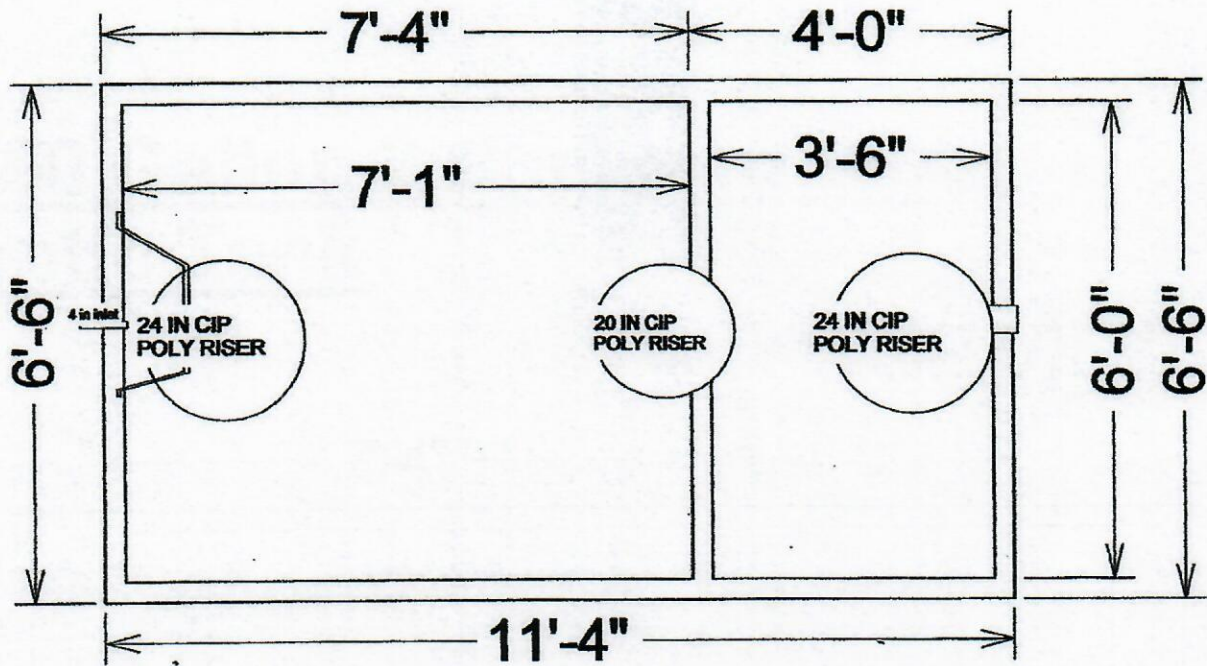
Designer Signature

Brummer Septic LLC.
Design Company

L-1347
License#

1650 Gallon 2 Compartment Septic Tank

TOP VIEW



SIDE VIEW

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

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



Fiberglass Survey, Field & Utility Markers

Identify boundaries, pipelines, cables, valve boxes, manholes, right of way easements, meter locations, etc., with these professional

fiberglass markers. Weather-resistant fiber reinforced composite is temperature stable and UV resistant. Use the optional marker

driver (SN 39222, sold separately) for easy installation. *Note: Custom labels and colors are available by special order. Call 800-647-5368 for details.*

5784



Utility Marker Driver

5785

For installing fiberglass boundary and utility markers (sold separately). Insert the marker into the driver with the pointed end exposed. Rotate the driver into installation position and drive the marker into the soil with a series of light taps until the desired depth is reached.

Utility Marker 39222 \$175.95 Driver

Fiberglass Markers

	Survey	Wetland	Sewer Line	Water Line	Gas Line	Utility	Utility	Utility	Utility
Color	Orange	Brown	Green	Blue	Yellow	Orange	Green	Blue	Red
W	2-5/8	3-3/4	3-3/4	3-3/4	3-15/16	3-3/4	3-3/4	3-3/4	3-3/4
L	66	66	66	66	66	66	66	66	66
SN	39220	38852	38851	38850	38853	39221	38847	38848	38849
Each	\$19.95	\$23.50	\$23.50	\$23.50	\$23.50	\$19.95	\$19.95	\$19.95	\$19.95
20+	\$16.95	\$20.25	\$20.25	\$20.25	\$20.25	\$16.85	\$16.85	\$16.85	\$16.85
50+	\$15.75	\$18.75	\$18.75	\$18.75	\$18.75	\$15.60	\$15.60	\$15.60	\$15.60

WARNING: Cancer - www.P65Warnings.ca.gov.

Wood Survey Stakes

Durable, long-lasting stakes are cut from Southern yellow pine. Points are saw-formed

to ensure all sides are equal so stakes drive straight. *Note: Due to manufacturing tolerances,*

product dimensions may differ slightly.

1129

Wood Survey Stakes

	1 x 2 Flats				2 x 2 Hubs				2 x 4 Corner				1 x 1 Guard Stakes				3/8 x 2 Lathes			
	SN	Bundle	Each	5+	SN	Bundle	Each	5+	SN	Bundle	Each	5+	SN	Bundle	Each	5+	SN	Bundle	Each	5+
6"	39515	50	\$12.50	\$10.95	39511	25	\$12.25	\$10.95												
8"					39545	25	\$12.75	\$11.75												
12"	39514	50	\$13.50	\$11.95	39512	25	\$14.75	\$13.25												
18"	39516	50	\$18.25	\$15.75	39513	25	\$19.50	\$17.95												
36"	39520	50	\$32.75	\$29.75									39517	50	\$27.25	\$26.50	39546	50	\$23.95	\$22.25
48"	39523	25	\$23.25	\$21.50					39537	10	\$27.25		39519	50	\$38.75	\$36.75	39535	50	\$33.25	\$31.25
58"													39518	50	\$47.50	\$45.25				

Stake Whiskers

1128

The 5-1/2" flexible plastic tops spring back if run over. Fit all wood stakes. Bundle of 25.

Stake Whiskers

	Blue	Red	Yellow	Orange	Green	Pink
Each	33775	33776	33777	33778	33779	33780
20+	\$3.45	\$3.45	\$3.45	\$3.45	\$3.45	\$3.45
50+	\$2.95	\$2.95	\$2.95	\$2.95	\$2.95	\$2.95
50+	\$2.85	\$2.85	\$2.85	\$2.85	\$2.85	\$2.85

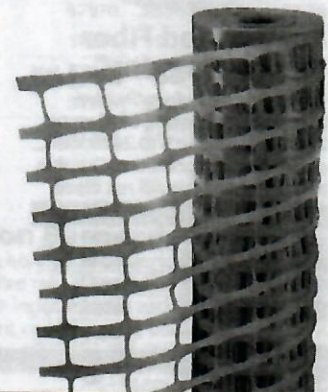
Hi-Vis Barrier Fencing

1627

High visibility temporary barrier fencing is UV stabilized to prevent fading. Resists corrosion and rot. Reusable. Hi-Vis Orange.

Barrier Fencing
4' x 100' 12 lb. Non-Stretched Fence, 1.75" x 1.75" Holes

24919	Each	\$31.95
17032	Each	\$34.95
	3+	\$32.25



Carrier may require an additional handling charge.



Detailed Parcel Report

Parcel Number: 14-1-070800

General Information

Township/City:	JEVNE TWP		
Taxpayer Name:	TOWNLIN DMP LLC		
Taxpayer Address:	5600 54TH AVE N CRYSTAL MN 55429		
Property Address:	27871 438th Ln		
Township:	48	Lake Number:	1008300
Range:	24	Lake Name:	TOWNLIN LAKE (JEVNE TWP) <i>NE</i>
Section:	18	Acres:	0.00
Green Acres:	No	School District:	4.00
Plat:	FELKNORS TOWNLIN SHORES		
Brief Legal Description:	LOT 6	<i>DHW - NA?</i>	

Tax Information

Class Code 1:	Non-Comm Seasonal Residential Recreational
Class Code 2:	Unclassified
Class Code 3:	Unclassified
Homestead:	Non Homestead
Assessment Year:	2023

Estimated Land Value:	\$146,800.00
Estimated Building Value:	\$103,100.00
Estimated Total Value:	<u>\$249,900.00</u>
Prior Year Total Taxable Value:	\$231,200.00
Current Year Net Tax (Specials Not Included):	\$1,544.00
Total Special Assessments:	\$0.00
**Current Year Balance Not Including Penalty:	\$0.00
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.

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.

Townline DMP



Date: 1/4/2024

Web App Builder for ArcGIS

1 inch = 94 feet

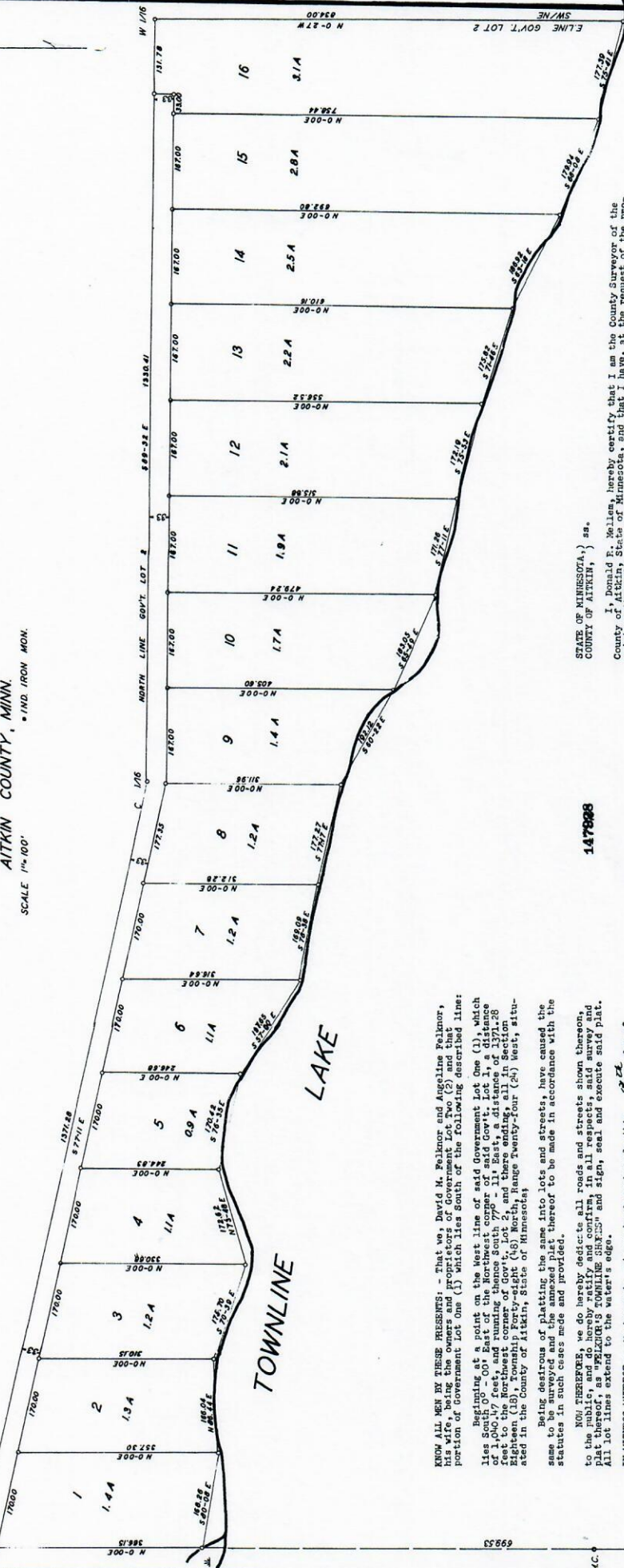
0 0.005 0.01 m

1:1,128

FELKNOR'S TOWNLINE SHORES

PLAT OF
 GOV'T LOTS 1&2
 SEC. 18 T48N - R24W
 AITKIN COUNTY, MINN.

SCALE 1"=100'



STATE OF MINNESOTA, } ss.
 COUNTY OF AITKIN, }

I, Donald F. Williams, hereby certify that I am the County Surveyor of the County of Aitkin, State of Minnesota, and that I have, at the request of the proprietors thereof, made a careful survey of the property described in the foregoing plat, and that the same is in accordance with the laws of the State. I further certify that the annexed plat is a true and correct representation of the field survey, and that all distances are correctly shown on the plat to the best of my knowledge, and that the same are in accordance with the records of the County Surveyor's Office. I also certify that the boundary lines are correctly designated, that there are no wet lands, rivers, streams, creeks, lakes, public highways or thoroughfares laid out, opened or traveled, existing before the platting, other than shown on the annexed plat.

Subscribed and sworn to before me this 14 day of June, A. D., 1964.
 County Surveyor, Aitkin County, Minn.
 Registered Engineer No. 3612

Notary Public, Aitkin County, Minn.
 My Commission Expires August 15, 1968.

I hereby certify that the annexed plat was approved this 14 day of June, A. D., 1964.
 Notary Public, Aitkin County, Minn.
 My Commission Expires August 15, 1968.

147898

STATE OF MINNESOTA } ss.
 COUNTY OF AITKIN, }

I, Donald F. Williams, hereby certify that I am the County Surveyor of the County of Aitkin, State of Minnesota, and that I have, at the request of the proprietors thereof, made a careful survey of the property described in the foregoing plat, and that the same is in accordance with the laws of the State. I further certify that the annexed plat is a true and correct representation of the field survey, and that all distances are correctly shown on the plat to the best of my knowledge, and that the same are in accordance with the records of the County Surveyor's Office. I also certify that the boundary lines are correctly designated, that there are no wet lands, rivers, streams, creeks, lakes, public highways or thoroughfares laid out, opened or traveled, existing before the platting, other than shown on the annexed plat.

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I hereby certify that the annexed plat was approved this 14 day of June, A. D., 1964.
 Notary Public, Aitkin County, Minn.
 My Commission Expires August 15, 1968.

KNOW ALL MEN BY THESE PRESENTS: - That we, David H. Felkner and Angeline Felkner, his wife being the owners and Proprietors of Government Lot Two (2) and that portion of Government Lot One (1) which lies south of the following described line:

Beginning at a point on the West line of said Government Lot One (1), which line is the North line of the North line of the North line of the North line of 200.47 feet; and extending South 11.8 degrees East 11.8 feet to the Northwest corner of Gov't Lot 2, and there ending, all in Section Eighteen (18), Township Forty-eight (48) North, Range Twenty-four (24) West, situated in the County of Aitkin, State of Minnesota.

Being desirous of platting the same into lots and streets, have caused the same to be surveyed and the annexed plat thereof to be made in accordance with the statutes in such cases made and provided.

NOW THEREFORE, we do hereby dedicate to all roads and streets shown thereon, to the public, and we hereby certify and confirm, in all respects, said survey and plat, and we do hereby agree to pay the cost of the same, and execute said plat. All lot lines extend to the water's edge.

IN WITNESS WHEREOF, - We hereunto set our hands and seals this 14 day of June, A. D., 1964.

Signed in Presence of:
 David H. Felkner
 Angeline Felkner

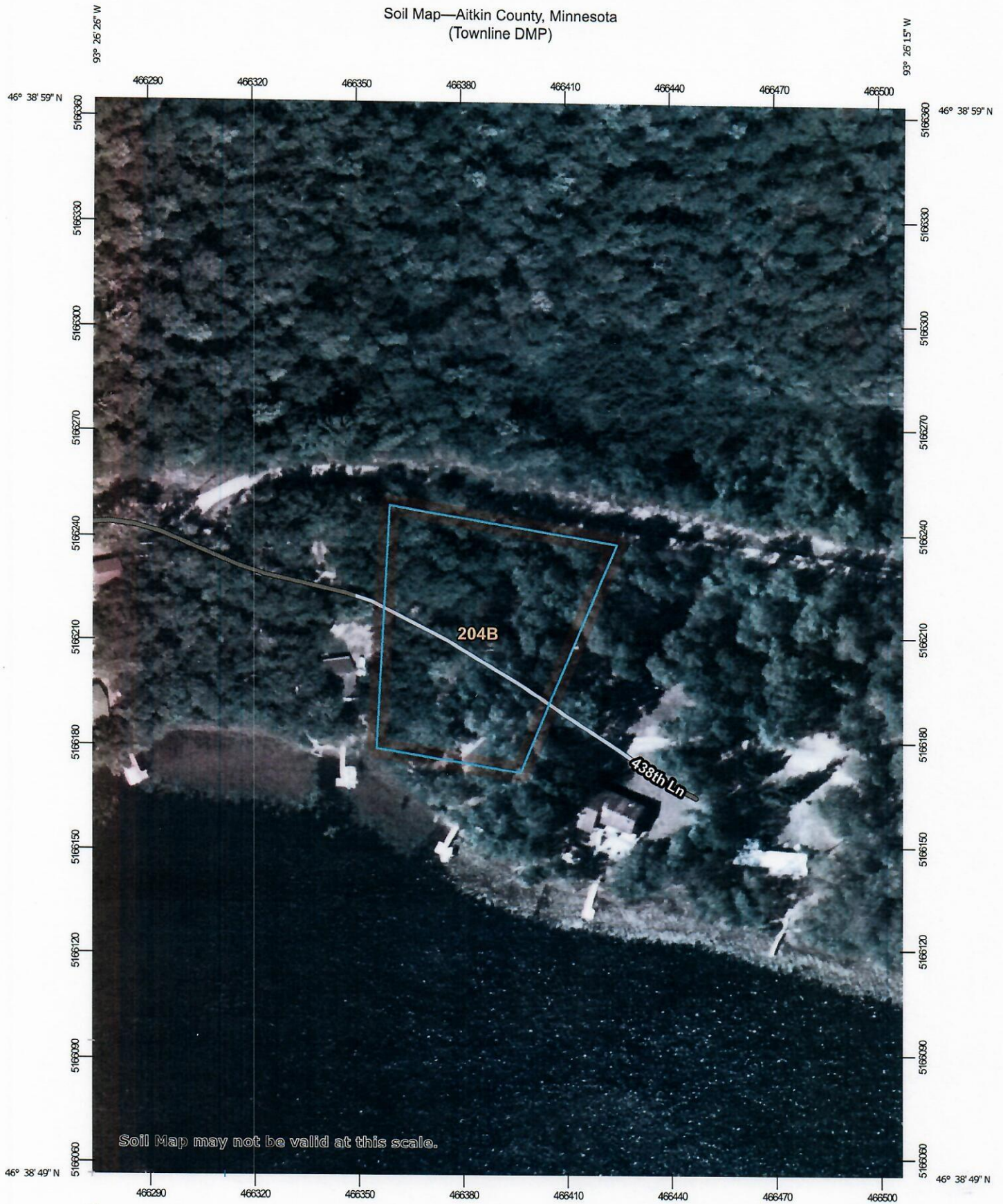
STATE OF MINNESOTA, } ss.
 COUNTY OF AITKIN, }

On this 14 day of June, A. D., 1964, personally appeared David H. Felkner and Angeline Felkner, his wife, to me well known to be the persons described in and who executed the foregoing owner's certificate and acknowledged the same as their free act and deed.

Notary Public, Aitkin County, Minn.
 My Commission Expires August 15, 1968.

TAXES PAID AND
 TRANSFER ENLARGED
 This is a day of June, 1964
 Notary Public, Aitkin County, Minn.

Soil Map—Aitkin County, Minnesota
(Townline DMP)



Soil Map may not be valid at this scale.

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



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



Aitkin County, Minnesota

204B—Branstad loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: gjfx
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

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

Description of Branstad

Setting

Landform: Moraines
Landform position (two-dimensional): Backslope, summit
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Loamy till

Typical profile

A - 0 to 2 inches: loam
E, Bw, E', E/B - 2 to 17 inches: fine sandy loam
Bt1, Bt2 - 17 to 36 inches: loam
Bt3 - 36 to 43 inches: loam
C - 43 to 60 inches: loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
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 30 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F090AY015W1 - Loamy Upland with Carbonates

Forage suitability group: Sloping Upland, Neutral (G090AN002MN)

Other vegetative classification: Sloping Upland, Neutral
(G090AN002MN)

Hydric soil rating: No

Minor Components

Alstad

Percent of map unit: 3 percent

Hydric soil rating: No

Cromwell

Percent of map unit: 3 percent

Hydric soil rating: No

Cutaway

Percent of map unit: 3 percent

Hydric soil rating: No

Hamre

Percent of map unit: 2 percent

Landform: Depressions

Hydric soil rating: Yes

Seelyeville

Percent of map unit: 2 percent

Landform: Bogs

Hydric soil rating: Yes

Talmoon

Percent of map unit: 2 percent

Landform: Swales

Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Aitkin County, Minnesota

Survey Area Data: Version 24, Sep 9, 2023