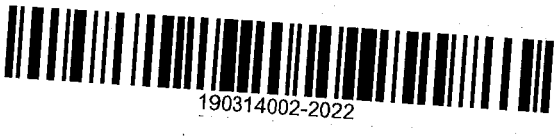


Becker County Planning & Zoning
915 Lake Ave
Detroit Lakes, MN 56501
(218) 846-7314
www.co.becker.mn.us

Certificate of Compliance

Inspection Report - Permit #: SS2022-1341

Owner & Property Information

Owner Name:	HEATHER SCHMIT
Mailing Address:	HEATHER SCHMIT 329 ELIZABETH ST DETROIT LAKES MN 56501
Parcel #:	190314002
Secondary Parcel #:	

Site Address:	13898 260TH AVE
Township - Sec/Twp/Rng:	LAKE VIEW - 16/138/041
Legal Description:	16-138-41 COMM NE COR SEC 16, S 227.87', W 7.43' TO POB; W 652.57', S 211', E 387.36', NLY 96.87', ELY 85.03', NLY 19.78', E 165.58', N 97.24' TO POB. TRACT A.
Designer:	Cubed B LLC, L4142 (Brant Bigger)
Installer:	Stenger Excavating LLC, L553 (Timothy Stenger)

Inspector Verified Specifications

Insp- Effluent Screen Installed:	No
Insp- Alarm Required:	No
Insp- Lift Pump in System:	No
Insp- Number of Bedrooms:	4

Insp- Tank Nbr/Size:	1/1500/2
Insp- Drainfield Type:	Chamber Trench
Insp- Drainfield Size:	64 chambers X 15 square feet each = 960 square feet
Insp- Soil Verification:	#1:attached #2:N/A #3:N/A

Inspector Verified Setbacks

Insp- Tank Dist to Road	100+
Insp- Tank Dist to Nearest Prop Line	5'
Insp- Tank Dist to Nearest Structure	36
Insp- Tank Dist to Well	100+
Insp- Tank Dist to OHW	
Insp- Tank Dist to Pond/Wetland	
Insp- Tank Dist to Pressure Line	

Insp- Drainfield Dist to Road	100+
Insp- Drainfield Dist to Nearest Prop Line	5'
Insp- Drainfield Dist to Nearest Structure	75
Insp- Drainfield Dist to Well	100+
Insp- Drainfield Dist to OHW	
Insp- Drainfield Dist to Pond/Wetland	
Insp- Drainfield Dist to Pressure Line	

Certificate of Compliance

(Yes) Certificate is hereby granted based upon the application, addendum from, plans, specifications and all other supporting data. With proper maintenance, this system can be expected to function satisfactory, however this is not a guarantee.

Certification Date: 6/23/2022

Zoning Office Signature:

Denise Gubrud

Denise Gubrud - ISTS Inspector

*** Certificate of Compliance is not valid unless signed by a Registered Qualified Employee ***

Field Review Form

Permit # SS2022-1341

Property and Owner

Owner: **HEATHER SCHMIT**	Parcel Number: **190314002**
Site Address: **13898 260TH AVE**	Secondary Parcel:

Home Information

Does the structure contain any of the following elements?	Designer submitted	Inspector verified
	Garbage disposal: No Dishwasher: Invalid Field Grinder pump: Invalid Field Lift pump in bsmt: Invalid Field	Garbage disposal? Y (N) Dishwasher? Y (N) Grinder pump? Y (N) Lift pump in basement? Y (N)
Number of bedrooms: **4**	Review - Number of bedrooms: 4	
Effluent screen	Effluent screen installed? Y (N) Mfr:	
Alarm: **No** Type: **n/a**	Review - Alarm? Y (N) Type & Mfr:	
Lift pump in system: **No**	Review - Lift pump in system? Y (N) Mfr:	

Component Information

Tank size: **1500 gallon, 2-compartment**	Review - Tank nbr: 1 size: 1500/2 Mfr: Brown
Drainfield type: **Chamber Trench**	Review - Drainfield type: Chamber Trench
Drainfield size: Full size - **768** Reduced/warr. size -	Review - Drainfield status: none / (installed) / next spring Review - Drainfield size: 15 x 64 = 960
Absorption area size: **n/a**	Review - Absorption area size:
Chamber type/num: **Quick 4 High Capacity (64)** Trench sqft/chamber - **12**	Review - Chamber type: Hi capacity Num: 64 Review - Trench sqft/chamber: 15
Drainfield rock depth: **n/a**	~~Review - Rock depth~~:

Soil Verification

Vertical separation verified	Boring #1: attached Boring #2: Boring #3:

Setback Verification

Distance to...	Designer submitted		Inspector verified	
	Tank	Drainfield	Tank	Drainfield
Road	>100'	>100'	100+	100+
Nearest prop line	8'	8'	5+ letter	5+ letter
Nearest structure	>80'	>80'	36	75
Well	>100'	>100'	100+	100+
OHW				
Pond/Wetland				
Pressure line	>100'	>100'		

Date System Installed 6/23/2022 Installer: Stenger's Tim Inspector: Denise Gutsmer

Cubed B LLC
SEPTIC SYSTEM DESIGN & INSPECTION

BRANT B. BIGGER
Owner

13248 US Hwy 10
Lake Park, MN 56554

218-234-6906

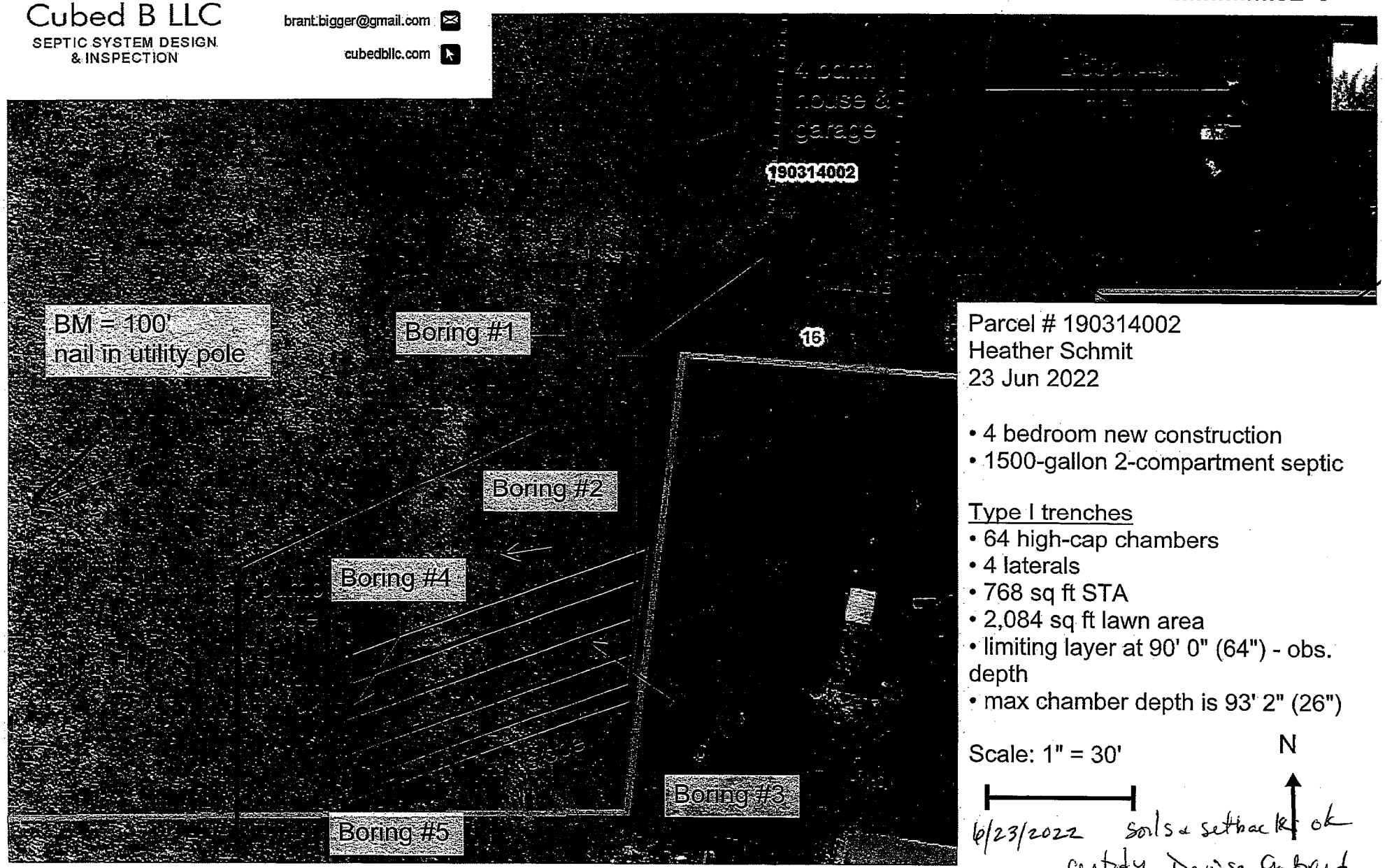
brant.bigger@gmail.com

cubedbllc.com

Benchmark = 100' (nail in utility pole)

Aprox. System Corners
NW = 96' 6" NE = 97'
SW = 95' SE = 95'

Soil Boring #2 96' 8".....Limiting Layer 91' 4"
#3 98'.....92' 8"
#4 98'.....92' 8"
#5 95' 4".....92' 0"



Parcel # 190314002
Heather Schmit
23 Jun 2022

- 4 bedroom new construction
- 1500-gallon 2-compartment septic

Type I trenches
- 64 high-cap chambers
- 4 laterals
- 768 sq ft STA
- 2,084 sq ft lawn area
- limiting layer at 90' 0" (64") - obs. depth
- max chamber depth is 93' 2" (26")

Scale: 1" = 30'

N

6/23/2022 soils & setback ok
certify Denise Gabriel

1341

Site Sketch

Cubed B LLC
SEPTIC SYSTEM DESIGN & INSPECTION

BRANT B. BIGGER
Owner
13248 US Hwy 10
Lake Park, MN 56554
218-234-6906
brant.bigger@gmail.com
cubedbllc.com

Parcel # 19031 4002

Owner Heather Schmit

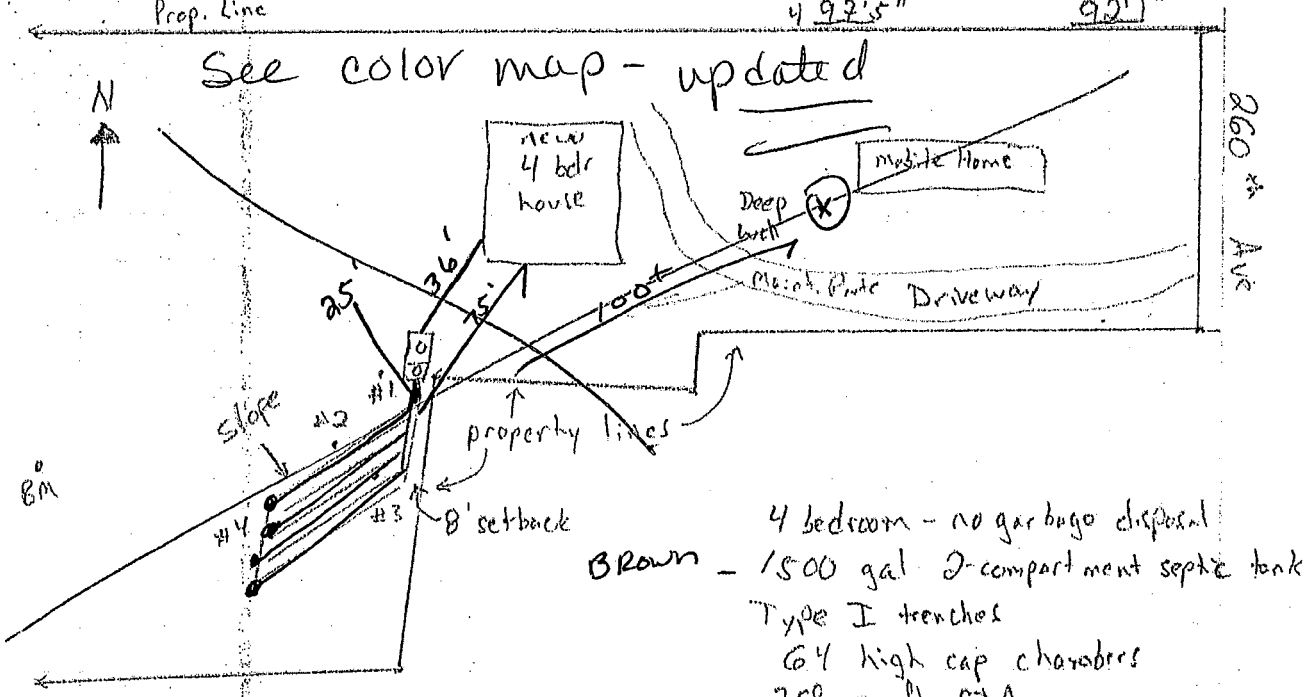
Date 20 May 2022

Scale 1" = 60 Ft (1" / 60')

Benchmark 100' (nail in utility pole)
Tank Outlet ____

System Corner
NW 98'2" NE 98'6"
SW 96'8" SE 96'6"

Soil Borings
#1 98'8" Limiting Layer 93'4"
#2 98'2" 93'10"
#3 96'6" 91'2"
4 92'5" 92'1"



4 bedroom - no garbage disposal
Brown - 1500 gal 2-compartment septic tank
Type I trenches
64 high cap chambers
768 sq ft SWA
2,084 sq ft lawn area
max chamber depth is 97'5"
limiting condition is 91'2"
(obs depth)

6/23/2022
1 - 1500/2 Brown tank
4 runs - 16 Hi cap chambers each
Reduced Lot line set back - letter ~~of~~ anticipated outlet from house is 97'8" Attached
Set backs & soils ok
Certify Denise Gabbard

Becker County Restrictive Layer Verification

Client: Heather Schmit	Parcel: 19031400 2	Date: 5/20/2022
Address: 13898 260th Ave		
Vegetation:		
Weather Conditions/Time of Day: 10:30 PT Cldy	Observation#/Location/Method: auger	

Depth (in)	Texture	Matrix Color(s)	Mottle Color(s)
64"	SL	10yr 4/3	none

Comments/Notes:

64" - depth of excavation - no restrictive layer

Certified Statement: I hereby certify that I have completed this work in accordance with all applicable ordinace, rules and laws.			
(Designer) Brandt Bloom	(Inspector) Denise Gabrud	(License #) C8952	(Date) 5/20/2022

University of Minnesota
ONSITE SEWAGE TREATMENT PROGRAM

Soil Observation Log

Project ID:

v 04.01.2021

Client:	Heather Schmit	Location / Address:	13898 260TH AVE, DETROIT LAKES MN 56501

Soil parent material(s): (Check all that apply) ☑ Outwash ☐ Lacustrine ☐ Loess ☐ Till ☐ Alluvium ☐ Bedrock ☐ Organic Matter

Landscape Position: (select one)	Back/Side Slope	Slope %:	6.0	Slope shape	Linear, Linear
Elevation-relative to benchmark:	98' 2"				
Vegetation:	Ag. Land	Soil survey map units:	778C—Dorset-Corliss complex	Limiting Layer Elevation:	92' 10"
Weather Conditions/Time of Day:	sunny	13:00		Date	05/07/22
Observation #/Location:	#2	Upper central part of STA		Observation Type:	Auger

Depth (in)	Texture	Rock Frag. %	Matrix Color(s)	Mottle Color(s)	Redox Kind(s)	Indicator(s)	Structure: Shape	Structure: Grade	Structure: Consistence
0-12	Medium Sandy Loam	<10	10YR 2/2		None		Granular	Structureless	Loose
12-30	Medium Loamy Sand	<10	10YR 3/6		None		Granular	Structureless	Loose
30-60	Medium Loamy Sand	<10	10YR 3/2		None		Granular	Structureless	Loose
60-64	Medium Sandy Loam	<10	10YR 4/3		None		Blocky	Moderate	Friable

Comments

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

Brant B Bigger		L4142	20-May
(Designer/Inspector)	(Signature)	(License #)	(Date)

University of Minnesota Onsite Sewage Treatment Program

Soil Observation Log

Project ID:

v 04.01.2021

Client:	Heather Schmit	Location / Address:	13898 260TH AVE, DETROIT LAKES MN 56501

Soil parent material(s): (Check all that apply) ☑ Outwash ☐ Lacustrine ☐ Loess ☐ Till ☐ Alluvium ☐ Bedrock ☐ Organic Matter

Landscape Position: (select one)	Back/Side Slope	Slope %:	6.0	Slope shape	Linear, Linear	Elevation-relative to benchmark:	96' 6"
Vegetation:	Ag. Land	Soil survey map units:	778C—Dorset-Corliss complex			Limiting Layer Elevation:	91' 2"
Weather Conditions/Time of Day:	sunny		14:15	Date	05/07/22		
Observation #/Location:	#3	SE corner of STA		Observation Type:	Auger		

Depth (in)	Texture	Rock Frag. %	Matrix Color(s)	Mottle Color(s)	Redox Kind(s)	Indicator(s)	Structure: Shape	Structure: Grade	Structure: Consistence
0-12	Medium Sandy Loam	<10	10YR 2/2		None		Granular	Structureless	Loose
12-30	Medium Loamy Sand	<10	10YR 3/6		None		Granular	Structureless	Loose
30-54	Medium Loamy Sand	<10	10YR 3/2		None		Granular	Structureless	Loose
54-64	Medium Sandy Loam	<10	10YR 4/3		None		Blocky	Moderate	Friable

Comments

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

Brant B Bigger		L4142	20-May
(Designer/Inspector)	(Signature)	(License #)	(Date)

University of Minnesota Onsite Sewage Treatment Program

Soil Observation Log

Project ID:

v 04.01.2021

Client:	Heather Schmit	Location / Address:	13898 260TH AVE, DETROIT LAKES MN 56501

Soil parent material(s): (Check all that apply) ☑ Outwash ☐ Lacustrine ☐ Loess ☐ Till ☐ Alluvium ☐ Bedrock ☐ Organic Matter

Landscape Position: (select one)	Back/Side Slope	Slope %: 6.0	Slope shape	Linear, Linear	Elevation-relative to benchmark: 97' 5"
Vegetation:	Ag. Land	Soil survey map units:	778C—Dorset-Corliss complex		Limiting Layer Elevation:
Weather Conditions/Time of Day:	Sunny	14:30	Date	05/07/22	
Observation #/Location:	#4	west side of STA	Observation Type:	Auger	

Depth (in)	Texture	Rock Frag. %	Matrix Color(s)	Mottle Color(s)	Redox Kind(s)	Indicator(s)	Structure: Shape	Structure: Grade	Structure: Consistence
0-8	Medium Sandy Loam	<10	10YR 2/2		None		Granular	Structureless	Loose
8-30	Medium Loamy Sand	<10	10YR 3/6		None		Granular	Structureless	Loose
30-54	Medium Loamy Sand	<10	10YR 3/2		None		Granular	Structureless	Loose
54-64	Medium Sandy Loam	<10	10YR 4/3		None		Blocky	Moderate	Friable

Comments

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

Brant B Bigger	Brant B Bigger	L4142	20-May
(Designer/Inspector)	(Signature)	(License #)	(Date)

6-23-2022

Tim 3:00

Becker County Planning & Zoning
915 Lake Ave
Detroit Lakes, MN 56501
(218) 846-7314
www.co.becker.mn.us

Septic Permit

Permit #: SS2022-1341

Owner & Property Information

Owner Name:	HEATHER SCHMIT	**Parcel #:**	190314002
Mailing Address:	HEATHER SCHMIT 329 ELIZABETH ST DETROIT LAKES MN 56501	**Secondary Parcel #:**	
		Site Address:	13898 260TH AVE
Phone #:	218-850-7921	**Township - Sec/Twp/Rng:**	LAKE VIEW - 16/138/041
Lake/River(1000/300):	No	**Designer:**	Cubed B LLC, L4142 (Brant Bigger)
Lake/River Name:		**Installer:**	Stenger Excavating LLC, L553 (Timothy Stenger)
Pond/Wetland(50):	No		

Specifications

Tank to be Installed:	Compartmented Tank	**Type of Drainfield:**	Chamber Trench
Total # Tanks Installed:	1	**Full Size of Drainfield:**	768
System Status:	No Existing System	**Reduced/Warrantied Size:**	
System Serves:	Full-Time Dwelling	**Absorbtion Area Size:**	64' x 27'
Number of Bedrooms:	4	**Rock Depth:**	n/a
Design Flow/GPD:	600	**Chamber Type and Number:**	Quick 4 High Capacity (64)
Garbage Disposal?	No	**Chamber Trench SqFt/Chamber:**	12
Size of Lift Pump:	n/a	**Is System Pressurized?**	No
Size of Lift Line:	n/a	**Alarm?**	No
Soil Sizing Factor:	0.78	**Type of Alarm:**	n/a

Setbacks

Road Type:	Public / Township	**Right of Way Marked:**	Yes
Tank Dist to Road:	>100'	**Drainfied Dist to Road:**	>100'
Tank Dist to Closest Prop Line:	8'	**Drainfied Dist to Closest Prop Line:**	8'
Tank Dist to Nearest Structure:	>80'	**Drainfield Dist to Nearest Structure:**	>80'
Tank Dist to Well:	>100'	**Drainfield Dist to Well:**	>100'
Tank Dist to OHW:		**Drainfield Dist to OHW:**	
Tank Dist to Pond/Wetland:		**Drainfield Dist to Pond/Wetland:**	
Tank Dist to Pressure Line:	>100'	**Drainfield Dist to Pressure Line:**	>100'

Other Information

Date Approved:	5/20/2022
Permit Fee:	225.00
Receipt Number:	251554706
Date Paid:	5/20/2022

Notes: Install a 1500/2 septic tank and 65 hi-capacity chambers (960 square feet)

Zoning Office Signature:

Denise Gubrud

PERMIT MUST BE POSTED AT JOB SITE. PERMIT EXPIRES ONE YEAR FROM DATE PAID.

**** Please schedule for inspection prior to installation! ****

University of Minnesota Onsite Sewage Treatment Program

Design Summary Page

MINNESOTA POLLUTION CONTROL AGENCY

1. PROJECT INFORMATION

v 04.01.2021

Property Owner/Client:	Heather Schmit	Project ID:	
Site Address:	13898 260TH AVE, DETROIT LAKES MN 56501	Date:	05/19/22
Email Address:	schmit.home@yahoo.com	Phone:	218-850-7921

2. DESIGN FLOW & WASTE STRENGTH

Attach data / estimate basis for Other Establishments

Design Flow: 600 GPD — Anticipated Waste Type: Residential

BOD: <170 mg/L TSS: <60 mg/L Oil & Grease: <25 mg/L

Treatment Level: C *Select Treatment Level C for residential septic tank effluent*

3. HOLDING TANK SIZING

Minimum Capacity: Residential =400 gal/bedroom, Other Establishment = Design Flow x 5.0, Minimum size 1000 gallons

Code Minimum **Holding Tank** Capacity: ____ Gallons in ____ Tanks or Compartments

Recommended **Holding Tank** Capacity: ____ Gallons in ____ Tanks or Compartments

Type of High Level Alarm: ____ (Set @ 75% tank capacity)

Comments: ____

4. SEPTIC TANK SIZING

A. Residential dwellings:

Number of Bedrooms (Residential): 4

Code Minimum **Septic Tank** Capacity: 1500 Gallons in 1 Tanks or Compartments

Recommended **Septic Tank** Capacity: 1500 Gallons in 2 Tanks or Compartments

Effluent Screen & Alarm (Y/N): Optional Model/Type: ____

B. Other Establishments:

Waste received by: ____ ____ GPD x ____ Days Hyd. Retention Time

Code Minimum **Septic Tank** Capacity: ____ Gallons In ____ Tanks or Compartments

Recommended **Septic Tank** Capacity: ____ Gallons In ____ Tanks or Compartments

Effluent Screen & Alarm (Y/N): ____ Model/Type: ____

5. PUMP TANK SIZING

Pump Tank 1 Capacity (Minimum):	Gal	Pump Tank 2 Capacity (Minimum):	Gal
Pump Tank 1 Capacity (Recommended):	Gal	Pump Tank 2 Capacity (Recommended):	Gal
Pump 1 ____ GPM Total Head	ft	Pump 2 ____ GPM Total Head	ft
Supply Pipe Dia. ____ in Dose Vol:	gal	Supply Pipe Dia. ____ Dose Vol:	Gal

University of Minnesota Onsite Sewage Treatment Program

Soil Observation Log

Project ID:

v 04.01.2021

Client:	Heather Schmit	Location / Address:	13898 260TH AVE, DETROIT LAKES MN 56501

Soil parent material(s): (Check all that apply) ☑ Outwash ☐ Lacustrine ☐ Loess ☐ Till ☐ Alluvium ☐ Bedrock ☐ Organic Matter

Landscape Position: (select one)	Back/Side Slope	Slope %: 6.0	Slope shape	Linear, Linear	Elevation-relative to benchmark: 95' 4"
Vegetation:	Ag. Land	Soil survey map units:	778C—Dorset-Corliss complex		Limiting Layer Elevation: 90'
Weather Conditions/Time of Day:	sunny	8:30	Date	06/23/22	
Observation #/Location:	#5	SW corner of STA	Observation Type:	Auger	

Depth (in)	Texture	Rock Frag. %	Matrix Color(s)	Mottle Color(s)	Redox Kind(s)	Indicator(s)	Structure: Shape	Structure: Grade	Structure: Consistence
0-6	Medium Loamy Sand	<10	10YR 2/2		None		Granular	Structureless	Loose
6-30	Medium Loamy Sand	<20	10YR 3/6		None		Granular	Structureless	Loose
30-54	Medium Sandy Loam	<20	10YR 3/4		None		Blocky	Weak	Friable
54-64	Medium Sandy Loam	<10	10YR 6/3		None		Blocky	Weak	Friable

Comments

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

Brant Bigger	B Bigger	L4142	22-Jun
(Designer/Inspector)	(Signature)	(License #)	(Date)

University of Minnesota Onsite Sewage Treatment Program

Design Summary Page

MINNESOTA POLLUTION CONTROL AGENCY

6. SYSTEM AND DISTRIBUTION TYPE

Project ID:

Soil Treatment Type:	Trench	Distribution Type:	Gravity Distribution
Elevation Benchmark:	100 ft	Benchmark Location:	nail on light/utility pole west of S
MPCA System Type:	Type I	Distribution Media:	Registered Product:
Type III/IV/V Details:			Chamber High Capacity

7. SITE EVALUATION SUMMARY:

Describe Limiting Condition: Depth of Observation

Layers with >35% Rock Fragments? (yes/no) No If yes, describe below: % rock and layer thickness, amount of soil credit and any additional information for addressing the rock fragments in this design.

Note:

	Depth		Depth		Elevation of Limiting Condition	
Limiting Condition:	64	inches	5.3	ft	91.20	ft
Minimum Req'd Separation:	36	inches	3.0	ft		
					Elevation	
Code Max System Depth:	28	inches	2.3	ft	94.20	ft

Critical for system compliance

This is the maximimum depth to the bottom of the distribution media for required separation. Negative Depth (ft) means it must be a mound.

Soil Texture:	Medium Sandy Loam		
Soil Hyd. Loading Rate:	0.78 GPD/ft^2	Percolation Rate:	MPI
Contour Loading Rate:	12	Note:	
Measured Land Slope:	6 %	Note:	
Comments:			

8. SOIL TREATMENT AREA DESIGN SUMMARY

Trench:

Dispersal Area	768 ft^2	Sidewall Depth	12 in	Trench Width	3 ft
Total Lineal Feet	256 ft	No. of Trenches	4	Code Max. Trench Depth	28.0 in
Contour Loading Rate	12.0 ft	Minimum Length	50 ft	Designed Trench Depth	28.0 in

Bed:

Dispersal Area	ft^2	Sidewall Depth	in	Maximum Bed Depth	in
Bed Width	ft	Bed Length	ft	Designed Bed Depth	in

Mound:

Dispersal Area	ft^2	Bed Length	ft	Bed Width	ft
Absorption Width	ft	Clean Sand Lift	ft	Berm Width (0-1%)	ft
Upslope Berm Width	ft	Downslope Berm	ft	Endslope Berm Width	ft
Total System Length	ft	System Width	ft	Contour Loading Rate	gal/ft

University of Minnesota Onsite Sewage Treatment Program

Design Summary Page

MINNESOTA POLLUTION CONTROL AGENCY

Project ID:

At-Grade:

Bed Width	ft	Bed Length	ft	Finished Height	ft
Contour Loading Rate	gal/ft	Upslope Berm	ft	Downslope Berm	ft
Endslope Berm	ft	System Length	ft	System Width	ft

Level & Equal Pressure Distribution

No. of Laterals		Perforation Spacing	ft	Perforation Diameter	in
Lateral Diameter	in	Min Dose Volume	gal	Max Dose Volume	gal

Non-Level and Unequal Pressure Distribution

	Elevation (ft)	Pipe Size (in)	Pipe Volume (gal/ft)	Pipe Length (ft)	Perf Size (in)	Spacing (ft)	Spacing (in)
Lateral 1							
Lateral 2							
Lateral 3							
Lateral 4							
Lateral 5							
Lateral 6							

Minimum Dose Volume: gal

Maximum Dose Volume: gal

9. Additional Info for At-Risk, HSW or Type IV Design

A. Starting BOD Concentration = Design Flow X Starting BOD (mg/L) X 8.35 ÷ 1,000,000

gpd X mg/L X 8.35 ÷ 1,000,000 = lbs. BOD/day

B. Target BOD Concentration = Design Flow X Target BOD (mg/L) X 8.35 ÷ 1,000,000

gpd X mg/L X 8.35 ÷ 1,000,000 = lbs. BOD/day

Lbs. BOD To Be Removed:

PreTreatment Technology: *Must Meet or Exceed Target

Disinfection Technology: *Required for Levels A & B

C. Organic Loading to Soil Treatment Area:

mg/L X gpd x 8.35 ÷ 1,000,000 ÷ ft^2 = lbs./day/ft^2

10. Comments/Special Design Considerations:

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

Brant B Bigger	R Bigger	L4142	19-May
(Designer)	(Signature)	(License #)	(Date)

University of Minnesota Onsite Sewage Treatment Program

Trench Design Worksheet

MINNESOTA POLLUTION CONTROL AGENCY

1. SYSTEM SIZING: Project ID: v 04.01.2021

A. Design Flow: 600 GPD

B. Code Maximum Depth: 28 inches Designers Maximum Depth: 28.0 inches

C. Soil Loading Rate: 0.78 GPD/ft² Contour Loading Rate: 12 gal/ft

D. Required Bottom Area: Design Flow ÷ Soil Loading Rate

600 GPD ÷ 0.78 GPD/ft² = 769 ft²

E. Select Dispersal Media: Registered Product: Chamber High Capacity
If Registered Media

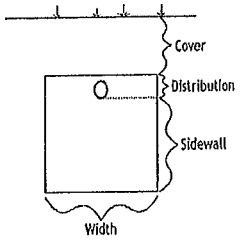
F. Select Distribution Method: Gravity - Drop Box Notes:

G. Is distribution media installed in contact with sand or loamy sand or with a percolation rate of 0.1 to 5 mpi?
If yes, Indicate distribution or treatment method:

2. TRENCH CONFIGURATION

A.

Initial required trench bottom area (ft²): (from 1.D)	Sidewall Absorption (inches)	Bottom Area Reduction	Bottom Area Multiplier	Design trench bottom area
769	6 to 11	0%	1	769
	12 to 17	20%	0.8	615
	18 to 23	34%	0.66	508
	24	40%	0.6	462



Check registered product information for specific application details and design

B. Select Sidewall Height: 12 inches = 1.0 ft

C. Design Bottom Area: 768 ft²

D. Select Trench/Registered Width: 3 ft

E. Total Designed Trench Length: Bottom Area ÷ Trench Width

768 ft² ÷ 3.0 ft = 256 ft

F. Calculate Minimum length of each trench based on Contour Loading Rate: Design Flow ÷ CLR =

600 gpd ÷ 12.0 gal/ft = 50.0 ft

G. Rapidly Permiable Soil Design Considerations:

15% Trench Distribution = Required Bottom Area x 15%.

N/A ft² x 15% = N/A ft²

Length Trenches at 15 %: Trench area ÷ Trench Width

N/A ft² ÷ N/A ft = N/A ft

H. Number of Trenches: 5 Based on CLR minimum length N/A Based on 15% sections

Designed Number of Trenches: 4

I. Equal Length per Trench = Actual Trench Length ÷ Number of Trenches

256 ft ÷ 4.0 = 64.0 ft

J. Select Trench Spacing : 8 ft (typically 5 - 12 ft from center to center)

K. Calculate Lawn Area: Trench Length X Trench Spacing

256 ft X 8 ft = 2048 ft² lawn area

4. ROCK MATERIALS

Project ID:

A. Select Depth Required to Cover Distribution Pipe: [ ] ft (0.33 ft for pressure, 0.5 ft for gravity)

B. Calculate Rock Volume: (Sidewall Height + Depth to Cover Pipe X Bottom Area = cubic feet ÷ 27 = cubic yards

([ ] ft + [ ] ft) X [ ] ft^2 = [ ] ft^3 + 27 [ ] yd^3

5. REGISTERED PRODUCTS MATERIALS

A. Registered Product: Chamber High Capacity Model: Quick 4 HCC

B. Total Length to be Installed: 240 ft

C. Total Designed for Install - Total Trench Required (must be a positive number)

240 Total ft - 256.0 ft required = -16.0 ft

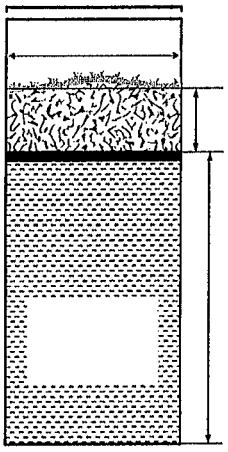
Check registered product information for specific application details and design

6. Dimension Summary

One 4" Inspection pipe per trench

240 Total Feet

4 Number of Trenchs



36 Trench Width (in)

Minimum 12 inch cover

12 Sidewall Height (in)

28.0 Max Depth (in)- Design

28 Max Depth (in) - Code

36 Required Separation (in)

Distribution Media Chamber High Capacity

Comments:

University of Minnesota Onsite Sewage Treatment Program

Soil Observation Log

Project ID:

v 04.01.2021

Client:	Heather Schmit	Location / Address:	13898 260TH AVE, DETROIT LAKES MN 56501

Soil parent material(s): (Check all that apply) ☑ Outwash ☐ Lacustrine ☐ Loess ☐ Till ☐ Alluvium ☐ Bedrock ☐ Organic Matter

Landscape Position: (select one)	Back/Side Slope	Slope %: 6.0	Slope shape	Linear, Linear	Elevation-relative to benchmark: 96' 6"
Vegetation:	Ag. Land	Soil survey map units:	778C—Dorset-Corliss complex		Limiting Layer Elevation: 91' 2"
Weather Conditions/Time of Day:	sunny	14:15	Date	05/07/22	
Observation #/Location:	#3	SE corner of STA	Observation Type:	Auger	

Depth (in)	Texture	Rock Frag. %	Matrix Color(s)	Mottle Color(s)	Redox Kind(s)	Indicator(s)	Structure: Shape	Structure: Grade	Structure: Consistence
0-12	Medium Sandy Loam	<10	10YR 2/2		None		Granular	Structureless	Loose
12-30	Medium Loamy Sand	<10	10YR 3/6		None		Granular	Structureless	Loose
30-54	Medium Loamy Sand	<10	10YR 3/2		None		Granular	Structureless	Loose
54-64	Medium Sandy Loam	<10	10YR 4/3		None		Blocky	Moderate	Friable

Comments

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

Brant B Bigger		L4142	20-May
(Designer/Inspector)	(Signature)	(License #)	(Date)

University of Minnesota Onsite Sewage Treatment Program

Soil Observation Log

Project ID:

v 04.01.2021

Client:	Heather Schmit	Location / Address:	13898 260TH AVE, DETROIT LAKES MN 56501

Soil parent material(s): (Check all that apply) ☑ Outwash ☐ Lacustrine ☐ Loess ☐ Till ☐ Alluvium ☐ Bedrock ☐ Organic Matter

Landscape Position: (select one)	Back/Side Slope	Slope %:	6.0	Slope shape	Linear, Linear
Elevation-relative to benchmark:	97' 5"				
Vegetation:	Ag. Land	Soil survey map units:	778C—Dorset-Corliss complex	Limiting Layer Elevation:	
Weather Conditions/Time of Day:	Sunny	14:30	Date	05/07/22	
Observation #/Location:	#4	west side of STA	Observation Type:	Auger	

Depth (in)	Texture	Rock Frag. %	Matrix Color(s)	Mottle Color(s)	Redox Kind(s)	Indicator(s)	Structure: Shape	Structure: Grade	Structure: Consistence
0-8	Medium Sandy Loam	<10	10YR 2/2		None		Granular	Structureless	Loose
8-30	Medium Loamy Sand	<10	10YR 3/6		None		Granular	Structureless	Loose
30-54	Medium Loamy Sand	<10	10YR 3/2		None		Granular	Structureless	Loose
54-64	Medium Sandy Loam	<10	10YR 4/3		None		Blocky	Moderate	Friable

Comments

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

Brant B Bigger	Brant Bigger	L4142	20-May
(Designer/Inspector)	(Signature)	(License #)	(Date)

ONSITE SEWAGE TREATMENT PROGRAM

Preliminary Evaluation Worksheet

MINNESOTA POLLUTION CONTROL AGENCY

v 04.01.2021

1. Contact Information

Property Owner/Client:	Heather Schmit	Date Completed:	5/7/2022
Site Address:	13898 260TH AVE, DETROIT LAKES MN 56501	Project ID:	
Email:	schmit.home@yahoo.com	Phone:	218-850-7921
Mailing Address:	329 ELIZABETH ST, DETROIT LAKES MN 56501	Alt Phone:	
Legal Description:	COMM NE COR SEC 16, S 227.87', W 7.43' TO POB; W 652.57', S 211', E387.36', NLY 96.87		
Parcel ID:	190314002	SEC: 16 TWP: 138 RNG: 041	

2. Flow and General System Information

A. Client-Provided Information

Project Type: ☑ New Construction ☐ Replacement ☐ Expansion ☐ Repair

Project Use: ☑ Residential ☐ Other Establishment:

Residential use: # Bedrooms: 4 Dwelling Sq.ft.: Unfinished Sq. Ft.:

Adults: 2 # Children: # Teenagers:

In-home business (Y/N): No If yes, describe:

Water-using devices: *(check all that apply)*

- ☐ Garbage Disposal/Grinder
- ☑ Dishwasher
- ☐ Hot Tub*
- ☐ Sewage pump in basement
- ☑ Water Softener*
- ☐ Sump Pump*
- ☐ Large Bathtub >40 gallons
- ☐ Iron Filter*
- ☐ Self-Cleaning Humidifier*
- ☑ Clothes Washing Machine
- ☐ High Eff. Furnace*
- ☐ Other:

* Clear water source - should not go into system

Additional current or future uses:

Anticipated non-domestic waste:

The above is complete & accurate: spoke with property owner on 07 May 2022

Client signature & date

B. Designer-determined flow information

Attach additional information as necessary.

Design Flow: 600 GPD Anticipated Waste Type: Residential

BOD: <170 mg/L TSS <60 mg/L Oil & Grease <25 mg/L

3. Preliminary Site Information

A. Water Supply Wells

#	Description	Mn. ID#	Well Depth (ft.)	Casing Depth (ft.)	Confining Layer	STA Setback	Source
1	deep well						visual
2							
3							
4							

Additional Well Information:

University of Minnesota Onsite Sewage Treatment Program

Preliminary Evaluation Worksheet

MINNESOTA POLLUTION CONTROL AGENCY

Site within 200' of noncommunity transient well (Y/N)	No	Yes, source:	
Site within a drinking water supply management area (Y/N)	No	Yes, source:	
Site in Well Head Protection inner wellhead management zone (Y/N)	No	Yes, source:	
Buried water supply pipes within 50 ft of proposed system (Y/N)	No		
B. Site located in a shoreland district/area?	No	Yes, name:	
Elevation of ordinary high water level:	ft	Source:	
Classification:	Tank Setback: ft.	STA Setbk: ft.	
C. Site located in a floodplain?	No	Yes, Type(s):	N/A
Floodplain designation/elevation (10 Year):	N/A ft	Source:	N/A
Floodplain designation/elevation (100 Year):	N/A ft	Source:	N/A

D. Property Line Id / Source: ☑ Owner ☑ Survey ☑ County GIS ☐ Plat Map ☐ Other:

E. ID distance of relevant setbacks on map: ☐ Water ☐ Easements ☑ Well(s) ☑ Building(s) ☑ Property Lines ☐ OHWL ☐ Other:

4. Preliminary Soil Profile Information From Web Soil Survey (attach map & description)

Map Units: 778C—Dorset-Corliss complex — Slope Range: 6-12 %

List landforms: Hillslopes

Landform position(s): Summit, shoulder, backslope, Side slope

Parent materials: Outwash

Depth to Bedrock/Restrictive Feature: >80 in — Depth to Watertable: >80 in

Map Unit Ratings

Septic Tank Absorption Field- At-grade:	Slightly Limited
Septic Tank Absorption Field- Mound:	Extremely Limited
Septic Tank Absorption Field- Trench:	Moderately Limited

5. Local Government Unit Information

Name of LGU:	Becker County
LGU Contact:	Kyle Varebert
LGU-specific setbacks:	
LGU-specific design requirements:	
LGU-specific installation requirements:	

Notes:

University of Minnesota Onsite Sewage Treatment Program

Preliminary Evaluation Worksheet

MINNESOTA POLLUTION CONTROL AGENCY

Site within 200' of noncommunity transient well (Y/N)	No	Yes, source:	
Site within a drinking water supply management area (Y/N)	No	Yes, source:	
Site in Well Head Protection inner wellhead management zone (Y/N)	No	Yes, source:	
Buried water supply pipes within 50 ft of proposed system (Y/N)	No		
B. Site located in a shoreland district/area?	No	Yes, name:	
Elevation of ordinary high water level:	ft	Source:	
Classification:	Tank Setback: ft.	STA Setbk: ft.	
C. Site located in a floodplain?	No	Yes, Type(s):	N/A
Floodplain designation/elevation (10 Year):	N/A ft	Source:	N/A
Floodplain designation/elevation (100 Year):	N/A ft	Source:	N/A

D. Property Line Id / Source: ☑ Owner ☑ Survey ☑ County GIS ☐ Plat Map ☐ Other:

E. ID distance of relevant setbacks on map: ☐ Water ☐ Easements ☑ Well(s) ☑ Building(s) ☑ Property Lines ☐ OHWL ☐ Other:

4. Preliminary Soil Profile Information From Web Soil Survey (attach map & description)

Map Units: 778C—Dorset-Corliss complex — Slope Range: 6-12 %

List landforms: Hillslopes

Landform position(s): Summit, shoulder, backslope, Side slope

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Map Unit Ratings

Septic Tank Absorption Field- At-grade:	Slightly Limited
Septic Tank Absorption Field- Mound:	Extremely Limited
Septic Tank Absorption Field- Trench:	Moderately Limited

5. Local Government Unit Information

Name of LGU: Becker County

LGU Contact: Kyle Varebert

LGU-specific setbacks:

LGU-specific design requirements:

LGU-specific installation requirements:

Notes:

ONSITE SEWAGE TREATMENT PROGRAM

Field Evaluation Worksheet

MINNESOTA POLLUTION CONTROL AGENCY

v 04.01.2021

1. Project Information

Property Owner/Client: Heather Schmit | Project ID:

Site Address: 13898 260TH AVE, DETROIT LAKES MN 56501 | Date Completed: 5/7/2022

2. Utility and Structure Information

Utility Locations Identified ☐ Gopher State One Call # | ☐ Any Private Utilities:

Locate and Verify (*see Site Evaluation map*) ☑ Existing Buildings ☐ Improvements ☐ Easements ☐ Setbacks

3. Site Information

Vegetation type(s): Ag. Land | Landscape position: Back/ Side Slope

Percent slope: % | Slope shape: Linear, Linear | Slope direction: southeast

Describe the flooding or run-on potential of site: unlikely

Describe the need for Type III or Type IV system: n/a

Note:

Proposed soil treatment area protected? (Y/N): Yes | If yes, describe: flagged

4. General Soils Information

Filled, Compacted, Disturbed areas (Y/N): No

If yes, describe:

Soil observations were conducted in the proposed system location (Y/N): Yes

A soil observation in the most limiting area of the proposed system (Y/N): Yes

Number of soil observations: 3 | Soil observation logs attached (Y/N): Yes

Percolation tests performed & attached (Y/N): No

5. Phase I. Reporting Information

	Depth		Elevation	
Limiting Condition*:	64	in	91.2	ft
Periodically saturated soil:		in		ft
Standing water:		in		ft
Bedrock:		in		ft
Benchmark Elevation:	100.0	ft		

*Most Restrictive Depth Identified from List Below

Soil Texture: Medium Sandy Loam

Percolation Rate: min/inch

Soil Hyd Loading Rate: 0.78 gpd/ft^2

Elevations and Benchmark on map? (Y/N): Yes

Benchmark Elevation Location: nail on light/utility pole west of STA

Differences between soil survey and field evaluation: Red horizons were noted in the house excavation area. No

Site evaluation issues / comments: Assumed sewer outlet from the house is at 97' 8".

Anticipated construction issues: Heavy truck trafic was on the west side of the STA & will limit trench length. Property line agreement will be needed.

University of Minnesota Onsite Sewage Treatment Program

Soil Observation Log

Project ID:

v 04.01.2021

Client:	Heather Schmit	Location / Address:	13898 260TH AVE, DETROIT LAKES MN 56501

Soil parent material(s): (Check all that apply) ☑ Outwash ☐ Lacustrine ☐ Loess ☐ Till ☐ Alluvium ☐ Bedrock ☐ Organic Matter

Landscape Position: (select one)	Back/Side Slope	Slope %:	6.0	Slope shape	Linear, Linear
Elevation-relative to benchmark:	98' 2"				
Vegetation:	Ag. Land	Soil survey map units:	778C—Dorset-Corliss complex	Limiting Layer Elevation:	92' 10"
Weather Conditions/Time of Day:	sunny	13:00	Date	05/07/22	
Observation #/Location:	#2	Upper central part of STA	Observation Type:	Auger	

Depth (in)	Texture	Rock Frag. %	Matrix Color(s)	Mottle Color(s)	Redox Kind(s)	Indicator(s)	Structure: Shape	Structure: Grade	Structure: Consistence
0-12	Medium Sandy Loam	<10	10YR 2/2		None		Granular	Structureless	Loose
12-30	Medium Loamy Sand	<10	10YR 3/6		None		Granular	Structureless	Loose
30-60	Medium Loamy Sand	<10	10YR 3/2		None		Granular	Structureless	Loose
60-64	Medium Sandy Loam	<10	10YR 4/3		None		Blocky	Moderate	Friable

Comments

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

Brant B Bigger		L4142	20-May
(Designer/Inspector)	(Signature)	(License #)	(Date)