

CITY OF CROSSLAKE

PLANNING COMMISSION/BOARD OF ADJUSTMENT

June 26, 2020

9:00 A.M.

Crosslake City Hall
37028 County Road 66, Crosslake MN 56442
(218) 692-2689

PUBLIC HEARING NOTICE

Applicant: Randal L Darling Rev. Living Trust

Authorized Agent: Wes Hanson Builders

Site Location: 14551 Wildwood Dr., Crosslake, MN 56442 on Tiff Lake-NE

Variance for:

- Lake setback of 101 feet where 150 feet is required to proposed structure
- Increase in patio size of 591 where 400 is allowed in the Shore Impact Zone 2 (SIZ2)

To construct:

- 3562 square foot dwelling with an attached garage (2607sf), covered entrance (100sf), and deck (855sf)
- 591 square foot patio

Notification: Pursuant to Minnesota Statutes Chapter 462, and the City of Crosslake Zoning Ordinance, you are hereby notified of a public hearing before the City of Crosslake Planning Commission/Board of Adjustment. Property owners have been notified according to MN State Statute 462 & published in the local newspaper. Please share this notice with any of your neighbors who may not have been notified by mail.

Information: Copies of the application and all maps, diagrams or documents are available at Crosslake City Hall or by contacting the Crosslake Planning & Zoning staff at 218-692-2689. Please submit your comments in writing including your name and mailing address to Crosslake City Hall or (crosslakepz@crosslake.net).



STAFF REPORT

Property Owner/Applicant: Randal L Darling Rev. Living Trust

Parcel Number(s): 14210628

Application Submitted: May 11, 2020

Action Deadline: July 9, 2020

City 60 Day Extension Letter sent / Deadline: N/A / N/A

Applicant Extension Received / Request: N/A / N/A

City Council Date: N/A

Authorized Agent: Wes Hanson Builders

Variance for:

- Lake setback of 101 feet where 150 feet is required to proposed structure
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To construct:

- 3562 square foot dwelling with an attached garage (2607sf), covered entrance (100sf), and deck (855sf)
- 591 square foot patio

Current Zoning: Shoreland District

Existing Impervious Coverage:

0.0%

Proposed Impervious Coverage:

7.9%

- A stormwater management plan was submitted with the variance application
- A septic design was approved by the county meeting all requirements

Development Review Team Minutes held on 3-10-2020:

- Property is located on Tiff Lake on Wildwood Drive with a lake setback of 150 feet
- The proposed dwelling structure to be approximately 80 feet from the OHW of Tiff Lake
- Elevation for Tiff lake of 1230.7 to be met, landscape items in relation to possible variance needs and any variance(s) approved are good for 2 years
- All setbacks shall be measured to the vertical side of the structure. No part of the structure, such as eaves, can overhang or reduce such setback by more than three feet (Sec. 26-308)
- If the eaves exceed 36" the setback and the impervious coverage shall be measured from the dripline
- Staff suggested moving the structure back into the building envelope as much as possible to decrease the lake setback request
- Impervious maximum of 25% and if impervious exceeds 20% a Shoreline Rapid Assessment Model form will be completed (Sec. 26-518)

- The parcel is located within a plat and/or an organization that may have restrictions, you would need to verify those restrictions and clarify that your request is allowed
- Design and implement a stormwater management plan (gutters, berm & rain gardens) to update any existing plan, which is required with all variance applications per Article 8, section 26-222, (2), 1). When a wetland is being used the stormwater must be filtered to drinking standards before it can flow into any wetland
- A septic design will be needed and applicant can sign a septic winter window agreement, staff suggested an email from designer to verify that a variance will not be needed for the system
- A wetland delineation done by Ben Meister dated 11-16-19 is on file
- A grade and elevation illustration along with a cut and fill calculation is required
- Discussion on application requirements, procedure, schedule and the requirements/need for a complete application packet by the deadline date
- A Land Use Permit will be required prior to construction

Property owner was informed that before they could be placed on a public hearing agenda the following information is required:

1. A certificate of survey meeting the requirements outlined in Article 8, Sec. 26-222 of the City Land Use Ordinance
2. Grade and Elevation illustration, along with the Cut and fill calculations
3. Wetland delineation is on file
4. A septic design
5. A complete Variance application with the \$500.00 public hearing fee

Parcel History:

- Wildwood Acres established in 1982
- 2015 FEMA update of the Crow Wing County floodplains included wetland adjacent to Tiff Lake as a part of the lake - moving the setback further into the property, thus shrinking the building envelop significantly, from the original Plat
- Tiff Lake – Natural Environment (NE) lake with a structural setback of 150 feet

Agencies Notified and Responses Received:

County Highway Dept: N/A

DNR: No comments were received as of 6-15-2020

City Engineer: N/A

Lake Association: No comments were received as of 6-15-2020

Township: N/A

Crosslake Public Works: No comments were received as of 6-15-2020

Crosslake Park, Recreation & Library: N/A

Concerned Parties: No comments were received as of 6-15-2020

POSSIBLE MOTION:

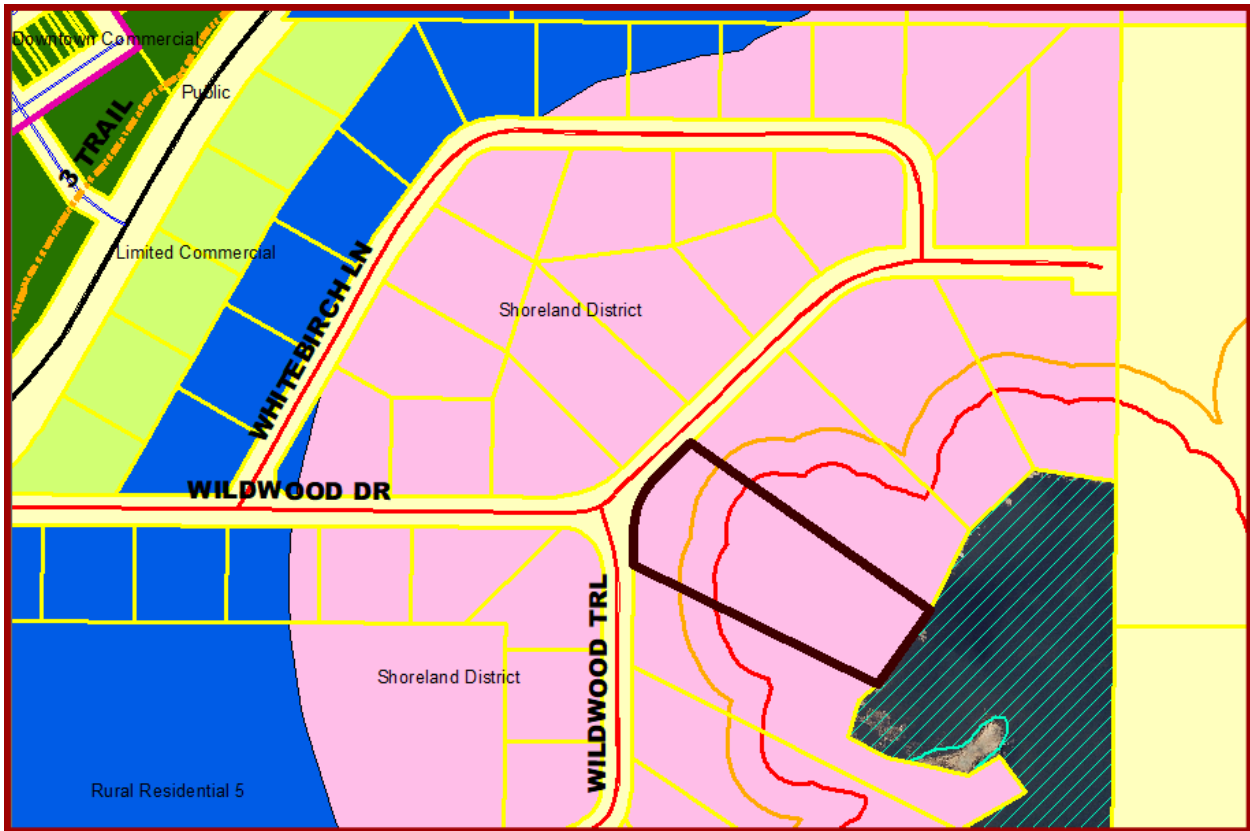
To approve/table/deny the variance to allow:

- Lake setback of 101 feet where 150 feet is required to proposed structure
- Increase in patio size of 591 where 400 is allowed in the Shore Impact Zone 2 (SIZ2)

Increase in patio size of 591 where 400 is allowed in the Shore Impact Zone 2 (SIZ2)To construct:

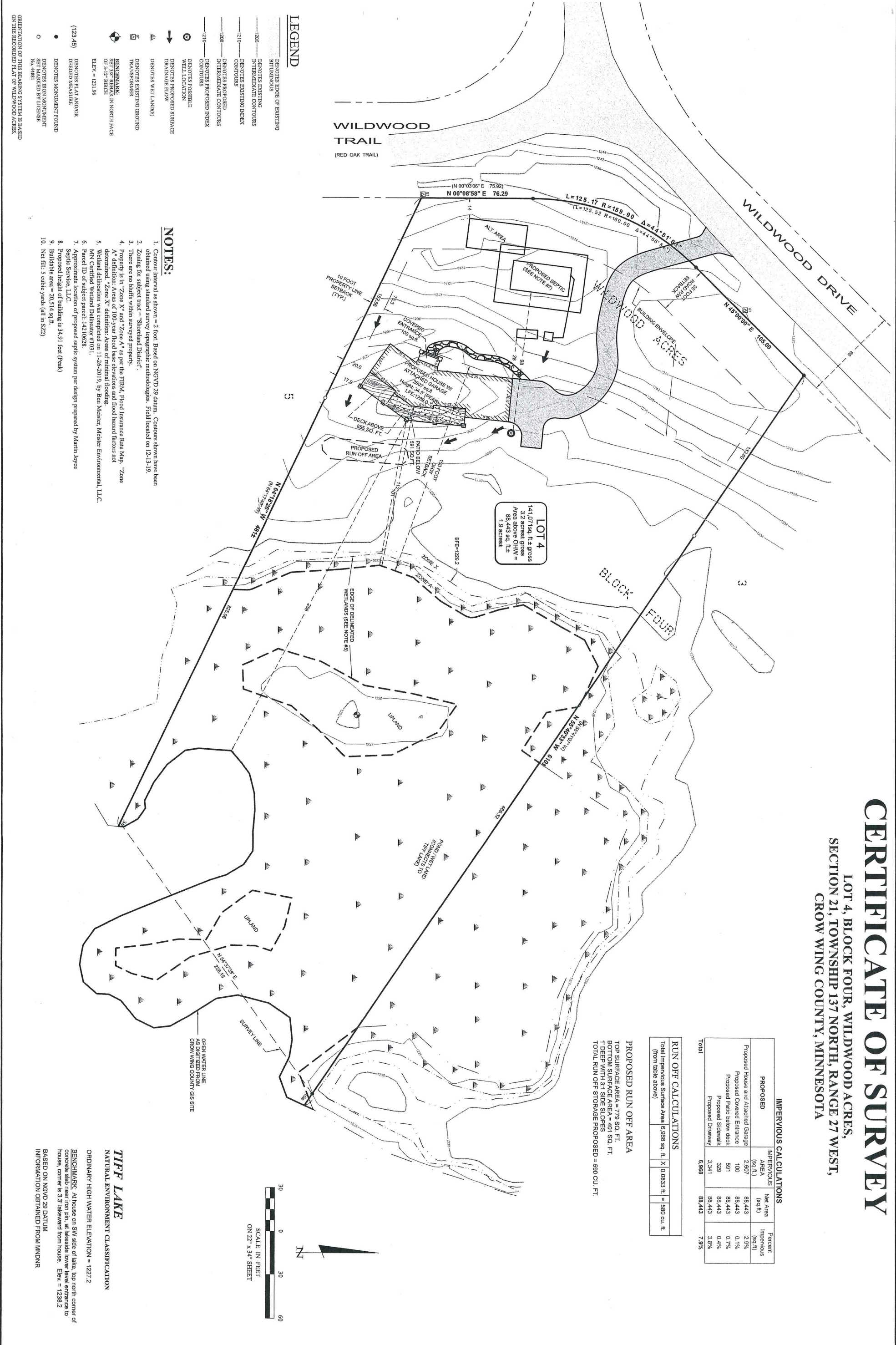
- 3562 square foot dwelling with an attached garage (2607sf), covered entrance (100sf), and deck (855sf)
- 591 square foot patio

As shown on the certificate of survey dated 5-11-2020



CERTIFICATE OF SURVEY

LOT 4, BLOCK FOUR, WILDWOOD ACRES,
SECTION 21, TOWNSHIP 137 NORTH, RANGE 27 WEST,
CROW WING COUNTY, MINNESOTA



- LEGEND**
- DENOTES EDGE OF EXISTING BITUMINOUS
 - DENOTES EXISTING INTERMEDIATE CONTOURS
 - DENOTES EXISTING INDEX CONTOURS
 - DENOTES PROPOSED INTERMEDIATE CONTOURS
 - DENOTES PROPOSED INDEX CONTOURS
 - DENOTES POSSIBLE WELL LOCATION
 - DENOTES PROPOSED SURFACE DRAINAGE FLOW
 - DENOTES WETLANDS
 - DENOTES EXISTING GROUND TRANSDUCER
 - DENOTES BEACH MARK SET 3/12" BEARING IN NORTH FACE OF 3-1/2" BENCH
 - ELEV. = 1231.96
 - (123.45) DENOTES PLAT AND/OR DERIVED MEASURE
 - DENOTES MONUMENT FOUND
 - DENOTES MONUMENT SET MARKED BY LICENSEE No. 44881

- NOTES:**
1. Contour interval as shown = 2 foot. Based on NAVD 29 datum. Contours shown have been obtained using standard survey topographic methodologies. Field located on 12-13-19.
 2. Zoning for subject tract = "Shoreland District".
 3. There are no bluffs within surveyed property.
 4. Property is in "Zone X" and "Zone A" as per the FRM, Flood Insurance Rate Map, "Zone A" definition. Areas of 100-year flood base elevations and flood hazard factors not determined. "Zone X" definition: Areas of minimal flooding.
 5. Wetland delineation was completed on 11-26-2019, by Ben Meister, Meister Environmental, LLC.
 6. Parcel ID of subject parcel: 14210628.
 7. Approximate location of proposed septic system per design prepared by Martin Joyce Septic Service, LLC.
 8. Proposed height of building is 34.9' feet (Peak).
 9. Building area = 20,514 sq.ft.
 10. Net fill: 5 cubic yards (all in S22)

IMPERVIOUS CALCULATIONS

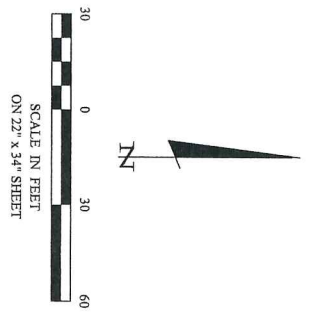
PROPOSED	IMPERVIOUS AREA (sq. ft.)	Net Area (sq. ft.)	Percent Impervious (sq. ft.)
Proposed House and Attached Garage	2,507	88,443	2.9%
Proposed Covered Entrance	100	88,443	0.1%
Proposed Patio below deck	591	88,443	0.7%
Proposed Sidewalk	329	88,443	0.4%
Proposed Driveway	3,341	88,443	3.8%
Total	6,968	88,443	7.9%

PROPOSED RUN OFF AREA
TOP SURFACE AREA = 779 SQ. FT.
BOTTOM SURFACE AREA = 401 SQ. FT.
1' DEEP WITH 3:1 SIDE SLOPES
TOTAL RUN OFF STORAGE PROPOSED = 590 CU. FT.

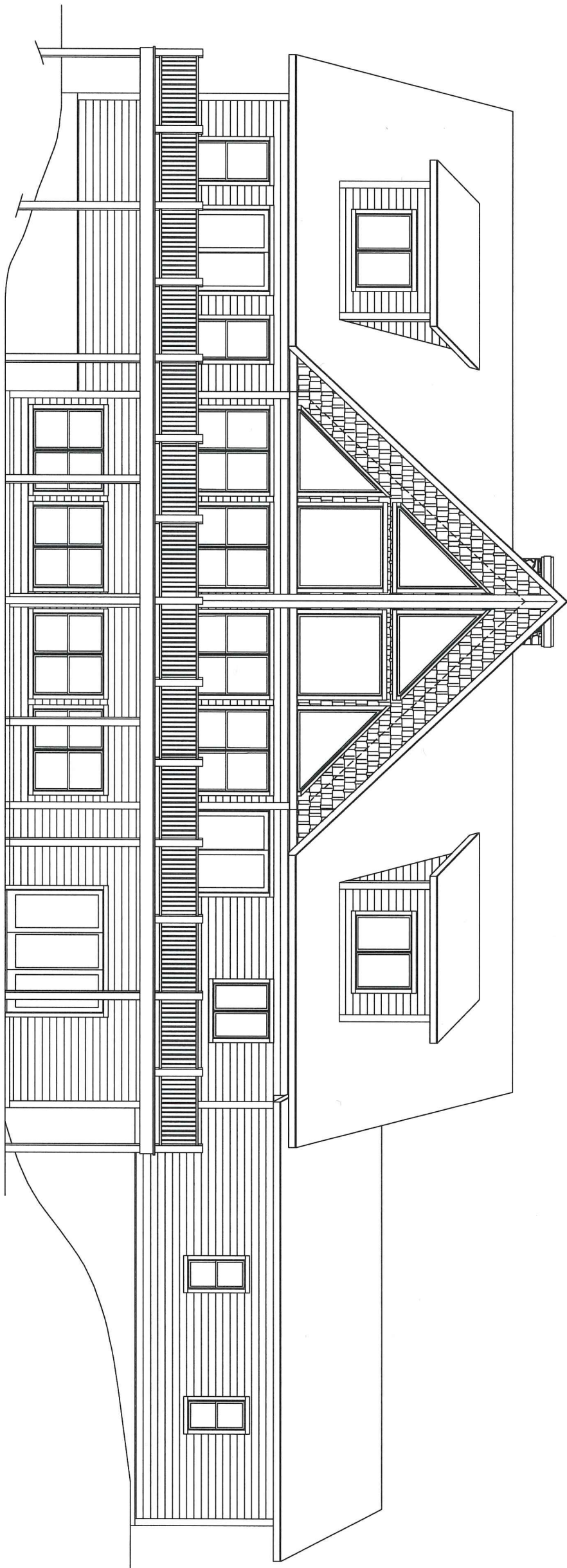
RUN OFF CALCULATIONS

Total Impervious Surface Area (6,968 sq. ft.)	X	0.0833 ft.	=	580 cu. ft.
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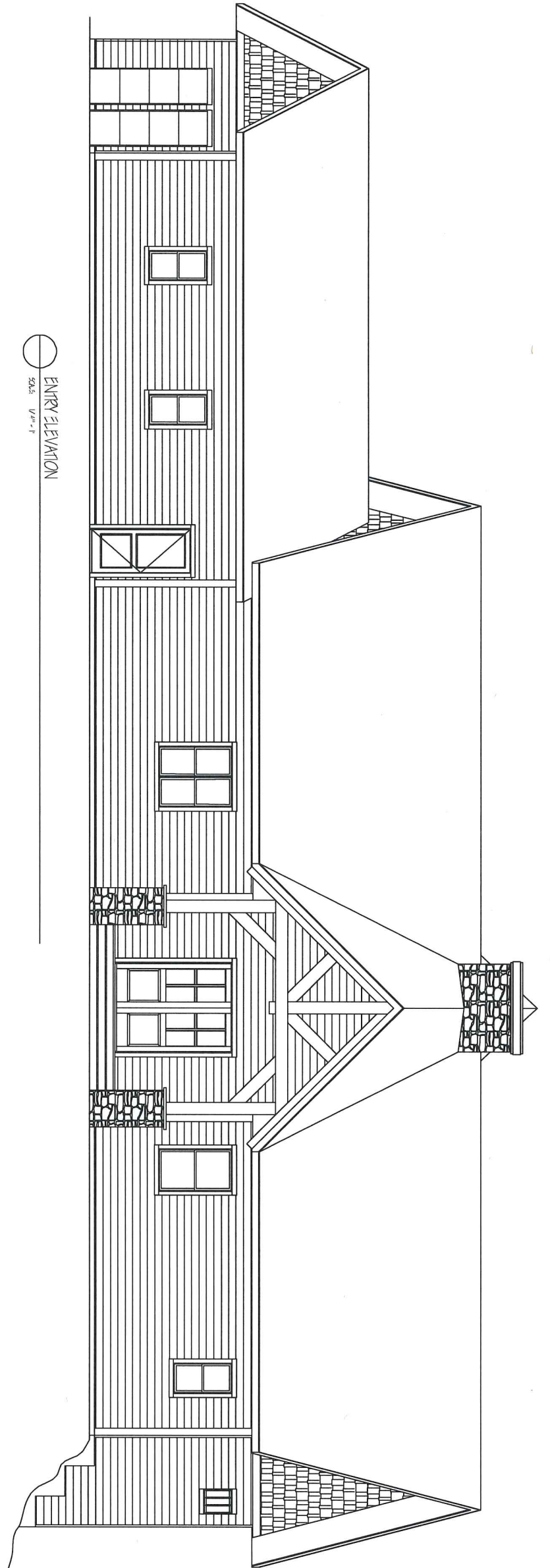
TIFF LAKE
NATURAL ENVIRONMENT CLASSIFICATION
ORDINARY HIGH WATER ELEVATION = 1227.2
BENCHMARK: At house on SW side of lake, top north corner of concrete slab near iron pin, at lakeside lower level entrance to house corner is 5.3' lakeward from house. Elev. = 1238.2
BASED ON NAVD 29 DATUM
INFORMATION OBTAINED FROM MANDNR



30206 Rasmussen Road
Suite 1
P. O. Box 874
Pequot Lakes, MN 56472
218-568-4940
www.stonemarksurvey.com



○ LAKE ELEVATION
SCALE: 1/4" = 1'

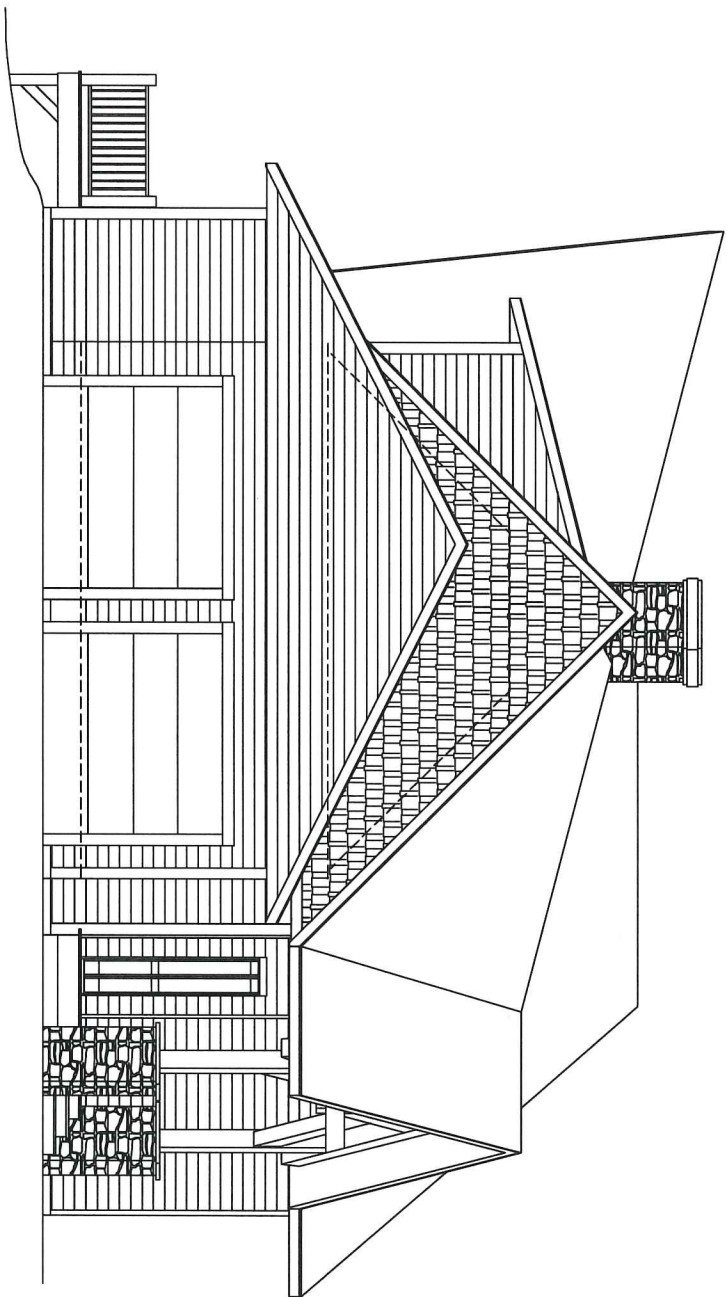


○ ENTRY ELEVATION
SCALE: 1/4" = 1'

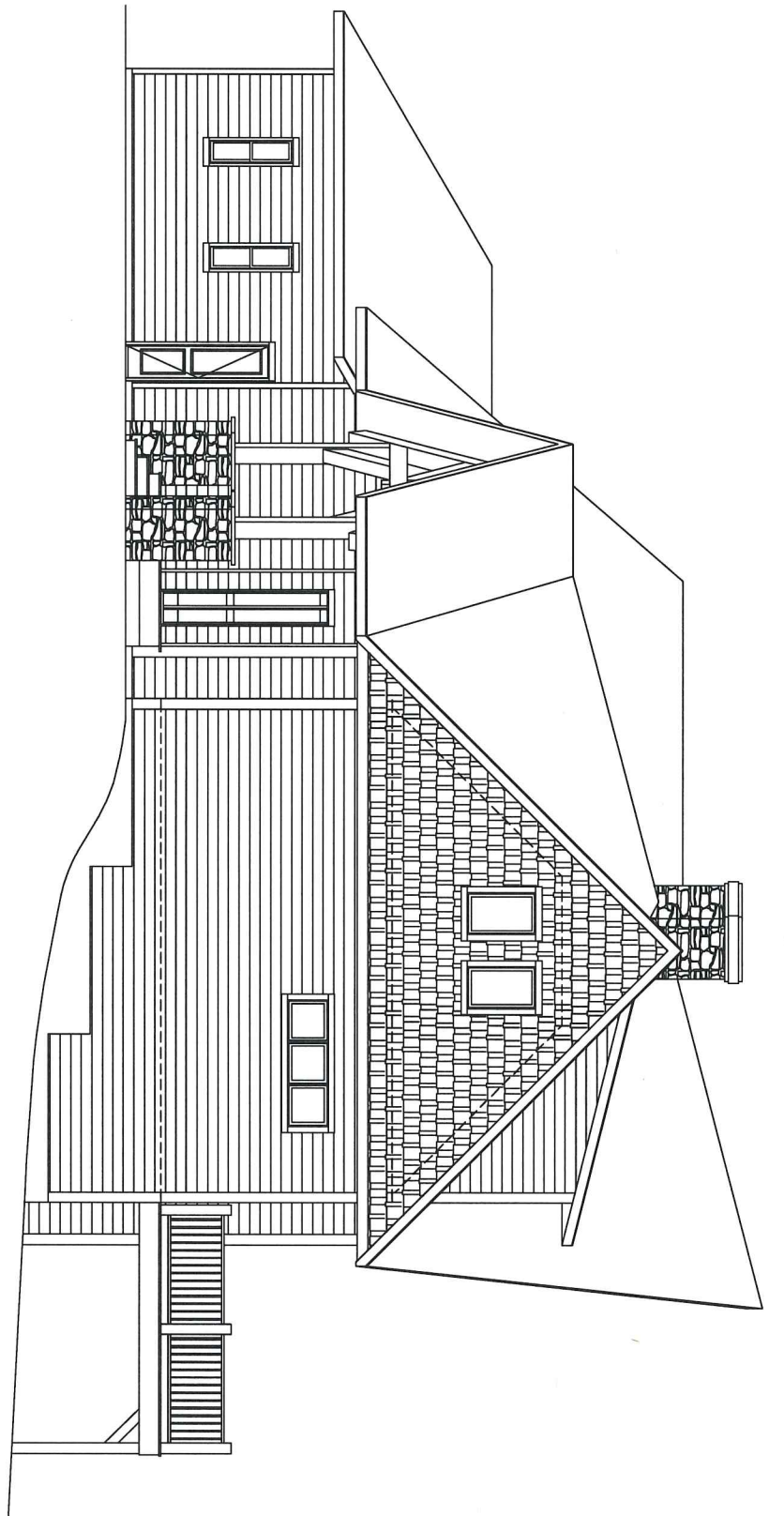
DARLING PROJECT RANDY + JAQLYN DARLING 14551 WILDWOOD DRIVE - CROSSLAKE, MN 56442 ELEVATIONS	DATE: 4.15.20 SCALE: 1/4" = 1' DRAWN BY: MMS CHECKED BY: MMS JOB NUMBER:	DATE: 02.23.18 REV: #1 REVISION: REVISION 1	BY:
	DATE:	REV:	REVISION:
	DATE:	REV:	REVISION:
	DATE:	REV:	REVISION:


WES HANSON Builders, Inc.
 GENERAL CONTRACTORS
 & PROFESSIONAL SERVICES

34103 COUNTY ROAD 3
 CROSSLAKE, MN 56442
 PHONE: (218) 692-1760
 FAX: (218) 692-1770



○ SIDE ELEVATIONS
SCALE: 1/4" = 1'



SHEET 8 OF 14 A2.2 <small>DATE</small>	DARLING PROJECT RANDY + JAQLYN DALING 14551 WILDWOOD DRIVE - CROSSLAKE, MN 56442 ELEVATIONS CONT...		<small>DATE</small> 4.15.20	<small>BY</small> MWS	<small>REVISIONS DESCRIPTION</small> 02.23.19 #1 REVISION 1	<small>BY</small> MWS
	<small>SCALE</small> 1/4" = 1'	<small>DRAWN BY</small> MWS	<small>CHECKED BY</small> MWS	<small>JOB NUMBER</small>		


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 & PROFESSIONAL SERVICES

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 CROSSLAKE, MN 56442
 PHONE: (218) 692-1760
 FAX: (218) 692-1770

Bethany Soderlund

From: Greg Kossan <kossan@brainerd.net>
Sent: Sunday, April 12, 2020 4:58 PM
To: Bethany Soderlund
Subject: Re: Darling Septic Design

Thanks Bethany I hope you did too! Darling septic design approved Greg Kossan

New Outlook Express and Windows Live Mail replacement - get it here:
<http://www.oeclassic.com/>

----- **Original Message** -----

From: Bethany Soderlund <Bethany.Soderlund@crowwing.us>
To: kossan@brainerd.net <kossan@brainerd.net>
Sent: 4/10/2020 4:01:46 PM
Subject: Darling Septic Design

Greg,

See attached septic design for your approval.

Have a happy and wonderful Easter!

Bethany Soderlund
Environmental Services Specialist

Land Services Department
322 Laurel Street, Suite 15
Brainerd, MN 56401
Office: (218) 824-1010
Direct (218) 824-1024
www.crowwing.us

Excellent Customer service is our top priority. Please let me know if I was helpful!

[Land Services Customer Survey](#)

The County of Crow Wing does NOT perform legal or abstracting services, nor do we certify to any search results. Any information provided is for courtesy/reference purposes only and does NOT carry any warranties, including fitness for particular use. This email message, including any attachments, is for the sole use of the intended recipients and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender by email and destroy all copies of the original message.



Our Vision: Being Minnesota's favorite place.

Crow Wing County Mound Design

Property Owner: Randal Darling

Date: 4/9/2020

Mailing Address: 13376 W Marigold Ct

City: Andover

State: MN

Zip: 55304

Home Phone Number:

Cell:

Site Address: 14551 Wilwood Dr

City: Crosslake

State: MN

Zip: 56442

Driving directions if no address issued:

APPROVED

By Greg Kossan at 11:04 am, Apr 13, 2020

Legal Description: Lot 4 Block 4 Wildwood Acres

Sec: 21

Twp: 137

Range: 27

Twp Name: City of Crosslake

Parcel Number: 14210628

Lake/ River: Tiff

Lake/River Classification: NE

Flow Data

Number of Bedrooms: 3

Dwelling Classification: I

System Type: I

GPD: 450

Estimated Flow in Gallons per Day (GPD)			
Bedrooms	Class I	Class II	Class III
2	300	225	180
3	450	300	218
4	600	375	256
5	750	450	294
6	900	525	332
7	1050	600	370
8	1200	675	408

Wells

Deep Well: Proposed Deep

Shallow Well: None

Wells to be sealed (if applicable)?

Setbacks

Tank(s) to: Well +50

House +10

Property Line +10

Drainfield to: Well +50

House +20

Property Line +10

Sewer Line to well: +50

Air Test: No

Additional System Notes and Information: NEW CONSTRUCTION

Propose a 3 bedroom house with a basement lift.

Designer Name: Martin Joyce

License Number: 2129

Address:

City:

State:

Zip:

Home Phone Number:

Cell: 218-820-2621

E-Mail Address: joycem@brainerd.net

I hereby certify that I have completed this work in accordance with all applicable requirements.

Designer Signature: 

Date: 4/9/2020

Crow Wing County Mound Design

Property Owner: Randal Darling

Date: 4/9/2020

Designer's Initials:

Tank Sizing

- A. Septic Tank Capacity: 2250 Gallons
 Tank Type: 2 Compartments Filter: No
 Garbage Disposal/Basement Lift Station: Lift Only
- B. Pump Tank Capacity: 500 Gallons (7080.2100)
 a. Alarm Type: Electric

Septic Tank Capacity		
Bedrooms	Minimum	GD/BL
5 or less	1,500	2,250
6 or 7	2,000	3,000
8 or 9	2,500	3,750

Soils

- C. Depth to Restricting Layer: 2.5ft. ✓
 D. Depth of Clean Sand at Upslope Edge: 1ft. ✓
 E. Native SSF: 1.67 (Perc. Rate [Optional] MPI)
 F. Land Slope: 6%

Absorption Width Ratio Table		
Texture	SSF	AWR
Sand	0.83	1.00
Fine Sand	1.67	2.00
Sandy Loam	1.27	1.52
Loam	1.67	2.00
Silt Loam	2.00	2.40
Clay Loam	2.20	2.67

Rock Bed Dimensions

- G. GPD $450 \times .83 = 373.5$ sq. ft.
 H. Rock Bed Width: 10ft. ✓
 I. Rock Bed Length: 40ft. ✓
 J. Cubic Yards of Rock $(H) \times (I) \times \text{Rock Depth } 1\text{ft.} \div 27 = 14 \text{ yds}^3$

Mound Size Calculations

- K. AWR (from table): $2 \times \text{Rock Bed Width (H): } 10 = 20\text{ft.}$ (Absorption Width)
 L. Absorption Width (K): $20\text{ft.} - \text{Rock Bed Width (H): } 10\text{ft.} = 10\text{ft.}$ (Downslope Minimum)
 M. Depth of washed sand (D): $1 + 1 \text{ ft. of rock} + 1 \text{ ft. of cover} = 3\text{ft.}$ (Upslope Height)
 N. Enter upslope berm value from Berm Multiplier Table: 3.23
 O. Upslope berm multiplier (N): $3.23 \times \text{upslope height (M): } 3 = 9.69\text{ft.}$ (Upslope Width)
 P. Rock bed width (H): $10\text{ft.} \times \text{land slope (F): } 6\% \times 0.01 = 0.6\text{ft.}$ (Drop in Elevation)
 Q. Upslope height (M): $3\text{ft.} + \text{drop in elevation (P): } 0.6\text{ft.} = 3.6\text{ft.}$ (Downslope Height)
 R. Enter downslope berm value from Berm Multiplier Table: 5.26
 S. Downslope height (Q): $3.6 \times \text{Downslope berm multiplier (R): } 5.26 = 18.94 \text{ ft.}$ (Downslope Width)
 T. Select the larger number of Step (L) and Step (S): 19ft.
 U. Upslope width (O): $9.69 + \text{rock bed width (H): } 10 + \text{downslope width (T): } 19 = 38.69\text{ft.}$ (Mound Width)
 V. Upslope width (O): $9.69 + \text{rock bed length (I): } 40 + \text{Upslope width (O): } 9.69 = 59.38\text{ft.}$ (Mound Length)
 W. Final Mound Dimensions Are: Width (U): 38ft. by Length (V): 59ft.

Berm Multiplier Table														
Land Slope→	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	
Upslope Berm ↓	3/1	3.00	2.91	2.83	2.75	2.68	2.61	2.54	2.48	2.42	2.36	2.31	2.26	2.21
	4/1	4.00	3.85	3.70	3.57	3.45	3.33	3.23	3.12	3.03	2.94	2.86	2.78	2.70
	5/1	5.00	4.76	4.54	4.35	4.17	4.00	3.85	3.70	3.57	3.45	3.33	3.23	3.12
	6/1	6.00	5.66	5.36	5.08	4.84	4.62	4.41	4.23	4.05	3.90	3.75	3.61	3.49
	7/1	7.00	6.54	6.14	5.79	5.46	5.19	4.93	4.70	4.49	4.30	4.12	3.95	3.80
Downslope Berm ↓	3/1	3.00	3.09	3.19	3.30	3.41	3.53	3.66	3.80	3.95	4.11	4.29	4.48	4.69
	4/1	4.00	4.17	4.35	4.54	4.76	5.00	5.26	5.56	5.88	6.25	6.67	7.14	7.69
	5/1	5.00	5.26	5.56	5.88	6.25	6.67	7.14	7.69	8.33	9.09	10.00	11.11	12.50
	6/1	6.00	6.38	6.82	7.32	7.89	8.57	9.38	10.34	11.54	13.04	15.00	17.65	21.43
	7/1	7.00	7.53	8.14	8.86	9.72	10.77	12.07	13.73	15.91	18.92	23.33	30.43	43.75

Crow Wing County Mound Design

Property Owner: Randal Darling
Date: 4/9/2020

Designer's Initials:

Determine Pump Capacity

1) Gravity Distribution Pump Capacity Range: 10 - 45 GPM

*Skip to Pump Head Requirements if pumping to gravity

2) Pressure Distribution:

a) Number of laterals: 3

b) Lateral Size: 1.5in.

c) Perforation spacing: 3ft.

d) Check Table 4 to see the maximum number of perforations per lateral.

3) Lateral Length (choose):

a) End manifold: rock bed length: 40 - 2 ft. = 38ft.

b) Center manifold: rock bed length /2: 20 - 1 ft. = 19ft.

c) Choose 3a or 3b: 38ft.

4) Total Perforation Determination:

a) (3c): 38ft. ÷ (2c): 3ft. + 1 = 13.67 Perforations / Lateral

b) (4a): 13.67 × (2a): 3 = 41.01 Total Number of Perforations

c) Select perforation discharge from Table 1 = .74 GPM/Perf.

d) (4b): 41.01 × (4c): 0.74 GPM/Perf. = 30.35 GPM

PUMP HEAD REQUIREMENTS

5) Elevation difference:

a) Elevation difference between pump and point of discharge 12ft.

b) If pumping to a pressure distribution system, (5a) + 5 = 17ft.

c) Choose 5a if pumping to gravity or 5b for pressure: 17ft.

6) Friction loss:

a) Select a value from Table 2: 2.06ft. / 100 ft. of pipe

b) Pipe length to drainfield: 50ft. × 1.25 = 62.5ft.

c) (6a): 2.06 × (6b): 62.5 ÷ 100 = 1.29 Total Friction Loss

7) Drainback:

a) Actual Pipe length 50ft. × .17 gal/ft. (Table 3) = 8.5 gal

8) (5c): 17ft. + (6c): 1.29ft. = 18.29 Total Head Required

9) Minimum Pump Size 30 GPM (4d) & 18ft. of dynamic head (8)

Ft. of Head	7/32" Perf	1/4" Perf
1.0	0.56	0.74
2.0	0.80	1.04

Use 1.0 for single homes, 2.0 for everything else

Flow (GPM)	1.5"	2"	3"
20	2.47	0.73	0.11
25	3.73	1.11	0.16
30	5.23	1.55	0.23
35	6.96	2.06	0.30
40	8.91	2.64	0.39
45	11.07	3.28	0.48
50	13.46	3.99	0.58
55		4.76	0.70
60		5.60	0.82
65		6.48	0.95
70		7.44	1.09

Pipe Diameter	Gal/Ft.
1.25 in.	0.078
1.5 in.	0.11
2.0 in.	0.17

Perf. Spacing	1.25" Pipe	1.5" Pipe	2" Pipe
2.5 ft.	14	18	28
3 ft.	13	17	26
3.3 ft.	12	16	25
4 ft.	11	15	23
5 ft.	10	14	22

Crow Wing County Mound Design

Property Owner: Randal Darling

Date: 4/9/2020

Designer's Initials:

Please record the depths of all horizons, redoximorphic features, restricting layers, and saturated soils. Include all chroma and hue values.

#1 Proposed Site

Depth (in.)	Texture	Color
0-6	SL-Loam	10YR 3/2
6-20	Sandy Loam	10YR 4/4
20-30	Sandy Loam	10YR 4/4-4/6
30-40	Loam w/redox	10YR 6/2
	Dense	7.5YR 6/4

#1 Alternate Site

Depth (in.)	Texture	Color
0-6	SL-Loam	10YR 3/2
6-20	Sandy Loam	10YR 4/4
20-32	Sandy Loam	10YR 4/4-4/6
+32	Loam w/redox	

#2 Proposed Site

Depth (in.)	Texture	Color
0-6	SL-Loam	10YR 3/2
6-20	Sandy Loam	10YR 4/4
20-32	Sandy Loam	10YR 4/4-4/6
32-48	Loam w/redox	
	Dense/	

#2 Alternate Site

Depth (in.)	Texture	Color

Soil Sizing Factors/Hydraulic Loading Rates							
Perc. Rate	Texture	SSF	HLR	Perc. Rate	Texture	SSF	HLR
<0.1	Coarse Sand			16 to 30	Loam	1.67	0.60
0.1 to 5	Sand	0.83	1.20	31 to 45	Silt Loam	2.00	0.50
0.1 to 5	Fine Sand	1.67	0.60	46 to 60	Clay Loam	2.20	0.45
6 to 15	Sandy Loam	1.27	0.79	> 60	Clay Loam	****	0.24

Description of Soil Treatment Areas				
	Proposed Site		Alternate Site	
Disturbed Areas?	No		No	
Compacted Areas?	No		No	
Flooding Potential?	No		No	
Run on Potential?	No		No	
Limiting Layer Depth	Proposed #1 30"	Proposed #2 32"	Alternate #1 32"	Alternate #2
Slope % and Direction	6% SW		2-4% NW	
Landscape Position	Summit/Shoulder slope		Summit	
Vegetation Types	Wooded		Wooded	
Soil Texture	Loam over SL			
Soil Sizing Factor	1.67		Select One	

4/10

Martin Joyce Septic Service, LLC

27604 County Road 3, Merrifield, MN 56465

Septic System Management Plan

Property Owner: Randal Darling

Phone: _____

Date: 4/9/2020

Mailing Address: 13376 W Marigold Ct, Andover, MN 55304

Site Address: 14551 Wilwood Dr, Crosslake, MN 56442

This management plan will identify the operation and maintenance activities necessary to ensure long-term performance of your septic system. Some of these activities must be performed by you, the homeowner. Other tasks must be performed by a licensed septic service provider.

System Designer: check every _____ months
Local Government: check every _____ months
State Requirement: check every 36 months

My system needs to be checked
every 36 months

Homeowner Management Tasks (performed monthly unless otherwise stated)

Leaks - Check (look,listen) for leaks in toilets and dripping faucets. Repair leaks promptly

Surfacing sewage - Regularly check for wet or spongy soil around your soil treatment area.

Effluent filter - *Inspect and clean twice a year or more*

Alarms - Alarm signal when there is a problem: contact Service Provider any time an alarm signals

Event counter or water meter - Monitor your average daily water use (if it applies)

Professional Management Tasks

Check and clean the in-tank effluent filter

Check the sludge/scum layer levels in all septic tanks

Recommend if tank should be pumped

Pump all compartments of septic tank at least every 36 months

Check inlet and outlet baffles

Clean drainfield laterals (if it applies)

Check the drain field effluent levels in the rock layer

Check the pump and alarm system functions (if it applies)

Check wiring for corrosion and function (if it applies)

Check dissolved oxygen and effluent temperature in tank

Provide home owner with list of results and any action to be taken

Replacement system for this residence, a secondary site has not been identified.

" I understand it is my responsibility to properly operate and maintain the sewage treatment system on this property, utilizing the Management Plan. If requirements in this Management Plan are not met, I will promptly notify the permitting authority and take necessary corrective actions. If I have a new system, I agree to adequately protect the reserve area for future use as a soil treatment system."

Property Owner Signature: _____

Date: _____

Designer Signature: Martin Joyce

Date: _____

Permitting Authority Signature: _____

Date: _____

Map Unit Description (MN)

Crow Wing County, Minnesota

[Data apply to the entire extent of the map unit within the survey area. Map unit and soil properties for a specific parcel of land may vary somewhat and should be determined by onsite investigation]

D83D--Eutrudepts-Graycalm-Rollins complex, pitted, 10 to 20 percent slopes

Eutrudepts, sandy

<p><i>Extent:</i> 15 to 55 percent of the unit</p> <p><i>Landform(s):</i> moraines on till plains</p> <p><i>Slope gradient:</i> 10 to 20 percent</p> <p><i>Parent material:</i> coarse-loamy glaciofluvial deposits over sandy outwash over coarse-loamy till</p> <p><i>Restrictive feature(s):</i> greater than 60 inches</p> <p><i>Flooding:</i> none</p> <p><i>Ponding:</i> none</p> <p><i>Drainage class:</i> moderately well drained</p>	<p><i>Soil loss tolerance (T factor):</i> 5</p> <p><i>Wind erodibility group (WEG):</i> 5</p> <p><i>Wind erodibility index (WEI):</i> 56</p> <p><i>Kw factor (surface layer)</i> .32</p> <p><i>Land capability, nonirrigated</i> 3s</p> <p><i>Hydric soil:</i> no</p> <p><i>Hydrologic group:</i> C</p> <p><i>Potential for frost action:</i> low</p>
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Representative soil profile:	Texture	Permeability	Available water capacity	pH
A -- 0 to 3 in	Loam	moderate	0.63 to 0.69 in	4.5 to 5.5
Bw -- 3 to 10 in	Fine sandy loam	moderate	0.80 to 1.14 in	5.0 to 6.0
E -- 10 to 19 in	Fine sandy loam	moderately rapid	1.13 to 1.61 in	5.0 to 6.0
2E and Bt -- 19 to 55 in	Loamy sand	rapid	2.87 to 4.66 in	5.0 to 6.0
3C -- 55 to 79 in	Cobbly loamy sand	moderate	1.89 to 3.78 in	5.5 to 6.5

Graycalm

<p><i>Extent:</i> 15 to 30 percent of the unit</p> <p><i>Landform(s):</i> moraines on till plains</p> <p><i>Slope gradient:</i> 10 to 20 percent</p> <p><i>Parent material:</i> outwash</p> <p><i>Restrictive feature(s):</i> greater than 60 inches</p> <p><i>Flooding:</i> none</p> <p><i>Ponding:</i> none</p> <p><i>Drainage class:</i> somewhat excessively drained</p>	<p><i>Soil loss tolerance (T factor):</i> 5</p> <p><i>Wind erodibility group (WEG):</i> 2</p> <p><i>Wind erodibility index (WEI):</i> 134</p> <p><i>Kw factor (surface layer)</i> .15</p> <p><i>Land capability, nonirrigated</i> 4s</p> <p><i>Hydric soil:</i> no</p> <p><i>Hydrologic group:</i> A</p> <p><i>Potential for frost action:</i> low</p>
--	--

Representative soil profile:	Texture	Permeability	Available water capacity	pH
A -- 0 to 4 in	Loamy sand	rapid	0.35 to 0.43 in	4.5 to 5.5
Bw1 -- 4 to 20 in	Loamy sand	rapid	1.29 to 1.61 in	5.0 to 6.0
Bw2 -- 20 to 31 in	Sand	rapid	0.44 to 0.66 in	5.0 to 6.0
E and Bt -- 31 to 79 in	Sand	rapid	2.38 to 3.81 in	5.5 to 6.5

6/10

Map Unit Description (MN)

Crow Wing County, Minnesota

D83D--Eutrudepts-Graycalm-Rollins complex, pitted, 10 to 20 percent slopes

Rollins

<p><i>Extent:</i> 15 to 23 percent of the unit</p> <p><i>Landform(s):</i> moraines on till plains</p> <p><i>Slope gradient:</i> 10 to 20 percent</p> <p><i>Parent material:</i> coarse-loamy drift over sandy and gravelly outwash</p> <p><i>Restrictive feature(s):</i> greater than 60 inches</p> <p><i>Flooding:</i> none</p> <p><i>Ponding:</i> none</p> <p><i>Drainage class:</i> somewhat excessively drained</p>	<p><i>Soil loss tolerance (T factor):</i> 2</p> <p><i>Wind erodibility group (WEG):</i> 3</p> <p><i>Wind erodibility index (WEI):</i> 86</p> <p><i>Kw factor (surface layer)</i> .24</p> <p><i>Land capability, nonirrigated</i> 6s</p> <p><i>Hydric soil:</i> no</p> <p><i>Hydrologic group:</i> A</p> <p><i>Potential for frost action:</i> low</p>
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<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 5 in	Sandy loam	moderately rapid	0.56 to 0.67 in	5.1 to 6.5
Bw -- 5 to 14 in	Gravelly sandy loam	moderately rapid	0.91 to 1.09 in	5.1 to 6.5
2C -- 14 to 79 in	Extremely gravelly sand	very rapid	1.29 to 3.87 in	5.6 to 6.5

7/10

Map Unit Description (MN)

Crow Wing County, Minnesota

D83D--Eutrudepts-Graycalm-Rollins complex, pitted, 10 to 20 percent slopes

Eutrudepts, stratified

<p><i>Extent:</i> 10 to 17 percent of the unit</p> <p><i>Landform(s):</i> moraines on till plains</p> <p><i>Slope gradient:</i> 10 to 20 percent</p> <p><i>Parent material:</i> coarse-loamy glaciofluvial deposits over sandy outwash over coarse-loamy glaciofluvial deposits over sandy outwash over coarse-loamy subglacial till</p> <p><i>Restrictive feature(s):</i> greater than 60 inches</p> <p><i>Flooding:</i> none</p> <p><i>Ponding:</i> none</p> <p><i>Drainage class:</i> moderately well drained</p>	<p><i>Soil loss tolerance (T factor):</i> 5</p> <p><i>Wind erodibility group (WEG):</i> 3</p> <p><i>Wind erodibility index (WEI):</i> 86</p> <p><i>Kw factor (surface layer)</i> .20</p> <p><i>Land capability, nonirrigated</i> 3s</p> <p><i>Hydric soil:</i> no</p> <p><i>Hydrologic group:</i> B</p> <p><i>Potential for frost action:</i> low</p>
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<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 7 in	Sandy loam	moderately rapid	0.74 to 1.07 in	4.5 to 5.5
Bw1 -- 7 to 13 in	Sandy loam	moderately rapid	0.65 to 0.77 in	5.0 to 6.0
2Bw2 -- 13 to 34 in	Gravelly loamy sand	rapid	1.06 to 2.34 in	5.0 to 6.0
3Bw3 -- 34 to 41 in	Loam	moderately rapid	0.74 to 1.07 in	5.0 to 6.0
4Bw4 -- 41 to 50 in	Sand	rapid	0.49 to 1.08 in	5.0 to 6.0
5C -- 50 to 79 in	Sandy loam	moderately rapid	3.12 to 3.69 in	5.5 to 6.5

This report provides a semitabular listing of some soil and site properties and interpretations that are valuable in communicating the concept of a map unit. The report also provides easy access to the commonly used conservation planning information in one place. The major soil components in each map unit are displayed. Minor components may be displayed if they are included in the database and are selected at the time the report is generated.

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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.

Date: 4/10/2020 Time: 8:54:05 AM

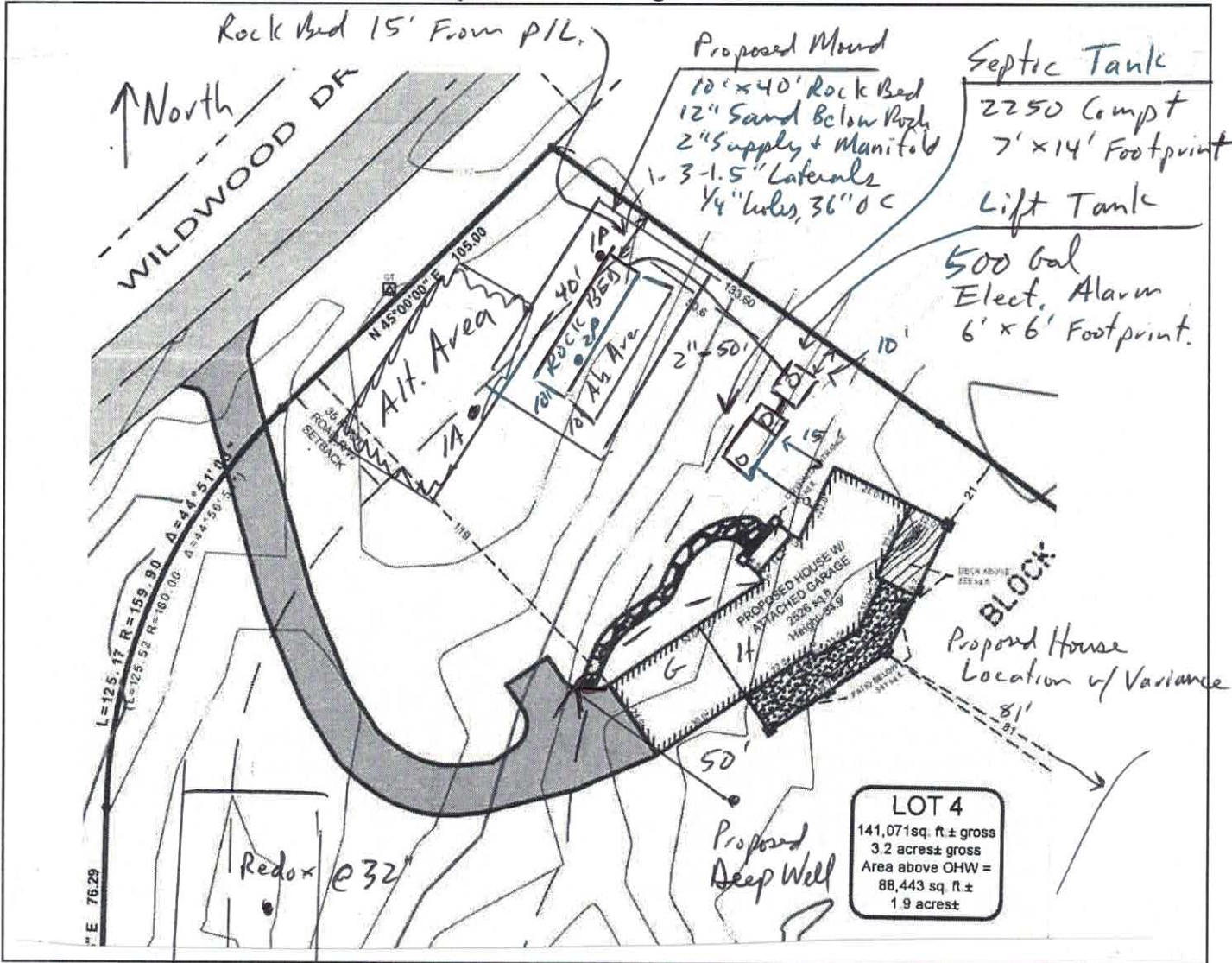


9 of 10

Crow Wing/Cass County Mound Design

Property Owner: Randal Darling Date: 4/9/2020
 Site Address: 14551 Wilwood Dr, Crosslake, MN 56442 Re Code: 14210628

Please Draw to Scale with North Arrow to top or Left Side of Page



← Another Alternate Area - Mound

Please show all that apply (Existing or Proposed):

- | | | |
|---|---------------------------|-----------------------------------|
| Wells within 100 ft. of a Drainfield | Disturbed/Compacted Areas | Access Route for Tank Maintenance |
| Water lines within 10 ft. of a Drainfield | Component Location | Property Lines |
| Drainfield Areas | OHW | Structures |
| Boring Locations | Lot Easements | Setbacks |

Elevations:

- | | |
|-----------------------------------|------------------------------|
| Benchmark Elevation: | Pump Elevation: |
| Elevation of Sewer Line at House: | Pump Discharge Elevation: |
| Tank Inlet Elevation: | Restricting Layer Elevation: |
| Drainfield Elevation: | |

Designer Signature: *Matt Joyce*

Date: 4/9/2020

License Number:

L2129



Variance Application
Planning and Zoning Department
37028 County Rd 66, Crosslake, MN 56442
218.692.2689 (Phone) 218.692.2687 (Fax) www.cityofcrosslake.org

Receipt Number: 621712

Permit Number: 2010020V

Property Owner(s): Randal L. Darling Rev. Living Trust

Mailing Address: 13376 W Marigold Ct - Andover, MN 55304

Site Address: 14551 Wildwood Dr - Crosslake, MN 56442

Phone Number: 612-756-1830

E-Mail Address: darkroaster2@aol.com

Parcel Number(s): 14210628

Legal Description: Wildwood Acres - Lot 4 / Block 4

Sec 21 Twp 137 Rge 26 27 28

Lake/River Name: Tiff

Do you own land adjacent to this parcel(s)? ___ Yes No

If yes list Parcel Number(s) _____

Authorized Agent: Wes Hanson Builders

Agent Address: 34103 Cty Rd 3 - Crosslake, MN 56442

Agent Phone Number: 692-1760

Variances	
(Check applicable requests)	
<input checked="" type="checkbox"/>	Lake/River Setback
<input type="checkbox"/>	Road Right-of-Way Setback
<input type="checkbox"/>	Bluff Setback
<input type="checkbox"/>	Side Yard Setback
<input checked="" type="checkbox"/>	Wetland Setback N/A
<input type="checkbox"/>	Septic Tank Setback
<input type="checkbox"/>	Septic Drainfield Setback
<input type="checkbox"/>	Impervious Coverage
<input type="checkbox"/>	Accessory Structure
<input type="checkbox"/>	Building Height
<input type="checkbox"/>	Patio Size
<input type="checkbox"/>	_____
<input type="checkbox"/>	_____

Signature of Property Owner(s) Randal L. Darling

Date 4-9-2020

Signature of Authorized Agent(s) [Signature]

Date 4/13/20

- All applications must be accompanied by a signed Certificate of Survey
- Fee \$500 for Residential and Commercial Payable to "City of Crosslake"
- No decisions were made on an applicant's request at the DRT meeting. Submittal of an application after DRT does not constitute approval. Approval or denial of applications is determined by the Planning Commission/Board of Adjustment at a public meeting as per Minnesota Statute 462 and the City of Crosslake Land Use Ordinance.

5.11.2020 resubmitted

For Office Use:
Application accepted by [Signature] Date 4/13/2020 Land Use District SD

Lake Class NE Septic: Compliance _____ SSTS Design _____ Installation _____

Original application was withdrawn and resubmitted on 5.11.2020 for the June 26th meeting with a resubmittal cost of \$250.00 per fee schedule guidelines.



Practical Difficulty Statement

Pursuant to City of Crosslake Ordinance Article 8 – Variances may be granted when it is found that strict enforcement of the Land Use Ordinance will result in a “practical difficulty”.

Please answer the following questions regarding the “practical difficulty” for your variance request.

1. Is the Variance request in harmony with the purposed and intent of the Ordinance?

Yes No

Why:

Defer to the Planning Commission/Board of Adjustment

2. Is the Variance consistent with the Comprehensive Plan?

Yes No

Why:

Defer to the Planning Commission/Board of Adjustment

3. Is the property owner proposing to use the property in a reasonable manner not permitted by the Land Use Ordinance?

Yes No

Why:

The presence of wetland on the property greatly impacts the practical placement of a reasonably sized single family dwelling. If the typical wetland setback was in effect it would not be an issue but the DNR has just recently deemed that this wetland is subject to environmental lake setbacks which would push the structure almost back to the road.

4. Will the issuance of a Variance maintain the essential character of the locality?

Yes No

Why:

There are a few homes in the immediate area that are built much closer to the OHW and / or wetland than is being asked on the property at hand. We are not asking to be any closer than any of them and in reality will still be further back from the OHW and / or wetland than what many of them are currently.

5. Is the need for a Variance due to circumstances unique to the property and not created by the property owner?

Yes No

Why:

As outlined, the presence of the wetland and the more recent decision to treat it as part of the OHW has created this practical difficulty.

6. Does the need for a Variance involve more than economic considerations?

Yes No

Why:

There are actually no economic considerations involved with the application for this variance. Our hope is to be able to place the structure in a place that works with the existing contours, provides proper stormwater management and does not force us to place the structure in a highly visible manner from Wildwood Drive.



City of Crosslake Planning Commission/Board of Adjustment

FINDINGS OF FACT

SUPPORTING / DENYING A VARIANCE REQUEST

A Variance may be granted by the Planning Commission/Board of Adjustment when it is found that strict enforcement of the Land Use Ordinance will result in a “practical difficulty” according to Minnesota Statute Chapter 462. The Planning Commission/Board of Adjustment should weigh each of the following questions to determine if the applicant has established that there are “practical difficulties” in complying with regulations and standards set forth in the Land Use Ordinance.

1. Is the Variance request in harmony with the purposes and intent of the Ordinance?

Yes No

Why:

2. Is the Variance consistent with the Comprehensive Plan?

Yes No

Why:

3. Is the property owner proposing to use the property in a reasonable manner not permitted by the Land Use Ordinance?

Yes No

Why:

4. Will the issuance of a Variance maintain the essential character of the locality?

Yes No

Why:

5. Is the need for a Variance due to circumstances unique to the property and not created by the property owner?

Yes No

Why?

6. Does the need for a Variance involve more than economic considerations?

Yes No

Why: