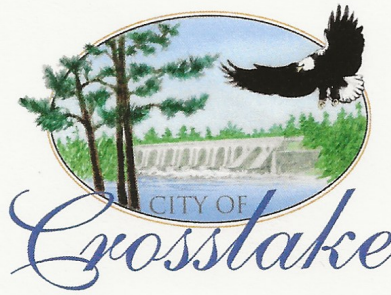


City Hall: 218-692-2688
Planning & Zoning: 218-692-2689
Fax: 218-692-2687



13888 Daggett Bay Rd
Crosslake, Minnesota 56442
www.cityofcrosslake.org

CITY OF CROSSLAKE

PLANNING COMMISSION/BOARD OF ADJUSTMENT

October 23, 2020

9:00 A.M.

Crosslake City Hall
13888 Daggett Bay Rd, Crosslake MN 56442
(218) 692-2689

PUBLIC HEARING NOTICE

Applicant: James Reid & Coral C Price

Authorized Agent: N/A

Site Location: 13130 Gladick Lane, Crosslake, MN 56442 on Rush Lake-GD

Variance for:

- Lake setback of 44 feet where 75 feet is required to proposed septic system
- Side yard setback of 2 feet where 10 feet is required to proposed septic system
- Road right-of-way setback of 2 feet where 10 feet is required to proposed drainfield
- Dwelling setback of 4 feet where 10 feet is required to the septic tank
- Dwelling setback of 8 feet where 20 feet is required to the drainfield

To construct:

- A new type III septic system

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 ownerls 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: James Reid & Coral C Price
Parcel Number(s): 14170614
Application Submitted: September 4, 2020
Action Deadline: November 3, 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: N/A

Variance for:

- Lake setback of 44 feet where 75 feet is required to proposed septic system
- Side yard setback of 2 feet where 10 feet is required to proposed septic system
- Road right-of-way setback of 2 feet where 10 feet is required to proposed drainfield
- Dwelling setback of 4 feet where 10 feet is required to the septic tank
- Dwelling setback of 8 feet where 20 feet is required to the drainfield

To construct:

- A new type III septic system

Current Zoning: Shoreland District

Existing Impervious Coverage:

29.4%

Proposed Impervious Coverage:

29.4%

- A stormwater management plan was submitted with the variance application
- Septic design was submitted to Crow Wing County for approval pending variance outcome

Development Review Team Minutes held on July 14, 2020:

- Property is located on Rush Lake at 13130 Gladick Lane with a lake setback of 75 feet
- A septic tank is existing, additional tank is proposed, and a drainfield installation is proposed with a 5 to 10 foot setback from ROW
- A septic design is needed; if using existing tank a new compliance inspection will be required
- Survey to show setbacks of all septic components from the lake, side yard, dwelling, and ROW whether existing or proposed
- 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
- Wetland Delineation is a requirement for a variance or a no wetland statement/letter
- A cut and fill calculation is required for a complete variance application
- 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. A cut and fill calculation
3. Wetland delineation or a no wetland statement/letter
4. A septic design
5. A complete Variance application with the \$500.00 public hearing fee

Parcel History:

- Gladick established in 1964
- May 1980 – Enclose bottom portion of exiting deck
- May 1989 – Demo existing retaining wall, replace and relocate retaining wall, add rock to prevent erosion
- October 2017 – Water oriented accessory structure - demo & replace existing 176 sf patio at shed
- May 30, 2017 – EXPIRED septic compliance inspection

Agencies Notified and Responses Received:

County Highway Dept: N/A

DNR: No comments were received as of 10-12-2020

City Engineer: N/A

Lake Association: N/A

Township: N/A

Crosslake Public Works: No comments were received as of 10-12-2020

Crosslake Park, Recreation & Library: N/A

Concerned Parties: No comments were received as of 10-12-2020

POSSIBLE MOTION:

To approve/table/deny the variance to allow:

- Lake setback of 44 feet where 75 feet is required to proposed septic system
- Side yard setback of 2 feet where 10 feet is required to proposed septic system
- Road right-of-way setback of 2 feet where 10 feet is required to proposed drainfield
- Dwelling setback of 4 feet where 10 feet is required to the septic tank
- Dwelling setback of 8 feet where 20 feet is required to the drainfield

To construct:

- A new type III septic system

As shown on the certificate of survey dated 9-8-2020



CERTIFICATE OF SURVEY

LOT 8, GLADICK,
SECTION 17, TOWNSHIP 137 NORTH, RANGE 27 WEST,
CROW WING COUNTY, MINNESOTA

LEGAL DESCRIPTION PER DOCUMENT NUMBER A-892013

Lot Eight (8), Gladick Addition, according to the plat thereof on file and of record in the office of the County Recorder in and for said County and State together with that portion of vacated roadway set out in the Resolution of the Council of the Village of North Crosslake and recorded in Book 22 of Miscellaneous, page 310, within the southerly extension of the boundaries of the east and west lines of said Lot Eight (8) and center line of said vacated roadway.

Together with all betterments and appurtenances belonging thereto, subject to the following exceptions: Subject to reservations, restrictions and easements of record, if any.

RUSH LAKE
GENERAL DEVELOPMENT CLASSIFICATION
NORMAL RESERVOIR POOL ELEVATION = 1231.00
100 YEAR FLOOD ELEVATION = 1231.00
HIGHEST KNOWN ELEVATION = 1234.56
INFORMATION OBTAINED FROM CORPS OF ENGINEERS LAKE ELEVATION = 1229.48 ON 7/21/2020
BASED ON NGVD 29 DATUM

LEGEND

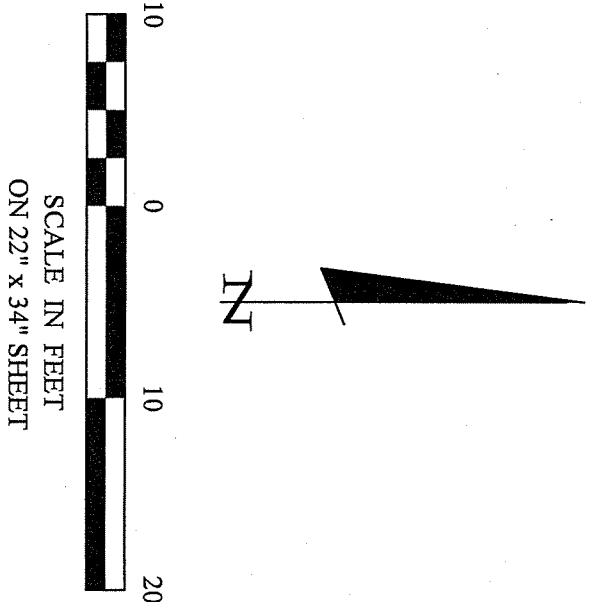
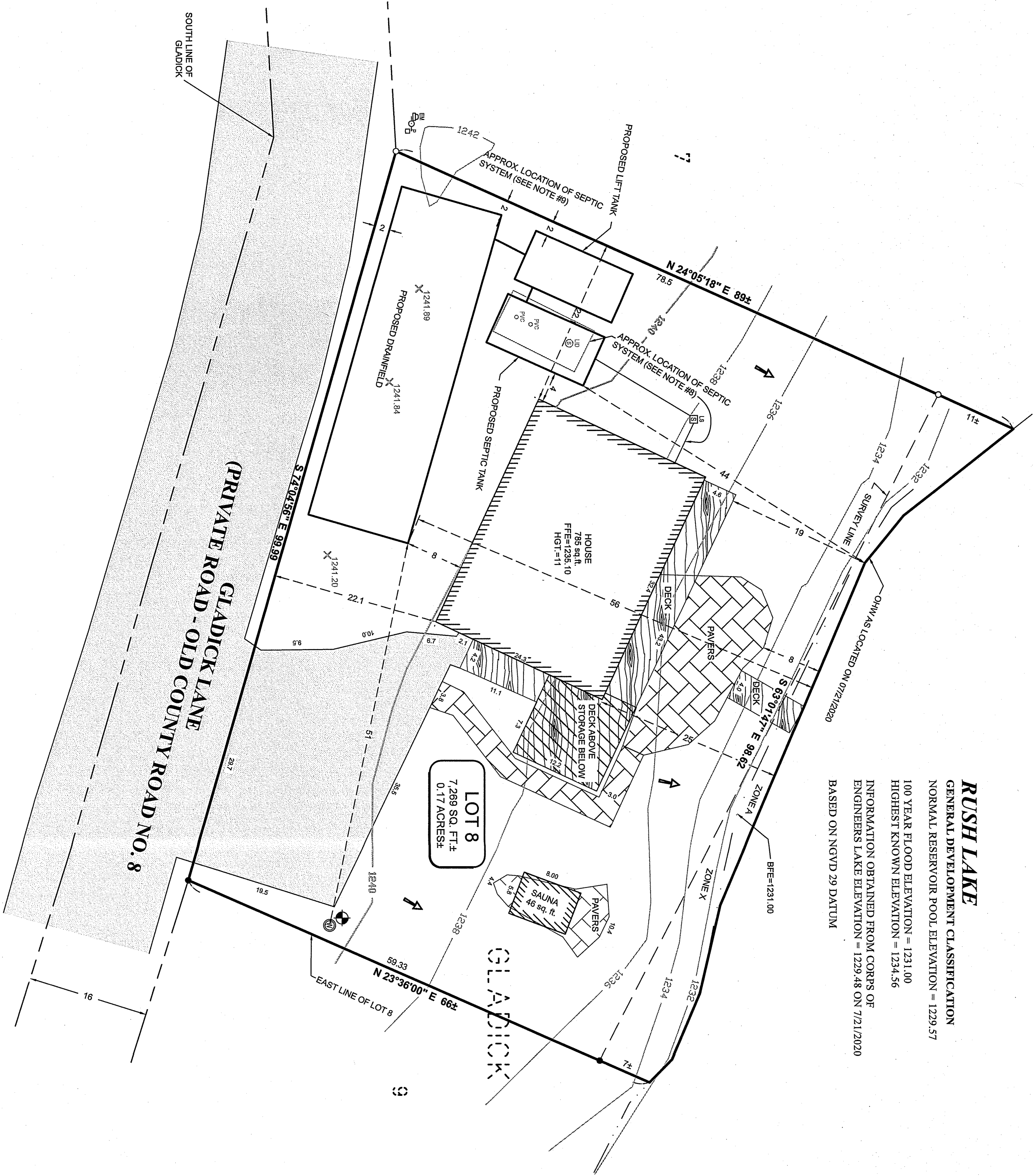
- DENOTES EDGE OF EXISTING BITUMINOUS
- DENOTES EDGE OF EXISTING PAVING STONES
- DENOTES EDGE OF EXISTING WOODEN DECKING
- DENOTES EXISTING INTERMEDIATE CONTOURS
- DENOTES EXISTING INDEX CONTOURS
- DENOTES SPOT ELEVATION (EXISTING GRADE)
- DENOTES EXISTING UTILITY POLE
- DENOTES EXISTING ELECTRIC METER
- DENOTES EXISTING PHONE PEDISTAL & PHONE BOX
- DENOTES EXISTING WELL
- DENOTES EXISTING SEPTIC TANK LID
- DENOTES EXISTING SEPTIC LEFT STATION
- DENOTES MONUMENT FOUND
- DENOTES MONUMENT SET MARKED BY LICENSE No. 44881
- ORIENTATION OF THIS BEARING SYSTEM IS BASED ON THE EAST LINE OF LOT 8, GLADICK TO HAVE AN ASSUMED BEARING OF N 23°56'00" E.

IMPERVIOUS CALCULATIONS

EXISTING	IMPERVIOUS AREA (sq. ft.)	Net Area (sq. ft.)	Percent ImperVIOUS
House	785	7,269	10.8%
Pavers	393	7,269	5.4%
Bluminius	772	7,269	10.6%
Storage	141	7,269	1.9%
Sauna	46	7,269	0.6%
Total	2,137	7,269	29.4%

NOTES:

- Contour interval as shown = 2 feet. Based on NGVD 29 datum. Contours shown have been obtained using standard survey topographic methodologies. Field located on 7/21/2020.
- Zoning for subject tract and surrounding tracts = "Shoreland District".
- There are no bluffs within surveyed property.
- Property is in "Zone X" and "Zone A" as per the FEMA 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.
- After applying the City of Crosslake setbacks per ordinance, there is no building envelope on subject property.
- Parcel ID of subject parcel: #14170614.
- The property address of subject parcel: 13130 Gladick Ln.
- Approximate location of existing septic system per sketch prepared by Amy A. Wannabe, WAS Design and Inspection, Inc.
- Approximate location of proposed septic system per sketch prepared by Martin Joyce, Martin Joyce Septic Service, LLC.
- Weiland delineation was completed on August 12, 2020, by Ben Meister, Meister Environmental, LLC.
- MN Certified Weiland Delineator #1031.



SCALE IN FEET
ON 22" x 34" SHEET

CERTIFICATE OF SURVEY
JAMES PRICE
PO BOX 27
PEQUOT LAKES, MN 56472

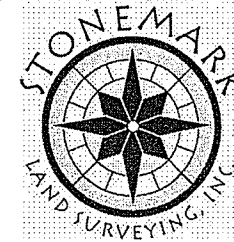
PROJECT MANAGER:
CMH
CHECKED BY:
CMH
DRAWN BY:
SGB

PROJECT No.:
20160
FILE NAME:
C20160.dwg
FIELD BOOK:
BOOK PG.

DATE:
9/4/2020
SCALE:
HORIZ. 1"=10'
VERT. NONE

DATE	REVISIONS DESCRIPTION	BY
9-4-2020	Added tank & drainfield dim. to lake	RJP

I HEREBY CERTIFY THAT THIS SURVEY, PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA.
PATRICK A. TROTTER PL541002
DATE 9-08-2020 LIC. NO. 41002



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

CERTIFICATE OF SURVEY

LOT 8, GLADICK,
SECTION 17, TOWNSHIP 137 NORTH, RANGE 27 WEST,
CROW WING COUNTY, MINNESOTA

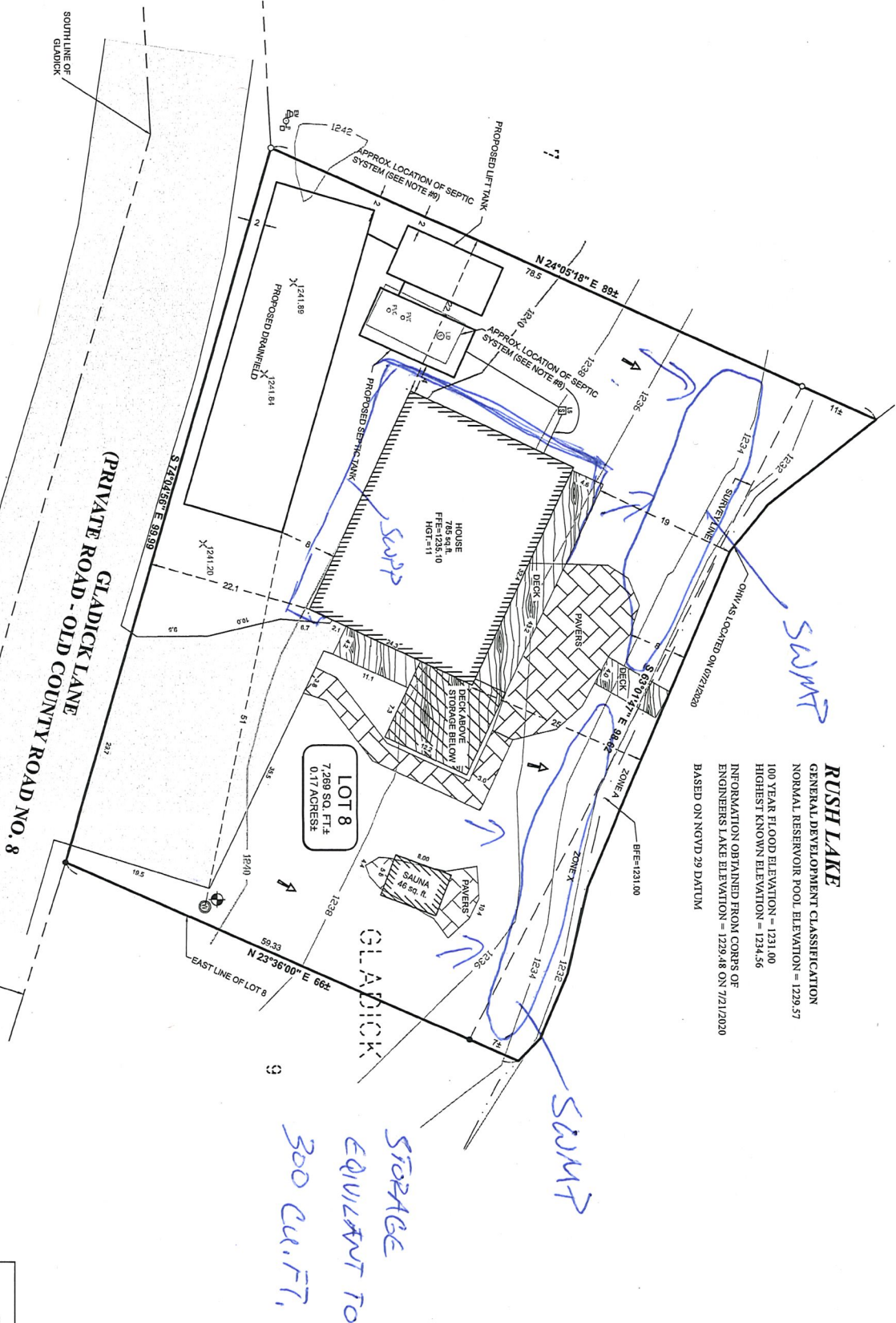
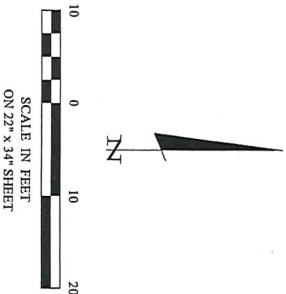
LEGAL DESCRIPTION PER DOCUMENT NUMBER 4-892013

Lot Eight (8), Gladick Addition, according to the plat thereof on file and of record in the office of the County Recorder in and for said County and State together with that portion of vacated roadway set out in the Resolution of the Council of the Village of North Crosslake and recorded in Book 22 of the Record of Deeds, page 318, within the southerly extension of the boundaries of the east and west lines of said Lot Eight (8) and center line of said vacated roadway.

Together with all hereinafter and hereinafter belonging hereto, subject to the following exceptions: Subject to reservations, restrictions and easements of record, if any.

NOTES:

1. Contour interval as shown = 2 feet. Based on NAD 83 datum. Contours shown have been obtained using standard survey topographic methodologies. Field located on 7/21/2020.
2. Zoning for subject tract and surrounding tracts - "Shoreland District".
3. There are no buildings within surveyed property.
4. Property is in "Zone X" and "Zone A" as per the FIRMA 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. After applying the City of Crosslake setbacks per ordinance, there is no building envelope on subject property.
6. Parcel ID of subject parcel: #14170614.
7. The property address of subject parcel: 13130 Gladick Ln.
8. Approximate location of existing septic system per sketch prepared by Amy A. Wamelo, W&S Design and Inspection, Inc.
9. Approximate location of proposed septic system per sketch prepared by Martin Joyce, Martin Joyce Septic Service, LLC.
10. Wetland delineation was completed on August 12, 2020, by Ben Mettler, Mettler Environmental, LLC. MN Certified Wetland Delineator #1031.



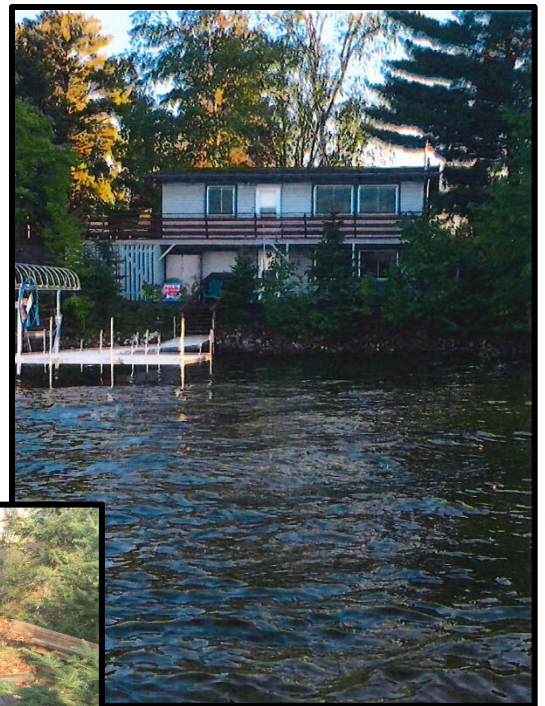
RUSH LAKE
GENERAL DEVELOPMENT CLASSIFICATION
NORMAL RESERVOIR POOL ELEVATION = 1229.57
100 YEAR FLOOD ELEVATION = 1231.00
HIGHEST KNOWN ELEVATION = 1234.56
INFORMATION OBTAINED FROM CORPS OF ENGINEERS LAKE ELEVATION = 1229.48 ON 7/21/2020
BASED ON NAD 83 DATUM

LEGEND

- DENOTES EDGE OF EXISTING BRIDGEMOUNT
 - DENOTES EDGE OF EXISTING PAVING STONES
 - DENOTES EDGE OF EXISTING WOODEN DECKING
 - DENOTES EXISTING INTERMEDIATE CONTOURS
 - DENOTES EXISTING INDEX CONTOURS
 - X 1234.5 DENOTES SPOT ELEVATION (EXISTING GRADE)
 - DENOTES EXISTING UTILITY POLE
 - DENOTES EXISTING ELECTRIC METER
 - DENOTES EXISTING PHONE TOWER/MAIL & PHONE BOX
 - DENOTES EXISTING WELL
 - DENOTES EXISTING SEPTIC SEPTIC TANK/LID
 - DENOTES EXISTING SEPTIC LIFT STATION
 - BENCHMARK TOP OF WELL ELEV. = 1241.17 NAD 83 DATUM
 - DENOTES MONUMENT FOUND
 - DENOTES MONUMENT SET MARKED BY LICENSE NO. 44881
- ORIENTATION OF THIS BEARING SYSTEM IS BASED ON THE EAST LINE OF LOT 8, GLADICK TO HAVE AN ASSIGNED BEARING OF S 23°58'00\"/>

IMPERVIOUS CALCULATIONS			
EXISTING	AREA (sq. ft.)	Net Area (sq. ft.)	Percent Impervious (sq. ft.)
House	785	7,269	10.8%
Pavers	393	7,269	5.4%
Bituminous	772	7,269	10.6%
Shoreline	141	7,269	1.9%
Sauna	46	7,269	0.6%
Total	2,137	7,269	29.4%

1 of 1	CERTIFICATE OF SURVEY	PROJECT MANAGER: CMH CHECKED BY: CMH DRAWN BY: SGB	PROJECT No.: 20160 FILE NAME: C20160.dwg FIELD BOOK: BOOK PG.	DATE: 9/4/2020 SCALE: HORIZ. 1"=10' VERT. NONE	REVISIONS DESCRIPTION DATE	I HEREBY CERTIFY THAT THIS SURVEY, PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA. <i>Patrick A. Trotter</i> PATRICK A. TROTTER PLS#41002 DATE 9-04-2020 LIC. NO. 41002	30206 Rasmussen Road Suite 1 P. O. Box 874 Pequot Lakes, MN 56472 218-568-4940 www.stonemarksurvey.com



Bethany Soderlund

From: Greg Kossan <kossan@brainerd.net>
Sent: Thursday, September 10, 2020 9:28 AM
To: Bethany Soderlund
Subject: Re: Price Septic Design

Hello Bethany, I talked to Martin and this design is for a Air B&B and so I approve of the design and concept as long as all the variances are 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: Greg Kossan <kossan@brainerd.net>
Sent: 9/8/2020 10:23:11 AM
Subject: Price Septic Design

Greg,

See attached design for Reid Price.

Have a great day!!

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.

Crow Wing County Trench/Pressure Bed Design

Property Owner: Reid & Coral Price

Date: 9/2/2020

Mailing Address: PO Box 727

City: Pequot Lakes

State: MN

Zip: 56472

Home Phone Number:

Cell:

Site Address: 13130 Gladick Lane

City: Crosslake

State: MN

Zip: 56442

Driving directions if no address issued:

Legal Description: Lot 8 Gladick

Sec: 17

Twp: 137

Range: 27

Twp Name: Crosslake

Parcel Number: 14170614

Lake/ River: Rush

Lake/River Classification: GD

Flow Data

Number of Bedrooms: 3

Dwelling Classification: I

System Type: III

GPD: 450

Wells

Deep Well: Existing Deep

Shallow Well: None

Wells to be sealed (if applicable)?

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

Time Dose
But oversizing the drainfield,

Utilities May Need to be Moved
- Gas + Power

Setbacks

Tank(s) to: Well +50

Drainfield to: Well 50

Sewer Line to well: +50

House 4 *✱*

House 8 *✱*

Air Test: No

Property Line 2 *✱*

Property Line 2 *✱*

Variance Required

Additional System Notes and Information: NEW SSTs

Need variances approved for the system to be installed.

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: *Martin Joyce*

Date: 9/2/2020

Crow Wing County Trench/Pressure Bed Design

Property Owner: Reid & Coral Price

Date: 9/2/2020

Designer's Initials:

Tank Sizing

A. Septic Tank Capacity: 2250 Gallons

Tank Type: 2 Compartments

Filter: Yes

Garbage Disposal/Basement Lift Station: Disposal and Lift

B. Pump Tank Capacity: 2250 Gallons (7080.2100)

a. Alarm Type: Electric

Time Dose

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: +6ft.

D. Native SSF: .83

(Perc. Rate [Optional] MPI)

****Enter GPD next to the type of system****

Rock Trenches

E. 6 in. Trench Depth $GPD \times D = 0.0 \text{ sq. ft.}$ Cubic Yards of Rock: 0 yds³

F. 12 in. Trench Depth $GPD \times D \times .8 = 0.0 \text{ sq. ft.}$ Cubic Yards of Rock: 0 yds³

G. 18 in. Trench Depth $GPD \times D \times .66 = 0.0 \text{ sq. ft.}$ Cubic Yards of Rock: 0 yds³

H. 24 in. Trench Depth $GPD \times D \times .6 = 0.0 \text{ sq. ft.}$ Cubic Yards of Rock: 0 yds³

I. Divide (E-H) by Trench Width for lineal feet: $0.0 \div =$

Chamber Trenches

J. Brand: Dimensions of one chamber (L x W): ft. x ft.

K. 6-11 in. Chamber Depth $GPD \times D = 0.0 \text{ sq. ft.}$

L. 12 in. Chamber Depth $GPD \times D \times .8 = 0.0 \text{ sq. ft.}$

M. Select from (K-L) if installing Chamber Trenches: 0.0

N. Divide (M) by Trench Width for lineal feet: $0.0 \div 0 =$ Lineal Feet

O. Total Chambers Needed (**Round Up**): Chambers

Seepage/Pressure Beds

P. Seepage Bed $GPD \times D \times 1.5 = 0.0 \text{ sq. ft.}$

a. Bed Dimensions ft. x ft.

b. Cubic Yards of Rock Bed Length x Bed Width x Rock Depth ft. $\div 27 = 0 \text{ yds}^3$

Q. Pressure Bed $450 GPD \times D = 373.5 \text{ sq. ft.}$ *Requires*

a. Bed Dimensions 14ft. x 45ft. *= 630 Installing*

b. Cubic Yards of Rock Bed Length x Bed Width x Rock Depth 1ft. $\div 27 = 23 \text{ yds}^3$

Additional System Notes and Information:

Installing as much drainfield as possible. Will be oversized for a 3 bedroom.

Time dosing the drainfield due to limited area and setback restrictions.

The time dosing will make this a type 3 system.

Crow Wing County Trench/Pressure Bed Design

Property Owner: Reid & Coral Price
Date: 9/2/2020

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: 45 - 2 ft. = 43ft.

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

c) Choose 3a or 3b: 43ft.

4) Total Perforation Determination:

a) (3c): 43ft. ÷ (2c): 3ft. + 1 = 15.33 Perforations / Lateral

b) (4a): 15.66 × (2a): 3 = 46.98 Total Number of Perforations

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

d) (4b): 46.98 × (4c): 0.74 GPM/Perf. = 34.77 GPM

PUMP HEAD REQUIREMENTS

5) Elevation difference:

a) Elevation difference between pump and point of discharge 8ft.

b) If pumping to a pressure distribution system, (5a) + 5 = 13ft.

c) Choose 5a if pumping to gravity or 5b for pressure: 13ft.

6) Friction loss:

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

b) Pipe length to drainfield: 10ft. × 1.25 = 12.5ft.

c) (6a): 2.06 × (6b): 12.5 ÷ 100 = 0.26 Total Friction Loss

7) Drainback:

a) Actual Pipe length 10ft. × .17 gal/ft. (Table 3) = 1.7 gal

8) (5c): 13ft. + (6c): 0.26ft. = 13.26 Total Head Required

9) Minimum Pump Size 34 GPM (4d) & 13ft. of dynamic head (8)

Designer's Initials:

Table 1		
Perforation Discharge (GPM/perf.)		
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

Table 2			
Friction Loss in Plastic Pipe			
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

Table 3	
Volume of Liquid in Pipe	
Pipe Diameter	Gal/Ft.
1.25 in.	0.078
1.5 in.	0.11
2.0 in.	0.17

Table 4			
Max Perforations/Lateral			
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 Trench/Pressure Bed Design

Property Owner: Reid & Coral Price

Date: 9/2/2020

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	Loamy Sand	10YR 3/2
6-40	Sand	10YR 4/4
40-60	Sand	10YR 5/4
60-72	Loamy Sand	10YR 6/4

#1 Alternate Site

Depth (in.)	Texture	Color

#2 Proposed Site

Depth (in.)	Texture	Color

#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			
Compacted Areas?	No			
Flooding Potential?	No			
Run on Potential?	No			
Limiting Layer Depth	Proposed #1 72"	Proposed #2	Alternate #1	Alternate #2
Slope % and Direction	0%			
Landscape Position	Flat			
Vegetation Types	Lawn			
Soil Texture	Sand			
Soil Sizing Factor	0.83		Select One	

Martin Joyce Septic Service, LLC
Septic Design, Inspection, and Repair
27604 Cty. Rd. 3 ~ Merrifield, MN 56465
Cell (218) 820-2621 Fax (218) 765-4385

Reid & Coral Price Time Dose Drainfield Construction Notes

PIN 14170614
13130 Gladick Lane
Crosslake, MN 56442

The existing 3 bedroom house is currently on a holding tank. A Class 1 – 3 bedroom house is sized for 450 GPD. Over sizing the new drainfield max out the available area. Propose reducing the daily flow to this drainfield to 70% or 300 GPD by installing time dosing. Time dosing this drainfield will make this system a Type 3. The 2250 gal lift tank will have reserve capacity when flows are over 300 GPD and space flow to the drainfield evenly. This will help with treatment and extending the life of the system. Protect the drainfield area from vehicle traffic.

Variances will be needed for:

Lake to SSTS of 55' instead of 75'
House to Tanks of 4 instead of 10'
House to Drainfield of 8' instead of 20'
P/L and ROW to Drainfield of 2' instead of 10'.

- The proposed drainfield area is sized for Approx. 750 GPD, less a safety reduction in the actual flow to daily dosing of approximately 300 GPD.
- Dosing the drainfield at 77 gal. per cycle, 4 times per day, less approximately 2 gallons of drainback per cycle would equal approx. 300 GPD to the drainfield.
- The pump should have a rundown performed on it to calibrate how long the pump needs to run to pump out approximately 77 gallons. Please contact Martin Joyce if you have questions on this.
- An alarm will be installed on the lift tank to notify the owners their water use is getting close to meeting peak reserve levels in the lift tank. The alarm will be set up so that if it sounds, there will be enough capacity to keep using the system. Just limit the water use until some time passes and water is dosed to the drainfield. Or get the tanks pumped.
- The compartmented septic tank with a filter will keep the water going into the lift and into drainfield clean. This will help extend the life of the drainfield.
- Regular pumping maintenance will be needed. Tanks may need to be pumped prior to a big event at the house. An event counter and elapsed time meter will be installed in the control panel for the lift pump. This information needs to be recorded monthly and sent to the county annually.
- Install control panel (SJE Rhombus Simplex Time Dose with counter panel - TD1W114H3A6A8AC10E) a minimum of 3' to 4' above final grade on a solid post(s). The electrical conduit into the lift tank should be 2". Install a plug in under the control panel or near the lift tank for the pump. Do not cut the plug in off the pump.

Please feel free to contact me with any questions.

Martin Joyce Septic Service, LLC

27604 County Road 3, Merrifield, MN 56465

Septic System Management Plan

Property Owner:	Reid & Coral Price	Phone:		Date:	9/2/2020
Mailing Address:	PO Box 727	City:	Pequot Lakes	Zip:	56472
Site Address:	13130 Gladick Lane	City:	Crosslake	Zip:	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)

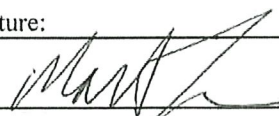

Leaks - Check (look,listen) for leaks in toilets and dripping faucets. Repair leaks promptly
Surfacing sewage - Regularly check for wet or spongy soil around your soil treatment area.
Effluent filter - *Inspect and clean twice a year or more*
Alarms - Alarm signal when there is a problem: contact Service 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:		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]

D77D--Graycalm-Grayling complex, 12 to 25 percent slopes

Graycalm

Extent: 25 to 65 percent of the unit
Landform(s): rises on outwash plains
Slope gradient: 12 to 25 percent
Parent material: outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .15
Land capability, nonirrigated 4s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

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

Grayling

Extent: 29 to 45 percent of the unit
Landform(s): rises on outwash plains
Slope gradient: 12 to 25 percent
Parent material: outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

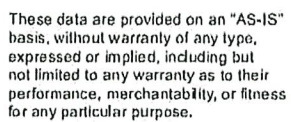
Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .20
Land capability, nonirrigated 4s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:			Texture	Permeability	Available water capacity	pH
A --	0 to 8 in	Loamy sand		rapid	0.63 to 0.87 in	5.1 to 6.5
Bw --	8 to 47 in	Sand		rapid	1.95 to 4.29 in	5.1 to 6.5
BC --	47 to 79 in	Sand		rapid	1.59 to 2.23 in	5.1 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.

This report shows only the major soils in each map unit

70610



rded in Book 22 of
as of the east and west lines of

bject to the following exceptions:

RUSH LAKE

GENERAL DEVELOPMENT CLASSIFICATION

NORMAL RESERVOIR POOL ELEVATION = 1229.57

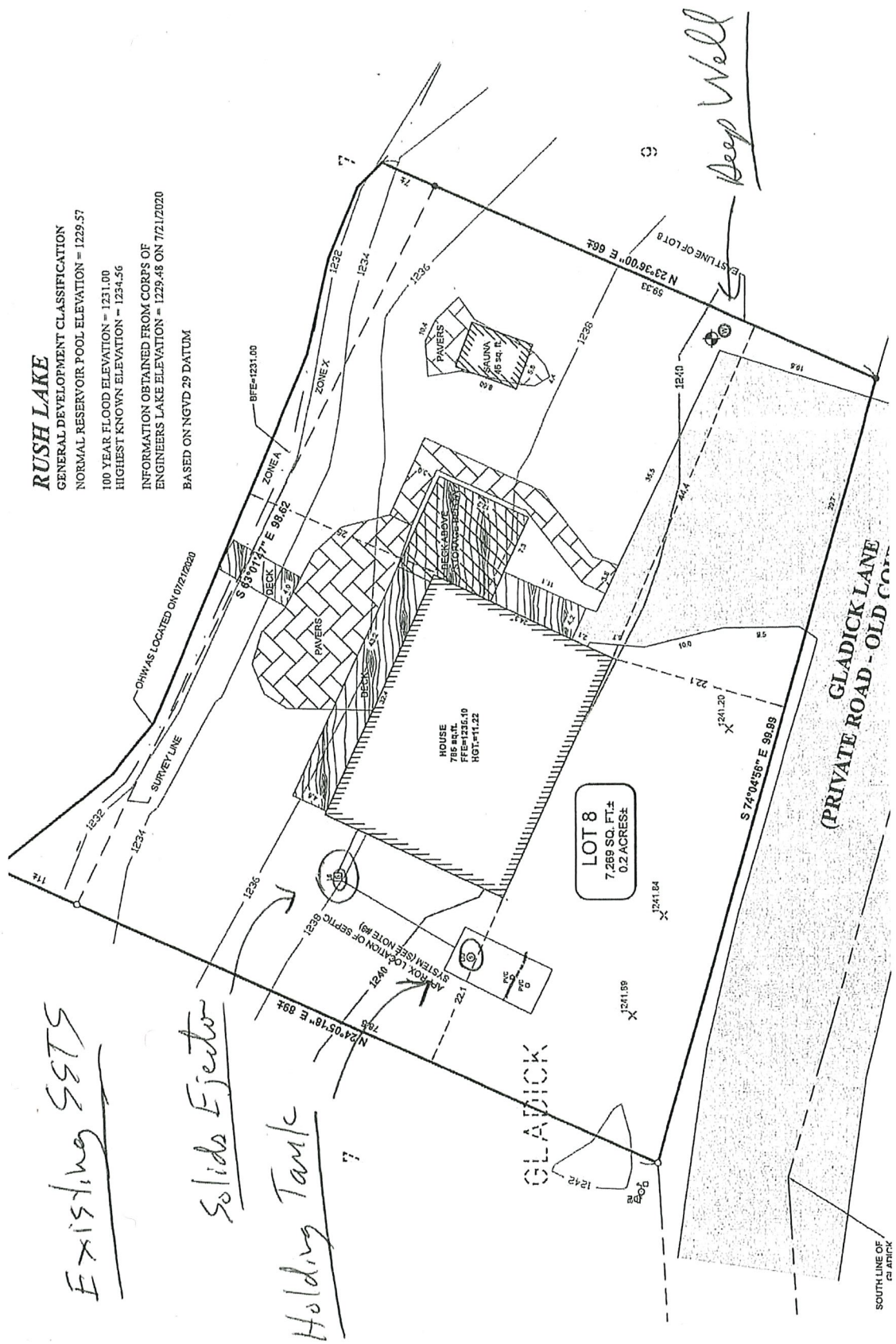
100 YEAR FLOOD ELEVATION = 1231.00

HIGHEST KNOWN ELEVATION = 1234.56

INFORMATION OBTAINED FROM CORPS OF

ENGINEERS LAKE ELEVATION = 1229.48 ON 7/21/2020

BASED ON NGVD 29 DATUM



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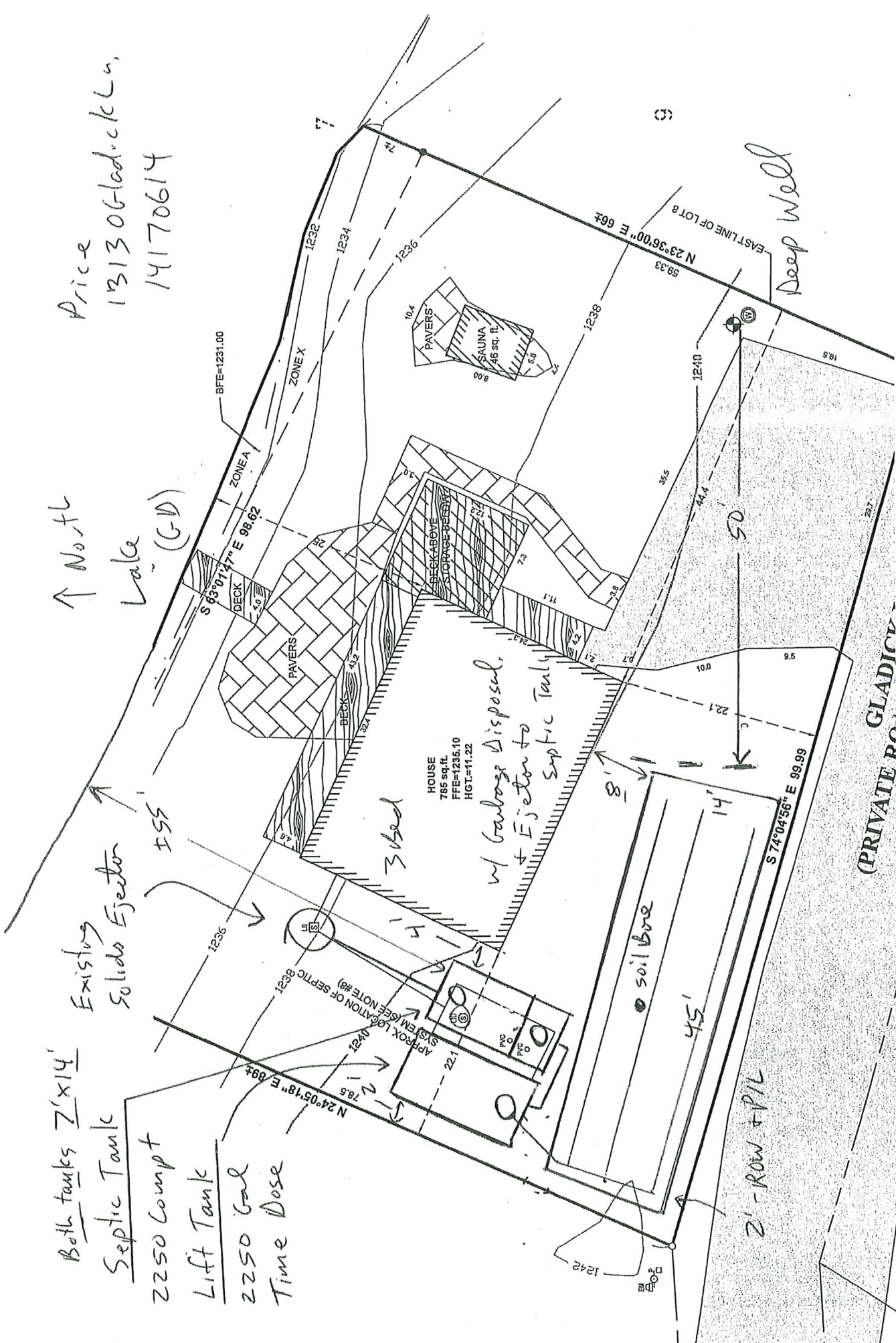
acbo,

Price
131306-lad-ckcln,
14170614

↑ North
Lake (GD)

Existing
Solids Ejector

Both tanks 2'x14'
Septic Tank
2250 Compt
Lift Tank
2250 Gal
Time Dose



No neighbor wells are a concern.



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: 475670

Permit Number: 2010161V

Property Owner(s): JAMES + CORAL PRICE James Reid & Coral C Price

Mailing Address: PO BOX 727 PEQUOT LAKES MN 56472

Site Address: 13130 GLADICK LN, Crosslake, MN 56442

Phone Number: 218-831-8088

E-Mail Address: REID@THEWOODS LANDSCAPING.COM

Parcel Number(s): 14170614

Legal Description: LOT 8 GLADICK

Sec 17 Twp 137 Rge 26 ☐ 27 ☒ 28 ☐

Lake/River Name: RUSH LAKE

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

If yes list Parcel Number(s) _____

Authorized Agent: _____

Agent Address: _____

Agent Phone Number: _____

Signature of Property Owner(s) [Signature] Date 9/4/20

Signature of Authorized Agent(s) _____ Date _____

- 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.

For Office Use:
Application accepted by [Signature] Date 9/4/2020 Land Use District SD

Lake Class GD Septic: Compliance _____ SSTS Design 9/2/2020 Installation _____

Variations

(Check applicable requests)

- ☒ Lake/River Setback
44' for septic system should be 75'
- ☒ Road Right-of-Way Setback
2' for septic system should be 10'
- ☐ Bluff Setback
- ☒ Side Yard Setback
2' for septic system should be 10'
- ☐ Wetland Setback
- ☒ Septic Tank Setback
4' from dwelling should be 10'
- ☒ Septic Drainfield Setback
8' from dwelling should be 20'
- ☒ Impervious Coverage
29.4% where 25% is allowed
- ☐ Accessory Structure
- ☐ Building Height
- ☐ Patio Size
- ☐ _____
- ☐ _____



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: WE WOULD LIKE TO INSTALL A SEPIC SYSTEM & THE LOT
IS TOO SMALL.
USE IS Residential

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

Yes ☒ No ☐

Why: ALL LOTS IN NEIGHBORHOOD ARE NON CONFORMING
everyone is too close to the other and Road

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

Yes ☒ No ☐

Why: WE PURCHASED AS IS. WOULD LIKE A REAL SEPTIC
SYSTEM.

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

Yes ☒ No ☐

Why: WOULD LIKE A FULL SEPTIC SYSTEM existing holding
tank does not treat effluent, a Time-closed drain will treat
sewage and pose less of a threat to the water.



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: