



STAFF REPORT

Application: Variance to construct a new 8.5 x 11.2 foot dwelling addition and replace existing roof with higher 8/12 pitch roof approximately 70 feet from Mink Lake (min. 100 ft required).

Applicant: Dennis and Sandra Cullip

Agenda Item: 4(g)

Background Information:

Location:

- Property Address: 8221 Greer Ave NW, Maple Lake
- Sec/Twp/Range: 24-121-27
- Parcel Number: 206020002050

Zoning: Urban/Rural Transitional (R-1)/Residential Recreation Shorelands (S-2) Overlay District, Mink Lake (Recreational Development lake).

Lot size: Approximately 105 x 185 or 19,794 sq ft (0.45 acres) according to provided survey (above OHWL).

Existing Impervious Coverage:

- Buildings: Approx. 2,076 sq ft (10.5%)
- Total: Approx. 3,894 sq ft (19.7%)

Proposed Impervious Coverage:

- Buildings: Approx. 2,056 sq ft (10.4%)
- Total: Approx. 3,779 sq ft (19.1%)

Septic System Status: The applicant has submitted a preliminary sewer design for a 3 bedroom house that will upgrade the existing system (making use of the existing drainfield). The proposed house would continue to contain 3 bedrooms.

Natural Features:

Floodplain: The property is not within an identified floodplain.

Bluff/Steep Slopes: The property contains a steep slope running from the road to the lakeshore, but it is not steep enough to be considered a bluff. There is a large timber retaining wall between the house and the lake.

Wetlands: There are not any wetlands on the property.

Proposal: The applicant is proposing to modify the existing house by removing a sun porch on one side and converting an existing deck/walkway to dwelling space. The roof on the house would be replaced and increased in roof pitch from 6/12 to 8/12.

Requested Variance(s):

- Lake setback: Construct a new 8.5 x 11.2 foot dwelling addition and replace existing roof with higher 8/12 pitch roof approximately 70 feet from Mink Lake (min. 100 ft required).

Applicable Statutes/Ordinances/Court Decisions:

1.1 A bill for an act

1.2 relating to local government; providing for variances from city, county, and town

1.3 zoning controls and ordinances; amending Minnesota Statutes 2010, sections

1.4 394.27, subdivision 7; 462.357, subdivision 6.

1.5 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA:

1.6 Section 1. Minnesota Statutes 2010, section 394.27, subdivision 7, is amended to read:

1.7 Subd. 7. **Variances; ~~hardship~~ practical difficulties.** The board of adjustment shall

1.8 have the exclusive power to order the issuance of variances from the ~~terms requirements~~

1.9 of any official control including restrictions placed on nonconformities. Variances shall

1.10 only be permitted when they are in harmony with the general purposes and intent of the

1.11 official control ~~in cases when there are practical difficulties or particular hardship in~~

1.12 ~~the way of carrying out the strict letter of any official control, and when the terms of~~

1.13 ~~the variance variances~~ are consistent with the comprehensive plan. "Hardship" as used

1.14 ~~in connection with the granting of a variance means the property in question cannot be~~

1.15 ~~put to a reasonable use if used under the conditions allowed by the official controls; the~~

1.16 ~~plight of the landowner is due to circumstances unique to the property not created by the~~

1.17 ~~landowner; and the variance, if granted, will not alter the essential character of the locality.~~

1.18 Variances may be granted when the applicant for the variance establishes that there

1.19 are practical difficulties in complying with the official control. "Practical difficulties,"

1.20 as used in connection with the granting of a variance, means that the property owner

1.21 proposes to use the property in a reasonable manner not permitted by an official control;

1.22 the plight of the landowner is due to circumstances unique to the property not created by

1.23 the landowner; and the variance, if granted, will not alter the essential character of the

1.24 locality. Economic considerations alone shall do not constitute a ~~hardship~~ if a reasonable

2.1 use for the property exists under the terms of the ordinance ~~practical difficulties~~. Practical

2.2 difficulties include, but are not limited to, inadequate access to direct sunlight for solar

2.3 energy systems. Variances shall be granted for earth sheltered construction as defined in

2.4 section 216C.06, subdivision 14, when in harmony with the official controls. No variance

2.5 may be granted that would allow any use that is ~~prohibited~~ not allowed in the zoning

2.6 district in which the subject property is located. The board of adjustment may impose

2.7 conditions in the granting of variances to. A condition must be directly related to and must

2.8 bear a rough proportionality to the impact created by the variance ~~insure compliance~~

2.9 and to protect adjacent properties and the public interest. The board of adjustment may

2.10 consider the inability to use solar energy systems a "hardship" in the granting of variances.

2.11 **EFFECTIVE DATE.** This section is effective the day following final enactment.

2.12 Sec. 2. Minnesota Statutes 2010, section 462.357, subdivision 6, is amended to read:

2.13 Subd. 6. **Appeals and adjustments.** Appeals to the board of appeals and

2.14 adjustments may be taken by any affected person upon compliance with any reasonable

2.15 conditions imposed by the zoning ordinance. The board of appeals and adjustments has

2.16 the following powers with respect to the zoning ordinance:

2.17 (1) To hear and decide appeals where it is alleged that there is an error in any

2.18 order, requirement, decision, or determination made by an administrative officer in the

2.19 enforcement of the zoning ordinance.

2.20 (2) To hear requests for variances from the ~~literal provisions of the ordinance~~

2.21 ~~in instances where their strict enforcement would cause undue hardship because of~~

2.22 ~~circumstances unique to the individual property under consideration, and to grant such~~

2.23 ~~variances only when it is demonstrated that such actions will be in keeping with the spirit~~

2.24 ~~and intent of the ordinance. "Undue hardship" as used in connection with the granting of a~~

2.25 ~~variance means the property in question cannot be put to a reasonable use if used under~~

2.26 ~~conditions allowed by the official controls, requirements of the zoning ordinance including~~

2.27 ~~restrictions placed on nonconformities. Variances shall only be permitted when they are in~~

2.28 ~~harmony with the general purposes and intent of the ordinance and when the variances are~~

2.29 ~~consistent with the comprehensive plan. Variances may be granted when the applicant for~~

2.30 ~~the variance establishes that there are practical difficulties in complying with the zoning~~

2.31 ~~ordinance. "Practical difficulties," as used in connection with the granting of a variance,~~

2.32 ~~means that the property owner proposes to use the property in a reasonable manner not~~

2.33 ~~permitted by the zoning ordinance; the plight of the landowner is due to circumstances~~

2.34 ~~unique to the property not created by the landowner; and the variance, if granted, will not~~

2.35 ~~alter the essential character of the locality. Economic considerations alone shall do not~~

3.1 ~~constitute an undue hardship if reasonable use for the property exists under the terms of~~

3.2 ~~the ordinance. Undue hardship also includes practical difficulties. Practical difficulties~~

3.3 ~~include, but is are not limited to, inadequate access to direct sunlight for solar energy~~

3.4 ~~systems. Variances shall be granted for earth sheltered construction as defined in section~~

3.5 216C.06, subdivision 14 , when in harmony with the ordinance. The board of appeals and

3.6 adjustments or the governing body as the case may be, may not permit as a variance any

3.7 use that is not ~~permitted~~ allowed under the zoning ordinance for property in the zone

3.8 where the affected person's land is located. The board or governing body as the case

3.9 may be, may permit as a variance the temporary use of a one family dwelling as a two

3.10 family dwelling. The board or governing body as the case may be may impose conditions

3.11 in the granting of variances ~~to insure compliance and to protect adjacent properties.~~ A

3.12 condition must be directly related to and must bear a rough proportionality to the impact

3.13 created by the variance.

3.14 **EFFECTIVE DATE.** This section is effective the day following final enactment.

MN Rules 6120.3900, Subp 3 (Variances)

Variances may only be granted in accordance with Minnesota Statutes, chapters 394 or 462, as applicable. They may not circumvent the general purposes and intent of the official controls. No variance may be granted that would allow any use that is prohibited in the zoning district in which the subject property is located. Conditions may be imposed in the granting of variances to ensure compliance and to protect adjacent properties and the public interest. In considering variance requests, boards of adjustment must also consider whether property owners have reasonable use of the lands without the variances, whether existing sewage treatment systems on the properties need upgrading before additional development is approved, whether the properties are used seasonally or year-round, whether variances are being requested solely on the basis of economic considerations, and the characteristics of development on adjacent properties.

502.3 Findings

The Board of Adjustment shall not grant a Variance unless it finds the following facts at the hearing where the applicant shall present a statement of evidence proving the following:

- (1) The granting of the Variance will not be in conflict with the Comprehensive Plan;
- (2) The property will not yield a reasonable return if used in compliance with this Ordinance;
- (3) The conditions causing the hardship are unique and are not shared by neighboring property in the same zone;
- (4) The granting of the Variance will not essentially alter the character of the neighborhood; and,
- (5) The granting of the Variance will not adversely affect the environmental quality of the area.

If the appellant fails to prove only one of the conditions, the Board of Adjustment cannot legally grant the Variance. The burden of proof of these matters rests on the applicant. He is requesting a special privilege, and it is incumbent upon him to prove that the conditions necessary for granting of the privilege are satisfied.

612.5 Shoreland Performance Standards

612.5 (1) General Performance Standard for Lakes

Performance standards in shoreland areas are additional to standards of the primary zoning district. In case of a conflict, the stricter standard shall apply as well as any additional requirements if flood plain elevations have been established.

(a) General Development Minimum Standards:
Structure setback from NOHW

75 ft.

Structure setback from Bluff	30 ft.
Height	2 1/2 stories (35 ft.)
Elevation of lowest floor above highest known water level	4 ft.
Water Oriented Accessory Structure setback from NOHW	10 ft.

Staff Findings: The following findings of fact are presented by Staff for consideration by the Board of Adjustment:

1) Will the granting of the variance be in harmony with the general purposes and intent of the Corinna Township Land Use (Zoning) and/or Subdivision Ordinance?

Yes. The spirit and intent of the ordinance, according to the DNRs SONAR statement in 1989, is:

“In general, structure setbacks are needed to provide an adequate distance between the development of a shoreland area and the adjacent waterbody or near blufftops to control the resource damaging effects of non-point source pollution. Soil erosion and subsequent sedimentation in water bodies and the loading of nutrients, toxics and other pollutants to the water body from shoreland area surface water runoff are examples of non-point source pollution.”

Given that the existing house is already within the lake setback and the footprint of the house/deck will not be increased, the existing conditions will not be worsened. Implementation of a stormwater management plan, as proposed, would further ensure that the spirit of the ordinance is met.

2) Will the granting of the variance be consistent with the Corinna Township Comprehensive Plan?

Yes, with possible conditions addressing stormwater management and erosion control. The Corinna Township Comprehensive Plan does not directly address lake setback issues except to make statements about protecting lake quality in shoreland areas as land is developed. The Wright County Comprehensive Plan states “Development of lakeshore property shall abide by State Shoreland Management Rules to maintain, as far as practical, a natural shoreline and natural views of shoreland areas from the lake's surface.”

The Comprehensive Plan states the following as strategies to “protect, preserve, and enhance lake water quality”:

- Require on-site storm water retention and erosion-control plans for all new lakeshore development and redevelopment of existing sites, to ensure that storm water runoff is properly managed and treated before entering surface waters.
- Require the use of best management practices as outlined by the Minnesota DNR, University of Minnesota Extension, or other appropriate agencies during the development and re-development of all property in the Township to prevent erosion and sedimentation that eventually reaches area lakes and wetlands through ditches, direct runoff, or other means.

- **Staff Comment:** The applicant, in conjunction with Wright Co SWCD, has submitted a stormwater management plan involving the installation of a rain garden. The earth work associated with the rain garden would require a separate CUP as it will involve greater than 50 cubic yards of material. The applicant is aware of this and has opted to wait to apply for that permit until later when they will have time to do it.
 - Seek ways to ensure that new development, landscaping, or other alterations on lakeshore properties preserve and/or provide for the planting of native trees and shoreline vegetation.
 - **Staff Comment:** See comment above.
 - Limit the amount of grading and filling in the shoreland area so as to minimize the disturbance of soil and prevent erosion.
 - **Staff Comment:** The only earth work will be related to the installation of a rain garden, which will require a separate CUP.

3) Is the proposed use of the property reasonable?

Yes. The proposed use of the property for a small dwelling addition and replacement of the roof is reasonable for the area and for the needs of the house which is in need of repair. Also, given the location of the sewer system, the existing house location and the slope of the land, it is not likely that there would be much improvement in the management of stormwater runoff if the house were to be completely torn down and moved back.

4) Is the plight of the landowner due to circumstances unique to the property not created by the landowner?

Yes. The need for the variances is created primarily by the existing location of the dwelling, septic system and the steep slope of the lot.

5) Will the variance, if granted, alter the essential character of the locality?

No. The proposed changes to the footprint of the dwelling, and the increase in the roof pitch will be relatively minor changes to the existing dwelling. No change to the character of the neighborhood is expected.

6) Are economic considerations the only reason the applicant cannot meet the strict requirements of the ordinance?

No. There are other considerations involved, including the location of the existing house and septic system, the steep slope and the dimensions of the lot as originally platted.

7) Could the practical difficulty be alleviated by a feasible method other than a variance (taking into account economic considerations)?

No. Unless the house is to be torn down completely, and there is significant disturbance of the steep slope, there is no other feasible way in which to meet the required lake setback.

8) Will the granting of the variance adversely affect the environmental quality of the area?

The most likely impact on the environment would come from stormwater runoff from the garage. These are proposed to be addressed with the rainwater

garden/stormwater management plan developed in conjunction with Wright Co SWCD.

Board of Adjustment Direction: The Board of Adjustment may approve the variance request, deny the request, or table the request if the Board should need additional information from the applicant. If the Board should approve or deny the request, the Board should state the findings which support either of these actions.

Staff Recommendation: Based on the findings of fact and discussion listed above, Staff would recommend approval of the request as presented.

As conditions of any approval, Staff would recommend the following:

1. The applicant is required to implement the stormwater management plan submitted in conjunction with Wright Co SWCD, or a similar plan as approved by the SWCD, within one year of the date of the completion of the house work.
2. Erosion and sedimentation control measures must be installed and maintained until the construction areas have been stabilized. These shall include at a minimum silt fences on downslope areas. Once disturbed areas are no longer being used for construction purposes, these shall be covered with mulch, erosion control blankets or other forms of temporary cover until vegetation is re-established.

Application # <u>V11-008</u>	Date Application Rec'd <u>6/13/2011</u>	Fee Collected \$ <u>400.00</u>
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(for office use only)

**CORINNA TOWNSHIP
VARIANCE APPLICATION**

Name of Applicant Dennis & Sandra Cullip Phone 651-565-2246 or 507-251-5365 - cell

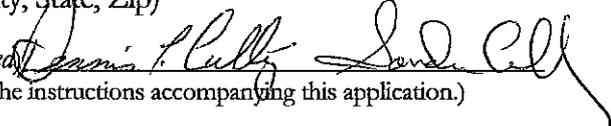
Property Address (E911#) 8221 Greer Ave NW ^{Maple} Make Lake MN 55358

Mailing Address 203 Coffee Mill Dr Local Phone _____
(if different than above) *(if different than above)*

City, State, Zip Wabasha MN 55981

Applicant is: _____ Title Holder of Property *(if other than applicant)*

- | | | |
|----------------|-------------------------------------|--------------------|
| Legal Owner | <input checked="" type="checkbox"/> | _____ |
| Contract Buyer | <input type="checkbox"/> | (Name) |
| Option Holder | <input type="checkbox"/> | _____ |
| Agent | <input type="checkbox"/> | (Address) |
| Other _____ | | _____ |
| | | (City, State, Zip) |

Signature of Legal Owner(s), authorizing application *(required)* 
 (By signing the owner is certifying that they have read and understood the instructions accompanying this application.)

Signature of Applicant *(if different than owner)*: _____
 (By signing the applicant is certifying that they have read and understood the instructions accompanying this application.)

Property ID # (12 digit # beginning with 206-XXX-XXXXXX) 206-020-002050

Full legal description of property involved in this request, including total acreage or square footage (required – attach separate sheet if necessary):
Sect 24 Twp 121 Rane 027 Campell's Terrace Lot 005 Block 002

Wright County 19,794 SF

Zoning District Recreational, Lake Name (if applicable) Mink Lake

- What type of variance are you requesting (check as many as apply)?
- | | | |
|---|---|---|
| <input type="checkbox"/> 1 per 40 Division | <input type="checkbox"/> Road Setback | <input type="checkbox"/> Building/Impervious Coverage |
| <input type="checkbox"/> Lot Line Adjustment | <input checked="" type="checkbox"/> Lake or River Setback | <input type="checkbox"/> Height of Structure |
| <input checked="" type="checkbox"/> Undersized Lot | <input type="checkbox"/> Side or Rear Line Setback | <input type="checkbox"/> Septic System Setback |
| <input type="checkbox"/> Appeal of Staff Interpretation | <input type="checkbox"/> Bluff Setback | <input type="checkbox"/> Other _____ |

What are you proposing for the property? State nature of request in detail: We are planning a complete remodel of the house. To facilitate that we would like to add a small addition to the lake side of the house to square off a previous addition. We also will remove the existing roof and replace it with a new roof.

Please read the variance application in its entirety before submitting the application. See the attached schedule of public hearings for relevant application deadlines. The full land use ordinance is available at the Town Hall and online at www.corinnaplanning.info.

NOTE: Incomplete applications, as determined by the Zoning Administrator, will not be accepted or scheduled for a hearing. It is recommended that you work with the Zoning Administrator well before the application deadline to ensure that you have all required information so as to avoid delays in the hearing of your application.

Please complete all of the following questions (if you are outside a shoreland zone, do not complete these questions. Instead complete the next set of questions below):

1. Describe why you believe the granting of the variance request would be in harmony with the general purposes and intent of the Corinna Township Land Use and/or Subdivision Ordinance (available at www.corinnaplanning.info).

We want to take a vacated property in disrepair and bring it back to being a comparable property to the other homes on Mink Lake. This will include making the property into a year round residence for us that will continue to be maintained according to the ordinances of Corinna Township.

2. Describe why you believe the granting of the variance would be consistent with the Corinna Township Comprehensive Plan (Plan available at www.corinnaplanning.info).

By granting this variance we will be able to improve the property to reduce the current rainwater runoff into Mink Lake. We plan on adding gutters, downspouts, and water collection with the new roof. We also plan to update the landscaping on the lake side of the property to put in a rain garden.

3. Describe why you feel that your proposal is a reasonable use of the property.

The property was originally built to be year round residence however after years of disrepair and negligence the home is no longer a viable year round property. The current landscaping and lack of gutters/water collection are causing water problems in the home, including making it prone to mold and making elements of the home no longer structurally sound.

4. Describe what factors contributing to the need for a variance were not in your control. Address factors such as the lot size or shape, topography, location of existing buildings, sewer systems and wells, and any other factors you feel are relevant.

The lot size is slightly under the required size, the home is setback ^{72.2} ~~74~~ feet from the lake shore versus the current 100 foot requirement.

5. Describe the character of the area and why your project will not substantially change the character of the neighborhood or be a detriment to nearby properties.

The neighborhood is primarily year round homes as this property was originally intended to be. We feel this project will bring this property up to the standards of the neighborhood to make it compatible with other homes.

6. Describe why it is not feasible for your project to meet the minimum requirements of the ordinance. What options did you explore that would minimize the variance necessary and why did you determine these were not feasible alternatives?

To meet the current ordinances we would need to increase the setback from the lake shore by at least 26 feet, in doing so the home would not be able to fit the lot nor would there be room for a new septic system.

7. Discuss what impacts, if any, the requested variance may have on the environmental quality of the area. For any potential impacts, how do you intend to eliminate or minimize their effect?

The requested variance will improve the environmental quality of the area with the addition of gutters and water collection as well as the implementation of a rain garden.

8. Please include any other comments pertinent to this request.

The home has three severe issues that this variance will solve: water damage, poor insulation/ lack of ability to properly insulate, and elements of the home are no longer structurally sound. The water damage is due to the poor drainage around the home, the poor insulation is due to the current construction of the roof that can be fixed using a truss type structure, and the current sun room is no longer a structurally sound element of the house.

6-10-11

Dennis & Sandra Cullip
203 Coffee Mill Dr.
Wabasha, MN 55981

Storm water management for property located at 8221 Greer Ave NW, Maple Lake, MN.

During construction we will install two rows of silt fencing between project area and lake.
Please see site plan for locations.

Our completed project will incorporate gutters and down spouts with this water being piped to a proposed rain garden. In addition landscape work on the road side of the house will direct rain water around the house to rain garden. Please see site plan of more details

35
83
40
74
11
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ROBERT J. HIIVALA
WRIGHT COUNTY AUDITOR/TREASURER
10 SECOND STREET N.W. ROOM 232
BUFFALO, MN 55313-1194
763-682-7572 or 763-684-4540
www.co.wright.mn.us

Property Tax Statement for Taxes Payable in 2011

Save for future reference

Property ID #: R206-020-002050

Description:

Sect-24 Twp-121 Range-027 CAMPBELL'S TERRACE Lot-005 Block-002

Taxpayer ID Number: 258563
DENNIS & SANDRA CULLIP
203 COFFEE MILL DR
WABASHA MN 55981-1384



**\$\$\$
REFUNDS?**

You may be eligible for one or even two
refunds to reduce your property tax.
Read the back of this statement to find
out how to apply.

Taxes Payable Year:	2010	2011
Your Property Tax Values & Classification		
Estimated Market Value:	237,300	218,400
Improvements Excluded:		
New Improvements/ Expired Exclusions:		
Taxable Market Value:	237,300	218,400
Property Classification:	RES HMSTD	RES HMSTD

- Use this amount on Form M1PR to see if you are eligible for a property tax refund. File by August 15. If this box is checked, you owe delinquent taxes and are not eligible.
- Use these amounts on Form M1PR to see if you are eligible for a special refund.

Your Property Tax and Credits

3. Your property taxes before credits	2,632.83	2,561.84
4. Credits that reduce your property taxes		
A. Homestead and agricultural market value credits	158.83	175.84
B. Other Credits		
5. Property taxes after credits	2,474.00	2,386.00

Property Tax by Jurisdiction

6. County		789.23	787.97
LAKE IMPROVEMENT		95.69	93.15
7. City (TOWN OF CORINNA)		421.73	358.68
8. State General Tax			
9. School district (0881)			
A. Voter approved levies		924.15	920.56
B. Other local levies		243.20	225.64
10. Special Taxing Districts			
11. Non-school voter approved referenda levies			
12. Total property tax before special assessments		2,474.00	2,386.00

1st 1/2 PD
5-10-11
CU #1430

Special Assessments on Your Property

13. Special assessments	Principal \$	70.00	70.00	70.00
A. FIRE DEPT 51030-0		45.00		
B. CO SW DEBT 86000-0		25.00		

14. YOUR TOTAL PROPERTY TAX AND SPECIAL ASSESSMENTS	2,544.00	2,456.00
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PAYABLE 2011 2nd HALF PAYMENT STUB

PLEASE READ THE BACK OF THE STATEMENT FOR IMPORTANT INFORMATION.

TO AVOID PENALTY PAY ON OR BEFORE: OCTOBER 17

Property ID Number: R206-020-002050

Bill Number: 28858

ID Number: 258563



DENNIS & SANDRA CULLIP
203 COFFEE MILL DR
WABASHA MN 55981-1384

If your address has changed please check this box and show the change on the back of this stub.

SECOND 1/2 TAX AMOUNT DUE:	\$1,228.00
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PENALTY:

TOTAL:

****DO NOT PAY****
YOUR TAXES HAVE
BEEN SENT TO YOUR
ESCROW AGENT
WELLS FARGO E TAX
SERVICE

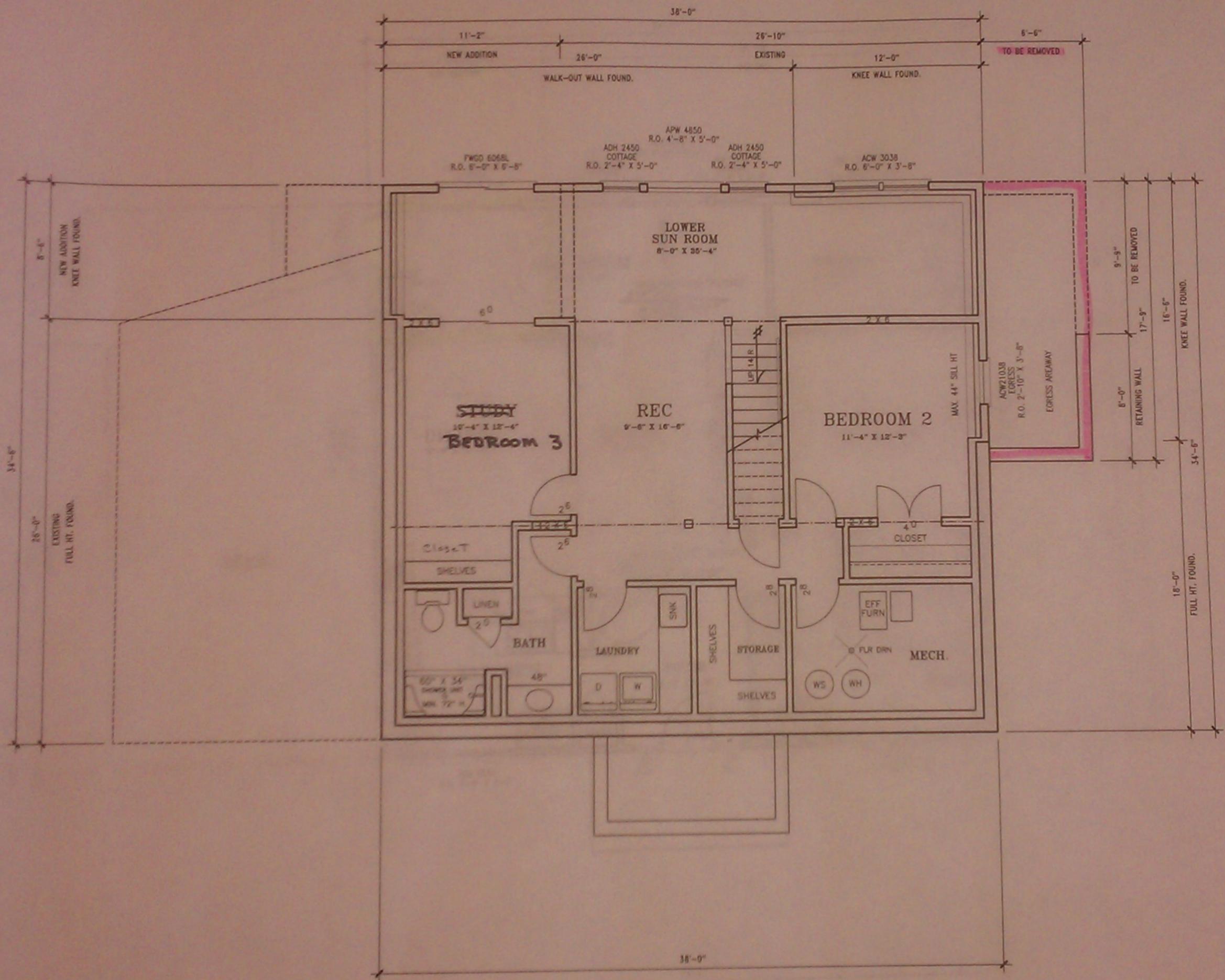
Prior Owners
Escrow

MAKE CHECKS PAYABLE & MAIL TO:

ROBERT J. HIIVALA
WRIGHT COUNTY AUDITOR/TREASURER
10 SECOND STREET N.W. ROOM 232
BUFFALO, MN 55313-1195

No Receipt Sent Unless Requested. Your cancelled check is your receipt. This receipt is void if the check is not honored.

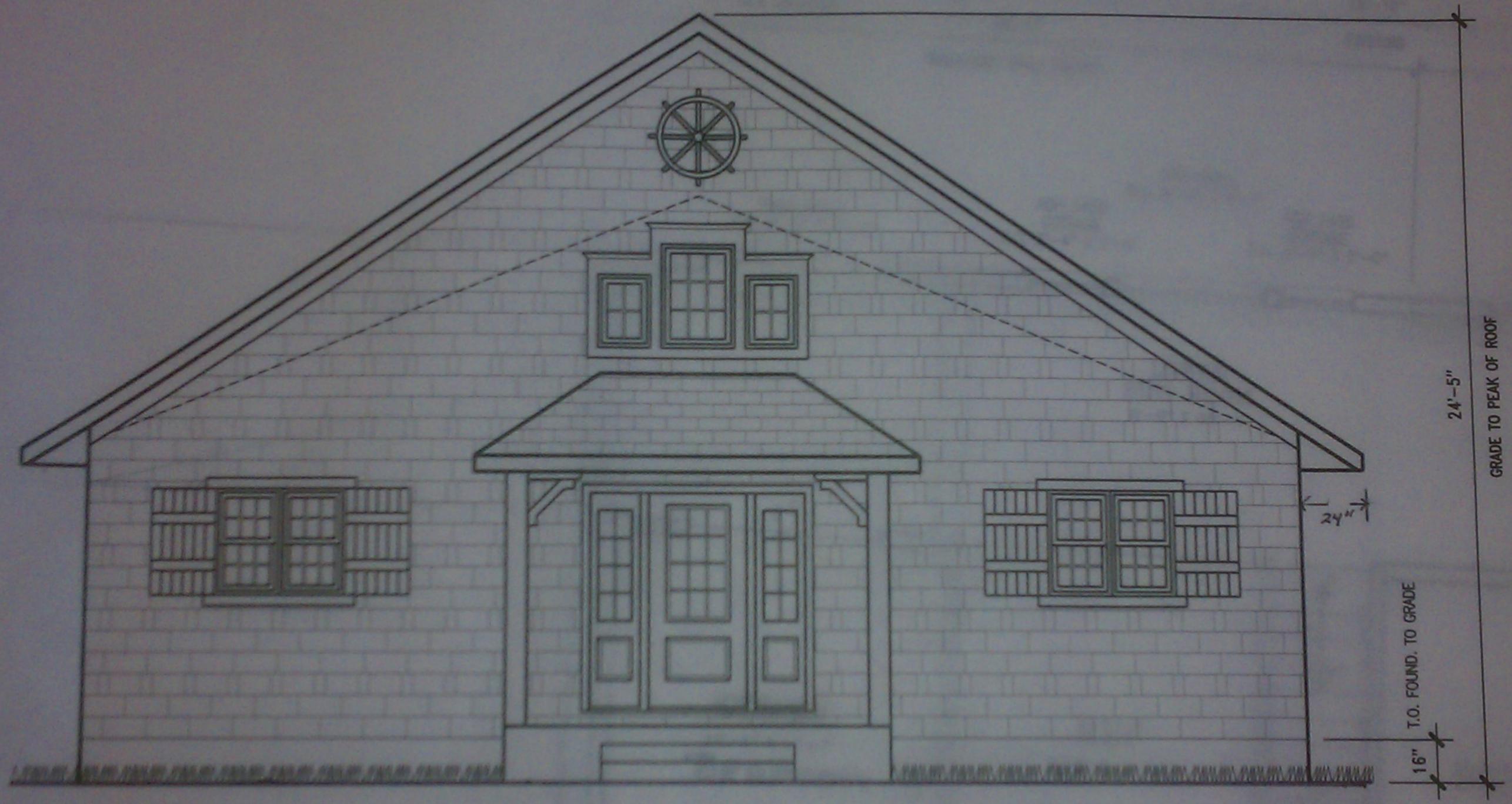
↑
DETACH HERE AND RETURN THIS STUB
WITH YOUR SECOND HALF PAYMENT.
DO NOT STAPLE.



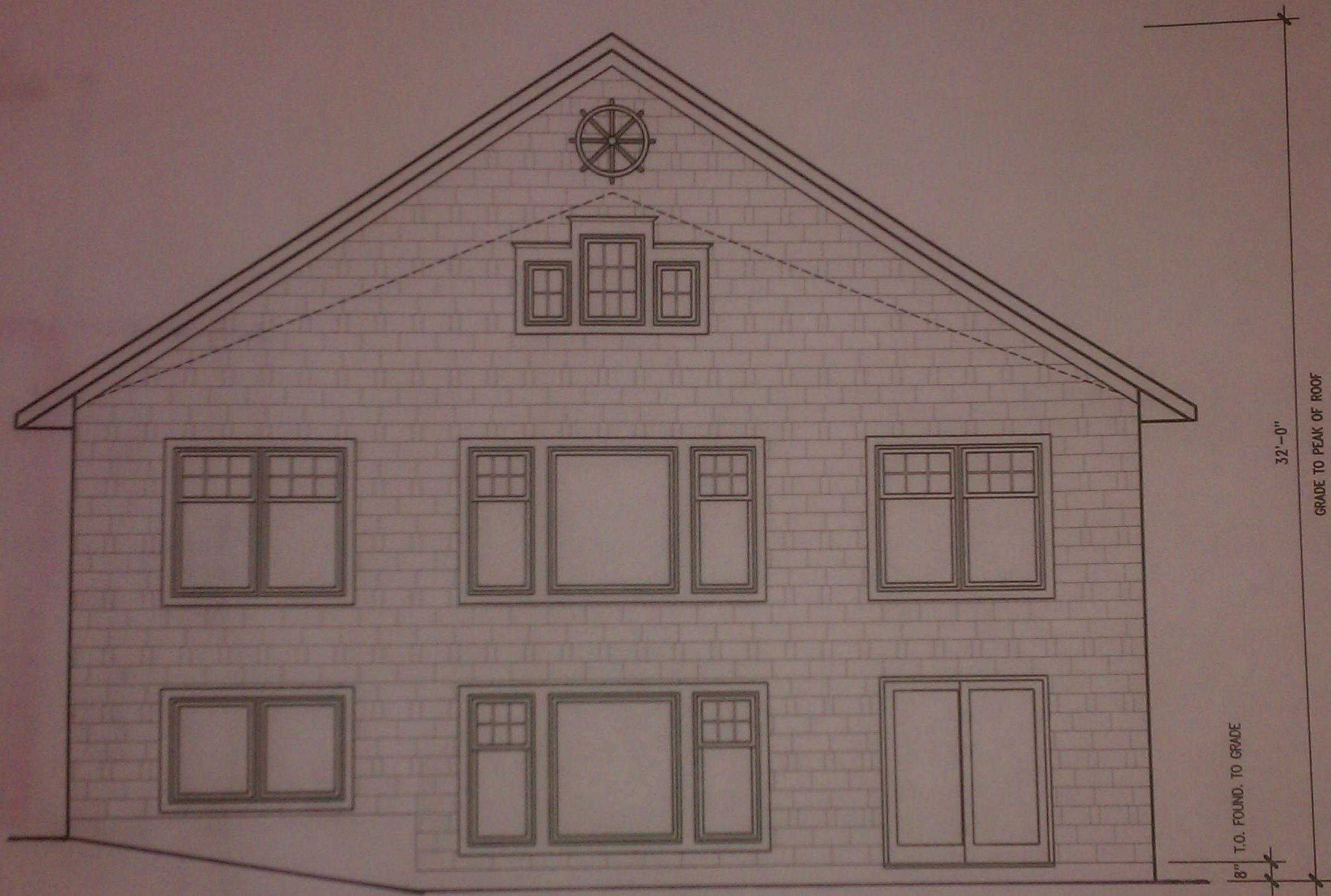
FOUNDATION / BASEMENT PLAN

EXISTING: 1216 S.F.

NEW: 95 S.F.

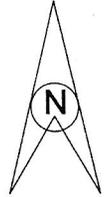


FRONT ELEVATION



REAR/RIVER ELEVATION

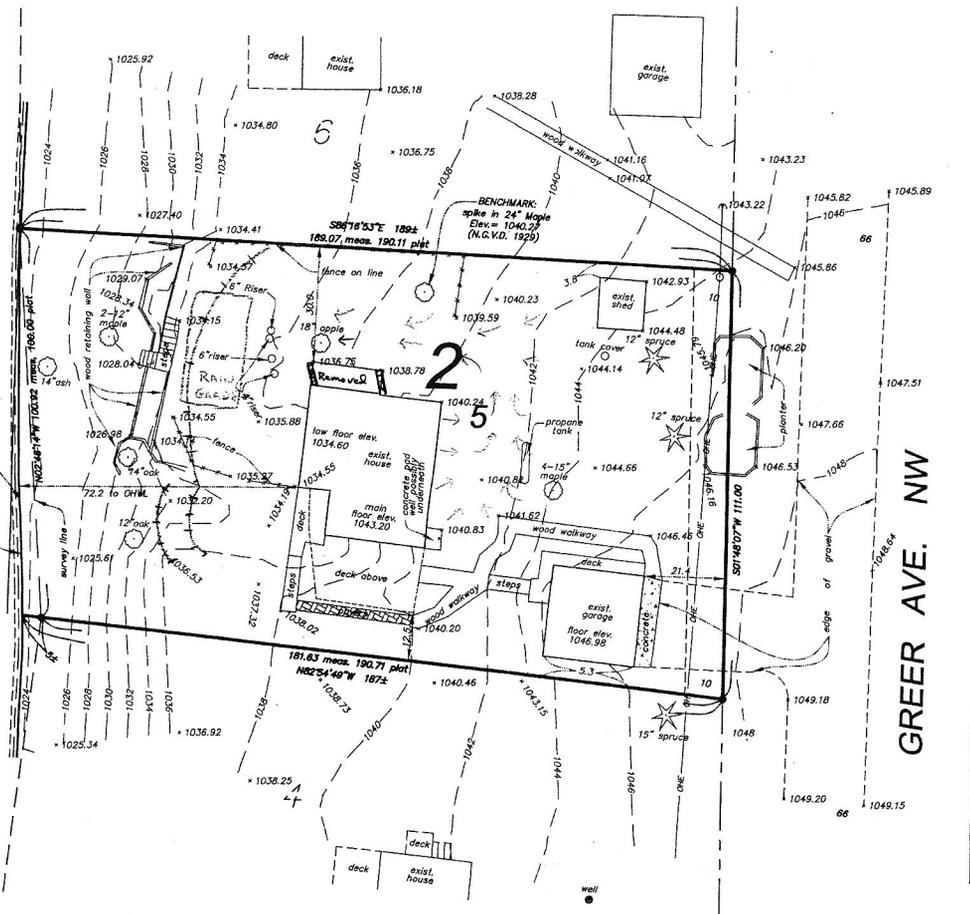
Certificate & Topographic Survey



AREA TO OHWL = 19,794 SF

MINK LAKE

Top of water on 4/22/11 = 1023.18
OHWL = 1023.10 according to the MN DMR
Present shoreline



LEGEND

- denotes fence
- denotes utility easement per the plot of CAMPBELL'S TERRACE
- denotes overhead electric
- denotes existing contour
- denotes spot elevation
- denotes power pole
- denotes tree
- denotes guy wire
- SILT FENCE
- PROPOSED RAIN GARDEN
- RETAINING WALL
- WATER Runoff and Direction

PROPERTY DESCRIPTION:
Lot 5, Block 2, CAMPBELL'S TERRACE, Wright County, Minnesota,
according to the record plot thereof.

- denotes iron monument found
- denotes iron pipe set and marked as shown:
- ⊕ denotes soil boring
- ⊙ denotes percolation test hole

Certificate & Topographic Survey on Lot 5, Block 2, CAMPBELL'S TERRACE, Wright County, Minnesota

Requested By: **Dennis Cullip**

Date: 4/28/11 Drawn By: M.L.H. Scale: 1" = 20' Checked By: P.E.O.

I hereby certify that this survey, plan, or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.

Paul E. Otto
Paul E. Otto
Date: 4/28/11 License # 40062

OTTO ASSOCIATES
Engineers & Land Surveyors, Inc.

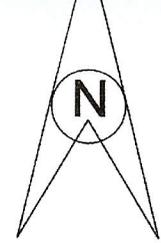
www.ottoassociates.com
9 West Division Street
Buffalo, MN 55313
(763)682-4727
Fax: (763)682-3522

Revised:

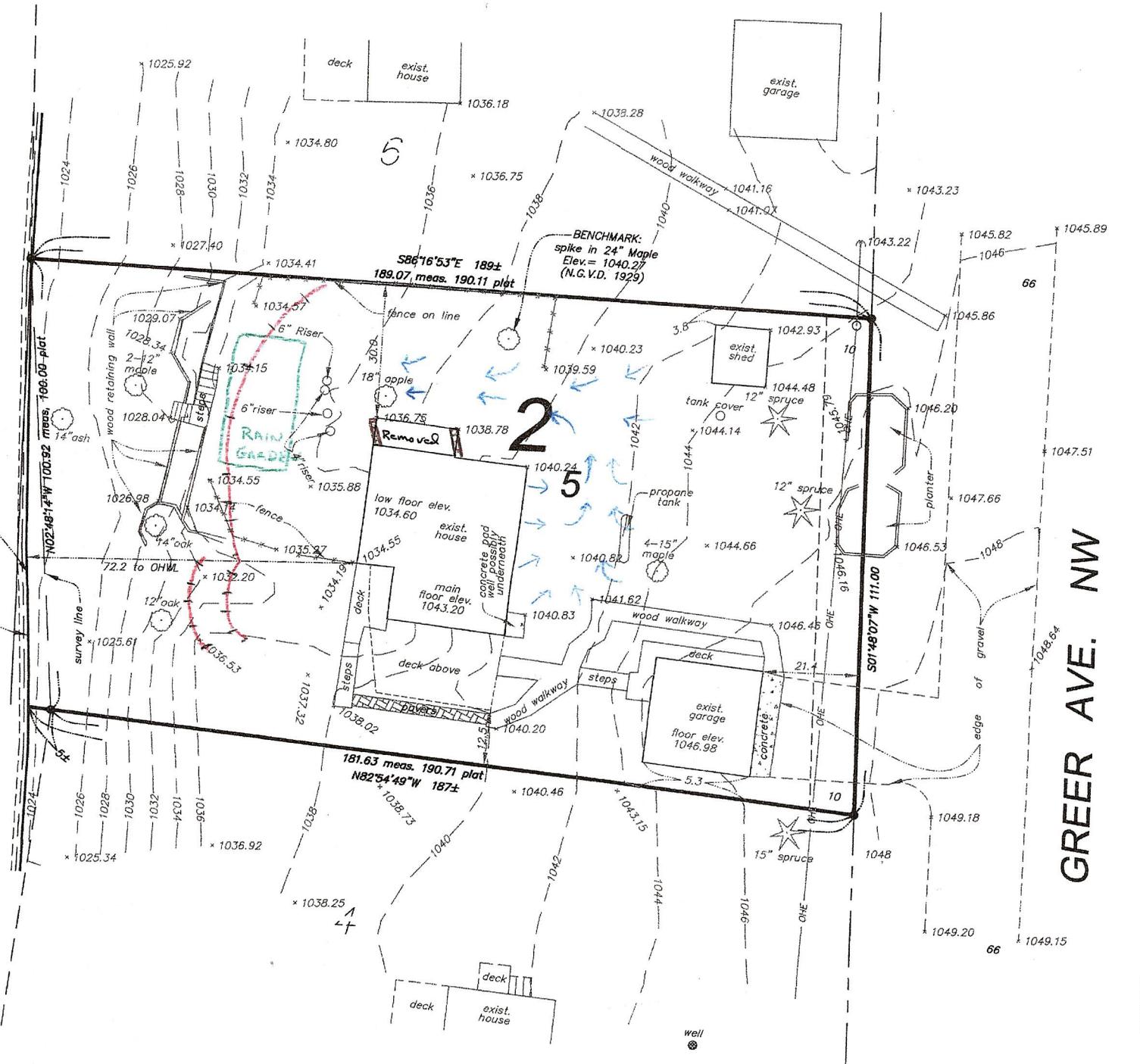
Job No. 1-11-0071

MINK LAKE

Top of water on 4/22/11 = 1023.18
 OHWL = 1023.10 according to the MN DNR
 present shoreline



AREA TO OHWL = 19,794 SF



LEGEND

- denotes fence
- denotes utility easement per the plat of CAMPBELL'S TERRACE
- denotes overhead electric
- denotes existing contour
- denotes existing spot elevation
- denotes power pole
- denotes tree
- denotes guy wire

- SILT FENCE
- PROPOSED RAIN GARDEN
- RETAINING WALL
- WATER RUNOFF and Direction

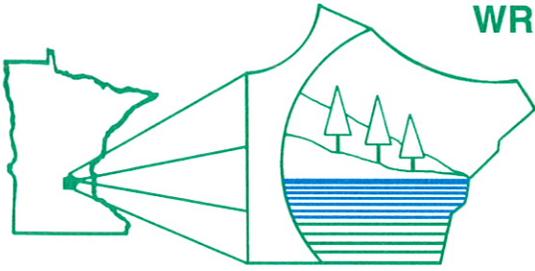
GREER AVE. NW

PROPERTY DESCRIPTION:
 Lot 5, Block 2, CAMPBELL'S TERRACE, Wright County, Minnesota,
 according to the record plat thereof.

Requested By:

I hereby certify that this survey

Revised:



WRIGHT SOIL AND WATER CONSERVATION DISTRICT

311 Brighton Ave. S., Suite C
Buffalo, Minnesota 55313
Telephone (763) 682-1933
(763) 682-1970
Fax (763) 682-0262

June 20, 2011

Dennis Cullip
8221 Greer Avenue NW
Maple Lake, MN 55358

**RE: SE ¼ of the SE ¼, Section 24, Township 121, Range 27, Wright County, Minnesota,
(Corinna Township). Request to install a raingarden to treat stormwater runoff from a proposed
new dwelling.**

Dear Mr. Cullip,

The Wright Soil and Water Conservation District (SWCD) has reviewed and inspected the above mentioned property to construct a raingarden to treat the stormwater runoff from proposed impervious surfaces instead of directly discharging stormwater runoff into Mink Lake.

A site visit proved the best possible solution to treat stormwater runoff from the additional impervious surfaces being proposed would be to install a raingarden. The placement of the raingarden should allow at least 3 feet of separation from the Ordinary High Water (OHW) mark of 1023.1 feet. Placement should be at least 10 feet from the foundation of the proposed dwelling and septic site. The proposed location and requirements of the raingarden for this site can be observed on the attached design.

Given the undersized lot and close proximity to the neighboring parcel temporary sediment control devices should be used to ensure sediment remains on-site. Temporary erosion control measures such as silt fence should be utilized if at all possible to maintain as much sediment onsite as possible. Ideally the location of the silt fence should be trenched in on down gradient perimeters of all disturbed areas and run parallel to the shoreline. This will help settle out soil particles and provide protection for all areas of the disturbance. A barrier (Ex. silt fence) should be placed around the 20 foot septic setback and proposed raingarden location to ensure disturbance or soil compaction does not occur from equipment during construction.

Please note during final grading if soil is spread around the base of the mature trees at too great of a quantity it has the potential to harm or even kill the mature trees. Once construction has ceased all exposed soils require sod or grass seed and disk anchored mulch. The silt fences installed should be removed once the vegetation has reached 70% cover over the entire disturbed areas.

The raingarden location will require two herbicide applications to kill off existing vegetation using a Glyphosate herbicide allowed near water such as Rodeo or Shore Klear. After allowing 10 days for the herbicide treatment to take effect the area treated can then be excavated, under drained, planted, and mulched to ensure the disturbed areas remain stabilized until permanent vegetation is stabilized over 70% of the entire disturbed areas has occurred. Further maintenance on the raingarden will be required to ensure noxious and invasive weeds are being controlled to ensure survival of native vegetation.

Final approval of proposed request is ultimately the decision of the Corinna Township Planning and Zoning department. The SWCD reviews the site for environmental quality concerns as the Planning and Zoning department provides guidance on any necessary permits or approval.

After reviewing the proposed activity in conjunction with the Wright SWCD raingarden design there are no major concerns with the approval of the proposed project. Thank you for addressing our comments and if you have any questions or concerns please feel free to contact myself or the District.

Kind Regards,



Brian Sanoski
Urban Conservation Specialist

Cc: Ben Oleson, Corinna Township Planning & Zoning



Cullip Raingarden Design

Dennis Cullip
8221 Great Avenue NW
Maple Lake, MN 55358
(507) 251-5365



- 4" Perforated Tile
- Raingarden
- Impervious
- 2' Contour
- Parcel Boundary
- Road

Dennis Cullip

Site Visit - June 13, 2011

Site Summary and Recommendations

Reviewed by: Wright Soil and Water Conservation District

Cullip Raingarden Design

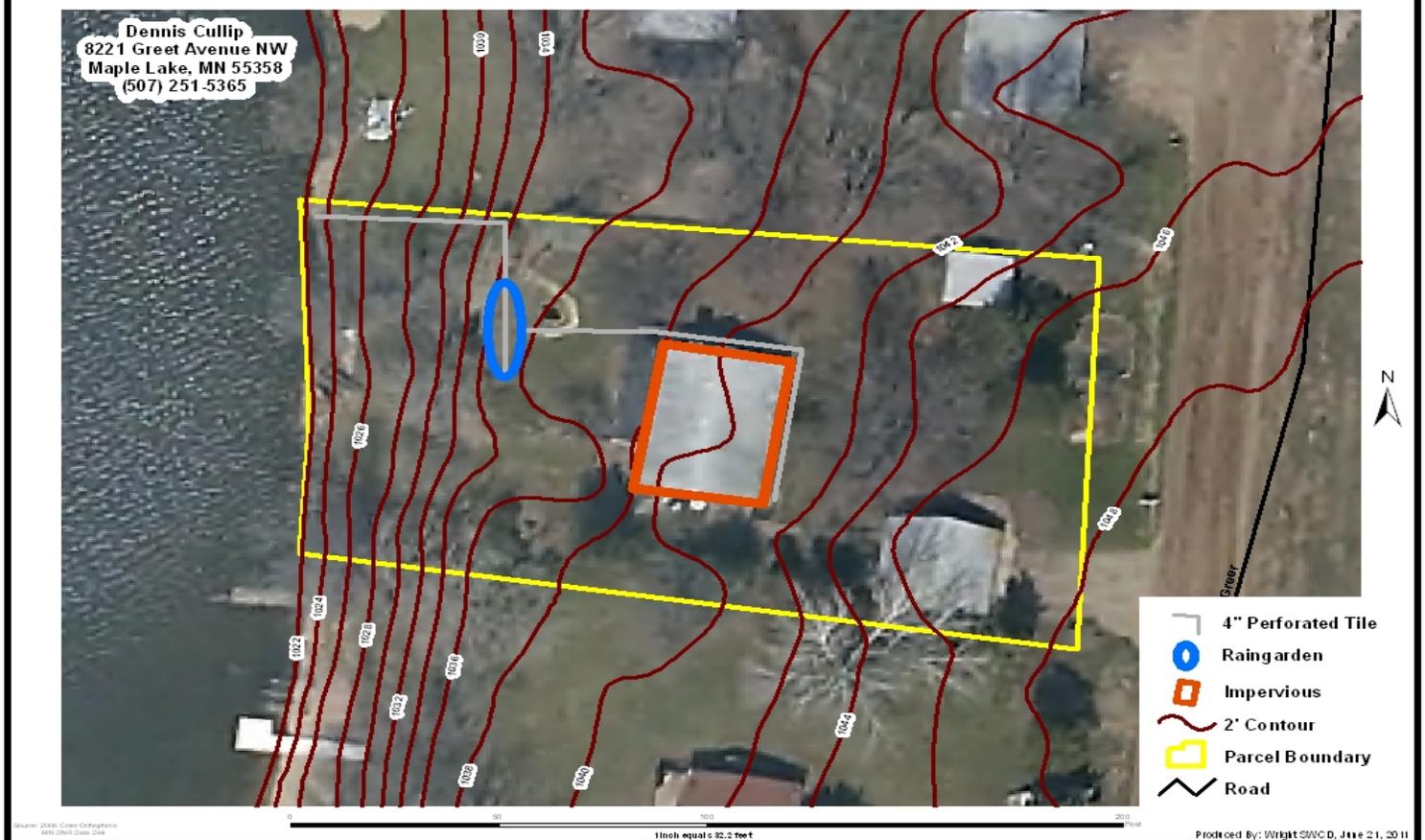


Photo 1:

View looking at a portion of landscaping to be treated by native vegetation in the form of a raingarden. The site could be considered a potential site for a raingarden because of the natural watershed and topography allowing the stormwater runoff to drain into a central location via over-land flow and underground tile on the property. The proposed restoration site currently is occupied by traditional lawn and with adequate sun light for a planting to occur.

The stormwater runoff from the house and lawn slope towards the proposed raingarden and currently have potential to travel untreated into Mink Lake. The property owner has voluntarily agreed to direct and treat his stormwater runoff through the use of a raingarden under the direction and supervision of the Wright Soil and Water Conservation District (SWCD). This location for a raingarden would be ideal to collect and infiltrate stormwater runoff before traveling untreated into the lake.

Restoration Recommendations:

Native plants have long term benefits for water quality as well as wildlife and aquatic habitat. The Wright SWCD may cover costs up to 50% of \$500.00 upon District Board approval. Planting should occur when plants can be maintained and watered by the landowner if needed. The following is a proposed guide for property owners and is subject to change upon request. The Wright SWCD encourages landowners to provide input on plant selection to ensure a proper variation of color, size, and blossom time can be enjoyed by the landowners and wildlife year round. Required technical support of sizing, placement, quantities, estimates, staking and soil amenities will be provided by the SWCD in addition to providing construction and installation oversight.

In order to maintain the beauty of a restoration planting and create less confusion during maintenance we recommend a cluster planting be implemented. Cluster planting involves strategically placing uniform plant species together to provide continuity to the site and avoid randomness among the project. Given the amount of sunlight at different times throughout the day, shade and sun tolerable plants should be planted of upland and transitional varieties. Lower areas remaining saturated during rain events should favor transitional species adaptive to wetter climates.

Native plantings will vary in height and should be considered when designing a restoration site. It is suggested to plant native grasses where runoff is first entering the raingarden to increase the chance of collecting any heavier soils and debris before accessing the raingarden. This process will help to ensure the raingarden doesn't become plugged by sediment transported during large rain events over time. The restoration footprint for the raingarden is estimated at approximately 175.5 square feet by 12 inches deep, and could be designed in any shape to best fit the landscape. Transitional and upland plant species should be considered when planting to compensate for lower lying areas which may at times receive an increased amount of water. Transitional area accounts for approximately 52.5 square feet of planting area and requires approximately 58 plugs to be planted with a spacing of 12 inches. The plants considered for this area are the following: Blue Flag Iris, Blue Vervain, Bottle Gentian, Button Blazing Star, Cardinal Flower, Great Blue Lobelia, Joe Pye Weed, Obedient Plant, Mountain Mint, Obedient Plant, or Turtlehead. The upland area accounts for 123 square feet of planting area and requires approximately 136 plugs to be planted with a spacing of 12 inches. The plants considered for this area are the following: Anise Hyssop, Black Eyed Susan, Butterfly Weed, Fireweed, Heath Aster, Hoary Vervain, Little Bluestem, New England Aster, Purple Coneflower, Rattlesnake Master, Thimbleweed, or Wild Bergamot.

2" of cedar mulch could be incorporated into the design plan if requested by the landowner to help maintain moisture for the plants and act as an initial weed barrier. There are some benefits of adding mulch to any project, but cost will increase as a result of this demand. The proposed runoff from the roof of the house should be channeled by gutters and discharge into the raingarden through underground drain tile.

The soils in the area are primarily clay and the use of an underdrain with engineered soils would be required to ensure the raingarden drains down within 48 hours of a 2" rain event. The underdrain would be placed in the bottom of the raingarden and outlet on the shoreline of the property. The use of a small rock stilling basin would be beneficial to ensure future scouring of the shoreline is avoided. The use of 12" of sand and a planting medium of 70% compost and 30% sand 12" deep would be required to be installed over the underdrain to allow the underdrain to function properly. The design has allowed for any additional water from a sump pump to discharge into the raingarden.

Restoration Recommendations:

175.5 Square Feet by 12" Deep

This raingarden has been designed to treat the first 1" of stormwater runoff from the impervious surfaces. The required footprint of the raingarden required should be at least 175.5 feet with a ponding depth of 12 inches. Raingarden sideslopes should be at least 3 to 1 to provide adequate ponding for stormwater runoff. Plants selected for this area are required to be forbs and grasses of native varieties to Wright County. Shredded Cedar mulch is recommended if applied to ensure washing or floating of mulch does not occur during rainevents. Signed operation and maintenance contracts are to be followed to ensure the survival of native plants and designed function of the raingarden.

These alterations should enhance the aesthetic beauty of the property while improving water quality. The native species planted should embed their roots deep into the soil providing significant holding power to prevent against erosion. The proposed raingarden should collect and treat the proposed impervious runoff from this site prior to discharging into Mink Lake.



Hydrographs for Small Areas

(assumes runoff rate = rainfall rate)

RCN=	98	(0 -99)		
DA (Sq Ft) =	1311		Peak Q =	0.165 cfs
24-hr Rainfall Amt (")=	4		Runoff Depth =	3.7651 in
			Runoff Event =	411 cu. Ft.
			Runoff (1 inch)=	109 cu. Ft.

Rain Garden Sizing

Raingarden Sideslope= 3 to 1
 Raingarden Depth= 1 ft

Assume Rectangular Area:

Top Length = 13.5
 Top Width = 13

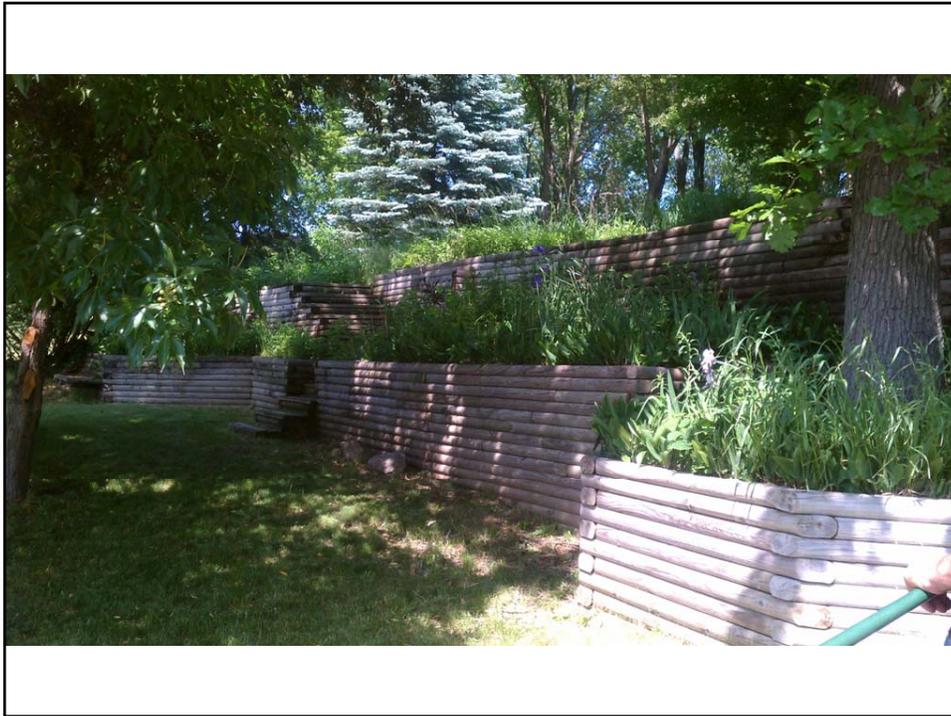
Top Area = 175.5
 Bottom Area = 52.5

Volume = 114 Stores 1 inch of runoff

Quantity Calculations

Compost Layer Thickness 12 inches
 Is sand drain layer required? Y (Y or N)
 Layer Thickness 12 inches
 Is tile required? Y (Y or N)
 Length 100 feet

Common Excavation	17 Cu. Yds.
Compost Mix	7 Cu. Yds.
Sand Drain Layer	7 Cu. Yds.
Shredded Hardwood Mulch	2 Cu. Yds.
Drain Tile	100 Ln. Ft.
Prefab Inlet	1 Each
Sideslope Planting Area	123 Sq. Ft.
Bottom Planting Area	52.5 Sq. Ft.









Date Created: 6/21/2011



Parcel ID	206020002050	Alternate ID	n/a	Owner Address	DENNIS & SANDRA CULLIP
Sec/Twp/Rng	24-121-27	Class	151 - SEASONAL RES REC		203 COFFEE MILL DR
Property Address	8221 GREER AVE NW MAPLE LAKE	Acreage	n/a		WABASHA, MN 55981

District n/a
Brief Tax Description Sect-24 Twp-121 Range-027 CAMPBELL'S TERRACE Lot-005 Block-002
(Note: Not to be used on legal documents)

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