

VLAWMO TECHNICAL COMMISSION MEETING

7:30 AM August 13th, 2021

Vadnais Heights City Hall, Lakes Room, 800 County Road E East, Vadnais Heights, MN 55127

Meeting also available via Zoom Teleconference:

<https://us02web.zoom.us/j/82609413241?pwd=Qy9rcURGb2VPdjB4UkV3VDVvWHA2UT09>

Meeting passcode: 874971

Access by telephone: +1-312-626-6799 Meeting ID: 826 0941 3241 Passcode: 874971

Action items: ✎

- I. Call to Order – 7:30am – Vice Chair Jesse Farrell
- II. Approval of Agenda
- III. Approval of Minutes (July 9th, 2021)
- IV. Administration & Operations
 - A. Financial Report for August & authorization for Payment – Phil ✎ (Pg. 11)
 - B. VLAWMO August TEC Report to the Board – Phil ✎ (Pg. 18)
 - C. 2021 VLAWMO Minor CWMP Amendment ✎ & Ditch 14 Phase 2 Maintenance Project Plans Recommendation – Phil ✎ (Pg. 20)
- V. Programs
 - A. Education & Outreach – Nick
 1. August updates
 - B. Cost Share Program – Tyler
 1. LL2 2021-01 Morrison WBL Curb Cut Rain Garden ✎ (Pg. 33)
 2. LL2 2021-02 VH Bridgwood Park Retrofit Curb Cut Rain Garden ✎ (Pg. 44)
 3. LL1 2021-03 Crowley Riparian Wetland Restoration & Native Buffer ✎ (Pg. 58)
- VI. WCA
 - A. Bluebird Development WCA Replacement Plan related WCA Recommendation – Brian ✎ (Pg. 69)
- VII. Projects
 - A. Proposed Wilkiinson Lk. BMP/319 Grant Update: Workplan, Budget, MOU & O&M Agreements – Dawn ✎ (Pg. 130)
 - B. Great River Greening Vadnais-Sucker Park Update – Dawn
 - C. East Goose Lake ALM Update – 8/3 Community Meeting – Phil
 - D. Amelia Lake Invasive Species Update – Dawn
 - E. Lambert Lake Meander Drone Footage and MAWD Update – Dawn
- VIII. Commissioner Reports
 1. Consideration of Alternate TEC Meeting Times or Days ✎
- IX. NOHOA
- X. Ramsey Soil & Water Conservation Division
- XI. St. Paul Regional Water Services
- XII. Public Comment
- XIII. Next Meetings: TEC: September 10th, Regular Board Meeting: August 25th, 2021
- XIV. Adjourn

Upcoming Events: vlawmo.org/events

- Upstream: Multiple events posted online August - Sept
- White Bear Lake MarketFest: August 5th (VLAWMO table)
- Lakeaires Raingarden Brush-up: August 12th
- Neighborhood cost-share tour: August 14th
- White Bear Township Day September 18th



**Vadnais Lake Area Water Management Organization
Technical Commission Minutes
July 9, 2021
Vadnais Heights City Hall, Lakes Room
800 County Road E East, Vadnais Heights, MN 55127**

Commission Members Present:

Gloria Tessier	Chair, Gem Lake (GL)
Jesse Farrell	Vice Chair, Vadnais Heights (VH)
Paul Duxbury	Board Liaison, White Bear Township (WBT)
Terry Huntrods	White Bear Lake (WBL)
Andy Nelson	Lino Lakes (LL)

Commission Members Absent: Bob Larson (NO)

Others in attendance: Phil Belfiori, Dawn Tanner, Tyler Thompson (VLAWMO); Patricia Orud, Kristie Elfering (NOHOA); Justine Roe (SPRWS)

- I. **Call to Order** Chair Tessier called the meeting to order at 7:30 am.
- II. **Approval of Agenda**
The agenda for the July 9, 2021 Technical Commission Meeting was presented for approval. Thompson asked to add an action item for V. A. 1. Tessier allowed this addition. Agenda moved for approval.
It was moved by Duxbury and seconded by Huntrods to approve the June 11, 2021 TEC agenda, as amended. Vote: all aye. Motion passed.
- III. **Approval of Minutes**
It was moved by Farrell and seconded by Huntrods to approve the June 11, 2021 meeting minutes, as presented. Vote: all aye. Motion passed.
- IV. **Administration & Operations**
 - A. **Financial Report for July & Authorization for Payment**
Belfiori overviewed highlights of the July Finance Report and bills.
It was moved by Farrell and seconded by Huntrods to approve the July Treasurer's Report and authorization of payments. Vote: all aye. Motion passed.
 - B. **2022 VLAWMO Budget Update**
Belfiori overviewed the Board-approved 2022 budget for the Technical Commission.
- V. **Programs**
 - A. **Education & Outreach**
 1. **Community Blue: NOHOA Bioswale Renovation – MN Water Stewards**
Thompson presented the 2021 Community Blue: NOHOA Bioswale grant application for the rejuvenation of the East Oaks rain garden in North Oaks. The basin currently exhibits poor infiltration and high rates of sedimentation, so the proposed restoration would restore infiltration rates, install new sediment inlet catchments, and revegetate the basin with native vegetation. The grant application proposes \$9,840 in cash match funds from NOHOA and \$2,000 in VLAWMO Community Blue funding for replanting, mulch, and soil amendments.
Discussion: Tessier asked about maintenance, going forward. Elfering offered that NOHOA is now undertaking this basin for maintenance, going forward.

It was moved by Duxbury and seconded by Huntrods to approve NOHOA Bioswale Renovation Community Blue Grant for funding in the amount of \$2,000.00. Vote: all aye. Motion passed.

2. Community Blue: Upstream update

Thompson updated on the re-initiated project, after COVID-19 complications and an updated grant and schedule, earlier this year. The project has moved forward with 2 White Bear Press articles, 2 completed tea ceremonies, and attendee survey. 5 more virtual ceremonies are planned for the rest of 2021.

In other updates, newly-updated VLAWMO Cost Share brochures are available, July volunteer event planning is active, and the complete list of events can be found on the vlawmo.org web calendar.

B. Cost Share Program

1. 2021 Cost Share Program Update & Budget

Thompson updated on the current status and financials of the 4 Landscape Cost Share Programs, as well as the Bridgewood Park parking lot rain garden status, and the upcoming Birch Lake Elementary curb cut rain garden project.

VI. Projects

A. 319 Update

Tanner updated that the Board authorized several measures for staff at their June meeting, including: continuing to work with the MPCA to develop the workplan and grant contract; continue to work with North Oaks Co. and City of North Oaks on MOU & maintenance agreement, accept \$10K MDH grant, on behalf of the SPRWS; authorization for continued project investigation and development using MDH grant funds and VLAWMO 2021 Wilkinson subwatershed budget.

B. Invasive Species Update

Tanner gave an update on the various invasive species efforts that are ongoing within VLAWMO. Efforts include Yellow iris survey/checks and removal on Deep Lake and Japanese hedge-parsley removal at the 4th & Otter site. Coordination for carp removal in Pleasant Lake is continuing with WSB. Staff checked Tamarack Lake for curly leaf pondweed and did not find any evidence or presence.

C. Spent Lime Project Update

Thompson provided an update and showed photos of the Spent Lime application in Lino Lakes on the Ash Street pond. So far, both applications in VLAWMO, and on Wakefield Pond in the RWMWD are promising. Barr is expected to produce a final report with its findings. VLAWMO staff will continue to take water quality samples on the outlet of Ash Street Pond, which is tributary to Wilkinson Lake.

D. RC Ditch Phase 2 Maintenance Update

Thompson updated that the landowner meeting for the Phase 2 Ditch 14 maintenance project is scheduled for July 28th in the VH City Council Chambers. Landowner letters and maps were mailed out on June 30th to notify adjacent residents and ask for their interest and attendance at the informational meeting. Looking forward, staff is anticipating authorization for project bid in August and work to begin this fall.

VII. Commissioner Reports:

Farrell proposed exploring alternate meeting times or days for future TEC meetings. Will table for discussion at the August TEC meeting.

VIII. NOHOA

In person meetings are planned going forward for the summer.

IX. Ramsey Soil & Water Conservation Division (RCSWCD) Report

None.

X. St. Paul Regional Water Service (SPRWS) Report

Testing is continuing on the pilot plant upgrade.

XI. Public Comment

None.

XII. Next Meetings

TEC: August 13th, 2021; Board: August 25th, 2021

XII. Adjourn

It was moved by Farrell and seconded by Huntrods to adjourn the meeting at 8:25 am. All aye. Motion passed.

Minutes compiled and submitted by Tyler Thompson.

DRAFT

TEC Staff Memo – August 2021

IV. Administration & Operations

A. Financial Report for August & authorization for Payment

Please find the August 2021 Finance Report attached in the ePacket.

B. VLAWMO August TEC Report to the Board

Please find the draft August TEC Report to the Board attached in the ePacket for review and approval.

C. 2021 VLAWMO Minor CWMP Amendment & Ditch 14 Phase 2 Maintenance Project Plans Recommendation

Staff has been working on a minor amendment to VLAWMO's 2017-2026 Comprehensive Water Management Plan, as approved by the Board at their June meeting. The draft language includes minor updating on 2 pages of the Plan, updating information about VLAWMO's role as ditch authority and ditch maintenance in Sections 3.4 & 3.5. This minor amendment was released to VLAWMO's review authority contacts, comprising of agencies and municipalities, for a 30-day comment period. Three "no comments" were received and 1 comment from Ramsey County Public Works identifying that ditch system maintenance activities and authorities are described in MN Statutes 103E instead of 103B.

Our BWSR Board Conservationist has since submitted a formal determination letter, stating "no comment" and recommending moving forward with a public hearing and approval by the VLAWMO Board for approval. Staff has noticed a public hearing for the draft CWMP minor amendment at the August 25th Board meeting, as well as bringing the minor amendment for approval and adoption at their meeting. The full '17-'26 VLAWMO CWMP with draft minor amendment changes included, [can be found at vlawmo.org at this link](http://www.vlawmo.org).

Staff is recommending the TEC review the proposed 2021 minor amendment and consider a formal motion for recommendation of approval and adoption to the VLAWMO Board at their August 25, 2021 meeting, after the public hearing closes. Attached in the TEC ePacket are the 2 draft minor amendment pages 42 & 43, along with received review authority comments and the BWSR determination letter.

The landowner information meeting for the proposed Ditch 14 "phase 2" maintenance project was held on July 28, 2021. The meeting was attended by 10 landowners with property on the ditch right of way as well as Council member Youker, Project Engineer Chris Otterness from Houston Engineering and VLAWMO Staff. Staff and the Project engineer provided a presentation on the project background and expectations for site conditions once the project is constructed. Based on landowner comments /requests received at the meeting, Brian or Tyler will be conducting site visit with individual landowner to discuss any questions or concerns related to the project.

The Draft Plans for the proposed Ditch 14 "phase 2" maintenance project are **attached** to this TEC staff memo. **VLAWMO staff request a TEC recommendation to the Board to accept these plans for filing (pending any comments from the TEC and any revision to the plans by**

the project engineer before the VLAWMO Board meeting) and to recommend sending out the plans for solicitation of quotes after the August 25, 2021 VLAWMO Board meeting. It is anticipated that some modifications will be made the attached draft plans by Houston Engineering before the August 25 VLAWMO Board meeting including inclusion of an erosion control project plan (SWPPP) page and other minor plan modifications.

V. Programs

A. Education and Outreach

1. August Updates

During the meeting Nick will provide a summary of the latest outreach efforts and communications. Key updates include:

- Drought resources posted on news page
- Algae/aquatic veg guide posted on blog
- Vadnais Heights Ice Cream Social
- White Bear Lake MarketFest
- Upstream tea ceremonies
- Lakeaires Raingarden Brush-up
- Raingarden tour
- Lambert Lake pond and meander drone footage

B. Cost Share Program

1. LL2 2021-01 Morrison Curb Cut Rain Garden – White Bear Lake

As previously updated, the 2021 City of White Bear Lake street reconstruction projects and City efforts have netted 1 applicable and willing homeowner to implement a curb cut rain garden and accept VLAWMO funding, in conjunction with the City street mill & overlay project. The RCSWCD has designed the project and has generated an opinion of project cost at \$9,370. The project has been combined with others to be put out for proposal bids to contractors in July, and bid selection will take place on August 6th, which the final project total cost will be known. Via updated 2021 Landscape Level 2 policy, VLAWMO is able to pay up to 90% of project implementation costs. **Staff will recommend this final 90% cost share grant funding amount for TEC recommendation at the meeting for LL2 2021-01 grant funding and approval by the Board at their August 25th meeting. Staff is estimating this grant amount to be roughly \$8,500, with the homeowner's 10% cost amount being roughly \$1,000.**

2. LL2 2021-02 Bridgewood Park Curb Cut Rain Garden – Vadnais Heights

Though none of the street mill and overlay residential sections were viable for curb cut rain gardens, the Bridgewood Park parking lot mill & overlay presented an opportunity for the implementation of a curb cut rain garden during reconstruction. The City of Vadnais Heights placed a change order for the project to alter the existing grade of the parking lot to flow towards a rain garden basin, along with curb and gutter installation that was not existing prior, all at the estimated extra cost of \$9,200 to make the rain garden basin possible.

The RCSWCD has designed the 785 square foot curb cut rain garden to include 2 Rain Guardian catch basins, along with an overflow swale and planting schedule of 360 native plants. The Opinion of Cost for the rain garden is estimated at \$29,956, and is being put out for bid this month, with selection taking place soon after. The City of Vadnais Heights has submitted a Landscape Level 2 application for the project and is requesting funding for the rain garden up to \$33,000 for a 10% contingency funding above the project's estimated cost. The City's in-kind cash grant match contribution is \$9,200 for the parking lot regrading and curb implementation costs to direct flow into the rain garden basin, but does not include added engineering costs that were necessary for the parking lot redesign. The final selected bid price will determine the actual VLAWMO grant value, but shall not exceed \$33,000.

VLAWMO staff recommends TEC recommendation of approval and funding to the VLAWMO Board of Landscape Level 2 grant application LL2 2021-02 up to \$33,000, which includes cost contingency. BWSR '21-'23 Watershed Based Implementation funding will be used for Landscape Level 2 funding of the grant and the final grant amount will be determined upon bid selection. If bid proposals come in significantly high, bids will be rejected and the project will be put back out for bid in the beginning of 2022, for spring 2022 construction.

3. LL1 2021-03 Crowley Riparian Wetland Restoration & Native Buffer

As part of the 2020 Birch Lake Iron-Enhance sand filter project, part of the project area was seeded and restored with native vegetation. The filter is on private property but within City of WBL drainage & utility easement. The Crowleys, the parcel landowners, early on had expressed interest in extending the restoration further along the filter outlet channel. The channel is within the riparian wetland and still remains degrading, presenting the possibility of increased sediment loss, and may actively erode with larger storm events.

The Crowleys seeked proposal for restoring and stabilizing the riparian wetland and buffer along the channel, and have submitted a Landscape Level 1 grant application for this proposed restoration by Natural Shore Technologies. The proposal for restoration was quoted at \$5,789.84 and includes an area of roughly 1,500 square feet. 25 1-3 gallon native shrubs would be planted along the channel outlet banks for increased stabilization and erosion reduction, along with a 1,000 square foot native planting along the bank and wetland buffer slope. In areas not planted with shrubs or plugs, additional native seed mix will be spread, overlaid with erosion control blanket. Maintenance would be continued for 5 years using Natural Shore Technologies.

The Crowleys are requesting 50% cost share funding of the project, amounting to \$2,894.92. Being that this proposal includes riparian wetland and buffer restoration, would further stabilize the 4th & Otter filter wetland site and actively reduce erosion and sedimentation downstream and tributary to Birch Lake, staff is recommending approval of Landscape Level 1 grant application 2021-03 and funding in the amount of \$2,894.92.

VI. WCA

A. Bluebird Development WCA Replacement Plan and related WCA Recommendations:

Harstad Hills, Inc. is proposing the Bluebird Grove residential development project within an approximately 9-acre site in Vadnais Heights. The Bluebird Grove project will be a 21 lot, single-family development with associated streets, utilities, and stormwater areas. The site currently consists of multiple parcels (partial parcels), two of which contained vacant, large-lot single family homes. The remainder of the site is woodland, meadow, or wetland.

The Bluebird Grove project will involve 13,414 sf (0.3079-ac) of permanent impact to one isolated wetland. Additionally, 6,706 sf (0.1539-ac) of temporary excavation impact to the same isolated wetland in order to incorporate the wetland into a detention basin is proposed as a non-WCA regulated impact (No Loss). Permanent wetland impacts will be replaced via the purchase of wetland bank credits at a ratio of 2:1 within the same major watershed and Bank Service Area (BSA) as the proposed project.

VLAWMO staff recommends TEC recommendation of approval to the Board of a No-Loss request on excavation of a portion of a Type 1 wetland; Sequencing for filling a portion of a Type 1 wetland for road access to buildable upland and creating a storm pond in a portion of a Type 1 wetland; Replacement plan for 0.3079 acre of impact to a Type 1 wetland replaced with banking credits at 2:1.

It is anticipated that this consideration of this WCA application will be considered by the VLAWMO Board at the August 25, 2021 Board meeting.

VII. Projects

A. 319 Update: Workplan, Budget, MOU & O&M Agreements: Wilkinson 319 prep has continued since last month. Specifically, updates and related documents are included in the packet. These include: 1) an update to the North Oaks City Council and NOHOA regarding project progress, 2) a final but not yet signed MOU/Maintenance agreement from NOC/NOF, and 3) a draft workplan and budget. VLAWMO staff request support from the TEC to bring these documents to the VLAWMO Board as part of the August regular meeting. VLAWMO staff also request a recommendation for the Board to authorize the workplan/budget for continued approval with MPCA/EPA.

*VLAWMO staff request a TEC recommendation to the Board to submit the MPCA workplan and budget to MPCA/EPA for review and authorization.

B. Great River Greening Vadnais-Sucker Park Update: VLAWMO staff has continued working with Great River Greening, the SPRWS, and Ramsey County SWCD to complete the landowner agreement for 45 acres of restoration in Vadnais-Sucker Park. SRPWS has agreed to supply work crews to contribute to maintenance following completion of the multi-phase restoration plan. VLAWMO appreciates the work of our partners to help make projects like this possible.

C. East Goose Lake Update - 8/3 Community Meeting:

The Community Input meeting for the East Goose Lake Adaptive Lake Management (ALM) project was held on August 3, 2021 at the City of White Bear Lake Public Safety Training room. Seven residents attended the meeting along with VLAWMO and City Staff, Barr engineering staff and City Council member Biehn. Staff provided a presentation which summarized the various project activities since the December 1, 2020 neighborhood meeting, a summary of the shallow lakes science presentations made the City Council and VLAWMO Boards in May and June 2021, and a summary of the results of the East Goose ALM public engagement process. After the presentation, residents asks several insightful questions and had productive comments on the information presented. The audio of this August 3rd community input meeting can be found on the East Goose ALM web hub at:

<https://www.vlawmo.org/projects/east-goose-lake-adaptive-management1/>

D. Amelia Lake Invasive Species Update: VLAWMO staff joined Ramey County SWCD on July 29 for the bathymetry and aquatic vegetation survey on Amelia Lake. We were especially interested in these surveys because surveys have not been done on Amelia in the past. The water level was quite low, only 2 feet deep in many areas. Thick aquatic vegetation was documented, including extensive native species mats. Invasive Eurasian watermilfoil hybrids were detected. A delineation for invasive Flowering rush was planned. Flowering rush was reported in the lake as part of USGS and MN DNR checks in 1968 and a DNR check in 1995. VLAWMO staff have tried to locate Flowering rush in the lake over the past 2 years in coordination with the Cooperative Weed Management Area (CWMA). It has not been detected during these checks. It was not detected on the aquatic vegetation survey with RCSWCD either. RC recommends rechecking the area where Flowering rush was reported previously in each of the next 2 years. If it is not found in 3 consecutive years, MN DNR will allow it to be listed as eradicated. The area where Flowering rush was reported is very shallow. It may be that higher water levels over the years drowned it out. In other patches in the County where Flowering rush is found, it is thought to only spread through rhizomes (not seed) and stays fairly contained within an area. We will continue to check for this species and coordinate with partners if it is not found.

Shoreline vegetation is especially interesting at Amelia Lake. Water willow (also called Swamp loosestrife) is a species of conservation concern that is found in the watershed and abundant on Amelia. Purple loosestrife is invasive and quite abundant this year. MN DNR/Ramsey County are discussing possible rejuvenation efforts for beetles that eat Purple loosestrife. VLAWMO may wish to participate if this effort is supported to help protect the native plant species found at Amelia. This may be an additional priority because Amelia is designated as a Lake of Biological Significance (MN DNR).

<p>Air quality was poor due to Canadian fires on July 29 when the Amelia survey was conducted. Shown below is a floating bog that has broken away. These are common on Amelia.</p>	<p>A loaded rake from macrophyte sampling. Native Flat-stem pondweed and Chara are particularly abundant in this sample.</p>
<p>Purple loosestrife appears to be rebounding. It may be worth considering reintroducing beetles to eat the Purple loosestrife on Amelia to help protect Water willow, a native plant species of conservation concern that is especially abundant there and sensitive to development. Water willow is abundant in the foreground (behind the Arrowhead) of this photo and looks a little bit like mangroves (to VLAWMO staff).</p>	<p>A close-up view of the root structure of Water willows. Roots are thick and extend into the water, helping to stabilize the shoreline.</p>



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E. Lambert Lake Meander Drone Footage and MAWD Update:

SEH recently completed a video showcasing the Lambert project construction. View the video here:

<https://vimeo.com/574115813/52e1f75bc6>

A project of the year submission for the Lambert project has been submitted to MAWD for the annual meeting in December. A project presentation abstract has also been submitted. VLAWMO and SEH staff will co-present if the presentation is accepted.

August 2021 VLAWMO Finance Report

August-21		Actual 8/1/21	Actual to Date	2021 Budget	2020 carry over/Grants	Remaining in Budget	2021 Available	Act vs. Budget
BUDGET #	INCOME							
5.11	Storm Water Utility	\$500,161	\$520,901	\$935,340	\$0	\$414,439	\$935,340	56%
5.12	Service Fees	\$200	\$950	\$200	\$0	(\$750)	\$200	475%
5.13	Interest + mitigation acct	\$14	\$114	\$3,000	\$0	\$2,886	\$3,000	4%
5.14	Misc. income - WCA admin & other	\$1,495	\$1,595	\$3,000	\$0	\$1,405	\$3,000	53%
5.15	Other Income Grants/ <u>loan</u>	\$26,958	\$616,921	\$894,679	\$0	\$277,758	\$894,679	69%
5.16	Transfer from reserves	\$0	\$0	\$192,840	\$14,000	\$206,840	\$206,840	0%
	TOTAL	\$528,829	\$1,140,481	\$2,029,059	\$14,000	\$902,578	\$2,043,059	56%
	EXPENSES							
3.1	Operations & Administration							
3.110	Office - rent, copies, post tel supplies	\$2,016	\$16,145	\$26,214	\$0	\$10,069	\$26,214	62%
3.120	Information Systems	\$2,474	\$12,071	\$22,365	\$4,000	\$14,294	\$26,365	46%
3.130	Insurance	\$6,142	\$6,142	\$7,000	\$0	\$858	\$7,000	88%
3.141	Consulting - Audit	\$0	\$7,025	\$7,728	\$0	\$703	\$7,728	91%
3.142	Consulting - Bookkeeping	\$0	\$0	\$1,500	\$0	\$1,500	\$1,500	0%
3.143	Consulting - Legal	\$653	\$1,296	\$4,000	\$0	\$2,704	\$4,000	32%
3.144	Consulting - Eng. & Tech.	\$1,605	\$1,801	\$30,000	\$0	\$28,199	\$30,000	6%
3.150	Storm Sewer Utility	\$0	\$6,236	\$13,000	\$0	\$6,764	\$13,000	48%
3.160	Training (staff/board)	\$0	\$4,120	\$8,750	\$0	\$4,630	\$8,750	47%
3.170	Misc. & mileage	\$223	\$1,831	\$6,300	\$0	\$4,469	\$6,300	29%
3.191	Administration - staff	\$27,792	\$234,527	\$370,307	\$0	\$135,780	\$370,307	63%
3.192	Employer Liability	\$8,691	\$70,410	\$102,376	\$10,000	\$41,966	\$112,376	63%
3.2	Monitoring and Studies							
3.210	Lake and Creek lab analysis	\$2,802	\$7,501	\$18,000	\$0	\$10,499	\$18,000	42%
3.220	Equipment	\$0	\$849	\$3,000	\$0	\$2,151	\$3,000	28%
3.230	Wetland assessment & management	\$0	\$0	\$0	\$0	\$0	\$0	#DIV/0!
3.3	Education and Outreach							
3.310	Public Education	\$0	\$2,743	\$8,500	\$0	\$5,757	\$8,500	32%
3.320	Marketing	\$328	\$792	\$7,500	\$0	\$6,708	\$7,500	11%
3.330	Community Blue Ed Grant	\$53	\$326	\$10,000	(\$4,500)	\$5,174	\$5,500	6%
	<i>Total Core functions: Ops, Monitoring, Education</i>	<i>\$52,780</i>	<i>\$373,814</i>	<i>\$646,540</i>	<i>\$9,500</i>	<i>\$282,226</i>	<i>\$656,040</i>	<i>57%</i>
	Capital Improvement Projects and Programs							
3.4	Subwatershed Activity							
3.410	Gem Lake	\$0	\$0	\$0	\$0	\$0	\$0	
3.420	Lambert Creek	\$1,548	\$622,736	\$222,100	\$0	(\$400,636)	\$222,100	280%
3.425	Goose Lake	\$2,003	\$4,197	\$124,200	\$0	\$120,003	\$124,200	3%
3.430	Birch Lake	\$0	\$637	\$0	\$0	(\$637)	\$0	#DIV/0!
3.440	Gilf Black Tam Wilk Amelia	\$102	\$1,173	\$16,000	\$0	\$14,827	\$16,000	7%
3.450	Pleasant Charley Deep	\$0	\$2,618	\$22,500	\$0	\$19,883	\$22,500	12%
3.460	Sucker Vadnais	\$0	\$16,533	\$12,500	\$0	(\$4,033)	\$12,500	132%
3.48	Programs							
3.480	Soil Health Grant	\$0	\$910	\$4,500	\$0	\$3,590	\$4,500	20%
3.481	Landscape 1	\$2,222	\$4,445	\$16,000	\$0	\$11,555	\$16,000	28%
3.482	Landscape 2	\$0	\$2,250	\$28,000	\$0	\$25,750	\$28,000	8%
3.483	Project Research & feasibility	\$0	\$0	\$0	\$0	\$0	\$0	#DIV/0!
3.485	Facilities Maintenance	\$1,915	\$12,353	\$46,540	\$0	\$34,187	\$46,540	27%
3.5	Regulatory							
3.510	Engineer Plan review	\$0	\$0	\$0	\$0	\$0	\$0	#DIV/0!
	<i>Total CIP & Program</i>	<i>\$7,789</i>	<i>\$667,852</i>	<i>\$492,340</i>	<i>\$0</i>	<i>(\$175,512)</i>	<i>\$492,340</i>	<i>136%</i>
	Total of Core Operations & CIP	\$60,569	\$1,041,665	\$1,138,880	\$9,500	\$106,715	\$1,148,380	91%

Fund Balance	7/1/2021	8/1/2021
4M Account	\$274,295	\$712,420
4M Plus Savings	\$324,154	\$324,163
Total	\$598,449	\$1,036,582

Restricted funds	8/1/2021
Mitigation Savings	\$21,037
Term Series	\$0

Vadnais Lake Area Water Management Orga
Profit & Loss
 July 10 through August 13, 2021

12:29 PM

08/03/2021

Cash Basis

Jul 10 - Aug 13, 21

Ordinary Income/Expense	
Income	
Misc.	1,495.25
5.1 · Income	
5.12 · Service Fees	200.00
5.13 · Interest	14.01
5.15 · Other Income Grants/Loan	26,958.27
Total 5.1 · Income	<u>27,172.28</u>
Total Income	<u>28,667.53</u>
Gross Profit	<u>28,667.53</u>
Expense	
3.1 · Administrative/Operations	
3.110 · Office	
Copies	86.50
Phone/Internet/Machine Overhead	290.00
Postage	24.97
Rent	1,615.00
Total 3.110 · Office	<u>2,016.47</u>
3.120 · Information Systems	
IT Support	1,203.91
WEB	707.00
Website & email hosting	563.37
Total 3.120 · Information Systems	<u>2,474.28</u>
3.130 · Insurance	6,142.00
3.143 · Legal	652.80
3.144 · Eng. & Tech.	1,605.05
3.170 · Misc. & mileage	222.62
3.191 · Employee Payroll	
Payroll	27,792.04
Total 3.191 · Employee Payroll	<u>27,792.04</u>
3.192 · Employer Liabilities	
Admin payroll processing	44.92
Administration FICA	2,014.01
Administration PERA	2,084.40
Insurance Benefit	4,547.55
Total 3.192 · Employer Liabilities	<u>8,690.88</u>
Total 3.1 · Administrative/Operations	<u>49,596.14</u>
3.2 · Monitoring and Studies	
3.210 · Lake & Creek lab analysis	2,802.00
Total 3.2 · Monitoring and Studies	<u>2,802.00</u>
3.3 · Education and Outreach	
3.320 · Marketing	328.00
3.330 · Community Blue Education Grant	53.41

August 2021 VLAWMO Finance Report

Total 3.3 · Education and Outreach	381.41
3.4 · Capital Imp. Projects/Programs	
3.420 · Lambert Creek Restoration	
LL VLAWMO cash match	1,547.84
Total 3.420 · Lambert Creek Restoration	<u>1,547.84</u>
3.425 · Goose Lake	2,002.60
3.440 · Gilfillan Black Tamarack Wilkin	102.00
Total 3.4 · Capital Imp. Projects/Programs	<u>3,652.44</u>
3.48 · Programs	
3.481 · Landscape 1 - cost-share	2,221.87
3.485 · Facilities & Maintenance	1,914.75
Total 3.48 · Programs	<u>4,136.62</u>
Total Expense	<u>60,568.61</u>
Net Ordinary Income	<u>-31,901.08</u>
Net Income	<u><u>-31,901.08</u></u>

Vadnais Lake Area Water Management Organization

12:26 PM

Check Detail

08/03/2021

July 10 through August 13, 2021

Type	Num	Date	Name	Item	Account	Paid Amount	Original Amount
Check	eft	07/26/2021	Reliance Standard		Checking - 1987		-202.29
				Insurance Benefit		-202.29	202.29
TOTAL						-202.29	202.29
Check	eft	07/26/2021	Reliance Standard		Checking - 1987		-90.00
				Insurance Benefit		-90.00	90.00
TOTAL						-90.00	90.00
Check	eft	07/26/2021	further		Checking - 1987		-5.00
				Insurance Benefit		-5.00	5.00
TOTAL						-5.00	5.00
Check	5171	08/13/2021	Tyler J Thompson		Checking - 1987		-61.94
				3.170 · Misc. & mileage		-61.94	61.94
TOTAL						-61.94	61.94
Check	5172	08/13/2021	Nicholas Voss		Checking - 1987		-20.16
				3.170 · Misc. & mileage		-20.16	20.16
TOTAL						-20.16	20.16
Check	5173	08/13/2021	Brian Corcoran		Checking - 1987		-128.76
				3.170 · Misc. & mileage		-128.76	128.76
TOTAL						-128.76	128.76
Check	5174	08/13/2021	Dawn Tanner		Checking - 1987		-11.76
				3.170 · Misc. & mileage		-11.76	11.76
TOTAL						-11.76	11.76
Check	5175	08/13/2021	ESRI		Checking - 1987		-707.00
				WEB		-707.00	707.00
TOTAL						-707.00	707.00
Check	5176	08/13/2021	Ed Welsch		Checking - 1987		-750.00
				3.481 · Landscape 1 - cost-share		-750.00	750.00
TOTAL						-750.00	750.00
Check	5177	08/13/2021	Dan Green		Checking - 1987		-1,471.87
				3.481 · Landscape 1 - cost-share		-1,471.87	1,471.87
TOTAL						-1,471.87	1,471.87

August 2021 VLAWMO Finance Report

Check 5178 08/13/2021 RMB Environmental Laboratories, Inc.	Checking - 1987		-2,802.00
	3.210 · Lake & Creek lab analysis	-695.00	695.00
	3.210 · Lake & Creek lab analysis	-44.00	44.00
	3.210 · Lake & Creek lab analysis	-237.00	237.00
	3.210 · Lake & Creek lab analysis	-1,354.00	1,354.00
	3.210 · Lake & Creek lab analysis	-472.00	472.00
TOTAL		-2,802.00	2,802.00
Check 5179 08/13/2021 City of Vadnais Heights	Checking - 1987		-2,016.47
	Rent	-1,615.00	1,615.00
	Phone/Internet/Machine Overhead	-290.00	290.00
	Postage	-24.97	24.97
	Copies	-86.50	86.50
TOTAL		-2,016.47	2,016.47
Check 5180 08/13/2021 HDR Engineering, Inc.	Checking - 1987		-563.37
	Website & email hosting	-563.37	563.37
TOTAL		-563.37	563.37
Check 5181 08/13/2021 Barr Engineering Co	Checking - 1987		-1,921.00
	3.425 · Goose Lake	-1,921.00	1,921.00
TOTAL		-1,921.00	1,921.00
Check 5182 08/13/2021 FastSigns	Checking - 1987		-53.41
	3.330 · Community Blue Education Grant	-53.41	53.41
TOTAL		-53.41	53.41
Check 5183 08/13/2021 Houston Engineering, Inc	Checking - 1987		-1,200.75
	3.485 · Facilities & Maintenance	-1,200.75	1,200.75
TOTAL		-1,200.75	1,200.75
Check 5184 08/13/2021 Press Publications	Checking - 1987		-70.00
	3.320 · Marketing	-70.00	70.00
TOTAL		-70.00	70.00
Check 5185 08/13/2021 Kennedy & Graven, Chartered	Checking - 1987		-1,958.40
	3.485 · Facilities & Maintenance	-714.00	714.00
	LL VLAWMO cash match	-408.00	408.00
	3.440 · Giffillan Black Tamarack Wilkin	-102.00	102.00
	3.143 · Legal	-652.80	652.80
	3.425 · Goose Lake	-81.60	81.60
TOTAL		-1,958.40	1,958.40
Check 5186 08/13/2021 City Of Roseville	Checking - 1987		-1,203.91
	IT Support	-1,203.91	1,203.91

August 2021 VLAWMO Finance Report

TOTAL			-1,203.91	1,203.91
	Check 5187 08/13/2021 impressive print	Checking - 1987		-258.00
		3.320 · Marketing	-258.00	258.00
TOTAL			<u>-258.00</u>	<u>258.00</u>
	Check 5188 08/13/2021 League of MN Cities Insurance Trust WC	Checking - 1987		-2,483.00
		3.130 · Insurance	-2,483.00	2,483.00
TOTAL			<u>-2,483.00</u>	<u>2,483.00</u>
	Check 5189 08/13/2021 League of MN Cities Insurance Trust P & C	Checking - 1987		-3,659.00
		3.130 · Insurance	-3,659.00	3,659.00
TOTAL			<u>-3,659.00</u>	<u>3,659.00</u>
	Check 5190 08/13/2021 SEH	Checking - 1987		-2,744.89
		LL VLAWMO cash match	-1,139.84	1,139.84
		3.144 · Eng. & Tech.	-1,605.05	1,605.05
TOTAL			<u>-2,744.89</u>	<u>2,744.89</u>
	Check 5191 08/13/2021 City of White Bear Lake	Checking - 1987		-36,185.63
		Payroll	-27,792.04	27,792.04
		Administration FICA	-2,014.01	2,014.01
		Administration PERA	-2,084.40	2,084.40
		Insurance Benefit	-4,250.26	4,250.26
		Admin payroll processing	-44.92	44.92
TOTAL			<u>-36,185.63</u>	<u>36,185.63</u>

August 2021 VLAWMO Finance Report

Vadnais Lake Area Water Management Organization
Custom Transaction Detail Report
 June 1 through August 1, 2021

12:24 PM

08/03/2021

Accrual Basis

	Type	Date	Num	Name	Memo	Account	Clr	Split	Amount	Balance
Jun 1 - Aug 1, 21										
	Credit Card Charge	06/02/2021		Google*SVCAPPS_VLAWM		US Bank CC	√ WEB		36.00	36.00
	Credit Card Charge	06/09/2021		adobe *photography plan		US Bank CC	√ Software		9.99	45.99
	Transfer	06/21/2021			Funds Transfer	US Bank CC	√ Checking - 1987		-262.56	-216.57
	Credit Card Charge	06/28/2021		University of Minnesota	PM Training - dawn	US Bank CC	√ 3.160 · Training (staff/board)		210.00	-6.57
	Credit Card Charge	06/28/2021		Adobe "Creative Cloud		US Bank CC	√ Software		32.20	25.63
	Credit Card Charge	06/29/2021		mn Department of Agriculture	pest 2022 license, workshop	US Bank CC	√ 3.160 · Training (staff/board)		159.80	185.43
	Credit Card Charge	07/01/2021		Nasco	leaf pack kit	US Bank CC	3.310 · Public Education		249.95	435.38
	Credit Card Charge	07/05/2021		Google*SVCAPPS_VLAWM		US Bank CC	√ WEB		36.00	471.38
	Credit Card Charge	07/07/2021		Ace Hardware	fence for E. Vadnais volunteer	US Bank CC	3.460 · Sucker Vadnais		125.02	596.40
Jun 1 - Aug 1, 21									596.40	596.40

TEC Report to the Board
August 2021

Programs & Projects	Effort Level	Completion Date	Comments
	LOW		
	MED		
	HIGH		
Projects			
Lambert Pond /Meander Project		2021/22	Construction of Meander and Sheet Pile completed and final closeout items ongoing.
East Goose Lk Adaptive Mgmt.		2021- ongoing	East Goose ALM community input meeting held on Aug. 3, 2021. Anticipated next step is consideration of the scope of work for development of the East Goose ALM management plan at the October 2021 VLAWMO Board meeting
Ditch 14 Maintenance project		2021/22	Working on Phase II project coordination on Ditch 14, Public mtg held 7/28/21. Consideration of the Minor amendment to the Watershed plan and authorization of soliciting quotes for the proposed project plan at the August 25 VLAWMO Board meeting.
MPCA 319 /Wilkinson Lake BMP		2021-23	Proposed project agreements (for access, maintenance and financial partnership) will be considered by the VLAWMO Board at the Aug. 25th Board meeting. Grant workplan with the MPCA will also be considered at the Aug. 25th Board meeting. Barr Eng. developing scope of work for initial project site survey and geo-tech review.
21-23 BWSR WBF		2023	The VH Bridgewood Park project and application is moving forward, along with design for a Birch Lake Elementary parking lot rain retrofit.
Programs			
Outreach		Feb-April	Lambert Lake Pond and Meander Factsheet completed to celebrate completion of project construction.
Education		April-June	New MS4 programming underway in collaboration with neighboring watersheds. Raingarden community tour scheduled for August.
Website		summer 2021	East Goose Lake Adaptive Management Web Hub posted on website and now includes Barr's presentation to City Council and Community engagement result document. New projects pages for Lambert Creek dredging, Co Rd F raingardens. 2021 cost-share program reflected on grants page and under news.
WAV		ongoing	WAV activities for 2021 allocated. Junior Watershed Explorer booklet continuing promotion, Aquatic Invasive Species detection continuing for 2021 monitoring year. Community-engaged U of MN volunteers active until end of college semester.
Cost Share		ongoing	One 2021 street recon RG in WBL, 2021 landowner site visits and communication ongoing, grants moving forward & being closed out.
GIS		ongoing	Ditch 14 Phase 2 mapping, 2022 SSU, West Vadnais SLMR
Monitoring		ongoing	2021 monitoring season continuing, Ash Street pond monitoring.
WCA		ongoing	administering WCA as needed. Consideration of the Bluebird WCA replacement plan at the Aug 25th Board meeting

TEC Report to the Board
August 2021

Administration & Operation			
Audit		2021	It is anticipated that advertisement for soliciting Audit firms to conduct 2021 and 2022 Audits will be considered at the August 25 Board meeting.
Budget		2020-21	Consideration of the 2022 SSU rates will be brought forward to the Board at the August 25th meeting.
Personnel		2021	staff continue to pursue professional development per their approved training plans.
SSU		ongoing	Parcel redefinitions have been reviewed as they are submitted.
Administration/ HR		ongoing	Work is underway by HR consultant Sara Noah on development of Board directed salary data collection/ salary survey review project

FINANCIAL SUMMARY as of 8/1/2021			CD's 4M Term Series		
				Maturity	Rate
4M Account (1.10)	4M Plus (1.23)	Total	Term series		
\$712,420	\$324,163	\$1,036,582			

Budget Summary	Actual Expense YTD	2021 Budget amended	Remaining in Budget	% YTD
Operations	\$373,814	\$656,040	\$282,226	57%
CIP	\$667,852	\$492,340	(\$175,512)	136%
Total	\$1,041,666	\$1,148,380	\$106,714	91%

3 VLAWMO CORE ACTIVITIES

- Birch Lake shoreline restoration project: an on-going maintenance agreement where VLAWMO manages the maintenance oversight and collects a set, annual amount from the BLID and the City of White Bear Lake to assist with maintenance costs.
- Whitaker Pond: agreement states that Ramsey County will dredge built up sediment from the forebay of the pond on a periodic basis.
- Central Middle School swale: VLAWMO agreed to cover the costs associated with the first two years of maintenance by a professional company, and then provided an operations and maintenance manual to the school district groundskeepers to assist them with the subsequent 8 years of required maintenance duties.

For stormwater infrastructure installed by MS4s, such as storm retention ponds or vegetated swales, they are responsible for the inspection, operation, and maintenance. Regular communication between agencies will allow the opportunity to discuss any concerns or new issues regarding their projects.

[For Lambert Creek, VLAWMO conducts maintenance on the ditch. Ditch 13/14 public ditch drainage system pursuant to the VLAWMO Board's direction, the VLAWMO Watershed Management Plan and public ditch inspection program. The VLAWMO Board directs drainage system maintenance on an as-needed basis. The VLAWMO Board has recently approved proposed ditch maintenance on Ditch 14 on approximately 2,400 linear feet of Ditch 14, east of Edgerton Street in the City of Vadnais Heights, at an estimated cost of \\$87,000 for years 2021-2022. VLAWMO intends to implement these activities under Core Activities - Capital Projects and Programs and utilizing funding authority under MN Statute 103B.](#)

3.5 REGULATORY PROGRAM

VLAWMO does not operate a regulatory program for development review. All member cities or townships are MS4s with approved permits to discharge stormwater, and they, along with Ramsey County, Anoka County and the Minnesota Department of Transportation (MNDOT) as MS4s will be responsible for ensuring that development, redevelopment and construction meets NPDES requirements. Each member city or township is required to operate a permitting program and have local controls consistent with VLAWMO water management policy.

VLAWMO is the LGU administering the Wetland Conservation Act (WCA) and has been since 1991 except in MnDOT right of way area. VLAWMO established performance and control standards for managing stormwater runoff, and management classifications, standards and procedures governing the use of wetlands as set out in the VLAWMO water management policy. The current [VLAWMO water management policy](#) was written in April 2009. The current policy is in the process of being updated to follow the most recent standard changes within the WCA, Minimum Impact Design Standards (MIDS), Atlas 14, and Minnesota Stormwater Manual, along with state groundwater and buffer rules. The updated VLAWMO water management policy will be revised as standards in these manuals are amended. The updated policy will be on the VLAWMO website and distributed directly to the appropriate partners.

Ramsey County transferred Drainage Authority for Ditches 13 and 14 to VLAWMO in 1986. These Drainage Systems are otherwise known as Lambert Creek and the Dillon or Whitaker storm sewer system (#07010206-801 & #07010206-637). Ditch Drainage System management activities are conducted under the authorities of chapters [103B and 103E, including maintaining conveyance](#), and are not specifically enumerated in this Plan

3 VLAWMO CORE ACTIVITIES

except as they relate to protecting and improving downstream water resources. VLAWMO plans to continue its Drainage Authority role and will actively look for opportunities to use its unique abilities and authorities under 103B ~~and 103E~~ to implement water quality improvement projects concurrently with ditch maintenance and repair projects. VLAWMO acknowledges its role as a ditch authority in implementing the State buffer law and will pursue buffers consistent with requirements.



Tyler Thompson <tyler.thompson@vlawmo.org>

Vadnais Lake Area WMO (VLAWMO) Minor Comprehensive Plan Amendment

Connie Taillon <ctaillon@whitebearlake.org>
To: Tyler Thompson <Tyler.Thompson@vlawmo.org>
Cc: "Melissa.King@state.mn.us" <Melissa.King@state.mn.us>

Tue, Jul 20, 2021 at 1:23 PM

Hi Tyler,

The City of White Bear Lake reviewed the Minor Amendment language on pages 42 and 43 of the VLAWMO Comprehensive Watershed Management Plan (CWMP) and have no comments.

Thank you for the opportunity to review and comment on this minor plan amendment.

Connie

Connie Taillon, P.E.

Environmental Specialist/Water Resources Engineer

City of White Bear Lake

4701 Highway 61

White Bear Lake, MN 55110

Office: 651-429-8587

Fax: 651-429-8500

ctaillon@whitebearlake.org

From: Tyler Thompson <Tyler.Thompson@vlawmo.org>

Sent: Friday, June 25, 2021 8:24 AM

To: Judy.Sventek@metc.state.mn.us; juline.holleran@state.mn.us; jeffrey.berg@state.mn.us; john.freitag@state.mn.us; jeanne.daniels@state.mn.us; King, Melissa (BWSR) <melissa.king@state.mn.us>; Neuendorf, Beth (DOT) <beth.neuendorf@state.mn.us>; renee.sande@co.anoka.mn.us; Churchich, Molly <Molly.Churchich@co.ramsey.mn.us>; Andrew Nelson <anelson3@linolakes.us>; Jim Lindner <lindner1858@yahoo.com>; kkress@northoaksmn.gov; Jesse Farrell <jesse.farrell@cityvadnaisheights.com>; Connie Taillon <ctaillon@whitebearlake.org>; Tom Riedesel <tom.riedesel@whitebeartownship.org>; chris.lord@anokaswcd.org; Ann WhiteEagle-Ramsey Co. Cons. Dist. <Ann.WhiteEagle@co.ramsey.mn.us>

Cc: Phil Belfiori <phil.belfiori@vlawmo.org>

Subject: Vadnais Lake Area WMO (VLAWMO) Minor Comprehensive Plan Amendment

Dear Review Authority members,

You are receiving this email, as your municipality or administrative agency is deemed a Review Authority of VLAWMO's Comprehensive Watershed Management Plan (CWMP). You are either the most recent, or most relevant contact available or found at your municipality or agency. If there is a more relevant contact at your agency to review this request, we kindly ask and would appreciate it, if you would be willing to forward this on to that applicable staff member.

VLAWMO has authored a Minor Amendment to our Comprehensive Watershed Management Plan (CWMP) to update and add language to reflect our ditch and drainage system maintenance activities. The VLAWMO Board of Directors approved the distribution of this draft Minor Amendment language for a 30-day review and comment period to our CWMP Review Authorities at their June 23rd, 2021 meeting. We ask that any comments are returned via email or mail to me, Tyler Thompson, by Monday, July 25th, 2021. VLAWMO will notice a public meeting to take place during its August 25th, 2021 Board of Directors Meeting, and subsequently consider approval of the CWMP Minor Amendment for adoption.

Please find attached a PDF of the specific pages of our CWMP with proposed draft amendment language (pages 42 & 43), as well as VLAWMO's full CWMP PDF attached with those same draft pages.

If you would like a hard copy, please don't hesitate to let me know and a paper copy will be mailed to you.

Thank you for your time and help in this process, we appreciate your effort!

Best regards & have a great weekend,

-Tyler Thompson

651-204-6071

800 County Road E East

Vadnais Heights, MN 55127



Tyler Thompson <tyler.thompson@vlawmo.org>

Vadnais Lake Area WMO (VLAWMO) Minor Comprehensive Plan Amendment

Berg, Jeffrey (MDA) <jeffrey.berg@state.mn.us>
To: Tyler Thompson <Tyler.Thompson@vlawmo.org>
Cc: "King, Melissa (BWSR)" <Melissa.King@state.mn.us>

Mon, Jul 26, 2021 at 9:07 AM

Tyler,

The MDA has not comments on the proposed Vadnais Lake Area WMO Minor Comprehensive Plan Amendment.

Thanks for the opportunity to review.

Jeff Berg

Water Policy Specialist

[Minnesota Department of Agriculture](#)

651 201 6338



[625 Robert Street North](#)

[St. Paul, MN 55155](#)

From: Tyler Thompson <Tyler.Thompson@vlawmo.org>

Sent: Friday, June 25, 2021 8:56 AM

To: Sventek, Judy <judy.sventek@metc.state.mn.us>; Holleran, Juline (MPCA) <juline.holleran@state.mn.us>; Berg, Jeffrey (MDA) <jeffrey.berg@state.mn.us>; Freitag, John (MDH) <john.freitag@state.mn.us>; jeanne.daniels@state.mn.us; King, Melissa (BWSR) <Melissa.King@state.mn.us>; Neuendorf, Beth (DOT) <beth.neuendorf@state.mn.us>; renee.sande@co.anoka.mn.us; Churchich, Molly <Molly.Churchich@co.ramsey.mn.us>; Andrew Nelson <anelson3@linolakes.us>; Jim Lindner <lindner1858@yahoo.com>; kkrress@northoaksmn.gov; Jesse Farrell <jesse.farrell@cityvadnaisheights.com>; Connie Taillon <ctaillon@whitebearlake.org>; Tom Riedesel <tom.riedesel@whitebeartownship.org>; chris.lord@anokaswd.org; Ann WhiteEagle-Ramsey Co. Cons. Dist. <Ann.WhiteEagle@co.ramsey.mn.us>

Cc: Phil Belfiori <phil.belfiori@vlawmo.org>

Subject: Re: Vadnais Lake Area WMO (VLAWMO) Minor Comprehensive Plan Amendment

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Hello again all,

[Quoted text hidden]

[Quoted text hidden]



Tyler Thompson <tyler.thompson@vlawmo.org>

RE: Vadnais Lake Area WMO (VLAWMO) Minor Comprehensive Plan Amendment - Review #21530-3

Mulcahy, Joe <joe.mulcahy@metc.state.mn.us>

Thu, Jul 8, 2021 at 11:24 AM

To: "tyler.thompson@vlawmo.org" <tyler.thompson@vlawmo.org>

Cc: "Sventek, Judy" <judy.sventek@metc.state.mn.us>, ReviewsCoordinator <ReviewsCoordinator@metc.state.mn.us>

Tyler,

The Metropolitan Council has no comments on the WMO's proposed minor Comprehensive Watershed Management Plan amendment. Thank you for the opportunity to review it. Please contact me if you have questions.

Thanks.

-jm

Joe Mulcahy

Environmental Analyst

Metropolitan Council Environmental Services

P. 651-602-1104 | C. 612-913-8864

From: Tyler Thompson <Tyler.Thompson@vlawmo.org>

Sent: Friday, June 25, 2021 8:24 AM

To: Sventek, Judy <judy.sventek@metc.state.mn.us>; juline.holleran@state.mn.us; jeffrey.berg@state.mn.us; john.freitag@state.mn.us; jeanne.daniels@state.mn.us; King, Melissa (BWSR) <melissa.king@state.mn.us>; Neuendorf, Beth (DOT) <beth.neuendorf@state.mn.us>; Renee Sande <renee.sande@co.anoka.mn.us>; Churchich, Molly <Molly.Churchich@co.ramsey.mn.us>; Andrew Nelson <anelson3@linolakes.us>; Jim Lindner <lindner1858@yahoo.com>; kkress@northoaksmn.gov; Jesse Farrell <jesse.farrell@cityvadnaisheights.com>; Connie Taillon <ctaillon@whitebearlake.org>; Tom Riedesel <tom.riedesel@whitebeartownship.org>; chris.lord@anokaswcd.org; Ann WhiteEagle-Ramsey Co. Cons. Dist. <Ann.WhiteEagle@co.ramsey.mn.us>

Cc: Phil Belfiori <phil.belfiori@vlawmo.org>

Subject: Vadnais Lake Area WMO (VLAWMO) Minor Comprehensive Plan Amendment

Dear Review Authority members,

You are receiving this email, as your municipality or administrative agency is deemed a Review Authority of VLAWMO's Comprehensive Watershed Management Plan (CWMP). You are either the most recent, or most relevant contact available or found at your municipality or agency. If there is a more relevant contact at your agency to review this request, we kindly ask and would appreciate it, if you would be willing to forward this on to that applicable staff member.

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26

Review Authorities at their June 23rd, 2021 meeting. We ask that any comments are returned via email or mail to me, Tyler Thompson, by Monday, July 25th, 2021. VLAWMO will notice a public meeting to take place during its August 25th, 2021 Board of Directors Meeting, and subsequently consider approval of the CWMP Minor Amendment for adoption.

Please find attached a PDF of the specific pages of our CWMP with proposed draft amendment language (pages 42 & 43), as well as VLAWMO's full CWMP PDF attached with those same draft pages.

If you would like a hard copy, please don't hesitate to let me know and a paper copy will be mailed to you.

Thank you for your time and help in this process, we appreciate your effort!

Best regards & have a great weekend,

-Tyler Thompson

651-204-6071

800 County Road E East

Vadnais Heights, MN 55127



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Tyler Thompson <tyler.thompson@vlawmo.org>

Vadnais Lake Area WMO (VLAWMO) Minor Comprehensive Plan Amendment

Churchich, Molly <Molly.Churchich@co.ramsey.mn.us>
To: Tyler Thompson <Tyler.Thompson@vlawmo.org>
Cc: "melissa.king@state.mn.us" <melissa.king@state.mn.us>

Fri, Jul 16, 2021 at 9:28 AM

Hello Tyler,

Thank you for the opportunity to review. Please find my comments below:

-In the revision of pages 42 and 43, I believe that Ditch Authority and official Public Ditch System maintenance is covered under MN Statute 103E, not 103B.

Regards,

Molly A. C. Churchich | Environmental Services Supervisor

Ramsey County

Public Works Department

1425 Paul Kirkwold Drive

Arden Hills, MN 55112

651-266-7159 | Fax: 651-266-7110

www.ramseycounty.us

From: Tyler Thompson <Tyler.Thompson@vlawmo.org>

Sent: Friday, June 25, 2021 8:24 AM

To: Judy.Sventek@metc.state.mn.us; juline.holleran@state.mn.us; jeffrey.berg@state.mn.us; john.freitag@state.mn.us; jeanne.daniels@state.mn.us; King, Melissa (BWSR) <melissa.king@state.mn.us>; Neuendorf, Beth (DOT) <beth.neuendorf@state.mn.us>; Sande, Renee <Renee.Sande@co.anoka.mn.us>; Churchich, Molly <Molly.Churchich@CO.RAMSEY.MN.US>; Andrew Nelson <anelson3@linolakes.us>; Jim Lindner <lindner1858@yahoo.com>; kkrass@northoaksmn.gov; Jesse Farrell <jesse.farrell@cityvadnaisheights.com>; Connie Taillon <ctailon@whitebearlake.org>; Tom Riedesel <tom.riedesel@whitebeartownship.org>; chris.lord@anokaswcd.org; WhiteEagle, Ann <Ann.WhiteEagle@CO.RAMSEY.MN.US>

Cc: Phil Belfiori <phil.belfiori@vlawmo.org>

Subject: Vadnais Lake Area WMO (VLAWMO) Minor Comprehensive Plan Amendment

External message alert: This message originated from outside the Ramsey County email system. **Use caution** when clicking hyperlinks, downloading pictures or opening attachments.

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July 28, 2021

Phil Belfiori
Administrator
Vadnais Lake Area WMO
800 E County Rd E
Vadnais Heights, MN 55127

RE: Vadnais Lake Area Watershed Management Organization – Watershed Management Plan Amendment (Minor)

Dear Mr. Belfiori,

On June 25, 2021 the Board of Water and Soil Resources (BWSR) received documentation of proposed revisions to the Vadnais Lake Area Watershed Management Organization (VLAWMO) Watershed Management Plan (Plan) submitted in accordance with the minor amendment process defined in Minnesota rules 8410.0140 Subp. 2. VLAWMO also distributed the minor amendment documentation to Plan review authorities and other stakeholders for the required 30-day review and comment period.

The draft Plan amendment included revisions to:

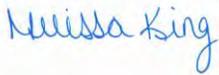
- *Section 3.4 Capital Improvement Projects and Programs:*
 - Addition of clarifying language that provides information on the current frequency of public drainage system maintenance and identification of the WMO program which incorporates project funding,
 - Addition of a specific public drainage maintenance project that the WMO will undertake in 2021-2022.
- *Section 3.5 Regulatory Program:*
 - Addition of language identifying drainage authorities under Minnesota Statute 103B and deletion of text referencing authorities described under Minnesota Statute 103E.

Staff from the City of White Bear Lake, the Minnesota Department of Agriculture, and the Metropolitan Council provided responses to the draft revisions that indicated each entity had no comment. Staff from Ramsey County responded with a comment identifying that public ditch system maintenance activities and authorities were described in Minnesota Statute 103E instead of 103B.

BWSR does not have any comment on the proposed Plan revisions distributed and this correspondence serves as notice of the Board's approval of the minor Plan amendment. With regards to the comment submitted by Ramsey County, and as identified in VLAWMO's response to comment, Minnesota Statutes 103B.211 Subd. 1(4) also authorizes the WMO to carry out drainage system maintenance.

We commend the VLAWMO for maintaining a current watershed management Plan. The WMO should legally notice and hold a public hearing on the Plan amendment in accordance with Minnesota Rules 8410.0140 Subp. 2(D). Once the VLAWMO Board adopts the changes, please print and forward those changes in the form of replacement pages for the Plan, to all Plan review authorities and Plan holders in accordance with Minnesota Rules 8410.0140 Subp. 4 and 5. Please refer to the Metro Plan Review Roster found on the BWSR website (<http://www.bwsr.state.mn.us/metro-watershed-management-plan-state-agencies-review-roster>) for the format that each review agency has requested. Please also note that BWSR requires hard and digital copies. Feel free to contact me with any questions at 651.350.8845.

Best Regards,



Melissa King
Board Conservationist

Cc: Tyler Thompson, VLAWMO (email only)

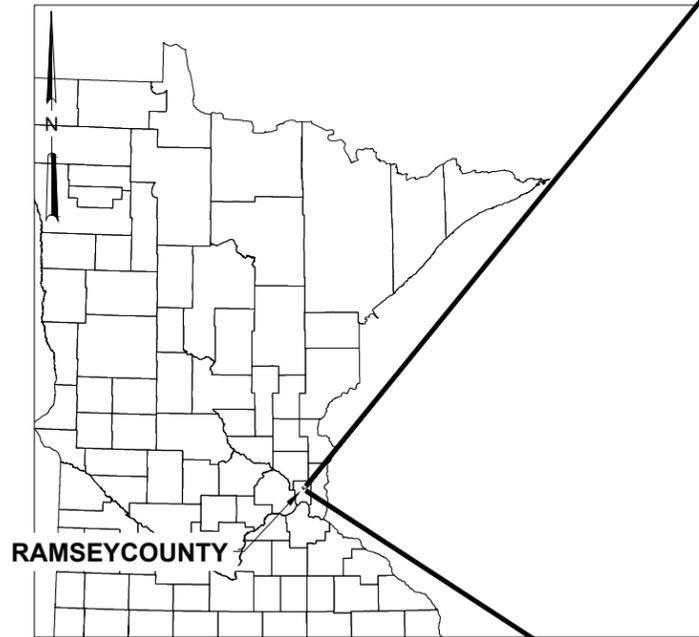
RAMSEY COUNTY DITCH 14 REPAIR

VADNAIS LAKE AREA

WATER MANAGEMENT ORGANIZATION

JULY 2021

TABLE OF CONTENTS	
SHEET #	SHEET TITLE
1	TITLESHEET
2	MAIN TRUNK PLAN & PROFILE
3	DETAILS



NOTES:

1. GEODETIC CONTROL

HORIZONTAL: NAD83 MINNESOTA DOT: RAMSEY COUNTY, US FOOT

VERTICAL: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

2. UTILITY

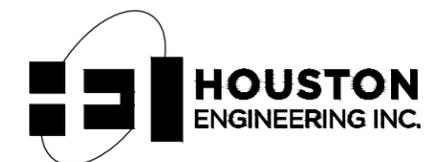
PRIOR TO ANY EXCAVATION WORK, THE CONTRACTOR IS RESPONSIBLE UNDER MINNESOTA STATE STATUTE 216D AND MINNESOTA RULES CHAPTER 7560 TO CONTACT GOPHER STATE ONE CALL FOR THE LOCATION OF UNDERGROUND UTILITY FACILITIES IN PROXIMITY TO THE EXCAVATION SITE.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".

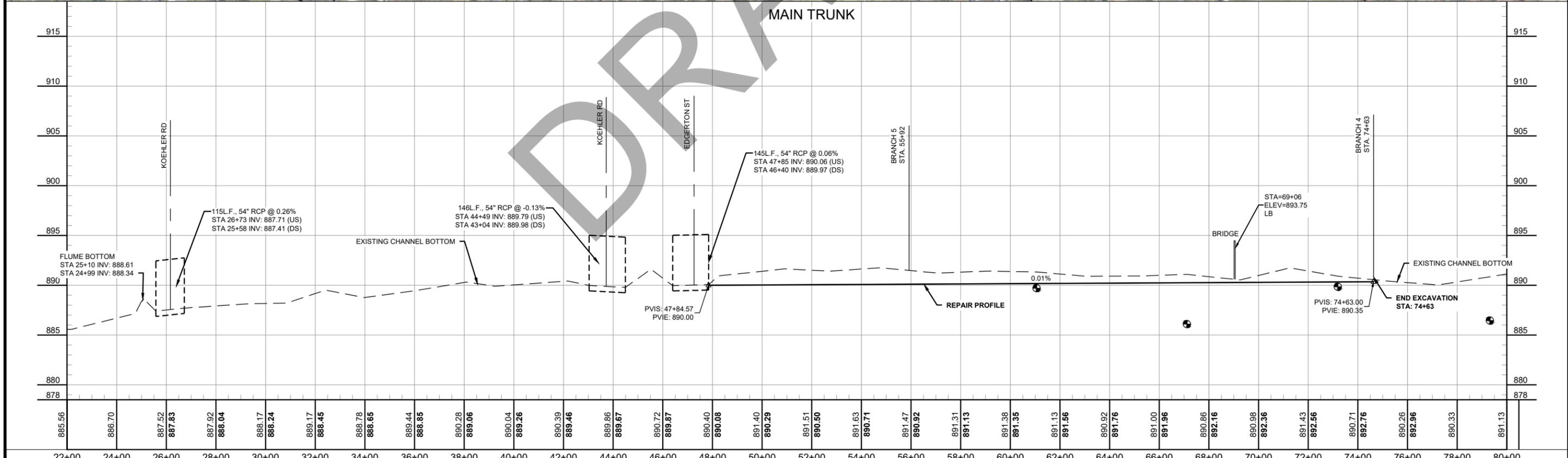
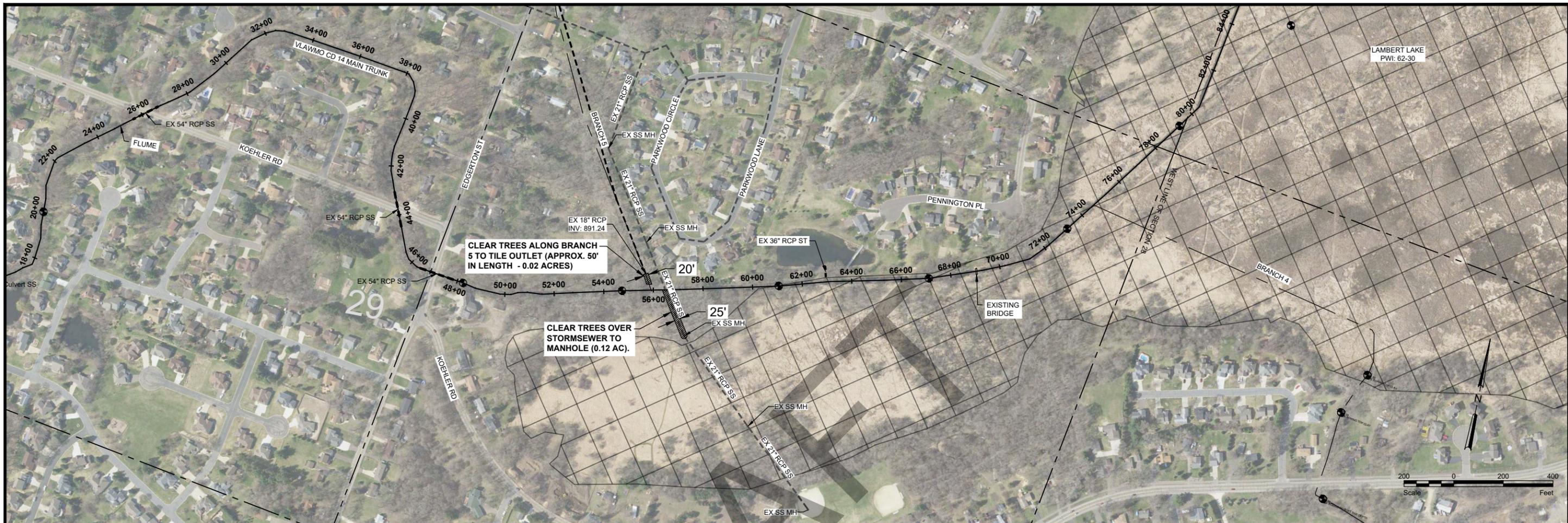
CONTACT "GOPHER STATE ONE CALL" FOR LOCATIONS OF BURIED UTILITIES. CALL (651) 454-0002 OR (800) 252-1166. ALSO CONTACT AT www.gopherstateonecall.org

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PREPARED BY:

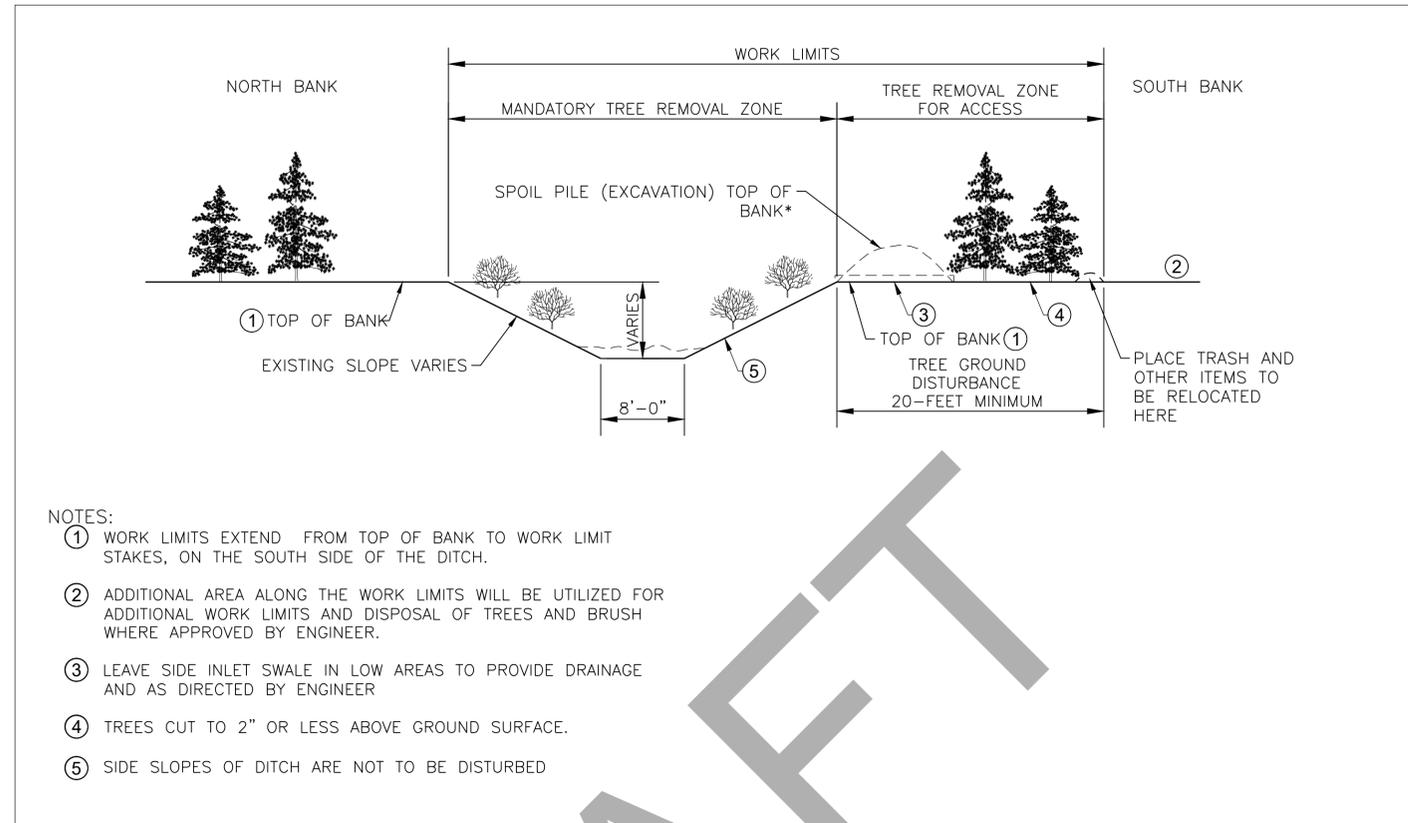


MAPLE GROVE, MINNESOTA



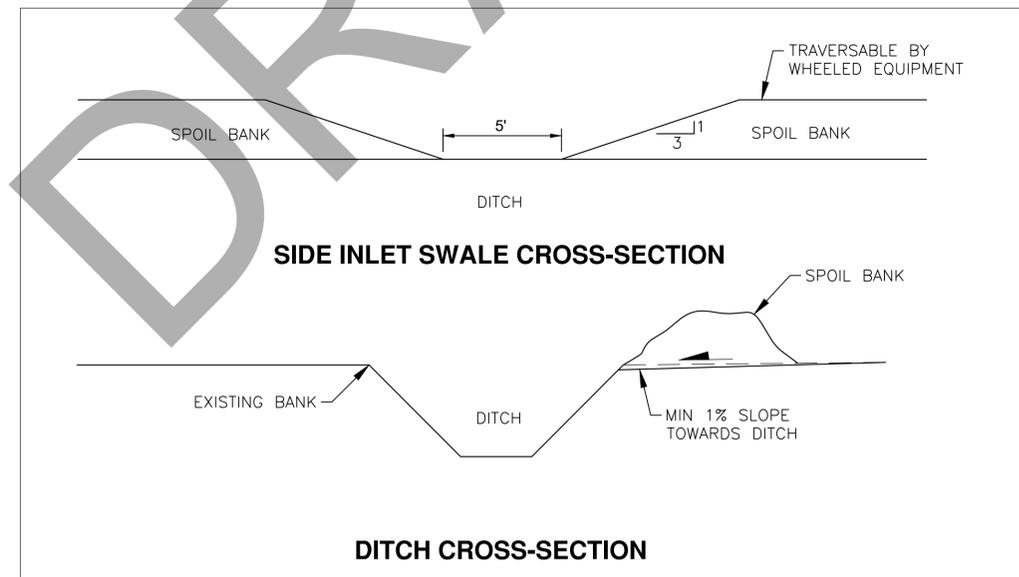
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No.	Revision	Date	By		Maple Grove P: 763.493.4522 F: 763.493.5572	Drawn by AMZ Checked by PM	Date 6-29-2021 Scale AS SHOWN	RAMSEY COUNTY DITCH 14 VADNAIS LAKE AREA WATER MANAGEMENT ORGANIZATION	MAIN TRUNK PLAN & PROFILE PROJECT NO. 7057-0012	SHEET 2



DITCH CORRIDOR "WORK LIMITS"

NOT TO SCALE



SIDE INLET DETAIL

NOT TO SCALE

H:\Maple Grove\JBN\7057\7057_0012\CAD\Plans\7057_VLA\WVO CD14 P&P.dwg-3 DETAILS-7/21/2021 3:28 PM-(arigan)

No.	Revision	Date	By



Maple Grove
P: 763.493.4522
F: 763.493.5572

Drawn by
AMZ
Checked by
PM

Date
6-29-2021
Scale
AS SHOWN

RAMSEY COUNTY DITCH 14
VADNAIS LAKE AREA
WATER MANAGEMENT ORGANIZATION

DETAILS
PROJECT NO. 7057-0012

SHEET
3



VLAWMO LANDSCAPE LEVEL 2 GRANT APPLICATION FORM

Please submit form & required materials to:
TYLER THOMPSON
tyler.thompson@vlawmo.org
(651) 204-6071

Vadnais Lake Area Water Management Organization
800 County Rd E East
Vadnais Heights, MN 55127
www.vlawmo.org
(651) 204-6070

Please fill in the application as best as possible and use additional pages if necessary. Refer to the Grant Guidance document for further information or contact Tyler Thompson with any questions.

APPLICANT INFORMATION

ORGANIZATION NAME: _____

CONTACT PERSON: _____

ADDRESS: _____ CITY: _____ ZIP: _____

PHONE: _____ EMAIL: _____

PROJECT SUMMARY

ESTIMATED **TOTAL** COST OF YOUR PROJECT: \$ _____ AMOUNT OF GRANT REQUESTED: \$ _____

AMOUNT & PERCENTAGE OF MATCHING FUNDS? (FROM LANDOWNER) _____

WHEN DO YOU PLAN TO COMPLETE YOUR PROJECT? _____

TYPE OF PROJECT THAT WILL BE COMPLETED:

- Raingarden/ Infiltration Basin
- Shoreline or Streambank Restoration
- Stormwater Retrofit
- Other

If other, please describe proposed project: _____

PROJECT BACKGROUND

DESCRIBE THE PROJECT LOCATION, INCLUDING WATER RESOURCES WHICH MAY BORDER THE PROPERTY), OR WHICH WATERBODIES THE PROPERTY MAY DRAIN TO. WHAT ISSUE DO YOU HOPE TO ADDRESS WITH THIS PROJECT?

WHAT RESULTS WATER QUALITY RESULTS DO YOU HOPE TO ACHIEVE WITH THIS PROJECT?

ARE ANY PUBLIC EDUCATION EFFORTS OR PROJECT SIGNAGE PLANNED FOR THE PROJECT? PLEASE EXPLAIN:

PLEASE LIST OTHER PARTNERS WHO ARE PROVIDING FUNDING OR OTHER FORMS OF SUPPORT.

PROJECT SPECIFICATIONS

In order to be considered for a LL2 grant, information regarding the water quality benefit of your project (amount of stormwater and phosphorus captured) must be included. If a professional designer or contractor has determined the pollutant capture amounts, please include that information with the application. VLAWMO staff is also available to assist you in determining these calculations.

TOTAL PROPERTY AREA
(SQ.FT.): _____

PROJECT SIZE
(SQ.FT.): _____

IMPERVIOUS AREA
DRAINING TO PROJECT
(SQ.FT.): _____

PERVIOUS AREA
DRAINING TO
PROJECT (SQ.FT.): _____

IF YOUR PROJECT IS A RAINGARDEN, PLEASE PROVIDE THE FOLLOWING INFORMATION

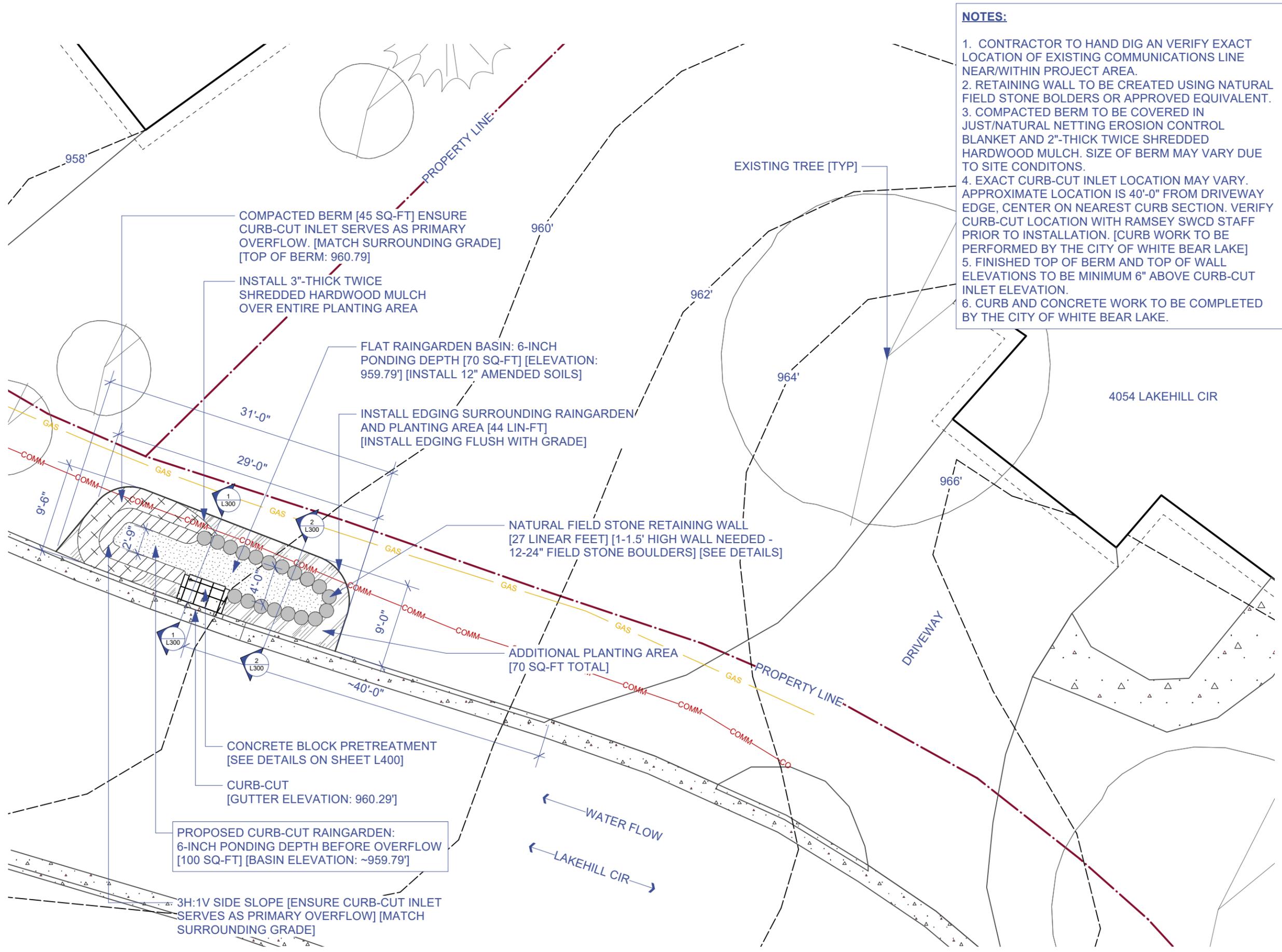
SOIL INFILTRATION
RATE (INCHES/HR): _____

DEPTH OF
RAINGARDEN (INCHES): _____

ADDITIONAL REQUIRED MATERIALS

TO COMPLETE YOUR APPLICATION, PLEASE INCLUDE AND ATTACH:

- Detailed final plan set of the proposed project, drafted by either a qualified professional or Engineer. Dependent upon the complexity of the project, VLAWMO may require project final designs be completed by qualifying professional or Engineer. Plans must either show water quality pollutant reductions, or must include project dimensions that enable VLAWMO staff to model the project for water quality benefits or stormwater reductions.
- Detailed project budget estimate with clear cost and material breakouts that equate to your total project cost estimate. Please review the VLAWMO Landscape Level 2 Cost Share Guidance document for eligible project materials that are applicable for grant funding.



NOTES:

1. CONTRACTOR TO HAND DIG AND VERIFY EXACT LOCATION OF EXISTING COMMUNICATIONS LINE NEAR/WITHIN PROJECT AREA.
2. RETAINING WALL TO BE CREATED USING NATURAL FIELD STONE BOLDERS OR APPROVED EQUIVALENT.
3. COMPACTED BERM TO BE COVERED IN JUST/NATURAL NETTING EROSION CONTROL BLANKET AND 2"-THICK TWICE SHREDDED HARDWOOD MULCH. SIZE OF BERM MAY VARY DUE TO SITE CONDITONS.
4. EXACT CURB-CUT INLET LOCATION MAY VARY. APPROXIMATE LOCATION IS 40'-0" FROM DRIVEWAY EDGE, CENTER ON NEAREST CURB SECTION. VERIFY CURB-CUT LOCATION WITH RAMSEY SWCD STAFF PRIOR TO INSTALLATION. [CURB WORK TO BE PERFORMED BY THE CITY OF WHITE BEAR LAKE]
5. FINISHED TOP OF BERM AND TOP OF WALL ELEVATIONS TO BE MINIMUM 6" ABOVE CURB-CUT INLET ELEVATION.
6. CURB AND CONCRETE WORK TO BE COMPLETED BY THE CITY OF WHITE BEAR LAKE.



RAMSEY COUNTY

RAMSEY COUNTY SWCD
1425 PAUL KIRKWOLD DR
ARDEN HILLS, MN 55112
651-266-7280
www.ramseycounty.us

PROJECT: MORRISON RESIDENCE
LOCATION: 4054 LAKEHILL CIR
 WHITE BEAR LAKE, MN 55110
WATERSHED DISTRICT:



VLAWMO
Vadunas Lake Area
Water Management Organization

DESIGNER: BTO
DATE: 5/28/2021
REVISION:
REVISION:
REVISION:
REVISION:
CHECKED BY: JL
TAA:

NOTES:

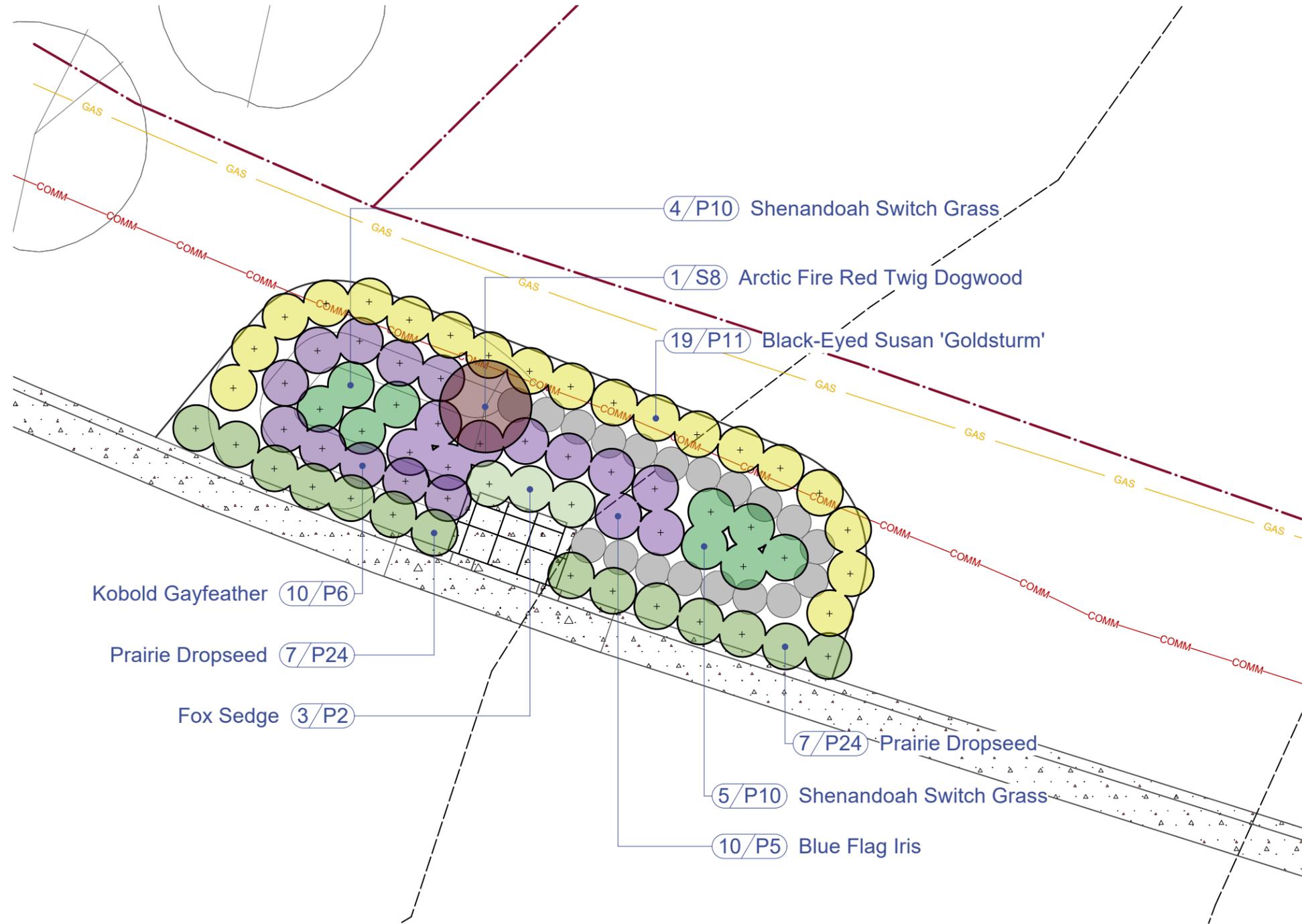
- ELEVATIONS ARE APPROXIMATE
- UTILITY LOCATIONS ARE APPROXIMATE, CONFRIM LOCATIONS PRIOR TO WORK
- CONTRACTOR AQUIRE NECESSARY PERMITS PRIOR TO START
- EXCAVATE WITH TRACKED EQUIPMENT ONLY
- RIP UNDERLYING SOILS 6-12" TO REMOVE COMPACTION
- SIZE AND SHAPE OF RAINGARDEN MAY VARY
- MAINTAIN SQUARE FEET AND PONDING DEPTH
- ORIGINAL SHEET SIZE: 11"x17"

SCALE: 1"=10'-0" N



LAYOUT PLAN

L100



PLANT SCHEDULE					
ID	Qty	Latin Name	Common Name	Size	Spacing (ft)
P2	3	Carex vulpinoidea	Fox Sedge	4" Pot	2
P5	10	Iris versicolor	Blue Flag Iris	4" Pot	2
P6	10	Liatis spicata 'Kobold'	Kobold Gayfeather	#1 Cont.	2
P10	9	Panicum virgatum 'Shenandoah'	Shenandoah Switch Grass	#1 Cont.	2
P11	19	Rudbeckia hirta 'Goldsturm'	Black-Eyed Susan 'Goldsturm'	#1 Cont.	2
P24	14	Sporobolus heterolepis	Prairie Dropseed	#1 Cont.	2
S8	1	Cornus sericea 'Farrow'	Arctic Fire Red Twig Dogwood	2 Gallon	-
	66	TOTAL PLANTS			



RAMSEY COUNTY

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1425 PAUL KIRKWOLD DR
ARDEN HILLS, MN 55112
651-266-7280
www.ramseycounty.us

PROJECT: MORRISON RESIDENCE
LOCATION:
4054 LAKEHILL CIR
WHITE BEAR LAKE, MN 55110
WATERSHED DISTRICT:



VLAWMO
Valdun Lake Area
Water Management Organization

DESIGNER: BTO
DATE: 5/28/2021
REVISION:
REVISION:
REVISION:
CHECKED BY: JL
TAA:

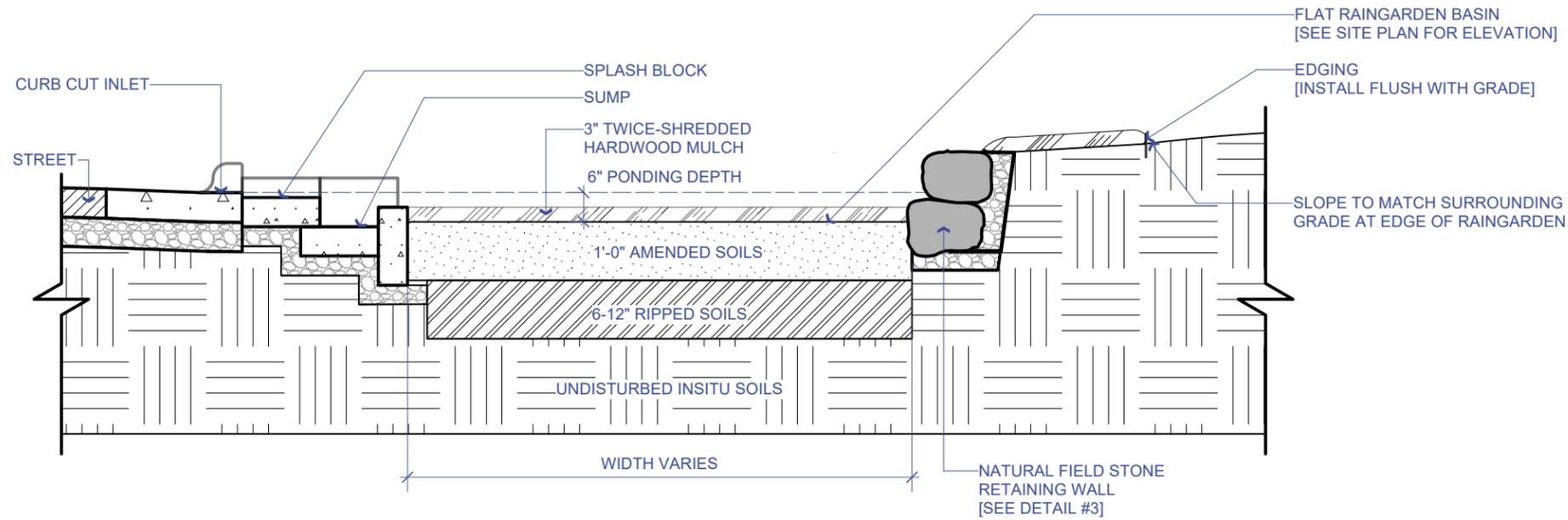
NOTES:
-CALL GOPHER ONE TO MARK UTILITIES BEFORE DIGGING
-PLANT PERENNIALS 24" O.C.
[SEE PLANT SCHEDULE]
[PLANT LOCATION MAY VARY]
-PLANT SUBSTITUTIONS MUST BE APPROVED BY SWCD STAFF
-ORIGINAL SHEET SIZE: 11"x17"

SCALE: 3/16"=1'-0" N
↑

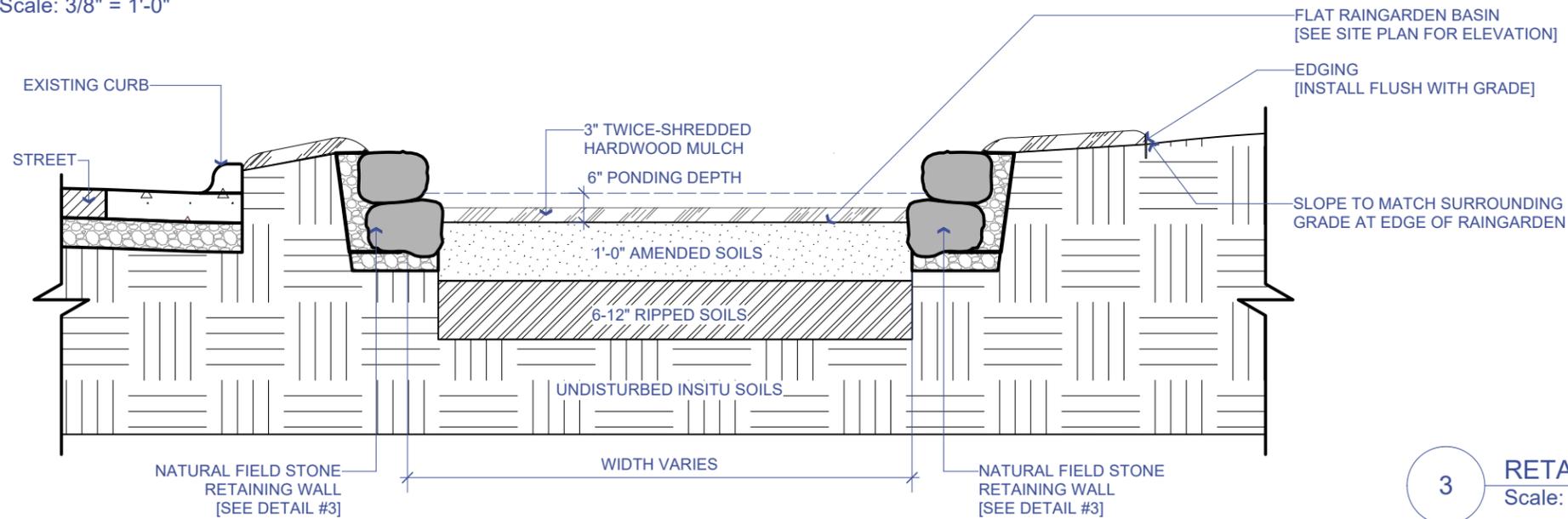
PLANTING PLAN

L200

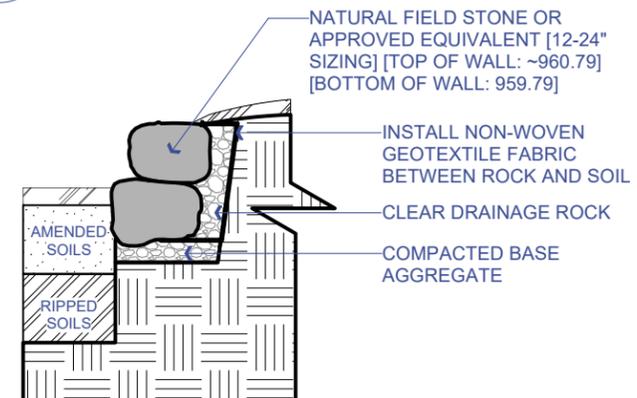
1 RAINGARDEN SECTION #1
Scale: 3/8" = 1'-0"



2 RAINGARDEN SECTION #2
Scale: 3/8" = 1'-0"



3 RETAINING WALL DETAIL
Scale: 3/8" = 1'-0"



- NOTES:**
1. EXCAVATE RAIN GARDEN TO 2'-0" BELOW GUTTER. SCARIFY AN ADDITIONAL 6" BEFORE BACKFILLING WITH AMENDED SOILS.
 2. THE PLANTING MEDIUM AND MULCH SHALL BE PLACED IN SUCH A WAY AS TO LIMIT THE AMOUNT OF COMPACTION OF THE SUB-SOILS.
 3. OFFSET SPLASH PAD FROM CURB CUT OPENING IN DIRECTION OF WATER FLOW ON STREET.
 4. NO GEOTEXTILE TO BE USED BETWEEN NATIVE AND ENGINEERED SOILS
 5. INSTALL EDGING SURROUNDING PLANTING BED AND RAINGARDEN. INSTALL EDGING FLUSH WITH GRADE TO ENSURE WATER MAY FLOW FREELY INTO RAINGARDEN BASIN.



RAMSEY COUNTY

RAMSEY COUNTY SWCD
1425 PAUL KIRKWOLD DR
ARDEN HILLS, MN 55112
651-266-7280
www.ramseycounty.us

PROJECT: MORRISON RESIDENCE
LOCATION:
4054 LAKEHILL CIR
WHITE BEAR LAKE, MN 55110
WATERSHED DISTRICT:



VLAWMO
Valdus Lake Area
Water Management Organization

DESIGNER: BTO
DATE: 5/28/2021
REVISION:
REVISION:
REVISION:
REVISION:
CHECKED BY: JL
TAA:

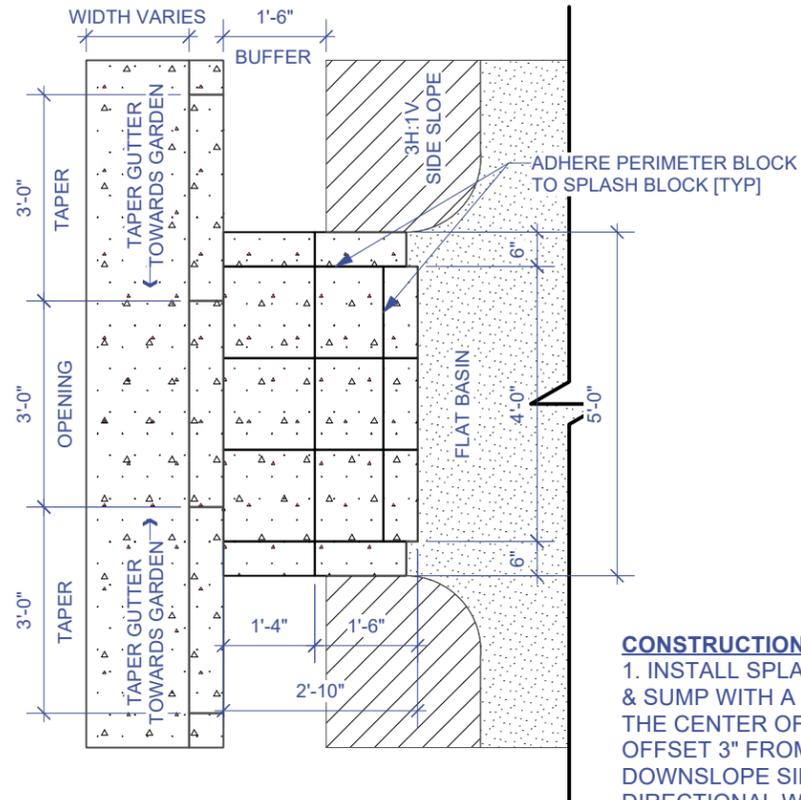
NOTES:
-CONTACT GOPHER STATE ONE CALL TO CONFIRM UTILITY LOCATIONS PRIOR TO WORK
-EXCAVATE WITH TRACKED EQUIPMENT ONLY
-MAINTAIN SQUARE FEET AND DEPTH
-SUBSTITUTIONS TO CONSTRUCTION DESIGN AND MATERIALS MUST BE APPROVED PRIOR TO INSTALLATION
-ORIGINAL SHEET SIZE: 11"x17"

SCALE:

**SITE DETAILS:
RAINGARDEN**

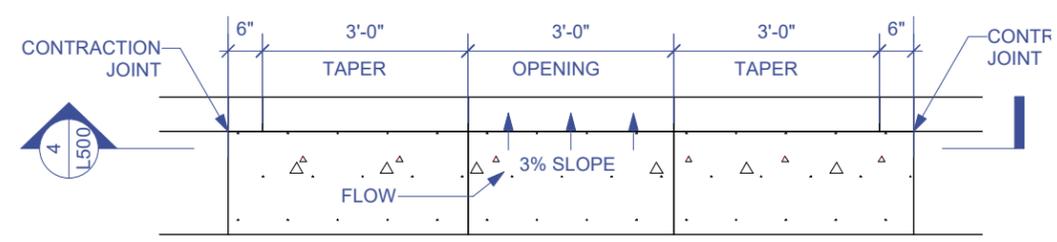
L300

1 SPLASH BLOCK STEP DOWN & SUMP: PLAN VIEW
Scale: 3/8" = 1'-0"

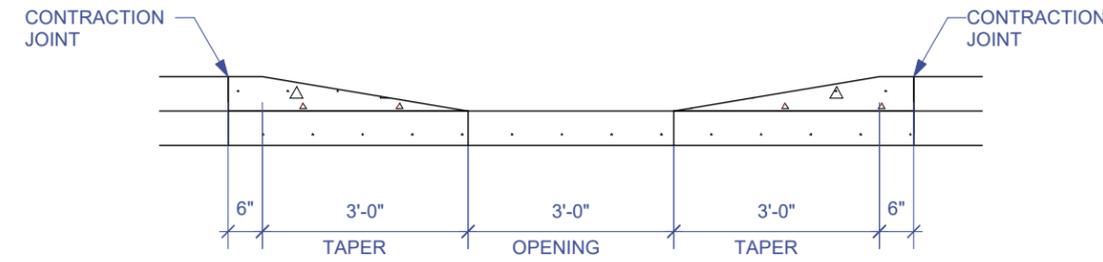


CONSTRUCTION NOTE:
1. INSTALL SPLASH BLOCK STEP DOWN & SUMP WITH A 3" OFFSET FROM THE CENTER OF CURB CUT OPENING. OFFSET 3" FROM CENTER TOWARDS DOWNSLOPE SIDE, CONSISTENT WITH DIRECTIONAL WATER FLOW

3 CURB CUT DETAIL [PLAN]
Scale: 3/8" = 1'-0"

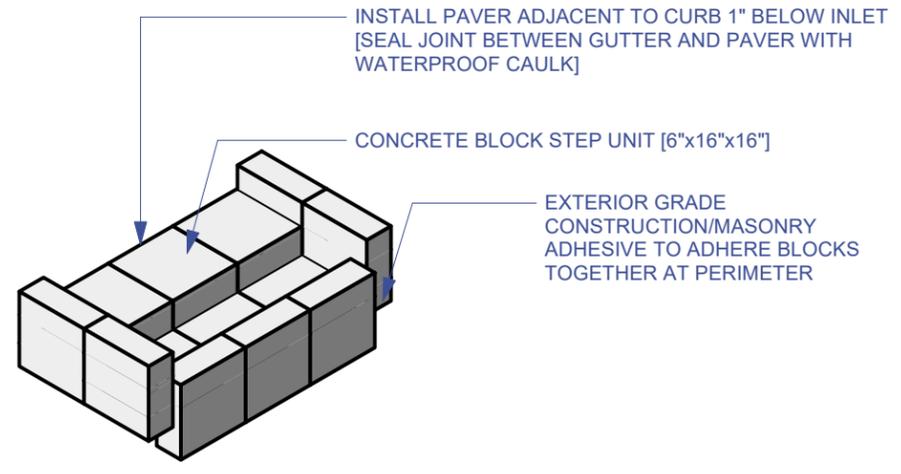
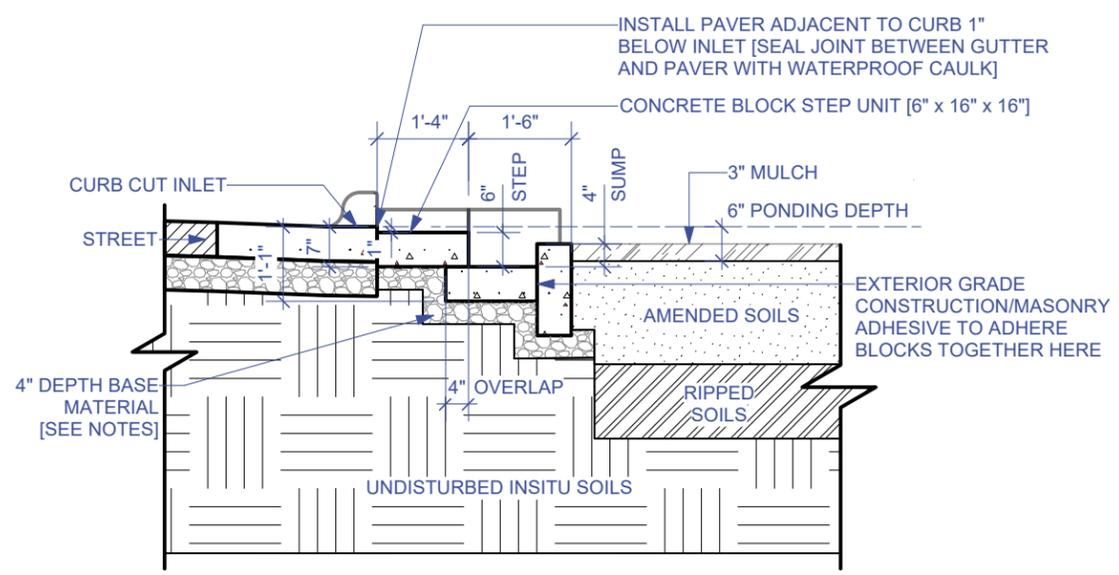


4 CURB CUT DETAIL [SECTION]
Scale: 3/8" = 1'-0"



- NOTES:**
1. SAW CUT 1'-3" TAPERS AT UNIFORM ANGLE FROM TOP CURB TO GUTTER
 2. SAW CUT 1'-6" OPENING IN CURB
 3. MINIMUM 3% SLOPE FROM GUTTER TO BACK OF CURB
 4. IF CURB FRACTURES DURING CUTTING CONTACT ENGINEER
 5. CURB SECTION LENGTH MAY VARY
 6. TAPER LENGTH MAY VARY
 7. MAINTAIN CURB-CUT OPENING LENGTH
 8. ALTERNATE: REMOVAL AND REPLACEMENT OF ENTIRE CURB SECTION MAY BE PERFORMED AS ALTERNATE TO SAW-CUTTING CURB-CUT OPENING.
 9. CURB WORK TO BE COMPLETED BY THE CITY OF WHITE BEAR LAKE.

2 SPLASH BLOCK STEP DOWN & SUMP: SECTION-ELEVATION/ISOMETRIC VIEW
Scale: 3/8" = 1'-0"



- NOTES:**
1. EXCAVATE RAIN GARDEN TO 1'-9" BELOW GUTTER.
 2. INSTALL AND COMPACT BASE MATERIAL [WASHED SAND, WASHED AGGREGATE OR APPROVED ALTERNATE]
 3. INSTALL PAVER SUMP AND SPLASH BLOCK TO A FINISHED HEIGHT OF 1" BELOW THE CURB-CUT INLET
 4. SEAL JOINT BETWEEN GUTTER AND PAVER WITH WATERPROOF CAULK

RAMSEY COUNTY

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ARDEN HILLS, MN 55112
651-266-7280
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PROJECT: MORRISON RESIDENCE
LOCATION:
4054 LAKEHILL CIR
WHITE BEAR LAKE, MN 55110
WATERSHED DISTRICT:
VLAWMO
Valdus Lake Area
Water Management Organization

DESIGNER: BTO
DATE: 5/28/2021
REVISION:
REVISION:
REVISION:
CHECKED BY: JL
TAA:

NOTES:
-CONTACT GOPHER STATE ONE CALL TO CONFIRM UTILITY LOCATIONS PRIOR TO WORK
-EXCAVATE WITH TRACKED EQUIPMENT ONLY
-MAINTAIN SQUARE FEET AND DEPTH
-SUBSTITUTIONS TO CONSTRUCTION DESIGN AND MATERIALS MUST BE APPROVED PRIOR TO INSTALLATION
--ORIGINAL SHEET SIZE: 11"x17"

SCALE:

**SITE DETAILS:
PRE-TREATMENT &
CURB-CUT**

L400



ALL ITEMS AS SPECIFIED BELOW ARE ESTIMATE ONLY - NOT A BID SHEET - FOR REFERENCE USE ONLY

Morrison Residence
4054 Lakehill Cir
White Bear Lake, MN 55110
BMP Type: Curb Cut Raingarden w/ Pre-Treatment
Number of BMPs: 1

County: Ramsey
Date: 28-May-21

CURB-CUT RAINGARDEN

Item	Qty	Unit	Unit Cost	Amount
Excavation, Grading, Ripping Soil (Tracked Equipment only in excavation area)	10.00	CY	\$ 60.00	\$ 600.00
Mobilization	1.00	LS	\$ 1,000.00	\$ 1,000.00
Deliveries (Soil, Plants, etc.)	3.00	EA	\$ 175.00	\$ 525.00
Soil Haul Away/Disposal (use excavated soil for berm creation prior to haul away)	3.00	CY	\$ 75.00	\$ 225.00
Splash Blocks and Sump Base Material:	0.50	TON	\$ 200.00	\$ 100.00
Aggregate/Washed Sand/Pea Gravel (or equivalent)				
Concrete Splash Blocks and Sump Installation [16"x16"x6" Blocks - 13]	1.00	LS	\$ 1,600.00	\$ 1,600.00
Field Stone Boulder Wall Installation - 12-24" natural field stone boulders	40.00	SQ-FT	\$ 60.00	\$ 2,400.00
[including: 1-2 courses, ~1 ton clear drainage rock, ~.75 ton compacted aggregate base, fabric]				
Soils: Soil Amendment (80% Washed No.2 Sand, 20% Leaf Compost- MNDoT Grade II)	2.50	CY	\$ 110.00	\$ 275.00
Edging (Metal: 1/8" x 6" x 8') [Steel]	44.00	LF	\$ 12.00	\$ 528.00
EC Blanket: Geo-Jute or C125 (or equivalent jute/natural netting blanket)	45.00	SQ-FT	\$ 1.50	\$ 67.50
(secure with biodegradable stakes - for compacted berm area)				
Twice-Shredded Hardwood Mulch (2-3" depth)	2.00	YD	\$ 90.00	\$ 180.00
Native Plant: 4" Pot (or approved equivalent)	13.00	EA	\$ 10.00	\$ 130.00
Native Plant: #1 Container (or approved equivalent)	52.00	EA	\$ 17.00	\$ 884.00
Native Shrub: 2 Gallon (or approved equivalent)	1.00	EA	\$ 55.00	\$ 55.00
Site Restoration (repair any turfgrass damaged outside of raingarden area)	1.00	LS	\$ 800.00	\$ 800.00
			Subtotal	\$ 9,369.50

ADD/DEDUCT BID ITEMS (AS NECESSARY)

1]			\$ -	\$ -
2]			\$ -	\$ -
3]			\$ -	\$ -
4]			\$ -	\$ -
5]			\$ -	\$ -
6]			\$ -	\$ -
			Subtotal	\$ -

PROJECT TOTAL

Project Estimate	\$	9,369.50
:-10%	\$	8,432.55
:+10%	\$	10,306.45
Estimated WD/WMO Grant Award:		\$7,027.13
Potential Grant Award Total:		\$7,027.13
Estimated Landowner Cost:		\$2,342.38

Soil & Water Conservation Division
2015 Van Dyke Street
Maplewood, MN 55109
www.ramseycounty.us

Project Information

Calculator Version:	Version 3: January 2017
Project Name:	4054 Lakehill Circle, WBL Curb Cut Rain Garden
User Name / Company Name:	VLAWMO
Date:	6/2/21
Project Description:	Curb-cut rain garden designed by RCSWCD, as part of WBL 2021 Mill & Overlay project
Construction Permit?:	No

Site Information

Retention Requirement (inches):	1.1
Site's Zip Code:	55110
Annual Rainfall (inches):	31.8
Phosphorus EMC (mg/l):	0.3
TSS EMC (mg/l):	54.5

Total Site Area

Land Cover	A Soils (acres)	B Soils (acres)	C Soils (acres)	D Soils (acres)	Total (acres)
Forest/Open Space - Undisturbed, protected forest/open space or reforested land	0	0			0
Managed Turf - disturbed, graded for yards or other turf to be mowed/managed	1.0065				1.0065
			Impervious Area (acres)		.5482
			Total Area (acres)		1.5547

Site Areas Routed to BMPs

Land Cover	A Soils (acres)	B Soils (acres)	C Soils (acres)	D Soils (acres)	Total (acres)
Forest/Open Space - Undisturbed, protected forest/open space or reforested land					0
Managed Turf - disturbed, graded for yards or other turf to be mowed/managed	0.247				0.247
			Impervious Area (acres)		0.3432
			Total Area (acres)		0.5902

Summary Information

Performance Goal Requirement

Performance goal volume retention requirement:	2189	ft ³
Volume removed by BMPs towards performance goal:	85	ft ³
Percent volume removed towards performance goal	4	%

Annual Volume and Pollutant Load Reductions

Post development annual runoff volume	1.6022	acre-ft
Annual runoff volume removed by BMPs:	0.2528	acre-ft
Percent annual runoff volume removed:	16	%

Post development annual particulate P load:	0.719	lbs
Annual particulate P removed by BMPs:	0.114	lbs
Post development annual dissolved P load:	0.588	lbs
Annual dissolved P removed by BMPs:	0.093	lbs
Percent annual total phosphorus removed:	16	%

Post development annual TSS load:	237.5	lbs
Annual TSS removed by BMPs:	37.5	lbs
Percent annual TSS removed:	16	%

BMP Summary

Performance Goal Summary

BMP Name	BMP Volume Capacity (ft ³)	Volume Received (ft ³)	Volume Retained (ft ³)	Volume Outflow (ft ³)	Percent Retained (%)
4054 CC RG	85	1370	85	1285	6

Annual Volume Summary

BMP Name	Volume From Direct Watershed (acre-ft)	Volume From Upstream BMPs (acre-ft)	Volume Retained (acre-ft)	Volume outflow (acre-ft)	Percent Retained (%)
4054 CC RG	0.866	0	0.2528	0.6132	29

Particulate Phosphorus Summary

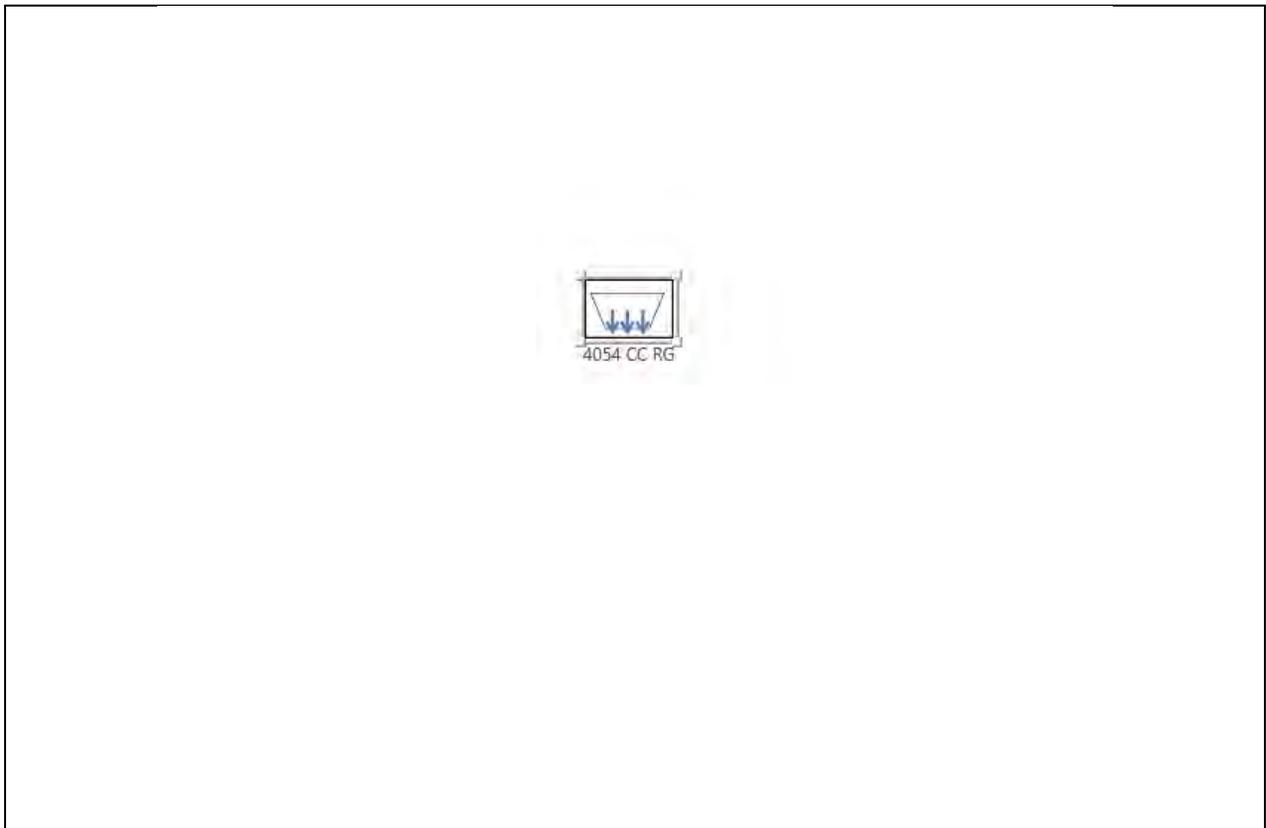
BMP Name	Load From Direct Watershed (lbs)	Load From Upstream BMPs (lbs)	Load Retained (lbs)	Outflow Load (lbs)	Percent Retained (%)
4054 CC RG	0.3886	0	0.1135	0.2751	29

Dissolved Phosphorus Summary

BMP Name	Load From Direct Watershed (lbs)	Load From Upstream BMPs (lbs)	Load Retained (lbs)	Outflow Load (lbs)	Percent Retained (%)
4054 CC RG	0.318	0	0.0928	0.2252	29

TSS Summary

BMP Name	Load From Direct Watershed (lbs)	Load From Upstream BMPs (lbs)	Load Retained (lbs)	Outflow Load (lbs)	Percent Retained (%)
4054 CC RG	128.37	0	37.48	90.89	29

BMP Schematic



VLAWMO LANDSCAPE LEVEL 2 GRANT APPLICATION FORM

Please submit form & required materials to:
TYLER THOMPSON
tyler.thompson@vlawmo.org
(651) 204-6071

Vadnais Lake Area Water
Management Organization
800 County Rd E East
Vadnais Heights, MN 55127
www.vlawmo.org
(651) 204-6070

Please fill in the application as best as possible and use additional pages if necessary. Refer to the Grant Guidance document for further information or contact Tyler Thompson with any questions.

APPLICANT INFORMATION

ORGANIZATION NAME: _____

CONTACT PERSON: _____

ADDRESS: _____ CITY: _____ ZIP: _____

PHONE: _____ EMAIL: _____

PROJECT SUMMARY

ESTIMATED **TOTAL** COST
OF YOUR PROJECT: \$ _____ AMOUNT OF GRANT REQUESTED: \$ _____

AMOUNT & PERCENTAGE OF MATCHING
FUNDS? (FROM LANDOWNER) _____

WHEN DO YOU PLAN TO COMPLETE YOUR PROJECT? _____

TYPE OF PROJECT THAT WILL BE COMPLETED:

Raingarden/
Infiltration Basin Shoreline or
Streambank Restoration Stormwater Retrofit Other

If other, please describe
proposed project: _____

PROJECT BACKGROUND

DESCRIBE THE PROJECT LOCATION, INCLUDING WATER RESOURCES WHICH MAY BORDER THE PROPERTY), OR WHICH WATERBODIES THE PROPERTY MAY DRAIN TO. WHAT ISSUE DO YOU HOPE TO ADDRESS WITH THIS PROJECT?

WHAT RESULTS WATER QUALITY RESULTS DO YOU HOPE TO ACHIEVE WITH THIS PROJECT?

ARE ANY PUBLIC EDUCATION EFFORTS OR PROJECT SIGNAGE PLANNED FOR THE PROJECT? PLEASE EXPLAIN:

PLEASE LIST OTHER PARTNERS WHO ARE PROVIDING FUNDING OR OTHER FORMS OF SUPPORT.

PROJECT SPECIFICATIONS

In order to be considered for a LL2 grant, information regarding the water quality benefit of your project (amount of stormwater and phosphorus captured) must be included. If a professional designer or contractor has determined the pollutant capture amounts, please include that information with the application. VLAWMO staff is also available to assist you in determining these calculations.

TOTAL PROPERTY AREA
(SQ.FT.): _____

PROJECT SIZE
(SQ.FT.): _____

IMPERVIOUS AREA
DRAINING TO PROJECT
(SQ.FT.): _____

PERVIOUS AREA
DRAINING TO
PROJECT (SQ.FT.): _____

IF YOUR PROJECT IS A RAINGARDEN, PLEASE PROVIDE THE FOLLOWING INFORMATION

SOIL INFILTRATION
RATE (INCHES/HR): _____

DEPTH OF
RAINGARDEN (INCHES): _____

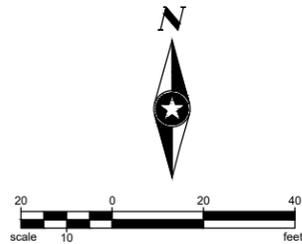
ADDITIONAL REQUIRED MATERIALS

TO COMPLETE YOUR APPLICATION, PLEASE INCLUDE AND ATTACH:

- Detailed final plan set of the proposed project, drafted by either a qualified professional or Engineer. Dependent upon the complexity of the project, VLAWMO may require project final designs be completed by qualifying professional or Engineer. Plans must either show water quality pollutant reductions, or must include project dimensions that enable VLAWMO staff to model the project for water quality benefits or stormwater reductions.
- Detailed project budget estimate with clear cost and material breakouts that equate to your total project cost estimate. Please review the VLAWMO Landscape Level 2 Cost Share Guidance document for eligible project materials that are applicable for grant funding.

NOTES:

- CONTRACTOR TO VERIFY LOCATIONS OF ALL PRIVATE AND PUBLIC UTILITIES IN THE PROJECT AREA.
- INSTALL INLET PROTECTION AT CATCH BASINS PRIOR TO BEGINNING WORK.
- CONTRACTOR SHALL USE A PICK-UP BROOM SWEEPER TO CLEAN STREETS ON A DAILY BASIS DURING CONSTRUCTION HOURS UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
- MINOR GRADING ADJACENT TO PARKING LOT WILL BE NEEDED TO MAINTAIN EXISTING DRAINAGE PATTERNS AND WILL BE DIRECTED BY ENGINEER AND PAID FOR UNDER SITE GRADING BID ITEM.
- ALL DISTURBED AREAS SHALL BE RESTORED WITH 6" IMPORTED TOPSOIL BORROW, SEED, & HYDRO MULCH UNLESS OTHERWISE NOTED.
- USE SEED MIXTURE 25-151 FOR TURF RESTORATION AS DIRECTED BY THE ENGINEER.
- ALL POINTS GIVEN IN POINT TABLE ARE PROPOSED EDGE OF BITUMINOUS.
- SEE PAGES 10-15 FOR MNDOT STANDARD PLATES ON PEDESTRIAN RAMPS.
- SEE PAGE 9 FOR TURRET DETAIL.



LEGEND

- REMOVE & REPLACE BITUMINOUS PAVEMENT (REMOVAL OF BITUMINOUS CURB INCIDENTAL) (3.5" DEPTH SECTION ASSUMED, MATCH EXISTING SECTION AS DIRECTED BY ENGINEER
- 6" CONCRETE WALK
- REMOVE & REPLACE CONCRETE SLAB (PROPOSED 4" SLAB)
- EDGE MILL BITUMINOUS
- PROPOSED RAIN GUARDIAN BUNKER (INSTALLED BY OTHERS)
- SALVAGE & INSTALL CASTING
- STORM DRAIN INLET PROTECTION
- PROPOSED DRAINAGE DIRECTION

LEGEND

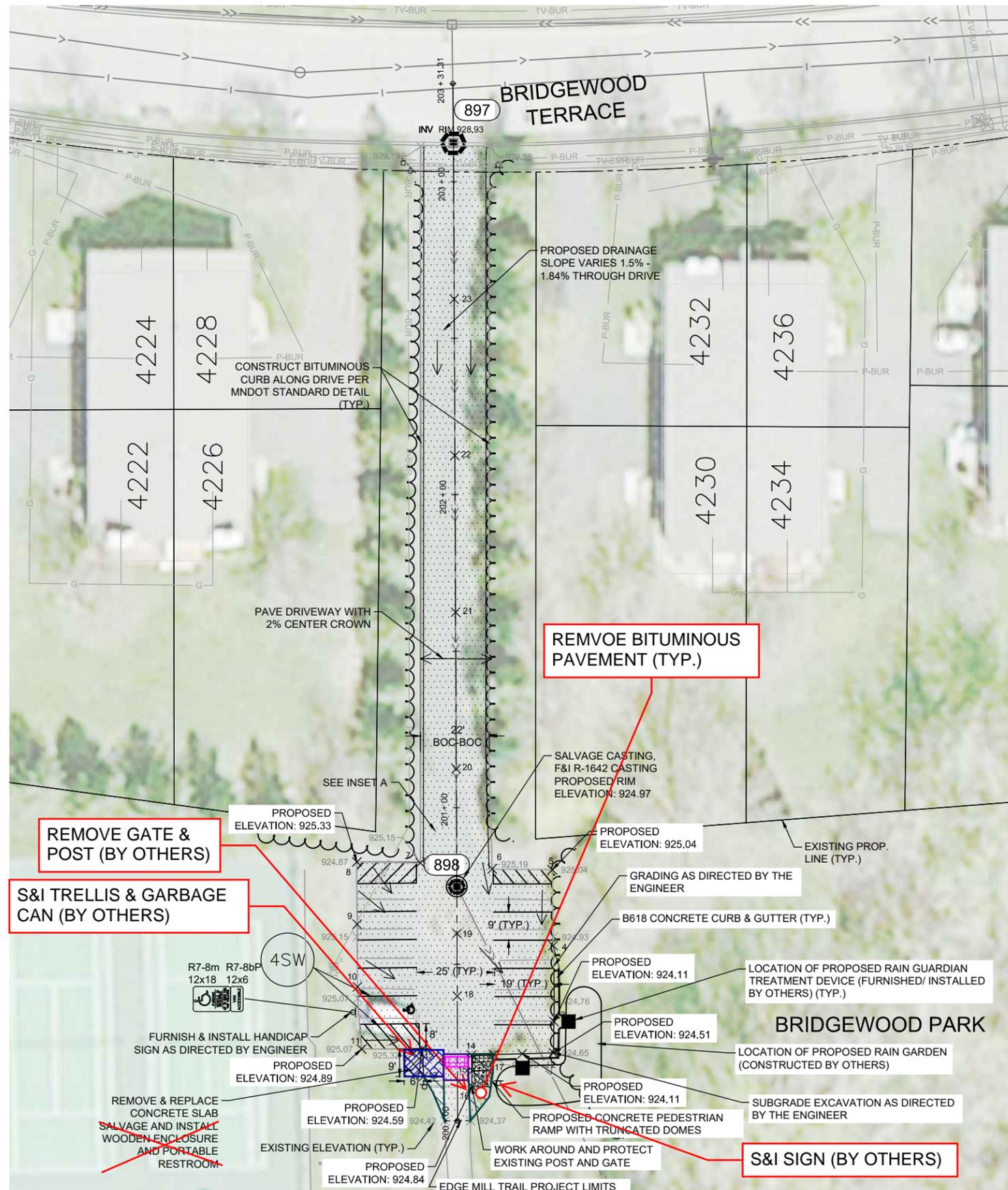
- REMOVE BITUMINOUS PAVEMENT
- REMOVE & REPLACE CONCRETE SLAB
- 6" CONCRETE WALK
- PED RAMP DOMES

INSET A



- 1.5" WEARING COURSE SPWEA330C
- BITUMINOUS TACK COAT
- 2.0" WEARING COURSE SPWEB330C
- REMOVE EXISTING PAVEMENT (3.5" ASSUMED)
- EXISTING LOT SECTION

POINT TABLE			
POINT #	ELEVATION	NORTHING	EASTING
1	924.11	201601.2160	583042.6002
2	924.51	201601.4860	583052.5960
3	924.11	201611.4898	583052.7640
4	924.58	201635.7359	583052.4930
5	925.04	201659.9820	583052.2220
6	925.01	201660.2330	583032.9780
7	925.15	201662.1630	583009.9570
8	925.33	201662.4740	582989.6270
9	925.19	201642.5822	582989.7351
10	925.04	201622.5825	582989.8439
11	924.89	201602.6690	582991.1550
12	924.59	201602.8726	583010.6975
13	924.73	201593.9890	583010.9950
14	924.36	201600.7896	583026.3990
15	924.44	201595.7910	583026.5176
16	924.84	201590.8180	583026.4670
17	924.25	201600.9460	583033.4560
18	924.53	201619.6103	583021.7766
19	924.77	201639.6101	583021.6968
20	925.52	201692.2800	583021.4690
21	926.27	201742.2795	583021.2462
22	927.07	201792.2790	583021.0232
23	928.00	201842.2785	583020.8003



Save: 6/14/2021 2:18 PM hcrumham Plot: 6/16/2021 2:43 PM X:\UZ\VVADNA\15898305-final-dsgm\51-drawings\10-Civil\cad\dwg\15898305RAINGARDEN.dwg

DRAWN BY:	HRC	1	HRC	4.12.21	ADDENDUM NO. 1- LOT REVISIONS
DESIGNER:	HRC	2	HRC	6.14.21	ADDENDUM NO. 2- LOT REVISIONS
CHECKED BY:	SDH				
DESIGN TEAM	NO.	BY	DATE		REVISIONS

PHONE: 651.490.2000
3535 VADNAIS CENTER DRIVE
ST. PAUL, MN 55110-5196
www.sehinc.com

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

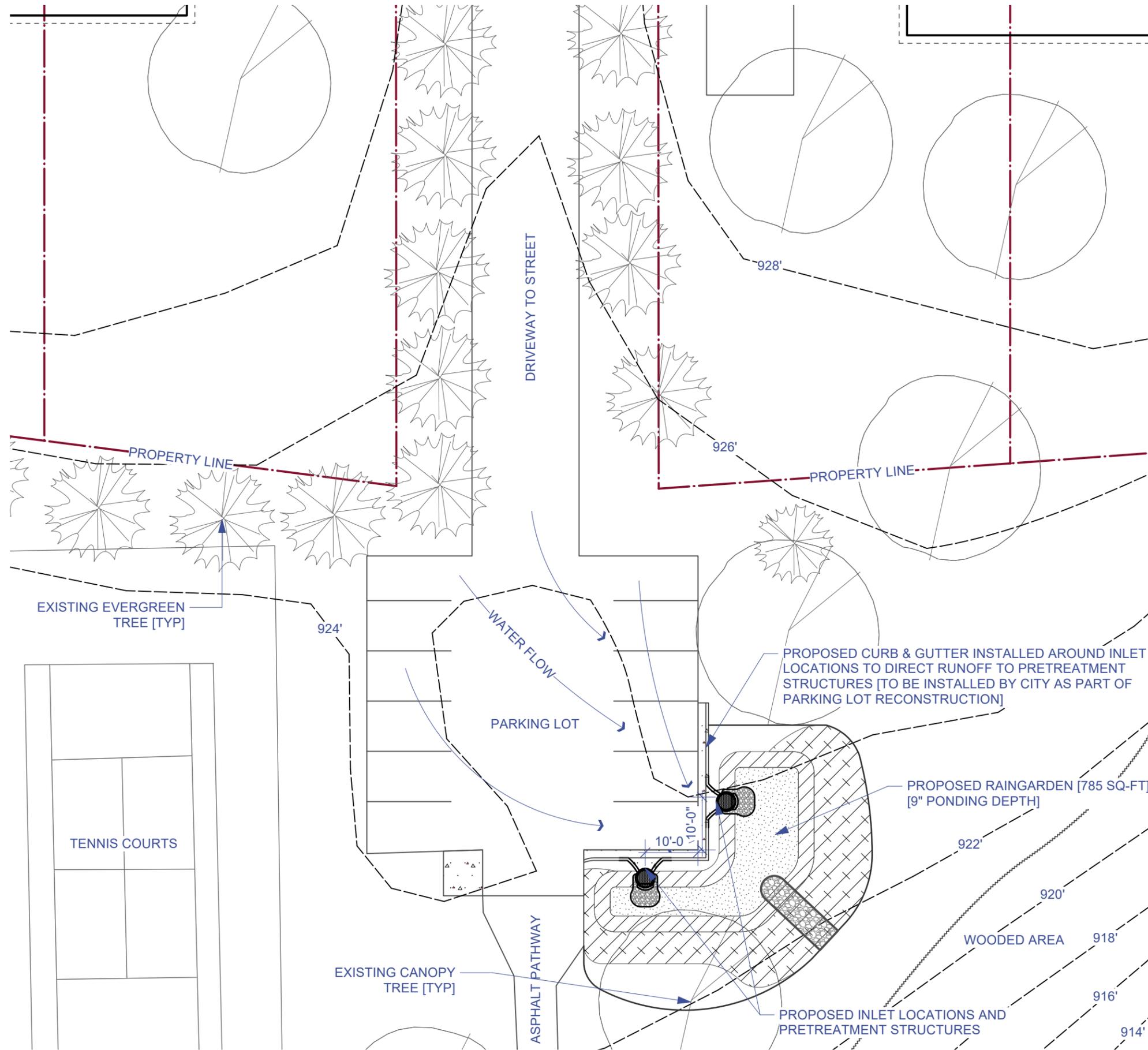
Scott D. Haupt
SCOTT D. HAUPT, PE
Date: 03/16/2021 Lic. No. 46603

VADNAIS HEIGHTS
MINNESOTA

**BRIDGEWOOD PARK
PARKING LOT IMPROVEMENTS
2021 STREET IMPROVEMENTS**

FILE NO.
VADNA 158983

29
36



PROJECT INFORMATION:
BRIDGEWOOD PARK RAINGARDEN
 4224 1/2 BRIDGEWOOD TERRACE
 VADNAIS HEIGHTS, MN 55127
 RAINGARDEN TO BE INSTALLED AFTER
 COMPLETION OF PARKING LOT
 PAVEMENT RECONSTRUCTION.



RAMSEY COUNTY

RAMSEY COUNTY SWCD
 1425 PAUL KIRKWOLD DR
 ARDEN HILLS, MN 55112
 651-266-7280
www.ramseycounty.us

PROJECT: BRIDGEWOOD PARK
LOCATION:
 VADNAIS HEIGHTS, MN

WATERSHED DISTRICT:

 Valleys Lake Area
 Water Management Organization

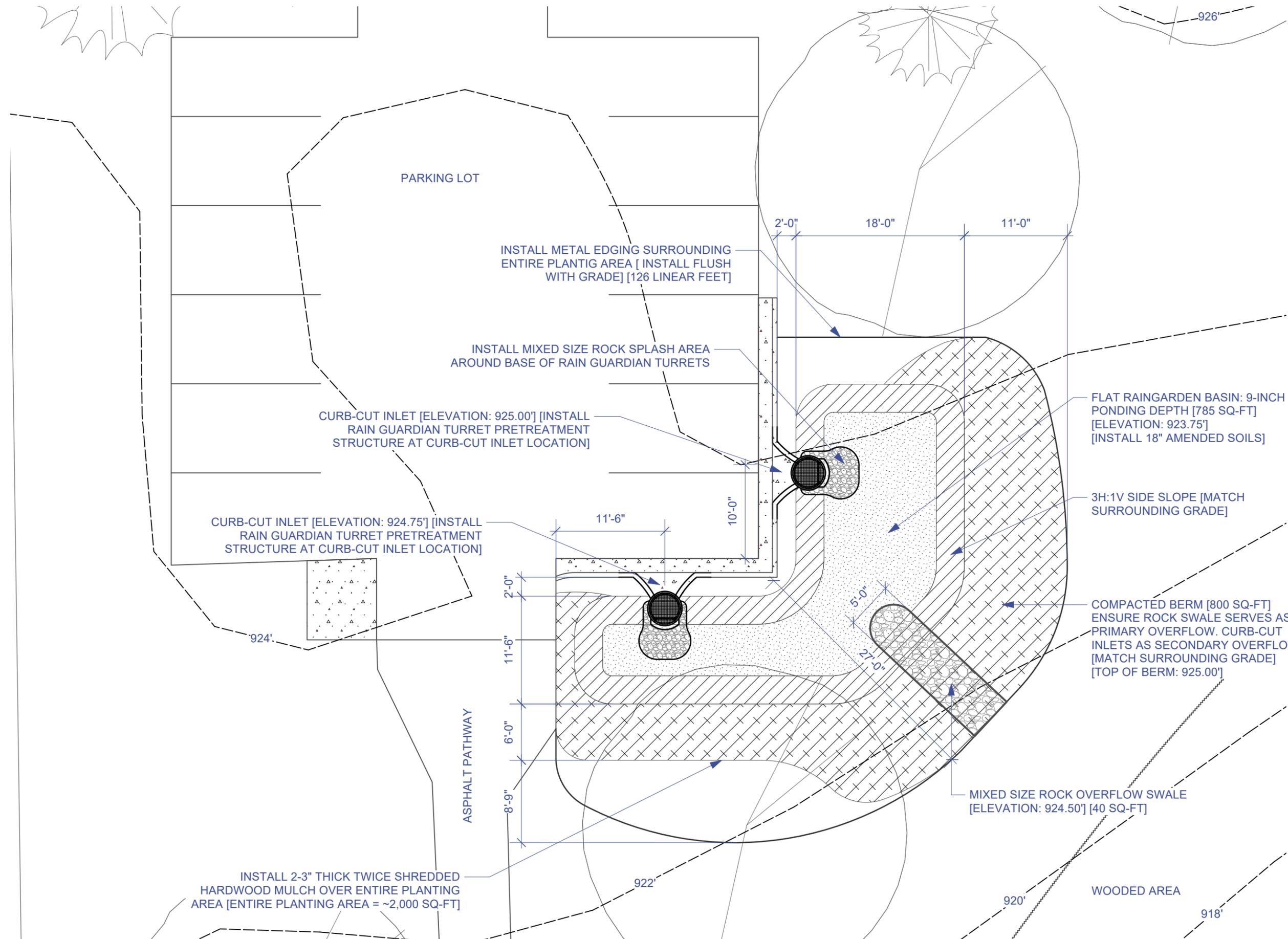
DESIGNER: BTO
DATE: 7/20/2021
REVISION:
REVISION:
REVISION:
REVISION:
CHECKED BY: JL
TAA:

NOTES:
 -ELEVATIONS ARE APPROXIMATE
 -UTILITY LOCATIONS ARE APPROXIMATE,
 CONFIRM LOCATIONS PRIOR TO WORK
 -CONTRACTOR ACQUIRE NECESSARY
 PERMITS PRIOR TO START
 -EXCAVATE WITH TRACKED EQUIPMENT
 ONLY
 -RIP UNDERLYING SOILS 6-12"
 TO REMOVE COMPACTION
 -SIZE AND SHAPE OF RAINGARDEN
 MAY VARY
 -MAINTAIN SQUARE FEET AND PONDING
 DEPTH
 -ORIGINAL SHEET SIZE: 11"x17"

SCALE: 1"=20'-0" N
↑

SITE PLAN

L100





RAMSEY COUNTY

RAMSEY COUNTY SWCD
 1425 PAUL KIRKWOLD DR
 ARDEN HILLS, MN 55112
 651-266-7280
 www.ramseycounty.us

PROJECT: BRIDGEWOOD PARK
 LOCATION: VADNAIS HEIGHTS, MN

WATERSHED DISTRICT:



VLAWMO
 Vadnaiss Lake Area
 Water Management Organization

DESIGNER: BTO
 DATE: 6/2/2021
 REVISION:
 REVISION:
 REVISION:
 CHECKED BY: JL
 TAA:

NOTES:

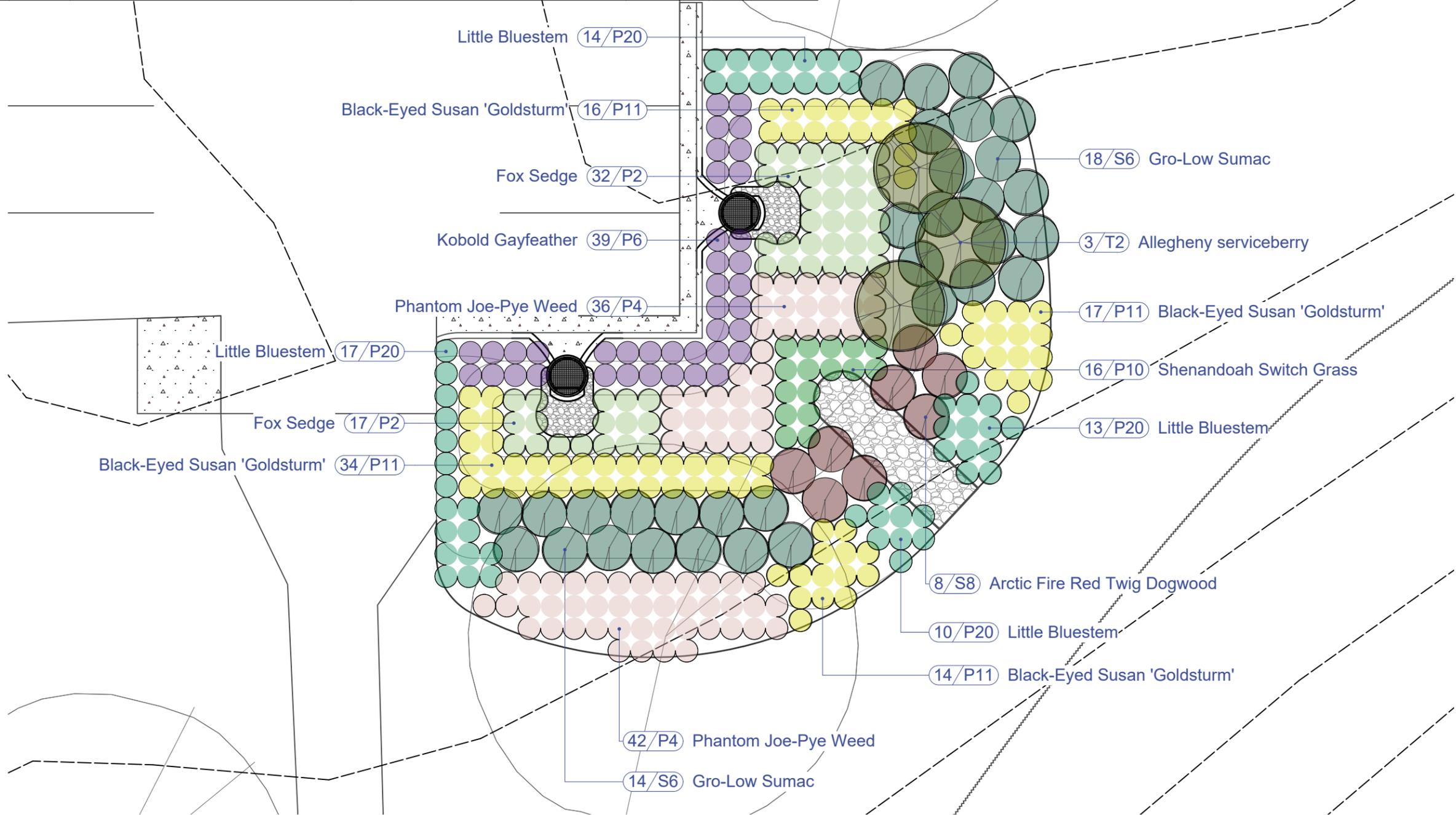
- ELEVATIONS ARE APPROXIMATE
- UTILITY LOCATIONS ARE APPROXIMATE, CONFIRM LOCATIONS PRIOR TO WORK
- CONTRACTOR ACQUIRE NECESSARY PERMITS PRIOR TO START
- EXCAVATE WITH TRACKED EQUIPMENT ONLY
- RIP UNDERLYING SOILS 6-12" TO REMOVE COMPACTION
- SIZE AND SHAPE OF RAINGARDEN MAY VARY
- MAINTAIN SQUARE FEET AND PONDING DEPTH
- ORIGINAL SHEET SIZE: 11"x17"

SCALE: 1"=10'-0" N

LAYOUT PLAN

L200

PLANT SCHEDULE					
ID	Qty	Latin Name	Common Name	Size	Spacing (ft)
P2	49	Carex vulpinoidea	Fox Sedge	4" Pot	2
P4	78	Eupatorium 'Phantom'	Phantom Joe-Pye Weed	#1 Cont.	2
P6	39	Liatris spicata 'Kobold'	Kobold Gayfeather	#1 Cont.	2
P10	16	Panicum virgatum 'Shenandoah'	Shenandoah Switch Grass	#1 Cont.	2
P11	81	Rudbeckia hirta 'Goldsturm'	Black-Eyed Susan 'Goldsturm'	#1 Cont.	2
P20	54	Schizachyrium scoparium	Little Bluestem	4" Pot	2
S6	32	Rhus aromatica 'Gro-low'	Gro-Low Sumac	2 Gallon	4
S8	8	Cornus sericea 'Farrow'	Arctic Fire Red Twig Dogwood	2 Gallon	4
T2	3	Amelanchier laevis	Allegheny serviceberry	10 Gallon	8
	360	TOTAL PLANTS			





RAMSEY COUNTY

RAMSEY COUNTY SWCD
 1425 PAUL KIRKWOLD DR
 ARDEN HILLS, MN 55112
 651-266-7280
www.ramseycounty.us

PROJECT: BRIDGEWOOD PARK
 LOCATION: VADNAIS HEIGHTS, MN

WATERSHED DISTRICT:



VLAWMO
 Vadnaiss Lake Area
 Water Management Organization

DESIGNER: BTO
 DATE: 7/20/2021
 REVISION:
 REVISION:
 REVISION:
 REVISION:
 CHECKED BY: JL
 TAA:

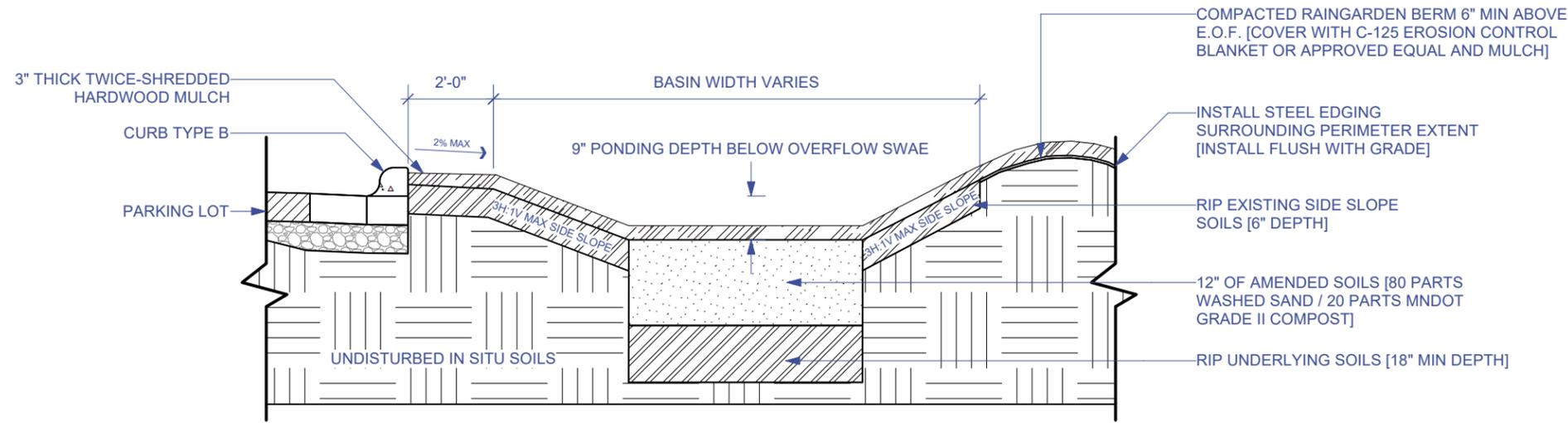
NOTES:
 -CALL GOPHER ONE TO MARK UTILITIES BEFORE DIGGING
 -SEE PLANT SCHEDULE FOR SPACING [PLANT LOCATION MAY VARY]
 -PLANT SUBSTITUTIONS MUST BE APPROVED BY SWCD STAFF
 -ORIGINAL SHEET SIZE: 11"x17"

SCALE: 1"=10'-0" N

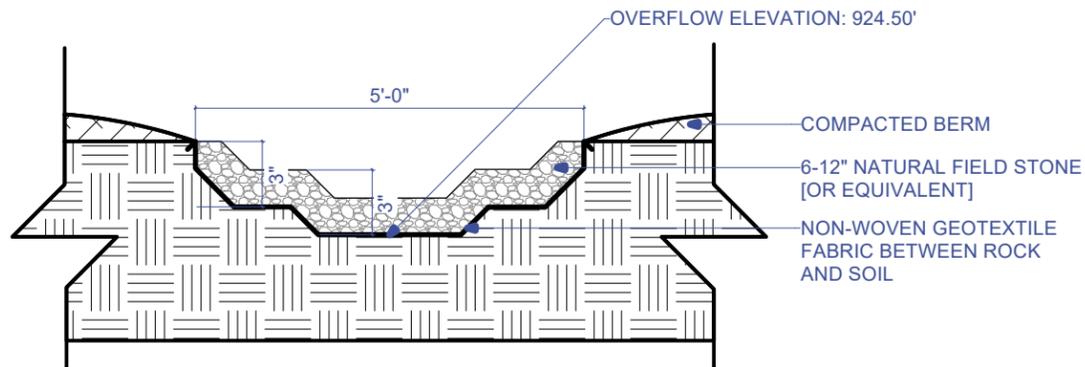
PLANTING PLAN

L300

1 RAINGARDEN SECTION
Scale: 3/8" = 1'-0"



2 ROCK OVERFLOW SECTION
Scale: 1:196



NOTES:

1. EXCAVATE RAIN GARDEN TO 2'-6" BELOW GUTTER. SCARIFY AN ADDITIONAL 6-12" BEFORE BACKFILLING WITH AMENDED SOILS.
2. THE PLANTING MEDIUM AND MULCH SHALL BE PLACED IN SUCH A WAY AS TO LIMIT THE AMOUNT OF COMPACTION OF THE SUB-SOILS.
3. NO GEOTEXTILE TO BE USED BETWEEN NATIVE AND ENGINEERED SOILS
4. INSTALL EDGING SURROUNDING PLANTING BED AND RAINGARDEN. INSTALL EDGING FLUSH WITH GRADE TO ENSURE WATER MAY FLOW FREELY OVER IT.
5. PONDING DEPTH FOR RAINGARDEN IS 9" FROM BASIN LEVEL TO ROCK OVERFLOW SWALE. BASIN TO BE 1'-0" DEPTH BELOW CURB-CUT INLET LOCATIONS. [SEE PLANS AND DETAILS FOR ELEVATIONS]
6. SOME SMALL STUMP REMOVAL MAY BE NECESSARY ALONG PARKING LOT EDGE FOR RAINGARDEN INSTALLATION. [SITE VERIFY]



RAMSEY COUNTY

RAMSEY COUNTY SWCD
1425 PAUL KIRKWOLD DR
ARDEN HILLS, MN 55112
651-266-7280
www.ramseycounty.us

PROJECT: BRIDGEWOOD PARK
LOCATION: VADNAIS HEIGHTS, MN

WATERSHED DISTRICT:



DESIGNER: BTO
DATE: 7/20/2021
REVISION:
REVISION:
REVISION:
REVISION:
CHECKED BY: JL
TAA:

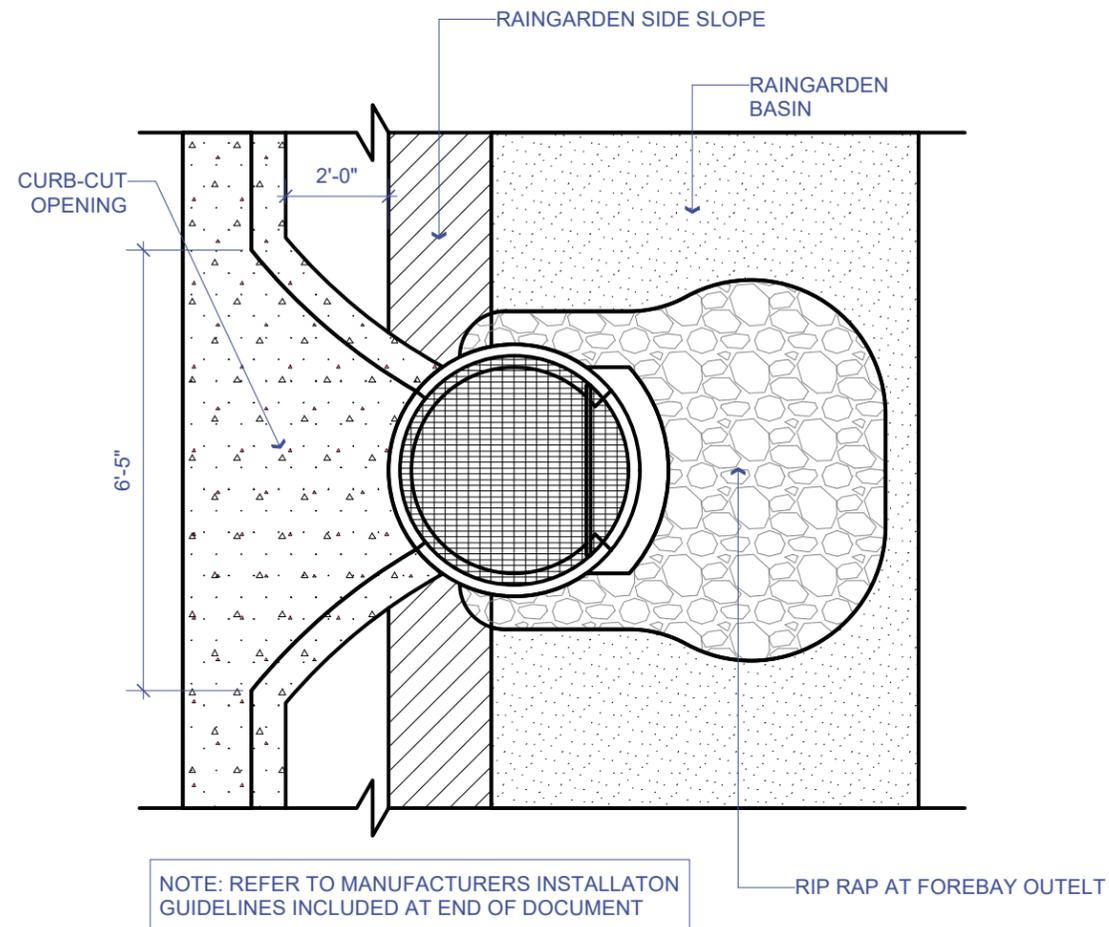
NOTES:
-CONTACT GOPHER STATE ONE CALL TO CONFIRM UTILITY LOCATIONS PRIOR TO WORK
-EXCAVATE WITH TRACKED EQUIPMENT ONLY
-MAINTAIN SQUARE FEET AND DEPTH
-SUBSTITUTIONS TO CONSTRUCTION DESIGN AND MATERIALS MUST BE APPROVED PRIOR TO INSTALLATION
-ORIGINAL SHEET SIZE: 11"x17"

SCALE:

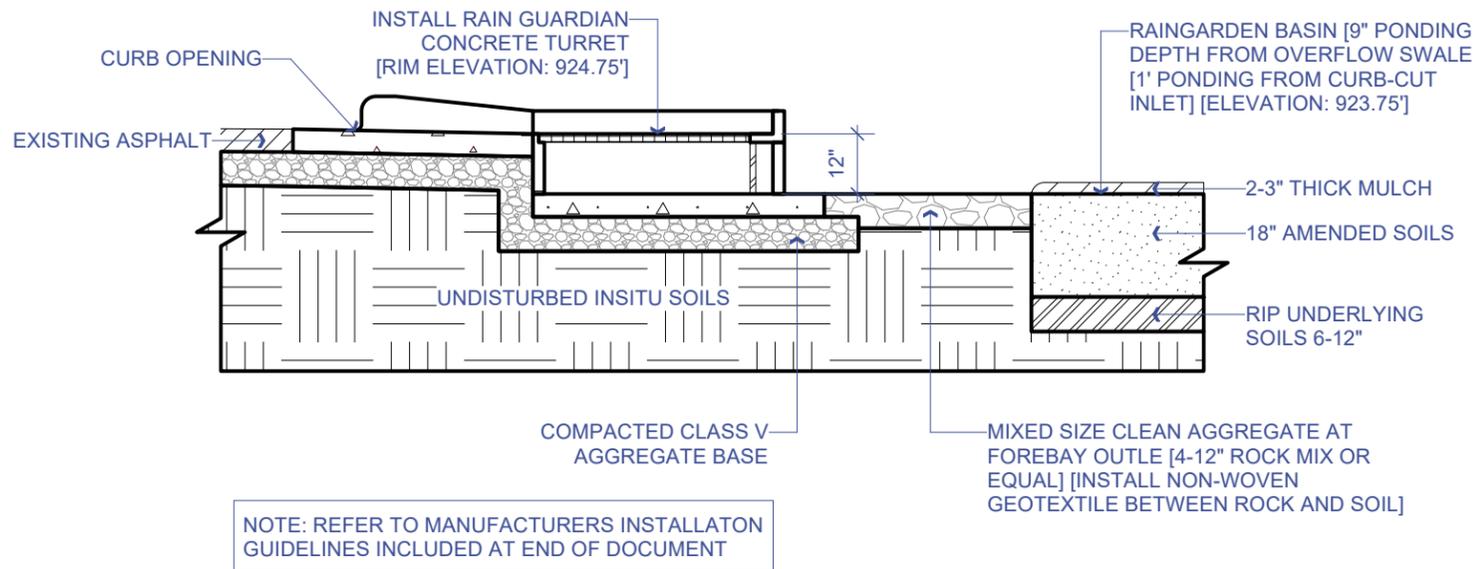
SITE DETAILS

L400

1 RAIN GUARDIAN TURRET INLET PLAN VIEW
Scale: 3/8" = 1'-0"



2 RAIN GUARDIAN TURRET INLET SECTION
Scale: 3/8" = 1'-0"





RAMSEY COUNTY

RAMSEY COUNTY SWCD
1425 PAUL KIRKWOLD DR
ARDEN HILLS, MN 55112
651-266-7280
www.ramseycounty.us

PROJECT: BRIDGEWOOD PARK
LOCATION:
VADNAIS HEIGHTS, MN

WATERSHED DISTRICT:



VLAWMO
Valdais Lake Area
Water Management Organization

DESIGNER: BTO
DATE: 7/20/2021
REVISION:
REVISION:
REVISION:
CHECKED BY: JL
TAA:

NOTES:
-CONTACT GOPHER STATE ONE CALL TO CONFIRM UTILITY LOCATIONS PRIOR TO WORK
-EXCAVATE WITH TRACKED EQUIPMENT ONLY
-MAINTAIN SQUARE FEET AND DEPTH
-SUBSTITUTIONS TO CONSTRUCTION DESIGN AND MATERIALS MUST BE APPROVED PRIOR TO INSTALLATION
--ORIGINAL SHEET SIZE: 11"x17"

SCALE:

SITE DETAILS

L500



ALL ITEMS AS SPECIFIED BELOW ARE ESTIMATE ONLY - NOT A BID SHEET - FOR REFERENCE USE ONLY

Bridgewood Park

Vadnais Heights, MN

BMP Type: Raingarden w/ Pre-Treatment

Number of BMPs: 1

County: Ramsey
Date: 20-Jul-21

CURB-CUT RAINGARDEN

Item	Qty	Unit	Unit Cost	Amount
Excavation, Grading, Ripping Soil (Tracked Equipment only in excavation area)	65.00	CY	\$ 80.00	\$ 5,200.00
Utilize Excavated Soils to Create Berm as Able Prior to Haul Away				
Mobilization	1.00	LS	\$ 1,500.00	\$ 1,500.00
Deliveries (Soil, Plants, etc.)	5.00	EA	\$ 175.00	\$ 875.00
Soil Haul Away/Disposal (use excavated soil for berm creation prior to haul away)	25.00	CY	\$ 70.00	\$ 1,750.00
Rain Guardian Turret Install & Base Material:	2.00	EA	\$ 1,500.00	\$ 3,000.00
Rain Guardian Turret, Concrete work, Class V Aggregate (or equivalent) base rock, fabric, etc.				
Mixed Size Washed Natural Rock [4-12" sizing or equivalent]	4.00	TON	\$ 130.00	\$ 520.00
Non-woven Geotextile Fabric - Geotex 401 (or Mirfani 140N: Non-woven geotextile, or eq)	120.00	SF	\$ 1.50	\$ 180.00
Soils: Soil Amendment (80% Washed No.2 Sand, 20% Leaf Compost- MNDOT Grade II)	24.00	CY	\$ 85.00	\$ 2,040.00
Edging (Metal: 1/8" x 6" x 8") [Steel]	126.00	LF	\$ 12.00	\$ 1,512.00
EC Blanket: Geo-Jute or C125 (or equivalent jute/natural netting blanket)	800.00	SF	\$ 1.65	\$ 1,320.00
(secure with biodegradable stakes - for compacted berm area)				
Twice-Shredded Hardwood Mulch (2-3" depth)	16.50	YD	\$ 85.00	\$ 1,402.50
Native Plant: 4" Pot (or approved equivalent)	103.00	EA	\$ 12.00	\$ 1,236.00
Native Plant: #1 Container (or approved equivalent)	294.00	EA	\$ 20.00	\$ 5,880.00
Native Shrub: 2 Gallon (or approved equivalent)	40.00	EA	\$ 50.00	\$ 2,000.00
Native Tree [Multi-Stem Serviceberry]: 10 Gallon (or approved equivalent)	3.00	EA	\$ 180.00	\$ 540.00
Site Restoration (repair any turfgrass damaged outside of raingarden area)	1.00	LS	\$ 1,000.00	\$ 1,000.00
			Subtotal	\$ 29,955.50

ADD/DEDUCT BID ITEMS (AS NECESSARY)

1]	\$	-	\$	-
2]	\$	-	\$	-
3]	\$	-	\$	-
4]	\$	-	\$	-
5]	\$	-	\$	-
6]	\$	-	\$	-
			Subtotal	\$ -

PROJECT TOTAL

Project Estimate	\$	29,955.50
:-10%	\$	26,959.95
:+10%	\$	32,951.05
Estimated WD/WMO Grant Award:		\$0.00
Potential Grant Award Total:		\$0.00
Estimated Landowner Cost:		\$29,955.50

Soil & Water Conservation Division
2015 Van Dyke Street
Maplewood, MN 55109
www.ramseycounty.us

Project Information

Calculator Version:	Version 3: January 2017
Project Name:	Bridgewood Park Curb Cut Rain Garden
User Name / Company Name:	VLAWMO
Date:	7/29/21
Project Description:	Bridgewood Park parking lot retrofit rain garden infiltration project
Construction Permit?:	No

Site Information

Retention Requirement (inches):	1.1
Site's Zip Code:	55127
Annual Rainfall (inches):	31.8
Phosphorus EMC (mg/l):	0.3
TSS EMC (mg/l):	54.5

Total Site Area

Land Cover	A Soils (acres)	B Soils (acres)	C Soils (acres)	D Soils (acres)	Total (acres)
Forest/Open Space - Undisturbed, protected forest/open space or reforested land		4.6			4.6
Managed Turf - disturbed, graded for yards or other turf to be mowed/managed		1.89			1.89
			Impervious Area (acres)		0.56
			Total Area (acres)		7.05

Site Areas Routed to BMPs

Land Cover	A Soils (acres)	B Soils (acres)	C Soils (acres)	D Soils (acres)	Total (acres)
Forest/Open Space - Undisturbed, protected forest/open space or reforested land					0
Managed Turf - disturbed, graded for yards or other turf to be mowed/managed		0.26			0.26
			Impervious Area (acres)		0.22
			Total Area (acres)		0.48

Summary Information

Performance Goal Requirement

Performance goal volume retention requirement:	2236	ft ³
Volume removed by BMPs towards performance goal:	589	ft ³
Percent volume removed towards performance goal	26	%

Annual Volume and Pollutant Load Reductions

Post development annual runoff volume	2.4995	acre-ft
Annual runoff volume removed by BMPs:	0.5699	acre-ft
Percent annual runoff volume removed:	23	%

Post development annual particulate P load:	1.122	lbs
Annual particulate P removed by BMPs:	0.256	lbs
Post development annual dissolved P load:	0.918	lbs
Annual dissolved P removed by BMPs:	0.209	lbs
Percent annual total phosphorus removed:	23	%

Post development annual TSS load:	370.5	lbs
Annual TSS removed by BMPs:	84.5	lbs
Percent annual TSS removed:	23	%

BMP Summary

Performance Goal Summary

BMP Name	BMP Volume Capacity (ft ³)	Volume Recieved (ft ³)	Volume Retained (ft ³)	Volume Outflow (ft ³)	Percent Retained (%)
1 - Infiltration basin/Infiltration trench (abc	589	878	589	290	67

Annual Volume Summary

BMP Name	Volume From Direct Watershed (acre-ft)	Volume From Upstream BMPs (acre-ft)	Volume Retained (acre-ft)	Volume outflow (acre-ft)	Percent Retained (%)
1 - Infiltration basin/Infiltration trench (abc	0.6225	0	0.5699	0.0526000000	92

Particulate Phosphorus Summary

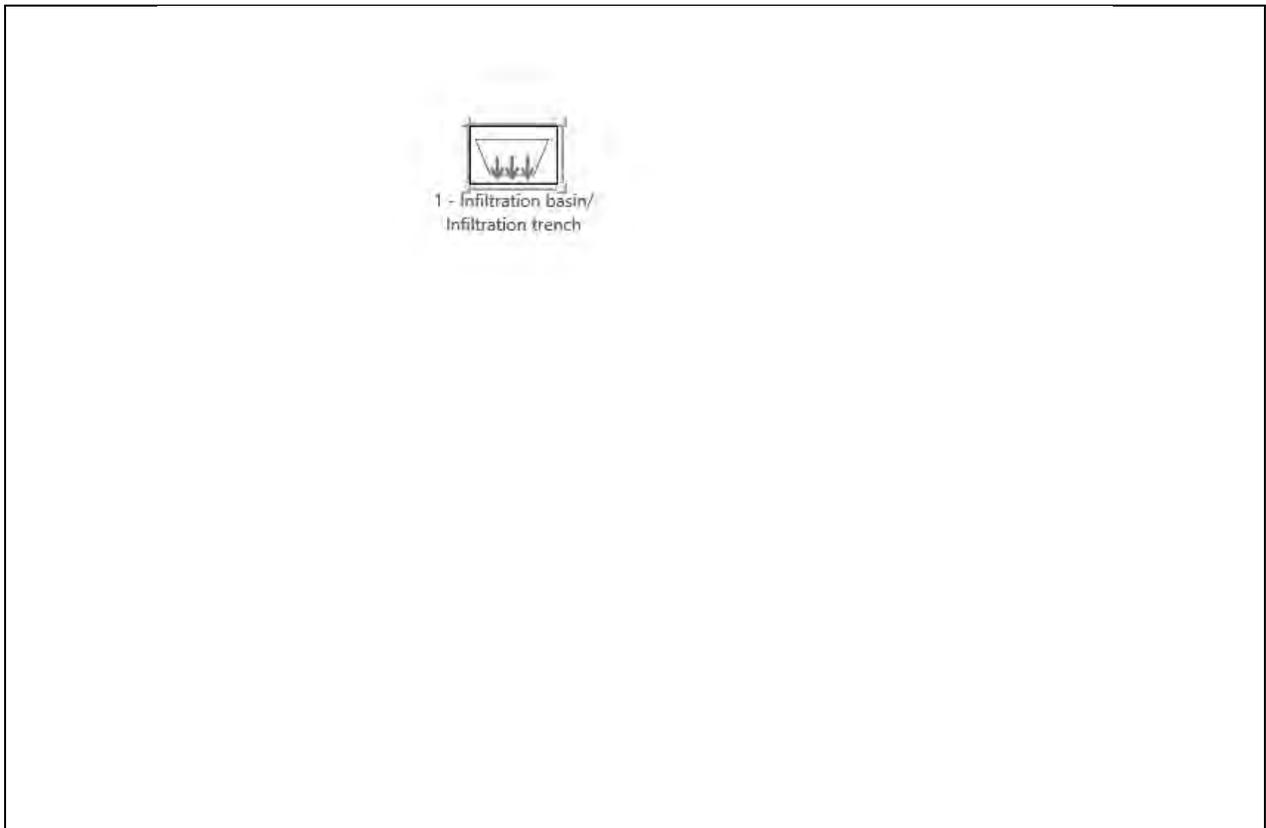
BMP Name	Load From Direct Watershed (lbs)	Load From Upstream BMPs (lbs)	Load Retained (lbs)	Outflow Load (lbs)	Percent Retained (%)
1 - Infiltration basin/Infiltration trench (abc	0.2794	0	0.2558	0.0236	92

Dissolved Phosphorus Summary

BMP Name	Load From Direct Watershed (lbs)	Load From Upstream BMPs (lbs)	Load Retained (lbs)	Outflow Load (lbs)	Percent Retained (%)
1 - Infiltration basin/Infiltration trench (abc	0.2286	0	0.2093	0.0193	92

TSS Summary

BMP Name	Load From Direct Watershed (lbs)	Load From Upstream BMPs (lbs)	Load Retained (lbs)	Outflow Load (lbs)	Percent Retained (%)
1 - Infiltration basin/Infiltration trench (abc	92.28	0	84.48	7.8	92

BMP Schematic



**VLAWMO LANDSCAPE LEVEL 1
GRANT APPLICATION FORM**

Vadnais Lake Area Water Management
Organization 800 County Road E East
Vadnais Heights, MN 55127
www.vlawmo.org (651) 204-6071

Please submit form and required materials
to: TYLER THOMPSON
tyler.thompson@vlawmo.org

Please fill in the application as best as possible and use additional pages if necessary. Refer to the Grant Guidance document for further information or contact Tyler Thompson with any questions.

APPLICANT INFORMATION

NAME: _____ DATE: _____

ADDRESS: _____ CITY: _____ ZIP: _____

PHONE: _____ EMAIL: _____

PROJECT SUMMARY

ESTIMATED TOTAL COST OF YOUR PROJECT: \$ _____ AMOUNT OF GRANT REQUESTED: (\$5,000 MAXIMUM) \$ _____

WHEN DO YOU PLAN TO COMPLETE YOUR PROJECT? _____

TYPE OF PROJECT THAT WILL BE COMPLETED:

- Raingarden/ Infiltration Basin
- Shoreline Restoration
- Hard Surface Runoff Reduction
- Other

If other, please describe proposed project: _____

PROJECT BACKGROUND

Describe your property: Does your property connect to a lake, stream, ditch, or wetland in VLAWMO? What issues are you planning to address with your project?

Describe how your project will support the goals of the Landscape Grant Program (see guidance materials for more information). Does your proposed project directly reduce, capture, or treat stormwater?

Please briefly describe anticipated maintenance activities of your project.

PROJECT SPECIFICATIONS

In order to determine the water quality benefit of your project (amount of stormwater and pollutants captured), specific information is required for VLAWMO staff to perform the calculations. If you are working with a professional landscaper, they should be able to provide you with this information.

TOTAL PROPERTY AREA (Acres): _____	TOTAL PROJECT SIZE (SQ.FT.): _____
IMPERVIOUS AREA DRAINING TO PROJECT (SQ.FT.): _____ dependent upon filter outflow*	PERVIOUS AREA DRAINING TO PROJECT (SQ.FT.): _____ dependent upon filter outflow*

IF YOUR PROJECT INCLUDES INFILTRATION, PLEASE PROVIDE THE FOLLOWING INFORMATION

SOIL INFILTRATION RATE (INCHES/HR): _____	DEPTH OF RAINGARDEN BASIN (INCHES): _____
--	--

ADDITIONAL REQUIRED ATTACHMENTS

TO COMPLETE YOUR APPLICATION, PLEASE INCLUDE:

- Detailed drawing or plan set of the proposed project, drafted by either the landowner or a contractor. Dependent upon the complexity of the project, VLAWMO may require project final designs be completed by a qualifying professional or Engineer. Drawing must include project dimensions that enable VLAWMO staff to model the project for water quality benefits or stormwater reductions.
- Detailed project budget estimate with clear cost and material breakouts that equate to your total project cost estimate. Please review the VLAWMO Landscape Level 1 Cost Share Guidance document for eligible project materials that are applicable for grant funding.

This information, along with the application, may be scanned and emailed to Tyler Thompson, VLAWMO GIS Watershed Technician at tyler.thompson@vlawmo.org



**PROPOSED
RESTORATION
AREA**

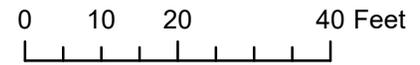
**EXISTING RESTORATION
AREA**

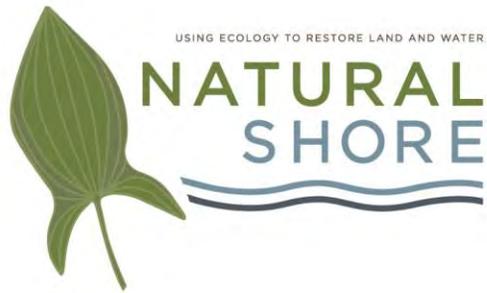
**IRON-ENHANCED
SAND FILTER**

4th Street

**Proposed Crowley Riparian Wetland
& Buffer Restoration**

-  IESF project footprint
-  2015 NWI wetlands - 30 ft buffer
-  RC parcels
-  2018 wetland delineation edge





Restoration Proposal for:

Joan and Pat Crowley
4760 Brooke Ct.
White Bear Lake, MN

Proposal Date: July 13, 2021

Prepared by:

Bill Bartodziej M.S., Senior Restoration Ecologist
Natural Shore Technologies, Inc.
612.730.1542 bill.b@naturalshore.com





USING ECOLOGY TO RESTORE LAND AND WATER

612.703.7581 | naturalshore.com | Office & Nursery 1480 County Rd 90 Independence, MN 55359

July 13, 2021

Dear Joan and Pat:

Thank you for giving Natural Shore Technologies the opportunity to bid on your project. Below is a *Project Summary* which outlines our *restoration methods* and *cost breakdown*. We would like to emphasize that we tailor our restoration approach to fit your site characteristics and specific objectives. We look forward to developing a partnership with you to produce an exceptional restoration that exceeds your expectations.

We would enjoy the chance to answer any questions that you have regarding this restoration proposal. We take great pride in our reputation and attention to customer satisfaction. After you have read through and are comfortable with the proposed plan and specified cost, please sign the contract that is provided. A down payment and a signed contract are required to book your project.

Best regards,

Bill Bartodziej, M.S.
Senior Restoration Ecologist
Natural Shore Technologies, Inc.

Project Summary

1. Project site: 105' x 25' (ave. width)
2. Site assessment and plan development include: detailed site preparation methods, plant selection, and a project timeline and work schedule for our staff. Because most of projects involve the establishment of natural buffers, site drawings and planting plans are not necessary. We have found that over time, native plants will seek out the optimal micro-habitats and flourish. However, project plan drawings can certainly be provide at an additional cost upon client request.
3. Delineate and verify total restoration project area.
4. Kill all weeds with an herbicide appropriate for upland or aquatic use. A licensed herbicide applicator from Natural Shore Technologies will apply the treatment. Cut and remove any weedy plant material from planting area.
5. Apply a 2-3" layer of shredded hardwood mulch in areas that will be planted – 14CY.
6. Install 25 - 1-3 gal. shrubs in front of the storm water settling basin.
7. We will create a native wildflower and grass buffer between your existing ground cover and the channel bed – approx. 1,000 SF. Plant selections will provide flowering throughout the growing season, with at least 25 native plant species included in the plan. Lay out plants into plant zones per plan specifications and install at approximately 1.5' centers.
8. Mulch will be moved aside, plant containers installed, and a light mulch layer will be returned around the base of the plants to hold moisture. We will use 455 – 3-4" containers for your planting.
9. In areas not planted, native seed will be spread and a degradable erosion control blanket will be installed.
10. Site monitoring will be conducted and appropriate maintenance will be provided through October, 2022.

Installation note: Prior to installation, please let us know of any underground utility lines, sprinkler lines, or other obstacles in the restoration area. It is the owner responsibility to clearly mark lines, and NST will not be held liable for any damages.

Project Cost

This bid includes project design and management, all materials, labor, and a two year maintenance plan. This is a comprehensive bid estimate and valid for thirty days. We require a 50% down payment to schedule your project.

Cost Breakdown

Site Design, Project Management, Mobilization	\$935.24
Site preparation, herb. trts, clearing, hauling, mulch (14 CY)	\$1,736.10
455 - Plants - 3" and 4" - containers @ 1.5' spacing, 25 - 2-3 gal. shrubs	\$2,718.50
Erosion control - NAG SC-150BN blanket, custom seed mix	\$400.00
Maintenance - through 2022	\$627.27
TOTAL =	\$6,417.11

Site maintenance

Site maintenance includes at least three visits per year during the growing season to monitor and conduct activities that will ensure proper restoration establishment. We use the most appropriate, up-to-date maintenance techniques such as targeted herbicide application, hand pulling, mowing, and spot weed whipping to effectively control invasive weeds. Our lead maintenance supervisor has a B.S. in Biology and 10 years of field experience.

Watering – We will thoroughly water your site immediately after plant installation. Any necessary watering after installation is the responsibility of the owner. (Generally, normal rainfall during the growing season is adequate for native plant establishment.)

****Note we do offer long-term maintenance contracts. Over 90% of our clients use that service.***

Staff Qualifications

Our company has over 50 years of combined ecological restoration experience. We are a local company that focuses on quality ecological restoration in the Metro area. Our clients vary from private estates on Lake Minnetonka, to large corporate headquarters in Eden Prairie. We also work with many city and county governments and watershed management organizations. We are fully insured.

Our specialty is lakeshore and wetland restoration. We have restored many miles of lakeshore in Minnesota, more than any other company. Please see our portfolio for examples of our restoration projects that include; shorelines, wetlands, prairies, savannas, and rain gardens.

Please see our **project photo book** at: <http://www.blurb.com/books/6034090-natural-shore-technologies-inc-photobook>

Natural Shore Technologies Plant Material

We have commercial and retail greenhouses in Maple Plain. Our plants are Minnesota native perennials that will flourish year after year. Utilizing our own plant material in our projects assure quality control. Our wetland and prairie plants are guaranteed to establish during the first growing season. Perennial plants put most of their energy into establishing root systems so please keep in mind that the first year of growth will be mainly underground. You will see some flowering the first year, but significantly more flowering during the second year of establishment.

Information about our **retail native plant greenhouses** located in Maple Plain is also available at: www.naturalshore.com



Guarantee

We stand by our native plant material and our ecological restoration services.

Native plants that we install are guaranteed to establish during the first growing season. Any plant material that does not make it through the first growing season will be replaced at no charge to the client.

On projects that we install and manage, we will guarantee successful establishment of your ecological restoration within three full growing seasons. This proposal provides a plan for accomplishing the restoration of the project site. If successful establishment does not occur within three growing seasons, all necessary steps will be taken to ensure the eventual success of the project, at no additional charge. For purposes of this guarantee, successful establishment is defined as follows: That the presence of at least 80% of the original seeded or planted species can be found on the site, and that the overall density of vegetation is comprised of no less than 80% native species.

The only exceptions to this guarantee have to do with plant death due to acts of God (floods or drought) the actions of others (vandalism), or animal herbivory (e.g., geese, muskrats). Watering by the owner during dry periods is necessary, and the lack of adequate watering in this circumstance may nullify this guarantee.

If these extreme circumstances do happen to occur, we will work with the client at a reduced rate to make all necessary repairs.

Our goal will always be to create successful, long-term partnerships with our clients. Our guarantee is the best in the business, and provides you with a clear understanding that we are here to fully support your ecological restoration endeavor.

Contract

- A down payment of \$3,200.00 is required to schedule your project.
- The remainder of the project cost is due at project completion. Any unpaid amount beyond the 30 day period after billing will incur a 3% monthly finance charge.
- *Please note that this proposal is valid for 30 days from the date on this Contract.*

If you would like to proceed with the above outlined project, please sign the contract below.

Client name: Pat or Joan Crowley

Contract Value: \$6,417.11

Signed: _____ **Date** _____

Contractor: *Natural Shore Technologies, Inc.*

Signed:

Contract Date: Contract Date for 30 Day term



William M. Bartodziej, M.S.

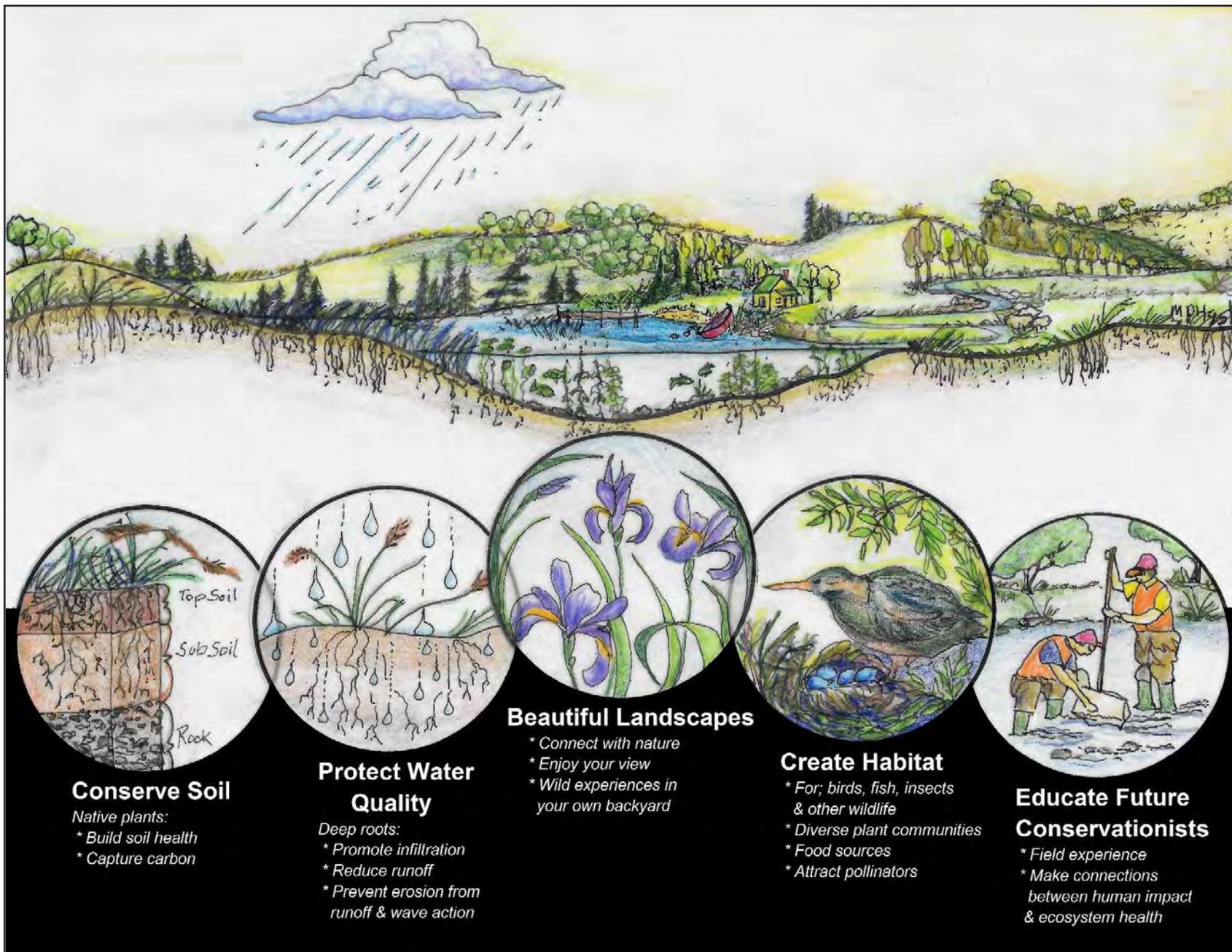
Senior Restoration Ecologist, Natural Shore Technologies

Please return a signed copy of this contract and a check to:

Natural Shore Technologies, Inc.
6275 Pagenkopf Rd.
Maple Plain, MN 55359



Benefits of our quality restoration work.



Conserve Soil

Native plants:

- * Build soil health
- * Capture carbon

Protect Water Quality

Deep roots:

- * Promote infiltration
- * Reduce runoff
- * Prevent erosion from runoff & wave action

Beautiful Landscapes

- * Connect with nature
- * Enjoy your view
- * Wild experiences in your own backyard

Create Habitat

- * For; birds, fish, insects & other wildlife
- * Diverse plant communities
- * Food sources
- * Attract pollinators

Educate Future Conservationists

- * Field experience
- * Make connections between human impact & ecosystem health

Agenda Item VI. A.

Bluebird Grove

Vadnais Height, Ramsey County, Minnesota

Wetland Permit Application

Prepared for
Harstad Hills, Inc.

by
Kjolhaug Environmental Services Company, Inc.
(KES Project No. 2021-115)

June 8, 2021

Bluebird Grove
Vadnais Heights, Ramsey County, Minnesota
Wetland Permit Application

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1. Site Location
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3. Proposed Plan and Wetland Impacts

APPENDICES

- A. Joint Application for Activities Affecting Water Resources in Minnesota
- B. Delineation Approvals
- C. City of Vadnais Heights Land Use Map
- D. Approved City Council Resolution
- E. Bluebird Grove Grading Plan
- F. MnRAM Analysis Results

Bluebird Grove

Vadnais Heights, Ramsey County, Minnesota

Wetland Permit Application

1. PROJECT SUMMARY

Harstad Hills, Inc. is proposing the Bluebird Grove residential development project within an approximately 9-acre site in Vadnais Heights (**Figure 1**). The Bluebird Grove project will be a 21 lot, single-family development with associated streets, utilities, and stormwater areas.

The site currently consists of multiple parcels (partial parcels), two of which contained vacant, large-lot single family homes (**Figure 2**). The remainder of the site is woodland, meadow, or wetland.

The Bluebird Grove project will involve 13,414 sf (0.3079-ac) of permanent impact to one isolated wetland. Additionally, 6,706 sf (0.1539-ac) of temporary excavation impact to the same isolated wetland in order to incorporate the wetland into a detention basin is proposed as a non-WCA regulated impact (No Loss).

Permanent wetland impacts will be replaced via the purchase of wetland bank credits at a ratio of 2:1 within the same major watershed and Bank Service Area (BSA) as the proposed project.

Project construction is expected to start in late summer of 2021. All earthwork and soil stabilization is expected to be completed by fall of 2021. Individual home construction on graded lots will follow based on market demand.

The following narrative describes the project, its purpose, site characteristics, wetland sequencing, and the wetland replacement plan. Figures and appendices are attached. The Joint Application Form for Activities Affecting Water Resources in Minnesota is included in **Appendix A**.

2. PROJECT PURPOSE

2.1 Project Purpose and Need

The purpose of the Bluebird Grove project is to construct a single-family residential development within the City of Vadnais Heights to meet market demand.

According to the City of Vadnais Heights 2040 Comprehensive Plan:

- The City of Vadnais Heights, based on the density ranges and available developable land and housing projections for the community, will be challenged to meet the housing demand of the community based on available developable land alone.
- Metropolitan Council guidance recommends municipalities use the low end of the density range and available developable land to assure the community is able to meet housing projections with the guided land use.
- In order to support emerging business opportunities, the City will look to develop more housing that suits the demand of the residents of Vadnais Heights. In order to fill this need the City will look to develop high quality housing options in undeveloped areas guided for residential housing and strategic housing redevelopment opportunities to meet the future needs of the community.

The project site is an underutilized site in the metro area where market need/demand for new housing is high, and developable/re-developable land is scarce. Additionally, the site is contiguous to developed low density residential areas and has convenient access to major transportation corridors.

2.2 Project Requirements/Constraints

Based on initial planning/design coordination discussion with the city, the Bluebird Grove project plan must meet all the following requirements to be considered feasible and prudent.

1. Create a single-family development with associated roadway and utilities.
2. Provide site access via existing Williams Street to the north and Tessier Trail to the south.
3. Mitigate existing onsite drainage issues, thereby mitigating offsite drainage issues.
4. Provide effective drainage for the overall site while capturing and treating stormwater runoff in a manner consistent with local, state, and federal standards.
5. Route treated runoff to the Bear Park stormpond to the southeast of the site.
6. Construct a paved trail between the proposed development and the existing neighborhood to the east which will serve as an emergency access and enhance public safety and resident accessibility/walkability between the neighborhoods, and which will allow plowable access to underground utilities.
7. Avoid and minimize direct and indirect impacts to wetlands to the extent practicable; and
8. Replace unavoidable wetland impacts with compensatory wetland mitigation that has wetland functions equal to or exceeding those of the impacted wetlands.

3. SITE LOCATION & EXISTING CONDITIONS

The proposed Bluebird Grove project is located on ~9 acres in Section 29, Township 30 North, Range 22 West, Vadnais Heights, Ramsey County, Minnesota. Generally, the site is located southeast of the intersection of McMenemy Street and Colleen Drive (**Figure 1**). The property corresponded to all or portions of Ramsey County PIDs 293022230004, 293022230005, 293022230006, 293022230007, 293022230008, and 293022230009.

The project area consists of two vacant single-family homes in the central portion of the site. Lawn areas are present near the homes and an open meadow is present in the southwest portion of the site. The remainder of the site is woodland or wetland.

Topography on the site is highest in the northwest (920-924-ft) and south-central (920-928-ft) portions. The middle of the site is relatively flat (916-914-ft) and begins to slope downhill in the east third of the site to an elevation of 896-ft and Wetland 1. Land slopes uphill from the east edge of Wetland 1 to a high elevation of 912-ft in the northeast corner of the site.

The site is located within the Mississippi River – Twin Cities Metro (#20) Major Watershed and Bank Service Area 7 (BSA7).

3.1 Wetland Delineation

Two (2) wetlands were delineated within the Bluebird Grove project boundaries (formerly McMenemy Street Parcels) by Kjolhaug Environmental Services (KES) in August 2020 (**Wetlands 1 and 2 of Figure 2**). The previously submitted *McMenemy Street Parcels Wetland Delineation Report* discussed the delineation in more detail and included National Wetland Inventory (NWI) and soil survey mapping. Copies of the report are available upon request.

The Notice of Delineation (NOD) issued on September 16, 2020 by VLAWMO (WCA LGU) approving the wetland boundaries is included in **Appendix B**. The WCA NOD included No Loss approval (incidental wetland concurrence) for Wetland 2. Delineation concurrence from the U.S. Army Corps of Engineers (USACE) issued on December 20, 2018 is also included in **Appendix B**, as well as an approved Jurisdiction Determination (AJD) for Wetland 2.

For development of the project stormwater plan, wetlands located adjacent to the site were delineated by Kjolhaug Environmental Services (KES) in May 2021 (**Wetlands A and B of Figure 2**). The previously submitted *Bluebird Grove – Storm Sewer Wetland Delineation Report* discussed the delineation in more detail and included National Wetland Inventory (NWI) and soil survey mapping. Copies of the report are available upon request.

Characteristics of delineated wetlands are summarized in **Table 1 on the following page**.

3.2 Approved Jurisdiction Determination Request

With delineation of Wetland A in May of 2020, it has been determined that Wetland 1/A within the project area is an isolated wetland surrounded by upland with no natural or constructed

outlet; therefore, **Attachment A of Appendix A** requests an Approved Jurisdictional Determination (AJD) from the USACE for Wetland 1/A as shown on **Figure 2**.

Table 1. Wetlands delineated for the Bluebird Grove project.

Wetland ID	Wetland Type			Dominant Vegetation
	Circular 39	Cowardin	Eggers and Reed	
1	Type 1	PFO1A	Deciduous forested, seasonally flooded basin	Cottonwood, boxelder, unvegetated, clearweed, rice cut grass, nettles, smartweed
2	Type 1	PEMA	Seasonally flooded basin	Unvegetated, sedges, smartweed, rice cutgrass
A	Type 1	PEMA	Seasonally flooded basin	Lake sedge
B	Type 1	PFO1Ad	Deciduous forested seasonally flooded basin	Elm, green ash, silver maple, false nettle, reed canary grass, jewelweed, sedges, wild cucumber

4. SEQUENCING DISCUSSION/ONSITE ALTERNATIVES

The following discussion addresses wetland avoidance, impact minimization, and impact reduction and elimination over time in compliance with Minnesota Wetland Conservation Act (WCA) requirements. It is assumed that Wetland 1/A is not regulated under Section 404 of the CWA and therefore the proposed project is not expected to require a permit from the USACE.

The following alternatives analysis demonstrates that there are no feasible and prudent alternatives available that would completely avoid or further minimize wetland impacts while achieving project needs and requirements.

4.1 WCA No-Build Alternative

The No-Build Alternative was considered as a way to eliminate wetland impacts associated with the project. Although the No-Build Alternative would completely avoid wetland impacts, it would not fulfill the project purpose, need, or requirements nor would it be consistent with local land use zoning which guides the site for low density development/redevelopment (**Appendix C**).

Even if the No-Build Alternative were implemented, development pressure would continue to affect the proposed site. Based on land use zoning, this would likely cause similar development proposals to arise for the property in the near future. ***For these reasons, the No-Build Alternative was rejected as an approach to avoiding wetland impacts.***

4.2 WCA Compete Avoidance Alternative

An alternative that would completely avoid impacts to regulated wetland on the site was initially considered (**Exhibit A of Appendix D**). With this alternative, a cul-de-sac would be extended onto the site from existing Bear Avenue North thereby eliminating the need to cross Wetland 1. With this alternative, the resulting length of Bear Avenue North would be ~2,050 feet, which is ~250 more than current length of 1,800 feet.

As a result of planning discussions with the City (**Attachment D**), this the complete avoidance alternative was rejected because a cul-de-sac longer than 1,800 feet in length not only presents safety issues but also presents access issues for the new and existing neighborhoods. Furthermore, this alternative would not resolve drainage issues on the project site or on neighboring properties.

Although a Canal/Ditch is shown to pass from north to southeast through the project site and adjacent properties according to the National Hydrography Dataset (**Figure 2**), the results of the delineation show that the historic county ditch system that formerly provided a connected flow path is no longer present. This disconnection results in spring flooding/ponding within the backyards of multiple existing properties as well as the proposed site. If the complete avoidance alternative were implemented, flooding would continue to occur in existing home lots on neighboring properties as well as newly developed home lots in Bluebird Grove.

The City is aware of this long-standing drainage issue, and in the interest of public benefit supports a project plan that helps to mitigate this problem even though it may require impacting wetland (**Appendix D**).

For these reasons, the Complete Avoidance Alternative was rejected as an approach to completely avoiding wetland impacts.

4.3 Proposed Alternative/Proposed Project

The proposed grading plan for the Bluebird Grove residential development project is provided in **Appendix E**. Wetland impacts along with other project features are illustrated on **Figure 3**. The proposed project design provides all of the required items outline in **Section 2.2**.

The proposed plan resolves drainage issues onsite and on neighboring properties by detaining/storing runoff within the two proposed stormwater ponds and the one proposed detention pond and providing an outlet for drainage that will discharge to Wetland B connected to the Bear Park stormwater pond via storm sewer.

Impact to Wetland 1 is partly due to roadway fill and is also partly due to the stormwater management plan. As explained previously, accessing the east portion of the development site via a cul-de-sac off of Bear Avenue North was rejected because it would present safety and access issues for the new and existing bordering neighborhoods. Therefore, access to the east portion of the Bluebird Grove development requires crossing Wetland 1 which extends from north to south through the site.

Permanent impact to the south half of Wetland 1 is for construction of a stormwater pond to mitigate drainage issues. Although this pond could be constructed to the east of its proposed location to minimize wetland impact, detention and diversion of runoff away from this portion of Wetland 1 would likely result in secondary/indirect impacts due to a reduction in supporting hydrology thereby diminishing wetland functions and values.

Furthermore, MN WCA Rule 8420.0520 SEQUENCING. Subp. 7a. Sequencing flexibility states that:

A. Flexibility in application of the sequencing steps may be requested by the applicant and allowed at the discretion of the local government unit, subject to the conditions in item B, as determined by the local government unit, if:

(1) the wetland to be impacted has been degraded to the point where replacement of it would result in a certain gain in function and public value.

(2) avoidance of a wetland would result in severe degradation of the wetland's ability to function and provide public value, for example, because of surrounding land uses, and the wetland's ability to function and provide public value cannot reasonably be maintained through implementation of best management practices, land use controls, or other mechanisms.

Wetland 1 has been degraded by excavation (likely done to try and minimize flooding extent onsite) and flooding which has resulted in a basin that is largely drowned out and unvegetated. A MnRAM analysis (**Appendix F**) rated the wetland as Manage 2 (medium quality) based on a highest rated function of Medium for wildlife habitat (due to surrounding generally natural upland conditions). Wetland banks on the other hand are large wetland complexes with multiple functions and values that generally have substantial upland buffer, with high native vegetation coverage in both the wetland and buffer. Based on this assessment, replacement via a wetland bank at a 2:1 ratio is certain to provide an increase in wetland functions and values. Therefore, proposed permanent impacts to Wetland 1 meet item (1) of sequencing flexibility requirements.

Additionally, proposed impacts to Wetland 1 meet item (2) of sequencing flexibility requirements. As explained previously, detention and diversion of runoff away from the south portion of Wetland 1 (if avoided) would likely result in secondary/indirect impacts due to a reduction in supporting hydrology thereby diminishing wetland functions and values.

Project construction is expected to start in late summer of 2021. All earthwork and soil stabilization is expected to be completed by fall of 2021. Individual home construction on graded lots will follow based on market demand.

The proposed project design meets the project purpose, need, and requirements as described previously. The proposed project represents an orderly and logical use of the subject property and is consistent with applicable land use and policy plans envisioned by the City of Vadnais Heights.

4.4 Wetland Minimization

The proposed plan represents the minimization alternative. Incorporation of the north portion of Wetland 1 into a detention pond (wetland excavation) results in temporary impacts from

excavation but does not result in permanent wetland impact. Post development, this remnant portion of Wetland 1 will be less than 6.5-ft in depth, will receive runoff from backyards and rooftops, but will not receive sediment (fill).

According to MN WCA Rule 8420.0105 SCOPE. Subpart 1. Scope; generally.

Wetlands must not be impacted unless replaced by restoring or creating wetland areas of at least equal public value. This chapter regulates the draining or filling of wetlands, wholly or partially, and excavation in the permanently and semipermanently flooded areas of type 3, 4, or 5 wetlands, and in all wetland types if the excavation results in filling, draining, or conversion to nonwetland.

Proposed excavation of the north portion of Wetland 1 (Type 1 PFO1A) will maintain the excavated area as wetland. Therefore, this excavation activity is outside the scope of WCA. **Attachment B of Appendix A** requests No Loss approval for this temporary wetland impact.

4.5 Wetland Impact Rectification

Temporary impacts to the north portion of Wetland 1 are proposed. See **Section 4.4** of this application.

4.6 Wetland Impact Reduction or Elimination Over Time

Practices to help reduce or eliminate wetland impacts over time include implementation of a stormwater management plan that reduces or eliminates potential effects of stormwater both onsite and offsite.

The City of Vadnais Heights has review jurisdiction over stormwater runoff from proposed development at this site. The MPCA has jurisdiction under the State Construction Stormwater NPDES General Permit.

Preferred methods to achieve stormwater management requirements will consist of BMPs including a detention pond (excavated wetland) and two stormwater ponds.

4.7 Proposed Project Impacts and Required Replacement

Minnesota Rules Part 8420.0117, Subp. 1 applies:

Ramsey County is in an area with less than 50% of the presettlement wetlands remaining. Minnesota Rules Part 8420.0522, Subp. 4, states that the minimum replacement ratio for impacts to wetland on nonagricultural land in a less than 50% area is 2:1.

Table 2 on the following page summarizes the wetland impact amount, impact type (fill/excavation), and required replacement. **Table 3 on the following page** summarizes temporary wetland impacts that do not require replacement under WCA.

Table 2. Summary of Permanent Wetland Impacts & Required Replacement

Wetland Impact Area	Impact Type	Impact Amount (sf)	Impact Amount (ac)	Replacement Ratio	Required Replacement (ac)
Wetland 1 North Impact	Fill	62	0.0014	2:1	0.0028
Wetland 1 South Impact	Fill	13,352	0.3065	2:1	0.6130
Total		13,414	0.3079	2:1	0.6158

Table 3. Summary of Temporary Wetland Impacts

Wetland Impact Area	Impact Type	Impact Amount (sf)	Impact Amount (ac)	Replacement Ratio	Required Replacement (ac)
Wetland 1	Excavation	6,706	0.1539	N/A	0
Total		6,706	0.1539	2:1	0

5. WETLAND REPLACEMENT PLAN

To mitigate for onsite wetland impacts, the applicant proposes to purchase a total of 0.6158-ac of Standard Wetland Credit (SWC) from an upcoming wetland bank located in Major Watershed #20 (Mississippi River – Twin Cities Metro) and Bank Service Area 7 (BSA7). This new wetland bank will be owned/managed by Patricia Preiner (owner of a current wetland bank in Anoka County). According to Patricia, the bank is expected to be online the week of June 14, 2021.

6. RARE & ENDANGERED SPECIES CONSIDERATIONS

6.1 MN Rare Species Considerations

Minnesota Rules Part 8420.0515 specifies that endangered and threatened species must be considered when submitting a wetland replacement plan. KES has reviewed a licensed copy of the Natural Heritage Inventory System (NHIS) to assess if any rare plant species are known to occur within a 1-mile radius of the project area.

The NHIS review identified one record of tubercled rein orchid (*Platanthera flava* var. *herbiola*), a state threatened plant species, within a 1-mile radius of the project area (more than 5,225 feet to the southeast of the site).

Paraphrasing from <https://www.dnr.state.mn.us/>, the normal habitat of *P. flava* var. *herbiola* is moist or wet meadows or sunny swales in savannas. Soils are generally moist acidic sand, with a thin layer of organic material or duff on the surface and sometimes a clay layer below the

surface. Ground water is usually at or near the surface. Sunlight is either direct for most of the day or lightly filtered through trees or shrubs; *P. flava* var. *herbiola* will slowly disappear if its habitat becomes completely shaded.

The proposed site does not contain suitable habitat to support tubercled rein orchid.

7. REQUESTED APPROVALS

The Bluebird Grove project will require 13,414 sf (0.3079-ac) of permanent impact to one isolated wetland when developed in a manner consistent with the project purpose, need and requirements.

Proposed wetland replacement includes the purchase of 0.6158 acres of Standard Wetland Credit from an upcoming wetland bank in the same major water (Mississippi – Twin Cities Metro; #20) and Bank Service Area (BSA7) as the proposed project.

This application requests WCA Wetland Replacement Plan approval for permanent wetland impacts, and No Loss approval for temporary wetland impacts.

Additionally, the applicant requests an Approved Jurisdictional Determination (AJD) for Wetland 1/A from the USACE. A Section 404 permit from the USACE is not anticipated to be needed for this project.

Bluebird Grove, Vadnais Heights

Wetland Permit Application

FIGURES

1. Site Location
2. Existing Conditions
3. Proposed Plan and Wetland Impacts

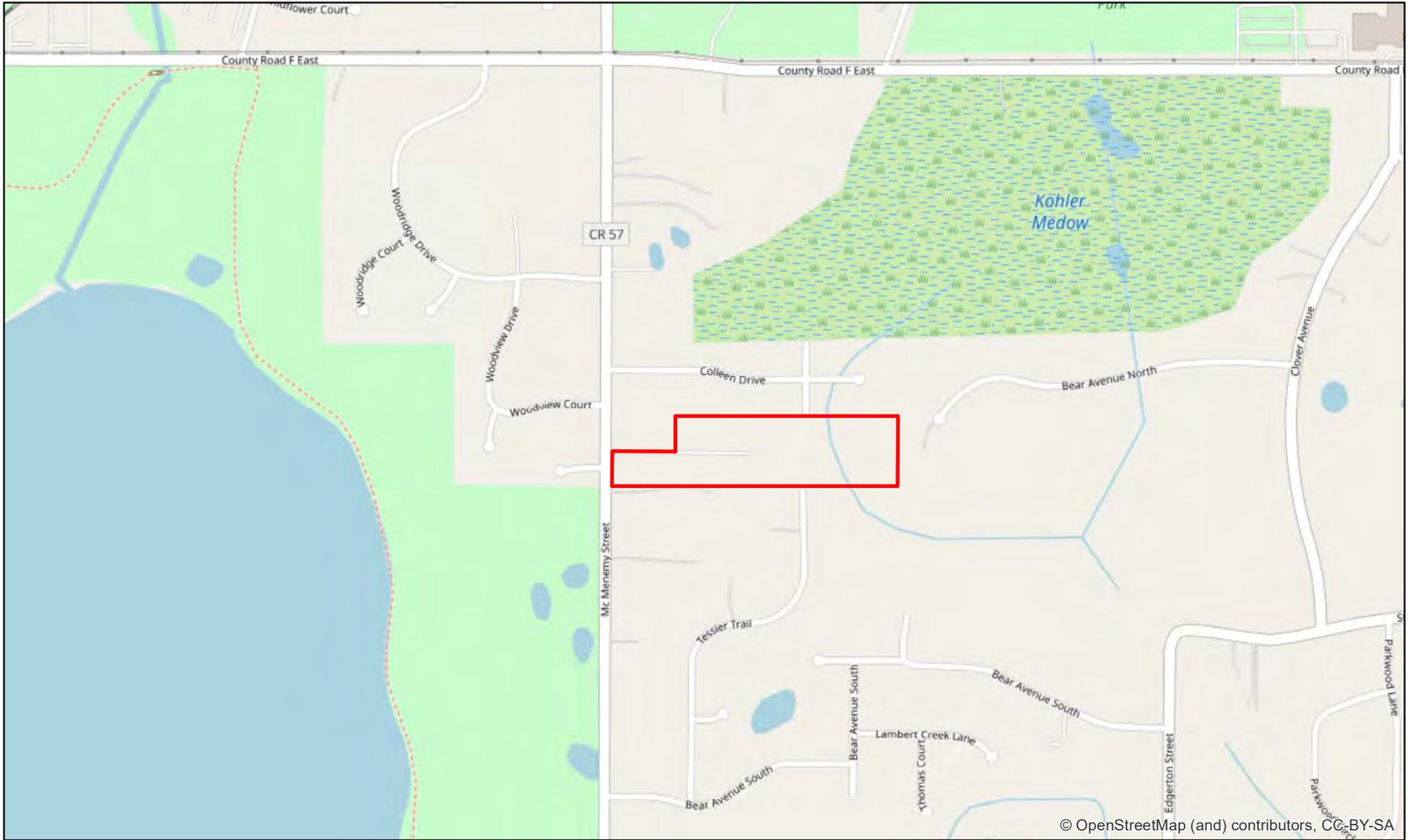


Figure 1 - Site Location

    **Bluebird Grove Residential Development**
Vadnais Heights, Minnesota (KES 2021-115)

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY
Source: ESRI Streets Basemap

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

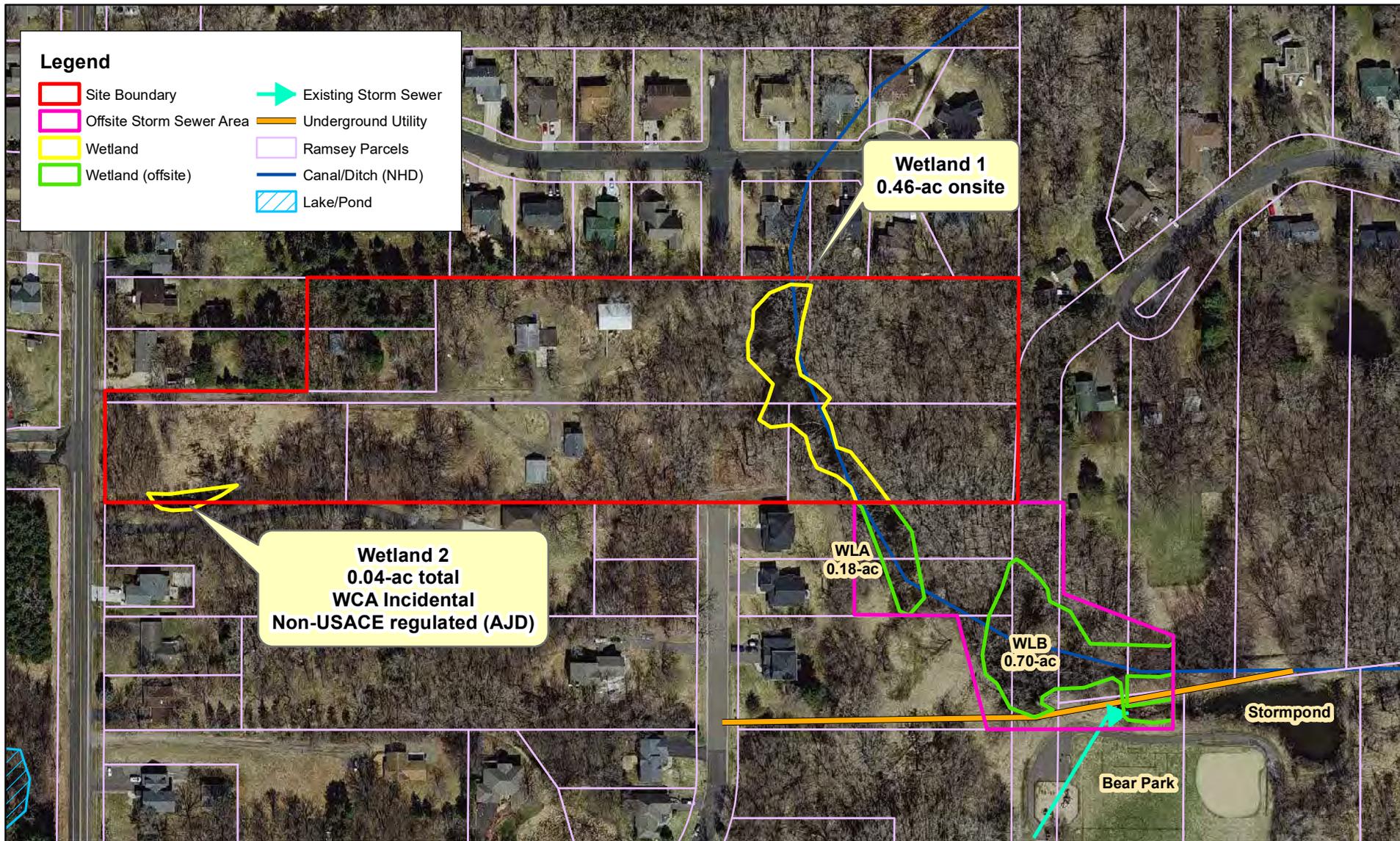


Figure 2 - Existing Conditions (2020 Metro Photo)



KJOLHAUG ENVIRONMENTAL SERVICES COMPANY
Source: MNGEO Spatial Commons

N



0 500 Feet



Bluebird Grove Residential Development
Vadnais Heights, Minnesota (KES 2021-115)

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

Bluebird Grove, Vadnais Heights

Wetland Permit Application

APPENDIX A

Joint Application for Activities Affecting Water Resources in Minnesota

Project Name and/or Number: **Bluebird Grove Residential Development, Vadnais Heights (KES#2021-115)**

PART ONE: Applicant Information

If applicant is an entity (company, government entity, partnership, etc.), an authorized contact person must be identified. If the applicant is using an agent (consultant, lawyer, or other third party) and has authorized them to act on their behalf, the agent's contact information must also be provided.

Applicant/Landowner Name: Marty Harstad, Harstad Hills, Inc.

Mailing Address: 2195 Silver Lake Road, New Brighton, MN 55112

Phone: (651) 636-9991

E-mail Address: mharstad@comcast.net

Authorized Contact (do not complete if same as above):

Mailing Address:

Phone:

E-mail Address:

Agent Name: Melissa Barrett, Kjolhaug Environmental

Mailing Address: 2500 Shadywood Road, Suite 130, Orono, MN 55331

Phone: 952-388-3752

E-mail Address: melissa@kjolhaugenv.com

PART TWO: Site Location Information

County: Ramsey

City/Township: Vadnais Heights

Parcel ID and/or Address: 293022230004 through 293022230009

Legal Description (Section, Township, Range): Sec 29, T30, R22

Lat/Long (decimal degrees): 45.05905, -93.0815

Attach a map showing the location of the site in relation to local streets, roads, highways.

Approximate size of site (acres) or if a linear project, length (feet): ~9-ac

If you know that your proposal will require an individual Permit from the U.S. Army Corps of Engineers, you must provide the names and addresses of all property owners adjacent to the project site. This information may be provided by attaching a list to your application or by using block 25 of the Application for Department of the Army permit which can be obtained at:

http://www.mvp.usace.army.mil/Portals/57/docs/regulatory/RegulatoryDocs/engform_4345_2012oct.pdf

PART THREE: General Project/Site Information

If this application is related to a delineation approval, exemption determination, jurisdictional determination, or other correspondence submitted *prior to* this application then describe that here and provide the Corps of Engineers project number.

Describe the project that is being proposed, the project purpose and need, and schedule for implementation and completion. The project description must fully describe the nature and scope of the proposed activity including a description of all project elements that effect aquatic resources (wetland, lake, tributary, etc.) and must also include plans and cross section or profile drawings showing the location, character, and dimensions of all proposed activities and aquatic resource impacts.

See Sections 1, 2, and 4 of the attached wetland permit application for Bluebird Grove.

Project Name and/or Number: **Bluebird Grove Residential Development, Vadnais Heights (KES#2021-115)**

PART FOUR: Aquatic Resource Impact¹ Summary

If your proposed project involves a direct or indirect impact to an aquatic resource (wetland, lake, tributary, etc.) identify each impact in the table below. Include all anticipated impacts, including those expected to be temporary. Attach an overhead view map, aerial photo, and/or drawing showing all of the aquatic resources in the project area and the location(s) of the proposed impacts. Label each aquatic resource on the map with a reference number or letter and identify the impacts in the following table.

Aquatic Resource ID (as noted on overhead view)	Aquatic Resource Type (wetland, lake, tributary etc.)	Type of Impact (fill, excavate, drain, or remove vegetation)	Duration of Impact Permanent (P) or Temporary (T) ¹	Size of Impact ²	Overall Size of Aquatic Resource ³	Existing Plant Community Type(s) in Impact Area ⁴	County, Major Watershed #, and Bank Service Area # of Impact Area ⁵
Wetland 1 North	Wetland	Fill	P	0.0014		Seas fl basin	Ramsey; 20; 7
Wetland 1 South	Wetland	Fill	P	0.3065		Seas fl basin	Ramsey; 20; 7
Wetland 1 No Loss	Wetland	Excavation	T	0.1539		Seas fl basin	Ramsey; 20; 7

¹If impacts are temporary; enter the duration of the impacts in days next to the "T". For example, a project with a temporary access fill that would be removed after 220 days would be entered "T (220)".

²Impacts less than 0.01 acre should be reported in square feet. Impacts 0.01 acre or greater should be reported as acres and rounded to the nearest 0.01 acre. Tributary impacts must be reported in linear feet of impact and an area of impact by indicating first the linear feet of impact along the flowline of the stream followed by the area impact in parentheses). For example, a project that impacts 50 feet of a stream that is 6 feet wide would be reported as 50 ft (300 square feet).

³This is generally only applicable if you are applying for a de minimis exemption under MN Rules 8420.0420 Subp. 8, otherwise enter "N/A".

⁴Use *Wetland Plants and Plant Community Types of Minnesota and Wisconsin* 3rd Ed. as modified in MN Rules 8420.0405 Subp. 2.

⁵Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

If any of the above identified impacts have already occurred, identify which impacts they are and the circumstances associated with each:

PART FIVE: Applicant Signature

Check here if you are requesting a pre-application consultation with the Corps and LGU based on the information you have provided. Regulatory entities will not initiate a formal application review if this box is checked.

By signature below, I attest that the information in this application is complete and accurate. I further attest that I possess the authority to undertake the work described herein.

Signature: _____ Date: _____

I hereby authorize _____ to act on my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.

¹ The term "impact" as used in this joint application form is a generic term used for disclosure purposes to identify activities that may require approval from one or more regulatory agencies. For purposes of this form it is not meant to indicate whether or not those activities may require mitigation/replacement.

Project Name and/or Number: **Bluebird Grove Residential Development, Vadnais Heights (KES#2021-115)**

Attachment A

Request for Delineation Review, Wetland Type Determination, or Jurisdictional Determination

By submission of the enclosed wetland delineation report, I am requesting that the U.S. Army Corps of Engineers, St. Paul District (Corps) and/or the Wetland Conservation Act Local Government Unit (LGU) provide me with the following (check all that apply):

Wetland Type Confirmation

Delineation Concurrence. Concurrence with a delineation is a written notification from the Corps and a decision from the LGU concurring, not concurring, or commenting on the boundaries of the aquatic resources delineated on the property. Delineation concurrences are generally valid for five years unless site conditions change. Under this request alone, the Corps will not address the jurisdictional status of the aquatic resources on the property, only the boundaries of the resources within the review area (including wetlands, tributaries, lakes, etc.).

Preliminary Jurisdictional Determination. A preliminary jurisdictional determination (PJD) is a non-binding written indication from the Corps that waters, including wetlands, identified on a parcel may be waters of the United States. For purposes of computation of impacts and compensatory mitigation requirements, a permit decision made on the basis of a PJD will treat all waters and wetlands in the review area as if they are jurisdictional waters of the U.S. PJDs are advisory in nature and may not be appealed.

Approved Jurisdictional Determination. An approved jurisdictional determination (AJD) is an official Corps determination that jurisdictional waters of the United States are either present or absent on the property. AJDs can generally be relied upon by the affected party for five years. An AJD may be appealed through the Corps administrative appeal process.

AJD requested for Wetland 1/A.

In order for the Corps and LGU to process your request, the wetland delineation must be prepared in accordance with the 1987 Corps of Engineers Wetland Delineation Manual, any approved Regional Supplements to the 1987 Manual, and the *Guidelines for Submitting Wetland Delineations in Minnesota* (2013).

<http://www.mvp.usace.army.mil/Missions/Regulatory/DelineationJDGuidance.aspx>

Project Name and/or Number: **Bluebird Grove Residential Development, Vadnais Heights (KES#2021-115)**

Attachment B

Supporting Information for Applications Involving Exemptions, No Loss Determinations, and Activities Not Requiring Mitigation

Complete this part *if* you maintain that the identified aquatic resource impacts in Part Four do not require wetland replacement/compensatory mitigation OR *if* you are seeking verification that the proposed water resource impacts are either exempt from replacement or are not under CWA/WCA jurisdiction.

Identify the specific exemption or no-loss provision for which you believe your project or site qualifies:

MN WCA Rule 8420.0105 SCOPE. Subpart 1. Scope; generally. Wetlands must not be impacted unless replaced by restoring or creating wetland areas of at least equal public value. This chapter regulates the draining or filling of wetlands, wholly or partially, and excavation in the permanently and semipermanently flooded areas of type 3, 4, or 5 wetlands, and in all wetland types if the excavation results in filling, draining, or conversion to nonwetland.

Provide a detailed explanation of how your project or site qualifies for the above. Be specific and provide and refer to attachments and exhibits that support your contention. Applicants should refer to rules (e.g. WCA rules), guidance documents (e.g. BWSR guidance, Corps guidance letters/public notices), and permit conditions (e.g. Corps General Permit conditions) to determine the necessary information to support the application. Applicants are strongly encouraged to contact the WCA LGU and Corps Project Manager prior to submitting an application if they are unsure of what type of information to provide:

See section 4.4 of the attached wetland permit application for Bluebird Grove.

Project Name and/or Number: **Bluebird Grove Residential Development, Vadnais Heights (KES#2021-115)**

Attachment C

Avoidance and Minimization

Project Purpose, Need, and Requirements. Clearly state the purpose of your project and need for your project. Also include a description of any specific requirements of the project as they relate to project location, project footprint, water management, and any other applicable requirements. Attach an overhead plan sheet showing all relevant features of the project (buildings, roads, etc.), aquatic resource features (impact areas noted) and construction details (grading plans, storm water management plans, etc.), referencing these as necessary:

See Sections 1, 2, and 4 of the attached wetland permit application for Bluebird Grove.

Avoidance. Both the CWA and the WCA require that impacts to aquatic resources be avoided if practicable alternatives exist. Clearly describe all on-site measures considered to avoid impacts to aquatic resources and discuss at least two project alternatives that avoid all impacts to aquatic resources on the site. These alternatives may include alternative site plans, alternate sites, and/or not doing the project. Alternatives should be feasible and prudent (see MN Rules 8420.0520 Subp. 2 C). Applicants are encouraged to attach drawings and plans to support their analysis:

See Section 4 of the attached wetland permit application for Bluebird Grove.

Minimization. Both the CWA and the WCA require that all unavoidable impacts to aquatic resources be minimized to the greatest extent practicable. Discuss all features of the proposed project that have been modified to minimize the impacts to water resources (see MN Rules 8420.0520 Subp. 4):

See Section 4 of the attached wetland permit application for Bluebird Grove.

Off-Site Alternatives. An off-site alternatives analysis is not required for all permit applications. If you know that your proposal will require an individual permit (standard permit or letter of permission) from the U.S. Army Corps of Engineers, you may be required to provide an off-site alternatives analysis. The alternatives analysis is not required for a complete application but must be provided during the review process in order for the Corps to complete the evaluation of your application and reach a final decision. Applicants with questions about when an off-site alternatives analysis is required should contact their Corps Project Manager.

N/A

Project Name and/or Number: **Bluebird Grove Residential Development, Vadnais Heights (KES#2021-115)**

Attachment D

Replacement/Compensatory Mitigation

Complete this part *if* your application involves wetland replacement/compensatory mitigation not associated with the local road wetland replacement program. Applicants should consult Corps mitigation guidelines and WCA rules for requirements.

Replacement/Compensatory Mitigation via Wetland Banking. Complete this section if you are proposing to use credits from an existing wetland bank (with an account number in the State wetland banking system) for all or part of your replacement/compensatory mitigation requirements.

Wetland Bank Account #	County	Major Watershed #	Bank Service Area #	Credit Type (if applicable)	Number of Credits
TBD	TBD	20	7	TBD	0.6158

Applicants should attach documentation indicating that they have contacted the wetland bank account owner and reached at least a tentative agreement to utilize the identified credits for the project. This documentation could be a signed purchase agreement, signed application for withdrawal of credits or some other correspondence indicating an agreement between the applicant and the bank owner. *However, applicants are advised not to enter into a binding agreement to purchase credits until the mitigation plan is approved by the Corps and LGU.*

Project-Specific Replacement/Permittee Responsible Mitigation. Complete this section if you are proposing to pursue actions (restoration, creation, preservation, etc.) to generate wetland replacement/compensatory mitigation credits for this proposed project.

WCA Action Eligible for Credit ¹	Corps Mitigation Compensation Technique ²	Acres	Credit % Requested	Credits Anticipated ³	County	Major Watershed #	Bank Service Area #

¹Refer to the name and subpart number in MN Rule 8420.0526.

²Refer to the technique listed in *St. Paul District Policy for Wetland Compensatory Mitigation in Minnesota*.

³If WCA and Corps crediting differs, then enter both numbers and distinguish which is Corps and which is WCA.

Explain how each proposed action or technique will be completed (e.g. wetland hydrology will be restored by breaking the tile.....) and how the proposal meets the crediting criteria associated with it. Applicants should refer to the Corps mitigation policy language, WCA rule language, and all associated Corps and WCA guidance related to the action or technique:

Attach a site location map, soils map, recent aerial photograph, and any other maps to show the location and other relevant features of each wetland replacement/mitigation site. Discuss in detail existing vegetation, existing landscape features, land use (on and surrounding the site), existing soils, drainage systems (if present), and water sources and movement. Include a topographic map showing key features related to hydrology and water flow (inlets, outlets, ditches, pumps, etc.):

Project Name and/or Number: **Bluebird Grove Residential Development, Vadnais Heights (KES#2021-115)**

Attach a map of the existing aquatic resources, associated delineation report, and any documentation of regulatory review or approval. Discuss as necessary:

For actions involving construction activities, attach construction plans and specifications with all relevant details. Discuss and provide documentation of a hydrologic and hydraulic analysis of the site to define existing conditions, predict project outcomes, identify specific project performance standards and avoid adverse offsite impacts. Plans and specifications should be prepared by a licensed engineer following standard engineering practices. Discuss anticipated construction sequence and timing:

For projects involving vegetation restoration, provide a vegetation establishment plan that includes information on site preparation, seed mixes and plant materials, seeding/planting plan (attach seeding/planting zone map), planting/seeding methods, vegetation maintenance, and an anticipated schedule of activities:

For projects involving construction or vegetation restoration, identify and discuss goals and specific outcomes that can be determined for credit allocation. Provide a proposed credit allocation table tied to outcomes:

Provide a five-year monitoring plan to address project outcomes and credit allocation:

Discuss and provide evidence of ownership or rights to conduct wetland replacement/mitigation on each site:

Quantify all proposed wetland credits and compare to wetland impacts to identify a proposed wetland replacement ratio. Discuss how this replacement ratio is consistent with Corps and WCA requirements:

By signature below, the applicant attests to the following (only required if application involves project-specific/permittee responsible replacement):

- All proposed replacement wetlands were not:
 - Previously restored or created under a prior approved replacement plan or permit
 - Drained or filled under an exemption during the previous 10 years
 - Restored with financial assistance from public conservation programs
 - Restored using private funds, other than landowner funds, unless the funds are paid back with interest to the individual or organization that funded the restoration and the individual or organization notifies the local government unit in writing that the restored wetland may be considered for replacement.
- The wetland will be replaced before or concurrent with the actual draining or filling of a wetland.
- An irrevocable bank letter of credit, performance bond, or other acceptable security will be provided to guarantee successful completion of the wetland replacement.
- Within 30 days of either receiving approval of this application or beginning work on the project, I will record the Declaration of Restrictions and Covenants on the deed for the property on which the replacement wetland(s) will be located and submit proof of such recording to the LGU and the Corps.

Applicant or Representative:

Title:

Signature: _____

Date:

Bluebird Grove, Vadnais Heights

Wetland Permit Application

APPENDIX B

Delineation Approvals

Minnesota Wetland Conservation Act Notice of Decision

Local Government Unit: Vadnais Lake Area WMO	County: Ramsey
Applicant Name: Mildred Johnson Trust Environmental	Applicant Representative: Kjolhaug
Project Name: McMenemy Street Parcels	LGU Project No. (if any): 10.2020
Date Complete Application Received by LGU: 8/24/20, revised 9/15/2020	
Date of LGU Decision: 9/15/2020	
Date this Notice was Sent: 9/16/2020	

WCA Decision Type - check all that apply

<input checked="" type="checkbox"/> Wetland Boundary/Type	<input type="checkbox"/> Sequencing	<input type="checkbox"/> Replacement Plan	<input type="checkbox"/> Bank Plan (not credit purchase)
<input checked="" type="checkbox"/> No-Loss (8420.0415)	<input type="checkbox"/> Exemption (8420.0420)		
Part: <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input type="checkbox"/> G <input type="checkbox"/> H	Subpart: <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9		

Replacement Plan Impacts (replacement plan decisions only)

Total WCA Wetland Impact Area:
Wetland Replacement Type: <input type="checkbox"/> Project Specific Credits: <input type="checkbox"/> Bank Credits:
Bank Account Number(s):

Technical Evaluation Panel Findings and Recommendations (attach if any)

<input checked="" type="checkbox"/> Approve <input type="checkbox"/> Approve w/Conditions <input type="checkbox"/> Deny <input type="checkbox"/> No TEP Recommendation
--

LGU Decision

<input type="checkbox"/> Approved with Conditions (specify below) ¹ List Conditions:	<input checked="" type="checkbox"/> Approved ¹	<input type="checkbox"/> Denied
Decision-Maker for this Application: <input checked="" type="checkbox"/> Staff <input type="checkbox"/> Governing Board/Council <input type="checkbox"/> Other:		
Decision is valid for: <input checked="" type="checkbox"/> 5 years (default) <input type="checkbox"/> Other (specify):		

¹ *Wetland Replacement Plan approval is not valid until BWSR confirms the withdrawal of any required wetland bank credits. For project-specific replacement a financial assurance per MN Rule 8420.0522, Subp. 9 and evidence that all required forms have been recorded on the title of the property on which the replacement wetland is located must be provided to the LGU for the approval to be valid.*

LGU Findings – Attach document(s) and/or insert narrative providing the basis for the LGU decision¹.

<input checked="" type="checkbox"/> Attachment(s) (specify): revised delineation, incidental wetland request, TEP Findings
<input checked="" type="checkbox"/> Summary: see TEP Findings

¹ *Findings must consider any TEP recommendations.*

Attached Project Documents

<input type="checkbox"/> Site Location Map <input type="checkbox"/> Project Plan(s)/Descriptions/Reports (specify):

Appeals of LGU Decisions

If you wish to appeal this decision, you must provide a written request within 30 calendar days of the date you received the notice. All appeals must be submitted to the Board of Water and Soil Resources Executive Director along with a check payable to BWSR for \$500 *unless* the LGU has adopted a local appeal process as identified below. The check must be sent by mail and the written request to appeal can be submitted by mail or e-mail. The appeal should include a copy of this notice, name and contact information of appellant(s) and their representatives (if applicable), a statement clarifying the intent to appeal and supporting information as to why the decision is in error. Send to:

Appeals & Regulatory Compliance Coordinator
 Minnesota Board of Water & Soils Resources
 520 Lafayette Road North
 St. Paul, MN 55155
travis.germundson@state.mn.us

Does the LGU have a local appeal process applicable to this decision?

Yes¹ No

¹If yes, all appeals must first be considered via the local appeals process.

Local Appeals Submittal Requirements (LGU must describe how to appeal, submittal requirements, fees, etc. as applicable)

--

Notice Distribution (include name)

Required on all notices:

<input checked="" type="checkbox"/> SWCD TEP Member: Michael Schumann	<input checked="" type="checkbox"/> BWSR TEP Member: Ben Meyer
<input type="checkbox"/> LGU TEP Member (if different than LGU contact):	
<input checked="" type="checkbox"/> DNR Representative: Leslie Parris	
<input type="checkbox"/> Watershed District or Watershed Mgmt. Org.:	
<input type="checkbox"/> Applicant:	<input checked="" type="checkbox"/> Agent/Consultant: Kjolhaug – Melissa Barrett

Optional or As Applicable:

<input type="checkbox"/> Corps of Engineers:	
<input type="checkbox"/> BWSR Wetland Mitigation Coordinator (required for bank plan applications only):	
<input type="checkbox"/> Members of the Public (notice only):	<input type="checkbox"/> Other:

Signature: 	Date: 9/16/2020
--	------------------------

This notice and accompanying application materials may be sent electronically or by mail. The LGU may opt to send a summary of the application to members of the public upon request per 8420.0255, Subp. 3.



Regulatory File No. MVP-2014-03417-EJW

LeVander, Gillen & Miller, P.A.
c/o Donald Hoeft
633 South Concord St., Suite 400
South St. Paul, Minnesota 55075

Dear Mr. Hoeft:

We are responding to your request, submitted by Kjolhaug Environmental on your behalf, for Corps of Engineers (Corps) concurrence with the delineation of aquatic resources completed on the 11.30-acre McMenemy Street Parcels site in the City of Vadnais Heights. The project site is in Section 29, Township 30 North, Range 22 West, Ramsey County, Minnesota. The review area for our jurisdictional determination is identified as Wetland 2 on the enclosed figures labeled MVP-2014-03417-EJW Page 1 of 2 through Page 2 of 2.

We have reviewed the delineation report dated August 24, 2020 and concur that Preliminary Figure 2 depicts a reasonable approximation of the location and boundaries of aquatic resources on the property. This delineation can be used for planning, and will generally be sufficient for permitting purposes. It may be necessary to review this determination in response to changing site conditions or new information.

Additional Information regarding Jurisdiction and Permitting:

The review area for our jurisdictional determination consists of Wetland 2 which is not a water of the United States subject to Corps of Engineers (Corps) jurisdiction. Therefore, you are not required to obtain Department of the Army authorization to discharge dredged or fill material within this area. The rationale for this determination is provided in the enclosed Approved Jurisdictional Determination form. This determination is only valid for the review area described. You are also cautioned that the area of waters described on the enclosed Jurisdictional Determination form is approximate and is not based on a precise delineation of aquatic resources.

If you object to this approved jurisdictional determination, you may request an administrative appeal under Corps regulations at 33 CFR 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination, you must submit a completed RFA form to the Mississippi Valley Division Office at the address shown on the form.

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR 331.5, and that it has been received by the Division Office within 60 days of the date of the enclosed NAP. It is not necessary to submit an RFA form to the division office if you do not object to the determination in this letter.

This approved jurisdictional determination may be relied upon for five years from the date of this letter. However, the Corps reserves the right to review and revise the determination in response to changing site conditions, information that was not considered during our initial review, or off-site activities that could indirectly alter the extent of wetlands and other resources on-site. This determination may be renewed at the end of the five year period provided you submit a written request and our staff are able to verify that the limits established during the original determination are still accurate.

Please note that the Corps has issued Nationwide General Permits and Regional General Permits that provide authorization for many minor activities. Many of those general permits require a pre-construction notification and Corps verification prior to starting work. However, several general permits also have "self-certifying" provisions that eliminate the need to provide notice to the Corps, provided the permittee complies with the terms and conditions of the general permit. Current general permit terms and conditions can be found at: <https://www.mvp.usace.army.mil/Missions/Regulatory/Permitting-Process-Procedures/>.

If you have any questions, please contact me in our St. Paul office at (651) 290-5357 or Eric.j.white@usace.army.mil. In any correspondence or inquiries, please refer to the Regulatory file number shown above.

Sincerely,

A handwritten signature in black ink, appearing to read "Eric J. White".

Eric White
Project Manager

Enclosures

cc:

Brian Corcoran (LGU)
Ben Meyer (BWSR)
Anna Hotz (MPCA)
Melissa Barrett (Agent)

I. ADMINISTRATIVE INFORMATION

Completion Date of Approved Jurisdictional Determination (AJD): 09/10/2020

ORM Number: MVP-2014-03417-EJW

Associated JDs: N/A

Review Area Location¹:

State/Territory: MN City: Vadnais Heights County/Parish/Borough: Ramsey County

Center Coordinates of Review Area: Latitude 45.059829 Longitude -93.084225

II. FINDINGS**A. Summary:** Check all that apply. At least one box from the following list **MUST** be selected. Complete the corresponding sections/tables and summarize data sources.

- The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area). Rationale: N/A or describe rationale.
- There are "navigable waters of the United States" within Rivers and Harbors Act jurisdiction within the review area (complete table in section II.B).
- There are "waters of the United States" within Clean Water Act jurisdiction within the review area (complete appropriate tables in section II.C).
- There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in section II.D).

B. Rivers and Harbors Act of 1899 Section 10 (§ 10)²

§ 10 Name	§ 10 Size	§ 10 Criteria	Rationale for § 10 Determination
N/A	N/A	N/A	N/A

C. Clean Water Act Section 404Territorial Seas and Traditional Navigable Waters ((a)(1) waters)³

(a)(1) Name	(a)(1) Size	(a)(1) Criteria	Rationale for (a)(1) Determination
N/A	N/A	N/A	N/A

Tributaries ((a)(2) waters):

(a)(2) Name	(a)(2) Size	(a)(2) Criteria	Rationale for (a)(2) Determination
N/A	N/A	N/A	N/A

Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters):

(a)(3) Name	(a)(3) Size	(a)(3) Criteria	Rationale for (a)(3) Determination
N/A	N/A	N/A	N/A

Adjacent wetlands ((a)(4) waters):

(a)(4) Name	(a)(4) Size	(a)(4) Criteria	Rationale for (a)(4) Determination
N/A	N/A	N/A	N/A

D. Excluded Waters or FeaturesExcluded waters ((b)(1) – (b)(12))⁴:

Exclusion Name	Exclusion Size	Exclusion ⁵	Rationale for Exclusion Determination
Wetland 2	0.04 acres	(b)(1) Non-adjacent wetland	Wetland 2 does not abut a TNW, lake, pond, or impoundment of a jurisdictional water in a typical year. The aquatic resource being evaluated is Wetland 2 shown on the attached figures labeled MVP-2014-03417-EJW Pages 1 of 2 through Page 2 of 2. The nearest (a)(3) water is Vadnais Lake, located approximately 0.25 miles west of the review area. Wetland 2 has no surface connection to Vadnais Lake and is not inundated by flooding from Vadnais Lake. Based upon information gathered as a result of the desktop review and wetland delineation report, Corps staff determined that Wetland 2 is wholly surrounded by uplands and lacks a natural intermittent or perennial surface connection to a water of the United States. Wetland 2 does not abut a TNW, lake, pond, or impoundment of a jurisdictional water in a typical year. Therefore, Wetland 2 does not meet the definition of an adjacent wetland under the NWPR and is not a water of the US.

III. SUPPORTING INFORMATION**A. Select/enter all resources** that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.

- Information submitted by, or on behalf of, the applicant/consultant: McMenemy Street Parcels Wetland Delineation Report August 24, 2020
This information (is) sufficient for purposes of this AJD.
Rationale: N/A
- Data sheets prepared by the Corps: *Title(s) and/or date(s)*.
- Photographs: *(NA, aerial, other, aerial and other) Title(s) and/or date(s)*.
- Corps Site visit(s) conducted on: *Date(s)*.
- Previous Jurisdictional Determinations (AJDs or PJDs): *ORM Number(s) and date(s)*.
- Antecedent Precipitation Tool: *provide detailed discussion in Section III.B.*
- USDA NRCS Soil Survey: Ramsey County Soil Survey Map
- USFWS NWI maps: USFWS National Wetlands Inventory Map
- USGS topographic maps: 1:24K White Bear Lake West

Other data sources used to aid in this determination:

Data Source (select)	Name and/or date and other relevant information
USGS Sources	N/A.

USDA Sources	N/A.
NOAA Sources	N/A.
USACE Sources	N/A.
State/Local/Tribal Sources	N/A.
Other Sources	N/A.

B. Typical year assessment(s): N/A

C. Additional comments to support AJD: N/A

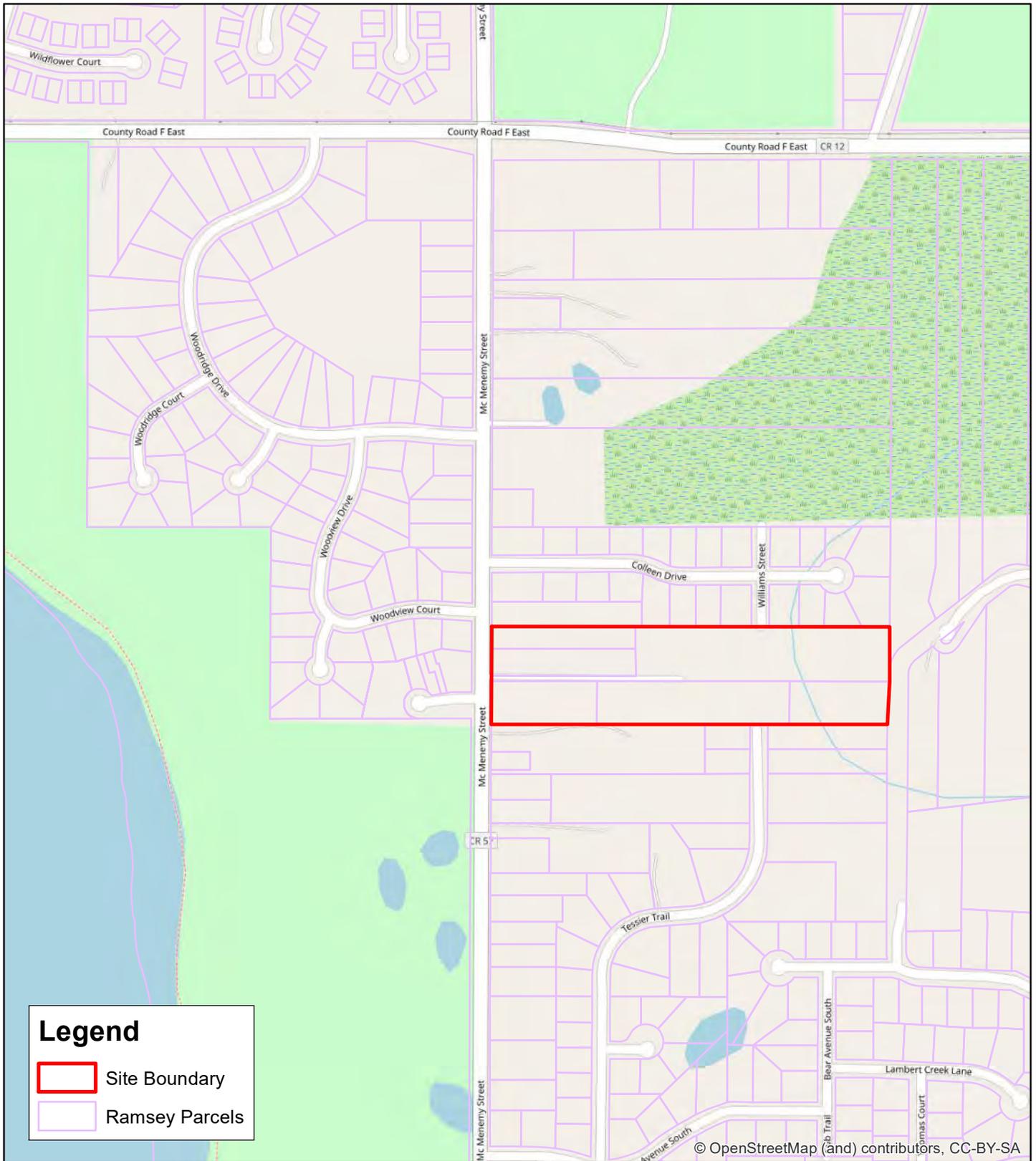
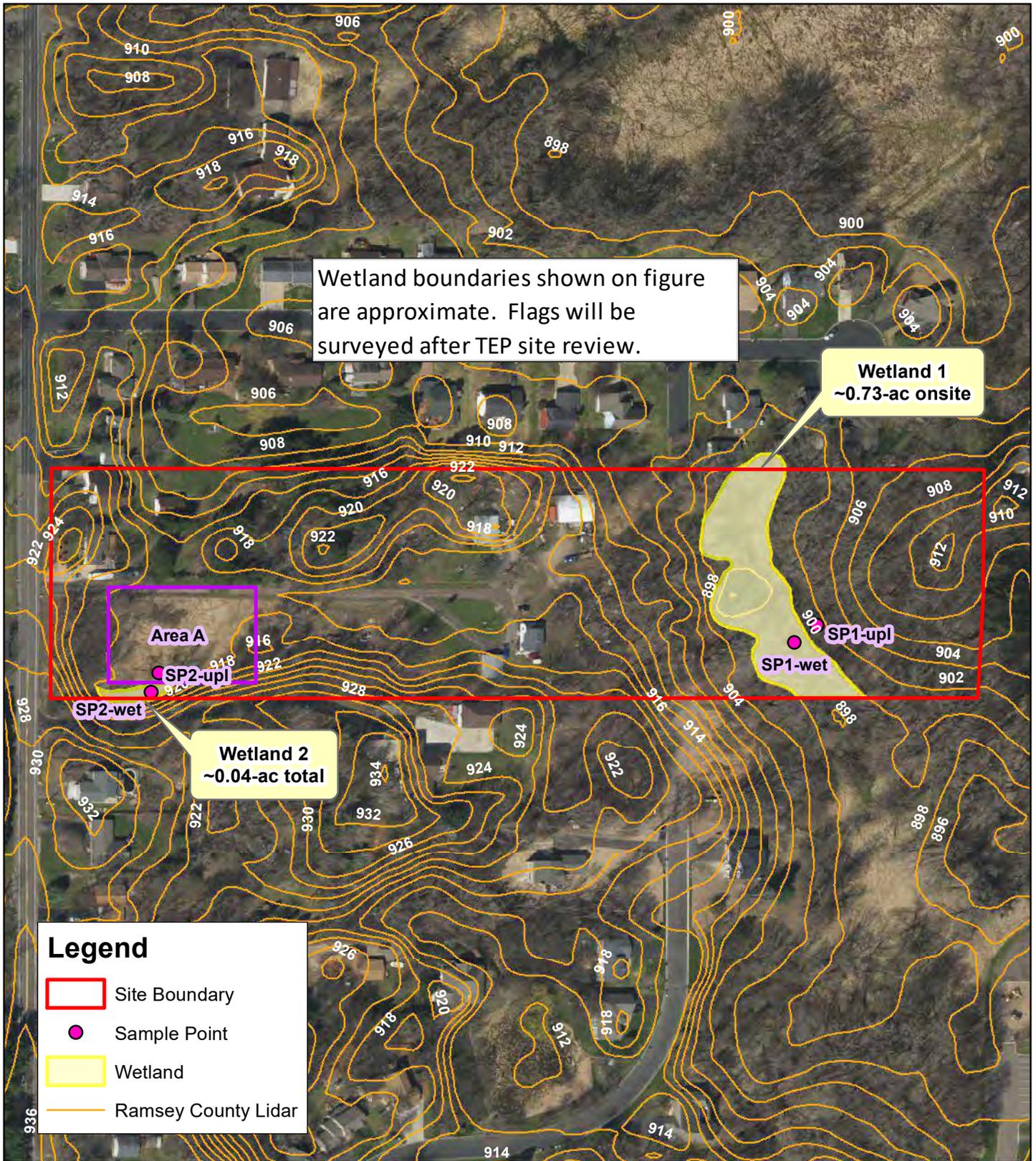


Figure 1 - Site Location

   **McMenemy Street Parcels (KES 2020-095)**
Vadnais Heights, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY
Source: ESRI Streets Basemap



Preliminary Figure 2 - Existing Conditions (2016 MnGEO Photo)



N



0 150 Feet



McMenemy Street Parcels (KES 2020-095)
Vadnais Heights, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY
Source: MNGEO Spatial Commons

**NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND
REQUEST FOR APPEAL**

Applicant: LeVander, Gillen & Miller, P.A. c/o Donald Hoeft	File No.: MVP-2014-03417-EJW	Date: September 10, 2020
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://usace.army.mil/inet/functions/cw/cecwo/reg> or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

U.S. Army Corps of Engineers
 Attn. Eric White
 180 Fifth Street East, Suite 700
 St. Paul, MN 55101
 651-290-5357
 Eric.J.White@usace.army.mil

If you only have questions regarding the appeal process you may also contact the Division Engineer through:

Administrative Appeals Review Officer
 Mississippi Valley Division
 P.O. Box 80 (1400 Walnut Street)
 Vicksburg, MS 39181-0080
 601-634-5820 FAX: 601-634-5816

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

<p>_____ Signature of appellant or agent.</p>	<p>Date:</p>	<p>Telephone number:</p>
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Bluebird Grove, Vadnais Heights

Wetland Permit Application

APPENDIX C

City of Vadnais Heights Land Use Map



Planned Land Use (2040)

2040 Comprehensive Plan
City of Vadnais Heights, Minnesota

Legend

- Vadnais Heights City Limits
- City/Township Boundaries
- Streams
- Railroad
- National Wetland Inventory

Planned Land Use Categories

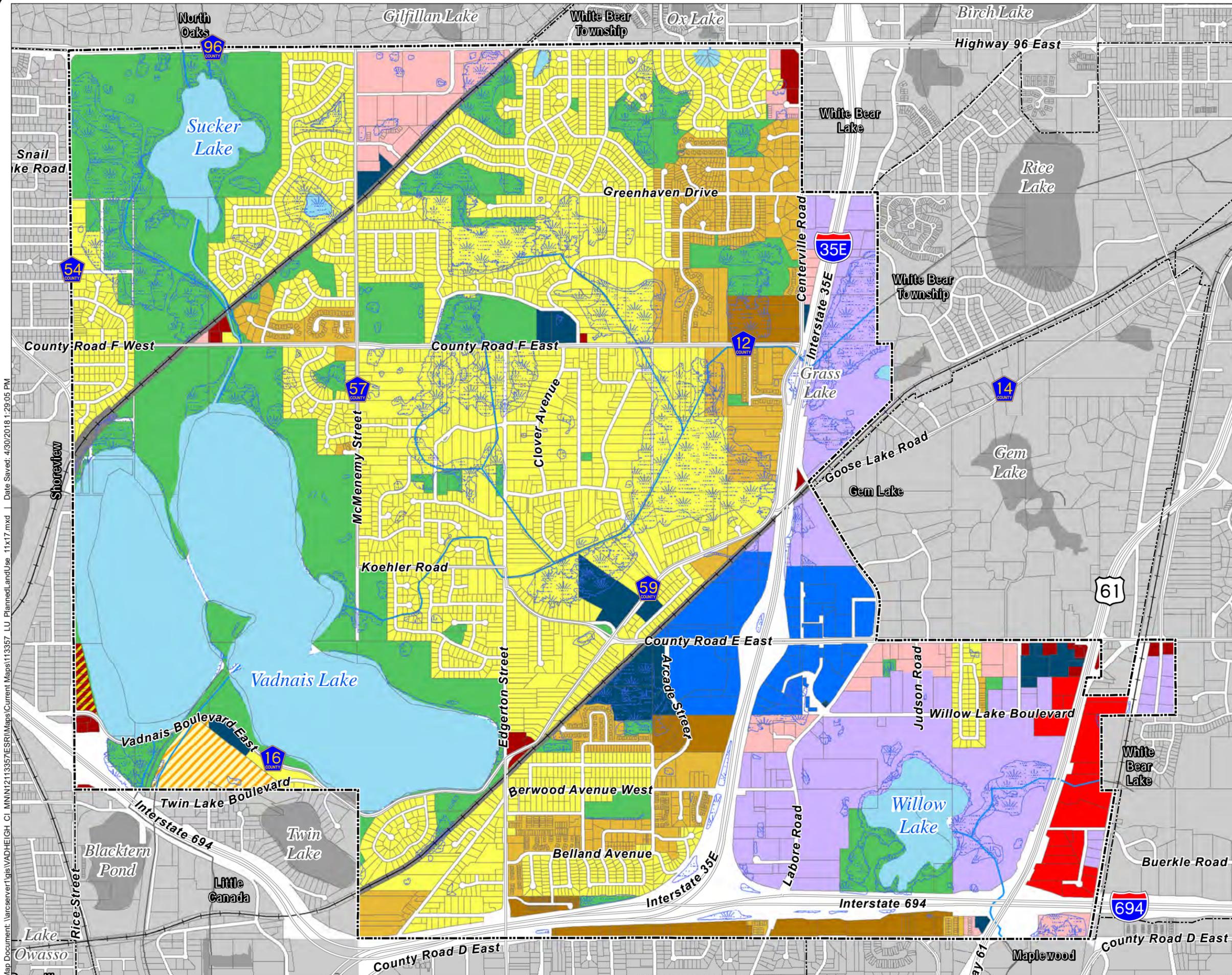
- Low Density Residential
- Manufactured Housing Park
- Medium Density Residential
- High Density Residential
- Mixed Use
- Office/Business
- Commercial
- Highway Commercial
- Industrial
- Open Water
- Park
- Public, Institutional or Utility
- Railway
- Vadnais Center Land Use Plan



Source: MnGeo, City of Vadnais Heights, Ramsey County



May 2018



Map Document: \arcserver\gis\ADHEIGH CI MN\12113357\ESRI\MapServer\Current Maps\113357 LU Planned Land Use 11x17.mxd | Date Saved: 4/30/2018 1:29:05 PM

Bluebird Grove, Vadnais Heights

Wetland Permit Application

APPENDIX D

Approved City Council Resolution

**CITY OF VADNAIS HEIGHTS
COUNTY OF RAMSEY
STATE OF MINNESOTA**

RESOLUTION NO. 21-06-093

**A RESOLUTION SUPPORTING THE EXPLORATION OF AN ALTERNATIVE
DEVELOPMENT PLAN FOR THE BLUEBIRD GROVE PLANNED UNIT
DEVELOPMENT**

WHEREAS, Harstad Hills, Inc., with consent of the property owners, has applied for concept/final planned unit development plan, minor subdivision, and preliminary plat approvals as proposed in Planning Case 21-004 for the properties located at 3904, 3910, 0 McMenemy Street and 0 Bear Avenue South, and for portions of 3920 and 3922 McMenemy Street; and

WHEREAS, the proposed development plan, as shown in Exhibit A, currently being considered by the City Council includes roadway and utility extensions to facilitate the platting and construction of a 19-lot single-family residential subdivision on approximately 8.85 acres; and

WHEREAS, the subject properties are zoned/guided for such uses, are surrounded by existing single-family residential developments, and contain portions of wetland and branch ditch systems; and

WHEREAS, the existing condition creates development constraints related to access, wetland buffering, grading, and stormwater management that have been addressed by the applicant in the proposed development plan in compliance with the applicable procedures and regulatory standards; and

WHEREAS, a public open house was held by the applicant on November 12, 2020 and public hearings on this matter were held by the Planning Commission on November 24, 2020 and March 23, 2021, respectively, and by the City Council on December 1, 2020 and April 20, 2021, respectively; and

WHEREAS, based on comments from the Planning Commission, City Council, City Staff, and public hearing testimony, the applicant is considering an alternative development plan, as shown in Exhibit B, that seeks, in part, to mitigate a portion of the existing wetland system, as shown in Exhibit C, and modify the existing drainage pattern by constructing an engineered stormwater management system to address drainage issues for the surrounding area outside of the proposed development in the interest of the general public welfare; and

WHEREAS, based on comments from the Planning Commission, City Council, City Staff, and public hearing testimony, the alternative development plan does not extend Bear Avenue North beyond its current length of approximately 1,800 feet and includes an emergency access easement and paved trail connecting the new/existing neighborhoods and allowing improved, plowable access to underground utility systems; and

WHEREAS, the City has extended the application review period to 120 days, which expires on June 18, 2021, and action by the City Council on the proposed development plan is required by that date without a further extension being granted in writing by the applicant; and

WHEREAS, the applicant is not withdrawing the proposed development plan in Planning Case 21-004 and will voluntarily extend the application review period while submitting the required applications under the Wetland Conservation Act to propose sequencing and replacement

of portions of the existing wetland system to allow further consideration of the alternative development plan; and

WHEREAS, the City Council acknowledges the required technical analysis has yet to be conducted and reviewed by City Staff as well as other jurisdictional agencies and stakeholders; and

WHEREAS, the City Council further acknowledges the required regulatory process has yet to be undertaken and recognizes the importance of said process; and

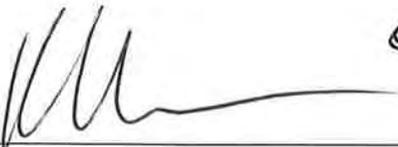
NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF VADNAIS HEIGHTS that, in full understanding of the recitals above, the alternative development proposal includes the following benefits that warrant consideration in compliance with all applicable regulations and policies:

1. Due to the degraded condition of the existing wetland system and its current function storing and conveying regional stormwater, an engineered stormwater management system that addresses the needs of the proposed development site and those of the surrounding area is an opportunity to accomplish shared goals to meet public needs.
2. Replacement of wetlands off-site, as required by the sequencing/replacement process, will significantly enhance existing wetland systems that have higher environmental and aesthetic value.
3. Inclusion of the proposed emergency access easement and paved trail connecting Bear Avenue North to the proposed roadway facility serving the new residential neighborhood will enhance public safety and promote walkability for new/existing residents.
4. A paved, accessible route to serve and maintain the proposed watermain and storm sewer utilities enhances the City's level of service to new/existing residents and improves utility system resiliency by enabling access to critical infrastructure.

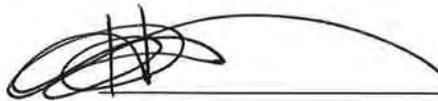
BE IT FURTHER RESOLVED BY THE CITY COUNCIL OF THE CITY OF VADNAIS HEIGHTS to support the exploration of an alternative development plan for the Bluebird Grove Planned Unit Development by demonstrating compliance with applicable federal, state, and local regulations to attain the necessary approvals from the Technical Evaluation Panel and the Vadnais Lake Area Water Management Organization's Technical Commission and Board of Directors.

This Resolution was declared duly passed and adopted and was signed by the Mayor and attested to by the City Administrator this 1st day of June, 2021.

Attest:



 Kevin Watson, City Administrator



 Heidi Gunderson, Mayor

(SEAL)

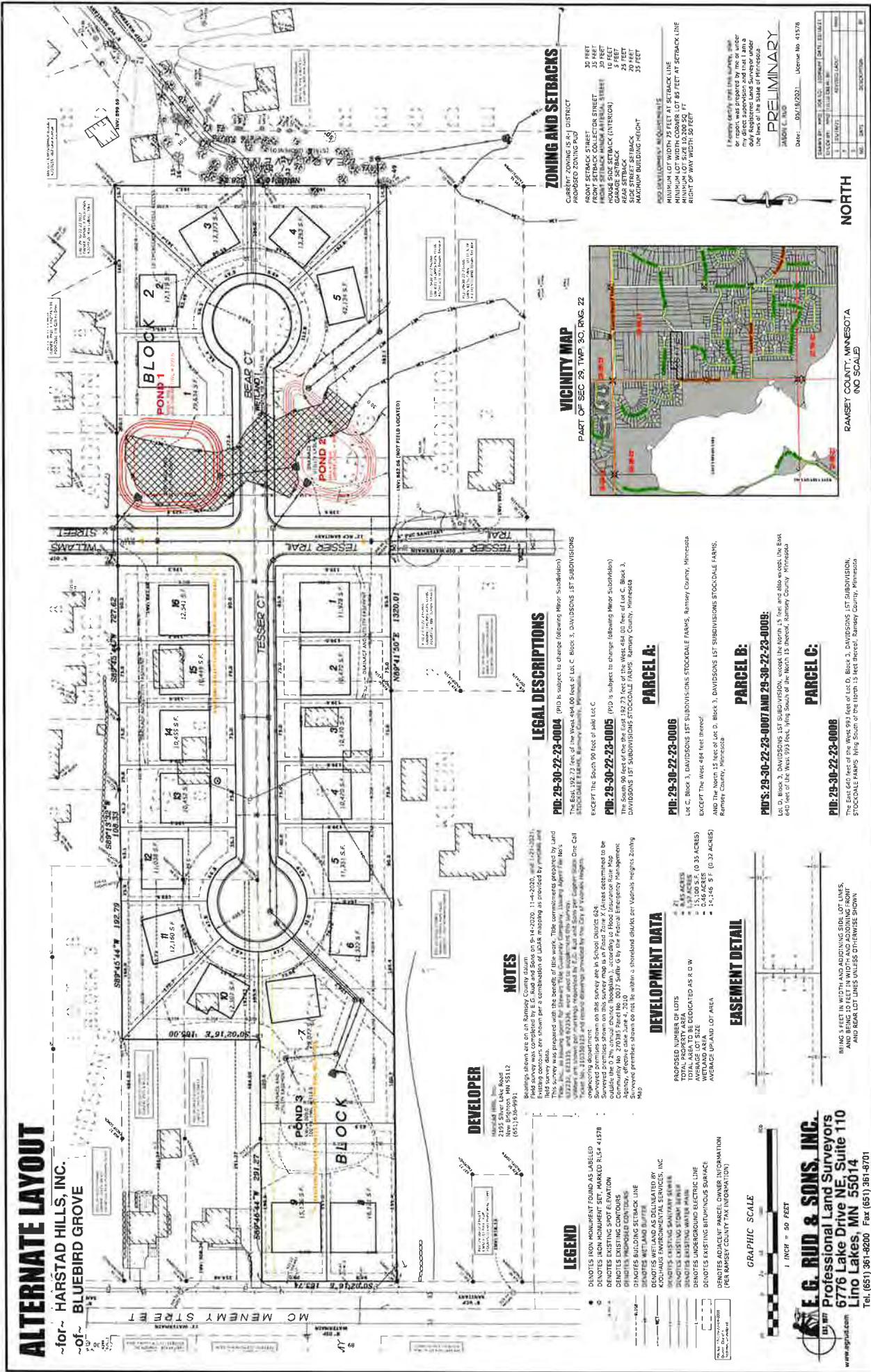
EXHIBIT A**Proposed Development Plan**

The proposed development plan currently being considered by the City Council, as in Planning Case 21-004, follows.

EXHIBIT B**Alternative Development Plan**

The alternative development plan currently being explored by the applicant follows.

ALTERNATE LAYOUT
for HARSTAD HILLS, INC.
of BLUEBIRD GROVE



DEVELOPER
Harstad Hills, Inc.
10000 Bluebird Grove
New Brighton, MN 55112
(651) 318-9991

NOTES

Bearings shown are on a Survey of the City of St. Louis, dated 08-14-2020, 11-4-2020, and 12-13-2021.
Existing contours are shown per a combination of LIDAR mapping as provided by the City of St. Louis and field data.
This survey was prepared with the benefit of the work of the City of St. Louis.
The City of St. Louis is not responsible for the accuracy of the information shown on this survey.
Surveyed premises shown on this survey are in School District 624.
Surveyed premises shown on this survey are in Precinct 7. (As such, development to be undertaken on these premises is subject to the rules and regulations of the St. Louis Community No. 270385, Precinct No. 0027, Staffed by the Federal Emergency Management Agency, effective date June 10, 2019, and to any subsequent amendments thereto.)
The City of St. Louis is not responsible for the accuracy of the information shown on this survey.

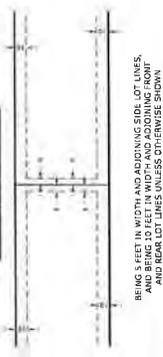
LEGEND

- DENOTES NON-MONUMENT FOUND AS LASED
- DENOTES NON-MONUMENT SET MARKED R.S.L.A. 41578
- DENOTES EXISTING SPOT ELEVATION
- DENOTES EXISTING CONTIGUOUS
- DENOTES PROPOSED CONTIGUOUS
- DENOTES BUILDING SETBACK LINE
- DENOTES WETLAND AS DELINEATED BY KOSHAUR ENVIRONMENTAL SERVICES, INC.
- DENOTES EXISTING SANITARY SEWER
- DENOTES EXISTING WATER MAIN
- DENOTES EXISTING WATER MAIN
- DENOTES UNDERGROUND ELECTRIC LINE
- DENOTES EXISTING BRUMBOUS SURFACE
- DENOTES ADJACENT PARCEL OWNER INFORMATION (PER RAMSEY COUNTY TAX INFORMATION)

DEVELOPMENT DATA

- PROPOSED NUMBER OF LOTS: 21
- TOTAL PROPERTY AREA: 8.15 ACRES
- WETLAND AREA: 15,100 S.F. (0.35 ACRES)
- AVERAGE LOT SIZE: 0.46 ACRES
- AVERAGE UNPAID LOT AREA: 17,700 S.F. (0.39 ACRES)

EASEMENT DETAIL



E.G. RUD & SONS, INC.
Professional Land Surveyors
6776 Lake Drive NE, Suite 110
Lino Lakes, MN 55014
Tel: (651) 361-8200 Fax: (651) 361-9701
www.egrud.com

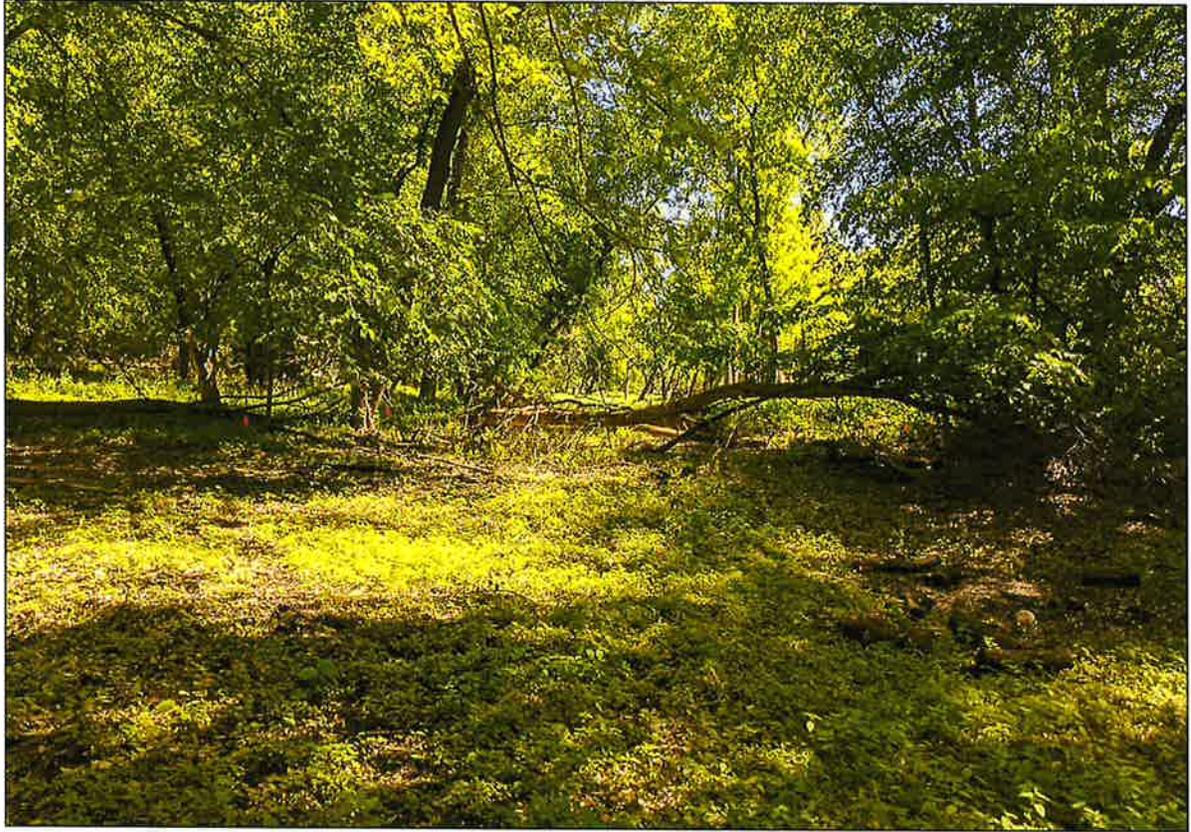
LEGAL DESCRIPTIONS

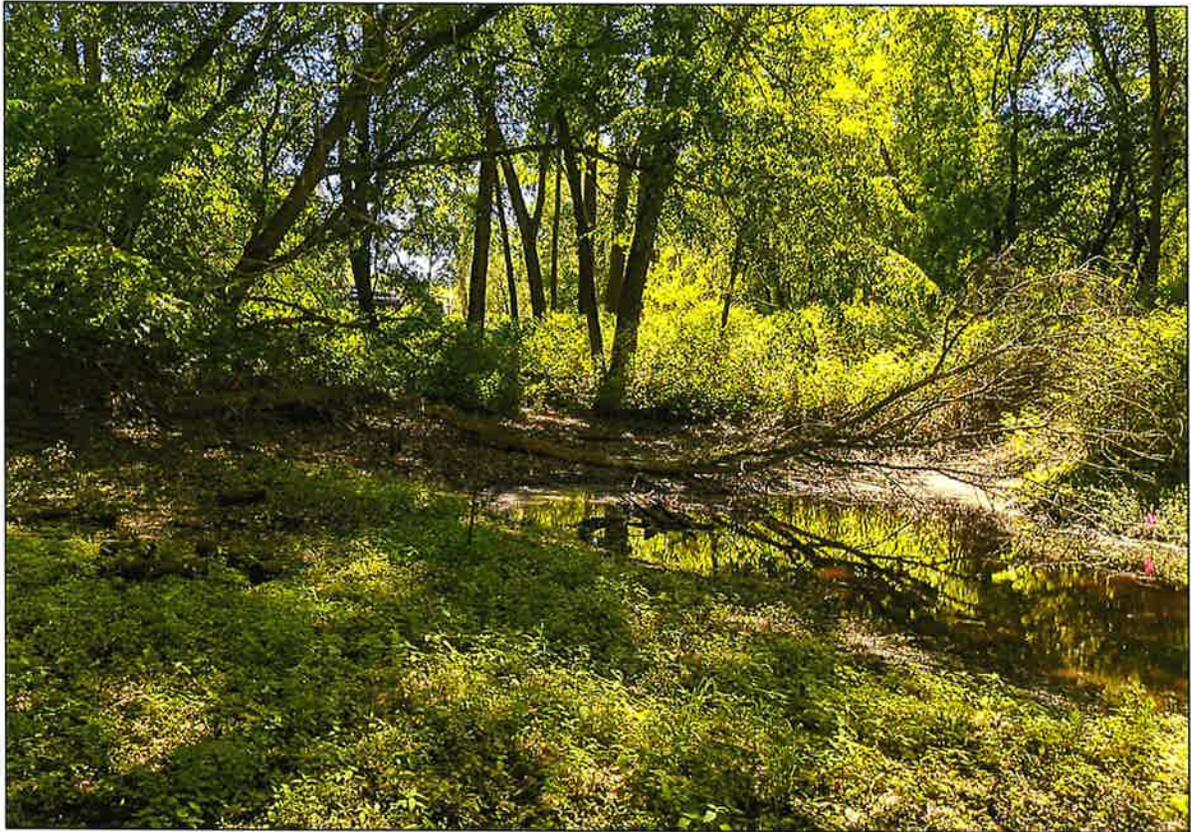
PID: 29-30-22-23-0004 PID is subject to change following Minor Subdivision.
Block 3, Lot 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 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EXHIBIT C**Existing Condition Photographs**

Photographs taken by City Staff on 5/26/21 showing the existing condition of a portion of the wetland system in-question and photographs submitted by a resident abutting the proposed/alternative development site during the 11/24/20 public hearing showing seasonal flooding follow.









Bluebird Grove, Vadnais Heights

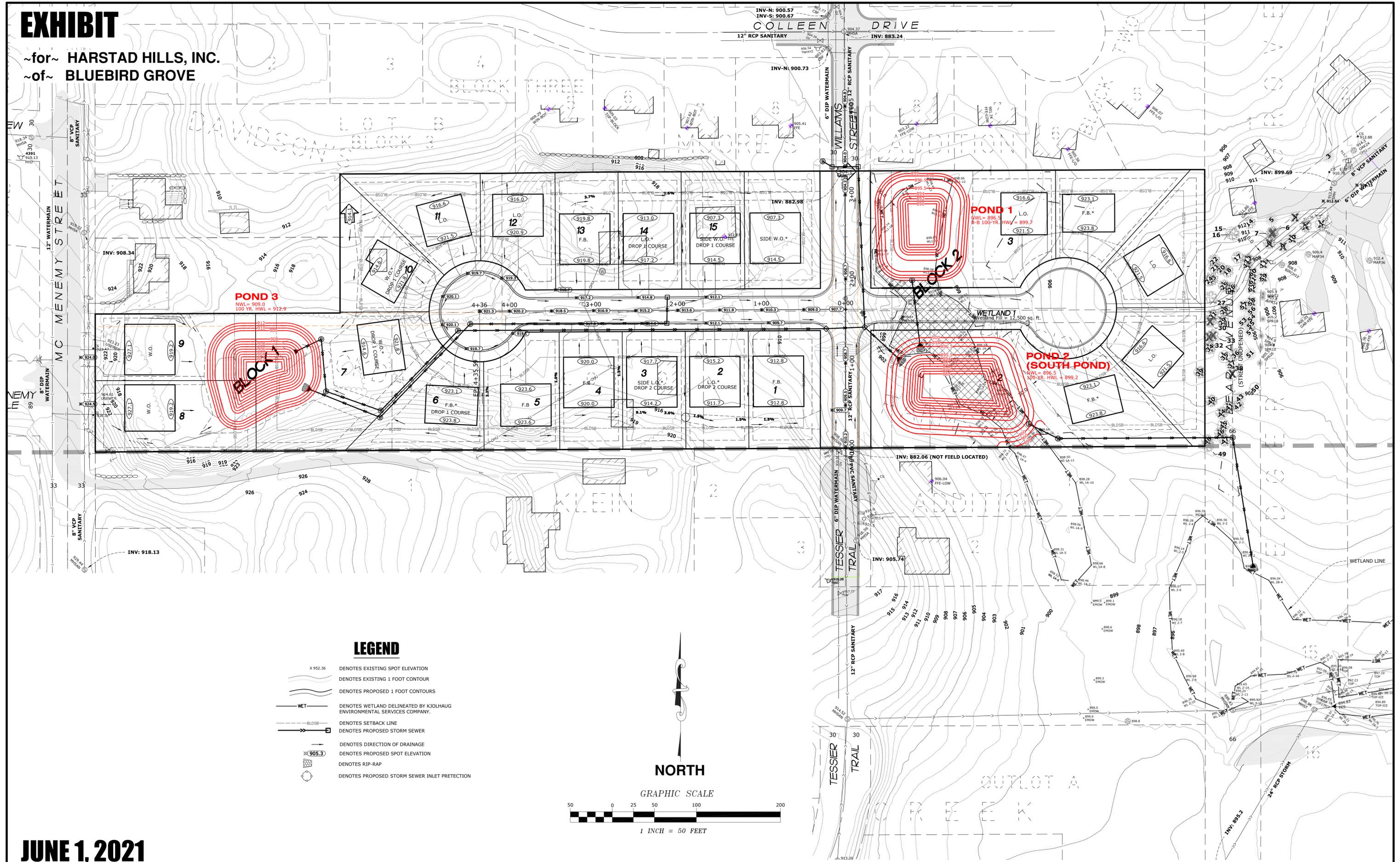
Wetland Permit Application

APPENDIX E

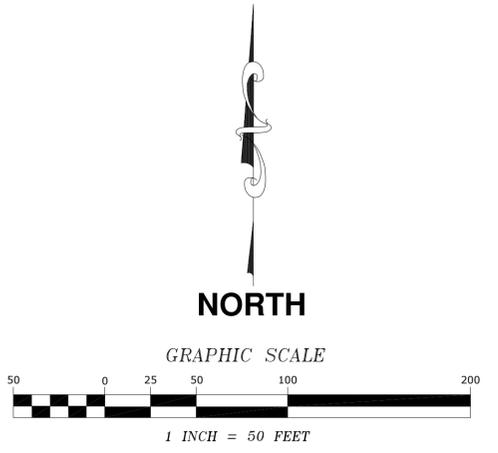
Bluebird Grove Grading Plan

EXHIBIT

~for~ HARSTAD HILLS, INC.
~of~ BLUEBIRD GROVE



- LEGEND**
- x 952.36 DENOTES EXISTING SPOT ELEVATION
 - DENOTES EXISTING 1 FOOT CONTOUR
 - DENOTES PROPOSED 1 FOOT CONTOURS
 - WET DENOTES WETLAND DELINEATED BY KJOLHAUG ENVIRONMENTAL SERVICES COMPANY.
 - BLD SB DENOTES SETBACK LINE
 - DENOTES PROPOSED STORM SEWER
 - DENOTES DIRECTION OF DRAINAGE
 - x 905.3 DENOTES PROPOSED SPOT ELEVATION
 - DENOTES RIP-RAP
 - DENOTES PROPOSED STORM SEWER INLET PRETECTION



JUNE 1, 2021

Bluebird Grove, Vadnais Heights

Wetland Permit Application

APPENDIX F

MnRAM Analysis Results

Management Classification Report for WL1 Mcmenemy

McMenemy St Parcels

ID: 58

RAMSEY County
Mississippi (Metro) Watershed, #20
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 2**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Low	Vegetative Diversity/Integrity	Moderate
Moderate	Habitat Structure (wildlife)	Moderate
Not Applicable	Amphibian Habitat	Low
Not Applicable	Fish Habitat	Moderate
Not Applicable	Shoreline Protection	Low
Low	Aesthetic/Cultural/Rec/Ed and Habitat	Moderate / Low
Exceptional	Stormwater/Urban Sensitivity and Vegetative Diversity	- / -
Moderate	Wetland Water Quality and Vegetative Diversity	- / -
Moderate	Characteristic Hydrology and Vegetative Diversity	- / -
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
Moderate	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 2** was **Maintenance of Characteristic Wildlife Habitat Structure**

Details of the formula for this action are shown below:

Maintenance of Characteristic Wildlife Habitat Str $(Q3e*2+Q39+Q40+Q41+(Q23+Q24+Q25)/3+Q13+Q20)/8$

Question	Value	Description
13	0.1	Outlet: hydrologic regime
20	0.1	Stormwater runoff
23	1	Buffer width
24	1	Adjacent area Management
25	0.5	Adjacent area diversity
39	0.1	Detritus
3e	0.1	<No Description Found>
40	0.5	Wetland interspersions/landscape

* The classification value settings for these functions are not adjustable

Management Classification Report for WL1 Mcmenemy

ID: 58

McMenemy St Parcels

RAMSEY County
Mississippi (Metro) Watershed, #20
Corps Bank Service Area 7

41 0.5 Wildlife barriers

This report was printed on: Monday, September 14, 2020

* The classification value settings for these functions are not adjustable

Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
WL1 Mcmenemy	Depressional/Tributary (outlet but no perennial inlet or drainage entering from upstream subwatershed)	0.43	0.36	0.41	0.64	0.00
		Moderate	Moderate	Moderate	Moderate	Not Applicable

Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
WL1 Mcmenemy	0.38	0.00	0.00	0.15	0.00	Recharge	0.00	0.10	0.64
	Moderate	Not Applicable	Not Applicable	Low	Not Applicable		Not Applicable	Exceptional	Moderate

Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
WL1 Mcmenemy	62-030-22-29-001	PFO1Ad	Type 1	Seasonally Flooded Basin	100	0.1	0.10	0.10	0.10
							Low	Low	Low
					100		0.10	0.10	0.10

Denotes incomplete calculation data.

MnRAM: Site Response Record

For Wetland: WL1 Mcmenemy

Location: 62-030-22-29-001

McMenemy St Parcels**Plant Community: Seasonally Flooded Ba**Cowardin Classification: PFO1Ad
Circular 39: Type 1

- 4 Listed, rare, special species?
- 5 Rare community or habitat?
- 6 Pre-European-settlement condition?

Hydrogeomorphology / topography:

7 Depressional/Tributary

8-1 Maximum water depth 36 inche

8-2 % inundated 20%

9 Immediate drainage--local WS 40 acres

10 Esimated size/existing site: (see #66)

11-Upland Soil

11-Wetland Soil

12 Outlet for flood control 13 Outlet for hydro regime 14 Dominant upland land use 15 Wetland soil condition 16 Vegetation (% cover) 17 Emerg. veg flood resistance 18 Sediment delivery 19 Upland soils (soil group) 20 Stormwater runoff 21 Subwatershed wetland density 22 Channels/sheet flow 23 Adjacent buffer width **Adjacent area management**24-A Full 24-B Manicured 24-C Bare **Adjacent area diversity/structure**25-A Native 25-B Mixed 25-C Sparse **Adjacent area slope**26-A Gentle 26-B Moderate 26-C Steep 27 Downstream sens./WQ protect. 28 Nutrient loading 29 Shoreline wetland? **Shoreline Wetland**30 Rooted veg., % cover 31 Wetland in-water width 32 Emerg. veg. erosion resistance 33 Erosion potential of site 34 Upslope veg./bank protection 35 Rare wildlife? 36 Scarce/Rare/S1/S2 community 37 Vegetative cover 38 Veg. community interspersion 39 Wetland detritus 40 Interspersion on landscape 41 Wildlife barriers **Amphibian-breeding potential**42 Hydroperiod adequacy 43 Fish presence 44 Overwintering habitat 45 Wildlife species (list) 46 Fish habitat quality 47 Fish species (list) 48 Unique/rare opportunity 49 Wetland visibility 50 Proximity to population 51 Public ownership 52 Public access 53 Human influence on wetland 54 Human influence on viewshed 55 Spatial buffer 56 Recreational activity potential 57 Commercial crop--hydro impact **Groundwater-specific questions**

58 Wetland soils Recharge

59 Subwatershed land use Recharge

60 Wetland size/soil group Recharge

61 Wetland hydroperiod Recharge

62 Inlet/Outlet configuration Recharge

63 Upland topo relief Recharge

Additional information

64 Restoration potential No

65 LO affected by restoration

66 Existing size Restorable size Potential new wetland

67 Average width of pot. buffer 0 feet

68 Ease of potential restoration

69 Hydrologic alterations 0

70 Potential wetland type 0

71 Stormwater sensitivity B

72 Additional treatment needs C

Watershed Mississippi (Metro)

WS# 20 Service Area: 7

For functional ratings, please run the Summary tab report.

This report printed on: 9/14/2020

Replacement:

- Wetland Banking Account information received Per MN Rules 8420.0522: Preiner Bank in watershed 20 (#1722)
- Project needs to provide sufficient hydrology downstream of project area to wetland A, offsite portion of Wetland A and Wetland B per MN Rules Part 8420.0520 Subp. 6.
- Replacement Plan decision will be conditioned on meeting all Watershed and City requirements per MN Rules Part 8420.0520 and 8420.0522.
- Preliminary confirmation of sufficient hydrology to downstream portion of wetland 1 (also referred to as WLA) was received 7/30/21.
- conditions include but are not limited to:
 - Stormwater report
 - hydrology modeling
 - inverts of all pipes and overflows
 - engineering of system
 - approval from City that all standards have been met and development plan is approved per MN Rule 8420.0515 Subp. 10.

Additional note regarding on site Public Drainage system (which will require separate additional approval from VLAWMO prior to construction):

- The subject property is traversed by County Ditch (CD) 14, a public drainage system for which authority and responsibility was transferred from Ramsey County to VLAWMO in 1986. The plans provided by the applicant indicate substantial modification of CD 14, including placement of stormwater infrastructure over the existing ditch and realigning the ditch's flow offsite. Approval of these modifications by VLAWMO will require demonstration by the applicant that the modifications will not impede the function and utility of the drainage system for property upstream and downstream of the subject property that utilize CD 14 as an outlet, and that the modifications will not inhibit future maintenance of the system. Submittals required for review of the modifications include, but are not limited to:
 - A detailed construction plan for the proposed modifications;
 - Stormwater calculations of the modified system for the 2-, 10-, and 100-year rainfall events under existing and proposed conditions;
 - Low opening elevations of upstream structures which may be impacted by the function of the CD 14 drainage system;
 - A narrative summarizing the stormwater calculations and how they demonstrate no loss of drainage system function;
 - A cash escrow to reimburse VLAWMO for its professional costs incurred for the preparation of the development agreement and review of the proposed modification; and
 - Financial security in the form of a letter of credit to secure the work to be done in the CD 14 drainage system.
- The applicant will need to execute a development agreement with VLAWMO to memorialize the approval and conditions. We encourage the applicant to complete a pre-application meeting with VLAWMO staff to discuss submittal requirements.
- The proposed modifications to CD 14 appear to be located on existing and/or proposed City of Vadnais Heights easements/property interests. The City of Vadnais Heights and VLAWMO will need to come to agreement on long term inspection and maintenance responsibilities on the modified portions of the public drainage system, prior to approval of the modifications.

Attachment(s) (specify): Preliminary confirmation of sufficient hydrology to Wetland 1 (WLA)

DNR Protected Waters and Shoreland Protection Zone

Will the project/activity affect DNR public waters, DNR public waters wetlands or wetlands within the shoreland protection zone? Yes No If yes, DNR representative is a member of the TEP.

Signatures

LGU TEP Member: Brian Corcoran Agree with Findings & Recommendations: Yes No

Signature: _____ Date: _____

SWCD TEP Member: Michael Schumann Agree with Findings & Recommendations: Yes No

Signature: _____ Date: _____

BWSR TEP Member: Ben Meyer Agree with Findings & Recommendations: Yes No

Signature: _____ Date: _____

DNR TEP Member: _____ Agree with Findings & Recommendations: Yes No

Signature: _____ Date: _____



Agenda Item VII. A.

Wilkinson Lake Project Introduction and Small Priority Watershed Designation for VLAWMO

To: North Oaks City Council and NOHOA
For: City Council and NOHOA August Packets
Date: July 30, 2021

Section 319 Grant Funds:

Section 319 funding is provided by the Environmental Protection Agency (EPA) and administered in Minnesota by the Minnesota Pollution Control Agency (MPCA). Starting in 2020, funds are awarded to Small Priority Watersheds resulting from a competitive application process with the MPCA.

Prior to the Small Priority Watershed designation, funding for Section 319 program grants was competitively awarded on a project basis. This prior project-based approach provided a grant to VLAWMO for the Lambert Creek meander that was completed this summer in Vadnais Heights.

VLAWMO was selected as a Small Priority Watershed in Group B with the MPCA in August 2019. The competitive process that led to the designation consisted of a 3-part process: an introductory letter of interest and detailed history of projects; a panel phone interview with VLAWMO and the MPCA; and an in-person panel interview with VLAWMO, MPCA, and partners. Partners representing North Oaks for the in-person interview included Bob Larson, the North Oaks City-appointed Technical Commission representative, and Diane Gorder, the NOHOA liaison at that time. Dan Jones (City of WBL) represented the VLAWMO Board. SPRWS and other partners also provided representation for the interview.

This new iteration of Section 319 has a 16-year vision for projects with Small Priority Watersheds in 4 groups, each of which is prioritized for funding in 4 separate years. Group B, which includes VLAWMO, is slated to receive funding during 2021. VLAWMO has prioritized Wilkinson Lake for projects of regional significance and also plans to include Birch and Tamarack Lakes, connected waterbodies in the system. Possible projects are listed in a Nine Key Element document (NKE), required prior to receiving funding, that was approved by the VLAWMO Board, MPCA, and EPA in early 2021. The NKE will be used for project selection over the course of the grant program.

Grant funding is provided for 60% of the project; 40% is provided by local match. The first-round projects for each Small Priority Watershed in 2021 are \$590,000. Local match contributions have been requested by VLAWMO from member communities. NOC is providing 50% of the resulting VLAWMO-required match in partnership with VLAWMO. VLAWMO and NOC are also providing funding for maintenance of the project (50/50 share).

Initial Phase Discussion and Project Identification Preparation:

- The City was presented a summary of early project development at the April Council meeting; a more detailed presentation and discussion was conducted at the April Natural Resources Commission (NRC) meeting by VLAWMO staff with VLAWMO Board representation

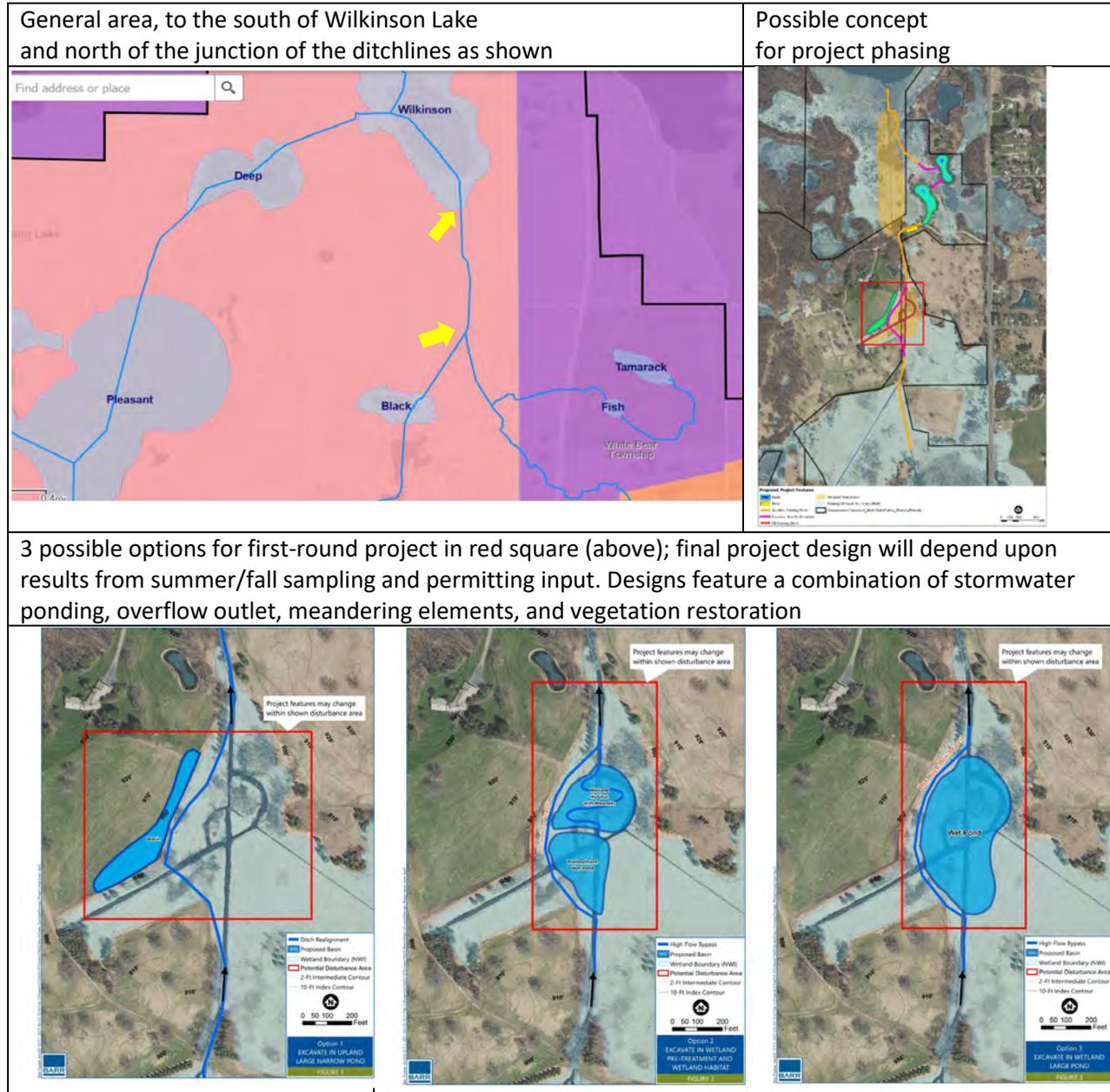
- City representative and VLAWMO Board representative for North Oaks, Tom Watson, has been involved in ongoing meetings and document preparation to build a framework for continued project development
- North Oaks Company, Inc., has been a cooperating partner in project development. The area identified as optimal for the first-round project is owned by NOC/NOF. NOC is working with VLAWMO to complete a Memorandum of Understanding (MOU), 10-year maintenance agreement, and providing an easement for the project
- NOHOA was informed about the project through phone and email conversations and through monthly updates at the VLAWMO Technical Commission meetings. The land area for the project is not an area where NOHOA has responsibility for maintenance at this time
- The Minnesota Land Trust (MLT) conservation easements may be enhanced as part of the Wilkinson projects. As such, MLT has been consulted and provided a letter of support for the full scope of possible projects
- An MPCA Workplan for the first-round project has been in development with VLAWMO and the MPCA this summer. This will be presented to the VLAWMO Board for authorization at the August regular Board meeting and continue with MPCA/EPA for authorization this fall
- St. Paul Regional Water Services (SPRWS) worked with VLAWMO to submit a grant to support project development with the Minnesota Department of Health (MDH). The grant was awarded/signed in July. The grant will support survey, geotechnical investigation, and continued project design advancement. The grant provides up to \$10,000 with a 50% match that is being provided by VLAWMO's Wilkinson subwatershed budget for a total of \$20,000
- Barr Engineering conducted an initial feasibility study that was funded by NOC. VLAWMO has been an active partner throughout the process. Three possible concept designs were developed. These designs will be advanced using the summer/fall survey and geotechnical investigation
- A pre-permitting meeting was held in April with regulatory agencies to help identify key elements of possible concept designs and the best result for permitting. A memo was prepared by Barr Engineering for this meeting. If the City or NOHOA would like a copy of the memo, VLAWMO staff are happy to provide that

Next Steps

Project design advancement this summer/fall will provide a more detailed footprint of the project and determine permitting needs. VLAWMO would like to continue discussions with the City and NOHOA to ensure that full communication is provided. If project presentations are desired by the City and NOHOA to members, VLAWMO would be happy to provide such presentations and regular updates. Concept designs have been included in the PPT presentation to the Council, NRC, and VLAWMO TEC. They are

also included below as a reference for possible project design, with the caveat that ongoing work will help to refine and develop details.

Possible project design/concept only pending survey and geotechnical investigation



MEMORANDUM OF UNDERSTANDING
Wilkinson Lake Water Quality Improvements

This Memorandum of Understanding (“**Agreement**”) is made as of this 16th day of July, 2021, by and between the Vadnais Lake Area Water Management Organization, a Minnesota joint powers watershed management organization (“**VLAWMO**”), and North Oaks Farms (“**NOF**”), Inc., doing business as North Oaks Company (NOC), LLC, a Minnesota limited liability company (“**NOC**”). VLAWMO and NOC/NOF may hereinafter be referred to individually as a “party” or collectively as the “parties.”

RECITALS

- A. The parties have jointly prepared a concept plan for a series of projects, referred to as a stormwater spine, with an overall goal of improving water quality in the nutrient-impaired Wilkinson Lake (collectively, the “**Project**”). A concept plan for the Project is attached hereto in the form of a pre-permitting memo by Barr Engineering as Exhibit A.
- B. The Project is conceptually designed to be implemented on and around Wilkinson Lake, on property that is located in the City of North Oaks and owned by NOC/NOF, including Ramsey County PIDs 053022410003 and 043022320002 (the “**Property**”).
- C. VLAWMO was recently selected by the Minnesota Pollution Control Agency (“**MPCA**”) as a prioritized small watershed for the Section 319 Small Watersheds Focus grant funding program (the “**Section 319 Program**”), beginning in federal fiscal year 2021, and therefore anticipates being provided with grant funding to support the Project under the Section 319 Program.
- D. The Section 319 Program is a long-term program, and the Project may include one or more phases depending on grant funding and other factors that are yet to be determined. The intent of this Agreement is to address the parties’ respective goals, duties, and expectations for the Project’s first phase (hereinafter, “**Phase I**”) and beyond.
- E. The parties understand the considerable long-term benefit that the Project will produce for the community and its residents, and desire to work collaboratively throughout design and implementation so that Phase I, along with subsequent phases of the Project, can be delivered in an efficient, cost-effective manner that minimizes physical disturbance to the project area and maximizes value for the local community.
- F. To that end, the parties desire to enter into this Agreement to formally outline a framework for design and implementation of Phase I, affirm their commitments as to responsibility for tasks to be undertaken for Phase I and beyond, establish a roadmap for performing these tasks and fulfilling these responsibilities, and facilitate communication and cooperation to ensure successful improvement and long term sustainability of the water quality in Wilkinson Lake.

AGREEMENT

In consideration of the mutual promises and agreements hereinafter set forth, and intending to be legally bound, the parties do hereby agree as follows:

1. Incorporation of Recitals. The above recitals are hereby incorporated into this Agreement as if fully set forth herein.
2. Phase I Scope; Estimated Costs. Phase I of the Project is more fully described in the attached draft MPCA workplan which is included as Exhibit B. The estimated total cost of Phase I is \$590,760.00, which includes all components (i.e. design, construction and administrative costs and based on the concept plan previously prepared by the parties).
3. Phase I Grant Funding; Cost-Share. Of the total Phase I cost, it is anticipated that 60% (currently estimated at \$354,456.00) will be paid for with Section 319 Program grant funding via a separate agreement that will be entered into between MPCA and VLAWMO. The additional 40% of Phase I costs (currently estimated at \$236,304.00) will be shared equally by VLAWMO and NOC/NOF. Accordingly, both parties agree to pay one-half of the Phase I costs that are not paid for with Section 319 Program grant dollars and in an amount not which shall not exceed \$118,152.00 per party. The cost allocations provided for herein, including the grant amount and the parties' 50-50 cost-share arrangement for the remaining local match, apply only to Phase I. VLAWMO or NOC/NOF may identify and secure funding from other parties interested and willing to contribute to the cash-match portion of the grant. Any such financial contribution will not affect the 50-50 cost-share arrangement between VLAWMO and NOC/NOF, just proportionately reduce the total contribution required from each party. Final cost-sharing obligations for Phase I will be determined in a subsequent agreement to be entered into by the parties at a later date, as outlined in more detail in Section 6 below. Cost allocations and requirements for subsequent phases of the Project, if any, will be determined on a case-by-case basis and separately negotiated in good faith by the parties at the time of said future phases.

The parties recognize that actual cost-share obligations for Phase I will be determined following (i) an awarded Section 319 Program grant and (ii) final design of Phase I, which shall include an updated engineer's estimate of Phase I costs. Both parties acknowledge that the anticipated cost-share obligations outlined above are based on preliminary plans, preliminary estimates, and anticipated levels of grant funding for Phase I. However, if following a grant award and the subsequent Phase I design and final estimates, the cost-sharing projections above change in a manner that would otherwise require additional monetary contributions from the parties, the parties agree to work together in good faith to determine an updated cost-sharing framework that will support Phase I feasibility.

4. VLAWMO Responsibilities. VLAWMO agrees to perform the following as it relates to Phase I of the Project:
 - a. Participate in the cost-sharing framework outlined above;
 - b. At least 30 days prior to the Section 319 Program grant application deadline, prepare and submit to NOC/NOF all documents necessary as part of the grant application, including, but not necessarily limited to, the nine key element (NKE) document, a formal grant proposal, a workplan and budget, and any other required documents;

- c. Upon NOC/NOF review and input regarding the grant application materials pursuant to Section 5(b) of this Agreement, finalize and submit a completed Section 319 Program grant application for Phase I, which shall include all information required by the MPCA;
 - d. If a funding proposal is accepted, complete a workplan, enter into a contract, and prepare any other documents required by MPCA to ensure that grant funding is properly secured;
 - e. Serve as the fiscal agent for the grant application;
 - f. Enter into and administer a contract with a design engineering firm for the Phase I design, bidding, and construction inspection services. VLAWMO will consult/review with NOC/NOF prior to final selection of a design engineering firm and collaborate with NOC/NOF in finalizing plan designs;
 - g. Responsible for submitting to the City Engineer design plans and specifications related to land disturbance and grading for the City's review and consideration;
 - h. In partnership with NOC/NOF, consult with the City of North Oaks and inform them about project status, progress, and next steps;
 - i. Continue to participate in all project-related meetings and make its staff available to serve on the project team;
 - j. Reasonably seek and provide financial resources for the maintenance of Phase I of the Project in partnership with NOC/NOF, for the timeframe required by any grant documents unless and until NOC ceases to exist as a company or the land is sold to a third party. Prior to or at the time of NOC dissolution or land sale, NOC/NOF will work to secure access for continued maintenance by VLAWMO. VLAWMO will continue with the maintenance responsibility for the remainder of the 10 years. Maintenance responsibilities are project-dependent and will be determined in detail at a later date. As part of the subsequent agreement contemplated pursuant to Section 6 of this Agreement, VLAWMO and NOC/NOF agree to work together to build a separate and detailed joint maintenance agreement for Phase I as additional design is made available. Notwithstanding the foregoing, the parties anticipate that maintenance may include, without limitation, annual evaluations, ongoing vegetation maintenance and enhancement, and planning ahead for possible, albeit unlikely, larger-scale maintenance tasks (e.g., pond dredging or infrastructure replacement in the event of failure); and
 - k. Adhere to the provisions contained in Section 6 of this Agreement regarding negotiation of a subsequent cooperative agreement with NOC/NOF regarding Phase I.
5. NOC/NOF Responsibilities. NOC/NOF agrees to perform the following as it relates to Phase I of the Project:
- a. Participate in the cost-sharing framework outlined above;

- b. At least two weeks prior to the grant application deadline, review and provide any desired written input to VLAMO regarding the Section 319 Program grant application for Phase I, assuming timely receipt of draft materials from VLAWMO in accordance with Section 4(b) above;

Provide VLAWMO with either an easement or non-exclusive license to access those portions of the Property reasonably necessary for the design, construction and implementation of Phase I of the Project;

Provide VLAWMO, or another entity identified by VLAWMO, with a perpetual easement so that those portions of the Property reasonably necessary for long-term monitoring and maintenance of Phase I may be accessed for the lifetime of the improvements. Said easement shall include the right to access all portions of the Property and perform all functions that are otherwise deemed necessary by mutual agreement between VLAWMO and NOC/NOF, to ensure adequate maintenance; where conservation easement areas are incorporated into project design, MLT will also be consulted for approval and written support.

The term for right of entry shall be for the required maintenance period associated with the 319 Grant, Phase 1. Any party working on NOC/NOF property will provide a certificate of insurance NOC/NOF prior to work proceeding on the property.

- c. Provide to VLAWMO any and all previous reports, surveys, data, and/or models for the project area, if and when requested by VLAWMO;
- d. Continue to facilitate and secure easement access with the Minnesota Land Trust (MLT) to ensure feasibility of Phase I;
- e. In partnership with VLAWMO, when deemed appropriate, consult with the City of North Oaks and inform them about project status, progress, and next steps;
- f. In partnership with VLAWMO, obtain permits from the City of North Oaks, consistent with development project requirements as previously established;
- g. Ensure compliance with the preexisting PDA and applicable City ordinances required by the City of North Oaks;
- h. Continue to participate in all Project meetings and make its staff available to serve on the project team;
- i. Collaborate with VLAWMO regarding the shared maintenance responsibilities of Phase I for the timeframe required by any grant documents unless and until this responsibility is formally transferred to a separate entity, i.e. a homeowners' association or other future property owner. Maintenance responsibilities are project-dependent and will be determined in detail at a later date. As part of the subsequent agreement contemplated pursuant to Section 6 of this Agreement, VLAWMO and NOC/NOF agree to work together to build a separate and detailed joint maintenance agreement for Phase I as

additional design is made available. Notwithstanding the foregoing, the parties anticipate that maintenance may include, without limitation, annual evaluations, ongoing vegetation maintenance and enhancement, erosion control and repair, and planning ahead for possible, albeit unlikely, larger-scale maintenance tasks (e.g., pond dredging or infrastructure replacement in the event of failure); and

- j. Adhere to the provisions contained in Section 6 of this Agreement regarding negotiation of a subsequent cooperative agreement with NOC/NOF regarding Phase I.
6. Subsequent Agreement. The parties agree that following a grant award and additional design work of Phase I by VLAWMO, a separate cooperative agreement is necessary that will address construction and contract administration of Phase I, ongoing construction inspection, payment of each parties' final cost-share obligation, and any long-term rights and maintenance responsibilities between the parties. The parties will negotiate said agreement in good faith and will seek to finalize such an agreement prior to any final contract award for Phase I construction and pursuant to any and all requirements of the Section 319 Program or otherwise.
 7. Right of Entry. NOC/NOF, as the property owner, grants to VLAWMO, its engineers, and its agents an irrevocable license to enter the Property at all reasonable times to conduct such inspections as VLAWMO determines are needed to ensure that all Phase I components contemplated or otherwise required under this Agreement are duly satisfied.
 8. Indemnification. The parties are each responsible for their own acts under this Agreement and neither party agrees to accept liability on behalf of the other party. NOC/NOF agrees to indemnify, defend, and hold VLAWMO and its officials, employees, and agents harmless for all costs, damages, or expenses which VLAWMO may pay or incur, including attorneys' fees, in consequence of any claims arising out of or related the acts or omissions of NOC/NOF in performing its obligations under this Agreement. This duty to indemnify does not extend to any claims arising from VLAWMO's own negligence.

Likewise, VLAWMO agrees to indemnify, defend, and hold NOC/NOF and its officials, employees, and agents harmless for all costs, damages, or expenses which NOC/NOF may pay or incur, including attorneys' fees, in consequence of any claims arising out of or related the acts or omissions of VLAWMO in performing its obligations under this Agreement. This duty to indemnify does not extend to any claims arising from NOC/NOF's own negligence. Nothing in this Agreement shall be construed as a waiver of, or limitation on, any immunity from or limitation on liability available to any party under law.
 9. Term and Termination. This Agreement shall be in effect as of the date first written above and shall terminate upon execution of a subsequent agreement as provided in the above Section 6, unless the parties otherwise agree in writing to mutually terminate this Agreement, in which case the Agreement shall immediately terminate.

10. Future Project Phases. The parties desire for this Agreement and the framework established for Phase I contained herein to serve as a roadmap to be followed for future Project phases and collaboration with respect to said phases. To that end, it is expressly acknowledged and understood that the parties will seek to cooperate in good faith beyond the termination of this Agreement, and will together negotiate future agreements, as may be necessary, so that future phases of the Project can be carried out in a manner consistent with the anticipated implementation of Phase I outlined herein.

11. Miscellaneous.

- a. Liaison; Notice. The parties designate the following authorized representatives to serve as the liaison to the other party for purposes of coordination of all work involved in or related to the Project as provided in this Agreement. Any written communications required under this Agreement will be addressed to the other party as follows, except that any party may change its address for notice by so notifying the other party in writing:

To VLAWMO: Vadnais Lake Area Water Management Organization
Attention: _____

To NOC/NOF: North Oaks Company, LLC
Attention: _____

- b. Complete Agreement. This Agreement contains the complete agreement between the parties and supersedes any previous oral agreements, representations and negotiations between the parties regarding the subject matters of this Agreement. This Agreement may be executed in more than one counterpart, each of which shall be deemed to be an original but all of which taken together shall be deemed a single instrument. No party shall assign an interest in this Agreement, nor shall transfer any interest in the same, without the other party's written consent. No modifications or amendments may be made to this Agreement unless in writing and signed by both parties hereto.
- c. Compliance. The parties shall abide by all applicable laws, statutes, ordinances, rules, and regulations in performing this Agreement.
- d. Headings. The headings contained in this Agreement have been inserted for convenience of reference only and shall in no way define, limit, or affect the scope and intent of this Agreement.
- e. Waiver. Any waiver by any of the parties of a breach of any provision of this Agreement will not affect, in any respect, the validity of the remainder of this Agreement.

- f. No Third-Party Rights. This Agreement is solely for the benefit of the signatories hereto. This Agreement shall not create or establish any rights in, or be construed as being for the benefit of, any third party.
- g. Applicable Law. The execution, interpretation, and performance of this Agreement will, in all respects, be controlled and governed by the laws of Minnesota. The provisions of this Agreement are severable. If any portion of this Agreement is, for any reason, held by a court of competent jurisdiction to be contrary to law, such decision will not affect the remaining provisions of the Agreement.
- h. Counterparts. This Agreement may be executed in multiple counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same document.
- i. Authority to Execute. The person or persons executing this Agreement on behalf of the parties represent that he, she, or they are duly authorized to execute this Agreement on behalf of their respective entities and represent and warrant that this Agreement is a legal, valid, and binding obligation enforceable according to its terms.

[Signature page follows]

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized officers on behalf of the parties as of the day and date first above written.

VLAWMO:

By: _____
Its Chair

And by: _____
Its Secretary

Date: _____

NOC/NOF:

By: _____

Its: _____

Date: _____

EXHIBIT A
Concept Plan

[Attached as pdf document]

EXHIBIT B
Description of Phase I
[Attached as pdf document]

Section 6, Joint Maintenance Agreement for Phase I of the 319 small priority watershed grant program, Wilkinson Lake

Part a: As defined in the MOU between VLAWMO and NOC/NOF, maintenance will include minor maintenance tasks including annual evaluations, ongoing vegetation maintenance and enhancement, erosion control and repair, and possible, albeit unlikely, larger-scale maintenance tasks (e.g., pond dredging, conveyance blowout, or infrastructure replacement in the event of failure). The Phase I project is expected to consist of a combination of stormwater pond, overflow bypass channel, possibly meander areas, and vegetation restoration south of Wilkinson Lake in City of North Oaks. Anticipated costs and partnership are defined in this additional agreement.

Whereas VLAWMO will enter into the contract with MPCA and that process will include required project maintenance:

The Minnesota Pollution Control Agency's (MPCA) Stormwater Manual has been used to anticipate expected maintenance costs. The MN Stormwater Manual states that the responsibility of maintenance is usually assigned to the landowner, and expected stormwater pond maintenance costs are estimated at 3%-5% of original construction costs annually.

VLAWMO has defined a 10-year project maintenance plan for cost-share BMPs, in anticipation of specific terms that will be defined in the workplan/grant contract with MPCA. The 10-year timeframe is used in this document to build commitment among parties and in preparation for the VLAWMO Board authorization of submission of the first round 319 grant application. Specific responsibilities are project dependent and will be determined prior to finalization of a contract with MPCA.

This joint maintenance agreement defines a 50/50 cost-share partnership in all project maintenance between VLAWMO and NOC/NOF. The cost allocations provided for herein, including the grant amount and the parties' 50-50 cost-share arrangement for the remaining local match, apply only to Phase I. VLAWMO or NOC/NOF will endeavor to identify and secure funding from other parties benefiting from this project. Any such financial contribution will not affect the 50-50 cost-share arrangement between VLAWMO and NOC/NOF, just proportionately reduce the total contribution required from each party.

Minor Maintenance cost share: VLAWMO will incorporate Phase I project maintenance into their annual maintenance contract with a qualified contractor that includes multiple watershed projects. The contractor will handle minor maintenance, conduct evaluation while doing maintenance activities, and recommend additional maintenance should be done to prevent larger problems. Minor maintenance will include: mowing and invasive species control where needed, adding native plants to supplement loss and maintain diversity. This cost is estimated to be \$2,000 annually, based on other watershed sites that are currently being maintained. Additional minor maintenance activities that may be done upon recommendation of the consultant may include (but are not limited to): repairing undercut areas, eroded sections, bare-soil areas, and possible gullies in banks where identified by the consultant. These minor maintenance activities would add to the standard annual contract. Both parties will be

informed prior to any minor maintenance activities. Minor maintenance activities will be done proactively to help prevent larger repair/maintenance needs. VLAWMO will pay minor maintenance costs for the project as they occur and bill NOC/NOF for 50% of total annual cost not to exceed \$22,500 or \$11,250 to each party per year [$\$450,000 \times 5\% / 2$]. Invoices will be paid by NOC/NOF within 60 days following receipt. This not to exceed minor maintenance cost share amount was calculated by taking construction costs for the project (approximately \$450,000). That number was calculated by the difference between the estimated construction cost and the total grant amount being engineering and permitting and administration \$547,000). Using a 5% estimate from the Stormwater Manual, \$22,500 should be considered the “worst case scenario” for a total invoice to NOC/NOF for annual minor maintenance. Again, \$22,500 is a not-to-exceed number for minor maintenance with the more likely anticipated minor maintenance annual amount to be between \$2,000 – \$5,000.

Larger-scale maintenance tasks: (e.g., pond dredging, conveyance blowouts, or infrastructure replacement in the event of failure) is not expected during the maintenance timeframe defined for the project. If an unlikely event occurs and large-scale maintenance is needed, parties will share the cost equally (50/50). NOC/NOF will be consulted prior to any repair to see if they have internal capacity to address the repair need. In an emergency, VLAWMO will respond as needed. As long as time allows, NOC/NOF will have 30 days to respond regarding internal capacity. If NOC/NOF does not have internal capacity to address, VLAWMO will lead arranging for a contractor to conduct repairs and invoice NOC/NOF for 50% of the cost. Invoices will be paid within 60 days following receipt.

North Oaks and Wilkinson Lake Improvements

1.0 Introduction

Barr Engineering Co. (Barr) has drafted this memo to provide a narrative for the conceptual design of several potential water quality improvement projects within the agricultural and conservation easements held by the Minnesota Land Trust (MLT) on North Oaks Company (NOC) property. The projects presented in this memo provide a range of possibilities for implementation through the Section 319 grant program. It should be noted that because the designs are in the conceptual stage, they are subject to change depending on future permitting, funding, stakeholder engagement, and final design considerations. Alternatives for Project 1 will be submitted for the spring 2021 Section 319 funding cycle, which will cover final design and construction.

2.0 Background

NOC hired Barr to create conceptual designs for stormwater management projects to be implemented on the company property, including its easements held through the MLT. The goal of the projects is to improve water quality in Wilkinson Lake (downstream of NOC property) by reducing loading of nutrients and sediment. Wilkinson Lake is listed by the Minnesota Pollution Control Agency (MPCA) as impaired for excess nutrients (phosphorus). The Vadnais Lakes Area Watershed Management Organization (VLAWMO) has completed a TMDL and several feasibility studies to identify ways to reduce phosphorus loading from the direct drainage area to Wilkinson Lake (Wilkinson subwatershed). Most recently, VLAWMO began working with the MPCA and Environmental Protection Agency (EPA) to secure Section 319 grant funding for projects that will help remove Wilkinson Lake from the MPCA's impaired waters list. In its planning process, VLAWMO identified NOC as a major partner in accomplishing this goal; its holdings are located at a critical point in the Wilkinson subwatershed where the majority of runoff from the subwatershed flows through an agricultural ditch system (see Photo 1) before entering Wilkinson Lake. Water quality monitoring (conducted by VLAWMO) shows that the runoff in these ditches has high total phosphorus (TP) concentrations and makes up a significant portion of the loading to Wilkinson Lake. However, the monitoring data also suggests that the high pollutant concentration in the ditch is driven by loading from areas east of Centerville Road in the Birch and Tamarack Lake subwatersheds.

Barr worked with NOC and VLAWMO to create conceptual designs that met several shared goals and would help remove Wilkinson from the impaired waters list. The focus of these efforts is on the agricultural ditch that runs through NOC property and within the MLT's agricultural and conservation easements. By treating poor water quality in the ditch before it enters Wilkinson Lake, we can maximize water quality improvement. Centralizing the treatment along the ditch also provides an opportunity to restore degraded areas in the easements and increase recreational use through added trails and interactive design features.



Photo 1: Existing agricultural ditches and surrounding wetland

The following sections summarize the proposed conceptual designs as of March 2021 and next steps in the process of design and securing 319 funding.

3.0 Proposed Conceptual Design

This section outlines the proposed concept design. Alternative configurations for the three project components are included in the sections below.

The focus area of this project is located in the upstream wetland in the agricultural easement. The project would be implemented between the future Red Forest Way and Gate Hill development. Currently, there are several agricultural ditches that intersect in this location and drain the surrounding wetlands. These ditches also convey flow from eastern subwatersheds (Tamarack and Birch Lakes) to Wilkinson Lake. Below are details for three alternative configurations for the upstream pond. These alternative configurations are also shown on Figures 1 through 3. It should be noted that the final design may not reflect these exact configurations but would be located within the red boxes outlined on the figures.

Project 1a (Figure 1): A pond would be excavated in upland area outside of the wetland boundary. The existing ditch would be realigned adjacent to the pond to allow flows above baseflow to spill into the pond and add a meandering aesthetic.

Project 1b (Figure 2): A smaller pre-treatment basin would be excavated in-line with the ditch to treat baseflow and small event flow. A high flow bypass would be constructed to the west of the basin to reduce the impact of high flows in the basin (scour, sediment resuspension, etc.). The pre-treatment basin would discharge into an excavated wetland basin with a meandering flow path to add improved wetland habitat and a meandering aesthetic.

Project 1c (Figure 3): A large pond would be excavated in-line with the ditch to treat baseflow and small event flow. The pond excavation would remove existing agricultural ditches to improve

aesthetics in the area. A high flow bypass would be constructed to the west of the basin to reduce the impact of high flows in the basin (scour, sediment resuspension, etc.).

For Options 2 and 3, the proposed basin would be constructed in the wetland. Several agencies will likely require permitting prior to construction of these options, including the United States Army Corps of Engineers (USACE) and the Board of Water and Soil Resources (BWSR) under the Wetland Conservation Act (WCA). Regulated activities in the wetland may include filling (grading above existing wetland bottom), excavation, and functional change. Wetland mitigation (replacement, banking/credits purchase) may be needed depending on the functional assessment of the existing wetland area and the extent of impact determined by the regulatory agencies.

Below in Table 1 is a summary of pros, cons, and unknowns for the proposed upstream pond configurations. The unknowns will be investigated and resolved prior to final design. The shape and placement of the basins shown on Figures 1

Table 1. Pros and cons for upstream pond alternatives

Project Component	Pros	Cons	Unknowns
Project 1a: Upland Pond	<ul style="list-style-type: none"> Minimal work within the wetland 	<ul style="list-style-type: none"> High excavation costs Smaller water quality treatment (off-line basin) Need to establish maintenance access. More frequent maintenance relative to Project 1c 	<ul style="list-style-type: none"> Flow regime in the ditch for hydraulic design
Project 1b: Pre-treatment Basin and Wetland with Meander	<ul style="list-style-type: none"> Moderate water quality treatment Habitat creation Lower excavation costs 	<ul style="list-style-type: none"> Work within wetland Need to establish maintenance access More frequent maintenance relative to Project 1c 	<ul style="list-style-type: none"> Potentially complex wetland permitting Wetland soil types (i.e., deep peat layer may cause constructability issues) Existing wetland function (may impact complexity of permitting) Flow regime in the agricultural ditch (impacts hydraulic design)
Project 1c: In-line Pond	<ul style="list-style-type: none"> Significant water quality treatment Habitat creation Lower excavation costs 	<ul style="list-style-type: none"> Work within wetland Need to establish maintenance access 	<ul style="list-style-type: none"> Potentially complex wetland permitting Wetland soil types (i.e., deep peat layer may cause constructability issues) Existing wetland function (may impact complexity of permitting) Flow regime in the agricultural ditch (impacts hydraulic design)

4.0 Next Steps

VLAWMO is in the process of securing Section 319 grant funding for the Wilkinson Lake subwatershed. The district was selected as a priority watershed to receive grant funding over the next 16 years. The first grant cycle will open late spring 2021, and subsequent cycles will open every four years following (2025, 2029, and 2033). Each grant cycle will have approximately \$540,000 in total grant funding available (for engineering, plans, specifications, and construction), with a required 40% local match.

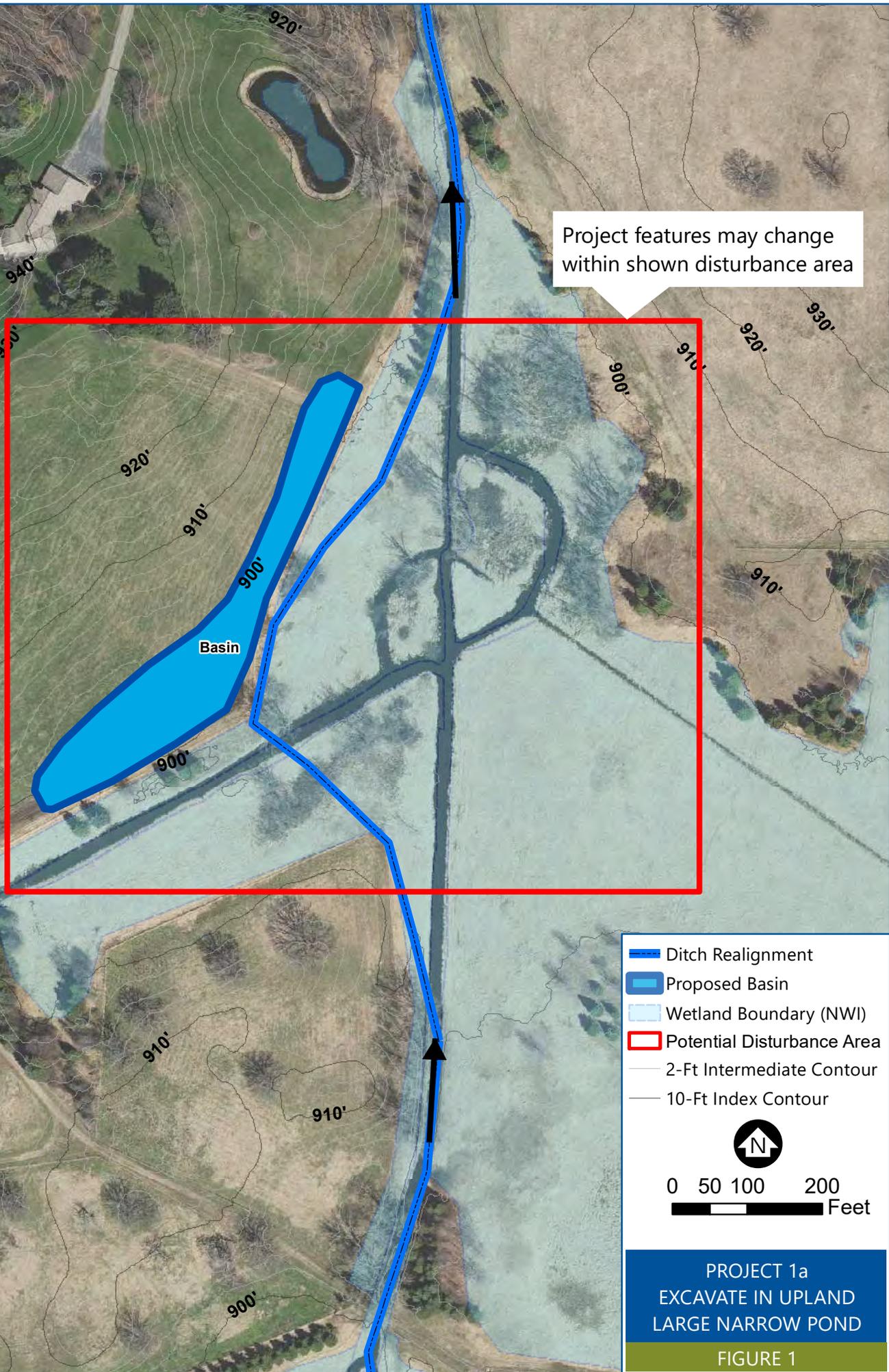
In discussions with VLAWMO staff, the projects located on NOC property will be eligible for funding in any of the grant cycles. If funding is secured in 2021, design and construction of this project will most likely take place in 2022, based on the timeline of the distribution of funds. The activities outlined under each phase below are subject to change.

Prior to applying for funding in the spring 2021, the following activities will be accomplished:

- High-level pollutant-removal estimates
- Conceptual-level cost estimating
- Preparation of funding application
- Coordination with all stakeholders (NOC, VLAWMO, MLT, Saint Paul Regional Water Services)

The designs, pollutant-removal estimates, cost estimates, and approximate schedule will be shared with the VLAWMO board in April 2021 for approval. The RFP for the first round of funding will be announced in April 2021 and will remain open for 60 days, closing in June 2021.

1006



Project features may change within shown disturbance area

- Ditch Realignment
- Proposed Basin
- Wetland Boundary (NWI)
- Potential Disturbance Area
- 2-Ft Intermediate Contour
- 10-Ft Index Contour

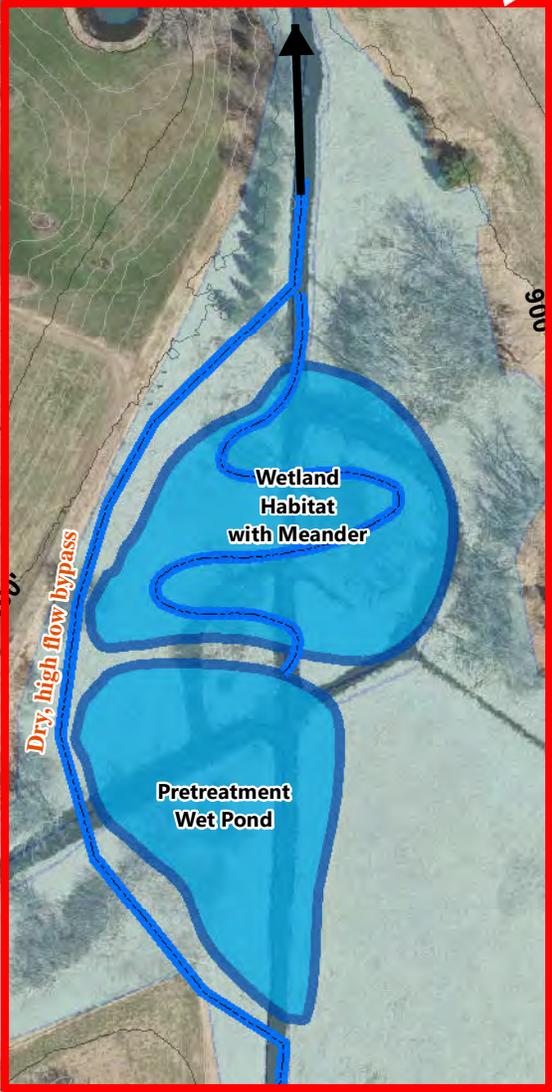
0 50 100 200
 Feet

PROJECT 1a
EXCAVATE IN UPLAND
LARGE NARROW POND
FIGURE 1

Project features may change within shown disturbance area

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1006



- High Flow Bypass/Ditch
- Proposed Basin
- Wetland Boundary (NWI)
- Potential Disturbance Area
- 2-Ft Intermediate Contour
- 10-Ft Index Contour

0 50 100 200

 Feet

PROJECT 1b
EXCAVATE IN WETLAND
PRE-TREATMENT AND
WETLAND HABITAT

FIGURE 2



Project features may change within shown disturbance area

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1006



- High Flow Bypass
- Proposed Basin
- Wetland Boundary (NWI)
- Potential Disturbance Area
- 2-Ft Intermediate Contour
- 10-Ft Index Contour

0 50 100 200
Feet

PROJECT 1c
EXCAVATE IN WETLAND
LARGE POND

FIGURE 3



520 Lafayette Road North
St. Paul, MN 55155-4194

Federal Clean Water Act Section 319

Project workplan

Doc Type: Contract

Swift #:	169280
PO #:	30000XXXXX
AI:	
Activity ID:	

Project title: Wilkinson, Tamarack, and Birch Lakes: Wilkinson Lake Stormwater Spine Phase I

1. Grant sponsor summary:

Organization: Vadnais Lake Area Water Management Organization (VLAWMO)
Contractor contact name: Dawn Tanner
Title: Program Development Coordinator
Address: 800 East Count Road E
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Project information

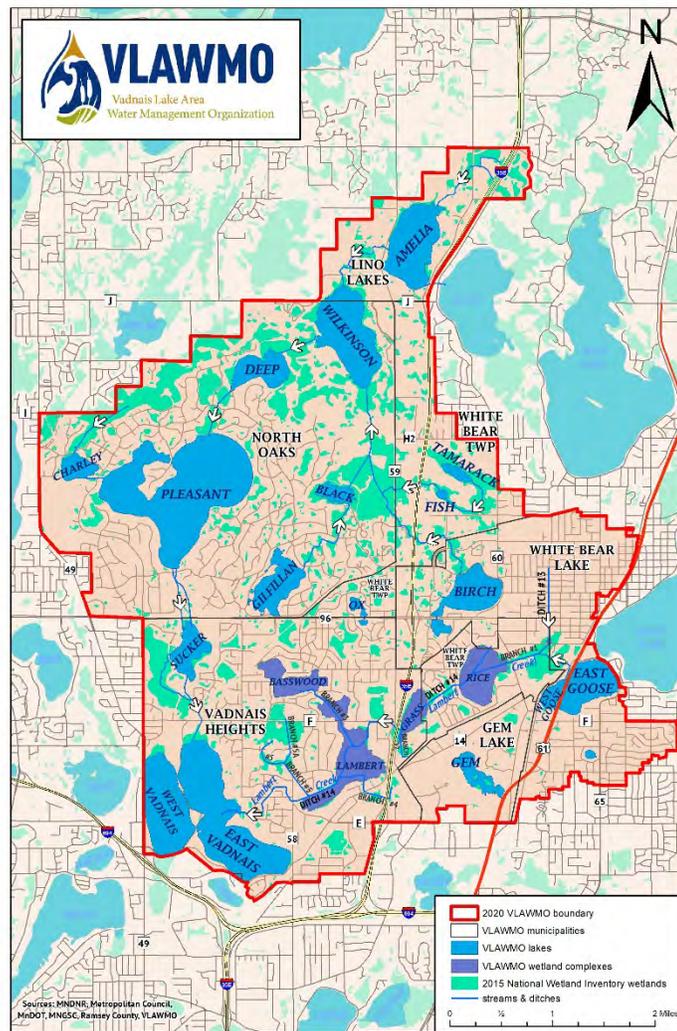
Project Cost: Grant: \$354,456, Match: \$236,304, Total: \$590,760

2. Project information

A detailed, Nine Key Element document was developed for Wilkinson, Birch, and Tamarack Lakes, and approved for funding by the U.S. Environmental Protection Agency. This project was identified as a priority concern to address critical phosphorus loading to Wilkinson Lake. Note that the BMP is not a structural part of the curb and gutter MS4.

Wilkinson and Tamarack Lakes are impaired waterbodies that are listed for nutrients. Wilkinson Lake has an approved Total Maximum Daily Load (TMDL) and completed feasibility studies to identify Best Management Practices (BMPs) to improve water quality. Tamarack Lake is slated for TMDL development in 2024; studies have been completed to inform TMDL development and prepare for BMP implementation. Birch Lake has good water quality and a designation of "protect" in the Vadnais Lake Area Watershed. Birch and Tamarack Lakes flow into Wilkinson Lake. See Watershed Figure (Figure 1) for locations and context of the first phase project site and longer-term comprehensive plan (Figure 2).

Figure 1: Vadnais Lake Area Watershed. Note the locations of Wilkinson, Tamarack, and Birch Lakes.

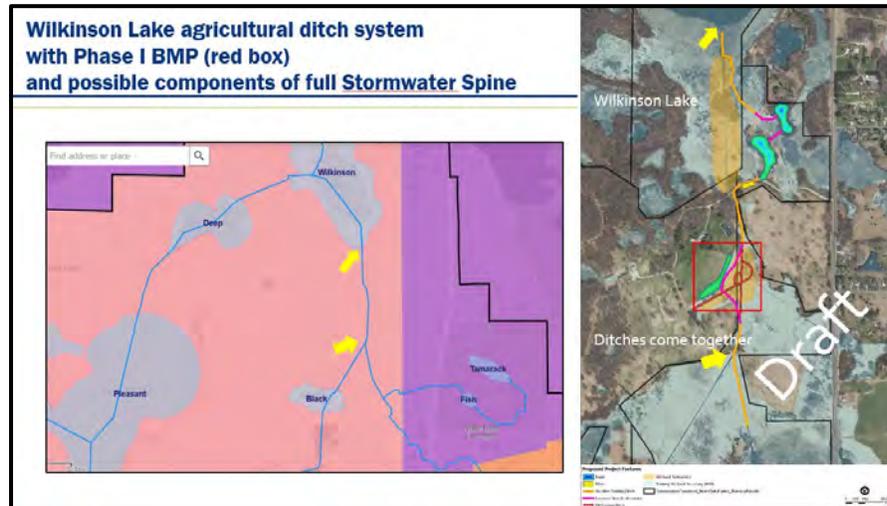


The project that is the focus of this grant round is a component in a connected network of stormwater BMPs. The collection of projects is referred to as the Wilkinson Lake Stormwater Spine. Phase I of the spine includes: stormwater ponding /treatment BMP area prior to treat regional drainage before discharge into Wilkinson Lake. Final design could incorporate additional project elements such as (but not limited to) a pretreatment basin, overflow structure, wetland restoration, and/or a meandering flow path. Additional structures are planned to build over time and create additive benefits in an overall comprehensive design. The overall goal of the Stormwater Spine is to improve water quality in Wilkinson Lake by reducing loading of nutrients and sediment.

The location of the Wilkinson Lake Stormwater Spine has been selected as a regionally important to strategically treat water prior to entering Wilkinson Lake; Wilkinson Lake receives water from Tamarack and Birch Lakes through an extensively channelized system in subwatersheds with high impervious area. Target areas are important in a largely developed watershed and provide key locations, where the majority of subwatershed runoff flows through an agricultural ditch system prior to entering Wilkinson Lake.

As identified in the Wilkinson Lake TMDL, the communities of North Oaks, White Bear Township, the City of White Bear Lake, Lino Lakes, and Ramsey and Anoka County all contribute stormwater to Wilkinson Lake. North Oaks Company/North Oaks Farms (NOC/NOF) is a major landowner in North Oaks. NOC/NOF has taken on a leadership role in working closely with VLAWMO to develop the concept plans for the Wilkinson Stormwater Spine. The company has also initially committed to being a financial partner in the cash match portion of the project and partnering on ongoing maintenance following project construction with VLAWMO. St. Paul Regional Water Services (SPRWS) uses the chain of lakes that receives water from Wilkinson as part of their drinking water supply, in addition to Mississippi River Water that is pumped through the system. SPRWS worked with VLAWMO to receive funding for a grant from the Minnesota Department of Health (MDH) for continued project development prior to completion of this workplan to continue site investigation and preliminary project design development.

Figure 2: Location of Phase I and anticipated Stormwater Spine project.

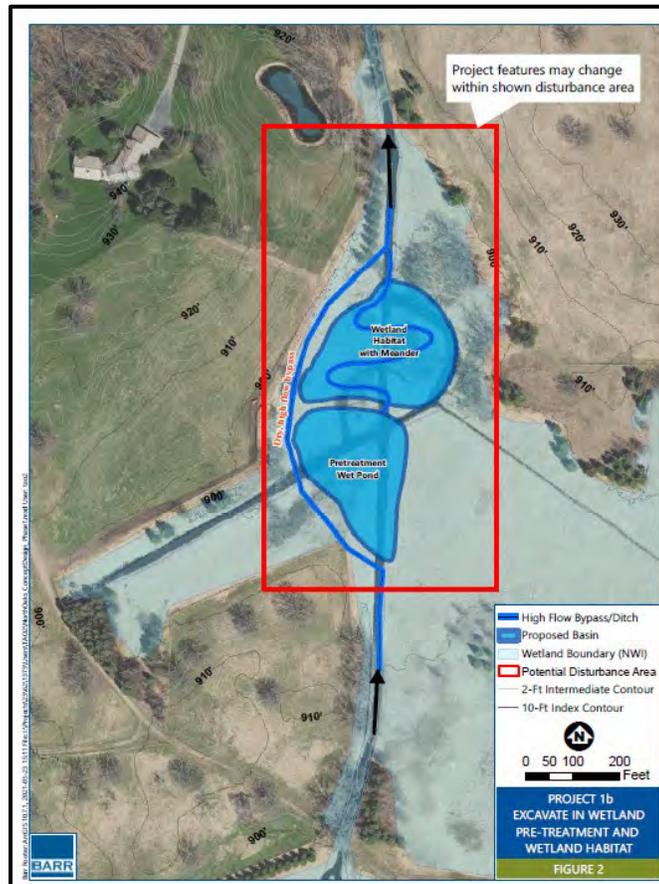


As part of project collaboration, NOC/NOF hired Barr Engineering to create conceptual designs for stormwater management projects to be implemented on company property, including land with conservation easements held through the Minnesota Land Trust (MLT). Work with NOC/NOF, VLAWMO, Barr Engineering, and MLT began in 2020 and continues to date.

Water quality monitoring (conducted by VLAWMO) shows that runoff in the agricultural ditch system that empties into Wilkinson Lake has high total phosphorus (TP) concentrations and makes up a significant portion of the loading to Wilkinson Lake. Monitoring data also suggest that the high pollutant concentration in the ditch is driven by loading from areas east of Centerville Road in the Birch and Tamarack Lake subwatersheds. Barr worked with NOC and VLAWMO to create conceptual designs that met several shared goals and would help improve the water quality in Wilkinson Lake. The focus of these efforts is on the agricultural ditch that runs through NOC property and within the MLT's agricultural and conservation easements. Centralizing the treatment along the ditch also provides an opportunity to restore degraded areas in the easements and increase recreational use through added trails and interactive design features. These additional design and restoration efforts are outside of this current grant, but are also part of a longer-term vision with planned incorporation by NOC/NOF. Designs are in the conceptual stage at the time of workplan preparation and will be updated based on survey and soil testing, permitting, stakeholder engagement, and final design considerations.

Phase I of the Stormwater Spine is located in an upstream wetland in the MLT agricultural easement. Currently, there are several agricultural ditches that intersect in this location and drain the surrounding wetlands. These ditches also convey flow from eastern subwatersheds (Tamarack and Birch Lakes) to Wilkinson Lake. There are three alternative concept level configurations for the upstream pond area that are being considered at this time. One of the possible configuration is shown below. Final design will depend upon results of summer technical analysis and testing (2021) and incorporation of agency feedback as part of permitting. In this possible configuration, a pre-treatment basin would be excavated in-line with the ditch to treat baseflow and small-event flow. A high-flow bypass would be constructed to the west of the basin to reduce the impact of high flows in the basin (scour, sediment resuspension, etc.). The pre-treatment basin would discharge into an excavated wetland basin with a meandering flow path to add improved wetland habitat and a meandering path to allow natural fluctuation and stream elements within the system.

Figure 3: A possible concept level configuration for the Phase I project depending upon results of upcoming technical design work including survey, soil testing, and continued input from permitting authorities.



3. Goals, objectives, tasks, and subtasks

Goal: Restore water quality as part of Phase I of the Wilkinson Lake Stormwater Spine, as identified in the Wilkinson, Birch, and Tamarack Lakes Nine Key Element document.

Objective 1: Engineering to complete design, permitting, and go out for bid (~\$107,060)

Task A: Complete any remaining survey, soil testing, and project design following summer 2021 investigation

Task B: Preliminary plan/spec development

Task C: Complete design to 90%

Task D: Receive and incorporate feedback from permitting authorities, make any necessary changes, and prepare final designs and specs

Task E: Develop contract between owner and contractor and facilitate bid process

Objective 1 Timeline: 12/2021 – 8/31/2023

Objective 1 Cost: Grant: \$85,236, Match: \$21,824, Total: \$107,060

Objective 1 Deliverables: Permits in place, final plans and specs, signed construction contract

Objective 2: BMP implementation/construction (~\$428,700)

Task A: Construction (~\$383,700)

Task B: Engineering oversight and inspection (~\$45,000)

Objective 2 Timeline: 8/31/2022 – 7/1/2024

Objective 2 Cost: Grant: \$257,220, Match: \$171,480, Total: \$428,700

Objective 2 Deliverables: BMP implementation completed

Objective 3: Monitoring for the effectiveness of BMP and maintenance

Task A: Monitoring with the intent of determining the effectiveness of the BMP, with the additional benefit of recommendations for maintenance. Monitoring will be conducted annually until the end of the grant timeframe with recommendations provided by contractor for following year implementation

Task B: Maintenance to be carried out as needed and in partnership between VLAWMO and NOC and possible other partners

Task C: Vegetation additions, structural monitoring, and minor remediation as needed until the new structures are stabilized

Objective 3 Timeline: 7/1/2023 – 8/31/2025

Objective 3 Cost: Grant: \$12,000, Match: \$8,000, Total: \$20,000

Objective 3 Deliverables: Ongoing maintenance needs identified, reported, and implemented

Objective 4: Project Management (\$35,000)

Task A: Administration and Reporting:

- Facilitate project management and partner interactions
- Work with engineering firm to obtain permits, make changes, and communicate with stakeholders
- Participate in finalization of specs, bid process, and construction as owner
- Track project activities according to project work plan and budget
- Complete e-LINK reporting requirements
- Track grant budget, matching funds, and expenditures for grant
- Compile, organize, and submit invoices according to grant requirements
- Authorize payment of bills for grant expenses
- Obtain matching funds documentation
- Prepare and submit semi-annual and final reports according to the grant agreement

Objective 4 Timeline: 12/2021 – 8/31/2025

Objective 4 Cost: Grant: \$0, Match (in-kind): \$35,000, Total: \$35,000

Objective 4 Deliverables: Report BMP accomplishments and pollutant reductions in e-LINK program. Submit invoices and reports according to the grant agreement

4. Project budget *(attached)*

Attachment A - Budget

SWIFT:	169280
Purchase Order:	30000XXXXX
AI:	
Activity ID:	

Project Name: Wilkinson, Tamarack, and Birch Lakes: Wilkinson Lake Stormwater Spine Phase I
Organization Name: Vadnais Lake Area Water Management Organization

Objective	Grant	In-kind match	Cash match	Total match	Budget total
Objective 1: Engineering to complete design, permitting, and go	\$ 85,236.00		\$ 21,824.00		\$ 107,060.00
Objective 2: BMP implementation/construction (~\$428,700)	\$ 257,220.00		\$ 171,480.00		\$ 428,700.00
Objective 3: Monitoring for the effectiveness of BMP and mainte	\$ 12,000.00		\$ 8,000.00		\$ 20,000.00
Objective 4: Project Management/VLAWMO staff		\$ 35,000.00			\$ 35,000.00
TOTAL	\$ 354,456.00	\$ 35,000.00	\$ 201,304.00	\$ 236,304.00	\$ 590,760.00