

**Riley-Purgatory-Bluff Creek Watershed District**  
Board of Managers Regular Meeting  
**Wednesday, May 5, 2021 Work Session Scheduled 5:00pm Regular Meeting**  
Virtual Meeting via ZOOM  
<https://us02web.zoom.us/j/89539134109>

**Agenda**

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|---|--------------------|
| <b>1. 5:00pm Work Session to provide overview of 10-Year Plan</b> | <b>Information</b> |
| <b>2. 7:00pm Call to Order Meeting of the Board of Managers</b>   | <b>Action</b>      |
| <b>3. Approval of the agenda</b>                                  | <b>Action</b>      |
| <b>4. Auditor Presentation</b>                                    | <b>Information</b> |
| <b>5. Matters of general public interest</b>                      | <b>Information</b> |

Welcome to the Board Meeting. Anyone may address the Board on any matter of interest in the watershed. Speakers will be acknowledged by the President; please come to the podium, state your name and address for the record. Please limit your comments to no more than three minutes. Additional comments may be submitted in writing. Generally, the Board of Managers will not take official action on items discussed at this time, but may refer the matter to staff for a future report or direct that the matter be scheduled on a future agenda.

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|---|---------------|
| <b>6. Reading and approval of minutes</b>                               | <b>Action</b> |
| a. Board of Managers Regular Meeting, April 7, 2021 (with Continuances) |               |
| b.  |               |
| <b>7. Citizen Advisory Committee</b>                                    | <b>Action</b> |
| a. Report   |               |
| b. Confirm May Board CAC Representative                                 |               |

**8. Consent Agenda**

(The consent agenda is considered as one item of business. It consists of routine administrative items or items where discussion isn't essential to understanding. Any manager may remove an item from the consent agenda for action.)

- a. Accept April Staff Report
- b. Accept April Engineer's Report
- c. Accept April Construction Inspection Report
- d. Approve Cost Share with Shorewood in the Amount of \$50,000 for the installation of sump manholes and SAFL baffles tributary to Silver Lake

- e. Authorize Administrator to Sign FY 2021 Watershed-Based Grant Agreement with the Minnesota Board of Water and Soil Resources for St. Huberts Opportunity Project.
- f. Approve permit 2021-008 for Minnetonka High School Momentum Building addition with staff recommendations
- g. Approve permit 2020-051 for Biolyph addition with staff recommendations
- h. Approve permit 2021-019 for Lake Riley Park Playground with staff recommendations

**9. Action Items**

**Action**

- a. Pulled consent items
- b. Accept March Treasurer's Report
- c. Approve Paying of the Bills
- d. Approve contract with SRF for design and construction administration services for St. Hubert's opportunity project.
- e. Approve cooperative agreement with St. Hubert's and authorize the president to sign.
- f. Consider variance from discharge rate criteria of Rule J for 2021-016 Duck Lake Rd
- g. Consider variance from wetland protection criteria criteria of Rule J for 2021-016 Duck Lake Rd
- h. Consider variance from treating off-site run on criteria of Rule J for 2021-016 Duck Lake Rd
- i. Approve permit 2021-016 for Duck Lake Road with staff recommendations
- j. Consider request for modification of financial assurance for 2019-051 Berrospid Addition
- k. Authorize staff and attorney to prepare contract documents and award St. Hubert's Opportunity Project to Apparent Low Bidder upon appropriate vetting. (Note – bid open is scheduled for May 5 and engineer recommendation is not included in packet.)

**10. Discussion Items**

**Information**

- a. Draft Cooperative Agreement Between Bearpath Golf and Country Club and RPBCWD
- b. Overview of 90% plans for Middle-Riley Creek Stabilization Project
- c. Land use agreement for use of private road for Middle-Riley Creek Stabilization Project
- d. Discuss permit application #2021-012 Noble Hill.
- e. Attorney Report
- f. Administrator Report
- g. Manager Report

**11. Upcoming Board Topics**

a. Other

**12. Upcoming Events**

**Information**

- CAC Meeting, May 17, 6pm Virtual
- June 2, 2021 Regular Meeting of the Board of Managers

*Please check [www.rpbcwd.org](http://www.rpbcwd.org) for the most current meeting details.*

## MEETING MINUTES

### Riley-Purgatory-Bluff Creek Watershed District

#### April 7, 2021, RPBCWD Board of Managers Monthly Meeting

PRESENT:

Managers: Jill Crafton, Treasurer  
Larry Koch  
Dorothy Pedersen, Vice President  
Dick Ward, President  
David Ziegler, Secretary

Staff: Amy Bakkum, Administrative Assistant  
Zach Dickhausen, Water Resources Technician II  
Liz Forbes, Grant Coordinator  
Terry Jeffery, Interim District Administrator and Watershed Planning Manager  
Josh Maxwell, Water Resources Coordinator  
Louis Smith, Attorney, Smith Partners  
Scott Sobiech, Engineer, Barr Engineering Company

Other attendees: Andrew Aller  
Liz Forbes  
Greg Hawks  
Elizabeth Henley  
Ahsan Ijaz  
Sharon McCotter  
Matt Pavek  
Marilyn Torkelson

*Note: this meeting was held remotely via meeting platform Zoom in abidance with state mandates in response to Covid-19.*

### 1. Call to Order

- 1 President Ward called to order the Wednesday, April 7, 2021, Board of Managers Regular
- 2 Monthly Meeting at 7:00 p.m. The meeting was held remotely via meeting platform Zoom.

### 2. Approval of Agenda

- 3 Manager Koch requested removing the following items from the Consent Agenda: 8c – Accept
- 4 March Construction Report, 8d - Approve permit application #2020-066, Chase Bank as
- 5 presented in the proposed board action of the permit report, and 8h – Award Silver Lake Water
- 6 Quality Project as presented in the recommended Board action section of the Engineer’s
- 7 recommendation memo. Administrator Ward noted that on May 5<sup>th</sup> the Board has a workshop at
- 8 5:00 p.m. and the Board’s regular monthly meeting at 7:00 p.m.. He recommended continuing
- 9 tonight’s meeting to a date next week and holding over Agenda item 9i – Selection of Consultants

10 – until the meeting continuation. Manager Crafton asked to discuss comments about the District’s  
 11 annual report at the continuation of this meeting.

12 Manager Ziegler moved to approve the agenda as amended. Manager Crafton seconded the  
 13 motion. Upon a roll call vote, the motion carried 5-0 as follows:

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<i>Manager</i>	<i>Action</i>
Crafton	Aye
Koch	Aye
Pedersen	Aye
Ward	Aye
Ziegler	Aye

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**3. Introduction of New Staff**

16 Interim Administrator Jeffery introduced new RPBWD staff member Liz Forbes, Grant Program  
 17 Coordinator, who started in her position Monday, March 30. Ms. Forbes shared about her career  
 18 and experience. The Board welcomed her.

19

**4. Public Hearing for Rule D and Rule F Proposed Amendment**

20 President Ward called to order the public hearing on the Amendment of the District’s Rule D and  
 21 Rule F. Interim Administrator Jeffery provided background about amendment, explaining it  
 22 wasn’t the intent and doesn’t make sense for the District’s process to make it the process to repair  
 23 shoreline rip rap more difficult. He said the fast track didn’t work the way it was intended  
 24 because there was no way to accomplish a shoreline stabilization consistent with the District’s  
 25 specifications without disturbing the land underneath it. Interim Administrator Jeffery said the  
 26 proposed rule amendment allows for the replacement of existing stabilization techniques. He  
 27 emphasized projects will need to go through the District’s review process and will need to  
 28 demonstrate the work complies with the District’s rules.

29 Interim Administrator Jeffery reported the proposed Amendment went out for public comment.  
 30 He stated the District received comments from the Metropolitan Council and the Minnesota  
 31 Board of Water and Soil Resources. He said the comment from both agencies was “no comment.”

32 President Ward opened the floor for public comments and called for comments. He called again  
 33 for public comments and upon hearing no comments, he opened the floor for manager comments.

34 Manager Koch stated he lives along Lotus Lake. He said the District has had several permit  
 35 applications come through, and he doesn’t think the Board has been consistent applying and

36 enforcing the District's current rules. Manager Koch said he thinks the District needs to look at  
37 ways to encourage lakeshore owners to repair and install rip rap. He commented he is pleased  
38 about the District's grant program for shoreline stabilization projects, but he doesn't agree with  
39 limiting the stabilization methods to vegetation or limiting access to grant funds to those  
40 applicants who are going to put in vegetative rip rap.

41 Manager Koch said the scoresheet the District uses is outdated and doesn't take into adequate  
42 consideration the erosion intensity and impacts from the wake from wake boats. He said the  
43 District needs to evaluate the scoresheet. Manager Koch suggested that the District stop requiring  
44 people to hire an engineer or landscape architect and instead accept documentation from any  
45 reasonable person who can measure and do the drawings. He said right now the shoreline erosion  
46 is probably the number one cause of excess nutrients loading into Lotus Lake

47 Manager Koch said he thinks the proposed amendment is a good start but needs work. He said  
48 he'd like the Board to table the proposed amendment until the Board's next monthly meeting, so  
49 he has time to have a discussion with Interim District Administrator Jeffery about language to  
50 address the issues he raised about the proposed amendment. President Ward reminded Manger  
51 Koch that this is the public hearing and Manager Koch can make a motion when the Board  
52 reaches that point in the agenda.

53 Manager Crafton said she is happy with what the District has proposed in the amendment. She  
54 commented the information in the webinar presented by Ms. B. Lauer and Ms. Amy Bakkum is  
55 contrary to many of Manager Koch's comments, so she is more comfortable with what the  
56 District has proposed in the amendment. Manager Pedersen agreed that the District giving money  
57 for people putting in rip rap isn't a stance the watershed wants to take because it encourages rip  
58 rap rather than looking at bioengineering and doing it right the first time. She said the issue is  
59 trying to get the Department of Natural Resources to address wake boats, and the issue is not for  
60 the District to pay cost share funding to fix their shoreline. Manager Koch noted waiting for the  
61 DNR is not a solution right now because the DNR won't do something unless the legislature does  
62 something, and right now the legislature won't do something until a study comes out from the  
63 University of Minnesota St. Anthony Falls Research Laboratory. He stated that scientifically  
64 there is no other solution aside from rip rap to prevent erosion on lakeshore on Lotus Lake  
65 because of the force exceeded by wake boats, which is too excessive for vegetative shoreline  
66 stabilization to hold up.

67 Manager Ziegler commented he agrees with Managers Crafton and Pedersen regarding the grant  
68 money because it seems like the District's philosophy hasn't even been to support straight rip rap  
69 with no vegetation, but the District isn't precluded from creating a buffer above the rip rap. He  
70 said he agrees with Manager Koch about the score sheet, which doesn't address boat wakes.

71 President Ward called for additional comments. Upon hearing none, he called for a motion to  
72 close the public hearing. Manager Pedersen moved to close the public hearing. Manager Ziegler  
73 seconded the motion.

74 Upon a roll call vote, the motion carried 5-0 as follows:

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<i>Manager</i>	<i>Action</i>
Crafton	Aye
Koch	Aye
Pedersen	Aye
Ward	Aye
Ziegler	Aye

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**5. Matters of General Public Interest**

77 Ms. Marilyn Torkelson, Eden Prairie Resident, commented on the proposed Noble Hill housing  
 78 development near Riley Creek and the Fredrick-Miller Spring. She said she is passionate about  
 79 soil health, and healthy soil is a rarity in urban areas. Ms. Torkelson stated there is a fragile area  
 80 around a unique resource that thousands of people come from miles around to visit. She said  
 81 currently there are healthy soils on the steep slopes at the site. Ms. Torkelson explained the soil  
 82 microbes, mycorrhizal fungi, organic matter, and living trees and plants all serve to infiltrate and  
 83 cleanse stormwater and replenish the aquifer that provides water to the spring and the creek. She  
 84 asked that the Board, to serve the people who use the spring and enjoy the creek, use its powers  
 85 as a watershed district to speak for and protect the water when reviewing permits for the Noble  
 86 Hill housing development.

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**6. Reading and Approval of Meeting Minutes**

88 **a. February 4, 2021, RPBCWD Board of Managers Special Meeting**  
 89 Manager Ziegler moved to approve the minutes as presented. Manager Pedersen seconded  
 90 the motion. Upon a roll call vote, the motion carried 5-0 as follows:

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<i>Manager</i>	<i>Action</i>
Crafton	Aye
Koch	Aye
Pedersen	Aye
Ward	Aye
Ziegler	Aye

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**b. February 18, 2021, RPBCWD Board of Managers Monthly Meeting**

Manager Ziegler moved to approve the minutes as presented. Manager Pedersen seconded the motion. Manager Crafton noted on line 1 the reference of “Ms.” needs to be changed to “Mr.” She pointed out an edit on line 7, the word “quested” should be changed to “questioned.” Managers Ziegler and Pedersen agreed by consent to Manager Crafton’s friendly amendment to the motion. Upon a roll call vote, the motion carried 5-0 as follows:

<i>Manager</i>	<i>Action</i>
Crafton	Aye
Koch	Aye
Pedersen	Aye
Ward	Aye
Ziegler	Aye

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**c. February 22, 2021, RPBCWD Board of Managers Monthly Meeting**

Manager Ziegler moved to approve the minutes as presented. Manager Pedersen seconded the motion. Upon a roll call vote, the motion carried 5-0 as follows:

<i>Manager</i>	<i>Action</i>
Crafton	Aye
Koch	Aye
Pedersen	Aye
Ward	Aye
Ziegler	Aye

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**d. March 3, 2021, RPBCWD Board of Managers Regular Meeting**

Manager Ziegler moved to approve the minutes as presented. Manager Pedersen seconded the motion. Manager Pedersen noted a correction on line 208 to delete the extra words, “and the.” Manager Ziegler and agreed by consent to Manager Pedersen’s friendly amendment to the motion. Upon a roll call vote, the motion carried 5-0 as follows:

<i>Manager</i>	<i>Action</i>
Crafton	Aye
Koch	Aye
Pedersen	Aye
Ward	Aye
Ziegler	Aye

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**e. March 9, 2021, RPBCWD Board of Managers Special Meeting**

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Manager Ziegler moved to approve the minutes as presented. Manager Pedersen seconded the motion. Manger Crafton pointed out an edit on line 1 to replace the word “regular” with “special.” Manager Koch commented that at the meeting he read his resolutions into the minutes, so the resolutions should be set forth in the minutes starting on line 42. He said that especially if the Board would adopt Attorney Smith’s version that these minutes are supposed to qualify as a journal of notes, then the minutes should at least recite resolutions that were voted upon. Attorney Smith noted Manager Koch’s resolutions were about District governance and operations matters. Attorney Smith said he can work with the recorder to get the resolutions into the minutes. Managers Ziegler and Pedersen agreed by consensus to Manager Koch’s friendly amendment. Upon a roll call vote, the motion carried 5-0 as follows:

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<i>Manager</i>	<i>Action</i>
Crafton	Aye
Koch	Aye
Pedersen	Aye
Ward	Aye
Ziegler	Aye

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**f. March 9, 2021, Meeting Continuation on March 15, 2021 - RPBCWD Board of Managers Special Meeting**

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Manager Ziegler moved to approve the minutes as presented. Manager Pedersen seconded the motion. Manager Crafton requested an edit on line 57 to add the word “to,” so the phrase reads, “work to improve communication.” Managers Ziegler and Pedersen agreed by consensus to Manager Crafton’s friendly amendment. Upon a roll call vote, the motion carried 5-0 as follows:

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<i>Manager</i>	<i>Action</i>
Crafton	Aye
Koch	Aye
Pedersen	Aye
Ward	Aye
Ziegler	Aye

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**7. CAC**

137 Ms. Sharon McCotter reported the CAC didn't conduct a March meeting but did gather to say  
 138 goodbye to Dr. Bleser and Ms. Lauer. Ms. McCotter said the draft minutes from the CAC's April  
 139 6<sup>th</sup> meeting are in the CAC's Google drive for the Board's review. She said one of the CAC's  
 140 specific tasks is to advise and assist the managers on topics of interest, especially when issues of  
 141 concern are raised by the public. Ms. McCotter said several concerns have been raised about the  
 142 Noble Hill property development. She said the proposed project is a 28-acre development for 40  
 143 to 50 residential units, and she believes they are single-family homes. Ms. McCotter reported  
 144 concerns raised by the public include the development will impact the Fredrick-Miller spring and  
 145 potentially Riley Creek.

146 Ms. McCotter talked about the CAC's steps to collect more information about the proposed  
 147 project and concerns being raised by the public about the project, such as the City's rezoning of  
 148 the project area from rural zoning to urban zoning. She explained she attended a City of Eden  
 149 Prairie planning commission public meeting and heard comments regarding concern about the  
 150 potential negative impact of the proposed project on the environment, specifically loss of trees  
 151 and the addition of impervious surfaces and the potential negative impact on water quality and  
 152 function of the spring, wetland, and creek. She mentioned a petition that citizens are circulating  
 153 regarding the rezoning and said there are approximately 2,700 signatures on the petition right  
 154 now.

155 Ms. McCotter said the Director of Land Planning and Entitlement for Pulte Homes came to the  
 156 CAC's meeting and expressed that Pulte Homes wants to collect enough data but wasn't sure if  
 157 there is data on the sites that people are expressing concerns about as listed in the petition. She  
 158 said Pulte Homes and Alliant Engineering target having the research about possible impacts  
 159 complete within the next few weeks, specifically targeting before May 4<sup>th</sup> or 5<sup>th</sup>.

160 Ms. McCotter presented the CAC's motion to request the support of the RPBCWD Board of  
 161 Managers in the gathering of additional information, so the watershed can be as helpful as  
 162 possible to minimize development impacts if the project is approved by the City and to make any  
 163 alterations as needed to protect the Fredrick-Miller Spring and Riley Creek from degradation.

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Manager Pedersen noted she read an article in which the City of Eden Prairie stated the spring and water area won't be impacted by the proposed project.

Interim Administrator Jeffery remarked an EAW was completed and found no recognized environmental condition for impacting the spring through the development of that area. He noted the water is piped under Spring Road from the west. He said the reason the City feels the proposed project is not going to affect the recharge of the spring is because it the project is separated by the creek from the actual source of the spring.

Manager Koch said it seems the District would want to see information from Hennepin and Carver counties and said he'd like District staff to explain to the Board what's being proposed with the project. Manager Koch moved to direct staff to gather information and report findings to the Board as soon as possible in terms of pros and cons, possible environmental impacts, and any issues for the watershed to address. Manager Ziegler seconded the motion and added the friendly amendment to direct the District Engineer to see if the District has rules regarding development around and on bluffs including any rules about any set back from bluffs. Manager Koch accepted Manager Ziegler's friendly amendment.

President Ward asked staff if they have reviewed anything for this project. Interim Administrator Jeffery said yes, District staff has worked on the first-round review. He said the submission was incomplete, so staff requested and is waiting to receive additional information.

Managers commented on their concerns about the proposed project's possible disruption to the ground, soil, and landscape at and around the project site.

Upon a roll call vote, the motion carried 5-0 as follows:

<i>Manager</i>	<i>Action</i>
Crafton	Aye
Koch	Aye
Pedersen	Aye
Ward	Aye
Ziegler	Aye

Manager Pedersen suggested staff reach out to Carrie at Freshwater Society to see if she has information about this bluff because she has done plotting throughout Hennepin County.

Manager Crafton noted she will be the Board representative at the CAC's next meeting.

## 8. Consent Agenda

192 Manager Koch moved to approve the Consent Agenda [as amended in agenda item 2]. Manager  
 193 Crafton seconded the motion. President Ward listed the following Consent Agenda items: 8a –  
 194 Accept March Staff Report, 8b – Accept March Engineer’s Report, 8e – Approve permit  
 195 application #2021-004, Silver Lake Water Quality Project as presented in the proposed Board  
 196 action of the permit report, 8f – Approve Silver Lake Land Use Agreement, and 8g – Approve  
 197 RPBCWD 2020 Annual Report for distribution to BWSR and the DNR. Manager Koch clarified  
 198 that the Board’s approval of the permits includes the recommendations and conditions set forth in  
 199 the staff report. The managers agreed with Manager Koch’s statement.

200 Upon a roll call vote, the motion carried 5-0 as follows:

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<i>Manager</i>	<i>Action</i>
Crafton	Aye
Koch	Aye
Pedersen	Aye
Ward	Aye
Ziegler	Aye

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## 9. Action Items

### 203 a. Items Pulled from Consent Agenda

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#### 205 i. **Accept March Construction Inspection Report**

206 Manager Koch said the report noted a lot of non-compliance items. He asked  
 207 for an update on those items and asked how the change in staffing has affected  
 208 the District’s inspection program, if at all. Interim Administrator Jeffery  
 209 provided an update on inspections by the District’s construction inspection staff  
 210 member. He said this is the first month of inspections as road restrictions only  
 211 recently lifted. He added that there is a little issue with the reporting, and  
 212 ultimately he wants this report to pull directly from the database. Interim  
 213 Administrator Jeffery said he is helping with inspections on larger or more  
 214 sensitive sites, and staff member Mat Niklay is full-time on construction  
 215 inspections. Interim Administrator Jeffery said staff has the capacity to continue  
 216 handling all inspections.

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218 Manager Koch moved to accept the March Construction Inspection Report.  
 219 Manager Ziegler seconded the motion. Upon a roll call vote, the motion carried  
 220 5-0 as follows:  
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<i>Manager</i>	<i>Action</i>
Crafton	Aye
Koch	Aye
Pedersen	Aye
Ward	Aye
Ziegler	Aye

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 224 **ii. Approve Permit Application #2021-004, Silver Lake Water Quality**  
 225 **project as presented in the proposed board action of the permit**  
 226 **report**

227 Manager Koch asked for background on the proprietary stormwater treatment  
 228 unit. Engineer Sobiech responded with details. Manager Koch asked if there is an  
 229 adequate maintenance agreement to make sure the unit operates for the duration.  
 230 Engineer Sobiech stated the District is requiring a maintenance declaration that  
 231 will be assigned to the property and travel with the property should it ever change  
 232 ownership. He added that as part of that declaration, the manufacturer’s  
 233 operations and maintenance plan for the filter systems will be incorporated into  
 234 the declaration, which will be adequate for the system to continue to perform as  
 235 intended.

236 Manager Koch moved to approve Permit 2021-004. Manager Ziegler seconded  
 237 the motion. Upon a roll call vote, the motion carried 5-0 as follows:

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<i>Manager</i>	<i>Action</i>
Crafton	Aye
Koch	Aye
Pedersen	Aye
Ward	Aye
Ziegler	Aye

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240 **iii. Award Silver Lake Water Quality Project as Presented in the**  
 241 **Recommended Board Action Section of the Engineer’s**  
 242 **Recommendation Memo**

243 Manager Koch said he didn’t intend to remove this item from the Consent  
 244 Agenda. Manager Pedersen moved to approve awarding the Silver Lake Water  
 245 Quality Project as presented in the recommended Board action section of the  
 246 Engineer’s Recommendation Memo. Manager Ziegler seconded the motion.  
 247 Upon a roll call vote, the motion carried 5-0 as follows:

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<i>Manager</i>	<i>Action</i>
Crafton	Aye
Koch	Aye
Pedersen	Aye
Ward	Aye
Ziegler	Aye

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251 **b. Accept February Treasurer’s Report**

252 Manager Crafton stated the report has been reviewed in accordance with internal  
 253 controls and procedures. She moved to accept the February Treasurer’s Report.  
 254 Manager Pedersen seconded the motion.

255 Manager Koch commented he has his continued objection to the cover letter provided  
 256 by Redpath and Company in two respects. He said he has asked for changes several  
 257 times, but Redpath says the format is the format requested by the Board. Manager Koch  
 258 says no one has provided him information to support that the Board acted to direct a  
 259 format. He added that he had suggested revisions and recommended they be  
 260 incorporated into and adopted with the District’s Bylaws, but that didn’t happen.

261 Manager Koch remarked his second issue is the cover letter states revenues are reported  
 262 on a cash basis, but the balance sheet reports accruals. He said there should be  
 263 consistency between the cover letter and the report, and the rules should be followed.  
 264 Manager Koch said the Board should adopt a format, which should be the format set  
 265 forth in the District’s policies. He said the cover letter should be consistent with the  
 266 policy, and the balance sheet should be consistent with the District’s policy of reporting  
 267 on cash or accrual or exceptions.

268 Upon a roll call vote, the motion carried 4-1 as follows:

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<i>Manager</i>	<i>Action</i>
Crafton	Aye
Koch	No
Pedersen	Aye
Ward	Aye
Ziegler	Aye

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President Ward asked Treasurer Crafton to clarify with the accountant if the District is operating on a cash basis or an accrual basis.

**c. Paying of Bills**

Manager Crafton moved to pay the bills. Manager Ziegler seconded the motion. Upon a roll call vote, the motion carried 5-0 as follows:

<i>Manager</i>	<i>Action</i>
Crafton	Aye
Koch	Aye
Pedersen	Aye
Ward	Aye
Ziegler	Aye

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**d. Consider Floodplain Variance Request for Permit Application #2021-005, Lake Place Project; Approve Permit Application #2021-005, Lake Place Project as Presented in the Proposed Board Action of the Permit Report**

Engineer Sobiech shared a PowerPoint presentation and walked the Board through the permit application review and variance request. He explained the permit is for the construction of an apartment building in Chanhassen on a 3.7-acre site and will include creating 1.82 acres of impervious surface. Engineer Sobiech said the project proposes underground stormwater retention filtration basins as well as a surface filtration basin on site. He went through the permit review and pointed out the Engineer’s conditions that the applicant provide requested information about the proposed erosion control plan and the maintenance declaration. He noted the permit condition that before the District releases the financial assurance, the permit holder will need to provide a chloride management plan to the District.

292 Engineer Sobiech explained the project as proposed doesn't conform to the District's  
293 Rule B, Floodplain Management and Drainage Alterations. He reported the applicant  
294 has requested a variance to the compensatory storage location requirements in  
295 subsection 3.2 of Rule B. Engineer Sobiech said the applicant worked with the City of  
296 Chanhasen regarding the evaluation of the wetland on the site. He said the wetland is  
297 an incidental wetland, meaning it exists because of construction activities that caused  
298 water to pond in that location. Engineer Sobiech explained the wetland meets the  
299 District's definition of a water body, meaning the District needs to consider impacts of  
300 potential floodplain fill by the proposed development of this area. He explained the  
301 applicant is requesting a variance to the compensatory storage location requirements  
302 because the project isn't providing compensatory storage within the same floodplain to  
303 the waterbody. Engineer Sobiech said that because the wetland is an incidental wetland,  
304 as determined by the City, the City is allowing the wetland to be completely filled by  
305 the development, which means the floodplain will no longer exist after the development  
306 occurs.

307 Engineer Sobiech went through the District's Rule K variance criteria. He addressed  
308 how substantial the variance is from the rule provision, noting the project will provide a  
309 net increase of 318 cubic yards of floodplain storage, but the applicant is providing  
310 compensatory storage by the construction of a biofiltration and a large underground  
311 stormwater treatment facility. Engineer Sobiech pointed out the project will provide  
312 approximately two times the amount of compensatory storage in those two facilities  
313 compared to what the project will fill in the floodplain. He talked about whether the  
314 variance will affect government services or substantially change the character of or  
315 cause material adverse effect to water resources, flood levels, drainage, or the general  
316 welfare in the District, or be a substantial detriment to neighboring properties. Engineer  
317 Sobiech clarified the proposed project isn't reasonably likely to cause off-site adverse  
318 impacts or adversely affect offside governmental services, water resources, flood levels,  
319 or neighboring properties and the proposed variance only impacts the applicant's  
320 property.

321 Engineer Sobiech stated the technical measures the applicant has taken to alleviate the  
322 practical difficulty include the proposal of constructing two stormwater facilities onsite  
323 to provide a little over twice as much compensatory storage. He explained that the  
324 practical difficulty came about because the applicant wanted to fill the floodplain. He  
325 added that the applicant did so with the approval of the City of Chanhasen, which is the  
326 Local Governmental Unit (LGU) responsible for administering the Wetland  
327 Conservation Act.

328 Engineer Sobiech summarized that because the project increases storage below the 100-  
329 year flood elevation of the incidental wetland, which the LGU is allowing to be filled,  
330 the District Engineer finds there is adequate technical basis for the managers to rely on  
331 to grant the requested variance.

332 Engineer Sobiech responded to questions.

333 Manager Ziegler moved to approve the variance for Permit Application 2021-005 based  
 334 on the Engineer’s analysis and conditions as reported. Manager Crafton seconded the  
 335 motion. Upon a roll call vote, the motion carried 5-0 as follows:

336

<i>Manager</i>	<i>Action</i>
Crafton	Aye
Koch	Aye
Pedersen	Aye
Ward	Aye
Ziegler	Aye

337

338 Manager Ziegler moved to approve the Permit 2021-005 based on the Engineer’s  
 339 analysis, recommendations, and conditions as reported. Manager Crafton seconded the  
 340 motion. Upon a roll call vote, the motion carried 5-0 as follows:

341

<i>Manager</i>	<i>Action</i>
Crafton	Aye
Koch	Aye
Pedersen	Aye
Ward	Aye
Ziegler	Aye

342

343 **e. Approve Rule D and Rule F Regulatory Amendment with Staff Suggested**  
 344 **Response to Comments**

345 Interim Administrator Jeffery reminded the Board that when the Board adopted taking  
 346 on shoreline regulations, the reason it did so was because the Board wanted to consider  
 347 the entire resource of the shoreline including habitat, shoreline protection, and  
 348 aesthetics. He said if the Board wants to go back to rip rap, the Board could go back to  
 349 the DNR and have applicants go through the DNR general permit. He said he doesn’t  
 350 believe that is what the District wants to do.

351 Interim Administrator Jeffery said if the District says it will fund rip rap, the  
 352 maintenance will need to be revised because it will no longer apply. He explained that  
 353 the amendment as written allows for existing rip rap to be repaired, and he said proof of

354 erosive forces aren't required. He said the amendment directs that rip rap can be  
 355 repaired but the property owner must provide the District documentation that the rip rap  
 356 repair is being done to standard. Interim

357 Administrator Jeffery said that if the Board is wanting instead to say the District will  
 358 fund that rip rap repair, then the Board would toss out this proposed amendment and  
 359 start over. He said the existing scoresheet doesn't account for wake boats, but the  
 360 scoresheet has data behind it and is defensible. Interim Administrator Jeffery said he  
 361 isn't debating that wake boats need to be considered and accounted for, but he isn't sure  
 362 this proposed amendment is the time to try and account for wake boats. He pointed out  
 363 the purpose of this amendment is to ease the burden right now for the people with rip  
 364 rap or existing shoreline stabilization techniques that need repair.

365 Manager Koch said the District should make sure the amendment states that the rip rap  
 366 must meet the DNR requirements. Interim Administrator Jeffery said the amendment's  
 367 language includes that it is necessary to meet 3-4 but not 3-1, which is the erosion  
 368 intensity. Manager Koch asked if inspection language can be included in the permit  
 369 conditions. Manager Jeffery said yes.

370 The managers and staff discussed the upcoming University of Minnesota St. Anthony  
 371 Falls research report and how the data could be reviewed and applied to the District's  
 372 erosion intensity scoring process.

373 Manager Ziegler moved to approve Rule D and Rule F as written and for the Board to  
 374 revisit the erosion intensity score sheet and the District's rules when the District has the  
 375 additional research data on wake boats. Manager Koch seconded the motion. Attorney  
 376 Smith clarified that the approval is per adoption of the resolution to adopt the rule  
 377 amendment. Manager Koch made the friendly amendment to adopt resolution 2021-003  
 378 to adopt the rule amendment. Manager Ziegler accepted the friendly amendment.

379 Upon a roll call vote, the motion carried 5-0 as follows:

380

<i>Manager</i>	<i>Action</i>
Crafton	Aye
Koch	Aye
Pedersen	Aye
Ward	Aye
Ziegler	Aye

381

382

383 **f. Authorize Change to SRF Contract to Provide Construction Administration**  
 384 **Services for St. Hubert’s Opportunity Project**

385 Interim Administrator Jeffery said the previous project manager thought the District  
 386 would provide the construction administration services in-house, but due to  
 387 considerations such as staff capacity and liability for a project the District didn’t design,  
 388 he recommends the District have SRF provide construction administration services. He  
 389 said he will direct SRF to write the proposal to have a cost not-to-exceed and to itemize  
 390 costs, because there are tasks District staff can complete such as grant reporting.

391 Manager Koch asked questions about the District’s contract with SRF, including about  
 392 the proposed extra cost. Interim Administrator Jeffery said the not-to-exceed cost is  
 393 \$19,850.

394 Manager Koch moved to authorize Attorney Smith and Interim Administrator Jeffery to  
 395 prepare a contract amendment including the District’s standard terms and conditions  
 396 and including the provision of the construction administration services set forth in  
 397 SRF’s letter and those amounts identified in the letter. Manager Pedersen seconded the  
 398 motion.

399 Upon a roll call vote, the motion carried 5-0 as follows:

400

<i>Manager</i>	<i>Action</i>
Crafton	Aye
Koch	Aye
Pedersen	Aye
Ward	Aye
Ziegler	Aye

401

402 **g. Adopt Resolution 2021-004 Allowing for use of Stewardship Grant for**  
 403 **Various Shoreline Stabilization Practices (Permitted)**

404 Interim Administrator Jeffery said this item is in front of the Board because the  
 405 District’s cost-share program specifies that any activity that needs to be done to abide  
 406 by the District’s regulatory program is ineligible for cost-share funds. He said staff  
 407 thinks the public good of shoreline stabilization is self-evident, so staff recommends  
 408 shoreline stabilization projects be eligible for the District’s cost share grants. Interim  
 409 Administrator Jeffery said the resolution as written only provides for bioengineering  
 410 techniques to be eligible for cost share grants. He said the Board can consider what  
 411 types of techniques it wants to make eligible for cost-share funds. Manager Pedersen  
 412 said she is in favor of the resolution as written and that the Board can reconsider at a

413 future time if the District receives more data about wake boats. Manager Ziegler  
 414 seconded the motion.

415 Manager Koch said that with this motion, the District isn't providing money where it  
 416 really needed and is providing money for projects on shoreline that needs less  
 417 protection. He said the Board can discuss this at a later date, but he wants to point out  
 418 that the District isn't putting money where the most damage is happening.

419 Upon a roll call vote, the motion carried 5-0 as follows:

420

<i>Manager</i>	<i>Action</i>
Crafton	Aye
Koch	Aye
Pedersen	Aye
Ward	Aye
Ziegler	Aye

421

422 **h. Selection of Consultants**

423 [Item to be discussed at the meeting continuation.]

424

**10. Discussion Items**

425 **a. Silver Lake Shorewood Street Reconstruction (Pedersen)**

426 Manager Pedersen asked Interim Administrator Jeffery to update the Board on progress  
 427 made in the past month. Interim Administrator Jeffery provided an update, adding that  
 428 plans, estimated costs, and a cost-share application will be submitted by the City to the  
 429 District.

430 **b. 2021 Work Plan (Koch)**

431 Manager Koch asked if the Board and staff need to adjust the District's 2021 workplan.  
 432 He said he wants to know sooner rather than later about potential impacts or adjustments  
 433 to the workplan. Interim Administrator Jeffery said he will pull together the staff and go  
 434 through the workplan and come back to the Board with an assessment and any  
 435 recommendations about the 2021 workplan.

436 **c. Strategic Planning**

437 Interim Administrator Jeffery said the Board has talked about doing strategic planning,  
 438 and he would like to reach out to Jen Kader of the Freshwater Society about strategic  
 439 planning and come back to the Board with more information.

440 President Ward commented strategic planning isn't a two-hour exercise and could take  
 441 multiple meetings over a period of time. He said it needs to be done and done right, but  
 442 he isn't in favor of embarking on it in the next 90 days. Manager Crafton remarked three  
 443 managers have viewed the movie, "Kiss the Ground." She said the movie highlights  
 444 important concepts, and those concepts could impact the District's effectiveness.  
 445 Manager Crafton said the movie could be made available to people to view on their own  
 446 to be able to discuss as part of the strategic planning process. President Ward suggested  
 447 Manager Crafton's point be assimilated into the Board's next discussion about strategic  
 448 planning.

449 **d. Administrator Report**

450 No items raised.

451 **e. Managers' Report**

452 Manager Koch reported he discussed his concerns about the upcoming audit and audit  
 453 response with Interim Administrator Jeffery. Manager Koch said he can't give Interim  
 454 Administrator Jeffery direction, but it is important that someone from the auditor is  
 455 available to answer questions.

456 Manager Koch suggested implementing tools to make it easier to find stuff on the  
 457 District's website. He said he would welcome a proposal from Interim Administrator  
 458 Jeffery about this work. Manager Koch noted he recently read information that the  
 459 District had discussed doing a report card every year, and he suggested the idea be part of  
 460 the strategic planning discussion.

461 President Ward said the Board needs to have an opportunity to ask questions during the  
 462 audit report. Treasurer Crafton said she and Interim Administrator Jeffery met today with  
 463 the auditor and let the auditor know to expect questions from the managers. Manager  
 464 Koch moved to require the auditor to produce someone at the audit presentation who can  
 465 answer Board questions about the audit. President Ward seconded the motion.

466 Upon a roll call vote, the motion carried 5-0 as follows:

467

<i>Manager</i>	<i>Action</i>
Crafton	Aye
Koch	Aye
Pedersen	Aye
Ward	Aye
Ziegler	Aye

468

469

## 11. Upcoming Board Topics

470 President Ward listed upcoming Board topics including the Soil Plan Amendment and a  
 471 review of the District’s 10-Year Plan. He asked Interim Administrator Jeffery if the May  
 472 workshop should be on the 10-Year Plan or the soil amendment. Interim Administrator  
 473 Jeffery suggested the 10-Year Plan and the report cards as well as the 2021 workplan.

474 Manager Crafton stated the District might not need to go as far as a soil plan amendment  
 475 but instead could consider adopting a soil policy and ways to encourage behaviors.

476 President Ward directed Interim Administrator Jeffery to handle the details to make the  
 477 May 5<sup>th</sup> workshop happen.

478 Manager Koch reminded the Board it tabled anything to do with the solicitation of  
 479 applications for an interim administrator until the Board’s May meeting. He suggested  
 480 tabling it indefinitely until the Board takes an affirmative step to go down the path of  
 481 soliciting applications. President Ward agreed. Manager Koch moved to table the matter  
 482 of soliciting applications for District Administrator indefinitely until the managers vote to  
 483 affirmatively solicit applications for that position. Manager Pedersen seconded the  
 484 motion. Upon a roll call vote, the motion carried 4-1 as follows:

485

<i>Manager</i>	<i>Action</i>
Crafton	Aye
Koch	Aye
Pedersen	Aye
Ward	Aye
Ziegler	No

486

## 12. Upcoming Events

- 487 • CAC Meeting, April 19, 2021, 6:00 p.m., virtual
- 488 • MPCA Turfgrass Maintenance Training, April 20, 8:30 a.m., virtual
- 489 • MPCA Smart Salting for Parking Lots and Sidewalks, April 27, 9:00 a.m.
- 490 • Board of Managers Monthly Work Session, May 5, 2021, 5:00 p.m., virtual
- 491 • Board of Managers Regular Meeting, May 5, 2021, 7:00 p.m., virtual

492

### 13. Action to Continue Meeting

493 President Ward said the Board discussed at the beginning of tonight’s meeting holding over  
494 discussing comments on the District’s annual report and the agenda item on the selection of  
495 consultants until a continuation of this meeting. Manager Koch moved to continue the meeting to  
496 April 13th at 9:00 a.m. Manager Pedersen seconded the motion. Upon a roll call vote, the motion  
497 carried 5-0 as follows:

498

<i>Manager</i>	<i>Action</i>
Crafton	Aye
Koch	Aye
Pedersen	Aye
Ward	Aye
Ziegler	Aye

499

500 The meeting was continued at 9:21 p.m.

501

502

503

504

Respectfully submitted,

505

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507

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508

David Ziegler, Secretary

## MEETING MINUTES

### Riley-Purgatory-Bluff Creek Watershed District

#### April 13, 2021, RPBCWD Board of Managers Continuation of April 7, 2021, Monthly Meeting

**PRESENT:**

**Managers:**

Jill Crafton, Treasurer  
Larry Koch  
Dorothy Pedersen, Vice President  
Dick Ward, President  
David Ziegler, Secretary

**Staff:**

Amy Bakkum, Administrative Assistant  
Zach Dickhausen, Water Resources Technician II  
Liz Forbes, Grant Coordinator  
Terry Jeffery, Interim District Administrator and Watershed Planning Manager  
Josh Maxwell, Water Resources Coordinator  
Louis Smith, Attorney, Smith Partners  
Scott Sobiech, Engineer, Barr Engineering Company

**Other attendees:**

Andrew Aller	Ahsan Ijaz
Liz Forbes	Sharon McCotter
Greg Hawks	Matt Pavek
Elizabeth Henley	Marilyn Torkelson

*Note: this meeting was held remotely via meeting platform Zoom in abidance with state mandates in response to Covid-19.*

### 1. Call to Order

- 1 President Ward called to order the Tuesday, April 13, 2021, continuation of the Wednesday, April
- 2 7, 2021, Board of Managers Regular Monthly Meeting at 9:00 a.m. The meeting was held
- 3 remotely via meeting platform Zoom.

### 2. Approval of Agenda

- 4 [Agenda item handled on April 7, 2021.]
- 5
- 6
- 7

8

## 8. Consent Agenda

9 [Agenda item handled on April 7, 2021. The following items were approved as part of the  
10 Consent Agenda: 8a – Accept March Staff Report, 8b – Accept March Engineer’s Report, 8e –  
11 Approve permit application #2021-004, Silver Lake Water Quality Project as presented in the  
12 proposed Board action of the permit report, 8f – Approve Silver Lake Land Use Agreement, and  
13 8g – Approve RPBCWD 2020 Annual Report for distribution to BWSR and the DNR.]

14

## 9. Action Items

### 15 a. Items Pulled from April 7<sup>th</sup> Consent Agenda

16

#### 17 iv. Approve RPBCWD 2020 Annual Report for distribution to BWSR 18 and the DNR.

19 [Approved on April 7, 2021, as part of the Consent Agenda. Managers  
20 requested an opportunity to provide comments on the annual report.]

21 President Ward said he has edits and suggestions. He proposed having all the  
22 managers provide their comments and edits to Interim Administrator Jeffery  
23 and Ms. Amy Bakkum to synthesize. The managers talked about the idea and  
24 the idea of changing the tone of future annual reports to be less technical.  
25 Manager Koch recommended the Board set a continuation of this meeting to  
26 talk about the synthesis of comments.

27 The Board agreed by consensus to set Tuesday, April 20 at 10:00 a.m. for  
28 continuing the Board’s April 7<sup>th</sup> meeting to continue the discussion on District’s  
29 annual report. The Board agreed by consensus that managers would forward  
30 comments on the draft annual report to District staff by 9:00 a.m. on Friday,  
31 April 16.

32

### 33 h. Selection of Consultants

34 Manager Koch recommended the Board focus on selecting an HR consultant and an IT  
35 consultant. He suggested the District redistribute the request for proposals and direct  
36 staff to figure out a way to get a better response because the District didn’t receive  
37 enough proposals for HR, IT, legal, banking, accounting, and audit services. The Board  
38 approved by consensus to direct staff to redistribute the request for proposals for all  
39 services except for engineering. Interim Administrator Jeffery requested managers  
40 forward to him their suggestions on places to send the RFPs.

41 Manager Pedersen suggested the Board discuss and decide on the engineering services.  
42 Interim Administrator Jeffery clarified that only two firms, Barr Engineer and EOR,

43 submitted a proposal for being the District Engineer and additional firms proposed  
44 being part of the District's engineering pool.

45 Manager Ziegler moved to select Barr Engineering as the District Engineer and to select  
46 EOR, SRF, Houston, and ISG for the District's engineer pool. Manager Crafton  
47 seconded the motion. Upon a roll call vote, the motion carried 5-0 as follows:

<i>Manager</i>	<i>Action</i>
Crafton	Aye
Koch	Aye
Pedersen	Aye
Ward	Aye
Ziegler	Aye

48

### 13. Action to Continue Meeting

49 Manager Koch moved to continue the meeting to April 20th at 10:00 a.m. Manager  
50 Pedersen seconded the motion. Upon a roll call vote, the motion carried 5-0 as follows:

<i>Manager</i>	<i>Action</i>
Crafton	Aye
Koch	Aye
Pedersen	Aye
Ward	Aye
Ziegler	Aye

51

52 The meeting was continued at 9:30 a.m.

53

54

55

Respectfully submitted,

56

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58

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David Ziegler, Secretary

59

## MEETING MINUTES

### Riley-Purgatory-Bluff Creek Watershed District

#### April 20, 2021, RPBCWD Board of Managers Continuation of April 7, 2021, Monthly Meeting

PRESENT:

Managers: Jill Crafton, Treasurer  
Larry Koch  
Dorothy Pedersen, Vice President  
Dick Ward, President  
David Ziegler, Secretary

Staff: Amy Bakkum, Administrative Assistant  
Terry Jeffery, Interim District Administrator and Watershed Planning Manager  
Josh Maxwell, Water Resources Coordinator

*Note: this meeting was held remotely via meeting platform Zoom in abidance with state mandates in response to Covid-19.*

#### 1. Call to Order

1 President Ward called to order the Tuesday, April 20, 2021, continuation of the Wednesday, April  
2 7, 2021, Board of Managers Regular Monthly Meeting at 10:00 a.m. The meeting was held  
3 remotely via meeting platform Zoom.

#### 2. Approval of Agenda

4 [Agenda item handled on April 7, 2021.]

#### 9. Action Items

##### h. Review and Approval of Annual Report

5  
6 President Ward reported that due to technical issues, staff did not receive all the  
7 comments on the annual report that managers emailed to staff. He said for that reason  
8 this meeting will need to be continued to a later date to give staff time to access the  
9 managers' comments. Interim Administrator Jeffery recommended managers submit  
10 their comments by uploading them through Google Docs or Dropbox.

11 Interim Administrator Jeffery said the District needs to provide the Minnesota Board of  
12 Water and Soil Resources with the District's annual report by end of business day on  
13 April 30.

14 Manager Koch recommended this meeting be continued to Monday, April 26 at 1:00  
15 p.m. He suggested managers provide their comments on the report to staff as soon as

16 possible so staff can provide, by the end of Friday, something for the managers to  
17 review over the weekend.

18

### 13. Action to Continue Meeting

19 Manager Koch moved to continue the meeting to April 26th at 1:00 p.m. Manager Pedersen  
20 seconded the motion. Upon a roll call vote, the motion carried 5-0 as follows:

21

<i>Manager</i>	<i>Action</i>
Crafton	Aye
Koch	Aye
Pedersen	Aye
Ward	Aye
Ziegler	Aye

22

23 The meeting was continued at 10:11 a.m.

24

25

26

Respectfully submitted,

27

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29

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David Ziegler, Secretary

30

**Draft Minutes: April 19, 2021**  
**RPBCWD Citizens' Advisory Committee Monthly Meeting**  
**Virtual Via Zoom**

**Member Attendance** (By each name, put a P=Present, E=Excused, not present but with notification or A=Absent with no notification)

Andrew Aller	P	Samuel Griffin	P	Terry Jorgenson	P	Jeff Weiss	P
Rodey Batiza	P	Heidi Groven	P	Sharon McCotter	P	Jessica Wiley	P
Kim Behrens	P	Michelle Frost	P	Jan Neville	E		
Jim Boettcher	P	Peter Iverson	E	Marilynn Torkelson	P		

Terry Jeffery	RPBCWD staff	P
Liz Forbes	RPBCWD staff	P
Joshua Maxwell	RPBCWD staff	P
Jill Crafton	BOM	P

<b>Key CAC MOTIONS for the Board of Managers:</b>
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- |         |
|---------|
| 1. None |
| 2.      |

<b>Key CAC discussion items for the Board of Managers:</b>
--

- |    |
|----|
| 1. |
| 2. |

**I. Opening**

- A. **Call CAC meeting to Order:**
- B. **Attendance:** As noted above.

- C. **Staff and Manager introductions** Jill appointed in 2009. Liz hired as grant program coordinator, groundwater & other duties as assigned. 11 candidates for E&O positions being interviewed.
- D. **Matters of general public interest:** none
- E. **Approval of Agenda: Kim to be timekeeper.** Andrew made a motion to approve the agenda and Sam seconded. Motion passed.
- F. **Approval of April 6, 2021 CAC Special Meeting Minutes:** Sharon made a motion, Kim seconded. Then Sharon asked a question on the dispersal of the special meeting minutes... Terry says CAC does not need to conform to open meeting laws. So CAC **can** email each other. Sharon wants to know if special meeting minutes could be sent to BOM, Terry will include in May BOM minutes, along with his research on potential effects to the creek and spring. Terry wants official CAC communications with BOMs to go through him. Motion to approve minutes was approved.

## II. Board Meeting Recap and Discussion -

- A. Highlights from the (monthly) managers meeting were presented by Sharon McCotter.
  - 1. **March Meeting** (Bylaws Recommendation) Attorney says it's ok to ask for a 2 year initial CAC membership commitment, but it can't be a requirement just a recommendation. Does this change to the bylaws have to be posted for 30 days? No just notify the absent CAC members only. Terry to send out email to non attending CAC members.
  - 2. **April Meeting**
    - a) BOM response to CAC recommendations on the Board-Noble Hill Housing Development was that they were very glad to receive the information about citizen concerns on the project. BOM asked for information to be gathered and presented at May BOM mtg on will project affect creek and spring. Rule D and E shoreline amendments were passed. WSG with the municipality to fix trash, sediment, etc..while also doing street improvements. District administrator posting being postponed indefinitely due to other demands on the district currently.
    - b) New CAC topics referred from the Board (overview): Sharon proposed a couple of ways for CAC to work with the BOM. First: Join in the BOM workshops for upcoming strategic planning. Second: Participate in the annual district scorecard include DEI section. Terry to look at 10 year plan reassessment of work to tackle in 2021. What can be accomplished considering staff turnover. Sharon also talked about how construction projects can create an "Incidental wetland".
- B. Questions from CAC and/or highlights (if needed)

### **III. Program and Project Updates; Staff Engagement with CAC; Learning Presentations**

- A. **Advisory Topics from Board of Managers** (Project / Details)
- B. **Learning Presentation** - Learning Topic: Creek Restoration Action Strategy (CRAS) - Josh Maxwell Water Resources Coordinator CRAS is a framework to establish relative creek resto priorities across all creeks- outside funding, coordination with other projects acute threats may affect priority. 89 subreaches identified 8 with severe degradation and 33 reaches with high degradation.
- C. **District Project Update** - Upper Riley Creek Ecological Enhancement Plan update - Terry- This project is almost 2 miles of stream located in the reach from Hwy 5 to Lake Susan. CRAS score of 41. This forms a delta about  $\frac{3}{4}$  acre in size emptying into Lake Susan that is just the larger visible particles. The restoration will include 9 rock riffles, 35 cross vanes, 10 outlet modifications, 5 floodplain reconnections. Anticipated Outcome Reduction of pollutant load of 470,000 pounds per year of TSS and 250 pounds per year of TP. Biodegradable materials will be used including root balls instead of boulders if the trees have to be removed anyway.

### **IV. CAC Business: Process and Function**

- A. **CAC Re-Entry Discussion** When do we start meeting in-person again? We voted, some members were ok with in person meetings and others are still very uncomfortable. We decided next month will be 100% zoom again.
- B. **Identification of Citizen Issues for BOM** How might we do this? Terry suggested CAC citizen reports. Then have the CAC vote on bringing to BOM. Heidi suggested we think about it and discuss at the next meeting.
- C. **Committee Scope / Interests** Committee members who are interested should share a 1 paragraph bio and send them to Heidi within next week as a way of getting to know each other better. We reviewed the status of the subcommittees.
- D. **Recap of Learning Topics** From previous discussion our highest priorities are to learn more about wetlands and deep dive into current projects.
- E. **2021 Calendars**
  - 1. Volunteers for Board meetings: **Need** June and August Board meeting attendees. Sign up on the Google docs calendar. Kim volunteered to attend BOM meeting in June.
- F. **Planning next meeting**

### **V. Upcoming Events and Meeting Close.**

- A. RPBCWD Board of Managers May 5th 2021; 7:00 PM Regular board meeting – virtual Zoom meeting - Heidi to attend on behalf of the CAC

- B. RPBCWD CAC Meeting May 17th, 2021; 6:00 PM – virtual Zoom meeting; Manager Crafton to attend on behalf of the managers
- C. Motion to Adjourn made by Sharon and seconded by Terry. Meeting adjourned at 8:06pm

## RPBCWD April Staff Report

Administration		Staff update	Partners
<b>Accounting and Audit</b>	<p>Coordinate with Accountants for the development of financial reports.                      Coordinate with the Auditor.                      Continue to work with the Treasurer to maximize on fund investments.</p>	<p>Staff Bakkum and Interim Administrator Jeffery compiled the monthly treasurer's report electronically.                      Staff Bakkum and Interim Administrator Jeffery met with staff from AEM on two occasions, one time with Manager Crafton present and the other with Manager Koch present, to discuss the audit.</p>	
<b>Administration</b>		<p>Interim Administrator Jeffery is working with BWSR to determine status of existing grants.                      Interim Administrator Jeffery has been reaching out to accounting, payroll, auditors, insurance providers, and building security as way of introduction and to understand current operations and statuses as well as to update log in and administrator privileges.                      Interim Administrator Jeffery continues reaching out to City Administrators, Public Works Directors, and Community Development Directors to introduce himself and open dialogue.                      Interim Administrator Jeffery is working with Carver County Land Records and the MN Board of Soil and Water Resources to assign properties to the appropriate watershed district.</p>	

<b>Hiring</b>		<p>Staff Bakkum and Administrator Jeffery, along with Gael Zembal of Nine Mile Creek interviewed seven candidates for an initial round of interviews for the Education and Outreach Coordinator position. They then asked three candidates to return to present to the panel on some education topic. Administrator Jeffery anticipates making an offer the first week of May.</p> <p>Thank you to Nine Mile Creek Watershed District for their assistance in our hiring process.</p>	<p>Nine Mile Creek Watershed District</p>
<b>Annual Report</b>	<p>Compile, finalize and submit an annual report to agencies.</p>	<p>The 2020 Annual Report has been edited and was submitted to the BWSR and the DNR on April 30, 2020</p>	
<b>BWSR</b>	<p>Discuss Targeted Watershed Grant Distribution.</p>	<p>Working with BWSR to closeout grants.</p>	<p>9-Mile WD Eden Prairie BWSR Bloomington Chanhassen Carver Co. Hennepin Co. LMRWD</p>

			Minnetonka Waconia
<b>DEI</b>	Diversity, Equity and Inclusion	No action has taken place on DEI. The E&O job description does ask applicant to have an understanding of DEI and several applicants have applicable experience and education.	Metro Watershed Partners
<b>Human Resources</b>	General Human Resources	No new updates	
<b>Internal Policies</b>	Work with Governance Manual and Personnel Committees to review bylaws and manuals as necessary.	No new update	
<b>Advisory</b>	Engage with the Technical Advisory Committee on water conservation, chloride management and emerging topics. Engage with the Citizen Advisory Committee on water conservation, annual budget and emerging topics.	<i>The CAC held a regular meeting on April 19. Staff Maxwell gave a learning presentation on the CRAS. Interim Administrator gave an update on the Upper Riley Project. Staff Forbes was introduced to the CAC. More discussion occurred around fine tuning the CAC Process and Function.</i>	

<b>Local SWMP</b>		No change.	
<b>MAWD</b>		No update.	
<b>District-Wide</b>			
<b>Regulatory Program</b>	<p>Review regulatory program to maximize efficiency.</p> <p>Engage Technical Advisory Committee and Citizen Advisory Committee on possible rule changes.</p> <p>Implement a regulatory program.</p>	<p>The new public interface is up and running for the permit database and application. You can view that here: <a href="https://ms4front.net">MS4 Permit Software (ms4front.net)</a></p> <p>Ten permits have been received since the March Regular Meeting of the Board of Managers.</p> <p>The new inspection tool is up and running. The database is now populated with the permits from 2020 and 2021, and 2019 permits are currently being imported. The new inspections report format is included in this month's packet. Some modifications are expected.</p> <p>The Noble Hill project in Eden Prairie has garnered a lot of attention from community members and environmental advocacy groups. Engineer Sobiech is reviewing the submittal and Interim District Administrator Jeffery is fielding phone calls and emails from the community and advocacy groups.</p>	

<p><b>Aquatic Invasive Species</b></p>	<p>Review AIS monitoring program.          Develop and implement Rapid Response Plan as appropriate Coordinate with LGUs and keep stakeholders aware of AISmanagement activities.          Manage and maintain the aeration system on Rice Marsh Lake.          Riley Chain of Lakes Carp Management.          Purgatory Chain of Lakes Carp Management.          Review AIS inspection program.          Keep abreast in technology and research in AIS.          Zebra mussel adult and veliger monitoring.</p>	<p>The Purgatory Creek Rec Area (PCRA)/Staring fish barrier remained closed over the winter and into spring. Staff have removed 386 carp below the barrier across three sampling events. Staff will continue to monitor the location and conduct further removal events if warranted.          Rice Marsh aeration. During the last sampling event in early March, Dissolved Oxygen levels were below 1mg/L indicating a winterkill. Staff have been looking into the possibility of an additional surface agitator unit to be placed in the lake in combination with the existing system due to the frequency of kills recently. Staff will purchase 1,000 bluegills to stock – 800 Rice Marsh Lake and 200 in Purgatory Creek Recreational Area. These stockings should prevent carp from having a successful recruitment year.          Staff were notified of a significant goldfish population in the stormwater pond closest to the Eden Prairie Outdoor Center last month. A trial removal event was conducted and 196 were captured in 40 minutes using backpack electrofishing. Staff purchased a large seine net to improve capture efficiencies and are waiting to conduct further removal events until it arrives. Staff also were notified of Goldfish in Kerber Pond draining to Lotus. Staff will be looking into the use of rotenone (fish toxin) for treating stormwater ponds with significant goldfish populations. This would occur in the winter months if approved.          Staff attended the Metro Carp Management Meeting this month. Main topics included the various types of aeration systems, and the effect carp have on alum treatments.</p>	<p>City of Chanhassen          City of Eden Prairie          University of Minnesota          MN DNR          Carver County</p>
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<b>Cost-Share</b>	<p>Schedule and coordinate site visits.</p> <p>Review applications and recommend implementation.</p> <p>Evaluate program.</p>	<p>Staff Forbes reached out to active grantees to introduce herself and field questions. The first grant application review session of 2021 is scheduled for April 30 &amp; will discuss six application packets. Site visits for potential grant applicants are underway with 29 site visits scheduled in April.</p>	<p>Carver County Soil and Water Conservation District</p>
<b>Data Collection</b>	<p>Continue Data Collection at permanent sites.</p> <p>Identify monitoring sites to assess future project sites.</p>	<p>WOMP stations: samples were collected 3 times this month for the Metropolitan Council. Staff attended the Metropolitan Council Annual Meeting.</p> <p>Staff will start conducting regular lake and stream monitoring beginning in May.</p> <p>Staff Maxwell submitted an abstract for the Water Resources Conference which occurs in October. Staff Maxwell and Brandon Barnes (BARR) will jointly present data on the spent lime unit if accepted.</p> <p>All lake level sensors were placed this month and last month.</p> <p>Staff will be placing auto sampling units at locations where more information is needed this coming month.</p>	<p>Metropolitan Council</p> <p>City of Eden Prairie</p> <p>University of MN</p> <p>City of Chanhassen</p> <p>MNDNR</p> <p>City of Minnetonka</p>
<b>District Hydrology and Hydraulics Model</b>	<p>Coordinate maintenance of Hydrology and Hydraulics Model.</p> <p>Coordinate model update with LGUs if additional information is collected.</p> <p>Partner and implement with the City of Bloomington on Flood Evaluation and Water Quality Feasibility.</p>	<p>District Staff, Barr Engineering, and Eden Prairie staff have been in discussions about updates to the District's stormwater model within the City (both Purgatory Creek and Riley Creek models). District staff will collect water levels in some key ponds and stream locations for model validation. Staff has begun placing units already this past month.</p>	<p>City of Bloomington</p> <p>City of Minnetonka</p> <p>City of Eden Prairie</p> <p>City of Deephaven</p> <p>City of Shorewood.</p>

<p><b>Education and Outreach</b></p>	<p>Implement Education &amp; Outreach Plan, review at year end.          Manage partnership activities with other organizations.          Coordinate Public Engagement with District projects.</p>	<p>Staff Bakkum continues to receive inquiries via the District website’s “Contact Us” form.          125 trees and shrubs were installed into the miniature gravel beds at the District Office.          Staff Bakkum will work with incoming E &amp; O Coordinator to expand and/or create outreach.          Staff Toavs is compiling a list of Adopt-A-Dock volunteers and gathering appropriate materials in preparation for the delivery of monitoring plates to volunteers.          Round Lake Fact sheets, trail maps, and stickers were given to the City of Eden Prairie for the Arbor Day event located near Round Lake.          About 100 grab bags were distributed.          Staff Forbes gave a presentation on April 14 to the Pax Christi Catholic Community about the District and how to help protect water quality.          Staff Maxwell and Jefferey presented at the Lake Riley Association meeting on 4/26/21. Updates were given on 2020 data and 2021 projected plans.          Staff Forbes is evaluating and editing the grant section of the website for clarity with larger changes planned for the future.</p>	<p>Adopt a drain: City of Eden Prairie, City of Minnetonka, City of Bloomington, City of Eden Prairie Hamline University, Nine Mile Creek Watershed District, MPCA, Fortin Consulting</p>
<p><b>Groundwater Conservation</b></p>	<p>Work with other LGUs to monitor, assess, and identify gaps.          Engage with the Technical Advisory Committee to identify potential projects.          Develop a water conservation program (look at Woodbury model).</p>	<p>No new updates.</p>	<p>Metropolitan Council          City of Eden Prairie          City of Shorewood          City of Bloomington          City of Minnetonka          City of Chanhassen</p>

<p><b>Lake Vegetation Management</b></p>	<p>Work with the University of Minnesota or Aquatic Plant Biologist, Cities of Chanhassen and Eden Prairie, lake associations, and residents as well as the Minnesota Department of Natural Resources on potential treatment. Implement herbicide treatment as needed.</p> <p>Secure DNR permits and contracts with herbicide applicators.</p> <p>Lakes the District is monitoring for treatment include: Lake Susan, Lake Riley, Lotus Lake, Mitchell Lake, Red Rock Lake and Staring Lake.</p> <p>Work with Three Rivers Park District for Hyland Lake.</p>	<p>Staff gathered input from the Riley/Purg Summit and scheduled point intercept vegetation surveys and spring herbicide application surveys. Below is a list of what is proposed/confirmed to be treated - what herbicide will be used – likelihood/confirmation of treatment (spring delineation will determine):</p> <ul style="list-style-type: none"> <li>• CLP - Red Rock - Diquat – Yes - 13 acres</li> <li>• CLP - Mitchell - Diquat – Yes - 13 acres</li> <li>• CLP - Lotus - Diquat - TBD</li> <li>• CLP - Riley - Diquat - Yes</li> <li>• CLP - Susan - Diquat - Yes</li> <li>• CLP - Staring - <u>Diquat</u> – NO TREATMENT</li> </ul> <p>Jacob Olson (Graduate Research Assistant) and Ray Newman (Professor) - University of Minnesota. The 2020 Annual Report and Completion Report was delivered to the RPBCWD in March. Data collected over the years by the Newman lab have been organized for access by RPBCWD personnel. A document describing data files and data is being finalized. Processed plant biomass samples from the Riley Project have been organized and placed into storage. Olson’s committee was finalized, and he is continuing to work on a thesis research proposal for them. Olson is preparing materials to present at the 2021 UCOWR Annual Water Resources Conference in June of 2021.</p>	<p>City of Eden Prairie  City of Chanhassen  University of Minnesota  MNDNR</p>
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<b>Opportunity Projects</b>	Assess potential projects as they are presented to the District.	No new updates	ISG Staring Lake Outdoor Center The Preserve Association
<b>Total Maximum Daily Load</b>	Continue working with Minnesota Pollution Control Agency on the Watershed Restoration And Protection Strategies (WRAPS). Engage the Technical Advisory Committee.	No new updates	MPCA
<b>Repair and Maintenance Grant</b>	Develop and formalize grant program.	No new updates	
<b>University of Minnesota</b>	Review and monitor progress on University of Minnesota grant. Support Dr John Gulliver and Dr Ray Newman research and coordinate with local partners. Keep the manager abreast to progress in the research. Identify next management steps.	The City of Eden Prairie applied iron filings on Bren pond at the end of February. This is a continuation of the 2020 iron filings project to assess the effectiveness of iron filings on locking phosphorus in pond sediments. The results from the two ponds treated in 2020 were inconclusive. The Gulliver Lab will continue to monitor all three ponds through this summer.	Stormwater ponds partners: Bloomington, Chanhassen, Eden Prairie, Minnetonka, Shorewood, University of MN,

			Wenck, and Limnotech.
<b>Watershed Plan</b>	Review and identify needs for amendments.	No changes	
<b>Wetland Conservation Act (WCA)</b>	Administer WCA within the Cities of Shorewood and Deephaven. Represent the District on Technical Evaluation Panel throughout the District.	No WCA applications have been received in Deephaven. No WCA applications have been received in Shorewood.	City of Shorewood City of Deephaven City of Chanhassen City of Eden Prairie MCWD BWSR DNR ACOE
<b>Wetland Management</b>	Assess known existing wetlands, identify previously unknown wetlands, identify wetlands for potential restoration/rehabilitation and wetlands requiring additional protection.	Staff Jeffery, Staff Dickhausen and staff Nicklay continue updating the MNRAM Access database. As the weather warms and things start to green up, field MNRAMs will begin. Final tweaks have been made to the MNRAM application to allow for easier export/import and to tailor the scoring rubric to reflect RPBCWD Rule D. Staff Jeffery is working with Joe Bischoff from Barr Engineering to develop the ecosystem services assessment.	City of Chanhassen City of Eden Prairie Hennepin County Carver County MNDNR BWSR USFWS

<b>Hennepin County Chloride Initiative</b>	Phase 1: Develop a plan to target commercial and association-based sources or chloride pollution - businesses, malls, HOAs, property management companies and the private applicators that they hire. We will hire a consultant to facilitate focus groups with private applicators, as well as those that execute contracts with private applicators. These focus groups will help identify needs and barriers for our target audience. The consultant will compile information into a plan for implementation.	Next meeting is scheduled for May 4 <sup>th</sup> .	
<b>Lower Minnesota Chloride Cost-Share Program</b>	The Lower Minnesota River Watersheds are coming together to offer cost-share grants.	Chloride Reduction cost-share grant remains open and is posted on District website and advertised through Fortin Consulting and the MPCA.	LMRWD, RBWMO, NMCWD
<b>Bluff Creek One Water</b>			
<b>Bluff Creek Tributary Restoration</b>	Implement and finalize restoration. Monitor Project.	On hold till Spring.	City of Chanhassen
<b>Wetland Restoration at 101</b>	Remove 3 properties from flood zone, restore a minimum 7 acres and as many as 16 acres of wetlands, connect public with resources, reduction of volume, rate, pollution loads to Bluff Creek.	Plans are being developed for the wetland restoration. Staff Jeffery is finalizing the documents for final payment from the DNR Flood Hazard Mitigation grant received for the purchase and demolition of the properties.	City of Chanhassen MN DNR Carver County
<b>Riley Creek One Water</b>			
<b>Lake Riley Alum</b>	Continuing to monitor the Lake.	Coring will occur in the fall of 2021 to assess the effectiveness of the alum application. Summer monitoring will continue.	

<b>Lake Susan Improvement Phase 2</b>	Complete final site stabilization and spring start up. Finalize and implement E and O for the project. Monitor project.	No new updates	City of Chanhassen Clean Water Legacy Amendment
<b>Lake Susan Spent Lime</b>	2021 startup and monitoring.	The unit will be turned on this month and an Enviro DIY unit will be placed to monitor water levels.	City of Chanhassen
<b>Lower Riley Creek Stabilization</b>	Coordinate agreement and acquire easements if needed for the restoration of Lower Riley Creek reach D3 and E. Implement Project. Continue Public Engagement for project and develop signage of restoration.	On hold till Spring.	City of Eden Prairie Lower MN River Watershed District
<b>Rice Marsh Lake Alum Treatment</b>	Continuing to monitor the Lake.	No new updates.	City of Eden Prairie City of Chanhassen
<b>Rice Marsh Lake Watershed Load Project 1</b>	Conduct feasibility. Develop cooperative agreement with City of Chanhassen.	Resolution included in board packet	City of Chanhassen
<b>Upper Riley Creek</b>	Work with city to develop scope of work(in addition to stabilizing the creek can we mitigate for climate change). Conduct feasibility. Develop cooperative agreement with the City of Chanhassen. Order project and begin design.	Interim Administrator Jeffery and Engineer Sobiech will be presenting the project to the Chanhassen City Council at their 4/12/21 Regular Meeting.	City of Chanhassen

<p><b>Middle Riley Creek</b></p>	<p>Work with Bearpath HOA/Golf Course to develop scope of work (in addition to stabilizing the creek can we mitigate for climate change and provide for an improved recreational experience). Draft feasibility report. Develop cooperative agreement with Bearpath.</p>	<p>Engineer and staff are continuing to work with Bearpath. Drafts of the cooperative agreement and the land use agreement are included in your packet. The joint notification application was submitted to the City of Eden Prairie and the U.S. Army Corps of Engineers. A MPARS application was submitted to the MN DNR. After review of the plans and the application, the area hydrologist felt it appropriate to have the RPBCWD permit under the general permit.</p>	<p>Bearpath Neighborhood Association. City of Eden Prairie Dept. of Natural Resources</p>
<p><b>St Hubert Water Quality Project</b></p>		<p>Interim Administrator Jeffery followed up with BWSR and the grant is in place. Advertisement for bids were sent to the newspapers and posted on our website. The bid opening is tentatively set for May 5<sup>th</sup>.</p>	<p>CCSWCD Metropolitan Council City of Chanhassen</p>

<b>Purgatory Creek One Water</b>			
<b>PCRA Berm</b>		Staff met with Wenck Engineering, City Partners and the MNDNR to finalize the plan on the repair of berm and modifications to the overflow structure after changes were made from the last meeting. Additional details will be gathered on impacts to Technology Drive, interim hydrology modeling, District rules triggered, estimated cost, and the US Army Corp input on project. A Technical Advisory Panel will be scheduled. Tentative partial installation of the project is scheduled in October.	City of Eden Prairie MN DNR
<b>Duck Lake Water Quality Project</b>	Work with the City to implement neighborhood BMP. Identify neighborhood BMP to help improve water resources to Duck Lake. Implement neighborhood BMPs.	No Change	City of Eden Prairie
<b>Lotus Lake – Internal Load Control</b>	Continuing monitoring the lake. Plan second alum dose application.	In 2021, staff will add phosphorus monitoring at a second location on Lotus Lake in the east bay. This will allow staff to better assess the alum treatment effectiveness across Lotus Lake.	
<b>Scenic Heights</b>	Continue implementing restoration effort. Work with the City of Minnetonka and Minnetonka School District on Public Engagement for project as well as signage.	Final pay app for the project is being processed this month.	Minnetonka Public School District City of Minnetonka Hennepin County
<b>Silver Lake Restoration</b>	Order project. Design Project. Work with the City of Chanhassen for Design, cooperative agreement and	Administrator Jeffery, Counselor Welch, and the design engineer from Barr have been finalizing contract documents and bonding documents with Molnau Trucking LLC	City of Chanhassen

	Implementation.		
<b>Professional Development</b>	<ul style="list-style-type: none"> <li>• Staff Jeffery and Staff Dickhausen attended two BWSR training events to maintain their Wetland Delineator Certifications.</li> <li>• Staff Nicklay completed the Construction Site Inspection EPSC certification program.</li> </ul>		

## Memorandum

**To:** Riley-Purgatory-Bluff Creek Watershed District Board of Managers and District Administrator  
**From:** Barr Engineering Co.  
**Subject:** Engineer's Report Summarizing April 2021 Activities for May 5, 2021, Board Meeting  
**Date:** April 28, 2021

The purpose of this memorandum is to provide the Riley-Purgatory-Bluff Creek Watershed District (RPBCWD) Board of Managers and the District Administrator with a summary of the activities performed by Barr Engineering Co., serving in the role of District Engineer, during April 2021.

### General Services

- a. Participated in a virtual meeting on April 7<sup>th</sup> with staff Maxwell to discuss 2021 monitoring and locations to expand the monitoring in support of the ongoing climate resiliency modeling efforts, wetland program, and pond assessment efforts.
- b. Worked with Counsel Smith to revise the draft cooperative agreement with Bearpath Golf and Country Club of the Middle Riley Creek project as well as drafting temporary construction access agreements with the homeowner's association (owner of the private streets) and two private residences.
- c. Participated in an April 26<sup>th</sup> virtual meeting with the MPCA and stakeholder group to discuss draft crediting framework for manufactured treatment devices (MTDs). The discussion included addressing the annual volume issue for MTDs, the issue of translators in the context of a possible research effort, and how a device is sized to meet a design storm (single event basis). Once this is done, we could incorporate the approach into guidance and/or propose research to test this.
- d. Participated in an April 12<sup>th</sup> meeting with Interim Administrator Jeffery and Houston Engineering Inc to discuss the regulatory database workflow, automatic emails and revisions to data uploads.
- e. Lead an April 13<sup>th</sup> meeting with Bearpath Golf and Country Club to discuss the revised draft cooperative agreement, highlight the 90% plans for Middle Riley Creek, project timeline, permitting requirements, and needed agreements with private property owners to facilitate access.
- f. Coordinated with Interim Administrator Jeffery and Counsel Welch to develop a draft cooperative agreement between the District and City of Chanhassen of the Rice Marsh Lake Water Quality improvement project.
- g. Coordinated an April 16<sup>th</sup> meeting with Interim Administrator Jeffery and Bob Obermeyer (served RPBCWD for >25 years as engineer) to discuss past experience and knowledge of Fredrick Miller Springs

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- h. Met with Interim Administrator Jeffery and staff Maxwell on April 21<sup>st</sup> to discuss outline for May 5<sup>th</sup> workshop. Prepared for materials for May 5<sup>th</sup> workshop on the 10-year plan and capital improvement program.
- i. Participated in an April 26<sup>th</sup> meeting with President Ward, interim Administrator Jeffery, and Counsel Smith to discuss upcoming May 5<sup>th</sup> Agenda.
- j. Met with Interim Administrator Jeffery, Stantec/Wenck, and the City of Eden Prairie on April 27<sup>th</sup> to discuss potential repair to the berm separating the north and south basin in the Purgatory Creek Park area. Stantec/Wenck presented the initial design they developed under contract with the District. Other items discussed include csrp management, wetland impacts/permitting, RPBCWD permitting, and City/District project coordination/roles.
- k. Participated in the April 7<sup>th</sup> regular Board of Managers meeting.
- l. Prepared Engineer's Report for engineering services performed during April 2021.
- m. Miscellaneous discussions and coordination with Interim Administrator Jeffery about the regulatory program, assistance during administrator transition, board workshop, annual report, and upcoming Board meeting agenda.

### **Permitting Program**

- a. *Permit 2019-051: Berrospid Addition* – This project is proposing to split an existing lot with one single family home at 7406 Frontier Trail in Chanhassen, MN into three separate lots for the addition of two single family homes. The proposed project triggers RPBCWD's floodplain management, erosion control, wetland and creek buffer, and storm water management rules. At the August 5, 2020 meeting, the Board of Managers conditionally approved permit 2019-051. Reviewed information from the developer's request for a reduced financial assurance amount and prepared a memo outlining the request for Manager consideration at the May 5<sup>th</sup> meeting. Reviewed the draft maintenance declaration and provided feedback on necessary changes.
- b. *Permit 2020-051: BIOLYPH Parking* – This project is a 0.55-acre parking lot expansion at the BIOLYPH building in Chaska, MN. The permit triggers RPBCWD's Erosion Prevention and Sediment Control Rule (Rule C) and Stormwater Management Rule (Rule J). Stormwater management facilities include an underground storage system with hydrodynamic separators and a rainwater harvest and reuse system. Reviewed April 9<sup>th</sup> and April 22<sup>nd</sup> submittals and provided comments. Drafted a permit review report for consideration at the May 5<sup>th</sup> Board of Managers meeting.
- c. *Permit 2020-060: Christian Brothers Automotive*– This project proposed construction of an auto care center and associated parking areas on Crossroads Boulevard in Chanhassen, MN. A subsurface stormwater management facility is proposed to provide volume control, water quality, and rate control. The project triggers the erosion prevention and sediment control rule and the stormwater management rule. Participated in an April 9<sup>th</sup> conference call to discuss review comments. Provided feedback on the draft maintenance declaration.
- d. *Permit 2021-008: Minnetonka High School Momentum Building Addition* – This project consists of proposed building addition located at 18301 Highway 7 in Minnetonka. Site improvements include construction of a building addition, new sidewalks, grading,

- landscaping, and related utilities. A subsurface stormwater management system will provide stormwater rate, volume, and water quality control. The project triggers the erosion prevention and sediment control rule and the stormwater management rule. Reviewed March 19<sup>th</sup> and 25<sup>th</sup> revised submittals. Finalized review of revised submittal and draft a permit report for consideration at the May 5<sup>th</sup> regular meeting.
- e. *Permit 2021-012: Noble Hill*– The applicant is planning a low-density residential development consisting of 50 single-family homes on a 32-acre site in Eden Prairie, Minnesota. The site contains large varying slopes including steep slopes within a high-risk erosion area as delineated by the District and most of the site discharges to a wetland which abuts Riley Creek on the western border of the site. The proposed development of 50 single-family homes will include construction of associated streets, underground utilities, and stormwater features. Three infiltration basins and one sediment basin are proposed to provide stormwater quantity, volume and quality control. The proposed project triggers RPBCWD's erosion prevention and sediment control, wetland and creek buffers, and stormwater management rules. The revised submittal permit application was received on April 13<sup>th</sup> and determined to remain incomplete. Participated in an April 15<sup>th</sup> virtual meeting with the applicant to discuss their independent investigation into the potential impacts of the development on Fredrick Miller Spring. Based on the information presented during the meeting, it appears the spring receives groundwater from areas west of Riley Creek and Spring Road, the opposite side of the proposed development. The applicant was notified of the incomplete application on April 20<sup>th</sup> and submitted a revised, complete application on April 23<sup>rd</sup>. Participated in an April 21<sup>st</sup> conference call with the applicant about the review comments. Reviewed the April 23<sup>rd</sup> submittal and drafted a permit report for legal review.
- f. *Permit 2021-015: Groveland Street Reconstruction*– The City of Minnetonka is proposing a linear reconstruction project within the Groveland Neighborhood of Minnetonka, MN. The portions of Groveland School Road and Lowell Street within RPBCWD will construct 34,700 square feet (SF) of reconstructed impervious area and 1,400 SF of new impervious area. The proposed project triggers RPBCWD's erosion prevention and sediment control, and stormwater management rules. The applicant is proposing to use an existing infiltration basin on private property for stormwater management due to limited space within the ROW. Reviewed the April 7<sup>th</sup> revised submittal and notified the applicant the application remains incomplete because of missing stormwater modeling, no infiltration testing provided, and no information demonstrating the property right to use the offsite BMP. Discussed comments with the applicant's engineer on April 19<sup>th</sup>.
- g. *Permit 2021-016: Duck Lake Road reconstruction*: The project includes full reconstruction of Duck Lake Road from Duck Lake Trail to Mallard Court in Eden Prairie, MN. The project also includes replacing the culvert under Duck Lake Road with a bridge, installing a backyard drain behind the homes along pardons Drive, constructing an infiltration basin, filling a portion of the floodplain of Duck Lake, and restoring the lake outlet to the elevation permitted by the DNR in 1969. This project will trigger RPBCWD Rules B, C, D, E, F, G, and J. The applicant is requesting a variance from the requirement to provide no increase in peak discharge (Rule J, subsection 3.1a), water quality treatment of all site runoff (Rule J, subsection 3.1c), and wetland protection criteria (Rule J, subsection 3.10bii). The DNR indicated that the project should be permitted by RPBCWD under General Permit 2015-1192 and confirmed that a project specific work in public waters permit is required for the project because the RPBCWD

- general permit does not apply to fill in public waters. Reviewed March 23<sup>rd</sup>, April 16<sup>th</sup>, April 19<sup>th</sup>, and April 22<sup>nd</sup> submittals and provided comments. Conducted conference calls on April 9<sup>th</sup> and April 22<sup>nd</sup> to discuss comments. Drafted a permit review report for consideration at the May 5<sup>th</sup> Board of Managers meeting.
- h. *Permit 2021-019: Lake Riley Park Playground:* The project proposes to reconstruct a portion of Riley Lake Park in Eden Prairie, Minnesota for the construction of a new playground area and equipment, as well as construction of connecting sidewalks, ADA parking stalls, supporting underground utilities, and an underground stormwater management facility. The proposed project triggers RPBCWD's erosion prevention and sediment control and stormwater management rules. Reviewed April 19<sup>th</sup>, and April 23<sup>rd</sup> submittals and provided comments. Conducted conference calls on April 22<sup>nd</sup> and April 23<sup>rd</sup> to discuss comments. Drafted a permit review report for consideration at the May 5<sup>th</sup> Board of Managers meeting.
  - i. Participated in a April 26<sup>th</sup> meeting with Houston Engineering Inc to discuss the workflow for entering permit location data into the GIS portion of the new regulatory database.
  - j. Participated in an April 22<sup>nd</sup> preapplication meeting with Interim Administrator Jeffery, Lennar, and ISG to discuss a 100-lot development in Chaska, just west of Audubon Road. The discussion focused on the need for the project to reduce wetland impact, provide wetland buffers, and stormwater management (including wetland protection criteria).
  - k. Miscellaneous preapplication calls from applicant with questions about rule applicability and criteria.
  - l. Miscellaneous conversations with Interim Administrator Jeffery about rules, permit database status, which permits will be reviewed by staff versus Barr, and rule application.

#### **Data Management/Sampling/Equipment Assistance**

- a. Prepared, loaded, and verified 2 RMB laboratory (RMB) reports.
- b. Updated an Enterprise Report for the RPBCWD dashboard.
- c. Worked with RPBCWD to correct data from 2012-2014 collected by Eden Prairie.
- d. Worked with RMB labs to correct electronic data deliverables (EDD).

#### **Task Order 6: WOMP Station Monitoring**

##### ***Purgatory Creek Monitoring Station at Pioneer Trail***

- a. File management – lab submission forms.
- b. Download and review data.

##### ***Purgatory Creek Monitoring Station at Valley View Rd***

- a. Download and review data.
- b. Storm event sampling.
- c. File management – lab submission forms.
- d. Review MCES Lab invoice.

### **Task Order 24B: Silver Lake Water Quality Improvement Project**

- a. Awarding of contract and continued coordination with contractor (Molnau), district staff, and legal for execution of all contract documents.
- b. Finalizing construction drawing planset and "Issuing for Construction"

### **Task Order 26: Stormwater Model Update and Flood-Risk Area Prioritization Identification for the Bloomington Portion of Purgatory Creek**

- a. Draft report documenting the process for developing the prioritization framework, source information, and initial prioritized list of flood-prone areas was provided to RPBCWD, city of Bloomington, and NMCWD for review in February. Barr has not received comments on the draft deliverables, but will provide a final version of the report after comments are received and revisions to the document have been made to address the comments.

### **Task Order 28B: Rice Marsh Lake (RM\_12a) Water Quality Improvement Project**

- a. Development of 60% drawings and proposed conditions modeling.
- b. Development of permitting report to meet District requirements.
- c. Development of technical specifications and preliminary engineer's opinion of probable cost.
- d. Coordinating with City of Chanhassen's neighborhood street reconstruction project.
- e. Development of soil amendment design and monitoring plan and native vegetation types for restoration plan.
- f. Sent 60% design to City on 4/20. Awaiting response from City anticipated to be provided on 5/3.

### **Task Order 29B: Middle Riley Creek (Reach R3) Stabilization Project Design**

- a. Barr led a review of the 90% plans with Bearpath on April 13<sup>th</sup>, and will be providing updated drawings to Bearpath for final review in early May.
- b. Barr submitted permit applications to MN DNR and RPBCWD. A draft permit application was submitted to the USACE April 23. A wetland report from RPBCWD staff is needed in order to complete the submittal. Additional permit applications to the USACE and City of Eden Prairie are scheduled to be submitted the in early-April.
- c. On April 14<sup>th</sup> the DNR requested that the District complete a full review of the project under the general permit, as the DNR is short-staffed. This requires modification of the original RPBCWD design report and permit application to encompass Rules F, G, and K. Barr staff will provide an updated report to RPBCWD for review.
- d. Pending review and feedback from Bearpath, as well as permitting agencies, the tentative timeline includes presenting a bid package with updated drawings, specifications, and cost estimate to the board for approval and authorization to solicit bids at the June 2nd board meeting.

- e. Golf Course construction is still tentatively slated for September 2021, with the goal of finishing the tee areas by October 1<sup>st</sup>, and stream work construction wrapping up in November/December 2021.
- f. Discussed wetland permitting status with Interim Administrator Jeffery. RPBCWD staff is responsible for the wetland delineation report based on the 2020 field investigations. Once staff have the report, finalizing the remaining wetland permitting efforts will be turned over to Barr to move the process forward.

#### **Task Order 30B: Pioneer Trail Wetland Restoration Project**

- a. Conducted a site review to document pre-project site conditions, existing vegetation, and community types.
- b. Plan review and design revisions. Updating model to NGVD29 survey data.
- c. Preparing cost estimate and specifications.
- d. 90% design drawings and OPC to send to District for review April 28.
- e. Preparing RPBCWD permit application.
- f. Preparing Joint Application requesting WCA no-loss approval and USACE Nationwide Permit applicability.
- g. Communication with City of Chanhassen regarding permitting or notification requirements for vegetation management.
- h. Project phase planning and schedule.
- i. Discussed wetland permitting status with Interim Administrator Jeffery. RPBCWD staff is responsible for the wetland delineation report based on the 2020 field investigations. Once staff have the report finalizing the remaining wetland permitting efforts will be turned over to Barr to move the process forward.

#### **Task Order 032A: Upper Riley Creek Ecological Enhancement Plan**

- a. Presented the Ecological Enhancement Plan at the April 12 Chanhassen City Council Workshop, including presentation preparation..

#### **Task Order 033: Wetland Assessment – Phase 1**

- a. Continued drafting field data collection needs and methodologies to support the framework including Floristic Quality Assessment methodologies.
- b. Continued building example framework to demonstrate the ranking scheme and metrics. Focused on nutrient cycling and habitat. Started development of hydrology example.
- c. Began drafting Phase 1 report to define ecosystem services and describe methodology for assessing each service.

To: Riley-Purgatory-Bluff Creek Watershed District Board of Managers and District Administrator  
From: Barr Engineering Co.  
Subject: Engineer's Report Summarizing April 2021 Activities for May 5, 2021, Board Meeting  
Date: April 28, 2021  
Page: 7

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### **Task Order 035: Eden Prairie Stormwater Model Update and Flood-Risk Area Prioritization**

- a. Staff began subdividing watershed divides that are used in the District's stormwater model for Riley Creek and Purgatory Creek. Subwatershed divides are being added such that the level of resolution in the model is consistent with the level of detail in the City of Eden Prairie's subwatershed GIS file. Modifying the subwatershed divides is anticipated to continue through April. In May, draft subwatershed divides will be provided to the City for review and an opportunity to provide comments prior to updating the stormwater model for Riley and Purgatory Creek.
- b. Barr met with RPBCWD District staff to review locations where collecting additional water surface elevation measurements could be beneficial for model validation. Potential locations were identified with input from City of Eden Prairie staff as well as following a review of the stormwater model. A list of 10 locations that were distributed throughout Eden Prairie was provided to RPBCWD staff for consideration. The final number of locations where water surface measurements will be collected will be based on equipment that is available to be installed. Measurements will be collected throughout the summer and fall. Model validation will occur in the spring of 2022.
- c. The schedule for this task order extends through 2022. In 2021 work will focus on updating the District's stormwater models for Riley Creek and Purgatory Creek to include additional detail within Eden Prairie. Currently staff are working on subwatershed delineation. This summer work will shift into adding additional details for the storm sewer system. In 2022, work will include model validation, simulation of design events, inundation mapping, identification and prioritization of flood prone areas, and documentation.

### **Task Order 036A: Bluff Creek Reach 5 Concept Design**

- a. Staff began reviewing background data for the site. Any additional data collected by the District was requested for review.
- b. Staff will conduct and site visit and assessment in mid-May.

Permit Number	Project Name	Project Type	Address 1	Municipality	Perimeter Comments:	Inlet Comments:	Entrance Comments:	Sediment Comments:	Stabilization Comments:
2019-024	Conifer Heights	Private - Residential			Silt fence needs repaired multiple locations, also needs sediment removed where >50% full	No protection on street catch basin, silt fence full, releasing sediment delta into ponding area			Bare patches where seeding/blanket has failed
2020-021	Purgatory Park Pipe Replacement	Government - Other		Minnetonka					Rutting/compaction, patchy failure of seeded vegetation
2020-031	Prairie Heights	Private - Residential	12701 Pioneer Trail	Eden Prairie	Breach and sediment release on south edge, bottom of hill	2 inlets need bmp repairs			Landscape blanket needs repair near south side
2020-031	Prairie Heights	Private - Residential	12701 Pioneer Trail	Eden Prairie	Missing silt fence near top slop south west corner, silt fence needs to be emptied south edge bottom of slope				Blanket out of place in basin, unprotected stockpiles, heavy erosion channels on slope west side of south perimeter
2020-035	Honeysuckle Single Family	Existing Single - Family	18100 Honeysuckle Lane	Deephaven	Silt fence down in several locations	No protection in downgrade street inlet			
2020-038	Jones Shoreline Stabilization	Existing Single - Family	480 Bighorn Dr	Chanhasen	Needs controls along street and bottom of slope			Some sediment runoff in gutter	Landscape blanket needs maintenance
2020-043	GBM Realty Parking Lot	Commercial		Chanhasen	Perimeter controls missing around sidewalk construction and mailbox pad				Unstabilized soils in areas without active work west and south perimeters of parking lot
2020-045	Galpin Project	Private - Residential	6921 Galpin Blvd	Chanhasen				Moderate to heavy tracking in areas where homes are under construction	Straw mulch washed out in some areas
2020-047	Abdul Landscaping Project	Existing Single - Family	6921 Howard Lane	Eden Prairie	No controls along street, sw edge above slope, east and se corners				Stabilization needed along road, and south and west side of property
2020-047	Abdul Landscaping Project	Existing Single - Family	6921 Howard Lane	Eden Prairie	No controls installed			Some tracking to be swept up	
2020-057	Bluff 25 Culvert Rehabilitation Project	Government - Other		Eden Prairie				Some tracking on roadway	
2020-064	Wetterling Build	Existing Single - Family	3880 Honeysuckle Rd	Deephaven	Large gaps in perimeter control on south property line			Soil tracking on road	
2021-011	Flying Cloud Commons	Private - Commercial/Industrial	625 Prairie Center Drive	Eden Prairie	Spot maintenance needed around entire perimeter		All entrances need maintenance, large quantities of mud minimizing effectiveness	Heavy sediment tracking at south entrance gates	Large areas unstabilized, erosion channels evident



**FY 2021 STATE OF MINNESOTA  
 BOARD OF WATER and SOIL RESOURCES  
 WATERSHED-BASED IMPLEMENTATION FUNDING  
 GRANT AGREEMENT**

<b>Vendor:</b>	0000201936
<b>PO#:</b>	3000013230

This Grant Agreement is between the State of Minnesota, acting through its Board of Water and Soil Resources (Board) and **Riley-Purgatory-Bluff Creek WD, 18681 Lake Drive E Chanhassen Minnesota 55317** (Grantee).

This grant is for the following Grant Programs :		
C21-0785	2021 Metro WBIF – Lower MN River North Area Projects	\$63,865
<b>Total Grant Awarded: \$63,865</b>		

**Recitals**

1. The Laws of Minnesota 2019, 1<sup>st</sup> Special Session, Chapter 2, Article 2, Section 7(a), appropriated Clean Water Funds (CWF) to the Board for the FY 2020-2021 Watershed-based Implementation Funding.
2. The Board adopted the FY 2020-2021 Clean Water Fund Watershed-based Implementation Funding Program Policy and authorized the Watershed-based Implementation Funding Program through Board Order #19-54.
3. The Board adopted Board Order #19-54 to allocate funds for the FY 2020-2021 Watershed-based Implementation Funding Program.
4. The Grantee has submitted a BWSR approved work plan for this Program which is incorporated into this Grant Agreement by reference.
5. The Grantee represents that it is duly qualified and agrees to perform all services described in this Grant Agreement to the satisfaction of the State.
6. As a condition of the grant, Grantee agrees to minimize administration costs.

**Authorized Representative**

The State’s Authorized Representative is Marcey Westrick, Clean Water Coordinator, BWSR, 520 Lafayette Road North, Saint Paul, MN 55155, 651-284-4153, or his/her successor, and has the responsibility to monitor the Grantee’s performance and the authority to accept the services and performance provided under this Grant Agreement.

The Grantee’s Authorized Representative is:

**TITLE**  
**ADDRESS**  
**CITY**  
**TELEPHONE NUMBER**

If the Grantee’s Authorized Representative changes at any time during this Grant Agreement, the Grantee must immediately notify the Board.

**Grant Agreement**

1. **Terms of the Grant Agreement.**
  - 1.1. **Effective date:** The date the Board obtains all required signatures under Minn. Stat. § 16B.98, Subd. 5. **The State will notify the Grantee when this Grant Agreement has been executed. The Grantee must not begin work under this Grant Agreement until it is executed.**
  - 1.2. **Expiration date:** **December 31, 2023**, or until all obligations have been satisfactorily fulfilled, whichever comes first.
  - 1.3. **Survival of Terms:** The following clauses survive the expiration date or cancellation of this Grant Agreement: 7. Liability; 8. State Audits; 9. Government Data Practices; 11. Publicity and Endorsement; 12. Governing Law, Jurisdiction, and Venue; 14. Data Disclosure; and 19. Intellectual Property Rights.

2. **Grantee's Duties.**

The Grantee will comply with required grants management policies and procedures set forth through Minn. Stat § 16B.97, Subd. 4(a)(1). The Grantee is responsible for the specific duties for the Program as follows:

- 2.1. **Implementation:** The Grantee will implement their work plan, which is incorporated into this Grant Agreement by reference.
- 2.2. **Reporting:** All data and information provided in a Grantee's report shall be considered public.
  - 2.2.1. The Grantee will submit an annual progress report to the Board by February 1 of each year on the status of Program implementation by the Grantee. Information provided must conform to the requirements and formats set by the Board. All individual grants over \$500,000 will also require a reporting expenditure by June 30 of each year.
  - 2.2.2. The Grantee will prominently display on its website the Clean Water Legacy Logo and a link to the Legislative Coordinating Commission website.
  - 2.2.3. Final Progress Report: The Grantee will submit a final progress report to the Board by February 1, 2024 or within 30 days of completion of the project, whichever occurs sooner. Information provided must conform to the requirements and formats set by the Board.
- 2.3. **Match:** The Grantee will ensure any local match requirement will be provided as stated in Grantee's approved work plan.

3. **Time.**

The Grantee must comply with all the time requirements described in this Grant Agreement. In the performance of this Grant Agreement, time is of the essence.

4. **Terms of Payment.**

- 4.1. Grant funds will be distributed in three installments: 1) The first payment of 50% will be distributed after the execution of the Grant Agreement. 2) The second payment of 40% will be distributed after the first payment of 50% has been expended and reporting requirements have been met. An eLINK Interim Financial Report that summarizes expenditures of the first 50% must be signed by the Grantee and approved by BWSR. Selected grantees may be required at this point to submit documentation of the expenditures reported on the Interim Financial Report for verification. 3) The third payment of 10% will be distributed after the grant has been fully expended and reporting requirements are met. The final, 10% payment must be requested within 30 days of the expiration date of the Grant Agreement. An eLINK Final Financial Report that summarizes final expenditures for the grant must be signed by the Grantee and approved by BWSR.
- 4.2. All costs must be incurred within the grant period.
- 4.3. All incurred costs must be paid before the amount of unspent funds is determined. Unspent grant funds must be returned within 30 days of the expiration date of the Grant Agreement.
- 4.4. The obligation of the State under this Grant Agreement will not exceed the amount listed above.
- 4.5. This grant includes an advance payment of 50 % of the grant's total amount. Advance payments allow the grantee to have adequate operating capital for start-up costs, ensure their financial commitment to landowners and contractors, and to better schedule work into the future.

5. **Conditions of Payment.**

- 5.1. All services provided by the Grantee under this Grant Agreement must be performed to the State's satisfaction, as set forth in this Grant Agreement and in the BWSR approved work plan for this program. Compliance will be determined at the sole discretion of the State's Authorized Representative and in accordance with all applicable federal, State, and local laws, policies, ordinances, rules, FY 2020-2021 Clean Water Fund Watershed-based Implementation Funding Program Policy, and regulations. The Grantee will not receive payment for work found by the State to be unsatisfactory or performed in violation of federal, State or local law.
- 5.2. Minnesota Statutes §103C.401 (2018) establishes BWSR's obligation to assure Program compliance. If the noncompliance is severe, or if work under the Grant Agreement is found by BWSR to be unsatisfactory or performed in violation of federal, State, or local law, BWSR has the authority to require the repayment of grant funds or withhold payment on grants from other programs.

6. **Assignment, Amendments, and Waiver**

- 6.1. **Assignment.** The Grantee may neither assign nor transfer any rights or obligations under this Grant Agreement without the prior consent of the State and a fully executed Assignment Agreement, executed and approved by the same parties who executed and approved this Grant Agreement, or their successors in office.
- 6.2. **Amendments.** Any amendments to this Grant Agreement must be in writing and will not be effective until it has been approved and executed by the same parties who approved and executed the original Grant Agreement, or their successors in office. Amendments must be executed prior to the expiration of the original Grant Agreement or any amendments thereto.

6.3. **Waiver.** If the State fails to enforce any provision of this Grant Agreement, that failure does not waive the provision or its right to enforce it.

7. **Liability.**

The Grantee must indemnify, save, and hold the State, its agents, and employees harmless from any claims or causes of action, including attorney's fees incurred by the State, arising from the performance of this Grant Agreement by the Grantee or the Grantee's agents or employees. This clause will not be construed to bar any legal remedies the Grantee may have for the State's failure to fulfill its obligations under this Grant Agreement.

8. **State Audits.**

Under Minn. Stat. § 16B.98, Subd. 8, the Grantee's books, records, documents, and accounting procedures and practices of the Grantee or other party relevant to this Grant Agreement or transaction are subject to examination by the Board and/or the State Auditor or Legislative Auditor, as appropriate, for a minimum of six years from the end of this Grant Agreement, receipt and approval of all final reports, or the required period of time to satisfy all State and program retention requirements, whichever is later.

8.1. The books, records, documents, accounting procedures and practices of the Grantee and its designated local units of government and contractors relevant to this grant, may be examined at any time by the Board or Board's designee and are subject to verification. The Grantee or delegated local unit of government will maintain records relating to the receipt and expenditure of grant funds.

9. **Government Data Practices.**

The Grantee and State must comply with the Minnesota Government Data Practices Act, Minn. Stat. Ch. 13, as it applies to all data provided by the State under this Grant Agreement, and as it applies to all data created, collected, received, stored, used, maintained, or disseminated by the Grantee under this Grant Agreement. The civil remedies of Minn. Stat. § 13.08 apply to the release of the data referred to in this clause by either the Grantee or the State.

10. **Workers' Compensation.**

The Grantee certifies that it is in compliance with Minn. Stat. § 176.181, Subd. 2, pertaining to workers' compensation insurance coverage. The Grantee's employees and agents will not be considered State employees. Any claims that may arise under the Minnesota Workers' Compensation Act on behalf of these employees and any claims made by any third party as a consequence of any act or omission on the part of these employees are in no way the State's obligation or responsibility.

11. **Publicity and Endorsement.**

11.1. **Publicity.** Any publicity regarding the subject matter of this Grant Agreement must identify the Board as the sponsoring agency. For purposes of this provision, publicity includes notices, informational pamphlets, press releases, research, reports, signs, and similar public notices prepared by or for the Grantee individually or jointly with others, or any subcontractors, with respect to the program, publications, or services provided resulting from this Grant Agreement.

11.2. **Endorsement.** The Grantee must not claim that the State endorses its products or services

12. **Governing Law, Jurisdiction, and Venue.**

Minnesota law, without regard to its choice-of-law provisions, governs this Grant Agreement. Venue for all legal proceedings out of this Grant Agreement, or its breach, must be in the appropriate State or federal court with competent jurisdiction in Ramsey County, Minnesota.

13. **Termination.**

13.1. The State may cancel this Grant Agreement at any time, with or without cause, upon 30 days' written notice to the Grantee. Upon termination, the Grantee will be entitled to payment, determined on a pro rata basis, for services satisfactorily performed.

13.2. In the event of a lawsuit, an appropriation from a Clean Water Fund is canceled to the extent that a court determines that the appropriation unconstitutionally substitutes for a traditional source of funding.

13.3. The State may immediately terminate this Grant Agreement if the State finds that there has been a failure to comply with the provisions of this Grant Agreement, that reasonable progress has not been made or that the purposes for which the funds were granted have not been or will not be fulfilled. The State may take action to protect the interests of the State of Minnesota, including the refusal to disburse additional funds and requiring the return of all or part of the funds already disbursed.

**14. Data Disclosure.**

Under Minn. Stat. § 270C.65, Subd. 3, and other applicable law, the Grantee consents to disclosure of its social security number, federal employer tax identification number, and/or Minnesota tax identification number, already provided to the State, to federal and State tax agencies and State personnel involved in the payment of State obligations. These identification numbers may be used in the enforcement of federal and State tax laws which could result in action requiring the Grantee to file State tax returns and pay delinquent State tax liabilities, if any.

**15. Prevailing Wage.**

It is the responsibility of the Grantee or contractor to pay prevailing wage for projects that include construction work of \$25,000 or more, prevailing wage rules apply per Minn. Stat. §§ 177.41 through 177.44. All laborers and mechanics employed by grant recipients and subcontractors funded in whole or in part with these State funds shall be paid wages at a rate not less than those prevailing on projects of a character similar in the locality. Bid requests must state the project is subject to prevailing wage.

**16. Municipal Contracting Law.**

Per Minn. Stat. § 471.345, grantees that are municipalities as defined in Subd. 1 of this statute must follow the Uniform Municipal Contracting Law. Supporting documentation of the bidding process utilized to contract services must be included in the Grantee's financial records, including support documentation justifying a single/sole source bid, if applicable.

**17. Constitutional Compliance.**

It is the responsibility of the Grantee to comply with requirements of the Minnesota Constitution regarding the use of Clean Water Funds to supplement traditional sources of funding.

**18. Signage.**

It is the responsibility of the Grantee to comply with requirements for project signage as provided in Minnesota Laws 2010, Chapter 361, Article 3, Section 5(b) for Clean Water Fund projects.

**19. Intellectual Property Rights.**

The State owns all rights, title, and interest in all of the intellectual property rights, including copyrights, patents, trade secrets, trademarks, and service marks in the Works and Documents *created and paid for under this grant*. Works means all inventions, improvements, discoveries, (whether or not patentable), databases, computer programs, reports, notes, studies, photographs, negatives, designs, drawings, specifications, materials, tapes, and disks conceived, reduced to practice, created or originated by the Grantee, its employees, agents, and subcontractors, either individually or jointly with others in the performance of this grant. Work includes "Documents." Documents are the originals of any databases, computer programs, reports, notes, studies, photographs, negatives, designs, drawings, specifications, materials, tapes, disks, or other materials, whether in tangible or electronic forms, prepared by the Grantee, its employees, agents or subcontractors, in the performance of this grant. The Documents will be the exclusive property of the State and all such Documents must be immediately returned to the State by the Grantee upon completion or cancellation of this grant at the State's request. To the extent possible, those Works eligible for copyright protection under the United State Copyright Act will be deemed to be "works made for hire." The Grantee assigns all right, title, and interest it may have in the Works and the Documents to the State. The Grantee must, at the request of the State, execute all papers and perform all other acts necessary to transfer or record the State's ownership interest in the Works and Documents.

*IN WITNESS WHEREOF, the parties have caused this Grant Agreement to be duly executed intending to be bound thereby.*

**Approved:**

**Riley-Purgatory-Bluff Creek WD**

**Board of Water and Soil Resources**

**By:** \_\_\_\_\_  
*(print)*

**By:** \_\_\_\_\_

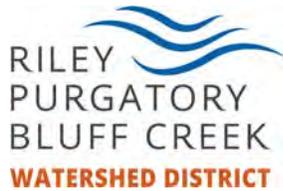
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*(signature)*

**Title:** \_\_\_\_\_

**Title:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Date:** \_\_\_\_\_



18681 Lake Drive East  
Chanhassen, MN 55317  
952-607-6512  
www.rpbcwd.org

## Riley Purgatory Bluff Creek Watershed District Permit Application Review

**Permit No:** 2021-008

**Considered at Board of Managers Meeting:** April 7, 2021

**Received complete:** March 19, 2021

**Applicant:** ISD #276, Paul Bourgeois

**Consultant:** Inspec, Inc., Cliff Buhman

**Project:** Minnetonka High School 2021 Momentum Building Addition – Site improvements including construction of a roughly 8,000 square foot building addition, replacement and addition of bituminous pavement and concrete sidewalk, and utility improvements located northeast of the existing Pagel building at the Minnetonka High School property. A subsurface stormwater management system will provide stormwater rate, volume and water quality control.

**Location:** 18301 Highway 7, Minnetonka, MN

**Reviewer:** Scott Sobiech, P.E., Barr Engineering

### Proposed Board Action

Manager \_\_\_\_\_ moved and Manager \_\_\_\_\_ seconded adoption of the following resolutions based on the permit report that follows and the presentation of the matter at the April 7, 2021 meeting of the managers:

Resolved that the application for Permit 2021-008 is approved, subject to the conditions and stipulations set forth in the Recommendations section of the attached report;

Resolved that on determination by the RPBCWD administrator that the conditions of approval have been affirmatively resolved, the RPBCWD president or administrator is authorized and directed to sign and deliver Permit 2021-008 to the applicant on behalf of RPBCWD.

Upon vote, the resolutions were adopted, \_\_\_\_\_ [VOTE TALLY].

**Applicable Rule Conformance Summary**

Rule	Issue	Conforms to RBPCWD Rules?	Comments	
<b>C</b>	<b>Erosion Control Plan</b>	See Comment	See Rule Specific Permit Condition C1	
<b>D</b>	<b>Wetland and Creek Buffers</b>	Yes.		
<b>J</b>	<b>Stormwater Management</b>	Rate	Yes	
		Volume	Yes	
		Water Quality	Yes	
		Low Floor Elev.	Yes	
		Maintenance	See Comment	See Rule Specific Permit Condition J1
		Chloride Management	Yes	
<b>L</b>	<b>Permit Fee Deposit</b>	NA	Governmental Agency.	
<b>M</b>	<b>Financial Assurance</b>	NA	Governmental Agency.	

**Background**

The proposed redevelopment includes construction of a roughly 8,000 square foot building addition, replacement and addition of bituminous pavement and concrete sidewalk, and utility improvements located northeast of the existing Pagel building at the Minnetonka High School property at 18301 Highway 7, Minnetonka, MN.

Stormwater management will be provided by a subsurface stormwater management facility to be constructed beneath the proposed pavement. The subsurface stormwater management system will provide stormwater rate, volume and water quality control. The proposed subsurface stormwater management system consists of open-bottom corrugated wall stormwater collection chambers surrounded by free draining stone to promote infiltration below the facility outlet. The subsurface stormwater management system will accept runoff from the proposed building addition and the replaced and additional pavement. The stormwater management system will direct runoff to an existing storm sewer system conveyance prior to being conveyed to an on-site, downgradient Wetland Conservation Act (WCA) protected wetland.

Under previously approved Permit 2016-010 at the Minnetonka High School property, the applicant provided a wetland delineation report, type and boundary determination, and MnRAM assessment based on a field investigation conducted on April 14, 2016. According to the MnRAM assessment and RPBCWD, Rule D Appendix D1, the wetland is rated as medium value. Under Rule D, Subsection 3.2.b.iii buffer must average of 40 feet from the delineated edge of the wetland, minimum 20 feet. Under

Permit 2016-010, the applicant established wetland buffers for the wetland which are 40 feet wide, thus conforming to the criteria identified in Rule D, Subsection 3.1a for medium value wetlands.

Eight permits have previously been issued for work at the Minnetonka High School property. Relevant project site information is provided below.

Site Information	Permit 2015-048	Permit 2016-010	Permit 2016-012	Permit 2017-036	Permit 2018-071	Permit 2020-011	Permit 2020-056	Permit 2020-068	Permit 2021-008 (Current)	Site Aggregate Total (Includes Eight Projects)
Total Site Area <sup>3</sup> (acres)	96.88	96.88	96.88	96.88	96.88	96.88	96.88	96.88	96.88	96.88
Existing Site Impervious Area (acres)	32.88	33.68	33.78	34.35	34.50	35.82	35.97	36.11	36.29	32.88 <sup>1</sup>
New (increase) in Site Impervious Area (acres)	0.81	0.10	0.57	0.15	1.32	0.15	0.14	0.18	0.21	3.62
Percent Increase in Impervious Surface	2.4	0.3	1.7	0.4	3.8	0.4	0.4	0.5	0.6	11.0 <sup>2</sup>
Disturbed Site Impervious Area (acres)	1.52	0.10	0.20	0	0	0.06	0.0	0.07	0.09	1.99
Percent Disturbance of Existing Impervious Surface	4.6	0.3	0.6	0	0	0.2	0.0	0.2	0.3	6.1
Total Disturbed Area (acres)	1.84	0.22	0.80	0.30	1.49	0.24	0.24	0.25	0.53	5.92

<sup>1</sup>Pre-2015 project existing conditions

<sup>2</sup>Calculated based on pre-2015 project existing conditions (Common Scheme of Development Rule J, Subsection 2.5)

<sup>3</sup>Minnetonka High School property consists of five adjacent parcels under common or related ownership.

**Exhibits Reviewed:**

1. Permit Application dated February 4, 2021 (Incomplete notice was sent on February 23, 2021; materials submitted to complete application March 19, 2021)
2. Stormwater Management Plan dated February 4, 2021 (revised March 19, 2020).
3. Design Plans Sheets C1 through C5 dated February 8, 2021 (sheets C2, C3 and C5 revised March 9, 2021).
4. Earthwork specification received February 13, 2021
5. Geotechnical Exploration Report prepared by Braun Intertec dated February 24, 2021, including infiltration testing

6. Existing and Proposed Conditions HydroCAD models received February 4, 2021 (updated March 25, 2021).
7. Minnetonka High School drainage areas exhibit received February 13, 2021 ( Revised March 19, 2021 and March 26, 2021).
8. Draft maintenance agreement received March 19, 2021.
9. Chloride Management Plan received March 19, 2021
10. MIDS water quality modeling received March 26, 2021

#### **Rule C: Erosion Prevention and Sediment Control**

Because the project will involve 0.53 acres of land-disturbing activity, the project must conform to the requirements in the RPBCWD Erosion Prevention and Sediment Control rule (Rule C, Subsection 2.1). The erosion and sediment control plan prepared by Inspec, Inc. includes installation of silt fence, inlet protection for storm sewer catch basins, a stabilized rock construction entrance, decompaction of areas compacted during construction, six inches of topsoil, and retention of native topsoil onsite. To conform to RPBCWD Rule C requirements, the following revisions are needed:

- C1. The Applicant must provide the name and contact information of the general contractor responsible for erosion prevention and sediment control at the site. RPBCWD must be notified if the responsible party changes during the permit term. This information is required prior to issuance of the permit.

#### **Rule D: Wetland and Creek Buffers**

Because the proposed work triggers a permit under RPBCWD Rule J (see analysis below) and runoff from the project area is conveyed to a wetland, Rule D, Subsections 2.1a and 3.1 require buffer on the edge of the wetland downgradient from the area to be disturbed. The proposed project does not involve disturbance of the wetland.

Under previously approved Permit 2016-010 at the Minnetonka High School property, the applicant provided a wetland delineation report, type and boundary determination, and MnRAM assessment based on a field investigation conducted on April 14, 2016. According to the MnRAM assessment and RPBCWD, Rule D Appendix D1, the wetland is rated as medium value. Under Rule D, Subsection 3.2.b.iii buffer must average of 40 feet from the delineated edge of the wetland, minimum 20 feet. Under Permit 2016-010, the applicant established wetland buffers for the wetland which are 40 feet wide, thus conforming to the criteria identified in Rule D, Subsection 3.1a for medium value wetlands. Items submitted and approved under Permit 2016-010 have provided the compliance criteria needed as part of Rule D under this permit, including a maintenance agreement with RPBCWD.

#### **Rule J: Stormwater Management**

Because the project will disturb 0.53 acres of land-surface area, the project must meet the criteria of RPBCWD's Stormwater Management rule (Rule J, Subsection 2.1). Under paragraph 2.5 of Rule J,

Common Scheme of Development, activities subject to Rule J on a parcel or adjacent parcels under common or related ownership will be considered in the aggregate, and the requirements applicable to the activity under this rule will be determined with respect to all development that has occurred on the site or on adjacent sites under common or related ownership since the date this rule took effect (January 1, 2015). Because eight projects have been permitted since the rules took effect (RPBCWD Permit 2015-048, 2016-010, 2016-012, 2017-036, 2018-071, 2020-011, 2020-056, and 2020-068), the proposed activities must be considered in aggregate with previously permitted activities.

The criteria listed in Subsection 3.1 will only apply to the disturbed areas on the project site because the project, when considered in aggregate with the previously permitted activities at the site, increases the imperviousness by 11.0 percent and disturbs a combined 6.1 percent of the existing impervious surface on the site (Rule J, Subsection 2.3) (See table above). The aggregate extent of disturbance and imperviousness increase are less than the 50 percent disturbed or expanded impervious area threshold for applicability of stormwater management requirements to the entire site.

The applicant is proposing construction of a subsurface stormwater management system to provide the rate control, volume abstraction and water quality management for the disturbed and replaced impervious area and additional impervious surface on the site resulting from activities permitted under the current project. Pretreatment for runoff entering the subsurface stormwater management system is being provided by a sump manhole.

**Rate Control**

In order to meet the rate control criteria listed in Subsection 3.1.a, the 2-, 10-, and 100-year post development peak runoff rates must be equal to or less than the existing discharge rates at all locations where stormwater leaves the site. The applicant used a HydroCAD hydrologic model to simulate runoff rates for pre- and post-development conditions for the 2-, 10-, and 100-year frequency storm events using a nested rainfall distribution, and a 100-year frequency, 10-day snowmelt event. The existing and proposed discharges from the site are summarized in the table below. The table below includes modeled runoff from the disturbed and additional surfaces, and a portion of existing parking area conveyed to the proposed subsurface stormwater management system. The proposed project is in conformance with RPBCWD Rule J, Subsection 3.1.a.

Modeled Discharge Location	2-Year Discharge (cfs)		10-Year Discharge (cfs)		100-Year Discharge (cfs)		10-Day Snowmelt (cfs)	
	Ex	Prop	Ex	Prop	Ex	Prop	Ex	Prop
Storm Sewer	1.8	<0.1	3.3	1.1	6.2	3.5	0.4	0.4

**Volume Abstraction**

Subsection 3.1.b and 2.3 of Rule J require the abstraction onsite of 1.1 inches of runoff from all disturbed and additional impervious surface of the site. An abstraction volume of 1,198 cubic feet is

required from the 0.3 acres of new and reconstructed impervious area on the project for volume retention.

Braun Intertec (Braun) completed seven (7) borings on this site with two (2) borings in the location of the proposed subsurface detention and infiltration practice. The soil borings performed January 14, 2021 show that soils in the location of the proposed subsurface stormwater management system are primarily sandy lean clay (CL). The two borings indicated Type D soils at the infiltration elevation of the facility and to a depth of more than five feet below this elevation. Two double ring infiltrometer tests were performed by Braun on January 13, 2021, at the proposed location of the stormwater management facility. The observed infiltration rates were measured as 0.08 inches per hour (in/hr) at the southern testing location and 0.07 in/hr at the northern testing location. Because of the low in-situ infiltration measurements the site is considered restricted.

For restricted sites, subsection 3.3 of Rule J requires rate control in accordance with subsection 3.1.a and that abstraction and water-quality protection be provided in accordance with the following sequence: (a) Abstraction of 0.55 inches of runoff from site impervious surface determined in accordance with paragraphs 2.3, 3.1 or 3.2, as applicable, and treatment of all runoff to the standard in paragraph 3.1c; or (b) Abstraction of runoff onsite to the maximum extent practicable and treatment of all runoff to the standard in paragraph 3.1c; or (c) Off-site abstraction and treatment in the watershed to the standards in paragraph 3.1b and 3.1c. Because of the low measured infiltration testing results and the presence of clay soils at the site, the engineer concurs that the site is restricted. The subsurface stormwater management system incorporate a rock storage layer under the system to provide for abstraction of runoff from all regulated impervious area for a restricted site (599 cubic feet), thus complying with Rule J, subsection 3.3a. The table below summarizes the volume abstraction for the site. The proposed project is in conformance with Rule J, Subsection 3.1.b.

Required Abstraction Depth (inches)	Required Abstraction Volume (cubic feet)	Provided Abstraction Depth (feet)	Provided Abstraction Volume (cubic feet)
0.55	599	0.68	740

Based on the average measured infiltration rate of 0.075 in/hr and the footprint of the proposed subsurface stormwater facility (2,467 square feet), the system will drawdown the 740 cubic feet in 48 hours as required by subsection 3.1.b.3. Pretreatment for runoff entering the subsurface stormwater management system is being provided by a sump manhole, thus the proposed project conforms with RPBCWD Rule J, Subsection 3.1b.1. Because groundwater was not observed at the termination depth of the borings (elevation 947 feet), the groundwater level is assumed to be no higher than elevation 947 feet. The bottom of the proposed subsurface stormwater management system is set at 953 feet, thus providing the required three feet of vertical separation (Rule J, subsection 3.1.b.2).The engineer concurs with the modeling and finds that the proposed project conforms with Rule J, Subsection 3.3.a.

**Water Quality Management**

Subsection 3.1.c of Rule J requires the Applicant provide for at least 60 percent annual removal efficiency for total phosphorus (TP), and at least 90 percent annual removal efficiency for total suspended solids (TSS) from site runoff, and no net increase in TSS or TP loading leaving the site from existing conditions. The Applicant is proposing to use a subsurface stormwater management system to achieve the required TP and TSS removals. P8 modeling results are summarized in tables below showing the annual TSS and TP removal requirements are achieved and that there is no net increase in TSS and TP leaving the site. The engineer concurs with the modeling, and finds that the proposed project is in conformance with Rule J, Subsection 3.1.c.

**Annual TSS and TP removal summary**

Pollutant of Interest	Regulated Site Loading (lbs/yr)	Required Load Removal (lbs/yr)	Provided Load Reduction (lbs/yr)
Total Suspended Solids (TSS)	223	201 (90%)	239 (>100%) <sup>1</sup>
Total Phosphorus (TP)	0.7	0.4 (60%)	0.7 (100)%

<sup>1</sup> Because the applicant is routing the regulated imperious area as well some additional undisturbed area (pervious and impervious surface) to the subsurface stormwater facility, the proposed stormwater facility is anticipated to remove more than the required load reductions.

**Summary of net change in TSS and TP leaving the site**

Pollutant of Interest	Existing Site Loading (lbs/yr)	Proposed Site Load after Treatment (lbs/yr)	Change (lbs/yr)
Total Suspended Solids (TSS)	201	8	-193
Total Phosphorus (TP)	0.6	0.1	-0.5

**Low floor Elevation**

No structure may be constructed or reconstructed such that its lowest floor elevation is less than 2 feet above the 100-year event flood elevation and no stormwater management system may be constructed or reconstructed in a manner that brings the low floor elevation of an adjacent structure into noncompliance according to Rule J, Subsection 3.6.

The low floor elevation of the structure and the adjacent proposed stormwater management system are summarized below. The RPBCWD Engineer concurs that the proposed project is in conformance with Rule J, Subsection 3.6.

Structure	Low Floor Elevation (feet)	100-year Event Flood Elevation (feet)	Freeboard (feet)
Momentum Building	958.86	956.76	2.1

***Maintenance***

Subsection 3.7 of Rule J requires the submission of a maintenance plan. All stormwater management structures and facilities must be designed for maintenance access and properly maintained in perpetuity to assure that they continue to function as designed. A draft maintenance was provided by the applicant on March 19, 2021 for review.

J2. To conform to the RPBCWD Rule J the applicant must either enter a new maintenance agreement with RPBCWD or amend the existing maintenance agreement between the parties to provide for maintenance and inspection of the facilities proposed under this application, including the appropriate permit number and the subsurface stormwater management system.

***Wetland Protection***

In accordance with Rule J, subsection 3.10a, there is no proposed activity that will alter the site in a manner that increases the bounce in water level, duration of inundation, or change the runout elevation in the subwatershed, for the wetland receiving runoff from the land disturbing activities. Because the applicant’s HydroCAD model results demonstrate, and the engineer concurs, that the proposed flow rate and volumes flowing towards the on-site wetland are less than the under existing conditions, the bounce and inundation will not increase, thus the project meets the Bounce and Inundation criterion.

Rule J, Subsection 3.10b requires that treatment of runoff to medium value wetlands archive 90 percent total suspended solids removal and 60 percent total phosphorus removal. Because the applicant is routing the regulated imperious area as well some additional undisturbed area (pervious and impervious surface) to the subsurface stormwater facility, P8 modeling results show the proposed subsurface stormwater management system is anticipated to remove more than the required load reductions as show in the water quality analysis above, thus the engineer finds that the proposed project is in conformance with Rule J, Subsection 3.10b.

***Chloride Management***

Subsection 3.8 of Rule J requires the submission of chloride management plan that designates the individual authorized to implement the chloride management plan and the MPCA-certified salt applicator engaged in implementing the plan. A compliant chloride management plan was provided by the applicant on March 19, 2021.

**Applicable General Requirements:**

1. The RPBCWD Administrator and Engineer shall be notified at least three days prior to commencement of work.

2. Construction shall be consistent with the plans and specifications approved by the District as a part of the permitting process. The date of the approved plans and specifications is listed on the permit.
3. Construction must be consistent with the plans, specifications, and models that were submitted by the applicant that were the basis of permit approval. The date(s) of the approved plans, specifications, and modeling are listed on the permit. The grant of the permit does not in any way relieve the permittee, its engineer, or other professional consultants of responsibility for the permitted work.
4. The grant of the permit does not relieve the permittee of any responsibility to obtain approval of any other regulatory body with authority.
5. The issuance of this permit does not convey any rights to either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.
6. In all cases where the doing by the permittee of anything authorized by this permit involves the taking, using or damaging of any property, rights or interests of any other person or persons, or of any publicly owned lands or improvements or interests, the permittee, before proceeding therewith, must acquire all necessary property rights and interest.
7. RPBCWD's determination to issue this permit was made in reliance on the information provided by the applicant. Any substantive change in the work affecting the nature and extent of applicability of RPBCWD regulatory requirements or substantive changes in the methods or means of compliance with RPBCWD regulatory requirements must be the subject of an application for a permit modification to the RPBCWD.
8. If the conditions herein are met and the permit is issued by RPBCWD, the applicant, by accepting the permit, grants access to the site of the work at all reasonable times during and after construction to authorized representatives of the RPBCWD for inspection of the work.

### **Findings**

1. The proposed project includes the information necessary, plan sheets and erosion control plan for review.
2. The proposed project will conform to Rules C and J if the Rule Specific Permit Conditions listed above are met.

### **Recommendation:**

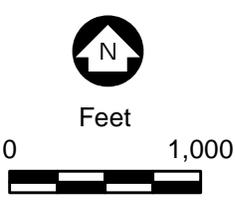
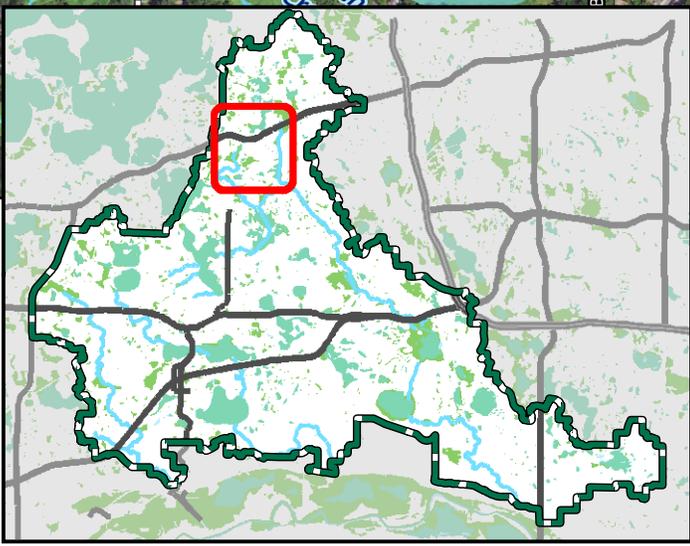
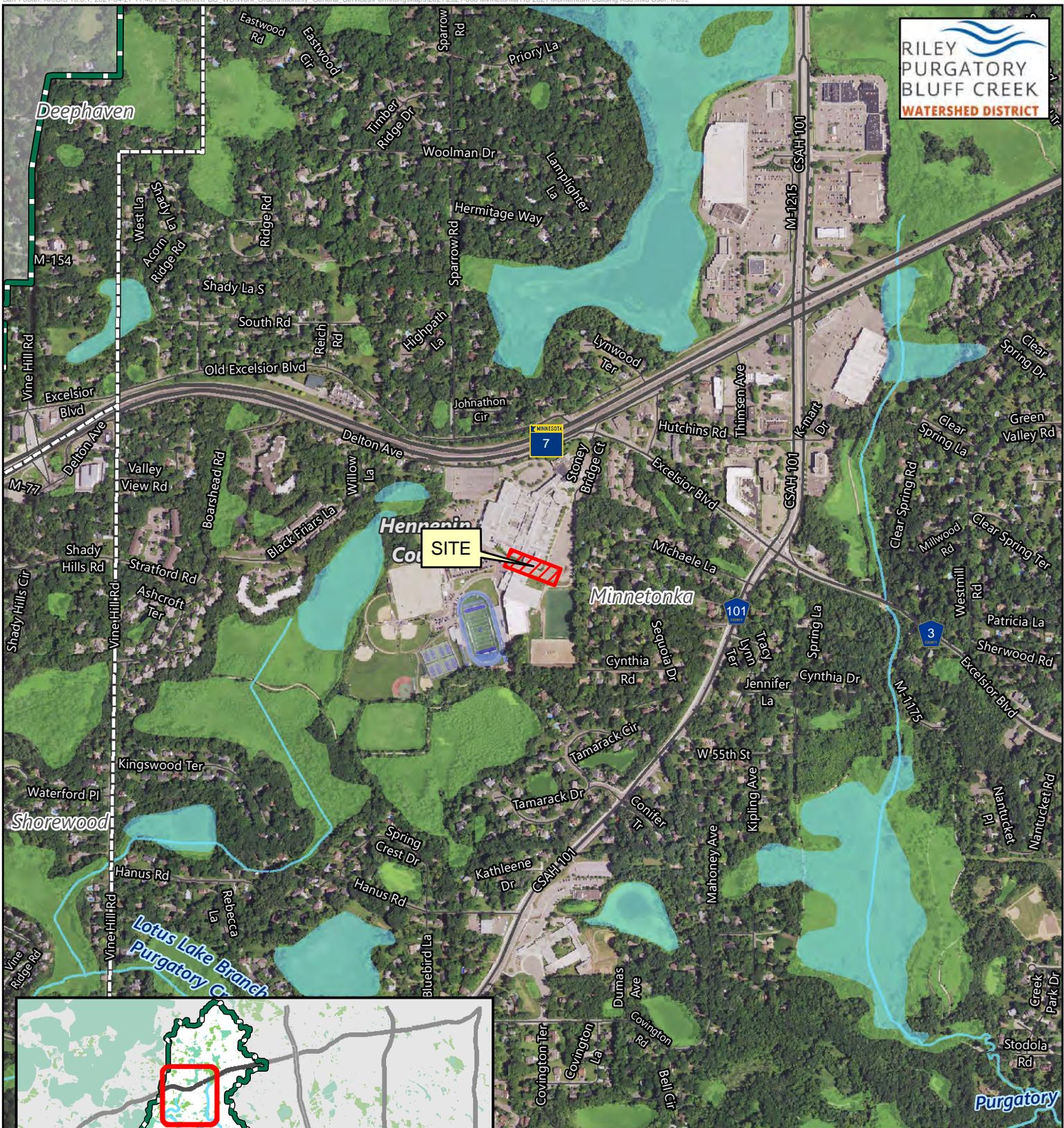
Approval, contingent upon:

1. Continued compliance with General Requirements.
2. The applicant providing the name and contact information of the general contractor responsible for erosion prevention and sediment control at the site.

3. The applicant must work with RPBCWD to revise the maintenance and inspection agreement as needed and the applicant must execute the revised agreement after approval by RPBCWD.

By accepting the permit, when issued, the applicant agrees to the following stipulations:

1. Per Rule J Subsection 4.5, upon completion of the site work, the permittee must submit as-built drawings demonstrating that at the time of final stabilization, the pretreatment manholes and subsurface stormwater facility conform to design specifications and function as intended and approved by the District. As-built/record drawings must be signed by a professional engineer licensed in Minnesota and include, but not limited to:
  - a) the surveyed bottom elevations, water levels, and general topography of all facilities;
  - b) the size, type, and surveyed invert elevations of all stormwater facility inlets and outlets;
  - c) the surveyed elevations of all emergency overflows including stormwater facility, street, and other;
  - d) other important features to show that the project was constructed as approved by the Managers and protects the public health, welfare, and safety.
  - e) photographic evidence of buffer marker locations indicated by permanent, free-standing markers in accordance with Rule D, Subsection 3.4 criteria.
2. Providing the following additional close-out materials:
  - a) Documentation that constructed infiltration and filtration facilities perform as designed. This may include infiltration testing, flood testing, or other with prior approval from RPBCWD
  - b) Documentation that disturbed pervious areas remaining pervious have been decompacted per Rule C.2c criteria



Permit Location Map  
MINNETONKA HS 2021  
MOMENTUM BUILDING ADD  
**Permit 2021-008**  
Riley Purgatory Bluff Creek  
Watershed District

**KEYED NOTES:**

- 1 REMOVE EXISTING 4" ASPHALT CONCRETE SURFACE AND REPAIR WITH 4" ASPHALT CONCRETE. APPROX. 11.50. SEE DETAIL 504.
- 2 NEW 4" ASPHALT CONCRETE SURFACE. APPROX. 11.50. SEE DETAIL 504.
- 3 NEW 4" ASPHALT CONCRETE SURFACE. APPROX. 11.50. SEE DETAIL 504.
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**SITE GRADING AND UTILITIES PLAN**  
SCALE: 1" = 20'-0"

**CATCH BASIN/MANHOLE SCHEDULE**

MANHOLE #	TYPE	INLET ELEVATION (FIN)	OUTLET ELEVATION (FIN)	INLET ELEVATION (FIN)	OUTLET ELEVATION (FIN)
MB 1	48" DIA. CONC. MANHOLE WITH 24" CURB	96.50	96.50	96.50	96.50
MB 2	48" DIA. CONC. MANHOLE WITH 24" CURB	96.50	96.50	96.50	96.50
MB 3	48" DIA. CONC. MANHOLE WITH 24" CURB	96.50	96.50	96.50	96.50
MB 4	48" DIA. CONC. MANHOLE WITH 24" CURB	96.50	96.50	96.50	96.50
MB 5	48" DIA. CONC. MANHOLE WITH 24" CURB	96.50	96.50	96.50	96.50
MB 6	48" DIA. CONC. MANHOLE WITH 24" CURB	96.50	96.50	96.50	96.50
MB 7	48" DIA. CONC. MANHOLE WITH 24" CURB	96.50	96.50	96.50	96.50
MB 8	48" DIA. CONC. MANHOLE WITH 24" CURB	96.50	96.50	96.50	96.50
MB 9	48" DIA. CONC. MANHOLE WITH 24" CURB	96.50	96.50	96.50	96.50
MB 10	48" DIA. CONC. MANHOLE WITH 24" CURB	96.50	96.50	96.50	96.50
MB 11	48" DIA. CONC. MANHOLE WITH 24" CURB	96.50	96.50	96.50	96.50
MB 12	48" DIA. CONC. MANHOLE WITH 24" CURB	96.50	96.50	96.50	96.50
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MB 45	48" DIA. CONC. MANHOLE WITH 24" CURB	96.50	96.50	96.50	96.50
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MB 47	48" DIA. CONC. MANHOLE WITH 24" CURB	96.50	96.50	96.50	96.50
MB 48	48" DIA. CONC. MANHOLE WITH 24" CURB	96.50	96.50	96.50	96.50
MB 49	48" DIA. CONC. MANHOLE WITH 24" CURB	96.50	96.50	96.50	96.50
MB 50	48" DIA. CONC. MANHOLE WITH 24" CURB	96.50	96.50	96.50	96.50

\* CONSTRUCTION TO DEPTH OF BOTTOM OF BOX





## Riley Purgatory Bluff Creek Watershed District Permit Application Review

**Permit No:** 2020-051

**Considered at Board of Managers Meeting:** May 5, 2021

**Received complete:** April 9, 2021

**Applicant:** BIOLYPH, Allison Zitzloff

**Consultant:** Sambatek, Inc., Aaron Feldberg

**Project:** BIOLYPH Parking Lot Expansion – The project proposes a parking lot expansion at an existing medical facility in Chaska, MN. Stormwater management facilities include an underground filtration system combined with rainwater harvest and reuse system to provide volume control, water quality, and rate control.

**Location:** 4275 Norex Drive, Chaska, MN 55318

**Reviewer:** Heather Hlavaty and Scott Sobiech P.E., Barr Engineering

### Board Action

Manager \_\_\_\_\_ moved and Manager \_\_\_\_\_ seconded adoption of the following resolutions based on the permit report that follows and the presentation of the matter at the May 5, 2021 meeting of the managers:

Resolved that the application for Permit 2020-051 is approved, subject to the conditions and stipulations set forth in the Recommendations section of the attached report.

Resolved that on determination by the RPBCWD administrator that the conditions of approval have been affirmatively resolved, the RPBCWD president or administrator is authorized and directed to sign and deliver Permit 2020-051 to the applicant on behalf of RPBCWD.

Upon roll call vote, the resolutions were adopted, \_\_\_\_\_.

**Applicable Rule Conformance Summary**

Rule	Issue	Conforms to RPBCWD Rules?	Comments	
<b>C</b>	<b>Erosion Control Plan</b>	Yes		
<b>J</b>	<b>Stormwater Management</b>	Rate	Yes	
		Volume	Yes	
		Water Quality	Yes	
		Low Floor Elev.	Yes	
		Maintenance	See Comment	See Rule Specific Permit Condition J1.
		Chloride Management	See Comment	See stipulation #3
		Wetland Protection	Yes	
<b>L</b>	<b>Permit Fee Deposit</b>	Yes	\$3,000 received August 18, 2020	
<b>M</b>	<b>Financial Assurances</b>	See Comment	The financial assurance is calculated at \$453,300	

**Background**

This application proposes construction of Phase I of the site redevelopment which entails the expansion of an existing parking lot for a medical building resulting in 0.55 acres of new or fully redeveloped impervious area. The project proposes construction of an underground filtration system combined with rainwater harvest and reuse system to provide stormwater quantity, volume, and rate quality control. Runoff leaving the underground filtration system will be conveyed to either the reuse storage tanks or the existing, on-site storm sewer. The existing storm sewer conveys runoff directly into a wetland in the northwest corner of the site. Because the wetland does not receive direct overland flow from the proposed land disturbing activities, wetland buffer requirements do not apply to the proposed project. The applicant also provided big picture proof of concept information for the full build-out condition of Phase 1 (parking lot expansion) and Phase 2 (a 26,000 square foot building expansion) to gauge whether the final project would be able to achieve compliance with the RPBCWD regulatory program. The full build-out of the site is anticipated to take several years. No work beyond Phase 1 will be authorized by this permit, if issued. The property owner must submit a separate permit application for Phase 2 work with necessary supporting materials showing compliance of the proposed work with applicable RPBCWD regulatory requirements applicable at the time of submission. In addition, the common scheme of development framework in subsection 2.5 of Rule J will apply to build-out of the properties. RPBCWD’s approval, if granted, of this permit 2020-051 does not represent a determination of compliance of the ultimate build-out condition with RPBCWD regulatory requirements. The data for the ultimate development in this report are provided for information only.

Project Site Information	Phase 1	Phase 1 and Phase 2
Total Site Area (acres)	13.59	13.59
Existing Impervious (acres)	3.08	3.08
Disturbed Impervious Area (acres)	0.03 (<1%)	0.03 (<1%)
Proposed Impervious Area (acres)	3.60	4.20
Additional Impervious Area (acres)	0.52 (17% increase)	1.12 (36% aggregate increase)
Regulated Impervious Area(acres)	0.55	1.15
Total Disturbed Area (acres)	0.69	1.64

The following materials were reviewed in support of the permit request:

1. Permit Application received August 18, 2020 (Incomplete notice was sent on August 25, 2020 and March 26, 2021; materials submitted to complete application on April 9, 2021)
2. Stormwater Management Report dated August 12, 2020 (revised April 22, 2021)
3. Project Plan Set (10 sheets) dated August 12, 2020 (revised March 10, 2021)
4. Geotechnical Evaluation Report by Northern Technologies, LLC dated June 5, 2014
5. Electronic HydroCAD models received on August 18, 2020 (revised April 9, 2021)
6. HydroCAD Output Drainage Summary Tables received on August 18, 2020 (revised April 9, 2021)
7. SHSAM and MIDS model Output Summary Tables received on August 18, 2020
8. Electronic MIDs and P8 models received on April 9, 2021
9. Contech Stormfilter Specifications and Testing Results received on August 18, 2020
10. 10-Year Storm Sewer Conveyance Spreadsheet received on August 18, 2020 (revised April 9, 2021)
11. Site Lighting Plan received on August 18, 2020
12. Site Plan received on August 18, 2020
13. Response to RPBCWD Comments dated September 21, 2020
14. Stormwater BMP Opinion of Probable Cost dated September 21, 2020
15. Submersible Pump Station drawing received on April 9, 2021
16. Suction Lift Pump Station drawing received on April 9, 2021
17. Irrigation area plan sketch received on April 9, 2021
18. Pump Station specifications received on April 9, 2021
19. SkyHarvester storage tank drawings (2) received on April 9, 2021
20. Chloride Management Plan received on March 12, 2021

21. Irrigation system drawing received on March 12, 2021
22. Opinion of Probable Costs for stormwater received on March 12, 2021
23. Electronic MIDs, P8, and HydroCAD models for Phase I Only received on April 22, 2021

### **Rule Specific Permit Conditions**

#### **Rule C: Erosion Prevention and Sediment Control**

Because the project will alter more than 50 cubic yards of material, the project must conform to the requirements in the RPBCWD Erosion Prevention and Sediment Control rule (Rule C, Subsection 2.1).

The erosion and sediment control plans prepared by Sambatek include installation of perimeter control, inlet protection for storm sewer catch basins, a rock construction entrance, protection of stormwater management facilities, placement of a minimum of 6 inches of topsoil, decompaction of pervious areas compacted during construction, and retention of native topsoil onsite. Mike Newcomb of Metro Paving will be the responsible party for erosion control during construction (763-428-4121) The proposed project conforms to the RPBCWD Rule C requirements.

#### **Rule J: Stormwater Management**

Because Phase 1 of the project will involve 0.69 acres of land-disturbing activity, the project must meet the criteria of RPBCWD's Stormwater Management rule (Rule J, Subsection 2.1). The criteria listed in Subsection 3.1 will apply to only to the disturbed area because the project will disturb less than 50% of the existing impervious surface on the parcel and will not increase imperviousness of the parcel by more than 50 percent (Rule J, Subsection 2.3).

The project proposes construction of an underground filtration system combined with a rainwater harvest and reuse system to provide stormwater quantity, volume and rate quality control. The underground filtration system will discharge treated and untreated runoff to underground storage tanks to be used for irrigation.

#### ***Rate Control***

In order to meet the rate control criteria listed in Subsection 3.1.a, the 2-, 10-, and 100-year post development peak runoff rates must be equal to or less than the existing discharge rates at all locations where stormwater leaves the site. The Applicant used a HydroCAD hydrologic model to simulate runoff rates for pre- and post-development conditions for the 2-, 10-, and 100-year frequency storm events using a nested rainfall distribution, and a 100-year frequency, 10-day snowmelt event. The existing and proposed 2-, 10-, and 100-year frequency discharges from the site are summarized in the table below.

Modeled Discharge Location	2-Year Discharge (cfs)		10-Year Discharge (cfs)		100-Year Discharge (cfs)		10-Day Snowmelt (cfs)	
	Ex	Prop	Ex	Prop	Ex	Prop	Ex	Prop
To Wetland	27.3	25.9	47.4	44.3	92.7	89.8	1.9	1.8
Southwest	3.6	3.6	6.5	6.5	13.2	13.2	0.3	0.3
Northeast	5.3	5.3	10.0	9.9	21.0	20.9	0.4	0.4

The proposed stormwater management plan will provide rate control in compliance with the RPBCWD requirements for the 2-, 10-, and 100-year events. Thus, the proposed project meets the rate control requirements in Rule J, Subsection 3.1a.

**Volume Abstraction**

Subsection 3.1.b of Rule J requires the abstraction onsite of 1.1 inches of runoff from the new and disturbed impervious surface of the parcel. An abstraction volume of 2,200 cubic feet is required from the 0.55 acres (24,004 square feet) of regulated impervious area for Phase 1 of the project for volume retention. The Applicant proposes a rainwater harvest and reuse system to provide volume abstraction. Pretreatment is provided by sump manholes at all discharge locations into the underground facility (Rule J, Subsection 3.1.b.1).

The proposed reuse system consists of two 20,000-gallon underground storage tanks for a total of 40,000 gallons (or 5,347 cubic feet) of rainwater harvest and reuse storage volume. The applicant proposes to reuse the rainwater by irrigating 2.2 acres of pervious area with the existing, on-site irrigation system. The table below summarizes the volume abstraction required and the volume abstraction achieved by the proposed stormwater management facility on site. The engineer concurs with the modeling, and finds that the proposed project is in conformance with Rule J, Subsection 3.1b.

Required Abstraction Depth (inches)	Required Abstraction Volume (cubic feet)	Provided Abstraction Depth (inches)	Provided Abstraction Volume (cubic feet)
1.1	2,200	1.1	2,276

**Water Quality Management**

Subsection 3.1.c of Rule J requires the Applicant provide volume abstraction in accordance with 3.1b or least 60 percent annual removal efficiency for total phosphorus (TP), and at least 90 percent annual removal efficiency for total suspended solids (TSS) from site runoff, and no net increase in TSS or TP loading leaving the site from existing conditions. Because the BMPs proposed by the applicant provide more volume abstraction than is require by 3.1b and the engineer concurs with the modeling, the engineer finds that the proposed project is in conformance with Rule J, Subsection 3.1.c.

**Low floor Elevation**

No structure may be constructed or reconstructed such that its lowest floor elevation is less than 2 feet above the 100-year event flood elevation of a waterbody or stormwater management facility. No stormwater management system may be constructed or reconstructed in a manner that brings the low floor elevation of an adjacent structure into noncompliance according to Rule J, Subsection 3.6.

The low floor elevation of the proposed building and the adjacent stormwater management feature are summarized below. The proposed project is in conformance with Rule J, Subsection 3.6.

Low Floor Elevation of Existing Building (feet)	100-year Event Flood Elevation of Stormwater Facility (feet)	Freeboard (feet)
971.60	965.89	5.71

**Maintenance**

Subsection 3.7 of Rule J requires the submission of a maintenance plan. All stormwater management structures and facilities must be designed for maintenance access and properly maintained in perpetuity to assure that they continue to function as designed. The stormwater management facilities include the underground filtration system, sump manhole structures, the rainwater harvest and reuse system. The Applicant must provide a draft maintenance and inspection declaration in conformance with Rule J, Subsection 3.7, for approval by RPBCWD staff prior to recordation. To conform to the RPBCWD Rule J the following revisions are needed:

- J1. Permit applicant must provide a maintenance and inspection declaration as required by Rule J, Subsection 3.7. The declaration must also include a stormwater reuse monitoring and reporting plan, including a map of the irrigation area. A maintenance declaration template is available on the permits page of the RPBCWD website (<http://www.rpbcwd.org/permits/>). A draft declaration must be provided for District approval prior to recordation as a condition of issuance of the permit.

**Chloride Management**

Subsection 3.8 of Rule J requires the submission of chloride management plan that designates the individual authorized to implement the chloride management plan and the MPCA-certified salt applicator engaged in implementing the plan. The permit applicant submitted an unsigned chloride management plan that designates Ted Hansen as the individual authorized to implement the chloride management plan and the MPCA-certified salt applicator engaged in implementing the plan at the site. However, chloride management plan submitted does not indicated the class information or provide evidence that Ted Hansen is an MPCA-certified salt applicator. To close out the permit and release the \$5,000 in financial assurance held for the purpose of chloride management, the permit applicant must

provide a signed chloride management plan that designates the individual authorized to implement the chloride management plan and the MPCA-certified salt applicator engaged in implementing the plan at the site.

**Wetland Protection**

Because the existing storm sewer system conveys runoff from the proposed stormwater management facilities to the on-site wetland, the project must comply with the wetland protection criteria in Rule J, Subsection 3.10. Subsection 3.10 of Rule J requires that the activity subject to this rule not alter a site in a manner that alters the bounce in water level, duration of inundation, or change the runout elevation beyond those specified in Table J1. Rather than conduct a MNRAM for the onsite wetland, the applicant elected to demonstrate compliance with the criteria for discharging to an exceptional value wetland. The following table summarizes the allowable change in bounce and inundation duration from Table J1 of RPBCWD Rule J.

**Summary of allowable impacts on onsite wetland from Rule J, Table J1**

Wetland Value/ Waterbody	Permitted Bounce for, 10-Year Event	Inundation Period for 1- and 2-Year Event	Inundation Period for 10-Year Event	Runout Control Elevation
Exceptional	Existing	Existing	Existing	No change

The Applicant used a HydroCAD hydrologic model to simulate runoff rates and flow depths for pre- and post-development conditions (Phase 1 and Phase 2) for applicable storm events specified in Table J1. Rule J, Subsection 3.10 identifies the permitted bounce for an exceptional value wetland must match the existing bounce for the 10-year event. The table below shows that the proposed design result in the same 10-year high water elevation for existing and proposed conditions, thus there is no change in the 10-year bounce and the project meets the bounce criteria for discharge to an exceptional value wetland.

10- Year Elevation (ft)	
Existing	Proposed
946.5	946.5

The HydroCAD model output hydrographs indicate that the proposed condition does not increase inundation in the wetland. Table J1 identifies the inundation period for 1-, 2-, and 10-year events for an exceptional value wetland must not exceed existing conditions. As shown in the table below, the submitted hydrologic models demonstrate that the duration of inundation has not been increased from existing conditions. The submitted materials demonstrate, and RPBCWD engineers concurs, that project is in conformance with Rule J, Subsection 3.10a.

2-Year Inundation Period (hrs)		10-Year Inundation Period (hrs)		100-Year Inundation Period (hrs)		10-Day Snowmelt Inundation Period (hrs)	
Ex	Prop	Ex	Prop	Ex	Prop	Ex	Prop
65	65	65	65	65	65	280	280

Rule J, Subsection 3.10b requires that for exceptional value wetlands, the project must meet at least 75 percent annual removal efficiency for phosphorus and at least 90 percent annual removal efficiency for total suspended solids. The Applicant is proposing the construction of an underground filtration system combined with a rainwater harvest and reuse system to provide volume abstraction and water quality treatment. The applicant used P8 to estimate the TP and TSS reduction provided by the underground filtration system. The resulting TP and TSS percent reductions by the underground filtration system were incorporated into the MIDs calculator to estimate the total treatment provided by the underground filtration system in combination with the rainwater harvest and reuse system. The results of this modeling are summarized in tables below showing the annual TSS and TP removal requirements are achieved prior to discharge entering the onsite wetland. The engineer concurs with the modeling, and finds that the proposed project is in conformance with Rule J, Subsection 3.10b.

**Annual TSS and TP removal summary**

Pollutant of Interest	Regulated Site Loading (lbs/yr)	Required Load Removal (lbs/yr)	Provided Load Reduction (lbs/yr)
Total Suspended Solids (TSS)	219	197 (90%)	218 (99%)
Total Phosphorus (TP)	1.21	0.91 (75%)	0.94 (78%)

**Rule L: Permit Fee Deposit:**

The RPBCWD permit fee schedule adopted in February 2020 requires permit applicants to deposit \$3,000 to be held in escrow and applied to cover the \$10 permit-processing fee and reimburse RPBCWD for permit review and inspection-related costs and when a permit application is approved, the deposit must be replenished to the applicable deposit amount by the applicant before the permit will be issued to cover actual costs incurred to monitor compliance with permit conditions and the RPBCWD Rules. A permit fee deposit of \$3,000 was received on August 12, 2020.

**Rule M: Financial Assurance:**

Rules C: Silt fence and silt dikes: 375 L.F. x \$2.50/L.F. = .....\$938  
 Inlet protection: 5 x \$100 = .....\$500  
 Rock Entrance: 1 x \$900 = .....\$900  
 Restoration: 0.69 acres x \$2,500/acre = .....\$1,725

Rules J: Stormwater Management Facility: \$322,422 x 125% of engineer's opinion of cost= ....	\$403,028
Chloride Management Plan: \$5,000 .....	\$5,000
Contingency (10%) .....	<u>\$41,209</u>
Total Financial Assurance.....	\$453,300

**Applicable General Requirements:**

1. The RPBCWD Administrator and Engineer shall be notified at least three days prior to commencement of work.
2. Construction shall be consistent with the plans and specifications approved by the District as a part of the permitting process. The date of the approved plans and specifications is listed on the permit.
3. Construction must be consistent with the plans, specifications, and models that were submitted by the applicant that were the basis of permit approval. The date(s) of the approved plans, specifications, and modeling are listed on the permit. The grant of the permit does not in any way relieve the permittee, its engineer, or other professional consultants of responsibility for the permitted work.
4. The grant of the permit does not relieve the permittee of any responsibility to obtain approval of any other regulatory body with authority.
5. The issuance of this permit does not convey any rights to either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.
6. In all cases where the doing by the permittee of anything authorized by this permit involves the taking, using or damaging of any property, rights or interests of any other person or persons, or of any publicly owned lands or improvements or interests, the permittee, before proceeding therewith, must acquire all necessary property rights and interest.
7. RPBCWD's determination to issue this permit was made in reliance on the information provided by the applicant. Any substantive change in the work affecting the nature and extent of applicability of RPBCWD regulatory requirements or substantive changes in the methods or means of compliance with RPBCWD regulatory requirements must be the subject of an application for a permit modification to the RPBCWD.
8. If the conditions herein are met and the permit is issued by RPBCWD, the applicant, by accepting the permit, grants access to the site of the work at all reasonable times during and after construction to authorized representatives of the RPBCWD for inspection of the work.

**Findings**

1. The proposed project includes the information necessary, plan sheets and erosion control plan for review.

2. The proposed project conforms to Rules C and will conform to Rule J if the Rule Specific Permit Conditions listed above are met.

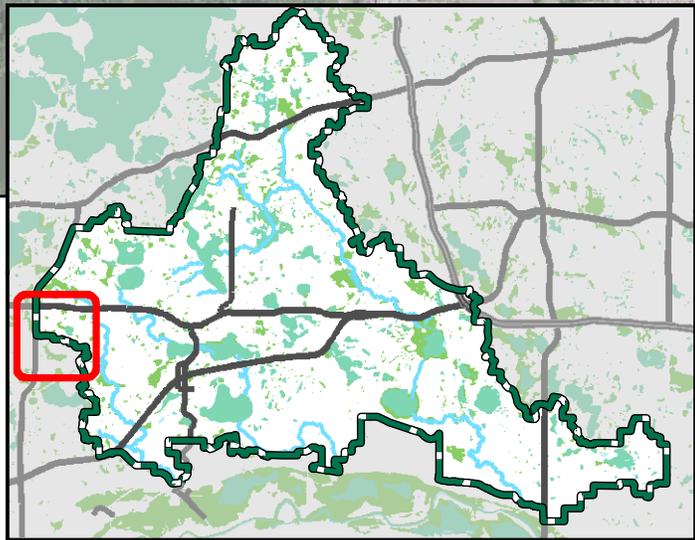
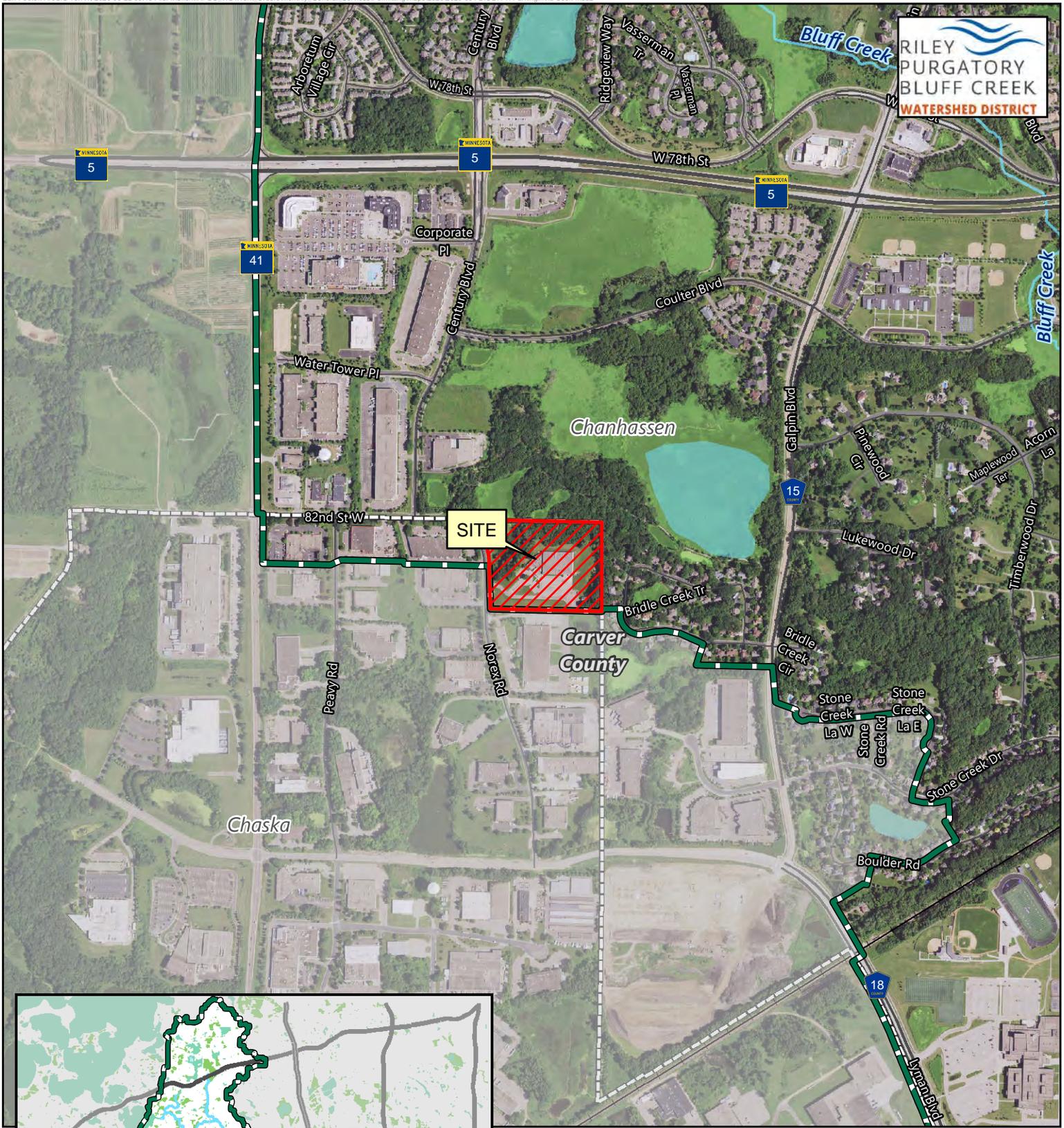
**Recommendation:**

Approval, contingent upon:

1. Continued compliance with General Requirements
2. Financial Assurance in the amount of \$453,300.
3. Receipt in recordation a maintenance declaration for the stormwater management facilities. The declaration must also include a stormwater reuse monitoring and reporting plan, including a map of the irrigation area. Drafts of all documents to be recorded must be approved by the District prior to recordation.

By accepting the permit, when issued, the applicant agrees to the following stipulations:

1. Per Rule J Subsection 4.5, upon completion of the site work, the permittee must submit as-built drawings demonstrating that at the time of final stabilization, the pretreatment manholes and subsurface stormwater facility and reuse system conform to design specifications and function as intended and approved by the District. As-built/record drawings must be signed by a professional engineer licensed in Minnesota and include, but not limited to:
  - a. the surveyed bottom elevations, water levels, and general topography of all facilities;
  - b. the size, type, and surveyed invert elevations of all stormwater facility inlets and outlets;
  - c. the surveyed elevations of all emergency overflows including stormwater facility, street, and other;
  - d. other important features to show that the project was constructed as approved by the Managers and protects the public health, welfare, and safety.
2. Providing the following additional close-out materials:
  - a. Documentation that constructed filtration facilities perform as designed. This may include filtration testing, flood testing, or other with prior approval from RPBCWD.
  - b. Documentation that disturbed pervious areas remaining pervious have been decompacted per Rule C.2c criteria.
3. To close out the permit and release the \$5,000 in financial assurance held for the purpose of the chloride management, the permit applicant must provide a signed chloride management plan that designates the individual authorized to implement the chloride management plan and the MPCA-certified salt applicator engaged in implementing the plan at the site.



Permit Location Map



Feet



BIOLYPH PARKING  
**Permit 2020-051**  
Riley Purgatory Bluff Creek  
Watershed District

# Construction Documents

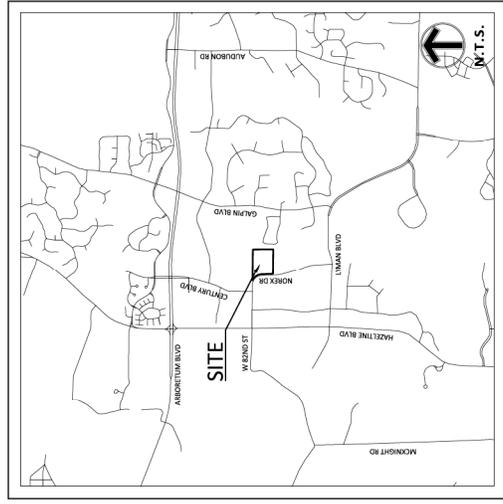
for

# Biolymph Parking Lot Expansion

Chaska, Minnesota

Presented by:

## Martin Woody Architects



**SHEET INDEX**

SHEET	TITLE SHEET	DESCRIPTION
C1.01	TITLE SHEET	DESCRIPTION
C2.01	EXISTING CONDITIONS	
C3.01	SITE PLAN	
C4.01	GRADING AND EROSION CONTROL PLAN	
C4.02	EROSION CONTROL NOTES AND DETAILS	
U1.01	UTILITY PLAN	
L1.01	LANDSCAPE PLAN	
L1.02	LANDSCAPE DETAILS AND NOTES	

**CONSULTANT CONTACT LIST:**

**CIVIL ENGINEER**  
 SAMBATEK  
 12800 WHITEWATER DRIVE, SUITE 300  
 MINNETONKA, MN 55343  
 TEL 763-476-6010  
 FAX 763-476-8532  
 CONTACT: CHAD AYERS

**ARCHITECT**  
 MARTIN WOODY ARCHITECTS  
 26405 SMITH TOWN ROAD  
 SHOREWOOD, MN 55331  
 TEL 612-382-2423  
 CONTACT: MARTIN WOODY

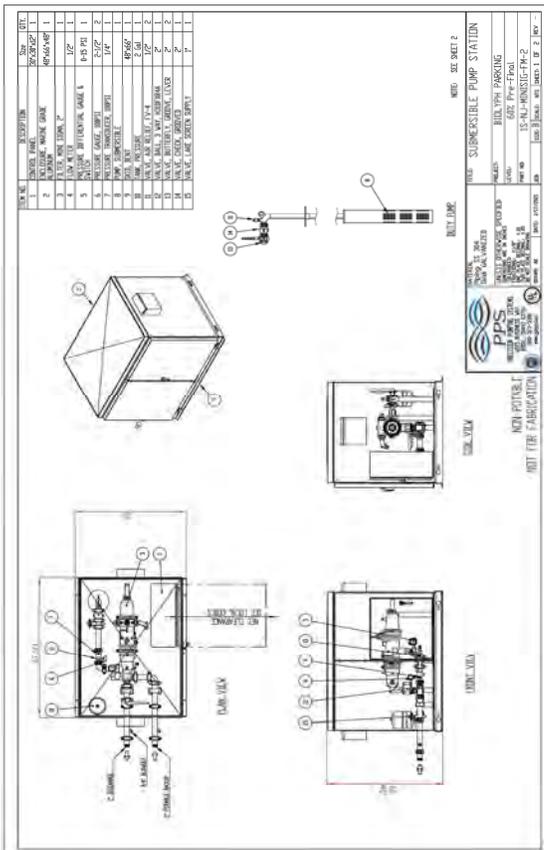
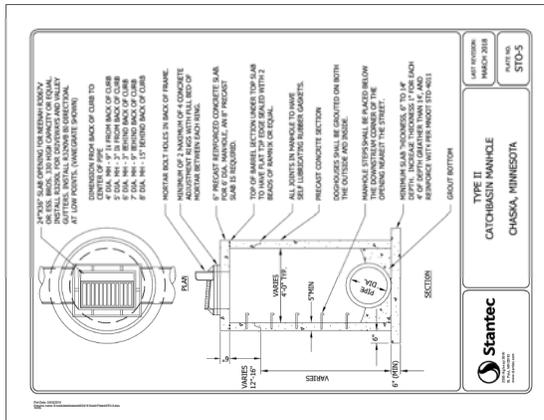
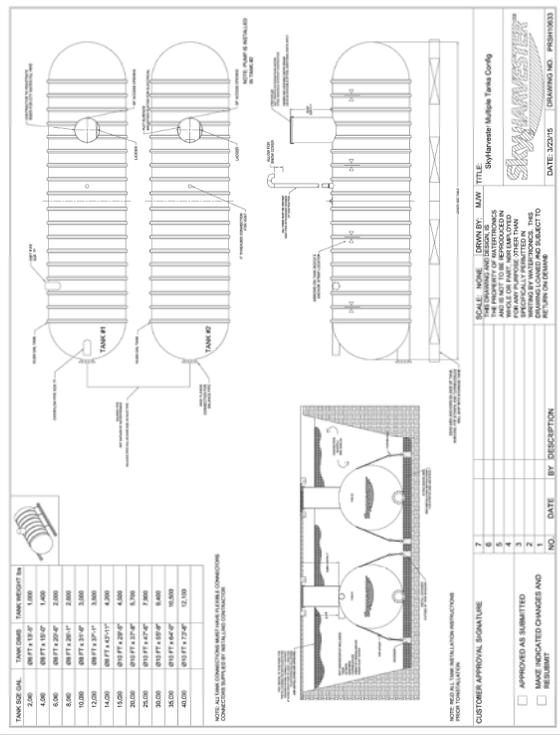
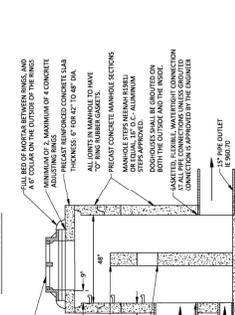
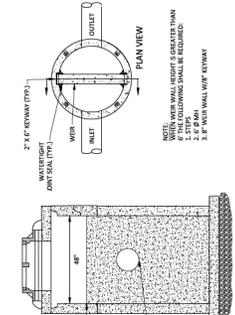
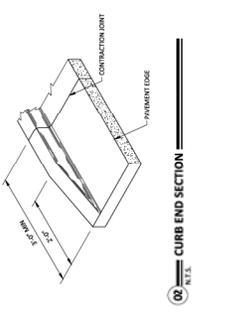
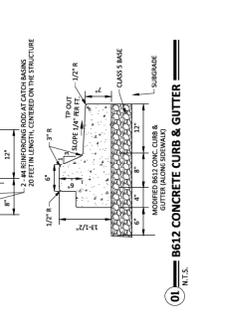
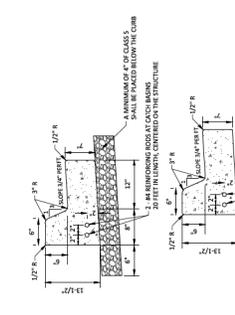
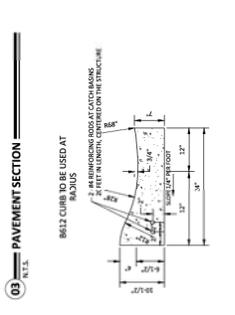
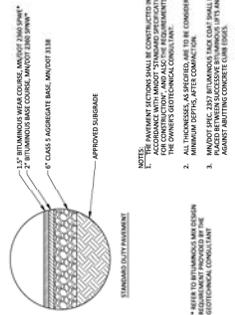
**LANDSCAPE ARCHITECT**  
 SAMBATEK  
 12800 WHITEWATER DRIVE, SUITE 300  
 MINNETONKA, MN 55343  
 TEL 763-476-6010  
 FAX 763-476-8532  
 CONTACT: JOSH MCKINNEY

**GEOTECHNICAL**  
 NORTHERN TECHNOLOGIES INC  
 2600 W. GRAND DRIVE #100  
 MINNETONKA, MN 55310  
 TEL 651-389-4191  
 FAX 651-389-4190  
 CONTACT: RYAN MENTER









**03 PAVEMENT SECTION**  
 N.T.S.

**04 MOUNTABLE CONCRETE CURB & GUTTER**  
 N.T.S.

**01 CONCRETE CURB & GUTTER**  
 N.T.S.

**05 OUTLET CONTROL STRUCTURE**  
 N.T.S.

**02 CURB END SECTION**  
 N.T.S.

**06 WATER WALL SECTION**  
 N.T.S.

**07 WATER WALL SECTION**  
 N.T.S.







18681 Lake Drive East  
Chanhassen, MN 55317  
952-607-6512  
www.rpbcwd.org

## Riley Purgatory Bluff Creek Watershed District Permit Application Review

**Permit No:** 2021-019

**Considered at Board of Managers Meeting:** May 5, 2021

**Received complete:** April 19, 2021

**Applicant:** City of Eden Prairie

**Representative:** ISG Inc., Andrea Rand

**Project:** The project proposes to reconstruct a portion of Riley Lake Park in Eden Prairie, Minnesota for the construction of a new playground area and equipment, as well as construction of connecting sidewalks, ADA parking stalls, supporting underground utilities, and a stormwater management facility.

**Location:** 9180 Riley Lake Rd, Eden Prairie, Minnesota 55347

**Reviewer:** Dallen Webster, EIT; and Scott Sobiech, PE; Barr Engineering Co.

### Proposed Board Action

Manager \_\_\_\_\_ moved and Manager \_\_\_\_\_ seconded adoption of the following resolutions based on the permit report that follows and the presentation of the matter at the May 5, 2021 meeting of the managers:

Resolved that the application for Permit 2021-019 is approved, subject to the conditions and stipulations set forth in the Recommendations section of the attached report;

Resolved that on determination by the RPBCWD administrator that the conditions of approval of the permit have been affirmatively resolved, the RPBCWD president or administrator is authorized and directed to sign and deliver to the applicant, Permit 2021-019 on behalf of RPBCWD.

Upon vote, the resolutions were adopted, \_\_\_\_\_ [VOTE TALLY].

### Applicable Rule Conformance Summary

Rule	Issue	Conforms to RBPCWD Rules?	Comments
C	Erosion Control Plan	See comment.	See rule-specific permit condition C1.
J	Stormwater Management	Rate	Yes
		Volume	Yes
		Water Quality	Yes
		Low Floor Elev.	Yes
		Maintenance	See Comment

Rule	Issue	Conforms to RBPCWD Rules?	Comments
	Chloride Management	Yes	
	Wetland Protection	NA	
<b>L</b>	<b>Permit Fee Deposit</b>	NA	Governmental Agency.
<b>M</b>	<b>Financial Assurance</b>	NA	Governmental Agency.

### **Background**

The proposed work will redevelop 1.37 acres of Lake Riley Park in Eden Prairie. The proposed redevelopment within the park will include a playground area, Americans With Disabilities Act (ADA) parking stalls, sidewalks, as well as underground utilities and a stormwater management facility. The stormwater management system includes the construction of a subsurface stormwater management facility with a rock storage reservoir below the subsurface draitile to provide water quality treatment, rate control, and volume abstraction.

Under paragraph 2.5 of Rule J, Common scheme of development, activities subject to Rule J on a parcel or adjacent parcels under common or related ownership will be considered in the aggregate, and the requirements applicable to the activity under this rule will be determined with respect to all development that has occurred on the site or on adjacent sites under common or related ownership since the date Rule J took effect (January 1, 2015). Because a different project was permitted (RPBCWD Permit 2017-010) on the site, the current activities proposed must be considered in aggregate with the activities conducted under Permit 2017-010.

The project site information is summarized in Table 1.

**Table 1. Project site information**

Site Information	Permit 2017-010	Permit 2021-019 (Current)	Site Aggregate Total (includes Two Projects)
Total Site Area (acres)	36.55	36.55	36.55
Existing Site Impervious Area (acres)	7.48	9.72	7.48 <sup>1</sup>
Proposed Site Impervious Area (acres)	9.72	9.61	9.61
New (increase) in Site Impervious Area (acres)	2.03	-0.11	1.92
Percent Increase in Impervious Surface	27.1	-1.5	25.7 <sup>2</sup>
Disturbed Site Impervious Area (acres)	0.21	0.17	0.38

Site Information	Permit 2017-010	Permit 2021-019 (Current)	Site Aggregate Total (includes Two Projects)
Percent Disturbance of Existing Impervious Surface	2.8	2.3	5.1 <sup>2</sup>
Exempt Impervious Area (pavement rehabilitation and 10-foot wide trails bordered downgradient by pervious area 5 feet or more in width) (acres)	0.7	0.32	1.02
Regulated impervious surface (acres)	1.54	0.17	1.71
Total Disturbed Area (acres)	5.15	1.37	6.52

<sup>1</sup>Pre-2015 project existing conditions

<sup>2</sup>Calculated based on pre-2015 project existing conditions (Common Scheme of Development Rule J, Subsection 2.5)

**Exhibits:**

1. Permit application dated March 24, 2021 (Notified applicant on April 7, 2021 that submittal was incomplete, revised materials completing the application received April 19, 2021 and April 23, 2021)
2. Project Plan set dated March 24, 2021 (revised April 19, 2021 and April 23, 2021)
3. Stormwater Report memo dated March 24, 2021 (revised April 19, 2021 and April 23, 2021)
4. Existing and Proposed HydroCAD Models received March 24, 2021 (revised April 19, 2021 and April 23, 2021)
5. MIDS Proposed Conditions Model received March 24, 2021 (revised April 19, 2021 and April 23, 2021)
6. Review Responses dated April 19, 2021 (i.e., the applicant's responses to the April 7<sup>th</sup> incomplete notice/review comments)
7. Chloride Management Plan dated April 19, 2021
8. Double-ring Infiltrometer Testing Report dated April 19, 2021

**Rule Specific Permit Conditions**

**Rule C: Erosion Prevention and Sediment Control**

Because the project will involve the alteration 1.38 acres of land-surface area or vegetation, the project must conform to the erosion prevention and sediment control requirements established in Rule C.

The erosion control plan prepared by ISG includes installation of perimeter control (i.e. silt fence or sediment control logs), a concrete washout area, inlet protection, a rock construction entrance, daily inspection, staging areas, placement of a minimum of 6 inches of topsoil (at 5% organic matter), decompaction of areas compacted during construction, and retention of native topsoil onsite to the greatest extent possible. To conform to RPBCWD Rule C requirements, the following revisions are needed:

C1. The Applicant must provide the name, address and phone number of the individual who will remain liable to the District for performance under this rule and maintenance of erosion and sediment-control measures from the time the permitted activities commence until vegetative cover is established. This information is required prior to issuance of the permit.

### **Rule J: Stormwater Management**

Because the project will disturb 1.38 acres of land-surface area, the project must meet the criteria of RPBCWD's Stormwater Management rule (Rule J, Subsection 2.1) Under paragraph 2.5 of Rule J, Common Scheme of Development, activities subject to Rule J on a parcel or adjacent parcels under common or related ownership will be considered in the aggregate, and the requirements applicable to the activity under this rule will be determined with respect to all development that has occurred on the site or on adjacent sites under common or related ownership since the date Rule J took effect (January 1, 2015). Because another project was permitted since the rule took effect (RPBCWD Permit 2017-010), the current activities proposed must be considered in aggregate with the activities proposed under Permit 2017-010. The criteria listed in Subsection 3.1 will only apply to the disturbed areas and new impervious area on the project site because the project, when considered in aggregate with the other permitted activities at the site, increases the imperviousness by 25.7 percent and disturbs a combined 5.1 percent of the existing impervious surface on the site (Rule J, Subsection 2.3) (See table above). The aggregate extent of disturbance and imperviousness increase are less than the 50 percent disturbed or expanded impervious area thresholds for applicability of stormwater management requirements to the entire site.

The applicant is proposing construction of a subsurface stormwater management system to provide the rate control, volume abstraction and water quality management for the disturbed and replaced impervious area and additional proposed impervious surface. Pretreatment for runoff entering the subsurface stormwater management system is being provided by a turf areas and woodchip filter.

### ***Rate Control***

In order to meet the rate control criteria listed in Subsection 3.1.a, the 2-, 10-, and 100-year post development peak runoff rates must be equal to or less than the existing discharge rates at all locations where stormwater leaves the site. The applicant used a HydroCAD hydrologic model to simulate runoff rates for pre- and post-development conditions for the 2-, 10-, and 100-year frequency storm events using a nested rainfall distribution, and a 100-year frequency, 10-day snowmelt event. The existing and proposed 2-, 10-, and 100-year frequency discharges from the site are summarized in Table 2 below. The proposed project is in conformance with RPBCWD Rule J, Subsection 3.1.a.

**Table 2. Existing and Proposed Peak Runoff Rates**

Rainfall Event	Condition	
	Existing Discharge Rate (CFS)	Proposed Discharge Rate (CFS)
2-Year	3.3	2.4
10-Year	5.7	4.6
100-Year	10.4	8.3
100-year, 10-Day Snowmelt	0.3	0.3

**Volume Abstraction**

Subsection 3.1.b of Rule J requires the abstraction onsite of 1.1 inches of runoff from the regulated impervious surface of the site. An abstraction volume of 657 cubic feet is required from the 0.17 acres (7,171 square feet) of new regulated impervious area. Pretreatment of runoff entering the infiltration area is provided by the first 3-inches of wood mulch applied to the playground and turf areas to conform to Rule J, Subsection 3.1.b.1. The four soil borings and one infiltrometer test performed by Braun Intertec show that soils in the project area are primarily Sandy Lean Clays. Only one boring encountered groundwater, at approximately 22 feet below the ground surface, elevation 857 feet. Because the bottom of the proposed stormwater management facility is at elevation 877.56, adequate ground water separation will be achieved between the bottom of BMP and the groundwater table, as required by Rule J, Subsection 3.1.b.2.a.

Infiltrometer testing conducted by Braun Intertec measured an infiltration rate of 0.5 inches/hour at the site. The engineer concurs with the applicant’s design infiltration rate of 0.25 inches/hour. The proposed stormwater facility provides adequate surface area (2,720 SF) to drawdown the abstraction volumes within the required 48-hour period, thus conforming with Rule J, Subsection 3.1.b.3.

The table below summarizes the volume abstraction for the site. The engineer concurs with the submitted information and finds that the proposed project will conform with Rule J, Subsection 3.1.b.

Required Abstraction Depth (inches)	Required Abstraction Volume (cubic feet)	Provided Abstraction Depth (feet)	Provided Abstraction Volume (cubic feet)
1.1	657	1.2	725

### ***Water Quality Management***

Subsection 3.1.c of Rule J requires the Applicant provide volume abstraction in accordance with 3.1b or least 60 percent annual removal efficiency for total phosphorus (TP), and at least 90 percent annual removal efficiency for total suspended solids (TSS) from site runoff, and no net increase in TSS or TP loading leaving the site from existing conditions. Because the BMP proposed by the applicant provides more volume abstraction than is required by 3.1b and the engineer concurs with the modeling, the engineer finds that the proposed project is in conformance with Rule J, Subsection 3.1.c.

### ***Low floor Elevation***

All new buildings must be constructed such that the lowest floor is at least two feet above the 100-year high-water elevation or one foot above the emergency overflow of a stormwater-management facility according to Rule J, Subsection 3.6a. In addition, a stormwater-management facility must be constructed at an elevation that ensures that no adjacent habitable building will be brought into noncompliance with this requirement according to Rule J, Subsection 3.6b. Because the project does not propose new or reconstructed structures and there are no habitable structures adjacent to the stormwater facility, the low floor elevation requirements set forth by Rule J, Subsection 3.6 do not impose requirements on the project.

### ***Maintenance***

Subsection 3.7 of Rule J requires the submission of maintenance plan. All stormwater management structures and facilities must be designed for maintenance access and properly maintained in perpetuity to assure that they continue to function as designed.

- J1. Permit applicant must provide a draft maintenance and inspection plan. As a public entity, the City of Eden Prairie may comply with this requirement by entering into a maintenance agreement with the RPBCWD.

### ***Chloride Management***

Subsection 3.8 of Rule J requires the submission of chloride management plan that designates the individual authorized to implement the chloride management plan and the MPCA-certified salt applicator engaged in implementing the plan. The applicant indicated Lake Riley Park is not de-iced, and the streets department only de-ices the boat launch parking lot. Therefore, the City of Eden Prairie provided its chloride management plan and its designated state-certified chloride applicator is Eden Prairie's Streets Division Manager Larry Doig, the proposed development conforms with Rule J, subsection 3.8.

### **Applicable General Requirements:**

1. The RPBCWD Administrator and Engineer shall be notified at least three days prior to commencement of work.

2. Construction shall be consistent with the plans and specifications approved by the District as a part of the permitting process. The date of the approved plans and specifications is listed on the permit.
3. Construction must be consistent with the plans, specifications, and models that were submitted by the applicant that were the basis of permit approval. The date(s) of the approved plans, specifications, and modeling are listed on the permit. The grant of the permit does not in any way relieve the permittee, its engineer, or other professional consultants of responsibility for the permitted work.
4. The grant of the permit does not relieve the permittee of any responsibility to obtain approval of any other regulatory body with authority.
5. The issuance of this permit does not convey any rights to either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.
6. In all cases where the doing by the permittee of anything authorized by this permit involves the taking, using or damaging of any property, rights or interests of any other person or persons, or of any publicly owned lands or improvements or interests, the permittee, before proceeding therewith, must acquire all necessary property rights and interest.
7. RPBCWD's determination to issue this permit was made in reliance on the information provided by the applicant. Any substantive change in the work affecting the nature and extent of applicability of RPBCWD regulatory requirements or substantive changes in the methods or means of compliance with RPBCWD regulatory requirements must be the subject of an application for a permit modification to the RPBCWD.
8. If the conditions herein are met and the permit is issued by RPBCWD, the applicant, by accepting the permit, grants access to the site of the work at all reasonable times during and after construction to authorized representatives of the RPBCWD for inspection of the work.

### **Findings**

1. The proposed project includes the information necessary, plan sheets and erosion control plan for review.
2. The proposed project will conform to Rules C and J if the Rule Specific Permit Conditions listed above are met.

### **Recommendation:**

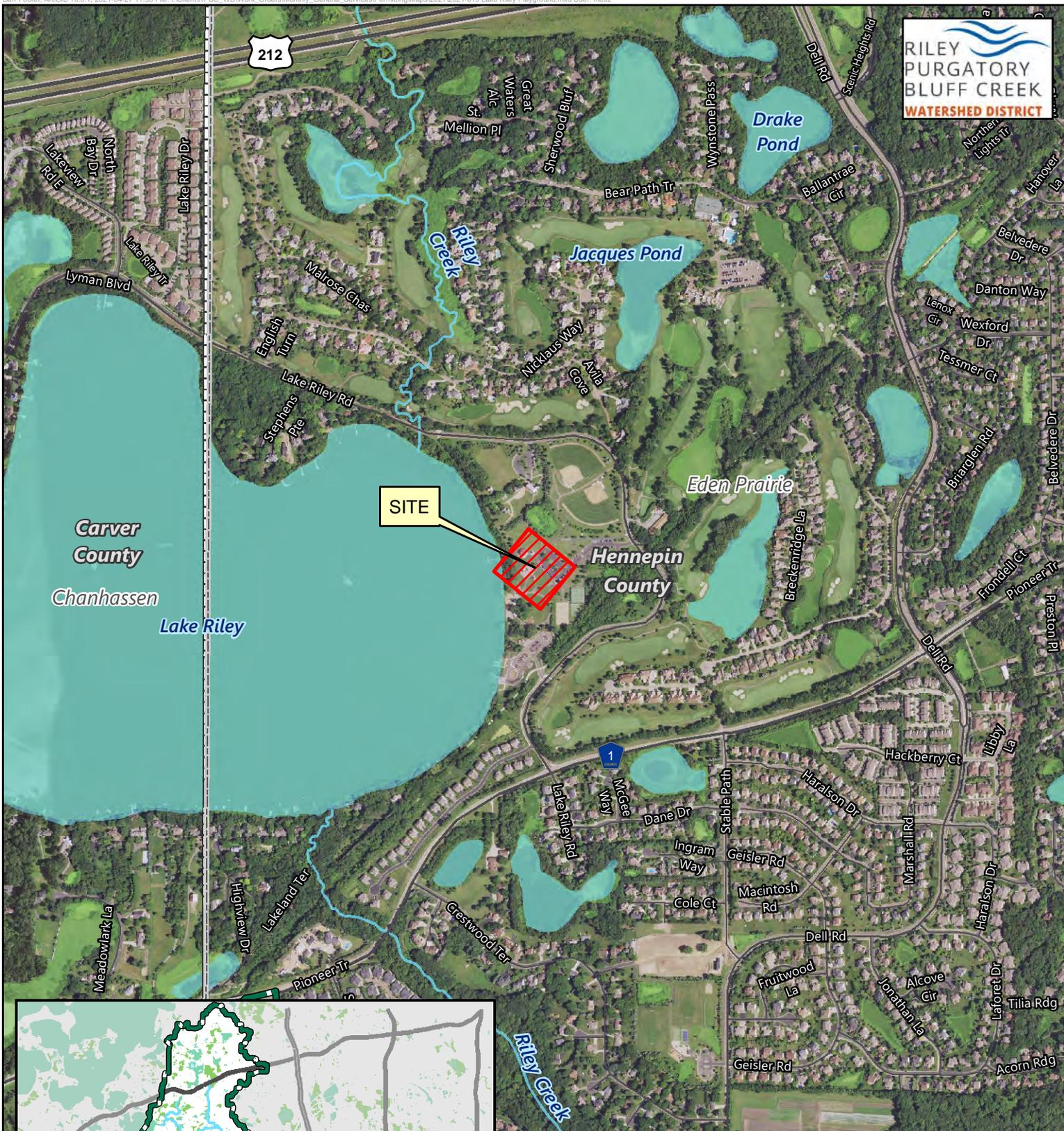
Approval of the permit contingent upon:

1. Continued compliance with General Requirements.
2. Permit applicant must provide the name and contact information of the general contractor responsible for the site. RPBCWD must be notified if the responsible party changes during the permit term.

3. Permit applicant must provide a draft maintenance and inspection plan for the stormwater facility. As a public entity, the City of Eden Prairie may comply with this requirement by entering into a maintenance agreement with the RPBCWD.

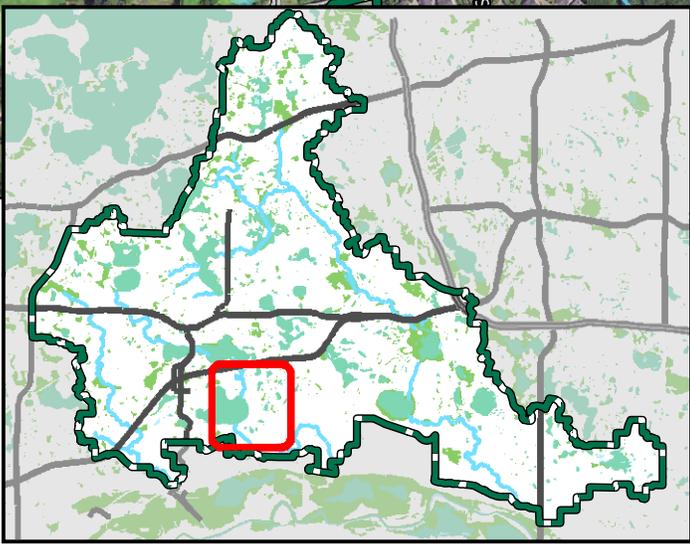
By accepting the permit, when issued, the applicant agrees to the following stipulations:

1. Per Rule J Subsection 4.5, upon completion of the site work, the permittee must submit as-built drawings demonstrating that at the time of final stabilization the stormwater management facility conforms to design specifications and functions as intended and approved by the District. As-built/record drawings must be signed by a professional engineer licensed in Minnesota and include, but not limited to:
  - a) the surveyed bottom elevations, water levels, and general topography of all facilities;
  - b) the size, type, and surveyed invert elevations of all stormwater facility inlets and outlets;
  - c) the surveyed elevations of all emergency overflows including stormwater facility, street, and other;
  - d) other important features to show that the project was constructed as approved by the Managers and protects the public health, welfare, and safety.
2. Providing the following additional close-out materials:
  - a) Documentation that constructed infiltration facilities perform as designed. This may include infiltration testing, flood testing, or other with prior approval from RPBCWD
  - b) Documentation that disturbed pervious areas remaining pervious have been decompacted per Rule C.2c criteria



**RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT**

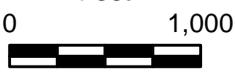
**SITE**



Permit Location Map



Feet



**LAKE RILEY PLAYGROUND**  
**Permit 2021-019**  
 Riley Purgatory Bluff Creek Watershed District













MINNESOTA PROFESSIONAL LANDSCAPE ARCHITECTS REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND I AM A LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 MITCHELL R. WOODRUM  
 DATE: 04/01/2021 LIC. NO.: 53748

THIS DOCUMENT IS THE PROPERTY OF ISG GROUP. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT PRIOR WRITTEN CONSENT.

PROJECT: EDEN PRAIRIE, MINNESOTA

# RILEY LAKE PARK PLAYGROUND

EDEN PRAIRIE, MINNESOTA

DATE	REVISION/SCHEDULE	DESCRIPTION	BY

PROJECT NO.	20-24726
FILE NAME	24726.DWG RESTORATION
DRAWN BY	MRD
CHECKED BY	MRW/AM
REVIEWED BY	MRW/AM
ORIGINAL ISSUE DATE	04/01/2021
CLIENT PROJECT NO.	

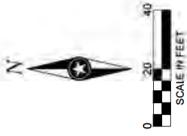
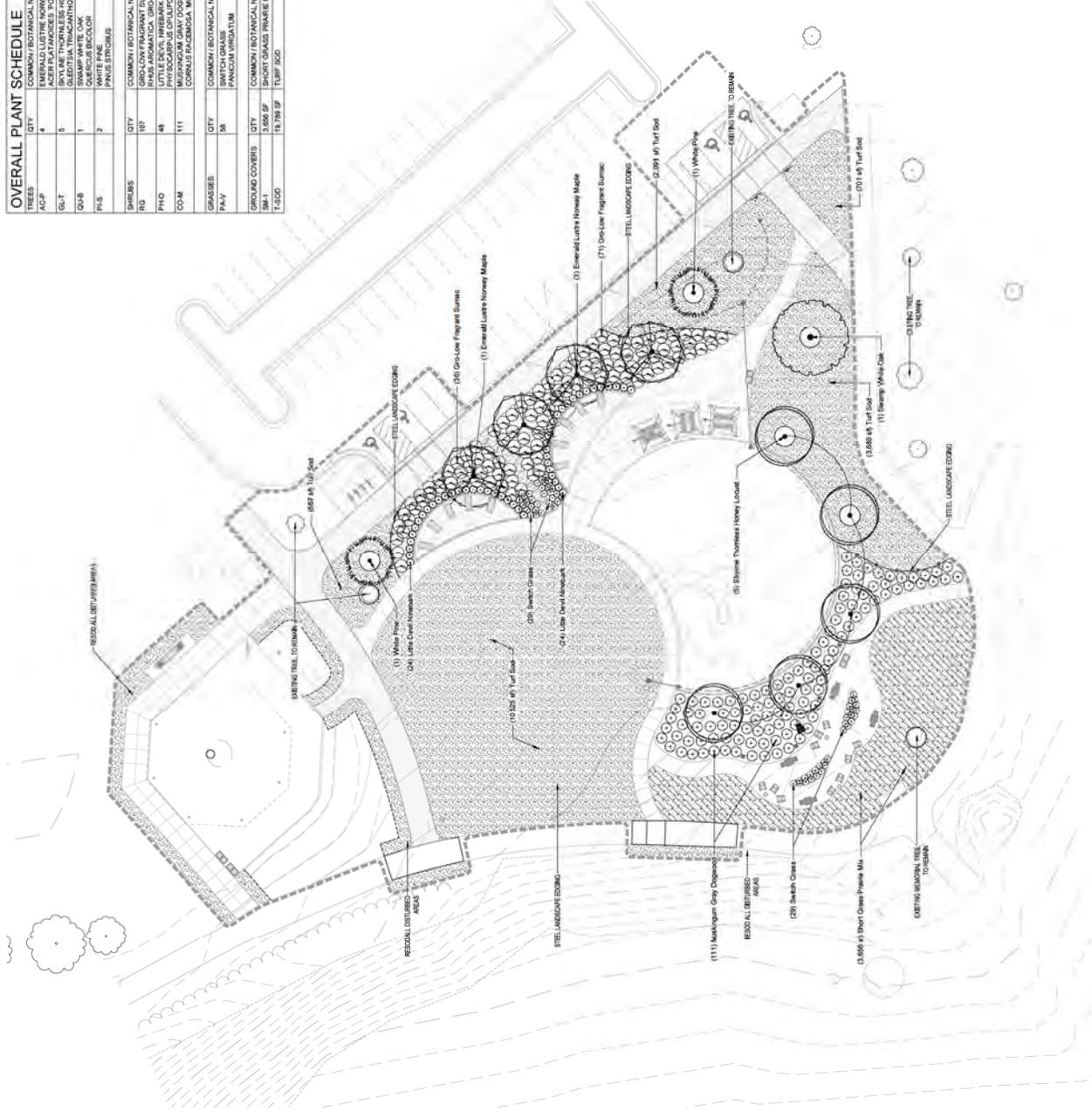
## LANDSCAPE PLANTING PLAN

SHEET **C5-20**

### OVERALL PLANT SCHEDULE

TREES	QTY	COMMON / BOTANICAL NAME	ROOT	SIZE	NOTE
AC/P	4	AMERICAN LARCH 'NORWAY' TM	2'2" CAL	8' & B	TRUNK FREE OF BRANCHES 6'7" FROM BASE
GL/T	5	ROYAL HAWTHORN 'NORWAY' TM	2'2" CAL	8' & B	TRUNK FREE OF BRANCHES 6'7" FROM BASE
Q/O/B	1	GLADSTONE THORNLESS HONEY LOCUST	2'2" CAL	8' & B	TRUNK FREE OF BRANCHES 6'7" FROM BASE
Q/O/B	1	QUEENSLAND SILVER OAK	2'2" CAL	8' & B	TRUNK FREE OF BRANCHES 6'7" FROM BASE
P/S	2	WHITE PINE	8' & B	8' Ht RW	DENSE / FULL
P/S	2	PARSONS SPINDRUS	8' & B	8' Ht RW	DENSE / FULL
SHRUBS	QTY	COMMON / BOTANICAL NAME	ROOT	SIZE	NOTE
RG	107	GRASSY FRAGRANT SUMAC	5 CAL	COHT	SPACE 3'-0" O.C.
PHO	48	LITTLE LEAF NINEBARK	COHT	8 CAL	SPACE 3'-2" O.C.
COO	111	PHYSCARPUS OXYLOPOLIS 'DOMA MUY' TM	COHT	5 CAL	SPACE 3'-0" O.C.
COO	111	PHYSCARPUS OXYLOPOLIS 'DOMA MUY' TM	COHT	5 CAL	SPACE 3'-0" O.C.
COO	111	CORNUS PAUCIFLORA 'WISCONSIN' TM	COHT	5 CAL	SPACE 3'-0" O.C.
GRASSES	QTY	COMMON / BOTANICAL NAME	ROOT	SIZE	NOTE
P/V	58	PANICUM VIRGATUM	COHT	3 CAL	SPACE 3'-0" O.C.
P/V	58	PANICUM VIRGATUM	COHT	3 CAL	SPACE 3'-0" O.C.
GROUND COVERS	QTY	COMMON / BOTANICAL NAME	SIZE	ROOT	NOTE
SM-1	3,056 SF	SHORT GRASS PRAIRIE MIX	SEED	N/A	SEE SPEC SECTION 32 02-1 - TURF RESTORATION
T-CO2	15,778 SF	TURF 3020	SEED	N/A	SEE SPEC SECTION 32 02-1 - TURF RESTORATION

**SITE RESTORATION NOTES:**  
 ALL TOPSOIL TO BE INSTALLED SHALL CONTAIN AT LEAST ON PERCENT ORGANIC MATTER AND MEET THE FIRMING TOPSOIL SPECIFICATIONS.  
 ALL SET-ASIDE AREAS SHALL BE TILLED OR RIPPED TO A 12" DEPTH AND RESEED WITH THE SAME MIXTURE OF SEEDS AS THE ADJACENT AREAS TO MAINTAIN THE INTEGRITY OF THE LANDSCAPE.  
 ALL SET-ASIDE AREAS SHALL BE TILLED OR RIPPED TO A 12" DEPTH AND RESEED WITH THE SAME MIXTURE OF SEEDS AS THE ADJACENT AREAS TO MAINTAIN THE INTEGRITY OF THE LANDSCAPE.





April 29, 2021

Terry Jeffery  
Interim District Administrator  
Riley Purgatory Bluff Creek Watershed District  
18681 Lake Drive E.  
Chanhassen, Minnesota 55317

Dear Terry:

Enclosed please find the checks and Treasurer's Report for Riley Purgatory Bluff Creek Watershed District for the one month and three months ending March 31, 2021.

Please examine these statements and if you have any questions or need additional copies, please call me.

Sincerely,

REDPATH AND COMPANY, LTD.

A handwritten signature in black ink, appearing to read "Mark Gibbs".

Mark C. Gibbs, CPA  
Enclosure



To The Board of Managers  
Riley Purgatory Bluff Creek Watershed District  
Chanhassen, Minnesota

### **Accountant's Opinion**

The Riley Purgatory Bluff Creek Watershed District is responsible for the accompanying March 31, 2021 Treasurer's Report in the prescribed form. We have performed a compilation engagement in accordance with the Statements on Standards for Accounting and Review promulgated by the Accounting and Review Services Committee of AICPA. We did not audit or review the Treasurer's Report nor were we required to perform any procedures to verify the accuracy or completeness of the information provided by the Riley Purgatory Bluff Creek Watershed District. Accordingly, we do not express an opinion, a conclusion, nor provide any form of assurance on the Treasurer's Report.

### **Reporting Process**

The Treasurer's Report is presented in a prescribed form mandated by the Board of Managers and is not intended to be a presentation in accordance with accounting principles generally accepted in the United States of America. The reason the Board of Managers mandates a prescribed form instead of GAAP (Generally Accepted Accounting Principles) is this format gives the Board of Managers the financial information they need to make informed decisions as to the finances of the watershed.

GAAP basis reports would require certain reporting formats, adjustments to accrual basis and supplementary schedules to give the Board of Managers information they need, making GAAP reporting on a monthly basis extremely cost prohibitive. An independent auditing firm is retained each year to perform a full audit and issue an audited GAAP basis report. This annual report is submitted to the Minnesota State Auditor, as required by Statute, and to the Board of Water and Soil Resources.

The Treasurer's Report is presented on a modified accrual basis of accounting. Expenditures are accounted for when incurred. For example, payments listed on the Cash Disbursements report are included as expenses in the Treasurer's Report even though the actual payment is made subsequently. Revenues are accounted for on a cash basis and only reflected in the month received.

REDPATH AND COMPANY, LTD.

A handwritten signature in black ink that reads "Redpath and Company, Ltd." in a cursive script.

St. Paul, Minnesota  
April 29, 2021

**RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT**

**Treasurers Report**

**March 31, 2021**

**REPORT INDEX**

<b><u>Page #</u></b>	<b><u>Report Name</u></b>
1	Cash Disbursements
2	Fund Performance Analysis – Table 1
3	Multi-Year Project Performance Analysis – Table 2
4	Balance Sheet
5	VISA Activity

**RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT**

**Cash Disbursements**

**March 31, 2021**

**Accounts Payable:**

<b>Check #</b>	<b>Payee</b>	<b>Amount</b>
5556	Baker Tilly	\$9,313.00
5557	Barr Engineering	100,903.49
5558	B9 Polar Waters, LLC	1,790.88
5559	CenterPoint Energy	222.17
5560	CenturyLink	884.79
5561	City of Chanhassen	26.41
5562	Coverall of the Twin Cities	316.76
5563	ECM Publishers, Inc.	1,713.60
5564	Hansen Thorp Pellinen Olson, Inc.	3,201.75
5565	HealthPartners	6,917.08
5566	Amy Herbert	1,155.00
5567	Iron Mountain	162.57
5568	Metro Sales, Inc.	248.95
5569	Principal Life Insurance Company	404.01
5570	Redpath & Company	2,507.32
5571	Regents of the University of Minnesota	9,474.60
5572	Smith Partners	29,705.91
5573	Southwest News Media	1,168.64
5574	SpeedPro Imaging of Eden Prairie	95.60
5575	SRF Consulting Group, Inc.	13,424.43
5576	Xcel Energy	384.01
5577	Olivia Holstine	80.91
5578	Larry Koch	1,731.56

**Total Accounts Payable: \$185,833.44**

**Payroll Disbursements:**

Payroll Processing Fee	202.15
Employee Salaries	66,092.50
Employer Payroll Taxes	5,144.69
Employer Benefits (H.S.A. Match)	1,500.00
Employee Benefit Deductions	(822.54)
Staff Expense Reimbursements	634.18
PERA Match	3,128.00

**Total Payroll Disbursements: \$75,878.98**

VISA - 03/17/21 4,471.63

**Total: \$4,471.63**

**TOTAL DISBURSEMENTS: \$266,184.05**

**Memos**

The 2021 mileage rate is .56 per mile. The 2020 rate was .575  
Old National VISA will be paid on-line.

**RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT**  
**Fund Performance Analysis - Table 1**  
**March 31, 2021**

	2021 Budget	Fund Transfers	2021 Budget	Current Month	Year-to-Date	Year-to Date Percent of Budget
<b>REVENUES</b>						
Plan Implementation Levy	\$3,575,000.00	-	\$3,575,000.00	-	-	0.00%
Permit	25,000.00	-	25,000.00	5,000.00	14,400.00	57.60%
Grant Income	272,580.00	-	272,580.00	-	-	0.00%
Investment Income	30,000.00	-	30,000.00	(38.37)	181.24	0.60%
Miscellaneous Income	-	-	-	2.99	2.99	---
Past Levies	3,204,427.00	-	3,204,427.00	-	-	0.00%
Partner Funds	451,000.00	-	451,000.00	-	2,000.00	0.00%
<b>TOTAL REVENUE</b>	<b>\$7,558,007.00</b>	<b>-</b>	<b>\$7,558,007.00</b>	<b>\$4,964.62</b>	<b>\$16,584.23</b>	<b>0.22%</b>
<b>EXPENDITURES</b>						
<b>Administration</b>						
Audit	\$15,000.00	-	\$15,000.00	-	\$11,000.00	73.33%
Accounting (and Audit)	\$31,000.00	-	31,000.00	2,709.47	13,007.39	41.96%
Advisory Committees	7,000.00	-	7,000.00	-	-	0.00%
Insurance and bonds	18,000.00	-	18,000.00	-	414.00	2.30%
Engineering Services	112,000.00	-	112,000.00	13,335.00	38,203.00	34.11%
Legal Services	84,000.00	-	84,000.00	14,298.51	29,624.54	35.27%
Manager Per Diem/Expense	30,000.00	-	30,000.00	1,875.00	5,300.00	17.67%
Dues and Publications	16,000.00	-	16,000.00	-	9,006.00	56.29%
Office Cost	190,000.00	-	190,000.00	5,169.47	35,708.49	18.79%
Permit Review and Inspection	140,000.00	-	140,000.00	14,057.35	31,293.00	22.35%
Professional Services	10,000.00	-	10,000.00	9,313.00	12,335.50	123.36%
Recording Services	15,000.00	-	15,000.00	1,155.00	4,230.00	28.20%
Staff Cost	802,054.00	-	802,054.00	69,693.28	143,214.74	17.86%
<b>Subtotal</b>	<b>\$1,470,054.00</b>	<b>-</b>	<b>\$1,470,054.00</b>	<b>\$131,606.08</b>	<b>\$333,336.66</b>	<b>22.68%</b>
<b>Programs and Projects</b>						
<b>District Wide</b>						
10-year Management Plan	\$10,000.00	-	\$10,000.00	\$722.50	\$2,862.80	28.63%
AIS Inspection and early response	85,000.00	-	85,000.00	-	1,633.52	1.92%
Cost-Share/Stewardship Grant	346,735.00	-	346,735.00	4,124.07	27,988.48	8.07%
Data Collection and Monitoring	193,000.00	-	193,000.00	14,814.94	78,241.88	40.54%
Community Resiliency	111,058.00	-	111,058.00	2,341.50	6,163.50	5.55%
Education and Outreach	100,834.00	-	100,834.00	2,873.07	7,949.80	7.88%
Plant Restoration - U of M	61,613.00	-	61,613.00	9,474.60	9,474.60	15.38%
Repair and Maintenance Fund *	212,540.00	-	212,540.00	-	170.00	0.08%
Wetland Management*	111,248.00	-	111,248.00	18,674.23	48,078.34	43.22%
Groundwater Conservation*	229,444.00	-	229,444.00	-	450.00	0.20%
Lake Vegetation Implementation	83,083.00	-	83,083.00	-	2,290.28	2.76%
Opportunity Project*	317,480.00	-	317,480.00	-	-	0.00%
Stormwater Ponds - U of M	67,164.00	-	67,164.00	-	-	0.00%
Hennepin County Chloride Initiative	92,971.00	-	92,971.00	-	-	0.00%
Lower Minnesota Chloride Cost-Share	217,209.00	-	217,209.00	-	-	0.00%
<b>Subtotal</b>	<b>\$2,239,379.00</b>	<b>-</b>	<b>\$2,239,379.00</b>	<b>\$53,024.91</b>	<b>\$185,303.20</b>	<b>8.27%</b>
<b>Bluff Creek</b>						
Bluff Creek Tributary*	\$7,251.00	-	\$7,251.00	-	-	0.00%
Wetland Restoration at Pioneer	\$665,285.00	-	665,285.00	15,926.40	33,772.97	5.08%
Bluff Creek B5 by Galpin	140,000.00	-	140,000.00	-	-	0.00%
<b>Subtotal</b>	<b>\$812,536.00</b>	<b>-</b>	<b>812,536.00</b>	<b>\$15,926.40</b>	<b>\$33,772.97</b>	<b>4.16%</b>
<b>Riley Creek</b>						
Lake Riley - Alum Treatment*	\$62,885.00	-	\$62,885.00	-	-	0.00%
Rice Marsh Lake in-lake phosphorus load	45,636.00	-	45,636.00	239.00	239.00	0.52%
Rice Marsh Lake Water Quality Improvement Phase 1	634,147.00	-	634,147.00	2,841.50	9,451.00	1.49%
Riley Creek Restoration (Reach E and D3)	107,047.00	-	107,047.00	225.00	587.00	0.55%
Upper Riley Creek Stabilization	902,025.00	-	902,025.00	11,317.18	17,400.68	1.93%
Middle Riley Creek	192,363.00	-	192,363.00	14,985.50	43,136.00	22.42%
Lake Ann Wetland Restoration	50,000.00	-	50,000.00	-	-	0.00%
St. Hubert Water Quality Project	147,063.00	-	147,063.00	24,857.67	49,777.42	33.85%
<b>Subtotal</b>	<b>\$2,141,166.00</b>	<b>\$0.00</b>	<b>2,141,166.00</b>	<b>\$54,465.85</b>	<b>\$120,591.10</b>	<b>5.63%</b>
<b>Purgatory Creek</b>						
Purgatory Creek Rec Area- Berm/retention area - feasibility/design	\$34,899.00	-	\$34,899.00	\$3,201.75	\$4,634.75	13.28%
Lotus Lake in-lake phosphorus load control	79,225.00	-	79,225.00	-	-	0.00%
Silver Lake Restoration - Feasibility Phase 1	207,208.00	-	207,208.00	7,959.06	34,668.36	16.73%
Scenic Heights	92,040.00	-	92,040.00	-	2,983.00	3.24%
Hyland Lake in-lake phosphorus load control	20,000.00	-	20,000.00	-	-	0.00%
Duck Lake watershed load	32,120.00	-	32,120.00	-	3,900.00	12.14%
Lotus Lake Kerber Pond	14,380.00	-	14,380.00	-	-	0.00%
Duck lake Partnership	235,000.00	-	235,000.00	-	-	0.00%
<b>Subtotal</b>	<b>\$714,872.00</b>	<b>\$0.00</b>	<b>\$714,872.00</b>	<b>\$11,160.81</b>	<b>\$46,186.11</b>	<b>6.46%</b>
<b>Reserve</b>	<b>\$180,000.00</b>	<b>\$0.00</b>	<b>180,000.00</b>	<b>-</b>	<b>-</b>	<b>0.00%</b>
<b>TOTAL EXPENDITURE</b>	<b>\$7,558,007.00</b>	<b>\$0.00</b>	<b>\$7,558,007.00</b>	<b>\$266,184.05</b>	<b>\$719,190.04</b>	<b>9.52%</b>
<b>EXCESS REVENUES OVER (UNDER) EXPENDITURES</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>(\$261,219.43)</b>	<b>(\$702,605.81)</b>	

\*Denotes Multi-Year Project - See Table 2 for details

**RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT**  
**Muti-Year Project Performance Analysis - Table 2**  
**March 31, 2021**

Programs and Projects	Total	FUNDING SOURCE			Current	Costs	Costs	Total Costs	District's Share	District's Share
	Lifetime Budget	District funds	Partner Fund	Grants	Year Budget	Month End	Year-to-Date	to Date	Current Year	Future Years
<b>District Wide</b>										
Community Resiliency	\$148,000.00	\$98,000.00	-	50,000.00	\$111,058.00	\$2,341.50	\$6,163.50	\$68,104.57	\$75,000.00	60,000.00
Repair and Maintenance Fund	277,005.00	277,005.00	-	-	212,540.00	-	170.00	89,635.08	-	20,000.00
Wetland Management	200,000.00	200,000.00	-	-	111,248.00	18,674.23	48,078.34	161,830.22	-	70,000.00
Groundwater Conservation	180,000.00	180,000.00	-	-	229,444.00	-	450.00	1,005.85	50,000.00	79,000.00
Opportunity Project*	300,000.00	300,000.00	-	-	317,480.00	-	-	26,165.29	50,000.00	70,000.00
Stormwater Ponds - U of M	106,092.00	64,092.00	42,000.00	-	67,164.00	-	-	58,927.97	20,000.00	-
Hennepin County Chloride Initiative	120,800.00	19,000.00	-	101,800.00	92,971.00	-	-	27,829.77	-	-
Lower Minnesota Chloride Cost-Share	217,209.00	20,000.00	-	197,209.00	217,209.00	-	-	-	-	-
<b>Subtotal</b>	<b>\$1,549,106.00</b>	<b>\$1,158,097.00</b>	<b>\$42,000.00</b>	<b>\$349,009.00</b>	<b>\$1,359,114.00</b>	<b>\$21,015.73</b>	<b>\$54,861.84</b>	<b>\$433,498.75</b>	<b>195,000.00</b>	<b>299,000.00</b>
<b>Bluff Creek</b>										
Bluff Creek Tributary*	\$436,750.00	\$386,750.00	\$50,000.00	-	\$7,251.00	-	0.00	\$391,498.69	-	-
Wetland Restoration at Pioneer	857,820.00	450,000.00	-	407,820.00	665,285.00	15,926.40	33,772.97	676,310.13	450,000.00	-
Bluff Creek B5 by Galpin	614,000.00	614,000.00	-	-	140,000.00	-	-	-	140,000.00	614,000.00
<b>Subtotal</b>	<b>\$1,908,570.00</b>	<b>\$1,450,750.00</b>	<b>\$50,000.00</b>	<b>\$407,820.00</b>	<b>\$812,536.00</b>	<b>15,926.40</b>	<b>\$33,772.97</b>	<b>\$1,067,808.82</b>	<b>\$590,000.00</b>	<b>614,000.00</b>
<b>Riley Creek</b>										
Lake Riley - Alum Treatment 1st dose *	\$560,000.00	\$560,000.00	-	-	\$62,885.00	-	-	\$512,114.57	-	-
Rice Marsh Lake in-lake phosphorus load	150,000.00	150,000.00	-	-	45,636.00	239.00	239.00	104,603.65	-	170,000.00
Rice Marsh WQ 1	300,000.00	300,000.00	-	-	634,147.00	2,841.50	9,451.00	25,303.50	350,000.00	-
Riley Creek Restoration (Reach E and D3) *	2,168,148.00	1,615,000.00	553,148.00	-	107,046.00	225.00	587.00	2,228,444.03	40,000.00	-
Upper Riley Creek Stabilization	950,000.00	950,000.00	-	-	902,025.00	11,317.18	17,400.68	65,375.20	100,000.00	-
Middle Riley Creek	45,000.00	-	45,000.00	-	192,363.00	14,985.50	43,136.00	43,136.00	-	-
St Hubert	178,865.00	-	65,000.00	113,865.00	147,063.00	24,857.67	49,777.42	49,777.42	100,000.00	-
<b>Subtotal</b>	<b>\$4,352,013.00</b>	<b>\$3,575,000.00</b>	<b>\$663,148.00</b>	<b>\$113,865.00</b>	<b>\$2,091,165.00</b>	<b>\$54,465.85</b>	<b>\$120,591.10</b>	<b>\$3,028,754.37</b>	<b>\$590,000.00</b>	<b>170,000.00</b>
<b>Purgatory Creek</b>										
Purgatory Creek Rec Area- Berm/retention area - feasibility/design	\$50,000.00	\$50,000.00	-	-	\$34,899.00	3,201.75	4,634.75	\$19,736.03	-	-
Lotus Lake in-lake phosphorus load control	345,000.00	345,000.00	-	-	79,225.00	-	-	265,773.75	-	345,000.00
Silver Lake Restoration Project WQ1	268,013.00	268,013.00	-	-	207,208.00	7,959.06	34,668.36	95,473.55	-	-
Scenic Heights	260,000.00	165,000.00	45,000.00	50,000.00	92,040.00	-	2,983.00	210,942.75	-	-
Hyland Lake Internal Load	150,000.00	130,000.00	20,000.00	-	20,000.00	-	-	128,612.41	20,000.00	150,000.00
Duck Lake watershed load	220,000.00	220,000.00	-	-	32,120.00	-	3,900.00	191,779.01	-	-
<b>Subtotal</b>	<b>\$1,293,013.00</b>	<b>\$1,178,013.00</b>	<b>\$65,000.00</b>	<b>\$50,000.00</b>	<b>\$465,492.00</b>	<b>\$11,160.81</b>	<b>\$46,186.11</b>	<b>\$912,317.50</b>	<b>\$20,000.00</b>	<b>495,000.00</b>
<b>Total Multi-Year Project Costs</b>	<b>\$9,102,702.00</b>	<b>\$7,361,860.00</b>	<b>\$820,148.00</b>	<b>\$920,694.00</b>	<b>\$4,728,307.00</b>	<b>\$102,568.79</b>	<b>\$255,412.02</b>	<b>\$5,442,379.44</b>	<b>\$1,395,000.00</b>	<b>\$1,578,000.00</b>

**Riley Purgatory Bluff Creek Watershed District**  
**Balance Sheet**  
**As of March 31, 2021**

**ASSETS**

**Current Assets**

General Checking-Old National	\$2,053,790.66
Checking-Old National/BMW	23,256.03
Investments-Standing Cash	3,037,903.04
Investments-Wells Fargo	996,219.12
Accrued Investment Interest	7.50
Due From Other Governments	296,580.00
Taxes Receivable-Delinquent	36,003.36
Pre-Paid Expense	31,914.23
Security Deposits	7,244.00

**Total Current Assets:** \$6,482,917.94

**LIABILITIES AND CAPITAL**

**Current Liabilities**

Accounts Payable	\$359,014.25
Retainage Payable	27,616.74
Withholding Taxes	1,940.99
Permits & Sureties Payable	679,189.25
Deferred Revenue	36,003.36
Unearned Revenue	181,331.00

**Total Current Liabilities:** \$1,285,095.59

**Capital**

Fund Balance-General	\$5,900,428.16
Net Income	(702,605.81)

**Total Capital** \$5,197,822.35

**Total Liabilities & Capital** \$6,482,917.94

RILEY PURGTORY BLUFF CREEK WATERSHED DISTRICT  
 OLD NATIONAL BANK VISA ACTIVITY  
 March 31, 2021

DATE	PURCHASED FROM	AMOUNT	DESCRIPTION	ACCOUNT #	RECEIPT
	<b>NO CREDIT CARD TRANSACTIONS</b>				
	<b>NO CREDIT CARD TRANSACTIONS</b>				
		\$0.00	District-Wide Total		
		\$0.00	GRAND TOTAL		

**COOPERATIVE AGREEMENT**  
**Between the Church of Saint Hubert of Chanhassen and**  
**Riley-Purgatory-Bluff Creek Watershed**

St. Hubert Water Quality Project

DATE, 2021

This cooperative agreement is made by and between the Church of Saint Hubert of Chanhassen, a Minnesota Catholic school and parish (St. Hubert), and Riley-Purgatory-Bluff Creek Watershed District, a watershed district created pursuant to Minnesota Statutes chapters 103B and 103D (RPBCWD), to achieve shared water-resource protection and improvement goals through design, construction and maintenance of a project providing runoff volume and rate reduction; water quality improvement; ecological biodiversity enhancement; and educational opportunity on the campus of St. Hubert Catholic School (the St. Hubert Property, the parcels legally described in Exhibit A, attached to and incorporated into this agreement as a term thereof), which is owned in fee by the Church of Saint Hubert of Chanhassen.

**Recitals**

**WHEREAS** RPBCWD has an approved water resources management plan pursuant to Minnesota Statutes section 103B.231 (the Plan) that has as a primary goal the improvement of water quality in Rice Marsh Lake, Lake Riley and the Riley Creek watershed generally;

**WHEREAS** in 2016, RPBCWD completed the Rice Marsh Lake and Lake Riley Use Attainability Analysis Update, showing that Rice Marsh Lake fails to meet MPCA shallow lake water quality standards and that 64% of the phosphorus load is from external sources (44% watershed runoff, 20% discharge from Lake Susan into Rice Marsh Lake); RPBCWD implemented an alum treatment on Rice Marsh Lake in 2018 to reduce the internal phosphorus load, a measure that can be both more effective and longer lasting by maximizing management of external load;

**WHEREAS** the St. Hubert Property is tributary to Rice Marsh Lake, and in 2018, RPBCWD was contacted by St. Hubert about partnering on a rain garden on the St. Hubert Property; initial consultation identified the potential for multiple best management practices on the site that would progress RPBCWD goals;

**WHEREAS** RPBCWD's Opportunity Projects program was created with the adoption of the Plan in 2018 specifically to address previously unidentified projects and partnerships, and a stormwater retrofit of the St. Hubert Property was identified as a potential project for the program;

**WHEREAS** in April 2019, consulting engineer SRF Consulting Group Inc., retained by RPBCWD to work with St. Hubert stakeholders to identify potential best management practices for the St. Hubert Property that would meet RPBCWD goals, identified four project areas with multiple practices that would reduce runoff volume and rate; improve water quality; enhance ecological biodiversity through restoration of native plant species and maintenance of such species over a three-year establishment period; and develop educational opportunities (the Project);

**WHEREAS** the Project is expected to treat 2.8 acres of runoff; reduce total suspended solids by 434lbs/year and reduce TP by 2.0 lbs/year; restore 0.8 acres of prairie ecosystem habitat; and increase public awareness of water quality issues and improvements due to the accessible location of the project for St. Hubert students, St. Hubert staff, more than 2,600 families, and the Summer Wood Retirement Community; RPBCWD staff scored the Project according to the Opportunity Project prioritization rubric in the Plan, resulting in a score of 33;

**WHEREAS** on or about August 7, 2019, RPBCWD distributed a draft amendment describing the Project and proposing to add it to the capital improvements program in the Plan;

**WHEREAS** on September 4, 2019, RPBCWD held a duly noticed public hearing to receive public comment on the proposed minor plan amendment for the Project, and no comments were received;

**WHEREAS** on October 2, 2019, the RBCWD board of managers amended the Plan to include the St. Hubert Catholic Community Opportunity Project;

**WHEREAS** on February 5, 2020, the RPBCWD board of managers conducted a duly-noticed public hearing to receive testimony from interested parties on whether to order the design of the Project; the RPBCWD board of managers considered the comments received, and ordered the design phase of the Project in accordance with Minnesota Statutes section 103B.251;

**WHEREAS** on April 1, 2020, the RPBCWD board of managers authorized design of the Project;

**WHEREAS** St. Hubert, at its cost and direction, will contract for the design and construct improvements to outdoor-recreation areas of the St. Hubert Property adjacent to but separate from the portions of the St. Hubert Property that will be the location of the Project (the Playground Improvements);

**WHEREAS** St. Hubert has committed to contribute \$45,000 to the Project in annual disbursements of \$15,000 over the three years following completion of the Project, and up to \$5,000 per year to maintain the Project on the St. Hubert Property for the expected life of the Project, and will reimburse RPBCWD the costs of activities to be included in the Project construction contract and undertaken to support and facilitate the Playground Improvements;

**WHEREAS** RPBCWD will cover the remaining costs of the Project, the total estimated cost of which is \$277,000, through \$75,000 in grant funds from the Metropolitan Council, \$63,865 in Clean Water Legacy grant funds, and through its ad valorem property tax levy to implement its watershed management plan pursuant to Minnesota Statutes Section 103B.251,, and Carver County Soil and Water Conservation District will contribute funds in an amount not to exceed \$25,000 toward Project design costs;

**WHEREAS** the Project will be constructed entirely on the St. Hubert Property in the area depicted and labeled "Project Area" in Exhibit B, attached to and incorporated into this agreement as a term hereof;

**WHEREAS** St. Hubert will own and provide routine maintenance of the Project when it is completed, and RPBCWD will provide technical assistance and specialized maintenance activities as needed in accordance with a Maintenance Plan to be completed after substantial completion of the Project;

**WHEREAS** St. Hubert and RPBCWD entered an agreement for the Project dated January 20, 2021, that this agreement vacates and supersedes, and the parties acknowledge that their ability to achieve Project objectives depends on each party satisfactorily and promptly performing individual obligations and working cooperatively with the other party to this agreement; and

**WHEREAS** Minnesota Statutes section 103D.335, subdivisions 7 and 21, authorize RPBCWD to enter this cooperative agreement with St. Hubert.

### **Agreement**

NOW, THEREFORE St. Hubert and RPBCWD enter into this agreement to document their understanding as to the scope of the Project, affirm their commitments as to the responsibilities of and tasks to be undertaken by each party, grant the necessary land-use rights, and facilitate communication and cooperation to successfully complete the Project.

#### **1 Organization and Relationship of the Parties**

- A. The RPBCWD administrator and St. Hubert's Director of School Operations will serve as project leads and the principal contacts for their respective organizations for the Project, charged to conduct the day-to-day activities necessary to ensure that the Project is completed in accordance with the terms of this agreement.
- B. The project leads will coordinate and communicate informally and formally to timely address any issues of concern to ensure the successful completion of the Project.
- C. St. Hubert and RPBCWD enter this agreement solely for the purposes of improving water quality in Rice Marsh Lake and Lake Riley. Only contractual remedies are available for the failure of a party to fulfill the terms of this agreement.
- D. Notwithstanding the foregoing or any other provision of this agreement, St. Hubert's and RPBCWD's obligations and rights under paragraphs 2F, 3C, 4B, 6A and 6C of the agreement will survive the termination of the agreement.
- E. This agreement creates no right in and waives no immunity, defense or liability limitation with respect to any non-party.

#### **2 Project Design, Construction and Maintenance**

- A. The Project is further defined for purposes of this cooperative agreement as the work specified in the plans and design attached to and incorporated into this agreement as Exhibit C.
- B. By its signature hereunder, St. Hubert approves the plans and design for Project in Exhibit C.
- C. The Project will include, after completion of construction, assessment of the effectiveness of the Project by the parties and development by SRF under contract with RPBCWD of specific written schedules, procedures and protocols for routine and major operation and maintenance of the Project.

**D. Construction contracting.** RPBCWD will solicit bids in accordance with applicable state and federal law, and will contract with the bidder it determines is the lowest-cost responsible and responsive bidder as follows:

- i. The bidding process and documents for the Project will include site-preparation elements necessary for the Playground Improvements, labeled “Playground Elements” in Exhibit C, and optional elements of the Playground Improvements, labeled “Bid Alternates,” in Exhibit C. On receipt of bids and completion by RPBCWD of the bidder-selection process, RPBCWD will provide St. Hubert with the bid amounts for the Playground Elements and the Bid Alternates. St. Hubert will have 10 calendar days from receipt of the bid amounts to advise RPBCWD as to which, if any, Bid Alternates to include in the contract for construction. The Project, Playground Elements and Bid Alternates selected, if any, are collectively referred to herein as “the Work.”
- ii. The contract for construction will:
  - a. Include the Playground Elements items and, as selected by St. Hubert in accordance with paragraph 2.D.i herein, the Bid Alternates;
  - b. Restrict the contractor’s activities to the portions of the St. Hubert Property designated for access and construction in Exhibit B;
  - c. Require the contractor to indemnify, defend and hold harmless St. Hubert, its officers, employees and agents, from any and all actions, costs, damages and liabilities of any nature arising from the contractor’s negligent or otherwise wrongful act or omission, or breach of a specific contractual duty, or a subcontractor’s negligent or otherwise wrongful act or omission, or breach of a specific contractual duty owed by the contractor to RPBCWD;
  - d. Require that the contractor for the Work name St. Hubert as an additional insured for general liability with primary and noncontributory coverage for general liability and provide a certificate showing same prior to construction;
  - e. Extend the warranties for the Work to St. Hubert;
  - f. Require the contractor to coordinate construction of the Work with the construction of the Playground Improvements;
  - g. Require the contractor to determine and obtain all permits and other regulatory approvals applicable to the Work on behalf of RPBCWD and St. Hubert.

**E. Construction.**

- i. RPBCWD, or the RPBCWD consulting engineer on RPBCWD’s behalf, will provide construction oversight for and oversee implementation of the Work. RPBCWD may adjust the plans, design and specifications for the Project during implementation, as long as the revised plans do not require RPBCWD to exceed the scope of the rights granted under this agreement, and such changes are made in coordination with St. Hubert to ensure compatibility of the Project with St. Hubert’s continued use and operation of the St. Hubert Property for its customary and intended purposes.

Construction of the Work is planned to commence on or about June 3, 2021, and to be completed on or about August 30, 2021.

- ii. RPBCWD will timely engage and consult with St. Hubert on material changes to the plans, design and specifications for the Work.
- iii. Until substantial completion of construction of the Project for the purposes intended, if RPBCWD, in its judgment, should decide that the Project is infeasible, RPBCWD, at its option, may declare the agreement rescinded and annulled. If RPBCWD so declares, all obligations herein, performed or not, will be voided, except that RPBCWD will return the St. Hubert Property materially to its prior condition or to a condition agreed to by RPBCWD and St. Hubert.
- iv. RPBCWD will notify St. Hubert within five business days of receipt of a certification of substantial completion of the Work.
- v. Within 90 days of certification of substantial completion or termination of this agreement, RPBCWD will ensure that the Project site is restored to a condition consistent with the use of the St. Hubert Property for its intended purposes, except to the extent the St. Hubert Property is improved by the Project.

**F. Maintenance.**

- i. After substantial completion of the Project, St. Hubert will provide, at its sole expense, ongoing maintenance and repair of the Project in accordance with the Maintenance Plan, defined in and developed and approved in fulfillment of paragraphs 2.F.ii and iii herein, to the extent the costs of such maintenance do not exceed \$5,000 per year. St. Hubert will not be in default for failure to provide maintenance and repair exceeding \$5,000 in a single calendar year. RPBCWD will provide, at its sole expense, ongoing technical assistance and support for maintenance of the Project.
- ii. After substantial completion of the Project, RPBCWD will contract with the RPBCWD consulting engineer for the development, in collaboration with St. Hubert, of a draft plan delineating procedures and protocols necessary for the operation, maintenance and repair of the Project, as well as roles and responsibilities supplemental to and consistent with the terms of this agreement for implementation of maintenance work (the Maintenance Plan). The Maintenance Plan will identify routine maintenance activities.
- iii. St. Hubert will approve the Maintenance Plan within 45 days of receipt from RPBCWD, such approval not to be unreasonably withheld. Failure by St. Hubert to timely act on its rights and obligations under this paragraph will constitute approval of the Maintenance Plan. If St. Hubert disapproves the Maintenance Plan, all maintenance necessary to assure that the Project will continue to effectively function as designed will become the sole responsibility of St. Hubert. On approval of the Maintenance Plan, St. Hubert will perform or contract for the performance of all maintenance and repair of the Project, along with reporting as may be required by the Maintenance Plan, from the date the Project, including establishment of vegetation, is complete. The Maintenance Plan will not require St. Hubert to expend greater than \$5,000 per year

- for maintenance and St. Hubert will not be in default for failure to perform maintenance if the same would be in excess of \$5,000 per year.
- iv. The Maintenance Plan will be implemented as follows:
    - a. Maintenance and repair work under the Maintenance Plan will be completed by St. Hubert at St. Hubert's sole expense, with technical support as provided by RPBCWD in accordance with paragraph 2.F.i;
    - b. Maintenance and repair work under the Maintenance Plan exceeding the \$5,000 cap on St. Hubert's expenditures in a given year will be completed by RPBCWD at its expense.
  - v. RPBCWD may conduct monitoring of the performance of the Project.
  - G. **Grant reporting.** RPBCWD will comply with any grant-reporting requirements related to the Project, except that St. Hubert will provide any data on the Project reasonably requested by RPBCWD to meet grant-reporting obligations related to the Project.
  - H. **Ownership.** On completion of the Project, ownership of all equipment and materials installed on and incorporated into the St. Hubert Property will vest in St. Hubert.

### 3 Costs

- A. Except for reimbursement as provided in paragraph 3B, 3D and 3E herein, each party will be responsible for the costs of performance of its obligations (subject to the limit set forth herein) and exercise of its rights under this agreement, and in the event of cancellation of the Project, the parties will bear their own costs incurred prior to RPBCWD's issuance of notice to St. Hubert.
- B. St. Hubert, on receipt from RPBCWD of documentation of payment and other documentation as may be reasonably requested by St. Hubert, will reimburse RPBCWD within 35 days of costs of the Playground Elements and any Bid Alternates that are selected by St. Hubert in accordance with paragraph 2.D.i herein.
- C. As provided in paragraph 2.F.i herein, St. Hubert will be responsible for the costs, not to exceed \$5,000 per year, of maintenance and repair of the Project to standards reasonably agreed to by the parties, in conformance with the Maintenance Plan.
- D. On receipt of documentation of payment as may be reasonably requested, St. Hubert will reimburse RPBCWD \$15,000 per year in each of the three years subsequent to substantial completion of the Project, for a total reimbursement of \$45,000, of documented costs of construction of the Project. The initial payment will be due within six months of the completion of construction, and the second and third payments will be due on the successive one-year anniversaries of the first payment.
- E. If St. Hubert sells or materially redevelops any portion of the specifically identified native plant restoration site of the Project Area identified in Exhibit B prior to the end of the 10th year following substantial completion of the Project, St. Hubert will reimburse

RPBCWD a pro-rated portion of \$20,000 that will be calculated based on the number of years remaining in the 10-year period from the date of sale or material redevelopment.

- F. The entirety of the Project work will be the subject of a single RPBCWD permit prepared and submitted by RPBCWD; RPBCWD will be responsible for any other permits needed for the Work. St. Hubert will be responsible for permits for the Playground Improvements.

#### **4 Grant of Property-Use Rights**

For purposes of facilitating RPBCWD's exercise of its rights and performance of its responsibilities under this agreement:

- A. St. Hubert, which holds in fee simple the parcel(s) legally described in Exhibit A to this agreement, agrees that on completion of construction of the Project and provision by RPBCWD of final construction drawing(s), St. Hubert will execute and allow RPBCWD to record on the deed to the St. Hubert Property the declaration, completed substantially in the form attached to and incorporated herein as Exhibit D (the Declaration).
- B. St. Hubert hereby grants and conveys to RPBCWD, its contractors, agents, and assigns a nonexclusive irrevocable term license over, under, upon, and across the portions of the St. Hubert Property as necessary for construction of the Work, and for plant establishment and maintenance for the Project. The right of RPBCWD to enter the St. Hubert Property to perform monitoring, maintenance and repair of the Project and otherwise to fulfill its obligations and exercise its rights under this agreement will continue for 20 years after completion of the Project. The license granted hereby includes the right of reasonable ingress and egress and to pass over and through the St. Hubert Property on foot and using motorized equipment for purposes of completing and maintaining the Project, so long as such ingress and egress shall not unreasonably interfere with the use and operations of the St. Hubert Property. RPBCWD, on reasonable notice to St. Hubert, may temporarily restrict or preclude public access to the Project Area to ensure safety while construction, restoration or maintenance activities are under way. RPBCWD will restore any portions of St. Hubert's property outside the Project Area affected by the Project to conditions materially similar to conditions existing prior to commencement of the Project construction.
- C. St. Hubert will forbear from any material activity that would unreasonably interfere with RPBCWD's ability to exercise its rights or meet its obligations under this agreement, including the transfer of ownership of the St. Hubert Property. Subject to its interest in preserving public safety, St. Hubert will facilitate RPBCWD's reasonable exercise of its rights under this agreement with regard to access to and use of the St. Hubert Property as described herein so long as the same shall not materially affect its use and operations of the St. Hubert Property and improvements thereon. St. Hubert will not knowingly take any materially adverse action within or adjacent to the Project Area that could reasonably be expected to materially diminish the effectiveness or function of the Project for the purposes intended.

- D. St. Hubert has identified a construction area to be fenced during the duration of construction of the Project so as to prevent students and any other unauthorized persons from entering the construction zone. RPBCWD has incorporated this construction zone into the construction plans and design in Exhibit C.

## **5 RPBCWD's Further Rights and Obligations**

- A. RPBCWD will not be deemed to have acquired by entry into or performance under this agreement any form of interest or ownership in the St. Hubert Property. RPBCWD will not by entry into or performance under this agreement be deemed to have exercised any form of control over the use, operation or management of any portion of the St. Hubert Property or adjacent property so as to render RPBCWD a potentially responsible party for any contamination or exacerbation of any contamination conditions under state and/or federal law except to the extent of RPBCWD's gross negligence or willful misconduct or that of its agents or contractors.
- B. RPBCWD will provide as-built construction drawings of the Project to St. Hubert within 90 days of certification of the Project as substantially complete for the intended purposes.
- C. RPBCWD has contracted for the development of the design, plans and specifications for the Project, along with all necessary construction documentation, and the Maintenance Plan. Notwithstanding the foregoing, RPBCWD makes no warranty to St. Hubert regarding the RPBCWD consulting engineer's performance in design, construction or construction management for the Project.

## **6 General Terms**

- A. **Publicity and endorsement.** RPBCWD and St. Hubert will collaboratively develop, produce and disseminate public education and outreach materials and conduct at least one, and possibly annual, public educational and informational meetings about the Project. Each party, at its sole expense, may develop, produce and, after approval of the other parties, distribute educational, outreach and publicity materials related to the Project. Any publicity regarding the Project must identify St. Hubert and RPBCWD as sponsoring entities. For purposes of this provision, publicity includes notices, informational pamphlets, press releases, research, reports, signs and similar public notices prepared by or for St. Hubert or RPBCWD individually or jointly with others, or any subcontractors, with respect to the Project.
- B. **Data management.** All designs, written materials, technical data, research or any other work in progress will be shared among the parties to this agreement on request, except as prohibited by law. As soon as is practicable, the party preparing plans, specifications, contractual documents, materials for public communication or education will provide them to the other parties for recordkeeping and other necessary purposes.
- C. **Data Practices.** All data created, collected, received, maintained or disseminated for any purpose in the course of this agreement is governed by the Minnesota Government Data Practices Act, Minnesota Statutes chapter 13, and any state rules adopted to implement the act, as well as federal regulations on data privacy

- D. **Entire agreement.** This agreement, as it may be amended only in writing by agreement of both parties, contains the complete and entire agreement between the parties relating to the subject matter hereof, and supersedes all prior negotiations, agreements, representations and understandings, if any, between the parties respecting such matters, including but not limited to the January 20, 2021, agreement between the parties. The recitals stated at the outset are incorporated into and made a part of the agreement.
- E. **Force majeure.** RPBCWD will not be liable for failure to complete the Project if the failure results from an act of God (including fire, flood, earthquake, storm, other natural disaster or other extreme weather conditions that make it infeasible or materially more costly to perform the specified work), embargo, labor dispute, strike, lockout, riot, pandemic, governmental shut down or emergency order, or interruption or failure of public utility service. In asserting force majeure, RPBCWD must demonstrate that it took reasonable steps to minimize delay and damage caused by foreseeable events, that it substantially fulfilled all non-excused obligations, and that it timely notified St. Hubert of the likelihood or actual occurrence of the force majeure event. Delay will be excused only for the duration of the force majeure. St. Hubert shall not be liable for any maintenance or repair obligations if the inability or failure or delay to perform the same arises from an act of God (including fire, flood, earthquake, storm, other natural disaster or other weather conditions that make it infeasible or materially more costly to perform the specified work), embargo, labor dispute, strike, lockout, riot, pandemic, governmental shut down or emergency order, or interruption or failure of public utility service.
- F. **Waivers.** The waiver by either party of any breach or failure to comply with any provision of this agreement by the other party will not be construed as nor will it constitute a continuing waiver of such provision or a waiver of any other breach of or failure to comply with any other provision of this agreement.
- G. **Notices.** Any notice, demand or communication under this agreement by any party to the others will be deemed to be sufficiently given or delivered if it is dispatched by registered or certified mail, postage prepaid to:

St. Hubert Catholic School  
Robert Schlegel  
Director of School Operations  
8201 Main Street  
Chanhassen, MN, 55317  
rob.schlegel@school.sthubert.org  
952-934-6003

RPBCWD  
Administrator  
18681 Lake Drive East  
Chanhassen, MN 55317  
[tjeffery@rpbcwd.org](mailto:tjeffery@rpbcwd.org)  
952-607-6512

- H. **Term; termination.** This agreement is effective on execution by each of the parties and will terminate five years from the date of execution of this agreement or on the written agreement of all three parties.

*[SIGNATURE PAGE FOLLOWS.]*

**IN WITNESS WHEREOF**, the parties have caused the agreement to be duly executed intending to be bounded thereby.

**The Church of Saint Hubert  
of Chanhassen**

**Riley-Purgatory-Bluff Creek  
Watershed District**

\_\_\_\_\_

\_\_\_\_\_

By Rev. Rolf Tollefson, Pastor  
Date: \_\_\_\_\_

By Dick Ward, President  
Date: \_\_\_\_\_

and

\_\_\_\_\_

By: [NAME], [TITLE]

Date: \_\_\_\_\_

*Approved as to form & execution:*

*Approved as to form & execution:*

\_\_\_\_\_  
RPBCWD counsel

\_\_\_\_\_

**EXHIBIT A**  
**Legal Description of the St. Hubert Property**

DRAFT

**EXHIBIT B**  
**Project Area**  
**Access, Construction and Maintenance Areas**

DRAFT

**EXHIBIT C**  
**Project Design and Plans, Bid Forms**

DRAFT

**EXHIBIT D**  
**Form of Declaration**

DRAFT

[maintain 4" top margin]

**DECLARATION**

**THIS DECLARATION** is made this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_ by the Church of Saint Hubert of Chanhassen, a private religious corporation constituted under Minnesota Statutes chapter 315 (Declarant), in favor of the Riley-Purgatory-Bluff Creek Watershed District, a governmental subdivision of the State of Minnesota with purposes and powers pursuant to Minnesota Statutes chapters 103B and 103D (RPBCWD).

**RECITALS**

**WHEREAS** Declarant is the owner of real property within the City of Chanhassen, Carver County, Minnesota, platted and legally described as:

[legal description]

(the St. Hubert Property) and no one other than Declarant and [NAME(S) HERE], has any right, title or legal interest in the St. Hubert Property; and

**WHEREAS** Declarant has agreed to record and RPBCWD has agreed to accept interest in the Declaration, necessary to ensure the long-term success of the parties' collaborative efforts to improve the St. Hubert Property through the construction and maintenance of tree trenches and rain gardens and shallow stormwater-collecting depressions, and through the restoration of portions of the

St. Hubert Property to native vegetation (the Project) for the mutual benefit of the RPBCWD and Declarant.

**NOW, THEREFORE,** Declarant makes this declaration and hereby declares that the Declaration constitutes covenants to run with the St. Hubert Property in perpetuity, and is binding on all persons owning or acquiring any right, title or interest in the St. Hubert Property and their heirs, successors, personal representatives and assigns. All features requiring maintenance as specified below and on the scaled site plan for the St. Hubert Property attached hereto and incorporated herein as Exhibit A will be maintained in perpetuity as follows:

1. **Stormwater Facilities**

- a. **Raingardens and filtration tree trenches.** Raingardens and filtration tree trenches will be inspected annually to ensure continued live storage capacity at or above the design volume. Invasive vegetation, excess sediment and debris will be removed as needed and healthy plant growth will be maintained to ensure that the facilities continue to perform per design. If clogged drain tile is suspected, the drain tile should be jetted clean.
- b. **Pretreatment sumps.** Pretreatment sumps will be inspected in the spring, summer and fall of each year. All sediment and debris will be removed as needed and the filter will be rinsed clean such that the stormwater facilities operate as designed and permitted.

2. **Native Prairie Restoration Areas.** Native prairie restoration areas will remain free from regular mowing or other vegetative disturbance, fertilizer application, yard or other waste disposal, the placement of structures or any other alteration that impedes the function of the native prairie restoration areas.

3. **Violation.** RPBCWD may seek any remedy in law or equity against the Declarant as long as the Declarant owns the St. Hubert Property and thereafter against the Property Owner for a violation of this declaration. "Property Owner" as used in this Declaration means the owner of the St. Hubert Property or a lot or outlot of record within the St. Hubert Property to which a maintenance obligation herein applies.

4. **Recitals.** The recitals set forth above are expressly incorporated herein.

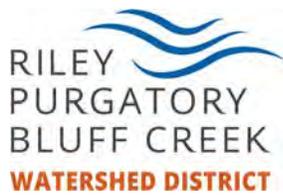




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Notary Public

**Exhibit A**  
**Stormwater Facilities and Native Prairie Restoration Areas**



18681 Lake Drive East  
Chanhassen, MN 55317  
952-607-6512  
www.rpbcwd.org

## Riley-Purgatory-Bluff Creek Watershed District Permit Application Review

**Permit No:** 2021-016

**Received complete:** April 19, 2021

**Considered at Board of Manager's Meeting:** May 5, 2021

**Applicant:** City of Eden Prairie; Mary Krause

**Consultant:** Bolton and Menk, Tim Olson

**Project:** Duck Lake Road Reconstruction – the applicant proposes to reconstruct Duck Lake Road from Duck Lake Trail to Mallard Court, replacing a waterbody crossing with a bridge, and filling a portion of the Duck Lake floodplain. The applicant proposes stormwater management facilities including one infiltration basin and a proprietary hydrodynamic separator to provide water quality treatment, volume abstraction and rate control for runoff prior to discharging offsite.

**Location:** Duck Lake Road from Duck Lake Trail to Mallard Court in Eden Prairie

**Reviewer:** Scott Sobiech, PE Barr Engineering

### Potential Board Variance Action

Manager \_\_\_\_\_ moved and Manager \_\_\_\_\_ seconded adoption of the following resolution based on the permit report that follows, the presentation of the matter at the May 5, 2021, meeting of the managers and the managers' findings, as well as the factual findings in the permit report that follows:

Resolved that variances [1, 2 and 3] for Permit 2021-016 are approved based on the facts and analysis provided by the RPBCWD engineer below and placed in the record at the May 5, 2021, meeting of the managers, and the managers' findings in the record of the May 5<sup>th</sup> meeting, and subject to the following conditions:

1. [CONDITION(S)]

### Proposed Board Action

Manager \_\_\_\_\_ moved and Manager \_\_\_\_\_ seconded adoption of the following resolutions based on the permit report that follows and the presentation of the matter at the May 5, 2021 meeting of the managers:

Resolved that the application for Permit 2021-016 is approved, subject to the conditions and stipulations set forth in the Recommendations section of the attached report;

Resolved that on determination by the RPBCWD administrator that the conditions of approval of the variances and permit have been affirmatively resolved, the RPBCWD president or administrator is authorized and directed to sign and deliver to the applicant, Permit 2021-016 on behalf of RPBCWD.

Upon vote, the resolutions were adopted, \_\_\_\_\_ [VOTE TALLY].

**Applicable Rule Conformance Summary**

Rule	Issue	Conforms to RPBCWD Rules?	Comments	
B	Floodplain Management and Drainage Alterations	Yes		
C	Erosion Control Plan	See Comment	See Rule Specific Permit Condition C1.	
D	Wetland and Creek Buffers	See Comment	See Rule Specific Permit Condition D1.	
E	Dredging and Sediment Removal	Yes		
F	Streambank and Shoreline Stabilization	Yes		
G	Waterbody Crossings and Structures	Yes		
J	Stormwater Management	Rate	No	Rule K variance request#1 for peak discharge rate
		Volume	Yes	
		Water Quality	Yes	
		Low Floor Elev.	Yes	
		Maintenance	See Comment	See Rule Specific Permit Condition J1.
		Chloride Management	Yes	
		Wetland Protection	No	Rule K variance request #2 for 10-year bounce.
K	Variations and Exceptions	See Comment	See Rule K Variance Request.	
L	Permit Fees	NA	Governmental Agency	
M	Financial Assurances	NA	Governmental Agency	

**Project Description**

The proposed project and associated compliance measures involve the following elements:

- Reconstruction of Duck Lake Road and associated driveways within the right of way from Duck Lake Trail to Mallard Court. The project involves linear roadway reconstruction of approximately 1,900 feet of Duck Lake Road.
- Construction of approximately 660 feet of 10-foot wide trail between Petterborg Road and Padons Road, through Duck Lake, and construction of roughly 1,050 feet of 8-foot-wide trail on the west side of Duck Lake Road between Duck Lake Trail and Pavelka Drive.
- Construction of approximately 2,100 feet of sidewalk is proposed on the east side of Duck Lake Road.
- Replacing the existing 12-inch culvert (waterbody crossing) under Duck Lake Road that connects the east and west cells of Duck Lake with a 237-foot bridge. By increasing the size of the crossing under Duck Lake Road the applicant is reducing the flood elevation of the western cell of Duck Lake by distributing stored water over the entire surface area of Duck Lake (both the west and east cells).

- Constructing or reconstructing five outfalls into Duck Lake.
- Constructing a stormwater infiltration basin to treat runoff from about 0.2 acres of Duck Lake Road and 1.4 acres of impervious surface from Prairie View Elementary School. In addition, a proprietary hydrodynamic separator is proposed to treat runoff from another 0.4 acres of Duck Lake Road. The proposed best management practices provide water quality treatment, volume abstraction, and rate control for runoff. The applicant is also proposing four proprietary pretreatment structures to remove coarse particles from runoff from the portion of the reconstructed Duck Lake Road through Duck Lake.
- Construction of a French drain within an existing drainage and utility easement on a portion of 17208 Padons Drive, 17216 Padons Drive, 6836 Duck Lake Road, 17209 Duck Lake Trail, and 17217 Duck Lake Trail to help improve the ability of the low area to dry between storm event.
- Dedication of wetland buffers to the limits of right of way around wetland 05-33-A, which is disturbed by the project.
- Restoring the outlet from Duck Lake to re-establish the normal water level permitted by the MNDNR in 1969.

(A prior application, 2019-004, for reconstruction of Duck Lake Road was withdrawn before the board of managers made a decision.)

The following water resources are within the project site or downgradient of the proposed activities. Table 1 provides a brief explanation of how each resource is implicated in the permit application review process.

**Table 1 Water Resources potential impacts by proposed project**

Water Resource	Potential resource impacts
Duck Lake (a.k.a. Public Water 27-069P)	Changing the waterbody crossing in contact with the bed of Duck Lake, restoring the lake outlet to DNR permitted conditions, and constructing/reconstructing five outfalls into the lake.
Wetland 05-33-A (a.k.a. Western portion of Duck Lake, PW 27-069P)	This wetland is adjacent to Duck Lake. A portion of the wetland will be filled for reconstruction of Duck Lake Road

The work is proposed within the City of Eden Prairie right of way, on an easement covering a portion of a parcel owned by Independent School District 272 (i.e. Prairie View Elementary School), and within an existing drainage and utility easement on 17208 Padons Drive, 17216 Padons Drive, 6836 Duck Lake Road, 17209 Duck Lake Trail, and 17217 Duck Lake Trail.

The project site information is summarized in Table 2.

Table 2. Project site information

	Project Total
Existing Site Impervious (acres)	1.5
Existing Impervious Area Disturbed (acres)	1.5
New (Increase) in Site Impervious Area (acres)	0.6
Proposed Impervious Area (acres)	2.1
Exempt Trail and Sidewalk Area (acres)	0.44
Total Disturbed Area (acres)	3.63
Total Site Area (acres)	3.63

The following materials were reviewed in support of the permit request:

1. Permit application received March 23, 2021 (Incomplete notice was sent on April 9, 2021; materials submitted to complete application on April 19, 2021)
2. Stormwater Narrative dated March 23, 2021 (revised April 19, 2021)
3. SSA Models for Existing and Proposed conditions received March 23, 2021 (revised April 19, 2021)
4. Report of Geotechnical Report Limitation and Guidelines for Use by AET dated May 22, 2018
5. Report of Double Ring Infiltrometer Testing by AET dated July 9, 2018
6. MIDS calculator for Existing and Proposed conditions received March 23, 2021 (revised April 19, 2021)
7. P8 model of Duck lake watershed including the lake received March 23, 2021
8. SHASM model of SciClone hydrodynamic separator received April 9, 2021
9. Compensatory storage computations received April 22, 2021.
10. Duck Lake Road Improvements – Local Road Wetland Replacement Plan Application by Bolton and Menk dated August 28, 2018
11. Duck Lake Outfall– Wetland Delineation report by Bolton & Menk dated September 5, 2018
12. MnRAM Site Response Report for wetland 27-116-22-08-001 received on March 23, 2021
13. Certificates of Survey at 17040 and 17060 South Shore Lane received March 23, 2021
14. Agreements received March 23, 2021

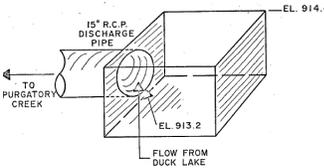
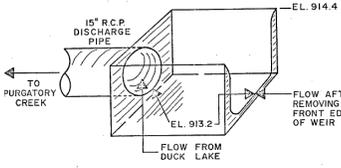
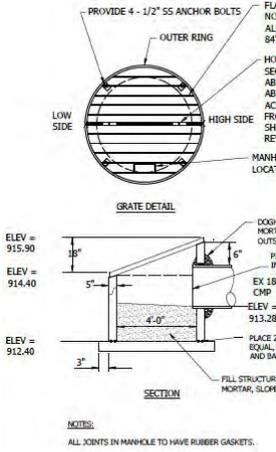
15. Construction Plans (71 sheets) dated March 19, 2021 (revisions received April 9, 2021)
16. Preliminary Bridge drawing set (15 sheets) received April 19, 2021
17. RPBCWD Erosion Intensity Worksheet received March 7, 2019
18. Pedestrian Facility Option cost comparison table received on March 7, 2019
19. Draft Maintenance Agreement, including information for the SciClone and Rain Guardian facilities, received on March 23, 2021
20. Applicant's response to RPBCWD April 9, 2021 comments received April 19, 2021

### **Department of Natural Resources Permitting**

Because the applicant proposes to fill a portion of the Duck Lake floodplain and provide a waterbody crossing in contact with the bed of Duck Lake, the determination of the 100-year flood elevation of Duck Lake is a critical element of the analysis necessary to assess compliance of the project with RPBCWD rules. In 2014, the RPBCWD completed hydrologic and hydraulic (H&H) modeling for the Purgatory Creek watershed and established the flood elevation for the 1 percent chance event (the 100-year flood elevation) for Duck Lake to be 916.1 feet based on the best available data. As part of the Duck Lake Road permit application the applicant supplied information about the Duck Lake outlet that is different than what was used in the district's H&H modeling because the lake outlet was replaced in 2014 by the City of Eden Prairie. The city's data show that the outlet is an 18-inch CMP at elevation 913.28 mean sea level (M.S.L.) rather than a box weir structure at elevation 914.4 M.S.L. connected to a 15-inch pipe as depicted in the 1969 as-built drawings approved by the Department of Natural Resources (DNR). Table 3 illustrates the Duck Lake outlet configurations.

Because the project proposes to restore the lake outlet to the DNR approved elevation of 914.4 M.S.L., fill a portion of the Duck Lake floodplain, and provide a waterbody crossing in contact with the bed of Duck Lake, the modeling and permit analysis associated with the submittal are dependent on the outlet from Duck Lake. Modeling that incorporates the DNR authorized Duck Lake outlet results in the modeled existing 100-year flood elevation for the 100-year, 24 hour event was 916.15 M.S.L. for the eastern portion of Duck Lake and 916.53 M.S.L. west of Duck Lake Road.

Table 3. Duck Lake Outlet information

DNR Permitted 1969 Duck Lake Outlet	DNR Denied Modification Configuration and 2014 City Observed Outlet	2014 City Constructed Outlet	Proposed 2021 Reconstruction
 <p>Source: Exhibit B in Duck Lake Outlet Control Level memo dated 2/12/79 from Carl Jullie, City of Eden Prairie Director of Public Works</p>	 <p>Source: Exhibit B in Duck Lake Outlet Control Level memo dated 2/12/79 from Carl Jullie, City of Eden Prairie Director of Public Works</p>  <p>Photo source: Email Mary Krause, Sr. Project Engineer, dated 9/28/19</p>	 <p>Photo source: Email Mary Krause, Sr. Project Engineer, dated 9/28/19</p>	 <p>Source: April 19, 2021 construction drawings</p>
<p><b>Control Feature:</b> Box Weir Structure with 15-inch CMP <b>Control Elevation:</b> 914.4 M.S.L.</p>	<p><b>Control Feature:</b> 18-inch CMP <b>Control Elevation:</b> 913.28 M.S.L.</p>	<p><b>Control Feature:</b> 18-inch CMP <b>Control Elevation:</b> 913.28 M.S.L.</p>	<p><b>Control Feature:</b> Manhole Structure with 18-inch CMP <b>Control Elevation:</b> 914.4 M.S.L.</p>

**Rule B: Floodplain Management and Drainage Alterations**

Because the proposed project involves the placement of fill below the 100-year flood elevation of Duck Lake and altering surface flow below the 100-year flood elevation, the project activities must conform to the RPBCWD’s Floodplain Management and Drainage Alterations rule (Rule B).

Because the city does not propose to construct or reconstruct structures that have low floors, Rule B subsection 3.1 does not apply.

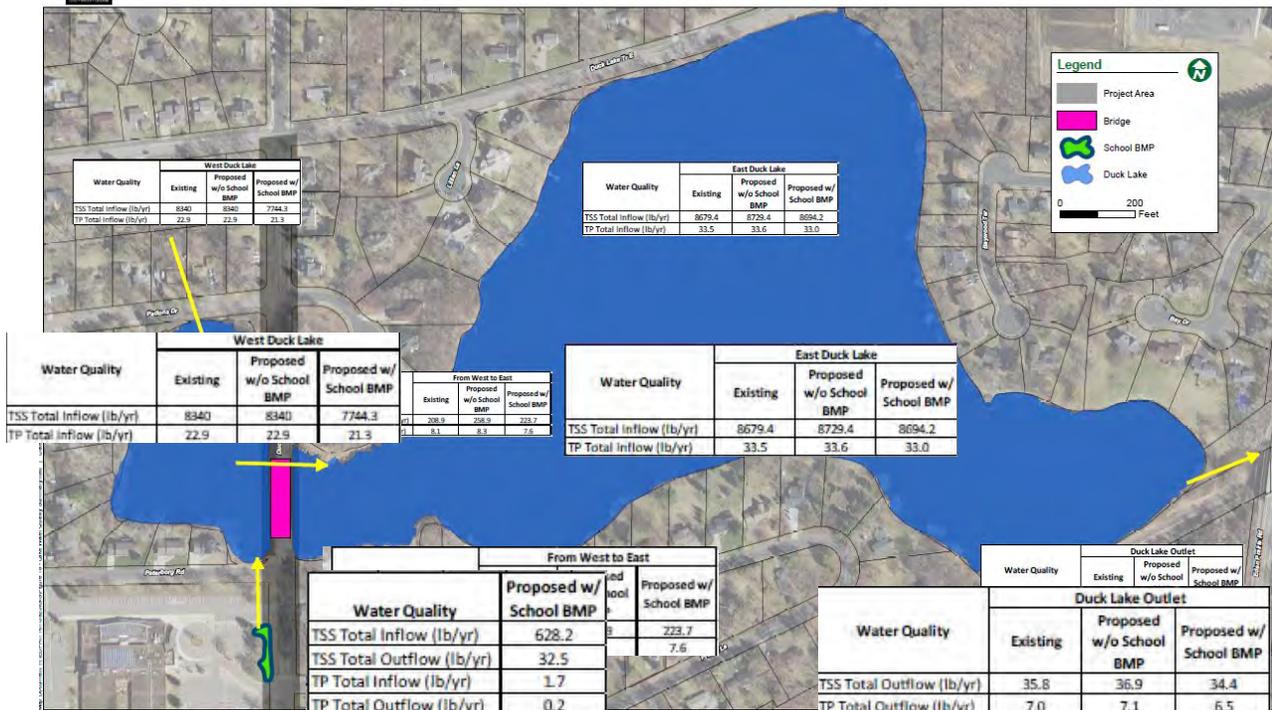
Table 4 below summarizes the locations where filling of land below the 100-year flood elevation is proposed in waterbodies on the site.

Table 4. Compensatory storage analysis

Waterbody ID	Floodplain Description	Floodplain Fill (CY)	Compensatory Storage Provided (CY)	100-year Flood Elevation (M.S.L.)	Cause of Impact
Public Water 27-069P	Duck Lake	481	497	916.15	Fill from proposed Duck Lake Road reconstruction and trail

Placement of fill below the 100-year flood elevation is prohibited unless fully compensatory flood storage at the same elevation (+/- 1 foot) and within the floodplain of the same waterbody is provided (Rule B, Subsection 3.2). The supporting materials demonstrate, and the RPBCWD Engineer concurs, that 481 cubic yards of fill will be placed to facilitate the roadway construction, and 497 cubic yards of compensatory storage will be created below the 100-year floodplain by the replacement of the existing roadway embankment with a 237-foot bridge, thus providing a net increase in the floodplain storage and the project conforms to Rule B, Subsection 3.2.

Because filling of floodplain onsite to facilitate roadway construction has the potential to alter the timing and duration of flows leaving the site, the applicant must demonstrate that the alterations are not reasonably likely to have an adverse offsite impact and not reasonably likely adversely affect flood risk, basin or channel stability, groundwater hydrology, stream baseflow, water quality, or aquatic or



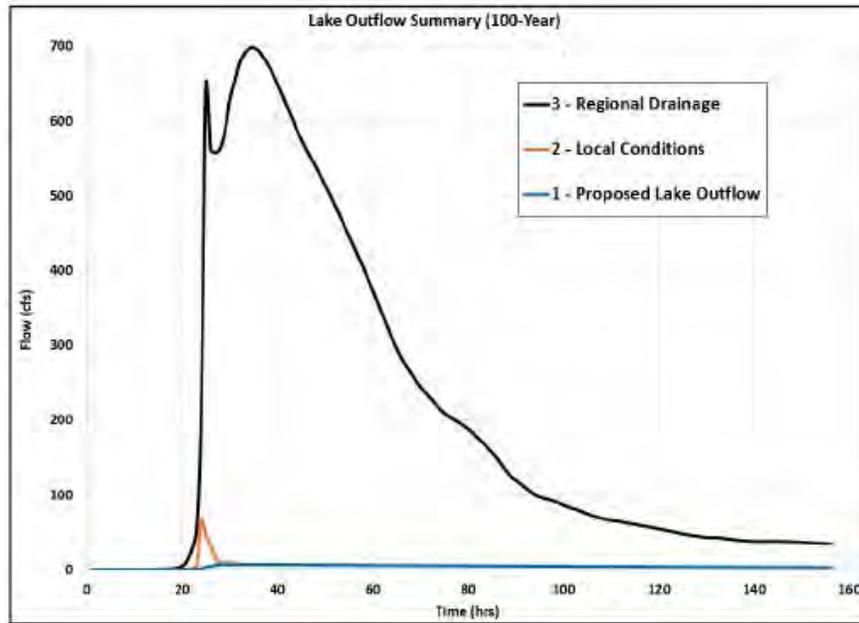
riparian habitat (Rule B subsection 3.3). The applicant provided pre- and post-project P8 water quality modeling to demonstrate no adverse impact to water quality. As summarized in the following figure, the modeling results show the total suspended solids and total phosphorus load entering Duck Lake after the development will be less than the existing loads entering the lake. The modeling also shows the annual loadings leaving Duck Lake after the project will be less than existing conditions.

The RPBCWD engineer concurs with the hydraulic analysis conducted by the applicant’s engineer which demonstrates that the project will not materially alter flood elevations as summarized in Table 5. The proposed project will reduce the flood risk for areas west of Duck Lake road by lowering the 100-year flood elevation by 0.38 feet.

**Table 5. Flood Risk analysis summary**

		2-year	10-year	50-year	100-Year
Existing Conditions	East Cell Peak Water Elevation (ft)	914.74	915.06	915.77	916.15
	West Cell Peak Water Elevation (ft)	915.32	916.13	916.48	916.53
Proposed Conditions	East Cell Peak Water Elevation (ft)	914.80	915.19	915.83	916.15
	West Cell Peak Water Elevation (ft)	914.80	915.19	915.83	916.15

In addition, the peak flow rate leaving Duck Lake and discharging to Purgatory Creek represents a very small fraction of the discharge in Purgatory Creek (0.6% for the 100-year event), thus constituting a relatively low potential to adversely impact flood elevations and channel stability in Purgatory Creek. The following figure presents an example of this for the 100-year, 24-hour rainfall event. In addition, the 0.1 cfs increase in the 2-year represents about 0.05% of the flow in Purgatory Creek while the 0.3 cfs increase in the 10-year event represents roughly 0.08% of the flow in Purgatory Creek. Also, the restoration of the lake’s normal water level and the construction of the proposed infiltration basin will support additional groundwater recharge. This also supports the engineer’s determination that the project meets the requirements of Rule B, subsection 3.3.



Because the proposed crossing is regulated under Rule G, the project is not subject to the restriction on creekside imperviousness in Rule B, Subsection 3.4. The design plans include temporary and permanent erosion control measures as well as appropriate site restoration methods (Rule B, Subsection 3.5). The design plans also include a note indicating that activities must be conducted so as to minimize the potential transfer of aquatic invasive species (e.g., zebra mussels, Eurasian watermilfoil, etc.) to the maximum extent possible (Rule B, Subsection 3.6).

The proposed project conforms to the floodplain management and drainage alteration requirements of Rule B.

Filling in a public water is outside the scope of actions authorized by DNR General Permit 2015-1192. As such, if the RPBCWD permit is issued, it will not constitute authorization of the proposed work for purposes of DNR Work in Waters rule (Minn. R. ch. 6115) or any other state regulatory purposes.

**Rule C: Erosion and Sediment Control**

Because the project will alter more than 3.6 acres of surface area the project must conform to the requirements in the RPBCWD Erosion Prevention and Sediment Control rule (Rule C, Subsection 2.1).

The erosion control plans prepared by Bolton and Menk include installation of silt fence, sediment control log, floating silt curtain, inlet protection for storm sewer catch basins, placement of a minimum of 6 inches of topsoil, decompaction of pervious areas compacted during construction prior to topsoil placement, and retention of native topsoil onsite.

To conform to the RPBCWD Rule C requirements the following revisions are needed:

C1. The Applicant must provide the name and contact information of the general contractor responsible for the site. RPBCWD must be notified if the responsible party changes during the permit term.

**Rule D: Wetland and Creek Buffers**

Because the proposed work triggers RPBCWD Rules B, E, F, G and J and one wetland will be disturbed by the proposed construction activities, Rule D, Subsections 2.1a and 3.1 require buffer around the entirety of the wetland disturbed by the proposed work. The local governmental unit (LGU) responsible for administering the Wetland Conservation Act (city of Eden Prairie) issued a WCA notice of decision indicating the portion of Duck Lake west of Duck Lake Road was a type 2/3/4 wetland (Wetland 05-33-A).

The applicant provided a wetland delineation report dated August 28, 2018. The MnRAM analyses submitted indicates that the wetland is high value (Appendix D1). Rule D, Subsection 3.1.a.iii requires a wetland buffer with an average of 60 feet from the delineated edge of the wetland, minimum 30 feet. The buffer widths are summarized in the Table 6.

Table 6. Wetland buffer analysis

Wetland ID	RPBCWD Wetland Value	Required Minimum Width <sup>1</sup> (ft)	Required Average Width <sup>1</sup> (ft)	Provided Minimum Width (ft)	Provided Average Width (ft)
Wetland 05-33-A	High	30	60	11	17.9

<sup>1</sup> Average and minimum required buffer width under Rule D, Subsection 3.1.a.

The Applicant provided buffer zone and marker location information on the construction drawings confirming that the proposed buffer area extends to the right-of-way limits. The Applicant is proposing revegetating disturbed areas within the proposed buffer with native vegetation in conformance with Rule D, Subsection 3.3. A note is included on the plan sheet indicating the project will be constructed so as to minimize the potential transfer of aquatic invasive species (e.g., zebra mussels, Eurasian watermilfoil, etc.) to the maximum extent possible conforming to Rule D, Subsection 3.6.

The Applicant requested a variance from the criteria of Rule D, Subsection 3.2 for not providing the average or minimum buffer width. Because the proposed buffer extends to the available right of way limits will meet the 3.2 requirement, the proposal meet the requirement and the variance request was not analyzed.

The following revisions are needed to conform to the RPBCWD Rule D:

- D1. Buffer areas and maintenance requirements must be documented in an agreement approved by RPBCWD. As a public entity, the city of Eden Prairie may comply with this requirement by

entering into a maintenance agreement with the RPBCWD (Rule D, Subsection 3.5). The maintenance agreement must also include an exhibit clearly showing the buffer area and monument locations.

### **Rule E, Dredging and Sediment Removal**

Because the project involves removal of material from Duck Lake, a public water, the project requires approval under RPBCWD Rule E, Dredging and Sediment Removal. Because proposed sediment removal is not intended for navigation purposes, Rule E subsection 3.1a does not impose requirement on this project. Because the proposed removal of material from the bed of Duck Lake will restore the lakebed to conditions that existed prior to the original construction of Duck Lake Road, the project is restoring the ecological function of a portion of the lake (Rule E, subsections 3.1b, 3.1c, 3.1d, and 3.1g). The cross section on the bridge drawings confirms the side slope adjacent to the bridge abutments will be a 3:1 (H:V), thus conforming with Rule E, subsection 3.1f.

A note on the plans requires the contractor to dispose of dredged materials off-site, thus conforming with Rule E, subsection 3.2). The project SWPPP includes a note directing the contractor that no work affecting the bed or banks of a protected water shall occur between April 1 and June 15 (Rule E, Subsection 3.5). Banks will be immediately stabilized after completion of permitted work and revegetated as soon as growing conditions allow (Rule E, Subsection 3.3) and the erosion control plans call for the installation of floating silt curtain (Rule E, Subsection 3.4). A note is included on the plan sheet indicating the project will be constructed so as to minimize the potential transfer of aquatic invasive species (e.g., zebra mussels, Eurasian watermilfoil, etc.) to the maximum extent possible (Rule E, Subsection 3.6).

The proposed project conforms to RPBCWD Rule E.

### **Rule F: Shoreline and Streambank Stabilization**

The applicant's proposed reconstruction of Duck Lake Road will impact the existing shoreline of Duck Lake where the roadway embankment through the lake connects to the riparian areas and the roadway construction will result in replacement of shoreline along both sides of the road.

The applicant completed the Erosion Intensity Score Worksheet in accordance with subsection 3.2, which shows the site is a low-energy site. This indicates the shoreline stabilization may be completed using bioengineering practices. The applicant indicated the plantings were selected by certified wetland professionals to best stabilize the roadway slope, restore wetland areas and reestablish aquatic habitat. A combination of live plantings (Arrowhead, Water Plantain and River Bulrush) and native seed (MNDOT wet prairie seed mix 34-262 and mesic prairie general seed mix 35-241) will be utilized at varying elevations (Rule F, subsection 3.3a.i). The slope is 3H:1V to minimize fill in the lake and conform to subsection 3.3a.ii. The 3H:1V slope will also minimize the horizontal encroachment, thus conforming to

subsection 3.3a.iii. Information submitted by the applicant indicates the project design and shoreline restoration measures reflect the underlying soil conditions, thus conforming to subsection 3.3a.iv.

A note is included on the plan sheet indicating the project will be constructed so as to minimize the potential transfer of aquatic invasive species (e.g., zebra mussels, Eurasian watermilfoil, etc.) to the maximum extent possible (Rule F, subsection 3.3e).

The proposed project conforms to RPBCWD Rule F.

### **Rule G: Waterbody Crossings and Structures**

The applicant proposes construction of a 237-foot bridge, thus conformance with RPBCWD's Waterbody Crossings Rule (Rule G) is required for this project. The bridge is proposed to replace the existing 12-inch CMP under Duck Lake Road. The applicant is also proposing the construction or reconstruction of five outfalls into Duck Lake. The criteria in subsections 3.1, 3.2, 3.3, and 3.7 apply to the project.

This work will provide a public benefit by improving the traffic flow and reducing the flood elevation of the western portion of Duck Lake to reduce roadway overtopping for the 100-year event (Rule G, Subsection 3.1a).

The existing and proposed crossings were modeled by the applicant's engineer using Autodesk Storm and Sanitary Analysis (SSA). The SSA modeled existing flood elevation for the 100-year, 24 hour event was estimated to be 916.15 M.S.L. for the eastern portion of Duck Lake and 916.53 M.S.L. west of Duck Lake Road. The applicants modeling shows that the 100-year frequency flood elevation upstream of the crossing will be lowered to 916.15 M.S.L. and the downstream flood elevation will be unchanged from existing conditions (elevation of 916.15 M.S.L.). Because the modeling results indicate no increase in the flood stage of Duck Lake for the 100-year event, the application conforms with Rule G, Subsection 3.2a.

The existing 12-inch crossing is not used for navigation, thus compliance with the requirement of Rule G, Subsection 3.2b is not relevant. The applicant provided water quality modeling demonstrating the pollutant transfer between west and east portions of Duck Lake will be reduced for proposed conditions (see water quality discussion in the Rule B analysis). Because the applicant also provided computations demonstrating that the 100-year flow velocity of water through the bridge opening is anticipated to be about 0.2 feet per second, which is not materially likely to increase scour or erosion or at the crossing, the proposed bridge conforms with Rule G, Subsection 3.2c.

Because the proposed bridge restores the lakebed and reconnects the east and west basins, the proposed crossing will provide fish passage and is in conformance with Rule G, Subsection 3.2d.

The narrative prepared by Bolton and Menk indicated the following five alternatives were considered

1. No change: Leaving the existing culvert in place was considered but ruled out. The existing culvert is in a state of disrepair and without replacement could lead to the roadway failing.
2. Replacement in kind: The existing culvert capacity would need to be replaced to eliminate any stage increase on the east cell of Duck Lake. The Applicant indicated reducing flooding on the west cell is a primary goal of the project.
3. Replace with 8'x4' Box culvert: Replacing the existing culvert with the 8'x4' box culvert represents a feasible option because it has adequate capacity to equalize the flood elevation of the western and eastern portion of Duck Lake while fitting under the road section.
4. Additional culvert sizes: Numerous culvert sizes were considered, but the 8'x4' box culvert achieves the equalization goals of the project.
5. Replace with a bridge: Replacing the existing culvert with the bridge represents the minimal impact solution because it has adequate capacity to equalize the flood elevation of the western and eastern portion of Duck Lake while also restoring a portion of the lakebed, which is consistent with Rule G, Subsection 3.2e.

Because the applicant also proposed to construction or reconstruct a total of five outfalls into Duck Lake, the project must conform to Rule G, subsection 3.3. The project is proposing to install MnDOT Class III riprap according to MNDOT standard plate 3133 at the five outfalls to minimize erosion of the shoreline, consistent with Rule G, subsection 3.3a. The project also proposes to use four proprietary pretreatment structures to remove coarse particles, a stormwater infiltration basin to treat runoff from about 0.1 acres of Duck Lake Road, and a proprietary hydrodynamic separator is proposed to treat runoff from the northern 0.4 acres of Duck Lake Road prior to discharging runoff to Duck Lake (Rule G, subsection 3.3b).

The project SWPPP includes a note directing the contractor that no work affecting the bed or banks of a protected water shall occur between April 1 and June 15 (Rule G, Subsection 3.7a). Banks will be immediately stabilized after completion of permitted work and revegetated as soon as growing conditions allow (Rule G, Subsection 3.7b). A note is included on the plan sheet indicating the project will be constructed so as to minimize the potential transfer of aquatic invasive species (e.g., zebra mussels, Eurasian watermilfoil, etc.) to the maximum extent possible (Rule G, Subsection 3.7c and Rule F, subsection 3.3e).

Rule G, Subsection 3.7d requires compliance with the applicable criteria in section 3 of Rule F. The proposed riprap placement extends from the outfalls to the control elevation of Duck Lake, thus representing the minimal horizontal encroachment to prevent erosion (Rule F, subsection 3.3a). Based on MNDOT's standard plate, the project proposes the use stone rip-rap having an average size of 9 inches, with a geotextile and transition layer of granular bedding sized consistent with the erosion intensity at the outfall locations, thus conforming to Rule F, Subsections 3.3b.

To conform to the RPBCWD Rule G the following revisions are needed:

G1. Permit applicant must provide a draft maintenance agreement for the waterbody crossing, in accordance with Rule G, Section 5. As a public entity, the city may comply with this requirement by entering into a maintenance agreement with the RPBCWD.

**Rule J: Stormwater Management**

Because the project will alter more than 3.6 acres of surface area, conformance with RPBCWD’s Stormwater Management Rule (Rule J) is required.

The project entails construction and reconstruction that altogether amounts to 2.1 acres of linear impervious surface; therefore, stormwater management for this linear portion of the project must be provided in accordance with the criteria of Subsection 3.2 (Rule J, Subsection 2.4). The 2.1 acres of impervious surface includes 0.44 acres of trail and sidewalk that is 10 feet or less in width bordered downgradient by a pervious area extending at least half the trail width; therefore, 0.44 acres of trail and sidewalk is exempt from RPBCWD’s stormwater management rule (Rule J, Subsection 2.2d). Therefore, the requirements of Rule J apply to 1.66 acres of proposed impervious surface within the site.

**Rate Control**

In order to meet the rate control criteria listed in Subsection 3.1.a, the 2-, 10-, and 100-year post development peak runoff rates must be equal to or less than the existing discharge rates at all locations where stormwater leaves the site.

The Applicant used SSA hydrologic model to simulate runoff rates for pre- and post-development conditions for the 2-, 10-, and 100-year frequency storm events using a nested rainfall distribution, and a 100-year frequency, 10-day snowmelt event. The existing and proposed 2-, 10-, and 100-year frequency discharges from the site are summarized in Table 7. The applicant requested a variance from the criteria of Rule J, Subsection 3.1a because the proposed project will increase peak discharge rates at the site boundary for the 2- and 10-year storms (See Rule K variance discussion).

Table 7. Rate control summary:

Modeled Discharge Location	2-Year Discharge (cfs)		10-Year Discharge (cfs)		100-Year Discharge (cfs)		10-Day Snowmelt (cfs)	
	Ex	Prop	Ex	Prop	Ex	Prop	Ex	Prop
Duck Lake Outlet	2.7	2.8	3.4	3.7	4.2	4.2	4.1	3.9

**Volume Abstraction**

Subsection 3.2c of Rule J requires the abstraction onsite of the larger of 0.55 inches of runoff from the new and fully reconstructed linear impervious surfaces or 1.1 inches from the net increase in linear impervious area. In this case 0.55 inches of runoff from the new and fully reconstructed impervious

surfaces is the larger volume. An abstraction volume of 3,322 cubic feet is required from the 1.66 acres of linear impervious surface on the site for volume retention.

Soil boring information collected by AET indicate the soils on the site are predominately loamy sands. Soil borings collect for the project encountered groundwater at depths ranging from 0 feet to 6.8 feet below the ground surface at the time of drilling, corresponding to groundwater elevations of about 913 to 910½ feet. The applicant prepared a figure showing the approximate groundwater elevation and required separation between groundwater and potential BMP bottoms to illustrate a large portion of the site is not suitable for infiltration because the required 3-foot separation between the groundwater elevation and bottom of infiltration practice could not be met. Because the engineer concurred that the soil boring information, high groundwater and underground utility conflict support that the abstraction standard in subsection 3.2 of Rule J cannot practicably be met, the site is considered a restricted site and stormwater runoff volume must be managed in accordance with subsection 3.3 of Rule J.

For restricted sites, subsection 3.3 of Rule J requires rate control in accordance with subsection 3.1.a and that abstraction and water-quality protection be provided in accordance with the following sequence: (a) Abstraction of 0.55 inches of runoff from site impervious surface determined in accordance with paragraph 3.2, and treatment of all runoff to the standard in paragraph 3.1c; or (b) Abstraction of runoff onsite to the maximum extent practicable and treatment of all runoff to the standard in paragraph 3.1c; or (c) Off-site abstraction and treatment in the watershed to the standards in paragraph 3.1b and 3.1c. Because of high groundwater and utilities, the abstraction standard in Subsection 3.3a of Rule J cannot practicably be achieved. No groundwater was not observed in the soil boring collected at the proposed infiltration basin (B-15) on a portion of ISD 272 property where the city obtained property rights to construct and maintain an infiltration basin, thus confirming adequate separation to groundwater (Rule J, subsection 3.1bii). In accordance with 3.1bii, AET performed an infiltration test at the proposed bottom of the infiltration basin to establish a measured rate of 3.73 inches per hour and the design infiltration rate of 1.87 inches per hour. The Engineer concurs that because there is insufficient separation to the groundwater table and utility conflicts, the Applicant is providing abstraction to the maximum extent practicable (see Table 8) on the project site and the proposed activity conforms to Rule J, Subsection 3.3b.

Table 8. Volume abstraction summary

Required Abstraction Depth (inches)	Required Abstraction Volume (cubic feet)	Provided Abstraction Depth (cubic feet)	Provided Abstraction Volume (cubic feet)
0.55	3,322	0.57	3,466

**Water Quality Management**

Subsection 3.1.c of Rule J requires the Applicant to provide for at least 60 percent annual removal efficiency for total phosphorus (TP), and at least 90 percent annual removal efficiency for total suspended solids (TSS), as well as no net increase in pollutant loading from existing conditions. The applicant has demonstrated and the engineer concurs that the site is restricted. Rule J, subsection 3.1c(ii) (made applicable by 3.2c) requires water-quality treatment of at least 60 percent annual removal efficiency for total phosphorus, at least 90 percent annual removal efficiency for total suspended solids and no net increase in TP or TSS from the site from existing conditions. The Applicant is proposing a stormwater infiltration basin to treat runoff from about 0.2 acres of Duck Lake Road and 1.4 acres of impervious surface from Prairie View Elementary School. In addition, a proprietary hydrodynamic separator (HDS) is proposed to treat runoff from 0.4 acres of Duck Lake Road. The proposed best management practices are needed to provide water quality treatment for runoff prior to discharging offsite. The applicant is also proposing four proprietary pretreatment structures to remove coarse particles from runoff from the portion of the reconstructed Duck Lake Road through Duck Lake. A MIDS water quality model and SHSAM model was developed to estimate the TP and TSS loading from the watersheds and the removal capacity of the proposed BMPs. The results of this modeling are summarized in Table 9 and Table 10 below. The results show the proposed project will remove sufficient TSS and TP to achieve an overall reduction to Duck Lake that is in accordance with the required annual removals. Because the removals rely on treating stormwater runoff from Prairie View Elementary School (off-site runoff) rather than the required reduction “from site runoff” a variance is needed.

Table 9. Annual TSS and TP removal summary:

Pollutant of Interest	Regulated Site Loading (lbs/yr)	Required Load Removal (lbs/yr) <sup>1</sup>	Provided Load Reduction (lbs/yr) <sup>2</sup>
Total Suspended Solids (TSS)	624	562 (90%)	578 (92.6%)
Total Phosphorus (TP)	3.4	2.1 (60%)	2.8 (81.4%)

<sup>1</sup>Required load reduction is calculated based on the removal criteria in Rule J, Subsection 3.1c and the new and reconstructed impervious area site loading

<sup>2</sup> 0.79 acres of untreated impervious surface from Duck Lake Trail and Padons Drive also drains through the proposed HDS structure, thus increasing the removals.

Table 10. Summary of net change in TSS and TP leaving the site

Pollutant of Interest	Existing Site Loading (lbs/yr)	Proposed Site Load after Treatment (lbs/yr) <sup>1</sup>	Change (lbs/yr)
Total Suspended Solids (TSS)	624	46	-578
Total Phosphorus (TP)	3.4	0.6	-1.8

**Low floor Elevation**

No structure may be constructed or reconstructed such that its lowest floor elevation is less than 2 feet above the 100-year event flood elevation according to Rule J, Subsection 3.6. In addition, a stormwater-management facility must be constructed at an elevation that ensures that no adjacent habitable building will be brought into noncompliance with a standard in this subsection 3.6. The project does not propose to construct or reconstruct structures that have low-floor elevations. However, the project will construct an infiltration basin with a 100-year flood elevation of 920.04 M.S.L. near Prairie View Elementary school. The low floor elevation of the school is approximately 928 M.S.L. resulting in 7.96 feet of freeboard above the 100-year elevation in the infiltration basin. The RPBCWD Engineer concurs that the proposed project is in conformance with Rule J, Subsection 3.6.

**Maintenance**

Subsection 3.7 of Rule J requires the submission of maintenance plan. All stormwater management structures and facilities must be designed for maintenance access and properly maintained in perpetuity to assure that they continue to function as designed.

- J1. Permit applicant must provide a draft maintenance and inspection plan. As a public entity, the city of Eden Prairie may comply with this requirement by entering into a maintenance agreement with the RPBCWD.

**Chloride Management**

Subsection 3.8 of Rule J requires the submission of chloride management plan that designates the individual authorized to implement the chloride management plan and the MPCA-certified salt applicator engaged in implementing the plan. The City of Eden Prairie’s Streets Division Manager, Larry Doig, is authorized to implement the City’s chloride management plan and documentation provided confirms he is certified by the Minnesota Pollution Control Agency as a certified salt applicator, thus conforming with Rule J, subsection 3.8.

**Wetland Protection**

Because the proposed activities discharge to a protected wetland (Wetland 05-33-A) on the site and alter the discharge the wetland receive from the site, the proposed activities must conform to RPBCWD wetland protection criteria (Rule J, subsection 3.10). Wetland 05-33-A falls in the high value category.

Table 11 summarizes the allowable change in bounce and inundation duration from Table J1 of RPBCWD Rule J. The information summarized in Table 12 summarizes the applicant’s analysis for wetland protection and the potential impacts on the wetlands.

Table 11: Summary of allowable impacts on onsite wetland from Rule J, Table J1

Wetland Value/ Waterbody	Permitted Bounce for, 10-Year Event	Inundation Period for 1- and 2-Year Event	Inundation Period for 10-Year Event	Runout Control Elevation
High	Existing +/- 0.5 feet	Existing+1 days	Existing +7 days	No change

Table 12: Impacts of Project on Wetland

Wetland	RPBCWD Wetland Value	Change in Bounce for, 10-Year Event (feet)	1-year change in Inundation Period (days)	2-year change in Inundation Period (days)	10-year change in Inundation Period (days)	Runout Control Elevation <sup>1</sup>
Wetland 05-33-A	High	-0.93	0	0	0	No change

<sup>1</sup> The control elevation for this wetland was established by the DNR’s approved outlet elevation for Duck Lake in 1969. The project proposes to restore the lake outlet elevation to 914.4.

The analysis shows the bounce for the 10-year event will be reduced by 0.93 feet. Because this does not conform to the criteria in Table J1 for a high value wetland a variance from Rule J, Subsection 3.10.a is needed: As summarized in the water quality analysis in Table 9, the runoff will be treated by an infiltration basin, and a proprietary stormwater HDS to provide 92.6% TSS and 81.4% TP removal prior to discharging to the wetland in accordance with Rule J, subsection 3.10b.

### Rule K: Variances and Exceptions

Table 11 summarizes the Applicant’s request for approval of three variances from the RPBCWD regulatory requirements.

Table 13. Variance request summary

Variance number	Rule	Subsection	Requested Variance	Notes
1.	J	3.1a	Rate control	Increase rate leaving the site
2.	J	3.1c	Water quality	Allow treatment of off-site runoff
3.	J	3.10a	Wetland protection	Variance from the 10-year bounce criteria

Rule K requires the Board of Managers to find that because of unique conditions inherent to the subject property the application of rule provisions will impose a practical difficulty on the Applicant. Assessment of practical difficulty is conducted against the following criteria:

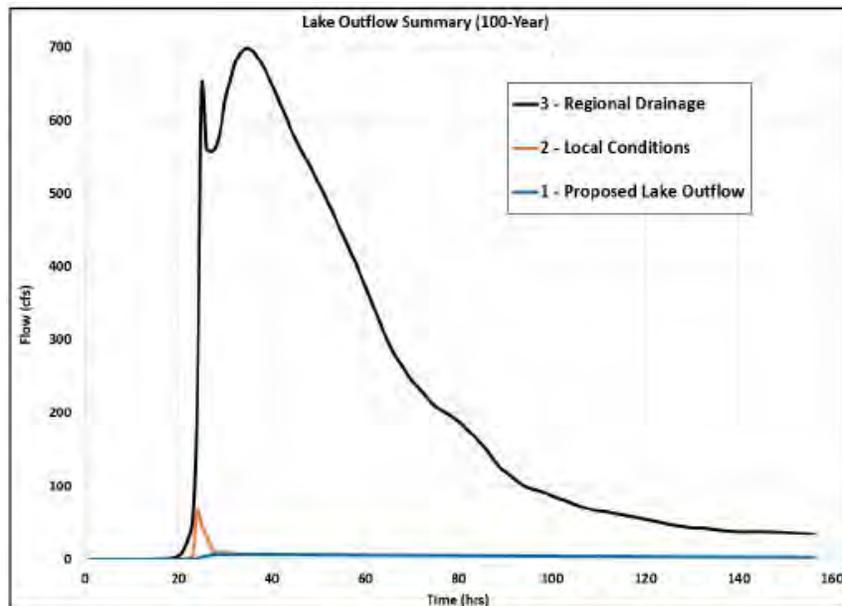
1. how substantial the variation is from the rule provision;
2. the effect of the variance on government services;
3. whether the variance will substantially change the character of or cause material adverse effect to water resources, flood levels, drainage or the general welfare in the District, or be a substantial detriment to neighboring properties;
4. whether the practical difficulty can be alleviated by a technically and economically feasible method other than a variance. Economic hardship alone may not serve as grounds for issuing a variance if any reasonable use of the property exists under the terms of the District rules;
5. how the practical difficulty occurred, including whether the landowner, the landowner's agent or representative, or a contractor, created the need for the variance; and
6. in light of all of the above factors, whether allowing the variance will serve the interests of justice.

It is the applicant's obligation to address these criteria to support a variance request. The applicant's variance request, taken from their March 23, 2021 submittal, is attached to this review. Following is the RPBCWD engineer's assessment of information received relevant to the applicant's variance requests

#### ***Variance Request #1***

The first variance request is from the requirement to limit peak runoff flow rates to that from existing conditions for the two- and 10- -year frequency storm events. (Rule J, Subsection 3.1.a). For purposes of the Board of Managers' consideration, the following factors were analyzed based on Rule K.

- Related to variance criterion 1 – The applicant supplied a modeling results of peak site discharges as summarized in Table 7. The peak discharge rate leaving Duck Lake increases by between 0.1 cfs (3.7% increase) to 0.3 cfs (8.8% increase) for the 2-year rainfall and 10-year events respectively. These deviations from RPBCWD standards are not substantial on a percentage basis or flow change basis and the 0.1 cfs increase in the 2-year discharge is within the accuracy of the modeling assumptions.
- With regard to variance criteria 2 and 3 – The peak flow rate leaving Duck Lake and discharging to Purgatory Creek represents a very small fraction of the discharge in Purgatory Creek (0.6% for the 100-year event), thus constituting a relatively low potential to adversely impact, flood elevations and channel stability in Purgatory Creek. The following figure presents an example of this for the 100-year, 24-hour rainfall event. In addition, the 0.1 cfs increase in the 2-year represents about 0.05% of the flow in Purgatory Creek while the 0.3 cfs increase in the 10-year event represents roughly 0.08% of the flow in Purgatory Creek.



- The applicant indicated the only technical measure to eliminate the need for the variance would be to replace the existing culvert in kind, which would not achieve the project flood reduction goal or restore a portion of the lakebed.
- With regard to variance criterion 5, the applicant has created the circumstances leading to the shortfall from compliance, but did so to restore a portion of the lakebed of Duck Lake, reduce flooding problems west of Duck Lake Road, and to improve the public pedestrian and vehicular safety.

The engineer finds that because the increased rates would have an immaterial impact on downstream storm sewer and Purgatory Creek, there is adequate technical basis for the managers find that practical difficulty presented outweighs the significance of the deviance from the RPBCWD standard at issue.

### **Variance Request #2**

The second variance request is from the requirement to provide pollutant removal “from site runoff” . (Rule J, Subsection 3.1.c). For purposes of the Board of Managers’ consideration, the following factors were analyzed based on Rule K.

- Related to variance criterion 1 – The applicant’s design includes treatment of 0.4 acres of impervious surface from the 1.66 acres of regulated impervious surface on the site. This represents about 24% of the site. The deviations from RPBCWD standard is substantial.
- With regard to variance criteria 2 and 3 –Because of the applicant is proposing to treat runoff from a portion of the adjacent school property to the required annual TSS and TP removal requirements the proposed alternations will not have significant adverse effects to governmental services, water resources, flood levels, or neighboring properties.

- Technical measures incorporated into the project plan to alleviate the practical difficulty (variance criterion 4) include reducing the width of a section of Duck Lake Road from the standard 52 feet to 40 feet. In addition, by treating the offsite runoff the applicant's design reduces the TSS and TP loading to the lake by 92.6% and 81.4% respectively (see Table 9 and Table 10). By reducing the pollutant load to the lake beyond what would have resulted from strict compliance with the criteria, the applicant's design provides additional resource protection.
- With regard to variance criterion 5, the practical difficulty is the result of limited area available to provide water quality treatment on the project site and the topography challenge to route the runoff to areas suitable for construction of best management practices.

The engineer finds there is adequate technical basis for the managers to rely on to grant the requested variance to allow the treatment of off-site runoff in lieu of strictly treating site runoff, as long as the city enters an agreement with the school district committing to maintenance of the drainage rights necessary for continuing compliance with the permit, if issued, and RPBCWD regulatory requirements.

### ***Variance Request #3***

The third variance request is from the requirement to limit the bounce in the existing wetland to current conditions plus/minus 0.5 feet (Rule J, Subsection 3.10a). For purposes of the Board of Managers' consideration, the following factors were analyzed based on Rule K.

- Related to variance criterion 1 – Because the wetland is riparian to Duck Lake, the 10-year bounce on Duck Lake governs the bounce in the wetland. By installing a bridge and restoring 237 feet of lakebed the design eliminates the flow restriction between the east and west basins of Duck Lake. In doing so the 10-year elevation of the west basin is reduced by 0.93 feet. This reduction in the 10-year bounce exceeds the allowable bounce change by 0.43 feet, about 1.86 times the allowable. This represents a substantial deviation from RPBCWD standard.
- With regard to variance criteria 2 and 3 –Because of the applicant is proposing to reduce the flood elevation of the western basin of Duck Lake, which also establishes the wetland bounce, the proposed alternations will reduce flooding frequency of governmental services and increase the flood protection for neighboring properties. Because the project also proposes to restore the outlet from Duck Lake, which controls the wetland elevation, the changing bounce is not reasonably likely to have an adverse impact on the wetland.
- Technical measures incorporated into the project plan to alleviate the practical difficulty (variance criterion 4) include restoration of the outlet from Duck Lake and revegetation of the wetland and shoreline areas with native vegetation. The only technical measure to eliminate the need for the variance would be to replace the existing culvert in kind, which would not achieve the project flood reduction goal or restore a portion of the lakebed.
- With regard to variance criterion 5, the applicant has created the circumstances leading to the variances, but did so to restore a portion of the lakebed of Duck Lake, reduce flooding problems west of Duck Lake Road, and to improve the public pedestrian and vehicular safety.

The engineer finds there is adequate technical basis for the managers to rely on to grant the requested variance to allow the 0.93 feet reduction in the 10-year bounce on the wetland because of the added flood risk reduction, restoration of the disturb wetland areas with native vegetation, restoration a portion of the lakebed, and restoration of the outlet from Duck Lake.

**Applicable General Requirements:**

1. The RPBCWD Administrator and Engineer shall be notified at least three days prior to commencement of work.
2. Construction must be consistent with the plans, specifications, and models that were submitted by the applicant that were the basis of permit approval. The date(s) of the approved plans, specifications, and modeling are listed above and on the permit. The granting of the permit does not in any way relieve the permittee, its engineer, or other professional consultants of responsibility for the permitted work.
3. The grant of the permit does not relieve the permittee of any responsibility to obtain approval of any other regulatory body with authority.
4. The issuance of this permit does not convey any rights to either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.
5. In all cases where the doing by the permittee of anything authorized by this permit involves the taking, using or damaging of any property, rights or interests of any other person or persons, or of any publicly owned lands or improvements or interests, the permittee, before proceeding therewith, must acquire all necessary property rights and interest.
6. RPBCWD's determination to issue this permit was made in reliance on the information provided by the applicant. Any substantive change in the work affecting the nature and extent of applicability of RPBCWD regulatory requirements or substantive changes in the methods or means of compliance with RPBCWD regulatory requirements must be the subject of an application for a permit modification to the RPBCWD.
7. If the conditions herein are met and the permit is issued by RPBCWD, the applicant, by accepting the permit, grants access to the site of the work at all reasonable times during and after construction to authorized representatives of the RPBCWD for inspection of the work.

**Findings**

1. The proposed project includes the information necessary, plan sheets and erosion control plan for review.
2. The Applicant has requested a variance from compliance with the Rule J criteria related to rate control, and allowing treatment of off-site runoff instead of site runoff.
3. Aside from the variance requests from the provisions of Rule J cited above, the proposed project will conform to the remaining criteria of Rules C, D, G, and J if the Rule Specific Permit Conditions listed above are met.

4. The proposed project conforms to Rules B, E, and F.
5. Under Minnesota Department of Natural Resources General Permit 2015-1192 (attached to this report), approval of work under RPBCWD rule(s) E, F, and G constitutes approval under applicable DNR work in waters rules. Compliance with conditions on approval and payment of applicable fees, if any, are necessary to benefit from general permit approval and the responsibility of the applicants. (Because filling in a public water is outside the scope of actions authorized by DNR General Permit 2015-1192, the RPBCWD permit, if issued, will not constitute authorization of the proposed work for purposes of DNR Work in Waters rule (Minn. R. ch. 6115) or any other state regulatory purposes.)

**Recommendation:**

If the managers grant the variances (with such conditions as the managers may impose), the engineer recommends approval of the permit, contingent upon:

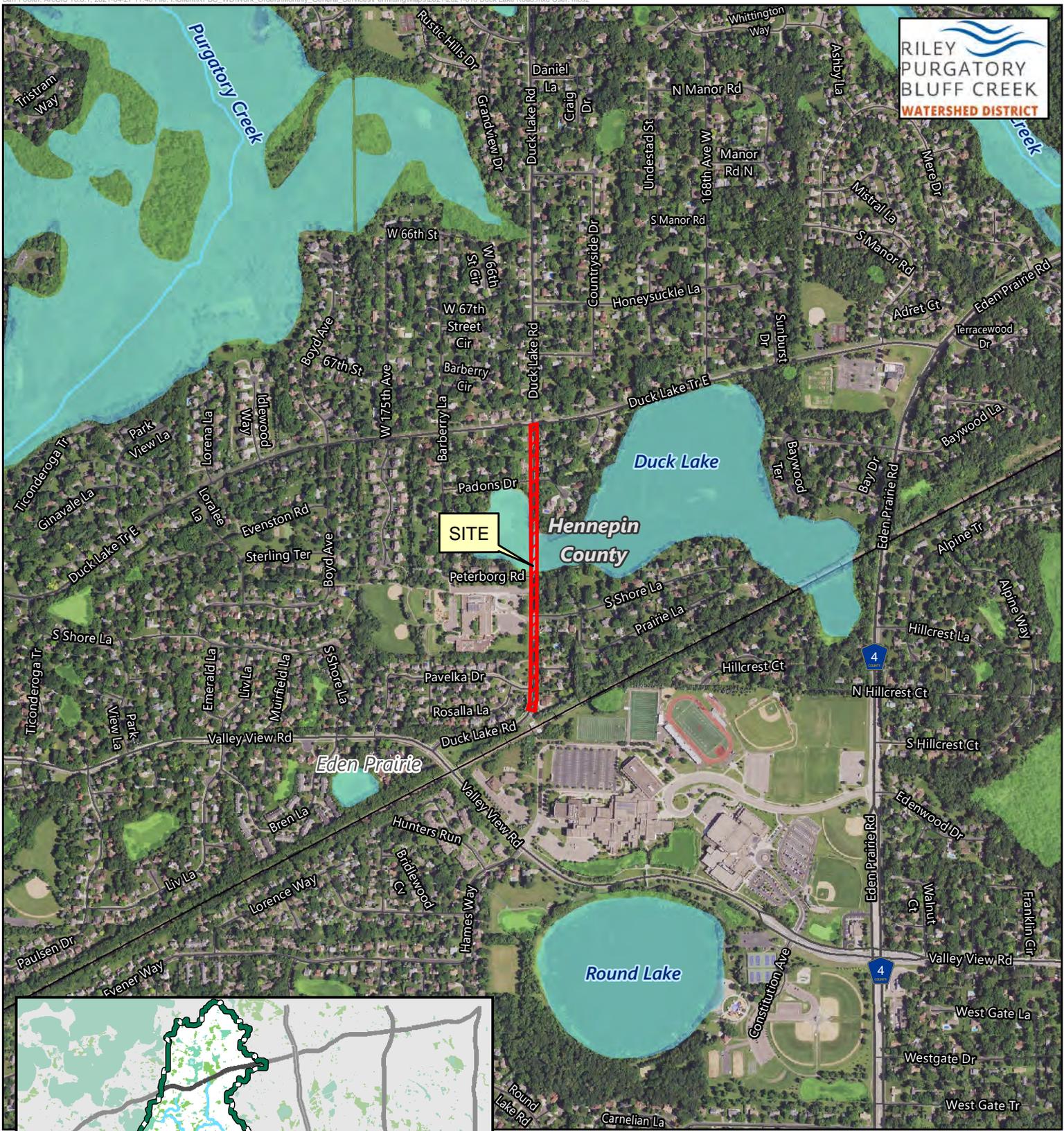
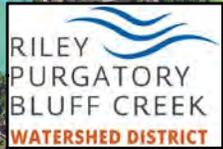
1. A two-year permit term is recommended since the construction is anticipated to continue through 2023.
2. Continued compliance with General Requirements
3. Permit applicant must provide the name and contact information of the general contractor responsible for the site. RPBCWD must be notified if the responsible party changes during the permit term.
4. Permit applicant must provide a draft maintenance agreement and inspection plan for the wetland buffers, management of stormwater BMPs and waterbody crossing, including exhibit clearly identifying stormwater BMPs and buffer areas. Once approved by RPBCWD, the City must enter an agreement with RPBCWD to maintain the project facilities in accordance with the plan.

By accepting the permit, when issued, the applicant agrees to the following stipulations:

1. Filling in a public water is outside the scope of actions authorized by DNR General Permit 2015-1192. As such, if the RPBCWD permit is issued, it will not constitute authorization of the proposed work for purposes of DNR Work in Waters rule (Minn. R. ch. 6115) or any other state regulatory purposes. The applicant must, at a minimum, obtain a project-specific permit from DNR for placing fill below the OWH of Duck Lake. Further, any modification of the project plans material to compliance with RPBCWD rules or this permit – whether undertaken to comply with requirements imposed or actions undertaken by DNR – must be submitted to RPBCWD in the form a request for a permit modification.
2. Per Rule J Subsection 4.5, upon completion of the site work, the permittee must submit as-built drawings demonstrating that at the time of final stabilization, all stormwater management facilities, the waterbody crossing, and Duck Lake outlet conform to design specifications and

function as intended and approved by the District. As-built/record drawings must be signed by a professional engineer licensed in Minnesota and include, but not limited to:

- a) the surveyed bottom elevations, water levels, and general topography of all facilities;
  - b) the size, type, and surveyed invert elevations of all stormwater facility inlets and outlets;
  - c) the surveyed elevations of all emergency overflows including stormwater facility, street, and other;
  - d) other important features to show that the project was constructed as approved by the Managers and protects the public health, welfare, and safety.
  - e) photographic evidence of buffer marker locations indicated by permanent, free-standing markers in accordance with Rule D, Subsection 3.4 criteria.
1. Providing the following additional close-out materials:
- a) Documentation that constructed infiltration and filtration facilities perform as designed. This may include infiltration testing, flood testing, or other with prior approval from RPBCWD
  - b) Documentation that disturbed pervious areas remaining pervious have been decompacted per Rule C.2c criteria

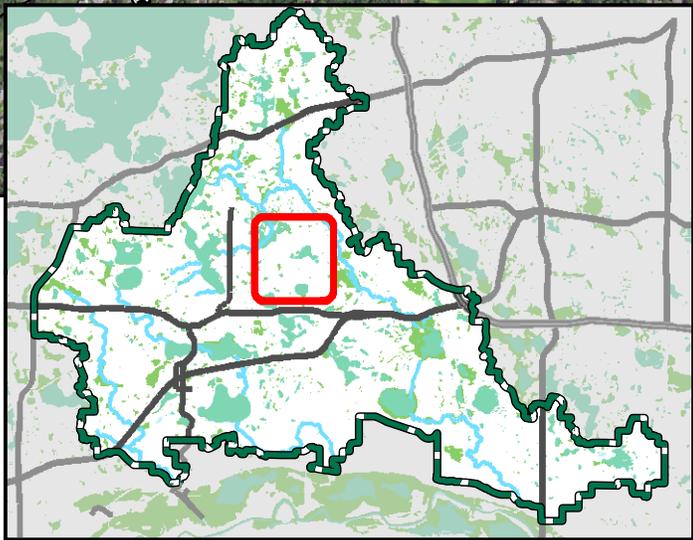


**SITE**

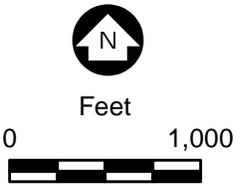
**Hennepin County**

**Eden Prairie**

**Round Lake**



Permit Location Map



**DUCK LAKE ROAD**  
**Permit 2021-016**  
Riley Purgatory Bluff Creek  
Watershed District

# MINNESOTA DEPARTMENT OF TRANSPORTATION CITY OF EDEN PRAIRIE DUCK LAKE ROAD

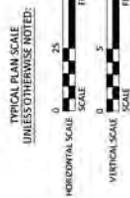
DESIGN DESIGNATION	DUCK LAKE ROAD
STA. 1+54.05 TO STA. 2+995.83	
FUNCTIONAL CLASSIFICATION	MINOR COLLECTOR
R-VALUE	12
FM 18	163,000
NO. & WIDTH OF TRAFFIC LANES	2 & 11-12 ft
NO. & WIDTH OF PARKING LANES	NA
ADT (PRESENT YEAR) 2020	1,250
ADT (PROJECTED YEAR) 2040	1,750
HCA-DT (PROJECTED YEAR) 2040	67
DESIGN SPEED	30 mph
DESIGN LOAD	10 ton
DESIGN SPEED NOT ACHIEVED AT:	NA
DESIGN SPEED FOR ROADWAY BASED ON	ON STOPPING SIGHT DISTANCE:
HEIGHT OF EYE = 3.5 FT	
HEIGHT OF OBJECT = 2.0 FT	

CONSTRUCTION PLAN FOR:  
GRADING, AGGREGATE BASE, PLANT MIXED BITUMINOUS PAVEMENT, CONCRETE CURB AND GUTTER, CONCRETE SIDEWALK,  
BITUMINOUS TRAIL, ADA IMPROVEMENTS, STORM SEWER, AND RELATED APPURTENANCES

SECTION 5 & 8, T116N, R22W	DUCK LAKE ROAD	FROM	200' SOUTH OF PAVELVA DRIVE	TO	DUCK LAKE TRAIL	(GEOGRAPHICAL DESCRIPTION)
						(LEGAL DESCRIPTION)

DUCK LAKE ROAD (SAP 181-121-001)	
GROSS LENGTH	2,241.78 FEET 0.425 MILES
BRIDGE LENGTH	236.66 FEET 0.045 MILES
EXCEPTION LENGTH	FEET MILES
NET LENGTH	2,241.78 FEET 0.425 MILES

LENGTH AND DESCRIPTION BASED UPON  
PROPOSED CENTERLINE



PROJECT LOCATION



CITY: EDEN PRAIRIE  
COUNTY: HENNEPIN  
DISTRICT: METRO

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



PROJECT DATUM:  
HORIZONTAL: HENNEPIN COUNTY, NAD 83 (1986)  
VERTICAL: CITY DATUM (± NGVD 1929)

PROJECT NO: BM=924.42  
TIN#  
STATION 2+25  
7+141 DUCK LAKE RD



3224 HICKORY AVENUE  
BURNSVILLE, MINNESOTA 55337  
Phone: (952) 890-0569  
Email: info@bolton-menk.com  
www.bolton-menk.com

STATE AID (02/02/2019)  
STATE AID (04/19/2019)  
STATE AID (04/19/2021)

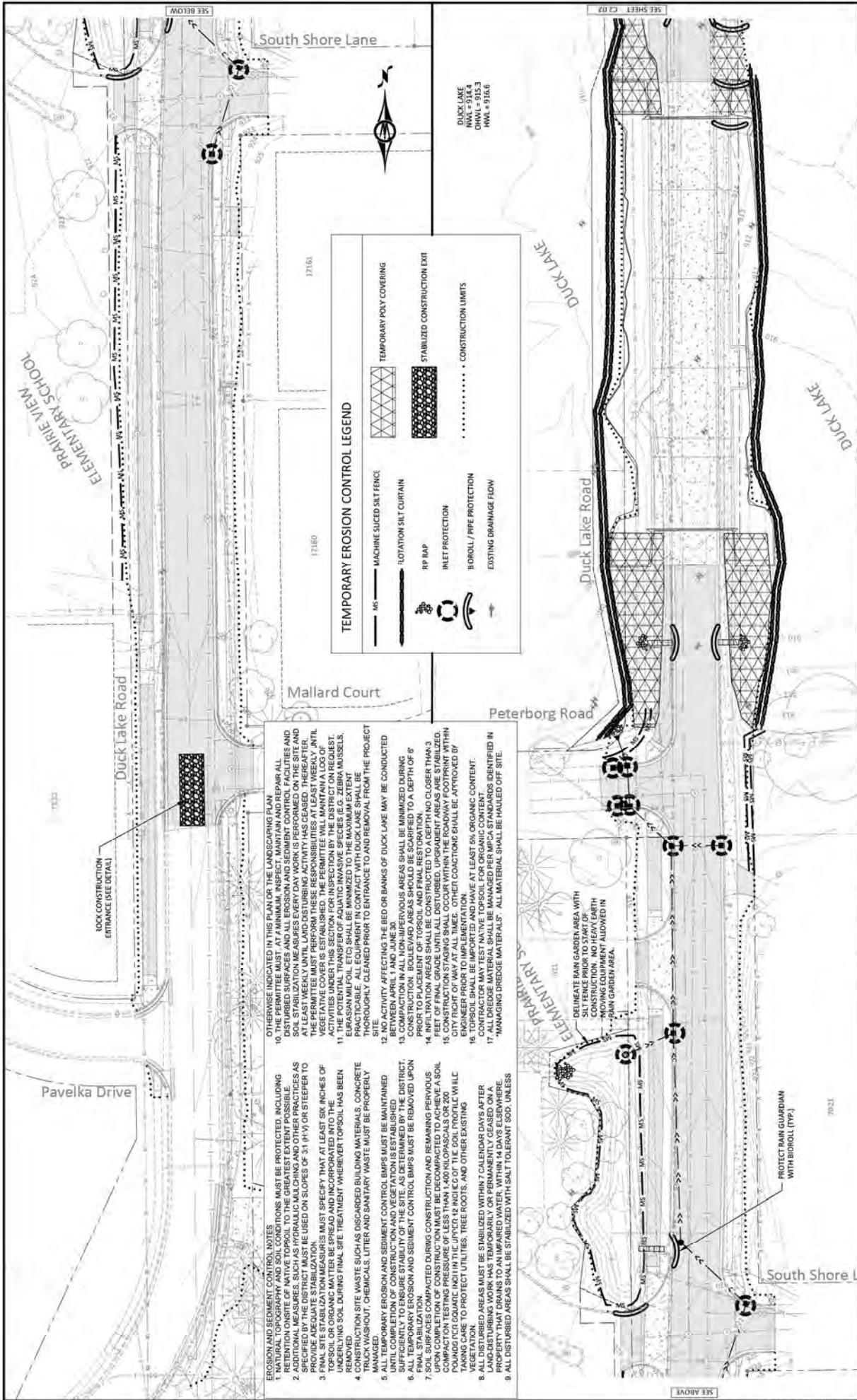
THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION  
"STANDARD SPECIFICATION FOR CONSTRUCTION" SHALL GOVERN.  
ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM AND BE INSTALLED IN ACCORDANCE  
WITH THE "FIELD MANUAL FOR TRAFFIC CONTROL DEVICES" (MUTCD) AND  
PART IV, "FIELD MANUAL" FOR TEMPORARY TRAFFIC CONTROL DEVICES.

SHEET NUMBER	SHEET TITLE
GENERAL	
G0.01	TITLE SHEET
G0.02	LEGEND
G1.01 - G1.03	STATEMENT OF ESTIMATED QUANTITIES AND TABLES
G2.01	LOCATION PLAN
CIVIL	
C0.01 - C0.02	REMOVAL PLAN
C1.01	TYPICAL SECTIONS
C2.01 - C2.07	EROSION CONTROL PLANS & SWPPP
C3.01	SURCHARGE PLAN
C3.02 - C3.03	GRADING PLANS
C5.01 - C5.02	STORM SEWER PLAN & PROFILE
C6.01	REAR YARD STORM SEWER - FADONS DRIVE
C6.02	TEMPORARY ROAD
C6.02 - C6.05	STREET PLAN & PROFILE
C6.06 - C6.07	INTERSECTION DETAILS
C7.01	SIGNING AND PAVEMENT MARKINGS
C8.01 - C8.09	STANDARD DETAILS
C9.01 - C9.19	CROSS SECTIONS - STAGE 1-4 SURCHARGE
C9.20 - C9.30	CROSS SECTIONS - DUCK LAKE ROAD
L2.01 - L2.03	LANDSCAPE PLAN
B1-840	BRIDGE PLANS
THIS PLAN SET CONTAINS 112 SHEETS.	

Design Engineer: 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.  
Date: XX/XX/XXXX Printed Name: MICHAEL R. WARRER License Number: 44693

Approved: \_\_\_\_\_ License Number: 20  
City of Eden Prairie Engineer  
District State Aid Engineer: \_\_\_\_\_ License Number: 20  
Reviewed for compliance with State Aid Rules/Policy  
Approved for State Aid Funding: State Aid Engineer \_\_\_\_\_ License Number: 20

CITY OF EDEN PRAIRIE, MINNESOTA  
DUCK LAKE ROAD IMPROVEMENTS  
STATE AID PROJECT NO. 181-121-001  
SHEET: G0.01



- EROSION AND SEDIMENT CONTROL NOTES**
- NATURAL TOPOGRAPHY AND SOIL CONDITIONS MUST BE PROTECTED, INCLUDING ALL EXISTING VEGETATION.
  - ADDITIONAL MEASURES, SUCH AS HYDRAULIC MASHINGS AND OTHER PRACTICES AS SPECIFIED BY THE DISTRICT MUST BE USED ON SLOPES OF 3:1 (H:V) OR STEEPER TO PROVIDE ADEQUATE STABILIZATION.
  - FINAL SITE STABILIZATION MEASURES MUST SPECIFY THAT AT LEAST SIX INCHES OF UNDERLYING SOIL DURING FINAL SITE TREATMENT WHEREVER TOPSOIL HAS BEEN REMOVED.
  - CONSTRUCTION SITE WASTE SUCH AS DISCARDED BUILDING MATERIALS, CONCRETE, PAINT, OIL, AND OTHER HAZARDOUS WASTE MUST BE PROPERLY MANAGED.
  - ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPs MUST BE MAINTAINED SUFFICIENTLY TO ENSURE STABILITY OF THE SITE, AS DETERMINED BY THE DISTRICT.
  - FINAL STABILIZATION.
  - SOIL SURFACES COMPACTED DURING CONSTRUCTION AND REMAINING PERVIOUS UPON COMPLETION OF CONSTRUCTION MUST BE DECOMPACTED TO ACHIEVE A SOIL COMPACTION TESTING PRESSURE OF LESS THAN 1,400 KILOPASCALS OR 200 POUNDS PER SQUARE FOOT. SOIL SURFACES MUST BE REVEGETATED WITH GRASS, LEGUMES, OR OTHER VEGETATION.
  - ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 7 CALENDAR DAYS AFTER COMPLETION OF CONSTRUCTION AND MUST BE REVEGETATED WITHIN 14 DAYS ELSEWHERE ON THE PROPERTY THAT DRAINS TO AN UNPAVED WATERWAY WITHIN 14 DAYS ELSEWHERE.
  - ALL DISTURBED AREAS SHALL BE STABILIZED WITH SALT TOLERANT SOD, UNLESS
- OTHERWISE INDICATED IN THIS PLAN OR THE LANDSCAPING PLAN**
- THE PERMITEE MUST, AT A MINIMUM, INSPECT, MAINTAIN AND REPAIR ALL EROSION CONTROL MEASURES EVERY DAY WORK IS PERFORMED ON THE SITE AND SOIL STABILIZATION MEASURES EVERY DAY WORK IS PERFORMED ON THE SITE AND AT LEAST WEEKLY UNTIL LAND-DISTURBING ACTIVITY HAS CEASED. THEREAFTER, THE PERMITEE MUST PERFORM THESE RESPONSIBILITIES AT LEAST WEEKLY UNTIL VEGETATIVE COVER IS ESTABLISHED. THE PERMITEE WILL MAINTAIN A LOG OF ALL EROSION CONTROL MEASURES AND REPAIRS.
  - THE POTENTIAL TRANSFER OF AQUATIC INVASIVE SPECIES (E.G. ZEBRA MUSSELS, EURASIAN MILFOIL, ETC) SHALL BE MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE. ALL EQUIPMENT IN CONTACT WITH DUCK LAKE SHALL BE THOROUGHLY CLEANED PRIOR TO ENTRANCE TO AND REMOVAL FROM THE PROJECT SITE.
  - NO ACTIVITY AFFECTING THE BED OR BANKS OF DUCK LAKE MAY BE CONDUCTED BETWEEN APRIL 1 AND JUNE 30.
  - COMPACTION IN ALL NON-IMPERVIOUS AREAS SHALL BE MINIMIZED DURING CONSTRUCTION AND MUST BE LIMITED TO A DEPTH OF 6 FEET.
  - PRIOR TO PLACEMENT OF TOPSOIL AND FINAL RESTORATION.
  - INFILTRATION AREAS SHALL BE CONSTRUCTED TO A DEPTH NO CLOSER THAN 3 FEET OF FINAL GRADE UNTIL ALL DISTURBED, UPRADIATED AREAS ARE STABILIZED.
  - CONSTRUCTION STAGING SHALL OCCUR WITHIN THE ROADWAY FOOTPRINT WITHIN THE DISTRICT'S RIGHT-OF-WAY. ALL STAGING SHALL BE APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTATION.
  - TOPSOIL SHALL BE IMPORTED AND HAVE AT LEAST 5% ORGANIC CONTENT.
  - CONTRACTOR MAY TEST NATIVE TOPSOIL FOR ORGANIC CONTENT.
  - ALL IMPORTED TOPSOIL SHALL BE TESTED FOR ORGANIC CONTENT.
  - "MANAGING DREDGE MATERIALS": ALL MATERIAL SHALL BE HAULED OFF SITE.

**TEMPORARY EROSION CONTROL LEGEND**

MS	MACHINE SIZED SILT FENCE	XXXXXX	TEMPORARY POLY COVERING
---	NOTATION SILT CURTAIN	XXXXXX	STABILIZED CONSTRUCTION EXIT
○	RP RAP	.....	CONSTRUCTION LIMITS
○	INLET PROTECTION		
○	BOROLL / PIPE PROTECTION		
→	EXISTING DRAINAGE FLOW		

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SEE SHEET C2.494

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SEE SHEET C2.520

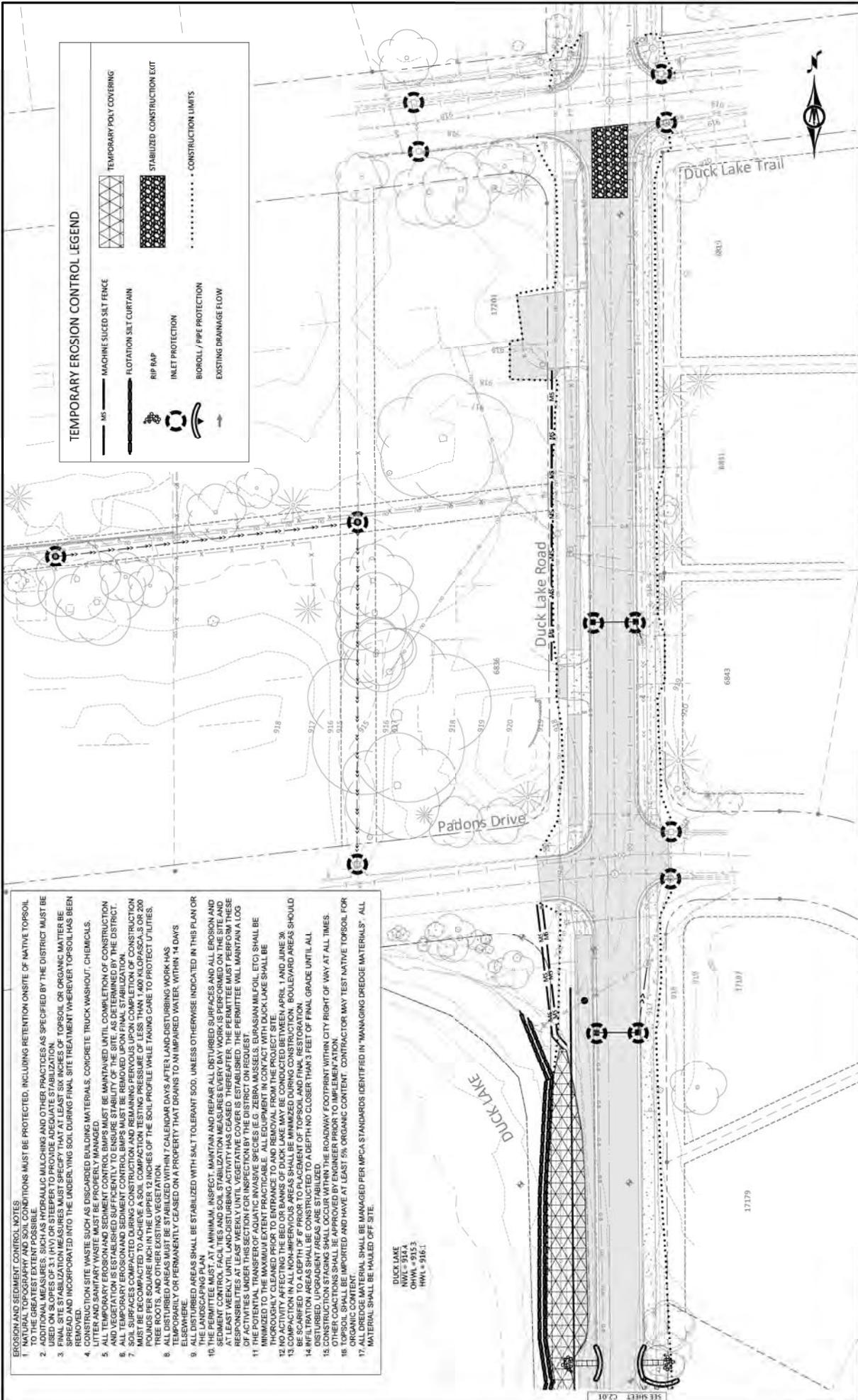
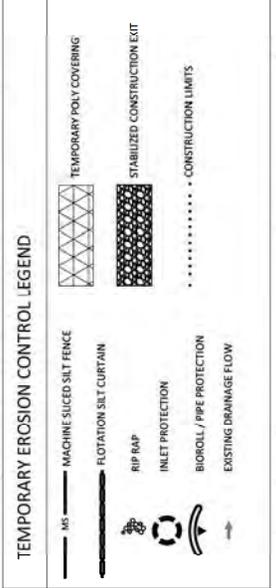
SEE SHEET C2.521

SEE SHEET C2.522

SEE SHEET C2.523</

- EROSION AND SEDIMENT CONTROL NOTES**
1. NATURAL TOPOGRAPHY AND SOIL CONDITIONS MUST BE PROTECTED, INCLUDING RETENTION ON-SITE OF NATIVE TOPSOIL TO THE GREATEST EXTENT POSSIBLE.
  2. ADDITIONAL MEASURES, SUCH AS HYDRAULIC MULCHING AND OTHER PRACTICES AS SPECIFIED BY THE DISTRICT MUST BE USED ON SLOPES OF 1:1 (H:V) OR STEEPER TO PROVIDE ADEQUATE STABILIZATION.
  3. EXISTING TOPSOIL OR ORGANIC MATTER BE SPREAD AND INCORPORATED INTO THE UNDERLYING SOIL DURING FINAL SITE TREATMENT WHEREVER TOPSOIL HAS BEEN REMOVED.
  4. CONSTRUCTION SITE WASTE SUCH AS DISCARDED BUILDING MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICALS, LITTER AND SANITARY WASTE MUST BE PROPERLY MANAGED.
  5. ALL TEMPORARY EROSION CONTROL MEASURES MUST BE MAINTAINED UNTIL COMPLETION OF CONSTRUCTION AND VEGETATION IS ESTABLISHED SUFFICIENTLY TO ENSURE STABILITY OF THE SITE, AS DETERMINED BY THE DISTRICT.
  6. ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPs MUST BE REMOVED UPON FINAL STABILIZATION.
  7. SOIL SURFACES COMPACTED DURING CONSTRUCTION AND REMAINING PERVIOUS UPON COMPLETION OF CONSTRUCTION MUST BE RECOMPACTED TO A MINIMUM OF 15% MOISTURE AND 95% RELATIVE DENSITY TO A DEPTH OF 12 TO 20 POUNDS PER SQUARE INCH AT THE UPPER 12 INCHES OF THE SOIL PROFILE WHILE TAKING CARE TO PROTECT PLANTS, TREE ROOTS, AND OTHER EXISTING VEGETATION.
  8. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 7 CALENDAR DAYS AFTER LAND-DISTURBING WORK HAS TEMPORARILY OR PERMANENTLY CEASED ON A PROPERTY THAT DRAINS TO AN IMPAIRED WATER, WITHIN 14 DAYS.
  9. ALL DISTURBED AREAS SHALL BE STABILIZED WITH SALT TOLERANT SOIL, UNLESS OTHERWISE INDICATED IN THIS PLAN OR THE LANDSCAPING PLAN.
  10. THE PERMITTEE MUST, AT A MINIMUM, INSPECT, MAINTAIN AND REPAIR ALL DISTURBED SURFACES AND ALL EROSION AND SEDIMENT CONTROL MEASURES EVERY 7 DAYS DURING CONSTRUCTION. THE PERMITTEE SHALL BE RESPONSIBLE FOR AT LEAST WEEKLY VISUAL INSPECTIONS. INSPECTIONS SHALL BE CONDUCTED AT LEAST WEEKLY UNTIL VEGETATIVE COVER IS ESTABLISHED. THE PERMITTEE WILL MAINTAIN A LOG OF ACTIVITIES UNDER THIS SECTION FOR INSPECTION BY THE DISTRICT ON REQUEST.
  11. THE POTENTIAL TRANSPORT OF AQUATIC INVASIVE SPECIES (E.G. ZEBRA MUSSELS, EURASIAN MILFOIL ETC.) SHALL BE THOROUGHLY CLEANSED PRIOR TO ENTRANCE TO AND REMOVAL FROM THE PROJECT SITE.
  12. NO ACTIVITY AFFECTING THE BED OR BANKS OF DUCK LAKE MAY BE CONDUCTED BETWEEN APRIL 1 AND JUNE 30.
  13. COMPACTION IN ALL NON-IMPVIOUS AREAS SHALL BE MINIMIZED DURING CONSTRUCTION. BOULEVARD AREAS SHOULD BE SCARIFIED TO A DEPTH OF 6" PRIOR TO PLACEMENT OF TOPSOIL AND FINAL RESTORATION.
  14. ALL DISTURBED AREAS SHALL BE STABILIZED TO A DEPTH NO CLOSER THAN 3 FEET OF FINAL GRADE UNTIL ALL DISTURBED, UPGRADING AREAS ARE STABILIZED.
  15. CONSTRUCTION STAGING SHALL OCCUR WITHIN THE ROADWAY FOOTPRINT WITHIN CITY RIGHT OF WAY AT ALL TIMES.
  16. OTHER CONDITIONS SHALL BE APPROVED BY ENGINEER PRIOR TO IMPLEMENTATION.
  17. ALL DREDGE MATERIAL IMPORTED AND HAVED AT LEAST 5% ORGANIC CONTENT. CONTRACTOR MAY TEST NATIVE TOPSOIL FOR ORGANIC CONTENT.
  18. ALL DREDGE MATERIAL SHALL BE MANAGED PER MPSCA STANDARDS IDENTIFIED IN "MANAGING DREDGE MATERIALS". ALL MATERIAL SHALL BE HAULED OFF SITE.

DUCK LAKE  
 NWL = 914  
 OHWL = 915.3  
 HWL = 916.1



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DATE: 02/20/2017  
 PERIOD: 02/09/2015  
 STATE AID: 02/26/2021

MARK: MARK  
 DATE: 02/20/2017  
 SHEET: C2.02

CITY OF EDEN PRAIRIE, MINNESOTA  
 DUCK LAKE ROAD IMPROVEMENTS  
 TEMPORARY EROSION CONTROL  
 S.A.P. 191-121-001

3/27/2015  
 MICHAEL L. WARNER  
 46953

0 35 50  
 FEET  
 HORIZ. SCALE



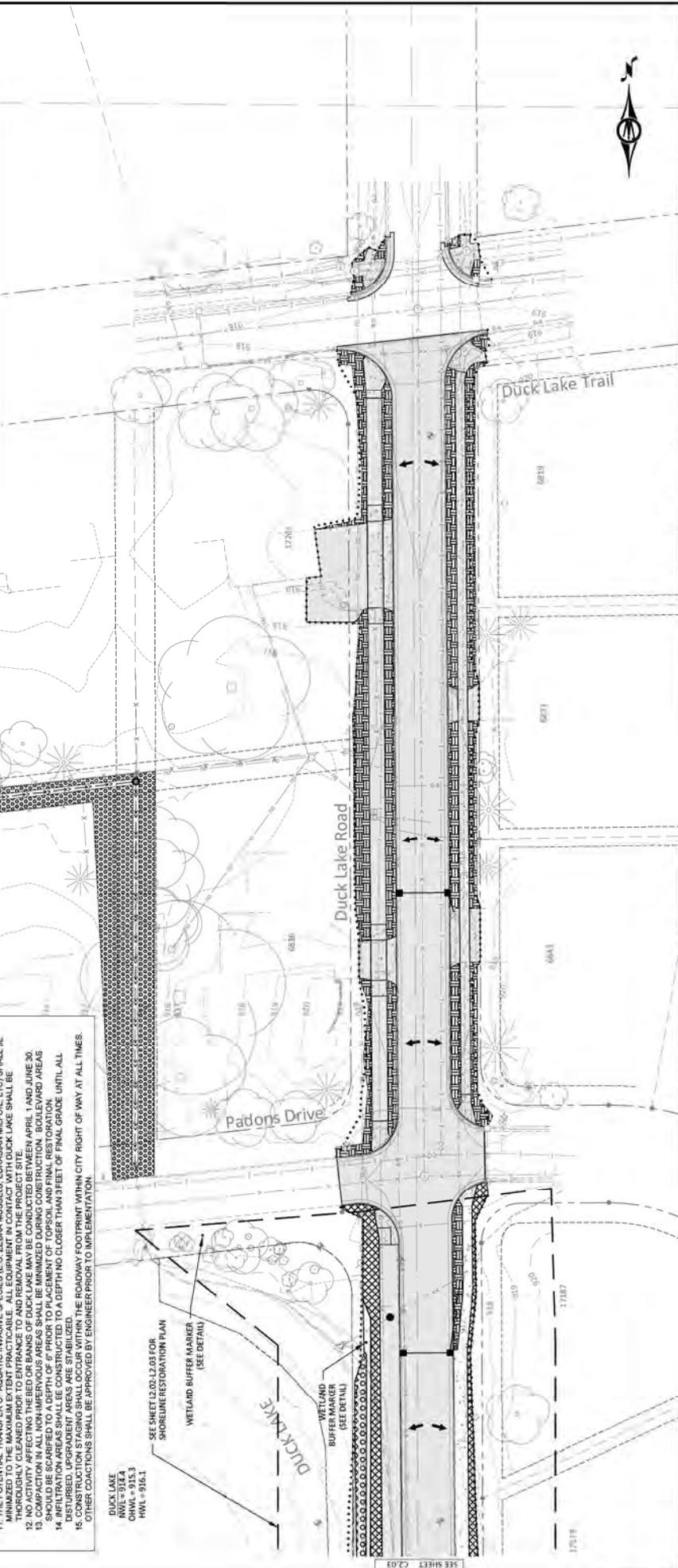
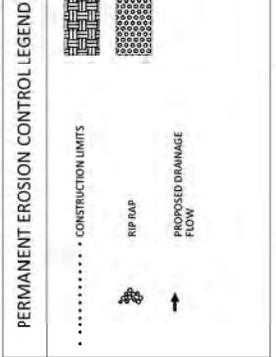
- EROSION AND SEDIMENT CONTROL NOTES**
1. NATURAL TOPOGRAPHY AND SOIL CONDITIONS MUST BE PROTECTED, INCLUDING RETENTION ON-SITE OF NATIVE TOPSOIL TO THE GREATEST EXTENT POSSIBLE.
  2. ADDITIONAL MEASURES, SUCH AS HYDRAULIC MULCHING AND OTHER PRACTICES AS SPECIFIED BY THE DISTRICT, MUST BE USED TO PROTECT EXPOSED SOIL SURFACES.
  3. FINAL SITE STABILIZATION MEASURES MUST SPECIFY THAT AT LEAST SIX INCHES OF TOPSOIL OR ORGANIC MATTER BE SPREAD AND INCORPORATED INTO THE UNDERLYING SOIL DURING FINAL SITE TREATMENT WHEREVER TOPSOIL HAS BEEN REMOVED.
  4. OTHER AND SANITARY WASTE MUST BE PROPERLY MANAGED.
  5. ALL TEMPORARY EROSION AND SEDIMENT CONTROL BARRIERS MUST BE MAINTAINED UNTIL COMPLETION OF CONSTRUCTION AND VEGETATION IS ESTABLISHED SUFFICIENTLY TO ENSURE STABILITY OF THE SITE, AS DETERMINED BY THE DISTRICT.
  6. ALL TEMPORARY EROSION AND SEDIMENT CONTROL BARRIERS MUST BE REMOVED UPON FINAL STABILIZATION.
  7. ALL TEMPORARY EROSION AND SEDIMENT CONTROL BARRIERS MUST BE MAINTAINED AT ALL TIMES. CONSTRUCTION MUST BE RECOMPACTED TO ACHIEVE A SOIL COMPACTION TESTING PRESSURE OF LESS THAN 1400 KILOPASCALS OR 200 POUNDS PER SQUARE INCH IN THE UPPER 12 INCHES OF THE SOIL PROFILE WHILE TAKING CARE TO PROTECT UTILITIES, TREE ROOTS, AND OTHER EXISTING VEGETATION.
  8. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 7 CALENDAR DAYS AFTER LAND-DISTURBING WORK HAS COMPLETED.
  9. ALL DISTURBED AREAS SHALL BE STABILIZED ON A PROPERTY THAT DRAINS TO AN IMPAIRED WATER, WITHIN 14 DAYS ELSEWHERE.
  10. ALL DISTURBED AREAS SHALL BE STABILIZED WITH SALT TOLERANT SOG, UNLESS OTHERWISE INDICATED IN THIS PLAN OR THE LANDSCAPING PLAN.
  11. THE MINIMUM INSPECT, MAINTAIN AND REPAIR ALL DISTURBED SURFACES AND ALL EROSION AND SEDIMENT CONTROL FACILITIES AND SOIL STABILIZATION MEASURES EVERY DAY WORK IS PERFORMED ON THE SITE AND AT LEAST WEEKLY UNTIL LAND-DISTURBING ACTIVITY HAS CEASED. THEREAFTER, THE PERMITTEE MUST PERFORM THESE RESPONSIBILITIES AT LEAST WEEKLY UNTIL VEGETATIVE COVER IS ESTABLISHED. THE PERMITTEE WILL MAINTAIN A LOG OF ACTIVITIES UNDER THIS SECTION FOR INSPECTION BY THE DISTRICT ON REQUEST.
  12. EQUIPMENT SHALL BE LIMITED TO THE MINIMUM EXTENT PRACTICABLE. ALL EQUIPMENT IN CONTACT WITH DUCK LAKE SHALL BE THOROUGHLY CLEANED PRIOR TO ENTRANCE TO AND REMOVAL FROM THE PROJECT SITE.
  13. NO ACTIVITY AFFECTING THE BED OR BANKS OF DUCK LAKE MAY BE CONDUCTED BETWEEN APRIL 1 AND JUNE 30.
  14. INFILTRATION AREAS SHALL BE CONSTRUCTED TO A DEPTH NO CLOSER THAN 3 FEET OF FINAL GRADE UNTIL ALL DISTURBED, UPGRADIENT AREAS ARE STABILIZED.
  15. CONSTRUCTION STAGING SHALL OCCUR WITHIN THE ROADWAY FOOTPRINT WITHIN CITY RIGHT OF WAY AT ALL TIMES. OTHER CONNECTIONS SHALL BE APPROVED BY ENGINEER PRIOR TO IMPLEMENTATION.

DUCK LAKE  
HWL = 916.4  
OHWL = 915.3  
HWL = 916.1

SEE SHEET C2.03 FOR  
STORAGE RESTORATION PLAN

WETLAND BUFFER MARKER  
(SEE DETAIL)

WETLAND  
BUFFER MARKER  
(SEE DETAIL)



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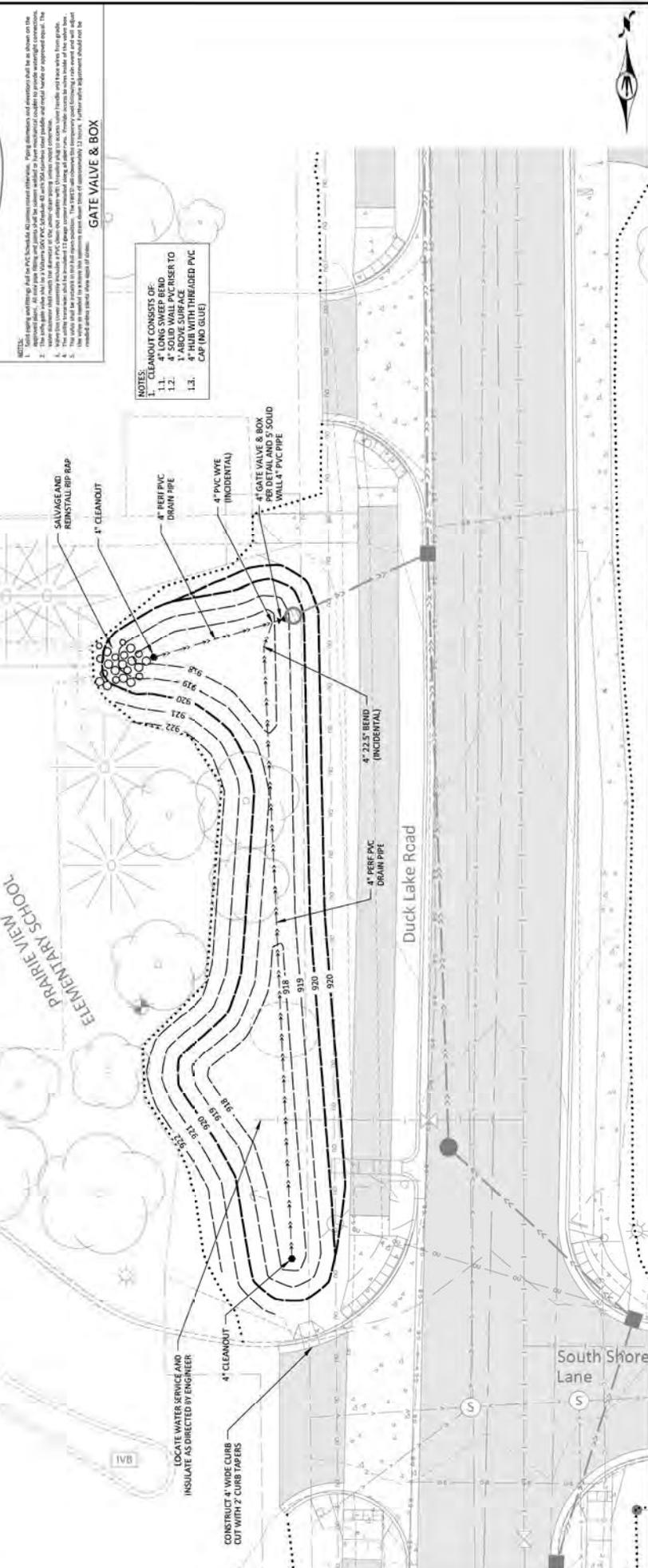
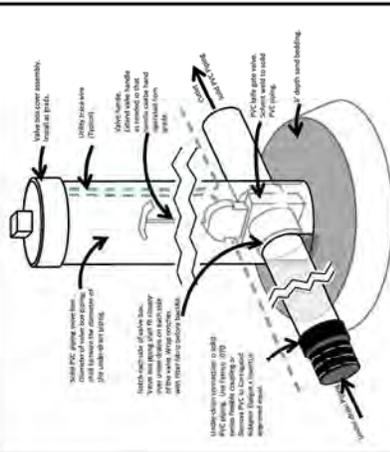
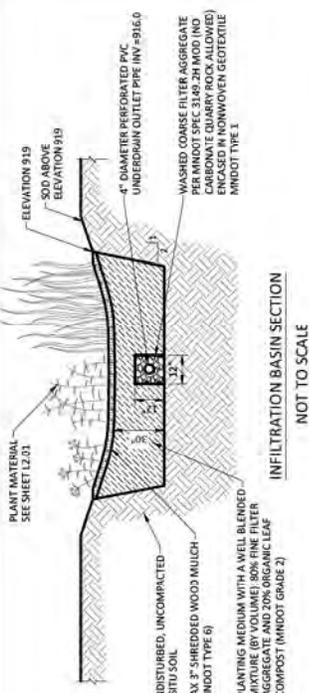
STATE AID 02/20/2017  
PERMITS 02/02/2018  
STATE AID 02/26/2021

MARK  
MARK  
MARK  
MARK

DATE: 3/27/2018  
DRAWN: MICHAEL H. WARNER  
SCALE: AS SHOWN

SHEET: C2.04  
PROJECT: DUCK LAKE ROAD IMPROVEMENTS  
SUBJECT: PERMANENT EROSION CONTROL  
S.A.P. 191-121-001

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF UTILITIES WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
2. EXISTING GRADE CONTOURS SHOWN AT 1 FOOT INTERVALS, PROPOSED GRADE CONTOURS SHOWN AT 1 FOOT INTERVALS, UNPAVED DRIVING SURFACE CONTOURS SHOWN AT 1 FOOT INTERVALS, AND UNPAVED DRIVEWAY CONTOURS SHOWN AT 1 FOOT INTERVALS SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
3. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL BE RECLAIMED TO ORIGINAL GRADE OR BETTER.
4. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL BE RECLAIMED TO ORIGINAL GRADE OR BETTER.
5. WETLAND BOUNDARY SHALL BE PROTECTED BY THE CONTRACTOR USING REASONABLE EROSION CONTROL PRACTICES PRIOR TO CONSTRUCTION TO CLEARLY IDENTIFY AREA NOT TO BE DISTURBED.
6. ANY CONSTRUCTION SEQUENTIAL FROM THE CONTRACTOR'S ACTIVITIES DISCOVERED IN WETLAND AREA SHALL BE REMOVED IMMEDIATELY UPON DISCOVERY AT THE CONTRACTOR'S EXPENSE.
7. THE CONTRACTOR SHALL PROTECT ALL REMAINING PLANT MATERIAL IN PLACE UNTIL ALL DISTURBED AREAS HAVE BEEN STABILIZED.
8. POSITIVE ADEQUATE COVERAGE OF SEED AND MULCH MATERIAL, POSITIVE DRAINAGE SHALL BE MAINTAINED DURING CONSTRUCTION AT ALL TIMES.
9. THE CONTRACTOR SHALL PROTECT ALL TREES ON SITE UNLESS INDICATED TO BE REMOVED.
10. THE CONTRACTOR SHALL PROTECT ALL DRAINAGE WAYS ON SITE AND SHALL MAINTAIN THEM AS SHOWN ON THESE PLANS.
11. THE CONTRACTOR SHALL STABILIZE ALL DRAINAGE WAYS WITHIN 24 HOURS OF COMPLETION OF CONSTRUCTION IN ALL NON-IMPERVIOUS AREAS SHALL BE MINIMIZED DURING CONSTRUCTION. BOUNDARY AREAS SHOULD BE SECURED TO A DEPTH OF 6" PRIOR TO PLACEMENT OF TOPSOIL.
12. INFILTRATION AREAS SHALL BE CONSTRUCTED TO A DEPTH NO CLOSER THAN 3 FEET OF FINAL GRADE UNTIL ALL DISTURBED, UPGRADE AREAS ARE STABILIZED.
13. INFILTRATION AREAS SHALL BE CONSTRUCTED TO A DEPTH NO CLOSER THAN 3 FEET OF FINAL GRADE UNTIL ALL DISTURBED, UPGRADE AREAS ARE STABILIZED.
14. 4" GATE VALVE SHALL REMAIN CLOSED.



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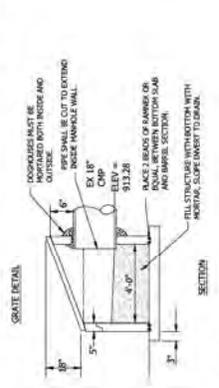
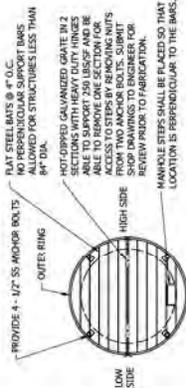
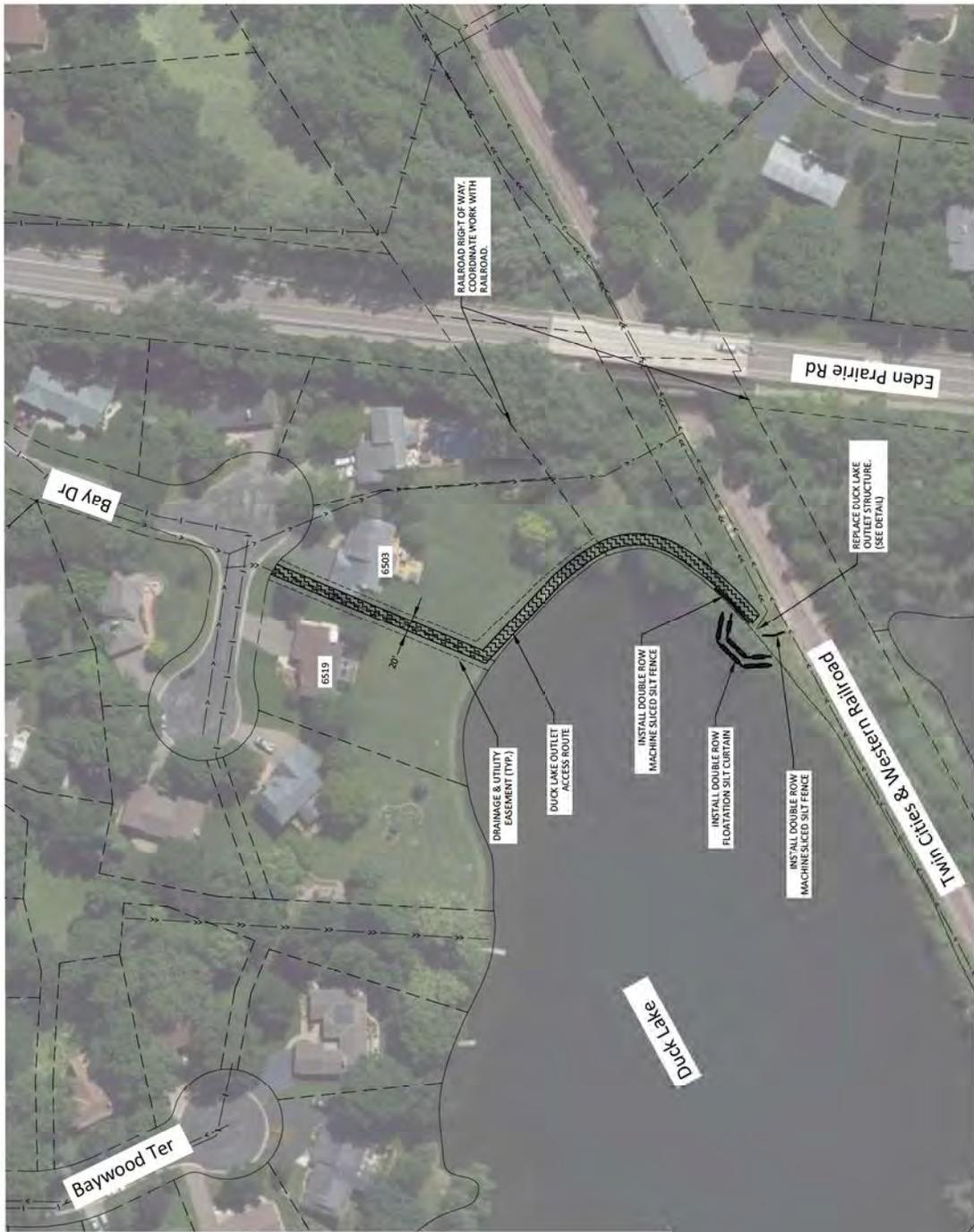
DATE: 02/20/2019  
REVISED: 02/05/2019  
STATE AID: 02/17/2019

MICHAEL T. WARNER  
3/29/2019

CITY OF EDEN PRAIRIE, MINNESOTA  
DUCK LAKE ROAD IMPROVEMENTS  
GRADING PLAN - INFILTRATION BASIN  
S.A.P. 181-121-001

C3.02

0 10 20 FEET SCALE



NOTES:  
 1. CONTRACTOR TO MINIMIZE IMPACT BY UTILIZING MATS ALONG ACCESS ROUTE.  
 2. ANY DISTURBANCES TO BE RESTORED TO PRE-CONSTRUCTION CONDITIONS.  
 3. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 7 CALENDAR DAYS AFTER COMPLETION OF CONSTRUCTION AND SEDIMENT CONTROL BMPs MUST BE MAINTAINED UNTIL COMPLETION OF CONSTRUCTION AND VEGETATION IS ESTABLISHED SUFFICIENTLY TO ENSURE STABILITY OF THE SITE, AS DETERMINED BY THE DISTRICT.  
 4. ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPs MUST BE REMOVED UPON FINAL STABILIZATION.  
 5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 7 CALENDAR DAYS AFTER COMPLETION OF CONSTRUCTION AND SEDIMENT CONTROL BMPs MUST BE MAINTAINED UNTIL COMPLETION OF CONSTRUCTION AND VEGETATION IS ESTABLISHED SUFFICIENTLY TO ENSURE STABILITY OF THE SITE, AS DETERMINED BY THE DISTRICT.  
 6. NO ACTIVITY AFFECTING THE BED OR BANKS OF DUCK LAKE MAY BE CONDUCTED BETWEEN APRIL 1 AND JUNE 30.

**DUCK LAKE OUTLET CONTROL STRUCTURE**  
 NOT TO SCALE

NOTE:  
 ALL JOINTS IN MANHOLE TO HAVE RUBBER GASKETS.

SHEET  
**C5.04**

CITY OF EDEN PRAIRIE, MINNESOTA  
 DUCK LAKE ROAD IMPROVEMENTS  
 DUCK LAKE OUTLET STRUCTURE  
 S.A.P. 189-121-001

DATE	REVISED	BY	CHECKED	DATE	DATE
STATE AID 02/20/2019	STATE AID 02/20/2019	MARK	MARK	02/20/2019	02/20/2019
STATE AID 02/20/2019	STATE AID 02/20/2019	MARK	MARK	02/20/2019	02/20/2019
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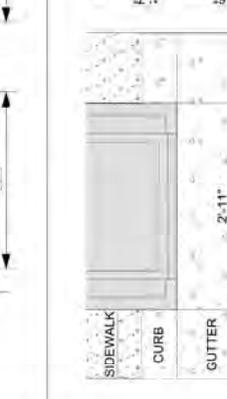
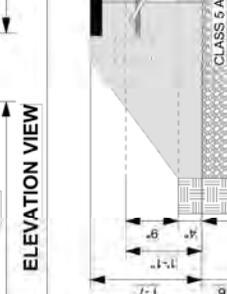
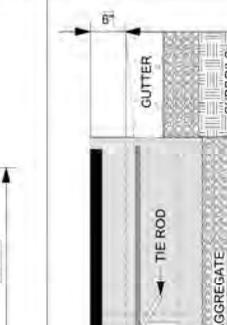
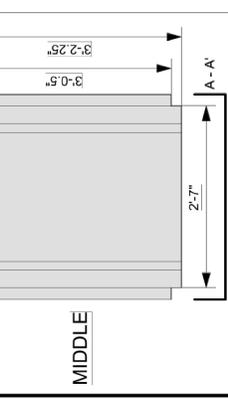
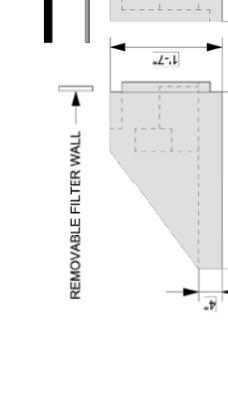
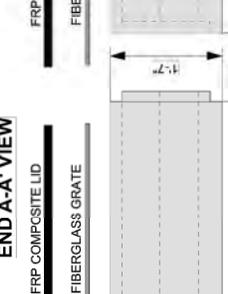
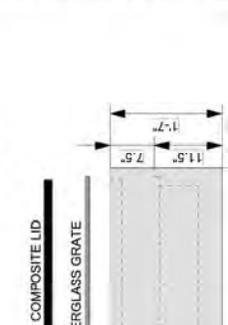
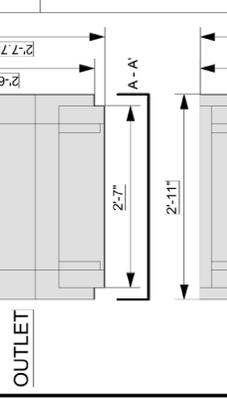
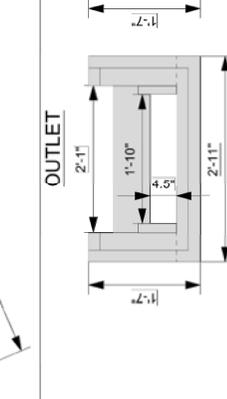
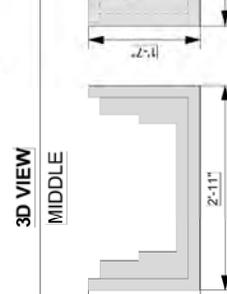
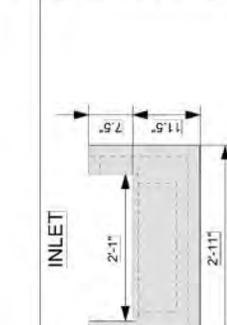
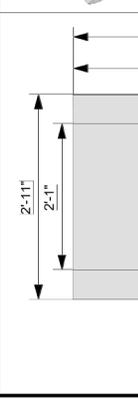
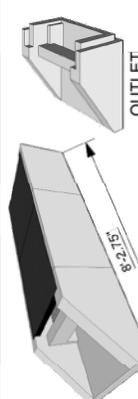
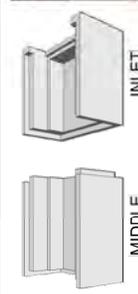
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MICHAEL R. WARNER  
 P.E. No. 46993  
 3/28/2019

0 50 100  
 FEET  
 HORIZ. SCALE



**SPECIFICATIONS**

1. STEEL REINFORCED, COLD JOINT SECURED MONOLITHIC CONCRETE STRUCTURES (INLET 875 LBS, MIDDLE 965 LBS, AND OUTLET 730 LBS). CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS. CONCRETE AIR ENTRAINMENT (4% TO 8% BY VOLUME), MANUFACTURED AND DESIGNED TO ASTM C888.
2. 2-POINT PICK USING RECESSED LIFTING POCKETS WITH A STANDARD HOOK.
3. FIBERGLASS GRATE (11 LBS/PIECE)
4. FRP COMPOSITE LID (38 LBS/PIECE) WITH CONCENTRATED LOAD CAPACITY OF 11,200 LBS.

**INSTALLATION NOTES**

1. INSTALL A CLASS 5 BASE (COMPACTED TO 95% STANDARD PROCTOR). THE DISTANCE FROM THE BACK OF THE CURB MAY VARY BASED ON SITE CONDITIONS. EXCAVATE 1" 7" BELOW THE GUTTERLINE ELEVATION (I.E. THE BIORETENTION OVERFLOW ELEVATION) TO ACCOMMODATE THE 9" PONDING DEPTH, 6" CLASS 5 AGGREGATE, AND 4" RAIN GUARDIAN FOXHOLE BASE (INCLUDED). THEREFORE, THE TOP OF THE CLASS 5 COMPACTED BASE IS PRECISELY 1" BELOW THE GUTTERLINE ELEVATION. THE TOP OF THE RAIN GUARDIAN FOXHOLE INLET WILL BE 7'-12" ABOVE THE TOP OF THE CONCRETE BASE AND 1'-12" BELOW THE GUTTERLINE ELEVATION TO ACCOMMODATE A SLOPED INLET FROM THE GUTTER TO THE RAIN GUARDIAN FOXHOLE.

2. SET RAIN GUARDIAN FOXHOLE INLET FIRST, FOLLOWED BY MIDDLE SECTION(S), AND FINALLY THE OUTLET ON THE PREPARED CLASS 5 BASE. POSITION RAIN GUARDIAN FOXHOLE OUTLET PIECE SO PRIMARY OUTLET ALIGNS WITH TOE OF BASIN SIDE SLOPE TO AVOID SOIL INTERFERENCE WITH REMOVABLE FILTER WALL.
3. SECURE MODULAR FOXHOLE PIECES AT EACH JOINT USING PROVIDED GALVANIZED TIE RODS.
4. INSTALL EXPANSION/CONTRACTION JOINT MATERIAL OR A SHEET OF POLY TO SERVE AS A BOND BREAK BETWEEN RAIN GUARDIAN FOXHOLE AND CONCRETE INLET BEFORE POURING INLET.
5. REMOVABLE FILTER WALL SHOULD BE INSTALLED WITH FILTER FABRIC FACING THE RAIN GUARDIAN FOXHOLE INLET.

**MANUFACTURED BY:**

**REVISION HISTORY**

REV	BY	DATE	DESCRIPTION
W	ADH	9/11/19	MODULAR FOXHOLE

SCALE: U.S. PATENT 8,361,016 AND 8,368,804  
NO.:

**RAIN GUARDIAN FOXHOLE  
MODULAR PRETREATMENT CHAMBER  
BIORETENTION PONDING DEPTH: 9"  
TYPICAL DETAIL**

**INSTALL PLAN VIEW - INLET ONLY**

**INSTALL PLAN VIEW - MIDDLE ONLY**

**INSTALL PLAN VIEW - OUTLET ONLY**

**INSTALL ELEVATION VIEW - INLET/OUTLET ONLY**

**RAIN GUARDIAN  
PRETREATMENT FOR BIORETENTION**  
Rain Gardens • Swales • Filtration Basins • Infiltration Systems

**MANUFACTURED BY:**

**REVISION HISTORY**

REV	BY	DATE	DESCRIPTION
W	ADH	9/11/19	MODULAR FOXHOLE

SCALE: U.S. PATENT 8,361,016 AND 8,368,804  
NO.:

**RAIN GUARDIAN FOXHOLE  
MODULAR PRETREATMENT CHAMBER  
BIORETENTION PONDING DEPTH: 9"  
TYPICAL DETAIL**

**INSTALL PLAN VIEW - INLET ONLY**

**INSTALL PLAN VIEW - MIDDLE ONLY**

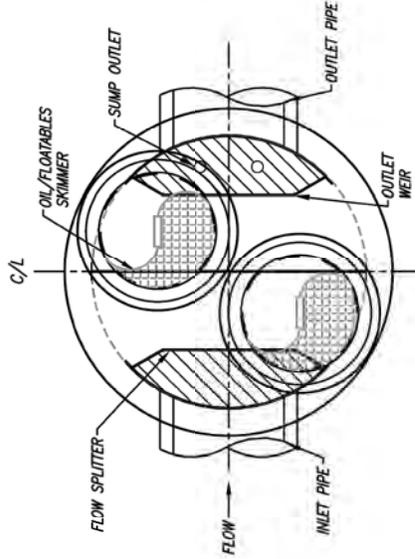
**INSTALL PLAN VIEW - OUTLET ONLY**

**INSTALL ELEVATION VIEW - INLET/OUTLET ONLY**

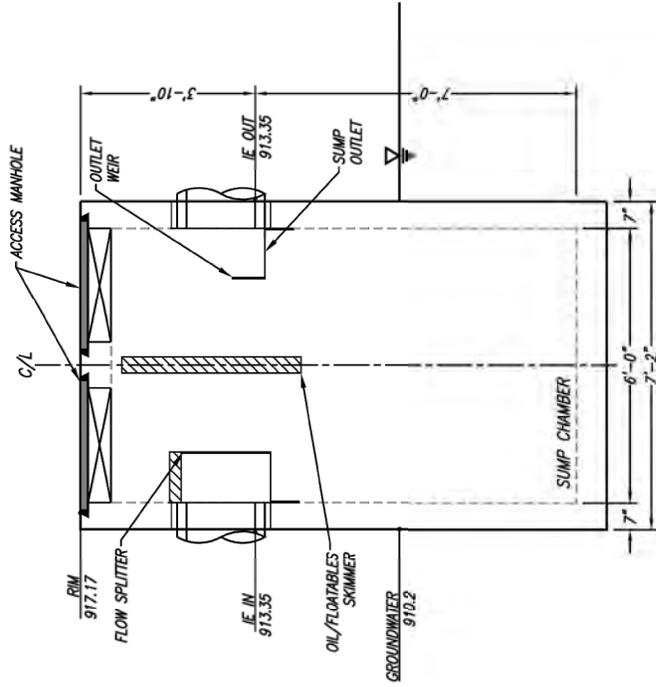


SITE SPECIFIC DATA *	
PROJECT NUMBER	7737
PROJECT NAME	DUCK LAKE RD IMP.
PROJECT LOCATION	EDEN PRAIRIE, MN
STRUCTURE ID	SC-6-V
WATER QUALITY FLOW RATE (GFS)	2.0
PEAK FLOW RATE (GFS)	17.0
PEAK STORM DURATION (YEARS)	100
PIPE DATA	I.E. MATERIAL SIZE
INLET PIPE 1	913.35 RCP 18X29
OUTLET PIPE 1	913.35 RCP 18X29
RIM ELEVATION	917.17
SUMP ELEVATION	906.35
SURFACE LOADING REQUIREMENT	HS-20
FRAME AND COVER	#30"
SKIMMER WALL HEIGHT	STANDARD
KNOWN GROUNDWATER ELEVATION	910.2
NOTES: INLET AND OUTLET PIPES ARE 18" X 29" ARCH PIPE.	
CONCEPT ONLY - NOT FOR CONSTRUCTION	
*PER ENGINEER OF RECORD	

PERFORMANCE DATA				
TREATMENT FLOW RATE (GFS)	2.21			
WET VOLUME (CU FT)	197.82			
TSS REMOVAL EFFICIENCY	80%			
STORAGE CAPACITY (CU FT)	42			
STORAGE CAPACITIES				
SUMP CHAMBER CAPACITY				
DIAMETER (FT)	AREA (SF)	HEIGHT (FT)	TOTAL (CF)	
CHAMBER 1	6.00	28.26	7.00	197.82



PLAN VIEW  
NTS



ELEVATION VIEW  
NTS

#### GENERAL NOTES

- BIO CLEAN TO PROVIDE ALL MATERIALS UNLESS OTHERWISE NOTED.
- ALL DIMENSIONS, ELEVATIONS, SPECIFICATIONS, AND CAPACITIES ARE SUBJECT TO CHANGE. FOR PROJECT SPECIFIC DRAWINGS DETAILING EXACT DIMENSIONS, WEIGHTS, AND ACCESSORIES PLEASE CONTACT BIO CLEAN.
- ALTERNATIVE HATCHES OR MANHOLES AVAILABLE UPON REQUEST.

#### INSTALLATION NOTES

- CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE SLOTTONE UNIT AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURER'S SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURER'S CONTRACT.
- MANUFACTURER RECOMMENDS A 6"-12" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PROJECT ENGINEER'S RECOMMENDED BASE SPECIFICATIONS.
- ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE. (PIPES CANNOT INTRUDE BEYOND FLUSH). ALL GAPS AROUND PIPES SHALL BE SEALED WATER TIGHT WITH A NON-SHRINK GROUT PER MANUFACTURER'S STANDARD CONNECTION DETAIL AND SHALL MEET OR EXCEED REGIONAL PIPE CONNECTION STANDARDS.
- CONTRACTOR RESPONSIBLE FOR INSTALLATION OF ALL RISERS, MANHOLES, AND HATCHES. ALL COVERS SHALL BE SHIPPED LOOSE. CONTRACTOR TO GROUT ALL MANHOLES AND HATCHES TO MATCH FINISHED SURFACE UNLESS SPECIFIED OTHERWISE.



A Forterra Company

SC-6-V  
HYDRODYNAMIC SEPARATOR  
SITE SPECIFIC DETAIL

THIS PRODUCT ASSIGNED TO THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BOLTON & MENK. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED AS A TRADE WITHOUT THE WRITTEN PERMISSION OF BIO CLEAN ENVIRONMENTAL SERVICES, INC. IS PROHIBITED.



**BOLTON & MENK**

12724 NICOLLET AVENUE  
BURNSVILLE, MINNESOTA 55337  
Phone: (952) 890-0269  
Email: info@boltonandmenk.com  
www.boltonandmenk.com

CITY OF EDEN PRAIRIE, MINNESOTA  
DUCK LAKE ROAD IMPROVEMENTS  
STANDARD DETAILS  
S.A.P. 18B-121-001

SHEET

C8.09

10/15/2017 11:17 AM



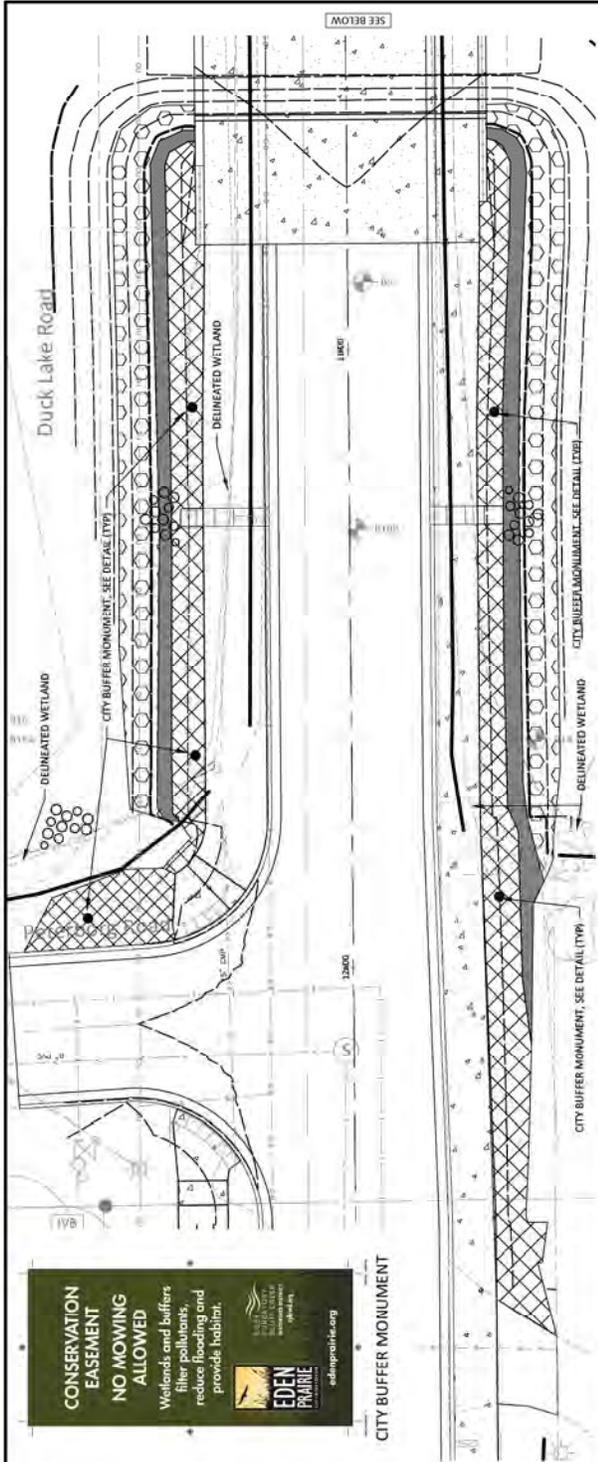
**LAKE SECTION LANDSCAPE LEGEND**

- 1' BELOW WATER TO ELEV. 915.3:  
 PLACE STAGGERED ROWS OF 6" POTS ON 5' GRID  
 SAGITTARIA LATIFOLIA (ARROWHEAD)  
 ALISMASUBCORDATUM (WATER PLANTAIN)  
 SCIRPUS FLUVIATILIS (RIVER BULRUSH)
- ELEV. 915.3 TO 916.1:  
 MINDOT SEED MIX 34-262 & CAT 3 BLANKET
- ELEV. 916.1 TO ROAD EDGE:  
 MINDOT SEED MIX 35-241 & CAT 3 BLANKET

**CONSERVATION EASEMENT NO MOWING ALLOWED**  
 Wetlands and buffers filter pollutants, reduce flooding and provide habitat.



CITY BUFFER MONUMENT



SEE BELOW

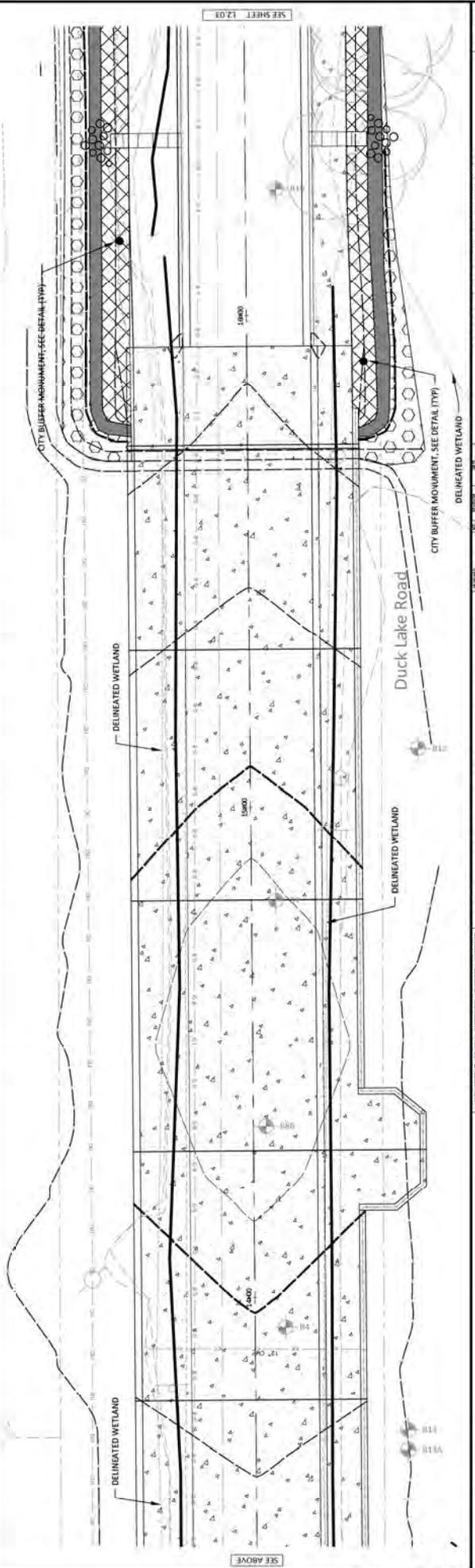
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 MINDOT SEED MIX 35-241 & CAT 3 BLANKET

**CONSERVATION EASEMENT NO MOWING ALLOWED**  
 Wetlands and buffers filter pollutants, reduce flooding and provide habitat.



CITY BUFFER MONUMENT



SEE SHEET L2.01

SEE ABOVE

		3224 NICOLET AVENUE BURNSVILLE, MINNESOTA 55337 Phone: (952) 890-0569 Email: www.boltonmenk.com		STATE AID 02/20/2017 PERIOD 10/01/2015 STATE AID 04/29/2021	SHEET <b>L2.02</b>
CITY OF EDEN PRAIRIE, MINNESOTA DUCK LAKE ROAD IMPROVEMENTS LANDSCAPE PLAN S.A.P. 18J-121-001		MICHAEL R. WARNER 46953 3/27/2015		115-113978	



HORZ. SCALE

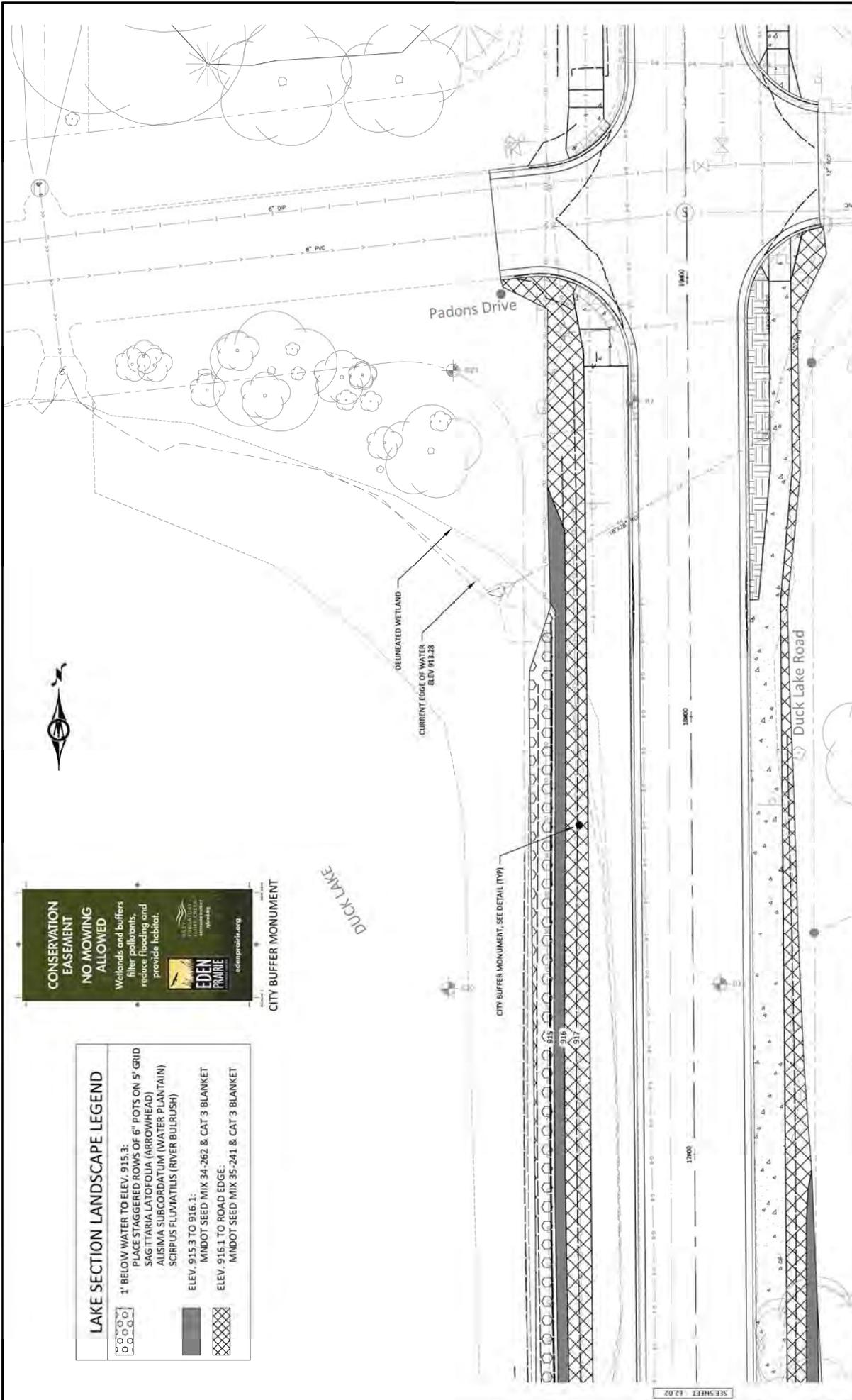
**LAKE SECTION LANDSCAPE LEGEND**

- 1' BELOW WATER TO ELEV. 915.3:  
 PLACE STAGGERED ROWS OF 6" POTS ON 5' GRID  
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 SCRIPUS FLUVIATILIS (RIVER BULRUSH)
- ELEV. 915.3 TO 916.1:  
 MINDOT SEED MIX 34-262 & CAT 3 BLANKET
- ELEV. 916.1 TO ROAD EDGE:  
 MINDOT SEED MIX 35-241 & CAT 3 BLANKET

**CONSERVATION EASEMENT ALLOWED**  
 Wetlands and buffers filter pollutants, reduce flooding and provide habitat.



**EDEN PRAIRIE**  
[edenprairie.org](http://edenprairie.org)



**BOLTON & MENK**

12724 NICOLET AVENUE  
 BURNSVILLE, MINNESOTA 55337  
 Phone: (952) 890-0569  
 Email: [www@boltonmenk.com](mailto:www@boltonmenk.com)

STATE AID 02/20/2017  
 STATE AID 02/20/2017  
 STATE AID 02/20/2017

DATE: 3/27/2013  
 DRAWN BY: MICHAEL N. WARNER  
 CHECKED BY: 46923

CITY OF EDEN PRAIRIE, MINNESOTA  
 DUCK LAKE ROAD IMPROVEMENTS  
 LANDSCAPE PLAN  
 S.A.P. - J91-121-001

SHEET  
**L2.03**



**Amended**

## Public Waters Work General Permit

**Expiration Date: 05/01/2025**
**General Permit Number**
**2015-1192**

Pursuant to Minnesota Statutes, Chapter 103G, and on the basis of statements and information contained in the permit application, letters, maps, and plans submitted by the applicant and other supporting data, all of which are made part hereof by reference, **PERMISSION IS HEREBY GRANTED** to the applicant to perform actions as authorized below. This permit supersedes the original permit and all previous amendments.

<b>Project Name:</b> Riley-Purgatory-Bluff Creek Watershed District General Permit	<b>County:</b> Hennepin and Carver	<b>Watershed:</b> Lower Minnesota River - Shakopee	<b>Resource:</b> All Public Waters within Riley-Purgatory-Bluff Creek Watershed
<b>Purpose of Permit:</b> Sediment Removal, Sand Blanket w/o Excavation, Sand Blanket w/ Excavation, Riprap (Natural Rock), Retaining Wall, Erosion Control/Stabilization Fill & Grading, Culvert Construction/Modification/Replacement, Bridge Construction/Modification/Replacement, Bioengineering		<b>Authorized Action:</b> Place natural rock riprap; shape banks/shorelines for placement of riprap or bioengineering; install beach sand blankets; construct retaining walls, bridges and culverts; remove structures; remove sediment; all in accordance with the Conditions of this permit. For actions addressed by this general permit, no separate GP Authorization is needed from the DNR.	
<b>Permittee:</b> Riparian Property Owners within Riley-Purgatory-Bluff Creek Watershed District		<b>Authorized Agent:</b> N/A	
<b>Property Description (land owned or leased or where work will be conducted):</b>			
<b>Issued Date:</b> 06/15/2020	<b>Effective Date:</b> 05/01/2020	<b>Expiration Date:</b> 05/01/2025	
<b>Authorized Issuer:</b> Tom Hovey	<b>Title:</b> Water Regulations Unit Supervisor	<b>Email Address:</b> tom.hovey@state.mn.us	<b>Phone Number:</b> 651-259-5654

This permit is granted **subject to** the following **CONDITIONS**:

**APPLICABLE FEDERAL, STATE, OR LOCAL REGULATIONS:** The permittee is not released from any rules, regulations, requirements, or standards of any applicable federal, state, or local agencies; including, but not limited to, the U.S. Army Corps of Engineers, Board of Water and Soil Resources, MN Pollution Control Agency, watershed districts, water management organizations, county, city and township zoning.

**NOT ASSIGNABLE:** This permit is not assignable by the permittee except with the written consent of the Commissioner of Natural Resources.

**NO CHANGES:** The permittee shall make no changes, without written permission or amendment previously obtained from the Commissioner of Natural Resources, in the dimensions, capacity or location of any items of work authorized hereunder.

**SITE ACCESS:** The permittee shall grant access to the site at all reasonable times during and after construction to authorized representatives of the Commissioner of Natural Resources for inspection of the work authorized hereunder.

**TERMINATION:** This permit may be terminated by the Commissioner of Natural Resources at any time deemed

## **GENERAL PERMIT CONDITIONS** (Continued from previous page)

necessary for the conservation of water resources of the state, or in the interest of public health and welfare, or for violation of any of the conditions or applicable laws, unless otherwise provided in the permit.

**COMPLETION DATE:** Construction work authorized under this permit shall be completed on or before the date specified above. The permittee may request an extension of the time to complete the project by submitting a written request, stating the reason thereof, to the Commissioner of Natural Resources.

**WRITTEN CONSENT:** In all cases where the permittee by performing the work authorized by this permit shall involve the taking, using, or damaging of any property rights or interests of any other person or persons, or of any publicly owned lands or improvements thereon or interests therein, the permittee, before proceeding, shall obtain the written consent of all persons, agencies, or authorities concerned, and shall acquire all property, rights, and interests needed for the work.

**PERMISSIVE ONLY / NO LIABILITY:** This permit is permissive only. No liability shall be imposed by the State of Minnesota or any of its officers, agents or employees, officially or personally, on account of the granting hereof or on account of any damage to any person or property resulting from any act or omission of the permittee or any of its agents, employees, or contractors. This permit shall not be construed as estopping or limiting any legal claims or right of action of any person other than the state against the permittee, its agents, employees, or contractors, for any damage or injury resulting from any such act or omission, or as estopping or limiting any legal claim or right of action of the state against the permittee, its agents, employees, or contractors for violation of or failure to comply with the permit or applicable conditions.

**EXTENSION OF PUBLIC WATERS:** Any extension of the surface of public waters from work authorized by this permit shall become public waters and left open and unobstructed for use by the public.

**GP AUTHORIZATION - APPLY USING MPARS:** The permittee shall apply for prior authorization for all projects to be constructed under this General Permit using the MNDNR Permitting and Reporting System (MPARS) at [www.mndnr.gov/mpars/signin](http://www.mndnr.gov/mpars/signin) . Users will need to create an account the first time they access the system. Once created, click on the link for 'Apply for a New Permit/Authorization' under the Actions box and complete the application questions.

**WETLAND CONSERVATION ACT:** Where the work authorized by this permit involves the draining or filling of wetlands not subject to DNR regulations, the permittee shall not initiate any work under this permit until the permittee has obtained official approval from the responsible local government unit as required by the Minnesota Wetland Conservation Act.

**INVASIVE SPECIES - EQUIPMENT DECONTAMINATION:** All equipment intended for use at a project site must be free of prohibited invasive species and aquatic plants prior to being transported into or within the state and placed into state waters. All equipment used in designated infested waters, shall be inspected by the Permittee or their authorized agent and adequately decontaminated prior to being transported from the worksite. The DNR is available to train inspectors and/or assist in these inspections. For more information refer to the "Best Practices for Preventing the Spread of Aquatic Invasive Species" at [http://files.dnr.state.mn.us/publications/ewr/invasives/ais/best\\_practices\\_for\\_prevention\\_ais.pdf](http://files.dnr.state.mn.us/publications/ewr/invasives/ais/best_practices_for_prevention_ais.pdf). Contact your regional Invasive Species Specialist for assistance at [www.mndnr.gov/invasives/contacts.html](http://www.mndnr.gov/invasives/contacts.html). A list of designated infested waters is available at [www.mndnr.gov/invasives/ais/infested.html](http://www.mndnr.gov/invasives/ais/infested.html). A list of prohibited invasive species is available at [www.mndnr.gov/invasives/laws.html#prohibited](http://www.mndnr.gov/invasives/laws.html#prohibited).

**CONSTRUCTION DEWATERING - GENERAL:** All construction dewatering in excess of 10,000 gallons per day or one million gallons per year must be authorized by a separate water appropriation permit. All worksite discharge water must be treated for sediment reduction prior to return to the surface water. Water from designated infested waters shall not be diverted to other waters, transported on a public road, or transported or appropriated off property riparian to infested waters without a DNR permit specifically for this use. All equipment in contact with infested waters must be decontaminated upon leaving the site.

**EROSION AND SEDIMENT CONTROL:** In all cases, methods that have been determined to be the most effective and practical means of preventing or reducing sediment from leaving the worksite shall be installed in areas that slope to the water and on worksite areas that have the potential for direct discharge due to pumping or draining of areas from within the worksite (e.g., coffer dams, temporary ponds, stormwater inlets). These methods, such as mulches, erosion control blankets, temporary coverings, silt fence, silt curtains or barriers, vegetation preservation, redundant methods, isolation of flow, or other engineering practices, shall be installed concurrently or within 24 hours after the start of the project, and will be maintained for the duration of the project in order to prevent sediment from leaving the worksite. DNR requirements may be waived in writing by the authorized DNR staff based on site conditions, expected weather conditions, or project completion timelines.

## **GENERAL PERMIT CONDITIONS** (Continued from previous page)

**EXCAVATED MATERIALS - FLOODPLAIN CONCERN:** Excavated material shall not be permanently placed within community designated floodplain areas or shoreland areas, unless all necessary local permits and approvals have been obtained.

**AQUATIC PLANT MANAGEMENT:** For projects where vegetation is placed waterward of the ordinary high water level, a separate Aquatic Plant Management (APM) permit is needed from the DNR Regional APM Specialist. See contact list at: <http://www.dnr.state.mn.us/apm/index.html>. A permit shall be obtained (no fee required) for each site in order to monitor plant source, species, and planting location. Vegetation must be appropriate for the site and free of invasive species. This condition does not apply when only woody vegetation is used, such as willow and dogwood.

**APPLICABLE PROJECTS:** A project not meeting applicable conditions of this permit or a project the DNR identifies as having the potential for significant resource impacts, is not authorized herein. Rather, such projects will require an individual DNR permit application.

**ENVIRONMENTAL REVIEW:** If the project proposal is part of a project that requires mandatory environmental review pursuant to MN Environmental Quality Board rules, then the permit is not valid until environmental review is completed.

**RETAINING WALLS:** Retaining walls are generally discouraged because their impact on the near-shore aquatic environment can be severe and they restrict wildlife movement, however, they may be permitted if the following conditions are met: a. Existing or expected erosion problems shall preclude the use of riprap shore protection with a finished slope of 2:1 (horizontal to vertical) or more gentle, due to steep banks, nearby structures or other extenuating circumstances; or there shall be a demonstrated need for direct shoreland docking. b. Design shall be consistent with existing uses in the area. Examples are: riverfront commercial-industrial areas having existing structures of this nature, dense residential areas where similar retaining walls are common, or where barges are utilized to carry equipment and supplies. c. Adequate engineering studies shall be performed on foundation conditions, tiebacks, internal drainage, construction materials, and protection against flanking. d. The facility shall not be an aesthetic intrusion upon the area and is consistent with all applicable local, state, and federal management plans and programs for the water body. e. Encroachment below the ordinary high water elevation shall be limited to the absolute minimum necessary for construction.

**ICE RIDGE REMOVAL:** Ice ridge removal projects must meet the DNR "no permit required" conditions for ice ridge removal specified in Minn. Rules part 6115.0215, Subpart 4. If not, a DNR Individual permit is required as District rules do not address this category of project.

**HYDROLOGIC / HYDRAULIC DATA REPORTING ::** Unless waived by the DNR Area Hydrologist, hydrologic modeling to show the impacts of a bridge or culvert constructed in a Public Water to the 100-year flood elevation is required. Additional modeling may also be required for temporary fill or temporary structures required during demolition or construction. Calculations showing calculated velocities through the structures at 2-year peak flows may also be required.

**FISHERY PROTECTION - EXCLUSION DATES:** No activity affecting the bed of the protected water may be conducted between March 15 and April 15 on watercourses, or between April 1 and June 30 on all other waterbodies, to minimize impacts on fish spawning and migration. If work during this time is essential, it shall be done only upon written approval of the Area Fisheries Manager. See contact list at:

[http://files.dnr.state.mn.us/fisheries/management/dnr\\_fisheries\\_managers.pdf](http://files.dnr.state.mn.us/fisheries/management/dnr_fisheries_managers.pdf) Should work begin elsewhere in the project area within these dates, all exposed soils that are within 200 feet of Public Waters and drain to those waters must complete erosion control measures within 24 hours of its disturbance to prevent sediment from entering Public Waters.

**REPORTING:** The Riley-Purgatory-Bluff Creek Watershed District shall submit annually or as requested a summary report of the projects authorized under this General Permit to the Area Hydrologist.

**CONSTRUCTION AIDS:** No construction is allowed of temporary channel diversions or placement of fill for temporary work pads, bypass roads, access roads, or coffer dams to aid in the construction of any authorized structure unless approved in writing by the Area Hydrologist prior to beginning work.

**FISH PASSAGE:** Bridges, culverts and other crossings shall provide for fish movement unless the structure is intended to impede rough fish movement or the stream has negligible fisheries value as determined by the DNR Area Hydrologist in consultation with the Area Fisheries Manager. The accepted practices for achieving these conditions include: Where possible a single culvert or bridge shall span the natural bankfull width adequate to allow for debris and sediment transport rates to closely resemble those of upstream and downstream conditions. A single culvert shall be recessed in order to pass bedload and sediment load. Additional culvert inverts should be set at a higher elevation. All culverts should match the alignment and slope of the natural stream channel, and extend through the toe of the road side slope. "Where

**GENERAL PERMIT CONDITIONS** *(Continued from previous page)*

possible" means that other conditions may exist and could take precedence, such as unsuitable substrate, natural slope and background velocities, bedrock, flood control, 100 year flood elevations, wetland/lake level control elevations, local ditch elevations, and other adjacent features. Rock Rapids or other structures may be used to retrofit crossings to mimic natural conditions.

**PHOTOS AND AS-BUILTS:** Upon completion of the authorized work, the permittee may be required to submit a copy of established benchmarks, representative photographs, and may be required to provide as-built surveys of Public Watercourse crossing changes.

**EXCAVATION OF PUBLIC WATERS:** Excavation of Public Waters is authorized by this permit only when the proposed excavation is consistent with Minnesota Rules 6115.0200 and 6115.0201.

**REMOVAL OF STRUCTURES:** Removal of structures from public waters is authorized by this permit when the proposed removal is consistent with Minnesota Rules 6115.0211 subp. 8.

---

cc: John Gleason, EWR District Manager

MEMORANDUM

TO: Board of Managers  
 FROM: Terry Jeffery, Interim District Administrator and Scott Sobiech, PE, District Engineer  
 DATE: April 23, 2021  
 RE: Permit 2019-051: Berrospid Development Request for Reduced Financial assurance

**Proposed Board Action**

Manager \_\_\_\_\_ moved and Manager \_\_\_\_\_ seconded adoption of the following resolutions based on the information that follows and the presentation of the matter at the May 5, 2021 meeting of the managers:

Resolved that the financial assurance for application for Permit 2019-051 be reduce from \$64,629 as approved at the August 5, 2020 meeting of the managers to \$46,845 as long as the chloride management plan is recorded as part of the maintenance declaration.

Upon vote, the resolutions were adopted, \_\_\_\_\_ [VOTE TALLY].

At the August 5, 2020 meeting, the Board of Managers conditionally approved permit 20219-051 for the Berrospid development. The proposed development includes splitting an existing single family home property into a 3-lot subdivision. The existing home will remain on one lot while 2 new single-family home sites, extension of sanitary sewer and watermain, and shared driveway will be constructed. One underground stormwater detentions/infiltration facility will be constructed to provide volume control, water quality, and rate control for runoff prior to discharging offsite. The following table present a compliance summary of the applicable regulatory requirements.

**Applicable Rule Conformance Summary from August 5<sup>th</sup> Permit Report**

Rule	Issue	Conforms to RBPCWD Rules?	Comments	
B	Floodplain Management	Yes		
C	Erosion Control Plan	See comment.	See rule-specific permit condition C1.	
J	Stormwater Management	Rate	Yes.	
		Volume	See comment.	See stipulation #5
		Water Quality	Yes.	
		Low Floor Elev.	Yes.	
		Maintenance	See comment.	See rule-specific permit condition J1.

Rule	Issue	Conforms to RBPCWD Rules?	Comments
	Chloride Management	Yes.	
	Wetland Protection	NA	No wetlands have been identified on or downgradient from the site.
<b>L</b>	<b>Permit Fee Deposit</b>	See comment.	\$1,500 was received on 1/31/2020
<b>M</b>	<b>Financial Assurance</b>	See comment.	The financial assurance is calculated at \$64,629

Since the Board's conditional approval, the applicant has been working with RPBCWD to fulfill the conditions of approval (a maintenance declaration and financial assurance) and the City of Chanhassen to finalize the development agreement with the city.

On April 23, 2021, the applicant submitted a written request asking the Board of managers to reconsider the financial assurance amount for this project as follows:

- Adjust the financial assurance computation based on the contractors quote for the construction of the stormwater management facilities rather than the prior engineer's opinion of probable cost. (see attached)
- Remove the erosion prevention and sediment control elements of the financial assurance because the city is also holding funds
- Eliminate the \$5,000 associated with a chloride management plan because the applicant provided a signed chloride management plan indicating chlorides will not be used on the private street. (see attached)

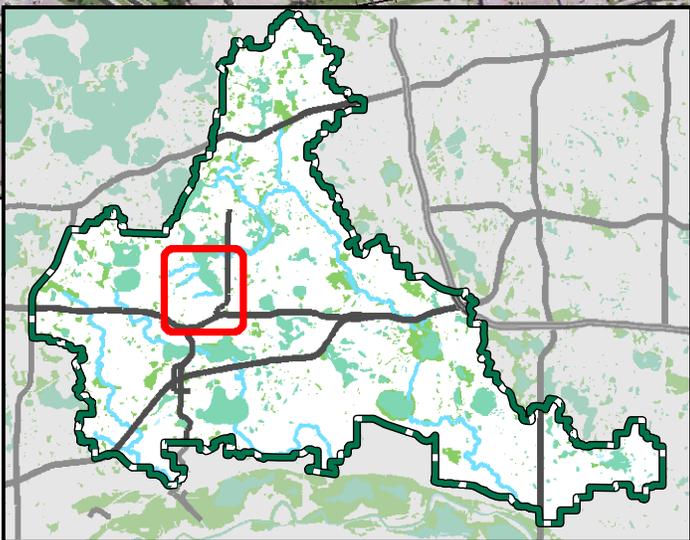
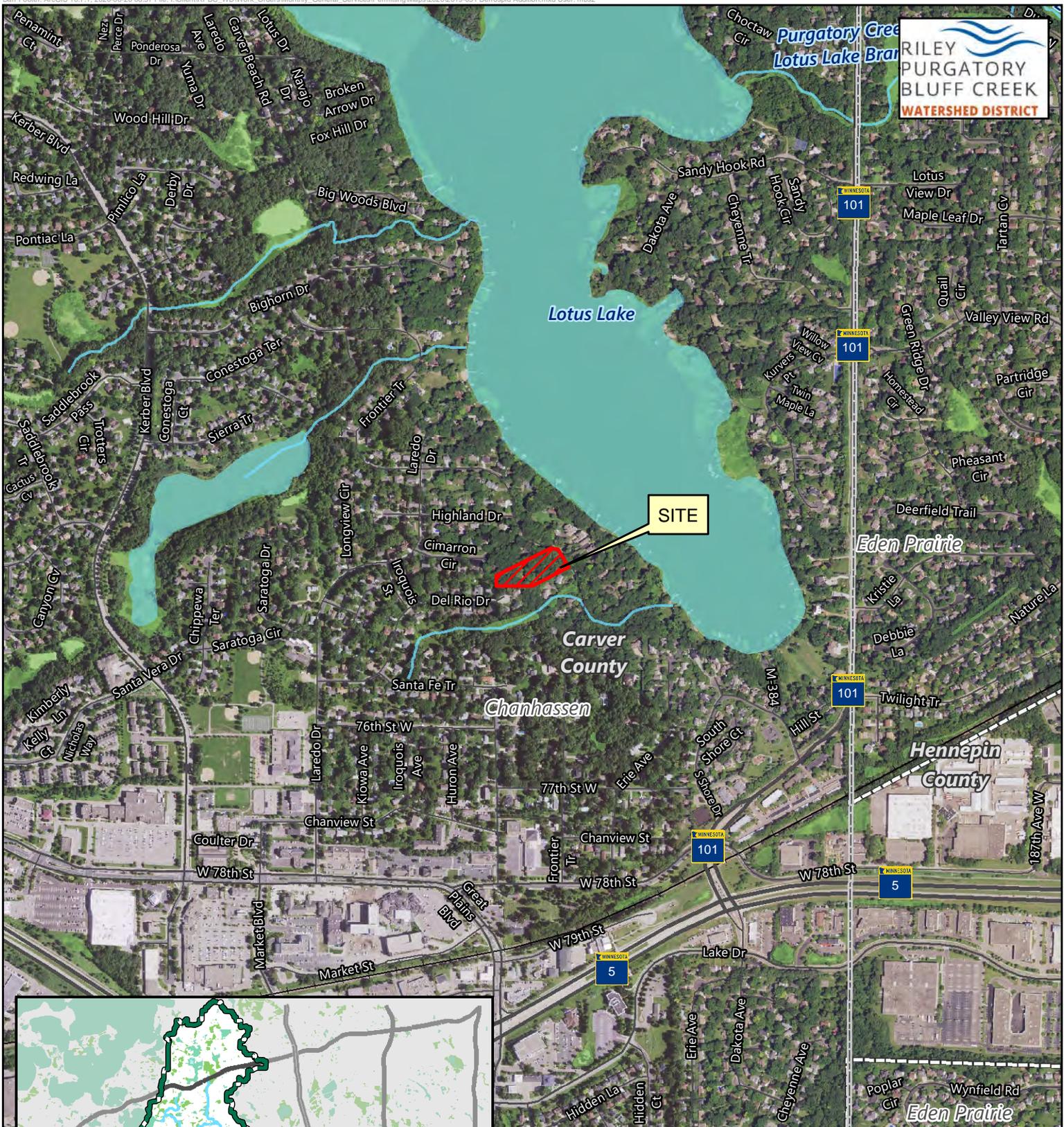
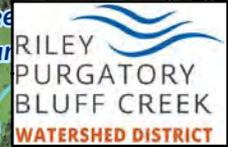
#### Rule M: Financial Assurance:

Rule M indicates that the District may require a permit bond, letter of credit or other financial assurance in a form approved by the District for an activity regulated under these rules. The RPBCWD requires separate financial assurances from that provided to another entity because a financial assurance is a contract between the oversight agency (RPBCWD) and the applicant. As such, the financial assurance provided to the cities is not in favor of the district as required by Rule M subsection 3.2 and does not allow RPBCWD to access the assurance in case of a need to ensure adequate performance of the authorized activities and compliance with the District rules.

The following financial assurance computations highlight's the recommended revisions to the various components of the assurance in response to the applicant's request.

Items	August 5, 2020 Approve Financial Assurance	Recommended Adjusted Financial Assurance	Reasoning
Rules C: Silt fence: 440 L.F. x \$2.50/L.F. =	\$1,100	\$1,100	No adjustment because RPBCWD does not have access to city held assurance
Inlet protection: 2 x \$100 =	\$200	\$200	
Rock Entrance: 1 x \$900 =	\$900	\$900	
Restoration: 0.99 acres x \$2,500/acre =	\$2,475	\$2,475	

Items	August 5, 2020 Approve Financial Assurance	Recommended Adjusted Financial Assurance	Reasoning
Rules J: Infiltration Basins: \$39,263 x 125% of engineer's opinion of cost=	\$49,079	\$37,911	Adjustment based on 125% of contractor construction quote (\$30,328.83)
Chloride Management	\$5,000	\$0	Eliminated because applicant provided a sign management plan indicating chloride will not be used on the private road (Joanna Drive). Because this does not fully align with the plan criteria it is recommended this be recorded as part of the maintenance declaration
Contingency (10%)	<u>\$5,875</u>	<u>\$4,259</u>	
Total Financial Assurance	\$64,629	<b>\$46,845</b>	



Feet



Permit Location Map

BERROSPID ADDITION

**Permit 2019-051**

Riley Purgatory Bluff Creek  
Watershed District

## Scott Sobiech

---

**From:** Rick Osberg <rosberg@jrhinc.com>  
**Sent:** Friday, April 23, 2021 11:49 AM  
**To:** Scott Sobiech; Terry Jeffery  
**Cc:** Luis Berrospid  
**Subject:** Permit 2019-051 - Modification Request  
**Attachments:** Kevitt Earthwork & Utility quote.pdf; DOCS-#214537-v1-DEVELOPMENT\_CONTRACT\_\_RECORDED\_\_A719829.PDF

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Scott and Terry,

The owner is requesting the Board to amend the security amount for Berrospid Addition, Permit 2019-051, based upon the following information:

1. A Chloride Management plan has been signed and submitted to the watershed. We ask that this portion of the security be removed.
2. The city of Chanhassen is holding security for grading, erosion control and restoration. We ask that this portion of the security be removed. Recorded development contract attached.
3. The owner has obtained a bid from a contractor for installation of storm sewer and underground chamber. We ask that the revised, lower amount of \$30,328.83 be used for determining the security. Contractor's bid attached.

Feel free to contact me if you have any questions.

--

*Rick L. Osberg, P.E.*

**James R. Hill, Inc.**

2999 W. County Road 42, Suite 100

Burnsville, MN 55306

Office: (952) 890-6044 Direct: 952-426-4730

Fax: (952) 890-6244

Email: [rosberg@jrhinc.com](mailto:rosberg@jrhinc.com)

**CONFIDENTIALITY NOTICE:**

INFORMATION IN THIS MESSAGE, INCLUDING ANY ATTACHMENTS, IS INTENDED ONLY FOR THE PERSONAL AND CONFIDENTIAL USE OF THE RECIPIENT(S) NAMED ABOVE AND FOR THE PURPOSES INDICATED. Any unauthorized review, use, disclosure or distribution is prohibited. If you are not the intended recipient, or employee or agent responsible to deliver it to the intended recipient, you are hereby notified that any dissemination, distribution or copy of this communication is strictly prohibited. If you receive this communication in error, please contact the sender immediately by reply e-mail and delete all copies of the original message. Thank You:  
James R. Hill Inc.



# COMPANIES

3335 Pennsylvania Ave. N  
Crystal, MN 55427  
763-545-3557  
[www.kevittexcavating.com](http://www.kevittexcavating.com)

<b>To:</b>	Luis Berrospid	<b>Contact:</b>	
<b>Address:</b>	7406 Frontier Trail Chanhassen, MN	<b>Phone:</b>	
<b>Project Name:</b>	Frontier Trail	<b>Bid Number:</b>	
<b>Project Location:</b>	Frontier Trail, Chanhassen, MN	<b>Bid Date:</b>	

Line #	Item #	Item Description	Total Price
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### Site Demolition

3000		Demolition - Tree Clearing	\$8,919.90
3600		Demolition - Saw Cut Asphalt	\$264.60
3050		Demolition - Asphalt Removal	\$881.38

**Total Price for above Site Demolition Items: \$10,065.88**

### Erosion Control

2100		Erosion Control - Site Sweeping	\$416.04
2150		Erosion Control - Construction Entrance	\$1,716.09

**Total Price for above Erosion Control Items: \$2,132.13**

### Earthwork

1000		Mobilization	\$2,774.67
4000		Earthwork - Strip Topsoil	\$1,560.00
4020		Earthwork - Mass Cut And Mass Fill Onsite Material	\$12,810.00
4130		Earthwork - Soil Correction Building	\$2,800.00
4600		Earthwork - Site Grading Bituminous Road	\$4,620.96
4750		Earthwork - Backfill Curb	\$440.80

**Total Price for above Earthwork Items: \$25,006.43**

### Utilities

1000		Mobilization	\$2,774.68
5000		Utilities - Watermain Installation	\$16,856.00
5001		Utilities - Water Service Installation	\$7,341.00
5100		Utilities - Sanitary Sewer Installation	\$16,550.82
5200		Utilities - Storm Sewer Installation	\$16,830.40
5250		Utilities - Infiltration System Installation	\$13,498.43
5300		Utilities - Testing Watermain	\$512.40
5400		Utilities - Testings Sanitary Sewer	\$644.16

**Total Price for above Utilities Items: \$75,007.89**

**Total Bid Price: \$112,212.33**

### Payment Terms:

Acceptance of Proposal & Pre-Lien Notice: The above prices, specifications and conditions are satisfactory & hereby accepted. You are authorized to do the work as specified. If conditions are encountered at the project site which are subsurface, unknown or are not found under normal building conditions, an adjustment to the contract will be required.

Any person or company supplying labor or materials for this improvement to your property may file a lien against your property if that person or company is not paid for the contributions.

Under Minnesota law, you have the right to pay persons who supplied labor or materials for this improvement directly and deduct this amount from our contract price, or withhold the amounts due them from us until 120 days after completion of the improvement unless we give you a lien waiver signed by persons who supplied any labor or material for the improvement and who gave you timely notice.

Terms: **30 days** from date of invoice. a finance charge of 1.5% per month (18% annual) charged on all past due accounts.

<p><b>ACCEPTED:</b> The above prices, specifications and conditions are satisfactory and hereby accepted.</p> <p><b>Buyer:</b> _____</p> <p><b>Signature:</b> _____</p> <p><b>Date of Acceptance:</b> _____</p>	<p><b>CONFIRMED:</b> <b>Kevitt Excavating</b></p> <p><b>Authorized Signature:</b> _____</p> <p><b>Estimator:</b> _____</p>
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18681 Lake Drive East  
Chanhassen, MN 55317  
952-607-6512  
www.rpbcwd.org

## Chloride Management Plan

### Overview

It is the policy of the District to regulate the management of stormwater runoff to minimize the impacts of the application of chloride compounds on water resources by minimizing their use on roads, parking lots, sidewalks and other impervious surfaces.

A chloride management plan for post project management of chloride must be provided when an applicant for a permit under the stormwater management rule for land disturbing activity on property other than single-family home sites. The plan must include, at a minimum:

1. Designation of an individual authorized to implement the chloride-use plan
2. Designation of a Minnesota Pollution Control Agency (MPCA)-certified salt applicator engaged in the implementation of the chloride-use plan for the site

### Background

Elevated chloride concentrations have been found in waterbodies throughout the Twin Cities Metro Area at levels exceeding water quality standards. Chloride levels when they exceed water quality standard impact the aquatic community. The District has identified through monitoring that stormwater reaching Purgatory Creek regularly exceeds water quality standards during winter months. The chloride or salt found in the water comes from the salt that is applied to our streets, parking lots, driveways and sidewalks during winter months. In an effort to protect the District's water resources and increase efficiency in winter best management practices, a Chloride Management Plan needs to be in place as prescribed in Subsection 3.8 of Rule J. This will require cities, the county, commercial and private applicators to both reduce chloride application rates and improve winter management practices.

### Chloride Management Plan

The two minimum components of a chloride management plan are the designation of individual authorized to implement the plan and the designation of a MPCA certified salt applicator engaged in the implementation of the chloride-use plan for the site.

#### Designated Individual

This individual is the point of contact for any questions regarding winter maintenance on the site, including chloride application.

#### MPCA Certified Applicator

To achieve MPCA certification, an applicator must first attend a Smart Salting Training. Riley Purgatory Bluff Creek Watershed District and other organizations host these trainings free of charge throughout the year. The training offers information about best practices for managing snow and ice on roads or parking lots and sidewalks. A test is offered at the end of the workshop to earn Minnesota Pollution Control Agency (MPCA) Level 1 Certification in Snow & Ice Control Best Practices. Additional information about the trainings, including upcoming training dates is available at: [www.pca.state.mn.us/water/salt-application-training](http://www.pca.state.mn.us/water/salt-application-training)

### Project Information

Name of Proposed Project: Berrospid Addition

Address or Intersection: Frontier Trail and Joanna Drive (f

City: Chanhassen

RPBCWD Permit Number (if known): 2019-051

*For Cities/Public Agencies Only:*  Chloride Management Plan previously submitted for the year

**Applicant Information** (Site Owner or Project Developer)

Name of Permit Applicant: Luis Berrospid  
Address: 7406 Frontier Trail  
City, State, Zip: Chanhassen, MN 55317  
Phone: 763-280-0528

Email: lberrospid@gmail.com

**Applicant Information** (Site Consulting Engineer or Project Representative)

Name: Rick Osberg - James R. Hill, Inc  
Address: 2999 County Rd 42 East, #100  
City, State, Zip: Burnsville, MN 55306  
Phone: 952-890-6044

Email: rosberg@jrhinc.com

**Designated Individual**

Company Name: Same as applicant  
Address:  
City, State, Zip:  
Contact Name:  
Email Address:  
Phone Number:

The application of road salt will not and shall not be implemented on the Private Drive (JOANNA DRIVE) by the Applicant or by the Lot Owners.

*LB*

Mobile Number:

**MPCA Certified Individual\***

Company Name:  
Address:  
City, State, Zip:  
Contact Name:  
Email Address:  
Phone Number:

Mobile Number:

**Class Information**

Level 1:  Parking Lot & Sidewalk  Roads  
Level 2:  Winter Maintenance Assessment Tool  
Location & Date of Class:

Include a photo/scanned copy of certified individual's certificate or excel spreadsheet from the MPCA website that has certified individual's name listed. Certification is valid for five years.

MPCA website link: [www.pca.state.mn.us/water/salt-application-training](http://www.pca.state.mn.us/water/salt-application-training)

Signature: 

Printed Name: Luis Berrospid

Date: 4/20/2021

Return to: **Riley Purgatory Bluff Creek Watershed District**  
18681 Lake Drive East  
Chanhassen, MN 55317  
Email: [tjeffery@rpbcwd.org](mailto:tjeffery@rpbcwd.org)

**To Be Completed by District:**  
Permit # \_\_\_\_\_  
Received From \_\_\_\_\_  
Date Received \_\_\_\_\_  
Date Approved \_\_\_\_\_

# BERROSPID ADDITION

CHANHASSEN, MINNESOTA

## SITE DEVELOPMENT PLANS

FOR

### LUIS BERROSPID

7406 FRONTIER TRAIL, CHANHASSEN, MINNESOTA

PHONE: (763)-280-0528

**SINGLE FAMILY REQUIREMENT & DATA (P.U.D.)**

MIN. LOT AREA 15,000 S.F.  
 MIN. LOT WIDTH AT SETBACK 100 FEET  
 (100 FEET NECK/FLAG LOT)  
 MIN. LOT DEPTH 125 FEET

**MINIMUM SETBACKS FOR SINGLE FAMILY**

FRONT 30 FEET  
 SIDE (INTERIOR) 10 FEET  
 SIDE (STREET) 30 FEET  
 REAR 30 FEET

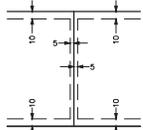


**LOCATION MAP**

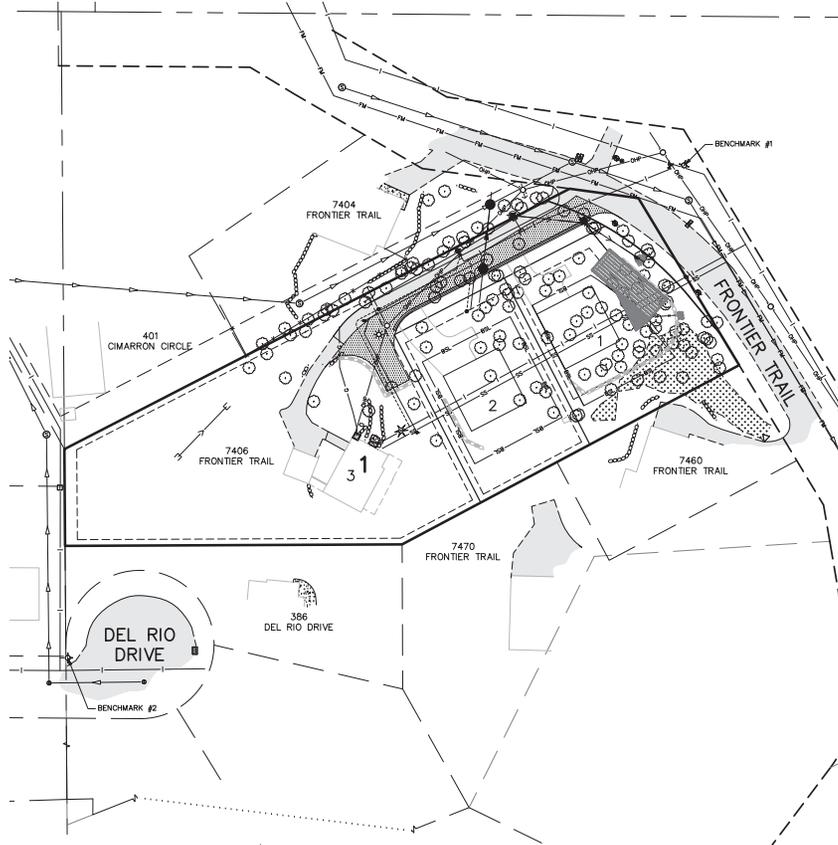
SCALE: 1"=1600'

**PROJECT COORDINATES**  
 N 44° 52' 7"  
 W 93° 31' 48"

**DRAINAGE AND UTILITY EASEMENTS ARE SHOWN THUS:**



BEING 5 FEET IN WIDTH AND ADJOINING SIDE LOT LINES AND 10 FEET IN WIDTH ADJOINING STREET LINES AND REAR LOT LINES, UNLESS OTHERWISE INDICATED ON THE PLAN.



**PROJECT CONTACTS**

PROJECT ENGINEER:	LUIS BERROSPID	(952)-890-6044 (O)
DEVELOPER:	JASON WEDEL	(763)-280-0528 (O)
CITY ENGINEER:	BRIAN GREEN	(952)-227-1189 (O)
NPDES OFFICER:	TBD	(507)-206-2610 (O)
GENERAL CONTRACTOR REPRESENTATIVE:	TBD	

**BENCHMARK**

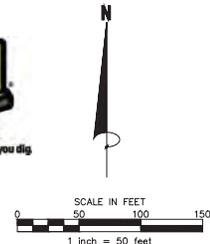
#1 TOP NUT HYDRANT EAST OF PROPERTY ON EAST SIDE OF FRONTIER TRAIL ELEV=930.78  
 #2 TOP NUT HYDRANT SOUTH OF PROPERTY ON DEL RIO DRIVE CUL-DE-SAC ELEV=981.89

**INDEX**

TITLE SHEET	1.0
SITE INFORMATION	1.1
GRADING PLAN	2.0
UTILITY PLAN	3.0
CONSTRUCTION DETAILS	4.0-4.2
TREE PRESERVATION PLAN	5.0

**LEGEND**

	EXISTING WATERMAIN
	EXISTING SANITARY SEWER
	EXISTING STORM SEWER
	EXISTING OVERHEAD POWER LINE
	EXISTING LIGHT POLE
	EXISTING TELEPHONE PEDESTAL
	EXISTING TV PEDESTAL
	EXISTING CURB & GUTTER
	EXISTING RETAINING WALL
	EXISTING TREELINE/TREES
	EXISTING ASPHALT
	EXISTING CONCRETE
	EXISTING GRAVEL
	PROPOSED WATERMAIN
	PROPOSED SANITARY SEWER
	PROPOSED STORM SEWER
	PROPOSED CURB & GUTTER
	PROPOSED CONCRETE
	PROPOSED ASPHALT SURFACE



**James R. Hill, Inc.**  
 PLANNERS / ENGINEERS / SURVEYORS  
 2999 W. Cty. Rd. 42, Suite 100, Burnsville, MN 55306  
 PHONE: (952)890-6044 FAX: (952)890-6244

James R. Hill, Inc. is a member of the James R. Hill Group, a national leader in providing professional services to the construction industry. For more information, please contact the State Office of James R. Hill, Inc. at (952)890-6044.

**BERROSPID ADDITION**  
 CHANHASSEN, MINNESOTA  
**TITLE SHEET**  
 FOR  
**LUIS BERROSPID**  
 7406 FRONTIER TRAIL, CHANHASSEN, MINNESOTA

**DRAWN BY**  
 JSO  
**DATE**  
 03/05/19

**REVISIONS**

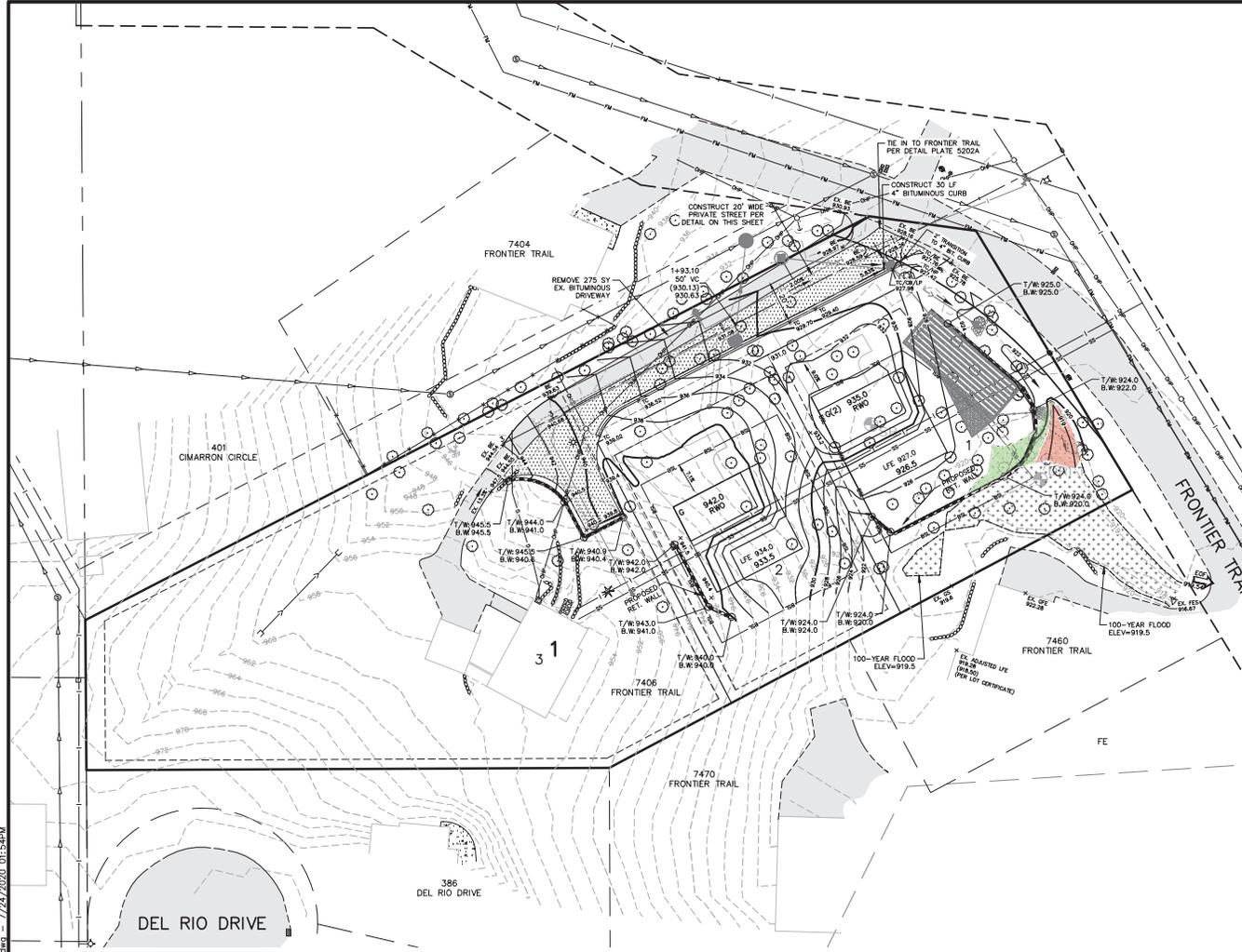
04/22/19	DRIVEWAY/STORM SEWER
08/05/19	TREE PLAN & PLAN
04/20/20	WATERSHED COMMENTS
06/03/20	WATERSHED COMMENTS
06/23/20	WATERSHED COMMENTS
07/24/20	WATERSHED COMMENTS

**CAD FILE**  
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**PROJECT NO.**  
 23520

**1.0**

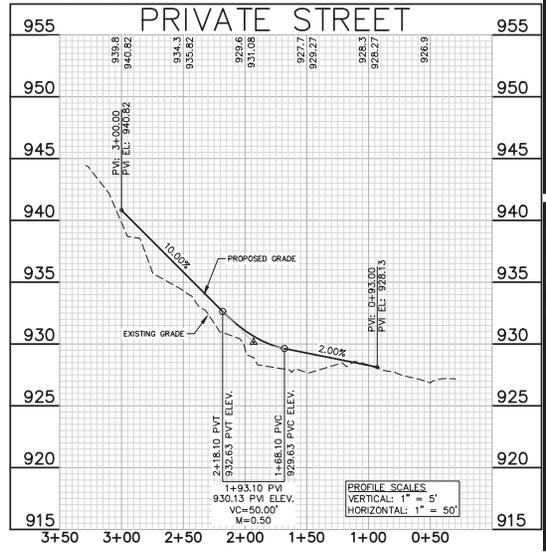
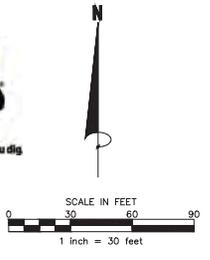
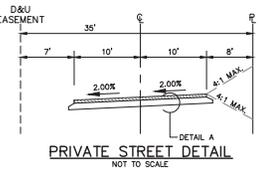
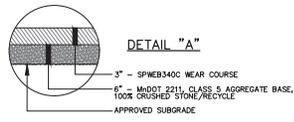
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- ### LEGEND
- EXISTING WATERMAIN
  - EXISTING SANITARY SEWER
  - EXISTING STORM SEWER
  - EXISTING OVERHEAD POWER LINE
  - EXISTING LIGHT POLE
  - EXISTING TV PEDESTAL
  - EXISTING CURB & GUTTER
  - EXISTING RETAINING WALL
  - EXISTING CONTOUR
  - EXISTING TREELINE/TREES
  - EXISTING ASPHALT
  - EXISTING CONCRETE
  - EXISTING GRAVEL
  - PROPOSED STORM SEWER
  - PROPOSED CURB & GUTTER
  - PROPOSED RETAINING WALL
  - PROPOSED CONTOUR
  - SB#1
  - EMERGENCY OVERFLOW
  - PROPOSED CONCRETE
  - PROPOSED BITUMINOUS
  - PROPOSED SPOT ELEVATION
  - C=TOP OF CURB
  - G=OUTLET
  - GS=GROUND SHOT
  - LP=LOW POINT
  - HP=HIGH POINT
  - EXISTING RETAINING WALL
  - EX=EXISTING ELEVATION
  - CB=TOP OF CATCH BASIN
  - PROPOSED SILT FENCE
  - PROPOSED WIMCO/INLET PROTECTION
  - POST STORM SEWER CONSTRUCTION
  - PROPOSED FLARED END PROTECTION
  - POST STORM SEWER CONSTRUCTION

### FLOOD STORAGE SUMMARY

CUT WITHIN FLOODPLAIN = 281 CF  
 FILL WITHIN FLOODPLAIN = 112 CF  
 CHANGE IN STORAGE CAPACITY = + 169 CF



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 PHONE: (952)980-6044 FAX: (952)980-6244

I am a duly licensed Professional Engineer in the State of Minnesota, License No. 227209.  
 I hereby certify that the information on this report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer in the State of Minnesota, License No. 227209.

**BERROSPID ADDITION**  
 CHANNAHASSEN, MINNESOTA  
**GRADING PLAN**  
 FOR  
**LUIS BERROSPID**  
 7406 FRONTIER TRAIL, CHANNAHASSEN, MINNESOTA

DRAWN BY  
 JSO  
 DATE  
 03/05/19  
 REVISIONS  
 04/22/19 DRIVEWAY/STORM SEWER  
 08/05/19 TREE PLAN & PLAT  
 04/20/20 WATERSHED COMMENTS  
 06/03/20 WATERSHED COMMENTS  
 06/23/20 WATERSHED COMMENTS  
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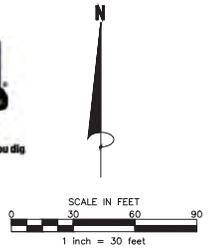
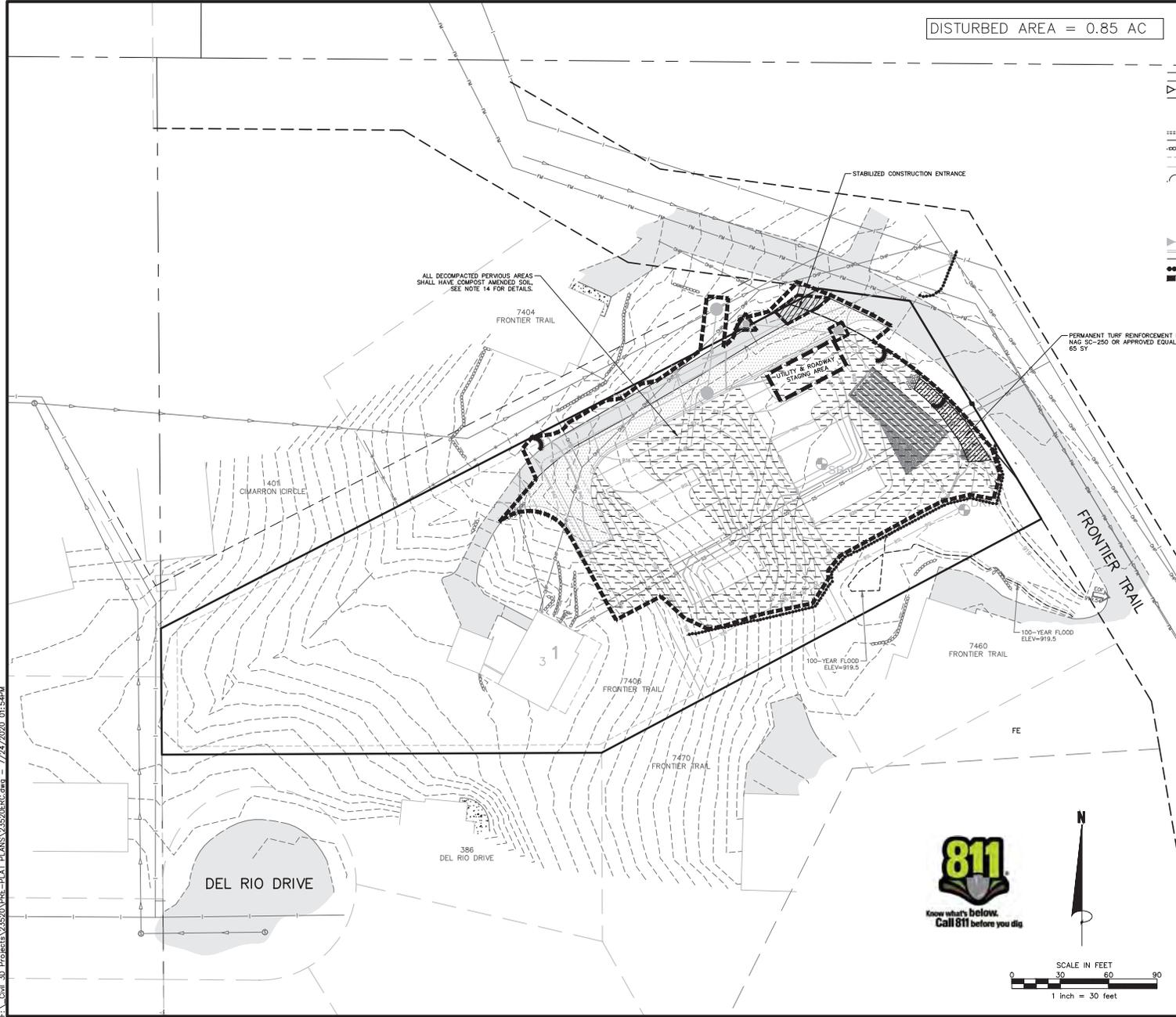
DISTURBED AREA = 0.85 AC

LEGEND

- EXISTING WATERMAIN
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING OVERHEAD POWER LINE
- EXISTING LIGHT POLE
- EXISTING TELEPHONE PEDESTAL
- EXISTING TV PEDESTAL
- EXISTING CURB & GUTTER
- EXISTING FENCE
- EXISTING RETAINING WALL
- EXISTING CONTOUR
- EXISTING WETLAND
- EXISTING TREELINE/TREES
- EXISTING ASPHALT
- EXISTING CONCRETE
- EXISTING GRAVEL
- PROPOSED STORM SEWER
- PROPOSED CURB & GUTTER
- PROPOSED CONTOUR
- PROPOSED SILT FENCE
- PROPOSED DISTURBANCE LIMITS
- PROPOSED WIMCO-POST STORM SEWER CONSTRUCTION
- PROPOSED YARD CURB/INLET PROTECTION
- POST STORM SEWER CONSTRUCTION
- MNDOT TYPE 3 DITCH CHECK
- SOIL BORING LOCATION
- EMERGENCY OVERFLOW
- PROPOSED CONCRETE
- PROPOSED TEMPORARY ROCK CONSTRUCTION ENTRANCE
- PROPOSED EROSION CONTROL BLANKET - MNDOT CATEGORY 3
- DE-COMPACT PERVIOUS AREA TO GREATEST EXTENT PRACTICABLE
- PERMANENT TURF REINFORCEMENT MAT

EROSION CONTROL NOTES

1. ACTIVITIES MUST BE CONDUCTED SO AS TO MINIMIZE THE POTENTIAL TRANSFER OF AQUATIC INVASIVE SPECIES (ZEBRA MUSSELS, EURASIAN WATERMILFON, ETC.) TO THE MAXIMUM EXTENT POSSIBLE.
2. NATURAL TOPOGRAPHY AND SOIL CONDITIONS MUST BE PROTECTED, INCLUDING RETENTION ON-SITE OF NATIVE TOPSOIL TO THE GREATEST EXTENT POSSIBLE.
3. CONSTRUCTION SHOULD INCLUDE MINIMIZATION OF THE DISTURBANCE INTENSITY AND DURATION, INCLUDING PHASING OF DISTURBANCE TO MINIMIZE QUANTITY OF DISTURBED AREA AT ANY ONE TIME.
4. ADDITIONAL MEASURES, SUCH AS HYDRAULIC MULCHING AND OTHER PRACTICES AS SPECIFIED BY THE DISTRICT MUST BE USED ON SLOPES OF 3:1 (H:V) OR STEEPER TO PROVIDE ADEQUATE STABILIZATION.
5. ALL STORMWATER-MANAGEMENT FACILITIES MUST BE PROTECTED WITH EROSION PREVENTION AND SEDIMENT CONTROL BMPs.
6. FINAL SITE STABILIZATION MEASURES MUST SPECIFY THAT AT LEAST SIX INCHES OF TOPSOIL OR ORGANIC MATTER BE SPREAD AND INCORPORATED INTO THE UNDERLYING SOIL DURING FINAL SITE TREATMENT WHEREVER TOPSOIL HAS BEEN REMOVED.
7. CONSTRUCTION SITE WASTE, SUCH AS DISCARDED BUILDING MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICALS, LITTER, AND SANITARY WASTE MUST BE PROPERLY MANAGED.
8. STAKING OFF AND MARKING OF PROPOSED INFILTRATION FACILITIES TO PREVENT SOIL COMPACTION BY HEAVY EQUIPMENT, STOCKPILING OF MATERIALS, AND TRAFFIC. IF INFILTRATION FACILITIES ARE IN PLACE DURING CONSTRUCTION ACTIVITIES, BEST PRACTICES MUST BE DEPLOYED TO PREVENT SEDIMENT AND OTHER MATERIAL FROM ENTERING THE FACILITIES. INFILTRATION FACILITIES MUST NOT BE EXCAVATED TO WITHIN 3 FEET OF FINAL GRADE UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN CONSTRUCTED AND FULLY STABILIZED. ANY ACCUMULATED SEDIMENT IN AN INFILTRATION FACILITY MUST BE REMOVED IN A MANNER THAT PREVENTS COMPACTION OF THE FACILITY BOTTOM. TO PROVIDE A WELL-AERATED, HIGHLY PEROUS SURFACE, THE SOILS BELOW AN INFILTRATION PRACTICE MUST BE LOOSENEO TO A MINIMUM DEPTH OF 18 INCHES PRIOR TO INSTALLATION OR PLANTING.
9. ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPs MUST BE MAINTAINED UNTIL COMPLETION OF CONSTRUCTION AND VEGETATION IS ESTABLISHED, SUFFICIENTLY TO ENSURE STABILITY OF THE SITE, AS DETERMINED BY THE DISTRICT.
10. ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPs MUST BE REMOVED UPON FINAL STABILIZATION.
11. SOIL SURFACES COMPACTED DURING CONSTRUCTION AND REMAINING PEROUS UPON COMPLETION OF CONSTRUCTION MUST BE DECOMPACTED TO ACHIEVE:
  - a. A SOIL COMPACTION TESTING PRESSURE OF LESS THAN 1,400 KILOPASCALS OR 200 POUNDS PER SQUARE INCH IN THE UPPER 12 INCHES OF SOIL OR
  - b. A BULK DENSITY OF LESS THAN 1.4 GRAMS PER CUBIC CENTIMETER OR 87 POUNDS PER CUBIC FOOT IN THE UPPER 12 INCHES OF SOIL.
12. THE PERMITTEE MUST, AT A MINIMUM, INSPECT, MAINTAIN, AND REPAIR ALL DISTURBED SURFACES AND ALL EROSION AND SEDIMENT CONTROL FACILITIES AND SOIL STABILIZATION MEASURES EVERY DAY OF WORKS PERFORMED ON THE SITE AND AT LEAST WEEKLY UNTIL LAND-DISTURBING ACTIVITY HAS CEASED. THEREAFTER, THE PERMITTEE MUST PERFORM THESE RESPONSIBILITIES AT LEAST WEEKLY UNTIL VEGETATIVE COVER IS ESTABLISHED. THE PERMITTEE WILL MAINTAIN A LOG OF ACTIVITIES UNDER THIS SECTION FOR INSPECTION BY THE DISTRICT ON REQUEST.
13. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 7 CALENDAR DAYS AFTER LAND-DISTURBING WORK HAS TEMPORARILY OR PERMANENTLY CEASED ON A PROPERTY THAT DRAINS TO AN IMPAIRED WATER, WITHIN 14 DAYS ELSEWHERE.
  - a. INTERNAL STABILIZATION (PRIOR TO HOME CONSTRUCTION) SHALL INCLUDE SEED AND MULCHING OF ALL DISTURBED AREAS.
  - b. ALL DISTURBED AREAS SHALL BE STABILIZED WITH SOO OR LANDSCAPING UPON COMPLETION OF HOME CONSTRUCTION.
14. DECOMPACTION OF DISTURBED PEROUS AREAS SHALL INCLUDE THE AMENDMENT OF TOPSOIL. 1 INCHES OF COMPOST MATERIAL SHALL BE PLACED ON THE BESPPAL TOPSOIL AND BLENDED TO A DEPTH OF 6 INCHES, MINIMUM, TO COMPLETE THE AMENDMENT.



**James R. Hill, Inc.**  
 PLANNERS / ENGINEERS / SURVEYORS  
 2999 W. Cty. Rd. 42, Suite 100, Burnsville, MN 55306  
 PHONE: (952)990-6044 FAX: (952)990-6244

PROJECT NO. 23520  
 DATE 03/05/19  
 DRAWN BY JSO

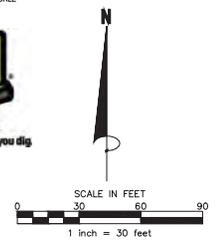
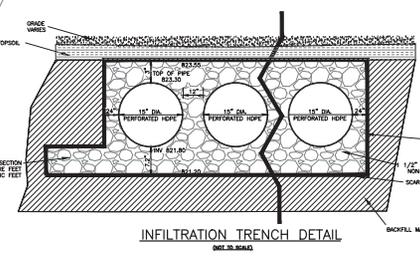
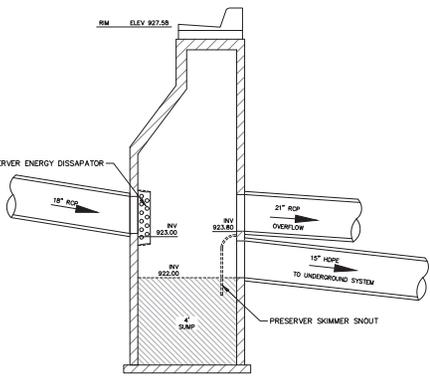
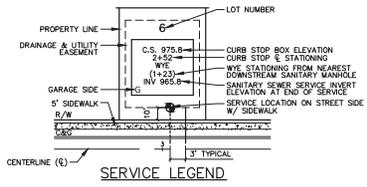
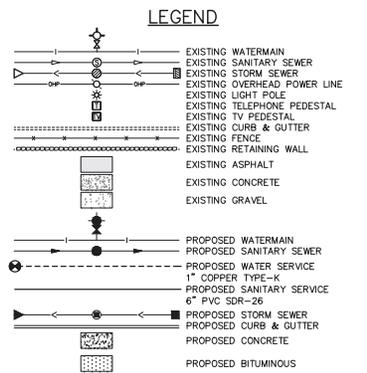
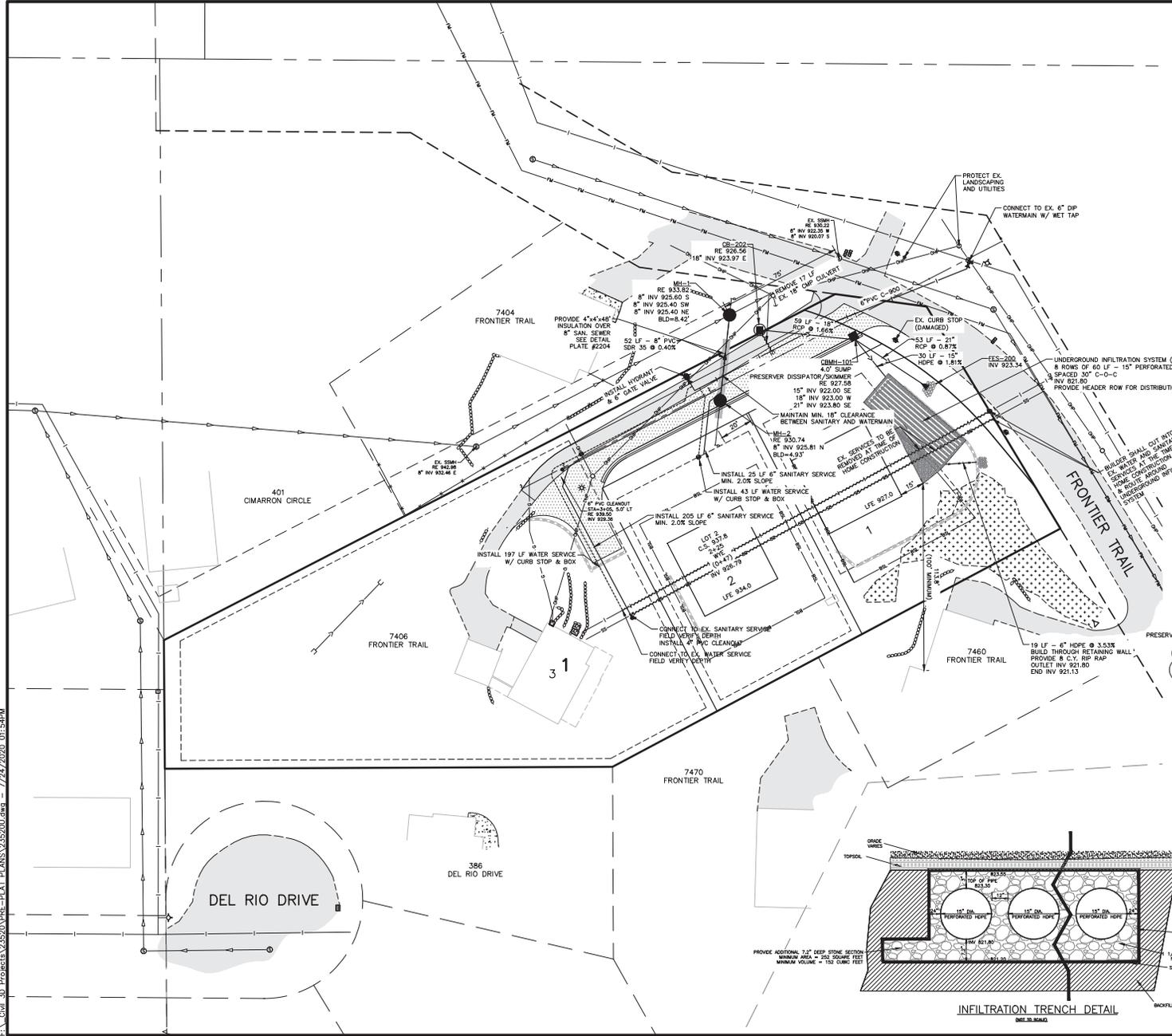
**BERROSPID ADDITION  
 EROSION & SEDIMENT CONTROL PLAN**  
 FOR  
**LUIS BERROSPID**  
 7406 FRONTIER TRAIL, CHANNAHASSEN, MINNESOTA

DATE	REVISIONS
04/22/19	DRIVEWAY/STORM SEWER
08/05/19	TREE PLAN & PLAT
04/20/20	WATERSHED COMMENTS
06/03/20	WATERSHED COMMENTS
06/23/20	WATERSHED COMMENTS
07/24/20	WATERSHED COMMENTS

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**James R. Hill, Inc.**  
 PLANNERS / ENGINEERS / SURVEYORS  
 2999 W. Cty. Rd. 42, Suite 100, Burnsville, MN 55306  
 PHONE: (952)980-6044 FAX: (952)980-6244

This utility plan was prepared by the undersigned professional engineer and is a true and correct copy of the original on file in the State of Minnesota. License No. 0000000000.

**LUIS BERROSPID**  
 CIVIL ENGINEER, P.E.  
 License No. 0000000000

**BERROSPID ADDITION**  
 CHANNASSEN, MINNESOTA  
**UTILITY PLAN**  
 FOR  
**LUIS BERROSPID**  
 7406 FRONTIER TRAIL, CHANNASSEN, MINNESOTA

DRAWN BY  
 JSO  
 DATE  
 03/05/19  
 REVISIONS  
 04/22/19 DRIVEWAY/STORM SEWER  
 08/05/19 TREE PLAN & PLAT  
 04/20/20 WATERSEED COMMENTS  
 06/03/20 WATERSEED COMMENTS  
 04/23/20 WATERSEED COMMENTS  
 07/24/20 WATERSEED COMMENTS  
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 PROJECT NO.  
 23520  
 3.0

**COOPERATIVE AGREEMENT**  
**Between Bearpath Golf and Country Club and**  
**Riley-Purgatory-Bluff Creek Watershed District**

Middle Riley Creek Stabilization Project

**DRAFT April 9, 2021**

This cooperative agreement is made by and between Bearpath Golf and Country Club, a Minnesota limited partnership (Bearpath) and Riley-Purgatory-Bluff Creek Watershed District, a watershed district created pursuant to Minnesota Statutes chapters 103B and 103D (RPBCWD); to achieve shared water-resource protection and improvement goals through design, construction and maintenance of a stabilization project along Middle Riley Creek on the campus of Bearpath Golf and Country Club (the Bearpath Property), which is owned in fee by Bearpath Golf and Country Club.

**Recitals**

**WHEREAS** RPBCWD has an approved water resources management plan pursuant to Minnesota Statutes section 103B.231 (the Plan) that has as a primary goal the improvement of water quality in Riley Creek and in the Riley Creek watershed generally;

**WHEREAS** the Plan identifies creek restoration and stabilization at Riley Creek as a Proposed Project in the Riley Creek Watershed (Plan, Section 8, Table 8-2);

**WHEREAS** Riley Creek is listed on the Minnesota Pollution Control Agency's list of impaired waters for turbidity, aquatic macroinvertebrate bioassessments, fishes bioassessments, and *E. coli*, and the Minnesota River, into which Riley Creek flows, is impaired for nutrients/eutrophication and turbidity;

**WHEREAS** RPBCWD and Bearpath recognized a mutual opportunity to address streambank erosion, impairments, and golf course impacts by partnering in a project to restore a section of Middle Riley Creek (R3);

**WHEREAS** at the direction of the RPBCWD board of managers and in collaboration with Bearpath, the RPBCWD engineer studied the feasibility of providing a biologically diverse stream reach that significantly reduces streambank erosion and sediment and phosphorus loading to Riley Creek and downstream waterbodies; improves water quality, and improves natural stream habitat for aquatic organisms along 815 feet of Riley Creek Reach R3 (the Project); the engineer estimated that the Project would result in 0.2 acres of in-channel habitat improvements and 0.5 acres of riparian habitat improvements; reduce TSS by 16,640 lbs/yr and reduce TP by 8.3 lbs/yr; restore 815 feet of reach R3; and generally would help protect Riley Creek from erosion by moving the stream away from the banks;

**WHEREAS** the Project will increase public awareness of erosion issues and water quality of Riley Creek due to the accessible location of the project for Bearpath members; stabilize the slope failure area on the Hole 16 green and the bank erosion that is exposing golf course infrastructure next to the Hole #13 tee box; provide a natural stream corridor and additional and improved habitat by increasing stream length; provide greater stream depth

variability and other in-stream enhancements that will potentially allow more opportunities for macroinvertebrates and fish to use this reach of Riley Creek; and improve long-term stability of the reach of Riley Creek that passes through the Bearpath Property;

**WHEREAS** on April 1, 2020, the RPBCWD board of managers conducted a duly-noticed public hearing on and ordered the Project in accordance with Minnesota Statutes section 103B.251;

**WHEREAS** Bearpath has committed to contribute \$43,500 in cash and other in kind contributions to for a total equivalent value not to exceed \$82,500; RPBCWD will cover the remaining costs of the Project, the total estimated cost of which is \$290,000 through its ad valorem property tax levy to implement its watershed management plan pursuant to Minnesota Statutes Section 103B.21, 77% of which is paid by RPBCWD property taxpayers in Hennepin County and 23% is paid by RPBCWD property taxpayers in Carver County;

**WHEREAS** the Project will be constructed entirely on the Bearpath Property in the area depicted and labeled "Project Area" in Exhibit B, attached to and incorporated into this agreement;

**WHEREAS** Bearpath will own and maintain the Project when it is completed;

**WHEREAS** Bearpath and RPBCWD acknowledge that their ability to achieve Project objectives depends on each party satisfactorily and promptly performing individual obligations and working cooperatively with the other party to this agreement; and

**WHEREAS** Minnesota Statutes §103D.335, subdivisions 7 and 21 authorize RPBCWD to enter this cooperative agreement with Bearpath.

### **Agreement**

NOW, THEREFORE Bearpath and RPBCWD enter into this agreement to document their understanding as to the scope of the Project, affirm their commitments as to the responsibilities of and tasks to be undertaken by each party, grant and assign the necessary land-use rights, and facilitate communication and cooperation to successfully complete the Project.

#### **1 Organization and Relationship of the Parties**

- A. The RPBCWD administrator and Bearpath's owner will serve as project leads and the principal contacts for their respective organizations for the Project, charged to conduct the day-to-day activities necessary to ensure that the Project is completed in accordance with the terms of this agreement.
- B. The project leads will coordinate and communicate informally and formally to timely address any issues of concern to ensure the successful completion of the Project.
- C. Bearpath and RPBCWD enter this agreement solely for the purposes of improving water quality and stabilizing and reducing erosion in Riley Creek. Only contractual remedies are available for the failure of a party to fulfill the terms of this agreement.
- D. Notwithstanding the foregoing or any other provision of this agreement, Bearpath's and RPBCWD's obligations and rights under paragraphs 2E, 3B, 5C, 6A and 6C of the agreement will survive the termination of the agreement.

- E. This agreement creates no right in and waives no immunity, defense or liability limitation with respect to any non-party.

## **2 Project Design, Construction and Maintenance**

- A. The Project is further defined for purposes of this cooperative agreement as the work specified in the final designs that RPBCWD generated with its engineer, and plans and specifications attached to and incorporated into this agreement as Exhibit C. The final design provides that Bearpath may coordinate its design and relocation of Hole #13 tee boxes and #12 green area of the golf course designated as Phase I on the plans in Exhibit C. RPBCWD work in the Project is designated as Phase II on the plans in Exhibit C.
- B. The Project will include, after completion of construction, assessment of the effectiveness of the Project by the parties and development by the RPBCWD engineer of specific written schedules, procedures and protocols for routine and major operation and maintenance of the Project. This agreement also provides terms and conditions for post-construction operation and maintenance of the Project.
- C. **Construction contracting.** RPBCWD will solicit bids in accordance with applicable state and federal law, and will contract with the bidder it determines is the lowest-cost responsible and responsive bidder. The contract for construction will:
  - i. Require the contractor to indemnify, defend and hold harmless Bearpath, its officers, employees and agents, from any and all actions, costs, damages and liabilities of any nature arising from the contractor's negligent or otherwise wrongful act or omission, or breach of a specific contractual duty, or a subcontractor's negligent or otherwise wrongful act or omission, or breach of a specific contractual duty owed by the contractor to RPBCWD;
  - ii. Require that the contractor for the Project name Bearpath as an additional insured for general liability with primary and noncontributory coverage for general liability and provide a certificate showing same prior to construction;
  - iii. Extend the contractor's warranties under the agreement to Bearpath;
  - iv. Require the contractor to determine and obtain all permits and other regulatory approvals applicable to the Project on behalf of RPBCWD and Bearpath.
- D. **Construction.**
  - i. RPBCWD, or the RPBCWD engineer on RPBCWD's behalf, will provide construction oversight for and oversee implementation of the Project. RPBCWD may adjust the plans and specifications for the work during implementation, as long as the revised plans do not require RPBCWD to exceed the scope of the rights granted under this agreement, and such changes are made in coordination with Bearpath to ensure compatibility of the Project with Bearpath's continued use and operation of the Bearpath Property for its customary and intended purposes. Project construction is

- planned to commence on or about September 1, 2021, with site restoration and planting to take place in spring 2022 before the golf season commences.
- ii. RPBCWD will coordinate construction activities with Bearpath's construction to relocate Hole #13 tee boxes and modifying Hole #12 tee, fairway and green areas.
  - iii. RPBCWD will timely engage and consult Bearpath on material changes to the Project plans and specifications.
  - iv. Until substantial completion of construction of the Project for the purposes intended, if RPBCWD, in its judgment, should decide that the Project is infeasible, RPBCWD, at its option, may declare the agreement rescinded and annulled. If RPBCWD so declares, all obligations herein, performed or not, will be voided, except that RPBCWD will return the Bearpath Property materially to its prior condition or to a condition agreed to by Bearpath.
  - v. RPBCWD will notify Bearpath within five business days of receipt of a certification of substantial completion from the contractor contracted to construct the Project.
  - vi. Within 90 days of certification of substantial completion or termination of this agreement, RPBCWD will ensure that the Project site is substantially restored to a condition consistent with the use of the Property for its intended purposes, and consistent with the ordinary time required to re-establish vegetation.

**E. Maintenance.**

- i. After completion of the three-year vegetation establishment period for the Project, Bearpath will provide, at its sole expense ongoing routine maintenance of the Project. RPBCWD will provide, at its sole expense, ongoing technical assistance and support for maintenance of the Project, and conduct specialized maintenance and repairs.
- ii. After completion of the three-year vegetation establishment period for the Project, RPBCWD will contract with the RPBCWD engineer for the development in collaboration with Bearpath of a draft plan for the maintenance of the Project (the Maintenance Plan). The Maintenance Plan will delineate necessary routine maintenance of the Project, as well as roles and responsibilities supplemental to and consistent with the terms of this agreement for implementation of maintenance work. The Maintenance Plan will identify routine maintenance activities and define specialized maintenance and repair work (Specialized Maintenance and Repairs).
- iii. Bearpath will approve the Maintenance Plan within 45 days of receipt from RPBCWD, such approval not to be unreasonably withheld. Failure by Bearpath to timely act on its rights and obligations under this paragraph will constitute approval of the Maintenance Plan. If Bearpath disapproves the Maintenance Plan, all maintenance necessary to assure that the Project will continue to effectively function as designed will become the sole responsibility of Bearpath. On approval of the Maintenance Plan, Bearpath will perform all routine maintenance and monitoring of the Project, along with reporting as may be required by the Maintenance Plan, from the date of completion of the three-year construction and establishment period for the Project for its intended purposes. The Maintenance Plan will not require Bearpath to expend greater financial resources

for routine maintenance tasks (subject to normal inflationary increases) than are expended by Bearpath for the Project area at the time of execution of this agreement.

- iv. The Maintenance Plan will be implemented as follows:
  - a. Routine maintenance work under the Maintenance Guide will be completed by Bearpath at Bearpath's sole expense with technical support as provided in accordance with paragraph F.i. herein.
  - b. RPBCWD will contract for the performance of Specialized Maintenance and Repair.
- v. RPBCWD may conduct monitoring of the performance of the Project.

### **3 Costs**

- A. Except for reimbursement as provided in paragraph 3C herein, each party will be responsible for the costs of performance of its obligations and exercise of its rights under this agreement.
- B. As provided in paragraph 2.F.i herein, Bearpath will be responsible for the costs of routine post-construction maintenance of the Project in conformance with the Maintenance Plan.
- C. On receipt of documentation of payment as may be reasonably requested, Bearpath will reimburse RPBCWD \$43,500 of documented costs of construction of the Project. Additionally, Bearpath will commit the following expenditures or in-kind contributions:
  - i. \$950 in payment to Barr Engineering for conceptual design development, information from which was used in the Middle Riley Creek Stabilization Feasibility Report;
  - ii. \$6,550 in future payments planned, and under contract, from Bearpath to Barr Engineering, for consulting on final golf-related design development and golf feature construction related to the Project;
  - iii. All design and construction costs, estimated at \$24,700, related to relocation of Hole #13 tee boxes and modifying Hole #12 green area to accommodate the Project;
  - iv. In-kind long-term maintenance of the Project, in accordance with the Maintenance Plan, excluding material costs associated with implementing the Maintenance Plan, an estimated value of \$6,800 (40 hours of labor per year);
- D. The entirety of the Project work will be the subject of one single permit jointly prepared and submitted by Bearpath and RPBCWD, including Bearpath's in-kind work on Hole #13 tee boxes and modifying Hole #12 tee, fairway and green areas ; Bearpath will be responsible for any other permits for its work related to the Project;
- E. Except as specifically provided otherwise herein, each of the parties will bear the costs of fulfilling its responsibilities and obligations under this agreement and, in the event of

cancellation, the parties will bear all costs incurred prior to RPBCWD's issuance of notice to Bearpath in accordance with paragraph 2.E.iv herein.

#### **4 Grant of Property-Use Rights**

Bearpath holds fee simple on the parcel(s) legally described in Exhibit A to this Agreement and agrees to grant RPBCWD an easement over the areas identified in Exhibit B to this Agreement. This easement will provide for access and use of the burdened areas for purposes of construction and ongoing inspection and maintenance of the Project, and provide for conservation of the Project and related buffer areas. Buffer areas will be memorialized by installing either monuments flush with the ground or above ground signage. Bearpath will facilitate communication with property owners in order for RPBCWD to acquire rights to access the site using roadways under ownership of the Bearpath HOA (PID: 1911622230035 & 1911622230027) and a private drive/road under ownership by two private individuals (1911622240039 & 1911622240038).

#### **5 RPBCWD's Further Rights and Obligations**

- A. RPBCWD will not be deemed to have acquired by entry into or performance under this agreement any form of interest or ownership in the Bearpath Property. RPBCWD will not by entry into or performance under this agreement be deemed to have exercised any form of control over the use, operation or management of any portion of the Bearpath Property or adjacent property so as to render RPBCWD a potentially responsible party for any contamination or exacerbation of any contamination conditions under state and/or federal law.
- B. RPBCWD will provide (in both digital and paper copy format) as-built construction drawings of the Project to Bearpath within 90 days of certification of the Project as substantially complete for the intended purposes.
- C. RPBCWD contracted with the RPBCWD engineer for the development of the plans and specification for the Project, along with all necessary construction documentation, and will be responsible to contract with the RPBCWD engineer for development of the Maintenance Plan. Notwithstanding the foregoing, RPBCWD makes no warranty to Bearpath regarding the RPBCWD engineer's or another non-party's performance in design, construction or construction management for the Project.

#### **6 General Terms**

- A. **Publicity and endorsement.** RPBCWD and Bearpath will collaboratively develop, produce and disseminate public education and outreach materials and conduct at least one, and possibly annual, public educational and informational meetings about the Project. Each party, at its sole expense, may develop, produce and, after approval of the other parties, distribute educational, outreach and publicity materials related to the Project. Any publicity regarding the Project must identify Bearpath and RPBCWD as sponsoring entities. For purposes of this provision, publicity includes notices, informational pamphlets, press releases, research, reports, signs and similar public notices prepared by or for Bearpath or

RPBCWD individually or jointly with others, or any subcontractors, with respect to the Project.

- B. **Data management.** All designs, written materials, technical data, research or any other work in progress will be shared among the parties to this agreement on request, except as prohibited by law. As soon as is practicable, the party preparing plans, specifications, contractual documents, materials for public communication or education will provide them to the other parties for recordkeeping and other necessary purposes.
- C. **Data Practices.** All data created, collected, received, maintained or disseminated for any purpose in the course of this agreement is governed by the Minnesota Government Data Practices Act, Minnesota Statutes chapter 13, and any state rules adopted to implement the act, as well as federal regulations on data privacy
- D. **Entire agreement.** This agreement, as it may be amended in writing, contains the complete and entire agreement between the parties relating to the subject matter hereof, and supersedes all prior negotiations, agreements, representations and understandings, if any, between the parties respecting such matters. The recitals stated at the outset are incorporated into and made a part of the agreement.
- E. **Force majeure.** RPBCWD will not be liable for failure to complete the Project if the failure results from an act of god (including fire, flood, earthquake, storm, other natural disaster or other weather conditions that make it infeasible or materially more costly to perform the specified work), embargo, labor dispute, strike, lockout or interruption or failure of public utility service. In asserting force majeure, RPBCWD must demonstrate that it took reasonable steps to minimize delay and damage caused by foreseeable events, that it substantially fulfilled all non-excused obligations, and that it timely notified Bearpath of the likelihood or actual occurrence of the force majeure event. Delay will be excused only for the duration of the force majeure.
- F. **Waivers.** The waiver by Bearpath of any breach or failure to comply with any provision of this agreement by the other parties will not be construed as nor will it constitute a continuing waiver of such provision or a waiver of any other breach of or failure to comply with any other provision of this agreement.
- G. **Notices.** Any notice, demand or communication under this agreement by any party to the others will be deemed to be sufficiently given or delivered if it is dispatched by registered or certified mail, postage prepaid to:

Bearpath

James Senske  
Owner  
18100 Bearpath Trail  
Eden Prairie, MN, 55347  
Email address  
Phone number

RPBCWD

Terry Jeffery  
Interim Administrator  
18681 Lake Drive East  
Chanhassen, MN 55317  
tjeffery@rpbcd.org  
952-807-6885

- H. **Term; termination.** This agreement is effective on execution by each of the parties and will terminate three years from the date of execution of this agreement or on the written agreement of all three parties.

*[SIGNATURE PAGE FOLLOWS.]*

DRAFT

**IN WITNESS WHEREOF**, the parties have caused the agreement to be duly executed intending to be bounded thereby.

**Bearpath**

\_\_\_\_\_

By: James Senske, Owner

Date: \_\_\_\_\_

and

\_\_\_\_\_

By: [NAME],

Date: \_\_\_\_\_

**Riley-Purgatory-Bluff Creek Watershed District**

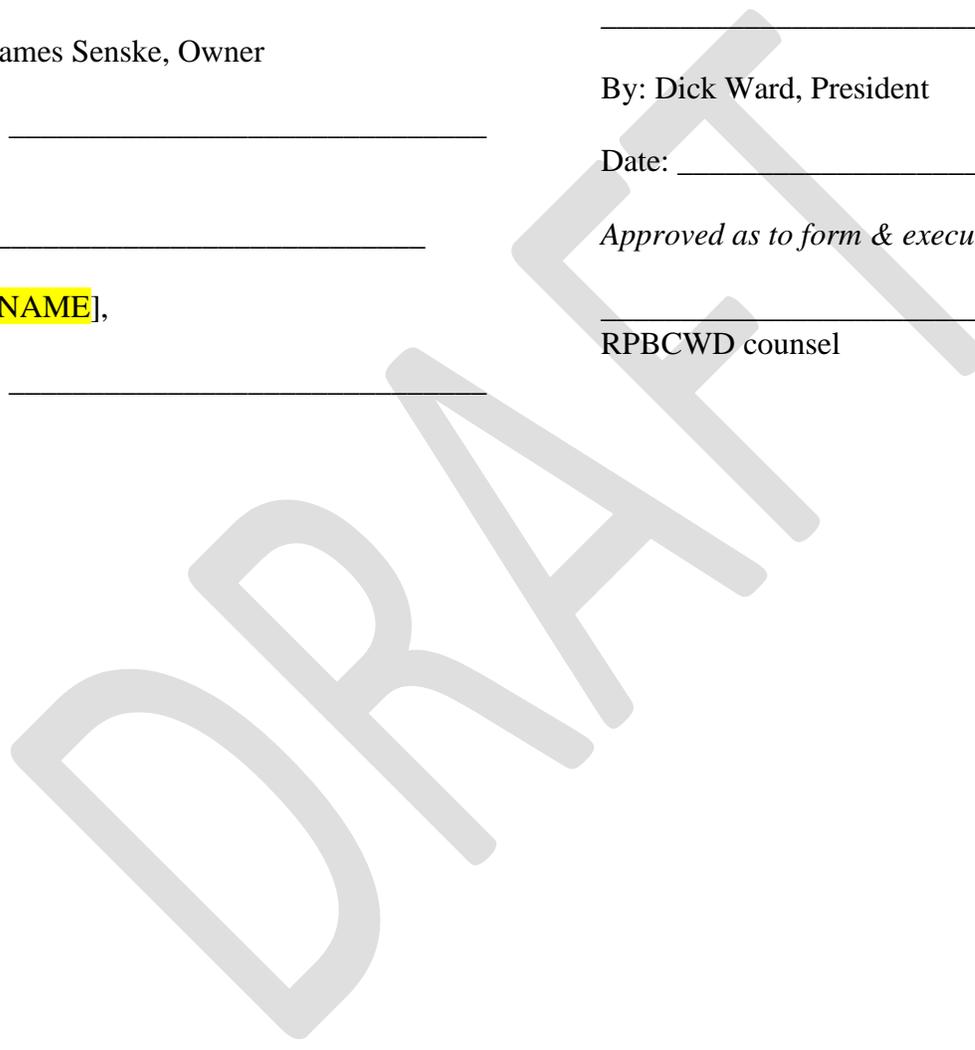
\_\_\_\_\_

By: Dick Ward, President

Date: \_\_\_\_\_

*Approved as to form & execution:*

\_\_\_\_\_  
RPBCWD counsel



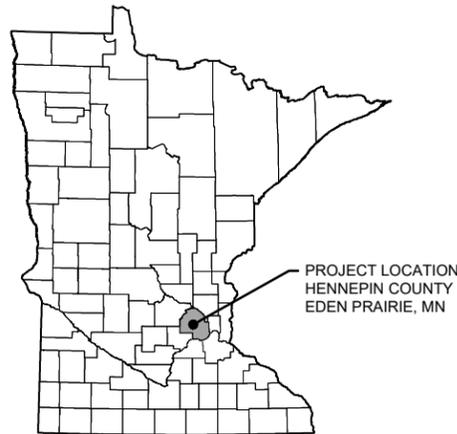
**EXHIBIT A**  
**Legal Description of the Bearpath Property**

[This should come from Bearpath.]

**EXHIBIT B**  
**Easement**

# MIDDLE RILEY CREEK STABILIZATION AND BEARPATH GOLF COURSE RENOVATION

## RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT



MINNESOTA COUNTY MAP

**CONTACTS:**

**ENGINEER CONTACT:**  
 Jessica Olson  
 Barr Engineering Co.  
 325 South Lake Avenue  
 Duluth, MN 55802  
 218-259-7118  
 jolson@barr.com

**OWNER'S REPRESENTATIVE CONTACT:**  
 Claire Blesser  
 Riley Purgatory Watershed District  
 18681 Lake Drive East  
 Chanhassen, MN 55317  
 952-607-6512  
 cblesser@rpbcd.org

**OWNER CONTACT:**  
 Bearpath Golf & Country Club  
 Attn: Kevin Cashman  
 18100 Bearpath Trail  
 Eden Prairie, MN 55347  
 952-975-0123  
 kcashman@bearpathgolf.com

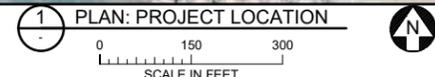
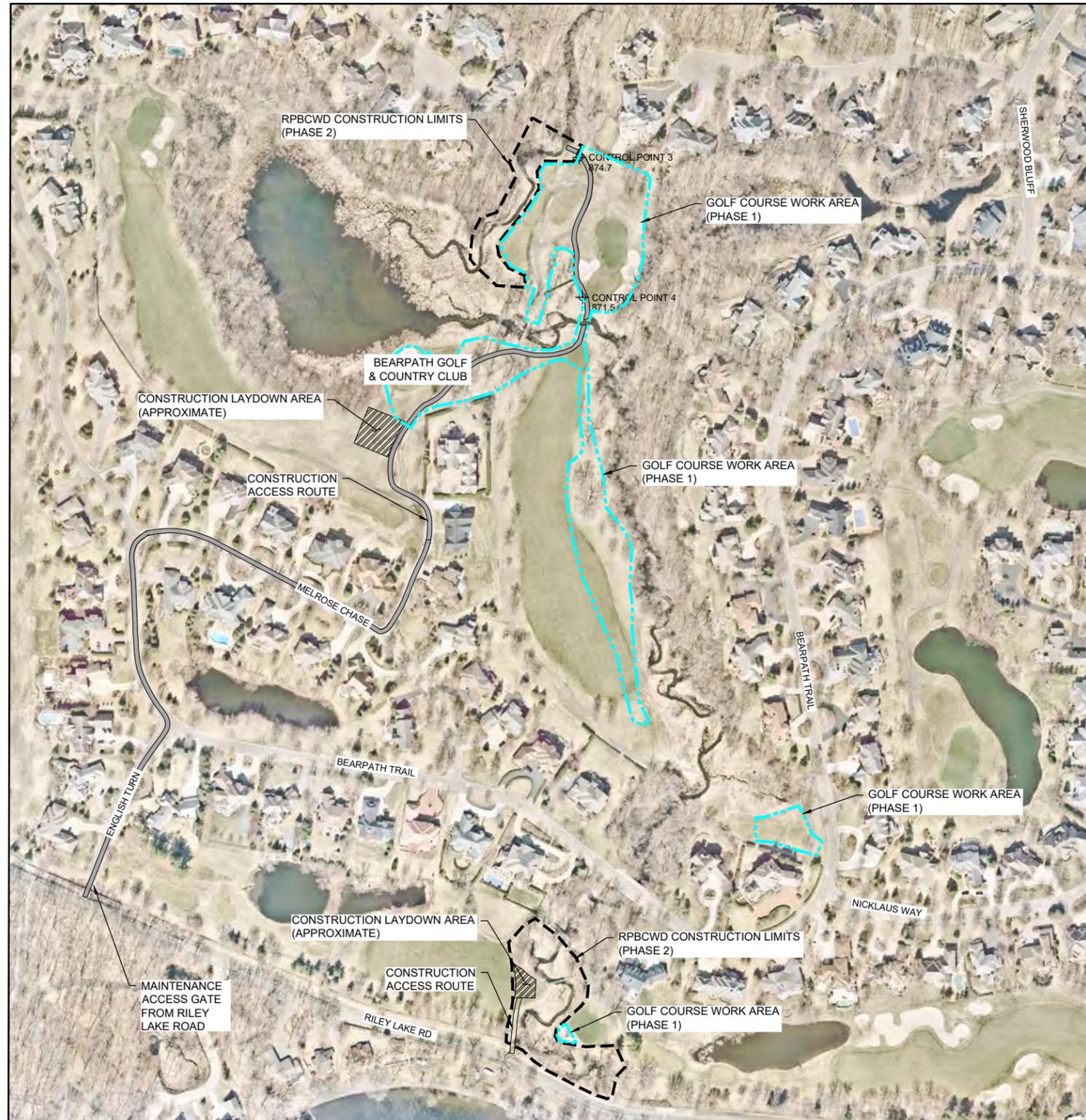
**GENERAL NOTES:**

- CONTOUR DATA SHOWN IN THIS PLAN SET IS BASED ON 2015 LIDAR TOPOGRAPHY AND SURVEYS PERFORMED BY RPB/CWD STAFF ON MAY 4 AND 18, 2020 AND SUPPLEMENTED BY SURVEY DATA FROM A SURVEY PERFORMED BY BARR ENGINEERING ON JUNE 11, 2020.
- IMAGERY; COPYRIGHT PICTOMETRY INTERNATIONAL CORP AND HENNEPIN COUNTY, MINNESOTA, 2017.
- HORIZONTAL DATUM AND COORDINATE SYSTEM: HENNEPIN COUNTY COORDINATES, NAD83, US SURVEY FEET.
- VERTICAL DATUM: NAVD88.

CONTROL POINTS				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	117922.4829'	465761.5527'	875.23'	VRS SPIKE 1
2	117850.1325'	465717.6763'	880.15'	VRS SPIKE 2
3	119806.1150'	465879.4807'	874.71'	VRS SPIKE 3
4	119491.9292'	465886.5323'	871.54'	VRS SPIKE 4



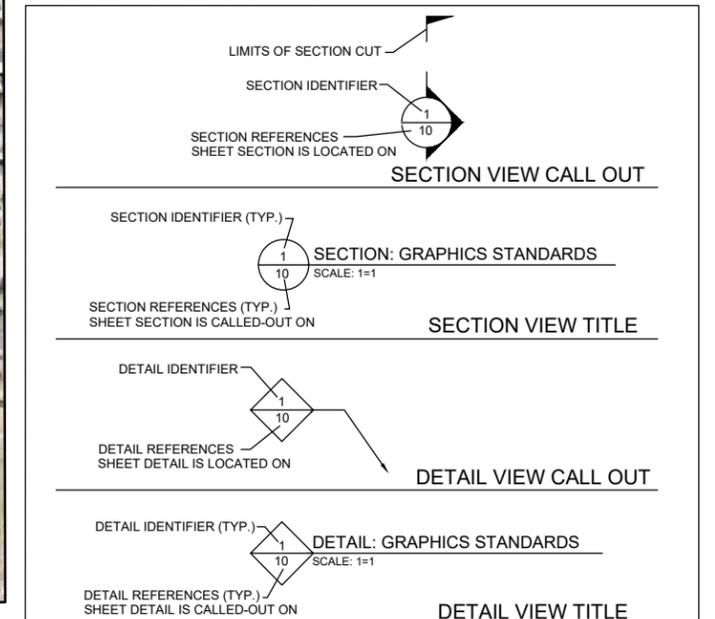
GOPHER STATE ONE CALL:  
 CALL BEFORE YOU DIG.  
 1-800-252-1166



**INDEX OF SHEETS**

- G-01 ... TITLE SHEET, PROJECT LOCATION, AND SHEET INDEX
  - G-02 ... STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
  - G-03 ... STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
  - G-04 ... TREE INVENTORY AND TREE REMOVALS - SOUTH
  - G-05 ... TREE INVENTORY AND TREE REMOVALS - NORTH
- PHASE 2 - MIDDLE RILEY CREEK STABILIZATION**
- C-01 ... EXISTING CONDITIONS, REMOVALS, AND EROSION CONTROL PLAN - SOUTH
  - C-02 ... EXISTING CONDITIONS, REMOVALS, AND EROSION CONTROL PLAN - NORTH
  - C-03 ... EROSION CONTROL DETAILS
  - C-04 ... EASEMENTS, FLOODPLAINS, AND WETLAND BOUNDARIES - FULL SITE
  - C-05 ... EASEMENTS, FLOODPLAINS, AND WETLAND BOUNDARIES - SOUTH
  - C-06 ... EASEMENTS, FLOODPLAINS, AND WETLAND BOUNDARIES - NORTH
  - C-07 ... STREAM STABILIZATION SOUTH - PLAN
  - C-08 ... STREAM STABILIZATION SOUTH - PROFILE AND SECTIONS
  - C-09 ... STREAM STABILIZATION NORTH - PLAN
  - C-10 ... STREAM STABILIZATION NORTH - PROFILE AND SECTIONS
- D-01 ... STABILIZATION DETAILS
  - D-02 ... STABILIZATION DETAILS
  - D-03 ... STABILIZATION DETAILS
  - D-04 ... STABILIZATION DETAILS
  - D-05 ... ROCK WALL DETAILS
  - D-06 ... OUTLET IMPROVEMENT DETAILS
  - D-07 ... OUTLET IMPROVEMENT DETAILS
- R-01 ... RESTORATION PLAN - SOUTH
  - R-02 ... RESTORATION PLAN - NORTH
  - R-03 ... RESTORATION DETAILS
- PHASE 1 - BEARPATH GOLF COURSE RENOVATION**
- C-11 ... EROSION CONTROL PLAN - #16 GREEN, #12 TEE BOX, #12 FAIRWAY
  - C-12 ... EROSION CONTROL PLAN - #13 GREEN, #12 GREEN, #13 TEE BOX
  - C-13 ... EROSION CONTROL DETAILS
  - C-14 ... GRADING PLAN - #16 GREEN, #12 TEE BOX, #12 FAIRWAY
  - C-15 ... GRADING PLAN - #13 GREEN, #12 GREEN, #13 TEE BOX
- R-04 ... RESTORATION PLAN - #16 GREEN, #12 TEE BOX, #12 FAIRWAY
  - R-05 ... RESTORATION PLAN - #13 GREEN, #12 GREEN, #13 TEE BOX

**SYMBOLS AND ABBREVIATIONS:**



ISSUED FOR PERMITTING  
 NOT FOR CONSTRUCTION

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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. PRINTED NAME: JESSICA OLSON SIGNATURE: _____ DATE: 03/12/2021 LICENSE # 43102		CLIENT: RPB/CWD BID: 2021-0308-20 CONSTRUCTION PERMITTING: 2021-0312-21 RELEASED TO/FOR: A B C 0 1 2 3 DATE RELEASED: _____		Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435 Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com		Scale: AS SHOWN Date: 03/12/2021 Drawn: EPF Checked: SAB2 Designed: BARR Approved: JCO		MIDDLE RILEY CREEK STABILIZATION & BEARPATH GOLF COURSE RENOVATION RILEY PURGATORY BLUFF CREEK WD CHANHASSEN, MN BARR PROJECT No. 23/27-0053.14 CLIENT PROJECT No. _____ DWG. No. G-01 REV. No. C	
NO. BY CHK. APP. DATE REVISION DESCRIPTION								TITLE SHEET, PROJECT LOCATION, AND SHEET INDEX	

CADD USER: Eric P. Fitzgerald FILE: M:\DESIGN\23270053.14\MIDDLE RILEY CREEK STABILIZATION AND BEARPATH GOLF COURSE RENOVATION\G-01\_TITLE SHEET.DWG PLOT SCALE: 1:2 PLOT DATE: 4/23/2021 10:45 AM  
 BARR: M:\AutoCAD\2011\AutoCAD 2011\Support\enu\Template\Bar\_2011\_Template.dwg Plot at 1: 10/06/2010 14:09:30

**1.0 GENERAL CONSTRUCTION ACTIVITY INFORMATION:**

THIS STORMWATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN PREPARED IN COMPLIANCE WITH THE MINNESOTA GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY NO. MNR100001 (GENERAL PERMIT), AS REQUIRED BY THE MINNESOTA POLLUTION CONTROL AGENCY (MPCA) UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM/STATE DISPOSAL SYSTEM (NPDES/SDS) PROGRAM.

THE PROJECT IS LOCATED IN THE CITY OF EDEN PRAIRIE, HENNEPIN COUNTY, MINNESOTA. PROPOSED CONSTRUCTION ACTIVITIES WILL TAKE PLACE WITHIN SECTION 19 TOWNSHIP 116 NORTH RANGE 22 WEST. THE APPROXIMATE CENTROID OF THE PROJECT HAS A LATITUDE OF 44.8404389 AND A LONGITUDE OF -93.5107298.

THIS PROJECT INVOLVES THE REPAIR OF EROSION ON THE EXISTING BANKS OF RILEY CREEK TO REDUCE THE TRANSPORT OF EXCESS SEDIMENT DOWNSTREAM TO LAKE RILEY. CONSTRUCTION WILL CONSIST OF CLEARING AND GRUBBING, CONSTRUCTION OF ACCESS AND STAGING AREAS, EARTHWORK REPAIRING ERODED BANKS, CONSTRUCTING ROCK RIFFLES, J-HOOKS, REGADING THE CHANNEL, CONSTRUCTION OF A STORM SEWER EXTENSION, PLACEMENT OF RIPRAP, INSTALLATION OF ROCK VANES, CONSTRUCTION OF VEGETATED REINFORCEMENT SOIL SLOPES (VRSS) AND TOE WOOD, AND RESTORATION THROUGH SEEDING AND EROSION CONTROL BLANKET. THE PROJECT IS NOT A PART OF A LARGER COMMON PLAN OF DEVELOPMENT. THE PROJECT AS PROPOSED HAS A TOTAL DISTURBANCE AREA OF 4.282 ACRES. EROSION PREVENTION AND SEDIMENT CONTROL MEASURES ARE REQUIRED TO MINIMIZE SEDIMENT FROM BEING TRANSPORTED INTO THE LAKE RILEY, REFER TO PROJECT DRAWINGS FOR FURTHER DETAILS. (CSW PERMIT PART III.A.1)

**1.1 PROJECT SIZE AND CUMULATIVE IMPERVIOUS SURFACE:**

- THE ANTICIPATED AREA OF DISTURBANCE IS APPROXIMATELY 5.01 ACRES (STAGE 1 = 3.06 ACRES, STAGE 2 = 1.95 ACRES).
- THE TOTAL AREA OF PRE-CONSTRUCTION IMPERVIOUS AREA IS APPROXIMATELY 0.13 ACRES.
- THE TOTAL AREA OF POST-CONSTRUCTION IMPERVIOUS AREA IS APPROXIMATELY 0.05 ACRES.
- THE TOTAL NEW IMPERVIOUS AREA IS APPROXIMATELY -0.08 ACRES.

**1.2 DATES OF CONSTRUCTION:**

- ANTICIPATED START DATE: SEPTEMBER 2021 ANTICIPATED END DATE: JUNE 2022

**1.3 CONTACT INFORMATION:**

OWNER: RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT  
 MAILING ADDRESS: 18681 LAKE DRIVE EAST, CHANNHASSEN, MN. 55317  
 CONTACT PERSON: CLAIRE BLESER TITLE: RPBCWD ADMINISTRATOR  
 PHONE NUMBER: 952-607-6512 EMAIL ADDRESS: cbleser@RPBCWD.ORG  
 ALTERNATE CONTACT PERSON: SCOTT SOBIECH TITLE: DISTRICT ENGINEER  
 PHONE NUMBER: 952-832-2755 EMAIL ADDRESS: ssobiech@BARR.COM

OPERATOR / GENERAL CONTRACTOR (WILL OVERSEE IMPLEMENTATION OF THE SWPPP): TBD

MAILING ADDRESS: TBD  
 CONTACT PERSON: TBD TITLE: TBD  
 PHONE NUMBER: TBD EMAIL ADDRESS: TBD

PARTY RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PERMANENT STORMWATER MANAGEMENT SYSTEM:

BEARPATH GOLF & COUNTRY CLUB  
 MAILING ADDRESS: 18100 BEARPATH TRAIL, EDEN PRAIRIE, MN. 55347  
 CONTACT PERSON: KEVIN CASHMAN  
 PHONE NUMBER: 952-975-0123  
 EMAIL ADDRESS: kcashman@BEARPATHGOLF.COM

**2.0 RECEIVING WATERS:**

WATERS WITHIN ONE MILE (NEAREST STRAIGHT LINE DISTANCE) THAT ARE LIKELY TO RECEIVE STORMWATER RUNOFF FROM THE PROJECT SITE (CSW PERMIT ITEM 5.10) INCLUDE:

NAME OF WATER BODY	TYPE <sup>(1)</sup>	WATER BODY ID <sup>(2)</sup>	SPECIAL WATER? <sup>(3)</sup>	IMPAIRED WATER? <sup>(3)</sup>	PUBLIC WATER WITH WORK IN WATER RESTRICTIONS?
LAKE RILEY	LAKE	27-0132P	NO	YES	NO
RILEY CREEK	CREEK	07020012-855	NO	NO	NO

- TYPE EXAMPLES: DITCH, POND, WETLAND, CALCAREOUS FEN, LAKE, STREAM, RIVER
- WATER BODY IDENTIFICATION (ID) MIGHT NOT BE AVAILABLE FOR ALL WATER BODIES. USE THE SPECIAL AND IMPAIRED WATERS SEARCH TOOL AT: [HTTPS://WWW.PCA.STATE.MN.US/WATER/STORMWATER-SPECIAL-AND-IMPAIRED-WATERS-SEARCH](https://www.pca.state.mn.us/water/stormwater-special-and-impaired-waters-search)
- REFER TO CSW PERMIT SECTION 23. IMPAIRED WATER FOR THE FOLLOWING POLLUTANT(S) OR STRESSOR(S): PHOSPHORUS (NUTRIENT EUTROPHICATION BIOLOGICAL INDICATORS), TURBIDITY, TOTAL SUSPENDED SOLIDS (TSS), DISSOLVED OXYGEN, OR AQUATIC BIOTA (FISH BIOASSESSMENT, AQUATIC PLANT BIOASSESSMENT, AND AQUATIC MACROINVERTEBRATE BIOASSESSMENT)

**2.1 SPECIAL AND IMPAIRED WATERS:** THE MPCA'S SPECIAL AND IMPAIRED WATERS SEARCH TOOL WAS USED TO LOCATE SPECIAL AND IMPAIRED WATERS WITHIN ONE MILE (AERIAL RADIUS MEASUREMENT) OF THE PROJECT SITE. LAKE RILEY AND RILEY CREEK HAVE AN EPA-APPROVED IMPAIRMENT FOR NUTRIENTS, FISHES BIOSASSESSMENTS, MERCURY IN FISH TISSUE, MACROINVERTIBATE BIOSASSESSMENTS AND TURBIDITY. THESE IMPAIRMENTS ARE CONSIDERED CONSTRUCTION RELATED AND DO REQUIRE ADDITIONAL BEST MANAGEMENT PRACTICES (BMPS) OR PLAN REVIEW FOR COMPLIANCE WITH THE GENERAL PERMIT. (CSW PERMIT ITEM 2.7 AND SECTION 23)

ADDITIONAL BMPS OR OTHER SPECIFIC CONSTRUCTION RELATED IMPLEMENTATION ACTIVITIES IDENTIFIED IN AN APPROVED TOTAL MAXIMUM DAILY LOAD (TMDL) INCLUDE NEED TO UPDATE BASED ON TMDL - MIGHT INCLUDE THINGS LIKE IMMEDIATE STABILIZATION OF EXPOSED SOIL AREAS. (CSW PERMIT ITEM 5.19)

**2.2 PUBLIC WATERS WITH WORK IN WATER RESTRICTIONS:** THIS PROJECT DOES NOT INCLUDE WORK IN PUBLIC WATERS. (CSW PERMIT ITEM 5.11)

**2.3 WETLAND IMPACTS:** THIS PROJECT MAY RESULT IN ADVERSE IMPACTS TO WETLANDS, INCLUDING [EXCAVATION, DEGRADATION OF WATER QUALITY, DRAINING, FILLING, PERMANENT INUNDATION OR FLOODING, CONVERSION TO A STORMWATER POND, ETC.] THEREFORE [DESCRIBE MITIGATION MEASURES] TO ADDRESS THE IMPACTS. [PERMITS OR APPROVALS FROM AN OFFICIAL STATE WIDE WETLAND PROGRAM ISSUED SPECIFICALLY FOR THIS PROJECT] ARE ATTACHED FOR REFERENCE. (CSW PERMIT ITEMS 2.4 AND 2.10, AND SECTION 22)

**-OR- 2.3 WETLAND IMPACTS:** THIS PROJECT DOES NOT INCLUDE WETLAND IMPACTS. (CSW PERMIT ITEMS 2.4 AND 2.10, AND SECTION 22)

**2.4 ENVIRONMENTAL REVIEW AND OTHER REQUIRED REVIEWS:** STORMWATER MITIGATION MEASURES ARE NOT REQUIRED AS A RESULT OF AN ENVIRONMENTAL REVIEW (E.G., EAW OR EIS), ENDANGERED OR THREATENED SPECIES REVIEW, ARCHEOLOGICAL SITE REVIEW, OR OTHER LOCAL, STATE, OR FEDERAL REVIEW CONDUCTED FOR THE PROJECT. (CSW PERMIT ITEMS 2.8, 2.9, AND 5.16)

**2.5 KARST AREAS OR DRINKING WATER SUPPLY MANAGEMENT AREAS:** THIS PROJECT DOES NOT INCLUDE ANY KARST OR DRINKING WATER SUPPLY MANAGEMENT AREAS. (CSW PERMIT ITEMS 16.19, 16.20, AND 18.10)

**3.0 PROJECT PLANS AND SPECIFICATIONS:**

**REQUIRED FEATURE**

- PROJECT LOCATION AND CONSTRUCTION LIMITS
- EXISTING AND FINAL GRADES, INCLUDING DRAINAGE AREA BOUNDARIES, DIRECTIONS OF FLOW AND ALL DISCHARGE POINTS WHERE STORMWATER IS LEAVING THE SITE OR ENTERING A SURFACE WATER
- SOIL TYPES AT THE SITE
- LOCATIONS OF IMPERVIOUS SURFACES
- LOCATIONS OF AREAS NOT BE DISTURBED (E.G., BUFFER ZONES, WETLANDS, ETC.)
- LOCATIONS OF AREAS OF STEEP SLOPES
- LOCATIONS OF AREAS WHERE CONSTRUCTION WILL BE PHASED TO MINIMIZE DURATION OF EXPOSED SOILS
- PORTIONS OF THE SITE THAT DRAIN TO A PUBLIC WATER WITH DNR WORK IN WATER RESTRICTIONS FOR FISH SPAWNING TIMEFRAMES
- LOCATIONS OF ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL BMPS AS REQUIRED IN PERMIT SECTIONS 8 THROUGH 10 AND 14 THROUGH 19
- BUFFER ZONES AS REQUIRED IN PERMIT ITEMS 9.17 AND 23.11
- LOCATIONS OF POTENTIAL POLLUTION-GENERATING ACTIVITIES IDENTIFIED IN PERMIT SECTION 12
- STANDARD DETAILS FOR EROSION AND SEDIMENT CONTROL BMPS TO BE INSTALLED AT THE SITE

**SHEET NUMBER**

- G-01
- G-01
- G-03
- C-01, C-02, C-14, C-15
- C-04, C-05, C-06
- C-07, C-09, C-14, C-15
- NA
- NA
- C-01, C-02, C-11, C-12
- C-04, C-05, C-06
- C-07, C-09
- C-03, C-13

**4.0 BEST MANAGEMENT PRACTICES (BMPS):**

**4.1 EROSION PREVENTION PRACTICES:**

- BEFORE LAND DISTURBING ACTIVITIES BEGIN, THE LIMITS OF THE AREAS TO BE DISTURBED DURING CONSTRUCTION WILL BE DELINEATED WITH FLAGS, STAKES, SIGNS, SILT FENCE, ETC.
- TEMPORARY STABILIZATION OF SOILS AND SOIL STOCKPILES: (CSW PERMIT ITEMS 8.4, 8.5, AND 23.9)
  - AREAS OF EXPOSED SOIL WILL BE STABILIZED WITH EROSION CONTROL BLANKET OR EQUIVALENT MEASURES.
  - IF PRESENT, SOIL STOCKPILES WILL BE STABILIZED WITH FAST GROWING COVER CORP, MULCH SUCH AS STRAW MULCH OR EQUIVALENT MEASURES.
  - TEMPORARY STOCKPILES WITHOUT SIGNIFICANT SILT, CLAY, OR ORGANIC COMPONENTS (E.G., CLEAN AGGREGATE STOCKPILES, DEMOLITION CONCRETE STOCKPILES, SAND STOCKPILES) AND THE CONSTRUCTED BASE COMPONENTS OF ROADS, PARKING LOTS, AND SIMILAR SURFACES ARE EXEMPT FROM THESE STABILIZATION REQUIREMENTS.
- STABILIZATION OF DITCH AND SWALE WETTED PERIMETERS: (CSW PERMIT ITEMS 8.6 THROUGH 8.8)
  - IF SOILS WITHIN EXISTING STORMWATER DITCHES OR SWALES ARE DISTURBED, THEY WILL BE STABILIZED WITH [CHANNEL EROSION CONTROL BLANKET, RIPRAP, TURF REINFORCEMENT MAT] OR EQUIVALENT MEASURES.
  - MULCH, HYDROMULCH, TACKIFIER, POLYACRYLAMIDE, OR SIMILAR EROSION PREVENTION PRACTICES WILL NOT BE USED TO STABILIZE ANY PART OF AN EXISTING STORMWATER DITCH OR SWALE WITH A CONTINUOUS SLOPE OF GREATER THAN 2 PERCENT.
  - THE LAST 200 LINEAL FEET OF LENGTH OF THE NORMAL WETTED PERIMETER OF ANY TEMPORARY OR PERMANENT DITCH OR SWALE THAT DRAINS WATER FROM ANY PORTION OF THE CONSTRUCTION SITE, OR DIVERTS WATER AROUND THE SITE, WITHIN 200 LINEAL FEET FROM THE PROPERTY EDGE, OR FROM THE POINT OF DISCHARGE INTO ANY SURFACE WATER WILL BE STABILIZED WITHIN 24 HOURS AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE.
  - STABILIZATION OF THE REMAINING PORTIONS OF ANY TEMPORARY OR PERMANENT DITCHES OR SWALES WILL BE COMPLETED WITHIN 14 CALENDAR DAYS AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE AND CONSTRUCTION IN THAT PORTION OF THE DITCH HAS TEMPORARILY OR PERMANENTLY CEASED.
- ENERGY DISSIPATION AT PIPE OUTLETS: ENERGY DISSIPATION AT PIPE OUTLETS WILL BE PROVIDED WITH ONE OR MORE OF THE FOLLOW METHODS: RIP RAP, SPLASH PADS, GABIONS, OR EQUIVALENT MEASURES. (CSW PERMIT ITEM 8.9)
- EROSION PREVENTION IMPLEMENTATION TIMELINES: (CSW PERMIT ITEMS 5.4, 8.4 THROUGH 8.6, AND 23.9)
  - STABILIZATION OF EXPOSED SOIL AREAS (INCLUDING STOCKPILES) WILL BE INITIATED IMMEDIATELY TO LIMIT SOIL EROSION WHENEVER ANY CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS.
  - IF THE EXPOSED SOIL AREAS DRAIN TO A DISCHARGE POINT THAT IS WITHIN ONE MILE (AERIAL RADIUS MEASUREMENT) OF A SPECIAL OR IMPAIRED WATER (SEE SECTION 2.0), STABILIZATION OF EXPOSED SOIL AREAS (INCLUDING STOCKPILES) WILL BE INITIATED IMMEDIATELY TO LIMIT SOIL EROSION WHENEVER ANY CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 7 CALENDAR DAYS.
  - THE FOLLOWING ACTIVITIES CAN BE TAKEN TO INITIATE STABILIZATION: PREPPING THE SOIL FOR VEGETATIVE OR NON-VEGETATIVE STABILIZATION, APPLYING MULCH OR OTHER NON-VEGETATIVE PRODUCT TO THE EXPOSED SOIL AREA, OR SEEDING OR PLANTING THE EXPOSED AREA.
- ADDITIONAL EROSION PREVENTION MEASURES: THE FOLLOWING ADDITIONAL EROSION PREVENTION METHODS WILL BE IMPLEMENTED AT THE SITE DURING CONSTRUCTION: (CSW PERMIT ITEMS 8.2, 8.3, AND 8.10)
  - CONSTRUCTION PHASING WILL BE UTILIZED TO MINIMIZE THE AREA OF SOIL EXPOSED AT ANY ONE TIME.
  - SOIL DISTURBANCE WILL BE MINIMIZED WHEREVER POSSIBLE TO AID IN EROSION PREVENTION.
  - EXISTING VEGETATION WILL BE PRESERVED WHEREVER POSSIBLE TO LIMIT EXPOSED SOIL AND THUS WILL SERVE AS NATURAL VEGETATIVE BUFFERS.
  - EXPOSED SOIL ON STEEP SLOPES (≤3H:1V) WILL BE STABILIZED USING EROSION CONTROL BLANKETS AND SEEDING.
  - HORIZONTAL SLOPE GRADING WILL BE UTILIZED TO MINIMIZE EROSION POTENTIAL.
  - TERRACING WILL BE USED TO MINIMIZE EROSION POTENTIAL.

**4.2 SEDIMENT CONTROL PRACTICES:**

- DOWNGRADIENT PERIMETER CONTROLS: (CSW PERMIT ITEMS 9.2 THROUGH 9.6)
  - SEDIMENT CONTROL PRACTICES WILL BE ESTABLISHED ON ALL DOWNGRADIENT PERIMETERS AND LOCATED UPGRADIENT OF ANY BUFFER ZONES. PERIMETER SEDIMENT CONTROLS WILL INCLUDE: [SILT FENCE, SEDIMENT CONTROL LOGS / BIOROLLS (FILLED WITH COMPOST, WOOD CHIPS, ROCK, ETC.), VEGETATIVE BUFFERS (RETAIN EXISTING VEGETATION WHERE POSSIBLE) OR EQUIVALENT MEASURES.
  - PERIMETER SEDIMENT CONTROL PRACTICES MUST BE INSTALLED BEFORE ANY UPGRADIENT LAND-DISTURBING ACTIVITIES BEGIN AND REMAIN IN PLACE UNTIL PERMANENT COVER HAS BEEN ESTABLISHED.
  - IF SEDIMENT CONTROL PRACTICES HAVE BEEN ADJUSTED OR REMOVED TO ACCOMMODATE SHORT-TERM ACTIVITIES (SUCH AS CLEARING, GRUBBING, OR PASSAGE OF VEHICLES), THE CONTROLS MUST BE RE-INSTALLED IMMEDIATELY AFTER THE SHORT-TERM ACTIVITY HAS BEEN COMPLETED. SEDIMENT CONTROL PRACTICES MUST BE RE-INSTALLED BEFORE THE NEXT PRECIPITATION EVENT, EVEN IF THE SHORT-TERM ACTIVITY IS NOT COMPLETE.
  - IF THE DOWNGRADIENT SEDIMENT CONTROLS ARE OVERLOADED (BASED ON FREQUENT FAILURE OR EXCESSIVE MAINTENANCE REQUIREMENT), INSTALL ADDITIONAL UPGRADIENT SEDIMENT CONTROL PRACTICES OR REDUNDANT BMPS TO ELIMINATE THE OVERLOADING AND AMEND THE SWPPP TO IDENTIFY THESE ADDITIONAL PRACTICES.
- SOIL STOCKPILE PERIMETER CONTROLS: TEMPORARY SOIL STOCKPILES WILL BE SURROUNDED BY: SEDIMENT CONTROL LOGS / BIOROLLS (FILLED WITH COMPOST, WOOD CHIPS, ROCK, ETC.) OR EQUIVALENT MEASURES, AND SHALL NOT BE PLACED IN ANY NATURAL BUFFERS OR SURFACE WATERS. (CSW PERMIT ITEMS 9.9 AND 9.10)
- STORM DRAIN INLET PROTECTION: (CSW PERMIT ITEMS 9.7 AND 9.8)
  - INLET PROTECTION BMPS WILL BE INSTALLED AROUND ALL STORM DRAIN INLETS DOWNGRADIENT OF CONSTRUCTION ACTIVITIES.
  - STORM DRAIN INLETS WILL BE PROTECTED UNTIL ALL SOURCES WITH POTENTIAL FOR DISCHARGING TO THE INLET HAVE BEEN STABILIZED.
  - INLET PROTECTION BMPS WILL BE: [SEDIMENT CONTROL LOG, FILTER SACK, ROCK WITH FILTER FABRIC, FILTER FENCE BOX] OR EQUIVALENT MEASURES.
- VEHICLE TRACKING BMPS: (CSW PERMIT ITEMS 9.11 AND 9.12)
  - VEHICLE TRACKING BMPS WILL BE INSTALLED TO MINIMIZE THE TRACKING OUT OF SEDIMENT FROM THE CONSTRUCTION AREA AND WILL INCLUDE: ROCK PADS OR AN EQUIVALENT SYSTEM.
  - IF SUCH VEHICLE TRACKING BMPS ARE NOT ADEQUATE TO PREVENT SEDIMENT FROM BEING TRACKED ONTO THE PAVED ROAD, STREET SWEEPING WILL ALSO BE EMPLOYED. SEDIMENT WILL BE REMOVED BY SWEEPING WITHIN 24 HOURS.
- PROTECTION OF INFILTRATION AREAS: IF NECESSARY, ADDITIONAL SEDIMENT CONTROLS (E.G., DIVERSION BERMS) WILL BE INSTALLED TO KEEP RUNOFF AWAY FROM PLANNED INFILTRATION AREAS WHEN EXCAVATED PRIOR TO ESTABLISHING PERMANENT COVER WITHIN THE CONTRIBUTING DRAINAGE AREA. (CSW PERMIT ITEMS 16.4 AND 16.5)
- MINIMIZATION OF SOIL COMPACTION AND PRESERVATION OF TOPSOIL: SOIL COMPACTION WILL BE MINIMIZED AND TOPSOIL WILL BE PRESERVED WHERE POSSIBLE. (CSW PERMIT ITEMS 5.24, 9.14, AND 9.15)
- PRIORITIZATION OF ONSITE INFILTRATION AND SEDIMENT REMOVAL: (CSW PERMIT ITEM 9.16)
  - PRIOR TO OFFSITE DISCHARGE, INFILTRATION AND SEDIMENT REMOVAL WILL BE IMPLEMENTED ONSITE WHERE POSSIBLE.
  - DISCHARGES FROM BMPS WILL BE DIRECTED TO VEGETATED AREAS OF THE SITE (INCLUDING ANY NATURAL BUFFERS) IN ORDER TO INCREASE SEDIMENT REMOVAL AND MAXIMIZE STORMWATER INFILTRATION. IF EROSION IS NOTED TO OCCUR AS THE RESULT OF SUCH A DISCHARGE, VELOCITY DISSIPATION BMPS WILL BE CONSIDERED AND INSTALLED AS NECESSARY TO PREVENT EROSION.
- BUFFER ZONE OR REDUNDANT SEDIMENT CONTROLS TO PROTECT SURFACE WATERS: (CSW PERMIT ITEM 9.17)
  - A 50-FOOT NATURAL BUFFER WILL BE PRESERVED IN CONSTRUCTION AREAS DISCHARGING TO A NON-SPECIAL/NON-IMPAIRED SURFACE WATER OR WETLAND. IF A NON-SPECIAL/NON-IMPAIRED SURFACE WATER OR WETLAND IS LOCATED WITHIN 50 FEET OF THE PROJECT'S EARTH DISTURBANCES AND STORMWATER FLOWS TO THE SURFACE WATER, OR WHEN A BUFFER IS INFEASIBLE, REDUNDANT SEDIMENT CONTROLS WILL BE PROVIDED.
  - A 100-FOOT NATURAL BUFFER WILL BE PRESERVED IN CONSTRUCTION AREAS DISCHARGING TO A SPECIAL OR IMPAIRED SURFACE WATER. IF A SPECIAL OR IMPAIRED SURFACE WATER IS LOCATED WITHIN 100 FEET OF THE PROJECT'S EARTH DISTURBANCES AND STORMWATER FLOWS TO THE SURFACE WATER, OR WHEN A BUFFER IS INFEASIBLE, REDUNDANT SEDIMENT CONTROLS WILL BE PROVIDED.
  - REDUNDANT PERIMETER CONTROLS WILL BE INSTALLED AT LEAST 5 FEET APART UNLESS LIMITED BY LACK OF AVAILABLE SPACE.
- SEDIMENTATION TREATMENT CHEMICALS: NOT APPLICABLE; USE OF SEDIMENTATION TREATMENT CHEMICALS (E.G., POLYMERS, FLOCCULANTS, ETC.) IS NOT ANTICIPATED AS PART OF THE PROJECT. (CSW PERMIT ITEMS 5.22 AND 9.18)
- TEMPORARY SEDIMENT BASIN(S): THE PROJECT WILL NOT INCLUDE 10 OR MORE ACRES OF DISTURBED SOIL DRAINING TO A COMMON LOCATION OR 5 OR MORE ACRES DRAINING TO A COMMON LOCATION WITHIN 1 MILE OR A SPECIAL OR IMPAIRED WATER THEREFORE TEMPORARY SEDIMENT BASINS ARE NOT REQUIRED. (CSW PERMIT ITEMS 5.6, 9.13, AND 23.10 AND SECTION 14)

**4.3 DEWATERING AND BASIN DRAINING:** NO DEWATERING OR BASIN DRAINING WILL OCCUR AS PART OF THIS PROJECT. (CSW PERMIT SECTION 10 AND ITEM 10.5)

**4.4 BMP DESIGN FACTORS:** THE FOLLOWING BMP DESIGN FACTORS HAVE BEEN CONSIDERED IN DESIGNING THE TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL BMPS:

- EXPECTED AMOUNT, FREQUENCY, INTENSITY, AND DURATION OF PRECIPITATION:
- NATURE OF STORMWATER RUNOFF AND RUN-ON AT THE SITE, INCLUDING FACTORS SUCH AS EXPECTED FLOW FROM IMPERVIOUS SURFACES, SLOPES, AND SITE DRAINAGE FEATURES:
- STORMWATER VOLUME, VELOCITY, AND PEAK FLOW RATES TO MINIMIZE DISCHARGE OF POLLUTANTS IN STORMWATER AND TO MINIMIZE CHANNEL AND STREAMBANK EROSION AND SCOUR IN THE IMMEDIATE VICINITY OF DISCHARGE POINTS:
- RANGE OF SOIL PARTICLE SIZES EXPECTED TO BE PRESENT:

**4.5 BMP QUANTITIES:** ANTICIPATED EROSION PREVENTION AND SEDIMENT CONTROL BMP QUANTITIES NEEDED FOR THE LIFE OF THE PROJECT: ARE INCLUDED IN THE BID DOCUMENTS

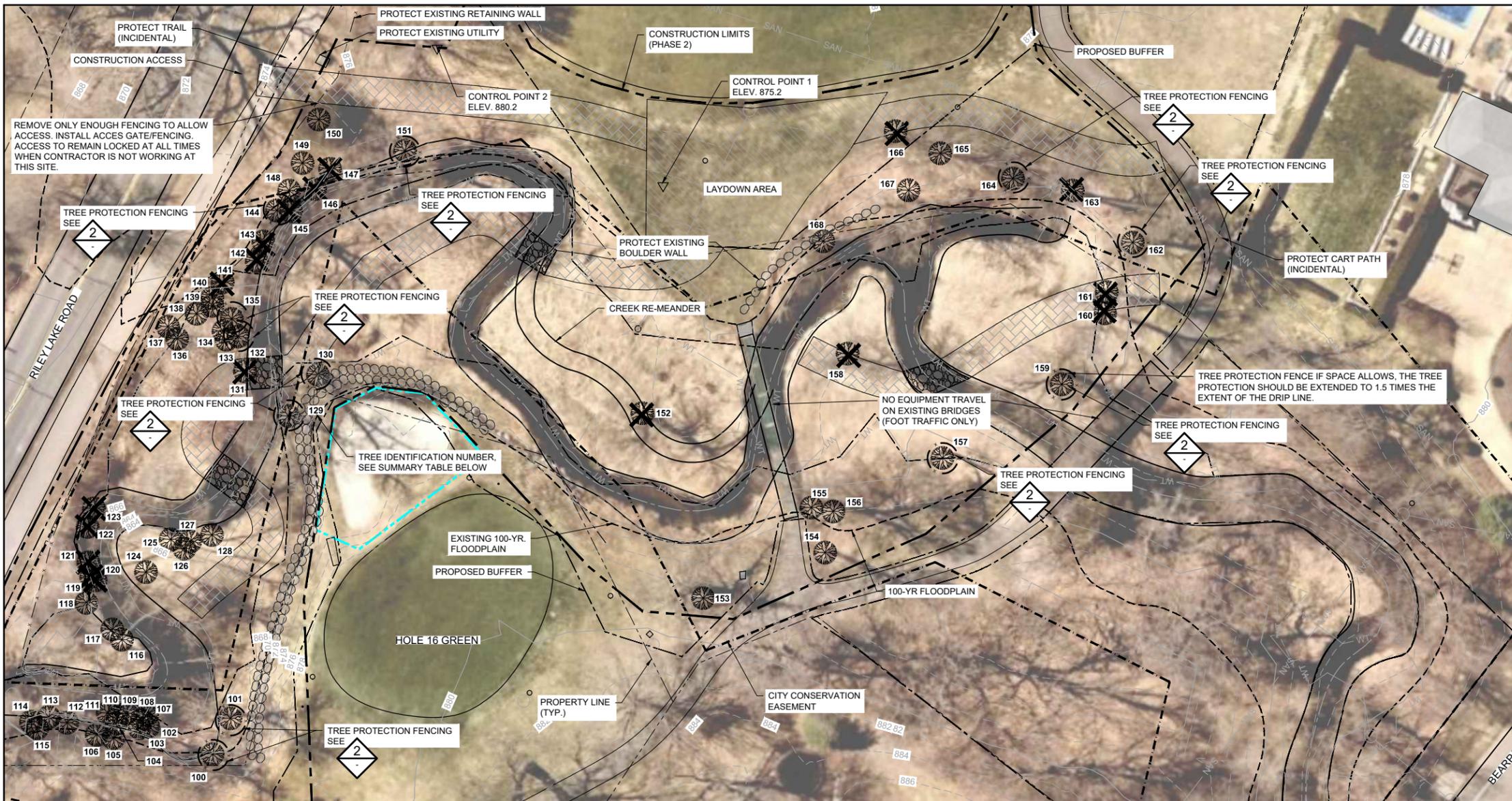
(SEE PAGE 2 OF 2)

ISSUED FOR PERMITTING  
NOT FOR CONSTRUCTION

CADD USER: ERIC P. FITZGERALD FILE: MIDDLE RILEY STREAM 23270053.14.MXD DESIGN: 23270053.14\_G-02\_SWPPP.DWG PLOT SCALE: 1:2 PLOT DATE: 03/12/2021 9:29 AM

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.		CLIENT BID CONSTRUCTION PERMITTING	07/15/20 08/06/20 03/12/21	A B C 0 1 2 3	 Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435  Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com	Scale AS SHOWN  Date 03/12/2021  Drawn EPF  Checked SAB2  Designed BARR  Approved JCO	MIDDLE RILEY CREEK STABILIZATION & BEARPATH GOLF COURSE RENOVATION  STORMWATER POLLUTION PREVENTION PLAN (SWPPP)	BARR PROJECT No. 23/27-0053.14  CLIENT PROJECT No.  DWG. No. G-02  REV. No. C
NO. BY CHK. APP. DATE REVISION DESCRIPTION	PRINTED NAME JESSICA OLSON  SIGNATURE DATE: 03/12/2021 LICENSE # 43102	RELEASED TO/FOR DATE RELEASED						





**SYMBOL AND PATTERN LEGEND**

---	EXISTING 10' CONTOUR
---	EXISTING 2' CONTOUR
SS	EXISTING STORM SEWER
SAN	EXISTING SANITARY SEWER
WT	EXISTING WETLAND DELINEATION
---	EXISTING 100-YR FLOODPLAIN
---	CITY CONSERVATION EASEMENT
---	CONSTRUCTION LIMITS (PHASE 1)
---	CONSTRUCTION LIMITS (PHASE 2)
---	PROPOSED BUFFER
⊗	EXISTING TREE TO REMAIN, PROTECT IN PLACE
⊗	REMOVE EXISTING CONIFEROUS OR DECIDUOUS TREE
⊗	TREE PROTECTION FENCE, SEE SHEET G-09
101	TREE IDENTIFICATION NUMBER, SEE TABLE FOR TREE SURVEY AND TREE REMOVAL SUMMARY

**OAK WILT**  
 TO PROTECT AGAINST OAK WILT ALL PRUNING, ROOT CUTTING, OR DAMAGE TO THE OAK TREES SHALL BE AVOIDED BETWEEN APRIL 1ST AND JULY 31ST. ANY WOUNDING OR ROOT CUTTING WILL REQUIRE THE SEALING OF ALL WOUNDS WITH AN APPROVED PAINT OR SHELLAC AND AN INSPECTION BY THE CITY FORESTER. EXPOSED, CUT, OR DAMAGED ROOTS MUST BE IMMEDIATELY COVERED WITH SOIL OR SEALED AND INSPECTED BY THE CITY FORESTER.  
 CONTRACTOR SHALL CONTACT THE CITY FORESTER, PRIOR TO DEMOLITION OR OTHER LAND DISTURBANCE ASSOCIATED WITH SITE CONSTRUCTION, TO VERIFY TREE PROTECTION MEASURES.

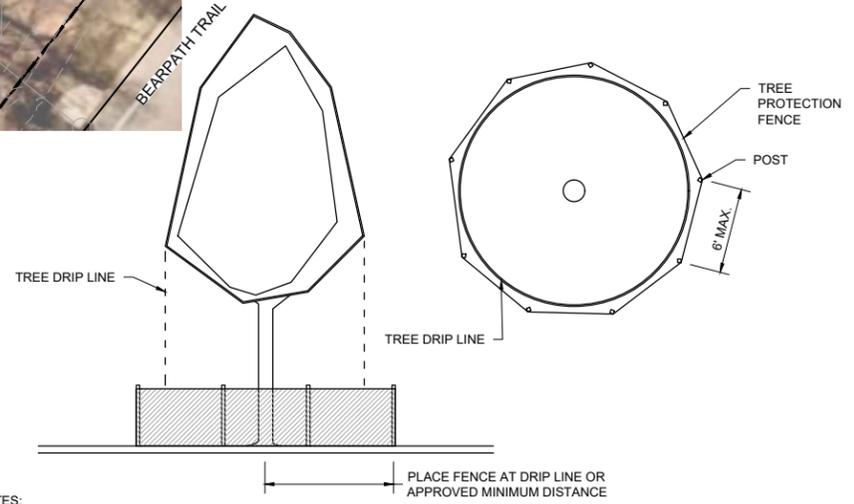
**1 PLAN: TREE PROTECTION AND REMOVALS**  
 SCALE IN FEET  
 0 20 40

**TREE SURVEY AND REMOVAL TABLE - SOUTH**

TREE ID #	TREE SPECIES	DBH (INCHES)	SGN.	TREE HEALTH	REMOVED
100	BASSWOOD	11		HEALTHY	NO
101	RED ASH	16	S	HEALTHY	NO
102	ASH	7		HEALTHY	NO
103	BASSWOOD	12	S	HEALTHY	NO
104	ASH	6		HEALTHY	NO
105	ASH	13	S	HEALTHY	NO
106	ASH	15	S	HEALTHY	NO
107	ASH	3		DEF.	YES
108	BASSWOOD	8		HEALTHY	NO
109	ASH	8		DEF.	NO
110	ASH	7		HEALTHY	NO
111	ASH	4		HEALTHY	NO
112	ASH	14	S	HEALTHY	NO
113	MAPLE	7		HEALTHY	NO
114	ASH	10		HEALTHY	NO
115	MAPLE	5		HEALTHY	NO
116	ASH	10		HEALTHY	NO
117	ASH	8		HEALTHY	NO
118	BASSWOOD	10		HEALTHY	NO
119	ASH	3		HEALTHY	YES
120	ASH	5		HEALTHY	YES
121	ASH	4		HEALTHY	YES
122	UNKNOWN	6		DEAD	YES

NOTE: SIGNIFICANT TREES DENOTED BY 'S'

123	BUCKTHORN	9		DEAD	YES
124	ASH	10		HEALTHY	NO
125	ASH	15	S	HEALTHY	NO
126	ASH	8		HEALTHY	NO
127	ASH	5		HEALTHY	NO
128	ASH	12	S	HEALTHY	NO
129	OAK	13	S	HEALTHY	NO
130	ASH	27	S	HEALTHY	NO
131	ASH	8		HEALTHY	NO
132	ASH	11		HEALTHY	YES
133	ELM	6		HEALTHY	NO
134	ELM	6		HEALTHY	NO
135	FOX GLOVER	15		HEALTHY	NO
136	FOX GLOVER	8		HEALTHY	NO
137	BOX ELDER	7		HEALTHY	NO
138	ASH	0		HEALTHY	NO
139	MAPLE	3		HEALTHY	NO
140	ASH	8		HEALTHY	NO
141	ASH	4		HEALTHY	YES
142	ASH	4		HEALTHY	YES
143	ASH	6		HEALTHY	YES
144	BASSWOOD	26	S	HEALTHY	NO
145	MAPLE	4		HEALTHY	YES
146	ASH	4		HEALTHY	YES
147	OAK	6		HEALTHY	YES
148	ASH	9		HEALTHY	NO
149	ASH	14	S	HEALTHY	NO
150	OAK	6		HEALTHY	NO
151	MAPLE	27	S	HEALTHY	NO
152	ASH	25	S	HEALTHY	YES
153	RED OAK	30	S	HEALTHY	NO
154	SUGAR MAPLE	17	S	HEALTHY	NO
155	MAPLE	13	S	HEALTHY	NO
156	MAPLE	15	S	UNHEALTHY	NO
157	ASH	12	S	HEALTHY	NO
158	ASH	13	S	HEALTHY	YES
159	MAPLE	16	S	HEALTHY	NO
160	ELM	16		HEALTHY	YES
161	RED ASH	16	S	HEALTHY	YES
162	MAPLE	22	S	HEALTHY	NO
163	SYCAMORE	20	S	HEALTHY	YES
164	CHERRY	12	S	HEALTHY	NO
165	RED ASH	14	S	HEALTHY	NO
166	MAPLE	13	S	UNHEALTHY	YES
167	BOX ELDER	16		HEALTHY	NO
168	BASSWOOD	15	S	HEALTHY	NO



- NOTES:
- TREE PROTECTION FENCING SHALL BE INSTALLED ACCORDING TO PLAN PRIOR TO DEMOLITION OR OTHER SITE WORK. ANY RELOCATION OF THE TREE PROTECTION FENCING TO BE APPROVED BY CITY FORESTER. TREE PROTECTION FENCING SHALL BE MAINTAINED FOR THE DURATION OF THE CONSTRUCTION PROCESS.
  - CONSTRUCTION MATERIALS, STOCKPILES, EQUIPMENT, VEHICLES, AND TEMPORARY FACILITIES SHALL NOT BE STORED OR OPERATED WITHIN THE TREE PROTECTION ZONE.
  - ROOTS OUTSIDE OF THE TREE PROTECTION ZONE EXPOSED OR DAMAGED DURING EXCAVATION OR OTHER CONSTRUCTION ACTIVITY SHALL BE CLEANLY CUT AS DIRECTED BY THE CITY FORESTER.
  - ADDITIONAL TREE PROTECTION MEASURES MAY BE REQUIRED.

**2 DETAIL: TREE PROTECTION FENCING**  
 NOT TO SCALE  
 ISSUED FOR PERMITTING  
 NOT FOR CONSTRUCTION

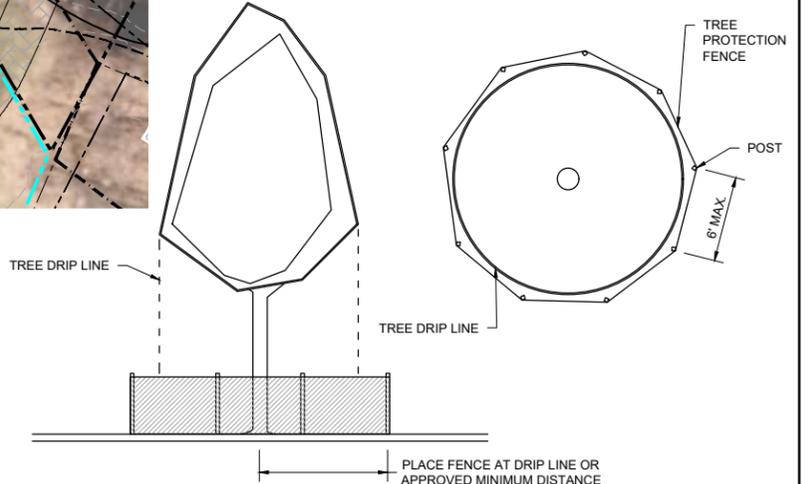
CADD USER: Eric P. Fitzgerald FILE: M:\DESIGN\23270053\_14\MIDDLE RILEY CREEK STABILIZATION\DWG\G-04\_TREE INVENTORY.DWG PLOT SCALE: 1:2 PLOT DATE: 3/12/2021 9:35 AM  
 BARR\AUCAD\2011\AUCAD 2011 Support\Temp\Barr\_2011\_Template.dwg Plot at 1:10/06/2010 14:09:50

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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. PRINTED NAME: JESSICA OLSON SIGNATURE: _____ DATE: 03/12/2021 LICENSE # 43102		CLIENT: BARR ENGINEERING CO. BID: 03/02/20 CONSTRUCTION PERMITTING: 03/12/21 RELEASED TO/FOR: A B C 0 1 2 3 DATE RELEASED: _____		Project Office: <b>BARR</b> ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435 Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com		Scale: AS SHOWN Date: 03/12/2021 Drawn: EPF Checked: SAB2 Designed: BARR Approved: JCO		<b>MIDDLE RILEY CREEK STABILIZATION &amp; BEARPATH GOLF COURSE RENOVATION</b> <b>TREE PROTECTION AND REMOVALS PLAN SOUTH</b>		BARR PROJECT No. 23/27-0053.14 CLIENT PROJECT No. _____ DWG. No. G-04 REV. No. B	
NO. BY CHK. APP. DATE REVISION DESCRIPTION		B EPF SAB2 JCO 03/12/2021 ISSUED FOR PERMITTING A CWF SAB2 JCO 07/15/2020 60% ISSUED FOR REVIEW		<b>RILEY PURGATORY BLUFF CREEK WD</b> CHANHASSEN, MN		<b>TREE PROTECTION AND REMOVALS PLAN SOUTH</b>		BARR PROJECT No. 23/27-0053.14 CLIENT PROJECT No. _____ DWG. No. G-04 REV. No. B			



**SYMBOL AND PATTERN LEGEND**

	EXISTING 10' CONTOUR
	EXISTING 2' CONTOUR
	EXISTING STORM SEWER
	EXISTING SANITARY SEWER
	EXISTING WETLAND DELINEATION
	EXISTING 100-YR FLOODPLAIN
	CITY CONSERVATION EASEMENT
	CONSTRUCTION LIMITS (PHASE 1)
	CONSTRUCTION LIMITS (PHASE 2)
	PROPOSED BUFFER
	EXISTING TREE TO REMAIN, PROTECT IN PLACE
	REMOVE EXISTING CONIFEROUS OR DECIDUOUS TREE
	TREE PROTECTION FENCE, SEE SHEET G-09
101	TREE IDENTIFICATION NUMBER, SEE TABLE FOR TREE SURVEY AND TREE REMOVAL SUMMARY



- NOTES:**
- TREE PROTECTION FENCING SHALL BE INSTALLED ACCORDING TO PLAN PRIOR TO DEMOLITION OR OTHER SITE WORK. ANY RELOCATION OF THE TREE PROTECTION FENCING TO BE APPROVED BY CITY FORESTER. TREE PROTECTION FENCING SHALL BE MAINTAINED FOR THE DURATION OF THE CONSTRUCTION PROCESS.
  - CONSTRUCTION MATERIALS, STOCKPILES, EQUIPMENT, VEHICLES, AND TEMPORARY FACILITIES SHALL NOT BE STORED OR OPERATED WITHIN THE TREE PROTECTION ZONE.
  - ROOTS OUTSIDE OF THE TREE PROTECTION ZONE EXPOSED OR DAMAGED DURING EXCAVATION OR OTHER CONSTRUCTION ACTIVITY SHALL BE CLEANLY CUT AS DIRECTED BY THE CITY FORESTER.
  - ADDITIONAL TREE PROTECTION MEASURES MAY BE REQUIRED.

**TREE SURVEY AND REMOVAL TABLE - NORTH**

TREE ID #	TREE SPECIES	DBH (INCHES)	SKGN.	TREE HEALTH	REMOVED
200	ASH	21	S	HEALTHY	NO
201	ASH	14	S	UNHEALTHY	NO
202	ELM	16		HEALTHY	NO
203	ASH	16	S	HEALTHY	NO
204	BASSWOOD	15	S	HEALTHY	NO
205	ASH	6		HEALTHY	NO
206	BASSWOOD	7.4		HEALTHY	NO
207	ASH	4		HEALTHY	NO
208	ELM	16		HEALTHY	NO
209	DCX.C.DDR	4		HEALTHY	NO
210	ASH	7		HEALTHY	NO
211	ASH	7		HEALTHY	NO
212	OAK	6		UNHEALTHY	NO
213	ASH	7.2		HEALTHY	NO
214	BASSWOOD	8		HEALTHY	NO
215	ASH	12	S	HEALTHY	NO
216	ASH	14	S	HEALTHY	NO
217	ASH	4		HEALTHY	NO
218	ASH	6		HEALTHY	NO
219	WILLOW	5		HEALTHY	NO
220	OAK	9		HEALTHY	NO

NOTE: SIGNIFICANT TREES DENOTED BY 'S'

221	WILLOW	9		HEALTHY	NO
222	WILLOW	8		HEALTHY	NO
223	BASSWOOD	11		HEALTHY	NO
224	ASH	8		HEALTHY	NO
225	ASH	6		DEAD	NO
226	ASH	8		DEAD	NO
227	ASH	10		HEALTHY	NO
228	ASH	10		HEALTHY	NO
229	ASH	10		HEALTHY	NO
230	RED OAK	10 (2)		HEALTHY	NO
231	ASH	14	S	HEALTHY	NO
232	BASSWOOD	14	S	HEALTHY	NO
233	ASH	11		HEALTHY	NO
234	BASSWOOD	12	S	HEALTHY	NO
235	BASSWOOD	8		HEALTHY	NO
236	BASSWOOD	8		HEALTHY	NO
237	OAK	24	S	HEALTHY	NO
238	ELM	16		HEALTHY	NO



**OAK WILT**  
 TO PROTECT AGAINST OAK WILT ALL PRUNING, ROOT CUTTING, OR DAMAGE TO THE OAK TREES SHALL BE AVOIDED BETWEEN APRIL 1ST AND JULY 31ST. ANY WOUNDING OR ROOT CUTTING WILL REQUIRE THE SEALING OF ALL WOUNDS WITH AN APPROVED PAINT OR SHELLAC AND AN INSPECTION BY THE CITY FORESTER. EXPOSED, CUT, OR DAMAGED ROOTS MUST BE IMMEDIATELY COVERED WITH SOIL OR SEALED AND INSPECTED BY THE CITY FORESTER.  
 CONTRACTOR SHALL CONTACT THE CITY FORESTER, PRIOR TO DEMOLITION OR OTHER LAND DISTURBANCE ASSOCIATED WITH SITE CONSTRUCTION, TO VERIFY TREE PROTECTION MEASURES.

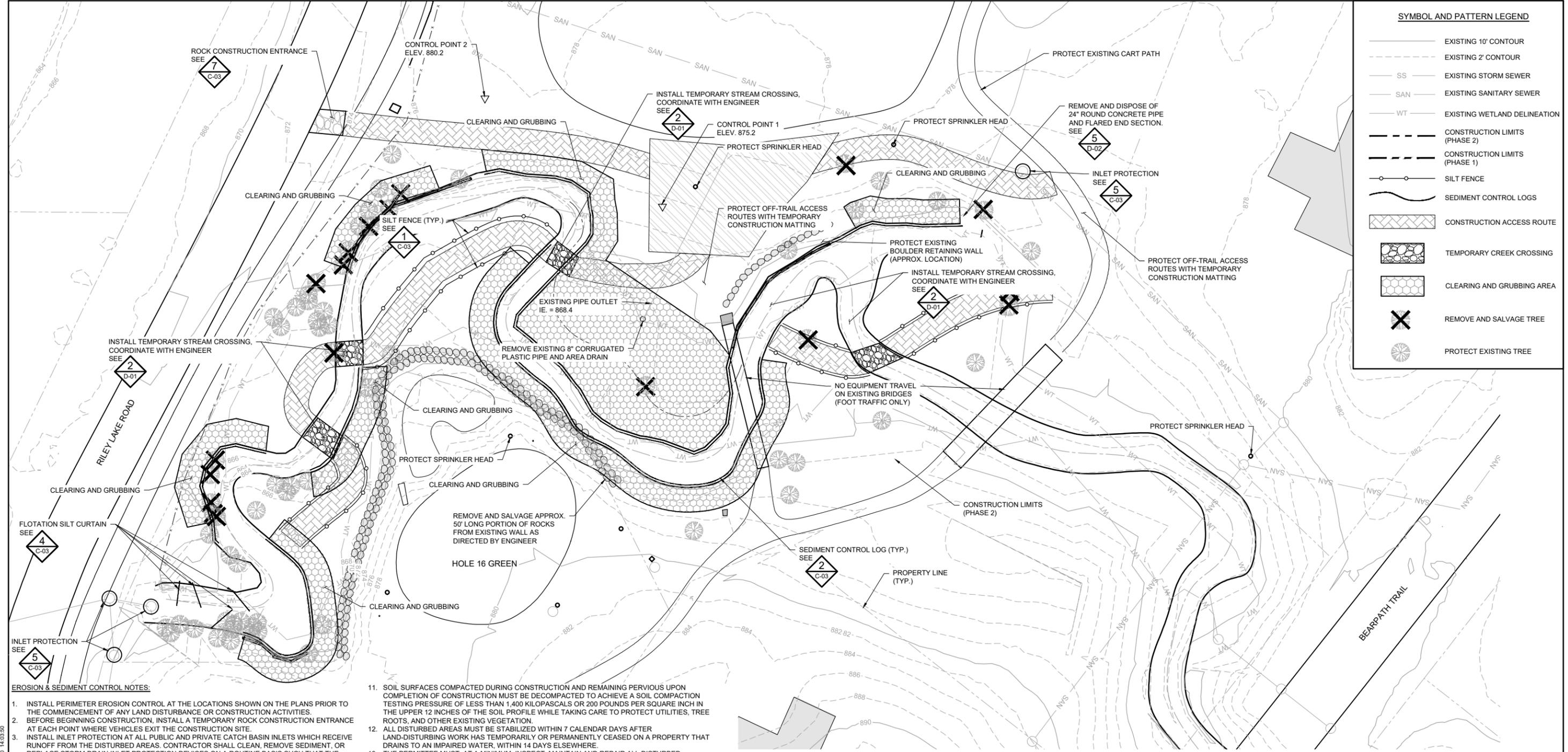
**2 DETAIL: TREE PROTECTION FENCING**  
 NOT TO SCALE

ISSUED FOR PERMITTING  
 NOT FOR CONSTRUCTION

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NO. BY CHK. APP. DATE REVISION DESCRIPTION											
B	EPF	SAB2	JCO	03/12/2021	ISSUED FOR PERMITTING						
A	CWF	SAB2	JCO	07/15/2020	60% ISSUED FOR REVIEW						

CADD USER: Eric P. Fitzgerald FILE: M:\DESIGN\23270053.MIDDLE RILEY CREEK STABILIZATION.DWG PLOT SCALE: 1:2 PLOT DATE: 4/23/2021 9:47 AM  
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CADD USER: Eric P. Fitzgerald FILE: M:\DESIGN\23270053\_1\MIDDLE RILEY CREEK STABILIZATION PHASE 1\_C-01\_EROSION CONTROL PLAN.DWG PLOT SCALE: 1:2 PLOT DATE: 4/23/2021 8:13 AM  
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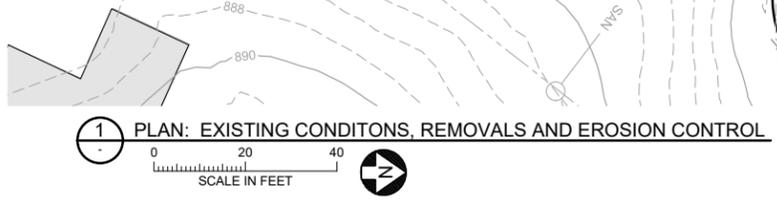


SYMBOL AND PATTERN LEGEND	
	EXISTING 10' CONTOUR
	EXISTING 2' CONTOUR
	EXISTING STORM SEWER
	EXISTING SANITARY SEWER
	EXISTING WETLAND DELINEATION
	CONSTRUCTION LIMITS (PHASE 2)
	CONSTRUCTION LIMITS (PHASE 1)
	SILT FENCE
	SEDIMENT CONTROL LOGS
	CONSTRUCTION ACCESS ROUTE
	TEMPORARY CREEK CROSSING
	CLEARING AND GRUBBING AREA
	REMOVE AND SALVAGE TREE
	PROTECT EXISTING TREE

**EROSION & SEDIMENT CONTROL NOTES:**

- INSTALL PERIMETER EROSION CONTROL AT THE LOCATIONS SHOWN ON THE PLANS PRIOR TO THE COMMENCEMENT OF ANY LAND DISTURBANCE OR CONSTRUCTION ACTIVITIES.
- BEFORE BEGINNING CONSTRUCTION, INSTALL A TEMPORARY ROCK CONSTRUCTION ENTRANCE AT EACH POINT WHERE VEHICLES EXIT THE CONSTRUCTION SITE.
- INSTALL INLET PROTECTION AT ALL PUBLIC AND PRIVATE CATCH BASIN INLETS WHICH RECEIVE RUNOFF FROM THE DISTURBED AREAS. CONTRACTOR SHALL CLEAN, REMOVE SEDIMENT, OR REPLACE STORM DRAIN INLET PROTECTION DEVICES ON A ROUTINE BASIS SUCH THAT THE DEVICES ARE FULLY FUNCTIONAL FOR THE NEXT RAIN EVENT. SEDIMENT DEPOSITED IN AND/OR PLUGGING DRAINAGE SYSTEMS IS THE RESPONSIBILITY OF THE CONTRACTOR. HAY BALES OR FILTER FABRIC WRAPPED GRATES ARE NOT ALLOWED FOR INLET PROTECTION. LOCATE SOIL OR DIRT STOCKPILES NO LESS THAN 25 FEET FROM ANY PUBLIC OR PRIVATE ROADWAY OR DRAINAGE CHANNEL. IF REMAINING FOR MORE THAN SEVEN DAYS, STABILIZE THE STOCKPILES BY MULCHING, VEGETATIVE COVER, TARPS, OR OTHER MEANS. CONTROL EROSION FROM ALL STOCKPILES BY PLACING SILT BARRIERS AROUND THE PILES. TEMPORARY STOCKPILES LOCATED ON PAVED SURFACES MUST BE NO LESS THAN TWO FEET FROM THE DRAINAGE/GUTTER LINE AND SHALL BE COVERED IF LEFT MORE THAN 24 HOURS.
- NATURAL TOPOGRAPHY AND SOIL CONDITIONS MUST BE PROTECTED, INCLUDING RETENTION ONSITE OF NATIVE TOPSOIL TO THE GREATEST EXTENT POSSIBLE.
- ADDITIONAL MEASURES, SUCH AS HYDRAULIC MULCHING AND OTHER PRACTICES AS SPECIFIED BY THE DISTRICT MUST BE USED ON SLOPES OF 3:1 (H:V) OR STEEPER TO PROVIDE ADEQUATE STABILIZATION.
- FINAL SITE STABILIZATION MEASURES MUST SPECIFY THAT AT LEAST SIX INCHES OF TOPSOIL OR ORGANIC MATTER BE SPREAD AND INCORPORATED INTO THE UNDERLYING SOIL DURING FINAL SITE TREATMENT WHEREVER TOPSOIL HAS BEEN REMOVED.
- CONSTRUCTION SITE WASTE SUCH AS DISCARDED BUILDING MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICALS, LITTER AND SANITARY WASTE MUST BE PROPERLY MANAGED.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPs MUST BE MAINTAINED UNTIL COMPLETION OF CONSTRUCTION AND VEGETATION IS ESTABLISHED SUFFICIENTLY TO ENSURE STABILITY OF THE SITE. AS DETERMINED BY THE DISTRICT.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPs MUST BE REMOVED UPON FINAL STABILIZATION.

- SOIL SURFACES COMPACTED DURING CONSTRUCTION AND REMAINING PERVIOUS UPON COMPLETION OF CONSTRUCTION MUST BE DECOMPACTED TO ACHIEVE A SOIL COMPACTION TESTING PRESSURE OF LESS THAN 1,400 KILOPASCALS OR 200 POUNDS PER SQUARE INCH IN THE UPPER 12 INCHES OF THE SOIL PROFILE WHILE TAKING CARE TO PROTECT UTILITIES, TREE ROOTS, AND OTHER EXISTING VEGETATION.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 7 CALENDAR DAYS AFTER LAND-DISTURBING WORK HAS TEMPORARILY OR PERMANENTLY CEASED ON A PROPERTY THAT DRAINS TO AN IMPAIRED WATER, WITHIN 14 DAYS ELSEWHERE.
- THE PERMITTEE MUST, AT A MINIMUM, INSPECT, MAINTAIN AND REPAIR ALL DISTURBED SURFACES AND ALL EROSION AND SEDIMENT CONTROL FACILITIES AND SOIL STABILIZATION MEASURES EVERY DAY WORK IS PERFORMED ON THE SITE AND AT LEAST WEEKLY UNTIL LAND-DISTURBING ACTIVITY HAS CEASED. THEREAFTER, THE PERMITTEE MUST PERFORM THESE RESPONSIBILITIES AT LEAST WEEKLY UNTIL VEGETATIVE COVER IS ESTABLISHED. THE PERMITTEE WILL MAINTAIN A LOG OF ACTIVITIES UNDER THIS SECTION FOR INSPECTION BY THE DISTRICT ON REQUEST.
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- FLOW IN RILEY CREEK WILL BE PASSED AROUND THE ACTIVE WORK AREA. CONTRACTOR IS RESPONSIBLE FOR CONTROL OF WATER TO MANAGE WATER FLOW AND LEVELS AS NECESSARY, REFER TO SPECIFICATIONS.
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**1 PLAN: EXISTING CONDITIONS, REMOVALS AND EROSION CONTROL**

**ISSUED FOR PERMITTING  
NOT FOR CONSTRUCTION**

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
C	EPF	SAB2	JCO	03/12/2021	ISSUED FOR PERMITTING
B	EPF	SAB2	JCO	08/06/2020	65% ISSUED FOR REVIEW
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PRINTED NAME: JESSICA OLSON  
SIGNATURE: \_\_\_\_\_  
DATE: 03/12/2021 LICENSE # 43102

CLIENT	DATE	STATUS
BARR	07/15/20	08/06/20
CONSTRUCTION		
PERMITTING		03/12/21

**BARR**  
Corporate Headquarters: Minneapolis, Minnesota  
Ph: 1-800-632-2277

Project Office:  
BARR ENGINEERING CO.  
4300 MARKETPOINTE DRIVE  
Suite 200  
MINNEAPOLIS, MN 55435  
Ph: 1-800-632-2277  
Fax: (952) 832-2601  
www.barr.com

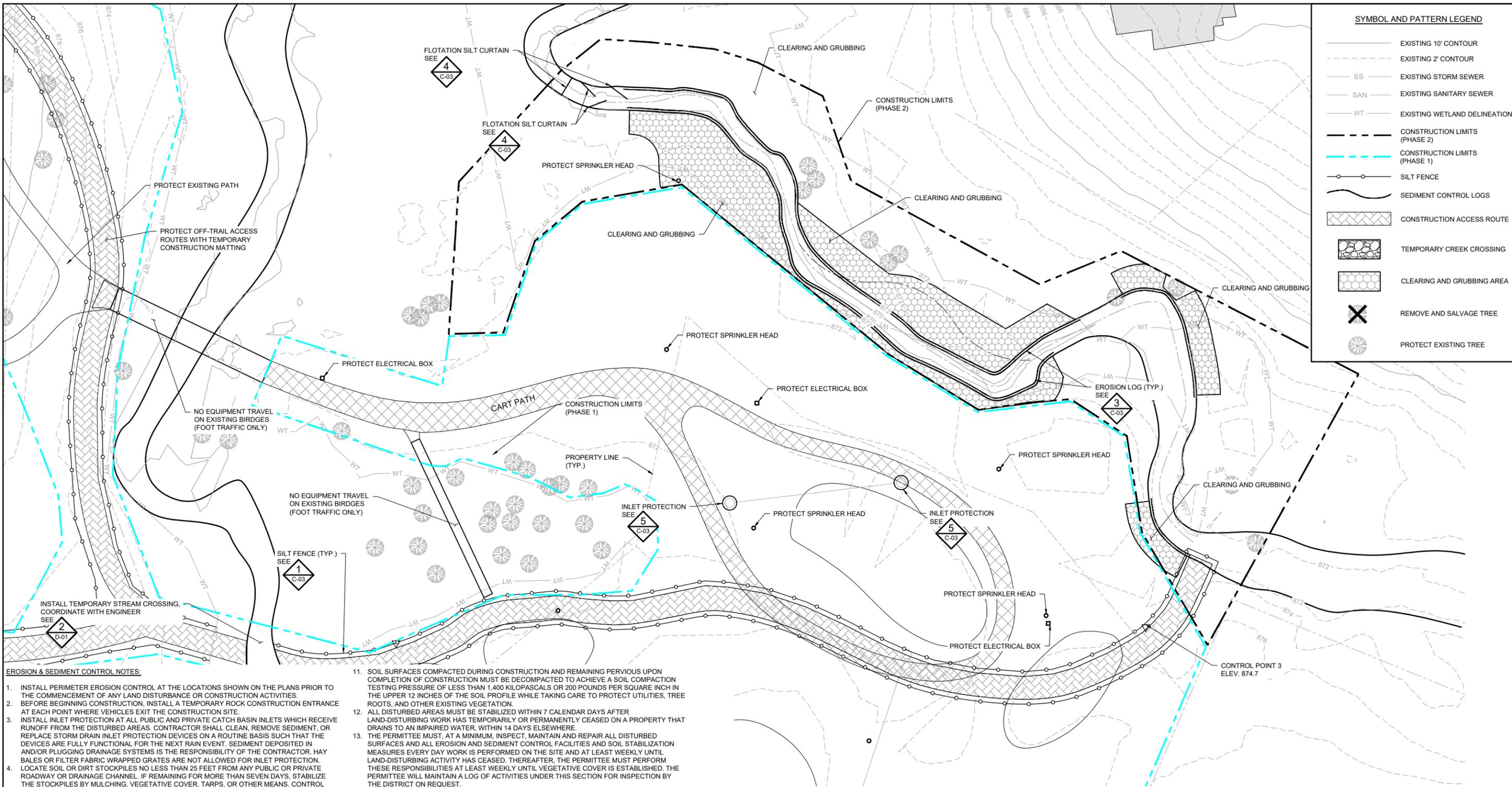
Scale	AS SHOWN
Date	03/12/2021
Drawn	EPF
Checked	SAB2
Designed	BARR
Approved	JCO

**RILEY PURGATORY BLUFF CREEK WD**  
CHANHASSEN, MN

**MIDDLE RILEY CREEK STABILIZATION (PHASE 2)**  
EDEN PRAIRIE, MN  
EXISTING CONDITIONS, REMOVALS & EROSION CONTROL PLAN  
SOUTH

BARR PROJECT No.	23/27-0053.14
CLIENT PROJECT No.	
DWG. No.	C-01
REV. No.	C

CADD USER: Eric P. Fitzgerald FILE: M:\DESIGN\23270053\_1\MIDDLE RILEY CREEK STABILIZATION PHASE 2\C-01\_EROSION CONTROL PLAN.DWG PLOT SCALE: 1:2 PLOT DATE: 4/23/2021 9:49 AM  
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SYMBOL AND PATTERN LEGEND	
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	EXISTING 2' CONTOUR
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	EXISTING SANITARY SEWER
	EXISTING WETLAND DELINEATION
	CONSTRUCTION LIMITS (PHASE 2)
	CONSTRUCTION LIMITS (PHASE 1)
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1 PLAN: EXISTING CONDITIONS, REMOVALS AND EROSION CONTROL

0 20 40  
SCALE IN FEET

ISSUED FOR PERMITTING  
NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
C	EPF	SAB2	JCO	03/12/2021	ISSUED FOR PERMITTING
B	EPF	SAB2	JCO	08/06/2020	65% ISSUED FOR REVIEW
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PRINTED NAME: JESSICA OLSON  
SIGNATURE: \_\_\_\_\_  
DATE: 03/12/2021 LICENSE # 43102

CLIENT	07/15/20	08/06/20					
BID							
CONSTRUCTION							
PERMITTING				03/12/21			
RELEASED TO/FOR	A	B	C	0	1	2	3
DATE RELEASED							

Project Office:  
BARR ENGINEERING CO.  
4300 MARKETPOINTE DRIVE  
Suite 200  
MINNEAPOLIS, MN 55435

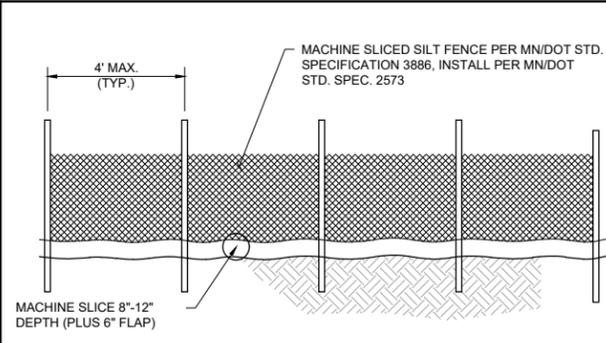
Corporate Headquarters:  
Minneapolis, Minnesota  
Ph: 1-800-632-2277  
Ph: (952) 832-2601  
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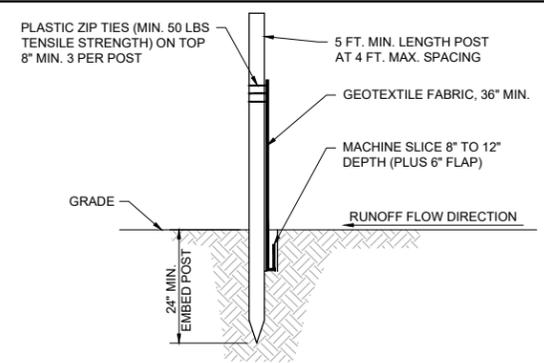
**RILEY PURGATORY BLUFF CREEK WD**  
CHANHASSEN, MN

MIDDLE RILEY CREEK STABILIZATION (PHASE 2)  
EDEN PRAIRIE, MN  
EXISTING CONDITIONS, REMOVALS & EROSION CONTROL PLAN  
NORTH

BARR PROJECT No.	23/27-0053.14
CLIENT PROJECT No.	
DWG. No.	C-02
REV. No.	C



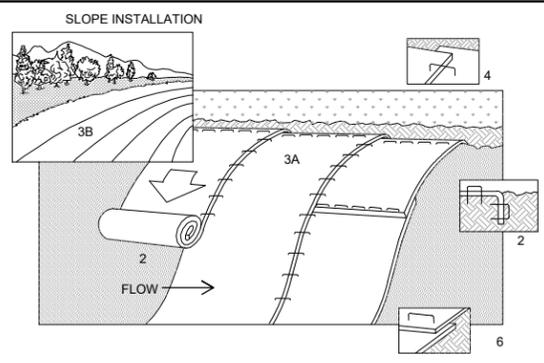
**DOWNSTREAM VIEW**



**SECTION VIEW**

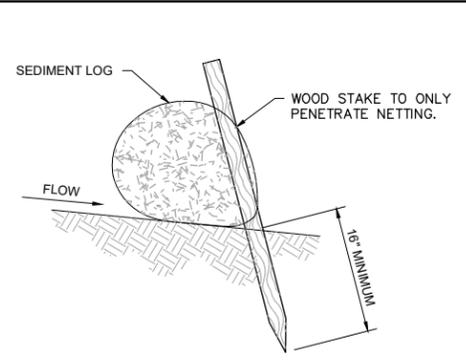
- NOTES:**
- SILT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. SILT FENCE AND ANY ACCUMULATED SEDIMENT SHALL BE REMOVED IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.
  - SILT FENCE INSTALLATION AND MATERIALS SHALL MEET THE REQUIREMENTS OF MN/DOT SPECIFICATIONS 2573 AND 3886.
  - NO HOLES OR GAPS SHALL BE PRESENT IN/UNDER SILT FENCE. PREPARE AREA AS NEEDED TO SMOOTH SURFACE OR REMOVE DEBRIS.
  - WHEN SEDIMENT BUILD UP REACHES 1/3 OF FENCE HEIGHT, THE SILT FENCE SHOULD BE REMOVED OR A SECOND SILT FENCE INSTALLED UPSTREAM OF THE EXISTING FENCE AT A SUITABLE DISTANCE.
  - WHEN SPLICES ARE NECESSARY MAKE SPlice AT POST ACCORDING TO SPlice DETAIL. PLACE THE END POST OF THE SECOND FENCE INSIDE THE END POST OF THE FIRST FENCE. ROTATE BOTH POSTS TOGETHER AT LEAST 180 DEGREES TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL. CUT THE FABRIC NEAR THE BOTTOM OF THE POSTS TO ACCOMMODATE THE 6 INCH FLAP. THEN DRIVE BOTH POSTS AND BURY THE FLAP. COMPACT BACKFILL.

**1** DETAIL: SILT FENCE - MACHINE SLICED  
NOT TO SCALE

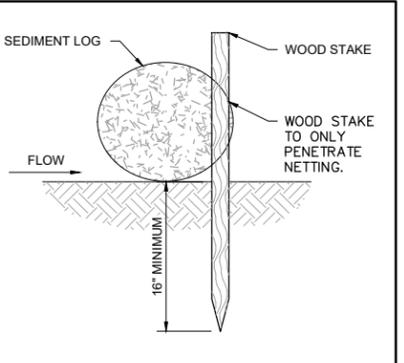


- NOTES:**
- REFER TO MANUFACTURER RECOMMENDATIONS FOR STAPLE PATTERNS FOR SLOPE INSTALLATIONS.
  - PREPARE SOIL BY LOOSENING TOP 1-2 INCHES AND APPLY SEED (AND FERTILIZER WHERE REQUIRED) PRIOR TO INSTALLING BLANKETS. GROUND SHOULD BE SMOOTH AND FREE OF DEBRIS.
  - BEGIN (A) AT THE TOP OF THE SLOPE AND ROLL THE BLANKETS DOWN OR (B) AT ONE END OF THE SLOPE AND ROLL THE BLANKETS HORIZONTALLY ACROSS THE SLOPE.
  - THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 6" OVERLAP, WITH THE UPHILL BLANKET ON TOP.
  - WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 6" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART.
  - BLANKET MATERIALS SHALL BE AS SPECIFIED OR AS APPROVED BY ENGINEER.

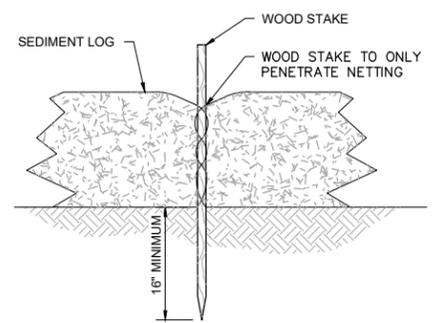
**2** DETAIL: EROSION CONTROL BLANKET - INSTALLATION  
NOT TO SCALE



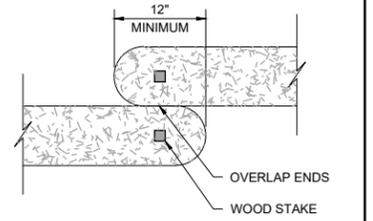
**SIDE VIEW ON SLOPE**



**SIDE VIEW FLAT**



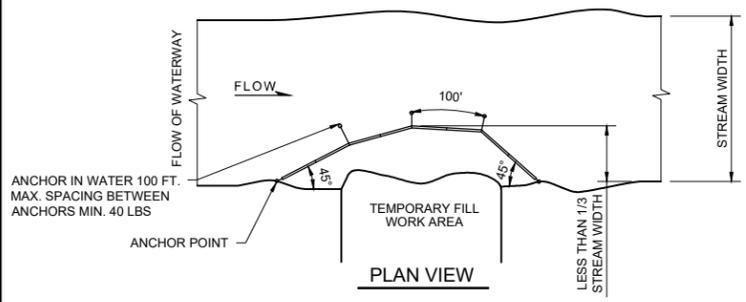
**FRONT VIEW**



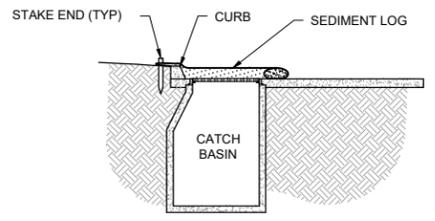
**TOP VIEW**

- NOTES:**
- INSTALL SEDIMENT LOG ALONG CONTOURS (CONSTANT ELEVATION).
  - NO GAPS SHALL BE PRESENT UNDER SEDIMENT LOG. PREPARE AREA AS NEEDED TO SMOOTH SURFACE OR REMOVE DEBRIS.
  - REMOVE ACCUMULATED SEDIMENT WHEN REACHING 1/3 OF LOG HEIGHT.
  - MAINTAIN SEDIMENT LOG THROUGHOUT THE CONSTRUCTION PERIOD AND REPAIR OR REPLACED AS REQUIRED.

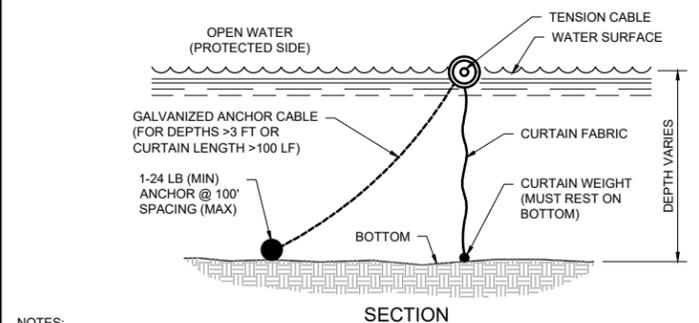
**3** DETAIL: EROSION LOG - STAKING  
NOT TO SCALE



**PLAN VIEW**



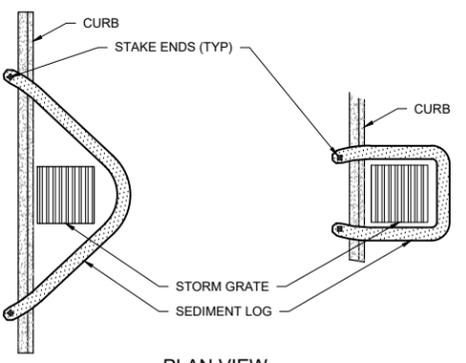
**SECTION VIEW**



**SECTION**

- NOTES:**
- INSTALL SILT CURTAIN PRIOR TO ANY CONSTRUCTION ACTIVITIES IN AREAS DRAINING TO OPEN WATER OR WORK IN WATER.
  - ANCHOR TENSION CABLE AT SHORE AT BOTH END WITH STEEL POSTS OF DIAMETER AND LENGTH SUFFICIENT TO PREVENT BENDING AND PULL-OUT.
  - ELIMINATE ANCHOR AND CABLE FOR WATER DEPTHS LESS THAN 3'-0" OR DISTANCE BETWEEN SHORE ANCHORS FOR TENSION CABLE OF LESS THAN 100'
  - CURTAIN WEIGHT SHALL BE HEAVY ENOUGH TO HOLD CURTAIN VERTICAL IN CURRENT AND WAVES TYPICAL FOR THE SITE.
  - SILT CURTAIN MATERIALS SHALL CONFORM TO MN/DOT SPECIFICATION 3887.
  - MAINTAIN SILT CURTAIN AND REPAIR OR REPLACE AS REQUIRED TO PREVENT DISCHARGE OF SEDIMENT TO PROTECTED WATER BODY.
  - REMOVE ANY ACCUMULATED SEDIMENT PRIOR TO REMOVAL OF SILT CURTAIN.
  - REMOVE SILT CURTAIN FOLLOWING SITE STABILIZATION OR AS DIRECTED BY ENGINEER.

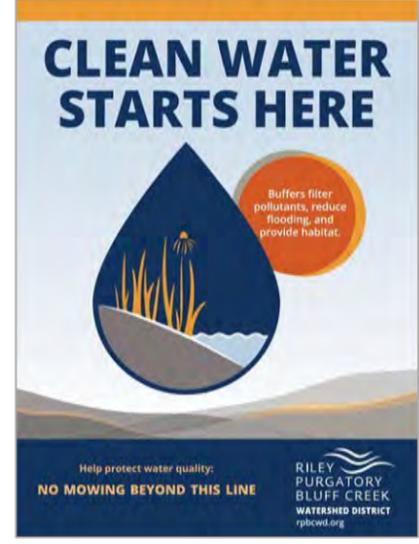
**4** DETAIL: FLOTATION SILT CURTAIN  
NOT TO SCALE



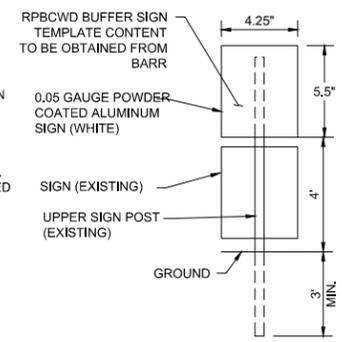
**PLAN VIEW**

- NOTES:**
- INLET PROTECTION SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED OR IMMEDIATELY FOLLOWING CATCHBASIN INSTALLATION, AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
  - MATERIALS SHALL BE SUFFICIENT TO ALLOW FLOW WHILE BLOCKING SEDIMENT. NO HOLES OR GAPS SHALL BE PRESENT IN/UNDER SEDIMENT LOG.
  - INLET PROTECTION SHALL BE CLEANED AS REQUIRED.
  - MATERIALS AND ANY ACCUMULATED SEDIMENT SHALL BE REMOVED IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.

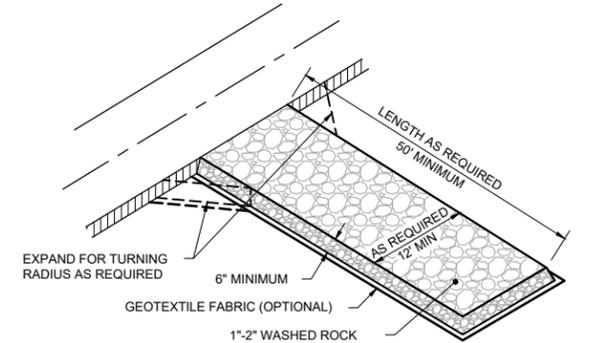
**5** DETAIL: INLET PROTECTION - SEDIMENT LOG  
NOT TO SCALE



- NOTES:**
- SIGNS TO BE INSTALLED AT LOCATIONS IN TABLE ON SHEET G-02.
  - SIGNS TO BE ADDED TO EXISTING POSTS. RELOCATE EXISTING SIGN ON POSTS AS NECESSARY TO FIT BOTH SIGNS.
  - CONTRACTOR TO OBTAIN SIGN DESIGN FROM ENGINEER PRIOR TO MAKING SIGNS.
  - LOCATIONS WITHOUT EXISTING SIGN/POST TO USE SURVEY MARKER (FLUSH WITH GROUND), SEE EXAMPLE. SURVEY MARKER CAP TO BE INSTALLED ON 3" STEEL REBAR (1/2" DIA.) DRIVEN INTO GROUND.
  - BOLTS SHALL BE TAMPER PROOF.
  - POSTS SHALL BE PAINTED GREEN, 3 LB/FT



**6** DETAIL: BUFFER SIGN INSTALLATION  
NOT TO SCALE



- NOTES:**
- MAINTAIN ENTRANCE THROUGHOUT THE CONSTRUCTION PERIOD AND REPAIR OR REPLACE AS REQUIRED TO PREVENT TRACKING OFFSITE.
  - REMOVE ENTRANCE IN CONJUNCTION WITH FINAL GRADING AND SITE STABILIZATION.

**7** DETAIL: CONSTRUCTION ENTRANCE - ROCK  
NOT TO SCALE

ISSUED FOR PERMITTING  
NOT FOR CONSTRUCTION

CADD USER: Eric P. Fitzgerald FILE: M:\DESIGN\23270053\_1\MIDDLE RILEY CREEK STABILIZATION CONTROL DETAILS DWG PLOT SCALE: 1:2 PLOT DATE: 3/12/2021 10:46 AM

NO.	BY	CHK	APP.	DATE	REVISION DESCRIPTION
C	EPF	SAB2	JCO	03/12/2021	ISSUED FOR PERMITTING
B	EPF	SAB2	JCO	08/06/2020	65% ISSUED FOR REVIEW
A	CWF	SAB2	JCO	07/15/2020	60% ISSUED FOR REVIEW

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

PRINTED NAME: JESSICA OLSON  
SIGNATURE: \_\_\_\_\_  
DATE: 03/12/2021 LICENSE # 43102

CLIENT	BID	CONSTRUCTION	PERMITTING	RELEASED TO/FOR	DATE RELEASED					
07/15/20	08/06/20		03/12/21	A	B	C	0	1	2	3

**BARR** Project Office:  
BARR ENGINEERING CO.  
4300 MARKETPOINTE DRIVE  
Suite 200  
MINNEAPOLIS, MN 55435

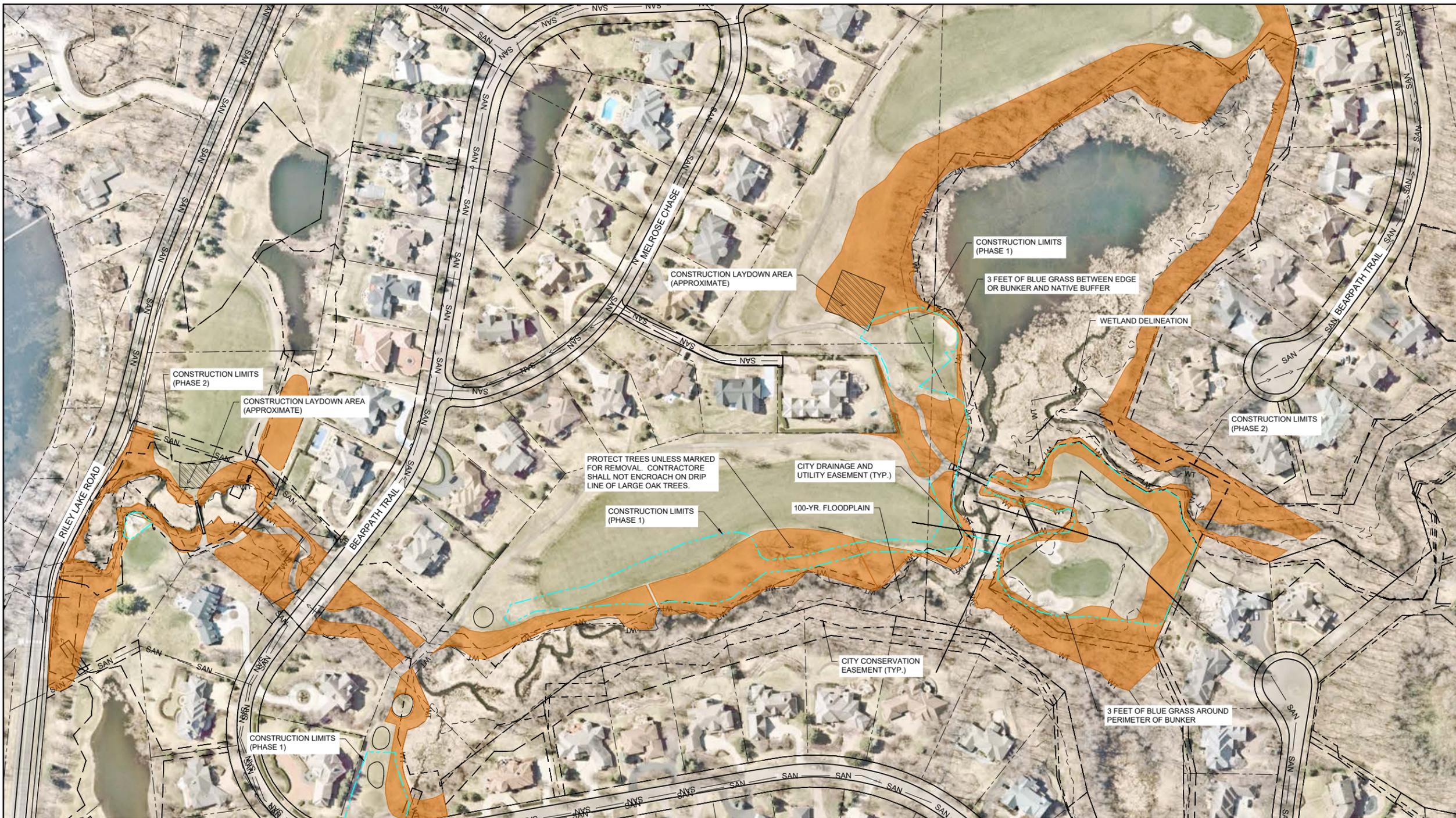
Corporate Headquarters:  
Minneapolis, Minnesota  
Ph: 1-800-632-2277  
Ph: 1-800-632-2277

Scale	AS SHOWN
Date	03/12/2021
Drawn	EPF
Checked	SAB2
Designed	BARR
Approved	JCO

**RILEY PURGATORY BLUFF CREEK WD**  
CHANHASSEN, MN

**MIDDLE RILEY CREEK STABILIZATION (PHASE 2)**  
EDEN PRAIRIE, MN  
**EROSION CONTROL DETAILS**

BARR PROJECT No.	23/27-0053.14
CLIENT PROJECT No.	
DWG. No.	C-03
REV. No.	C



**SYMBOL AND PATTERN LEGEND**

	CONSTRUCTION LIMITS (PHASE 2)
	CONSTRUCTION LIMITS (PHASE 1)
	EXISTING PROPERTY LINE
	EXISTING SANITARY SEWER
	EXISTING STORM SEWER
	EXISTING WETLAND DELINEATION
	EXISTING 100-YR FLOODPLAIN
	CITY CONSERVATION EASEMENT
	CITY DRAINAGE AND UTILITY EASEMENT
	PROPOSED BUFFER

- NOTES:**
- CONTRACTOR IS RESPONSIBLE TO LOCATE AND FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO WORK.
  - ALL EXISTING ROADS, PARKING LOTS, TRAILS, FENCES, SIGNS, OR SIMILAR SHALL BE PROTECTED DURING CONSTRUCTION. CONTRACTOR RESPONSIBLE TO COORDINATE SURVEYS WITH OWNER TO DOCUMENT PRE-CONSTRUCTION EXISTING CONDITION ISSUES. CONTRACTOR SHALL INSTALL AND MAINTAIN ALL EROSION CONTROL BMPs PRIOR TO COMMENCEMENT OF GRADING FOR EACH LOCATION DURING CONSTRUCTION. EROSION CONTROL PLANS ARE PROVIDED INSIDE THE PROJECT STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
  - CONSTRUCTION LIMITS AS SHOWN ARE APPROXIMATE FINAL CONSTRUCTION LIMITS TO BE COORDINATED WITH THE OWNER AND STAKED IN THE FIELD.
  - CLEARING AND GRUBBING TO BE PERFORMED ONLY WITHIN GRADING LIMITS AND ACCESS ROUTES UNLESS DIRECTED BY ENGINEER.
  - TREES TO BE CLEARED WILL BE MARKED IN THE FIELD BY ENGINEER. ALL TREES >= 8" DIAMETER NOT MARKED FOR REMOVAL SHALL BE PROTECTED.
  - TREES IDENTIFIED BY ENGINEER FOR ADDITIONAL PROTECTION AGAINST ROOT COMPACTION, DAMAGE AND DISFIGUREMENTS IN ACCORDANCE WITH MnDOT Spec. 2572. PROTECTION OF TREES NOT IDENTIFIED TO BE REMOVED SHALL BE INCIDENTAL.
  - TREE SURVEY COMPLETED 05/04/2020. "SIGNIFICANT TREES" MEET THE DEFINITION REQUIREMENTS. CONTRACTOR SHALL TAKE PRECAUTIONS TO MINIMIZE THE TRANSFER OF AQUATIC AND TERRESTRIAL INVASIVE SPECIES TO THE MAXIMUM EXTENT POSSIBLE.
  - SOIL SURFACES COMPACTED DURING CONSTRUCTION MUST BE DECOMPACTED TO A SOIL COMPACTING PRESSURE OF LESS THAN 1400 KILOPASCALS OR 200 POUNDS PER SQUARE INCH IN THE UPPER 1 INCH OF SOIL.
  - SEE SHEET R-01 FOR PLANTING SCHEDULE AND SITE RESTORATION DETAILS.
  - CONTRACTOR SHALL CONTACT ENGINEER AT LEAST 24 HOURS PRIOR TO CONSTRUCTION OF CRITICAL DESIGN ITEMS TO ALLOW FOR CONSTRUCTION OBSERVATION. CRITICAL DESIGN ITEMS INCLUDE:
    - RIPRAP TOE PROTECTION INSTALLATION
    - VRSS INSTALLATION
    - BOULDER VANE INSTALLATION

**1 PLAN: EASEMENTS, FLOODPLAINS AND WETLAND BOUNDARIES - FULL SITE**

0 100 200  
SCALE IN FEET

**GENERAL NOTE:**  
BUFFER LINES ARE APPROXIMATE AND WILL BE ADJUSTED IN THE FIELD TO MEET PERMIT AND GOLF COURSE REQUIREMENTS.

**ISSUED FOR PERMITTING  
NOT FOR CONSTRUCTION**

CADD USER: Eric P. Fitzgerald FILE: M:\DESIGN\23270053\_1\MIDDLE RILEY STREAM\23270053\_14\_C-04\_EASEMENTS - FULL SITEDWG.PLOT SCALE: 1:2 PLOT DATE: 4/23/2021 11:28 AM  
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NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
C	EPF	SAB2	JCO	03/12/2021	ISSUED FOR PERMITTING
B	EPF	SAB2	JCO	08/06/2020	65% ISSUED FOR REVIEW
A	CWF	SAB2	JCO	07/15/2020	60% ISSUED FOR REVIEW

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PRINTED NAME: JESSICA OLSON  
SIGNATURE: \_\_\_\_\_  
DATE: 03/12/2021 LICENSE # 43102

CLIENT	BID	CONSTRUCTION	PERMITTING	RELEASED TO/FOR	DATE RELEASED
07/15/20	08/06/20		03/12/21	A B C	0 1 2 3

**BARR** ENGINEERING CO.  
4300 MARKETPOINTE DRIVE  
SUITE 200  
MINNEAPOLIS, MN 55435

Project Office:  
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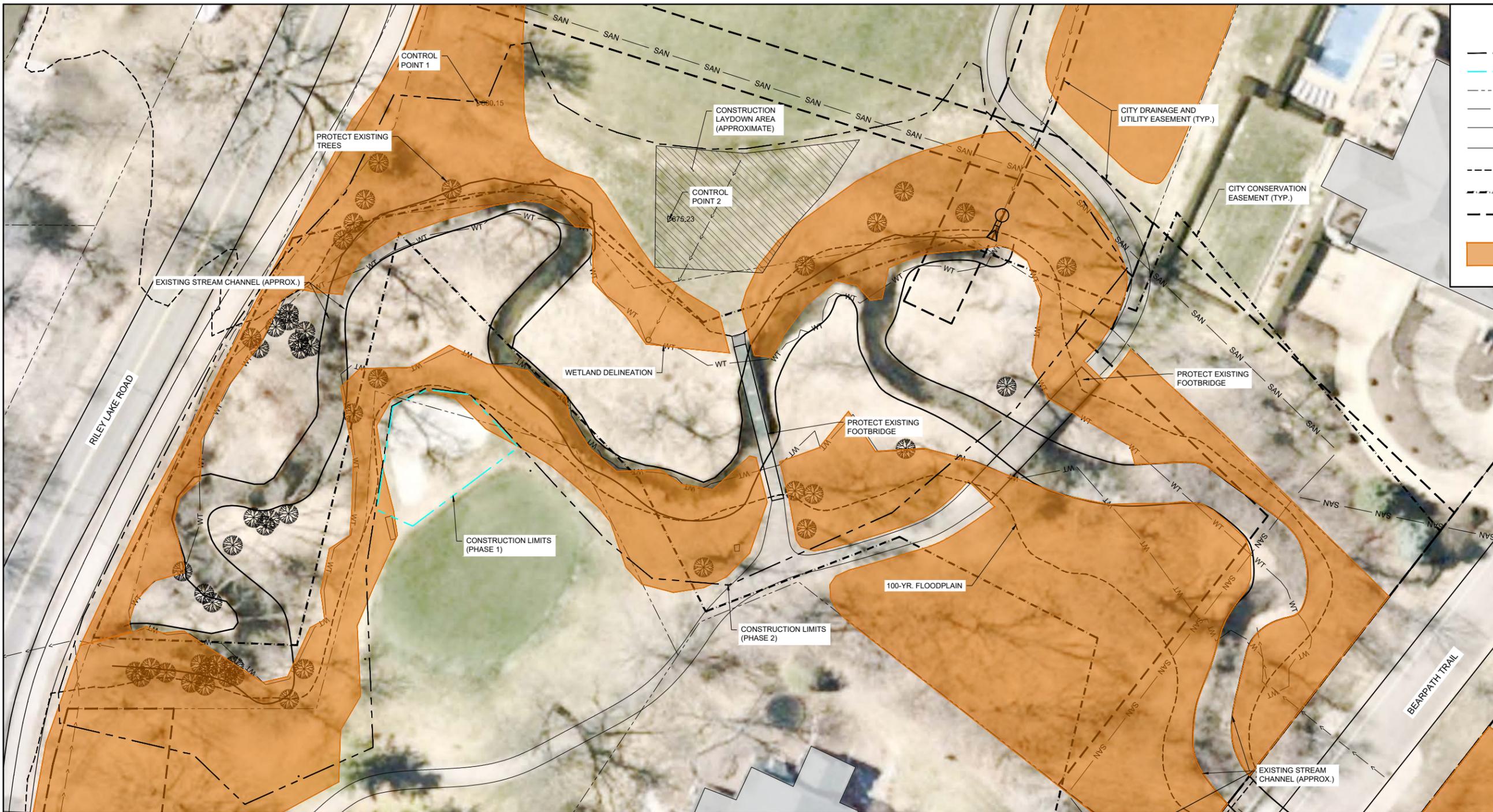
Corporate Headquarters:  
Minneapolis, Minnesota  
Ph: 1-800-632-2277  
Fax: (952) 832-2601  
www.barr.com

Scale	AS SHOWN
Date	03/12/2021
Drawn	EPF
Checked	SAB2
Designed	BARR
Approved	JCO

**RILEY PURGATORY BLUFF CREEK WD**  
CHANHASSEN, MN

**MIDDLE RILEY CREEK STABILIZATION (PHASE 2)**  
EDEN PRAIRIE, MN  
EASEMENTS, FLOODPLAINS & WETLAND BOUNDARIES  
FULL SITE

BARR PROJECT No.	23/27-00534.14
CLIENT PROJECT No.	
DWG. No.	C-04
REV. No.	C



SYMBOL AND PATTERN LEGEND	
	CONSTRUCTION LIMITS (PHASE 2)
	CONSTRUCTION LIMITS (PHASE 1)
	EXISTING PROPERTY LINE
	SAN EXISTING SANITARY SEWER
	EXISTING STORM SEWER
	EXISTING WETLAND DELINEATION
	EXISTING 100-YR FLOODPLAIN
	CITY CONSERVATION EASEMENT
	CITY DRAINAGE AND UTILITY EASEMENT
	PROPOSED BUFFER

- NOTES:**
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    - RIPRAP TOE PROTECTION INSTALLATION
    - VRSS INSTALLATION
    - BOULDER VANE INSTALLATION



CONTROL POINTS				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	117922.4829'	465761.5527'	875.23'	VRS SPIKE 1
2	117850.1325'	465717.6763'	880.15'	VRS SPIKE 2

**GENERAL NOTE:**  
 BUFFER LINES ARE APPROXIMATE AND WILL BE ADJUSTED IN THE FIELD TO MEET PERMIT AND GOLF COURSE REQUIREMENTS.

ISSUED FOR PERMITTING  
 NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
C	EPF	SAB2	JCO	03/12/2021	ISSUED FOR PERMITTING
B	EPF	SAB2	JCO	08/06/2020	65% ISSUED FOR REVIEW
A	CWF	SAB2	JCO	07/15/2020	60% ISSUED FOR REVIEW

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PRINTED NAME: JESSICA OLSON  
 SIGNATURE: \_\_\_\_\_  
 DATE: 03/12/2021 LICENSE # 43102

CLIENT	BID	CONSTRUCTION	PERMITTING	RELEASED TO/OF	DATE RELEASED
07/15/20	08/06/20		03/12/21	A B C	0 1 2 3

**BARR** Project Office:  
 BARR ENGINEERING CO.  
 4300 MARKETPOINTE DRIVE  
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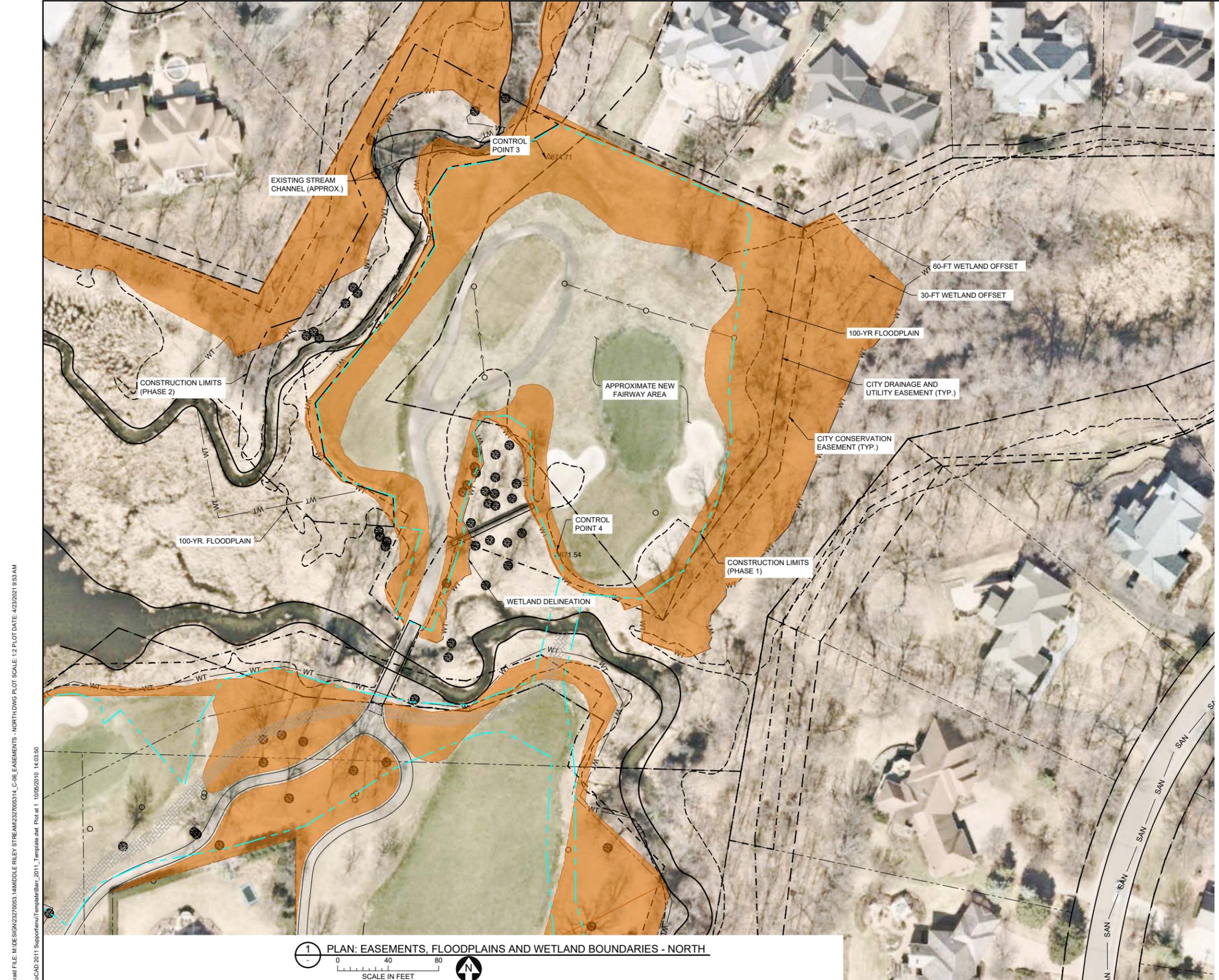
Scale	AS SHOWN
Date	03/12/2021
Drawn	EPF
Checked	SAB2
Designed	BARR
Approved	JCO

**RILEY PURGATORY BLUFF CREEK WD**  
 CHANHASSEN, MN

**MIDDLE RILEY CREEK STABILIZATION (PHASE 2)**  
 EDEN PRAIRIE, MN  
 EASEMENTS, FLOODPLAINS & WETLAND BOUNDARIES  
 SOUTH

BARR PROJECT No.	23/27-00534.14
CLIENT PROJECT No.	
DWG. No.	C-05
REV. No.	C

CADD USER: Eric P. Fitzgerald FILE: M:\DESIGN\23270053\_1\MIDDLE RILEY STREAM\23270053\_14\_C-05\_EASEMENTS - SOUTH.DWG PLOT SCALE: 1:2 PLOT DATE: 4/23/2021 8:30 AM  
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**SYMBOL AND PATTERN LEGEND**

	CONSTRUCTION LIMITS (PHASE 2)
	CONSTRUCTION LIMITS (PHASE 1)
	EXISTING PROPERTY LINE
	SAN EXISTING SANITARY SEWER
	EXISTING STORM SEWER
	WT EXISTING WETLAND DELINEATION
	EXISTING 100-YR FLOODPLAIN
	CITY CONSERVATION EASEMENT
	CITY DRAINAGE AND UTILITY EASEMENT
	PROPOSED BUFFER

**NOTES:**

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  - RIPRAP TOE PROTECTION INSTALLATION
  - VRS INSTALLATION
  - BOULDER VANE INSTALLATION

CONTROL POINTS				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
3	119806.1150'	465879.4807'	874.71'	VRS SPIKE 3
4	119491.9292'	465886.5323'	871.54'	VRS SPIKE 4

**GENERAL NOTE:**

BUFFER LINES ARE APPROXIMATE AND WILL BE ADJUSTED IN THE FIELD TO MEET PERMIT AND GOLF COURSE REQUIREMENTS.

**1 PLAN: EASEMENTS, FLOODPLAINS AND WETLAND BOUNDARIES - NORTH**

0 40 80  
SCALE IN FEET

**ISSUED FOR PERMITTING  
NOT FOR CONSTRUCTION**

CADD USER: Eric P. Fitzgerald FILE: M:\DESIGN\23270053\_1\MIDDLE RILEY CREEK STABILIZATION PHASE 1\_C-06\_EASEMENTS - NORTH.DWG PLOT SCALE: 1:2 PLOT DATE: 4/23/2021 9:53 AM  
BARR - AutoCAD 2011 Support\enu\Template\Bar\_2011\_Template.dwt Plot #1 10/05/2010 14:09:50

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
C	EPF	SAB2	JCO	03/12/2021	ISSUED FOR PERMITTING
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PRINTED NAME: JESSICA OLSON  
SIGNATURE: \_\_\_\_\_  
DATE: 03/12/2021 LICENSE # 43102

CLIENT	BID	CONSTRUCTION	PERMITTING	RELEASED TO/FOR	DATE RELEASED
07/15/20	08/06/20		03/12/21	A B C	0 1 2 3

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www.barr.com

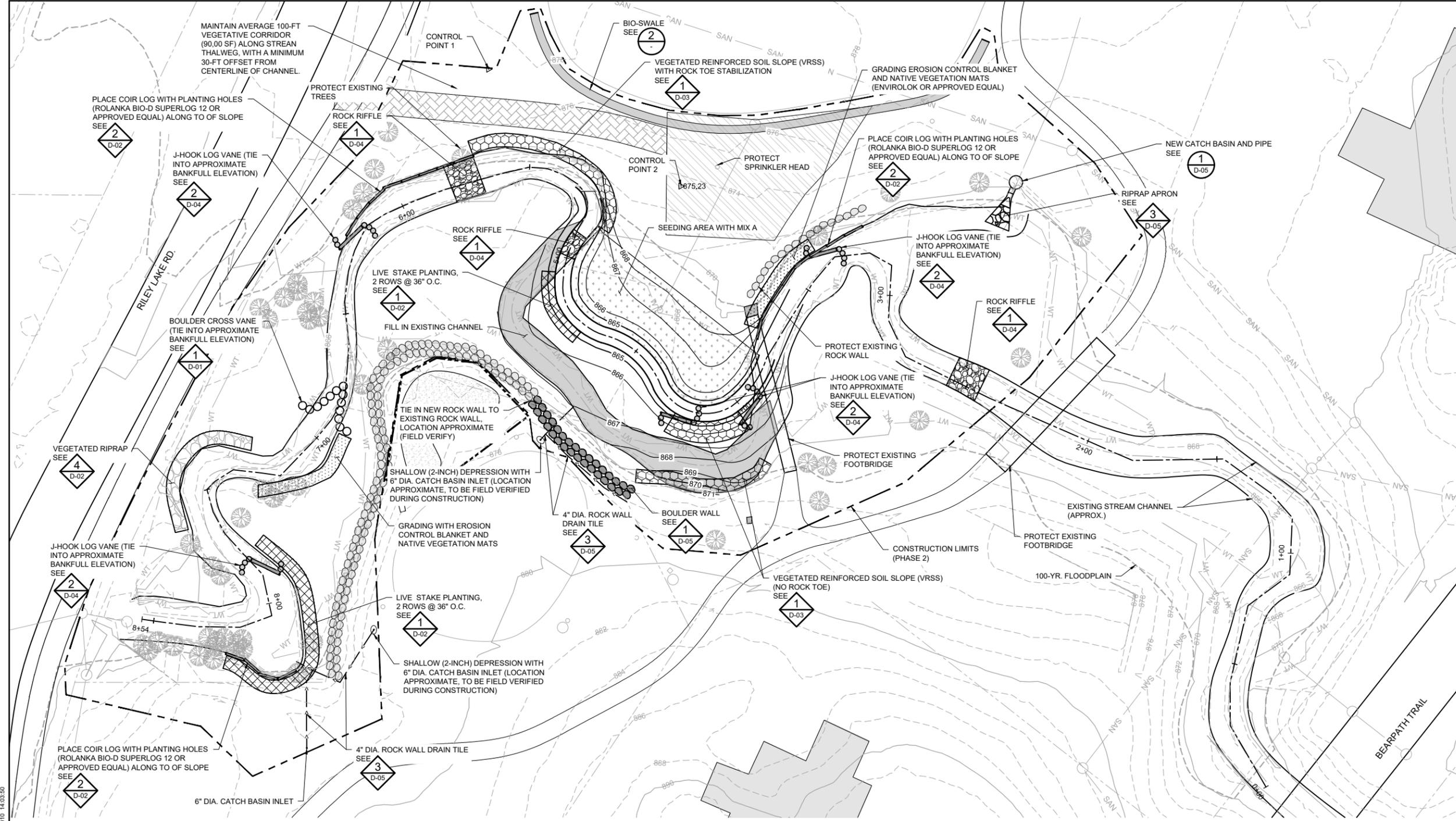
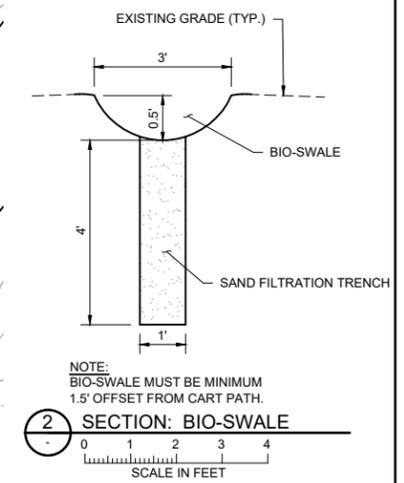
Scale	AS SHOWN
Date	03/12/2021
Drawn	EPF
Checked	SAB2
Designed	BARR
Approved	JCO

**RILEY PURGATRY BLUFF CREEK WD**  
CHANHASSEN, MN

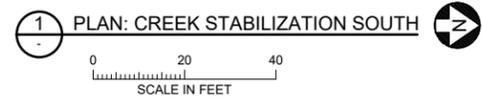
**MIDDLE RILEY CREEK STABILIZATION (PHASE 2)**  
EDEN PRAIRIE, MN  
EASEMENTS, FLOODPLAINS & WETLAND BOUNDARIES  
NORTH

BARR PROJECT No. 23/27-0053.14	
CLIENT PROJECT No.	
DWG. No. C-06	REV. No. C

SYMBOL AND PATTERN LEGEND	
	EXISTING 10' CONTOUR
	EXISTING 2' CONTOUR
	EXISTING PROPERTY LINE
	EXISTING STREAM THALWEG (APPROX.)
	EXISTING 100-YR FLOODPLAIN
	PROPOSED 10' CONTOUR
	PROPOSED 2' CONTOUR
	CONSTRUCTION LIMITS (PHASE 1)
	CONSTRUCTION LIMITS (PHASE 2)
	ROCK RIFFLE
	LIVE STAKES
	VRSS
	FILL EXISTING CREEK
	SEEDING AREA WITH MIX A
	J-HOOK BOULDER VANE
	BOULDER CROSS VANE
	GRADING WITH EROSION CONTROL BLANKET AND NATIVE VEGETATION MATS
	J-HOOK LOG VANE



- NOTES:**
- CONTRACTOR IS RESPONSIBLE TO LOCATE AND FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO WORK.
  - ALL EXISTING ROADS, PARKING LOTS, TRAILS, FENCES, SIGNS, OR SIMILAR SHALL BE PROTECTED DURING CONSTRUCTION. CONTRACTOR RESPONSIBLE TO COORDINATE SURVEYS WITH OWNER TO DOCUMENT PRE-CONSTRUCTION EXISTING CONDITION ISSUES.
  - CONTRACTOR SHALL INSTALL AND MAINTAIN ALL EROSION CONTROL BMPs PRIOR TO COMMENCEMENT OF GRADING FOR EACH LOCATION DURING CONSTRUCTION. EROSION CONTROL PLANS ARE PROVIDED INSIDE THE PROJECT STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
  - CONSTRUCTION LIMITS AS SHOWN ARE APPROXIMATE FINAL CONSTRUCTION LIMITS TO BE COORDINATED WITH THE OWNER AND STAKED IN THE FIELD.
  - CLEARING AND GRUBBING TO BE PERFORMED ONLY WITHIN GRADING LIMITS AND ACCESS ROUTES UNLESS DIRECTED BY ENGINEER.
  - TREES TO BE CLEARED WILL BE MARKED IN THE FIELD BY ENGINEER. ALL TREES >= 8" DIAMETER NOT MARKED FOR REMOVAL SHALL BE PROTECTED.
  - TREES IDENTIFIED BY ENGINEER FOR ADDITIONAL PROTECTION AGAINST ROOT COMPACTION, DAMAGE AND DISFIGUREMENTS IN ACCORDANCE WITH MnDOT Spec. 2572. PROTECTION OF TREES NOT IDENTIFIED TO BE REMOVED SHALL BE INCIDENTAL.
  - TREE SURVEY COMPLETED 05/04/2020. "SIGNIFICANT TREES" MEET THE DEFINITION REQUIREMENTS.
  - CONTRACTOR SHALL TAKE PRECAUTIONS TO MINIMIZE THE TRANSFER OF AQUATIC AND TERRESTRIAL INVASIVE SPECIES TO THE MAXIMUM EXTENT POSSIBLE.
  - SOIL SURFACES COMPACTED DURING CONSTRUCTION MUST BE DECOMPACTED TO A SOIL COMPACTING PRESSURE OF LESS THAN 1400 KILOPASCALS OR 200 POUNDS PER SQUARE INCH IN THE UPPER 1 INCH OF SOIL.
  - SEE SHEET R-01 FOR PLANTING SCHEDULE AND SITE RESTORATION DETAILS.
  - CONTRACTOR SHALL CONTACT ENGINEER AT LEAST 24 HOURS PRIOR TO CONSTRUCTION OF CRITICAL DESIGN ITEMS TO ALLOW FOR CONSTRUCTION OBSERVATION. CRITICAL DESIGN ITEMS INCLUDE:
    - RIPRAP TOE PROTECTION INSTALLATION
    - VRSS INSTALLATION
    - BOULDER VANE INSTALLATION



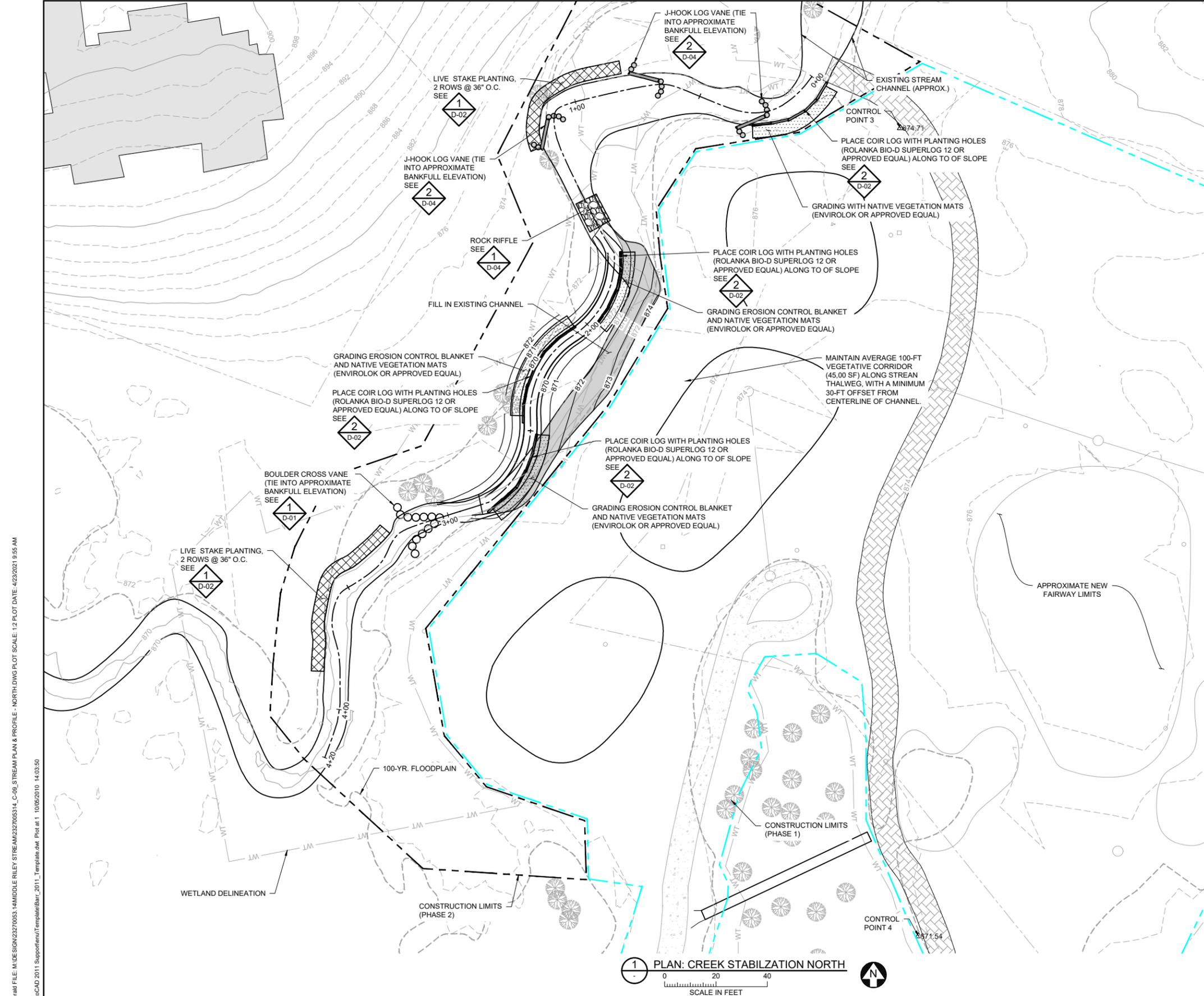
CONTROL POINTS				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	117922.4829'	465761.5527'	875.23'	VRS SPIKE 1
2	117850.1325'	465717.6763'	880.15'	VRS SPIKE 2

ISSUED FOR PERMITTING  
NOT FOR CONSTRUCTION

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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. PRINTED NAME: JESSICA OLSON SIGNATURE: _____ DATE: 03/12/2021 LICENSE # 43102		CLIENT: _____ DATE: 07/15/20 08/06/20 CONSTRUCTION: _____ PERMITTING: _____ DATE: 03/12/21		<b>BARR</b> Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435 Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com		Scale: AS SHOWN Date: 03/12/2021 Drawn: EPF Checked: SAB2 Designed: BARR Approved: JCO		MIDDLE RILEY CREEK STABILIZATION (PHASE 2) EDEN PRAIRIE, MN RILEY PURGATORY BLUFF CREEK WD CHANHASSEN, MN		BARR PROJECT No. 23/27-0053.14 CLIENT PROJECT No. _____ DWG. No. C-07 REV. No. C				
NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION	A	B	C	0	1	2	3	RELEASED TO/FOR	DATE RELEASED
C	EPF	SAB2	JCO	03/12/2021	ISSUED FOR PERMITTING									
B	EPF	SAB2	JCO	08/06/2020	65% ISSUED FOR REVIEW									
A	CWF	SAB2	JCO	07/15/2020	60% ISSUED FOR REVIEW									

CADD USER: Eric P. Fitzgerald FILE: M:\DESIGN\23270053.14\MIDDLE RILEY STREAM PLAN & PROFILE - SOUTH.DWG PLOT SCALE: 1:2 PLOT DATE: 3/12/2021 1:29 PM  
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**SYMBOL AND PATTERN LEGEND**

	EXISTING 10' CONTOUR
	EXISTING 2' CONTOUR
	EXISTING PROPERTY LINE
	EXISTING STREAM THALWEG (APPROX.)
	EXISTING 100-YR FLOODPLAIN
	PROPOSED 10' CONTOUR
	PROPOSED 2' CONTOUR
	CONSTRUCTION LIMITS (PHASE 1)
	CONSTRUCTION LIMITS (PHASE 2)
	ROCK RIFFLE
	LIVE STAKES
	VRSS
	FILL EXISTING CREEK
	SEEDING AREA WITH MIX A
	J-HOOK BOULDER VANE
	BOULDER CROSS VANE
	GRADING WITH EROSION CONTROL BLANKET AND NATIVE VEGETATION MATS
	J-HOOK LOG VANE

- NOTES:**
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  - SEE SHEET R-01 FOR PLANTING SCHEDULE AND SITE RESTORATION DETAILS.
  - CONTRACTOR SHALL CONTACT ENGINEER AT LEAST 24 HOURS PRIOR TO CONSTRUCTION OF CRITICAL DESIGN ITEMS TO ALLOW FOR CONSTRUCTION OBSERVATION. CRITICAL DESIGN ITEMS INCLUDE:
    - RIPRAP TOE PROTECTION INSTALLATION
    - VRSS INSTALLATION
    - BOULDER VANE INSTALLATION

**CONTROL POINTS**

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
3	119806.1150'	465879.4807'	874.71'	VRS SPIKE 3
4	119491.9292'	465886.5323'	871.54'	VRS SPIKE 4

**1 PLAN: CREEK STABILIZATION NORTH**

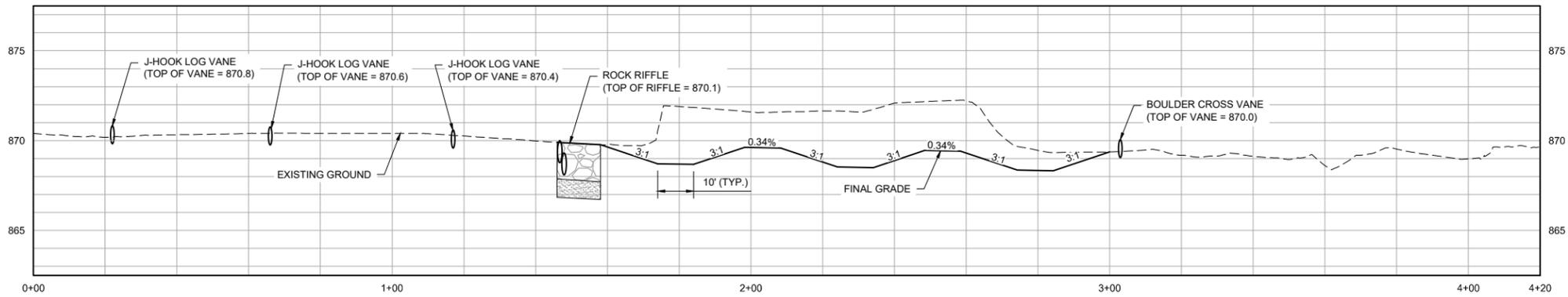
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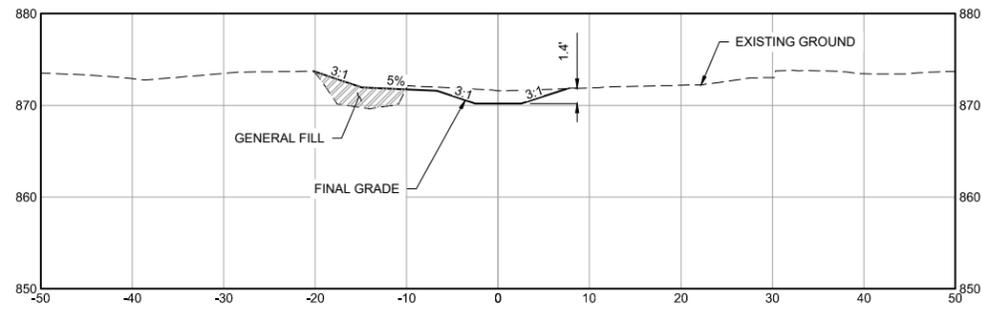
ISSUED FOR PERMITTING  
NOT FOR CONSTRUCTION

CADD USER: Eric P. Fitzgerald FILE: M:\DESIGN\23270053\_1\MIDDLE RILEY CREEK STABILIZATION PHASE 1\CONSTRUCTION PLAN & PROFILE - NORTH.DWG PLOT SCALE: 1:2 PLOT DATE: 4/23/2021 9:55 AM  
 BARR - AutoCAD 2011\AutoCAD 2011 Support\enu\template\Bar\_2011\_Template.dwg Plot at 1: 10/06/2010 14:03:50

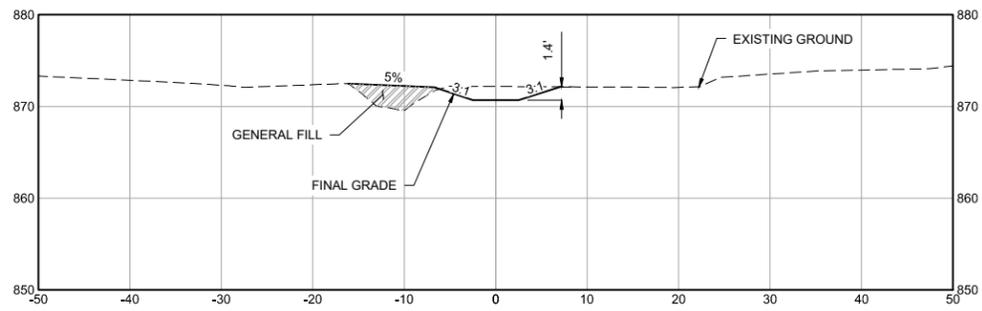
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINTED NAME: JESSICA OLSON SIGNATURE: _____ DATE: 03/12/2021 LICENSE # 43102		CLIENT: BARR ENGINEERING CO. BID: 23/27-0053.14 CONSTRUCTION PERMITTING: 03/12/21 RELEASED TO/FOR: A B C 0 1 2 3 DATE RELEASED:		Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435 Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com		Scale: AS SHOWN Date: 03/12/2021 Drawn: EPF Checked: SAB2 Designed: BARR Approved: JCO		MIDDLE RILEY CREEK STABILIZATION (PHASE 2) EDEN PRAIRIE, MN STREAM STABILIZATION NORTH PLAN		BARR PROJECT No. 23/27-0053.14 CLIENT PROJECT No. DWG. No. C-09 REV. No. C	
NO. BY CHK. APP. DATE REVISION DESCRIPTION											
C	EPF	SAB2	JCO	03/12/2021	ISSUED FOR PERMITTING						
B	EPF	SAB2	JCO	08/06/2020	65% ISSUED FOR REVIEW						
A	CWF	SAB2	JCO	07/15/2020	60% ISSUED FOR REVIEW						



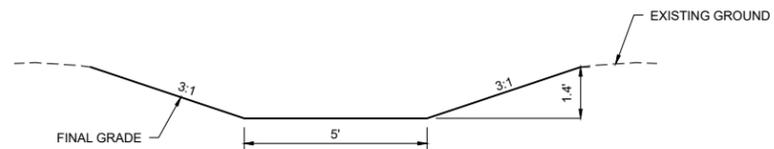
1 PROFILE: CREEK STABILIZATION NORTH  
 HORIZONTAL SCALE IN FEET: 0 20 40  
 VERTICAL SCALE IN FEET: 0 4 8



2 SECTION: CREEK STABILIZATION NORTH (STA. 2+00) LOOKING DOWNSTREAM  
 SCALE IN FEET: 0 10 20



3 SECTION: CREEK STABILIZATION NORTH (STA. 2+50) LOOKING DOWNSTREAM  
 SCALE IN FEET: 0 10 20



4 SECTION: TYPICAL RIFFLE SECTION  
 NOT TO SCALE

ISSUED FOR PERMITTING  
 NOT FOR CONSTRUCTION

CADD USER: Eric P. Fitzgerald FILE: M:\DESIGN\23270053\_1\MIDDLE RILEY STREAM\AM2327005314\_C-09\_STREAM PLAN & PROFILE - NORTH.DWG PLOT SCALE: 1:2 PLOT DATE: 3/16/2021 12:24 PM  
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NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
C	EPF	SAB2	JCO	03/12/2021	ISSUED FOR PERMITTING
B	EPF	SAB2	JCO	08/06/2020	65% ISSUED FOR REVIEW
A	CWF	SAB2	JCO	07/15/2020	60% ISSUED FOR REVIEW

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 PRINTED NAME: JESSICA OLSON  
 SIGNATURE: \_\_\_\_\_  
 DATE: 03/12/2021 LICENSE #: 43102

CLIENT	07/15/20	08/06/20					
BID							
CONSTRUCTION							
PERMITTING			03/12/21				
RELEASED TO/FOR	A	B	C	0	1	2	3
DATE RELEASED							

**BARR**  
 Project Office:  
 BARR ENGINEERING CO.  
 4300 MARKETPOINTE DRIVE  
 Suite 200  
 MINNEAPOLIS, MN 55435  
 Corporate Headquarters:  
 Minneapolis, Minnesota  
 Ph: 1-800-632-2277  
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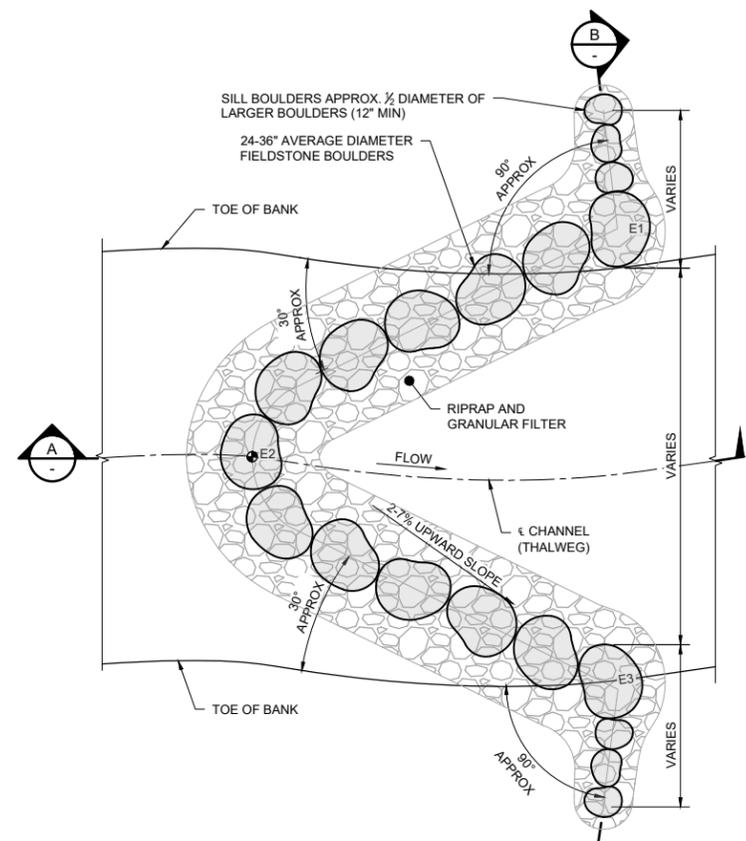
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Date	03/12/2021
Drawn	EPF
Checked	SAB2
Designed	BARR
Approved	JCO

**RILEY PURGATORY BLUFF CREEK WD**  
 CHANHASSEN, MN

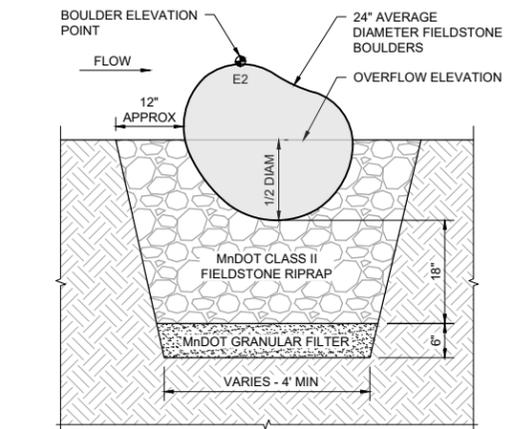
MIDDLE RILEY CREEK STABILIZATION (PHASE 2)  
 EDEN PRAIRIE, MN  
 STREAM STABILIZATION NORTH  
 PROFILE AND SECTIONS

BARR PROJECT No. 23/27-0053.14	
CLIENT PROJECT No.	
DWG. No. C-10	REV. No. C

CADD USER: Eric P. Fitzgerald FILE: M:\DESIGN\23270053\_1\MIDDLE RILEY CREEK STABILIZATION\DWG\14-D-01\_DETAILS\DWG PLOT SCALE: 1:2 PLOT DATE: 3/12/2021 9:46 AM  
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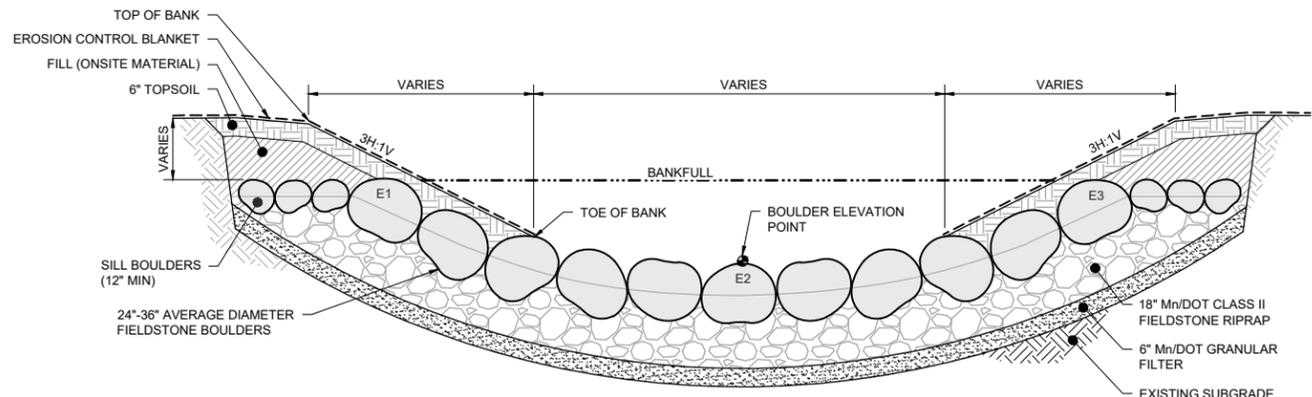


**1** DETAIL: CROSS VANE - SINGLE BOULDER  
NOT TO SCALE

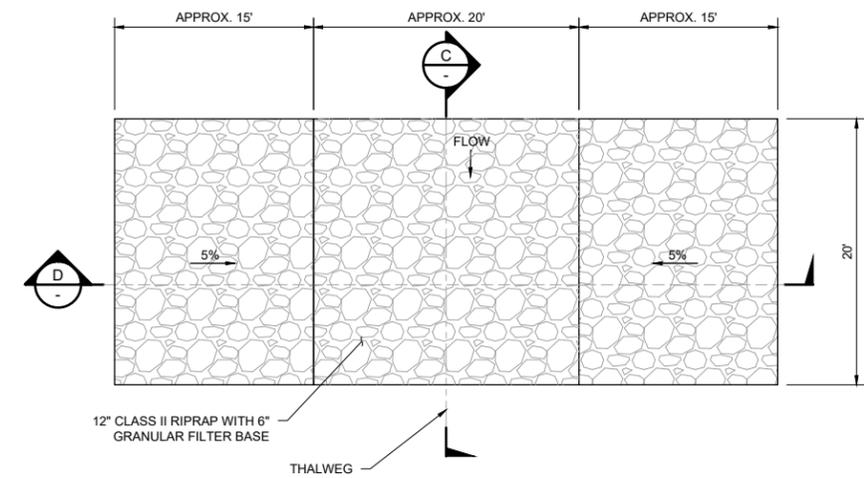


**A** SECTION: CROSS VANE - SINGLE BOULDER  
NOT TO SCALE

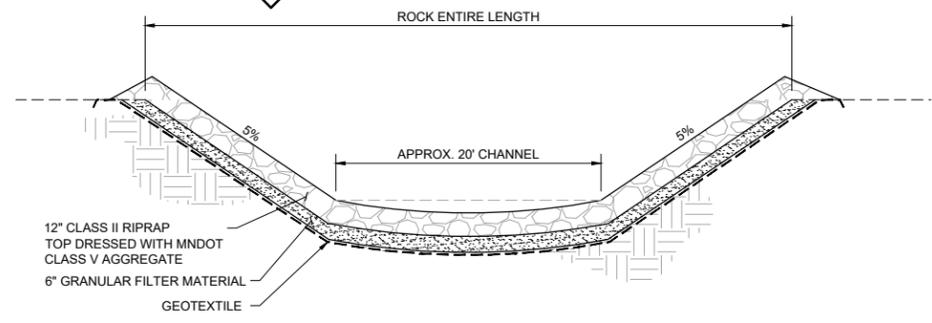
- NOTES:**
- CROSS VANE LOCATIONS AND ELEVATIONS ARE APPROXIMATE AND MAY BE MODIFIED IN THE FIELD BY THE ENGINEER.
  - FINAL BOULDER PLACEMENT TO BE APPROVED BY THE ENGINEER IN THE FIELD. CONTRACTOR MAY BE REQUIRED TO ADJUST BOULDER ELEVATIONS AND ROTATION.
  - THERE SHALL BE NO SIGNIFICANT GAPS BETWEEN BOULDERS. RIPRAP BEDDING SHALL BE PLACED ON THE UPSTREAM SIDE OF THE BOULDERS TO PLUG SMALL GAPS (MAY REQUIRE HAND PLACEMENT).
  - BOULDERS OF AN UNSUITABLE SHAPE MAY BE RE-LOCATED OR REJECTED.
  - INSTALL EROSION CONTROL BLANKET ON DISTURBED BANKS.



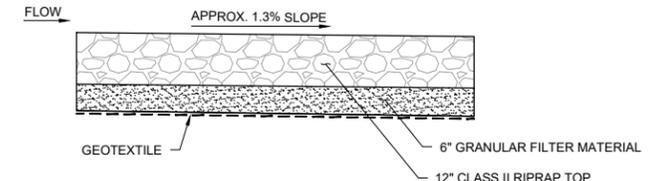
**B** SECTION: CROSS VANE - SINGLE BOULDER  
NOT TO SCALE



**2** DETAIL: TEMPORARY CREEK CROSSING OPTION  
NOT TO SCALE



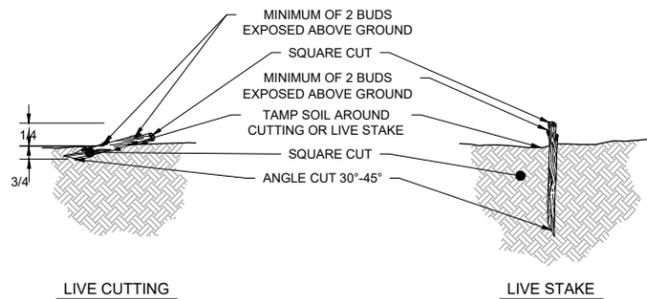
**D** SECTION: TEMPORARY CREEK CROSSING OPTION  
NOT TO SCALE



**C** SECTION: TEMPORARY CREEK CROSSING OPTION  
NOT TO SCALE

ISSUED FOR PERMITTING  
NOT FOR CONSTRUCTION

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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. PRINTED NAME: JESSICA OLSON SIGNATURE: _____ DATE: 03/12/2021 LICENSE # 43102				CLIENT: BARR ENGINEERING CO. BID: 07/15/20 03/08/21 CONSTRUCTION: 03/12/21 PERMITTING: 03/12/21 RELEASED TO/FOR: A B C 0 1 2 3 DATE RELEASED:				Project Office: <b>BARR</b> ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435 Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com				Scale: AS SHOWN Date: 03/12/2021 Drawn: EPF Checked: SAB2 Designed: BARR Approved: JCO				<b>RILEY PURGATORY BLUFF CREEK WD</b> CHANHASSEN, MN				<b>MIDDLE RILEY CREEK STABILIZATION (PHASE 2)</b> EDEN PRAIRIE, MN STABILIZATION DETAILS				BARR PROJECT No. 23/27-0053.14 CLIENT PROJECT No. DWG. No. D-01 REV. No. C			
NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION																						
C	EPF	SAB2	JCO	03/12/2021	ISSUED FOR PERMITTING																						
B	EPF	SAB2	JCO	08/06/2020	65% ISSUED FOR REVIEW																						
A	CWF	SAB2	JCO	07/15/2020	60% ISSUED FOR REVIEW																						



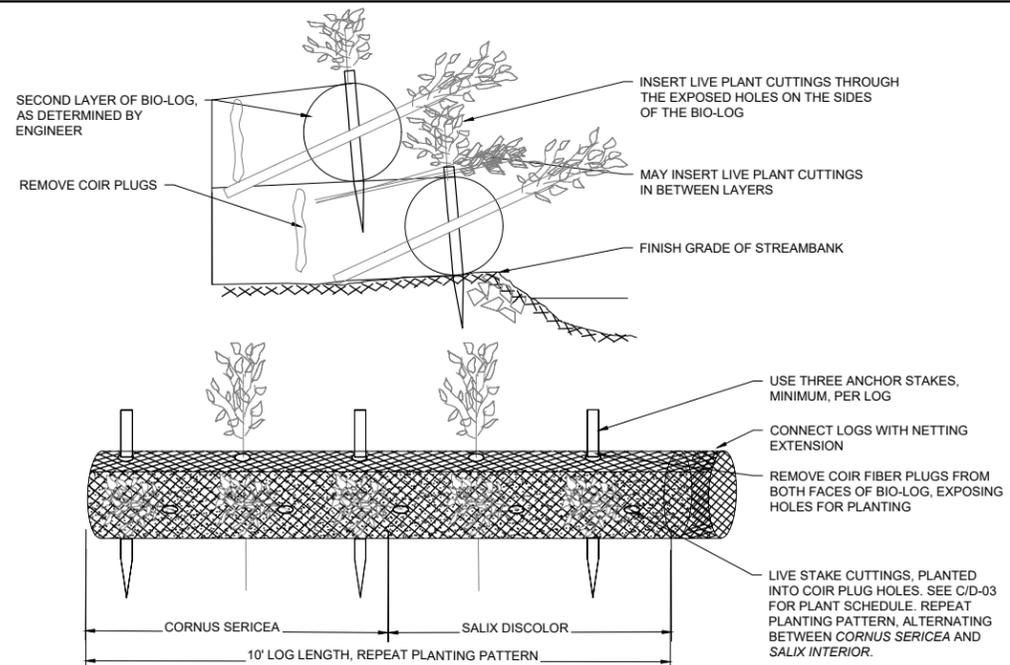
**LIVE CUTTING**

**LIVE STAKE**

**GENERAL NOTES:**

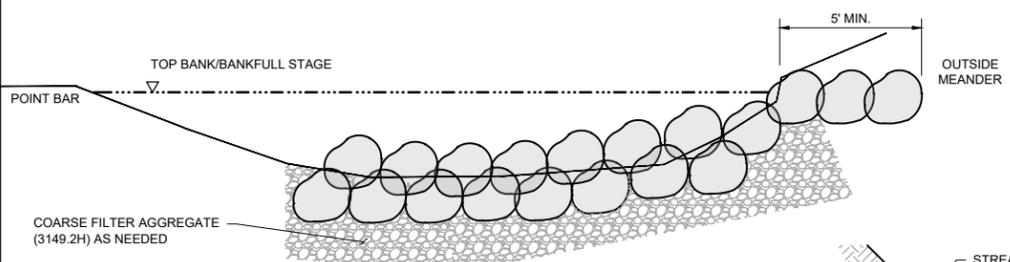
1. LIVE STAKE OR CUTTING PLANTED PERPENDICULAR TO GROUND SURFACE.
2. SEE SHEET D-03 FOR PLANT MATERIAL LIST FOR SPECIES LENGTH AND SPACING.
3. LIVE STAKES SHALL BE 3/4" DIAMETER MINIMUM. LIVE CUTTINGS SHALL BE 3/4" DIAMETER MINIMUM.

**1** **DETAIL: LIVE CUTTINGS OR LIVE STAKES**  
NOT TO SCALE

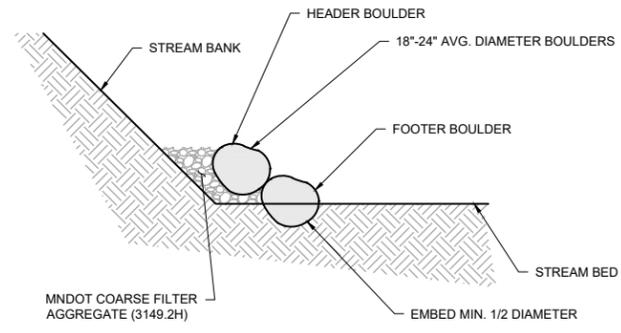


- NOTES:**
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

**2** **DETAIL: COIR LOG WITH PLANTING HOLES**  
NOT TO SCALE



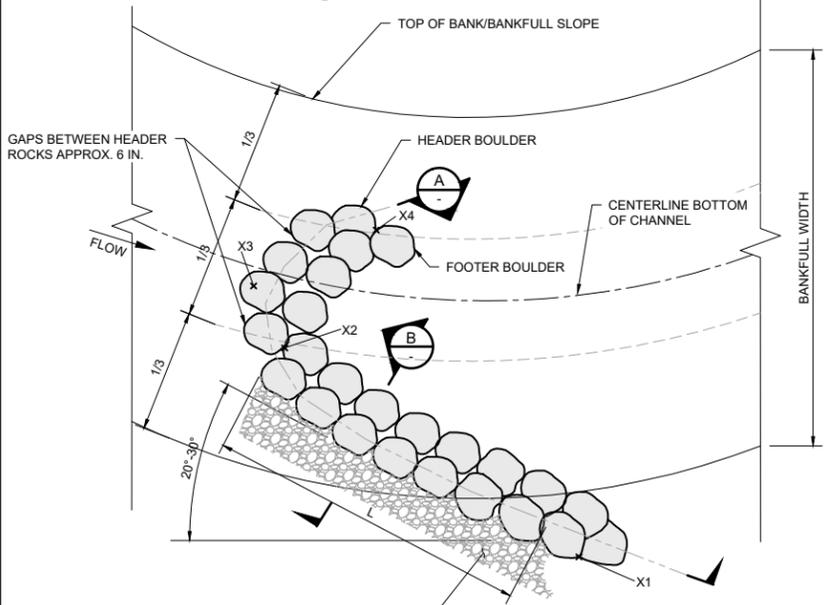
**A** **SECTION: J-HOOK BOULDER VANE**  
NOT TO SCALE



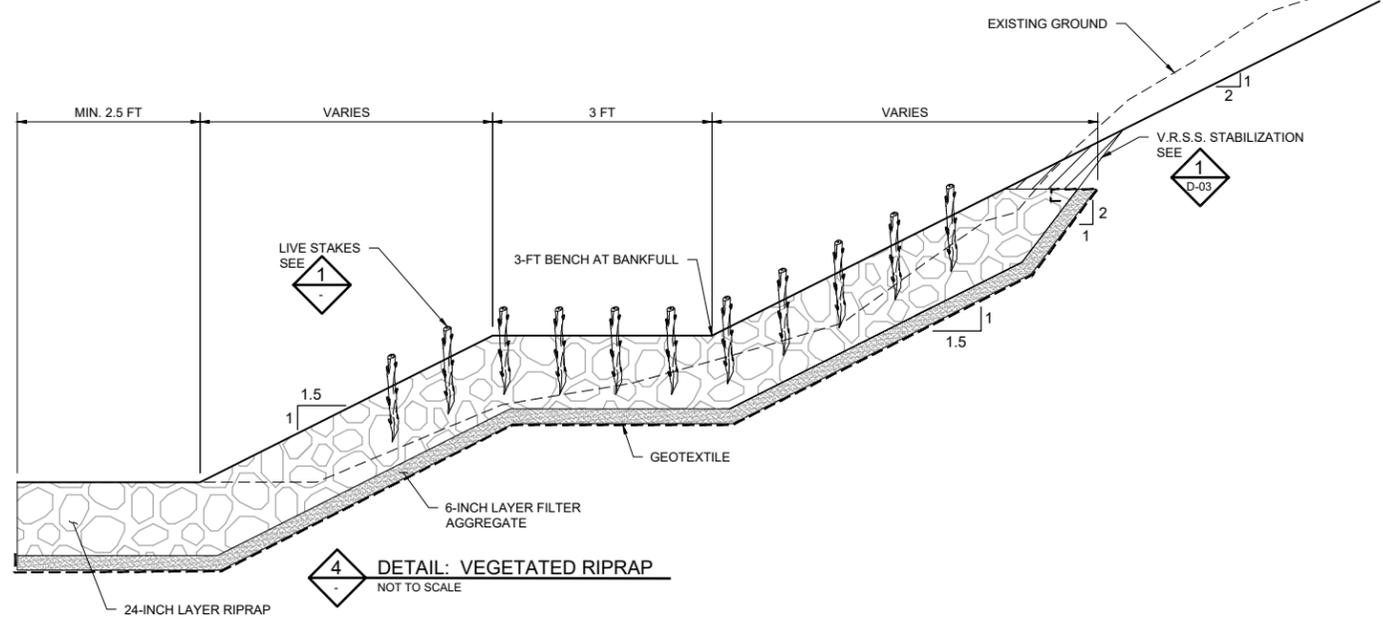
**B** **SECTION: J-HOOK BOULDER VANE**  
NOT TO SCALE

**NOTES:**

1. COARSE BACKFILL (MNDOT COARSE FILTER AGGREGATE) SHALL BE PLACED TO A THICKNESS EQUAL TO THE DEPTH OF THE HEADER AND FOOTER BOULDERS AND SHALL EXTEND OUT FROM THE VANE ARMS TO THE STREAM BANK.
2. THE VANE ARM OF THE BOULDER J-HOOK SHALL BE CONSTRUCTED FIRST, FOLLOWED BY THE HOOK.
3. BOULDER J-HOOK VANES SHALL BE BUILT TYPICALLY AS FOLLOWS:
  - A. OVER EXCAVATE STREAM BED TO A DEPTH EQUAL TO THE TOTAL THICKNESS OF THE HEADER AND FOOTER BOULDERS.
  - B. PLACE FOOTER BOULDERS OF THE VANE ARM. THERE SHALL BE NO GAPS BETWEEN BOULDERS.
  - C. PLACE COARSE BACKFILL BEHIND THE FOOTER BOULDERS.
  - D. INSTALL HEADER BOULDERS ON THE VANE ARM ON TOP OF AND SET SLIGHTLY BACK FROM THE FOOTER BOULDERS (SUCH THAT PART OF THE HEADER BOULDER IS RESTING ON THE COARSE BACKFILL). HEADER BOULDERS SHALL SPAN THE SEAMS OF THE FOOTER BOULDERS. THERE SHALL BE NO GAPS BETWEEN BOULDERS.
  - E. PLACE COARSE BACKFILL BEHIND HEADER BOULDERS ENSURING THAT ANY VOIDS BETWEEN THE BOULDERS ARE FILLED.
  - F. PLACE EACH BOULDER TO FORM THE HOOK BY INSTALLING A FOOTER BOULDER, THEN A HEADER BOULDER. GAPS AS WIDE AS 1/4 TO 1/3 THE BOULDER DIAMETER SHALL BE LEFT BETWEEN THE HOOK BOULDERS.



**3** **DETAIL: J-HOOK BOULDER VANE**  
NOT TO SCALE



**4** **DETAIL: VEGETATED RIPRAP**  
NOT TO SCALE

ISSUED FOR PERMITTING  
NOT FOR CONSTRUCTION

CADD USER: Eric P. Fitzgerald FILE: M:\DESIGN\23270053\_14\MIDDLE RILEY CREEK STABILIZATION\DWG\14\_D-01\_DETAILS.DWG PLOT SCALE: 1:2 PLOT DATE: 3/12/2021 9:52 AM

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
C	EPF	SAB2	JCO	03/12/2021	ISSUED FOR PERMITTING
B	EPF	SAB2	JCO	08/06/2020	65% ISSUED FOR REVIEW
A	CWF	SAB2	JCO	07/15/2020	60% ISSUED FOR REVIEW

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PRINTED NAME: JESSICA OLSON  
SIGNATURE: \_\_\_\_\_  
DATE: 03/12/2021 LICENSE # 43102

CLIENT	07/15/20	08/06/20				
BID						
CONSTRUCTION						
PERMITTING		03/12/21				
RELEASED TO/FOR	A	B	C	0	1	2
DATE RELEASED						

**BARR** Project Office:  
BARR ENGINEERING CO.  
4300 MARKETPOINTE DRIVE  
Suite 200  
MINNEAPOLIS, MN 55435

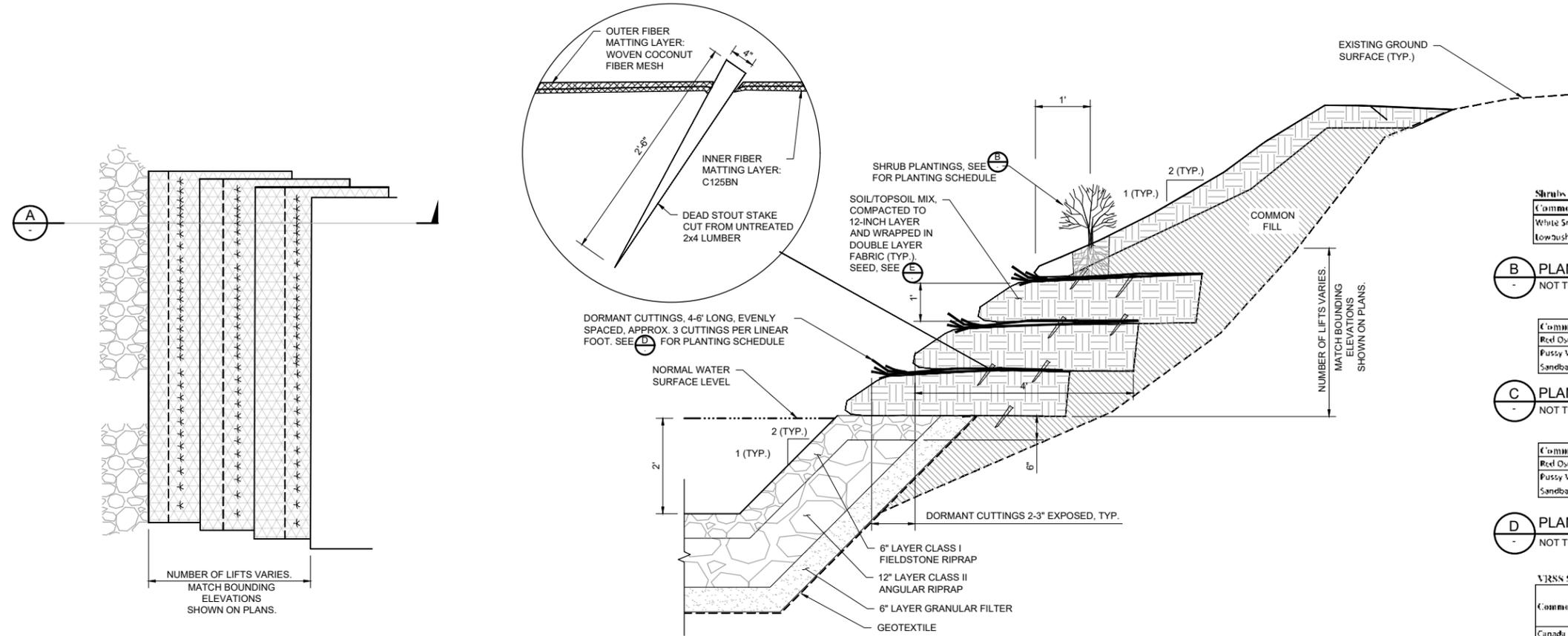
Corporate Headquarters:  
Minneapolis, Minnesota  
Ph: 1-800-632-2277  
Fax: (952) 832-2601  
www.barr.com

Scale	AS SHOWN
Date	03/12/2021
Drawn	EPF
Checked	SAB2
Designed	BARR
Approved	JCO

**RILEY PURGATORY BLUFF CREEK WD**  
CHANHASSEN, MN

**MIDDLE RILEY CREEK STABILIZATION (PHASE 2)**  
EDEN PRAIRIE, MN  
**STABILIZATION DETAILS**

BARR PROJECT No.	23/27-0053.14
CLIENT PROJECT No.	
DWG. No.	D-02
REV. No.	C



**1** **DETAIL: LIVE PLANT VEGETATED REINFORCED SOIL SLOPE (V.R.S.S.)**  
NOT TO SCALE

**A** **SECTION: LIVE PLANT VEGETATED REINFORCED SOIL SLOPE (V.R.S.S.)**  
NOT TO SCALE

**Shrubs**

Common Name	Scientific Name	Quantity	Spacing	Size
White Snowberry	<i>Symphoricarpos albus</i>	25	4' O.C.	#2 Pot
Lowbush Honeysuckle	<i>Lonicera canadensis</i>	4	4' O.C.	#2 Pot

**B** **PLANT SCHEDULE: SHRUBS**  
NOT TO SCALE

Common Name	Scientific Name	Quantity	Spacing
Red Osier Dogwood	<i>Cornus sericea</i>	219	Pe-P an
Pussy Willow	<i>Salix discolor</i>	218	Pe-P an
Sandbar Willow	<i>Salix interior</i>	58	Pe-P an

**C** **PLANT SCHEDULE: LIVE STAKES**  
NOT TO SCALE

Common Name	Scientific Name	Quantity	Spacing
Red Osier Dogwood	<i>Cornus sericea</i>	792	Pe-P an
Pussy Willow	<i>Salix discolor</i>	396	Pe-P an
Sandbar Willow	<i>Salix interior</i>	396	Pe-P an

**D** **PLANT SCHEDULE: DORMANT CUTTINGS (4-6')**  
NOT TO SCALE

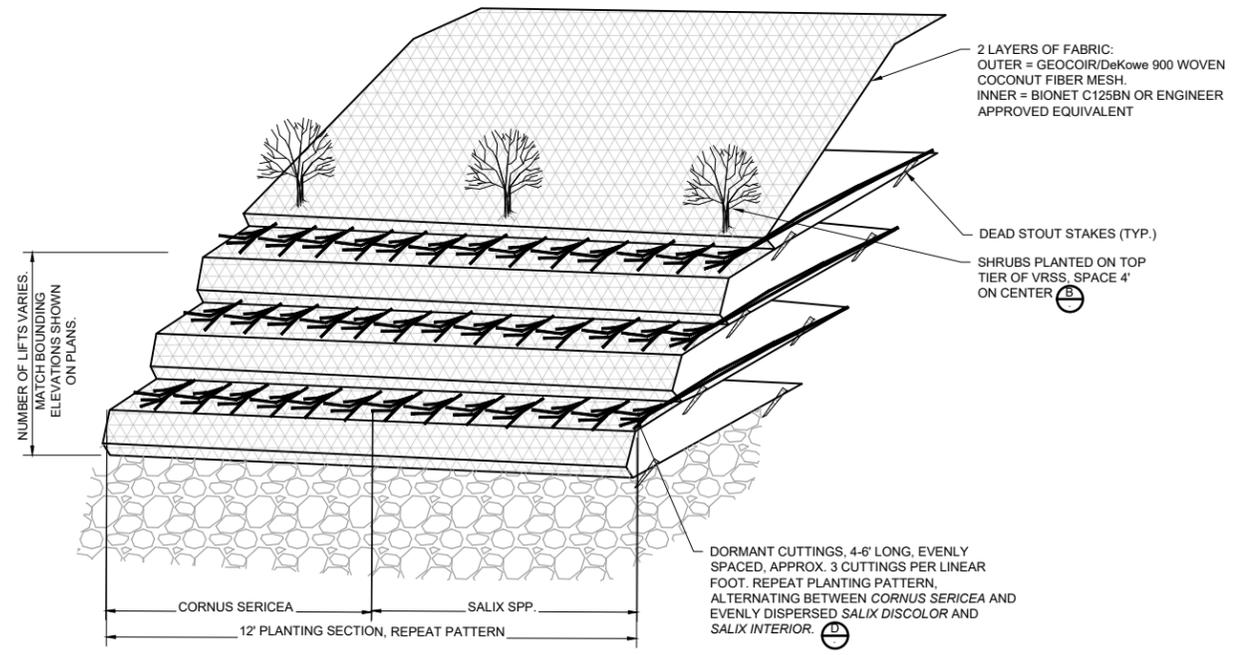
**VRSS Seed Mix**

Common Name	Scientific Name	PLS Rate (lbs/ac)	% of Mix (by weight)
Canada Anemone	<i>Anemone canadensis</i>	0.50	1.9%
Canada Blue Joint Grass	<i>Calamagrostis canadensis</i>	4.00	15.5%
Riverbank Wild Rye	<i>Elymus riparius</i>	4.50	17.4%
Fowl Manna Grass	<i>Glyceria striata</i>	6.00	23.3%
Rice Cut Grass	<i>Leersia oryzoides</i>	4.00	15.5%
Fowl Bluegrass	<i>Poa palustris</i>	5.50	21.3%
Wool Grass	<i>Scirpus cyperinus</i>	0.30	1.2%
Prairie Cordgrass	<i>Spartina pectinata</i>	1.00	3.9%
<b>Total</b>		<b>25.80</b>	<b>100%</b>

**E** **PLANT SCHEDULE: VRSS SEED MIX**  
NOT TO SCALE

**NOTES:**

- THE ENGINEER MUST BE NOTIFIED AT LEAST 3 DAYS PRIOR TO ROOT WAD INSTALLATION AND MUST BE ON SITE DURING INSTALLATION.
- SOAK DORMANT CUTTINGS FOR A MINIMUM OF 24 HOURS IN FLOWING WATER BEFORE PLANTING. SOAKING FOR 5-7 DAYS IS CONSIDERED IDEAL. THE DORMANT CUTTINGS SHOULD ONLY BE INSTALLED DURING THE DORMANT SEASON, AFTER LEAF DROP IN THE FALL AND BEFORE BUD BREAK IN THE SPRING. DORMANT CUTTINGS STORED IN COLD STORAGE WITH NO VISIBLE SIGN OF BUD BREAK MAY BE USED INTO LATE SPRING.
- INSTALL RIPRAP AND GRANULAR FILTER AGGREGATE AS SPECIFIED IN SECTION 02375 AND AS SHOWN ON THE DRAWINGS.
- EXCAVATE THE EXISTING STREAMBANK SLOPE SHOREWARD FROM AND LEVEL WITH THE TOP OF THE RIPRAP TO FORM A STABLE, UNDISTURBED SURFACE. A FLAT BENCH SHOULD BE CREATED FROM THE TOE OF THE STABLE CUT SLOPE TO THE TOE OF THE PROPOSED STREAM BANK RIPRAP.
- DORMANT CUTTINGS ARE TO BE PLACED ON TOP OF THE RIPRAP EXCAVATED BENCH AT 3 BRANCHES PER LINEAR FOOT; THE BASAL END OF THE CUTTINGS SHOULD EXTEND AT LEAST 2 FOOT PAST THE BACK OF THE RIPRAP. NO MORE THAN 6 INCHES OF THE BUDDING END OF THE LIVE BRANCH SHOULD EXTEND PAST THE FRONT OF THE RIPRAP. COVER THE DORMANT CUTTINGS WITH TOPSOIL TO CREATE AN EVEN SURFACE FOR THE CONSTRUCTION OF THE FIRST SOIL LIFT.
- LAY NATURAL FIBER MATTING ON BOTTOM OF THE BENCH, OVERLAPPING ADJACENT MATTING BY 1 FOOT. THE OUTER EXPOSED FIBER MATTING LAYER OF EACH SOIL LIFT SHALL BE GEOCOIR/DEKOWE 900 WOVEN COCONUT FIBER MESH, BIOD-MATTM 90, OR AN ENGINEER APPROVED EQUIVALENT.
- THE INNER LAYER OF EACH SOIL LIFT SHALL BE BIONET C125BN OR AN ENGINEER APPROVED EQUIVALENT. LAY THE INNER LAYER OF BIONET ON TOP OF NATURAL FIBER MATTING OF EACH SOIL LIFT. FABRIC SHOULD BE INSTALLED SMOOTH WITH NO UNNECESSARY FOLDS OR WRINKLES. STAKE THE SHOREWARD END OF THE FIBER MATTING IN PLACE WITH WOODEN STAKES SPACED EVERY THREE FEET AS SHOWN ON THE DRAWINGS.
- THE FIRST 6 TO 8 INCHES OF THE BOTTOM SOIL LIFT SHALL BE FILLED WITH GRAVEL AND SAND MATERIAL EXCAVATED FROM THE STREAM BED. THE TOP 6 TO 8 INCHES ON THE FRONT OF SURFACE LAYER SHOULD BE COMPRISED OF TOPSOIL MIX AS SHOWN ON THE DRAWINGS.
- THE TOPSOIL LAYER SHALL BE SEEDED WITH THE VRSS SEED MIX AT 0.7 POUNDS PER 1,000 SQUARE FEET OF LIFT SURFACE AREA AS SHOWN ON THE DRAWINGS.
- FOLD THE FIBER MATTING OVER THE FILL MATERIAL AND STAKE IN PLACE SO THE FABRIC IS TAUT AND SMOOTH WITH NO UNNECESSARY FOLDS OR WRINKLES. BACKFILL BEHIND THE BOTTOM SOIL LIFT WITH GRANULAR FILTER MATERIAL TO MEET THE EXISTING SLOPE AS SHOWN ON THE DRAWINGS.



**2** **DETAIL: LIVE PLANT VEGETATED REINFORCED SOIL SLOPE (V.R.S.S.)**  
NOT TO SCALE

ISSUED FOR PERMITTING  
NOT FOR CONSTRUCTION

CADD USER: Eric P. Fitzgerald FILE: M:\DESIGN\23270053\_1\MIDDLE RILEY CREEK STABILIZATION PHASE 2\01\_DETAILS\DWG\_PLOT\_SCALE\_1:2\_PLOT\_DATE\_3/12/2021 9:54 AM

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
C	EPF	SAB2	JCO	03/12/2021	ISSUED FOR PERMITTING
B	EPF	SAB2	JCO	08/06/2020	65% ISSUED FOR REVIEW
A	CWF	SAB2	JCO	07/15/2020	60% ISSUED FOR REVIEW

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

PRINTED NAME: JESSICA OLSON  
SIGNATURE: \_\_\_\_\_  
DATE: 03/12/2021 LICENSE # 43102

CLIENT	07/15/20	08/06/20					
BID							
CONSTRUCTION							
PERMITTING				03/12/21			
RELEASED TO/FOR	A	B	C	0	1	2	3
DATE RELEASED							

Project Office:  
**BARR ENGINEERING CO.**  
4300 MARKETPOINTE DRIVE  
Suite 200  
MINNEAPOLIS, MN 55435

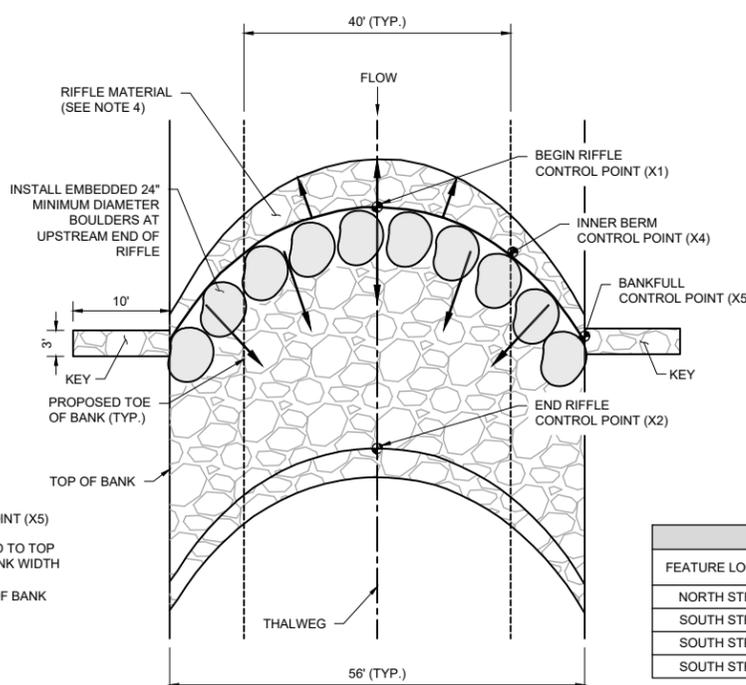
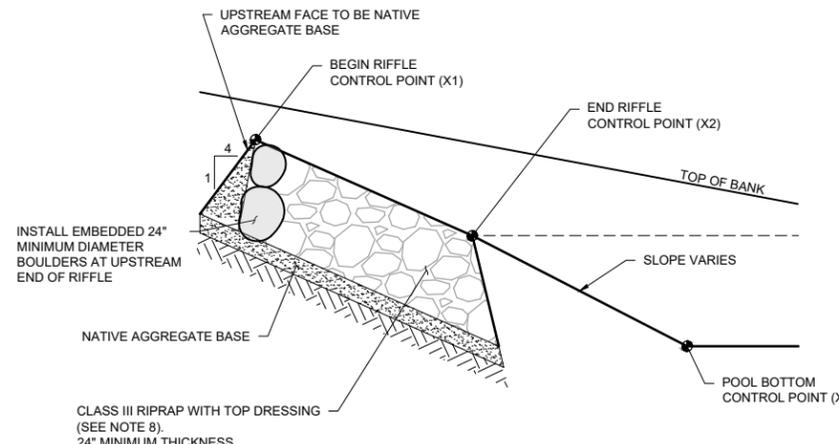
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Ph: 1-800-632-2277  
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www.barr.com

Scale	AS SHOWN
Date	03/12/2021
Drawn	EPF
Checked	SAB2
Designed	BARR
Approved	JCO

**RILEY PURGATORY BLUFF CREEK WD**  
CHANHASSEN, MN

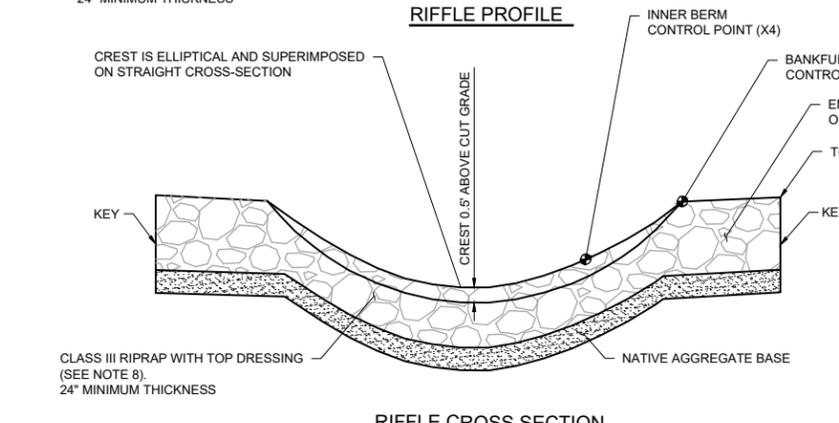
MIDDLE RILEY CREEK STABILIZATION (PHASE 2)  
EDEN PRAIRIE, MN  
STABILIZATION DETAILS

BARR PROJECT No. 23/27-0053.14
CLIENT PROJECT No.
DWG. No. D-03
REV. No. C

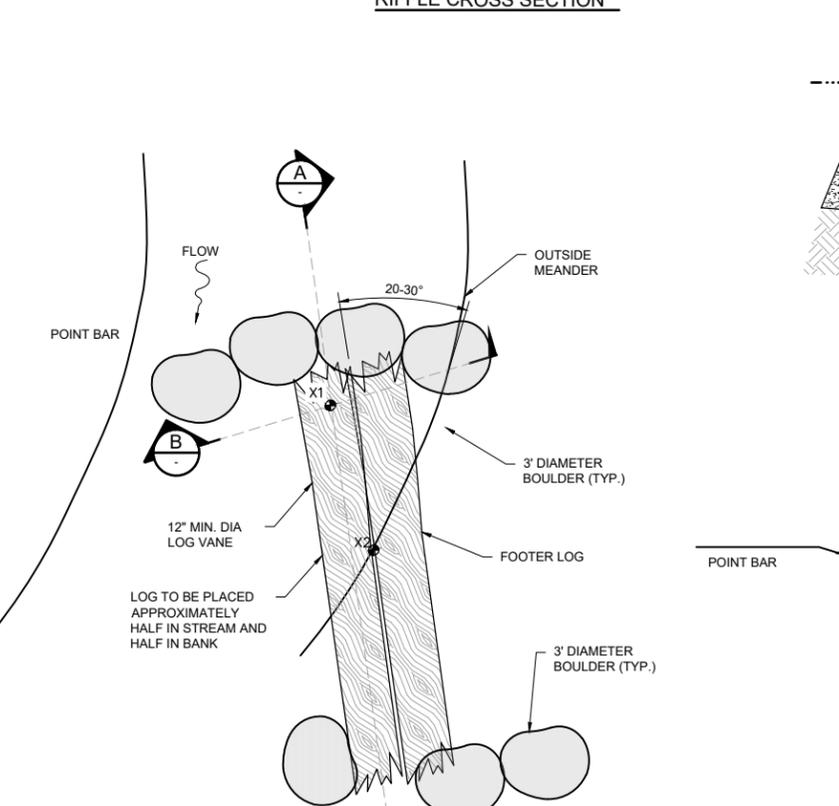


- NOTES:**
- ROCK RIFFLES SHALL BE INSTALLED WITHIN THE EXISTING RIVER CHANNEL AS SPECIFIED.
  - ELEVATION CONTROL POINTS SHALL BE DESIGNATED AT THE BEGINNING AND END OF RIFFLE POINTS TO ESTABLISH PART OF THE PROFILE OF THE CHANNEL. SURVEY OF CONTROL POINTS SHALL BE REQUIRED TO ESTABLISH ACCURATE RIFFLE INSTALLATION.
  - RIFFLE MATERIAL SHALL BE CLASS III RIPRAP FROM THE SITE AND/OR IMPORTED, INSTALLED WITH A MINIMUM THICKNESS OF 24".
  - THE FACE OF THE RIFFLE UPSTREAM OF THE BEGIN RIFFLE CONTROL POINT SHALL BE NATIVE AGGREGATE BASE. 24" MINIMUM DIAMETER BOULDERS EMBEDDED IN RIFFLE IMMEDIATELY DOWNSTREAM OF THE NATIVE AGGREGATE BASE.
  - THE PLACEMENT OF BACKFILL AND/OR RIFFLE MATERIAL SHALL BE DONE IN A MANNER TO CREATE A SMOOTH PROFILE, WITH NO ABRUPT 'JUMP' (TRANSITION) BETWEEN THE UPSTREAM POOL-GLIDE AND THE RIFFLE, AND LIKEWISE NO ABRUPT 'DROP' (TRANSITION) BETWEEN THE RIFFLE AND THE DOWNSTREAM RUN-POOL. A THALWEG SHALL BE FASHIONED WITHIN THE RIFFLE WIDTH SO THAT THE FINISHED CROSS SECTION OF THE RIFFLE MATERIAL MATCHES THE SHAPE AND DIMENSIONS SHOWN ON THE RIFFLE TYPICAL SECTION.
  - SEE THE ROCK RIFFLES TABLE FOR STATIONING AND ELEVATIONS.
  - SEE TYPICAL RIFFLE SECTION (D-04) FOR CHANNEL DIMENSIONS.
  - RIFFLE SURFACE TO BE TOP-DRESSED WITH 6" OF MnDOT CLASS I RIPRAP TO REDUCE VOID SPACE.

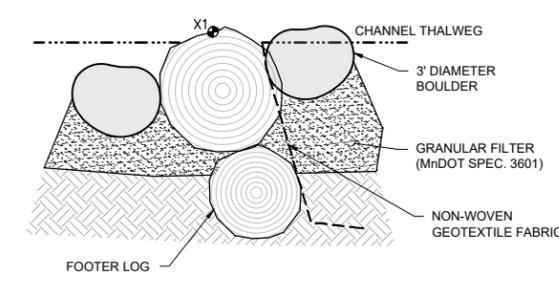
ROCK RIFFLES									
FEATURE LOCATION	X1 STATION	X1 ELEVATION	X1 BANKFULL	X2 STATION	X2 ELEVATION	X2 BANKFULL	X3 STATION	X3 ELEVATION	NOTES
NORTH STREAM	1+46	870.1		1+58					
SOUTH STREAM	2+45	865.5		2+57					
SOUTH STREAM	5+00	865.2		5+12					
SOUTH STREAM	5+62	865.0		5+74					



**1** **DETAIL: ROCK RIFFLE**  
NOT TO SCALE

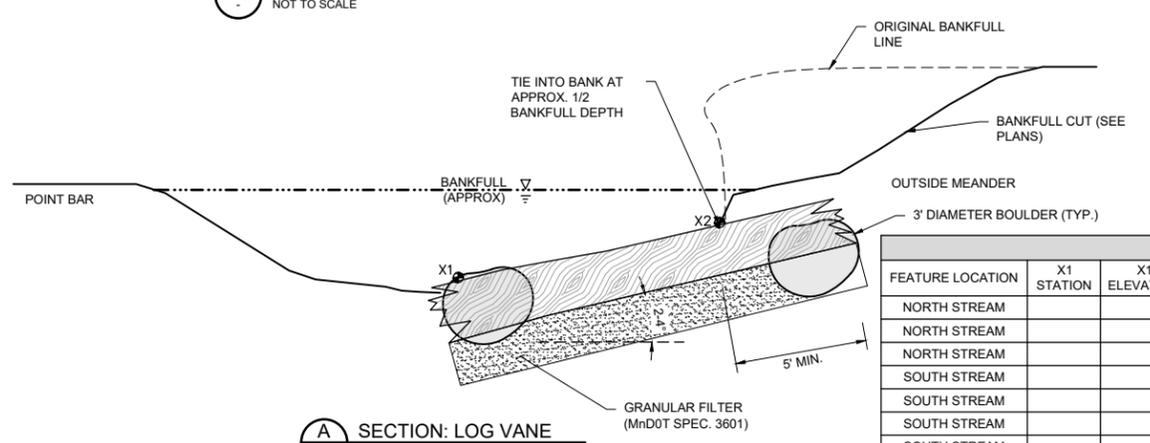


**2** **DETAIL: J-HOOK LOG VANE**  
NOT TO SCALE



**B** **SECTION: LOG VANE**  
NOT TO SCALE

- GENERAL NOTES:**
- THE ENGINEER MUST BE NOTIFIED AT LEAST 3 DAYS PRIOR TO LOG VANE INSTALLATION AND MUST BE ON SITE DURING INSTALLATION.
  - TO THE EXTENT POSSIBLE, LOG VANES SHOULD BE CREATED FROM TREES THAT WILL BE REMOVED FROM THE SITES WITHIN THE PROJECT AREA.
  - EITHER DRIVE THE LOG VANE INTO THE BANK, OR EXCAVATE A TRENCH IN WHICH TO PLACE THE LOG VANE. IF THE LOG VANE IS DRIVEN INTO THE BANK, SHARPEN THE END OF THE LOG VANE TO A POINT.
  - THE LOG VANE MUST BE PLACED AT APPROXIMATELY A 20-30 DEGREE ANGLE, OR AS DIRECTED BY THE ENGINEER.
  - PLACE FOOTER LOG SLIGHTLY UPSTREAM AND UNDER MAIN LOG TO PROVIDE PROTECTION AGAINST SCOUR.
  - NON-WOVEN GEOTEXTILE FABRIC IS ATTACHED WITH ROOFING NAILS TO ENTIRE LENGTH OF LOG ON UPSTREAM SIDE AND EXTENDED OVER FOOTER LOG AND UNDER AGGREGATE BEDDING.
  - THE LOG VANE MUST BE PLACED IN THE BANK SO THAT AT LEAST 1/2 OF THE LOG VANE IS EMBEDDED INTO THE BANK.
  - LARGE BOULDERS ARE PLACED ON BOTH SIDES OF THE LOG VANE AT THE INTERFACE WITH THE BANK TO CREATE A CUT-OFF SILL.
  - LARGE BOULDERS ARE ALSO PLACED AT THE END OF THE LOG VANE IN THE CHANNEL AS DIRECTED BY THE ENGINEER.
  - PLACE GRANULAR FILTER AGGREGATE (MnDOT STANDARD SPECIFICATION 3601) AS BEDDING FOR BOULDERS IF NECESSARY.
  - MATCH EXISTING GRADE OR PLANNED GRADE AS APPROPRIATE WITH BACKFILL.
  - REVEGETATE AND STABILIZE WITH SEED AND MULCH AS SPECIFIED FOR EACH SITE AS SHOWN IN THE DRAWINGS AND DIRECTED BY THE ENGINEER.
  - EXCAVATE SCOUR HOLE IN STREAM BED ADJACENT TO LOG VANE AS DIRECTED BY THE ENGINEER.



**A** **SECTION: LOG VANE**  
NOT TO SCALE

J-HOOK LOG VANES									
FEATURE LOCATION	X1 STATION	X1 ELEVATION	X2 STATION	X2 ELEVATION	X3 STATION	X3 ELEVATION	X4 STATION	X4 ELEVATION	NOTES
NORTH STREAM					0+22	870.8			
NORTH STREAM					0+66	870.6			
NORTH STREAM					1+17	870.6			
SOUTH STREAM					3+38	865.5			
SOUTH STREAM					3+93	865.4			
SOUTH STREAM					4+16	864.9			
SOUTH STREAM					6+15	864.9			
SOUTH STREAM					7+84	864.7			

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CADD USER: Eric P. Fitzgerald FILE: M:\DESIGN\23270053\_1\MIDDLE RILEY CREEK STABILIZATION\DWG\14\_D-01\_DETAILS.DWG PLOT SCALE: 1:2 PLOT DATE: 3/12/2021 9:55 AM

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
C	EPF	SAB2	JCO	03/12/2021	ISSUED FOR PERMITTING
B	EPF	SAB2	JCO	08/06/2020	65% ISSUED FOR REVIEW
A	CWF	SAB2	JCO	07/15/2020	60% ISSUED FOR REVIEW

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PRINTED NAME: JESSICA OLSON  
SIGNATURE: \_\_\_\_\_  
DATE: 03/12/2021 LICENSE #: 43102

CLIENT	BID	CONSTRUCTION	PERMITTING
07/15/20	08/06/20		03/12/21

RELEASED TO/FOR: A B C 0 1 2 3  
DATE RELEASED: \_\_\_\_\_

Project Office:  
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4300 MARKETPOINTE DRIVE  
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MINNEAPOLIS, MN 55435

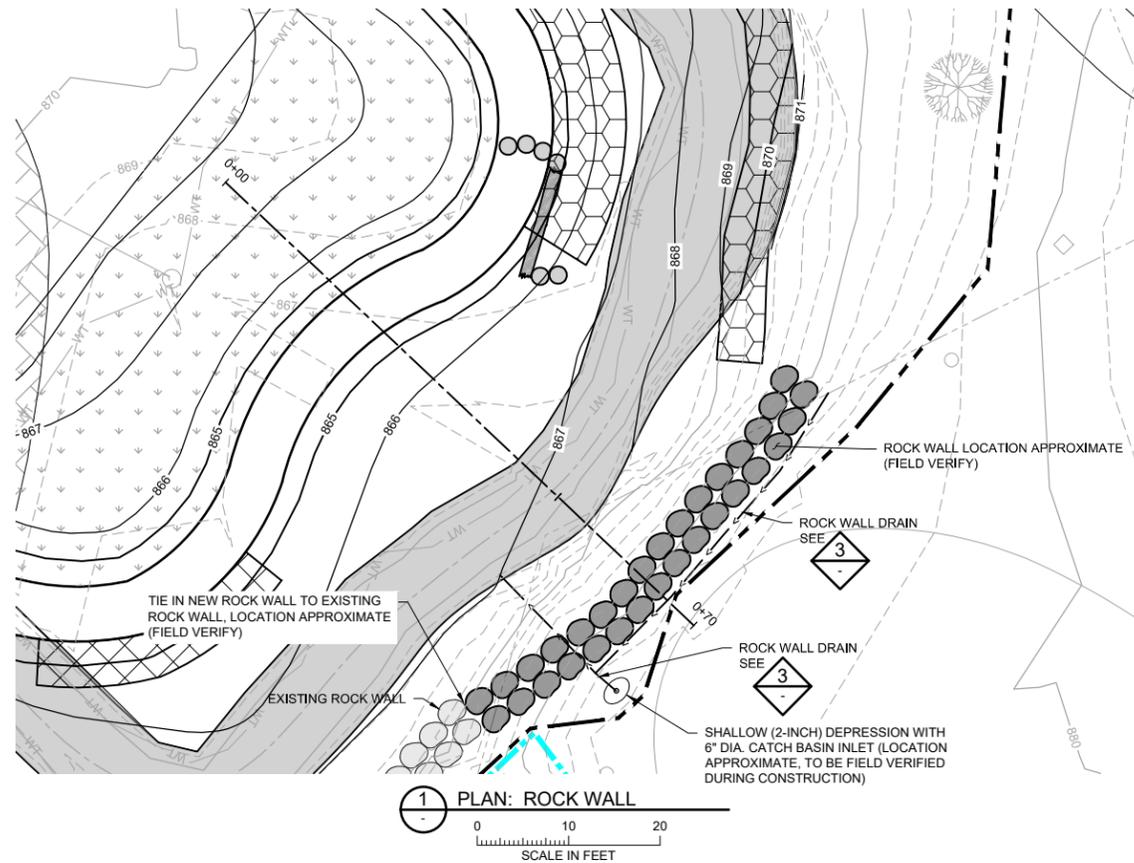
Corporate Headquarters:  
Minneapolis, Minnesota  
Ph: 1-800-632-2277  
Fax: (952) 832-2601  
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Scale	AS SHOWN
Date	03/12/2021
Drawn	EPF
Checked	SAB2
Designed	BARR
Approved	JCO

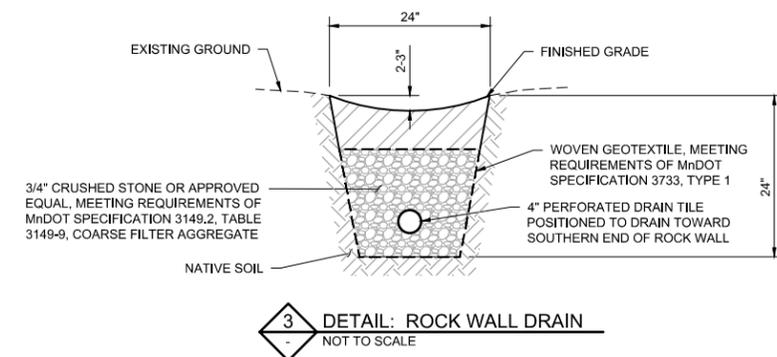
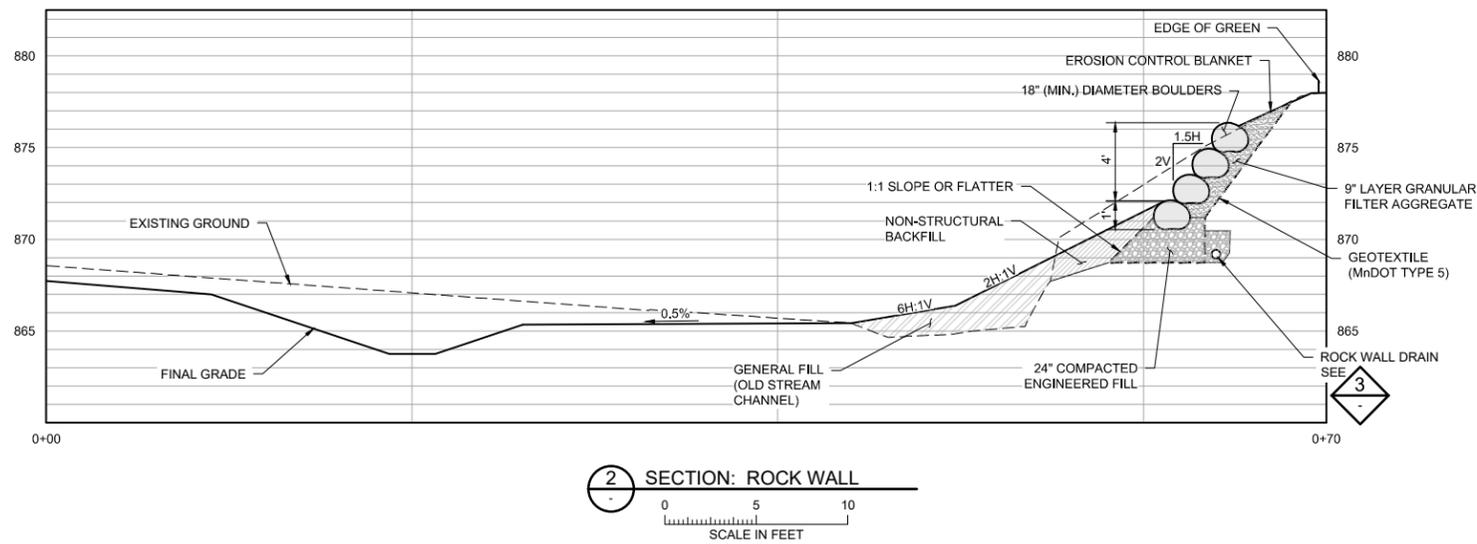
**RILEY PURGATORY BLUFF CREEK WD**  
CHANHASSEN, MN

**MIDDLE RILEY CREEK STABILIZATION (PHASE 2)**  
EDEN PRAIRIE, MN  
**STABILIZATION DETAILS**

BARR PROJECT No. 23/27-0053.14	CLIENT PROJECT No.
DWG. No. D-04	REV. No. C



ROCK WALL RENDERING



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NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
C	EPF	SAB2	JCO	03/12/2021	ISSUED FOR PERMITTING
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PRINTED NAME: JESSICA OLSON

SIGNATURE: \_\_\_\_\_

DATE: 03/12/2021 LICENSE # 43102

CLIENT	07/15/20	08/06/20					
BID							
CONSTRUCTION							
PERMITTING			03/12/21				
RELEASED TO/FOR	A	B	C	0	1	2	3
DATE RELEASED							

**BARR**

Project Office:  
BARR ENGINEERING CO.  
4300 MARKETPOINTE DRIVE  
Suite 200  
MINNEAPOLIS, MN 55435

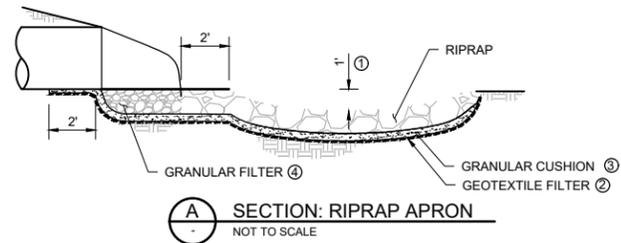
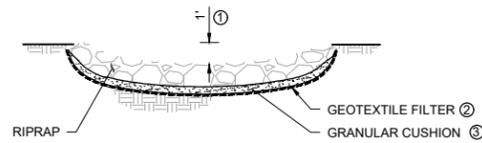
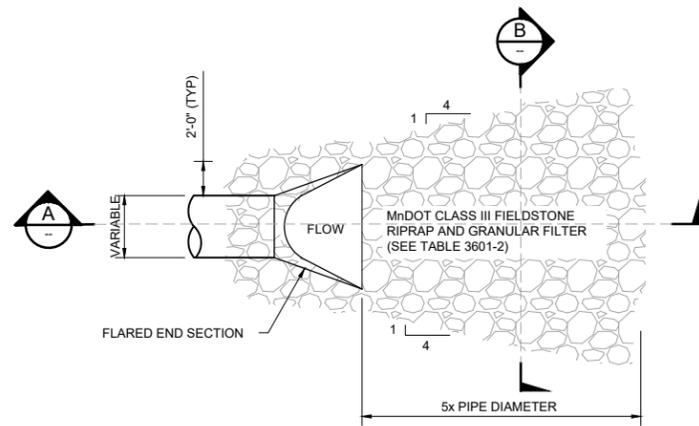
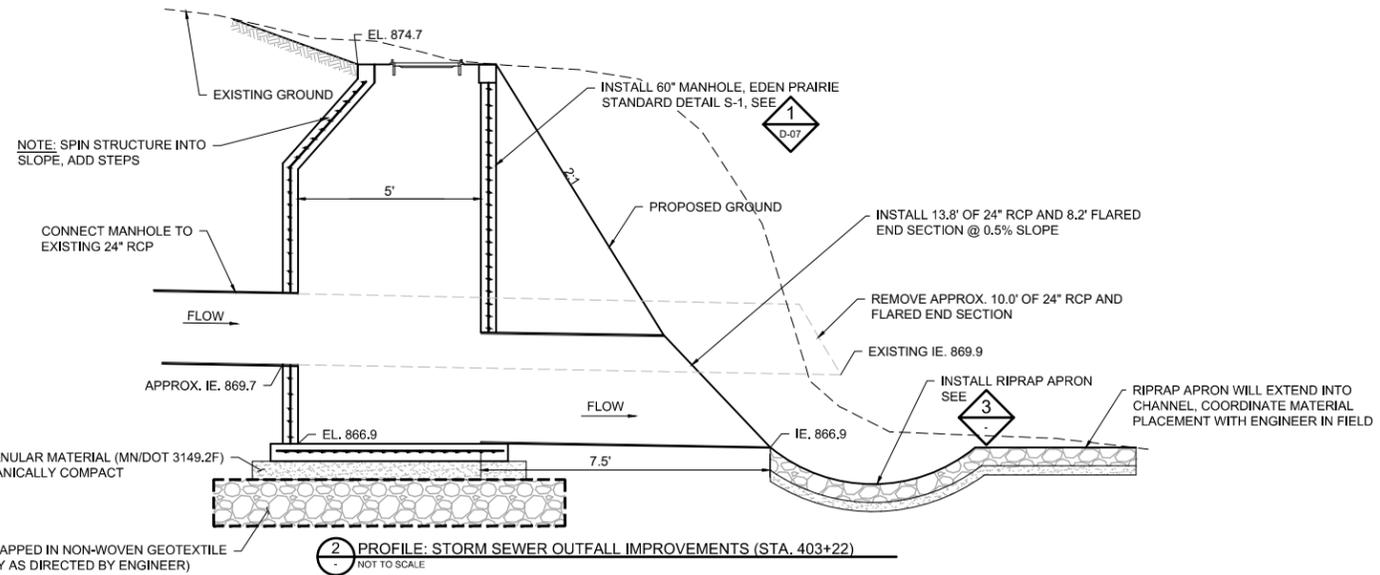
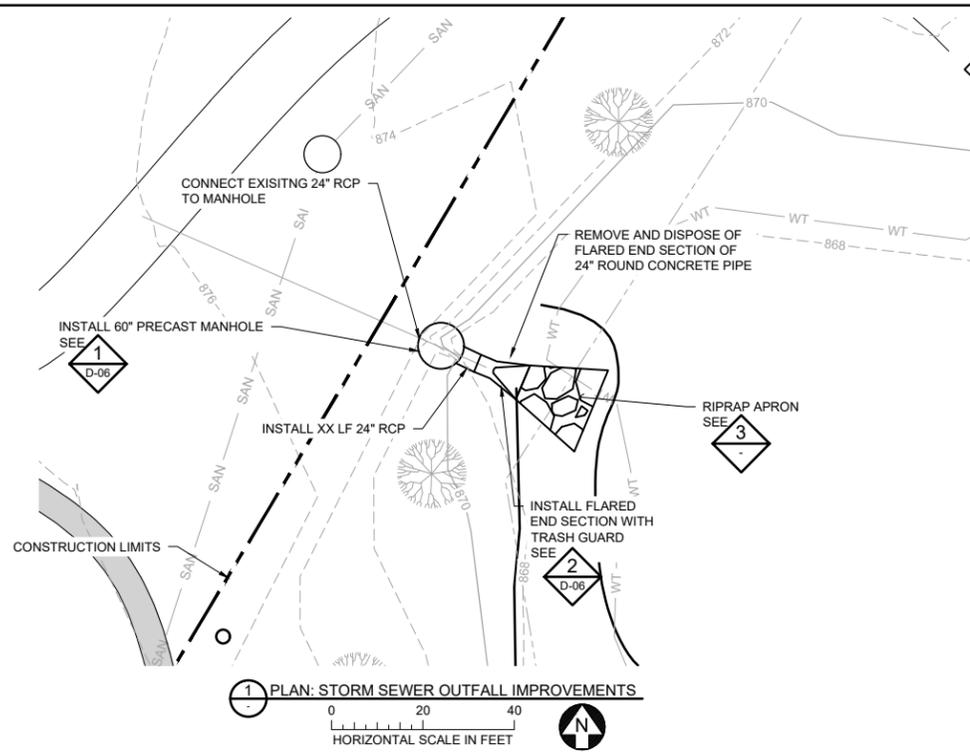
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Scale	AS SHOWN
Date	03/12/2021
Drawn	EPF
Checked	SAB2
Designed	BARR
Approved	JCO

RILEY PURGATORY BLUFF CREEK WD  
CHANHASSEN, MN

MIDDLE RILEY CREEK STABILIZATION (PHASE 2)  
EDEN PRAIRIE, MN  
ROCK WALL DETAILS

BARR PROJECT No.	23/27-0053.14
CLIENT PROJECT No.	
DWG. No.	D-05
REV. No.	C



- NOTES:**
- REQUIREMENTS FOR GEOTEXTILE TYPE, RIPRAP SIZE AND THICKNESS SHALL BE DESIGNATED IN THE PLANS.
- PIPE SIZES LARGER THAN THOSE SHOWN REQUIRE A SPECIAL DESIGN.
- ① FOR PIPES GREATER THAN OR EQUAL TO 30", USE 1.5".
  - ② GEOTEXTILE FILTER, SPEC. 3733, SHALL COVER THE BOTTOM AND SIDES OF THE AREA EXCAVATED FOR THE RIPRAP.
  - ③ GRANULAR FILTER, SPEC. 3601, USED AS A CUSHION LAYER. PLACE FILTER PER SPEC. 2511. THE CUSHION LAYER IS INCIDENTAL.
  - ④ GRANULAR FILTER OR RIPRAP, SPEC. 3601, TO EXTEND UNDER ENTIRE OPEN PORTION OF PIPE APRON. DEPTH OF MATERIAL UNDER APRON SHALL MATCH RIPRAP DEPTH. WHEN USING RIPRAP, INCREASE RIPRAP QUANTITY ACCORDINGLY AND PLACE A 3" LAYER OF 1.5" CRUSHED ROCK UNDER THE APRON TO AID IN GRADING FOR APRON PLACEMENT. CRUSHED ROCK IS INCIDENTAL.

ISSUED FOR PERMITTING  
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CADD USER: Eric P. Fitzgerald FILE: M:\DESIGN\23270053\_1\MIDDLE RILEY CREEK STABILIZATION\DWG\23270053\_14\_D-01\_DETAILS.DWG PLOT SCALE: 1:12 PLOT DATE: 3/12/2021 9:56 AM  
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NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
C	EPF	SAB2	JCO	03/12/2021	ISSUED FOR PERMITTING
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PRINTED NAME: JESSICA OLSON  
SIGNATURE: \_\_\_\_\_  
DATE: 03/12/2021 LICENSE #: 43102

CLIENT	BID	CONSTRUCTION	PERMITTING	RELEASED TO/FOR	DATE RELEASED
	07/15/20	08/06/20		A B C	0 1 2 3

**BARR**  
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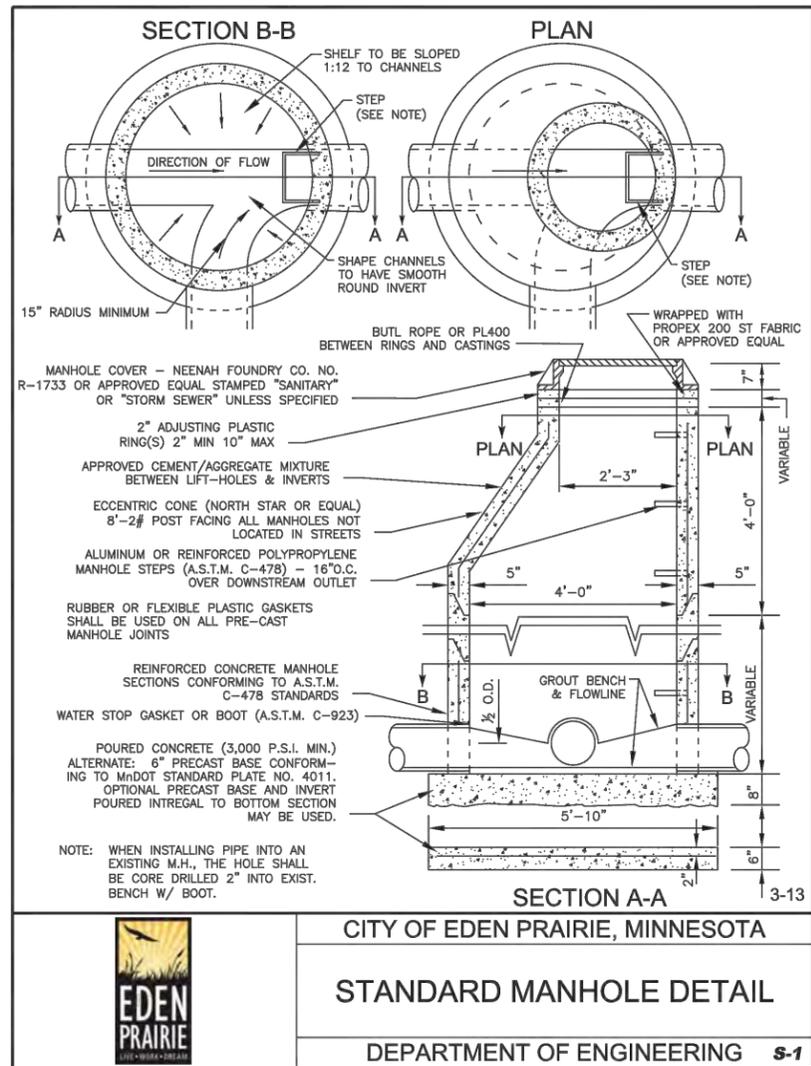
Scale	AS SHOWN
Date	03/12/2021
Drawn	EPF
Checked	SAB2
Designed	BARR
Approved	JCO

**RILEY PURGATORY BLUFF CREEK WD**  
CHANHASSEN, MN

MIDDLE RILEY CREEK STABILIZATION (PHASE 2)  
EDEN PRAIRIE, MN  
OUTLET IMPROVEMENT DETAILS

BARR PROJECT No.	23/27-0053.14
CLIENT PROJECT No.	
DWG. No.	D-06
REV. No.	C

CADD USER: Eric P. Fitzgerald FILE: M:\DESIGN\23270053\_1\MIDDLE RILEY CREEK\STREAM\23270053\_14\_D-01\_DETAILS.DWG PLOT SCALE: 1:12 PLOT DATE: 3/12/2021 9:57 AM  
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CITY OF EDEN PRAIRIE, MINNESOTA

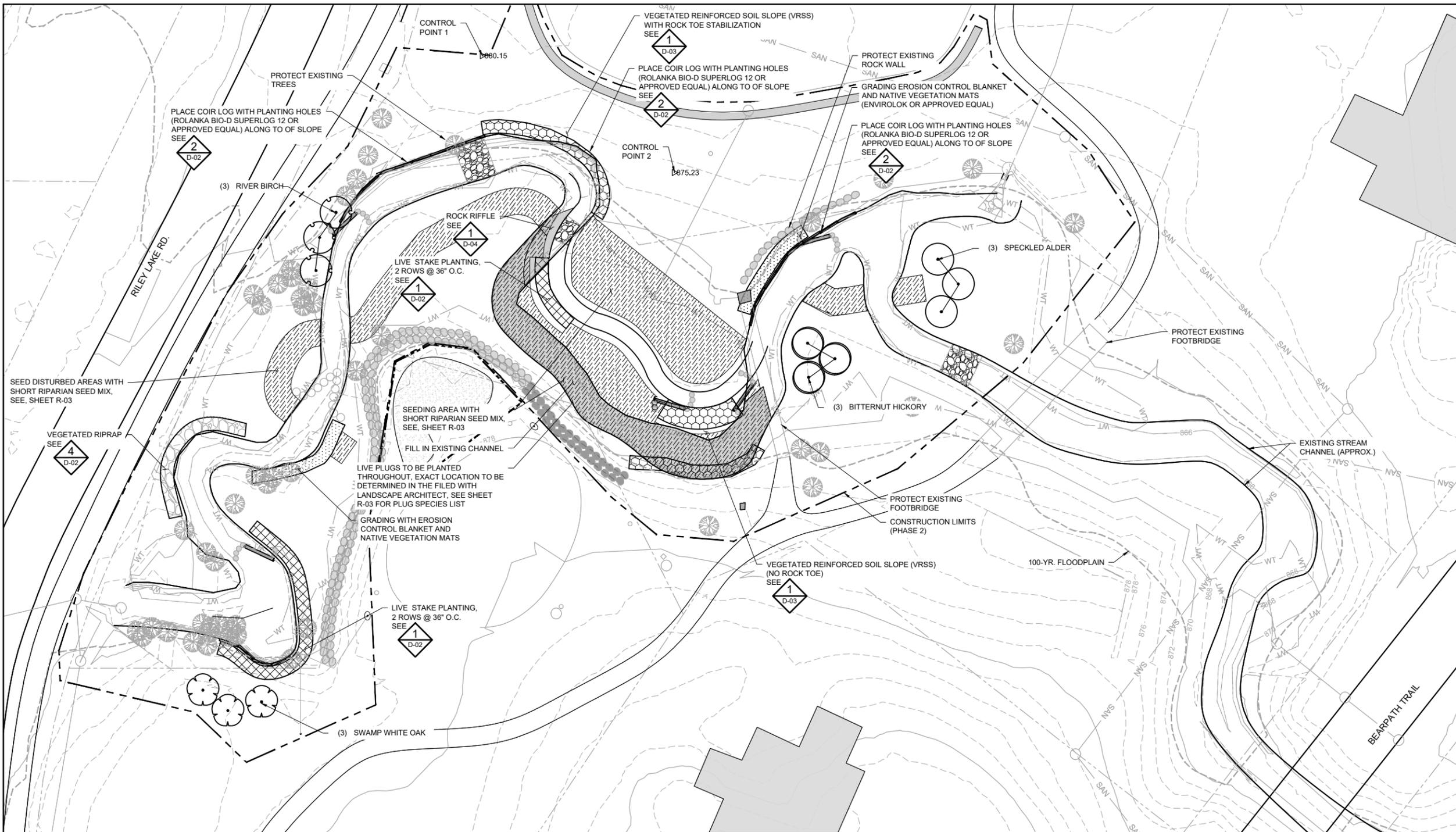
STANDARD MANHOLE DETAIL

DEPARTMENT OF ENGINEERING S-1

1 DETAIL: STANDARD MANHOLE  
 NOT TO SCALE

ISSUED FOR PERMITTING  
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				PRINTED NAME JESSICA OLSON				CONSTRUCTION				Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com				Date 03/12/2021		RILEY PURGATORY BLUFF CREEK WD CHANHASSEN, MN		CLIENT PROJECT No.	
				SIGNATURE				PERMITTING				Drawn EPF		Checked SAB2		OUTLET IMPROVEMENT DETAILS		DWG. No. D-07			
				DATE 03/12/2021 LICENSE # 43102				RELEASED TO/FOR				Designed BARR		Approved JCO		REV. No. C					
NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION				DATE RELEASED												
C	EPF	SAB2	JCO	03/12/2021	ISSUED FOR PERMITTING																
B	EPF	SAB2	JCO	08/06/2020	65% ISSUED FOR REVIEW																
A	CWF	SAB2	JCO	07/15/2020	60% ISSUED FOR REVIEW																



SYMBOL AND PATTERN LEGEND	
	EXISTING 10' CONTOUR
	EXISTING 2' CONTOUR
	EXISTING PROPERTY LINE
	EXISTING STREAM THALWEG (APPROX.)
	EXISTING 100-YR FLOODPLAIN
	PROPOSED 10' CONTOUR
	PROPOSED 2' CONTOUR
	CONSTRUCTION LIMITS (PHASE 1)
	CONSTRUCTION LIMITS (PHASE 2)
	ROCK RIFFLE
	LIVE STAKES
	VRSS
	FILL EXISTING CREEK
	SEEDING AREA WITH SHORT RIPARIAN SEED MIX, SEE SHEET R-03
	J-HOOK BOULDER VANE
	BOULDER CROSS VANE
	GRADING WITH EROSION CONTROL BLANKET AND NATIVE VEGETATION MATS
	J-HOOK LOG VANE

1 PLAN: CREEK RESTORATION SOUTH



CONTROL POINTS				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	117922.4829'	465761.5527'	875.23'	VRS SPIKE 1
2	117850.1325'	465717.6763'	880.15'	VRS SPIKE 2

GENERAL LANDSCAPE NOTES:

- PLANTING SHALL CONFORM TO MNDOT SPEC 2571. PLANT INSTALLATION AND ESTABLISHMENT, EXCEPT AS INDICATED OTHERWISE IN THE PLANTING SHEETS.
- INFORM THE LANDSCAPE ARCHITECT OF PLANTING TWO DAYS PRIOR TO PLANT DELIVERY.
- CONTRACTOR SHALL COORDINATE LAYOUT OF ALL PLANTS WITH DIRECTION OF LANDSCAPE ARCHITECT IN THE FIELD.
- CONFIRM ALL QUANTITIES, SHAPES AND LOCATIONS OF VRSS, BIOLOGS, AND ALL SEEDING AND PLANTING AREAS; ADJUST QUANTITIES AS REQUIRED TO CONFORM TO THE SITE CONDITIONS. CONFIRM ANY ADJUSTMENTS WITH THE LANDSCAPE ARCHITECT.
- LOCATE ALL UTILITIES. NOTIFY THE LANDSCAPE ARCHITECT OF ANY CONFLICTS WITH PLANT INSTALLATION.
- LONG-TERM STORAGE OF MATERIALS OR SUPPLIES ON-SITE WILL NOT BE ALLOWED. ANY PLANT STOCK NOT PLANTED ON DAY OF DELIVERY SHALL BE HELED IN AND WATERED UNTIL INSTALLATION. PLANTS NOT MAINTAINED IN THIS MANNER WILL BE REJECTED.
- THE PLAN TAKES PRECEDENCE OVER THE PLANT SCHEDULE IF DISCREPANCIES EXIST. ADVISE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.

PROTECTIONS:

- THE CONTRACTOR SHALL AVOID DAMAGING EXISTING TREES. DO NOT STORE OR DRIVE HEAVY MATERIALS OVER TREE ROOTS. DO NOT DAMAGE TREE BARK OR BRANCHES.
- THE CONTRACTOR SHALL KEEP PAVEMENTS, FIXTURES AND BUILDINGS CLEAN AND UNSTAINED. ANY DAMAGE TO EXISTING FACILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. THE PROJECT SITE SHALL BE KEPT CLEAR OF CONSTRUCTION WASTES AND DEBRIS.
- PROVIDE SILT FENCE IF NECESSARY TO PROTECT STREET FROM EROSION.

SEEDING:

- ANY EXOTIC INVASIVE PLANTS AND WEEDS WITHIN THE SEEDING AREAS SHALL BE SPRAYED WITH HERBICIDE 14 DAYS PRIOR TO SEEDING OR AS PER MANUFACTURER'S RECOMMENDATION. SIGNAGE INDICATING THE USE OF HERBICIDES MUST BE POSTED ON SITE.
- ALL HERBICIDE APPLICATION SHALL BE APPLIED BY A LICENSED APPLICATOR WITHIN THE STATE OF MINNESOTA.
- SEED IN ACCORDANCE WITH THE SPECIFICATIONS. SEEDING IS TO TAKE

PLACE IMMEDIATELY FOLLOWING FINAL GRADING AND SOIL PLACEMENT TO PREVENT EROSION AND COMPACTION.

- COVER CROP IS TO BE SEEDING WITHIN ALL AREAS.
- AFTER SEEDING, TYPE 8 MULCH MATERIAL SHALL BE DIS-ANCHORED OVER ENTIRE SEEDING AREA IN ACCORDANCE WITH MNDOT STANDARD SPECIFICATION 3882.
- REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. IN THE CASE OF ANY DISCREPANCIES BETWEEN THIS DETAIL, PLANS, OR SPECIFICATIONS, THE SPECIFICATIONS SHALL GOVERN.

MAINTENANCE AND CARE:

- MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER EACH PORTION OF THE WORK IS IN PLACE. PLANT MATERIAL SHALL BE PROTECTED AND MAINTAINED UNTIL THE INSTALLATION OF PLANTINGS IS COMPLETE. INSPECTION HAS BEEN MADE AND PLANTING IS ACCEPTED EXCLUSIVE OF THE GUARANTEE.
- MAINTENANCE SHALL INCLUDE WATERING, WEEDING, MULCHING, REMOVAL OF DEAD MATERIAL PRIOR TO GROWING SEASON, RE-SETTING PLANTS AND PROPER GRADE, AND KEEPING PLANTS IN A PLUMB POSITION. AFTER ACCEPTANCE, THE OWNER SHALL

ASSUME MAINTENANCE RESPONSIBILITIES. HOWEVER, THE CONTRACTOR SHALL CONTINUE TO BE RESPONSIBLE FOR KEEPING THE SHRUBS PLUMB THROUGHOUT THE GUARANTEE PERIOD.

- WATERING: MAINTAIN A WATERING SCHEDULE WHICH WILL THOROUGHLY WATER ALL PLANTS ONCE A WEEK. IN EXTREMELY HOT, DRY WEATHER, WATER MORE OFTEN AS REQUIRED BY INDICATIONS OF HEAT STRESS SUCH AS WILTING LEAVES. CHECK MOISTURE UNDER MULCH PRIOR TO WATERING TO DETERMINE NEED. CONTRACTOR SHALL MAKE THE NECESSARY ARRANGEMENTS FOR WATER.

ISSUED FOR PERMITTING  
NOT FOR CONSTRUCTION

CADD USER: Eric P. Fitzgerald FILE: M:\DE\GIS\23270053\_1\MIDDLE RILEY CREEK RESTORATION PLAN - SOUTH.DWG PLOT SCALE: 1:2 PLOT DATE: 3/12/2021 10:19 AM  
BARR:\AutoCAD\2011\AutoCAD 2011 Support\enu\TemplateBar\_2011\_Template.dwt Plot at 1: 10/06/2010 14:09:50

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
C	EPF	SAB2	JCO	03/12/2021	ISSUED FOR PERMITTING
B	EPF	SAB2	JCO	08/06/2020	65% ISSUED FOR REVIEW
A	CWF	SAB2	JCO	07/15/2020	60% ISSUED FOR REVIEW

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

PRINTED NAME: JESSICA OLSON  
SIGNATURE: \_\_\_\_\_  
DATE: 03/12/2021 LICENSE # 43102

CLIENT	BID	CONSTRUCTION	PERMITTING
07/15/20	08/06/20		
			03/12/21

Project Office:  
BARR ENGINEERING CO.  
4300 MARKETPOINTE DRIVE  
Suite 200  
MINNEAPOLIS, MN 55435

Corporate Headquarters:  
Minneapolis, Minnesota  
Ph: 1-800-632-2277  
Ph: 1-800-632-2277

Scale	AS SHOWN
Date	03/12/2021
Drawn	EPF
Checked	SAB2
Designed	BARR
Approved	JCO

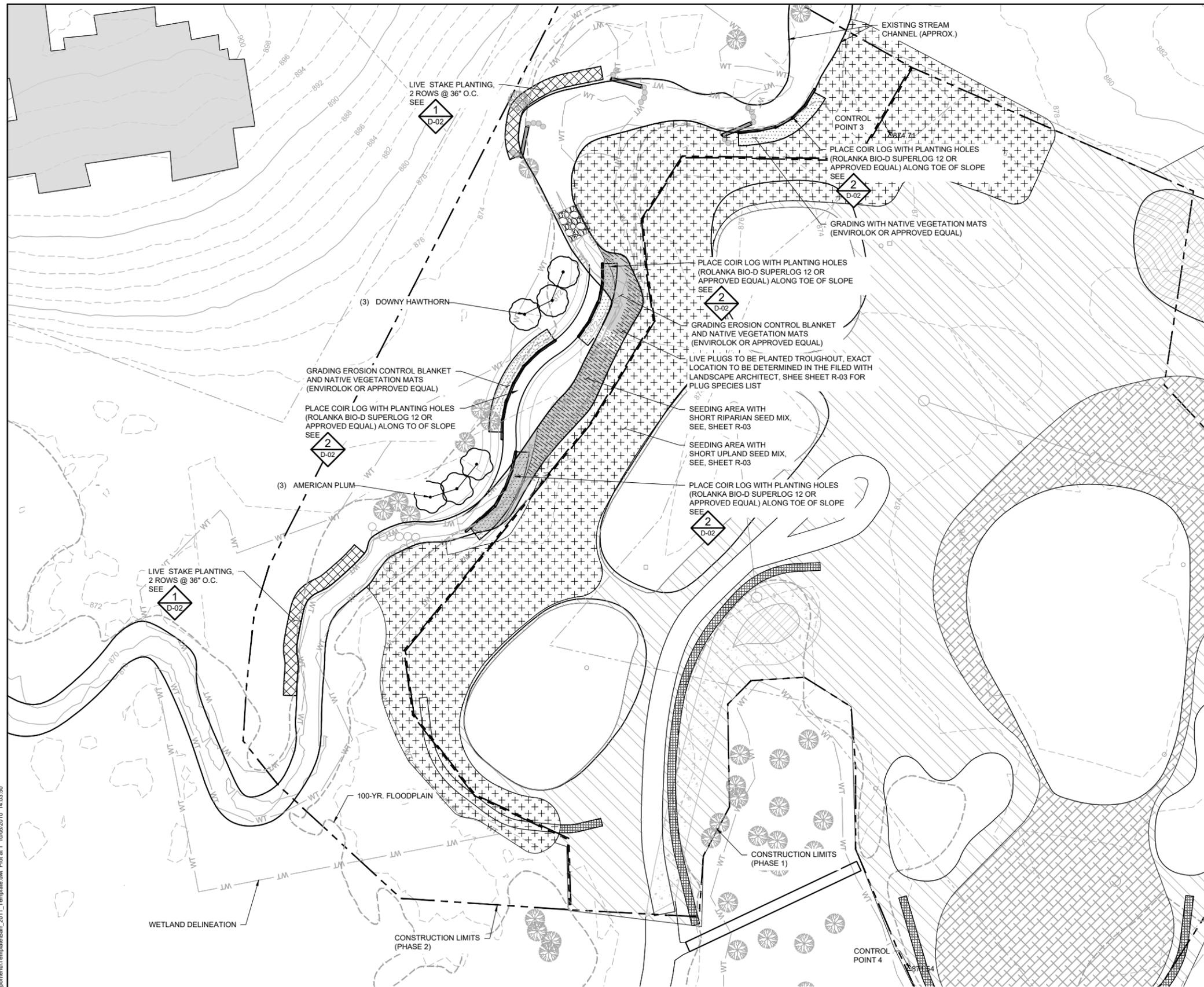
RILEY PURGATORY BLUFF CREEK WD  
CHANHASSEN, MN

MIDDLE RILEY CREEK STABILIZATION (PHASE 2)  
EDEN PRAIRIE, MN  
RESTORATION PLAN  
SOUTH

BARR PROJECT No. 23/27-0053.14	
CLIENT PROJECT No.	
DWG. No. R-01	REV. No. C

CADD USER: Eric P. Fitzgerald FILE: M:\DESIGN\23270053\_1\MIDDLE RILEY CREEK STABILIZATION PHASE 2\R-02 RESTORATION PLAN - NORTH.DWG PLOT SCALE: 1:2 PLOT DATE: 3/12/2021 10:21 AM

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SYMBOL AND PATTERN LEGEND	
	EXISTING 10' CONTOUR
	EXISTING 2' CONTOUR
	EXISTING PROPERTY LINE
	EXISTING STREAM THALWEG (APPROX.)
	EXISTING 100-YR FLOODPLAIN
	PROPOSED 10' CONTOUR
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	CONSTRUCTION LIMITS (PHASE 1)
	CONSTRUCTION LIMITS (PHASE 2)
	ROCK RIFFLE
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	FILL EXISTING CREEK
	SEEDING AREA WITH SORT RIPARIAN SEED MIX, SEE SHEET R-03
	SEEDING AREA WITH SORT UPLAND SEED MIX, SEE SHEET R-03
	J-HOOK BOULDER VANE
	BOULDER CROSS VANE
	GRADING WITH EROSION CONTROL BLANKET AND NATIVE VEGETATION MATS
	J-HOOK LOG VANE

CONTROL POINTS				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
3	119806.1150'	465879.4807'	874.71'	VRS SPIKE 3
4	119491.9292'	465886.5323'	871.54'	VRS SPIKE 4

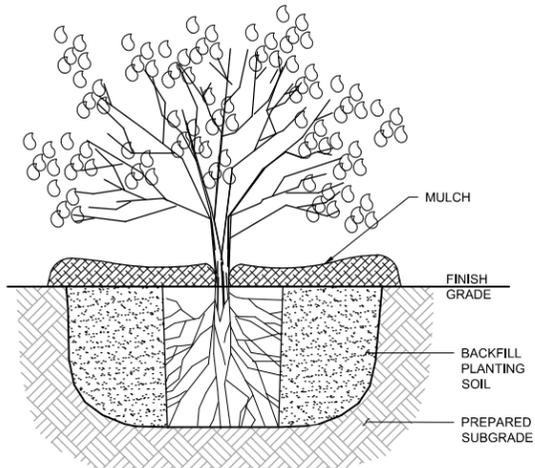
1 PLAN: CREEK RESTORATION NORTH  
 SCALE IN FEET  
 0 20 40

ISSUED FOR PERMITTING  
 NOT FOR CONSTRUCTION

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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. PRINTED NAME: JESSICA OLSON SIGNATURE: _____ DATE: 03/12/2021 LICENSE # 43102				CLIENT: BARR ENGINEERING CO. BID: 4300 MARKETPOINTE DRIVE SUITE 200 MINNEAPOLIS, MN 55435 PROJECT OFFICE: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE SUITE 200 MINNEAPOLIS, MN 55435 PROJECT: RILEY PURGATORY BLUFF CREEK WD PHASE: MIDDLE RILEY CREEK STABILIZATION (PHASE 2) RESTORATION PLAN NORTH				BARR PROJECT No. 23/27-0053.14 CLIENT PROJECT No. _____ DWG. No. R-02 REV. No. C			
NO. BY CHK. APP. DATE REVISION DESCRIPTION				RELEASED TO/FOR: A B C 0 1 2 3 DATE RELEASED: 03/12/21				Scale: AS SHOWN Date: 03/12/2021 Drawn: EPF Checked: SAB2 Designed: BARR Approved: JCO			

**NOTES:**

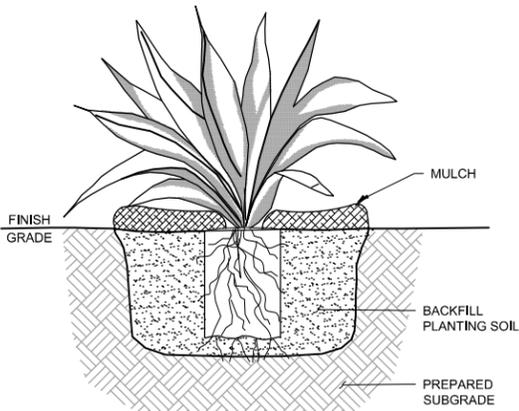
1. PREPARE PLANTING SOIL PER PLAN AND AS SPECIFIED.
2. PROVIDE AND INSTALL PLANTS PER PLANTING SCHEDULE.
3. DIG PLANT HOLES 18" MIN. LARGER THAN ROOT MASS, ALL SIDES.
4. SET SHRUB ON LIGHTLY FIRMED BACKFILL SOIL AT THE SAME DEPTH GROWN IN THE NURSERY.
5. BACKFILL WITH PLANTING SOIL. FIRM SOIL AROUND ROOT MASS TO MAINTAIN PLUMB AND ENSURE NO AIR GAPS IN SOIL REMAIN.
6. CONSTRUCT 3" WATERING BASIN. THOROUGHLY WATER WITHIN 3 HOURS OF PLANTING.
7. APPLY MULCH OVER SOIL SURFACE (SOIL PREPARED AS PER PLAN).
8. NO MULCH SHALL BE ALLOWED TO BE IN CONTACT WITH PLANT.
9. NOTIFY OWNER FOR ALL INSPECTIONS FOR PLANTING AND REPLACEMENTS, AS SPECIFIED.



**1** DETAIL: SHRUB PLANTING  
R-03 NOT TO SCALE

**NOTES:**

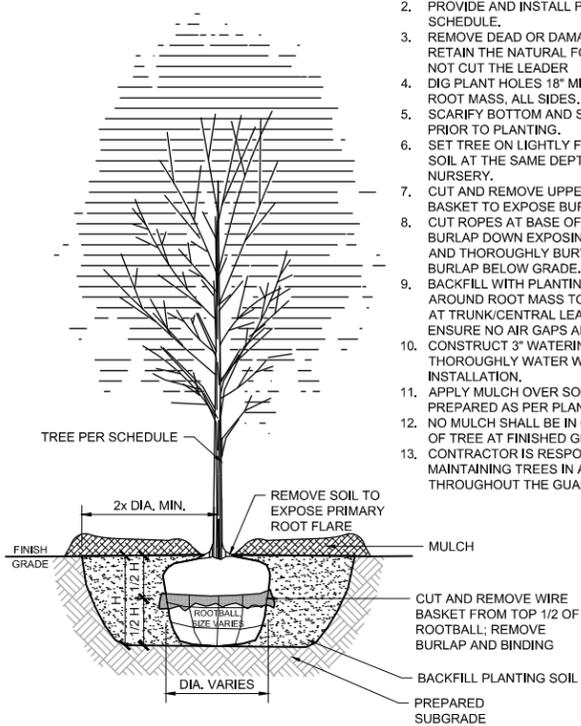
1. PREPARE PLANTING SOIL PER PLAN AND AS SPECIFIED.
2. PROVIDE AND INSTALL PLANTS PER PLANTING SCHEDULE.
3. DIG PLANTING HOLES 18" MIN. LARGER THAN ROOT MASS, ALL SIDES.
4. SET PERENNIAL OR GRASS ON LIGHTLY FIRMED BACKFILL SOIL AT THE SAME DEPTH GROWN IN THE NURSERY.
5. BACKFILL WITH PLANTING SOIL. FIRM SOIL AROUND ROOT MASS TO MAINTAIN PLUMB AND ENSURE NO AIR GAPS IN SOIL REMAIN.
6. CONSTRUCT 3" WATERING BASIN. THOROUGHLY WATER WITHIN 3 HOURS OF PLANTING.
7. APPLY MULCH OVER SOIL SURFACE (SOIL PREPARED AS PER PLAN).
8. NO MULCH SHALL BE ALLOWED TO BE IN CONTACT WITH PLANT.
9. NOTIFY OWNER FOR ALL INSPECTIONS FOR PLANTING AND REPLACEMENTS, AS SPECIFIED.



**2** DETAIL: PERENNIAL PLANTING  
R-03 NOT TO SCALE

**NOTES:**

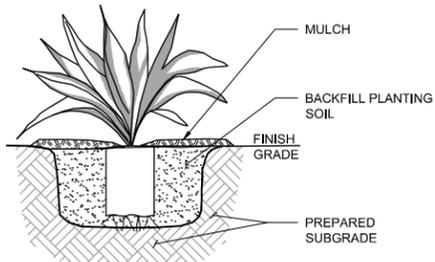
1. PREPARE SOIL PER PLAN AND AS SPECIFIED.
2. PROVIDE AND INSTALL PLANTS PER SCHEDULE.
3. REMOVE DEAD OR DAMAGED BRANCHES. RETAIN THE NATURAL FORM OF PLANT. DO NOT CUT THE LEADER.
4. DIG PLANT HOLES 18" MIN. LARGER THAN ROOT MASS, ALL SIDES.
5. SCARIFY BOTTOM AND SIDES OF HOLE PRIOR TO PLANTING.
6. SET TREE ON LIGHTLY FIRMED BACKFILL SOIL AT THE SAME DEPTH GROWN IN THE NURSERY.
7. CUT AND REMOVE UPPER 1/2 OF WIRE BASKET TO EXPOSE BURLAP.
8. CUT ROPES AT BASE OF TRUNK, PULL BURLAP DOWN EXPOSING 1/2 OF ROOTBALL AND THOROUGHLY BURY ROPES AND BURLAP BELOW GRADE.
9. BACKFILL WITH PLANTING SOIL. FIRM SOIL AROUND ROOT MASS TO MAINTAIN PLUMB AT TRUNK/CENTRAL LEADER. WATER TO ENSURE NO AIR GAPS AROUND ROOT MASS.
10. CONSTRUCT 3" WATERING BASIN. THOROUGHLY WATER WITHIN 3 HOURS OF INSTALLATION.
11. APPLY MULCH OVER SOIL SURFACE (SOIL PREPARED AS PER PLAN).
12. NO MULCH SHALL BE IN CONTACT WITH BASE OF TREE AT FINISHED GRADE.
13. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TREES IN A PLUMB POSITION THROUGHOUT THE GUARANTEE PERIOD.



**3** DETAIL: TREE PLANTING  
R-03 NOT TO SCALE

**NOTES:**

1. EXCAVATE HOLE 3 TIMES WIDTH OF ROOTBALL.
2. BREAK BOTTOM OF ROOTBALL TO LOOSEN ROOTS.
3. PLANT THROUGH MULCH AND EROSION CONTROL BLANKET, ALIGNING TOP OF ROOTBALL EVEN WITH SOIL FINISH GRADE. FIRM SOIL TO ENSURE GOOD CONTACT WITH ROOTS.
4. WATER THOROUGHLY AFTER PLANTING.
5. SEE SPECIFICATIONS FOR FURTHER INSTRUCTION REGARDING PLANTING LAYOUT AND PROCEDURES.



**4** DETAIL: HERBACEOUS PLUG PLANTING  
R-03 NOT TO SCALE

**Middle Riley Creek Short Upland Mix**

Common Name	Scientific Name	PLS Rate (lbs/ac)	% of Mix (by weight)
Sideoats Grama	Bouteloua curtipendula	1.00	2.7%
Blue Grama	Bouteloua gracilis	2.50	6.7%
Canada Wild Rye	Elymus canadensis	0.80	2.1%
Virginia wild rye	Elymus virginicus	2.50	6.7%
Purple Top Grass	Eragrostis spectabilis	0.01	0.1%
Swatchgrass	Panicum virgatum	0.90	1.1%
Low Blugrass	Poa palustris	0.06	0.2%
Litt le Bluestem	Schizachyrium scoparium	2.50	6.7%
<b>Grasses Subtotal</b>		<b>9.89</b>	<b>27%</b>
Brown Top Sedge	Carex vulpinoidea	0.24	0.6%
<b>Sedges &amp; Rushes Subtotal</b>		<b>0.24</b>	<b>1%</b>
Fragrant Hyssop	Agostache foeniculum	0.20	1.1%
Butterfly Milkweed	Asclepias tuberosa	0.06	0.2%
Whorled Milkweed	Asclepias verticillata	0.02	0.1%
White Wild Indigo	Baptisia alba	0.06	0.2%
Downy Wood Peck	Blephilia ciliata	0.02	0.0%
Partridge Pea	Chamaecrista fasciculata	0.60	1.6%
Purple Prairie Clover	Dalea purpurea	0.06	0.2%
Narrow-leaved Coneflower	Echinacea angustifolia	0.08	0.2%
Prairie blazing Star	Liatris pycnostachya	0.02	0.1%
Wild Luinoe	Lupinus perennis	0.30	0.8%
Wild Bergamot	Monarda fistulosa	0.06	0.2%
Spotted Bee Balm	Monarda punctata	0.01	0.0%
Large-flowered Beardtongue	Pentstemon grandiflorus	0.06	0.2%
Virginia Mountain Mint	Pycnanthemum virginianum	0.12	0.3%
Black-eyed Susan	Rudbeckia hirta	0.11	0.3%
Zig Zag Goldenrod	Solidago flexicaulis	0.08	0.2%
Heath Aster	Symphoricarum ericoides	0.01	0.0%
Goat's Rue	Tephrosia virginiana	0.01	0.0%
Foamy Vervain	Verbena stricta	0.20	0.3%
<b>Forbs Subtotal</b>		<b>2.18</b>	<b>6%</b>
Oats	Avena sativa	25	67.0%
<b>Cover Crop Subtotal</b>		<b>25</b>	<b>67.0%</b>
<b>Total</b>		<b>37.31</b>	<b>100%</b>

**Trees**

Common Name	Scientific Name	Quantity	Spacing	Size
Speckled Alder	Alnus rugosa	3	Per Plan	# 10 Pot
River Birch	Betula nigra	3	Per Plan	# 10 Pot
Bitternut Hickory	Cory cordifolia	3	Per Plan	# 10 Pot
Downy Hawthorne	Crataegus mollis	3	Per Plan	# 10 Pot
American Plum	Prunus americana	3	Per Plan	# 10 Pot
Swamp White Oak	Quercus bicolor	3	Per Plan	# 10 Pot

**Biostate Seed Mix**

Common Name	Scientific Name	PLS Rate (lbs/ac)	% of Mix (by weight)
Wavy Sedge	Carex eburnea	0.50	12.0%
Curly-styled Wood Sedge	Carex rostrata	1.25	30.0%
Plains Oval Sedge	Carex brevifolia	1.50	36.1%
Patn Rush	Juncus tenuis	0.10	3.8%
Pennsylvania Sedge	Carex pennsylvanica	0.75	18.0%
<b>Total</b>		<b>4.16</b>	<b>100%</b>

**Middle Riley Creek Short Riparian Mix**

Common Name	Scientific Name	PLS Rate (lbs/ac)	% of Mix (by weight)
Blue Joint Grass	Calamagrostis canadensis	0.06	0.2%
Canada Wild Rye	Elymus canadensis	0.50	2.2%
Riverbank Wild Rye	Elymus riparius	1.50	4.0%
Silky wild rye	Elymus villosus	0.75	2.0%
Rattlesnake Grass	Glyceria canadensis	0.12	0.3%
Swatchgrass	Panicum virgatum	0.80	2.2%
Fowl Blugrass	Poa palustris	0.12	0.3%
Litt le Bluestem	Schizachyrium scoparium	1.50	4.0%
Indiangrass	Sorghastrum nutans	1.00	2.7%
Prairie Cordgrass	Spartina pectinata	1.00	2.7%
Purple Top	Tridens flavus	0.24	0.6%
<b>Grasses Subtotal</b>		<b>7.89</b>	<b>21.3%</b>
Bristly Sedge	Carex canosa	0.18	0.5%
Lake Sedge	Carex lacustris	0.12	0.3%
Porcupine Sedge	Carex hystericina	0.09	0.2%
Awn-fruited Sedge	Carex stipata	0.17	0.5%
Wool Grass	Scirpus cyperinus	0.10	0.3%
<b>Sedges &amp; Rushes Subtotal</b>		<b>0.66</b>	<b>1.8%</b>
Fragrant Hyssop	Agostache foeniculum	0.20	1.1%
Canada Anemone	Anemone canadensis	0.14	0.4%
Columbine	Aquilegia canadensis	0.06	0.2%
Powder Milkweed	Asclepias exaltata	0.24	0.6%
Swamp Milkweed	Asclepias incarnata	0.24	0.6%
Tall Bellflower	Campanula americana	0.04	0.1%
Narrow-leaved Coneflower	Echinacea angustifolia	0.16	0.4%
Blue Flag Iris	Iris versicolor	1.00	2.7%
Meadow Blazing Star	Liatris ligulistylis	0.04	0.1%
Prairie Blazing Star	Liatris pycnostachya	0.04	0.1%
Wild Bergamot	Monarda fistulosa	0.17	0.3%
Black-eyed Susan	Rudbeckia hirta	0.24	0.6%
Heath Aster	Symphoricarum ericoides	0.03	0.1%
Smooth Blue Aster	Symphoricarum laeve	0.16	0.4%
Ohio Spiderwort	Tradescantia ohioensis	0.24	0.6%
Golden Alexanders	Zizia aurea	0.42	1.1%
<b>Forbs Subtotal</b>		<b>3.57</b>	<b>9.6%</b>
Oats	Avena sativa	25	67.3%
<b>Cover Crop Subtotal</b>		<b>25</b>	<b>67.3%</b>
<b>Total</b>		<b>37.12</b>	<b>100%</b>

**Perennial Plugs**

Common Name	Scientific Name	Quantity	Spacing	Size
Pearly Everlasting	Anaphalis margaritacea	18	Field Fit	Plug
Columbine	Aquilegia canadensis	36	Field Fit	Plug
Butterfly Milkweed	Asclepias tuberosa	36	Field Fit	Plug
Purple Milkweed	Asclepias purpurascens	36	Field Fit	Plug
Whorled Milkweed	Asclepias verticillata	36	Field Fit	Plug
Wild White Indigo	Baptisia alba	18	Field Fit	Plug
Tall Bellflower	Campanula americana	36	Field Fit	Plug
Blue Cornish	Calliophyllum thalictroides	24	Field Fit	Plug
Prairie Coreopsis	Coreopsis palmata	24	Field Fit	Plug
Dutchman's Breeches	Dicentra cucullaria	36	Field Fit	Plug
Narrow-leaved Coneflower	Echinacea angustifolia	48	Field Fit	Plug
Rattlesnake Master	Eryngium yuccifolium	24	Field Fit	Plug
Prairie Alumroot	Heuchera richardsonii	48	Field Fit	Plug
Burnt Blazing Star	Liatris spicata	36	Field Fit	Plug
Meadow Blazing Star	Liatris ligulistylis	36	Field Fit	Plug
Dotted Blazing Star	Liatris punctata	21	Field Fit	Plug
Wild Luinoe	Lupinus perennis	36	Field Fit	Plug
Spotted Bee Balm	Monarda punctata	21	Field Fit	Plug
Foxglove Beardtongue	Pentstemon digitalis	48	Field Fit	Plug
Large-flowered Beardtongue	Pentstemon grandiflorus	21	Field Fit	Plug
Wild Blue Fox	Phlox divaricata	48	Field Fit	Plug
Passque Flower	Pulsatilla nuttalliana	21	Field Fit	Plug
Mountain Mint	Pycnanthemum virginianum	36	Field Fit	Plug
Stiff Grounds	Solidago rigida	22	Field Fit	Plug
Aromatic Aster	Symphoricarum oblongifolium	36	Field Fit	Plug
Sky Blue Aster	Symphoricarum oblongifolium	24	Field Fit	Plug
Purple Meadow Rue	Thalictrum dasycarpum	36	Field Fit	Plug
Rue Anemone	Thalictrum thalictroides	36	Field Fit	Plug
Ohio Spiderwort	Tradescantia ohioensis	24	Field Fit	Plug
Common Ironweed	Veronica fasciculata	18	Field Fit	Plug
Cu ver's Root	Veronicastrum virginicum	48	Field Fit	Plug
<b>Total</b>		<b>1000</b>		

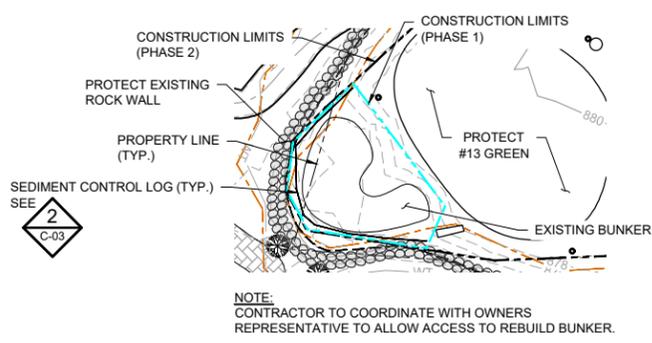
ISSUED FOR PERMITTING  
NOT FOR CONSTRUCTION

CADD USER: Eric P. Fitzgerald FILE: M:\DESIGN\23270053\_1\MIDDLE RILEY CREEK STABILIZATION DETAILS.DWG PLOT SCALE: 1:2 PLOT DATE: 1/2/2021 10:23 AM  
BARR AutoCAD 2011 Support\enu\template\Bar\_2011\_Template.dwg Plot at 1:10/06/2010 14:03:50

<p>HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.</p> <p>PRINTED NAME: JESSICA OLSON SIGNATURE: _____ DATE: 03/12/2021 LICENSE # 43102</p>		<p>CLIENT BID: 07/15/20 08/06/20</p> <p>CONSTRUCTION PERMITTING: 03/12/21</p> <p>RELEASED TO/FOR: A B C 0 1 2 3</p> <p>DATE RELEASED: _____</p>	<p>Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435</p> <p>Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com</p>	<p>Scale: AS SHOWN Date: 03/12/2021 Drawn: EPF Checked: SAB2 Designed: BARR Approved: JCO</p>	<p>MIDDLE RILEY CREEK STABILIZATION (PHASE 2) EDEN PRAIRIE, MN</p> <p>RILEY PURGATORY BLUFF CREEK WD CHANHASSEN, MN</p>	<p>BARR PROJECT No. 23/70-0053.29 CLIENT PROJECT No. _____ DWG. No. R-03 REV. No. B</p>
<p>C EPF SAB2 JCO 03/12/2021 ISSUED FOR PERMITTING</p> <p>B EPF SAB2 JCO 08/06/2020 65% ISSUED FOR REVIEW</p> <p>A CWF SAB2 JCO 07/15/2020 60% ISSUED FOR REVIEW</p>						

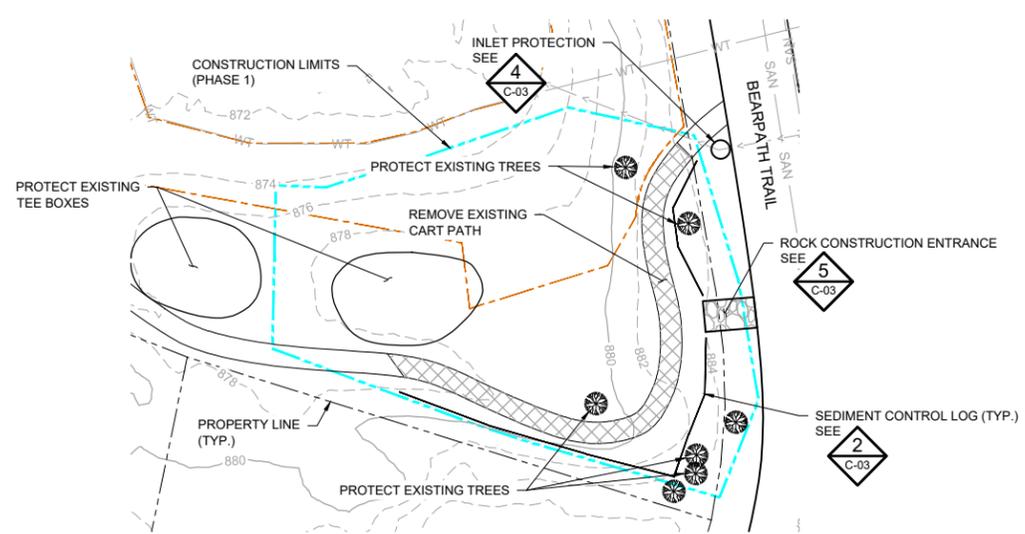
**EROSION & SEDIMENT CONTROL NOTES:**

- INSTALL PERIMETER EROSION CONTROL AT THE LOCATIONS SHOWN ON THE PLANS PRIOR TO THE COMMENCEMENT OF ANY LAND DISTURBANCE OR CONSTRUCTION ACTIVITIES.
- BEFORE BEGINNING CONSTRUCTION, INSTALL A TEMPORARY ROCK CONSTRUCTION ENTRANCE AT EACH POINT WHERE VEHICLES EXIT THE CONSTRUCTION SITE.
- INSTALL INLET PROTECTION AT ALL PUBLIC AND PRIVATE CATCH BASIN INLETS WHICH RECEIVE RUNOFF FROM THE DISTURBED AREAS. CONTRACTOR SHALL CLEAN, REMOVE SEDIMENT, OR REPLACE STORM DRAIN INLET PROTECTION DEVICES ON A ROUTINE BASIS SUCH THAT THE DEVICES ARE FULLY FUNCTIONAL FOR THE NEXT RAIN EVENT. SEDIMENT DEPOSITED IN AND/OR PLUGGING DRAINAGE SYSTEMS IS THE RESPONSIBILITY OF THE CONTRACTOR. HAY BALES OR FILTER FABRIC WRAPPED GRATES ARE NOT ALLOWED FOR INLET PROTECTION.
- LOCATE SOIL OR DIRT STOCKPILES NO LESS THAN 25 FEET FROM ANY PUBLIC OR PRIVATE ROADWAY OR DRAINAGE CHANNEL. IF REMAINING FOR MORE THAN SEVEN DAYS, STABILIZE THE STOCKPILES BY MULCHING, VEGETATIVE COVER, TARPS, OR OTHER MEANS. CONTROL EROSION FROM ALL STOCKPILES BY PLACING SILT BARRIERS AROUND THE PILES. TEMPORARY STOCKPILES LOCATED ON PAVED SURFACES MUST BE NO LESS THAN TWO FEET FROM THE DRAINAGE/GUTTER LINE AND SHALL BE COVERED IF LEFT MORE THAN 24 HOURS.
- NATURAL TOPOGRAPHY AND SOIL CONDITIONS MUST BE PROTECTED, INCLUDING RETENTION ON SITE OF NATIVE TOPSOIL TO THE GREATEST EXTENT POSSIBLE.
- ADDITIONAL MEASURES, SUCH AS HYDRAULIC MULCHING AND OTHER PRACTICES AS SPECIFIED BY THE DISTRICT MUST BE USED ON SLOPES OF 3:1 (H:V) OR STEEPER TO PROVIDE ADEQUATE STABILIZATION.
- FINAL SITE STABILIZATION MEASURES MUST SPECIFY THAT AT LEAST SIX INCHES OF TOPSOIL OR ORGANIC MATTER BE SPREAD AND INCORPORATED INTO THE UNDERLYING SOIL DURING FINAL SITE TREATMENT WHEREVER TOPSOIL HAS BEEN REMOVED.
- CONSTRUCTION SITE WASTE SUCH AS DISCARDED BUILDING MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICALS, LITTER AND SANITARY WASTE MUST BE PROPERLY MANAGED.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPs MUST BE MAINTAINED UNTIL COMPLETION OF CONSTRUCTION AND VEGETATION IS ESTABLISHED SUFFICIENTLY TO ENSURE STABILITY OF THE SITE, AS DETERMINED BY THE DISTRICT.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPs MUST BE REMOVED UPON FINAL STABILIZATION.
- SOIL SURFACES COMPACTED DURING CONSTRUCTION AND REMAINING PERVIOUS UPON COMPLETION OF CONSTRUCTION MUST BE DECOMPACTED TO ACHIEVE A SOIL COMPACTION TESTING PRESSURE OF LESS THAN 1,400 KILOPASCALS OR 200 POUNDS PER SQUARE INCH IN THE UPPER 12 INCHES OF THE SOIL PROFILE WHILE TAKING CARE TO PROTECT UTILITIES, TREE ROOTS, AND OTHER EXISTING VEGETATION.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 7 CALENDAR DAYS AFTER LAND-DISTURBING WORK HAS TEMPORARILY OR PERMANENTLY CEASED ON A PROPERTY THAT DRAINS TO AN IMPAIRED WATER, WITHIN 14 DAYS ELSEWHERE.
- THE PERMITTEE MUST, AT A MINIMUM, INSPECT, MAINTAIN AND REPAIR ALL DISTURBED SURFACES AND ALL EROSION AND SEDIMENT CONTROL FACILITIES AND SOIL STABILIZATION MEASURES EVERY DAY WORK IS PERFORMED ON THE SITE AND AT LEAST WEEKLY UNTIL LAND-DISTURBING ACTIVITY HAS CEASED. THEREAFTER, THE PERMITTEE MUST PERFORM THESE RESPONSIBILITIES AT LEAST WEEKLY UNTIL VEGETATIVE COVER IS ESTABLISHED. THE PERMITTEE WILL MAINTAIN A LOG OF ACTIVITIES UNDER THIS SECTION FOR INSPECTION BY THE DISTRICT ON REQUEST.
- CHANGES TO APPROVED EROSION CONTROL PLAN MUST BE APPROVED BY THE EROSION CONTROL INSPECTOR PRIOR TO IMPLEMENTATION. CONTRACTOR TO PROVIDE INSTALLATION AND DETAILS FOR ALL PROPOSED ALTERNATE TYPE DEVICES.
- FLOW IN RILEY CREEK WILL BE PASSED AROUND THE ACTIVE WORK AREA. CONTRACTOR IS RESPONSIBLE FOR CONTROL OF WATER TO MANAGE WATER FLOW AND LEVELS AS NECESSARY, REFER TO SPECIFICATIONS.
- IF DEWATERING OR PUMPING OF WATER IS NECESSARY, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND/OR APPROVALS PRIOR TO DISCHARGE OF ANY WATER FROM THE SITE. IF THE DISCHARGE FROM THE DEWATERING OR PUMPING PROCESS IS TURBID OR CONTAINS SEDIMENT LADEN WATER, IT MUST BE TREATED THROUGH THE USE OF SEDIMENT TRAPS, VEGETATIVE FILTER STRIPS, OR OTHER SEDIMENT REDUCING MEASURES SUCH THAT THE DISCHARGE IS NOT VISIBLY DIFFERENT FROM THE RECEIVING WATER. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AT THE DISCHARGE POINT TO PREVENT SCOUR EROSION.
- ACTIVITIES MUST BE CONDUCTED SO AS TO MINIMIZE THE POTENTIAL TRANSFER OF AQUATIC INVASIVE SPECIES (E.G., ZEBRA MUSSELS, EURASIAN WATERMILFOIL, ETC.) TO THE MAXIMUM EXTENT POSSIBLE.



**1 PLAN: EXISTING CONDITONS, REMOVALS AND EROSION CONTROL (#16 GREEN)**

0 30 60  
SCALE IN FEET

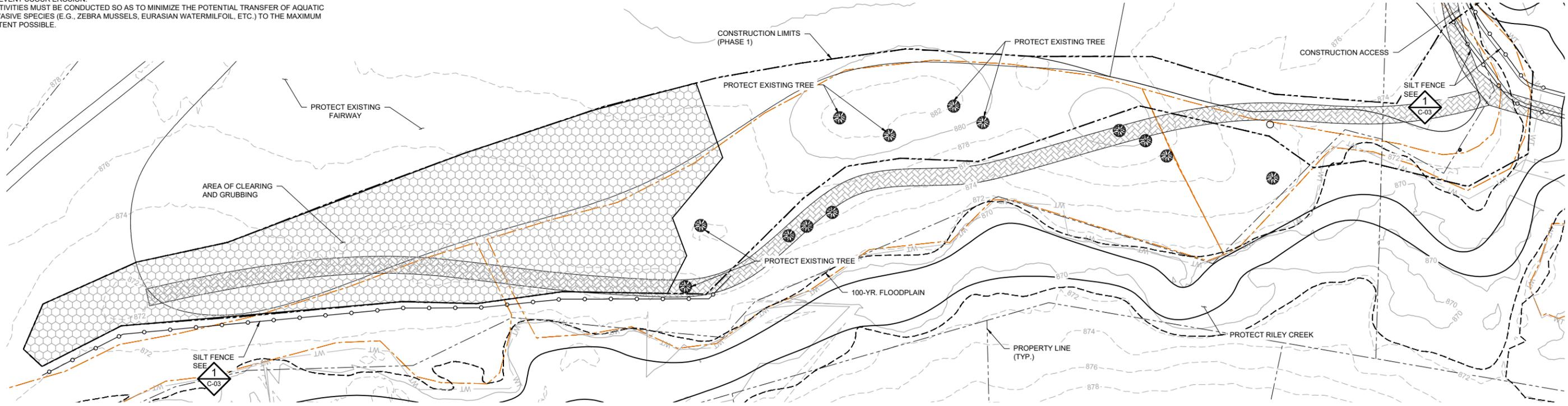


**2 PLAN: EXISTING CONDITONS, REMOVALS AND EROSION CONTROL (#12 TEE BOX)**

0 30 60  
SCALE IN FEET

**SYMBOL AND PATTERN LEGEND**

	EXISTING 10' CONTOUR
	EXISTING 2' CONTOUR
	EXISTING STORM SEWER
	EXISTING SANITARY SEWER
	EXISTING WETLAND DELINEATION
	EXISTING PROPERTY LINE
	EXISTING 100-YR FLOODPLAIN
	CONSTRUCTION LIMITS (PHASE 1)
	CONSTRUCTION LIMITS (PHASE 2)
	PROPOSED BUFFER
	SILT FENCE
	SEDIMENT CONTROL LOGS
	CONSTRUCTION ACCESS ROUTE
	TEMPORARY CREEK CROSSING
	EXISTING TREE



**2 PLAN: EXISTING CONDITONS, REMOVALS AND EROSION CONTROL (#12 FAIRWAY)**

0 30 60  
SCALE IN FEET

ISSUED FOR PERMITTING  
NOT FOR CONSTRUCTION

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

PRINTED NAME: BRAD LINDAMAN  
SIGNATURE: \_\_\_\_\_  
DATE: 03/12/2021 LICENSE # 43102

CLIENT	BARR ENGINEERING CO.
BID	4300 MARKETPOINTE DRIVE
CONSTRUCTION	SUITE 200
PERMITTING	MINNEAPOLIS, MN 55435
DATE	03/12/21
RELEASED TO/FOR	A B C 0 1 2 3
DATE RELEASED	

**BARR**  
Corporate Headquarters:  
Minneapolis, Minnesota  
Ph: 1-800-632-2277  
Ph: 1-800-632-2277

Project Office:  
BARR ENGINEERING CO.  
4300 MARKETPOINTE DRIVE  
Suite 200  
MINNEAPOLIS, MN 55435  
Ph: 1-800-632-2277  
Fax: (952) 832-2601  
www.barr.com

Scale	AS SHOWN
Date	03/12/2021
Drawn	EPF
Checked	BJL
Designed	BARR
Approved	BJL

**BEARPATH GOLF & COUNTRY CLUB**  
CHANHASSEN, MN

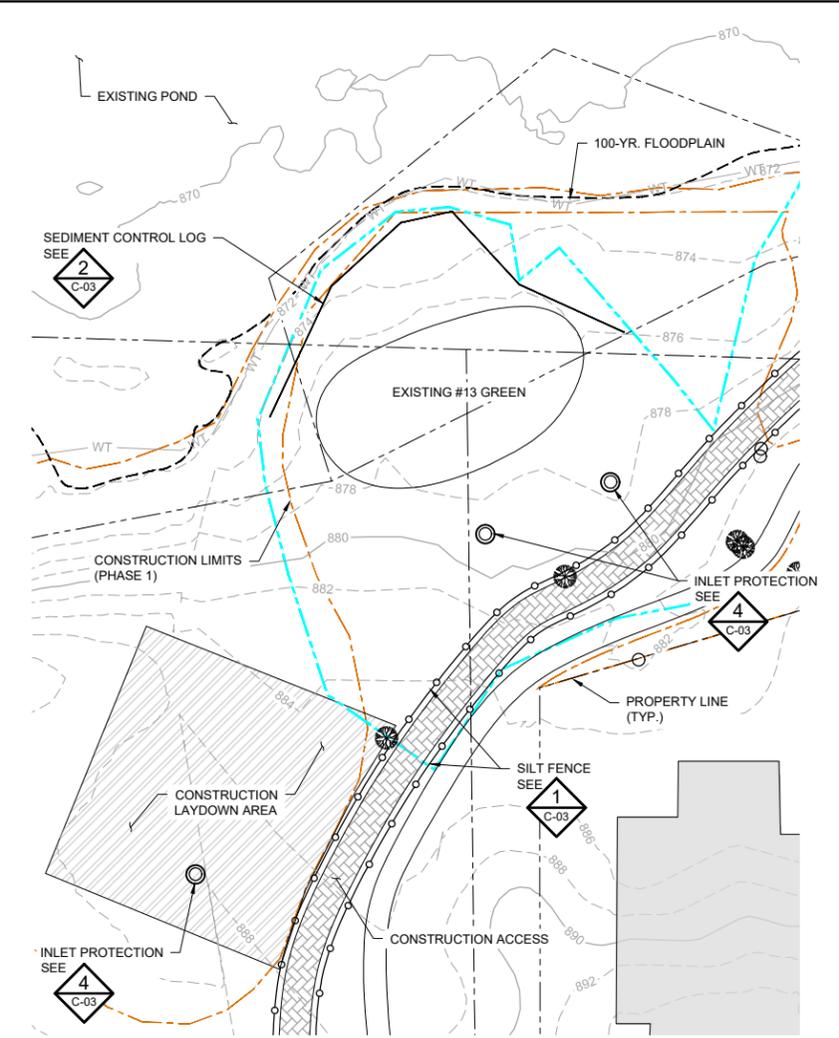
**BEARPATH GOLF COURSE RENOVATION (PHASE 1)**  
EDEN PRAIRIE, MN

EXISTING CONDITIONS, REMOVALS & EROSION CONTROL PLAN  
#16 GREEN, #12 TEE BOX & #12 FAIRWAY

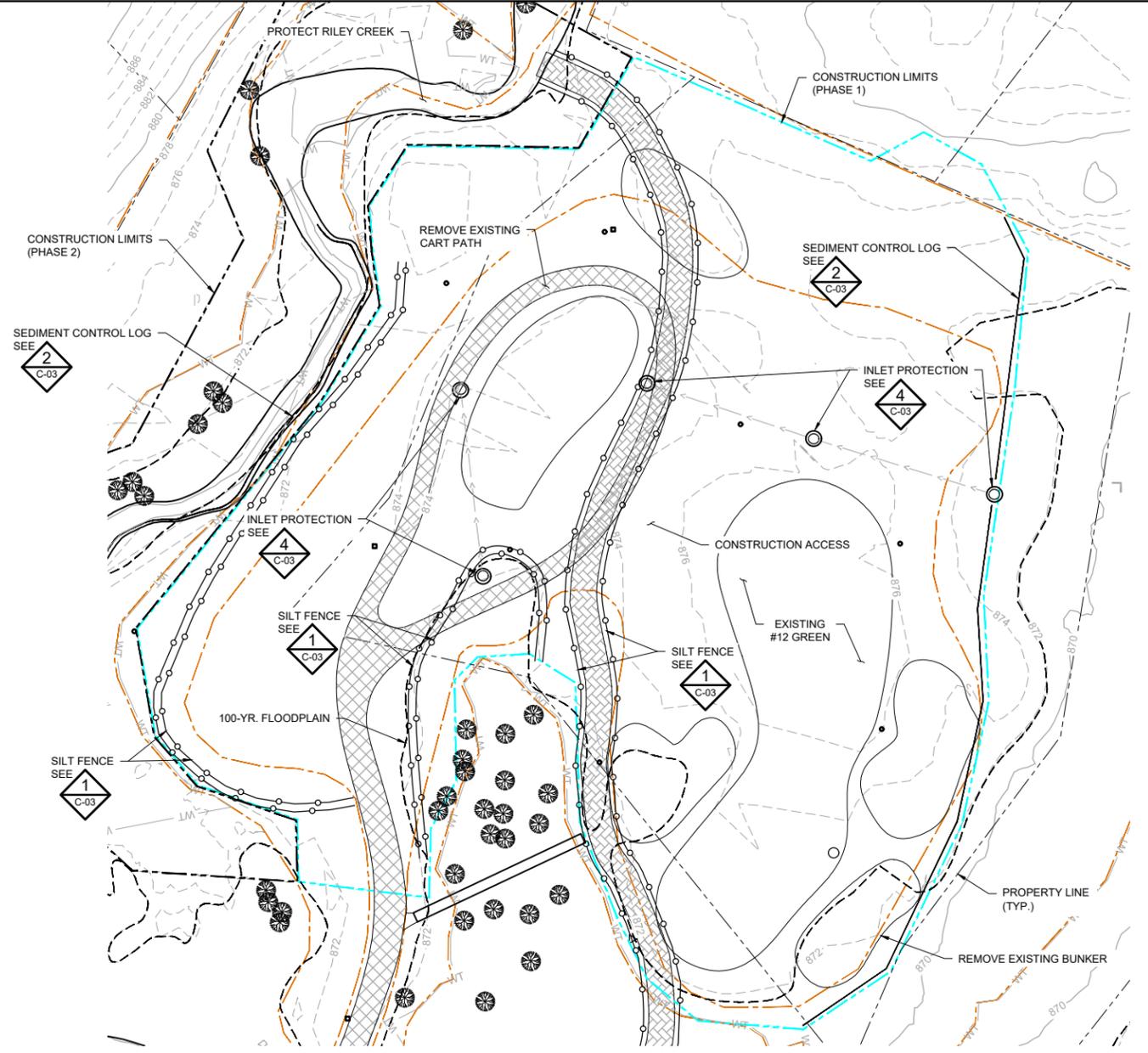
BARR PROJECT No.	23/27-0053.14
CLIENT PROJECT No.	
DWG. No.	C-11
REV. No.	A

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**1 PLAN: EXISTING CONDITONS, REMOVALS AND EROSION CONTROL (#13 GREEN)**  
 SCALE IN FEET



**2 PLAN: EXISTING CONDITONS, REMOVALS AND EROSION CONTROL (#12 GREEN & #13 TEE BOX)**  
 SCALE IN FEET

SYMBOL AND PATTERN LEGEND	
	EXISTING 10' CONTOUR
	EXISTING 2' CONTOUR
	EXISTING STORM SEWER
	EXISTING SANITARY SEWER
	EXISTING WETLAND DELINEATION
	EXISTING PROPERTY LINE
	EXISTING 100-YR FLOODPLAIN
	CONSTRUCTION LIMITS (PHASE 1)
	CONSTRUCTION LIMITS (PHASE 2)
	PROPOSED BUFFER
	SILT FENCE
	SEDIMENT CONTROL LOGS
	CONSTRUCTION ACCESS ROUTE
	TEMPORARY CREEK CROSSING
	EXISTING TREE

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**ISSUED FOR PERMITTING  
 NOT FOR CONSTRUCTION**

NO.	BY	CHK	APP	DATE	REVISION DESCRIPTION
A	EPF	JCO	BJL	03/12/2021	ISSUED FOR PERMITTING

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.  
 PRINTED NAME: BRAD LINDAMAN  
 SIGNATURE: \_\_\_\_\_  
 DATE: 03/12/2021 LICENSE #: 43102

CLIENT	BARR ENGINEERING CO.
BID	
CONSTRUCTION	
PERMITTING	03/12/21
RELEASED TO/FOR	A B C 0 1 2 3
DATE RELEASED	

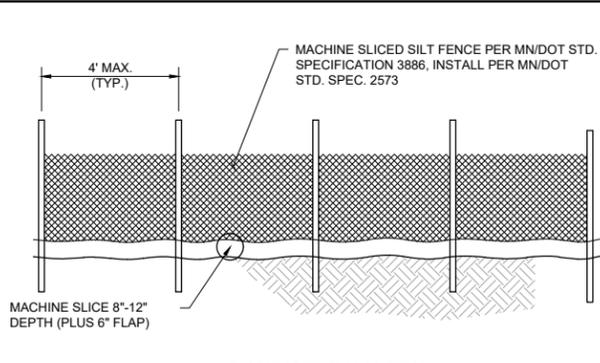
**BARR**  
 Project Office:  
 BARR ENGINEERING CO.  
 4300 MARKETPOINTE DRIVE  
 Suite 200  
 MINNEAPOLIS, MN 55435  
 Corporate Headquarters:  
 Minneapolis, Minnesota  
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 www.barr.com

Scale	AS SHOWN
Date	03/12/2021
Drawn	EPF
Checked	JCO
Designed	BARR
Approved	BJL

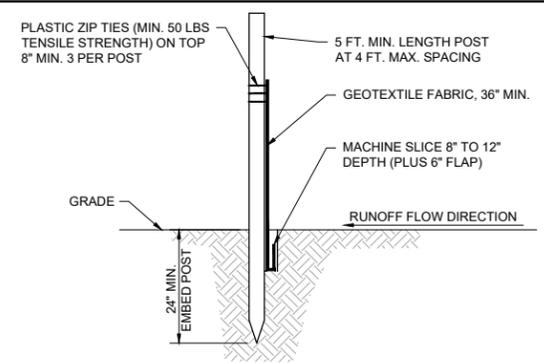
**BEARPATH GOLF & COUNTRY CLUB**  
 CHANHASSEN, MN

**BEARPATH GOLF COURSE RENOVATION (PHASE 1)**  
 EDEN PRAIRIE, MN  
 EXISTING CONDITIONS, REMOVALS & EROSION CONTROL PLAN  
 #13 GREEN & #12 GREEN/#13 TEE BOX

BARR PROJECT No.	23/27-0053.14
CLIENT PROJECT No.	
DWG. No.	C-12
REV. No.	A



**DOWNSTREAM VIEW**

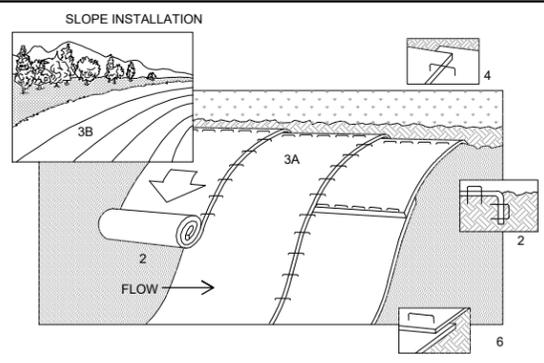


**SECTION VIEW**

**NOTES:**

- SILT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. SILT FENCE AND ANY ACCUMULATED SEDIMENT SHALL BE REMOVED IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.
- SILT FENCE INSTALLATION AND MATERIALS SHALL MEET THE REQUIREMENTS OF MN/DOT SPECIFICATIONS 2573 AND 3886.
- NO HOLES OR GAPS SHALL BE PRESENT IN/UNDER SILT FENCE. PREPARE AREA AS NEEDED TO SMOOTH SURFACE OR REMOVE DEBRIS.
- WHEN SEDIMENT BUILD UP REACHES 1/3 OF FENCE HEIGHT, THE SILT FENCE SHOULD BE REMOVED OR A SECOND SILT FENCE INSTALLED UPSTREAM OF THE EXISTING FENCE AT A SUITABLE DISTANCE.
- WHEN SPLICES ARE NECESSARY MAKE SPLICE AT POST ACCORDING TO SPLICE DETAIL. PLACE THE END POST OF THE SECOND FENCE INSIDE THE END POST OF THE FIRST FENCE. ROTATE BOTH POSTS TOGETHER AT LEAST 180 DEGREES TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL. CUT THE FABRIC NEAR THE BOTTOM OF THE POSTS TO ACCOMMODATE THE 6 INCH FLAP. THEN DRIVE BOTH POSTS AND BURY THE FLAP. COMPACT BACKFILL.

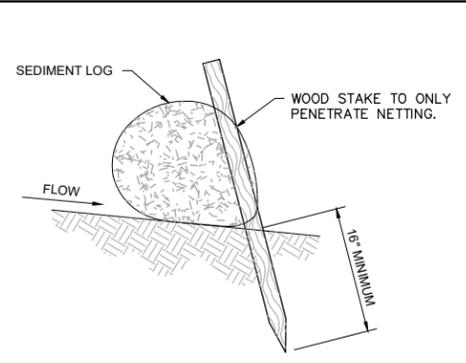
**1** DETAIL: SILT FENCE - MACHINE SLICED  
NOT TO SCALE



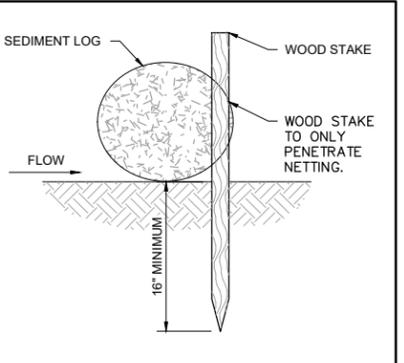
**NOTES:**

- REFER TO MANUFACTURER RECOMMENDATIONS FOR STAPLE PATTERNS FOR SLOPE INSTALLATIONS.
- PREPARE SOIL BY LOOSENING TOP 1-2 INCHES AND APPLY SEED (AND FERTILIZER WHERE REQUIRED) PRIOR TO INSTALLING BLANKETS. GROUND SHOULD BE SMOOTH AND FREE OF DEBRIS.
- BEGIN (A) AT THE TOP OF THE SLOPE AND ROLL THE BLANKETS DOWN OR (B) AT ONE END OF THE SLOPE AND ROLL THE BLANKETS HORIZONTALLY ACROSS THE SLOPE.
- THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 6" OVERLAP, WITH THE UPHILL BLANKET ON TOP.
- WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 6" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART.
- BLANKET MATERIALS SHALL BE AS SPECIFIED OR AS APPROVED BY ENGINEER.

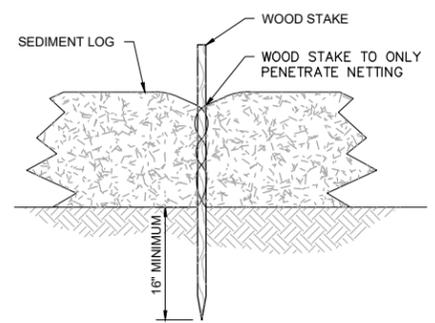
**2** DETAIL: EROSION CONTROL BLANKET - INSTALLATION  
NOT TO SCALE



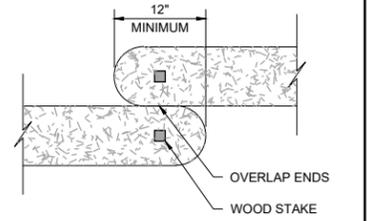
**SIDE VIEW ON SLOPE**



**SIDE VIEW FLAT**



**FRONT VIEW**

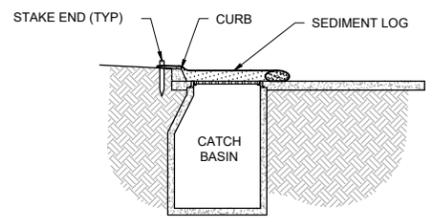


**TOP VIEW**

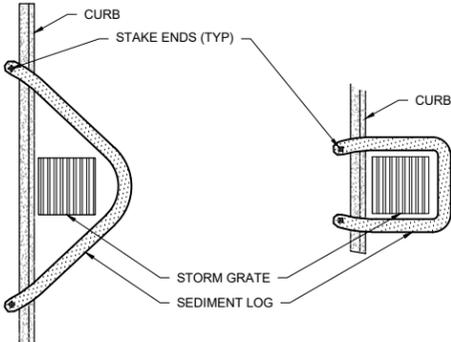
**NOTES:**

- INSTALL SEDIMENT LOG ALONG CONTOURS (CONSTANT ELEVATION).
- NO GAPS SHALL BE PRESENT UNDER SEDIMENT LOG. PREPARE AREA AS NEEDED TO SMOOTH SURFACE OR REMOVE DEBRIS.
- REMOVE ACCUMULATED SEDIMENT WHEN REACHING 1/3 OF LOG HEIGHT.
- MAINTAIN SEDIMENT LOG THROUGHOUT THE CONSTRUCTION PERIOD AND REPAIR OR REPLACED AS REQUIRED.

**3** DETAIL: SEDIMENT CONTROL LOG  
NOT TO SCALE



**SECTION VIEW**

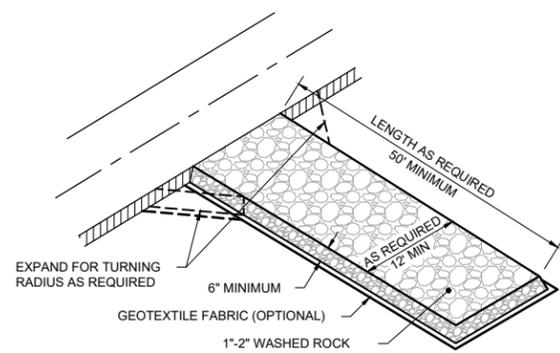


**PLAN VIEW**

**NOTES:**

- INLET PROTECTION SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED OR IMMEDIATELY FOLLOWING CATCHBASIN INSTALLATION, AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
- MATERIALS SHALL BE SUFFICIENT TO ALLOW FLOW WHILE BLOCKING SEDIMENT. NO HOLES OR GAPS SHALL BE PRESENT IN/UNDER SEDIMENT LOG.
- INLET PROTECTION SHALL BE CLEANED AS REQUIRED.
- MATERIALS AND ANY ACCUMULATED SEDIMENT SHALL BE REMOVED IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.

**4** DETAIL: INLET PROTECTION - SEDIMENT LOG  
NOT TO SCALE



**NOTES:**

- MAINTAIN ENTRANCE THROUGHOUT THE CONSTRUCTION PERIOD AND REPAIR OR REPLACE AS REQUIRED TO PREVENT TRACKING OFFSITE.
- REMOVE ENTRANCE IN CONJUNCTION WITH FINAL GRADING AND SITE STABILIZATION.

**5** DETAIL: CONSTRUCTION ENTRANCE - ROCK  
NOT TO SCALE

ISSUED FOR PERMITTING  
NOT FOR CONSTRUCTION

CADD USER: Eric P. Fitzgerald FILE: M:\DESIGN\23270053\_14\MIDDLE RILEY STREAM\EROSION CONTROL DETAILS.DWG PLOT SCALE: 1:2 PLOT DATE: 3/12/2021 11:10 AM  
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NO.	BY	CHK	APP.	DATE	REVISION DESCRIPTION
A	EPF	JCO	BJL	03/12/2021	ISSUED FOR PERMITTING

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

PRINTED NAME: BRAD LINDAMAN  
 SIGNATURE: \_\_\_\_\_  
 DATE: 03/12/2021 LICENSE #: 43102

CLIENT									
BID									
CONSTRUCTION									
PERMITTING	03/12/21								
RELEASED TO/FOR	A	B	C	0	1	2	3		
DATE RELEASED									

**BARR** ENGINEERING CO.  
 4300 MARKETPOINTE DRIVE  
 SUITE 200  
 MINNEAPOLIS, MN 55435

Project Office:  
 BARR ENGINEERING CO.  
 4300 MARKETPOINTE DRIVE  
 SUITE 200  
 MINNEAPOLIS, MN 55435

Corporate Headquarters:  
 Minneapolis, Minnesota  
 Ph: 1-800-632-2277  
 Fax: (952) 832-2601  
 www.barr.com

Scale	AS SHOWN
Date	03/12/2021
Drawn	EPF
Checked	JCO
Designed	BARR
Approved	BJL

**BEARPATH GOLF & COUNTRY CLUB**  
 CHANHASSEN, MN

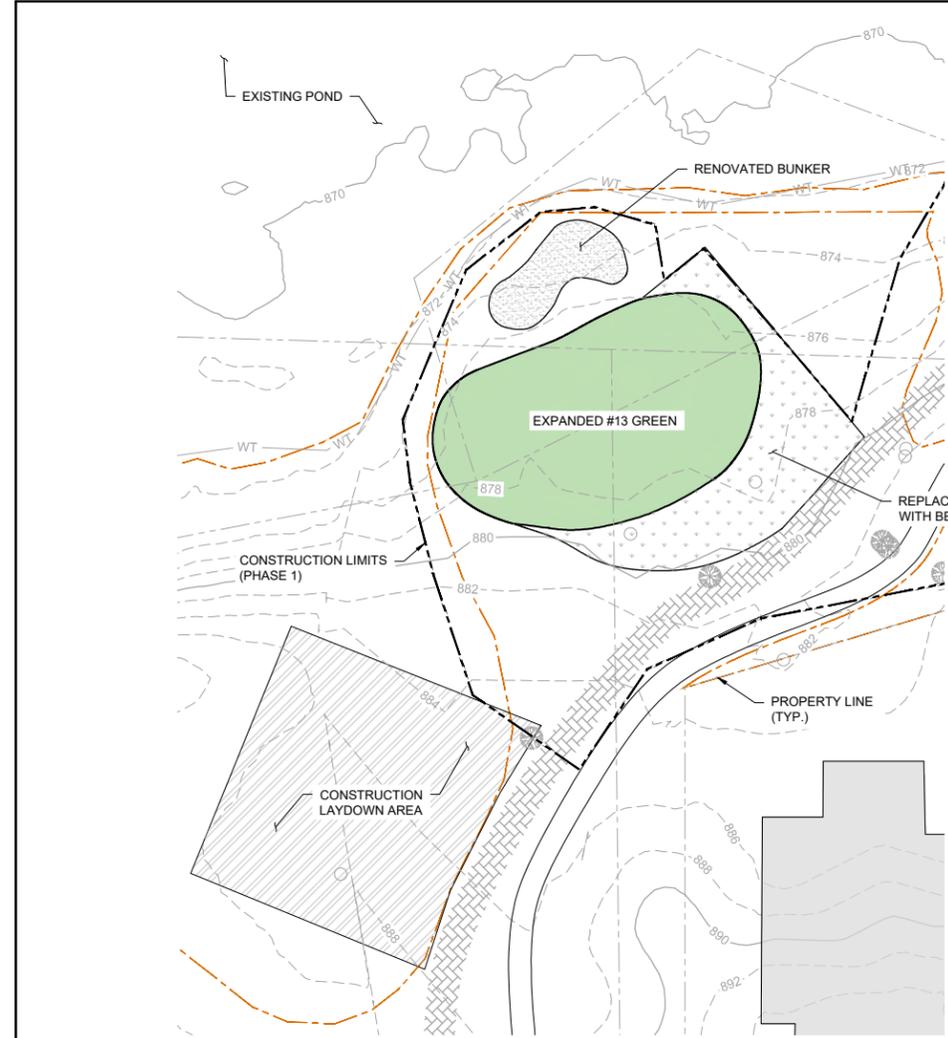
**BEARPATH GOLF COURSE RENOVATION (PHASE 1)**  
 EDEN PRAIRIE, MN

**EROSION CONTROL DETAILS**

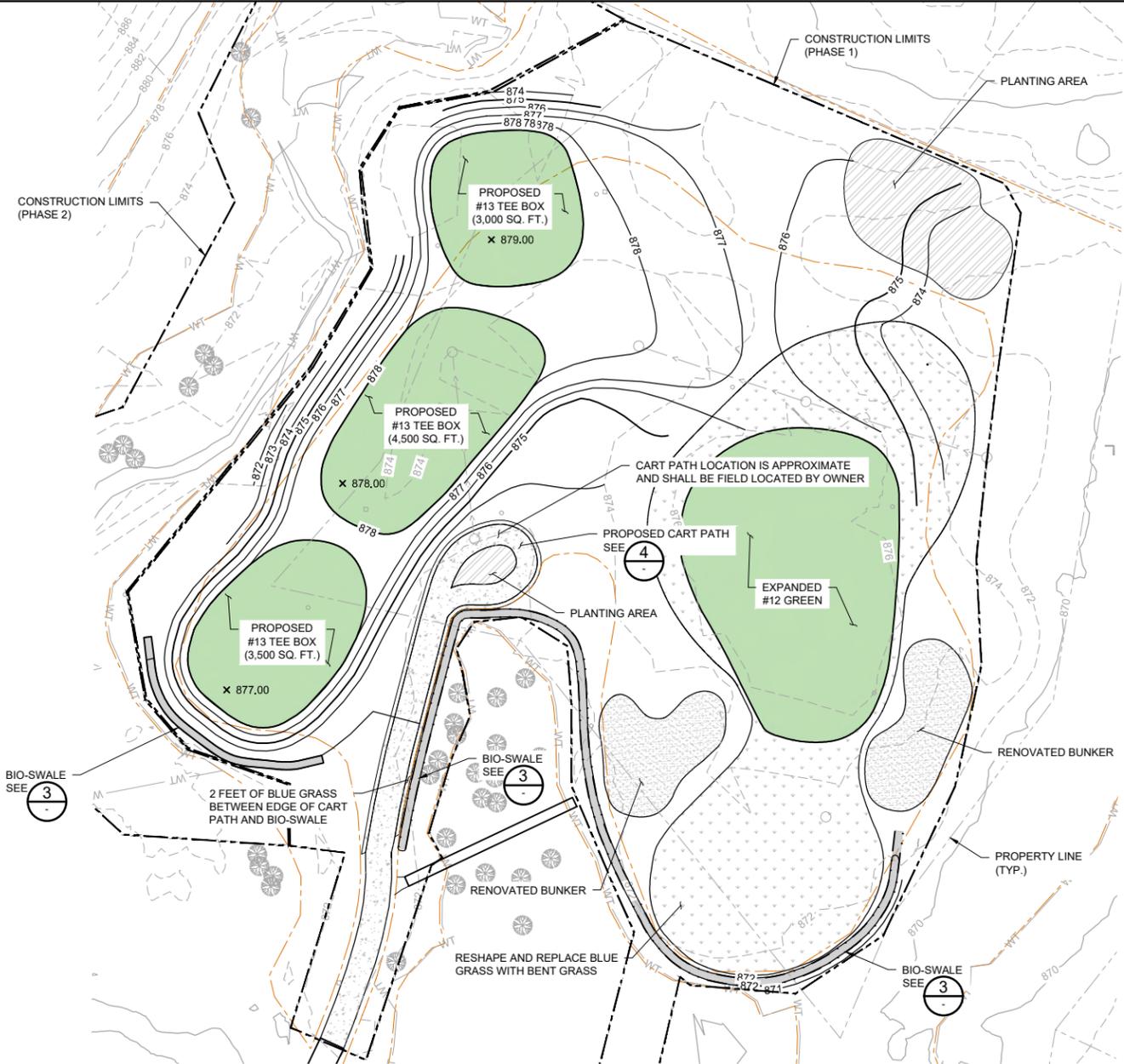
BARR PROJECT No.	23/27-0053.14
CLIENT PROJECT No.	
DWG. No.	C-13
REV. No.	A



CADD USER: Eric P. Fitzgerald FILE: M:\DESIGN\23270053\_14\MIDDLE RILEY STRE\M2327005314\_C-14\_BEARPATH\_GRADING PLANDWG.PLOT SCALE: 1:2 PLOT DATE: 4/23/2021 12:12PM



**1 PLAN: PROPOSED CONDITIONS AND GRADING (#13 GREEN)**  
 SCALE IN FEET

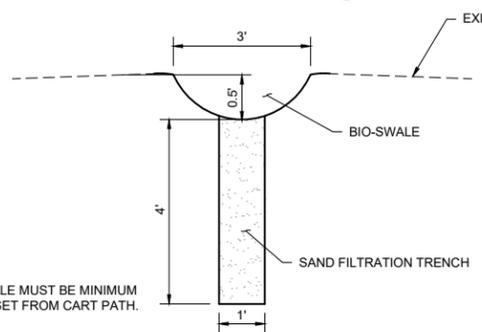


**2 PLAN: PROPOSED CONDITIONS AND GRADING (#12 GREEN & #13 TEE BOX)**  
 SCALE IN FEET

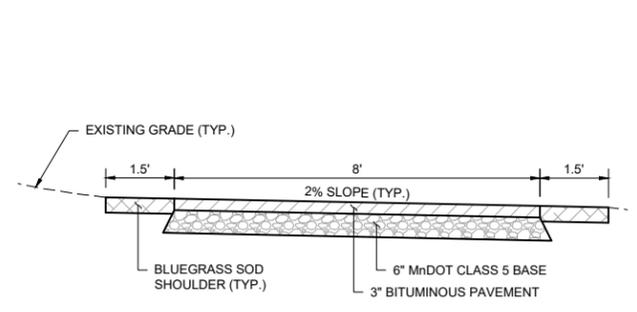
SYMBOL AND PATTERN LEGEND	
	EXISTING 10' CONTOUR
	EXISTING 2' CONTOUR
	EXISTING PROPERTY LINE
	PROPOSED 5' CONTOUR
	PROPOSED 1' CONTOUR
	CONSTRUCTION LIMITS (PHASE 1)
	CONSTRUCTION LIMITS (PHASE 2)
	PROPOSED BUFFER
	PROPOSED GOLF COURSE
	PROPOSED SAND BUNKER
	PLANTING AREA
	BENT GRASS SEEDING AREA

**NOTES:**

- CONTRACTOR IS RESPONSIBLE TO LOCATE AND FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO WORK.
- ALL EXISTING ROADS, PARKING LOTS, TRAILS, FENCES, SIGNS, OR SIMILAR SHALL BE PROTECTED DURING CONSTRUCTION. CONTRACTOR RESPONSIBLE TO COORDINATE SURVEYS WITH OWNER TO DOCUMENT PRE-CONSTRUCTION EXISTING CONDITION ISSUES.
- CONTRACTOR SHALL INSTALL AND MAINTAIN ALL EROSION CONTROL BMPs PRIOR TO COMMENCEMENT OF GRADING FOR EACH LOCATION DURING CONSTRUCTION. EROSION CONTROL PLANS ARE PROVIDED INSIDE THE PROJECT STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
- CONSTRUCTION LIMITS AS SHOWN ARE APPROXIMATE FINAL CONSTRUCTION LIMITS TO BE COORDINATED WITH THE OWNER AND STAKED IN THE FIELD.
- CLEARING AND GRUBBING TO BE PERFORMED ONLY WITHIN GRADING LIMITS AND ACCESS ROUTES UNLESS DIRECTED BY ENGINEER.
- TREES TO BE CLEARED WILL BE MARKED IN THE FIELD BY ENGINEER. ALL TREES >= 8" DIAMETER NOT MARKED FOR REMOVAL SHALL BE PROTECTED.
- TREES IDENTIFIED BY ENGINEER FOR ADDITIONAL PROTECTION AGAINST ROOT COMPACTION, DAMAGE AND DISFIGUREMENTS IN ACCORDANCE WITH MnDOT Spec. 2572. PROTECTION OF TREES NOT IDENTIFIED TO BE REMOVED SHALL BE INCIDENTAL.
- TREE SURVEY COMPLETED 05/04/2020. "SIGNIFICANT TREES" MEET THE DEFINITION REQUIREMENTS.
- CONTRACTOR SHALL TAKE PRECAUTIONS TO MINIMIZE THE TRANSFER OF AQUATIC AND TERRESTRIAL INVASIVE SPECIES TO THE MAXIMUM EXTENT POSSIBLE.
- SOIL SURFACES COMPACTED DURING CONSTRUCTION MUST BE DECOMPACTED TO A SOIL COMPACTING PRESSURE OF LESS THAN 1400 KILOPASCALS OR 200 POUNDS PER SQUARE INCH IN THE UPPER 1 INCH OF SOIL.
- SEE SHEET R-01 FOR PLANTING SCHEDULE AND SITE RESTORATION DETAILS.
- CONTRACTOR SHALL CONTACT ENGINEER AT LEAST 24 HOURS PRIOR TO CONSTRUCTION OF CRITICAL DESIGN ITEMS TO ALLOW FOR CONSTRUCTION OBSERVATION. CRITICAL DESIGN ITEMS INCLUDE:
  - RIPRAP TOE PROTECTION INSTALLATION
  - VRSS INSTALLATION
  - BOULDER VANE INSTALLATION



**3 SECTION: BIO-SWALE**  
 SCALE IN FEET



**4 SECTION: BITUMINOUS CART PATH**  
 SCALE IN FEET

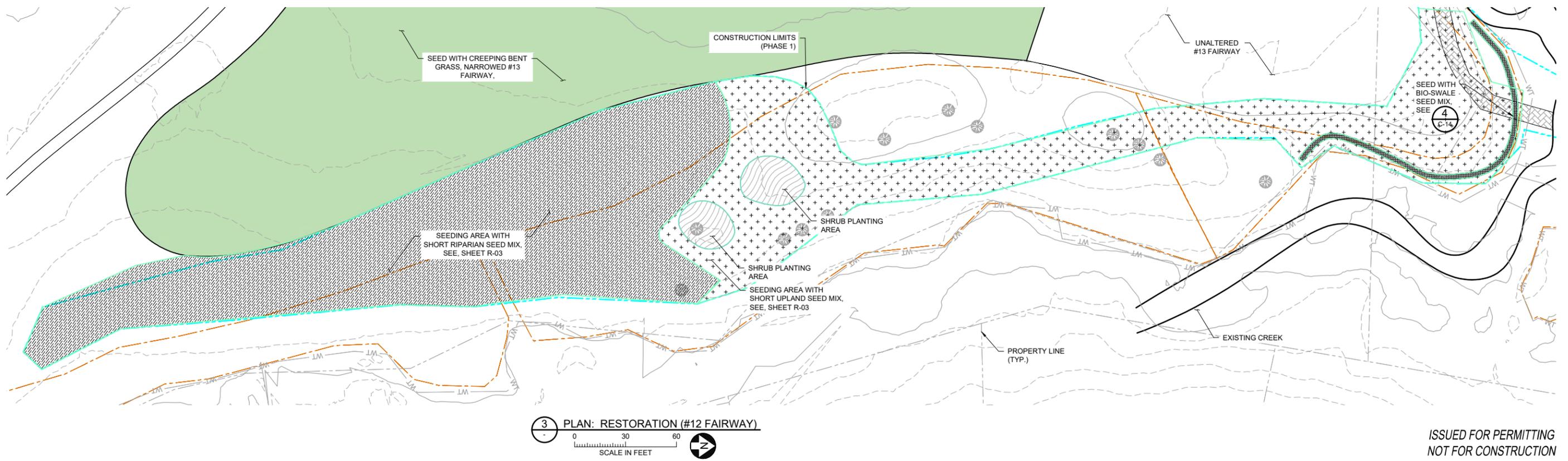
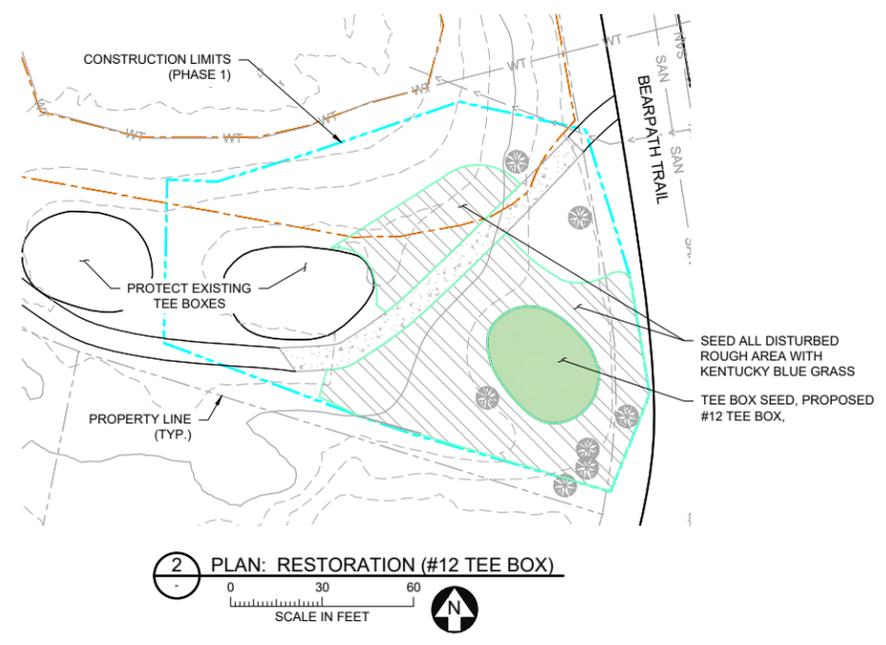
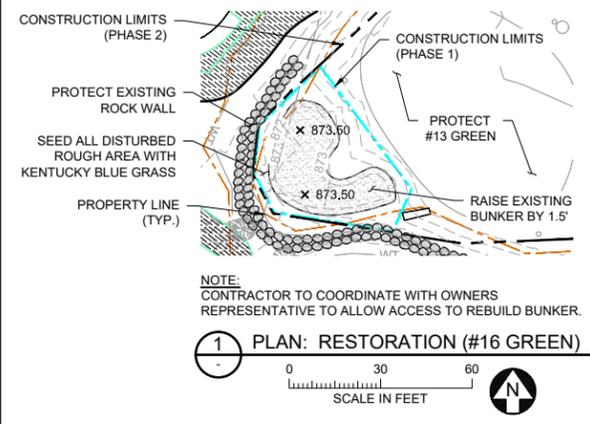
ISSUED FOR PERMITTING  
 NOT FOR CONSTRUCTION

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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. PRINTED NAME: BRAD LINDAMAN SIGNATURE: _____ DATE: 03/12/2021 LICENSE #: 43102		CLIENT: BARR ENGINEERING CO. BID: 4300 MARKETPOINTE DRIVE SUITE 200 CONSTRUCTION PERMITTING: 03/12/21 MINNEAPOLIS, MN 55435 Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE SUITE 200 MINNEAPOLIS, MN 55435 Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Ph: (952) 832-2601 Ph: 1-800-632-2277 www.barr.com		Scale: AS SHOWN Date: 03/12/2021 Drawn: EPF Checked: JCO Designed: BARR Approved: BJL		BEARPATH GOLF & COUNTRY CLUB CHANHASSEN, MN		BEARPATH GOLF COURSE RENOVATION (PHASE 1) EDEN PRAIRIE, MN PROPOSED CONDITIONS AND GRADING PLAN #13 GREEN & #12 GREEN/#13 TEE BOX		BARR PROJECT No. 23/27-0053.14 CLIENT PROJECT No. DWG. No. C-15 REV. No. A				
NO.	BY	CHK	APP.	DATE	REVISION DESCRIPTION	A	B	C	0	1	2	3	RELEASED TO/FOR	DATE RELEASED

- NOTES:**
- SEE SHEET R-01 FOR SITE RESTORATION DETAILS.
  - SEE SHEET R-03 FOR PLANTING SCHEDULE.
  - SEE SHEET C-14 FOR GENERAL CONSTRUCTION NOTES.

**SYMBOL AND PATTERN LEGEND**

	EXISTING 10' CONTOUR
	EXISTING 2' CONTOUR
	EXISTING PROPERTY LINE
	PROPOSED 5' CONTOUR
	PROPOSED 1' CONTOUR
	CONSTRUCTION LIMITS (PHASE 1)
	CONSTRUCTION LIMITS (PHASE 2)
	PROPOSED BUFFER
	PROPOSED GOLF COURSE
	PROPOSED SAND BUNKER
	SHRUB PLANTING
	SEEDING AREA WITH BIO-SWALE SEED MIX, SEE SHEET R-03
	SEEDING AREA WITH SORT RIPARIAN SEED MIX, SEE SHEET R-03
	SEEDING AREA WITH SORT UPLAND SEED MIX, SEE SHEET R-03
	SEEDING AREA WITH KENTUCKY BLUEGRASS SEED MIX, OWNER TO SPECIFY RATE
	SEEDING AREA WITH BENTGRASS SEED MIX, OWNER TO SPECIFY RATE



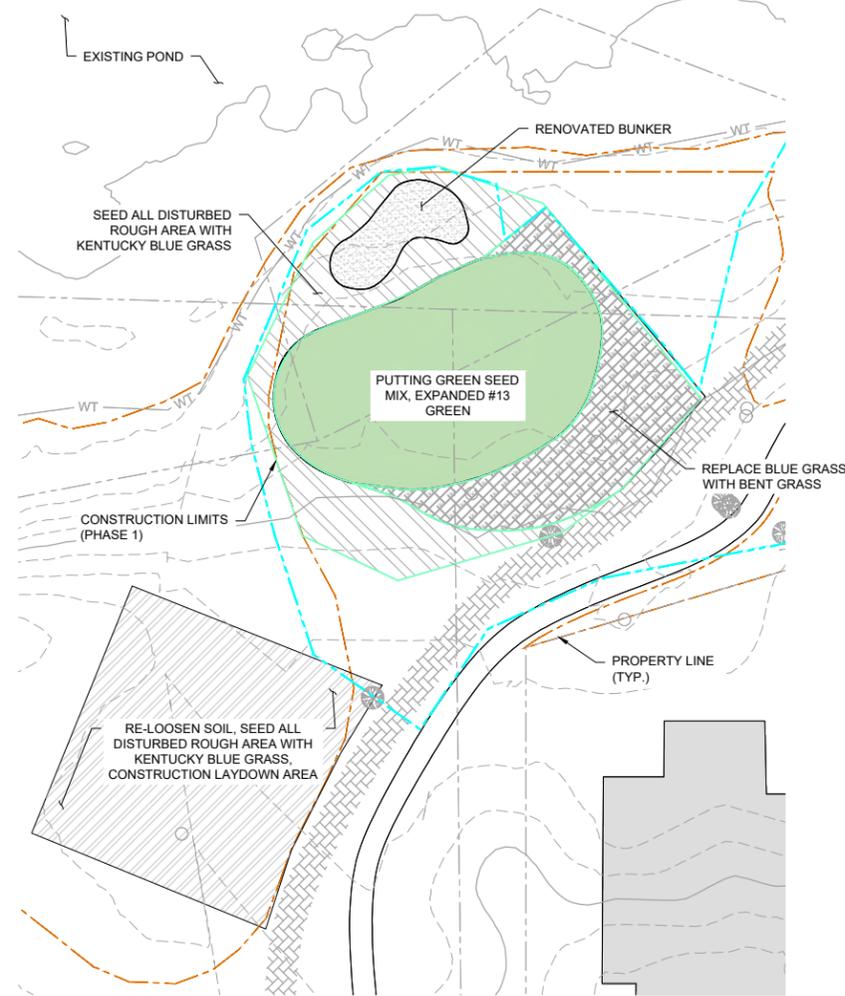
ISSUED FOR PERMITTING  
NOT FOR CONSTRUCTION

CADD USER: Eric P. Fitzgerald FILE: M:\DESIGN\23270053\_14\MIDDLE RILEY STREAM\23270053\_14\_R-04\_BEARPATH\_RESTORATION PLAN.DWG PLOT SCALE: 1:2 DATE: 4/23/2021 12:50 PM  
BARR M:\AutoCAD\2011\AutoCAD 2011 Support\enu\template\Bar\_2011\_Template.dwg Plot at 1: 10/06/2010 14:03:50

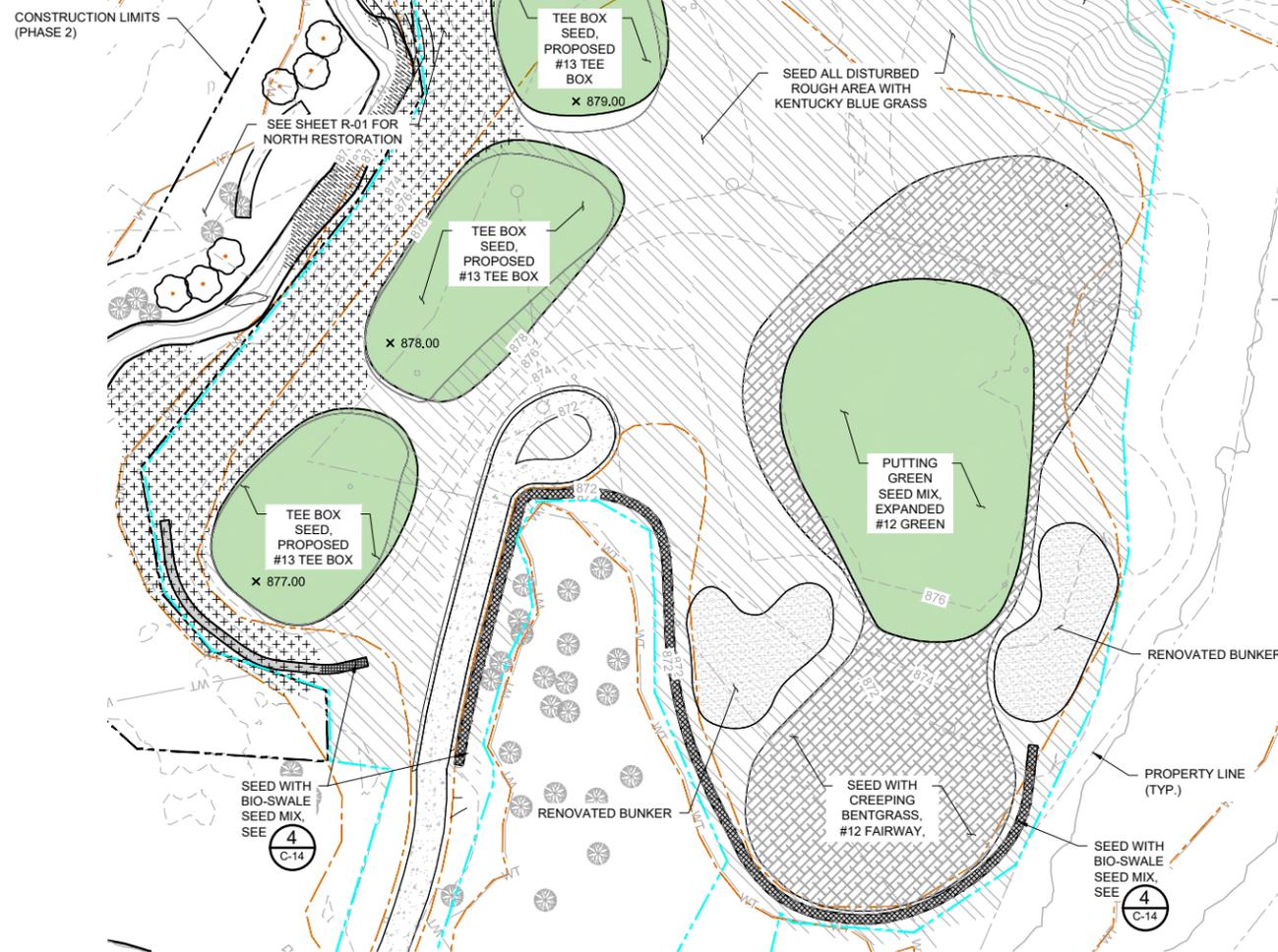
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.		CLIENT BID CONSTRUCTION PERMITTING	BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435		Scale Date Drawn Checked Designed Approved	BEARPATH GOLF & COUNTRY CLUB CHANHASSEN, MN	BEARPATH GOLF COURSE RENOVATION (PHASE 1) EDEN PRAIRIE, MN RESTORATION PLAN #16 GREEN, #12 TEE BOX & #12 FAIRWAY	BARR PROJECT No. 23/27-0053.14 CLIENT PROJECT No.
PRINTED NAME SIGNATURE DATE	BRAD LINDAMAN _____ 03/12/2021	RELEASED TO/FOR DATE RELEASED	A B C 0 1 2 3	AS SHOWN 03/12/2021 EPF JCO BARR BJL	DWG. No. REV. No.			

CADD USER: Eric P. Fitzgerald FILE: M:\DESIGN\23270053\_14\MIDDLE RILEY STREAM\BARRPATH\_RESTORATION PLAN.DWG PLOT SCALE: 1:2 PLOT DATE: 4/23/2021 12:52 PM

BARR:\AutoCAD\2011\AutoCAD 2011 Support\enu\template\Bar\_2011\_Template.dwt Plot at 1: 10/06/2010 14:09:50



1 PLAN: RESTORATION (#13 GREEN)  
SCALE IN FEET



2 PLAN: RESTORATION (#12 GREEN & #13 TEE BOX)  
SCALE IN FEET

SYMBOL AND PATTERN LEGEND	
	EXISTING 10' CONTOUR
	EXISTING 2' CONTOUR
	EXISTING PROPERTY LINE
	PROPOSED 5' CONTOUR
	PROPOSED 1' CONTOUR
	CONSTRUCTION LIMITS (PHASE 1)
	CONSTRUCTION LIMITS (PHASE 2)
	PROPOSED BUFFER
	PROPOSED GOLF COURSE
	PROPOSED SAND BUNKER
	SHRUB PLANTING
	SEEDING AREA WITH BIO-SWALE SEED MIX, SEE SHEET R-03
	SEEDING AREA WITH SORT RIPARIAN SEED MIX, SEE SHEET R-03
	SEEDING AREA WITH SORT UPLAND SEED MIX, SEE SHEET R-03
	SEEDING AREA WITH KENTUCKY BLUEGRASS SEED MIX, OWNER TO SPECIFY RATE
	SEEDING AREA WITH BENTGRASS SEED MIX, OWNER TO SPECIFY RATE

ISSUED FOR PERMITTING  
NOT FOR CONSTRUCTION

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## Access and Construction License Agreement

THIS AGREEMENT is made by and between Bearpath Homeowners Association Inc. (Bearpath Homeowners) and Riley-Purgatory-Bluff Creek Watershed District, a special purposes unit of the State of Minnesota with powers set forth at Minnesota Statutes chapters 103B and 103D (RPBCWD), to convey a property-use license for purposes of implementation of capital work by RPBCWD to stabilize Middle Riley Creek.

### Recitals

- A. Bearpath Homeowners owns in fee simple certain real property identified by PID 19-116-22-23-0035 in the City of Eden Prairie, Hennepin County, Minnesota, legally described as: Bearpath Sixth Addition, Outlot A (the Property);
- B. RPBCWD will undertake a construction project incorporating structural and vegetative stabilization to establish a more stable flow path for an 815-foot stretch of eroded streambank through which water flows through and off the Property, and on adjacent private and publicly owned property (the Project);
- C. Completion of the Project will benefit Bearpath Homeowners by stabilizing and improving the Property and securing against soil loss from erosion, and will contribute to the realization of the public purposes for which RPBCWD was established by improving water quality in Middle Riley Creek;
- D. The Project will reduce annual phosphorus loading to Lake Riley by an estimated 8.3 pounds, improving water quality for the benefit of the public, and will protect and improve Middle Riley Creek and streambanks on the Project site from degradation caused by existing erosion;
- E. RPBCWD and Bearpath Golf and Country Club (Bearpath) will be responsible for all costs of construction of the Project;
- F. RPBCWD has requested and Bearpath Homeowners have agreed to grant to RPBCWD a temporary license providing RPBCWD with the right to access and use the Property to construct the Project; and
- G. The parties acknowledge in executing this agreement that sufficient consideration has been received by the Bearpath Homeowners pursuant to the terms hereof, and that this agreement sets forth obligations that are duly binding on the parties.

### License

NOW, THEREFORE, in consideration of the foregoing recitals, which are incorporated into and made a part of this license, the parties agree as follows:

1. Grant of License. Bearpath Homeowners hereby grant and convey to RPBCWD, its contractors, agents, successors and assigns a term license (the License) over, under, upon and across that portion of the Property shown and labeled "Work Extents" on Exhibit A, attached hereto and incorporated herein as the (the License Area), for purposes of access for implementation and construction of the Project. The License includes the right of ingress and egress and to pass over and through the License Area on foot and using motorized equipment for staging of construction and construction, and the right to restore the area, then, subsequent

to construction, to inspect the Project and maintain vegetation on the Property. The rights granted hereby include the right to lay and maintain temporary utilities across or above the surface of the License Area for purposes of construction of the Project. The rights granted by Bearpath Homeowners herein will terminate on completion of the Project or on 10/31/2025, whichever is earlier.

2. Restrictions on Bearpath Homeowners' Use of License Area. Bearpath Homeowners will not use the License Area or permit the construction of any improvements within the License Area in any manner that would damage or interfere with the function or physical structure of the Project.
3. No Public Access or Use; Bearpath Homeowners' Reserved Rights. No right of access or use is granted to the general public to the Property by this License. Bearpath Homeowners may use and enjoy the License Area for any purposes and engage in or allow others to engage in all activities or uses and enjoy all rights accruing from their ownership of the Property, subject to the restrictions stated herein and the right of RPBCWD to use the License Area for the purposes herein expressed. Bearpath Homeowners retain the right to sell or transfer all or part of the Property, subject to the License. Bearpath Homeowners will inform others who exercise any right on the Property by or through Bearpath Homeowners of the requirements and constraints imposed by the License, and will take any other steps as necessary to ensure that the terms of the License are met.
4. Conduct of the Project; Property Condition. All activity by RPBCWD on the Property will be conducted in a safe and workmanlike manner at RPBCWD's sole cost. In the event the License Area or Property is damaged by the activities of RPBCWD or its contractors, agents or assigns pursuant to the exercise of any of RPBCWD's rights under the License, RPBCWD will promptly repair or restore the Property to the extent reasonably practicable. RPBCWD will repair, seed or plant disturbed or damaged areas with vegetation suitable for the intended uses of the Property. On completion of the Project, RPBCWD will restore the License Area to materially the same condition as existed prior to the commencement of construction, except to the degree that the License Area and Property are improved by the Project.
5. Permitting. Bearpath Homeowners, as landowners, authorize RPBCWD to apply on their behalf for all permits and approvals required for the Project and will cooperate with RPBCWD to obtain to all permits and approvals applicable to the Project. RPBCWD will obtain at its expense all required permits and approvals and will bear the costs and fees associated with complying with regulatory requirements applicable to the Project.
6. Notice. RPBCWD will provide Bearpath Homeowners with notice at least 10 days prior to the commencement of construction of the Project. RPBCWD may access the License Area and undertake work in accordance with and under the terms of the License at any time.
7. Regulatory Authorities Not Affected. The License does not replace or diminish the regulatory authority of RPBCWD or any other public body, as may apply to the Property or any activity within it.
8. Title. Except as expressly stated otherwise herein, Bearpath Homeowners represent and covenant with RPBCWD that Bearpath Homeowners own fee title to the Property, have the sole right to grant and convey the License to RPBCWD; that there are no unrecorded mortgages, contracts for deed or other encumbrances that would prevent the establishment of

the License or the use thereof by RPBCWD for the purposes described herein; and Bearpath Homeowners will indemnify and hold RPBCWD harmless for any breach of the foregoing covenants.

- 9. Insurance. Bearpath Homeowners remain solely responsible for maintaining liability and other insurance for its own uses of and authority over the Property.
- 10. Notices. Except as otherwise specifically provided herein, all notices required or permitted under this License will be in writing and will be deemed delivered when personally delivered, delivered by documented courier delivery or mailed by United States registered or certified mail, return receipt requested, at the address appearing below or to such other address as each party may designate by a written notice to the other.

If to Bearpath Homeowners: Bearpath Homeowners Association Inc.  
C/O Community Development Inc.  
7100 Madison Ave W  
Golden Valley, MN 55427  
[email/phone]

If to RPBCWD: Riley-Purgatory-Bluff Creek Watershed District  
Attn: Terry Jeffery  
18681 Lake Drive East  
Chanhassen, MN 55317

- 11. Severability. If any one or more of the provisions of this agreement, or the applicability of any such provision to a specific situation, will be held invalid or unenforceable, such provision will be modified to the extent necessary to make it or its application valid and enforceable, and the validity and enforceability of all other provisions of this agreement and all other applications of any such provision will not be affected thereby.
- 12. Governing Law. This license will be construed and governed by the laws of the State of Minnesota.
- 13. No Waiver of Immunity. No provision of this agreement will be interpreted as a waiver of any statutory or common law immunity from or limitation of liability available to RPBCWD, all such immunities and limitations being expressly reserved by RPBCWD.

{Signature page follows.}

IN WITNESS WHEREOF, the undersigned execute this license, intending to be legally bound.

**Bearpath Homeowners Association Inc.**

\_\_\_\_\_ Date: \_\_\_\_\_

By \_\_\_\_\_  
Its \_\_\_\_\_

**Approved as to form and execution**

\_\_\_\_\_  
RPBCWD Counsel

**Riley-Purgatory-Bluff Creek Watershed District**

\_\_\_\_\_ Date: \_\_\_\_\_

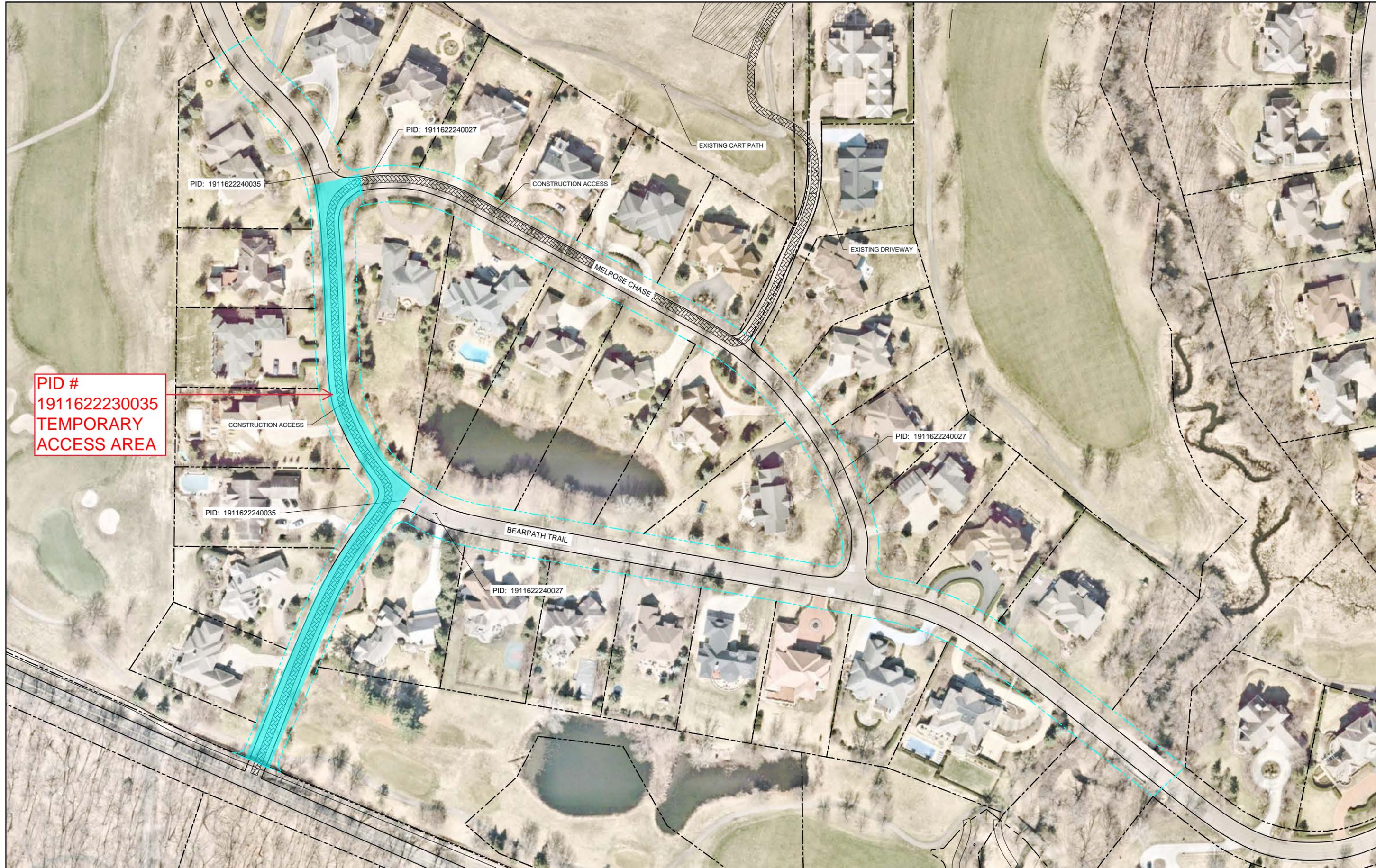
By \_\_\_\_\_  
Its Interim Administrator

Drafted by:  
Smith Partners PLLP  
400 Second Avenue S, Suite 1200  
Minneapolis, MN 55401

**EXHIBIT A**

**License Area**

DRAFT



**PID #**  
**1911622230035**  
**TEMPORARY**  
**ACCESS AREA**

**FIGURE A - PARCEL ID #**  
 1911622230035 TEMPORARY ACCESS

**MIDDLE RILEY CREEK STABILIZATION**  
**& BEARPATH GOLF COURSE RENOVATION**  
~~PARCEL ID# 1911622240038 ACCESS FIGURE A-1~~



CONSULTER: BARR, INC. 11/15/2024. THE INFORMATION IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT A CONTRACT. THE USER SHALL BE RESPONSIBLE FOR VERIFYING ALL INFORMATION. SCALE: 1:2500. PHOTO DATE: 11/15/2024.