Riley-Purgatory-Bluff Creek Watershed District

Board of Managers Regular Meeting
Wednesday, September 4, 2019
7:00pm Board Meeting
DISTRICT OFFICE
18681 Lake Drive East
Chanhassen

Agenda

Regular Meeting will begin at 7:00pm

1. **Call to Order** **Action**

2. **Approval of the Agenda** **Action**

3. **Public Hearing: Budget**

4. **Public Hearing: Silver Lake Water Quality Project at Pleasant View**

5. **Public Hearing: St Hubert Retrofit Plan Amendment**

6. **Matters of general public interest** **Information**

   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.

7. **Reading and approval of minutes** **Action**
   a. Board of Manager Meeting, August 7, 2019

8. **Citizen Advisory Committee** **Action**
   a. Report
   b. Motion

9. **Consent Agenda**
   (The consent agenda is considered as one item of business. It consists of routine administrative items or items not requiring discussion. Any manager may remove an item from the consent agenda for action.)
   a. Accept August Staff Report
   b. Accept August Engineer's Report (with attached Inspection Report)
   c. Permit 2019-024 Conifer Heights - Approve permit as presented in the proposed board action of the permit review report

d. Permit 2019-028 Lifetime Parking Lot - Approve permit as presented in the proposed board action of the permit review report
e. Permit 2019-032 Chanhassen Parking Lot - Approve permit as presented in the proposed board action of the permit review report
f. TO 28a Rice Marsh Lake Water Quality Improvement Project Phase 1
g. Authorize Watershed Planning Manager to release draft rules and supporting memorandum to review agencies and stakeholders for 45-day review and comment period
h. Elect to not waive the monetary limits on municipal tort liability established by Minn. Stat. 466.04 for District's insurance coverage.

10. Action Items **Action**

a. Pulled consent items
b. Accept July Treasurer's Report
c. Approve Paying of the Bills
d. Approve Watershed Stewardship Grant application from the Preserve Association
e. Permit 2019-034 Lion's Tap - Consider variance request from Rule J subsection 3.1a rate control
f. Permit 2019-034 Lion's Tap - Approve permit as presented in the proposed board action of the permit review report
g. Authorize Administrator to enter into a cooperative agreement, drafted by RPBCWD legal counsel, with the Lower MN River Watershed District (LMRWD) to differ permitting authority for TH 101 to LMRWD.
h. Per Diem - Meeting preparation - Manager Koch

11. Discussion Items **Information**

a. Manager Report
b. 50th Anniversary
c. Cooperative Agreement with MCWD for review and permitting of trail along MN TH 5 and the addition of turn lanes on Powers Blvd at Lake Lucy Road

12. Upcoming Board Topics

a. St Hubert Plan Amendment

13. Upcoming Events **Information**

- Walk With the Watershed, Friday, September 6th, 12pm, Hyland Lake Park Reserve, Bloomington
- Governance Workshop (MAWD/MASWCD), September 12-13, Airport Marriott, Bloomington
- Citizen Advisory Committee Meeting, September 16, 2019, 6:00pm, 18681 Lake Drive East, Chanhassen
- Smart Salting for Parking Lots and Sidewalks, September 26th, 9am, 18681 Lake Drive East, Chanhassen
- Cycle the Creek: 50th anniversary Edition. September 28th, 9am. Begins at Lake Ann Park, Chanhassen

Public Notice
(Official Publication)
Notice of Public Hearing
Riley Purgatory Bluff Creek Watershed District
2020 Budget and Levies

PLEASE TAKE NOTICE that the Board of Managers of the Riley Purgatory Bluff Creek Watershed District will hold a public hearing pursuant to Section 103D.911 of Minnesota Statutes, on September 4, 2019 at 7:00 p.m. at District Office, 18681 Lake Drive East, Chanhassen, MN to consider the District's budget and levies for the year 2020. The total proposed expenditures for 2020 are $ 6,676,000. Proposed levy is a $3,703,000 Metropolitan Surface Water Management Act implementation levy as authorized by Minnesota Statutes Section 103B.241.

Dated: August 14, 2019

BY ORDER OF THE BOARD OF MANAGERS

David Ziegler, Secretary

	Budget Description	LEVY	2019 LEVY	REVISED 2019 Budget	End of Year 2019 forecast	Carry Over estimates	Plan	2020 Levy	2020 Porposed Budget
		REVENUES							
		Plan Implementation Levy	$ 3,602,500.00	$ 3,602,500.00			$ 3,704,500.00	$ 3,703,000.00	**$ 3,703,000.00**
		Permit	$ 25,000.00	$ 50,000.00			$ 25,000.00	$ 25,000.00	$ 25,000.00
		Grant Income	*$400,000.00*	*$708,079.00*					
		Data Collection Income							
		Other Income							
		Investment Income		$ 35,000.00				$ 75,000.00	$ 75,000.00
		Past Levies	$ 2,889,992.00	$ 2,511,789.00					$ 2,873,000.00
		2018 Partner Funds		$ 432,000.00					
		TOTAL REVENUE	$ 6,917,492.00	$ 7,339,368.00				$ 3,803,000.00	$ 6,676,000.00
		EXPENDITURES							
		Administration							
1		Accounting and Audit	$ 42,000.00	$ 42,000.00	$ -		$ 44,000.00	$ 42,000.00	$ 42,000.00
2		Advisory Committees	$ 5,000.00	$ 5,000.00	$ -		$ 6,000.00	$ 5,000.00	$ 5,000.00
3		Insurance and bonds	$ 20,000.00	$ 20,000.00	$ -		$ 14,000.00	$ 20,000.00	$ 20,000.00
4		Engineering Services	$ 106,000.00	$ 106,000.00	$ -		$ 109,000.00	$ 109,000.00	$ 109,000.00
5		Legal Services	$ 78,000.00	$ 78,000.00	$ -		$ 81,000.00	$ 84,000.00	$ 84,000.00
6		Manager Compensation	$ 20,000.00	$ 20,000.00	$ -		$ 21,000.00	$ 20,000.00	$ 20,000.00
7		Dues and Publications	$ 12,000.00	$ 12,000.00	$ -		$ 10,000.00	$ 14,000.00	$ 14,000.00
8		Office Cost	$ 144,000.00	$ 144,000.00	$ -		$ 107,000.00	$ 150,000.00	$ 150,000.00
9		Permit Review and Inspection	$ 135,000.00	$ 110,000.00	$ -		$ 96,000.00	$ 135,000.00	$ 135,000.00
		Permit Review and Inspection Database		$ 39,900.00					
10		Recording Services	$ 10,000.00	$ 10,000.00	$ -		$ 17,000.00	$ 17,000.00	$ 17,000.00
11		Staff Cost	$ 550,000.00	$ 550,000.00	$ -		$ 462,000.00	$ 600,000.00	$ 600,000.00
		Subtotal	$ 1,122,000.00	$ 1,136,900.00	$ -		$ 967,000.00	$ 1,196,000.00	$ 1,196,000.00
		Programs and Projects							
		District Wide							
12		10-year Management Plan	$ 5,000.00	$ 5,000.00	$ -		$ 5,000.00	$ 5,000.00	$ 5,000.00
13		AIS Inspection and early response	$ 75,000.00	$ 75,000.00	$ -		$ 75,000.00	$ 85,000.00	$ 85,000.00
14		Hennepin County Chloride Initative*	$ 10,000.00	$ 120,800.00	Carry over	$ 100,000.00			$ 100,000.00
15		Chloride Lower Minnesota*	$ 9,000.00	$ 217,209.00	Carry over	$ 215,000.00			$ 215,000.00
16		Cost Share*	$ 100,000.00	$ 252,293.00	Carry over	$ 80,000.00	$ 200,000.00	$ 200,000.00	$ 280,000.00
17		Data Collection and Monitoring	$ 186,000.00	$ 186,000.00	$ -		$ 192,000.00	$ 192,000.00	$ 192,000.00
18		Community Resiliency		$ 48,000.00	Carry over	$ -		$ 50,000.00	$ 50,000.00
19		Education and Outreach	$ 119,000.00	$ 119,000.00			$ 123,000.00	$ 123,000.00	$ 123,000.00
20		Plant Restoration - U of M*	$ 42,000.00	$ 42,000.00	Carry over	$ -	$ 40,000.00	$ 42,000.00	$ 42,000.00
21		Repair and Maintenance Fund *		$ 177,005.00	Carry Over	$ 140,000.00	$ 100,000.00	$ 100,000.00	$ 240,000.00
22		Wetland Management*	$ 25,000.00	$ 145,272.00	Carry Over	$ 110,000.00	$ 100,000.00	$ 50,000.00	$ 160,000.00
23		Groundwater Conservation*		$ 130,000.00	Carry Over	$ 130,000.00	$ 100,000.00	$ 50,000.00	$ 180,000.00
24		Lake Vegetation Implementation	$ 75,000.00	$ 75,000.00			$ 75,000.00	$ 75,000.00	$ 75,000.00
25		Opportunity Project*	$ 100,000.00	$ 200,000.00	Carry Over	$ 180,000.00	$ 100,000.00	$ 100,000.00	$ 280,000.00
26		Stormwater Pond*	$ 22,000.00	$ 86,092.00	$ -			$ 20,000.00	$ 20,000.00
27		TMDL - MPCA		$ 10,000.00	Carry over	$ 10,000.00			$ 10,000.00
		Subtotal	$ 788,000.00	$ 1,888,671.00		$ 965,000.00	$ 1,110,000.00	$ 1,092,000.00	$ 2,057,000.00
		Bluff Creek							
28		Bluff Creek Tributary*	$ 50,000.00	$ 291,091.00	Carry over	$ 150,000.00			$ 150,000.00
29		Wetland Restoration and Flood Mitigation*	$ 450,000.00	$ 561,870.00	Carry over	$ 200,000.00			$ 200,000.00
30		Chanhassen High School *		$ 41,905.00	$ -	$ 20,000.00			$ 20,000.00
		Subtotal	$ 500,000.00	$ 894,866.00		$ 370,000.00	$ -	$ -	$ 370,000.00
		Riley Creek							
31		Lake Riley - Alum Treatment 1st dose *		$ 5,000.00	Carry over	$ -	$ 300,000.00	$ 300,000.00	$ 300,000.00
32		Lake Susan Improvement Phase 1 *				$ -			
33		Lake Susan Water Quality Improvement Phase 2 *		$ 13,420.00	Carry over	$ 10,000.00			$ 10,000.00
34		Rice Marsh Lake in-lake phosphorus load*		$ 73,983.00	Carry over	$ 65,000.00	$ 15,000.00		$ 65,000.00
35		Rice Marsh Lake Water Quality Improvement Phase 1*	$ 150,000.00	$ 150,000.00	Carry over	$ 125,000.00	$ 150,000.00	$ 150,000.00	$ 275,000.00
36		Riley Creek Restoration (Reach E and D3) *	$ 250,000.00	$ 1,680,562.00	Carry over	$ 500,000.00			$ 500,000.00
37		Lake Ann - Westland restoration						$ 150,000.00	$ 150,000.00
38		Lake Riley & Rice Marsh Lake Subwatershed Assessment		$ 72,500.00	Carry over	$ 15,000.00			$ 15,000.00
39		Upper Riley Creek Stabilization and Restoration*	$ 425,000.00	$ 425,000.00	Carry over	$ 425,000.00	$ 675,000.00	$ 675,000.00	$ 1,100,000.00
		Subtotal	$ 825,000.00	$ 2,420,465.00		$ 1,140,000.00	$ 1,140,000.00	$ 1,275,000.00	$ 2,415,000.00
		Purgatory Creek							
40		Purgatory Creek Rec Area- Berm/retention area - feasibility/design*		$ 50,000.00	Carry over	$ 40,000.00			$ 40,000.00
41		Lotus Lake in-lake phosphorus load control*		$ 105,772.00	Carry over	$ 103,000.00			$ 103,000.00
42		Silver Lake Restoration - Feasibility Phase 1*	$ 167,500.00	$ 168,013.00	Carry over	$ 140,000.00	$ 367,500.00	$ 100,000.00	$ 240,000.00
43		Scenic Heights*		$ 111,226.00	Carry over	$ 70,000.00			$ 70,000.00
44		Hyland Lake in-lake phosphorus load control*	$ 100,000.00	$ 140,000.00	Carry over	$ 5,000.00		$ 10,000.00	$ 15,000.00
45		Mitchell Lake Subwatershed Assessment*		$ 87,500.00		$ 20,000.00			$ 20,000.00
46		Lotus Lake Kerber Pond Ravine						$ 30,000.00	$ 30,000.00
47		Duck Lake watershed load*		$ 213,955.00	Carry over	$ 20,000.00			$ 20,000.00
		Subtotal	$ 267,500.00	$ 876,466.00		$ 398,000.00	$ 367,500.00	$ 140,000.00	$ 538,000.00
48		Reserve	$ 100,000.00	$ 99,628.00	$ -		$ 100,000.00	$ 100,000.00	$ 100,000.00
		TOTAL EXPENDITURE	$ 3,420,000.00	$ 7,316,996.00		$ 2,873,000.00	$ 3,684,500.00	$ 3,803,000.00	$ 6,676,000.00
		EXCESS REVENUES OVER (UNDER) EXPENDITURES	$ 3,497,492.00	$ 22,372.00					
		ESTIMATED FUND BALANCE BEGINNING							
		ESTIMATED FUND BALANCE ENDING							

DRAFT BUDGET WORKSHOP

* Denotes multi-year projects and programs - please see budget description sheet for further details

County	Payable 2019 Net Tax Capacity	Net Tax Capacity Percent Distribution	Apportionable Payable 2020	Apportionable Payable 2019	Tax based in 2019 increased by
Carver	$ 35,968,053	23.3379%	$ 864,203.69	$ 864,203.69	7.2%
Hennepin	$ 118,150,359	76.6621%	$ 2,838,796.31	$ 2,838,796.31	Propose Levy increase
Watershed Total	$ 154,118,412	100.0%	$ 3,703,000.00	$ 3,703,000.00	2.8%

BOARD WORKSHOP: July 10, 201
PUBLIC HEARING: September 4, 2019
DECEMBER BOARD MEETING: December 11, 2019

*Denotes multi-year project

Public Notice
(Official Publication)
Notice of Public Hearing
Riley Purgatory Bluff Creek Watershed District
Silver Lake: Pleasantview Road Stormwater Treatment Project

PLEASE TAKE NOTICE that the Board of Managers of the Riley Purgatory Bluff Creek Watershed District will hold a public hearing consistent with Section 103B.251 of Minnesota Statutes, on September 4, 2019 at 7:00 p.m. at District Office, 18681 Lake Drive East, Chanhassen, MN to consider implementing the Silver Lake: Pleasantview Road Stormwater Treatment Project.

The total estimated project cost for this project is $180,000. The District proposes to pay for the project with the District's ad valorem property tax levy authorized by Minnesota Statutes Section 103B.241 for the implementation of its water management plan and partnerships funds from the city of Chanhassen. Approximately 77% of this levy will be paid by properties in Hennepin County, and 23% paid by properties in Carver County.

All interested parties are invited to appear at the public hearing to offer comments and ask questions in order to advise the board of managers on whether to approve the proposed pilot projects. Further information is available by contacting the District Administrator, Claire Bleser, cbleser@rpbcwd.org, or 952-607-6512, or by visiting the District website: www.rpbcwd.org.

Dated: August 14, 2019

BY ORDER OF THE BOARD OF MANAGERS

David Zeigler, Secretary

Public Notice
(Official Publication)
Notice of Public Hearing
Riley Purgatory Bluff Creek Watershed District
Minor Plan Amendment

PLEASE TAKE NOTICE that the Board of Managers of the Riley Purgatory Bluff Creek Watershed District will hold a public hearing consistent with Minnesota Statutes section 103B.231, on September 4, 2019, at 7:00 p.m. at District Office, 18681 Lake Drive East, Chanhassen, MN to consider, to provide a forum for public comment on a minor plan amendments to its 2018 Water Resources Management Plan. The hearing will be held as part regular meeting of the Board of Managers. The amendment identifies a campus-wide stormwater retrofit opportunity project at St Hubert Catholic School in Chanhassen. This project falls under our opportunity project program in which was created specifically to address previously unidentified projects and partnerships. The District will fund $277,000 of this project by means of its watershed-wide ad valorem tax levy, St Hubert Catholic School, Carver County Soil and Water Conservation District and grants. The District proposes to pay for the project from the District's ad valorem property tax levy authorized by Minnesota Statutes Section 103B.241 for the implementation of its water management plan. Approximately 77% of this levy will be paid by properties in Hennepin County, and 23% paid by properties in Carver County.

All interested parties are invited to appear at the public hearing to offer comments and ask questions in order to advise the board of managers on whether to approve the proposed project. Further information is available by contacting the District Administrator, Claire Bleser, cbleser@rpbcwd.org, or 952-607-6512, or by visiting the District website: www.rpbcwd.org.

To review the full text of the amendments, please visit the District's website at www.rpbcwd.org.

Dated: August 14, 2019

BY ORDER OF THE BOARD OF MANAGERS

David Ziegler, Secretary

MEETING MINUTES

Riley-Purgatory-Bluff Creek Watershed District

August 7, 2019, RPBCWD Board of Managers Monthly Meeting

PRESENT:

Managers:	Jill Crafton, Treasurer
	Larry Koch
	Dorothy Pedersen, Vice President
	Dick Ward, President
	David Ziegler, Secretary
Staff:	Claire Bleser, RPBCWD Administrator
	Terry Jeffery, Watershed Planning Manager
	Louis Smith, Attorney, Smith Partners
	Scott Sobiech, Engineer, Barr Engineering Company
Other attendees:	Amy Herbert, Recorder
	Sharon Klumpp, Baker Tilly
	Lori Tritz, Chair, CAC

1. Call to Order

President Ward called to order the Wednesday, August 7, 2019, Board of Managers Monthly Meeting at 7:01 p.m. at the District Office, 18681 Lake Drive East, Chanhassen, MN 55317.

2. Oath of Office

Attorney Smith led Manager Ziegler through the oath of office for Manager of the RPBCWD, swearing him in for a three-year term.

3. Approval of the Agenda

Manager Ziegler moved to approve the agenda as handed out. Manager Koch seconded the motion with the friendly amendment to remove from the Consent Agenda items 8a – Accept Staff Report; and, 8b – Accept July Engineer's Report (with attached Inspection Report). Upon a vote, the motion carried 5-0.

4. Matters of General Public Interest

There were no matters of general public interest raised.

5. Approval of Minutes

a. July 10, 2019, RPBCWD Board of Managers Budget Workshop and Regular Monthly Meeting

Manager Koch requested the addition to item 11h on page 8 a sentence reflecting that the

managers indicated they want District staff to explore for next year's field season some type of survey on how the watershed's lakeshores are doing. Manager Zielger moved to accept the minutes as revised. Manager Pedersen seconded the motion. Upon a vote, the motion carried 5-0.

6. Citizen Advisory Committee (CAC)

Ms. Lori Tritz, CAC Chair, updated the Board about the CAC's previous meeting. She explained the CAC discussed whether CAC stewardship should support bee lawns and if so, to what capacity. Ms. Tritz said the CAC will score the initiative at the next CAC meeting. She noted that Administrator Bleser presented the proposed 2020 District budget and levy and provided an opportunity for the CAC to ask questions. Ms. Tritz reported about the July 31 wetland walk and about the CAC's subcommittees. President Ward asked when the Speaker's Bureau would be rolled out. Ms. Tritz responded that by the time the CAC next meets, the feedback from the watershed district should be implemented and the program should be ready to roll out. Manager Ziegler asked about the CAC's overall comments about the proposed 2020 budget and levy. Ms. Tritz said the CAC has no adverse feedback about the proposed budget and levy.

7. Consent Agenda

Manager Ziegler moved to accept the Consent Agenda as previously amended. Manager Pedersen seconded the motion. Upon a vote, the motion carried 5-0. The items on the Consent Agenda included: 6c – Permit 2019-026 Ridgewood Church – Approve permit as presented in the proposed board action of the permit report; 6d – Permit 2018-044 Smith Village – Approve permit as presented in the proposed Board action of the permit report;

8. Action Items

a. Pulled Consent Agenda items

i. Accept Staff Report

Manager Koch asked if there is monitoring on Purgatory Creek. Administrator Bleser noted there are permanent monitoring stations on all three creeks in the watershed, and she described the location of the one on Purgatory Creek. Manager Koch asked for an update on the functioning of the spent lime treatment. Engineer Sobiech responded it is filtering water at an acceptable rate. Manager Koch asked how costs were distributed regarding the joint electrofishing tasks with Nine Mile Creek Watershed District. Administrator Bleser and Attorney Smith provided details. Attorney Smith noted that Smith Partners is legal counsel for the Nine Mile Creek Watershed District. Manager Ziegler moved to accept the staff report as presented. Manager Pedersen seconded the motion. Upon a vote, the motion carried 5-0.

ii. Accept July Engineer's Report (with attached inspection report)

Manager Koch commented that the permit for the lot on Frontier Trail isn't listed in the staff report. Mr. Jeffery said it was an after-the-fact permit, and he will add it to the report. Manager Koch asked what tasks remain from Task Order 23, the Scenic Heights School Forest Restoration. Administrator Bleser went through the tasks remaining for the next growing season. Manager Koch moved to accept the July Engineer's Report. Manager Ziegler seconded the motion. Upon a vote, the motion carried 5-0.

[President Ward requested moving item 8g- Proposal for Administrator Review – ahead to next on the meeting agenda to accommodate the guest presenter, Sharon Klumpp of Baker Tilly. The Board agreed to the change].

b. Proposal for Administrator Review

Ms. Sharon Klumpp reminded the Board that it contacted her about developing a job description for the District Administrator and submitting a proposal for work to sructure a performance review of the District Administrator. She talked about how she developed the job description, which had been distributed to the Board. Ms. Klumpp went into detail about the proposal for services for structuring the performance review and the process she and the District would undertake as the District conducts the performance review. She responded to questions and comments. Managers provided feedback on how he or she would like aspects of the information gathering and information delivery to be handled. Attorney Smith pointed out details that the Board needed to clarify further, and he described the review process in terms of the Data Privacy Act.

Manager Pedersen moved to direct Baker Tilly to prepare and provide a synthesized report, which will be the information available to the Board and the Board will not have access to the individual feedback provided to Baker Tilly for the report. Manager Crafton seconded the motion. Upon a vote, the motion carried 4-1 [Manager Koch voted against the motion.]

Manager Pedersen moved to accept the proposal from Baker Tilly to retain Baker Tilly to conduct the Administrator performance review at a cost not to exceed $5,000 plus expenses. Manager Crafton seconded the motion. Upon a vote, the motion carried 5-0

c. Accept June Treasurer's Report

Treasurer Crafton communicated that the report has been reviewed in accordance with the District's internal controls and procedures. She moved to accept the Treasurer's Report as presented. Manager Ziegler seconded the motion. Manager Koch asked a series of questions about the report, including asking for more details about specific payments, permit reviews and inspections, and taxes receivables. Administrator Bleser said she can get clarification from the accountant regarding the line item about taxes receivables and making sure the District's protocols are followed. President Ward called the question on the motion to accept the Treasurer's Report as presented. Upon a vote, the motion carried 5-0.

d. Approve Paying of Bills

Manager Crafton moved to pay the bills. Manager Pedersen seconded the motion. Upon a vote, the motion carried 5-0.

e. Select District Auditor for 2019

President Ward reflected that the managers received the proposals for auditing services from four firms and have had time to review the proposals. Managers provided comments on their review and talked about the options. After a lengthy discussion, Manager Pedersen moved to accept the proposal from and engage services of Abdo Eick & Meyers LLP. Manager Crafton seconded the motion. Upon a vote, the motion carried 4-0 [Manager Koch abstained from the vote].

f. MAWD Governance Workshop September 12-13

Administrator Bleser asked the managers if they were each interested in and able to attend the workshop on September 12th and 13th. The managers all indicated yes. Manager Koch moved to authorize the managers to all attend the MAWD Governance Workshop September 12-13 and for

staff to publish the appropriate public notice. Manager Crafton seconded the motion. Upon a vote, the motion carried 5-0.

g. Per Diem – Meeting Preparation

Manager Koch moved to lay over this agenda item until the Board's October monthly meeting. Manager Ziegler seconded the motion. Upon a vote, the motion carried 5-0.

h. August Rules Workshop

Administrator Bleser said she is looking for the Board to hold a one-hour workshop to review the proposed rules. The Board agreed to hold a rules review workshop on Monday, August 19 at 4:00 p.m.

9. Discussion Items

a. Manager Report

No manager reports given.

b. Report from Personnel Committee

Manager Pedersen noted this topic was discussed as part of the agenda item to select the District Auditor.

c. RPBCWD Anniversary Event August 28

Administrator Bleser reminded the Board of the District's anniversary celebration and celebration of community event coming up on August 28 at the Riley Jacques Barn in Eden Prairie.

d. Rules Revisions

President Ward noted that the Board has set a rules review workshop for August 19 at 4:00 p.m.

e. 2020 Draft Budget

Administrator Bleser said she updated the draft budget presentation according to the feedback she received from the managers at the last Board meeting. She reminded the Board that the proposed 2020 levy is $3,703,000, for a proposed levy increase of 2.8% over the 2019 levy, and the proposed 2020 budget is $6,676,000.00. She added that the District's tax base increase for 2020 is 7.2%. Manager Koch asked questions, including about budget line 18: Community Resilience and the Groundwater Conservation budget item. Administrator Bleser answered his questions. She announced that she will present the 2020 draft budget at the September public hearing. Manager Koch moved to approve moving forward with this draft budget as presented and to notice the September public hearing on the proposed 2020 budget and levy. Manager Crafton seconded the motion. Upon a vote, the motion carried 5-0.

f. MAWD Resolutions

President Ward summarized the proposed MAWD [Minnesota Association of Watershed Districts] resolution drafted by Manager Koch and the one drafted by Manager Ziegler. Manager Ziegler provided more detail about his proposed resolution regarding herbicides and pesticides. Administrator Bleser commented that the proposed resolutions are due to MAWD by September 1. Attorney Smith pointed out language the Board could include with the proposed resolutions including an explanation memo detailing statewide implications and who the District thinks could take issue with the resolution. He said staff can gather this information and format it. Manager Koch moved to direct staff to put these draft two resolutions into the proper format and to add

them to the agenda for the August 19th workshop. Manager Ziegler seconded the motion. Upon a vote, the motion carried 5-0.

10. Upcoming Board Topics

President Ward noted that upcoming Board topics are listed on the agenda and include the September public hearings on the Silver Lake Water Quality Project and St. Hubert Catholic School Retrofit as well as the authorization of the release of rules for the 45-day public comment period.

11. Upcoming Events

- Project WET, August 6, 9:00 a.m.-3:00 p.m., Nine Mile Creek Watershed District
- Shoreline Restoration Volunteer/Continuing Education Opportunity, August 14, 6:00 p.m.-8:00 p.m., Timber Lakes Homeowners Association
- Citizen Advisory Committee Meeting, August 19, 6:00 p.m., District Office, 18681 Lake Drive East, Chanhassen
- Smart Salting for Property Managers, August 21, 9:00 a.m.-1:30 p.m., District Office, 18681 Lake Drive East, Chanhassen
- Celebrating the Community: RPBCWD 50th Anniversary Celebration, August 28, Riley Jacques Barn, Eden Prairie
- RPBCWD Public Hearing and Board Meeting, September 4, 2019, 7:00 p.m., District Office, 18681 Lake Drive East, Chanhassen
- Governance Workshop (MAWD/MASWCD), September 12-13, Airport Marriott, Bloomington

12. Adjourn

Manager Pedersen moved to adjourn the meeting. Manager Crafton seconded the motion. Administrator Bleser stated that the laid over agenda item regarding the Per Diem for meeting preparation, requested by Manager Koch, would be added to the November monthly meeting agenda instead of the October agenda as earlier directed because Manager Koch will be absent from the October monthly meeting. Upon a vote, the motion carried 5-0. The meeting adjourned at 9:26 p.m.

Respectfully submitted,

David Ziegler, Secretary

Minutes: Monday, August 19, 2019
RPBCWD Citizen's Advisory Committee Monthly Meeting
Location: RPBCWD offices: 18681 Lake Street, Chanhassen

CAC Members

Jim Boettcher	P	Peter Iverson	A	Sharon McCotter	P	Marilynn Torkelson	P
Scott Bryan	A	Daryl Kirt	A	Jan Neville	P	Lori Tritz	P
Anne Deuring	P	Denny Kopfmann	P	Joan Palmquist	P		
Barry Hofer	P	Matt Lindon	P	Samir Penkar	P		

Michelle Jordan	RPBCWD staff	P

Summary of key actions/motions for the Board of Managers:
1. Motion: none

Summary of discussion items for the Board of Managers:
1. Roll out of Speakers Bureau
2. Website studies

I. Opening

A. Call CAC meeting to Order: President Lori Tritz called the meeting to order at 6:01 pm.

B. Attendance: As noted above.

C. Matters of general public interest: None

D. Approval of Agenda: Joan moved and Sharon seconded to approve the agenda. Motion carried.

E. Approval of July 15, 2019 CAC Meeting Minutes: Sharon moved and Joan seconded to approve the minutes. Motion carried.

II. Staff Report

A. Michelle reported that the 50th anniversary celebration is next Wednesday and we have 75 RSVPs so far. Our intern is collecting historical and geological facts on the District to have on display. The Water Bar will be there and have a conversation on water tasting with surface water, ground water, and bottled water. The third panel of the art project will be executed. Plus food, and block printing. Remember to RSVP.

B. The Duck Lake rain garden project will likely be a spring install because of the late spring and shortened construction season. Therefore we have the winter to develop the maintenance book.

C. The education outreach theme for next year will be community resiliency and preparing for a changing climate. This is based on how wet this season has been and how icy last winter was, etc. There is potential for a subgroup to work on developing this topic if the CAC has any ideas. One subtopic being considered is the benefits of trees.

D. The summer interns are leaving so things are quieting down. We will be getting a Green Corps member for almost a year. Some of the projects they will be working on are a survey of the Silver Lake watershed, a steep slope vulnerability survey and assisting with two chloride grants.

E. The fourth Smart Salting for Property Managers class is already full, probably because of last year's conditions. Another Parking Lots and Sidewalks class is coming up in September with more science information.

F. Legislation to provide better protection against lawsuits if you've been trained in smart salting didn't pass again.

G. Matt wondered if anyone has spent time figuring cost of climate change. Anne suggested the U of M Professor Jay Coggins does a presentation called "The Favorable Economics of Solving Climate Change" which you can listen to here: http://www.stluke.mn/whatwereupto. Just scroll down six or seven events. The link for contacting Jay Coggins for a possible presentation to the Watershed is here:

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https://www.apec.umn.edu/people/jay-coggins. If anyone has other interesting links, send them to Michelle.

H. There is a lot of misunderstanding of creek banks. Without realizing the harm, people often dump leaves and grass from their yards onto the bands only to smother the rooted vegetation causing erosion vulnerability. Having information available would be helpful.

I. Adopt-a-Dock program – the first zebra mussels are showing up on Lake Riley. So far only new volunteers owners have found zebra mussels. This information helps us know how many monitors we need. There are no good solutions to zebra mussels. The best we can do is to try to keep them from spreading to another lake.

J. A letter has gone out to lake service providers on the need to be certified with the DNR.

K. Michelle handed out a Watershed Awareness sheet. We are asked to review the information and make suggestions.

L. The Cost Share committee will meet tomorrow to review applications from one association and 6 residences. This has been the most active applicant year.

M. The anniversary bicycle ride will be at the end of September. This will close out the anniversary events.

N. School outreach has ramped up with 6 classes already signed up. If you would like to volunteer, let Michelle know.

III. Commission Discussion

A. **Board Meeting – August 7, 2019:** Lori reported on the Board's discussion of resolutions that MAWD will lobby for. One is to limit wake surfing and the other is to ban the use of herbicides and pesticides on residential property. The District is also working on Healthy Living on a Healthy Shoreline with Fred Rozumalski of Barr Engineering. Lori will be out of the country for the next Board meeting, so Sharon will cover it.

B. **Speakers Bureau Presentations**: Three presentations are ready to go. Michelle demonstrated how someone would request a speaker from the website and showed us kits ad tools that can be checked out from the website. We suggested we might want to add recommended age levels. Example audiences will be added. The presentations are available on a thumb drive in PowerPoint, Keynote, and PDF versions and include speaker's notes, but we are encouraged to develop our own style. The District has a projector to use, but we would need to use our own computer (or Michelle will see if there is an old one to use). Lori quickly ran through each presentation which were well done and well received. All requests should go through the website so we can track them in a database. It is recommended that presenters shadow the presentation first. Michelle will give a call out initially to presenters and then to the rest of us as shadowers. Any events involving kids will need background checks. Go to District office to pick up thumb drive, packet, summary of where you're going, printed out notes and eval sheets. Signup sheet was passed around.

C. **Website usability exercises**: Michelle set up some scenarios and sent us the link. We each took a scenario and tested them on our own device and then provided input. Michelle asked for suggestions for a smoother experience. We are invited to play around with more scenarios if we have time before the next board meeting.

IV. Subcommittee Reports:

A. Lakes and Streams: Denny has found his drainage solution needs more work.

B. Stormwater: Sharon reported on the receipt of a grant for 2 clean up kits. 9 CAC members will test them on September 17 from 5:30 to 7:30 at Round Lake. We will meet at the beach. Rain date is September 23. Michelle suggested including a list of kit contents and contact info to be laminated and put in kit. Items have already been ordered. Chanhassen leaf cleanup has been advertised in the Chanhassen Connection.

V. Next Meeting

A. Learning presentation: Michelle will present Smart Salting for Churches.

B. Samir suggested having a discussion on the State of the CAC: What's working-What's not

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C. MAWD Conference is Dec. 4-6. Let Michelle know if you would like to go by the end of October. The District will pay for it. Preference given to those who haven't attended before. You will share what you learn with the CAC..

VI Upcoming Events.

A. RPBCWD Birthday Celebration – Wednesday, August 28, 2019, 6:00 – 8:00 pm, Riley Jacques Barn, 9180 Riley Lake Road, Eden Prairie, MN 55347
B. Board of Managers meeting September 4, 7:00 pm, 18681 Lake Drive East
C. RPBCWD CAC meeting September 16 at 6:00 pm, 18681 Lake Drive East
D. CAC Volunteer Clean-Up - Tuesday, September 17 - Round Lake - 5:30-7:30

VII. Adjourn CAC meeting: Jan moved and Barry seconded a motion to adjourn, Motion carried. Meeting adjourned at 8:49 pm.

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RPBCWD August Staff Report

Administration		Staff update	Partners
Accounting and Audit	Coordinate with Accountant for the development of financial reports. Coordinate with the Auditor. Continue to work with the Treasurer to maximize on fund investments.	Staff continues to work with Accounting and has notified Auditors of application status	
Annual Report	Compile, finalize and submit an annual report to agencies	**Task Completed.**	
Internal Policies	Work with Governance Manual and Personnel Committees to review bylaws and manuals as necessary	The Governance Committee did not meet in August.	
Advisory Committees	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. Facilitate recruitment of CAC members for 2019.	*The CAC met for their regular monthly meeting August 19. Draft CAC minutes are included in the packet.* *The TAC will meet on September 11, 2019*	
Membership		MAWD resolutions were submitted. PRWD is also looking at submitting a wake board resolutions. BSWD adamantly is against the pesticide resolution.	
District-Wide			
Regulatory Program	Review regulatory program to maximize efficiency.	2 permit applications received. 1 permit has been issued administratively. 5 Applications are currently under review.	

	Engage Technical Advisory Committee and Citizen Advisory Committee on possible rule changes. Implement regulatory program.	Duck Lake Permit Regulation. An updated draft of the model was completed. This information will be used to work with the DNR and Eden Prairie to address existing conditions versus approved conditions. Given the significant implications of some of the rule modifications, staff is requesting that a work session be held the third week of August to discuss the rule revisions with the release being authorized at the September meeting.	
Aquatic Invasive Species	Review AIS monitoring program Develop and implement Rapid Response Plan as appropriate Coordinate with LGUs and keep stakeholders aware of AIS management activities. Manage and maintain the aeration system on Rice Marsh Lake as per the Riley Chain of Lakes Carp Management Plan. Review AIS inspection program. Keep abreast in technology and research in AIS. 2019 zebra mussel veliger testing.	No new updates.	City of Chanhassen City of Eden Prairie University of Minnesota MN DNR Carver County
Cost-Share	Review program to determine efficiencies and needs. Recommend modification as necessary. Review applications and recommend implementation.	*The Stewardship Grant Review committee met August 20th to review 6 residential grant applications and one homeowner association grant application. Five of the residential grants were recommended for funding; one required significant additional detail/possible adjustments*	Carver County Soil and Water Conservation District

		and staff will work with the homeowner on these and resubmission. Additionally, a previously reviewed application for two rain gardens that required additional information and follow-up was approved for funding. *The Homeowner Association grant request is for over $10,000 and accordingly is being brought to the board of managers for consideration with a committee recommendation. Details can be found in the board packet.*	
Data Collection	Continue Data Collection at permanent sites. Identify monitoring sites to assess future project sites.	Staff completed two creek monitoring and Two lake monitoring sampling events. Assisted Chanhassen with CAMP program on Lake Susan. Auto sampling units on upper Riley Creek under Powers and upper Bluff Creek under Galpin sampled multiple times this month. Staff will assess the pollutant loads and evaluate if future creek restoration is needed. WOMP stations: Continued bi-weekly sampling of the station. All EnviroDIY stations for the pond project were deployed and running in August. Staff conducted multiple pond sampling events. Spent lime column testing-continuous water pumping through the media and the use of plaster sand will be tested this month. Lake level sensors have been checked this month and have been working well.	Metropolitan Council City of Eden Prairie University of MN City of Chanhassen

		9-mile Creek-Normandale fish surveys complete. Regular carp monitoring was conducted this month.	
District Hydrology and Hydraulics Model	Coordinate maintenance of Hydrology and Hydraulics Model. Coordinate model update with LGUs if additional information is collected. Partner and implement with the City of Bloomington on Flood Evaluation and Water Quality Feasibility.	TAC meeting scheduled for September 11th.	City of Bloomington
Education and Outreach	Implement Education & Outreach Plan, review at year end. Manage partnership activities with other organizations. Coordinate Public Engagement with District projects.	*The District hosted a Project WET (Water Education for Teachers) training in collaboration with Nine Mile Creek Watershed District. Local educators learned about activities and strategies for bringing water education into the classroom and other settings.* *The District held the third event in a series of shoreline maintenance restoration workshop/ volunteer events on August 14th at the Timber Lakes Homeowner's Association restoration project.* *Staff Swope and an intern led classes on macroinvertebrates and water for Minnetonka Explorers Club students from Scenic Heights, Groveland, and Exelsior elementary schools. Staff worked with more than 160 pre-K and Kindergarden aged students on August 15th and 16th.*	Project WET: Nine Mile Creek Watershed District, MN DNR Shoreline Workshop: Timber Lakes Homeowners Association, Natural Shores Technologies Smart Salting Courses: MPCA (funding), Fortin Consulting Shoreline Workshop: Timber Lakes Homeowners Association, Natural Shores Technologies

		The District hosted a Smart Salting for Property Managers training with Fortin Consulting on August 21st. *Master Water Stewards: the District is continuing to recruit for new stewards until applications close on September 20th.* *Adopt-a-dock volunteers checked their plates in early August. Lake Riley is the only lake with mussel sightings.* *Applications for Educator and Action grants continue to be received, reviewed, recommended, and processed.* *Community members continue to sign up to adopt storm drains and keep them clear of leaves, dirt, and other debris through the Adopt-a-drain.org partnership.*	Master Water Stewards: Freshwater Society Adopt a Drain: Nine Mile Creek Watershed District, City of Eden Prairie, City of Bloomington, City of Minnetonka, Hamline University.
Groundwater Conservation	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)	No new update.	TBD
Lake Vegetation Management	Work with the University of Minnesota or Aquatic Plant Biologist, Cities of Chanhassen and Eden Prairie, lake association, and residents as well as the Minnesota Department of Natural Resources on potential treatment. Implement herbicide treatment as needed.	No new updates.	City of Eden Prairie City of Chanhassen University of Minnesota MNDNR

	Secure DNR permits and contract with herbicide applicator. Lakes the District is monitoring for treatment include: Lake Susan, Lake Riley, Lotus Lake, Mitchell Lake, Red Rock Lake and Staring Lake. Work with Three Rivers Park District for Hyland Lake		
Opportunity Projects	Assess potential projects as they are presented to the District	*The draft plan amendment was released for public comment, and a public hearing will be held Wednesday, September 4th.* *Staff presented the project to school leadership on August 15th. They were interested in the project and pursuing the next steps in exploring the partnership.* *Staff continue to pursue funding opportunities.*	St Hubert Catholic Community Carver County Soil and Water Conservation District
Total Maximum Daily Load	Continue working with Minnesota Pollution Control Agency on the Watershed Restoration And Protection Strategies (WRAPS). Engage the Technical Advisory Committee.	No Updates	MPCA
Repair and Maintenance Grant	Develop and formalize grant program.	No Updates	
University of Minnesota	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.	No new updates	Stormwater ponds partners: Bloomington, Chanhassen, Eden Prairie, Minnetonka and Shorewood Plant Management:

			Chanhassen Eden Prairie
Watershed 50 year Anniversary	Come explore with us! Finalize anniversary program for 2019. Implement anniversary events.	*The District hosted a 50th Anniversary Celebration on August 28th, 6-8pm at the Riley Jaques Barn at Lake Riley. Nearly 100 community members attended, including past managers, city and other government representatives, volunteers and local residents.* *The District will host Cycle the Creek: 50th Anniversary Edition on Saturday, September 28th. Participants can bike 50 miles throughout the district, or 8 miles along bluff creek.*	
Watershed Plan	Review and identify needs for amendments.	St Hubert Plan Amendment was distributed for agencies to review. We have received two comments at this time. "Sounds like a great project, let me know if you go forward as I would love to watch it get built." City of Eden Prairie "It would be really neat to see some sort of educational aspect from this too, like a cistern that collects water from the roof that could be used for irrigation or something that's really visible to kids. Looks like several good projects in the mix!" MN DNR	
Wetland Conservation Act (WCA)	Administer WCA within the Cities of Shorewood and Deephaven. Represent the District on Technical Evaluation Panel throughout the District	No WCA application were received forDeephaven. No WCA applications have been received in Shorewood.	City of Shorewood City of Deephaven City of Chanhassen City of Eden Prairie MCWD

		A notice of decision was received from the City of Chanhassen for work on the MCES Interceptor Line located east of Galpin Blvd and north of TH5. Chanahssen is the LGU. The impacts are temporary in nature. The District provided comments seeking to assure the transience of the impacts and minimize their extents.	BWSR DNR ACOE
Wetland Management	Identify potential restoration/rehabilitate wetlands and wetland requiring protection.	Staff notified residents in the southwest portion of the district, and has begun assessing wetlands in this area. Field work will continue until plant identification no longer feasible. That portion of the Watershed District concurrent with Chanhassen will be finished by the end of this year. Remote sensing and other work will continue throughout the winter . Four residents contacted the District with questions. Staff Jeffery has addressed their comments. He will follow up with one resident when the assessment in that area occurs.	City of Chanhassen MNDNR
Hennepin County Chloride Initiative	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	Interviews with private applicators is complete. Staff is working on releasing out survey.	

	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.		
Lower Minnesota Chloride Cost-Share Program	The Lower Minnesota River Watersheds are coming together to offer cost-share grants.	No new updates	
Bluff Creek One Water			
Chanhassen High School Re-use	Continue to work with all partners. Complete site restoration and start system. Finalize and implement E and O for project. Monitor Project.	No update	ISD 212 City of Chanhassen Metropolitan Council
Bluff Creek Tributary Restoration	Implement and finalize restoration. Monitor Project.	USACE has issued their permit. Work can commence once site conditions are appropriate.	City of Chanhassen
Wetland Restoration at 101	Remove 3 properties from flood zone, restore a minimum 7 acres and as many as 16 acres of wetlands, connect public with resource, reduce volume, rate, pollution loads to Bluff Creek	The District has acquired both 730 and 750 Pioneer Trail. The home purchased by Chanhassen (770 Pioneer Trail) and 750 Pioneer Trail are both slated to be moved later this fall.	City of Chanhassen MN DNR
Riley Creek One Water			
Lake Riley Alum	Continue to monitor the waters.	No updates	
Lake Susan Improvement Phase 2	Complete final site stabilization and spring start up. Finalize and implement E and O for project.	The system is operational. Plugs were replaced and are establishing.	City of Chanhassen Clean Water Legacy Amendment

	Monitor Project.		
Lower Riley Creek Stabilization	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.	Project is moving forward. Tentative start after start of October. Postcards are being to residents with update of the project.	City of Eden Prairie Lower Minnesota Watershed District
Rice Marsh Lake Alum Treatment	Monitor Project.	No updates.	City of Eden Prairie City of Chanhassen
Rice Marsh Lake Watershed Load Project 1	Conduct feasibility. Develop cooperative agreement with City of Chanhassen	Working with new staff from the City of Chanhassen. Project delayed due to staff turnover.	City of Chanhassen
Upper Riley Creek	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 Start design	Discussion of this project will be on hold till the new water resources coordinator is hired.	City of Chanhassen
Purgatory Creek One Water			
Berm		Staff Jeffery met with the city and there are still some questions that remain unanswered. The District will be getting a surveyor to determine if the sheet pile is subsiding.	
Duck Lake Water Quality Project	Work with the City to implement neighborhood BMP. Identify neighborhood BMP to help improve water resources to Duck Lake. Implement neighborhood BMPs.	*The rain gardens designs are near completion. Final coordination with the homeowners is being conducted. Due to the cold, wet spring, contractor schedules were compressed this year and staff have heard from partners that project quotes*	City of Eden Prairie

		have been high. With this in mind, quotes will be sought in winter with the intent of a spring installation.	
Hyland Lake Internal Load control	Implement Hyland Lake Alum application.	Project is complete.	Three Rivers Park District City of Bloomington
Lotus Lake – Internal Load Control	Monitor treatment and plant populations.	No updates.	
Scenic Heights	Continue implementing restoration effort. Work with the City of Minnetonka and Minnetonka School District on Public Engagement for project as well as signage.	*Growing season management continues.*	Minnetonka Public School District City of Minnetonka Hennepin County
Silver Lake Restoration	Order project Design Project Work with the City of Chanhassen for Design, cooperative agreement and implementation	Ordering of the project is included in the board packet.	City of Chanhassen
Professional Development			
Administrator Bleser	Administrator Bleser will be attending the Governance Workshop.		
Grey to Green Conference	Minnesota and the Greater MSP Region are already a global center for water system technologies and there are multiple organizations and programs that support the use of green infrastructure in projects of all types and sizes. Grey to Green: Twin Cities is a unique opportunity to cross-pollinate		

	regional work on green infrastructure in Minnesota with the cutting edge work being done in Canada and in other U.S. cities. Several staff members will be attending the conference to learn more about the use of green infrastructure and trainings the conference is offering. Administrator Bleser and will be attending the “Valueing the benefits of green infrastructure”. Staff Jordan will be attending “Net zero water for building and sites” training

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Memorandum

To: Riley-Purgatory-Bluff Creek Watershed District Board of Managers and District Administrator
From: Barr Engineering Co.
Subject: Engineer's Report Summarizing August 2019 Activities for September 4, 2019, Board Meeting
Date: August 29, 2019

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 August 2019.

General Services

a. Met with Administrator Bleser, Watershed Planning Manager Jeffery, and Project Manager Jordan on August 5th about the capital improvement program and status of ongoing task orders. Discussion included the status of coordination with St. Hubert's opportunity project, Chanhassen for the Rice Marsh Lake RM12 feasibility assessment, Bluff Creek Tributary restoration project USACE permit still under review, 101 Wetland restoration property purchase, Lake Susan Park Pond operations and vegetation, Purgatory Creek Park berm repair discussion with Eden Prairie, Silver Lake subwatershed project, the Duck Lake subwatershed project basin designs and homeowner coordination, and Duck Lake outlet .

b. Met with Administrator Bleser, Project Manager Jordan, and city of Eden Prairie on August 5th to review the Duck Lake subwatershed site surveys, infiltration tests, 50% designs, curb inlet details, project timeline and city permitting. Because of the current construction environment, Administrator Bleser and City concurred that the request for quotes for construction of the project should be delayed until early 2020 in hopes of improving number of quotes and quote pricing.

c. Met with Watershed Planning Manager Jeffery and Counsel Welsh after August 13th to review rule revisions and discuss items to include in potential guidance documents and prepare for rules workshop.

d. Reviewed rule revisions in response to the board workshop and commented on support memo. Participated in an August 26th conference call to finalize draft rule revisions and support memo.

e. Participated in the August 7th regular Board of Managers meeting.

f. Prepared for Participated in the August 19th Rules workshop.

g. Prepared Engineer's Report for engineering services performed during August 2019.

h. Miscellaneous discussions and coordination with Administrator Bleser about Bluff Creek restoration permitting and private property access, spent lime system modifications, 2020 budgeting, Duck Lake subwatershed, Bluff Creek restoration, and Lower Riley restoration projects as well as upcoming Board meeting agenda.

Permitting Program

a. *Permit 2017-031 Lions Tap*: The applicant is proposing parking lot expansions. Met with the permit applicant and Watershed Planning Coordinator Jeffery to discuss the project modifications, status of the conditionally approved permit, process to reapply for the project, and permitting requirements.

b. *Permit 2018-043 Control Concepts:* The modified project proposes the construction of an approximately 38,000 SF Office and Warehouse facility at 8077 Century Boulevard in Chanhassen. Board conditionally approved at modification at the June 5, 2019 meeting. The project triggers the RPBCWD Erosion Control, Wetland and Creek Buffers, and Stormwater Management Rules. The city required that their proposed access road be realigned slightly which resulted in a slight increase in impervious surface. The applicant modified the size of the proposed underground infiltration system to account for the added imperious area. Reviewed the modification submittal received on August 8th and provided review comments to Watershed Planning Coordinator Jeffery. The project remains compliant with all RPBCWD criteria and the change was not substantive. Reviewed the draft and final maintenance declaration.

c. *Permit 2019-024: Conifer Heights:* The project includes a 6-lot single-family development located at 5615 Conifer Trail and 5616 Mahoney Ave Minnetonka. The proposed development will replat the two parcels to provide for a new public roadway extension, six new single-family lots, a public stormwater management basin, and new sanitary, water, and storm utilities. The project also includes an infiltration basin for abstraction of runoff, water quality treatment and rate control for runoff prior to discharging offsite. The project triggers RPBCWD Rules C, D, and J. Received and reviewed revised submittal on August 20th . . Drafted permit report for consideration at the September 4th board of manager's meeting.

d. *Permit* 2019-026: *Ridgewood Church Parking Lot:* The project includes the construction of a new building canopy and drop-off area, and the reconfiguration/reconstruction of a parking lot at Ridgewood Church at 4420 County Road 101, Minnetonka. Notified applicant of Board's conditional approval at the August 7th meeting. Reviewed maintenance declaration and provided feedback for revisions

e. *Permit 2019-028: Lifetime Parking Lot Chanhassen:* The applicant proposed the construction of a 69,850 square foot parking lot expansion at their site located at 2932 and 2970 Water Tower Place located in Chanhassen, Minnesota. The project also proposes to add 16,438 square feet of impervious for additional parking at 2900, 2901, & 2902 Corporate Place. An underground filtration/detention system with elevated draintile to promote infiltration will provide storm water quantity and quality control. The project triggers RPBCWD Rules C and J. Review the July 30th submittal which was incomplete. Met with applicant's engineer on August 20th to discuss restrict site criteria, site constraints, and needed documentation. Reviewed two revised submittals (August 21 and 26) and drafted permit report for consideration at the September 4th board of manager's meeting.

f. *Permit* 2019-032: West 79th St. *Chanhassen Parking Lot:* The project includes the construction of a new parking lot along the south side of West 79th Street in Chanhassen. The proposed parking lot will serve as overflow parking for the restaurant in the area. The project triggers RPBCWD Rules B, C, and J. The submittal materials received on July 23rd

were reviewed and considered incomplete. We provided the applicant with comments about insufficiencies and we responded to additional applicant questions. Three additional submittals were reviewed (8/21, 8/22, 8/27 and 8/28). Several conversations with the applicant's engineer about restricted sites, infiltration testing, site layout, modeling approaches, and BMP designs. The application was incomplete until the August 22 submittal. Drafted permit report for consideration at the September 4th board of manager's meeting.

g. Met with Eden Prairie School District and city of Eden Prairie on August 12th to discuss RPBCWD permitting requirements for upcoming site development at the Central Middle School site.

h. Miscellaneous conversations with Permit Manager Jeffery about technical questions on permit requirements for potential development and redevelopment projects.

Data Management/Sampling/Equipment Assistance

a. Prepared, uploaded, and verified 75 RMB laboratory (RMB) reports.

b. Communicated with RPBCWD staff about new sampling locations and standardizing location names.

c. Reviewed field data collected with the mobile application.

d. Deployed upgrade to alert Barr staff when RPBCWD submits field data via the mobile application.

Education and Outreach

a. Assisted District staff with 50th Anniversary board development; including review of historic files for content, text reviews, printing and mount boards.

Task Order 6: WOMP Station Monitoring

Purgatory Creek Monitoring Station at Pioneer Trail

a. Download and review data.

b. Storm event sampling – collect, prep, and deliver samples to MCES lab.

Purgatory Creek Monitoring Station at Valley View Rd

a. Download and review data.

b. Storm event sampling – collect, prep, and deliver samples to the MCES lab

c. Routine maintenance – change out desiccant and clean out mouse traps/replace with new ones.

Task Order 13b: Lake Susan Watershed Treatment and Stormwater Reuse Enhancements Design and Construction Administration

a. Peterson Companies reinstalled prairie cord grass plugs around the iron-enhanced sand filter in early-August without providing prior notification As shown in the photos below, overall

vegetation is establishing well and the new plugs appears to be living but do not exhibit vigorous growth. Barr will continue to monitor the plug establishment.



b. The revised punch list is as follows:

    1. (Peterson) Answer follow-up questions about the information that the program is currently recording and the current set points (times, runtimes, flow rates, levels, all on/off levels, etc.).

Task Order 14b: Lower Riley Creek Final Design

a. Worked with the contractor to get insurance and bond submittals completed.

b. Worked on project permitting for the city of Eden Prairie permit

Task Order 21B: Bluff Creek Stabilization Project

a. Continued communications with the USACE regarding the cultural and historical report review and USACE permit. Received the USACE permit on August 22, 2019.

b. Continued communications with the contractor regarding performance bond, payment bond, certificate of insurance, and anticipated schedule.

Task Order 25: Duck Lake Water Quality Improvement Project

a. Prepared grading and planting plans for five prospective rainwater garden sites.

b. Coordinated and attended an August 5th meeting with Administrator Bleser, Project Manager Jordan, and Eden Prairie City Engineer Rod Rue and staff engineer Patrick Sejkora to review grading plans and inlet design details for five rainwater garden sites. Eden Prairie city staff engineers were generally accepting of the plans and provided constructive feedback for the inlet design.

c. Developed advanced inlet design details, incorporating feedback from Eden Prairie city staff. Provided design plans to city staff for review and received their acknowledgement that previous city staff concerns had been met.

d. Staff accompanied Project Manager Jordan on visits to two prospective sites to meet with the homeowner and discuss rainwater garden design issues. One prospective site was dropped from the list due to homeowner concerns about conflicts with existing landscaping.

e. Developed work scope and specification documents to be used for a request for proposals for construction of four rainwater garden.

f. Worked with Administrator Bleser and Project Manager Jordan to develop a schedule for distributing the request for quotes. Because recent bids for fall construction of similar projects have been higher than anticipated, decided to delay the request for quotes until November 2019, for construction in spring 2020.

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

a. Staff met with Administrator Bleser to review items to discuss with the TAC including inundation figures and potential flood-prone areas.

b. Staff prepared a brief narrative to the TAC summarizing the evaluation and discussion items. The TAC meeting to receive feedback on what to consider when prioritizing flood-risk mitigation projects is scheduled for September 11th.

c. Following input from the TAC staff will develop a prioritized list of flood-risk mitigation areas within the portion of the Purgatory Creek watershed in Bloomington. The methodology will be developed such that it can be applied to other portions of the District in the future.

Task Order 27: Duck Lake Outlet Hydrologic and Hydraulic Model

a. Met with the Watershed Planning Manager, MN DNR Area hydrologist, city of Eden Prairie, and Bolton and Menk on August 21st to discuss the long-term (70 yrs.) continuous simulation results and the potential change in normal water levels with an outlet elevation lower than the DNR's permitted elevation. The modeling shows at the permitted outlet elevation the water levels tend to drawdown slightly due to seepage and evaporation. Modeling suggests that with the permitted outlet elevation the water level would be at elevation 914.1 feet, only 0.3 feet below the permitted control elevation. The DNR also mentioned that the data suggest there is a minimal impact of the rare, infrequent events (e.g., the 100-year event) but a significant impact on the normal levels. The DNR indicated any change in the outlet from what DNR permitted in 1969 would require a majority of riparian owner approval and public hearings. City plans to use the information provided and input from the meeting to strategize a path forward for the lake outlet and the Duck Lake Road project prior to the group reconvening.

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BARR

To: RPBCWD Board of Managers
From: Dave Melmer
Subject: August 13 and 14, 2019—Erosion Inspection
Date: August 29, 2019
Project: 23/27-0053.14 PRMT 9016

Barr staff has inspected construction sites in the Riley Purgatory Bluff Creek Watershed District for conformance to erosion and sediment control policies. Listed below are construction projects and the improvement needed for effective erosion control. The sites were inspected from August 13th and 14th, 2019.

Site Inspections

2015-010	**Children's Learning Adventure - Private - Commercial/Industrial** **Northwest Corner of Highway 5 and Galpin Avenue** **Chanhassen, Minnesota 55317** No change since last monthly inspection. Vegetation is established - sparse in some areas.	**2019-08-14**
2015-016	**Blossom Hill - Private - Residential** **10841 Blossom Rd Eden Prairie, Minnesota 55347** House construction at last site in development completed. All lots have been sold and have houses on them. Temporary BMP's can be removed. Landscaping at last home site is complete. Site is stable. Site representative was notified about removal of temporary BMP's.	**2019-08-13**
2015-036	**Saville West Subdivision - Private - Residential** **5325 County Road 101 Minnetonka, Minnesota 55345** No change since last inspection. CA still open. Construction complete at 5320 Spring Ln. house site. Silt fence perimeter control is down on NW side near pond. Landscaping not complete -lot has been graded for sod or seeding. Silt fence installed on southwest and west side of development. Additional lot has silt fence perimeter control installed- no activity at this lot. Lots to south have been brushed/cleared.	**2019-08-14**
2015-050	**Arbor Glen Chanhassen - Private - Residential** **9170 GREAT PLAINS BLVD Chanhassen, Minnesota 55317** No change since last monthly inspection. Perimeter control (silt fence). Roadway and detention pond installed. All slopes have been stabilized and covered. Rock entrances refreshed-installed regularly. Tracking to street/sediment at gutter--is cleaned up regularly. Catch basin protection installed. Bio-rolls installed where needed. Landscaping at some sites underway. BMP's good.	**2019-08-13**

2015-055	**Hampton Inn Eden Prairie - Private - Commercial/Industrial** **11825 Technology Drive Eden Prairie, Minnesota 55344** No change since last monthly inspection. Site construction continues. BMP's in place.	**2019-08-13**
2016-017	**SWLRT - Government - Other** **Varies Eden Prairie, Minnesota 55344** No change since last monthly inspection. Construction has begun along 95% of route. BMP's look good thru out entire site/route to date.	**2019-08-13**
2016-020	**Prairie View Enclave - Private - Commercial/Industrial** **12701 Pioneer Trail Eden Prairie, Minnesota 55347** No activity observed to date.	**2019-08-13**
2016-026	**Foxwood Development - Private - Residential** **9150 and 9250 Great Plains Blvd Chanhassen, Minnesota 55317** Minor tracking to street observed-- site is swept regularly. Multiple house construction has continues-BMP's look good- silt fences and rock entrances installed/ good perimeter control. Catch basin protection re-installed. Silt fences have been installed on unsold lots. Some bare areas recently spray-tac'd.	**2019-08-13**
2016-032	**CSAH 61 Improvements - Government - Linear** **N/A Eden Prairie, Minnesota 55347** No change since last monthly inspection. Construction continues. Slopes are covered with matting or have been spray tac'd. Area near creek crossing is completed.-- BMP's look good.	**2019-08-13**
2016-033	**Anderson Lakes-Purgatory Trail - Government - Other** **Anderson Lakes PKWY and Purgatory Creek Eden Prairie, Minnesota 55344** No construction observed to date.	**2019-08-13**
2016-041	**Chanhassen West Water Treatment Plant - Government - Other** **2070 Lake Harrison Road Chanhassen, Minnesota 55317** No change since last monthly inspection. Silt fences installed on site. Construction complete. Landscaping and seeding complete-- all soil covered with matting. BMP's look good. Entrance installed and paved--roadway complete. Vegetation is growing--some bare areas--site is stable. Playground installation on north side complete. South slope has sparse vegetation growing-- matting in place to control erosion. South slope vegetation is filling in.	**2019-08-14**

2016-042	**18663 St. Mellion Place--Eden Prairie (Bear Path)** BMP's adequate. Silt fences removed-biorolls installed. Sod has been installed on west and southwest side of site. 30% still needs landscaping completed. Driveway installation underway. Minor tracking to street.	**2019-08-13**
2017-001	**Kopesky 2nd Addition - Private - Residential** **18340 82nd St Eden Prairie, Minnesota 55347** Site grading complete-house construction completed at three sites. Fourth house site construction is underway. Perimeter control installed. BMP's are good. Infiltration basins completed. Basin protection is good.	**2019-08-13**
2017-006	**6687 Horseshoe Curve Chanhassen** No activity observed to date.	**2019-08-14**
2017-007	**Cedarcrest Stables - Private - Residential** **16870 CEDARCREST DR Eden Prairie, Minnesota 55347** No activity observed to date.	**2019-08-13**
2017-023	**Eden Prairie Assembly of God - Private - Commercial/Industrial** **16591 Duck Lake Trail Eden Prairie, Minnesota 55346** Construction complete. Site vegetation is established. Site is stable. All temporary BMP's have been removed with exception of bio-rolls near entrance. Site representative was notified about removing bio-rolls.	**2019-08-14**
2017-024	**Prairie Bluffs Senior Living - Private - Residential** **10280 Hennepin Town Rd Eden Prairie, Minnesota 55347** Construction continues. CA remains opened for lack of bio-rolls at back of curb and street tracking --sediment build up at curb. Site representative was notified in May /July and is aware of situations. CA's will remain open. Site grading underway on south side of site. Some landscaping underway on north end of project site. Clean up underway for sediment at curb. Silt fence at wetland silt needs maintenance again. Site personnel is aware of conditions.	**2019-08-13**
2017-026	**6135 Ridge Road - Private - Residential** **Shorewood, Minnesota 55331** No change since last monthly inspection. Rock driveway good. Silt fence maintenance has been completed-down in one section--slope is stable in this area. Bare soils on upper half of slope have been covered with straw matting-vegetation is growing and filling in. Will have to inspect for vegetation establishment in months ahead. Southwest corner has rock retaining landscaping completed.	**2019-08-14**

2017-029	**Tweet Pediatric Dentistry - Private - Commercial/Industrial** **7845 Century Blvd. Chanhassen, Minnesota 55317** No change since last month's inspection. Construction complete . Temporary BMP's are installed. Catch basin protection installed in this area. Infiltration areas installed. Parking lot grading and curb/gutter installation complete. Infiltration pond has bio-logs staked in to control silt. Vegetation is established and site is stable. Site representative was notified (July) about catch basin protection and bio-roll removal.	**2019-08-14**
2017-030	**Elevate - Private - Commercial/Industrial** **12900 Technology Drive Eden Prairie, Minnesota 55344** No change since last monthly inspection. Construction continues. Perimeter control installed. Catch basin protection re-installed. Some catch basins have bladders installed and drainage will be directed to other basins. BMP's look good. Site is well maintained.	**2019-08-13**
2017-032	**11193 Bluestem Lane - Government - Other** **11193 Bluestem Lane Eden Prairie, Minnesota 55347** No change since last monthly inspection. Construction complete. All exposed soils on slope are covered and stabilized--vegetation growing--areas where seed did not sprout are observed-- matting is keeping soils stable. Bio-logs installed at toe of slope. Site is in good condition. Bio-logs can be removed. New Eden Prairie site representative contacted concerning bare areas-may need to be reseeded/garlic mustard has started to invade area. Will contact site representative in September if logs not removed by then.	**2019-08-13**
2017-037	**The Venue - Private - Commercial/Industrial** **525 W 78th St Chanhassen, Minnesota 55317** Exterior construction wrapping up. Parking lot installation underway. BMP's good.	**2019-08-14**
2017-038	**West Park - Private - Residential** **760& 781 Lake Susan Drive 8601 Great Plains Blvd Chanhassen, Minnesota 55317** Construction continues. Street installation on north and south side completed. Rock entrance installed on south side and to individual house sites continues. Perimeter control installed. Catch basin protection installed. BMP's look good. Additional silt fences have been installed. Bare soils that are not being worked have been stabilized. Landscaping at some sites underway or completed. Entire site has recently been swept. BMP's look good.	**2019-08-13**
2017-039	**Mission Hill Senior Living - Private - Residential** **8600 Grate Plains Boulevard Chanhassen, Minnesota 55317** Construction continues. BMP's installed look good. Site perimeter control installed. Catch basin protection installed. South swale has been stabilized. Areas of final grading underway. Additional BMP's installed.	**2019-08-13**

2017-047	**Fawn Hill - Private - Residential** **7240 Galpin Road Chanhassen, Minnesota 55331** Open CA(s): Two stock piles at house sites that need protection/ rock entrances need refreshing. Site representative was notified. Deadline: 8/14/2019 Construction continues at additional house sites. Perimeter silt fences installed and additional silt fences installed where needed. BMP's to date look good with exception of two stock piles that need protection / rock entrances need refreshing. Site representative was notified.	**2019-08-14**
2017-052	**Old Excelsior Senior Living - Private - Residential** **17705 Hutchins Drive Minnetonka, Minnesota 55345** Construction complete. Landscaping complete. Site is stable. All temporary BMP's have been removed. This will be last field inspection for this permit.	**2019-08-14**
2017-069	**Scheels Redevelopment - Private - Commercial/Industrial** **8301 Flying Cloud Dr. Eden Prairie, Minnesota 55344** No change since last monthly inspection. BMP's installed. Construction continues. Parking lot to west is complete. BMP's look good to date.	**2019-08-13**
2017-072	**O'Reilly Auto Parts Eden Prairie - Private - Commercial/Industrial** **8868 AZTEC DRIVE Eden Prairie, Minnesota 55347** Construction continues. Perimeter control installed. Site has been cleared. Site rock entrance installed. Inlet protection installed. BMP's good. With exception of tracking and runoff control on road side of construction site. Corrective Action addressed and closed.	**2019-08-13**
2017-073	**Preserve Village - Private - Residential** **9625 Anderson Lakes Pkwy Eden Prairie, Minnesota 55344** No change since last month's inspection. Construction of building complete. Landscaping is complete. Silt fence installed at toe of infiltration basin. Catch basin protection still installed. Vegetation growing.	**2019-08-13**
2018-001	**Panera - Private - Commercial/Industrial** **531 W. 79th Street Chanhassen, Minnesota 55317** Construction complete. BMP's installed in areas where landscaping is not complete. Filtration basin installed-- final landscaping needs to be completed in some areas. Slopes on pond need stabilization. No change on pond slopes. Bio-rolls in place onsite.	**2019-08-14**

2018-004	**903 Lake Drive Chanhassen - Government - Other** **903 Lake Drive Chanhassen, Minnesota 55317** No change since last monthly inspection. Construction completed. BMP's installed. Site is in good condition. All soils covered. Site is stable. Site representative was contacted about temporary BMP removal.	**2019-08-14**
2018-014	**Eden Prairie Road Reconstruction- Government – Linear** **Eden prairie, Minnesota 55347** Additional BMP's installed along with rock for tracking control. Construction continues on roadway. Road closed on north end. Additional silt fences installed on slope where old roadway existed. All slopes have been recently spray-tac'd or covered with matting.	**2019-08-13**
2018-016	**Avienda - Private - Commercial/Industrial** **SW corner of Powers and Lyman Boulevard Chanhassen, Minnesota 55317** No activity observed to date.	**2019-08-14**
2018-020	**9770 Sky Lane - Existing Single-Family** **9770 Sky Lane Eden prairie, Minnesota 55347** No change since last monthly inspection. Construction complete. Site grading /boulder wall installation completed. Silt fences installed and maintenance needed. Bio-rolls at street side installed on part of front side of site-minor sediment runoff to street. Final landscaping appears to underway.	**2019-08-13**
2018-021	**9810 Sky Lane - Existing Single-Family** **9810 Sky Lane Eden prairie, Minnesota 55347** Construction and landscaping completed. Site is stable. Temporary BMP's still in placed.	**2019-08-13**
2018-022	**Sunrise Park Court Improvement - Government - Other** **9401 Bloomington Ferry Road Bloomington, Minnesota 55438** Construction complete. Tennis court fencing installed. . Parking lot complete. Grading and seeding complete. Vegetation established. Site is stable. All temporary BMP's have been removed. This will be last field inspection for this permit.	**2019-08-13**
2018-025	**Magellan Pipeline UCD Dig 8 through 12** No change since last inspection. Work halted until fall-winter 2019.	**2019-08-14**
2018-027	**MAMAC - Private - Commercial/Industrial** **8189 Century Boulevard Chanhassen, Minnesota 55317**	**2019-08-14**

No change since last inspection. Construction continues. Perimeter control silt fence installed. Temporary BMP's installed. Security fence installed. BMP's are good.

2018-028 **Oak Point Elementary School Parking Lot - Government - Other** **2019-08-13**
13400 Staring Lake Parkway Eden Prairie, Minnesota 55347
No earth work to date. No BMP's installed to date.

2018-038 **Eden Prairie Senior Living - Private - Residential** **2019-08-13**
8460 Franlo Rd Eden Prairie, Minnesota 55344
Construction continues. Perimeter control installed and updated in areas. Corrective Actions addressed.

2018-039 **Emerson Site Improvements - Private - Commercial/Industrial** **2019-08-13**
12001 Technology Drive Eden Prairie, Minnesota 55344
No change since last monthly inspection. BMP's installed. Construction completed. Area near garage has been graded and seeded-vegetation is growing. Storm water detention pond installed and BMP's are good.

2018-041 **Abra Auto Body - Private - Commercial/Industrial** **2019-08-13**
13075 Pioneer Trail Eden Prairie, Minnesota 55347
No change since last monthly inspection. Construction continues. Perimeter control installed. Rock entrances installed /refreshed since last month's inspection. BMP's good.

2018-043 **Control Concepts - Private - Commercial/Industrial** **2019-08-14**
8077 Century Boulevard Chanhassen, Minnesota 55317
No activity observed to date.

2018-044 **Smith Village - Private - Residential** **2019-08-14**
16389 Glory Lane Eden Prairie, Minnesota 55344
No activity observed to date.

2018-047 **Peterson Borrow Site - Private - Commercial/Industrial** **2019-08-13**
15900 Flying Cloud Drive Eden Prairie, Minnesota 55347
No change since last monthly inspection. BMP's in place. Pit is being used. Rock ditch checks installed along with silt fences.

2018-049 **D'Alessandro Home - Existing Single-Family** **2019-08-14**
18702 Heathcote Dr Deephaven, Minnesota 55391
Construction has continues. Perimeter control installed. Bio-logs installed. Rock entrance is ok. Minor tracking to street. CA opened

	for NW corner - no runoff protection to wetland/bare soils. Site representative was notified (June)--No change on corrective action item. Photo taken. (8-14-19). Final landscaping/grading underway. Contacted Julie from Streeter and Assoc. --sent photos of sediment runoff that needs to be addressed.	
2018-050	**Eden Prairie Cemetery - Private - Commercial/Industrial** **8810 Eden Prairie Road Eden Prairie, Minnesota 55437** No change since last monthly inspection. Construction appears to be completed. Straw biorolls in place where needed. Vegetation growing.	**2019-08-13**
2018-052	**HCRRA Culvert Replacement - Government - Linear** **Hennepin County Wayzata and Deephaven, Minnesota 55401** No change since last monthly inspection. Construction complete. BMP's installed. Vegetation growth observed thru matting and filling in; some bare areas of no growth-matting is protecting bare soils. Site is stable.	**2019-08-14**
2018-053	**Roberts Residence - Existing Single-Family** **5925 Ridge Road Shorewood, Minnesota 55331** No change since last monthly inspection. Construction continues. Driveway installation underway. BMP's installed. BMP's good.	**2019-08-14**
2018-055	**Park Trail Improvement Project - Government - Other** **1700 W. 98th Street Bloomington, Minnesota 55431** Construction complete. Grading and seeding complete. BMP's in place. Vegetation established. Bio-rolls onsite have been removed. Small area of bare soil across from Oregon Ave. --could use a reseeding--trail at Sunrise Park has bare areas at both entrances--site representative was notified.	**2019-08-13**
2018-056	**Bluff Creek Restoration - Government - Other** **Liberty on Bluff Creek, Outlot B Audubon Road Chanhassen, Minnesota 55317** Work delayed until fall-winter 2019.	**2019-08-14**
2018-058	**Walker Home - Existing Single-Family** **9108 Stephens Pointe Eden prairie, Minnesota 55347** Perimeter control installed--southeast side needs immediate attention--silt fence over topping at lake side--Corrective Action opened. Still needs additional attention-see photos. (8-13-19) Rock entrance is installed-recently refreshed. Excavation and foundation complete-structure construction continues. BMP's look good to date. Catch basin protection needed downstream of driveway. CA opened. Site representative was notified -again (8-13-19) along with silt fence issue. Open CA(s): Sediment from overtopping silt fence into and thru neighbors property down to lake needs to be cleaned up. Deadline: 8/15/2019	**2019-08-13** **2019-08-15**

	Open CA(s): Soils on slope need to be covered. Deadline: 9/4/2019 Silt fence updates installed. CA closed for silt fence overtopping. CA updates see photos. Silt down from rainfall. Neighbors path to lake refresh with mulch.. CA open for slope not covered. Site representative was notified. Ryan: 651-398-3622	**2019-08-16**
2018-059	**Mason Point Landscaping - Existing Single-Family** **15363 Mason Pointe Eden Prairie, Minnesota 55347** No change since last monthly inspection. Construction continues. BMP's installed.	**2019-08-13**
2018-060	**Loichinger Residence** No change since last monthly inspection. Construction continues. Perimeter silt fence installed. Biorolls installed where needed on front side on site. Minor tracking at curb-downstream.	**2019-08-13**
2018-061	**McCoy Lake Inlet Sediment Removal - Government - Other** **Mitchell Road and Cumberland Road Eden Prairie, Minnesota 55347** No change since last monthly inspection. Access to site completed. No BMP's installed to date. No construction to date.	**2019-08-13**
2018-062	**Lower Riley Creek Stabilization Project - Government - Other** **Ridge on Riley Creek, Outlot A Eden Prairie, Minnesota 55344** Work delayed until fall-winter 2019.	**2019-08-13**
2018-063	**Lake Susan Trail Rehab 2018 - Government - Other** **903 Lake Drive East Chanhassen, Minnesota 55317** Construction complete. BMP's in place-bio-rolls. Soils covered and seeded. Vegetation is established. Site is stable. Bio-roll removal is underway.	**2019-08-14**
2018-064	**Balaen Home - Existing Single-Family** **18366 82nd St W Eden Prairie, Minnesota 55347** Construction and landscaping completed. Site is stable. All temporary BMP's have been removed. This will be last field inspection for this permit.	**2019-08-13**
2018-067	**Hennepin Co Library - Eden Prairie Branch Refurb - Government - Other** **565 Prairie Center Drive Eden Prairie, Minnesota 55344** No change since last monthly inspection. Construction continues. Perimeter controls are installed. BMP's look good to date.	**2019-08-13**

2018-068	**DriSteem Warehouse Expansion - Private - Commercial/Industrial** **14949 Technology Drive Eden Prairie, Minnesota 55344** No change since last monthly inspection. Construction complete. Parking lot paved. Grading complete. Seeding completed and growing. Catch basin protection installed . Bio-rolls removed.	**2019-08-13**
2018-071	**Minnetonka High School Lacrosse Field - Government - Other** **18301 Highway 7 Minnetonka, Minnesota 55422** Construction has continues. BMP's removed. Sod installed.	**2019-08-14**
2018-072	**Hyland Park Parking Lot Improvements - Government - Other** **10145 E Bush Lake Rd Bloomington, Minnesota 55438** No changes since last inspection. Construction continues. BMP's installed. Perimeter control good. Site control good. Upper parking lot area completed. Areas have been seeded.	**2019-08-13**
2018-073	**Preserve Boulevard - Government - Linear** **Preserve Boulevard Eden Prairie, Minnesota 55344** No change since last monthly inspection. Construction continues. BMP's good.	**2019-08-13**
2018-074	**Eden Prairie Ground Storage Reservoir - Government - Other** **Eden Prairie Road Eden Prairie, Minnesota 55344** Site clearing and earthwork has begun. Perimeter control installed. BMP's to date are good.	**2019-08-14**
2019-001	**The Park- Private - Residential** **Galpin Avenue Chanhassen, Minnesota 55317** Open CA(s): One wetland observed to be unprotected-- site representative was notified. Deadline: 8/14/2019 Brushing and tree removal underway. Perimeter silt fence installation underway.	**2019-08-14**
2019-003	**Stable Path - Private - Residential** **Eden Prairie, Minnesota 55344** Roadway and curb/gutter installed. All bare soils covered with straw. Infiltration basin installed and slopes covered. BMP's installed where needed.	**2019-08-13**
2019-007	**Beverly Hill - Private-Residential** **16540 Beverly Drive & 9800 Eden Prairie Road Eden Prairie, Minnesota 55347** Construction has begun. Perimeter controls installed. Brush/tree clearing and grading underway. Catch basin and rock entrance need to be installed.	**2019-08-13**

2019-008	**Staring Lake Pavilion Government - Other** **Eden Prairie, Minnesota 55344** No change since last monthly inspection. Construction continues. Site perimeter control installed. Rock entrance installed. BMP's are good to date.	**2019-08-13**
2019-011	**Westwind Plaza Private-Commercial** **4795 County Rd. 101 Minnetonka, Minnesota 55345** No activity observed to date.	**2019-08-14**
2019-017	**Pawnee Drive – Private - Existing Single Family** **6650 Pawnee Dr. Chanhassen, Minnesota 55317** Catch basin protection needs attention. Heavy sediment runoff from site. Some clean up attempted. Site still needs major attention to control runoff during heavy rainfall events and attention after each rainfall event. Driveway installed. Corrective Action remains open. Will attempt to contact site representative.	**2019-08-14**
2019-018	**Deerwood Drive – Private - Existing Single Family** **6657 Deerwood Dr Chanhassen, Minnesota 55317** Catch basin protection needs attention. Heavy sediment runoff from site. Some clean up attempted. Site still needs major attention to control runoff during heavy rainfall events and after each rainfall event. Corrective Action remains opened. Will attempt to contact site representative. See photos in 2019-017 Permit (Pawnee Dr.). Both sites share same drainage and contribute to runoff issues.	**2019-08-14**
2019-019	**Sheldon Place – Private- Residential** **7960 Eden Prairie Rd, Eden Prairie, Minnesota 55347** No activity observed to date.	**2019-08-14**
2019-022	**Woodcrest Place – Private- Residential** **17170 Beverly Drive, Eden Prairie, Minnesota 55318** No construction activity observed to date.	**2019-08-13**
2019-023	**Minnetonka Library – Government – Other** **17524 Excelsior Blvd. Minnetonka, Minnesota 55435** Perimeter control installed. Biorolls in place. No construction/demolition activity observed to date.	**2019-08-14**
2019-026	**Ridgewood Church Parking Lot – Private – Other** **4420 county Road 101, Minnetonka, Minnesota 55345** No activity observed to date.	**2019-08-14**

Please contact me at 952.832-2687 or dmelmer@barr.com if you have questions on the projects listed above or any additional items that need to be addressed for the erosion control inspections.

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

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

Riley Purgatory Bluff Creek Watershed District Permit Application Review

Permit No: 2019-024

Considered at Board of Managers Meeting: September 4, 2019

Received complete: August 20, 2019

Applicant: Capital Development, LLC, Fred Stelter

Consultant: Jack Ammerman, Wenck Associates, Inc.

Project: Conifer Heights: site clearing and demolition of existing cul-de-sac, road and two single-family residential homes. Construction will include the extension of Conifer Trail and the construction of 6 single family residential homes. A stormwater infiltration basin will be provided to the south east of the site to provide rate, volume, and water quality control.

Location: 5616 Mahoney Avenue and 5615 Conifer Trail, Minnetonka, MN 55345

Reviewer: Heather Hlavaty, E.I.T. and 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 September 4, 2019 meeting of the managers:

Resolved that the application for Permit 2019-024 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 2019-024 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
C	**Erosion Control Plan**		See comment.	See rule-specific permit condition C1.
D	**Wetland and Creek Buffers**		See comment.	See rule-specific permit conditions D1-D2.
J	**Stormwater Management**	Rate	Yes.	
		Volume	See comment.	See stipulation 1.
		Water Quality	Yes.	
		Low Floor Elev.	Yes.	
		Maintenance	See comment.	See rule-specific permit condition J1.
		Chloride Management	Yes.	See stipulation 4.
		Wetland Protection	Yes.	
L	**Permit Fee**		Yes.	$2,250 received June 7, 2019
M	**Financial Assurance**		See comment.	The financial assurance is calculated at $153,284

Background

The applicant is clearing and demolishing an existing cul-de-sac and two residential homes in Minnetonka, MN. Construction will include the continuation of Conifer Trail and the subdivision into 6 residential lots. The project includes one stormwater infiltration basin in the south east corner of the site. The best management practice provides stormwater quantity, volume and quality control.

Because two wetlands (Wetland 1 and Wetland 983A-N) are downgradient from the proposed land disturbing activities, wetland buffer requirements apply to the wetland edge that is downgradient from the proposed project.

The project site information is summarized below:

Project Site Information	Area (acres)
Total Site Area	4.8
Existing Impervious	0.2
Disturbed Impervious Area	0.2 (100%)
Proposed Impervious Area	1.26 (>100% increase)
Change in Impervious Area	1.06 (>100% increase)
Regulated Impervious Area	1.26
Total Disturbed Area	4.8

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

1. Mahoney Ave/Conifer Trail Residential - Stormwater Modeling Summary dated May 23, 2019
2. Conifer Heights Residential – Stormwater Modeling Summary dated May 23, 2019 (revised August 19, 2019)
3. Preliminary Plat of Conifer Heights dated March 8, 2019
4. Wetland Delineation Report by Wenck dated October 2018
5. MnRAM Wetland Functional Assessment Summaries for Wetland 1 and Wetland 983A-N
6. Civil Construction Plan Sheets (17 sheets) dated May 9, 2019 (revised July 29, 2019)
7. Alta/NSPS Land Title Survey dated February 2019
8. Conifer Heights Project Narrative dated May 23, 2019
9. Minnesota Wetland Conservation Act Notice of Wetland Boundary dated December 7, 2018
10. Soil Boring Results by Haugo Geotechnical Services dated April 9, 2019
11. Electronic HydroCAD models received on June 7, 2019 (revised August 20, 2019)
12. Electronic P8 models received on June 7, 2019 (revised August 20, 2019)
13. Response to Watershed Comments dated August 20, 2019
14. Opinion of Probable Cost dated August 20, 2019

Rule C: Erosion and Sediment Control

Because the project will involve 3.25 acres of land-disturbing activity, the project must conform to the requirements in the RPBCWD Erosion and Sediment Control rule (Rule C, Subsection 2.1). The erosion control plan prepared by Wenck Associates, Inc includes installation of silt fence, inlet protection to protect storm sewer catch basins, a rock construction entrance, decompaction of areas compacted

during construction, rip-rap at outfalls into the infiltration basin, stabilization of steep slopes, and retention of native topsoil onsite. To conform to the RPBCWD Rule C the following revisions are needed:

C1. The name and contact information of the general contractor responsible for the site must be provided.

Rule D: Wetland and Creek Buffers

Because two wetlands (Wetland 1 and Wetland 983A-N) are downgradient from the proposed land disturbing activities, the project must conform to the requirements in the RPBCWD Wetland and Creek Buffers rule (Rule D, Subsection 3). Because the wetlands will not be disturbed by the proposed activities, buffers are needed along the areas downgradient from the land-disturbing activity along the edge of the wetlands.

Based on the MnRAM report, Wetland 1 and Wetland 983A-N are medium value wetlands and require 40 foot average and 20 foot minimum buffer widths required by rule D subsection 3.2.a.iii. The project provides the required buffer width between the disturbed area and Wetland 1 by maintaining an average width of 40.1 feet and minimum buffer width of 25.4 feet along the 310 feet of delineated wetland. The buffer area is summarized in the table below.

Wetland ID	RPBCWD Wetland Value	Required Minimum Width[1] (ft)	Required Average Width[1] (ft)	Provided Minimum Width (ft)	Provided Average Width (ft)
Wetland 1	Medium	20	40	25.4	40.1
Wetland 983A-N	Medium	20	40	0	0

[1] Average and minimum required buffer width under Rule D, Subsection 3.1.a.

Wetland 983A-N is located on a parcel across Mahoney Avenue but nonetheless downgradient from the proposed disturbance, and is owned by the City of Minnetonka (PID #3111722140007). Because the parcel is not owned by the applicant and is not part of the redevelopment site, and because the city of Minnetonka did not provide the applicant the property right to install a buffer adjacent to Wetland 983A-N, a buffer is not required along the portion of the wetland edge that is downgradient from the land disturbing area (Rule D, subsection 3.2e).

Disturbed areas within the buffer area will be maintained with native vegetation and maintained in a natural state (subsection 3.3). As shown on Sheet C-102, the buffer markers will be placed per District criteria (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 conforming to Rule D, Subsection 3.5. The following revisions are needed to conform to the RPBCWD Rule D the following revisions are needed:

D1. A wetland buffer sign detail for the markers must be provided on the plans. An example detail is available for download from the RPBCWD website (www.rpbcwd.org/permits).

D2. Buffer areas and maintenance requirements must be documented in a declaration recorded after review and approval by RPBCWD in accordance with Rule D, Subsection 3.5. The maintenance declaration must also include an exhibit clearly showing the buffer area and monument locations.

Rule J: Stormwater Management

Because the project will disturb 3.25 acres of land-surface area, 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 the entire project site because the project will increase the imperviousness of the entire site by more than 100 percent (Rule J, Subsection 2.3).

The developer is proposing construction of one infiltration system to provide the rate control, volume abstraction and water quality management on the site. A forebay will serve as pretreament for runoff into the infiltration basin.

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 disturbed site area are summarized in the table below. 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
Wetland 1 (South)	0.0	0.0	0.1	0.1	1.1	1.0	0.2	0.2
Wetland 983A-N (East)	2.6	0.5	4.0	1.6	8.8	8.0	1.0	1.0

Volume Abstraction

Subsection 3.1.b of Rule J requires the abstraction onsite of 1.1 inches of runoff from all new and fully reconstructed impervious surface of the parcel. An abstraction volume of 5,031 cubic feet is required from the 1.26 acres (54,886 square feet) of impervious area on the site for volume retention.

Soil borings performed by Haugo Geotechnical Services on April 9, 2019 show that soils in the project area are primarily Poorly Graded Sand. Groundwater was not encountered at any of the four soil borings. Soil boring SB-4 is the closest boring to the infiltration basin. Because groundwater was not observed at the termination depth of the boring (elevation 870.8 feet), the groundwater level is assumed to be no higher than elevation 871 feet. The proposed bottom of the infiltration basin is at elevation 888 feet, thus providing the required three feet of vertical separation (Rule J, subsection 3.1biiA). SB-4 has poorly graded sand from 0 to 10 feet but contains silty sand and sandy clays from 10 to 21 feet. Based on the design infiltration rate of 0.8 inches per hour for silty sand, the basin will drawdown within 48 hours (Rule J, subsection 3.1biii). The table below summarizes the volume abstraction for the site based on the design infiltration rate.

	Abstraction Depth (inches)	Abstraction Volume (cubic feet)
Requirement	1.1	5,031
Provided	1.3	5,237

The geotechnical report does not appear to contain measured infiltration or hydraulic conductivity testing results at the infiltration basin as required by Rule J, subsection 3.1.b.ii.C. Per Rule J, Subsection 3.1.b.ii measured infiltration capacity of the soils at the bottom of the infiltration systems must be provided. The applicant must submit documentation verifying the infiltration capacity of the soils and that the volume control capacity is calculated using the measured infiltration rate divided by 2. If infiltration capacity is less than needed to conform with the volume abstraction requirement in subsection 3.1b, design modifications to achieve compliance with RPBCWD requirements will need to be submitted (in the form of an application for a permit modification or new permit).

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 a pre-treatment forebay into an infiltration basin to achieve the required TP and TSS removals and submitted a P8 model to estimate the TP and TSS removals. The results of this modeling 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)	904	813 (90%)	825 (91%)
Total Phosphorus (TP)	3.0	1.8 (60%)	2.6 (87%)

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)	448	79	-369
Total Phosphorus (TP)	1.5	0.4	-1.1

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 or less than 1 foot above the emergency overflow according to Rule J, Subsection 3.6. The low floor elevation of the homes and the adjacent stormwater management feature is summarized below and shows proposed project is in conformance with Rule J, subsection 3.6.

Location Riparian to Stormwater Facility or waterbody	Low Floor Elevation of Building (feet)	100-year Event Flood Elevation of Adjacent Stormwater Facility or waterbody (feet)	Freeboard to 100-year Event (feet)
Lot 2	930.75	913.18	17.57
Lot 3	930.5	913.18	17.32
Lot 4	931.5	891.5	40.0
Lot 6	897.25	891.5	5.75

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. Alternatively, a stormwater-management facility may be constructed at a location and elevation set according to Appendix J1 – "Low Floor Elevation Assessment," which is incorporated into and made a part of these rules. If Appendix J1 is used, the low opening where surface water can enter the structure must be a minimum of two feet above the 100-year high water elevation. Because there is an existing habitable structure on the property immediately south of the proposed infiltration basin with a low opening (LO) of 890.0 feet, lower than the proposed 100-year elevation (891.5 feet) of the proposed infiltration basin, the applicant conducted an analysis consistent with Appendix J1. Assuming the lowest floor is 10 feet lower than the low opening (typical basement depth), the low floor elevation is estimated at 980.0 feet. Groundwater was not observed in nearest soil boring (SB-4) at the time of drilling and therefore is assumed to be at the bottom of the borehole at an elevation of 870.8. The existing structure to the south of the infiltration basin is 80-feet away from the 100-year wetted perimeter. Per Appendix J1 Plot 1, a lateral separation of 80-feet requires a minimum of four feet of

vertical separation between the low floor of the structure and groundwater. The actual sepratation between the estimated low floor and groundwater elevations is 9.2 feet (880.0-879.2), thus conforming the Rule J, subsection 3.6.

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.

J1. Permit applicant must provide a maintenance and inspection declaration. 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 review prior to recording.

Wetland Protection

Because the applicant has demonstrated, and the engineer concurs, that the proposed flow rate and volumes flowing towards the off-site wetland are less than the existing flows, the project meets the Bounce and Inundation criterion and is in conformance with Rule J, subsection 3.10a. Because the project does not propose to use the existing wetland for stormwater treatment, Rule J, subsection 3.10b is not applicable.

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. Under the policy in adopted resolution 2019-024, the RPBCWD chloride-management plan requirement applies to the streets and common areas of the project site, but not the individual single-family homes. Because the streets within the proposed residential development will be within public right of way that will be maintained by the city of Minnetonka, as a stipulation of approval, the applicant must work with the City to provide its chloride management plan and its designated state-certified chloride applicator to conform with Rule J, subsection 3.8.

Rule L: Permit Fee:

Fees for the project are:

Rule C& J $2,000

Rule M: Financial Assurance:

Rules C: Silt fence: 500 L.F. x $2.50/L.F. =.....$1,250

Inlet protection: 1 x $100 =.....$100

Rock Entrance: 1 x $900 =.....$900

Restoration: 3.25 acres x $2,500/acre = ... $8,125

Rule D: Wetland and Creek Buffer= $5,000

Rules J: Infiltration systems: $99,179 x 125% of engineer's opinion of cost= $123,974

Contingency (10%) $13,935

Total Financial Assurance $153,284

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. Return or allowed expiration of any remaining surety and permit close out is dependent on the permit holder providing proof that all required documents have been recorded and providing as-built drawings that show that the project was constructed as approved by the Managers and in conformance with the RPBCWD rules and regulations.

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, D and J if the Rule Specific Permit Conditions listed above are met.

Recommendation:

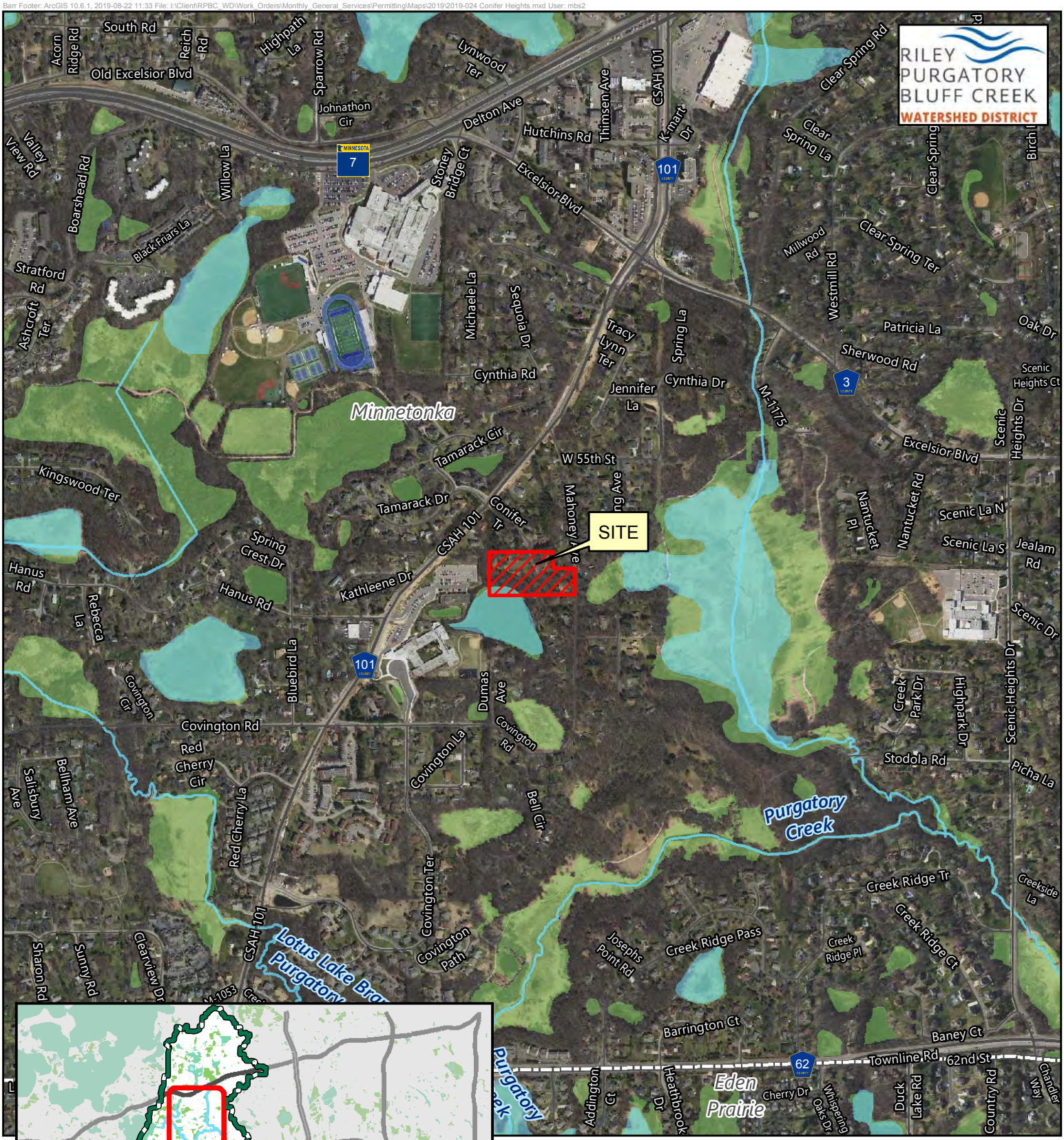
Approval of the permit issuance contingent upon:

1. Continued compliance with General Requirements.
2. Financial Assurance in the amount of $153,284.
3. The applicant providing the name and contact information of the general contractor responsible for the site.
4. Receipt of a detail for the markers must be provided on the plans. An example detail is available for download from the RPBCWD website (www.rpbcwd.org/permits).
5. Receipt in recordation a maintenance declaration for the stormwater management facilities and buffers. Drafts of any and 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 3.1.b.ii measured infiltration capacity of the soils at the bottom of the infiltration systems must be provided. The applicant must submit documentation verifying the infiltration capacity of the soils and that the volume control capacity is calculated using the measured infiltration rate divided by 2. If infiltration capacity is less than needed to conform with the volume abstraction requirement in subsection 3.1b, design modifications to achieve compliance with RPBCWD requirements will need to be submitted (in the form of an application for a permit modification or new permit).
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, stormwater facilities conform to design specifications as approved by the District.
3. The work on the Conifer Heights parcel under the terms of permit 2019-024, if issued, must have an impervious surface area and configuration materially consistent with the approved plans. Design that differs materially from the approved plans (e.g., in terms of total impervious area) will need to be the subject of a request for a permit modification or new permit, which will be subject to review for compliance with all applicable regulatory requirements.
4. City of Minnetonka chloride Management plan must be submitted to the RPBCWD and information showing the streets within the proposed residential development are dedicated within public right of way and will be maintained by the city of Minnetonka.

Barr Footer: ArcGIS 10.6.1, 2019-08-22 11:33 File: I:\Client\RPBC_WD\Work_Orders\Monthly_General_Services\Permitting\Maps\2019\2019-024 Conifer Heights.mxd User: mbs2



Feet

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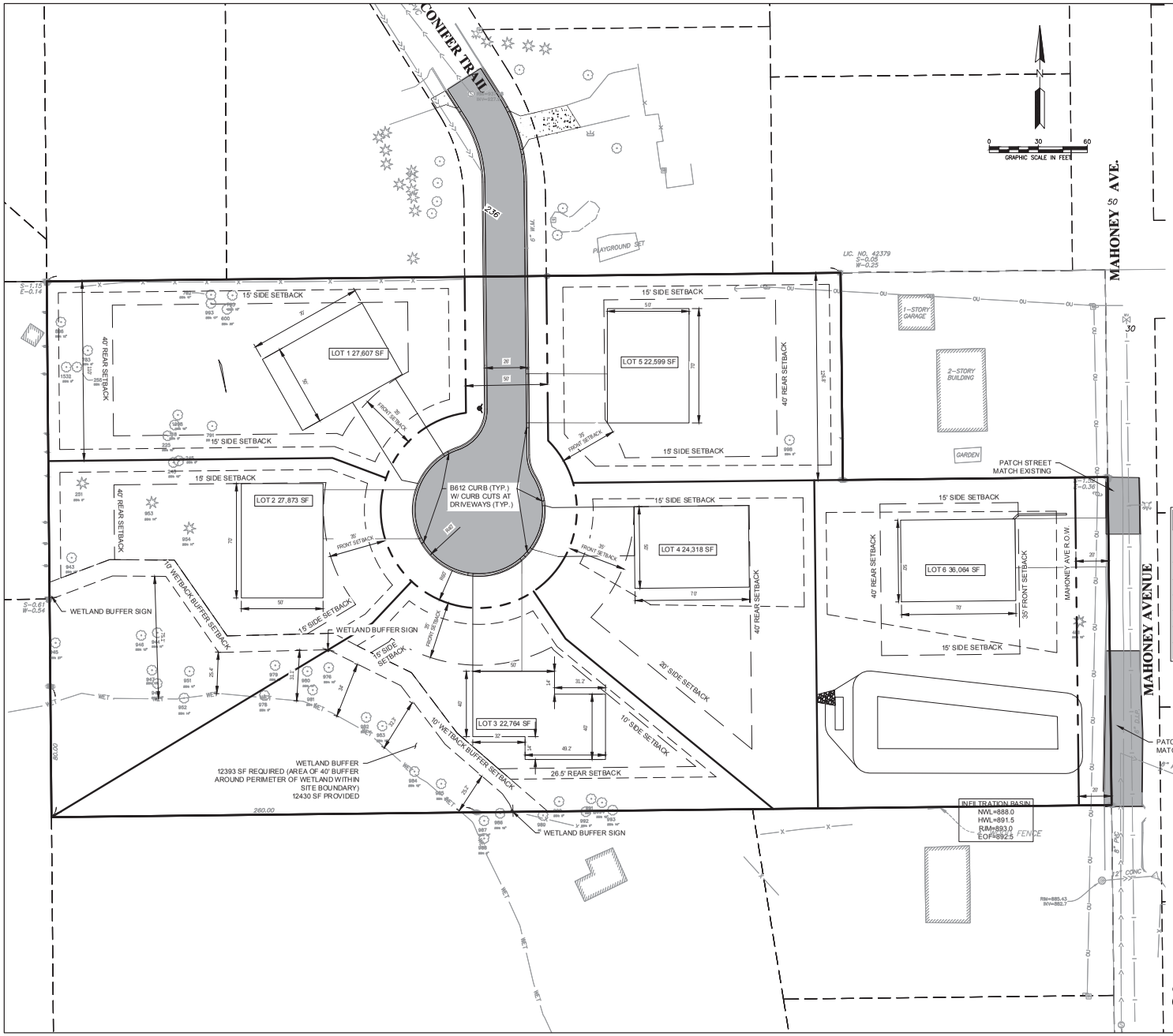
Permit Location Map

CONIFER HEIGHTS

Permit 2019-024

Riley Purgatory Bluff Creek Watershed District



SITE LEGEND

- PROPERTY LINE
- SETBACK LINE
- EASEMENT LINE
- PROPOSED B612 CURB AND GUTTER
- STANDARD DUTY BITUMINOUS PAVEMENT
- CONCRETE PAVEMENT

SITE ANALYSIS TABLE

5616 MAHONEY AVE &
5615 CONIFER TR
MINNETONKA, MN 55345

EXISTING ZONING	R-1, LOW DENSITY RESIDENTIAL	
PROPOSED USE	RESIDENTIAL HOUSING	
SETBACK SUMMARY	BUILDING	
FRONT / STREET ROW	35'	
SIDE	10'	
SIDE	SUM OF SIDE SETBACKS ≥ 30'	
REAR	40' OR 20% OF LOT DEPTH	
LOT AREA MINIMUM	22,000	
LOT WIDTH MINIMUM	110 AT SETBACK	
LOT DEPTH MINIMUM	125'	
MAX. BUILDABLE AREA	3,500 SF	
MAX. HEIGHT	35'	
MAX. DRIVEWAY WIDTH	TWO-CAR GARAGE	THREE-CAR GARAGE
	20'	30'

SITE DIMENSION TABLE

LOT	LOT AREA (SF)	SETBACK LOT WIDTH (LF)	ROW LOT WIDTH (LF)	LOT DEPTH (LF)	BUILDABLE AREA (SF)
LOT 1	27,607	112.4	112.6	332.5	3,500
LOT 2	27,873	112.4	78.0	214.2	3,500
LOT 3	22,764	177.5	95.8	130.7	3,500
LOT 4	24,318	115.1	83.3	162.2	3,500
LOT 5	22,599	126.8	126.8	179.0	3,500
LOT 6	32,049	200.9	200.9	159.6	3,500

WARNING:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR LOCATIONS OF ALL EXISTING UTILITIES. THEY SHALL COOPERATE WITH ALL UTILITY COMPANIES IN MAINTAINING THEIR SERVICE AND/OR RELOCATION OF LINES.

THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT 651-454-0002 AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UNDERGROUND WIRES, CABLES, CONDUITS, PIPES, MANHOLES, VALVES OR OTHER BURIED STRUCTURES BEFORE DIGGING. THE CONTRACTOR SHALL REPAIR OR REPLACE THE ABOVE WHEN DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

CALL BEFORE YOU DIG

GOPHER STATE ONE CALL

TWIN CITY AREA: 651-454-0002
TOLL FREE 1-800-252-1166

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MAPLE PLAIN, MN 55359
PHONE: 763-479-4200
FAX: 763-479-4242
WWW.WENCK.COM

CLIENT:
CAPITAL DEVELOPMENT LLC

PROJECT TITLE:
CONIFER HEIGHTS RESIDENTIAL
5616 MAHONEY AVE AND 5615 CONIFER TRAIL
MINNETONKA, MN 55345

ISSUE NO:	DESCRIPTION:	DATE:
1	PRELIMINARY CONCEPT	03/05/2019
2	PRELIMINARY PLAT	05/03/2019
3	FINAL PLAT	07/29/2019

CERTIFICATION:
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

LICENSE NO.:
DATE:

NOT FOR CONSTRUCTION

PROJECT NO.: 7775-0001

DWN BY:	CHKD BY:	APPD BY:
JTP	JRA	JTW

ISSUE DATE: 07-29-2019
ISSUE NO.: 3
SHEET TITLE: SITE PLAN
SHEET NO.: C-102

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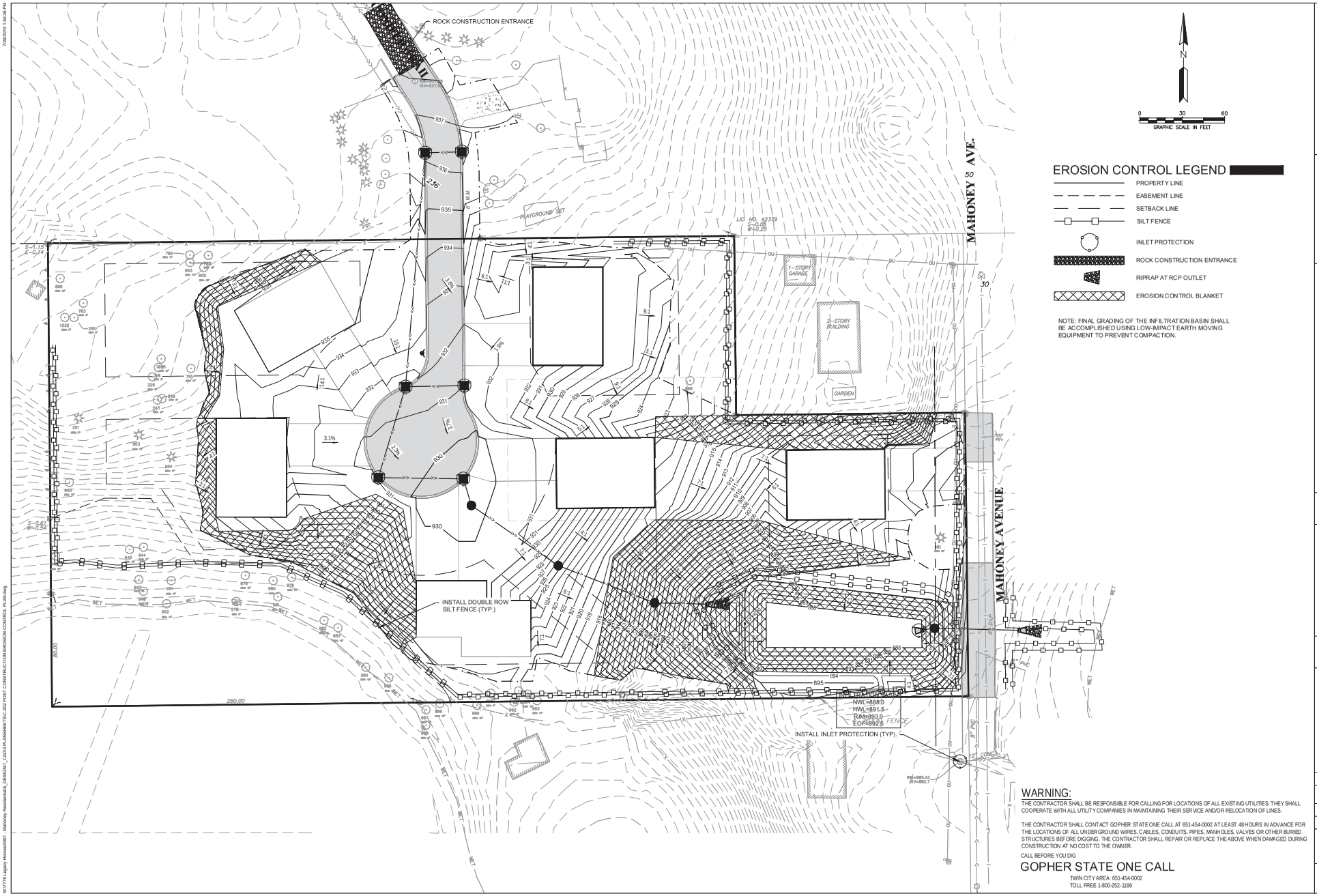

EROSION CONTROL LEGEND

- PROPERTY LINE
- EASEMENT LINE
- SETBACK LINE
- SILT FENCE
- INLET PROTECTION
- ROCK CONSTRUCTION ENTRANCE
- RIPRAP AT RCP OUTLET
- EROSION CONTROL BLANKET

NOTE: FINAL GRADING OF THE INFILTRATION BASIN SHALL BE ACCOMPLISHED USING LOW-IMPACT EARTH MOVING EQUIPMENT TO PREVENT COMPACTION.

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PROJECT NO.: 7775-0001

DWN BY:	CHK'D BY:	APP'D BY:
JTP	JRA	JTW

ISSUE DATE: 07-29-2019
ISSUE NO.: 3

SHEET TITLE:
POST CONSTRUCTION EROSION CONTROL PLAN

SHEET NO.:
C-202

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GRAPHIC SCALE IN FEET

GRADING LEGEND

- PROPERTY LINE
- SETBACK LINE
- EASEMENT LINE
- EXISTING CONTOUR
- 9XX PROPOSED CONTOUR
- PROPOSED STORM SEWER
- PROPOSED CATCH BASIN
- PROPOSED MANHOLE
- FL=±9XX PROPOSED SPOT ELEVATION (ALL ELEVATIONS ARE TO FLOWLINE UNLESS OTHERWISE NOTED)
- FG=±9XX FINISHED GRADE SPOT ELEVATION
- ME=±9XX MATCH EXISTING SPOT ELEVATION
- TC=±9XX TOP OF CURB SPOT ELEVATION
- HP=±9XX HIGH POINT SPOT ELEVATION
- EOF=±9XX EMERGENCY OVERFLOW SPOT ELEVATION
- TW=±9XX TOP OF WALL SPOT ELEVATION
- BW=±9XX BOTTOM / TOE OF WALL SPOT ELEVATION
- PROPOSED RIDGE / VALLEY / BREAKLINE
- 1.00% PROPOSED SLOPE ARROW
- ST EXISTING STORM STRUCTURE
- EXISTING STORM SEWER

NOTE: SEE C-501 STORM SEWER PLAN FOR STORM SEWER DESIGN DETAILS

WARNING:

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CLIENT:

CAPITAL DEVELOPMENT LLC

PROJECT TITLE:

CONIFER HEIGHTS RESIDENTIAL

5616 MAHONEY AVE AND 5615 CONIFER TRAIL
MINNETONKA, MN 55345

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PROJECT NO.: 7775-0001

DWN BY:	CHKD BY:	APPD BY:
JTP	JRA	JTW

ISSUE DATE: 07-29-2019

ISSUE NO.: 3

SHEET TITLE:

GRADING PLAN

SHEET NO.:

C-301

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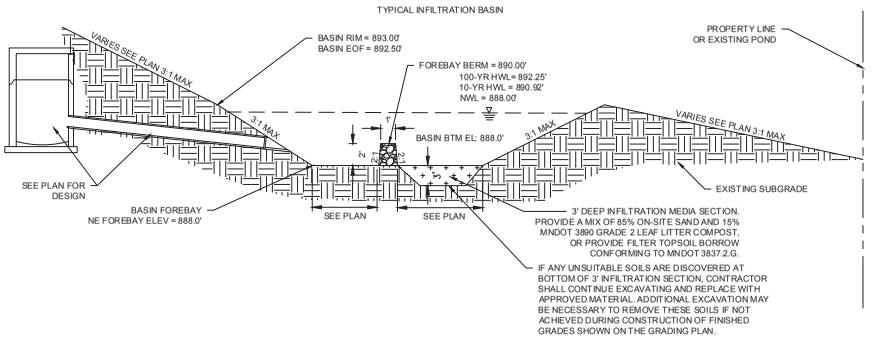
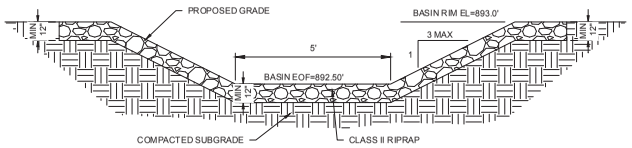


1 C805 TYPICAL INFILTRATION BASIN CROSS SECTION
NOT TO SCALE



2 C805 EMERGENCY OVERFLOW SPILLWAY
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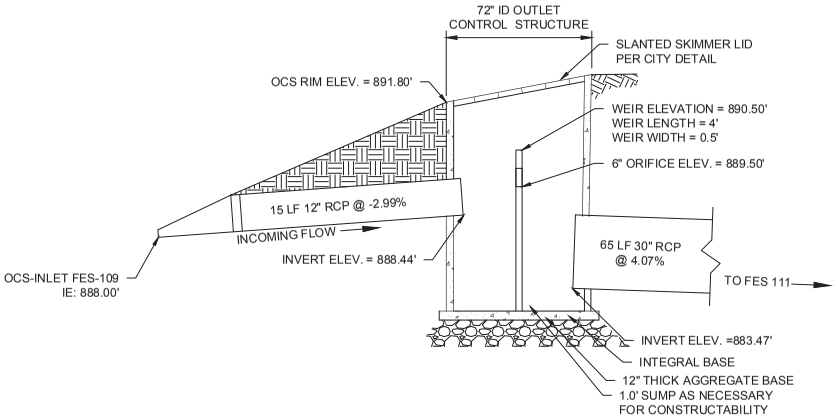

3 C805 OCS-110 OUTLET CONTROL STRUCTURE (72") DETAIL
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DATE:

PROJECT NO.: 7775-0001

DWN BY:	CHKD BY:	APPD BY:
JTP	JRA	JTW

ISSUE DATE: 07-29-2019
ISSUE NO.: 3

SHEET TITLE:
DETAILS

SHEET NO.:
C-805

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RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

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

Riley Purgatory Bluff Creek Watershed District Permit Application Review

Permit No: 2019-028

Considered at Board of Managers Meeting: September 4, 2019

Received complete: June 26, 2019

Applicant: Lifetime Fitness, Justin Schmidt

Consultant: Kristie Elfering, Elfering & Associates

Project: Chanhassen Lifetime Fitness Building Expansion – Construction of a 69,850 square foot parking lot expansion at their site located at 2932 and 2970 Water Tower Place located in Chanhassen, Minnesota. The project also proposes to add 16,438 square feet of impervious for additional parking at 2900, 2901, & 2902 Corporate Place. An underground filtration/detention system with elevated draintile to promote infiltration will provide storm water quantity and quality control.

Location: 2970 Water Tower Place and 2900, 2901, & 2902 Corporate Place, Chanhassen, 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 September 4, 2019 meeting of the managers:

Resolved that the application for Permit 2019-028 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 2019-028 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
C	**Erosion Control Plan**		Yes.	See rule-specific permit condition C1
J	**Stormwater Management**	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.
L	**Permit Fee**		See comment	$4,000 received June 26, 2019.
M	**Financial Assurance**		See comment.	The financial assurance is calculated at $209,220

Background

The project proposes the construction of a 69,850 square foot parking lot expansion at a multi-parcel site controlled by the applicant at 2932 and 2970 Water Tower Place in Chanhassen, Minnesota.). Because one project has been permitted since the rules took effect (RPBCWD Permit 2016-046), the current activities proposed must be considered in aggregate with the activities proposed under this application for purposes of determining the applicable stormwater-management requirements. The project also proposes to add 16,438 square feet of impervious for additional parking at 2900, 2901, & 2902 Corporate Place . An underground filtration/detention system with elevated draintile to promote infiltration will provide storm water quantity, volume, and quality control. The work is proposed on five adjoining parcels under common ownership (e.g. a single “site” for purposes of the RPBCWD rules) by the applicant. The project site information is summarized below:

Project Site Information	Permit 2016-046 Area (acres)	This Permit (2019-028) Area (acres)	Aggregate Area (acres)
Total Site Area	26.0	26.0	26.0
Existing Site Impervious	17.34	17.34	17.34
Disturbed Site Impervious Area	0.17 acres (1% disturbance)	0.6 acres (3.5% disturbance)	0.77 acres (4.5% disturbance)
Proposed Site Impervious Area	17.38	18.8	18.8

Project Site Information	Permit 2016-046 Area (acres)	This Permit (2019-028) Area (acres)	Aggregate Area (acres)
Change in Site Impervious Area	0.04 (0.2% increase)	1.42 (8.2% increase)	1.46 (8.4% increase)
Total Disturbed Area	0.21	2.51	2.72

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

1. Signed Application dated June 25, 2019
2. Construction Plan Sheets (15 sheets) received June 26, 2019 (received revised July 30, 2019 and August 20, 2019)
3. Stormwater Management Plan dated June 25, 2019 (Revised July 29, 2019 and August 20, 2019)
4. Electronic HydroCAD models received on June 26, 2019
5. Electronic P8 model received on June 26, 2019 (received revised July 30, 2019 and August 20, 2019)
6. Geotechnical Exploration Report dated July 13, 2013
7. Response to review comments dated July 30, 2019
8. Email correspondence related to observed infiltration in existing underground system associated with Permit 2016-046 dated July 22, 2019
9. Double ring infiltrometer testing dated August 1, 2019
10. Engineer's opinion of probable construction cost for the underground filtration/detention system with elevated draintile to promote infiltration received August 20, 2019

Rule C: Erosion and Sediment Control

Because the project will involve 2.51 acre of land-disturbing activity, the project must conform to the requirements in the RPBCWD Erosion and Sediment Control rule (Rule C, Subsection 2.1). The erosion control plan prepared by Elfering & Associates includes installation of silt fence, inlet protection, a rock construction entrance, restoration with six inches of topsoil, decompaction of areas compacted during construction, and retention of native topsoil onsite. To conform to the RPBCWD Rule C the following revisions are needed:

C1. The name and contact information of the general contractor responsible for the site must be provided.

Rule J: Stormwater Management

Because the project will disturb 2.51 acre 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 one project has been permitted since the rules took effect (RPBCWD Permit 2016-046), the current activities proposed must be considered in aggregate with the activities proposed under this application for purposes of determining the applicable stormwater-management requirements.

The criteria listed in Subsection 3.1 will apply to only runoff from the disturbed and reconstructed impervious areas on the project parcel because the aggregate impervious disturbance (4.5 percent) and no imperviousness increase (8.4 percent), do not amount to a disturbance of more than 50 percent of the impervious surface of the parcel nor will the imperviousness be increased by more than 50 percent from the amount existing at the time of the 2016-046 application (Rule J, Subsection 2.3).

The project includes one underground filtration/detention system with elevated draintile to promote infiltration to provide water quantity, volume, and quality control Pretreatment of runoff will be provided with sump structures.

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 fully reconstructed and additional impervious area are summarized in the table below. The proposed project is in conformance with RPBCWD Rule J, Subsection 3.1.a.

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
East	77.7	77.7	126.4	126.4	212.1	212.1	4.4	4.4
South	3.8	0.9	7.0	3.0	13.5	7.9	0.6	0.5

Volume Abstraction

Subsection 3.1.b of Rule J requires the abstraction onsite of 1.1 inches of runoff from all impervious surface of the parcel. An abstraction volume of 8,075 cubic feet is required from the 2.02 acres (8,916 square feet) of new or reconstructed impervious area on the project for volume retention. The Applicant proposed an underground filtration/detention system. A sump manhole will provide pretreatment for the underground filtration/detention system.

Soil borings performed by Braun Intertec, Inc. show that soils in the project area are primarily fill above sandy lean clay and show no groundwater to a boring depth of 21 feet. This indicates that groundwater is at least 3 feet below the bottom of the underground filtration/detention system (Rule J, Subsection 3.1.b.ii). The applicant provided an observed infiltration estimate of 0.06 inches per hour in the existing underground retention system installed with Permit 2016-046. The applicant also provided infiltrometer testing by AET, Inc. at the proposed BMP location which produced a measured infiltration rate of 0.02 inches per hour.

Because the engineer concurred that the soil boring information and low infiltration rates support that the abstraction standard in Subsection 3.1 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 3.1a and that abstraction and water quality protection be provided in accordance with the following sequence: (a)Abstraction of at least 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. RPBCWD's engineer concurs with a design infiltration rate of 0.02 inches per hour. The applicant incorporated storage below the draintile in the underground filtration/detention system to promote infiltration to the maximum extent practicable to conform to Rule J, subsection 3.3b.

The table below summarizes the volume abstraction for the site.

	Abstraction Depth (inches)	Abstraction Volume (cubic feet)
Requirement	1.1	8,075
Provided	0.15	1,090

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 an underground filtration/detention system with elevated draintile to promote infiltration to achieve the required TP and TSS removals and submitted a MIDs model to estimate the TP and TSS removals. The results of this modeling 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)	1453	1307 (90%)	1436 (98.8%)
Total Phosphorus (TP)	4.6	2.8 (60%)	3.9 (84.7%)

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)	12,310	11,474	-836
Total Phosphorus (TP)	39.2	37.2	-2.0

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 or less than 1 foot above the emergency overflow according to Rule J, Subsection 3.6. No new structures or reconstructions are proposed for this project. 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 low floor elevation existing structure and the adjacent stormwater management feature is summarized below. The project meets the requirements of Rule J, Subsection 3.6.

Stormwater Facility	100-year Event Flood Elevation of Stormwater Facility (feet)	Existing Lowest Floor Elevation (feet)	Freeboard (feet)
Underground filtration/detention	999.8	1004.57	4.77

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. Given the multiple legally separate properties that comprise the site, cross-drainage easements must be provided.

J1. Permit applicant must provide a maintenance and inspection declaration. 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 review prior to recording.

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. 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 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.

Rule L: Permit Fee:

Fees for the project are:

Rule C & J $4,000

Rule M: Financial Assurance:

Rule C: Silt fence and bio-logs: 2,400 L.F. x $2.50/L.F. =.....$6,000

Inlet protection: 14 x $100 =.....$1,400

Rock Entrance: 1.0 x $900 =.....$900

Restoration: 2.51 acres x $2,500/acre =.....$6,275

Rule J: Underground Filtration/Detention systems: $136,500 x 125% of engineer's opinion of cost= $170,625

Chloride Management Plan: $5,000

Contingency (10%) $19,020

Total Financial Assurance.....$209,220

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. Return or allowed expiration of any remaining surety and permit close out is dependent on the permit holder providing proof that all required documents have been recorded and providing as-built drawings that show that the project was constructed as approved by the Managers and in conformance with the RPBCWD rules and regulations.

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:

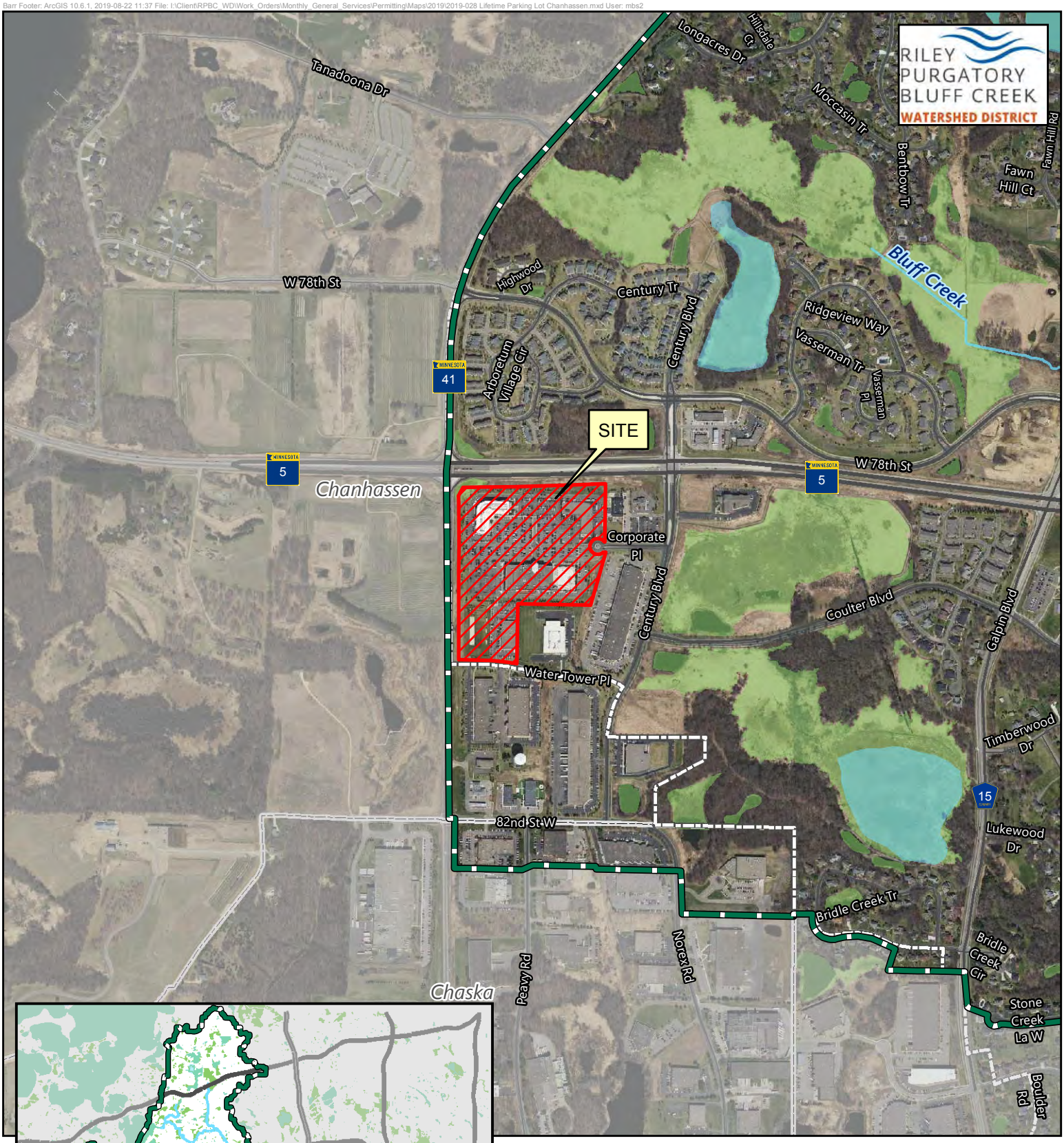
Approval of the permit issuance contingent upon:

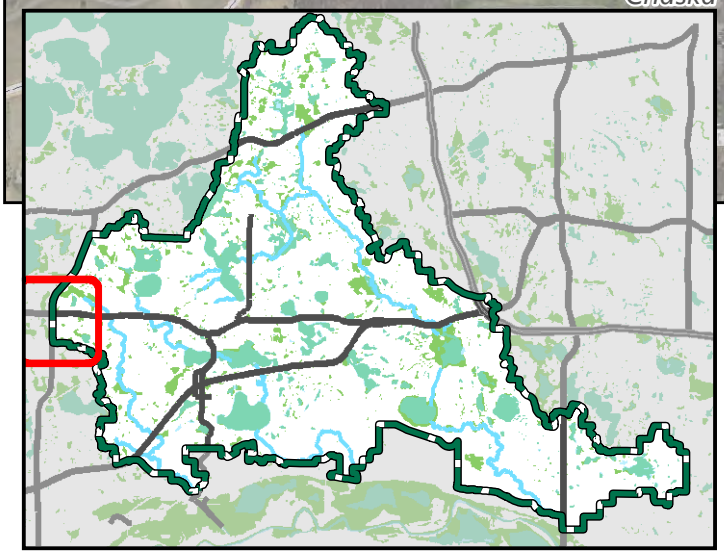
1. Continued compliance with General Requirements.
2. Financial Assurance in the amount of $209,220.
3. The applicant providing the name and contact information of the general contractor responsible for the site.
4. Receipt in recordation a maintenance declaration for the stormwater management facilities. Drafts of any and all documents to be recorded must be approved by the District prior to recordation. The applicant must include in the declaration or submit separate draft document(s) for approval providing any necessary drainage and use rights between or among parcels necessary for continued compliance operation of the proposed stormwater-management system.

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, stormwater facilities conform to design specifications as approved by the District.
2. The work on the Lifetime parcels under the terms of permit 2019-028, if issued, must have an impervious surface area and configuration materially consistent with the approved plans. Design that differs materially from the approved plans (e.g., in terms of total impervious area) will need to be the subject of a request for a permit modification or new permit, which will be subject to review for compliance with all applicable regulatory requirements.
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 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.

Barr Footer: ArcGIS 10.6.1, 2019-08-22 11:37 File: I:\Client\RPBC_WD\Work_Orders\Monthly_General_Services\Permitting\Maps\2019\2019-028 Lifetime Parking Lot Chanhassen.mxd User: mbs2





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Feet

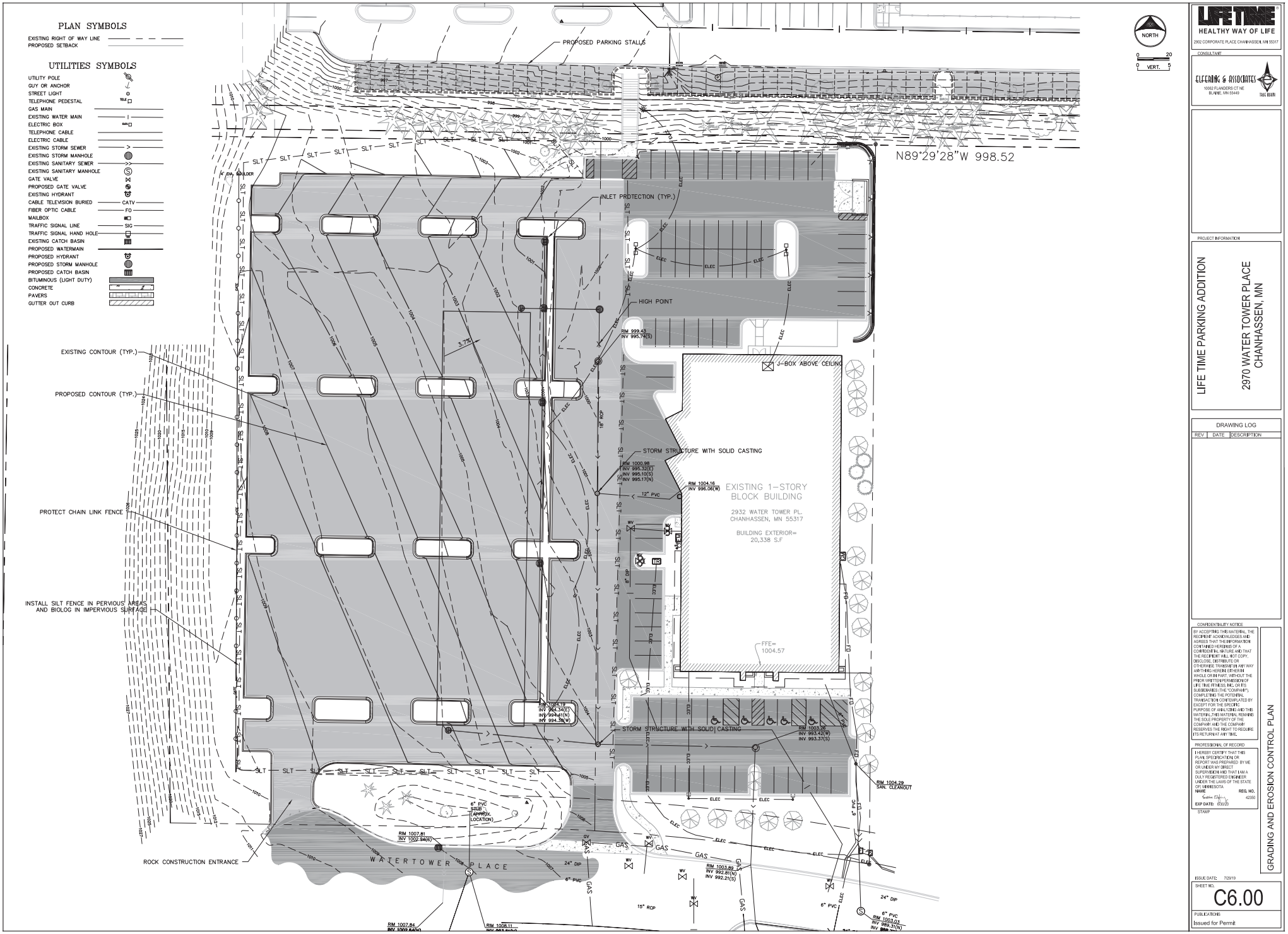
0 1,000

Permit Location Map

LIFETIME PARKING LOT CHANHASSEN

Permit 2019-028

Riley Purgatory Bluff Creek Watershed District



LIFE TIME
HEALTHY WAY OF LIFE
2902 CORPORATE PLACE CHANHASSEN, MN 55317

CONSULTANT
CLEERING & ASSOCIATES
10062 FLANDERS CT NE
BLAINE, MN 55449

PROJECT INFORMATION
LIFE TIME PARKING ADDITION
2970 WATER TOWER PLACE
CHANHASSEN, MN

DRAWING LOG

REV	DATE	DESCRIPTION

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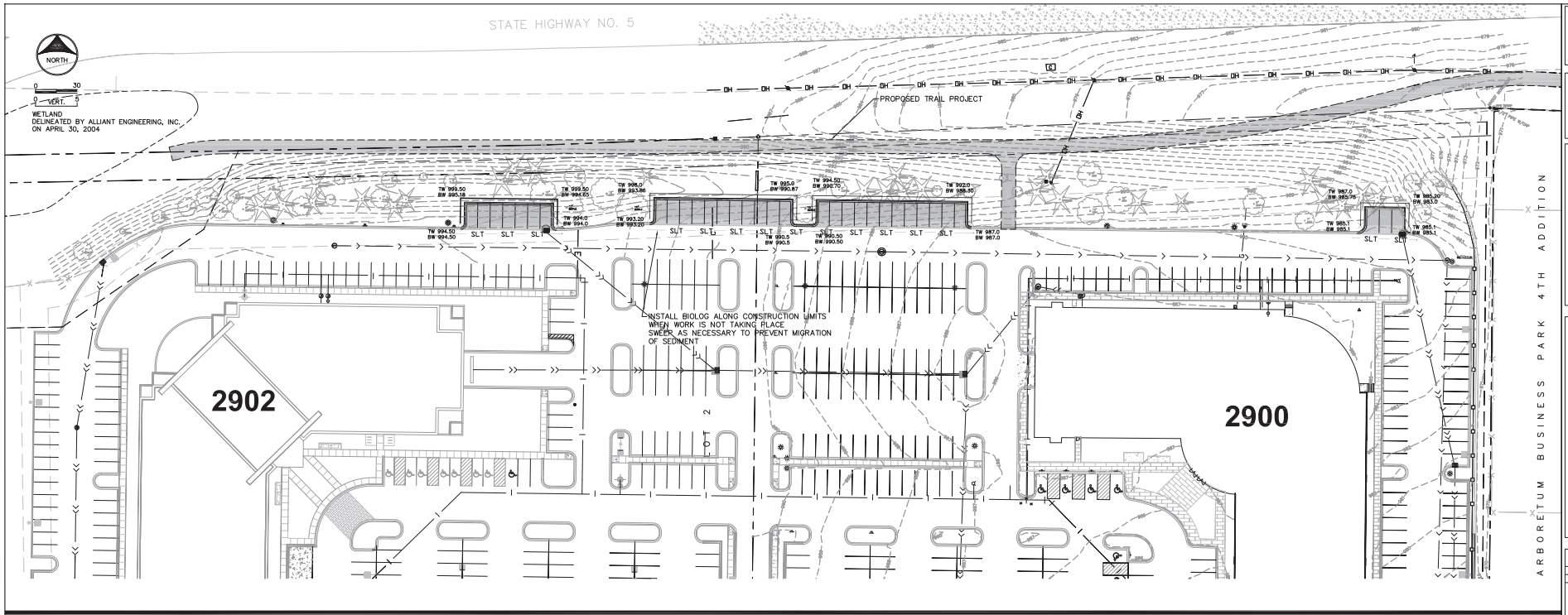
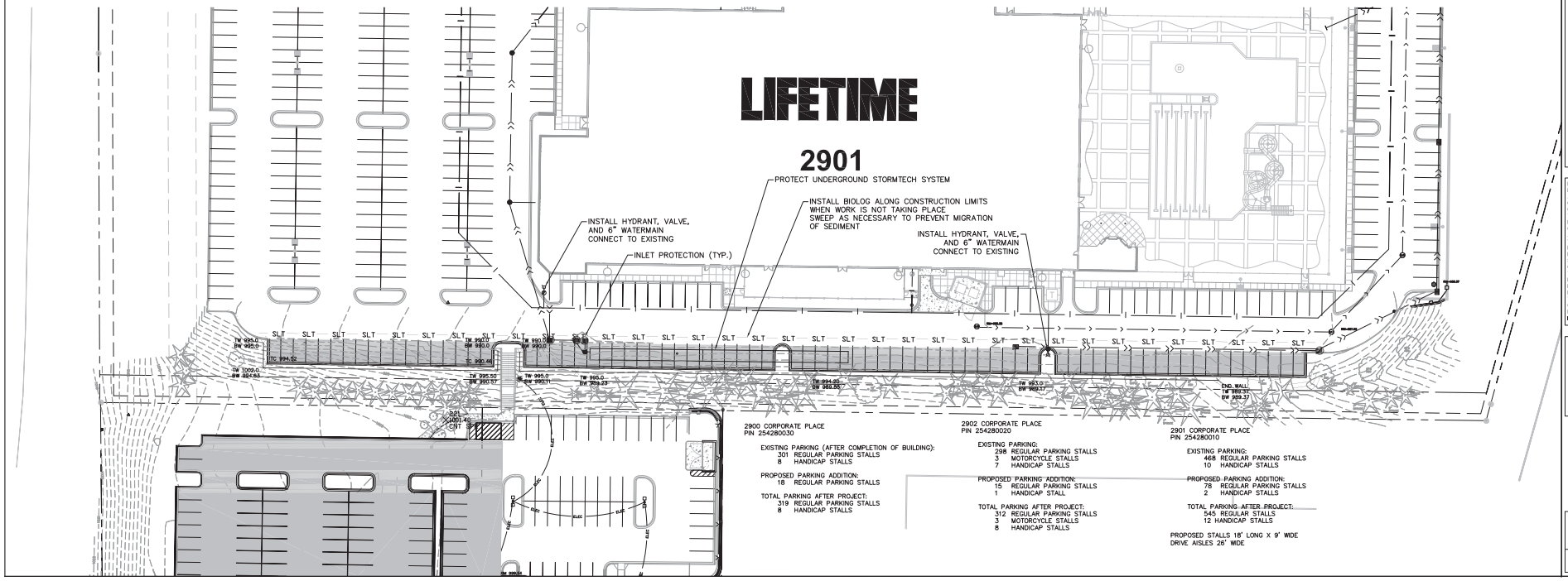
NAME: REG. NO. 42350
EXP DATE: 6/30/20
STAMP

GRADING AND EROSION CONTROL PLAN

ISSUE DATE: 7/29/19
SHEET NO.
C6.00
PUBLICATIONS:
Issued for Permit





2900 CORPORATE PLACE
PIN 254280030

EXISTING PARKING (AFTER COMPLETION OF BUILDING):
301 REGULAR PARKING STALLS
8 HANDICAP STALLS

PROPOSED PARKING ADDITION:
18 REGULAR PARKING STALLS

TOTAL PARKING AFTER PROJECT:
319 REGULAR PARKING STALLS
8 HANDICAP STALLS

2902 CORPORATE PLACE
PIN 254280020

EXISTING PARKING:
298 REGULAR PARKING STALLS
3 MOTORCYCLE STALLS
7 HANDICAP STALLS

PROPOSED PARKING ADDITION:
15 REGULAR PARKING STALLS
1 HANDICAP STALL

TOTAL PARKING AFTER PROJECT:
312 REGULAR PARKING STALLS
3 MOTORCYCLE STALLS
8 HANDICAP STALLS

2901 CORPORATE PLACE
PIN 254280010

EXISTING PARKING:
468 REGULAR PARKING STALLS
10 HANDICAP STALLS

PROPOSED PARKING ADDITION:
78 REGULAR PARKING STALLS
2 HANDICAP STALLS

TOTAL PARKING AFTER PROJECT:
545 REGULAR STALLS
12 HANDICAP STALLS

PROPOSED STALLS 18' LONG X 9' WIDE
DRIVE AISLES 26' WIDE

LIFETIME
HEALTHY WAY OF LIFE
2902 CORPORATE PLACE CHANHASSEN, MN 55317

CONSULTANT
CLEARING & ASSOCIATES
10062 FLANDERS CT NE
BLAINE, MN 55449

PROJECT INFORMATION
LIFE TIME PARKING ADDITION
2900, 2901, 2902 CORPORATE PLACE
CHANHASSEN, MN

DRAWING LOG

REV	DATE	DESCRIPTION

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I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
NAME REG. NO. 43338
EXP DATE: 6/30/18
STAMP

ADDITIONAL PARKING STALLS

ISSUE DATE: 12/19/18
SHEET NO.
C7.00
PUBLICATIONS

SC-740 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-740.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/IN/IN, AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-740 SYSTEM

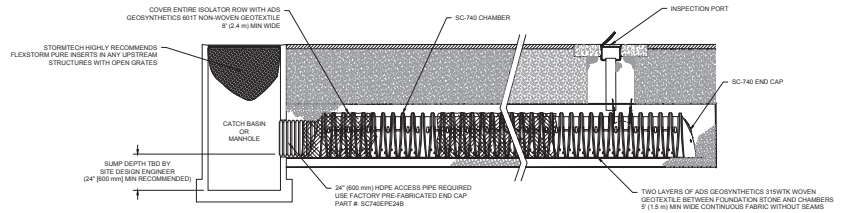
1. STORMTECH SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-740 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

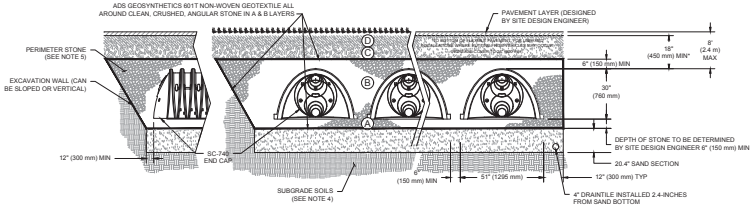


SC-740 ISOLATOR ROW DETAIL
NTS

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145* A-1, A-2-4, A-3 OR AASHTO M43* 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43* 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43* 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'C' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/IN/IN, AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- A. INSPECTION PORTS (REQUIRED)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

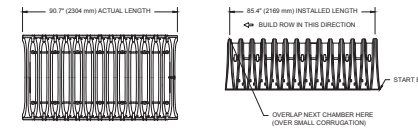
STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

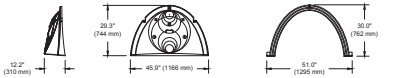
NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

SC-740 TECHNICAL SPECIFICATION

NTS

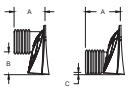




NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	51.0" X 30.0" X 85.4"	(1295 mm X 762 mm X 2169 mm)
CHAMBER STORAGE	45.9 CUBIC FEET	(1.30 m³)
MINIMUM INSTALLED STORAGE*	74.9 CUBIC FEET	(2.12 m³)
WEIGHT	75.0 lbs.	(33.6 kg)

*ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS



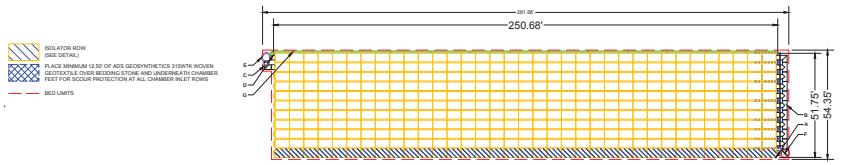
PRE-FAB STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
PRE-FAB STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
PRE-CORED END CAPS END WITH "PC"

PART #	STUB	A	B	C
SC740EPE06T / SC740EPE06TPC	6" (150 mm)	10.9" (277 mm)	18.5" (470 mm)	—
SC740EPE06B / SC740EPE06BPC			—	0.5" (13 mm)
SC740EPE08T SC740EPE08TPC	8" (200 mm)	12.2" (310 mm)	16.5" (419 mm)	—
SC740EPE08B / SC740EPE08BPC			—	0.6" (15 mm)
SC740EPE10T / SC740EPE10TPC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	—
SC740EPE10B / SC740EPE10BPC			—	0.7" (18 mm)
SC740EPE12T / SC740EPE12TPC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	—
SC740EPE12B / SC740EPE12BPC			—	1.2" (30 mm)
SC740EPE15T / SC740EPE15TPC	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)	—
SC740EPE15B / SC740EPE15BPC			—	1.3" (33 mm)
SC740EPE18T / SC740EPE18TPC	18" (450 mm)	19.7" (500 mm)	5.0" (127 mm)	—
SC740EPE18B / SC740EPE18BPC			—	1.6" (41 mm)
SC740EPE24B*	24" (600 mm)	18.5" (470 mm)	—	0.1" (3 mm)

ALL STUBS, EXCEPT FOR THE SC740EPE24B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

* FOR THE SC740EPE24B THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL



PROPOSED LAYOUT	
385	STORMTECH SC-740 CHAMBERS
22	STORMTECH SC-740 END CAPS
8	STONE ABOVE (in)
6	STONE BELOW (in)
40	% STONE VOID
30236	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED) (BASE STONE INCLUDED)
14024	SYSTEM AREA (SF)
632.01	SYSTEM PERIMETER (ft)

CONCEPTUAL ELEVATIONS	
MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	1007.1
MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	1001.1
MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	1000.6
MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	1000.6
MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	1000.6
TOP OF STONE:	1000.1
TOP OF SC-740 CHAMBER:	999.6
24" x 24" BOTTOM MANIFOLD INVERT:	997.71
24" x 24" BOTTOM MANIFOLD INVERT:	997.71
24" ISOLATOR ROW INVERT:	997.71
24" BOTTOM CONNECTION INVERT:	997.71
BOTTOM OF SC-740 CHAMBER:	997.1
UNDERDRAIN INVERT:	995.1
BOTTOM OF STONE:	996.6
BOTTOM OF STONE:	994.9

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
PREFABRICATED END CAP	A	24" BOTTOM PREFABRICATED END CAP/TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR ROWS	0.10"	
MANIFOLD	B	24" X 24" BOTTOM, ADS N-12	0.10"	
MANIFOLD	C	24" X 24" BOTTOM, ADS N-12	0.10"	
PIPE CONNECTION	D	24" BOTTOM CONNECTION	0.10"	
CONCRETE STRUCTURE	E	OCS (DESIGN BY ENGINEER / PROVIDED BY OTHERS)		14.0 CFS OUT
CONCRETE STRUCTURE W/WEIR	F	DESIGN BY ENGINEER / PROVIDED BY OTHERS)		26.6 CFS IN
UNDERDRAIN	G	8" ADS N-12 DUAL WALL PERFORATED HDPE UNDERDRAIN		

LIFETIME
THE HEALTHY WAY OF LIFE COMPANY
2932 CORPORATE PLACE CHANHASSEN, MN 55317

CONSULTANT

Z:\GEN\LOGO1.JPG
10062 FLANDERS CT NE
BLAINE, MN 55449

PROJECT INFORMATION

LIFE TIME PARKING ADDITION
2970 WATER TOWER PLACE
CHANHASSEN, MN

DRAWING LOG

REV.	DATE	COMMENT

CONFIDENTIALITY NOTICE

BY ACCEPTING THIS MATERIAL, THE RECIPIENT ACKNOWLEDGES AND AGREES THAT THE INFORMATION CONTAINED HEREIN IS OF A CONFIDENTIAL NATURE AND THAT THE RECIPIENT WILL NOT COPY, DISCLOSE, DISTRIBUTE OR OTHERWISE TRANSMIT IN ANY WAY ANYTHING HEREIN, EITHER IN WHOLE OR IN PART, WITHOUT THE PRIOR WRITTEN PERMISSION OF LIFE TIME FITNESS, INC. OR ITS SUBSIDIARIES (THE "COMPANY"). COMPLETING THE POTENTIAL TRANSACTION CONTEMPLATED BY EXCEPT FOR THE SPECIFIC PURPOSE OF ANALYZING AND THIS MATERIAL, THIS MATERIAL REMAINS THE SOLE PROPERTY OF THE COMPANY AND THE COMPANY RESERVES THE RIGHT TO REQUIRE ITS RETURN AT ANY TIME.

ENGINEER

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ENGINEER UNDER THE LAWS OF THE STATE OF

NAME: [illegible] REG. NO. 42350
DATE 06/30/20

STAMP

DETAILS

ISSUE DATE 07/29/19

SHEET NO. C11.00

PUBLICATIONS

APP. NUMBER:

TASK ORDER No. 28a: Preliminary Engineering Study for
Rice Marsh Lake - Subwatershed RM_12a Water Quality Treatment Project
Pursuant to Agreement for Engineering Services
Riley Purgatory Bluff Creek Watershed District and BARR Engineering Company.
August 29, 2019

This Task Order is issued pursuant to Section 1 of the above-cited engineering services agreement between the Riley Purgatory Bluff Creek Watershed District (District) and BARR Engineering Company (Engineer) and incorporated as a part thereof.

1. Description of Services:

The *2016 Rice Marsh Lake and Lake Riley Use Attainability Analysis Update* identified the Rice Marsh Lake subwatershed RM_12a as a targeted location within the Rice Marsh Lake watershed to reduce the phosphorus loading and improve the water quality of Rice Marsh Lake. Based on its project prioritization process that quantitatively considered project benefits and feasibility constraints using nine benefit categories and a total benefit, the District incorporated implementation of a best management practices in subwatershed RM_12a into its 2018 Plan (Planning for the Next Ten Years: 2018-2027).

Runoff from approximately 240 acres, including a significant portion of Chanhassen town center, drains through the location of the proposed best management practice (BMP). The UAA Update identified area as contributing roughly 33% of the annual watershed phosphorus loading to Rice Marsh Lake and thus suggested an iron enhanced sand filtration system to treat discharge from the upstream tributary area. The UAA Update also suggested implementing a treatment train of BMPs by combining the implementation of RM_12a with RM_10 to improve phosphorus removals prior to runoff entering Rice Marsh Lake watershed. The concept presented in the UAA update reflected implementation of an iron-enhanced sand filtration system in subwatersheds RM_12a which was shown between Dakota Land and the north side of Rice Marsh Lake. Iron mixed with the filtration media removes dissolved constituents, including phosphorus, from stormwater. The preliminary engineering study will evaluate the feasibility of other stormwater BMPs including but not limited to infiltration, woodchip bioreactor, and other proprietary filtration BMPs near the location identified in the UAA. In addition, other BMPs recommended by District staff or City stakeholders at the kickoff meeting will be considered in the preliminary engineering study. This assessment will include developing an estimated construction cost and conceptual schematics for up to three of the most feasible BMPs.

Work under this task order would provide RPBCWD with a brief engineering report summarizing the development and comparison of concept-level BMP design options, including life-cycle cost-benefit and permitting requirements, to provide additional scientific information upon which the managers can make prudent decisions about proceeding to full project implementation. Future task orders would cover work through final design, followed by preparation of bid documents and construction support services.

RPBCWD's activity is divided into three phases:

Phase 1: Feasibility Design (This Task Order 28a)
Phase 2: Final Design and Permitting (Future Task Order 28b);
Phase 3: Construction Administration Services (Future Task Order 28c).

2. Scope of Services:
Engineer's services under this task order shall include:

Phase 1. Preliminary Engineering Study and Stakeholder Involvement

The preliminary engineering study will include stormwater BMPs that are innovative methods to remove phosphorus. Therefore, it is essential that the Board of Managers, RPBCWD staff, and interested stakeholders understand the potential system effectiveness and the unknowns related to each BMP. Because the proposed project is located on city of Chanhassen property it is critical to obtain City support of the design concept before proceeding. Therefore, the following subtasks have been included as part of the preliminary engineering and stakeholder involvement phase.

Task 1-1. Kickoff Meeting

An initial meeting will be held with RPBCWD and city of Chanhassen staff to discuss each stakeholder's respective goals for the project and to learn about any key items that must or must not be considered during design.

Task 1-2. Site characterization

Site characterization includes gathering information near the location of the proposed BMP. Barr staff will request available public utility information, field verify diameters of stormwater pipes, collect photographs of the site, and review RPBCWD water quality monitoring data. Information collected during the site characterization will be considered in the preliminary design of stormwater BMPs for the site. Barr will rely on District staff to assist in collection of site specific data such as photographs and measurements.

The District Administrator and Watershed Planning Manager requested that site survey be included in the feasibility study rather than deferring those costs to the subsequent design phase during their review of the draft task order. Surveying services would include:

- Establish surveying control and benchmark using RTK VRS System to accurately define spatial and elevation
- Topographic survey using a robotic unit given the relatively flat grades and needed vertical accuracies.
- Visible surface features such as trails, fences, driveways, sidewalks, trees 8" and larger, and landscape beds,
- Property lines will be based on Hennepin County GIS data or visible features (e.g., fences, utility boxes)
- One-foot contours and spot elevation in AutoCAD format incorporated into the base maps for one site.
- Spot elevations for changes in grade (breakpoints) and slopes
- Collection of storm sewer invert, diameter, and material within the site. The cost estimate assumes no confined space entry will be required.
- Portrayal of underground utilities on the site based on a Gopher State One Call and mapping provided by utility operators
- Benchmarks to be utilized during construction

To minimize project expenditures at the feasibility stage of analysis, we assume soil borings and wetland delineation tasks would be completed during a subsequent phase of design, should the Managers order the project.

Task 1-3. Hydraulics Review

The hydraulics of the proposed stormwater BMP will require careful consideration and design. The design goal will be diversion of low-flows for treatment to meet the phosphorus removal goal, while maintaining sufficient capacity for high flows to prevent impacts to existing structures. Therefore, the applicable portion of the RPBCWD's SWMM hydrologic and hydraulic model will be updated to evaluate each stormwater BMP. The continuous flow data previously collected at the proposed BMP location by RPBCWD staff will be used to validate the hydrologic and hydraulic modeling for this subwatershed. This is an important consideration to improve the overall project understanding and ultimate performance should the managers elect to implement a BMP at this location.

This task includes developing conceptual designs for the inlet structure that diverts stormwater into the BMP, the BMP, and the outlet to the Rice Marsh.

Task 1-4. Phosphorus Removal Review and Preliminary Design

RPBCWD has collected several years of monitoring data at the proposed location of RM_12a. These data will be used in calibrate/validate the existing water quality modeling of the RM_12a subwatershed, to the extent practicable within the allocated budget. The updated water quality modeling will form the basis for the estimated phosphorus removal from conceptual designs. Recommendations for future monitoring of the recommended treatment system will also be made in the Preliminary Engineering Memorandum to evaluate actual pollutant removal effectiveness post-construction. This task includes updating the existing water quality model, developing conceptual designs and layouts for each BMP. It is assumed that up to three schematics (i.e., one for each BMP) may be prepared. The concept drawings will be GIS based and primarily present a conceptual design to address the issues present and meet overall goals. In addition, an engineer's opinion of probable cost will be developed for each option to aid in assessing the cost effectiveness of the various alternatives.

Task 1-5. Design Meeting

Participate in one preliminary design meeting with city of Chanhassen, RPBCWD staff, and other key stakeholders identified during the preliminary engineering study. During the design meeting, Barr staff will present initial design concepts based on stakeholder feedback on project constraints (e.g., maintenance, wetland impacts, water level fluctuations, resident concerns, etc…) provided during the kickoff meeting. Barr staff will use stakeholder comments to refine the preliminary design of stormwater BMPs.

Task 1-6. Preliminary Engineering Memorandum

A brief summary memorandum will be prepared to document the recommended conceptual design, alternative design concepts considered, design constraints, design assumptions, and anticipated phosphorus removals. The memorandum will also present a comparison of estimated construction costs for the recommended stormwater BMP to the costs associated with an iron enhanced sand filtration system presented in the UAA Update. Barr staff assume one round of comments from RPBCWD and city of Chanhassen staff.

Task 1-7. Public Hearing and Presentation to RPBCWD Board

Barr staff will work with RPBCWD's project manager to develop a presentation of the recommended preliminary design to the Board of Managers, RPBCWD staff, and interested stakeholders, at their regularly scheduled meeting which is assumed to double as the public hearing for the project.

Task 1-8. Project Management

Project Management will be required in all phases as careful project management will help to ensure the work meets the expectations of District staff and other stakeholders, and that it is completed in a satisfactory manner, within the project timeline and within the agreed-upon budget.

A project kickoff meeting will be scheduled following authorization by the Board to proceed with the preliminary engineering. The meeting purpose will be to define project roles and responsibilities, clarify expectations, scope, schedule, and administrative procedures. This meeting will also provide an opportunity to discuss the participation of other key stakeholders, such as the City of Chanhassen, and decide when stakeholder meetings should be scheduled.

Throughout the project, Barr will provide updates to the project team that document project progress and coordinate tasks. We will provide monthly progress reports and budget status updates. We will solicit feedback from you on an ongoing basis to ensure clear and timely communication.

Assumptions

We have made several assumptions in preparing the scope of work for each task in this agreement. Assumptions relating to individual work tasks are listed along with the detailed description. However, additional assumptions that do not correspond with a single work task are listed below:

- The kickoff meeting will last for approximately 1 hour and be held at RPBCWD's office.
- The design meeting will last approximately 2 hours and will be held at RPBCWD's office.
- The project site is free from contamination.
- The soils are adequate for construction of a small concrete structure.
- The groundwater table will be estimated based on water levels in Rice Marsh Lake.
- Soil borings to better characterize the underlying soil and groundwater elevation will not be collected during this phase of the design.
- Wetland delineation to better quantify wetland impacts will not be completed during this phase of the design.
- Site survey is limited to an area of no more than 0.6 acres.
- The proposed budget includes costs for mileage reimbursement for site visits.
- Design concepts will be developed in GIS.
- Because flow and water quality monitoring data have already been collected by RPBCWD staff, no additional information will be needed to complete the feasibility design.
- RPBCWD has performed quality control and quality assurance on all monitoring data collected at the site, thus the monitoring data is adequate for use without additional QA/QC by Barr. If additional QA/QC of the data are needed, the data are revised during

the analysis, or modeling or reporting changes are needed, these unanticipated cost will be invoiced on a time and expense basis.

Deliverables:
The following deliverables will be prepared and provided to the RPBCWD for the preliminary engineering study and stakeholder involvement:

- Agenda and meeting notes for one kickoff meeting
- Agenda and meeting notes for one design and stakeholder meeting
- Preliminary engineering memorandum summarizing concepts considered, design constraints, design assumptions, anticipated phosphorus removal estimates, and potential impacted property owners
- Conceptual schematic(s) of proposed treatment system
- Presentation to RPBCWD
- Monthly progress updates

3. Budget:
Services under this Task Order will be compensated for in accordance with the engineering services agreement and will not exceed $34,100 without written authorization by the Administrator.

Barr understands the importance of working as efficiently as possible while providing the services described above. Therefore, we will look for cost saving during the entire preliminary design process, such as looking to the city of Chanhassen to supply any existing topographic and soil boring information of the area in an effort to avoid unneeded duplication of past efforts. The following table provides a breakdown of the anticipated cost for major tasks associated with scope of services.

Task	Task Description	Anticipated Budget
1-1	Kickoff Meeting	$900
1-2	Site Characterization	$5,700
1-3	Hydraulics Review[1]	$6,400
1-4	Phosphorus Removal Review[1] & Preliminary Design	$9,700
1-5	Stakeholder Design Meeting	$1,300
1-6	Preliminary Design Memorandum	$4,900
1-7	Presentation to RPBCWD Board	$900
1-8	Project Management	$2,300
Task Order 28a Total		**$34,100**

[1] Includes validation of the existing hydrologic/hydraulic and water quality models to the extent practicable within the allotted budgets using monitoring data previously collected and QA/QC'd by RPBCWD staff.

4. Schedule and Assumptions Upon Which Schedule is Based
The following proposed schedule has been developed assuming authorization in September 2019, and that the District would like construction to occur in late-2020. The tentative schedule is subject

to change with changes to scope, review periods, and comments received during reviews. Barr's understands the District's desire to get projects in the ground as quickly and efficiently as possible. To that end Barr will work with District staff to expedite the timeline where possible.

- Project Kickoff Meeting – week of September 16th
- Design and Stakeholder Meeting – week of December 16th
- Preliminary Design Memorandum – week of January 27th
- Presentation to RPBCWD Board and public hearing – March 4, 2020

IN WITNESS WHEREOF, intending to be legally bound, the parties hereto execute and deliver this Agreement.

CONSULTANT	**RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT**
By_____	By_____
Its__Vice President_____	Its_____
Date:	Date:
	APPROVED AS TO FORM & EXECUTION
	_____

LEAGUE OF MINNESOTA CITIES

CONNECTING & INNOVATING
SINCE 1913

LIABILITY COVERAGE – WAIVER FORM

Members who obtain liability coverage through the League of Minnesota Cities Insurance Trust (LMCIT) must complete and return this form to LMCIT before the member's effective date of coverage. Return completed form to your underwriter or email to pstech@lmc.org.

The decision to waive or not waive the statutory tort limits must be made annually by the member's governing body, in consultation with its attorney if necessary.

Members who obtain liability coverage from LMCIT must decide whether to waive the statutory tort liability limits to the extent of the coverage purchased. The decision has the following effects:

- *If the member does not waive the statutory tort limits*, an individual claimant could recover no more than $500,000 on any claim to which the statutory tort limits apply. The total all claimants could recover for a single occurrence to which the statutory tort limits apply would be limited to $1,500,000. These statutory tort limits would apply regardless of whether the member purchases the optional LMCIT excess liability coverage.

- *If the member waives the statutory tort limits and does not purchase excess liability coverage*, a single claimant could recover up to $2,000,000 for a single occurrence (under the waive option, the tort cap liability limits are only waived to the extent of the member's liability coverage limits, and the LMCIT per occurrence limit is $2,000,000). The total all claimants could recover for a single occurrence to which the statutory tort limits apply would also be limited to $2,000,000, regardless of the number of claimants.

- *If the member waives the statutory tort limits and purchases excess liability coverage*, a single claimant could potentially recover an amount up to the limit of the coverage purchased. The total all claimants could recover for a single occurrence to which the statutory tort limits apply would also be limited to the amount of coverage purchased, regardless of the number of claimants.

Claims to which the statutory municipal tort limits do not apply are not affected by this decision.

LMCIT Member Name: Riley Purgatory Bluff Creek Watershed District

Check one:

☒ The member **DOES NOT WAIVE** the monetary limits on municipal tort liability established by Minn. Stat. § 466.04.

☐ The member **WAIVES** the monetary limits on municipal tort liability established by Minn. Stat. § 466.04, to the extent of the limits of the liability coverage obtained from LMCIT.

Date of member's governing body meeting: September 4, 2019

Signature: _____ Position: Secretary

145 UNIVERSITY AVE. WEST
ST. PAUL, MN 55103-2044

PHONE: (651) 281-1200 FAX: (651) 281-1299
TOLL FREE: (800) 925-1122 WEB: WWW.LMC.ORG

REDPATH AND COMPANY

August 28, 2019

Claire Bleser
District Administrator
Riley Purgatory Bluff Creek Watershed District
18681 Lake Drive E.
Chanhassen, Minnesota 55317

Dear Claire:

Enclosed please find the checks and Treasurer's Report for Riley Purgatory Bluff Creek Watershed District for the one month and seven months ending July 31, 2019.

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

Sincerely,

REDPATH AND COMPANY, LTD.

Mark C. Gibbs, CPA
Enclosure

REDPATH AND COMPANY

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 July 31, 2019 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.

REDPATH AND COMPANY, LTD.
St. Paul, Minnesota
August 28, 2019

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

Treasurers Report

July 31, 2019

REPORT INDEX

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT
Cash Disbursements
July 31, 2019

Accounts Payable:

Check #	Payee	Amount	
4876V	James & Sharon Hedberg	($275,000.00)	
4889V	Public Employees Retirement Association	(38.27)	
4906	First American Title	698.62	**Issued 8/22/19**
4907	James & Sharon Hedberg	275,000.00	**Issued 8/22/19**
4908	Barr Engineering	49,615.54	
4909	CenturyLink	293.50	
4910	Coverall of the Twin Cities	524.26	
4911	CSM Financial, LLC	7,847.28	
4912	Dunn & Semington, LLC	656.00	
4913	Fresh Scientific Services	2,700.00	
4914	Hach Company	372.03	
4915	HealthPartners	4,686.56	
4916	Olivia R. Holstine	918.05	
4917	Olivia R. Holstine	1,266.62	
4918	Iron Mountain	89.95	
4919	Michael Kaselnak & Michelle Taylor	3,987.37	
4920	Larry Koch	72.86	
4921	Landbridge Ecological Services	335.00	
4922	Lincoln National Life Insurance	448.21	
4923	McMaster-Carr Supply Co.	56.40	
4924	Metro Sales, Inc.	514.37	
4925	Sinh & Daisy Nguyen	1,987.50	
4926	ProTech	410.73	
4927	Purchase Power	475.21	
4928	Redpath & Company, Ltd.	1,545.52	
4929	RMB Environmental Laboratories	3,406.00	
4930	RMB Environmental Laboratories	4,278.00	
4931	RMB Environmental Laboratories	1,374.00	
4932	RMB Environmental Laboratories	1,394.00	
4933	Smith Partners	11,139.11	
4934	Water Bar & Public Studio GBC, Inc.	1,171.27	
4935	Wenck, Inc.	2,678.40	
4936	Xcel Energy	1,602.59	
	Total Accounts Payable:	**$106,506.68**	

Payroll Disbursements:

	Payroll Processing Fee	232.10
	Employee Salaries	42,790.12
	Employer Payroll Taxes	3,821.39
	Employer Benefits (H.S.A. Match)	525.00
	Employee Benefit Deductions	(396.26)
	Staff Expense Reimbursements	803.14
	PERA Match	2,669.92
	Total Payroll Disbursements:	**$50,445.41**
	VISA	10,643.56
TOTAL DISBURSEMENTS:		**$167,595.65**

Memos

The 2019 mileage rate is .58 per mile. The 2018 rate was .54.5
Old National VISA will be paid on-line.

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT
Fund Performance Analysis - Table 1
July 31, 2019

	2019 Budget	Fund Transfers	Revised 2019 Budget	Current Month	Year-to-Date	Year-to Date Percent of Budget
REVENUES						
Plan Implementation Levy	$3,602,500.00	-	$3,602,500.00	-	1,845,612.60	51.23%
Permit	50,000.00	-	50,000.00	-	24,322.50	48.65%
Grant Income	708,079.00	-	708,079.00	-	267,940.00	37.84%
Investment Income	35,000.00	-	35,000.00	9,434.94	62,651.53	179.00%
Miscellaneous Income	-	-	-	1.00	1.00	---
Past Levies	2,511,789.00	-	2,511,789.00	-	-	0.00%
Partner Funds	432,000.00	-	432,000.00	-	-	0.00%
TOTAL REVENUE	**$7,339,368.00**	**$0.00**	**$7,339,368.00**	**$9,435.94**	**$2,200,527.63**	**29.98%**
EXPENDITURES						
Administration						
Accounting and Audit	42,000.00	-	42,000.00	1,777.62	31,083.37	74.01%
Advisory Committees	5,000.00	-	5,000.00	-	931.42	18.63%
Insurance and bonds	20,000.00	-	20,000.00	-	-	0.00%
Engineering Services	106,000.00	-	106,000.00	7,608.00	64,749.40	61.08%
Legal Services	78,000.00	-	78,000.00	3,222.40	41,715.89	53.48%
Manager Per Diem/Expense	20,000.00	-	20,000.00	250.88	7,464.35	37.32%
Dues and Publications	12,000.00	-	12,000.00	-	11,319.50	94.33%
Office Cost	144,000.00	-	144,000.00	11,857.15	84,812.67	58.90%
Permit Review and Inspection	135,000.00	(25,000.00)	110,000.00	15,710.22	101,704.15	92.46%
Permit and Grant Database	-	39,900.00	39,900.00	-	1,480.75	3.71%
Recording Services	10,000.00	-	10,000.00	-	7,194.33	71.94%
Staff Cost	550,000.00	-	550,000.00	47,011.63	324,613.04	59.02%
Subtotal	**$1,122,000.00**	**$14,900.00**	**$1,136,900.00**	**$87,437.90**	**$677,068.87**	**59.55%**
Programs and Projects						
District Wide						
10-year Management Plan	5,000.00	-	5,000.00	3,440.89	11,003.50	220.07%
AIS Inspection and early response	75,000.00	-	75,000.00	3,093.11	5,354.80	7.14%
Cost-share	267,193.00	(14,900.00)	252,293.00	-	44,055.35	17.46%
Creek Restoration Action Strategies Phase	-	-	-	-	-	---
Data Collection and Monitoring	186,000.00	-	186,000.00	29,400.83	110,887.05	59.62%
District Wide Floodplain Evaluation - Atlas 14/SMM model	30,000.00	18,000.00	48,000.00	105.00	27,012.00	56.28%
Education and Outreach	119,000.00	-	119,000.00	17,804.96	58,057.17	48.79%
Plant Restoration - U of M	42,000.00	-	42,000.00	-	8,295.85	19.75%
Repair and Maintenance Fund *	177,005.00	-	177,005.00	-	6,209.00	3.51%
Wetland Management*	145,272.00	-	145,272.00	2,225.77	8,969.32	6.17%
District Groundwater Assessment	-	-	-	-	-	---
Groundwater Conservation*	130,000.00	-	130,000.00	-	-	0.00%
Lake Vegetation Implementation	75,000.00	-	75,000.00	2,700.00	7,293.76	9.73%
Opportunity Project*	200,000.00	-	200,000.00	-	9,999.00	5.00%
TMDL - MPCA	10,000.00	-	10,000.00	-	-	0.00%
Stormwater Ponds - U of M	86,092.00	-	86,092.00	-	12,507.33	14.53%
Hennepin County Chloride Initiative	120,800.00	-	120,800.00	462.87	1,859.06	1.54%
Lower Minnesota Chloride Cost-Share	217,209.00	-	217,209.00	-	-	0.00%
Subtotal	**$1,885,571.00**	**$3,100.00**	**$1,888,671.00**	**$59,233.43**	**$311,503.19**	**16.49%**
Bluff Creek						
Bluff Creek Tributary*	291,091.00	-	291,091.00	483.00	7,516.15	2.58%
Chanhassen High School *	41,905.00	-	41,905.00	22.50	516.00	1.23%
Wetland Restoration at Pioneer	561,870.00	-	561,870.00	698.62	540,067.28	96.12%
Subtotal	**$894,866.00**	**$0.00**	**$894,866.00**	**$1,204.12**	**$548,099.43**	**61.25%**
Riley Creek						
Lake Riley - Alum Treatment*	5,000.00	-	5,000.00	-	-	0.00%
Lake Susan Water Quality Improvement Phase 2 *	13,420.00	-	13,420.00	-	-	0.00%
Rice Marsh Lake in-lake phosphorus load	73,983.00	-	73,983.00	-	13,414.87	18.13%
Rice Marsh Lake Water Quality Improvement Phase 1	150,000.00	-	150,000.00	-	-	0.00%
Riley Creek Restoration (Reach E and D3)	1,680,562.00	-	1,680,562.00	1,465.00	19,207.38	1.14%
Lake Riley & Rice Marsh Lake Subwatershed Assessment	72,500.00	-	72,500.00	2,333.70	25,962.57	35.81%
Upper Riley Creek Stabilization	425,000.00	-	425,000.00	-	-	0.00%
Subtotal	**$2,420,465.00**	**$0.00**	**$2,420,465.00**	**$3,798.70**	**$58,584.82**	**2.42%**
Purgatory Creek						
Purgatory Creek Rec Area- Berm/retention area - feasibility/design	50,000.00	-	50,000.00	-	-	0.00%
Lotus Lake in-lake phosphorus load control	105,772.00	-	105,772.00	-	1,666.30	1.58%
Silver Lake Restoration - Feasibility Phase 1	168,013.00	-	168,013.00	-	-	0.00%
Scenic Heights	111,226.00	-	111,226.00	189.00	52,018.25	46.77%
Hyland Lake in-lake phosphorus load control	120,000.00	-	120,000.00	-	128,612.41	107.18%
Mitchell Lake Subwatershed Assessment	87,500.00	-	87,500.00	2,315.70	27,154.92	31.03%
Duck Lake watershed load	213,955.00	-	213,955.00	13,416.80	69,111.62	32.30%
Subtotal	**$856,466.00**	**$0.00**	**$856,466.00**	**$15,921.50**	**$278,563.50**	**32.52%**
Reserve	**$160,000.00**	**($18,000.00)**	**142,000.00**	-	-	0.00%
TOTAL EXPENDITURE	**$7,339,368.00**	**$0.00**	**$7,339,368.00**	**$167,595.65**	**$1,873,819.81**	**25.53%**
EXCESS REVENUES OVER (UNDER) EXPENDITURES	**$0.00**	**$0.00**	**$0.00**	**($158,159.71)**	**$326,707.82**	

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

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT
Muti-Year Project Performance Analysis - Table 2
July 31, 2019

		FUNDING SOURCE			Month Ended	Year	Lifetime	
	Total Project	District funds	Partner Fund	Grants	07/31/19	To-Date	Costs	Remaining
Programs and Projects								
District Wide								
District Wide Floodplain Evaluation - Atlas 14/SMM model	**48,000.00**	48,000.00	-	-	105.00	27,012.00	27,012.00	20,988.00
Repair and Maintenance Fund	**202,005.00**	177,005.00	-	-	-	6,209.00	31,209.00	170,796.00
Wetland Management	**150,000.00**	150,000.00	-	-	2,225.77	8,969.32	38,697.63	111,302.37
Groundwater Conservation	**130,000.00**	130,000.00	-	-	-	-	-	130,000.00
Opportunity Project*	**200,000.00**	200,000.00	-	-	-	9,999.00	9,999.00	190,001.00
Hennepin County Chloride Initiative	**120,800.00**	19,000.00	-	101,800.00	462.87	1,859.06	1,859.06	118,940.94
Lower Minnesota Chloride Cost-Share	**217,209.00**	20,000.00	-	197,209.00	-	-	-	217,209.00
Stormwater Ponds - U of M	**86,092.00**	44,092.00	42,000.00	-	-	12,507.33	12,507.33	73,584.67
Subtotal	**$1,154,106.00**	**$788,097.00**	**$42,000.00**	**$299,009.00**	**$2,793.64**	**$66,555.71**	**$121,284.02**	**1,032,821.98**
Bluff Creek								
Bluff Creek Tributary*	**292,362.00**	242,362.00	50,000.00	-	483.00	7,516.15	103,175.69	189,186.31
Chanhassen High School *	**508,000.00**	208,000.00	100,000.00	200,000.00	22.50	516.00	451,611.10	56,388.90
Wetland Restoration at Pioneer	**561,870.00**	450,000.00	0.00	111,870.00	698.62	540,067.28	540,067.28	21,802.72
Subtotal	**$1,362,232.00**	**$900,362.00**	**$150,000.00**	**$311,870.00**	**$1,204.12**	**$548,099.43**	**$1,094,854.07**	**$267,377.93**
Riley Creek								
Lake Riley - Alum Treatment 1st dose *	**260,000.00**	260,000.00	-	-	-	-	254,999.83	5,000.17
Lake Susan Water Quality Improvement Phase 2 *	**662,491.00**	330,000.00	99,091.00	233,400.00	-	-	649,070.80	13,420.20
Rice Marsh Lake in-lake phosphorus load	**150,000.00**	150,000.00	-	-	-	13,414.87	89,432.81	60,567.19
Riley Creek Restoration (Reach E and D3) *	**1,565,000.00**	1,265,000.00	300,000.00	-	1,465.00	19,207.38	199,702.53	1,365,297.47
Lake Riley & Rice Marsh Lake Subwatershed Assessment	**72,500.00**	12,500.00	5,000.00	55,000.00	2,333.70	25,962.57	25,962.57	46,537.43
Upper Riley Creek Stabilization	**450,000.00**	450,000.00	0.00	-	-	-	-	450,000.00
Subtotal	**$3,159,991.00**	**$2,467,500.00**	**$404,091.00**	**$288,400.00**	**$3,798.70**	**$58,584.82**	**$1,219,168.54**	**$1,940,822.46**
Purgatory Creek								
Purgatory Creek Rec Area- Berm/retention area - feasibility/design	**50,000.00**	50,000.00	-	-	-	-	-	50,000.00
Lotus Lake in-lake phosphorus load control	**345,000.00**	345,000.00	-	-	-	1,666.30	240,893.34	104,106.66
Scenic Heights	**260,000.00**	165,000.00	45,000.00	50,000.00	189.00	52,018.25	200,792.01	59,207.99
Mitchell Lake Subwatershed Assessment	**87,500.00**	12,500.00	5,000.00	70,000.00	2,315.70	27,154.92	27,154.92	60,345.08
Duck Lake watershed load	**220,000.00**	220,000.00	-	-	13,416.80	69,111.62	75,156.12	144,843.88
Subtotal	**$962,500.00**	**$792,500.00**	**$50,000.00**	**$120,000.00**	**$15,921.50**	**$149,951.09**	**$543,996.39**	**$418,503.61**
Total Multi-Year Project Costs	**$6,638,829.00**	**$4,948,459.00**	**$646,091.00**	**$1,019,279.00**	**$23,717.96**	**$823,191.05**	**$2,979,303.02**	**$3,659,525.98**

Riley Purgatory Bluff Creek Watershed District
Balance Sheet
As of July 31, 2019

ASSETS

Current Assets

General Checking-Old National	$2,407,870.29	
Checking-Old National/BMW	46,115.29	
Investments-Standing Cash	10,091.07	
Investments-Wells Fargo	4,374,476.67	
Accrued Investment Interest	22,486.64	
Due From Other Governments	25,021.73	
Taxes Receivable-Delinquent	29,411.16	
Pre-Paid Expense	27,361.36	
Security Deposits	7,244.00	
Total Current Assets:		**$6,950,078.21**

LIABILITIES AND CAPITAL

Current Liabilities

Accounts Payable	$554,661.37	
Retainage Payable	23,657.38	
Salaries Payable	18,475.25	
Permits & Sureties Payable	830,481.00	
Deferred Revenue	29,411.16	
Total Current Liabilities:		**$1,456,686.16**

Capital

Fund Balance-General	$5,166,684.23	
Net Income	326,707.82	
Total Capital		**$5,493,392.05**
Total Liabilities & Capital		**$6,950,078.21**

RILEY PURGTORY BLUFF CREEK WATERSHED DISTRICT
Old National Bank VISA Activity
July 31, 2019

DATE	PURCHASED FROM	AMOUNT	DESCRIPTION	ACCOUNT #	RECEIPT
07/22/19	Verizon Wireless	283.76	Telecommunications	10-00-4240	Y
07/23/19	North American Lake Mgmt.	909.00	Conference Registration & Training	10-00-4321	Y
07/24/19	Delta	508.00	Flight to No.American Lake Mgmt.	10-00-4321	Y
07/29/19	Randy's Sanitation	91.80	Office Maintenance	10-00-4215	Y
08/01/19	ComputerFixx	137.44	Computer Fixing	10-00-4635	Y
08/05/19	Adobe	16.10	Software	10-00-4203	Y
08/12/19	Microsoft	120.96	Software	10-00-4203	Y
08/12/19	Amazon	205.89	Office Supplies	10-00-4200	Y
08/14/19	Delta	318.60	Training & Conference	10-00-4320	Y
08/14/19	Costco	21.40	Supplies for Meeting	10-00-4260	Y
08/14/19	MAWD Governance 101	1,250.00	Workshop Registration	10-00-4010	Y
		$3,862.95	**General Administration Total**		
07/17/19	Cub Foods	77.98	Food for Property Manager Training	20-08-4265	Y
07/18/19	Dell Business On-Line	858.99	GIS Computer	20-13-4635	Y
07/19/19	Amazon	(15.84)	Data Collection Refund	20-13-4260	Y
07/19/19	Kowalski's	57.18	Food for Property Manager Training	20-08-4265	Y
07/19/19	Kowalski's	8.78	Food for Property Manager Training	20-08-4265	Y
07/19/19	Amazon	464.85	Data Collection Supplies	20-05-4201	Y
07/19/19	Dell Business On-Line	107.36	GIS Computer	20-13-4635	Y
07/22/19	Office Depot	154.27	Education & Outreach Supplies	20-08-4200	Y
07/22/19	Dell Business On-Line	1,020.05	GIS Computer	20-13-4635	Y
07/22/19	Speedway	19.52	Data Collection Gas	20-13-4322	Y
07/22/19	USPS	420.00	Postage for Wetland Cards	20-13-4280	Y
07/22/19	Signarama	127.45	Education & Outreach Supplies	20-08-4260	Y
07/22/19	Hotels.com	874.15	Conference Hotel Reservations	20-00-4320	Y
07/23/19	USPS	335.00	Postage for Wetland Cards	20-13-4280	Y
07/23/19	USPS	770.00	Postage for Wetland Cards	20-13-4280	Y
07/23/19	Costco	96.17	Food for Property Manager Training	20-08-4265	Y
07/23/19	Facebook	35.00	Advertising	20-08-4260	Y
07/24/19	Smith Eden Prairie	90.88	Food for MWS	20-08-4275	Y
07/24/19	Frattallone's	38.11	Data Collection Supplies	20-05-4201	Y
07/24/19	State Line Bag (PayPal)	238.54	Anniversary Event	20-08-4260	Y
07/24/19	Celestial Gifts LLC (PayPal)	78.00	Anniversary Event	20-08-4260	Y
07/25/19	Speedway	56.95	Data Collection Gas	20-05-4322	N
07/25/19	Jimmy John's	220.97	Food for Property Manager Training	20-08-4265	Y
07/25/19	Brueggers (SQ)	68.09	Food for Property Manager Training	20-08-4265	Y
07/25/19	Amazon	89.69	Data Collection Supplies	20-05-4260	Y
07/26/19	Menards	18.27	Data Collection Supplies	20-05-4201	Y
07/26/19	Voltaic Systems 212	273.95	Data Collection Supplies	20-05-4201	Y
07/26/19	Amazon	258.82	Data Collection Supplies	20-05-4201	Y
07/29/19	McMaster Carr	68.60	Data Collection Supplies	20-05-4201	Y
07/29/19	Eddie Bauer	71.98	Education & Outreach Supplies	20-08-4260	Y
07/30/19	Merlin's Ace Hardware	67.27	Data Collection Supplies	20-05-4201	Y
07/30/19	Amazon	312.67	Education & Outreach Supplies	20-08-4260	Y
07/30/19	Amazon	53.03	Education & Outreach Supplies	20-08-4200	Y
07/31/19	BagzDepot (SP)	385.70	Anniversary Event	20-08-4260	Y
08/01/19	Lunds & Byerly's	45.12	Food for Property Manager Training	20-08-4260	Y

RILEY PURGTORY BLUFF CREEK WATERSHED DISTRICT
Old National Bank VISA Activity
July 31, 2019

DATE	PURCHASED FROM	AMOUNT	DESCRIPTION	ACCOUNT #	RECEIPT
08/01/19	MN Historical Society (SP)	4.80	Anniversary Event	20-08-4260	Y
08/02/19	Holiday Stations	72.36	Data Collection Gas	20-05-4322	Y
08/05/19	Amazon	(232.94)	Data Collection Refund	20-05-4201	Y
08/05/19	Eddie Bauer	31.99	Education & Outreach Supplies	20-08-4260	Y
08/06/19	Amazon	4.50	Data Collection Supplies	20-05-4201	Y
08/07/19	Speedway	13.85	Wetland Gas	20-13-4322	Y
08/07/19	Hologram	100.00	Data Collection Supplies	20-05-4201	Y
08/07/19	Amazon	49.97	Data Collection Supplies	20-05-4201	Y
08/08/19	Holiday Stations	64.09	Data Collection Gas	20-05-4322	Y
08/09/19	Sigma Aldrich, Inc.	189.43	Data Collection Supplies	20-05-4201	Y
08/09/19	Amazon	54.95	Education & Outreach Supplies	20-08-4260	Y
08/12/19	Amazon	10.10	Data Collection Supplies	20-05-4201	Y
08/13/19	OSH Park	25.80	Data Collection Supplies	20-05-4201	Y
08/13/19	Amazon	143.25	Data Collection Supplies	20-05-4201	Y
08/13/19	Amazon	24.99	Data Collection Supplies	20-05-4201	Y
08/13/19	Amazon	60.05	Data Collection Supplies	20-05-4201	Y
08/14/19	Delta	288.60	Education & Outreach Supplies	20-08-4320	Y
08/14/19	Costco	79.78	Supplies for Meeting	20-08-4275	Y
08/15/19	Amazon	131.98	Data Collection Supplies	20-05-4201	Y
08/15/19	Grey to Green Conf. (Green Roofs)	145.00	Conference Registration	20-08-4265	Y
08/16/19	City of Eden Prairie	65.00	Anniversary Event	20-08-4260	Y
08/16/19	Holiday Stations	27.52	Wetland Gas	20-13-4322	Y
08/16/19	Facebook	19.82	Advertising	20-08-4260	Y
08/16/19	Uline	32.76	Anniversary Event	20-08-4260	Y
		$9,255.20	**District-Wide Total**		
		$13,118.15	**GRAND TOTAL**		

RILEY
PURGATORY
BLUFF CREEK
WATERSHED DISTRICT

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

August 28, 2019

To: The RPBCWD Board of Managers
Re: Preserve Association Application for a Watershed Stewardship Grant

The Watershed Stewardship (cost-share) Grant review committee met on August 20 to review grant applications. One application was received from an association, with a request over $10,000. As per the updated grant process, the application was reviewed by the committee and a funding recommendation made. The application is now being presented to the board for final approval decision.

Applicant: The Preserve Association, a non-profit corporation
Project title: First Native Planting

Description: A two-part project:

A) Restore 19,00 sf of mowed grass near Neil Lake to native plantings and a natural wildlife habitat.
B) Reclaim 4,800 sf near pool from Japanese Knotweed and replace with native grasses and flowers.

Cost: $22,928 Grant request: $17,196
Committee recommendation: fund at $15,071

Recommendation rationale:
Components A and B were each scored independently due to their differing goals and methods. Component A has a larger footprint and ecological impact and a smaller cost per square foot. Component B is more expensive per square foot. This is due to the intensive management for the Japanese Knotweed, and the choice to use more potted plants due to the high-traffic nature of the pool area. Taking into account these considerations, the turf conversion to native plantings (A) scored an 11, and the committee recommended funding it at the full 75% of applicable costs ($7857). The Japanese Knotweed to native plants (B) scored a seven. A seven is the midpoint of the scoring system, and the committee recommended funding at 50% of applicable costs ($7214).

Please find attached the review sheet and application for your consideration.
Sincerely,

Michelle Jordan
Communications & Project Manager

It was moved by Manager _____ and seconded by Manager _____ to fund/not fund the Preserve Associations application for First Native Planting at up to $_____.

CBB

APPLICATION EVALUATION WORKSHEET

Reviewer instructions

Please be specific when commenting. Include application sections/quotations where possible. Project must score at least a 5 to be eligible for funding. Projects that score a zero for questions 4 or 5 may be recommended for funding on condition that additional information or modification be provided.

Section 1: Applicant information

Name PRESERVE ASSOCIATION Address 11221 ANDERSON LAKES PKWY EDEN PRAIRIE MN 55344 Applicant type ASSOCIATION / NON-PROFIT

Project type NATIVE PLANTING RESTORATION Project cost $ 22929 Amount requested $ 17,196

Section 2: Eligibility pre-screening

If yes, forward to grant review committee. If no, stop reviewing. Return to applicant with request for information.

1. Does the project take place within the watershed district? ..... (Y) / N
2. Did CCSWCD technician conduct a site vist? ..... (Y) / N / NA
3. Are the following application pieces included? (check all present) ..... (Y) / N

☑ Grant application form ☑ Project designs (including plant list if applicable)

☐ Project cost estimate (with contractor bids as appropriate) ☑ Site map (if applicable)

Section 3: Project design

If yes, score a 1. If no, score a 0.

		Buffer	Pool plants
4. Are the designs thorough and provide adequate detail?	____	1	0
Explain: NEED #'S ON AMOUNT OF PLANTS			
5. Are the cost estimate and bids reasonable?	____	1	0
Explain: PRAIRIE AREA REASONABLE POOL AREA ?			

Section 4: Program outcomes

Goals are listed on page two. Score a point for each plan goal the project addresses up to a maximum of 5 points. If none, application does not qualify for funding.

6. Does the project support any of the 10-Year Plan goals?	____	4	2
Score a 2 if the project has quantifiable benefits. Score a 4 if the project provides exceptional benefits.			
7. Does the project have quantifiable benefits to water quality, habitat, flooding?	____	2	2
Explain: (or)			
Score a 1 for each item the project addresses.			
8. Will the project increase awareness of water resource issues?	____	1	1
Explain:			
9. Will the project increase visibility and general knowledge of clean water projects?	____	1	1
Explain:			
10. Is the applicant willing to have the project shared (on website, social media, tours etc)?	____	1	1
Total:	____	11	7

Funding recommendation:

☐ Fund fully ☑ Do not fund ☐ Fund partially ☐ Request modification/clarification

Review notes:*

NEED TO HAVE NUMBERS OF PLANTS & MAP OF LOCATION FOR MAINTENENCE

Fund prairie @ 75%

FUND POOL AREA @ 50% (Also - Difference in cost + extra $ for pools)

CONSIDER LONG-TERM MAINTENANCE

$ JAPANESE KNOTWEED DIFFICULT TO ERADICATE

Reviewer guide

Points possible: 14

1-4 = do not fund

5-8 = fund/request modification if needed

9-14 = fund

10 YEAR PLAN GOALS

Use these goals in evaluating question #6

Goal	Strategy
WQual1, WQual2, & WQual3 (Water Quality)	WQual S1. The District seeks to minimize the negative impacts of erosion and sedimentation through the District's regulatory, education and outreach, and incentive programs. WQual S3. The District encourages cities and developers to seek opportunities to incorporate habitat protection or enhancement into development and redevelopment projects. WQual S6. The District will seek opportunities to establish and preserve natural corridors for wildlife habitat and migration. WQual S7. The District will promote the use of natural materials and bioengineering for the maintenance and restoration of shorelines and streambanks where appropriate. WQual S11. The District recognizes the multiple benefits of vegetated buffers and promotes the use of vegetated buffers around all waterbodies. WQual S12. The District will assist and cooperate with cities, MPCA, MDNR, MnDOT, other watershed and other stakeholders in implementing projects or other management actions based on the Minnesota Pollution Control Agency's Twin Cities Metro Chloride TMDL. WQual S13. The District will continue to minimize pollutant loading to water resources through implementation of the District's capital improvement, regulatory, education and outreach, and incentive programs. WQual S15. The District will cooperate with other entities to investigate treatment effectiveness of emerging practices.
WQuan2 (Water Quantity)	WQuan S1. The District will preserve and enhance the natural function of the floodplain and maintain floodplain storage volume. WQuan S2. The District will promote strategies that minimize baseflow impacts. WQuan S3. The District will continue to promote infiltration, where feasible, as a best management practice to reduce runoff volume, improve water quality, and promote aquifer recharge. WQuan S7. The District promotes/encourages cities and developers to implement Low Impact Development (LID) practices and will work with cities to reduce regulatory barriers to LID practices. WQuan S9. The District will work with cities and other stakeholders to encourage conservation practices (e.g. water reuse) to protect creeks, lakes and wetlands.

QUATIFICATION OF BENNEFITS

Use for evaluating question #7. Check and fill in all those that apply.

- ☐ Habitat restoration: 24800 ft^2
- ☐ Pollution reduction: 0.71 lb phosphorus/year
- ☐ Pollution reduction: 58.94 lb sediment/year
- ☐ Pollution reduction: _____ lb salt/year
- ☐ Flood reduction _____ gal water captured/year
- ☐ Flood reduction _____ gal water infiltrated/year
- ☐ Flood reduction _____ gal water filtered/year
- ☐ Other _____

WATERSHED STEWARDSHIP GRANT

Application

Riley Purgatory Bluff Creek Watershed District
18681 Lake Drive East
Chanhassen, MN 55317
(952)-607-6481
rpbcwd.org

Instructions: You may apply either online, or by submitting this application to mjordan@rpbcwd.org. 2019 applications will be reviewed monthly through November. Only complete applications will be considered. A complete application includes:

☒ Application form ☒ Cost-estimate* ☒ Project designs and/or equipment specifications

☒ Site map of project location (if applicable) ☒ Plant list (if project includes vegetation)**

☒ Site visit from CCSWCD technician

**Cost-estimate must be thorough and specific. If using third party contractors, include bids.*
***Restorations & buffers may only use Minnesota native plants. Stormwater best management practices (like raingardens) may incorporate approved cultivars and non-natives.*

1. Applicant information

Applicant type

☐ Residential (homeowner) ☒ Non-profit ☐ Association

☐ School ☐ Business ☐ Public agency or local government

Property owner information

Names (s) **The Preserve Association**

Mailing address **11221 Anderson Lakes Pkwy** City **Eden Prairie** State **MN** Zip **55344**

Phone **9529418400** Email **scott@preserveassociation.com**

Primary contact

Who should the watershed district contact about questions with the application?

☐ Same as above

Name (s) **Scott Anderson** Role **General Manager**

Phone **9529418400** Email **scott@preserveassociation.com**

2. Project summary

Project title **First Native Planting**

Total cost **$22,928** Grant amount requested **$17,196**

Estimated start & completion dates **August 2019 to summer 2020**

Type of project (s)

Check all that apply.

☐ Raingarden ☒ Buffer or shoreline restoration ☒ Habitat restoration

☒ Capture & reuse ☐ Pervious pavers ☐ Vegetated swale

☐ Equipment purchase/retrofit ☐ Other stormwater best management practice

If you selected **Equipment** or **Other**, briefly describe

Project location

Mailing address 11221 Anderson Lakes Pkwy

City **Eden Prairie** State **MN** Zip **55344**

PID **2411622230283**

The property ID number (PID) can be found on the Hennepin County or Carver County online property information maps.

Project summary

Give a 2-3 sentence summary of what you propose to do.

Second PID# - 2411622230121

A) **Restore 19,000 SF of mowed grass near Neill Lake to native plantings and a natural wildlife habitat**

B) **Reclaim 4,800 SF near pool from Japanese Knotweed and replace with native grasses and flowers**

3. Project details

Location description

Projects must take place in the watershed district. ☒ Yes, this project is is within the district.

Describe the current conditions of your property, relevant site history and past management.

A) **This area has been mowed weekly and treated with fertilizers and broad leaf herbicide for 50 years.**

B) **Japanese Knotweed was planted about 45 years ago as buffet near the pool. No attempts have been made to control until recently.**

Project description

Describe the project in more detail, including any site issues you are hoping to address though it.

The project is described in detail in the Natural Shores proposal.

Both of these areas are among the highest traffic areas in The Preserve. For that reason, we are very sensitive to the timetable of results. We want to show our sceptics a fairly quick transition especially near Neill Lake where we are replacing manicured grass.

We prefer the Natural Shores proposal for the following reasons:

- **Natural Shores has a more aggressive (necessary) approach to the Japanese Knotweed eradication near the pool.**
- **The extensive use of plugs as well as the robust size of the plugs.**
- **We have a population made up largely of residents with a "golf course" mind set. Seeing results on a shorter timeframe will facilitate acceptance of our future efforts to reclaim additional natural habitat.**
- **Plugs will also increase the overall survival rate.**
- **Plugs will allow a more strategically designed area as opposed to a broadcast of seed mixture providing showier areas nearer the walking paths.**
- **Shredded hardwood mulch (pool area) is more appealing aesthetically than straw.**

Summarize your workplan for how the project will be completed.

Natural Shores will complete the site preparation and planting phases. We then will retain them for two years to maintain and instruct our crew on maintenance techniques moving forward

Who will be doing the work, and where will you be purchasing supplies/equipment from?

Natural Shores

4. Outcomes

Plan goals

The watershed district is guided by a planning document called the 10-Year Watershed Management Plan. The Watershed Stewardship Grant program was created to support the goals and strategies of this plan. Which of the following 10 -Year Plan strategies will your project support? (See goals sheet).

☐ WQual S1 ☒ WQual S3 ☒ WQual S6 ☒ WQual S7 ☒ WQual S11 ☐ WQual S12
☒ WQual S13 ☐ WQual S15 ☐ WQuan S1 ☐ WQuan S2 ☐ WQuan S3 ☐ WQuan S7
☐ WQuan S9

Explain how your project supports the strategies you selected.

By removing mowed grasses requiring fertilizer and herbicide near Neill Lake the pollutant run off is reduced. The native grasses and flowers will attract wildlife including pollinators. We will add additional bird feeders and houses designed to enhance the attraction of wildlife.

Quantifiable benefits

The grant program seeks to fund projects that have quantifiable benefit to water quality, habitat, and flood risk reduction. Please check the benefits your project will have. Include estimates where possible.

Water quality (pollution reduction)

- ☐ Phosphorus reduction lbs/year
- ☐ Sediment (TSS) reduction lbs/year
- ☐ Salt reduction lbs/year

Flood risk reduction

- ☐ Water capture/storage gallons/year
- ☐ Water infiltration gallons/year
- ☐ Water abstraction gallons/year

Habitat

- ☒ Habitat restoration **24,800** ft²

Other

- ☐

If you would like to say more about how your project will benefit water quality, habitat, and flood risk reduction, include a brief statement here:

Education

The grant program also exists to increase awareness and stewardship around water issues and solutions. Projects that incorporate community education and outreach are given preference. We encourage you to be creative as you think of ways to weave education into your project.

How will your project increase awareness of water resource issues?

We will use our web site, newsletter and Facebook to communicate the purpose of the project s well as its benefits. We will also share our long range plan for eradication of invasive plants and replace with native plantings throughout The Preserve.

How will the project increase visibility and general knowledge of clean water practices and/or projects?

In addition to the platforms listed above. Being as highly visible an area as it is, the curiosity will be large. We will keep literature in our offices to inform and promote residents to follow suit on their own properties.

May we share your project with on our website, social and other media? ☒ Yes ☐ No

Could we highlight your project on a tour, or training event? ☒ Yes ☐ No

5. Maintenance

If your project is approved for funding, you will need to enter into a maintenance agreement with the Riley Purgatory Bluff Creek Watershed District.

How will the project be monitored and maintained?

After the two-year training and maintenance period with Natural Shores, my grounds crew will monitor and maintain on a monthly basis.

6. Reporting

Grant recipients must submit a project report within 30 days of completing the project, and a yearly report with updates on maintenance and function. These are submitted online.

How/what will you track to fulfill these requirements?

We will document our activities on a monthly basis and recap in an annual report following the growing season.

7. Site visit

Most applications require a site visit from the Carver County Soil and Water Conservation District (CCSWCD) tech prior to applying, or at least prior to the application deadline.

Have you had a site visit with the CCSWCD technician?

☒ Yes ☐ No, but I have one scheduled ☐ No, and I confirmed that I do not need one

Authorization to submit application

Name of landowner(s) or responsible party authorized to submit this application and sign any subsequent funding agreement(s).

Name (s) **Scott Anderson** Date **8/6/2019**

☒ I/we submit this application for consideration for a 2019 Watershed Stewardship Grant.

The Preserve Association

Plan for clearing invasive and replanting native species

2018

- Grant permission to Rick & Jan Neville to develop area SW of Neill Lake to remove invasive species and restore a native prairie and pollinator garden.
- Cut and treat buckthorn on Neill Lake point. Plant with a no mow fescue.
- Remove invasive vines, buckthorn and dead brush west side of pool
- Cut and treat buckthorn on corner of Franlo and Anderson Lakes Pkwy
- Begin eradicating Japanese Knotweed from pool area and near barn

2019

- Convert 19,000 SF mowed grass area near brush pile to native grasses and flowers
- Plant west side of pool and dive well with Native grasses and flowers to replace Japanese knotweed, hostas, mowed grass and invasive vines
- Remove invasive vines and buckthorn:
    - East side of Neill Lake near Wilwerding bench
    - North and East sides of pool fence
    - Lower Neill Lake Rd & Anderson Lakes Pkwy
    - North side of Stan Nesbitt Trail
    - Inlet on Neill Lake near Bay Point Apartments
- Seed native grasses and flowers on west facing slope at High Point tot lot
- Plant native shrubs and bushes along north and east sides of pool fence
- Plant native garden where trees were removed behind 9130 Flyway Circle
- Lower Neill Lake Rd
    - Plant 1-2 White Pine in to add to existing grove
    - Add shrubs and bushes along decorative rocks to be a visual barrier

2020 to 2027

- Maintain all newly developed native plantings through monthly inspection and care
- Target areas each year for additional buckthorn and invasive removal and replanting with natives
- Monitor, cut and retreat all areas from previous years
- Attempt to reduce the mowed grass areas and replace with a combination of no mow grasses, native flowers, grasses, shrubs, bushes and trees.
- Continually develop this plan as a fluid living document.

Date: 8/16/2019

Proposal to Create a Native Landscape at the Preserve Association Eden Prairie, MN

Prepared for:
Preserve Association
Scott Anderson
11221 Anderson Lakes Parkway
Eden Prairie, MN 55344
952-941-8400
scott@preserveassociation.com

Prepared by:
John Condon
Site Manager
952-955-3400
jcondon@prairieresto.com

Project Area:
Pool Area – 1,500 sq ft
Prairie Area – 0.5 acres

Prairie Restorations, Inc.

PO Box 1127
Watertown, MN 55388
www.prairieresto.com

A. **Company Background:** (Follow the blue links to learn more)

Prairie Restorations, Inc. (PRI) has been dedicated to the restoration and management of native plant communities for over 40 years. We are fortunate to have worked with thousands of clients on a wide variety of projects in both the public and private sectors throughout the Upper Midwest.

The PRI staff currently consists of 54 full-time professionals and about an equal number of seasonal employees which operate out of six Minnesota locations. Most of the staff have B.S. degrees in natural resource related fields such as biology, forestry, horticulture or wildlife. As a full service restoration company, PRI is able to provide our clients expertise and service in all facets of native landscape restoration. Along with consulting, design, installation and land management services, we also produce our own local ecotype seed and plant materials which are used on all of our projects.

The PRI Team is committed to and passionate about protecting and enhancing our valuable natural resources. It is this dedication that is brought to each and every one of our projects. We are proud to offer the best expertise, services and products available in the industry and appreciate the opportunity to provide you with this proposal.

B. **Project Overview:**

1. Establishing a native landscape in this area will provide a long term, ecologically sound landscape that is adapted to the existing conditions of the site. This native landscape will not require irrigation, black dirt or other soil amendments. It will add a distinctive look to the property as well as provide valuable habitat for songbirds, pollinators, and other wildlife.

2. The Pool area will be seeded with native prairie grasses and wildflowers that are adapted to the well drained, sunny conditions on the sloped area. In the shaded area it will be planted with woodland grasses and flowers that are adapted to the shady conditions.

3. The Prairie area will be seeded with native prairie grasses and wildflowers that are adapted to the mesic soil and sunny conditions

4. To establish this planting, the site will be treated with herbicide to kill existing weeds (Pool area will be treated multiple times), Harley raked and harrowed to provide a smooth seedbed, seeded with native grasses and wildflowers, and mulched with straw to protect the seeding and enhance germination.

5. An estimate for 4 years of Establishment Period Vegetation Management is included in this proposal.

C. **Project Dimensions and Planting Zones:**

1. For purposes of vegetation restoration, the project area is separated into two zones, the **Pool area**, and the **Prairie area**.

2. **The Pool area is approximately 1,500 square feet.** This area is full sun to full shade. The soil is well drained. This zone will be planted with upland and woodland native seed mixes.

3. **The Prairie area is approximately 0.5 acres.** This area is full sun to part shade. The soil is mesic. This zone will be planted with prairie native seed mixes.

D. Site preparation:

1. **Pool Area.** In areas with actively growing vegetation, apply a glyphosate herbicide (Roundup® or equivalent), a triclopyr herbicide (Garlon 3A® or equivalent) with appropriate surfactants, as per manufacturer's directions. Allow a minimum of 30 days before disturbing the vegetation with other procedures. Multiple treatments likely needed.

2. **Prairie Area.** In areas with actively growing vegetation apply a glyphosate herbicide (Roundup® or equivalent) as per manufacturer's directions. Allow a minimum of 10 days before disturbing the vegetation with other procedures.

3. Mow the dead vegetation and remove excess thatch as needed.

4. **Pool Area.** Respray with a glyphosate herbicide (Roundup® or equivalent) if regrowth of vegetation occurs and when it reaches approximately 8" to 12" in height.

5. Harley rake the soil to remove thatch and create a smooth seedbed.

6. Hand rake (areas not accessible with tractor) the soil to create a firm, smooth seedbed.

E. Seed and Seeding:

1. Seeding dates will be in the spring or summer before August 25th or in the fall between September 20th and freeze-up.

2. All seed will be applied by broadcasting.

3. In areas too steep or small for equipment, the seed will be hand broadcast and raked into the soil.

4. The seed mixes will consist of the following species and amounts:

Grass Seed Mixes

Pool Area:

PRI-Watertown Short Dry Grass Mix B (Sand/Loam) (3 lbs)	% by weight (PLS)
Little bluestem (*Schizachyrium scoparium*)	40
Side oats grama (*Bouteloua curtipendula*)	33
Blue grama (*Bouteloua gracilis*)	10
Poverty oat grass (*Danthonia spicata*)	5
Sand dropseed (*Sporobolus cryptandrus*)	5
June grass (*Koeleria macrantha*)	4
Slender wheatgrass (*Elymus trachycaulum*)	3

PRI-Watertown Shady Garden Base Layer Grass Mix (1 lb)	% by weight (PLS)
Bottlebrush grass (*Elymus hystrix*)	35
Silky wild rye (*Elymus villosus*)	25
Plains oval sedge (*Carex brevior*)	20
Kalm's brome (*Bromus kalmii*)	18
Sprengel's sedge (*Carex sprengelii*)	2

Prairie Area:

PRI-Watertown Mixed Height Mesic Grass Mix (8 lbs)	% by weight (PLS)
Little bluestem (*Schizachyrium scoparium*)	22
Big bluestem (*Andropogon gerardii*)	20
Side oats grama (*Bouteloua curtipendula*)	20
Indian grass (*Sorghastrum nutans*)	20
Canada wild rye (*Elymus canadensis*)	8
Blue grama (*Bouteloua gracilis*)	5
Slender wheatgrass (*Elymus trachycaulum*)	3
Switch grass (*Panicum virgatum*)	2

Wildflower Seed Mixes

Pool Area:

PRI-Watertown Short Dry Forb Mix B (Sand/Loam) (4oz)	% by weight (PLS)
Purple prairie clover (*Dalea purpurea*)	18
Hoary vervain (*Verbena stricta*)	18
Black-eyed Susan (*Rudbeckia hirta*)	15
Leadplant (*Amorpha canescens*)	10
Golden Alexander (*Zizia aurea*)	8
Common ox-eye (*Heliopsis helianthoides*)	6
Bush clover (*Lespedeza capitata*)	4
Prairie rose (*Rosa arkansana*)	4
Stiff goldenrod (*Solidago rigida*)	4
Fragrant giant hyssop (*Agastache foeniculum*)	3
Common milkweed (*Asclepias syriaca*)	1
Butterfly weed (*Asclepias tuberosa*)	1
Yarrow (*Achillea millefolium*)	1
Stiff tickseed (*Coreopsis palmata*)	1
White prairie clover (*Dalea candida*)	1
Showy penstemon (*Penstemon grandiflorus*)	1
Gray goldenrod (*Solidago nemoralis*)	1
Smooth aster (*Symphyotrichum laeve*)	1
Western spiderwort (*Tradescantia occidentalis*)	1

PRI-Watertown Shady Garden Base Layer Forb Mix (2 oz)	% by weight (PLS)
Wild geranium (*Geranium maculatum*)	20
Columbine (*Aquilegia canadensis*)	18
Early meadow rue (*Thalictrum dioicum*)	16
False Solomon's seal (*Maianthemum racemosum*)	18
Calico aster (*Symphyotrichum lateriflorum*)	8
Lindley's aster (*Symphyotrichum ciliolatum*)	7
Large-leaved aster (*Eurybia macrophylla*)	5
Jacob's ladder (*Polemonium reptans*)	5
White snakeroot (*Eupatorium rugosum*)	3

Prairie Area:

PRI-Watertown Mixed Height Mesic Forb Mix (12oz)	% by weight (PLS)
Purple prairie clover (*Dalea purpurea*)	16
Black-eyed Susan (*Rudbeckia hirta*)	14
Leadplant (*Amorpha canescens*)	10
Golden Alexander (*Zizia aurea*)	8
Common ox-eye (*Heliopsis helianthoides*)	6
Yellow coneflower (*Ratibida pinnata*)	5
Hoary vervain (*Verbena stricta*)	5
Bush clover (*Lespedeza capitata*)	4
Stiff goldenrod (*Solidago rigida*)	4
Fragrant giant hyssop (*Agastache foeniculum*)	3
Canada milk vetch (*Astragalus canadensis*)	3
Prairie rose (*Rosa arkansana*)	3
Blue vervain (*Verbena hastata*)	3
Canada tick-trefoil (*Desmodium canadense*)	2
Yarrow (*Achillea millefolium*)	1
Common milkweed (*Asclepias syriaca*)	1
Butterfly weed (*Asclepias tuberosa*)	1
Stiff tickseed (*Coreopsis palmata*)	1
White prairie clover (*Dalea candida*)	1
Gray goldenrod (*Solidago nemoralis*)	1
Heath aster (*Symphyotrichum ericoides*)	1
Smooth aster (*Symphyotrichum laeve*)	1
Panicled aster (*Symphyotrichum lanceolatum*)	1
New England aster (*Symphyotrichum novae-angliae*)	1
Western spiderwort (*Tradescantia occidentalis*)	1

F. Grass and Wildflower Mix Definitions and Preferred Locations:

1. Short/Dry Prairie grass and forb mixes are ideal for sandy or gravelly soils, along walkways and around buildings where shorter vegetation is desirable. (Height: 1'-3') ***This seed mix is composed of species that made up the shortgrass or sand prairies; it is intended for dry and droughty areas.*

2. Mixed Height/Mesic and Tall Prairie grass and forb mixes are suitable for most sites and a variety of soils. (Height: 2.5'-6') ***Historically this is the selection of species that made up the vast Minnesota tallgrass prairie.*

3. Woodland mixes are for heavily shaded sites and a variety of soils. (Height: mostly 2'-3' with scattered taller species) ***This is a selection of species that make up the ground cover in established forests.*

G. Erosion Control:

1. Cover crop will be sown along with the native grasses. This is an annual grass species that germinates quickly and will reduce the risk of soil erosion on the site. Oats will be used for a spring or summer seeding, and winter wheat will be used for a fall seeding.

2. The seeded areas will be mulched with clean straw at a rate of 1.5 tons per acre.

3. Small or inaccessible areas will be hand mulched.

H. Plants and Planting:

1. Immediately following the implementation of any erosion control measures, the planting will be further diversified with native wildflower and/or grass plants (plugs). These will be planted individually in appropriate microhabitats throughout, or in designated areas of the project. The plants used will consist primarily of species other than those previously seeded.

2. From the following list a minimum of 15 species will be used.

3. Plant a total of 750 plugs.

Wildflowers

Wood anemone *(Anemone quinquefolia)*
Columbine (*Aquilegia canadensis*)
Prairie sage (*Artemisia ludoviciana*)
Wild ginger (*Asarum canadense*)
Butterfly weed (*Asclepias tuberosa*)
Whorled milkweed (*Asclepias verticillata*)
Large-leaved aster *(Eurybia macrophylla)*
Wild geranium (*Geranium maculatum*)
Virginia waterleaf (*Hydrophyllum virginianum*)
False solomon's seal (*Maianthemum racemosum*)
Woodland phlox (*Phlox divaricata*)
Prairie phlox (*Phlox pilosa*)
Mountain mint (*Pycnanthemum virginianum*)
Yellow coneflower (*Ratibida pinnata*)
Prairie rose (*Rosa arkansana*)
Zig zag goldenrod (*Solidago flexicaulis*)
Stiff goldenrod (*Solidago rigida*)
Heath aster (*Symphyotrichum ericoides*)
Smooth aster (*Symphyotrichum laeve*)
New England aster (*Symphyotrichum novae-angliae*)
Early meadow rue (*Thalictrum dioicum*)
Western spiderwort (*Tradescantia occidentalis*)
Blue vervain (*Verbena hastata*)

Grasses and Sedges

Pennsylvania sedge (*Carex pensylvanica*)
Wood sedge (*Carex rosea*)
Sprengel's sedge (*Carex sprengelii*)

I. Management:

1. Management (maintenance) plays a vital role in the eventual success of any native landscape installation, especially during the establishment period. Active management of your native landscape is highly recommended to give the project the best opportunity for long term success.

2. During the germination year, the project area may need to be mowed to control annual weed development. If a "closed" canopy of weed cover develops, it should be mowed to aid in the growth of the prairie seedlings by reducing competition. Mowing may also be necessary if the weeds are about to set seed. Optimum cutting height, depending on the wildflower species present, is typically 4 to 6 inches. It is important that the clippings are finely mulched in order to prevent smothering. PRI can provide the mowing services if desired. Please refer to the cost section of this proposal for a mowing quote.

3. In years following the first growing season, Integrated Plant Management (IPM) services are utilized to control annual, biennial and perennial weed species within the developing native landscape. Typical IPM services include spot herbicide spraying, spot mowing, herbicide wicking or hand weeding. These services are billed on a per trip cost agreed upon prior to the growing season. Rough estimates are provided in the cost section of this proposal for these future management activities.

4. Prescribed burning is a highly effective management tool and may be recommended for your project as it matures. Burning stimulates native species to grow more robustly and also help to deter the presence of many non-native and/or woody species. Prescribed burning, when recommended, will be provided as a separate lump sum cost.

5. In lieu of burning, or during years when the site is not burned, a Spring Dormant Mow can be used to "clean up" previous year's growth and set the table for the new growing season. This mowing would occur early in the spring, as soon as conditions permit. Spring Dormant Mowing, when recommended, will be provided as a separate lump sum cost.

J. Anticipated Management:

The following table conveys the anticipated management procedures for your project during the first four growing seasons. Estimates for these procedures are provided in the cost section of this proposal. It is important to note that the 'first growing season' for a native restoration begin immediately after planting, and as such may overlap calendar years. This means that the 2-3 mows recommended during the first growing season may actually occur in two different calendar years.

Year	Projected Management Procedures
First	Complete site mows to control annual weed canopy (2-3 mowings as needed) Project monitoring
Second	Integrated Plant Management (IPM) – includes spot spraying, spot mowing, wicking, hand weeding, and other techniques to control weeds and invasive species (3-4 visits are typical)

Project monitoring

Third Integrated Plant Management (IPM) – 3-4 visits are typical
Project monitoring

Fourth Spring burn to encourage native plant growth and to help deter the presence of non-native and woody species
Integrated Plant Management (IPM) – 3-4 visits are typical
Project monitoring

K. Costs:

Project Installation:

Project set up and mobilization $750

Pool Area:

Herbicide treatment (*1 spray @ $300*) $300
Site preparation (*seedbed prep*) $980
Seed and seeding $1,250
Straw mulch $250
Native seedling plugs (*150 installed @ $2.75 each*) $412.50

Prairie Area:

Herbicide treatment (*1 spray @ $00*) $400
Site preparation (*Harley Raking*) $850
Seed and seeding $1,550
Straw mulch and anchoring (*0 acres @ $00 /acre*) $600
Native seedling plugs (*600 installed @ $2.75 each*) $1,650

Total **$8,992.50**

Vegetation Management:

Future Management Estimates:

First growing season *(assumes 3 IPM visits)* **$1,950**
Second growing season *(assumes 3 IPM visits)* **$2,100**
Third growing season *(assumes 3 IPM visits)* **$2,100**
Fourth growing season *(IPM and a prescribed burn)* ..... **TBD**

Please note: The ***Future Management Estimates*** are meant to convey typical management costs for projects of similar size and characteristics. Prior to each growing season, you will receive a specified quote from your project manager detailing the recommended management strategies and associated costs for your project.

L. Contract:

If you accept the proposal as written and want to proceed with the project, please sign the contract below.

Owner: _____ **Date:** _____

Signed: _____ **Title:** _____

Project: _____ **Contract Value: $** _____

Contractor: *Prairie Restorations, Inc.*

Signed: _____ **Date:** _____

John Condon
Site Manager
Prairie Restorations, Inc.
PO Box 1127
Watertown, MN 55388

M. **Notes:** Please note that this proposal is valid for 6 months (from the date on the proposal). If the proposal is accepted after the 6 month period, PRI reserves the right to modify the proposal based on cost fluctuations and material availability.

Restoration outline prepared by Prairie Restorations, Inc. (PRI), Princeton, Minnesota

The Preserve Ecological Restoration – site map

The blue highlighted restoration area is in close proximity to the pool and is infested with Japanese knotweed – 4,800 SF. The red highlighted area is turf grass and will be restored to prairie – 19,000 SF.

Turf to Prairie Area (red)- 19,000 SF - Preliminary plant and seed list

760 - 3" containers will be installed after seeding (yellow highlighted species)

Planting - random distribution throughout the prairie restoration

Common Name	Scientific Name	Height (ft)	Color	Bloom Time	Sun Exposure
PRAIRIE					
[grasses, sedges, rushes]					
Side Oats Grama	*Bouteloua curtipendula*	1.5 to 2.5	Red-green	July - September	S PS
Canada Wild Rye	*Elymus canadensis*	3 to 4	Green	July - August	S PS
Bottlebrush Grass	*Elymus hystrix*	2 to 3	Green	September-October	S PS
Path Rush	*Juncus tenuis*	1.0	Brown	June - July	S PS
June grass	*Koeleria macrantha*	1 to 2	Amber	May-June	S
Little Bluestem	*Schizachyrium scoparium*	1.5 to 3	Amber	July - September	S PS
Indian Grass	*Sorghastrum nutans*	4 to 6	Amber	July - September	S PS
Prairie Dropseed	*Sporobolus heterolepis*	1.5 to 3	Green	August - October	S PS
[forbs, flowers]					
Aromatic aster	*Aster oblongifolium*	2	Puprle	August-November	S PS
Anise Hyssop	*Agastache foeniculum*	2 to 4	Purple	June-October	S SH
Prairie Onion	*Allium stellatum*	1 to 1.5	Pink	July - September	S PS
Butterfly Milkweed	*Asclepias tuberosa*	1 to 2	Orange	June - September	S PS
Smooth blue aster	*Aster laeve*	4	Blue	August-October	S PS
Smooth Aster	*Aster laevis*	1.5 to 2.5	Blue	July - Octoer	S PS
Panicled Aster	*Aster lanceolatus*	2 to 3	White	August - October	S PS
Blue wild indigo	*Baptisia australis*	4.0	Blue	May-July	S PS
Harebell	*Campanula rotundifolia*	1.0	Purple	June-August	S PS
Prairie Coreopsis	*Coreopsis palmata*	1.5 to 2.5	Yellow	June - September	S PS
White prairie clover	*Dalea candida*	2.0	White	June - September	S PS
Purple prairie clover	*Dalea purpurea*	2.0	Purple	July-September	S PS
Purple coneflower	*Echinacea pallida*	4.0	Purple	July-September	S PS
Pale purple coneflower	*Echinacea purpurea*	2 to 4	Purple	June-July	S PS
Rattlesnake master	*Eryngium yuccifolium*	4.0	White	July-September	S
Prairie Smoke	*Geum triflorum*	0.5 to 1	Red	May - June	S PS

Rough Blazingstar	*Liatris aspera*	1.5 to 3	Purple	July - September	S PS
Meadow blazing star	*Liatris ligulistylis*	4 to 5	Purple	August, September	S PS
Wild bergamot	*Monarda fistulosa*	4.0	Purple	July-September	S PS
Prairie Phlox	*Phlox pilosa*	1.5 to 2	Pink	May - June	S PS
Mountain Mint	*Pycnanthemum virginianum*	2 to 3	White	July - September	S PS
Yellow coneflower	*Ratibida pinnata*	5.0	Yellow	July-September	S PS
Black Eyed Susan	*Rudbeckia hirta*	2 to 3	Yellow	June - October	S PS
Blue-eyed grass	*Sisyrinchium campestre*	0.5	blue	May-June	S PS
Showy Goldenrod	*Solidago speciosa*	2 to 3	Yellow	August - September	S PS
Spiderwort	*Tradescantia ohiensis*	2 to 4	Blue	July - October	S SH
Golden Alexanders	*Zizia aurea*	1 to 3	Yellow	May-July	S PS

Japanese Knotweed Restoration Area (blue) - 4,800 SF - Preliminary plant list

2,181 - 3" containers - random distribution throughout restoration @ 1.5' centers

Common Name	Scientific Name	Height (ft)	Color	Bloom Time	Sun Exposure
PRAIRIE					
[grasses, sedges, rushes]					
Side Oats Grama	*Bouteloua curtipendula*	1.5 to 2.5	Red-green	July - September	S PS
Bottlebrush Grass	*Elymus hystrix*	2 to 3	Green	September-October	S PS
June grass	*Koeleria macrantha*	1 to 2	Amber	May-June	S
Little Bluestem	*Schizachyrium scoparium*	1.5 to 3	Amber	July - September	S PS
Prairie Dropseed	*Sporobolus heterolepis*	1.5 to 3	Green	August - October	S PS
[forbs, flowers]					
Aromatic aster	*Aster oblongifolium*	2	Puprle	August-November	S PS
Anise Hyssop	*Agastache foeniculum*	2 to 4	Purple	June-October	S SH
Prairie Onion	*Allium stellatum*	1 to 1.5	Pink	July - September	S PS
Butterfly Milkweed	*Asclepias tuberosa*	1 to 2	Orange	June - September	S PS
Smooth Aster	*Aster laevis*	1.5 to 2.5	Blue	July - Octoer	S PS
Panicled Aster	*Aster lanceolatus*	2 to 3	White	August - October	S PS
Blue wild indigo	*Baptisia australis*	4.0	Blue	May-July	S PS
Harebell	*Campanula rotundifolia*	1.0	Purple	June-August	S PS
Prairie Coreopsis	*Coreopsis palmata*	1.5 to 2.5	Yellow	June - September	S PS
White prairie clover	*Dalea candida*	2.0	White	June - September	S PS
Purple prairie clover	*Dalea purpurea*	2.0	Purple	July-September	S PS
Purple coneflower	*Echinacea pallida*	4.0	Purple	July-September	S PS
Pale purple coneflower	*Echinacea purpurea*	2 to 4	Purple	June-July	S PS
Rattlesnake master	*Eryngium yuccifolium*	4.0	White	July-September	S
Prairie Smoke	*Geum triflorum*	0.5 to 1	Red	May - June	S PS
Rough Blazingstar	*Liatris aspera*	1.5 to 3	Purple	July - September	S PS
Meadow blazing star	*Liatris ligulistylis*	4.0	Purple	August, September	S PS
Prairie Phlox	*Phlox pilosa*	1.5 to 2	Pink	May - June	S PS
Mountain Mint	*Pycnanthemum*	2 to 3	White	July - September	S PS

	virginianum				
Black Eyed Susan	*Rudbeckia hirta*	2 to 3	Yellow	June - October	S PS
Blue-eyed grass	*Sisyrinchium campestre*	0.5	blue	May-June	S PS
Showy Goldenrod	*Solidago speciosa*	2 to 3	Yellow	August - September	S PS
Spiderwort	*Tradescantia ohiensis*	2 to 4	Blue	July - October	S SH
Golden Alexanders	*Zizia aurea*	1 to 3	Yellow	May-July	S PS

NATURAL SHORE

Restoration Proposal for:

Mr. Scott Anderson – The Preserve in Eden Prairie

Proposal Date: June 11, 2019

Prepared by:

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

NATURAL SHORE

June 11, 2019

Dear Scott:

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

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

Best regards,

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

Project Summary – Pool Area

1. Dimensions: 4,800 SF
2. Site assessment and plan development include: detailed site preparation methods, plant selection, and a project timeline and work schedule for our staff.
3. Delineate and verify total restoration project area.
4. Design planting so that flowering will occur at different periods throughout the growing season.
5. Japanese Knotweed will be treated prior to planting. All stems will be cut and then treated with concentrated glyphosate.
6. Gather and remove remaining weedy material. Disposal will take place at a certified landfill that can take this invasive species.
7. An additional treatment will take place in the fall. Depending on the condition of the stand, we may use Milestone herbicide. A licensed herbicide applicator from Natural Shore Technologies will apply the treatment.
8. Apply a 3" layer of shredded hardwood mulch.
9. Lay out plants into plant zones per plan specifications. Depending on the condition of the knotweed stand, we may only use native grasses in this area. They will be less susceptible to herbicide treatment with Milestone. In areas not infested, we will use a diversity of native wildflower species.
10. We will use 2,181 – 3" container plants for your restoration. These are much more robust than the 2" plugs and have a higher survival rate.
11. Install all plants @ approximately 1.5' centers.
12. Site monitoring and maintenance will be provided throughout the 2020 growing season. (see maintenance description below)

Project Summary -- Turf Field

1. Dimensions: 19,000 SF
2. Site assessment and plan development include: detailed site preparation methods, plant and selection, and a project timeline and work schedule for our staff.
3. Delineate and verify total restoration project area.
4. Design planting so that flowering will occur at different periods throughout the growing season.
5. Kill a turf in the restoration area. A licensed herbicide applicator from Natural Shore Technologies will apply the treatment.
6. Drill in a custom prairie seed mix into the dead turf. Make several passes in a grid pattern. An oats cover crop will also be seeded.
7. Cover the entire site with weed-free straw.
8. Lay out plants into plant zones per plan specifications.
9. We will use 760 – 3" container plants for your restoration. These are more conservative plant species that do not do well from seed. These are much more robust than the 2" plugs and have a higher survival rate.
10. Install all plants @ approximately 5.0' centers. We will install more showy species closer to the walking pathway.
11. Site monitoring and maintenance will be provided throughout the 2020 growing season. This will include mowing and invasive weed control.

Project Cost

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

Cost Breakdown

Pool area – 4,800 SF

Site Design, Project Management, Mobilization	$1,816.00
Site preparation, herb. trts, mulch	$5,720.00
Plants - 3" containers - 2,181 plants	$8,176.00
Maintenance - 2 yr plan	$2,610.00
TOTAL =	**$18,324.00**

50% = 7857

Turf field – 19,000 SF

Site Design, Project Management, Mobilization	$1,018.00
Site preparation, herb. trts, straw	$2,472.00
Plants - 3" plants @ 5' spacing – 760 and custom seed mix - drilled	$3,724.00
Maintenance - 2 yr plan	$1,392.00
TOTAL =	**$8,606.00**

75% 7214 Fund

Site maintenance

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

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

4440 – 7132

Staff Qualifications

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

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

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

Natural Shore Technologies Plant Material

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

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

NATURAL SHORE	*Using Ecology to Restore Land and Water*

Guarantee

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

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

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

The only exceptions to this guarantee have to do with plant death due to acts of God (floods or drought) the actions of others (vandalism), or animal herbivory (e.g., geese, muskrats). If these extreme circumstances do happen to occur, we will work with the client at a reduced rate to make all necessary repairs.

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

Contract

A down payment of *$13,465.00* is required to schedule your project.

The remainder of the project cost is due at project completion.

Please note that this proposal is valid for 30 days from the date on this Contract.

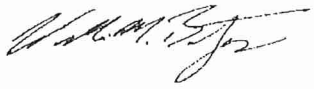
If you would like to proceed with the above outlined project, please sign the contract below.

Client name: Mr. Anderson, The Preserve **Contract Value: $26,930.00**

Signed: _____ **Date** _____

Contractor: ***Natural Shore Technologies, Inc.***

Signed: **Contract Date:** *Contract Date for 30 Day term*

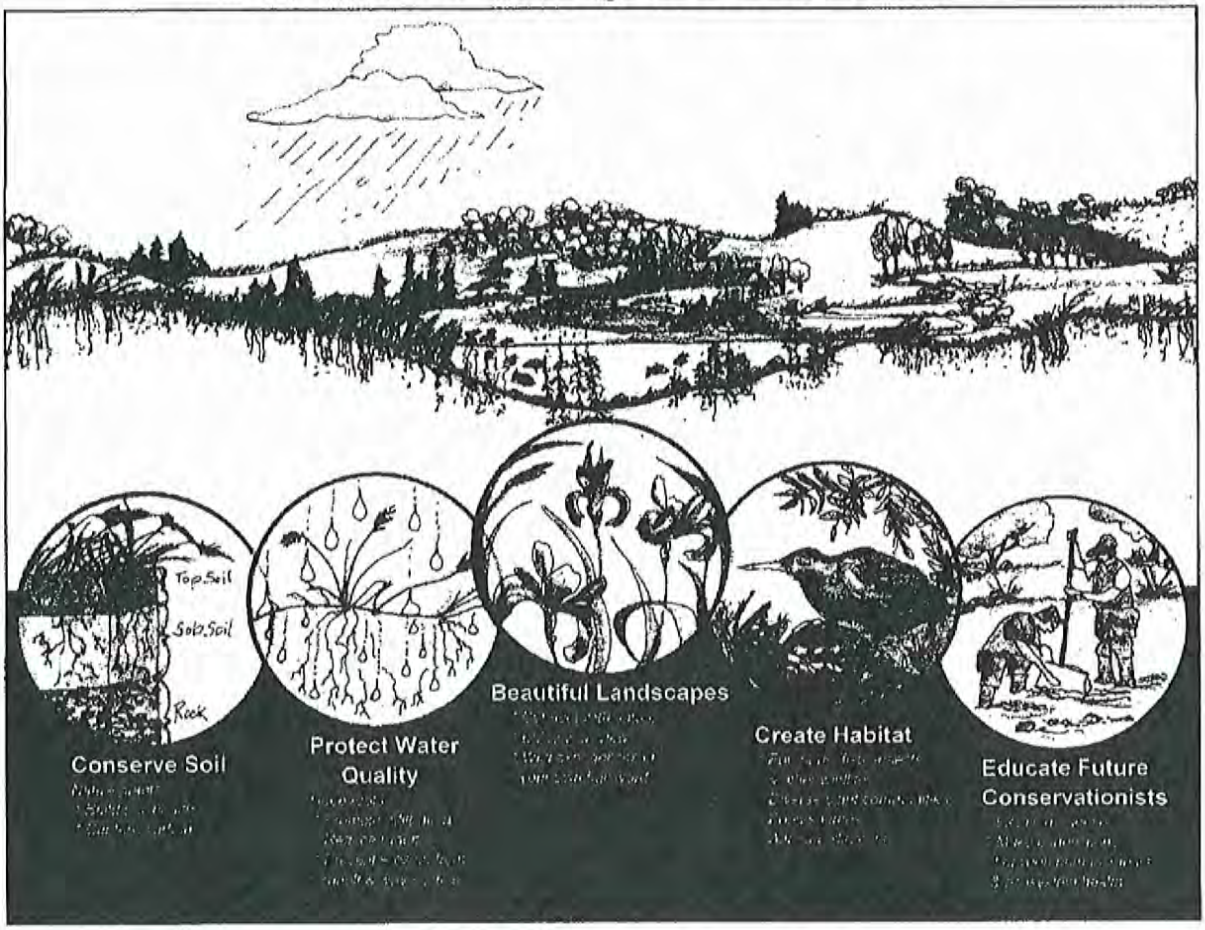


William M. Bartodziej, M.S.
Senior Restoration Ecologist, Natural Shore Technologies

Please return a signed copy of this contract and a check to: Natural Shore Technologies, Inc.
6275 Pagenkopf Rd.
Maple Plain, MN 55359

NATURAL SHORE	***Using Ecology to Restore Land and Water***

Benefits of our quality restoration work.



Riley Purgatory Bluff Creek Watershed District Permit Application Review

Permit No: 2019-034

Considered at Board of Managers Meeting: September 4, 2019

Received complete: April 27, 2017; Permit Expired June 7, 2018; reapplication August 7, 2019

Applicant: Bert Notermann

Consultant: Roger Humphrey, Stantec / Eric Lembke, Stantec

Project: Lion's Tap Site Improvements – Lion's Tap, in conjunction with the realignment of Spring Road in Eden Prairie, will be altering their site access and expanding their parking lot. The proposed improvements will disturb more than 50% of their site and will require lot line adjustments resulting from the realignment of Spring Road. A proprietary underground infiltration system will provide storm water quality, volume, and rate control.

Location: 16180 Flying Cloud Drive, Eden Prairie, MN

Reviewer: Terry Jeffery, Project Manager and Permit Coordinator

Potential Board Variance Action

Manager _____ moved and Manager _____ seconded adoption of the following resolutions based on the permit report that follows, the presentation of the matter at the September 4, 2019, meeting of the managers, and the managers' findings on the variance request, as well as the factual findings in the permit report that follows:

Resolved that the variance Permit 2019-034 is approved, 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 September 4, 2019 meeting of the managers:

Resolved that the application for Permit 2019-034 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 2019-034 to the applicant on behalf of RPBCWD.

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

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	See Rule Specific Permit Condition J1.
K	**Variance**		Yes	The applicant is requesting a variance from rate control for the 100-year, 10-day snowmelt out of proposed BMP.
L	**Permit Fee**		Yes	$1,500 was received on August 16, 2019
M	**Financial Assurance**		See Comment	The financial assurance has been calculated at $196,705.

Project Description

This application was conditionally approved on June 7, 2017 under permit number 2017-031. On May 17, 2018 the project representative was notified via email that the conditional approval was going to expire on June 7, 2018. Neither the applicant nor the representative took action to extend the permit expiration date as allowed for in section 5 of Rule A. For this reason, the applicant must reapply. The applicant has requested a two-year permit.

The project is being performed in conjunction with the Eden Prairie's realignment of Spring Road to the east. Because of the proposed realignment, some public right-of-way will be turned back to the Lion's Tap property. To accommodate the proposed improvements, land area will be exchanged between two properties, both owned by Mr. Notermann, and a retaining wall will be constructed. (See figure C0.03)

The access from Spring Road will be modified and the access from Flying Cloud Drive will be eliminated. The project is intended to improve traffic circulation within the parking lot, provide A.D.A. parking stalls, and provide other improvements intended to accommodate bicycle and pedestrian traffic. The building will remain unchanged. The project will disturb 2.28 acres and result in a net increase in impervious surface of 16,900 square feet. The project includes the construction of an underground infiltration stormwater best management practice. The only change from the original plan submittal is the increase of impervious surface by

The project site information is summarized below:

1. Total Site Area: 2.2 acres
2. Existing Site Impervious Area: 47,829 square feet
3. New (% increase in) Site Impervious Area: 16,988 square feet (35.5% increase in site impervious area)
4. Total Disturbed Impervious 46,940 square feet (1.08 acres)
5. Total Disturbed Area: 2.28 acres[1]

Submitted materials:

1. Permit Application date signed April 26, 2017.
2. Design Plan Sheets (22 Sheets 1-12) dated January 10, 2017 (received April 20, 2017).
3. Design Plan Sheets (28 sheets G0.01-L8.01) dated July 12, 2019
4. Stormwater Management Design Memo dated April 26, 2017 (revised May 24, 2017).
5. Stormwater Management Report Dated March 29, 2018 (revised August 6, 2019)
6. Subsurface boring logs performed by American Engineering Testing, Inc. on January 24, 2017.
7. MIDS Calculator Existing Conditions Output dated May 22, 2017
8. MIDS Calculator Proposed Conditions dated July 14, 2017
9. Variance request letter dated May 30, 2017

Rule Specific Permit Conditions

Rule C: Erosion and Sediment Control

Because the project will alter 2.28 acres (99,430 square feet) of land-surface area the project must conform to the requirements in the RPBCWD Erosion and Sediment Control rule (Rule C, Subsection 2.1).

The erosion control plan prepared by Stantec includes a phasing plan, installation of silt fence, inlet protection for storm sewer catch basins, a rock construction entrance, placement of a minimum of 6 inches of topsoil, decompaction of areas compacted during construction to 1400 kilopascals or less, retention of native topsoil onsite, and a final restoration plan. To conform to the RPBCWD Rule C requirements the following revisions are needed:

[1] Proposed land disturbance exceeds existing parcel size due to the construction of the retaining wall on the north side of the parcel requiring grading into the adjoining property to the north and the property transfer. The applicant, Mr. Notermann, owns this property as well. See page 1, sheet C0.03 of attached plans.

C1. The Applicant must provide the name and contact information of the individual responsible for erosion and sediment control at the site. RPBCWD must be notified if the responsible party changes during the permit term.

Rule J: Stormwater Management

Because the project will alter 2.28 acres (99,430 square feet) of land-surface area the project must meet the criteria of RPBCWD's Stormwater Management rule (Rule J, Subsection 2.1). Because the project will disturb more than 50% of the existing impervious area of the site, the criteria listed in Subsection 3.1 apply to the entire project parcel.

The applicant is proposing construction of an underground infiltration system to provide the rate control, volume abstraction and water quality management on the site. A sump manhole will provide pretreatment for the system.

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, including the 100-year, 10-day event are summarized in table 1 below. The proposed project is not in conformance with RPBCWD Rule J, Subsection 3.1.a as post-development rates exceed pre-development rates for the 100-year, 10-day snowmelt event discharging from the underground infiltration system. The applicant is requesting a variance for this occurrence.

Table 1. Review of Rule J, §3.1a: Discharge rate analysis pre- and post-development

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
Outfall 1 (CSAH 61)	1.2	0.04	2.5	0.1	5.6	0.3	0.5	0.01
Outfall 2 (UG System)	2.6	0.7	4.9	3.4	9.8	8.4	**0.6**	**1.0**

Volume Abstraction

Subsection 3.1.b of Rule J requires the abstraction onsite of 1.1 inches of runoff from all impervious surface of the parcel. An abstraction volume of 5,934 cubic feet is required from the 1.49 acres of impervious area on the project for volume retention. The Applicant proposed an underground infiltration system. Table 2 summarizes the volume abstraction on the site.

Soil borings performed by American Engineering Testing, Inc. show that soils in the project area are primarily silty sands which, according to the MN Stormwater Manual, have an infiltration rate of 0.45 inches/hour. Soil borings found ground water at a depth of 15 feet or at an elevation of 717 feet. The bottom of the proposed infiltration feature will be at 722.0 feet. This is a separation to ground water of 5.0 feet. Based on information reviewed, the proposed project conforms to Rule J, Subsection 3.1.b.

Table 2. Review of Rule J, §3.1b: Required and proposed abstraction quantities.

Required Abstraction Depth (inches)	Required Abstraction Volume (cubic feet)	Provided Abstraction Depth (inches)	Provided Abstraction Volume (cubic feet)
1.10	5,934	1.16	6,228

J1. The applicant must submit documentation verifying the infiltration capacity of the soil at the proposed infiltration systems. This can be accomplished by infiltrometer test, hydraulic conductivity test, or other accepted methods. This may be provided during construction of the facilities.

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. The Applicant is proposing to use a proprietary underground infiltration system to achieve the required TP and TSS removals and submitted the MIDS worksheet calculations to estimate the TP and TSS removals. Staff concurs that these results are consistent with the design and literature values.

Table 3. Review of Rule J, §3.1c: Required and estimated pollutant removals.

Pollutant of Interest	Regulated Load lbs	Required Removal (%)	Provided Removal lbs	Estimated Removal (%)
Total Suspended Solids (TSS)	527.1	474.4 (90)	487.7	93
Total Phosphorus (TP)	2.902	1.741 (60)	2.675	92

Based on information reviewed, the proposed project conforms to 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 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 elevations of the existing restaurant and the proposed adjacent stormwater management feature are summarized in the following table.

Table 4. Review Rule J, §3.6 freeboard in feet to low floor

Location Riparian to Stormwater Facility	Low Floor Elevation of Building (feet)	100-year Event Flood Elevation of Adjacent Stormwater Facility (feet)	Freeboard (feet)
Restaurant	733.29	723.89	9.4

Based upon the information provided by the consulting engineer, the proposed project complies with Rule J, Subsection 3.6

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.

J2. Permit applicant has provided a draft maintenance and inspection plan. Once approved by RPBCWD, the plan must be recorded on the deed in a form acceptable to the District.

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. Because the streets within the proposed development are private, in order for the proposed development to conform with Rule J, subsection 3.8 the following will be needed:

J3. Permit applicant must provide a chloride management plan for the site. A template is available on the District's website.

Rule K: Variances and Exceptions

The applicant is requesting a variance from Rule J, subsection 3.1a. The discharge rate for the 100-year frequency, 10-day snowmelt event leaving the underground infiltration system and entering the existing stormsewer for Hennepin County State Aid Highway (CSAH) 61 increases from 0.6 cfs to 1.0 cfs. As can

be seen in the table below, the site is able to meet the discharge rate requirement at all other points under all other events.

Table 5. Review of Rule J, § 3.1a as pertains to variance request

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
Outfall 1 (SW property corner)	2.1	0.1	4.0	0.3	8.3	0.5	0.3	0.01
Outfall 2 (CSAH 61)	3.6	1.2	6.3	4.9	12.4	12.3	**0.6**	**1.0**

The attached variance request letter submitted on behalf of the applicant cites several facts related to the development in support of the request. 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 incumbent upon the applicant to address the above criteria in submitting a variance request to the managers. To support the managers' assessment of the request, though, staff offers the following:

- Regarding criterion 1, the increase is nominal, and under all other events and at all other discharge points they reduce rates from existing conditions.
- Regarding criterion 3, the receiving infrastructure and runoff-management features downgradient from the discharge have capacity to effectively manage the proposed increase

from the underground infiltration chamber. The water is discharged into a reinforced concrete pipe before flowing into a storm water best management practice and then into Riley Creek. Staff does not find that granting the variance will present a material risk to downstream properties or infrastructure.

- Regarding criterion 4, the design engineer evaluated three other designs looking to eliminate the need for a variance. These are summarized here but are discussed in more detail in the attached memorandum from the applicant's engineer.
    - The first scenario involved constricting the outflow be using a 6-inch orifice. This resulted in a small (0.1 cfs) decrease for the 100-year, 10-day snowmelt event but did not get the rates down to the 0.6 cfs necessary to comply with Rule J, §3.1a. More important, it resulted in a 0.3 cfs increase for the 100-year rainfall event.
    - The second scenario was to increase the size of the underground infiltration system. To achieve the necessary decrease in rates, the system would need to be increased in size 2.6 times. Given the presence of a shallow water table elsewhere on the site, this is not a practical solution.
    - The last analysis looked at some combination of the first two scenarios. Even with a constricted outlet, the system would still require increasing the footprint 2.4 times from the proposed system. This again runs into the water table constraint of scenario #2.
    - In addition, the engineer reviewed the likelihood of constructing a BMP south of the building, thereby eliminating the need to divert this watershed to the proposed underground system. The proximity to the right-of-way for C.S.A.H. 61 and the need for adequate separation between the high-water level for the BMP and the low floor elevation precluded this approach.
- Regarding criterion 5, by accommodating runoff from the hillside above the site and from the area immediately surrounding the existing building to meet the requirement that all impervious surface on the site is treated, the drainage boundaries were changed and this resulted in the increase under the 100-year, 10-day snowmelt condition.

Rule L: Permit Fee:

Fees for the project are:

Rule C & J $1,500

Rule M: Financial Assurance:

Rules C: Silt fence: 2,000 L.F. x $2.50/L.F. = ... $5,000

Rock Construction Entrance 1 @ $250/ea = ... $250

Inlet Protection 12 @ $100/ea = ... $1200

Restoration: 0.95 acre x $2,500/acre = ... $2,375

Rules J: Underground engineers opinion of cost = ... $170,000

Contingency (10%) $17,880

Total Financial Assurance.....$196,705

Applicable General Requirements:

1. The RPBCWD Administrator 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. Return or allowed expiration of any remaining surety and permit close out is dependent on the permit holder providing proof that all required documents have been recorded and providing as-built drawings that show that the project was constructed as approved by the Managers and in conformance with the RPBCWD rules and regulations.

Findings

1. The proposed project includes the information necessary, plan sheets and erosion control plan for review.
2. The project conforms to Rule B requirements.
3. The proposed project will conform to Rules C and J (except subsection 3.1a) if the Rule Specific Permit Conditions listed above are met. The applicant has submitted a request for a variance from subsection J3.1a.

Recommendation:

Approval, contingent upon:

1. Continued compliance with General Requirements.
2. Financial Assurance in the amount of $196,705.
3. Submission of the name and contact information of the individual responsible for erosion and sediment control for the site.
4. Recordation of a maintenance declaration for the stormwater management facilities and wetland buffer. A draft 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, stormwater facilities conform to design specifications as approved by the District.
2. 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 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.

Board Action

It was moved by Manager _____, seconded by Manager _____ to approve permit application No. 2019-034 with the conditions recommended by staff.

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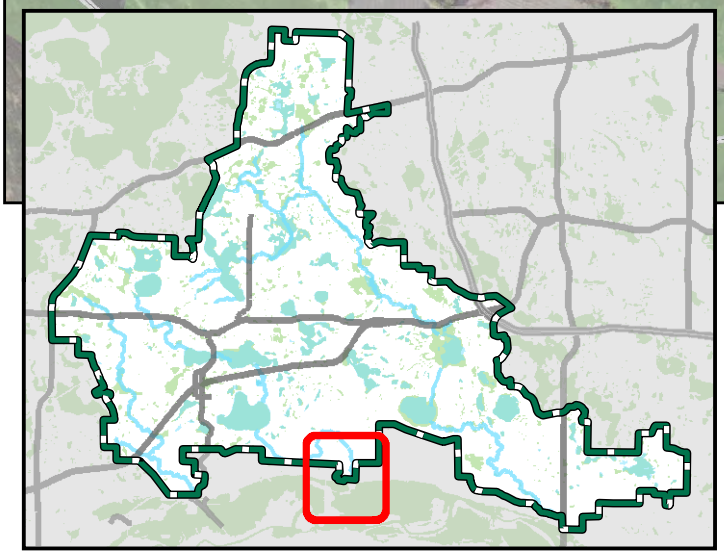

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Feet

0 1,000

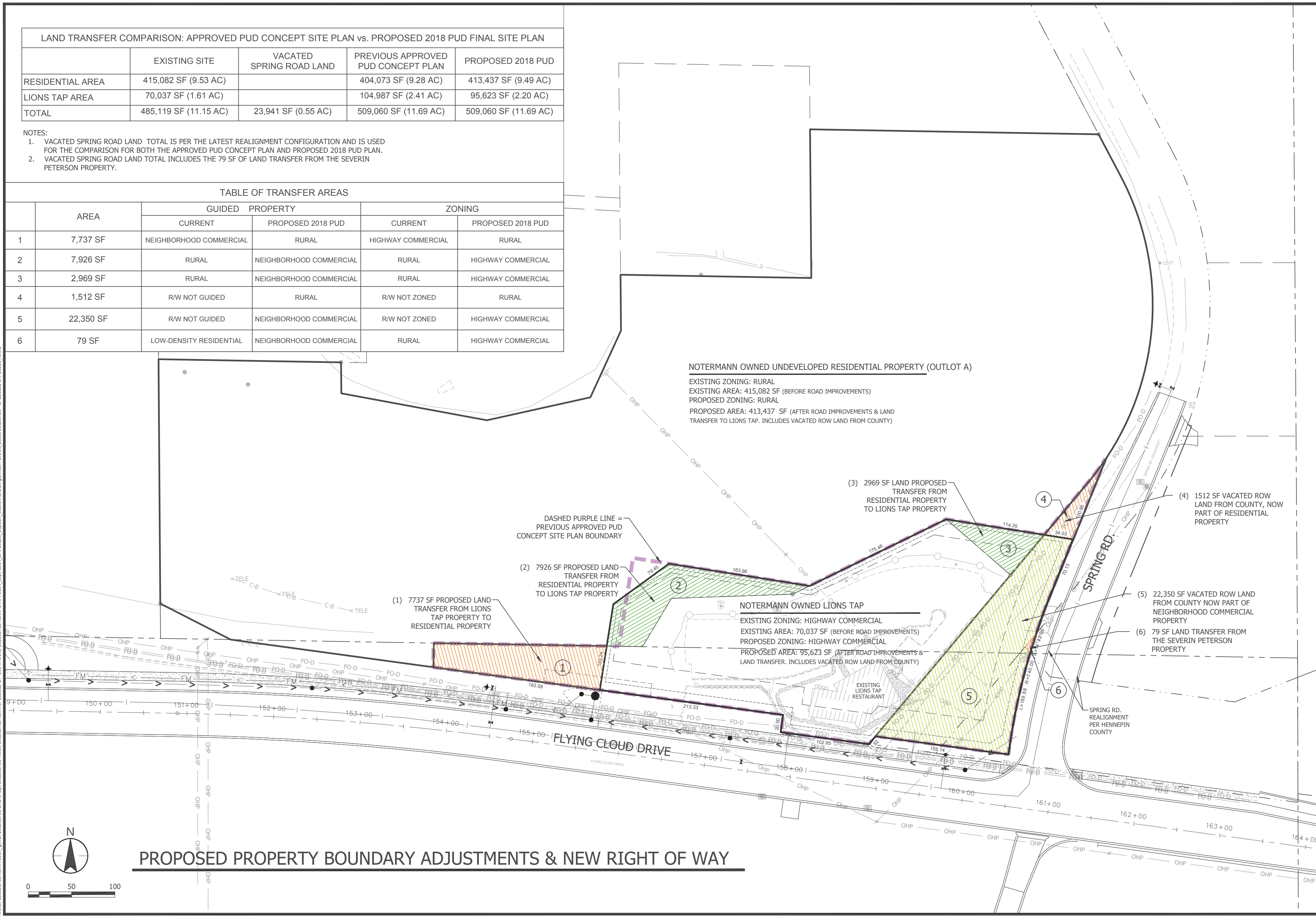
Permit Location Map

LION'S TAP
EDEN PRAIRIE
Permit 2019-034
Riley Purgatory Bluff Creek
Watershed District

LAND TRANSFER COMPARISON: APPROVED PUD CONCEPT SITE PLAN vs. PROPOSED 2018 PUD FINAL SITE PLAN				
	EXISTING SITE	VACATED SPRING ROAD LAND	PREVIOUS APPROVED PUD CONCEPT PLAN	PROPOSED 2018 PUD
RESIDENTIAL AREA	415,082 SF (9.53 AC)		404,073 SF (9.28 AC)	413,437 SF (9.49 AC)
LIONS TAP AREA	70,037 SF (1.61 AC)		104,987 SF (2.41 AC)	95,623 SF (2.20 AC)
TOTAL	485,119 SF (11.15 AC)	23,941 SF (0.55 AC)	509,060 SF (11.69 AC)	509,060 SF (11.69 AC)

NOTES:
1. VACATED SPRING ROAD LAND TOTAL IS PER THE LATEST REALIGNMENT CONFIGURATION AND IS USED FOR THE COMPARISON FOR BOTH THE APPROVED PUD CONCEPT PLAN AND PROPOSED 2018 PUD PLAN.
2. VACATED SPRING ROAD LAND TOTAL INCLUDES THE 79 SF OF LAND TRANSFER FROM THE SEVERIN PETERSON PROPERTY.

TABLE OF TRANSFER AREAS					
	AREA	GUIDED PROPERTY		ZONING	
		CURRENT	PROPOSED 2018 PUD	CURRENT	PROPOSED 2018 PUD
1	7,737 SF	NEIGHBORHOOD COMMERCIAL	RURAL	HIGHWAY COMMERCIAL	RURAL
2	7,926 SF	RURAL	NEIGHBORHOOD COMMERCIAL	RURAL	HIGHWAY COMMERCIAL
3	2,969 SF	RURAL	NEIGHBORHOOD COMMERCIAL	RURAL	HIGHWAY COMMERCIAL
4	1,512 SF	R/W NOT GUIDED	RURAL	R/W NOT ZONED	RURAL
5	22,350 SF	R/W NOT GUIDED	NEIGHBORHOOD COMMERCIAL	R/W NOT ZONED	HIGHWAY COMMERCIAL
6	79 SF	LOW-DENSITY RESIDENTIAL	NEIGHBORHOOD COMMERCIAL	RURAL	HIGHWAY COMMERCIAL



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PRINT NAME: DAVID AHRENS
SIGNATURE:
DATE: 7/12/2019 LIC. NO.

LIONS TAP
EDEN PRAIRIE, MN
PROPERTY BOUNDARY ADJUSTMENT & NEW ROW

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DESIGNED	DA/TW
CHECKED	DAA
APPROVED	DAA
PROJ. NO.	193803789

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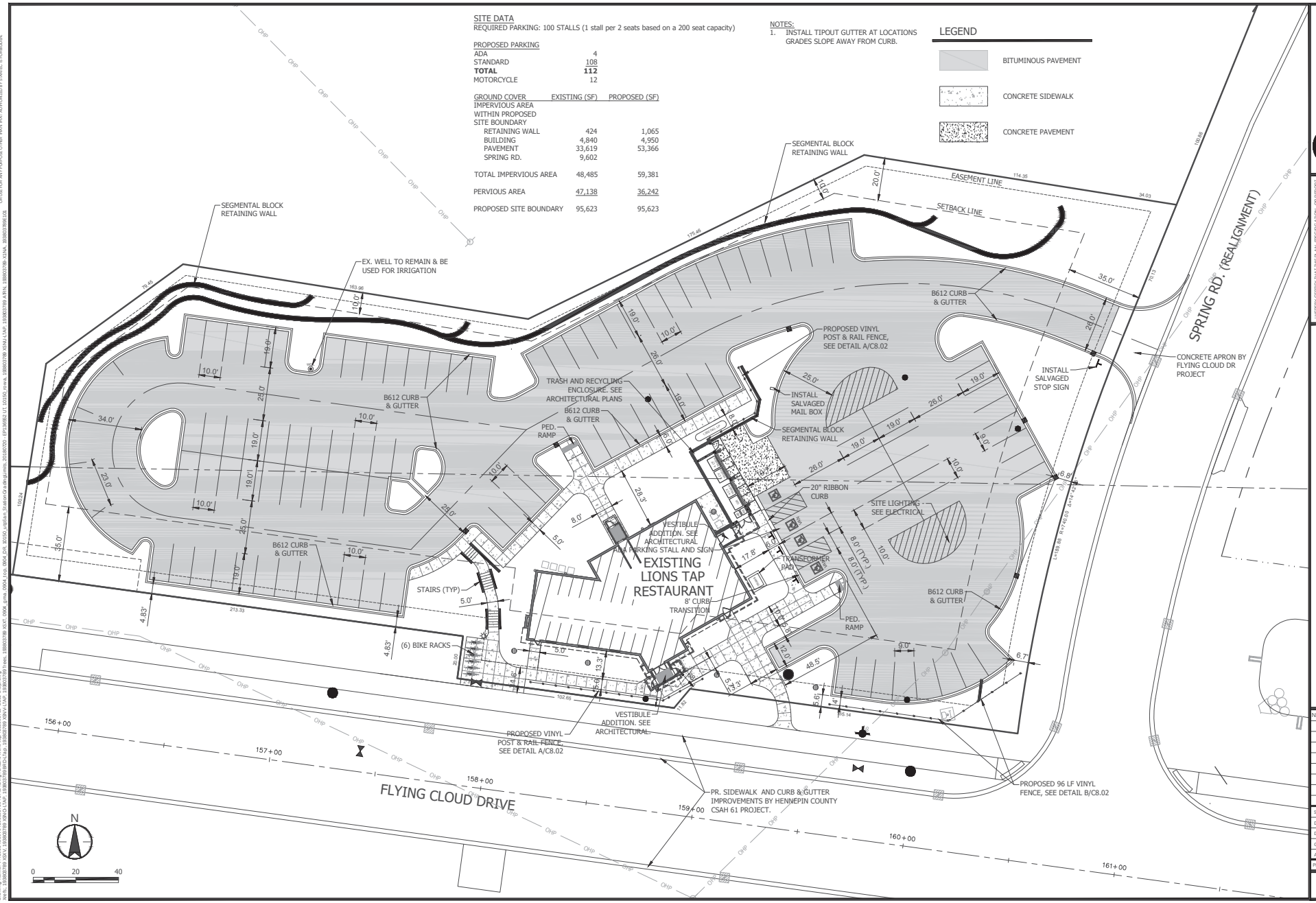

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PRINT NAME: DAVID AARENS
SIGNATURE:
DATE: 7/22/2019
LIC. NO. 21211

LIONS TAP
EDEN PRAIRIE, MN
SITE PLAN

NO	REVISION	DATE

SURVEY	STANTEC
DRAWN	DA/RM
DESIGNED	DA/TW
CHECKED	DAA
APPROVED	DAA
PROJ. NO.	193803789

SHEET NUMBER
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THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS. DO NOT SCALE THE DRAWING - ANY ERRORS OR OMISSIONS SHALL BE REPORTED TO STANTEC WITHOUT DELAY.
THE COPYRIGHTS TO ALL DESIGNS AND DRAWINGS ARE THE PROPERTY OF STANTEC. REPRODUCTION OR USE FOR ANY PURPOSE OTHER THAN THAT AUTHORIZED BY STANTEC IS FORBIDDEN.

EROSION AND SEDIMENT CONTROL NOTES:

1. ALL PERMITTEES, CONTRACTORS, AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PLAN AND THE STATE OF MINNESOTA NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES PHASE II PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS AND IS RESPONSIBLE TO COMPLY WITH ALL REQUIREMENTS STATED WITHIN.
2. THE BMP'S SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS FOR THE ANTICIPATED SITE CONDITIONS. AS CONSTRUCTION PROGRESSES, THE PERMITTEE/CONTRACTOR SHALL ANTICIPATE THAT ADDITIONAL BMP'S MAY BE REQUIRED AS SITE CONDITIONS CHANGE AND SHALL PROVIDE ADDITIONAL BMP'S TO MEET APPLICABLE REQUIREMENTS.
3. ALL WORK AND MATERIALS SHALL BE CONSTRUCTED ACCORDING TO THE APPROVED PLANS AND SWPPP. ANY DEVIATION FROM THE APPROVED PLANS SHALL REQUIRE WRITTEN APPROVAL FROM THE OWNER.
4. REFER TO SHEET L1.01 FOR FINAL STABILIZATION MEASURES.
5. ALL CONCRETE DELIVERY VEHICLES SHALL BE EQUIPPED WITH SELF-CONTAINED WASHOUT SYSTEMS.
6. TOTAL AREA OF DISTURBANCE = 110,030 SF
7. CONTRACTOR TO INSPECT AND REMOVE SEDIMENT IN UNDERGROUND STORMWATER SYSTEM DURING CONSTRUCTION UP TO FINAL ACCEPTANCE.

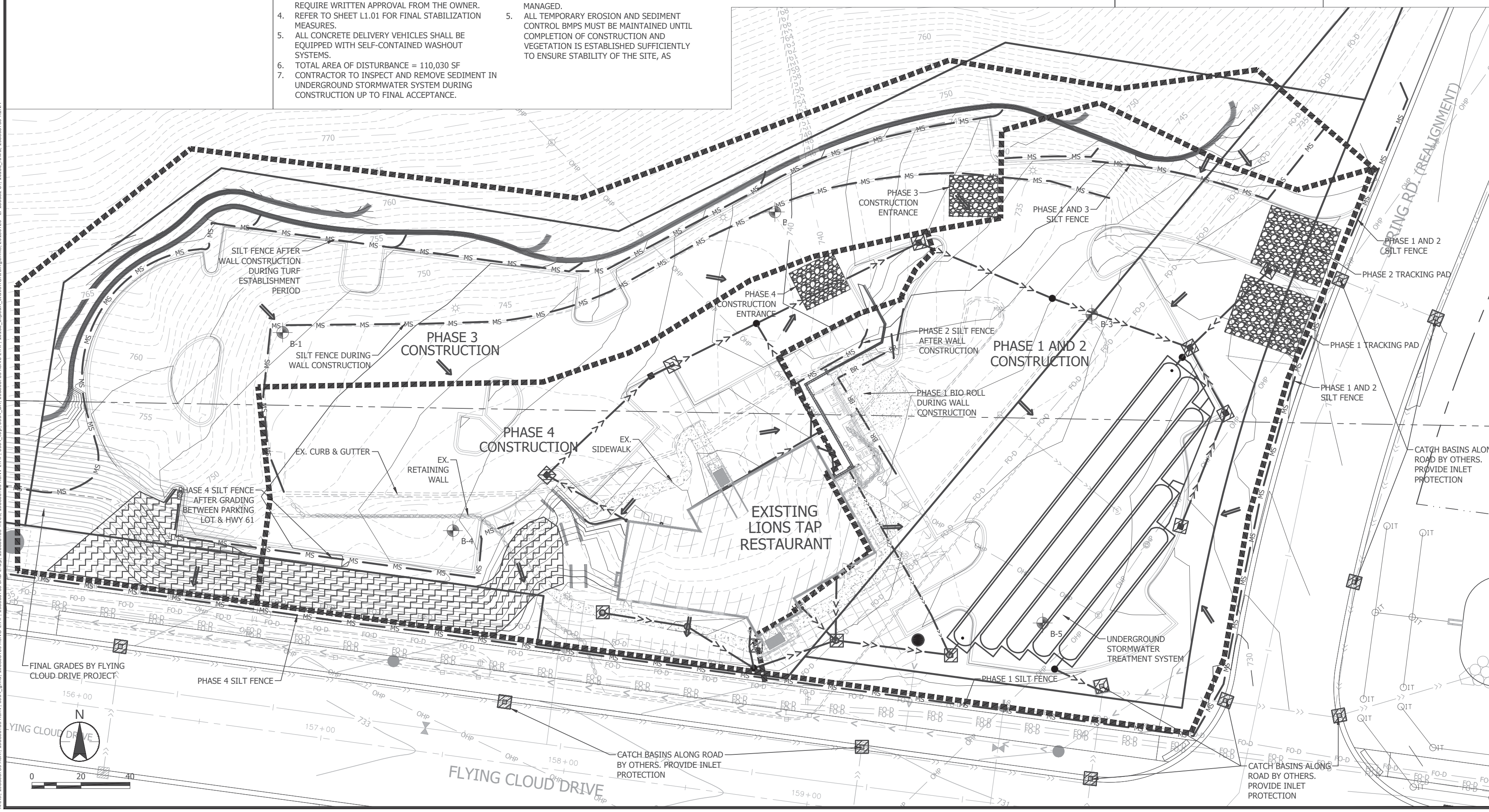
RPBCWD STANDARD EROSION CONTROL NOTES:

1. NATURAL TOPOGRAPHY AND SOIL CONDITIONS MUST BE PROTECTED, INCLUDING RETENTION ONSITE 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 3:1 (H:V) OR STEEPER TO PROVIDE ADEQUATE STABILIZATION
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. CONSTRUCTION SITE WASTE SUCH AS DISCARDED BUILDING MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICALS, LITTER AND SANITARY WASTE MUST BE PROPERLY MANAGED.
5. 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.
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 DECOMPACTED THROUGH SOIL AMENDMENT AND/OR RIPPING TO A DEPTH OF 18 INCHES (8 INCHES FOR SINGLE-FAMILY HOME PROPERTIES) WHILE TAKING CARE TO AVOID UTILITIES, TREE ROOTS AND OTHER EXISTING VEGETATION PRIOR TO FINAL REVEGETATION OR OTHER STABILIZATION.
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 ELSEWHERE.
9. 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-DISTRUBING 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.

EROSION CONTROL LEGEND

MS — MACHINE SLICED SILT FENCE	SEDIMENT — TEMPORARY SEDIMENT TRAP
BR — BIOROLL	SANDBAGS
XXXXXXX — ROCK LOG	DIRECTION OF RUNOFF
INLET PROTECTION	CONSTRUCTION ENTRANCE / EXIT
DITCH CHECK - BIOLOG	CONSTRUCTION PHASING
DITCH CHECK - ROCK	TURF REINFORCEMENT MAT (TRM)

NOTE: STEEL POSTS ARE REQUIRED FOR ALL SILT FENCES.



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PRINT NAME: DAVID AHRENS
SIGNATURE:
DATE: 7/12/2019 LIC. NO. 21711

LIONS TAP
EDEN PRAIRIE, MN
EROSION & SEDIMENT CONTROL PLAN

NO	REVISION	DATE

SURVEY	STANTEC
DRAWN	DA/RM
DESIGNED	DA/TW
CHECKED	DAA
APPROVED	DAA
PROJ. NO.	193803789

SHEET NUMBER
C2.01

Plot Date: 07/15/2019 - 11:47am
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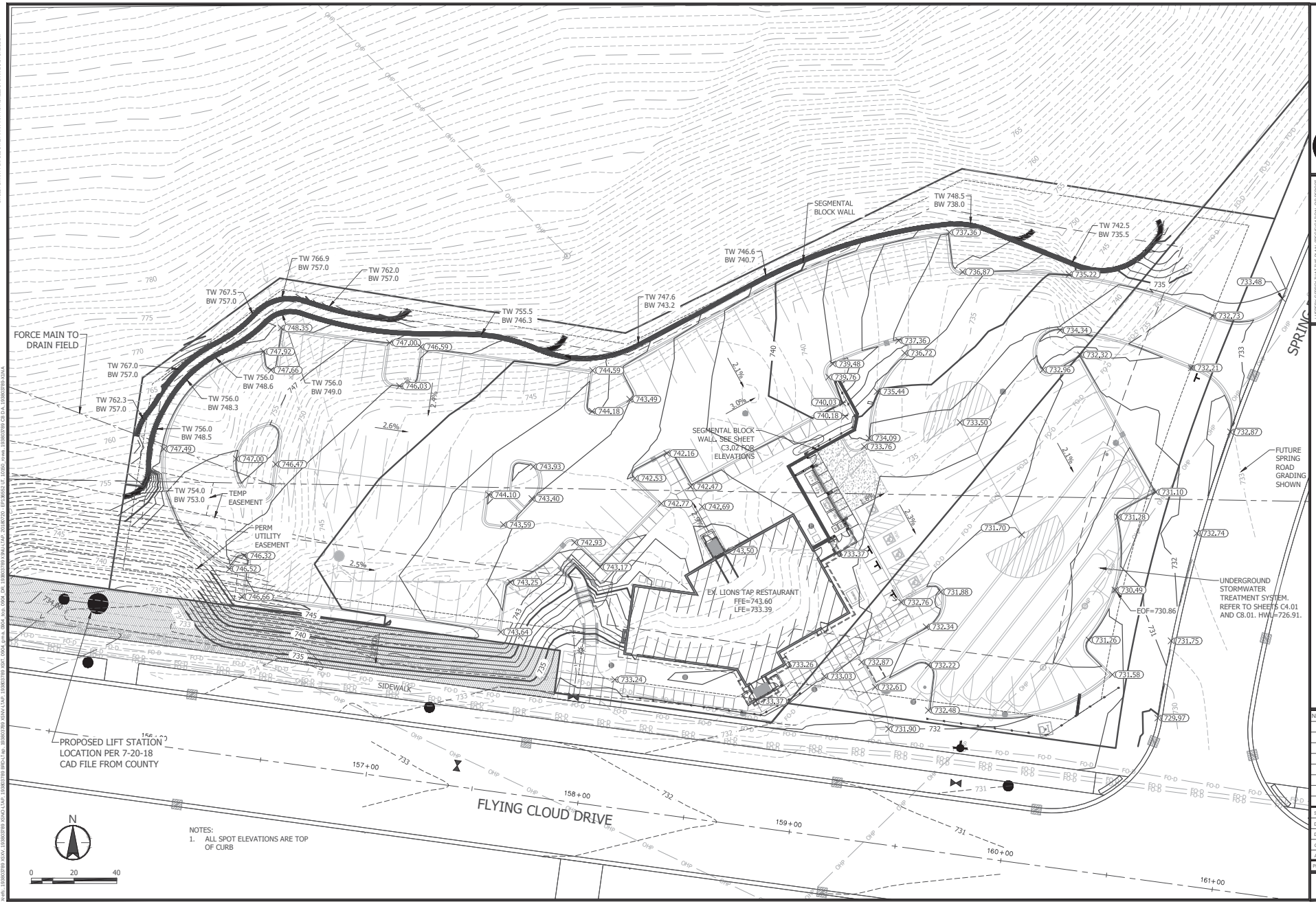

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PRINT NAME: DAVID AMBERG
SIGNATURE:
DATE: 7/10/2018
LIC. NO. 21211

LIONS TAP
EDEN PRAIRIE, MN
GRADING PLAN

NO	REVISION	DATE

SURVEY	STANTEC
DRAWN	DA/RM
DESIGNED	DA/TW
CHECKED	DAA
APPROVED	DAA
PROJ. NO.	193803789

SHEET NUMBER
C3.01

Plot Date: 07/25/2018 - 11:53 am
Plot By: Rachel Murphy
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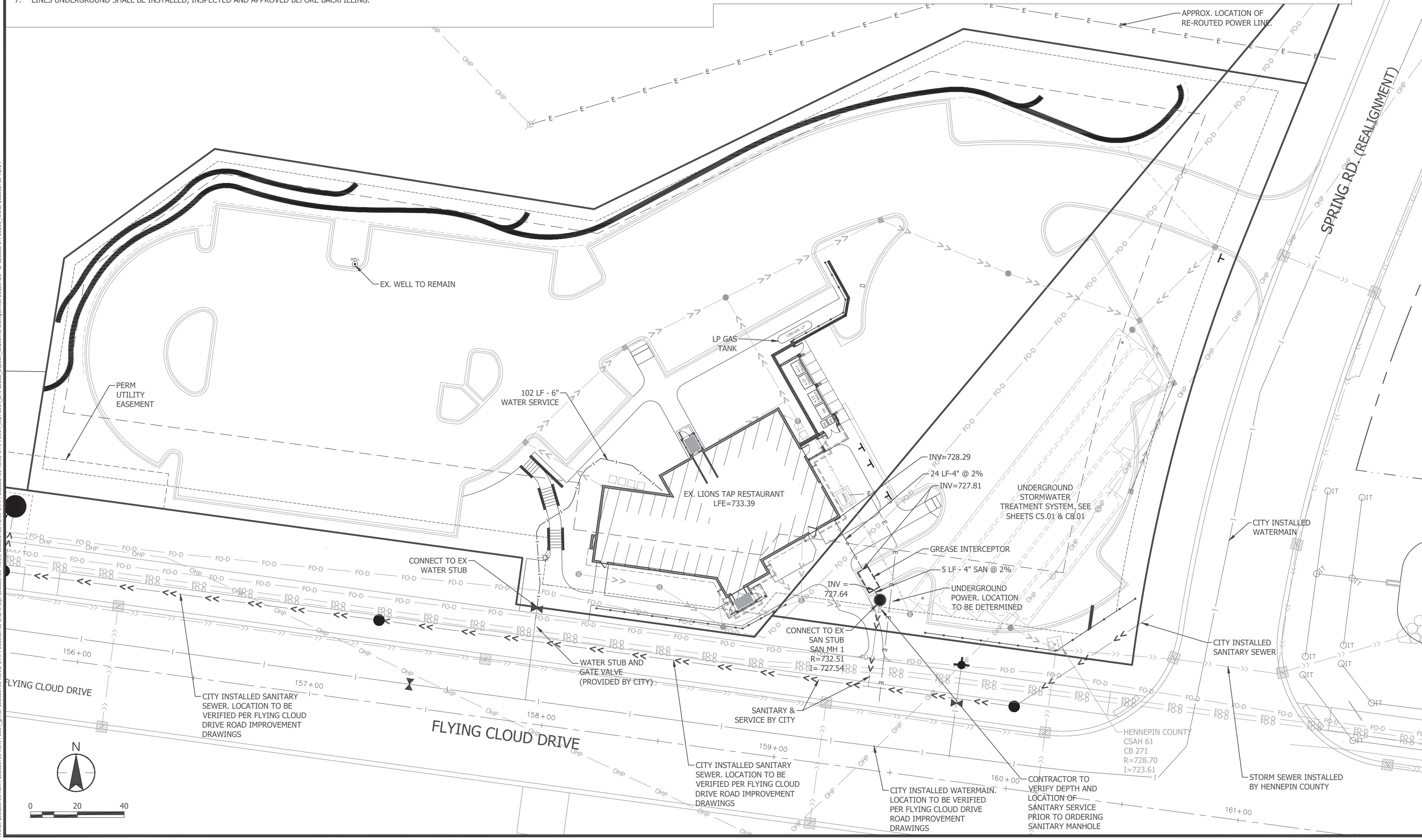
SITE UTILITY NOTES:

1. ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
2. CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
3. MINIMUM TRENCH WIDTH SHALL BE 2 FEET.
4. ALL UTILITIES SHOULD BE KEPT TEN (10') APART (PARALLEL) OR WHEN CROSSING 18" VERTICAL CLEARANCE (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE).
5. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 8'-0" COVER ON ALL WATERLINES.
6. IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATERLINES, SANITARY LINES, STORM LINES AND CAS LINES (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF CROSSING, THE WATERLINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE THRUST BLOCKING AS REQUIRED TO PROVIDE MINIMUM OF 18" CLEARANCE. MEETING REQUIREMENTS OF ANSI A21.10 OR ANSI 21.11 (AWWA C150) (CLASS 50).
7. LINES UNDERGROUND SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.
8. TOPS OF EXISTING MANHOLES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED PAVEMENT ELEVATIONS.
9. ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH AT 3000 P.S.I.
10. DRAWINGS DO NOT PURPORT TO SHOW ALL EXISTING UTILITIES.
11. EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES.
12. CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE SPECIFICATIONS OF THE LOCAL AUTHORITIES (CITY EDEN PRAIRIE) WITH REGARDS TO MATERIALS AND INSTALLATION OF THE WATER AND SEWER LINES.
13. 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 WHERE POSSIBLE, MEASUREMENTS TAKEN IN FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL VERIFY THE FIELD LOCATION OF ALL PUBLIC AND PRIVATE UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT (651) 454-0002. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
14. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICE.
15. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.
16. REFER TO ELECTRICAL PLANS FOR SITE LIGHTING ELECTRICAL PLAN.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS, INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNALS & POLES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH GOVERNING AUTHORITIES SPECIFICATIONS AND SHALL BE APPROVED BY SUCH.
18. EXISTING SANITARY SEWER AND WATER NOT UTILIZED SHALL BE REMOVED OR ABANDONED BACK TO THE TEE OR WYE.



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PRINT NAME: DAVID AHRENS
SIGNATURE:
DATE: 7/12/2019 LIC. NO. 21711

LIONS TAP
EDEN PRAIRIE, MN
SANITARY SEWER & WATERMAIN PLAN

NO	REVISION	DATE

SURVEY	STANTEC
DRAWN	DA/RM
DESIGNED	DA/TW
CHECKED	DAA
APPROVED	DAA
PROJ. NO.	193803789

SHEET NUMBER
C4.01

SITE UTILITY NOTES:

1. ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
2. CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
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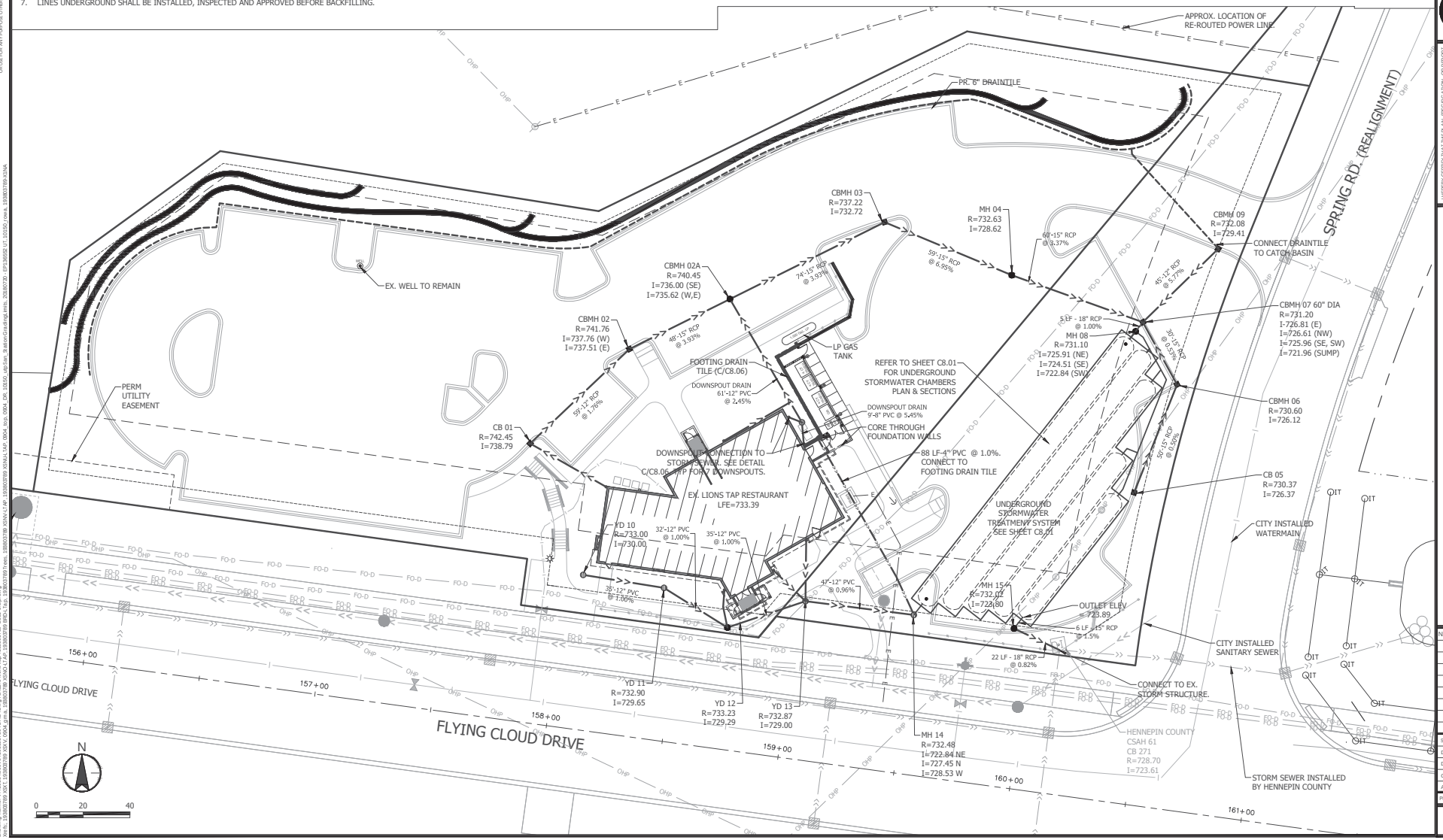

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PRINT NAME: DAVID AHRENS
SIGNATURE:
DATE: 7/10/2018
LIC. NO. 21211

LIONS TAP
EDEN PRAIRIE, MN
STORM SEWER PLAN

NO	REVISION	DATE

SURVEY	STANTEC
DRAWN	DA/RM
DESIGNED	DA/TW
CHECKED	DAA
APPROVED	DAA
PROJ. NO.	193803789

SHEET NUMBER
C5.01

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Plot Date: 07/15/2018 - 11:54am
Plot By: Ryan Mehrkens
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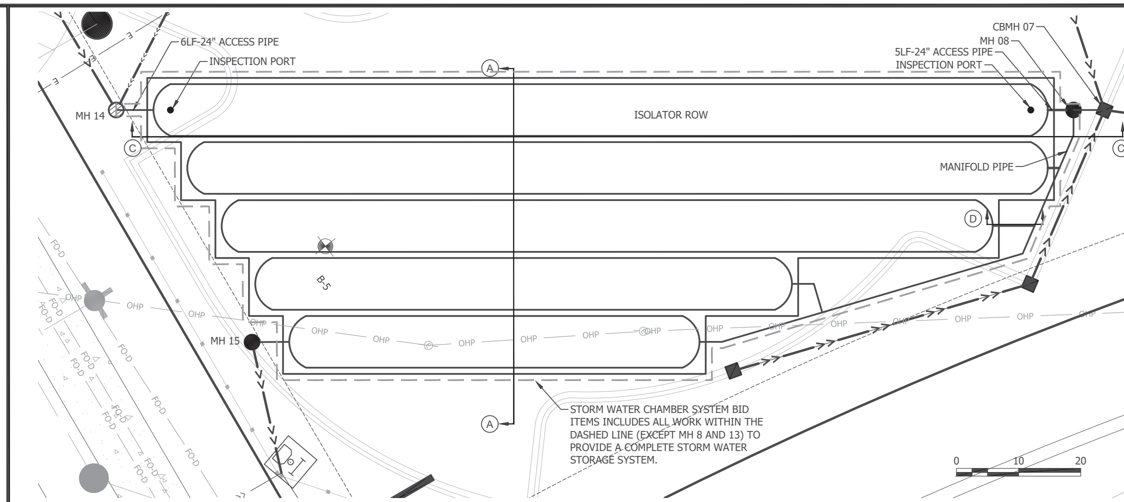
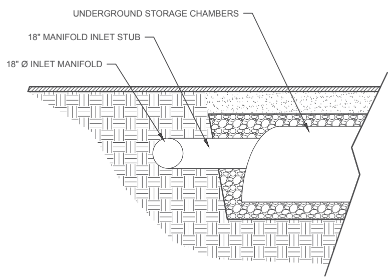
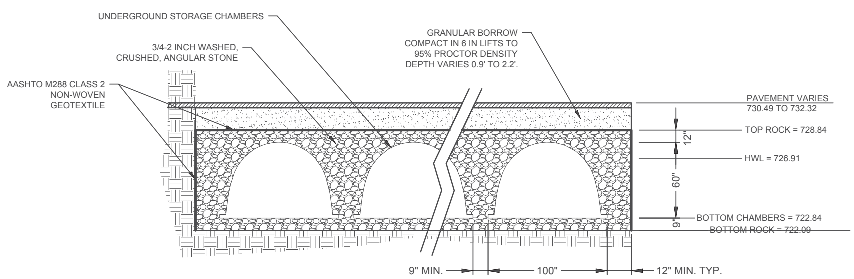


B C8.01 PLAN - UNDERGROUND STORMWATER TREATMENT SYSTEM
NOT TO SCALE



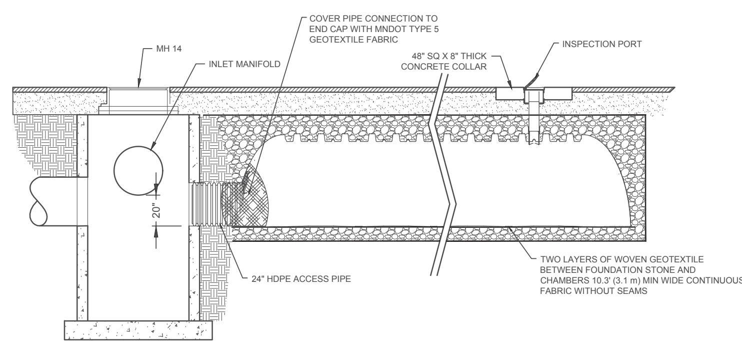
NOTE: ELEVATIONS AND DIMENSIONS ARE BASED ON STORMTECH MC-4500 CHAMBERS

D C8.01 CROSS SECTION OF INLET MANIFOLD AND CHAMBERS
NOT TO SCALE



NOTES:
1. ELEVATIONS AND DIMENSIONS ARE BASED ON STORMTECH MC-4500 STORM WATER CHAMBERS.
2. DO NOT INSTALL GEOTEXTILE FABRIC UNDER DRAINFIELD CHAMBERS.

A C8.01 CROSS SECTION OF CHAMBERS
NOT TO SCALE



C C8.01 ISOLATOR ROW
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PRINT NAME: DAVID AHRENS
SIGNATURE:
DATE: 7/12/2019 LIC. NO. 21711

LIONS TAP
EDEN PRAIRIE, MN
UNDERGROUND STORMWATER PLAN & SECTIONS

NO	REVISION	DATE

SURVEY	STANTEC
DRAWN	DA/RM
DESIGNED	DA/TW
CHECKED	DAA
APPROVED	DAA
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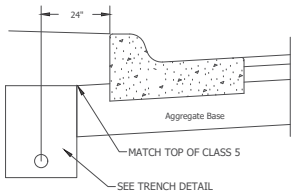

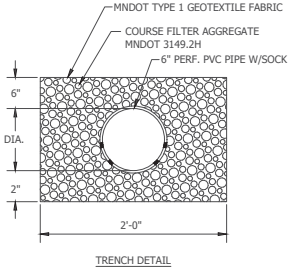

A C8.04 PVC PERFORATED PIPE BELOW CURB
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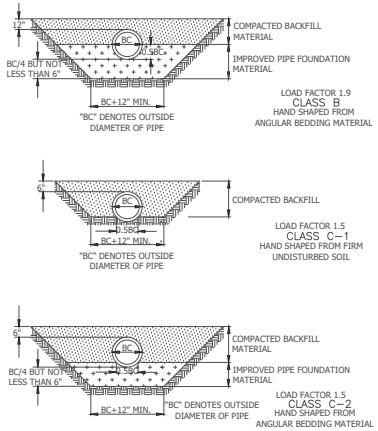

B C8.04 PIPE BEDDING METHODS FOR RCP OR DIP
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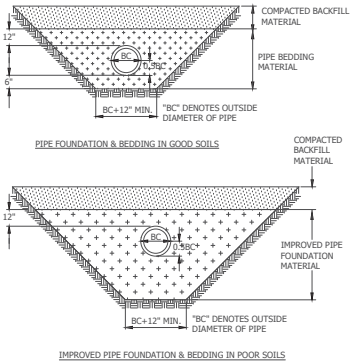

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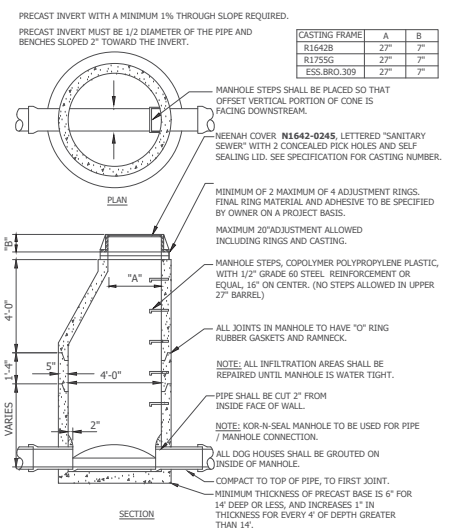

D C8.04 SANITARY MANHOLE (SAN MH)
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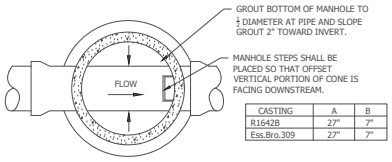

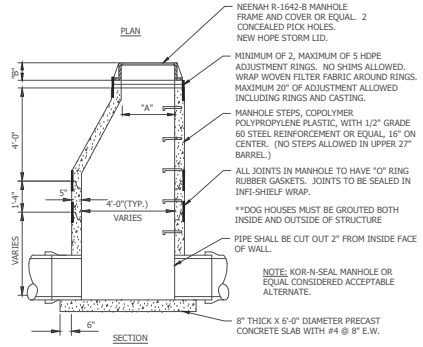

E C8.04 STORM SEWER MANHOLE (MH)
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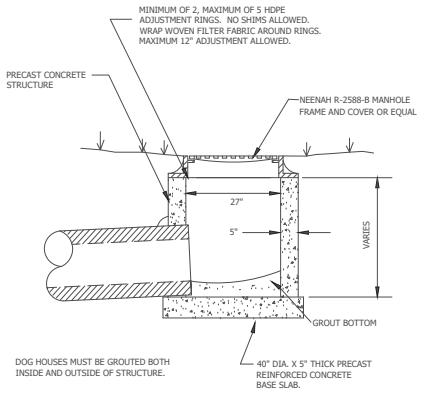

F C8.04 YARD DRAIN (YD)
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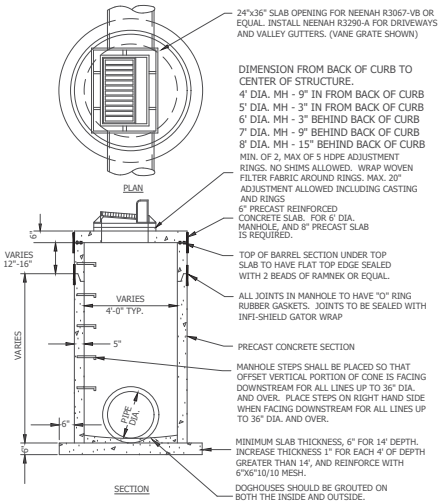
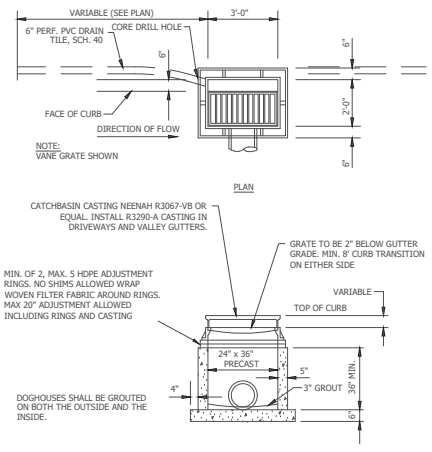


G C8.04 CATCH BASIN MANHOLE (CBMH)
NO SCALE



H C8.04 2' X 3' CATCH BASIN (CB)
NO SCALE

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PRINT NAME: DAVID AHRENS
SIGNATURE:
DATE: 7/10/2019
LIC. NO.

LIONS TAP
EDEN PRAIRIE, MN
SITE DETAILS

NO	REVISION	DATE

SURVEY	STANTEC
DRAWN	DA/RM
DESIGNED	DA/TW
CHECKED	DAA
APPROVED	DAA
PROJ. NO.	193803789

SHEET NUMBER
C8.04

Plot Date: 07/15/2019 - 11:57am
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Xrefs: 193803789 BRDY.dwg

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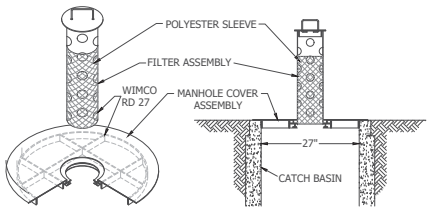
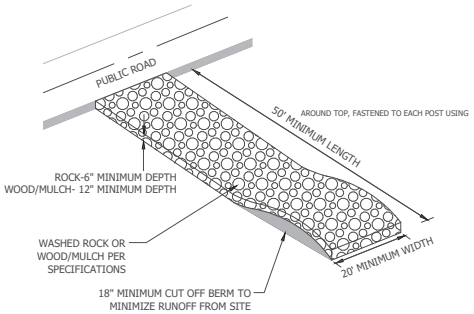
DEVICES TO BE INSTALLED IMMEDIATELY UPON INSTALLATION OF CONCRETE STRUCTURE CONE OR TOP SLAB.

DEVICES SHOWN ARE AS MANUFACTURED BY WIMCO. MODEL NO. OF UNIT SHOWN: RD 27.

OTHER APPROVED INLET PROTECTION DEVICES FOR BEEHIVE CASTINGS ARE:
- ROYAL ENTERPRISES - MODEL NO 27 INFRASAFE SEDIMENT CONTROL BARRIER - DG.
- PRE MANUFACTURED UNIT BY CIRCLE "H" ENTERPRISES.

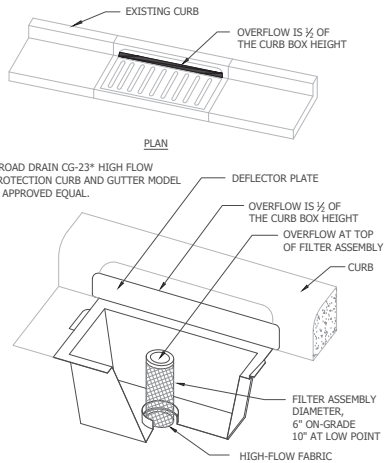


A C8.05 INLET PROTECTION - BEEHIVE CASTING — NO SCALE



NOTES:
1. MnDOT 3733 TYPE 4 FILTER FABRIC SHALL BE PLACED UNDER ROCK OR MULCH TO STOP MUD MIGRATION THROUGH MATERIAL.
2. FUGITIVE ROCK OR MULCH WILL BE REMOVED FROM ADJACENT ROADWAYS DAILY OR MORE FREQUENTLY AS NECESSARY.
3. CONSTRUCTION ENTRANCE MUST BE CONSTRUCTED PRIOR TO THE COMMENCEMENT OF GRADING OPERATIONS ON THE SITE.
4. THE ENTRANCE MUST BE MAINTAINED IN PROPER CONDITION TO PREVENT TRACKING OF MUD OFF THE SITE. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH ADDITIONAL ROCK, WOOD/MULCH, OR REMOVAL AND REINSTALLATION OF THE PAD.
5. THIS ENTRANCE WILL BE USED BY ALL VEHICLES ENTERING OR LEAVING THE PROJECT.
6. THE CONSTRUCTION ENTRANCE WILL BE REMOVED PRIOR TO THE PLACEMENT OF BITUMINOUS SURFACING.

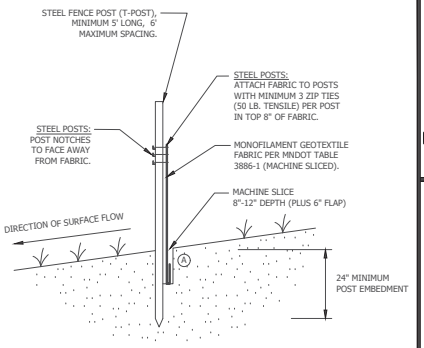
B C8.05 CONSTRUCTION ENTRANCE — NO SCALE



WIMCO ROAD DRAIN CG-23* HIGH FLOW INLET PROTECTION CURB AND GUTTER MODEL OR CITY APPROVED EQUAL.

* FOR THE NEW R-3290-VB STANDARD CASTING, INSTALL WIMCO ROAD DRAIN CG-3290 OR CITY APPROVED EQUAL.

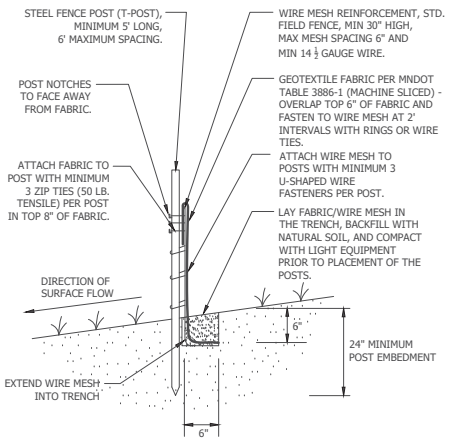
C C8.05 INLET PROTECTION AT CATCH BASIN — NO SCALE



NOTE:
THE MACHINE SLICED METHOD (THIS DETAIL) IS THE STANDARD SILT FENCE INSTALLATION METHOD. HEAVY DUTY (ERO-18) SILT FENCE INSTALLATION METHODS SHOULD ONLY BE USED WHEN APPROVED OR DIRECTED BY THE CITY.

A COMPACTION:
AFTER "SLICING" IN THE FABRIC AND *BEFORE* INSTALLATION OF STEEL POSTS, DRIVE INSTALLATION EQUIPMENT OVER THE "SLICE" WHILE FABRIC IS LAYING ON THE GROUND. *THEN* INSTALL THE POSTS AND PULL UP FABRIC TO ATTACH AT A UNIFORM HEIGHT.

D C8.05 SILT FENCE - MACHINE SLICED — NO SCALE

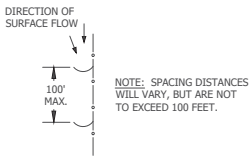


NOTE:
SPLICING WILL BE MADE AT OPPOSING SILT FENCE POSTS BY PLACING POSTS AND SILT FENCE NEXT TO EACH OTHER AND ROTATING 360°.

E C8.05 SILT FENCE - HEAVY DUTY — NO SCALE

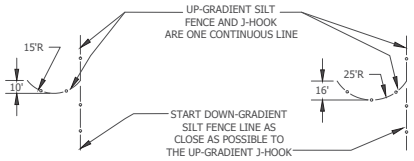
PLAN VIEW

I. SPACING REQUIREMENTS



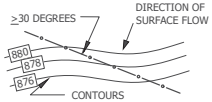
NOTE: SPACING DISTANCES WILL VARY, BUT ARE NOT TO EXCEED 100 FEET.

II. SIZING REQUIREMENTS: J15, J25



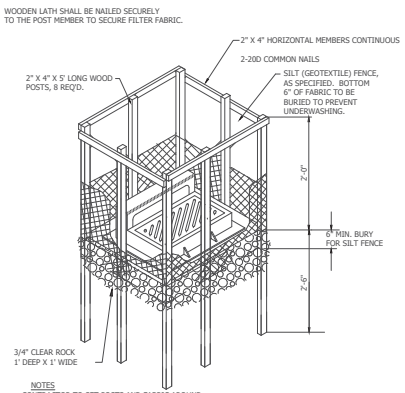
J15 - FOR CATCHMENT AREA <0.25 ACRES

J25 - FOR CATCHMENT AREA >0.25 ACRES



NOTE:
J-HOOKS SHALL BE USED WHEN THE SILT FENCE IS INSTALLED AT AN ANGLE OF 30 DEGREES OR GREATER FROM PARALLEL TO THE CONTOURS.

F C8.05 SILT FENCE - J-HOOK — NO SCALE



NOTES
CONTRACTOR TO SET POSTS AND FABRIC AROUND THE BASIN DURING THE BACKFILLING OPERATION. SIZE AND SHAPE OF THE BARRIER SHALL BE MODIFIED TO FIT STRUCTURE. SILT FENCE TO BE PLACED AROUND ENTIRE PERIMETER. TOP OF SILT FENCE TO HAVE 12" MIN. CLEARENCE TO EXISTING GRADE.

G C8.05 INLET PROTECTION AT CATCH BASIN — NO SCALE

Stantec
2335 Highway 36 W
St. Paul, MN 55113
www.stantec.com

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.
PRINT NAME: DAVID AHRENS
SIGNATURE:
DATE: 7/10/2018
LIC. NO.

LIONS TAP
EDEN PRAIRIE, MN
SITE DETAILS

NO	REVISION	DATE

SURVEY	STANTEC
DRAWN	DA/RM
DESIGNED	DA/TW
CHECKED	DAA
APPROVED	DAA
PROJ. NO.	193803789

SHEET NUMBER
C8.05

Plot Date: 07/15/2018 - 11:57am
Plot By: Ryan Mehrkens
File No: 193803789 C8.05 Detail Sheet.dwg

KEY	BOTANICAL NAME	COMMON NAME	TOTAL SITE QUANTITY	SIZE	REMARKS
	DECIDUOUS OVERSTORY TREES				
FM	*Acer x freemanii 'Sienna Glen'*	TREEMAN MAPLE	7	3.0" CAL. B&B	STR. LEADER, NO 'V' CROTCH
NHL	*Gleditsia triacanthos var inermis*	NORTHERN ACCLAIM HONEY LOCUST	12	3.0" CAL. B&B	STR. LEADER, NO 'V' CROTCH
SL	*Tilia mongolica 'Harvest Gold'*	HARVEST GOLD MONGOLIAN LINDEN	9	2.5" CAL. B&B	STR. LEADER, NO 'V' CROTCH
WO	*Quercus alba*	WHITE OAK	1	2.5" CAL. B&B	STR. LEADER, NO 'V' CROTCH
	OVERSTORY TREE TOTAL		**29**		
	CONIFEROUS OVERSTORY TREES				
CS	*Picea glauca 'Densata'*	BLACK HILLS SPRUCE	19	6'-8" HT. B&B	
NS	*Picea abies*	NORWAY SPRUCE	2	6'-8" HT. B&B	
	CONIFEROUS OVERSTORY TREE TOTAL		**21**		
	ORNAMENTAL/UNDERSTORY TREES				
JTL	*Syringa reticulata*	JAPANESE TREE LILAC	2	1.5" CAL.	
RB	*Betula nigra 'Dura Heat'*	RIVER BIRCH	1	1.5" CAL.	
	ORNAMENTAL/UNDERSTORY TREE TOTAL		**3**		
	SHRUBS				
FS	*Rhus aromatic*	FRAGRANT SUMAC	81	5 GAL	
TW	*Physocarpus opulifolius 'SMPOTW'*	TINY WINE NINEBARK	15	5 GAL	
BJ	*Juniperus sabina 'Broadmoor'*	BROADMOOR JUNIPER	5	5 GAL	
CN	*Physocarpus opulifolius 'Seward'*	SUMMER WINE NINEBARK	5	5 GAL	
CL	*Syringa vulgaris*	COMMON LILAC	7	5 GAL	
DBH	*Diervilla lonicera*	DWARF BUSH HONEYSUCKLE	20	5 GAL	
MKL	*Syringa patula*	MISS KIM LILAC	11	5 GAL	
NV	*Viburnum lentago*	NANNYBERRY VIBURNUM	2	5 GAL	
RTD	*Cornus sericea 'Radanfarlow'*	I- RHANNED DOGWOOD	19	5 GAL	
TY	*Taxus x media 'Tauntoni'*	TAUNTON YEW	20	5 GAL	
	SHRUBS TOTAL		**185**		
	PERENNIALS				
HMJ	*Hemerocallis 'Rodessa Returns'*	ROADSIDE RETURNS DAYLILY	46	1 GAL	
KF	*Calamagrostis x acutiflora 'Karl Foerster'*	KARL FOERSTER REED GRASS	65	1 GAL	
PRS	*Perovskia 'Filagran'*	FILIGRAN RUSSIAN SAGE	8	1 GAL	
JS	*Pachysandra terminalis*	JAPANESE SPURGE	15	1 GAL	
PL	*Pehnaroo Purpurea*	PURPLE CONEFLOWER	8	1 GAL	
EI	*PARTHENOCISSUS QUINQUEFOLIA*	ENGELMAN IVY	7	1 GAL	AT RETAINING WALLS
BI	*PARTHENOCISSUS TRICUSPIDATA*	BOSTON IVY	5	1 GAL	AT RETAINING WALLS
	PERENNIALS TOTAL		**164**		

WARRANTY ALL PLANTS FOR 2 GROWING SEASONS - 2 YR. WARRANTY
PROVIDE PLANT ESTABLISHMENT MAINTENANCE FOR FULL 2 GROWING SEASONS - 2 YR. MAINTENANCE

REQUIRED TREE REPLACEMENT CALCULATIONS

(A) 259.0 =TOTAL DBH SIGNIFICANT TREES LOST AS RESULT OF LAND ALTERATIONS (Fair and Poor trees excluded)
(B) 267 = TOTAL DBH SIGNIFICANT TREES IN GOOD CONDITIONS (Fair and Poor trees excluded)
(C) 0.5 - TREES REPLACEMENT CONSTANT
(D) REPLACEMENT TREES REQUIRED (Number of Caliper Inches)

TREE REPLACEMENT FORMULA = [(A/B) x C] x A = D
[(259.0/267) x 0.5] x 259.0 = 125.62 =
126 CALIPER INCHES REQUIRED FOR REPLACEMENT

LANDSCAPING REQUIREMENTS

TOTAL GROSS SQUARE FOOTAGE OF ALL FLOORS OF A BUILDING DIVIDED BY 320

LIONS TAP = 4,950 TOTAL GROSS SQUARE FOOTAGE
4,950 SF/320 = 15.46 CALIPER INCHES
16 CALIPER INCHES REQUIRED — **TOTAL REQ. REPLACEMENT = 142 cal. Inches**

PROPOSED TREE REPLACEMENT TOTAL CALIPERS

OVERSTORY DECID. TREES: 19 trees x 3.0 cal./tree = 57.0 cal. Inches
OVERSTORY DECID. TREES: 10 trees x 2.5 cal./tree = 25.0 cal. Inches
OVERSTORY CONIF. TREES: 21 trees x (6' ht. / 2.4 = 2.5 cal.) = 52.5 cal. Inches
UNDERSTORY DECID. TREES: 3 trees x 1.5 cal./tree = 4.5 cal. Inches
TOTAL PROPOSED TREE CALIPER INCHES = 139.0 cal. Inches

ADDITIONAL CALIPER INCHES FROM SHRUB & PERENNIALS
SHRUBS: 185 / (6 shrubs = 3 caliper inches) = (160/6)x3 = 92.5 cal. Inches
PERENNIALS: 154 / (6 shrubs = 3 caliper inches) = (147/6) x 3 = 77.0 cal. inches
NO MORE THAN TWENTY-FIVE (25%) OF THE TOTAL TREE CALIPER INCHES REQUIRED SHALL BE REPLACED WITH SHRUBS AND PERENNIALS OR PLANTING BEDS. 25% OF 16 (142 - 126) CAL. INCHES = 4" CAL INCHES — **4.0 cal. Inches**

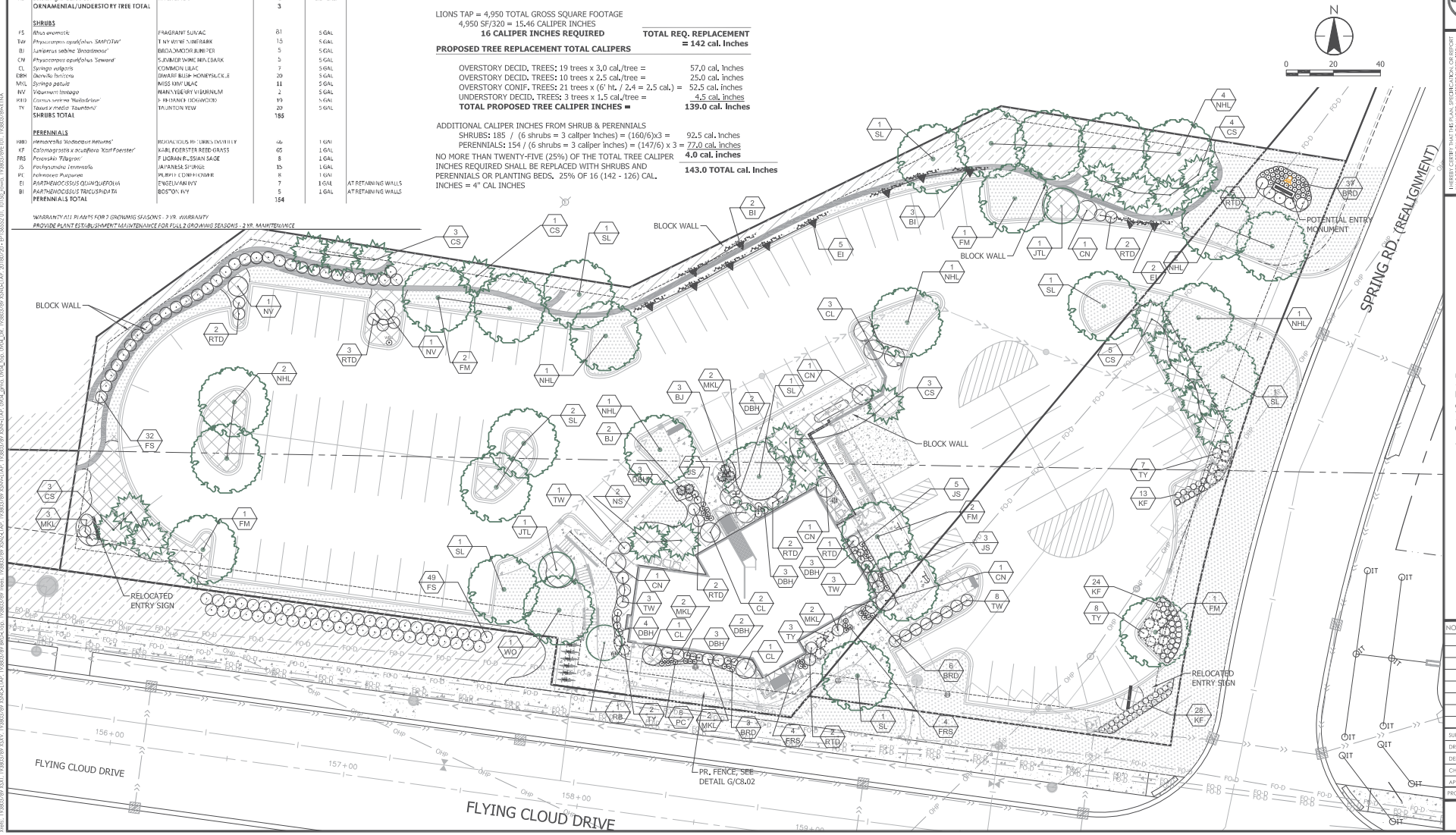
143.0 TOTAL cal. Inches

TURF: SOD
PLANT BED W/ MULCH
NATURAL GRASSES
RETAINING WALL

ALONG BLOCK RETAINING WALLS
BOSTON IVY, Parthenocissus tricuspidata
ENGLEMAN IVY, Parthenocissus quinquefalia englemann

NATURAL GRASS SEED MIX: STATE OF MN NATIVE GRASSLAND MIX 35-621 DRY PRAIRIE SOUTHEAST

NOTES:
1. ALL TURF AND GRASS AREAS SHALL BE DE-COMPACTED TO A DEPTH OF 18" PRIOR TO PLACEMENT OF 6" TOPSOIL.
2. FINAL SHRUB & PERENNIAL SELECTIONS TO INCLUDE POLLINATORS
3. TREE REPLACEMENT FOR THE NORTHERLY LOT (RESIDENTIAL SITE) WILL OCCUR IF/WHEN DEVELOPMENT OCCURS ON THAT LOT.



Stantec
2335 Highway 36 W
St. Paul, MN 55113
www.stantec.com

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 LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA

PRINT NAME: TODD MICHAUM
SIGNATURE:
DATE: 7/10/2020
LIC. NO. 19524

LIONS TAP
EDEN PRAIRIE, MN
PLANTING PLAN

NO	REVISION	DATE

SURVEY	STANTEC
DRAWN	DA/RM
DESIGNED	DA/TW
CHECKED	DAA
APPROVED	DAA
PROJ. NO.	193803789

SHEET NUMBER
L1.01

THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS. DO NOT SCALE THE DRAWING. ANY ERRORS OR OMISSIONS SHALL BE REPORTED TO STANTEC IMMEDIATELY. THE COPYRIGHTS TO ALL DESIGNS AND DRAWINGS ARE THE PROPERTY OF STANTEC. REPRODUCTION OR USE FOR ANY PURPOSE OTHER THAN THAT AUTHORIZED BY STANTEC IS FORBIDDEN.

Plot Date: 08/02/2019 - 1:06pm
Plot By: Dan Anderson
Xrefs: 193803789 XSIX1, 193803789 XSIX2, 193803789 XSIX3, 193803789 XSIX4, 193803789 XSIX5, 193803789 XSIX6, 193803789 trees

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT
18681 Lake Drive East
Chanhassen, MN 55317
952-607-6512
www.rpbcwd.org

MEMORANDUM

TO: RPBCWD Board of Managers

FROM: Terry Jeffery, Watershed Planning Manager

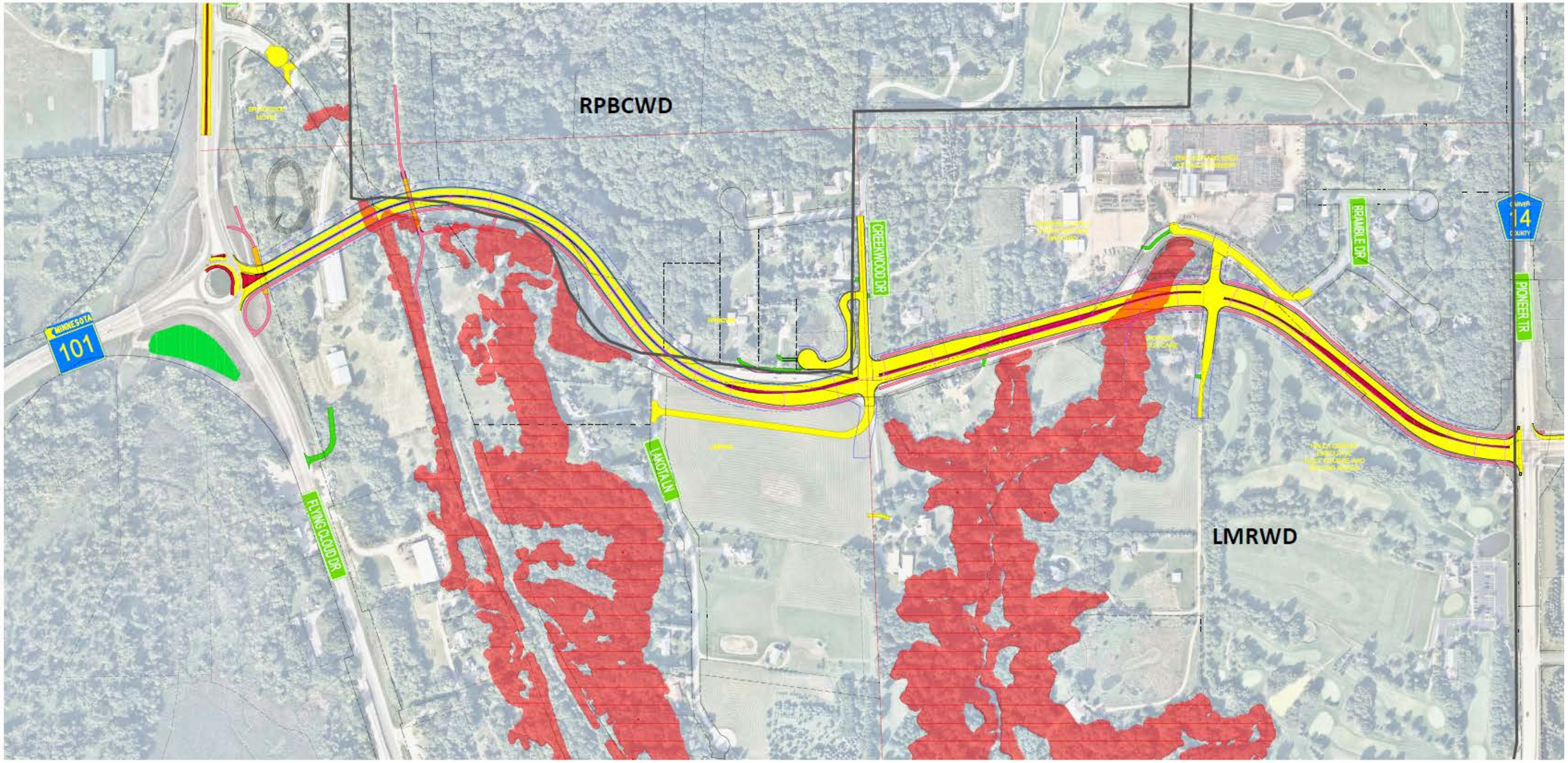
DATE: 04 September 2019

RE: Authorization for Administrator to enter into agreement with the Lower MN River Watershed District for review and permitting of the MN T.H. 101 project from Flying Cloud Drive (CSAH 61) to Pioneer Trail (CSAH 14)

The Minnesota Department of Transportation (MNDOT), Carver County, and the City of Chanhassen have been preparing plans to improve the geometrics of Minnesota Trunk Highway 101 (TH 101) from Flying Cloud Drive north to Pioneer Trail (CSAH 61). Staff from both Lower Minnesota River Watershed District (LMRWD) and Riley Purgatory Bluff Creek Watershed District (RPBCWD) have been meeting with the design team since November of 2018.

The majority of the project lies within the LMRWD as do the water resources of concern. A project of this magnitude is inherently cumbersome and complicated. In consideration of the stakeholders and to simplify the process, staff from LMRWD and RPBCWD have concluded that LMRWD has the greatest interest in and is best positioned to assume regulatory authority for this project.

Staff is requesting that the board authorize the Administrator to work with legal counsel to draft a cooperative agreement with the LMRWD to waive regulatory responsibility to LMRWD and, if necessary, to include the City of Chanhassen as a 3rd party in any such agreement. Staff further requests that the board authorize the Administrator to said agreement upon legal counsel's satisfaction that the District's interests are secured.



NORTH

0 100 200
SCALE IN FEET

LEGEND
PROPOSED ROADWAY
PROPOSED SHOULDER
PROPOSED WALKS AND TRAILS
PROPOSED RAISED MEDIANS
PROPOSED RETAINING WALL
PROPOSED TRAIL BRIDGE AND UNDERPASS
PROPOSED DRIVEWAYS
PROPOSED RIGHT-OF-WAY
EXISTING RIGHT-OF-WAY
EXISTING PROPERTY LINE

HIGHWAY 101 IMPROVEMENTS
PIONEER TRAIL TO FLYING CLOUD DRIVE
S.A.P. 194-020-014 / S.A.P. 010-701-004 / C.P. 14-08

WATERSHED AND STEEP SLOPES BOUNDARIES
FEBRUARY 2019

BOARD OF WATER AND SOIL RESOURCES

August 27, 2019

Riley Purgatory Bluff Creek Watershed District
C/o Claire Bleser, Administrator
18681 Lake Drive East
Chanhassen, MN 55317

Dear Board of Managers and Staff:

On behalf of the Minnesota Board of Water and Soil Resources, I would like to recognize and commend the Riley Purgatory Bluff Creek Watershed District (District) on its 50th Anniversary! Since 1969, the District Board and staff have been leaders in conservation by promoting, implementing and maintaining watershed protection and restoration projects within your watershed.

The original purposes for establishment of flood impact reduction and water quality continue to guide much of the District's work, but specifically in recent years the District has become a statewide leader in water resources management. This leadership is clear in the awards that the Creek Restoration Action Strategy has received. Collaborative implementation with school districts, municipalities and private landowners have also been critical elements to the success of the Scenic Heights School Forest Restoration, the Eden Prairie Fire Station Reuse Project and the Duck Lake Restoration. These are just a few examples of the value that you bring to water resource management in the State.

I wish the Riley Purgatory Bluff Creek Watershed District the best of luck in the next 50 years and challenge you to maintain the leadership you have demonstrated in the stewardship of our precious natural resources.

Sincerely,

John Jaschke
Executive Director

Cc: Dick Ward, RPBCWD Chair
Kevin Bigalke, BWSR (via email)
Steve Christopher, BWSR (via email)