Riley-Purgatory-Bluff Creek Watershed District

Board of Managers Workshop, Regular Meeting, and Public Hearing

Wednesday, September 6, 2017
5:30pm Board Workshop
7:00pm Regular Board Meeting
DISTRICT OFFICE
18681 Lake Drive East
Chanhassen

Agenda

1. Call to Order

2. Board workshop - 10 year plan

3. **Oath of Office -7:00pm** **Action**

4. **Approval of the Agenda** (Additions/Corrections/Deletion)

5. Election of Officers **Action**

6. Budget Public Hearing **Action**
   a. **Approve resolution 2017-06 to adopt 2018 budget**
   b. **Approve Resolution 2017-07 to adopt 2018 Metropolitan Surface Water Management Act Levy**
   c. **Order Scenic Heights Restoration Project 2017-08**

7. Matters of general public interest

   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.

8. **Reading and approval of minutes** **Action**
   Board of Manager Meeting, July 19, 2017
   Board of Manager Meeting, August 2, 2017

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 Staff Report
b. Accept Engineer's Report (with attached Inspection Report)
c. Approve Permit 2017-052: Old Excelsior Senior Living with staff recommendations
d. Approve Permit 2017-053: Minnetonka Mastercraft with staff recommendations
e. Approve Permit 2017-055: Scenic Heights Elementary 2018 Building Additions with staff recommendations
f. Approve Permit 2017-056: Covington Road Culvert Replacement with staff recommendations
g. Approve Permit 2017-057: Eden Prairie Center Retaining Wall with staff recommendations
h. Approve Permit 2017-023: Eden Prairie Assembly of God permit modification with staff recommendations
i. Approve 2nd Review Extension Period for Permit 2017-039: Mission Hills Senior Living
j. Authorize the administrator to execute with the Freshwater Society to participate into the Master Water Stewards Program.
k. Approve staff recommendations for cost-share applications
    i. 7300 Laredo Drive, Chanhassen 55317 (lake buffer, homeowner)
    ii. 7203 Frontier Trail, Chanhassen 55317 (lake buffer, homeowner)
    iii. 7205 Frontier Trail, Chanhassen 55317 (lake buffer, homeowner's assoc)

10. Citizen Advisory Committee **Information**
    a. Speaker's bureau proposal presentation

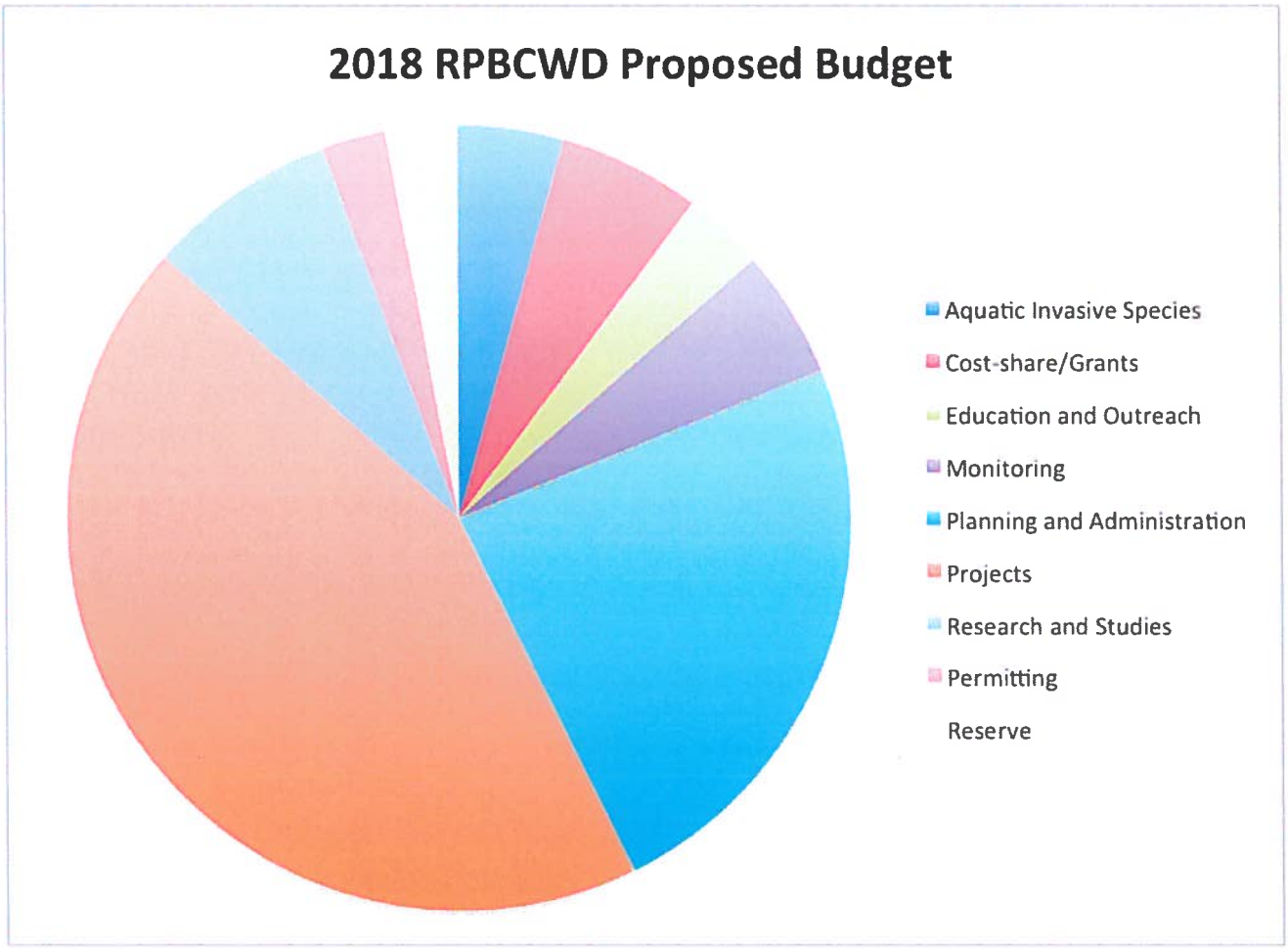
11. Action Items **Action**
    a. Permit 2017-047: Fawn Hill subdivision - Consider variance request and permit with staff recommendations
    b. Permit 2017-034: Park Road Improvements and Riley Creek crossing replacement - Consider variance request and permit with staff recommendation
    c. Accept July Treasurer's Report
    d. Approve Paying of the Bills
    e. Adopt Resolution 2017-009 - Petitioning Boundary Change

12. Discussion Items **Information**

    a. Upcoming Meeting

13. Upcoming Events **Information**

- Citizen Advisory Committee monthly meeting, September 18, 6:30pm, 18681 Lake Drive East, Chanhassen
- Metro Children's Water Festival, September 27, 9 am - 3 pm, state fair grounds.
- Governor's 25 by 25 town hall meetings for the Twin Cities Metro Area: September 27 in Minneapolis, October 4 in Burnsville, October 5 in Stillwater, 6:30 pm -8:30 pm. More details at: eqb.state.mn.us/townhalls
- Board Workshop and Regular Meeting, October 4, 5:30 pm, 18681 Lake Drive East, Chanhassen
- Cycle the Creek, October 7, 10 am - noon. 18681 Lake Drive East, Chanhassen.


2018 RPBCWD Proposed Budget
Aquatic Invasive Species
Cost-share/Grants
Education and Outreach
Monitoring
Planning and Administration
Projects
Research and Studies
Permitting
Reserve

Budget Description Number	Item & Description	Budget Amount	Change from '17 increase (decrease)
1	**Accounting and Audit** Preparation of the District's annual audit, provide monthly accounting services.	$ 40,000.00	$ 500.00
2	**Advisory Committees** Budget to cover Miscellaneous expenses related to the duties and activities of District advisory Committees.	$ 4,000.00	$ -
3	**Insurance and bonds** District general liability, workers compensation, property/casualty, public official liability insurance	$ 12,000.00	$ -
4	**Engineering Services** Oversight of all District Engineerins activities. Engineering attendance at meetings of the District - covers board and related project meetings, mini case studies, assisting in District water management planning activities, and other matters requiring District Engineer.	$ 103,000.00	$ -
5	**Legal Services** Legal advice at meetings, research on various issues for Board consideration, preparation and publication of legal notices, preparation of Board resolutions, and other matters requiring legal counsel.	$ 75,000.00	$ -
6	**Manager Compensation** Manager per diems for regular and special meeting attendance. Manager expenses incurred in the performance of official manager duties, such as attendance at conferences and meetings and related expenses.	$ 19,000.00	$ 500.00
7	**Dues and Publications** Dues for appropriate organization memberships (MAWD, League of Minnesota Cities, etc.) and for purchase of necessary publications and reference materials.	$ 8,000.00	$ -
8	**Office Cost** Rent, Office supplies, utilities, purchase additional equipment, janitorial expenses and office expansion.	$ 100,000.00	$ 5,000.00
9	**Permit Review and Inspection** Provides for engineering assistance in review of permit applications, clarifying problems with the developer, meet developer on-site, coordinate permit issues with communities, counties, and other regulatory bodies. Inspects projects.	$ 90,000.00	$ -
10	**Recording Services** Recording Services for the District.	$ 15,000.00	$ -
11	**Staff Cost** Includes salary, taxes, insurance, benefits and employee expenses (mileage, parking,professional development and supplies) for existing full time staff as well as interns). This budget includes an allowance for salary increases and benefit costs.	$ 434,000.00	$ (16,000.00)
12	**10-year Management Plan** Develop District next 10-year Plan. This is a multi-year project with an anticipated cost of $175,000.	$ 5,000.00	$ (70,000.00)
13	**AIS Inspection and early response** Support AIS inspections in Chanhassen and Eden Prairie. Support early rapid response to new infestation.	$ 75,000.00	$ -
14	**Buffer Demonstration Site** This project was to be implemented in 2015. However, our potential demonstration site fell through and the project did not move forward.	$ -	$ -
15	**Cost-share** Provides technical assistance and funds for our cost-share program.	$ 200,000.00	$ -

16	**Creek Restoration Action Strategy** Developed a prioritization scheme across all three watershed.	$ -	$	-
17	**Creek Restoration Action Strategies Phase 2** Provide funds to determine causes and solution to the deterioration of the creek reach.	$ 20,000.00	$	-
18	**Data Collection and Monitoring** Monitor and collect water quality data as identifies in our lakes and creeks report as well as collecting data for potential CIP sites and monitoring effectiveness of implmented CIPs.	$ 180,000.00	$	-
19	**District Groundwater Assessment** Assess curent state of groundwater located in the District. Identify needs and coordinate accordingly. Project to be completed Fall 2017.	$ -	$	(30,000.00)
20	**District Wide Floodplain Evaluation - Atlas 14/SMM model** Maintain and update SWMM model.	$ 30,000.00	$	-
21	**Education and Outreach** Develop education materials to raise awareness. Fund master water stewards program. Support programs that engage our community from youth to local decision makers. Maintain and enhance website.	$ 115,000.00	$	1,000.00
22	**Plant Restoration - U of M** Partner with the University of Minnesota to implement plan restoration measures on Lake Susan, Lake Riley, Mitchell Lake and Staring Lake.	$ 40,000.00	$	(35,000.00)
23	**Repair and Maintenance Fund *** Develop and implement grant program that LGU can use to repair and maintain stormwater infrastructure. *This is a multi year program that has a balance of $102,005. Next levying is expected in 2020.*	$ -	$	(100,000.00)
24	**Survey and Analysis Fund *** Funds in this category are funds dedicated in helping the District survey its resources as well as for analysis *This is a multi year program that has a balance of $13,837.*	$ -	$	-
25	**Community Resilience MPCA** The Riley Purgatory Bluff Creek Watershed District, in partnership with the Nine Mile Creek Watershed District were recipients of grant from MPCA to demonstrate a public planning process that educates and engages communities on the importance of climate change, current and anticipatedimpacts, and the need to build community resilience through planning. No additional expenditures are planned for 2018. Work is anticipated to end in 2017. *Project has expensed $45,667.18 out of the $47,000.*	$ -	$	-
26	**Wetland Management** This line item was created based on the public input for the next 10 year plan. Members of the community identified the need to protect and restore wetlands. Funds will be used to help us go through the wetland management scheme and projects.	$ 150,000.00	$	150,000.00
27	**Groundwater Conservation** Groundwater Conservationw as also identified as part of our 10 year plan process. The funds will be used in for project and studies.	$ 130,000.00	$	-
28	**Lake Vegetation Implementation** Funds in this category are to cover expenses for approved lake vegetation plans.	$ 75,000.00	$	75,000.00
29	**Opportunity Project** Funds in this category are for new opportunity projects that were not identified in the 10 year plan CIP program.	$ 100,000.00	$	100,000.00

30	**TMDL - MPCA** Assist and provide input in the TMDL process.	$ 10,000.00	$	-
31	**Bluff Creek Fish Passage and Creek Stabilization *** Implement creek stabilization and fish passage to address impairment on Bluff Creek. *This project was not implemented as we lacked support from one private property owner.*	$ -	$	-
32	**Bluff Creek Tributary** No additional funds needed. Project is anticipated to be completed winter 2017-2018 *This project is made in partnership with the City of Chanhassen.*	$ -	$	-
33	**Chanhassen High School *** Implement capture and reuse project at Chanhassen High School. *This is a multi-year project that is funded by a Stormwater Metropolitan Council Grant ($200,000) with a District match of $50,000. Additional funds are needed for this project in order to implement as bids came back higher then expected. The District is levying an additional $75,000. Chanhassen will be contributing as well.*	$ 75,000.00	$	25,000.00
34	**Chanhassen Town Center*~** Implement a study to identify opportunities to implement water quality improvement project in Chanhassen town center. *This is a multi-year project funded by the Clean Water Legacy Funds ($48,000) and with a District match of $12,000. The City of Chanhassen is a partner on this project. No additional funds are being levied for this project. The project is now completed. Lifetime costs $35,196.56. $27,803.44 under budget.*	$ -	$	-
35	**CLP Treatment - Lake Riley/Susan (WQ)** Implement curlyleaf pondweed treatment on Lake Susan and develop new 5-year plant management plan if identified as necessary. Moved to line item 28.	$ -	$	(10,000.00)
36	**CLP Treatment - Riley (WQ)** Implement curlyleaf pondweed treatment on Lake Riley and develop new 5-year plant management plan if identified as necessary. Moved to line item 28.	$ -	$	(10,000.00)
37	**Lake Lucy Iron Enhanced *** No additional funds needed at this time. Working with HOA to implement water quality improvement project on their outlot along Lake Lucy Road. Project canceled due to lack of support from HOA.	$ -	$	-
38	**Lake Lucy Plant Management Plan** Project complete. No additional funds are needed.	$ -	$	-
39	**Lake Lucy Spent Lime** Project was canceled due to lack of support from homeowners - no additional funds are needed at this time.	$ -	$	-
40	**Lake Riley - EWM Treatment** Implement curlyleaf pondweed treatment on Lake Riley and develop new 5-year plant management plan if identified as necessary. Increase in cost is due to utilizing a renovate 40. Moved to Line item 28.	$ -	$	(25,000.00)
41	**Lake Riley - Alum Treatment 1st dose *** Alum treatment was implemented in 2016. District will be monitoring but no additional funds are needed at this time. *This is a multi-year project. No additional funds are needed at this time. Monitoring will continue to assess longetivity at efficacity of the treatment.*	$ -	$	-
42	**Lake Susan Alum Feasibility** Feasibility will be completed in 2016.	$ -	$	-

43	**Lake Susan Improvement Phase 1 ***	$ -	$ -
	The Spent Lime project will be completed in 2016 and the District will be monitoring in 2017 through their data collection program. The City of Chanhassen was a partner on this project. No additional funds are needed at this time. *Monitoring technology through Data Collection. Project is complete.*		
44	**Lake Susan Water Quality Improvement Phase 2 *~**	$ 80,000.00	$ 80,000.00
	Lake Susan Water Quality project is looking at capturing and resuing water from towncenter. Project is still in feasibility. *This is a multi-year project funded by the Clean Water Legacy Funds ($233,400) and with $150,000 District funds levied in 2015. The City of Chanhassen is a partner on this project. Based on Recent Bids an adiitional $80,000 was identified as needed.*		
45	**Rice Marsh Lake Alum Feasibility Phase 1**	$ -	$ -
	Rice Marsh Lake UAA identified the need to control internal loads in RML.		
46	**Rice Marsh Lake Paleolimnology**	$ -	$ -
	Study is now completed. No additional funds are needed at this time.		
47	**Rice Marsh Lake Water Quality Improvement - Feasibility Phase 1**	$ -	$ (20,000.00)
	Rice Marsh Lake UAA identified the need to control watershed loads in RML. No additional funds needed.		
48	**Rice Marsh Lake Winter Fish Kill Prevention (WQ)**	$ -	$ (10,000.00)
	Maintaining Carp Control system on Rice Marsh Lake as part of the Riley Creek Chain of Lakes Carp Managmeent Plan. Moved to Line item13.		
49	**Rice Marsh Lake/Lake Riley UAA**	$ -	$ -
	Study is completed and has moved into implementation.		
50	**Rice Marsh Lake In-lake phosphorus load**	$ 150,000.00	$ 150,000.00
	Alum treatment is anticipated to be implemented in 2018 if conditions are right.		
51	**Riley Creek Restoration (Reach E and D3) *~**	$ 400,000.00	$ (200,000.00)
	Provide funds to implement feasibility, design and restoration of Reach E and D3 on Riley Creek. *This is a multi-year project. The District is levying an additional $400,000 in 2018 for this project. Anticipated cost for the project is $1,515,000. The City of Eden Prairie and the Lower Riley Creek Watershed District will be partnering in this effort but funds (anticipate $300,000 and $150,000 respectively).*		
52	**Fire Station 2 (Eden Prairie)**	$ -	$ (20,000.00)
	Implement a project to capture and reuse water at fire station 2 in Eden Prairie. *This is a multi-year project that is funded by a Stormwater Metropolitan Council Grant ($99,287), City of Chanhassen and the District match of $19,206.50 each. Project aniticpated to be completed in 2017. No additional funds needed.*		
53	**Purgatory Creek Rec Area- Berm/retention area - feasibility/design**	$ -	$ (50,000.00)
	The District and the City of Eden Prairie will be doing a feasibility to design phase to determine maintenance and repairs needed for this area.		
54	**Hyland Lake UAA**	$ -	$ (20,000.00)
	Hyland Lake UAA has not been updated since 2004 and needs to be updated.		
55	**Lotus Lake In-lake phosphorus load control**	$ 345,000.00	$ 345,000.00
	Pending feasibility study and invasive species check, internal control of phosphorus is anticipated in Lotus Lake in 2018.		

56	**Lotus Lake - Feasability Phase 1** The UAA identified management of internal loads to Lotus Lake.	$ -	$	(20,000.00)
57	**Mitchell Lake Plant Management (CLP - WQ)** Implement curlyleaf pondweed treatment on Mitchell Lake that is consistent with plant management plan. *Moving forward this line item has been clumped under lake vegetation implementation.*	$ -	$	(15,000.00)
58	**Purgatory Creek at 101*** Project will be implemented in 2016 - no additional funds are needed for the creek restoration on Purgatory Creek near highway 101. The City of Minnetonka was a partner on this project. *Project completed.*	$ -	$	-
59	**Purgatory Creek Lakes UAA*** UAA will be completed in 2016 - no additional funds are needed. *Project completed.*	$ -	$	-
60	**Red Rock Lake Plant Management (CLP - WQ)** Implement curlyleaf pondweed treatment on Red Rock Lake that is consistent with plant management plan. *Moving forward this line item has been clumped under lake vegetation implementation.*	$ -	$	(15,000.00)
61	**Silver Lake Restoration - Feasibility Phase 1** Provide funds to develop a restoration plan that would preserve/enhance wild rice preservation while also improving water quality.	$ -	$	(20,000.00)
62	**Silver Lake Paleolimnology** Work is completed. No additional funds are needed.	$ -	$	-
63	**Scenic Heights** This is water quality and habitat restoration located on the School of Forest grounds at Scenic Heights Elementary School. *This is a multi-year project. Partners include Minnetonka School District ($45,000), City of Minnetonka and Hennepin County ($50,000).*	$ -	$	-
64	**Hyland Lake in-lake phosphorus load control** This is for a feasibility analysis for in-lake load contraol treatment.	$ 20,000.00	$	20,000.00
65	**Duck Lake watershed load** This project will be done in coordination with the City of Eden Prairie. The project will have for main objective to reduce TP to Duck Lake.	$ 220,000.00	$	220,000.00
66	**Staring Lake - Plant Management - EWM Treatment and CLP** Implement and develop plant management plan for Staring Lake. Implement herbicide treatment for curlyleaf pondweed and eurasian watermilfoil treatment. *Moving forward this line item has been clumped under lake vegetation implementation.*	$ -	$	(20,000.00)
67	**Reserve** Contingency funds.	$ 100,000.00	$	(35,000.00)

Budget Description	BUDGET Public Hearing	2015 BUDGET	Actual 2015	2016 BUDGET	Actual 2016	2017 Budget	2017 expenditures as of August 2, 2017	Proposed 2018 BUDGET
	REVENUES							
	Plan Implementation Levy	$ 2,431,500.00	$ 2,417,053.77	$ 2,481,500.00	$ 2,481,500.00	$ 2,859,000.00	$ 2,859,000.00	$ 3,420,000.00
	Permit	15000	20100	15000	10540	15000	19300	20000
	Grant Income		84,934.01					
	Data Collection Income		8,830.50		1000			
	Other Income		535.17		18.83		33674	
	TOTAL REVENUE	$ 2,446,500.00		$ 2,496,500.00	$ 2,493,058.83	$ 2,874,000.00	$ 2,911,974.00	$ 3,440,000.00
	EXPENDITURES							
			Administration					
1	Accounting and Audit	$ 32,500.00	$ 31,134.72	$ 34,000.00	$ 25,559.79	$ 39,500.00	$ 23,568.30	$ 40,000.00
2	Advisory Committees	$ 4,500.00	$ -	$ 4,500.00	$ 147.45	$ 4,000.00	$ 3,408.83	$ 4,000.00
3	Insurance and bonds	$ 10,000.00	$ 3,191.64	$ 10,000.00	$ 7,649.28	$ 12,000.00	$ 4,701.49	$ 12,000.00
4	Engineering Services	$ 96,000.00	$ 100,824.23	$ 103,000.00	$ 3,358.62	$ 103,000.00	$ 41,316.70	$ 103,000.00
5	Legal Services	$ 130,000.00	$ 125,161.49	$ 75,000.00	$ 58,343.88	$ 75,000.00	$ 34,549.34	$ 75,000.00
6	Manager Compensation	$ 18,500.00	$ 12,394.36	$ 18,500.00	$ 7,180.05	$ 18,500.00	$ 7,000.81	$ 19,000.00
7	Dues and Publications	$ 3,500.00	$ 5,275.00	$ 3,500.00	$ 4,000.00	$ 8,000.00	$ 4,000.00	$ 8,000.00
8	Office Cost	$ 79,500.00	$ 68,161.04	$ 67,500.00	$ 46,851.83	$ 95,000.00	$ 94,781.31	$ 100,000.00
9	Permit Review and Inspection	$ 150,000.00	$ 155,420.03	$ 100,000.00	$ 122,299.66	$ 90,000.00	$ 104,769.19	$ 90,000.00
10	Recording Services	$ 15,000.00	$ 11,975.49	$ 15,000.00	$ 4,305.51	$ 15,000.00	$ 5,643.49	$ 15,000.00
11	Staff Cost	$ 248,500.00	$ 231,359.64	$ 265,500.00	$ 154,537.56	$ 450,000.00	$ 173,993.69	$ 434,000.00
	Subtotal	$ 788,000.00	$ 744,897.64	$ 696,500.00	$ 434,233.63	$ 910,000.00	$ 497,733.15	$ 900,000.00
			Programs and Projects					
			District Wide					
12	10-year Management Plan			$ 100,000.00	$ 43,813.28	$ 75,000.00	$ 55,965.97	5000
13	AIS Inspection and early response	$ 50,000.00	$ 53,364.43	$ 75,000.00	$ 11,563.71	$ 75,000.00	$ 62.24	75000
14	Buffer Demonstration Site	$ 15,000.00	$ -					
15	Cost-share	$ 130,000.00	$ 90,549.93	$ 150,000.00	$ 63,983.08	$ 200,000.00	$ 5,370.79	200000
16	Creek Restoration Action Strategy	$ -	$ 36,467.55					
17	Creek Restoration Action Strategies Phase 2			$ 25,000.00	$ -	$ 20,000.00	$ 11,487.00	20000
18	Data Collection and Monitoring	$ 170,000.00	$ 172,636.26	$ 180,000.00	$ 109,171.73	$ 180,000.00	$ 54,433.47	180000
19	District Groundwater Assessment					$ 30,000.00	$ 18,275.00	
20	District Wide Floodplain Evaluation - Atlas 14/SMM model	$ 110,000.00	$ 117,996.50	$ 55,000.00	$ 73,243.00	$ 30,000.00	$ 1,559.32	30000
21	Education and Outreach	$ 65,000.00	$ 41,550.66	$ 114,000.00	$ 43,412.78	$ 114,000.00	$ 32,419.62	115000
22	Plant Restoration - U of M	$ 75,000.00	$ 43,212.04	$ 75,000.00	$ 37,746.04	$ 75,000.00	$ 27,931.26	40000
23	Repair and Maintenance Fund *					$ 100,000.00		
24	Survey and Analysis Fund *				$ 24,165.26			
25	Community Resilience MPCA						$ 27,492.05	
26	Wetland Management							150000
27	Groundwater Conservation							130000
28	Lake Vegetation Implementation							75000
29	Opportunity Project							100000
30	TMDL - MPCA			$ 30,000.00	$ 1,165.45	$ 10,000.00	$ 1,028.00	10000
	Subtotal	$ 615,000.00	$ 555,777.37	$ 804,000.00	$ 408,264.33	$ 909,000.00	$ 236,024.72	$ 1,130,000.00
			Bluff Creek					
31	Bluff Creek Fish Passage and Creek Stabilization *	$ -	$ 19,466.54		$ 3,633.00		$ 8,392.43	
32	Bluff Creek Tributary						$ 17,294.27	
33	Chanhassen High School *			$ 5,000.00		$ 50,000.00	$ 96,312.90	$ 75,000.00
	Subtotal	$ -	$ 19,466.54	$ 5,000.00	$ 3,633.00	$ 50,000.00	$ 121,999.60	$ 75,000.00
			Riley Creek					
34	Chanhassen Town Center*~	$ 15,000.00	$ 11,286.50		$ 6,354.50		$ 12,605.56	
35	CLP Treatment - Lake Riley/Susan (WQ)	$ 12,000.00	$ 4,905.60	$ 10,000.00	$ 2,138.85	$ 10,000.00	$ 3,074.30	
36	CLP Treatment - Riley (WQ)	$ -	$ -	$ 10,000.00	$ 3,850.00	$ 10,000.00	$ 7,173.37	
37	Lake Lucy Iron Enhanced *	$ 50,000.00		$ 400,000.00	$ 62.32			
38	Lake Lucy Plant Management Plan	$ -	$ 466.81					
39	Lake Lucy Spent Lime	$ -	$ 3,152.16					
40	Lake Riley - EWM Treatment	$ 10,000.00	$ 3,430.72	$ 10,000.00	$ 4,819.00	$ 25,000.00	$ 22,325.20	
41	Lake Riley - Alum Treatment 1st dose *	$ 200,000.00	$ 19,375.53	$ 60,000.00	$ 215,289.49		$ 681.85	
42	Lake Susan Alum Feasibility			$ 11,500.00	$ 11,005.32			
43	Lake Susan Improvement Phase 1 *	$ 50,000.00	$ 49,538.10		$ 191,522.47			
44	Lake Susan Water Quality Improvement Phase 2 *~	$ 150,000.00	$ 9,331.68		$ 1,301.30		$ 13,476.02	$ 80,000.00
45	Rice Marsh Lake Alum Feasibility Phase 1	$ -		$ 11,500.00	$ 11,005.52			
46	Rice Marsh Lake Paleolimnology	$ -	$ 19,563.00					
47	Rice Marsh Lake Water Quality Improvement - Feasibility Phase 1					$ 20,000.00		
48	Rice Marsh Lake Winter Fish Kill Prevention (WQ)	$ 15,000.00	$ 1,656.41	$ 15,000.00	$ 732.02	$ 10,000.00	$ 398.57	
49	Rice Marsh Lake/Lake Riley UAA	$ -	$ 79,499.09					
50	Rice Marsh Lake in-lake phosphorus load							$ 150,000.00
51	Riley Creek Restoration (Reach E and D3) *~	$ -		$ 265,000.00	$ 75,787.18	$ 600,000.00	$ 19,292.60	$ 400,000.00
	Subtotal	$ 502,000.00	$ 202,205.60	$ 793,000.00	$ 523,867.97	$ 675,000.00	$ 79,027.47	$ 630,000.00
			Purgatory Creek					
52	Fire Station 2 (Eden Prairie)	$ -	$ -	$ -		$ 20,000.00	$ 13,769.19	
53	Purgatory Creek Rec Area- Berm/retention area - feasibility/design					$ 50,000.00		
54	Hyland Lake UAA					$ 20,000.00	$ 5,846.50	
55	Lotus Lake in-lake phosphorus load control							$ 345,000.00
56	Lotus Lake - Feasability Phase 1					$ 20,000.00		
57	Mitchell Lake Plant Management (CLP - WQ)	$ 15,000.00	$ 3,482.81	$ 15,000.00	$ 3,905.25	$ 15,000.00	$ 2,261.83	
58	Purgatory Creek at 101*	$ 250,000.00	$ 78,840.28		$ 27,057.53		$ 34,211.50	
59	Purgatory Creek Lakes UAA *	$ 200,000.00	$ 94,836.50	$ 50,000.00	$ 147,192.50			
60	Red Rock Lake Plant Management (CLP - WQ)	$ 15,000.00	$ 12,382.81	$ 15,000.00	$ 7,097.78	$ 15,000.00	$ 4,064.89	
61	Silver Lake Restoration - Feasibility Phase 1					$ 20,000.00		
62	Silver Lake Paleolimnology	$ 22,000.00	$ 19,125.00		$ 2,188.00			
63	Scenic Heights						$ 14,395.10	
64	Hyland Lake in-lake phosphorus load control							$ 20,000.00
65	Duck Lake watershed load							$ 220,000.00
66	Staring Lake - Plant Management - EWM Treatment and CLP	$ 8,000.00	$ 7,968.00			$ 20,000.00	$ 7,949.98	
	Subtotal	$ 510,000.00	$ 216,635.40	$ 80,000.00	$ 187,441.06	$ 180,000.00	$ 82,498.99	$ 585,000.00
			Reserve/Contingency					
67	Reserve	$ 16,500.00		$ 108,000.00		$ 135,000.00		$ 100,000.00
	TOTAL EXPENDITURE	$ 2,431,500.00		$ 2,486,500.00	$ 1,557,439.99	$ 2,859,000.00		$ 3,420,000.00
	EXCESS REVENUES OVER (UNDER) EXPENDITURES	$ 15,000.00		$ 10,000.00		$ 15,000.00		$ 20,000.00
	ESTIMATED FUND BALANCE BEGINNING							$ -
	ESTIMATED FUND BALANCE ENDING							

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

Committed funds from past levies to Multi-year Projects or Programs $ 1,857,891.12

District funds were already allocated in the past and are expected to be used for their respective project

BOARD WORKSHOP: August 2, 2017
PUBLIC HEARING: September 6, 2017
NOVEMBER BOARD MEETING: November 1, 2017

County	Payable 2017 Taxable Net Tax Capacity	Net Tax Capacity Percent Distribution	Apportioned Payable 2018 Levy
Carver County	$ 31,491,105.00	23.0518%	$ 788,371.56
Hennepin County	$ 105,119,295.00	76.9482%	$ 2,631,628.44
Watershed	$ 136,610,400.00	100.0000%	N/A

Resolution 2017-06
RILEY-PURGATORY-BLUFF CREEK WATERSHED DISTRICT
RESOLUTION TO ADOPT 2018 BUDGET

Manager _____ offered the following resolution and moved for its adoption, seconded by Manager _____:

BE IT RESOLVED, that the Board of Managers of the Riley-Purgatory-Bluff Creek Watershed District, pursuant to Minnesota Statutes Section 103D.911, hereby adopts its **2018** annual budget as presented on **September 6, 2017**, in the amount of **$3,420,000**.

The question was on the adoption of the above resolution and there were __ ayes, and __ nay as follows:

	AYE	NAY	ABSTAIN	ABSENT
Richard Chadwick				
Jill Crafton				
Dorothy Pedersen				
Richard Ward				
Leslie Yetka				

* * * * * * * * * * * *

I, _____, Secretary of the Riley-Purgatory-Bluff Creek Watershed District, do hereby certify that I have compared the above resolution with the original thereof as the same appears of record and on file with the District and find the same to be a true and correct transcript thereof.

IN TESTIMONY WHEREOF, I have hereunto set my hand this 6th day of **September, 2017**.

_____
_____, Secretary

Resolution 2017-07
RILEY-PURGATORY-BLUFF CREEK WATERSHED DISTRICT
RESOLUTION TO ADOPT
2018 METROPOLITAN SURFACE WATER MANAGEMENT ACT LEVY

Manager _____ offered the following resolution and moved for its adoption, seconded by Manager _____:

BE IT RESOLVED, that the Board of Managers of the Riley Purgatory Bluff Creek Watershed District hereby directs that the Secretary shall certify to the Auditors of Carver and Hennepin Counties in amounts bearing the same proportion to the total levy as the net tax capacity of the areas of the county within the watershed bears to the net tax capacity of the entire watershed district the total amount of **$3,420,000**, levied upon all taxable property in the Riley Purgatory Bluff Creek Watershed District, Carver and Hennepin Counties, State of Minnesota, for the year **2018**, for the purpose of paying the cost of management planning and plan implementation, as authorized by the Metropolitan Surface Water Management Act, Minnesota Statutes Sections 103B.241 and 103B.251.

The question was on the adoption of the above resolution and there were ___ ayes, and ___ nay as follows:

	AYE	NAY	ABSTAIN	ABSENT
Richard Chadwick				
Jill Crafton				
Dorothy Pedersen				
Richard Ward				
Leslie Yetka				

* * * * * * * * * * * *

I, _____, Secretary of the Riley Purgatory Bluff Creek Watershed District, do hereby certify that I have compared the above resolution with the original thereof as the same appears of record and on file with the District and find the same to be a true and correct transcript thereof.

IN TESTIMONY WHEREOF, I have hereunto set my hand this 6th day of **September, 2017**.

_____
_____, Secretary

RESOLUTION NO. 2017-008
RILEY-PURGATORY-BLUFF CREEK WATERSHED DISTRICT
BOARD OF MANAGERS

ORDERING THE SCENIC HEIGHTS ELEMENTARY SCHOOL FOREST RESTORATION AND WATER QUALITY IMPROVEMENT PROJECT

Manager _____ offered the following resolution and moved its adoption, seconded by Manager _____:

WHEREAS the Riley-Purgatory-Bluff Creek Watershed District (District) is responsible for the preparation, adoption and implementation of a watershed management plan for the Riley-Purgatory-Bluff Creek watershed pursuant to Minnesota Statutes section 103B.231, subdivisions 3 through 10;

WHEREAS on February 1, 2011, the District adopted its third-generation watershed management plan (the Plan), which details the existing physical environment, land use and development in the watershed and established a plan to manage water resources and improve water quality, prevent flooding and otherwise achieve the purposes of Minnesota Statutes chapters 103B and 103D;

WHEREAS the District proposes to partner with Minnetonka Public Schools – Independent School District 276 (ISD 276) and the City of Minnetonka (Minnetonka) to restore the Scenic Heights Elementary School Forest on adjacent properties owned by ISD 276 and Minnetonka that will result in improvements to the Purgatory Creek subwatershed and the restoration of an ecologically diverse and safe outdoor learning environment that promotes sound forest and watershed stewardship for future generations;

WHEREAS the Scenic Heights Elementary School Forest Restoration Project will involve eradicating invasive species; improvement of a pond and wetland through replacement of damaged flared-end section of storm sewer routing runoff through an eroded channel, and reconstructing and vegetating a swale to prevent erosion and improve local water quality; and introduction and establishment of natural plant communities;

WHEREAS on June 1, 2016, the Board of Managers authorized the president and the District administrator to sign a letter of intent to ISD 276 providing for the development of and pursuit of grant funding for the Project, and a $50,000 grant

was secured from the Hennepin County Natural Resources Opportunity program, use of which is governed by an agreement the District has entered with Hennepin County;

WHEREAS on September 7, 2016, the District distributed a draft amendment describing the Project and adding it to the capital improvements program in the Plan, and on December 7, 2016, the District held a duly-noticed public hearing to hear testimony from interested parties on the draft amendment, and the Board of Managers considered all comments received on the draft amendment and directed the District administrator to make appropriate responsive adjustments to the amendment text and to respond to all commenters, and adopted the amendment;

WHEREAS on February 1, 2017, the Board of Managers approved allocating $165,000 from the Iron Enhanced Lucy project to the Project; and

WHEREAS on September 6, 2017, the District held a duly noticed public hearing to hear testimony from interested parties on whether to order the Project, [_____], and the managers considered the comments received.

NOW THEREFORE BE IT RESOLVED that the Board of Managers finds that the Project is consistent with the water resources management objectives of the District and will be conducive to public health, will promote the general welfare, and complies with watershed law and the Plan as amended; and determines the cost of the Project to be $260,000, of which $165,000 will be paid through the District's ad valorem property tax levy authorized by Minnesota Statutes section 103B.241 for the implementation of its water management plan with approximately 77 percent of the levy paid by properties in Hennepin County, and 23 percent paid by properties in Carver County. The remainder of the Project costs will be paid by a $45,000 contribution from ISD 276 over the next three years and a the Hennepin County grant. Minnetonka will contribute labor; and pursuant to section 103B.251, the Project is hereby ordered;

BE IT FURTHER RESOLVED that the Board of Managers directs the District administrator to obtain final plans and specifications from the District engineer and present those plans and specifications to the Board for approval and authorization to solicit bids for the Project; and

BE IT FINALLY RESOLVED that the Board of Managers authorizes the administrator to develop, with the advice of legal counsel, and the president to execute on behalf of

the District cooperative agreements with ISD 276 and Minnetonka to provide for site access and use, cost- and task-sharing, and maintenance for the Project.

The question was on the adoption of the resolution and there were _____ yeas and ____ nays as follows:

	Yea	Nay	Abstain	Absent
CHADWICK				
CRAFTON				
PEDERSEN				
YETKA				
WARD				

Upon vote, the president declared the resolution _____.

* * * * * * * * * * * *

I, _____, secretary of the Riley-Purgatory-Bluff Creek Watershed District, do hereby certify that I have compared the above resolution with the original thereof as the same appears of record and on file with the District and find the same to be a true and correct transcription thereof.

IN TESTIMONY WHEREOF, I set my hand this _____ day of _____, 2017.

_____

_____, Secretary

MEETING MINUTES

Riley-Purgatory-Bluff Creek Watershed District

July 17, 2017, Special Board of Managers Meeting : Closed Session Administrator Review

PRESENT:

Managers: Richard Chadwick
Mary Bisek, Secretary
Jill Crafton, Treasurer
Perry Forster, President
Leslie Yetka, Vice President

Staff: Claire Bleser, District Administrator

1. Call to Order

President Forster called to order the Wednesday, July 17, 2017, Board of Managers Special Meeting at 7:08 p.m. at District Office, 18681 Lake Drive East, Chanhassen, MN 55317.

2. Closed Session

Managers met to perform annual review of the Administrator.

3. Adjourn

Manager Crafton moved to adjourn the meeting of the Board of Managers. Manager Yetka seconded the motion. Upon a vote, the motion carried 5-0. The meeting adjourned at 4:12 p.m.

Respectfully submitted,

_____

, Secretary

MEETING MINUTES

Riley-Purgatory-Bluff Creek Watershed District

August 2, 2017, Board of Managers Plan Workshop and Monthly Meeting

PRESENT:

Managers:	Mary Bisek, Secretary	
	Richard Chadwick	
	Perry Forster, President	
Staff:	Claire Bleser, District Administrator	
	Zach Dickhausen, Water Resources Technician	
	Terry Jeffery, Project and Permit Coordinator	
	Michelle Jordan, Community Outreach Coordinator	
	Josh Maxwell, Water Resources Coordinator	
	Louis Smith, Attorney (Smith Partners)	
	Scott Sobiech, Engineer (Barr Engineering Company)	
Other attendees:	Ryan Anderson, ISG*	Terence McGrotty, Chanhassen Resident*
	Evan Christianson, Barr Engineering*	Dave Modrow, City of Eden Prairie*
	Megan Jester, Eden Prairie Resident*	Dorothy Pedersen, CAC
	Larry Koch, Chanhassen Resident	David Ziegler, CAC
	Sharon McCotter, CAC*	

* Indicates attendance at the board meeting only

1. Plan Workshop

President Forster called to order the Wednesday, August 2, 2017, Board of Managers 10-Year Plan and 2018 Budget Workshop at 5:46 p.m. in the District Office, 18681 Lake Drive East, Chanhassen, MN 55317.

Administrator Bleser introduced Ms. Jordan to present on the District's Education and Outreach Plan (EOP) including the process undertaken to develop the plan and the current status of the plan.

Ms. Jordan handed out two copies of the EOP to each manager. She explained that one copy showed the tracked changes made based on Citizen Advisory Committee feedback and the other copy incorporated the changes and did not show the tracking. Ms. Jordan reviewed the process undertaken to develop the EOP and walked the Board through the plan's structure and content. Ms. Jordan collected manager feedback.

Administrator Bleser handed out the most recent version of the District's draft 10-year plan. She pointed out changes to be made to this version including under Plan Strategy 9 on page 55 to insert the word "Programs" so that the strategy states, "…to implement projects and programs to meet District's goals."

Administrator Bleser went through the draft plan's table of contents and the layout of the plan, and she described the updates made since the previous version of the draft plan. Administrator Bleser asked the managers to provide feedback on the draft prior to the next monthly meeting. She said that staff will incorporate the feedback and will provide the updated version to the CAC and Technical Advisory Committee (TAC) for their September meetings.

Administrator Bleser moved on to the District's proposed 2018 budget. She noted that the budget was identified in the CIP table included in the draft 10-year plan and that the Board has already seen this proposed budget a few times. Administrator Bleser listed the items included in the proposed 2018 budget and noted that no budget numbers have changed from what the managers saw listed in the implementation table.

Administrator Bleser reported that the District's public hearing on the proposed 2018 budget will be held here at the District office on September 6. She reminded the Board that the District will hold its second public hearing on the budget in November at which time the Board could act to lower the amount of its levy request. Administrator Bleser noted that the levy request needs to be certified by September 15 to both Hennepin and Carver counties. She responded to questions and stated that she would present this budget along with the line item descriptions at the Board's September monthly meeting.

Manager Chadwick moved to adjourn the workshop. Manager Yetka seconded the motion. Upon a vote, the motion carried 4-0 [Manager Crafton absent from vote]. President Forster adjourned the Plan Workshop at 6:58 p.m.

2. Monthly Board Meeting Call to Order

President Forster called to order the Wednesday, August 2, 2017, Board of Managers Monthly Meeting at 7:11 p.m. in the District Office, 18681 Lake Drive East, Chanhassen, MN 55317. He reported that on July 17 the managers met in closed session to evaluate Administrator Bleser's performance for the past 12 months. President Forster noted that all managers, including managers Bisek, Chadwick, Crafton, Yetka, and himself, were present at the meeting. He explained that the foundation of the evaluation was a document sent to the managers for each manager to complete and be used as the discussion points for the evaluation. President Forster reported that the meeting took approximately two hours and at the end of the time the managers determined that Administrator Bleser had exceeded the performance requirements of the job. He stated that the managers discussed a salary change for the Administrator for the coming year and approved a motion to increase Administrator Bleser's salary to $97,500. President Forster noted that the salary increase will take place on the anniversary of Administrator Bleser's employment. He thanked Manager Bisek for her time and work coordinating and organizing the evaluation data.

3. Approval of the Agenda

President Forster noted that Administrator Bleser requested adding to the action items a Resolution to delegate certain permit approval authority to the permit coordinator. He said it could be added to the agenda as Action Item 10d. Manager Chadwick requested that Consent Agenda item 8a. Accept Staff Report – be removed from the Consent Agenda for additional information. President Forster said it could be added as Discussion Item 11a.

Manager Yetka moved to approve the agenda as amended. Manager Chadwick seconded the motion. Upon a vote, the motion carried 4-0 [Manager Crafton absent from vote].

4. CAC Storm Drain Subcommittee Presentation

Ms. Sharon McCotter, CAC member, reported on the work undertaken by the CAC's storm drain subcommittee. She talked about working with Ms. Jordan to draft a survey and about members of the subcommittee surveying the watershed's city leaders. Ms. McCotter said that three city leaders were very engaged, and she described the information collected from them through interviews. She explained how one city was very interested in the idea of grass clipping education for residents, another had higher interest in fall leaf clean-up efforts, and one was

interested in a storm drain stenciling program. She reviewed the five subcommittee recommendations for the Board's consideration, described proposed next steps, and responded to questions. In response to the recommendations, Manager Bisek asked Ms. Jordan to come back to the Board if, as she works to help the subcommittee, she needs further direction about prioritizing her workload and time. In response to Ms. McCotter's question about how the Board would like to receive updates from the subcommittee, Manager Yetka said that she would like to see a report from the subcommittee.

Manager Yetka moved that the Board ask the subcommittee to move forward with the work proposed, use the District's administrative staff for support, and come back to the Board with updates. Manager Chadwick requested the friendly amendment that Ms. Jordan's role would be limited to an oversight and coordination role. Manager Yetka agreed to the friendly amendment. Manager Chadwick seconded the motion. Upon a vote, the motion carried 4-0 [Manager Crafton absent from vote].

5. Groundwater Presentation

Mr. Sobiech introduced Mr. Evan Christianson, PG, of Barr Engineering Company to present Mr. Christianson's Groundwater/Surface Water Interaction Study. Mr. Sobiech noted that the managers have a draft copy of the report.

Mr. Christianson went through the reasons why the study was undertaken, including the point that changes in the ground water system may affect water levels, stream flow, and water quality. He discussed the study's four tasks:

- Determine how surface water and groundwater interact in the watershed district;
- Identify surface waters in the district that may be vulnerable to changes in ground water;
- Identify areas most conducive for large-scale infiltration; and,
- Evaluate slope stability across the watershed district.

Mr. Christianson went into detail about each of the tasks and findings. He introduced the scoring system used for identifying areas most conducive for large-scale infiltration. He gave recommendations including:

- Establish base flow thresholds for the creeks within the District;
- Establish either lake stage or outlet discharge thresholds for lakes identified as vulnerable to changes in the ground water system;
- Establish target hydrographs for wetlands identified as vulnerable to changes in the ground water system; and,
- Re-establish a monitoring well network with in the District and implement a monitoring program.

Mr. Christianson provided additional recommendations and responded to questions.

6. Matters of General Public Interest

President Forster explained the procedure for bringing forward matters of general public interest and opened the floor.

Mr. Larry Koch thanked the Board and staff for considering moving up the Lotus Lake alum treatment project.

President Forster called for additional comments. Upon hearing none, he moved on to the next agenda item.

7. Reading and Approval of Minutes

a. July 12, 2017, RPBCWD Board of Managers Plan Workshop and Monthly Meeting

President Forster noted a clarification on page 1 to indicate that the Board discussed a resolution in support of a boundary change but did not yet review or take action on such a resolution. He also corrected an omission on page 3, first paragraph, to correctly insert that Ms. Susla thanked Dr. Bleser for presenting at the LLCA Question and Answer meeting on June 20. President Forster also noted on page 5 under item e that the size of the commercial development should be listed as 12,000 square feet. Manager Bisek said that on page 2 in the third paragraph, the referenced staff report should be changed to the permit report. Manager Chadwick stated that on page 4, item e, paragraph 2, the sentence should reflect that he asked if the watershed and City together could approach Emerson.

Manager Chadwick moved to accept the minutes as amended. Manager Bisek seconded the motion. Upon a vote, the motion carried 4-0 [Manager Crafton absent from vote].

8. Consent Agenda

President Forster read aloud the Consent Agenda items: b. Accept Engineer's Report (with attached inspection report); c. Approve Permit Modification Request for Permit 2016-026: Foxwood Development; d. Approve Permit Modification Request for Permit 2016-030: IDI Distribution; e. Approve Permit 2017-037: The Venue with Staff Recommendations; f. Approve Review Extension Period for Permit 2017-039: Mission Hills Senior Living; g. Approve funding for Master Water Steward Capstone Project.

Manager Bisek moved to approve the Consent Agenda as presented. Manager Yetka seconded the motion. Upon a vote, the motion carried 4-0 [Manager Crafton absent from vote].

9. Citizen Advisory Committee (CAC)

Ms. Pedersen stated that the CAC appreciated being included in the process for providing feedback on the Education and Outreach Plan. There was a short discussion about a spreadsheet that had been presented to the CAC but not to the Board.

10. Action Items

a. Accept June Treasurer's Report

Administrator Bleser explained the adjustment in legal services in the amount of $16,191.52 as indicated on the Treasurer's Report. She said that the services were coded correctly but had been erroneously allocated to general services instead of permitting services. She said that the adjustment was made to allocate the services correctly. Manager Chadwick commented that it might be worth adding a footnote to the Treasurer's Report to explain the adjustment. He also had comments and a question on the Engineering budget. Administrator Bleser answered his question. Manager Bisek moved to accept the Treasurer's Report as presented. Manager Chadwick seconded the motion. Upon a vote, the motion carried 4-0 [Manager Crafton absent from vote].

b. Approve Paying of Bills

Manager Yetka moved to pay the bills. Manager Chadwick seconded the motion. Upon a vote, the motion carried 4-0 [Manager Crafton absent from vote].

c. Approve Permit 2017-032: Purgatory Creek Channel Stabilization at Bluestem

Mr. Jeffery stated that the City of Eden Prairie is the permit applicant, and he went through the site map included in the Board meeting packet. He talked about the existing topography of the project site, which extends 174 linear feet along Purgatory Creek. Mr. Jeffery explained the applicant's request for variances to use type 3 rip rap at the toe of the slope and for the slope to be constructed at a 2:1 ratio instead of the 3:1 ratio required by the District's rules and finally to allow 100 cubic yards of fill in the floodplain. Mr. Jeffery described the design options considered and explained why he recommends the proposed design and the variances.

Manager Chadwick moved to approve the variances for Permit 2017-032 as described. Manager Bisek seconded the motion. Upon a vote, the motion carried 4-0 [Manager Crafton absent from vote].

Manager Chadwick moved to approve Permit 2017-032: Purgatory Creek Channel Stabilization at Bluestem. Manager Bisek seconded the motion. Upon a vote, the motion carried 4-0 [Manager Crafton absent from vote].

d. Approve Resolution 2017-05 Delegating Certain Permit Approval Authority to Permit Coordinator

Administrator Bleser presented the resolution to modify the District's rules so that in the absence of the Administrator of more than five days, the Permit Coordinator can review and approve, until the Administrator returns, permits that the Administrator is authorized to approve.

Manager Yetka moved to approve Resolution 2017-05 Delegating Certain Permit Approval Authority to the Permit Coordinator. Manager Bisek seconded the motion.

Upon a roll call vote, the motion carried 4-0 [Manager Crafton absent from vote].

Manager	Aye	Nay	Abstain	Absent
Bisek	X			
Chadwick	X			
Crafton				X
Yetka	X			
Forster	X			

11. Discussion Items

a. Staff Report

Manager Chadwick remarked that at the July meeting, staff requested manager feedback on the staff report. Manager Chadwick provided his specific comments about the staff report. President Forster reminded Manager Chadwick that staff was requesting feedback about the permit report and not the general staff report. Manager Yetka moved to accept the staff report as presented. Manager Bisek seconded the motion. Upon a vote, the motion carried 4-0 [Manager Crafton absent from vote.].

b. Upcoming Meetings

President Forster announced that starting with the District's next monthly meeting there will be two new Board managers: one replacing Manager Bisek and one replacing him. Manager Bisek shared her remarks about her five years on the Board. President Forster provided remarks about his history with the watershed and his service on the Board and thanked his fellow managers, District staff, and many others who assisted him during his years with the District.

12. Upcoming Events

- Project WET workshop, Thursday, August 10, 8:30 a.m. at Nine Mile Creek Watershed District, 12800 Gerard Drive, Eden Prairie, MN 553146
- Citizen Advisory Committee, Monday, August 21, 6:30 p.m., District Office, 18681 Lake Drive East, Chanhassen
- Scenic Heights Informational Meeting, Wednesday, August 23, 6:30 p.m.
- Board of Managers Public Hearing, Regular Meeting and Workshop, Wednesday, September 6, 5:30 p.m., District Office, 18681 Lake Drive East, Chanhassen

13. Adjourn

Manager Yetka moved to adjourn the meeting of the Board of Managers. Manager Chadwick seconded the motion. Upon a vote, the motion carried 4-0 [Manager Chadwick absent from vote]. The meeting adjourned at 9:00 p.m.

Respectfully submitted,

_____

Mary Bisek, Secretary

RPBCWD Staff Report

Sept 6, 2017

Administrative

10-Year Plan
Staff began compiling reporting comments from board member.

Aquatic Invasive Species
Rapid Response was performed on Lake Ann for brittle naiad. Staring Lake was also treated for eurasian watermilfoil as part of rapid response.

Budget
Budget Hearing was scheduled and was published..

City Engagement
Staff Jeffery and Administrator Bleser met with City Staff on August 8th to discuss wetland preservation and mitigation, potential collaborative efforts to address potable water conservation, and potential collaborative efforts to predict, manage, and mitigate flooding.

Most cities indicated that they had adequate banked wetland or access to wetland bank to address near term needs. However, when the horizon is extended out beyond the ten year horizon, the picture becomes less resolute. There are some banks in process currently such as the Sever Peterson bank along the Minnesota River however that has had some obstacles and does not provide direct benefit to any of the three namesake creeks.

All agree that there were ancillary benefits to wetland protection and restoration. It was agreed that the most beneficial course of action would be for the District to undertake a District wide functional wetland assessment and identification of potential restoration areas.

On the topic of water conservation, it was generally agreed that education and outreach is still extremely important. It was thought that getting into classrooms might be an effective method of disseminating information throughout the District. Many water conservation practices would already be covered under the District cost share program such as conversion of turf or impervious surface to native plants. Other cost shares were discussed such as smart evapotranspiration irrigation controllers.

Lastly, city representatives felt that the district wide flood vulnerability map assessment was valuable. Several of the Cities represented thought it might be beneficial to expand the assessed area to places outside of the main creek drainage areas. Concern was expressed over whether sufficient assurances could be made such that modeling assumptions and data used were as accurate as possible.

On August 23, 2017 Engineer Sobiech and staff Jeffery met with staff members from the City of Chanhassen to discuss the Lake Susan Pond Reuse and Water Quality Project. Chanhassen staff included; Paul Oehme, City Engineer and Public Works Director; Todd Hoffmann, Parks Director; Vanessa Strong, Water Resources Coordinator; Adam Beers, Parks Superintendent.

Chanhassen was supportive of the project. They recognized the need to address the impairment of Lake Susan and wanted to be certain that this was an efficient use of resources. District Staff referenced the UAA, the Engineer Report, as well as the draft TMDL as evidence that this is one of the better opportunities. Mr. Oehme wanted to know if it would be possible in the future to add Emerson if they so desired. Engineer Sobiech indicated that they would evaluate pump sizes during the design. Cost would obviously be a consideration. Mr. Hoffmann was supportive of the idea but wanted to avoid creating an attractive nuisance that might result in park patrons thinking of the area as a "swimming beach" instead of the stormwater pond that it is. Staff Jeffery indicated that we would evaluate different top dressings for City staff's consideration. Mr. Oehme committed $50,000 to the project as well as longterm maintenance of the facility.

Chanhassen staff also indicated that the ravine outletting Kerber Pond under Frontier Drive has been excessively sediment laden this year. Staff Jeffery and Ms. Strong agreed to walk the channel to see if the cause could be identified.

Chanhassen staff indicated that the outfall from Pleasant View Road in the Northeast portion of Lotus Lake has created a deeply incised gully. Staff Jeffery indicated that this would be eligible for a cost share and, depending upon the approved budget, may be eligible for funding from the Maintenance and Operation fund.

Data Request
We had several request in regards to the 10-year plan. Those have been satisfied.

Grants
The District has applied for Clean Water Fund for the Lower Riley Creek Project. We should her by the end of the year.

Permitting
Please find below permits that were issued administratively in late July and August.

2017-058 Magellan Pipeline CR-3	routine inspection & maintenance
2017-059 17308 Bridgewater Ci, Mntka	single family home
2017-060 CenterPoint Energy, TH5 Chan	directionally drill new pipeline
2017-061 735 Pleasant View Rd, Chan	single family home
2017-062 7236 Ticonderoga EP	After the fact lot grading

The District has received 66 applications in 2017. In addition to the 2017 permits, 3 more permits have been processed this year that were modifications or re-issuance of permits first applied for in the previous two years.

Citizens Advisory Committee

August meeting
The citizens advisory committee met for their monthly meeting on August 21. As a part of their meeting, staff Jeffery presented the draft budget for review and comment. David Ziegler was elected as the new CAC president. Meeting minutes are included in the board packet. Joan Palmquist will be presenting an idea for helping to create a speaker's bureau. Staff have included a memo of support for the proposed speaker's bureau.

Technical Advisory Committee

No additional updates.

Programs and Projects

District-Wide

Cost-share program

Three cost-share applications were received for the last round of 2017, two single-family homeowners, and one homeowner's association. All three are contiguous shoreline buffers on Lotus Lake. Staff and the CAC recommend funding the projects. The applications and summary sheets are included in the board packet.

MPCA Community Resiliency Grant

The summary for the District's resiliency discussion has been drafted. The community meetings were highlighted at one of the stops at the annual summer watershed tour.

Total Maximum Daily Load

No additional updates.

Data Collection (J. Maxwell)

Rice Marsh Aeration

No additional information. Staff will pulse the unit once a month to make sure lines remain clear. Barr Engineering has repaired the motor that went down last winter and the District has purchased another one as a back up.

Summer Field Season

Staff met with Barr Engineering at the beginning of the month to launch a data collection platform for use in the field with an Ipad. The program allows all sonde data collected to be entered into it and sent immediately to the database. This will cut down on staff time spent entering data. Data collected will still be QC'd before being finalized. Staff took the program for a test run and have been working with Barr to work out the final steps.

Staff began regular lake and creek sampling near the end of April which has continued through August. In addition to monthly zooplankton collection, staff has added phytoplankton sampling once a month to gauge harmful algae levels and overall health and diversity in each lake being sampled. Lakes receiving zooplankton and phytoplankton sampling include; Lotus, Staring, Riley, Susan, and Rice Marsh Lake. Each of these lakes have large projects coming soon or have had a project done recently (i.e. Riley alum). This will allow the District to monitor changes that occur from a project. Lake level sensors were checked in August and were all operational. The auto sampling unit placed on the northwest side of Rice Marsh Lake (same place as last year) to collect additional nutrient data entering the lake, had some issues early on, but is working well now. Staff also placed a unit on Riley Creek under Highway 101 to gauge nutrient and suspended solid concentrations to assess loading rates to Lake Susan. Both units have been triggered by rainfall events several times this months due to the many rain events we have received in August. The spent lime treatment system monitoring equipment was put online the first week of June. Additionally, a stop log was removed to see if water levels would bounce enough to trigger the auto sampling units currently on site. Early nutrient data suggests it is working, however the water level in the unit remains relatively stable which makes it difficult to capture storm event flushes. As of now the District is collecting grab samples once a week to ensure the unit is functioning well.

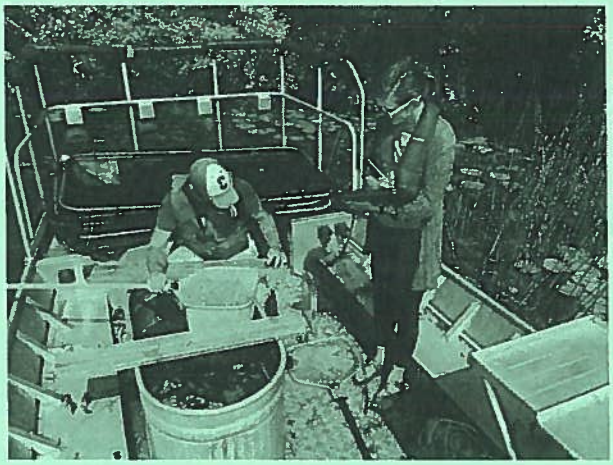
Carp Management

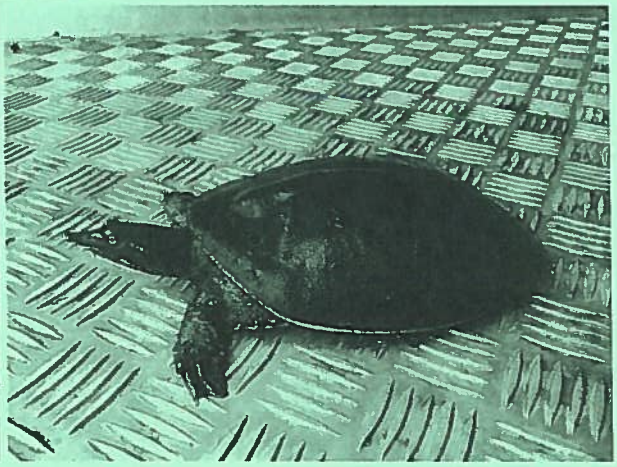
The barrier was opened on March 3rd to allow northern pike to move up into the recreational area to spawn and return to Staring Lake. The barrier was closed on April 4th as temperatures reached above 10 degrees Celsius on multiple days prior to closing. The floating trap net was deployed April 11th to capture fish for education and outreach events and gauge carp movement. The City of Eden Prairie opened, cleaned, and closed the fish barrier multiple times this spring due to high water levels in the Purgatory Recreational Area this spring and have currently been cleaning it every Friday. Fish species captured included mainly northern pike, black crappie, freshwater drum, bigmouth buffalo, bluegills, largemouth bass, and black bullheads. The first carp was captured on April 21st and the kill count is up to about 160 carp so far. We had hoped a

larger number of fish would have been captured by the trap net, but as an experimental gear we were unsure of how many would be captured. At one point we did have 300-500 fish trapped between the fish barrier and the net however the net became overcome with a large rain event and the fish escaped by the time we could arrange the use of a backpack electrofisher. Staff has been looking into the purchase of such a unit to prevent the situation from occurring in the future. The barrier was opened this month on 8/22/2017 and closed again 8/28/2017. Due to the amount of rain we received this month water levels in the rec area were very high. We did have the net deployed, but it was soon overwhelmed by the large amount of water.

The City of contacted the District in June after receiving an inquiry from residents located near Pond A and Pond B about carp found in the ponds. Staff went out to check for tagged fish in both ponds and Neil Lake to see if they were from Staring Lake (most likely). Staff have hypothesized that since the carp were prevented from accessing the Purgatory Recreational Area to spawn, they moved downstream from Staring and accessed the ponds. It is unknown whether the carp in the ponds would be successful at spawning due to the high salinity concentrations, shallow depths, and high water temperatures, but staff will continue to monitor the ponds. If successful recruitment occurs, the District may want to look into placing a fitted gate on the outlet culvert from the ponds.

Staff tracked carp movement via telemetry this past spring, but were not able to get out last month. Staff did find two carp in the Purgatory Creek trap net that had been tagged last year, but lost their tags, so more care will be taken this year to ensure limited tag loss. Staff reached out to the SMSC Organics Recycling Facility in Shakopee, MN with regards to the disposal of carp captured; the facility is allowing the District to bring carp to facility to be composted, waiving any organics disposal fees. Staff will bring excessive numbers of carp caught to the recycling facility. Staff placed the net on the upstream side of the barrier this month as most fish seen were trying to move down to Staring and very few fish were moving upstream. Staff will monitor the net to see if it works well on the upstream side of the barrier.





Staff have been busy this month setting fyke nets and conducting electrofishing transects. Ann, Susan, Lucy, Rice Marsh, Riley, and Lotus have had nets set and pulled this month leaving the rec area, Staring, and Lake SUsan Park Pond remaining. No juvenile carp have been captured yet this year. Ann, Susan, Staring, LSPP, and Lotus have all had a single electrofishing survey

conducted. On Staring staff conducted 5-20 minute transects which yielded 29 carp. Unfortunately, when we sampled Lake Susan Park Pond (33min) we captured 23 carp which is very high. Fish must be moving from Lake Susan into the pond which may be easier to then remove them. In Lake Susan we captured very few fish. Fyke netting will allow the District to know if any recruitment is occurring in the pond. Again, all of the electrofishing results are based off a single survey and two additional surveys are necessary to draw more complete conclusions.

Limnotech

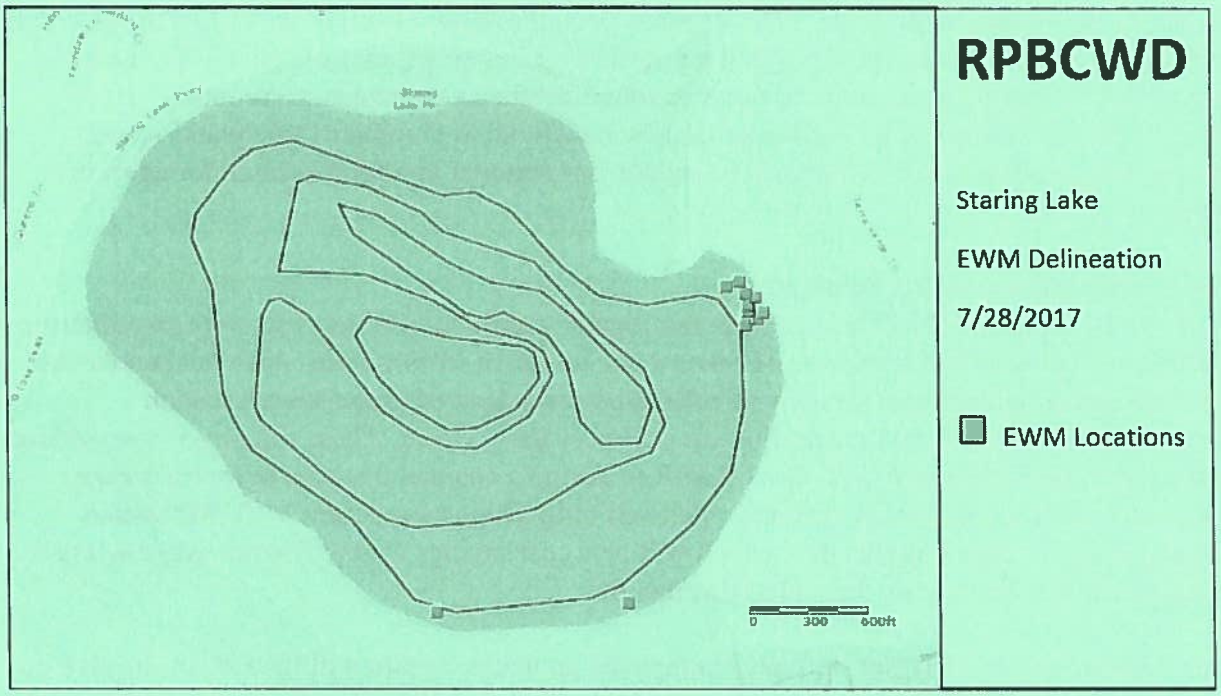
Staff met with Limnotech this month about the possibility of using their "homemade" auto sampling units. Units range from $200-$400 which increases when adding sensors. In comparison a single ISCO lake level sensor which only records temperature and level, costs around $1200-$1300. The auto units have been compared and have performed very well against top units available today without the high dollar cost. These sensors would allow the District to cheaply place auto sampling units up wherever additional data is needed and would allow the District to mix and match and add sensors easily to collect additional telling data. Not only could the District use them for data collection, but they would be a great education and outreach opportunity if placed at a school or possibly the outdoor center in Eden Prairie. Limnotech is also currently reviewing the District's data collection plan to enhance it and make recommendations where it could be improved.

Staring Lake – Eurasian Watermilfoil July 28th, 2017
Staff: Zach Dickhausen and Dave Ziegler

Treatment History

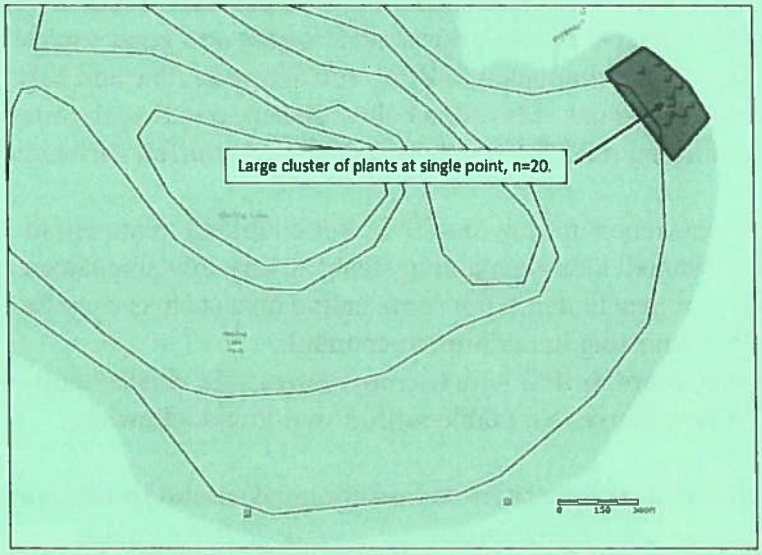
Eurasian watermilfoil (Myriophyllum spicatum, EWM) was found growing in Staring Lake by staff from the University of Minnesota in 2015. The Riley Purgatory Bluff Creek Watershed District with guidance from Freshwater Scientific Services (FWSS), then developed and executed a Rapid Response Plan on October 2, 2015. The majority of the EWM plants found were hand-pulled which was followed by an herbicide treatment. The treatment was a granular 3,5,6-trichloro-2-pyridinyloxyacetic acid (Renovate OTF) applied at a maximum rate of 67.5 pounds per acre foot in 3 treatment areas totaling 9.1 acres. In 2016 an additional 4 visual scans were completed and multiple plants were found after each scan. Again, plants were hand pulled and another herbicide treatment was applied totaling 6.5 acres.

Figure 1. Map showing the location of EWM plants found during the July 28th, 2017 visual scan on Staring Lake.



On July 28th, 2017, staff conducted another EWM scan and found multiple plants (Figure 1). All attached plants were found in the northeast corner of the lake near the outlet of Purgatory Creek. Staff removed multiple plants however staff did not have enough time to remove all plants as there was a very large cluster of plants (n=20) near the center of the plants located in Figure 1. During the last fall visual scan in 2016, staff did find most of the plants in this location and removed them. Staff did locate 2 plants on the south-east corner of the lake however they were complete plants (including roots) that were free floating. Staff removed these plants.

Figure 2. Map showing the location of the proposed 2017 EWM treatment area totaling 2 acres on the southeast corner of Staring Lake.



Treatment and Continual Monitoring

As part of the continuation of the rapid response plan, the district would like to treat up to 2 acres on Staring Lake with an herbicide to prevent further spread of the invasive plant. The treatment area would be located in the northeast corner where all the rooted plants were found. Not all plants were removed so treatment would also be beneficial to eliminate these plants as well. District staff plans to conduct multiple scans late this summer and fall to search for additional plants.

Creek Restoration Action Strategy

Staff will be replacing "lost" bank pins at our regular stream monitoring sites with an additional placement of pins on the south side of Silver Lake to assess erosion rates. Also this month staff went out and collected cross sections of riffles and pools located in the stream section downstream of the proposed restoration site on lower Riley Creek. These reference cross sections of the more stabilized reach will allow BARR to design a channel that will be stable for the upper section of which is to be restored. Maxwell utilized his most recent MNDNR stream training class for collecting the data which will be a cost savings for the District. Regular creek assessments may resume by the end of this month.

Barr Engineering and District staff have completed an updated edition of the CRAS (located on website) and have been working on a future publication for a professional journal. Additionally, staff have been working on a final creek walk summary book to have on hand to easily reference stream section data.

University of Minnesota Grant

19 July 2017
Ray Newman, University of Minnesota, with input from TJ Ostendorf
Riley Purgatory Bluff Creek Watershed District (RPBCWD) Aquatic Plant progress report for July 2017.

Peak curlyeaf surveys were completed on all lakes and most data have been entered. Preliminary observations suggest lake-wide control of curlyleaf in Riley, Susan and Staring and good control in Mitchell. Milfoil herbivore surveys have been conducted in Riley and Susan in June and July and in Mitchell in July and no herbivores were found. Milfoil is below detection in Susan (thus none was found in herbivore surveys) and living milfoil was not found after the milfoil herbicide treatment Riley.

Curlyleaf in Staring dropped from 50% occurrence in May to <20% after endothall treatment in June and these occurrences typically represented a few remaining stems at very low abundance. Water clarity has declined in Staring to <1 m Secchi depth but some native taxa such as Canada waterweed, Chara and sago pondweed are persisting in addition to coontail.

The Riley 21 June herbicide treatments to control milfoil with triclopyr (west side blocks) and 2,4-d (east side blocks) also appeared to be effective. No viable milfoil was found lakewide during the July herbivore survey.

Herbicide residue samples for endothall and 2,4-d have been sent off for analysis and results are expected in August.

Plans for the rest of July include sample processing, data entry and herbivore surveys and plant surveys will be conducted in August. .

Melaney Dunne successfully defended her MS thesis on 29 June; revisions are being completed and the thesis should be submitted to the graduate school by the end of the summer.

WOMP Station - Metropolitan Council
No new information. Staff have visited the WOMP stations twice this month and have been using the Met Council's new procedures.

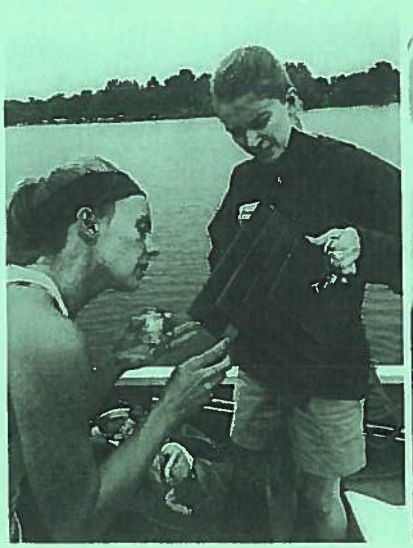
Service Learners
No new update.

Volunteering
Volunteers have contributed over 60 hours to district projects and programs to date. This does not include work done on their own time, like cleaning up trash, or participating in the Adopt a Dock program.

Spring Crest Pond
The District has been partnering with the City of Minnetonka in taking residual water samples on Spring Crest Pond in Minnetonka. The City has been carrying out weekly chemical treatments on the pond. Staff Dickhausen has been meeting Minnetonka City staff, Nick Atherton, at the pond every Friday since May 31 to collect water samples and a pond water column profile. The treatment and sampling is now completed.

Education and Outreach (M. Jordan)

Adopt a Dock Program
Volunteers continue to check their plates. No suspicious mussels have been found. Staff Jordan accompanied Minnehaha Creek Watershed District staff, and several others on a trip to collect and preserve zebra mussels for educational purposes. The samples will be used to help Adopt a Dock volunteers identify zebra mussels, and will be used with the AIS Jr inspector program.





AIS Jr Inspector
Nine Mile Creek Watershed District continues to use the toy boat version of the activity with their mobile education cart. The large boat activity will be used at the upcoming Metro Children's Water Festival.

Earth Day Mini Grants
No new updates.

Lakes and Creeks Water Quality Report
Almost 800 printed fact sheets have been distributed.

Master Water Stewards Program
Stewards continue to log volunteer hours. Recruiting for the 2017/2018 cohort of stewards continues. One of the 2016 steward capstone projects was highlighted on the summer watershed tour.

Project WET
Eighteen teachers and informal educators participated in the Project WET training. All of the reviews were positive and staff think this would be worth repeating next year. From one participant, when asked one thing that was useful from the workshop: "The confidence in knowing I have nearly a dozen fun, engaging lessons I can teach this year - that I was able to see them in action, try them for myself, and think through potential uses. This is pure gold!" The resource fair at the end of the workshop was also well-received. Dawn Christeson from Scenic Heights Elementary spoke about her experience in setting up an outdoor classroom, and got many questions. Partnering on this with Nine Mile Creek Watershed District had great benefit as well, both from being able to split the work and cost, and also from being able to host it at their outdoor education center.

Summer Watershed Tour

A news release written by staff about the tour was picked up in the local papers, both online and in print.

Website & Newsletter

A special project web page was created for the Scenic Heights Elementary School Forest ecological restoration project. It explains the how and why of the project, and invites the community in to be a part of it.

Winter & Turf Maintenance Training

The level II Smart Salt workshop on September 13th is being promoted.

Bluff Creek One Water

Chanhassen High School

Staff Jeffery and District Engineer Sobiech have met with one of the bidders on the project to determine how can the design be changed to lower the cost of the project.

Bluff Creek
No new updates.

Riley Creek One Water

Lake Susan Park Pond
Working with all of our partners to determine contribution and if additional funds needed to complete the project.

Riley Creek
We are continuing to work with the City in the design of the restoration.

Lake Riley CLP Treatment
No new updates.

Lake Riley Water Quality Project (Alum)
No new updates.

Lake Susan CLP Treatment
No new updates.

Purgatory Creek One Water

Fire Station 2
The cistern signage is being finalized, as well as logistics for the capture and reuse system.

Purgatory Recreational Area Berm
Numerous common carp have been captured and removed trying to get up and over the berm early this spring. The berm was flooded for most of the month after the large rain event occurred.

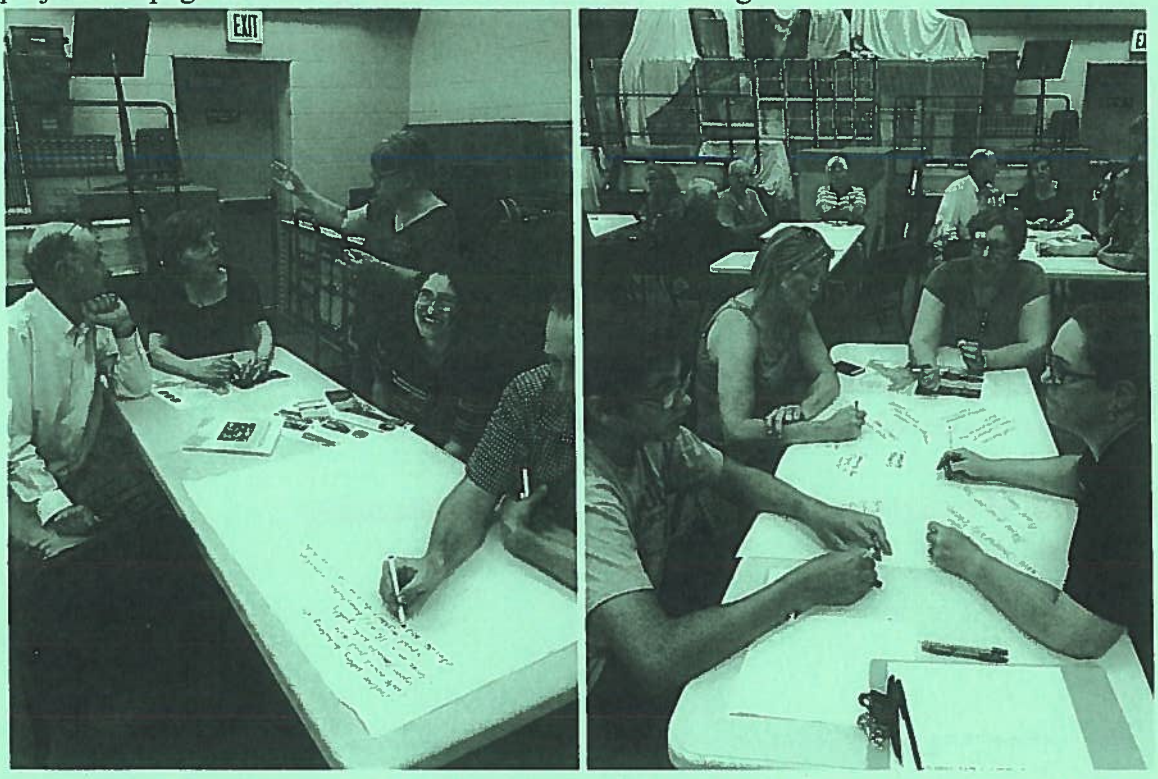
Purgatory Creek at 101
No new updates

Mitchell Lake Plant Management
No new updates

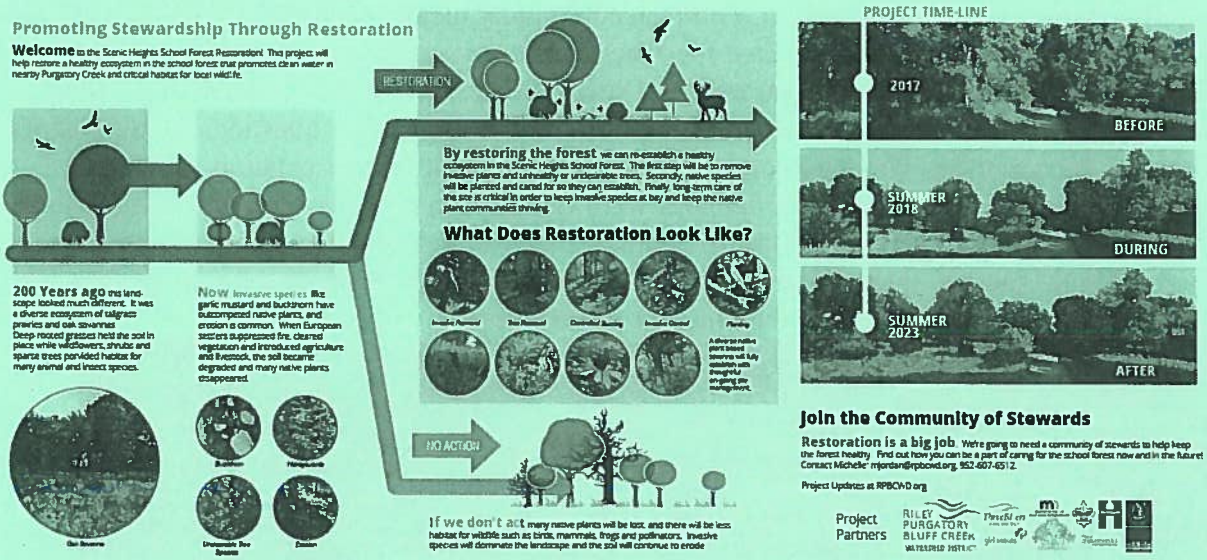
Red Rock Lake Plant Management
No new updates

Scenic Heights School Forest
An info session for the community living adjacent to the school forest was held on August 23rd. Post-cards were mailed to the addresses around the school on two occasions. Individuals who

had been involved with restoration efforts in Purgatory Creek Park were also invited (part of the restoration takes place on park land). Fourteen community members attended. The meeting was introduced by Scenic Heights principal Joe Wacker. There was then a presentation by District staff member Jordan, Scenic Heights teacher Dawn Christesen, and Barr Engineering's Matt Kumka. City of Minnetonka partner staff were also on hand to answer questions, as we District President Perry Forster. There was open discussion throughout the presentation, and then a facilitated discussion at the end. Participants were asked about how they had interacted with the forest in the past, how with would like to continue using it, and how they might like to be involved in the project. Overall there was positive feedback and excitement for the project. The project webpage was also launched in time for the meeting.



A temporary sign is now ready to be printed and posted at the forest, to let passersby know about the project as it begins this winter.



Staring Lake Plant Management
Herbicide treatment is completed.

Professional Workgroups and Continuing Education

No new updates

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BARR

Memorandum

To: Riley-Purgatory-Bluff Creek Watershed District Board of Managers and District Administrator
From: Barr Engineering Co.
Subject: Engineer's Report Summarizing August 2017 Activities for September 6, 2017, Board Meeting
Date: August 29, 2017

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 2017.

General Services

a. Assisted Administrator Bleser with developing and submitting a Clean Water Fund grant application for the Lower Riley Creek Streambank Restoration project.

b. Participated in an August 3rd meeting with Administrator Bleser, Permit Coordinator Jeffery and Houston Engineering Inc. (Brian Fisher) to discuss permit tracking and management databases developed for other watershed districts.

c. Participated in an August 8th meeting with cities (Eden Prairie, Chanhassen and Deephaven) to discuss wetland banking, water conservation efforts, flood hazard modeling, and 10-year plan update.

d. Assisted Administrator Bleser with preparation for 10-year plan update at August and September workshops.

e. Participated in August 2, 2017 regular Board meeting and workshop.

f. Prepared Engineer's Report for engineering services performed during August 2017.

g. Regular and frequent communication and coordination with Administrator Bleser discussing Lake Susan Park Pond project, status of various task orders, Board workshops, 2018 budgeting and miscellaneous questions.

h. Project management, webmap data management, and overall coordination of active task orders.

Permitting Program

a. *Permit 2015-050: Arbor Glen:* This project involves construction of an 18 lot residential subdivision at 9170 Great Plains Blvd in Chanhassen. Reviewed draft maintenance declaration and provided feedback of needed revision to the applicant.

b. *Permit 2017-024*: Prairie Bluffs Senior Living: This project involves construction of a senior living facility, parking lot, and landscaping at 10280 Hennepin Town Road in Eden Prairie. The project will trigger Rules C, D, and J. The permit was conditionally approved at the July 12th meeting. Reviewed draft maintenance declaration and provided feedback the applicant.

Discussed potential permitting considerations for grading revisions in NW corner of the site to address city of Eden Prairie comments about retaining walls.

c. *Permit 2017-029*: Elevate Apartments: This project involves construction of 222 apartments combined with approximately 12,000 square feet for commercial retail and associated site infrastructure located near the intersection of Prairie Center Drive and Highway 212. Stormwater reuse, green roof, permeable pavement and a tree trench system will provide storm water quantity, volume and quality control. Discussed additional groundwater information with applicant and potential consideration of permit conditions.

d. *Permit 2017-034*: Park Road: This project involves mill and overlay of Park Road in Chanhassen and the replacement of the Riley Creek culvert crossing. Reviewed revised submittals, provided comments to applicant of additional items to address prior to staff drafting recommendation for Board consideration, and drafted a staff report for Manager consideration at their September 6th meeting.

e. *Permit 2017-039*: Mission Hills Senior Living: This project involves disturbance of 8.65 acres to construct a 55,000 square foot senior housing building, eight townhome buildings and five biofiltration basins the intersection of Hwy 101 and Highway 212 in Chanhassen. The project will trigger Rules C and J. Drafted a second permit review period extension based on the applicant's request for Manager consideration at the September meeting.

f. *Permit 2017-047:* Fawn Hill: This project involves construction of an approximately 5.4 acre, 10 lot residential development in Chanhassen. The project will trigger Rules C, D, and J. the application was considered complete on August 4th. Conducted two rounds of review including sending comments to the applicant, several phone discussion with applicant's engineer, and met with applicant on August 23rd. Drafted a staff report for Manager consideration at their September 6th meeting.

g. *Permit 2017-053*: Mastercraft Boats: This project involves demolition of an existing building and the construction of a new building, including bituminous parking improvements. The project also involves the construction of an underground infiltration basin in Minnetonka. The project will trigger Rules C and J. Conducted several reviews of information and provided comments to the applicant. Drafted a staff report for Manager consideration at their September 6th meeting.

h. *Permit 2017-056*: Covington Road: This project involves the replacement of a deteriorated culvert at the Covington Road crossing of the Silver Lake branch of Purgatory Creek. The project will trigger Rules B, C, D, G, and J. Assisted Permit Coordinator Jeffery with the technical analysis associated with the waterbody crossing, including simulations in of the crossing in the District's Hydrologic and Hydraulic model to assess potential impacts.

i. *Permit 2017-057*: EP Center Retaining Wall Rehabilitation: This project involves the replacement of the existing retaining wall, concrete sidewalk, and associated grading and drainage for the new retaining wall along the southwest side of the Target store. The project will trigger Rules C and G. Answered applicants questions, reviewed revised submittal and drafted staff report for Manager consideration at their September 6th meeting.

j. Performed erosion control inspections of active sites during the week of August 19th (see attached inspection report).

k. Conversations with several project engineers/developers about permit requirements for potential development and redevelopment projects.

Data Management/Sampling/Equipment Assistance

a. Refined database and beta user interface to collect field and stream data with a hand-held electronic device (i.e. I-Pad, Smartphone, etc.) from the field. Training on the field tool with RPBCWD took place August 14, 2017. RPBCWD field staff tested the tool on August 15, 2017 and provided additional feedback to be incorporated into the next version, anticipated to be available early September.

b. Uploaded and verified 19 laboratory reports to EQuIS, including 2 lab report revisions.

c. Investigated and corresponded with RMB regarding total dissolved phosphorous analysis, prep and results.

d. Created tables for Barr team of all Susan Pond analytical data and spent lime analytical data.

e. Digitized new permit locations and updated the user groups for the inspection collection application.

Task Order 6: WOMP Station Monitoring

Purgatory Creek Monitoring Station at Pioneer Trail

a. Download and review data.

b. Storm event sampling – set station for sampling; collect, prep, and deliver sample to lab.

Purgatory Creek Monitoring Station at Valley View Rd

a. Downloaded and reviewed data.

b. Storm event sampling – set station for sampling; collect, prep, and deliver sample to lab.

Task Order 7b: Purgatory Creek Stabilization near Hwy 101—Construction

a. Construction of this project is substantially complete.

b. Completed a site visit to verify construction notes about field-fit placement of stabilization measures.

c. Began creation of an as-built plan set

d. Began completion of a construction memorandum to summarize construction activities.

Task Order 12: Downtown Chanhassen BMP Retrofit Assessment

a. Responded to Administrator Bleser questions about project budget to help with closing out the clean water fund accelerated grant. The Chanhassen Town Center investigation was completed roughly $24,000 under the authorized budget.

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

a. Design kick-off meeting at city of Chanhassen office attended by Barr, RPBCWD (Terry Jeffery), and City staff to discuss project preferences and concerns and issues to be aware of at the site. Discussed Lake Susan Pond recreational shoreline concerns, water treatment structure location and features, and iron enhanced sand filter design/cover.

b. Barr internal design kick-off meeting to discuss project background, initial tasks and deliverables, and questions from the team. Review of existing data and resources.

Task Order 14b: Lower Riley Creek Final Design

a. Continued 60% design, including determination of stable channel parameters and modeling potential designs to ensure erosive forces and shear stresses in the channel and overbanks will be properly reduced.

Task Order 16: Watershed Management Plan Refresh

a. Met with Administrator Bleser on August 1st to go over draft and incorporated Administrator comments into draft for distribution at August workshop.

b. Prepared draft plan documents for distribution at August plan workshop

c. Worked on overall plan formatting and clean-up of miscellaneous items

d. In the next month, Barr will work with Administrator to incorporate comments from Mangers and present to TAC and CAC

Task Order 18: MPCA Resiliency Grant

a. Completed the development of a four-page graphical workshop report for the Watershed District. The reports highlight the specific concerns workshop participants have about the impacts of climate change within the District along with the actions they believe to be most appropriate. Community actions addressed three different areas including impacts to infrastructure, environment and people. The final report was included in the District's 10 year plan.

b. With the finalization of this last report this project is now complete.

Task Order 19: Chanhassen High School Stormwater Reuse Design

a. Worked with District staff and school district staff to coordinate a meeting to discuss the needed revisions to potentially reduce construction costs based on the value engineering exercise with Peterson.

Task Order 20: Hyland Lake UAA Update

a. Continued working on the draft report text, figures and tables.

Task Order 21: Bluff Creek Feasibility Study

a. Continued 60% design, including determination of stable channel parameters and modeling potential designs to ensure erosive forces and shear stresses in the channel and overbanks will be properly reduced.

Task Order 22: Groundwater Assessment

a. Prepared and presented the draft groundwater report at the August 2nd Board meeting.

Task Order 23: Scenic Heights School Forest Restoration

a. Assisted District legal Counsel with developing a draft cooperative agreement at the Administrators request.

b. Development wetland delineation report and coordinated with Minnetonka School District (property owner) for review and signature. Submitted to LGU for comment.

c. Continued working to finalize design on the forest restoration plans and specifications.

d. Prepared and submitted permit application to RPBCWD.

e. Created and provided staff with interpretive signage concepts including various renderings of the project site using aerial photography and Photoshop renderings from the trails in Purgatory Park, including several meetings to discuss revisions.

Task Order 24: Preliminary Engineering Study for Silver Lake Water Quality Treatment Project

a. Kickoff meeting with city of Chanhassen staff and Permit Coordinator Jeffery to discuss project goals and receive initial input from City staff.

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BARR

To: RPBCWD Board of Managers

From: Dave Melmer

Subject: August 19, 2017—Erosion Inspection

Date: August 29, 2017

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 19, 2017.

Site Inspections

2015-005	**CSAH 101 Mntka**	**2017-08-19**
	Eastern side streets have had final top coat laid-vegetation is established-catch basin protection has been removed in many ares. Site is inspected and well maintained by contractor/site inspector. Construction is completed at creek crossing-BMP's look good at this location. Curb/gutter/side walk installation complete for entire site. Center median installations complete and final asphalt top coat has been applied. All vegetation is growing/established. Construction office is being dismantled and location needs to be graded and vegetated.	
2015-008	**3520 Meadow Lane**	**2017-08-19**
	Site BMP's are adequate. Silt fence is down in some areas on west side--will not affect site runoff. Site cleanup and house painting underway. (August-2017)	
2015-010	**Children's Learning Adventure**	**2017-08-19**
	Building construction complete. Inlet protection has been removed. Landscaping is complete. Sod was installed and application of spray tac to exposed soils. Vegetation growing thru mats and in spray-tac'd areas. Pond slope to west has failed--causing slope erosion to pond downstream. Site representative was notified of Corrective Action--has been repaired and improved. Some silt fences have been removed. One section of silt fence still in place and sand bags at north outlet still in place. Site representative was notified that silt fence and sand bags have been removed. Erosion mats installed on east and west side of rip-rap do not have vegetation growing to date.	
2015-014	**12420 Sunnybrook Road**	**2017-08-19**
	Site has been surveyed. No construction has started.	

2015-016	**Blossom Hill**	**2017-08-19**
	Construction on homesite at NE corner continues. BMP' look good look ok for unsold lots. House construction on south lot complete.	
2015-035	**LaMettry's Chanhassen**	**2017-08-19**
	Building construction continues on south site. Parking lot on north lot has been paved. North slope grading and landscaping complete. North slope has erosion control mat over entire area-vegetation established. BMP's are good. Slight tracking on south site.	
2015-036	**Saville West Subdivision**	**2017-08-19**
	Silt fence and fence installed at one building site. No earthwork has begun to date. Trees have been tagged along street side and trees/brush has been cleared near power lines. Wetland has been delineated. Utility flags installed along with some site surveying. (August-2017)	
2015-038	**Improvements to Field 8 at Miller Park**	**2017-08-19**
	BMP's look good. Site construction complete. Soils have been covered---vegetation is growing. All BMP's have been removed with exception of bio-logs at infiltration area. (August)	
2015-048	**Pagel II Ice Facility Addition**	**2017-08-19**
	Construction of building foundation/walls complete. Silt fences in place. Parking lot paved and staging area dismantled. Site BMP's look good. Site grading complete. Slope on south side of building --has erosion mats installed and silt fences at toe of slope-vegetation is established. Catch basin protection installed. Upper area graded and BMP's removed.	
2015-050	**Arbor Glen Chanhassen**	**2017-08-19**
	Perimeter control (silt fence) installed. Heavy equipment onsite. No earthwork observed to date.	
2015-053	**RBSC Chanhassen LLC**	**2017-08-19**
	No construction has begun. Site was being used as lay down yard for Hwy. 5 construction. Demobilization is complete. Catch basin protection still in place. Exposed soils have been covered and now vegetation is established. (August)	

2015-056	**Oster Property**	**2017-08-19**
	Construction complete. Silt fences /bio-logs have been removed. Vegetation mats and wood chips have been installed on all bare soils. All other BMP's look good. Vegetation (grass) still sparse in areas. (August-2017)	
2015-058	**Prairie Center Clinic Addition**	**2017-08-19**
	Construction complete on building. Some BMP's have been removed for landscaping. Vegetation growing in some areas. Parking lot top coat complete. Landscaping and seeding complete. BMP's are still in place.	
2015-060	**Optum Parking Expansion**	**2017-08-19**
	Site is stable. All temporary BMP's have been removed. This will be the last field inspection for this permit.	
2016-004	**Round Lake Park Improvements**	**2017-08-19**
	BMP's look good. Site construction complete--parking lot/lots-curb gutter and asphalt has been installed. Asphalt top coat complete. Vegetation has growing. All temporary BMP's have been removed with exception of BMP's at infiltration areas and silt fence on east side.	
2016-006	**Soccer Field 10 at Miller Park**	**2017-08-19**
	BMP's look good. Site construction complete. Vegetation established. Site is stable. BMP's still in place. (August)	
2016-012	**Minnetonka HS Parking Additions**	**2017-08-19**
	Construction is complete. BMPs have been removed. All exposed soils have been spray-tac'd and vegetation has started growing. Areas of bare soil exposed --no vegetation will grow. Site representative was notified concerning bare soils--they will be addressing the lack of vegetation growth. No activity on addressing lack of vegetation to date.	
2016-014	**Chanhassen Chick-Fil-A**	**2017-08-19**
	Construction complete. Landscaping complete. Parking lot construction complete. Temporary BMP's have been removed. Vegetation mats installed-vegetation is established. Sod installed at street side of project. Site is stable. This will be last inspection for this permit.	

2016-015	**18321 Heathcote Lane**	**2017-08-19**
	Silt fences installed/in good condition. Rock/gravel entrance is good. BMP's look good. House construction continues. (July-2017)	
2016-017	**SWLRT**	**2017-08-19**
	No construction observed to date.	
2016-018	**6830 Utica Terrace**	**2017-08-19**
	Site is stable. All temporary BMP's have been removed. This will be last inspection for this permit.	
2016-021	**Cedar Hills Park**	**2017-08-19**
	Construction continues. Curb and gutter installed for parking lot. Silt fences have been installed. Work near creek is complete-foot bridge installed. BMP's look good. Walking path location has been surveyed and marked--rock base installed --west path has been paved.	
2016-024	**Bandimere Park Improvements**	**2017-08-19**
	Site is stable. All temporary BMP's have been removed. This will be the last inspection for this permit.	
2016-025	**18374 Heathcote Lane**	**2017-08-19**
	Construction of house continues. Silt fence in place. Slopes with vegetation mats have growth. Southwest corner has more BMP's to control sediment erosion. BMP's installed are adequate, Construction of additions complete. Driveway installed and landscaping complete. Site is stable. Bio-logs can be removed. Site representative was notified that BMP's can be removed- one log still in place as of current inspection.	
2016-026	**Foxwood Development**	**2017-08-19**
	Multiple house construction has begun-BMP's look good- silt fences and rock entrances installed/ good perimeter control. Sidewalk installation underway. Silt fences have been installed on unsold lots. Catch basin protection installed. Street clean up underway during inspection.	
2016-030	**IDI Distribution Building Expansion**	**2017-08-19**
	Construction of addition complete .Catch basin protection has been installed. Silt fences on north side installed. Some over topping of first row of silt fence- 2 additional fences have been installed. Rock entrance installed at new entrance has been	

	refreshed again in August-2107. Catch basin protection at Basin east southeast of entrance has been installed. Stockpiles of dirt have been removed--silt fences still in place. Boulders onsite for installation. Site grading underway. BMP's look good.	
2016-032	**County Highway 61**	**2017-08-19**
	No construction started.	
2016-033	**Anderson Lakes-Purgatory Trail**	**2017-08-19**
	No construction observed to date.	
2016-037	**Prestige Day Care**	**2017-08-19**
	Earthwork and construction continues. Perimeter control silt fence in place, Rock entrance installed. Catch basin protection installed-as requested. Site looks good. August-2107	
2016-038	**Optum Technology Drive Improvements**	**2017-08-19**
	BMP's installed and are good. Vegetation is growing-sparse in some areas. August-2017.	
2016-039	**Powers Ridge Senior Apartments**	**2017-08-19**
	Construction continues. BMP's are good. Slight tracking to street. (August)	
2016-040	**18995 Minnetonka Blvd**	**2017-08-19**
	Construction of house continues. Silt fence in place. Slopes with vegetation mats have growth. Southwest corner has more BMP's to control sediment erosion. BMP's installed are adequate. Bio-logs may need to be doubled up soon.	
2016-041	**Chanhassen West Water Treatment Plant**	**2017-08-19**
	Silt fences have been installed on site. Construction continues. Rock entrance good. BMP's look good. Street cleanup conducted recently.	
2016-042	**18663 St. Mellion Place--Eden Prairie (Bear Path)**	**2017-08-19**
	Construction continues. BMP's are good. Silt fence in one small area is at 40% of height. Some erosion on hill is causing silt fence to fill.-- will monitor. Silt fences in some ares are overtopped or down. Homeowner notified.--secondary silt fence installed and a silt fence higher on slope. Drainage from downspout rerouted. Corrective Action closed.	

2016-043	**Bongards Redevelopment** BMP's are adequate. Parking lot base installed-- catch basins installed and protected--pavement installation still needs to be completed. (August)	**2017-08-19**
2016-044	**Dell Rd & Riley Creek Repair Project** Vegetation was growing appears to have died off. Rip-rap was recently installed at dirt road edge to control erosion from road. Photo taken.	**2017-08-19**
2016-045	**MCES Blue Lake Interceptor Rehab** Construction has started. Silt fences installed.	**2017-08-19**
2016-046	**Lifetime Fitness Chanhassen** Building construction complete. Parking lot area complete. South hillside slope is vegetated. Site is stable. All temporary BMP's have been removed. This will be the last inspection for this permit.	**2017-08-19**
2016-047	**9507 Sky Lane Eden Prairie** Construction continues. Silt fences down in some areas but secondary containment is good. Catch basin protection needs to be maintained --it's not installed-- just laying over CB. (street side CB). Catch basin between properties has been protected. Runoff from bare soils going around and offsite. Minor tracking to street. Site representative was notified after June inspection-no corrective action taken except for east catch basin protection installation.	**2017-08-19**
2016-FT02	**Mitchell and McCoy Lake Outlet Sediment Removal** Site construction complete. Bio-log still in place. Vegetation established. (August)	**2017-08-19**
2017-001	**Kopesky 2nd Addition** No recent activity to date.	**2017-08-19**
2017-002	**7012 Dakota Ave** BMP's installed. Bio-log perimeter installed. Bio-logs on SE side may need another layer--will monitor. New house construction continues. Site in good condition.	**2017-08-19**

2017-003	**18761 Heathcote Dr Building Addition**	**2017-08-19**
	House construction continues. BMP's are adequate for stockpile-silt fence would've been best--bio-logs are working. Minor tracking to street observed. Pool installation complete.additional silt fence install and working good. Landscaping underway. Bio-logs may have to be doubled up soon. Will notify site representative.	
2017-004	**9627 Sky Lane Eden Prairie**	**2017-08-19**
	Landscaping complete. Site is stable. All temporary BMP's have been removed. This will be last field inspection for this permit.	
2017-005	**9527 Sky Lane Eden Prairie**	**2017-08-19**
	Construction continues. Silt fences down in some areas but secondary containment is good. Catch basin protection needs to be maintained --it's not installed-- just laying over CB. (street side CB). Catch basin between properties has been protected. Runoff from bare soils going around t and offsite. Minor tracking to street. Site representative was notified after June inspection-no corrective action taken except for east catch basin protection installation.	
2017-006	**6687 Horseshoe Curve Chanhassen**	**2017-08-19**
	No activity observed to date.	
2017-007	**Cedarcrest Stables**	**2017-08-19**
	No activity observed to date.	
2017-008	**Prairie Meadows Site Renovation**	**2017-08-19**
	Construction continues. BMP's in place. Site looks good. Some minor tracking to street- catch basin protection is installed. East site access is adequate -- may require more rock as construction continues.--some debris in street from recent heavy rainfall--catch basin protection in place at this location.	
2017-009	**Emerson Chanhassen East Renovation**	**2017-08-19**
	Construction continues. BMP's installed. Rock entrance in place. (August)	
2017-010	**Riley Lake Park Renovations**	**2017-08-19**
	BMP's installed and look good. Parking lot and boat ramp construction underway.	

2017-011	**Galpin Blvd Watermain Improvements**	**2017-08-19**
	Construction complete. Soils covered with erosion control mats-no growth observed to date. Silt fences still installed in some areas.	
2017-012	**9667 Sky Lane**	**2017-08-19**
	BMP's look good. Minor tracking to street. Landscaping in backyard underway. (August)	
2017-015	**9995 Lawson Lane**	**2017-08-19**
	Construction complete. Landscaping and sod installed. BMP's are still in place. Site is stable.	
2017-018	**Bloomington 2017-102 Street Maint**	**2017-08-19**
	No activity observed to date.	
2017-019	**Bloomington 2017-110 Trail Improvements**	**2017-08-19**
	Construction complete. Catch basin protection in place. Hydro-seeding complete. Some minor debris in curb. Site is stable. Vegetation established.	
2017-020	**8512 Ellet Circle**	**2017-08-19**
	Construction complete. Site is stable. All temporary BMP's have been removed. This will be last field inspection for this permit.	
2017-021	**8544 Ellet Circle**	**2017-08-19**
	BMP's removed. Construction complete. Landscaping complete except west side.	
2017-023	**Eden Prairie Assembly of God**	**2017-08-19**
	Site has been surveyed. No construction activity to date.	
2017-025	**735 Pleasantview Road**	**2017-08-19**
	Construction continues. BMP's installed. Bio-logs for perimeter control--adequate. Some landscaping underway. Silt fence has been installed for perimeter control.	
2017-026	**6135 Ridge Road**	**2017-08-19**
	Site has been cleared and surveyed. BMP's installed --silt fence for erosion perimeter control. No additional activity to date.	

2017-027	**7500 Chanhassen Road**	**2017-08-19**
	Construction well underway. Silt fences and bio-logs installed. Erosion on west side went offsite-- cleanup up and more logs installed. This area could use more protection and log should be staked in at this site. Representative will be notify to reinforce this area.	
2017-029	**Tweet Pediatric Dentistry**	**2017-08-19**
	Construction continues. BMP's are installed and good. Slight tracking offsite. Catch basin protection installed in this area.	
2017-032	**11193 Bluestem Lane**	**2017-08-19**
	Survey markers observed. Eroded area is fenced off. No construction observed to date.	
2017-036	**Minnetonka HS Upper Field Access Road**	**2017-08-19**
	Open CA(s): Erosion overtopping bio-logs. Sediment cleanup in parking lot needed. Deadline: 9/19/2017 Construction continues. Erosion on slope north of retaining wall has overtopped bio-logs. Representative was notified. Parking lot has tracking.	
2017-044	**17064 Weston Bay Road**	**2017-08-19**
	Open CA(s): No construction entrance protection/no catch basin protection near entrance. Deadline: 9/19/2017 Construction has started. BMP's on lake side installed and look good. No catch basin protection installed near construction entrance. No rock/wood chip entrance installed. Site representative was notified.	

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: 2017-052

Received complete: July 11, 2017

Applicant: Pandora Holding LLC, ATTN: Jim Stubbe
EVI South Lake Medical LLC, ATTN: Nola McNeally
South Lake Properties LLP, ATTN: Dale Dorbin

Consultant: Civil Site Group, David Knaeble

Project: Old Excelsior Senior Living – Demolition of two existing buildings to construct one senior living facility along with appurtenant site work, utilities, stormwater management, and landscaping. The project also includes the construction of parking facilities on the adjoining property addressed 17705 Hutchins Drive owned by South Lake Properties, LLC. Two underground detention and infiltration features and a rain water garden are proposed to provide stormwater quantity, quality, and rate control.

Location: 17710 and 17724 Old Excelsior Boulevard and 17705 Hutchins Dr. Minnetonka, MN

Reviewer: Terry Jeffery, Permit Coordinator

Rules: Applicable rules checked

	Rule B: Floodplain Management		Rule H: Appropriation of Public Waters
X	Rule C: Erosion and Sediment Control		Rule I: Appropriation of Groundwater
	Rule D: Wetland and Creek Buffers	X	Rule J: Stormwater Management
	Rule E: Dredging and Sediment Removal		Rule K: Variances and Exceptions
	Rule F: Shoreline/Streambank Stabilization	X	Rule L: Permit Fees
	Rule G: Waterbody Crossings	X	Rule M: Financial Assurances

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.
L	**Permit Fee**		Yes	$1,500 was received on July 11, 2017
M	**Financial Assurance**		See Comment	The financial assurance has been calculated at $218,108.

Project Description

The project proposes to demolish two existing buildings on adjacent parcels to construct one senior living facility on what will be replatted as a single parcel, along with appurtenant site work, utilities, stormwater management, trails, and landscaping. At the same time, parking facilities will be constructed as part of the project on a third property to the north (17705 Hutchins Drive, owned by South Lake Properties, LLC.) The three parcels in question are now separately owned, and the three property owners have jointly applied for approval of the proposed work under the RPBCWD rules and permitting requirements. The parcel to the north will remain separate, and a land-use agreement (e.g., easement) will provide for joint use of the parking to be constructed on the parcel to the north. When combined, the adjacent east-west parcels will be owned by a single new entity, and transfer of the requested approval to this new entity is also requested as part of the application.

Two underground detention and infiltration features and a rain water garden are proposed to provide stormwater quantity, quality, and rate control.

The project site information is summarized below:

1. Total Site Area: 2.74 acres (2.54 plus 0.2 acres of 17705 Hutchins Dr.)
2. Existing Site Impervious Area: 1.07 acres (46,777 square feet)
3. Post Construction Site Impervious: 1.94 acres (84,426 square feet)
4. New (Increase) in Site Impervious Area: 0.87 acres (37,649 square feet) (81% increase in site impervious area)
5. Disturbed impervious surface: 1.07 acres (100% of existing site impervious area)
6. Total Disturbed Area: 2.68 acres (116,904 square feet)

Exhibits:

1. Permit Application from EVI South Medical LLC dated July 10, 2017
2. Permit Application from Pandora Holdings LLC dated July 6, 2017
3. Permit Application from South Lake Properties LLP dated July 6, 2017
4. Design Plan Sheets (9 Plan Sheets) dated June 28, 2017 (revised August 17, 2017)
5. Stormwater Management Plan dated June 28, 2017 (revised August 17, 2017)
6. MIDS Model – Existing Conditions dated June 27, 2017 (revised August 17, 2017)
7. MIDS Model – Proposed Conditions dated June 27, 2017 (revised August 17, 2017)
8. Existing and Proposed Conditions HydroCAD Model dated June 26, 2017 (revised 8/17/17)
9. Geotechnical Evaluation Report by Intertek PSI dated May 8, 2017 (additional borings advanced on July 5, 2017)
10. Memorandum responding to District comments dated August 18, 2017

Rule Specific Permit Conditions

Rule C: Erosion and Sediment Control

Because the project will alter 2.68 acres (116,904 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 Civil Site Group includes installation of, perimeter control where applicable, 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, and retention of native topsoil onsite. The contractor to be responsible for erosion control at the site needs to be determined. To conform to the RPBCWD Rule C requirements the following revisions are needed:

C1. The Applicant must provide the name and contact information of the 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 disturb all the 1.07 acres (46,777 square feet) of existing impervious surface and construct an additional 0.87 acres (37,649 square feet) on the combined project site, the project must meet the criteria of RPBCWD's Stormwater Management rule (Rule J, Subsection 2.3). As more than 50% of the existing 1.07 acres of impervious surface on the two east-west parcels will be disturbed and additional imperviousness surfaces will be constructed, the criteria in section 3 applies to all disturbed areas and newly constructed impervious surface notwithstanding exempt areas such as trails and sidewalks with appropriate buffers under paragraph 2.2(d). A six-foot-wide sidewalk will be added along Old Excelsior Boulevard. This will be buffered down gradient by a six-foot turf boulevard. Not all this area is captured by the treatment practices. However, this impervious surface is exempt under the criteria described in Rule J, §2.2(d)

Approximately 0.2 acres of imperviousness will be added to the parcel to the north. This represents an increase in imperviousness of the parcel of less than 50 percent and less than 50 percent of the existing impervious on the parcel will be disturbed in the course of prosecution of the project. Given this, Rule J paragraph 2.3 requires treatment only of runoff from the new imperviousness added to the parcel. For ease of explanation, treatment requirements and compliance for this 0.2 acres of imperviousness along with requirements and compliance for runoff from the 1.74 acres of imperviousness on the two to-be-combined east-west parcels. The total impervious area for which treatment is required is 1.94 acres.

The developer is proposing a combination of two on-site underground stormwater best management practices and a small rain water garden, all of which are on the two east-west parcels to be combined, to meet RPBCWD stormwater management requirements for all impervious area to be constructed for the project. A sump manhole with a SAFL Baffle will also be incorporated for pretreatment before surface water runoff enters the two underground stormwater management facilities. These practices will be used to provide the required rate control, volume abstraction and water quality management on the site.

Rate Control

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

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
1R	3.63	0.54	6.05	3.80	10.93	9.16	0.24	0.08
2R	0.16	0[1]	0.33	0	0.75	0	0.02	0
3R	0.50	0.02	0.93	0.11	1.90	0.36	0.05	0.01
4R	0.63	0.52	2.01	1.75	5.75	3.23	.20	0.07

[1] Drainage area 2R is being routed to drainage area 4R under built out conditions.

The proposed project conforms to RPBCWD Rule J, Subsection 3.1.a

Volume Abstraction

Subsection 3.1.b of Rule J requires the abstraction onsite of 1.1 inches of runoff from all new and disturbed impervious surface on the parcel. An abstraction volume of 7,358 cubic feet is required from the 1.94 acres (84,506 square feet) of reconstructed and new impervious area on the project for volume retention. The developer is proposing two underground infiltration basins and one rainwater garden. The table below summarizes the volume abstraction on the site.

Required Abstraction Depth (inches)	Required Abstraction Volume (cubic feet)	Provided Abstraction Volume (cubic feet)
1.1	7358	8456

Soil borings performed by Intertec PSI show that soils in the project area below the upper layer of topsoil consist primarily of sand and silty sand to depths as much as 31 feet below existing site grades. These soils are in the hydrologic group "A." The MN Stormwater Manual indicates an infiltration rate for A soils of 0.8 inches per hour. The design was made assuming this infiltration rate. Groundwater is at least 3 feet below the bottom of the proposed bioretention basin (Rule J, Subsection 3.1.b.ii). Based on information reviewed, the proposed project conforms to Rule J, Subsection 3.1.b.

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 developer is proposing a combination of two underground stormwater best management practices and a rain water garden. The table below summarized the water quality treatment provided for the site. Based on information reviewed, the proposed project conforms to Rule J, Subsection 3.1.c.

Pollutant of Interest	Regulated Site Loading (lbs/yr)	Required Load Removal (lbs/yr)[1]	Provided Load Reduction (lbs/yr)
Total Suspended Solids (TSS)	648.4	583.6 (90%)	619.3 (95.4%)
Total Phosphorus (TP)	3.569	2.141 (60%)	3.389 (94.9%)

[1]Required load reduction is calculated based on the removal criteria in Rule J, Subsection 3.1c and the new and reconstructed impervious area site load.

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 structure and the adjacent stormwater management feature are summarized below.

Location Riparian to Stormwater Facility	Low Floor Elevation of Building (feet)	100-year Event Flood Elevation of Adjacent Stormwater Facility (feet)	Freeboard (feet)	Provided Distance Between Building and Adjacent Stormwater Feature (feet)	Required Separation to Ground water based on Appndx J, Plot 1 (feet)	Provided Separation to Ground water based on Appndx J, Plot 1 (feet)
North of Building (2P)	922.0	906.01	15.99	NA	NA	NA
South of Building (1P)	922.0	922.78	-0.78	22	12.5	20.8

The proposed freeboard separation is compliant with Rule J, subsection 3.6.

Maintenance

Subsection 3.7 of Rule J requires the submission of maintenance plan. All stormwater management structures and facilities must be designed for maintenance access and properly maintained in perpetuity to assure that they continue to function as designed. Because the project proposes that treatment for the runoff from the 0.2 acres of imperviousness to be constructed on the northern parcel via the facilities on the combined southern parcel, the applicants must provide documentation of dedication of perpetual rights for the northern parcel to drain stormwater from the new impervious area to be constructed for the project to the facilities on the combined parcel to the south, along with rights for the northern parcel to rely on maintenance of the facilities on the southern parcel.

J1. Permit applicant must provide a draft maintenance and inspection plan and associated dedication of rights as described above. Once approved by RPBCWD, the plan must be recorded on the deeds to the parcels in a form acceptable to the District.

Rule L: Permit Fee:

Fees for the project are:

Rule C & J $1,500

Rule M: Financial Assurance:

Rules C: Silt fence: 1,700 L.F. x $2.50/L.F. = ... $4,250

Restoration: 0.73 acres x $2,500/acre = ... $1,825

Rules J: System 1P= $125,072

Rules J: System 2P = ... $18,112

Rules J: Infiltration Basin 544 S.F. x $6.00/ S.F.= $3,264

Contingency (10%) $15,252

Administration (30%) $50,333

Total Financial Assurance $218,108

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

Recommendation:

Approval, contingent upon:

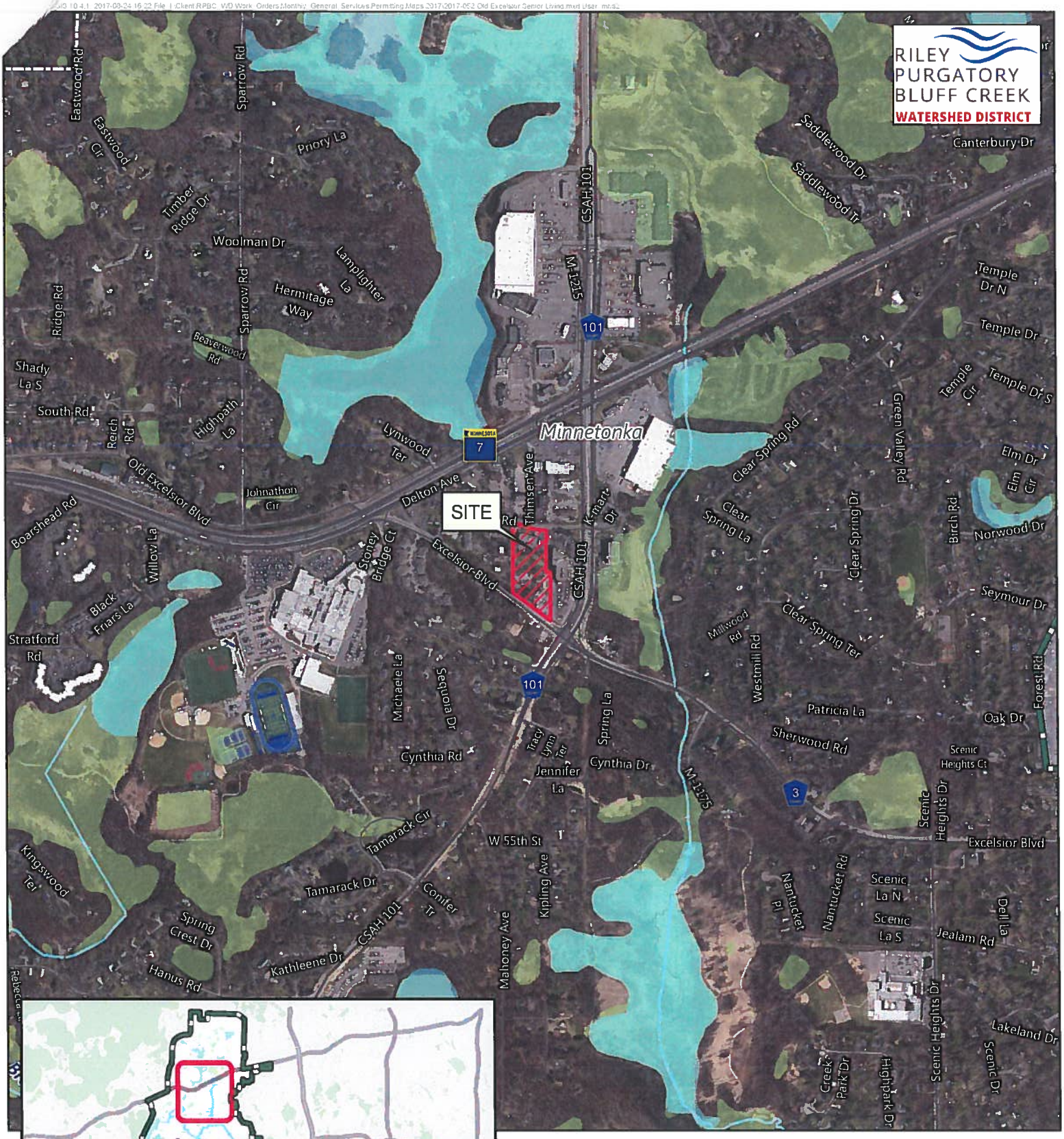
1. Continued compliance with General Requirements.
2. Financial Assurance in the amount of $218,108.
3. Receipt in recordation a maintenance declaration and dedication of reliance and use rights for the stormwater management facilities. A draft must be approved by the District prior to recordation.

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.

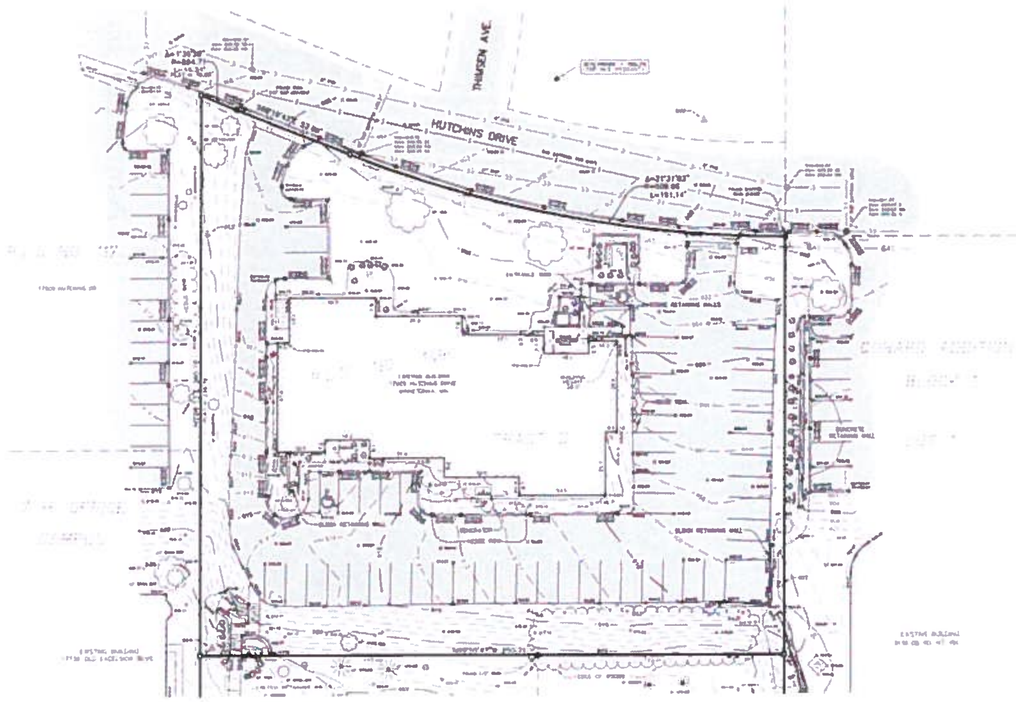
Board Action

It was moved by Manager _____, seconded by Manager _____ to approve permit application No. 2017-052 with the conditions recommended by staff, and to authorize the administrator to approve transfer of the permit to a new owner of the combined southern parcel as long as the requirements for transfer in rule A are met.



Permit Location Map

OLD EXCELSIOR
SENIOR LIVING
Permit 2017-052
Riley Purgatory Bluff Creek
Watershed District



LEGEND:

VICINITY MAP

GENERAL NOTES:

PARKING SUMMARY:

FLOOD ZONE:

SITE BENCHMARK:

PROPERTY DESCRIPTION:

AREA SUMMARY:

CERTIFICATION:

05/03/2017

REVISION SUMMARY

DATE	DESCRIPTION

SITE SURVEY

C0.1

BOUNDARY & TOPOGRAPHIC SURVEY

CIVIL SITE GROUP

MINNETONKA SENIOR LIVING FACILITY

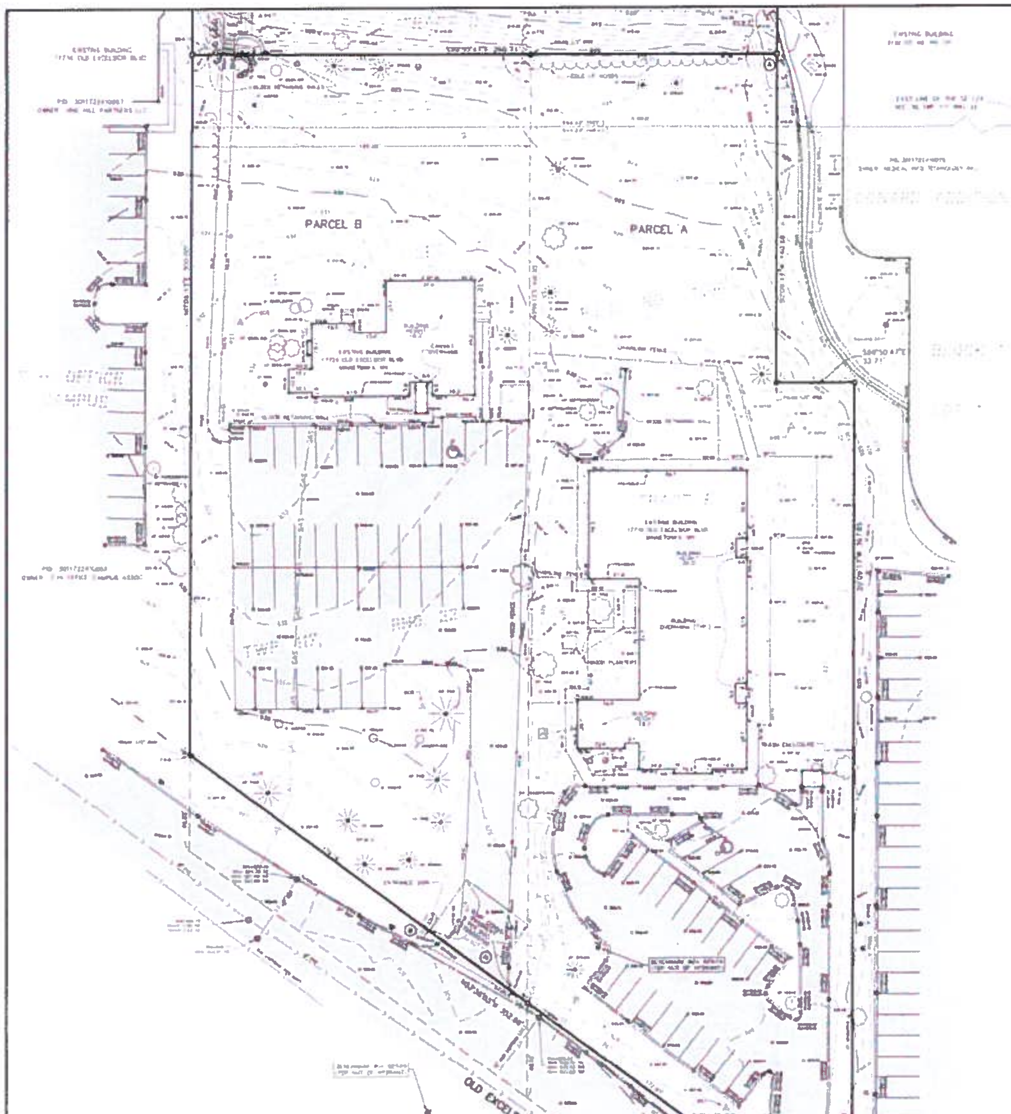
17705 Hutchins Drive - Minnetonka, Minnesota

Sec. 30, Twp. 117, Rng. 22
Hennepin County, Minnesota

CLARK ENGINEERING
www.clark-eng.com

May 3, 2017

1



PROPERTY DESCRIPTION:

PARCEL A (17710 Old Excelsior Blvd (per Title Commitment No. 32439))

Tract C, REGISTERED LAND SURVEY NO. 1490, Hennepin County, Minnesota
(Torrens Property)
(Torrens Certificate No. 1116134)

PARCEL B (17724 Old Excelsior Blvd (per Title Commitment No. 52871))

That part of the Southwest Quarter of Section 30, Township 117, Range 22, described as follows: [illegible]

(Torrens Property)

REVISION SUMMARY

DATE	DESCRIPTION

SITE SURVEY

C0.2

VICINITY MAP

AREA SUMMARY

[illegible]

SITE BENCHMARKS

[illegible]

PARKING SUMMARY

[illegible]

FLOOD ZONE

[illegible]

ZONING AND SETBACKS

[illegible]

POSSIBLE ENCROACHMENTS

[illegible]

LEGEND

[illegible]

SCHEDULE B EXCEPTIONS

Parcel A (17710 Old Excelsior Blvd)

Title Commitment No. 32439

Parcel B (17724 Old Excelsior Blvd)

Title Commitment No. 52871

[illegible]

GENERAL NOTES

[illegible]

CERTIFICATION

[illegible]

CLARK ENGINEERING
13755 Highway 55, Suite 100
Minneapolis, MN 55441
(763) 545-9196
Fax (763) 541-1894
www.clark-eng.com

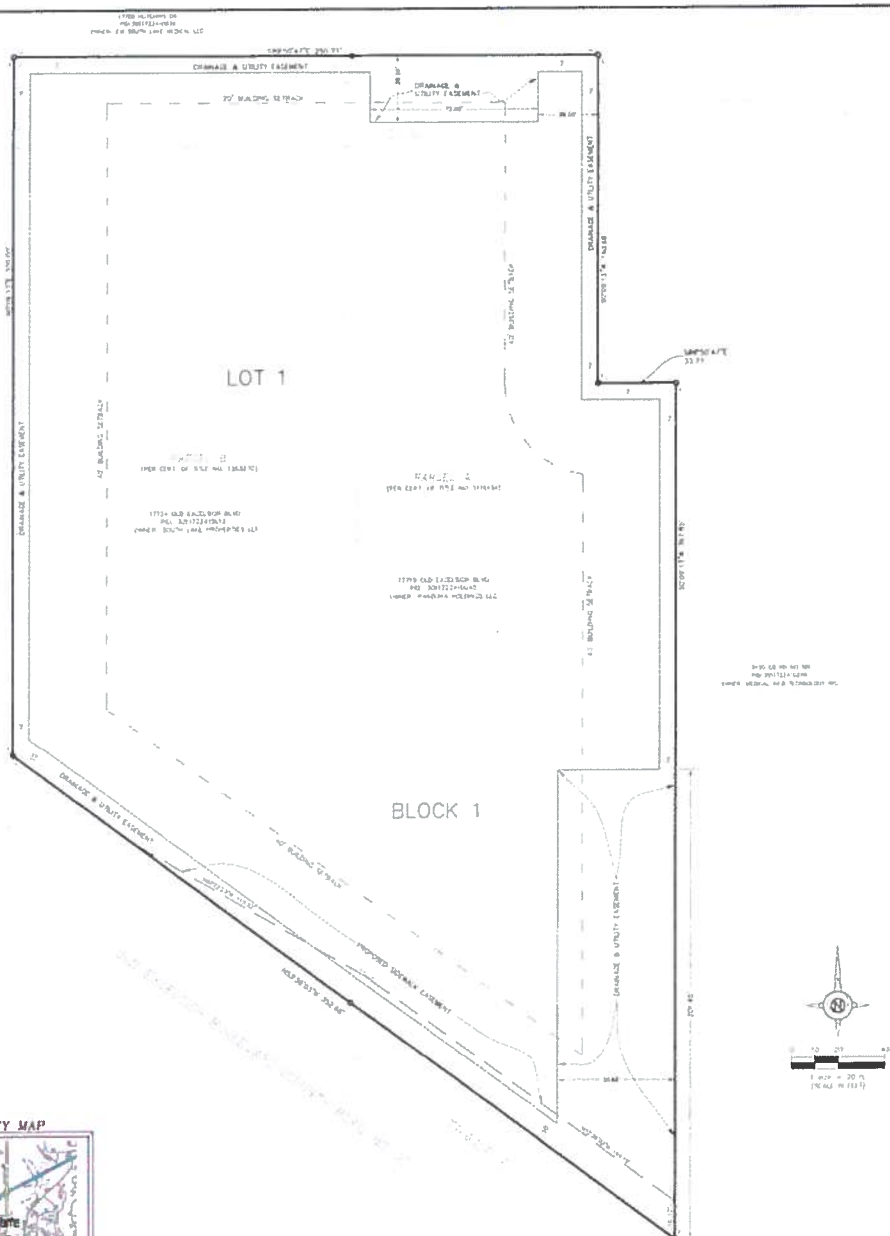
Sec. 30, Twp. 117, Rng. 22
Hennepin County, Minnesota

ALTA/NSPS SURVEY

CIVIL SITE GROUP

MINNETONKA SENIOR LIVING FACILITY
17710 & 17724 Old Excelsior Blvd - Minnetonka, Minnesota

1



REVISION SUMMARY

DATE	DESCRIPTION

PRELIMINARY PLAT

C0.3

LEGEND

[illegible]

PROPERTY DESCRIPTION

PARCEL A

[illegible]

PARCEL B

[illegible]

AREA SUMMARY

[illegible]

GENERAL NOTES

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]

PROPERTY IDENTIFICATION NUMBERS

[illegible]

CERTIFICATION

[illegible]

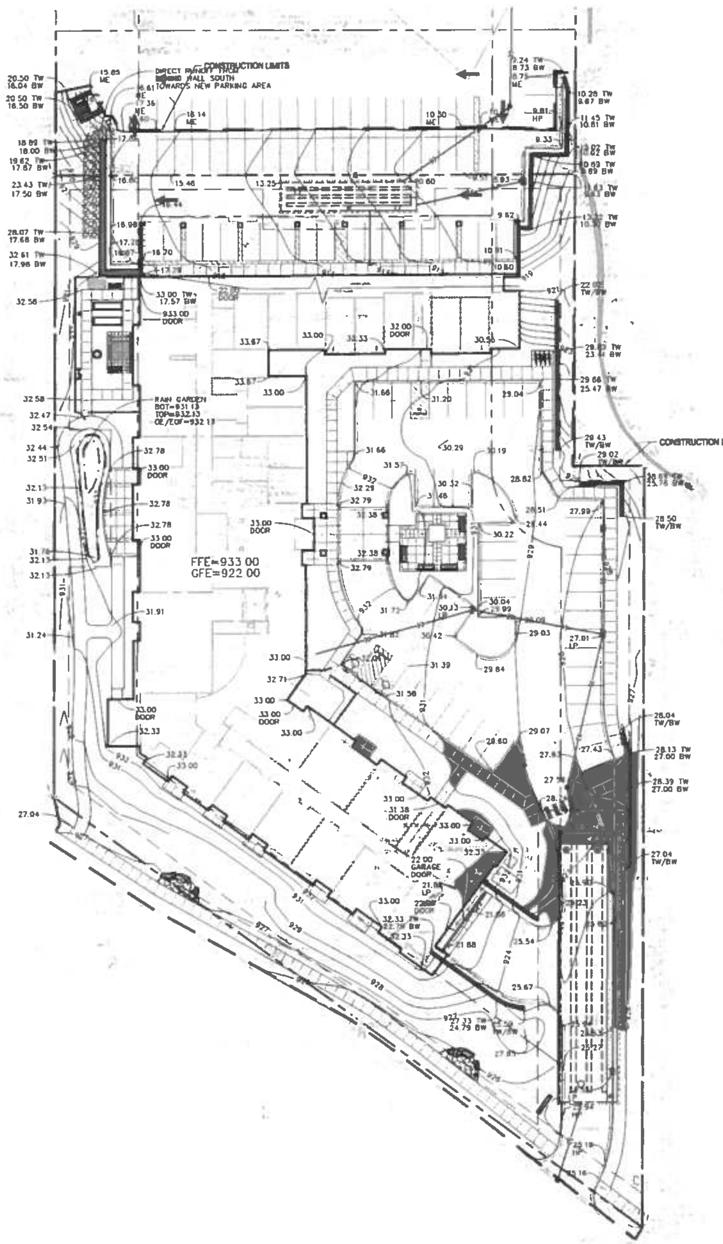
08/27/2017
Date

CLARK ENGINEERING
12155 Highway 55, Suite 100
Minneapolis, MN 55441-4609
(763) 545-9196
fax (763) 541-8035
www.clark-eng.com

Sec. 30, Twp. 117, Rng. 22
Hennepin County, Minnesota

PRELIMINARY PLAT
CIVIL SITE GROUP, INC.
OLD EXCELSIOR SENIOR LIVING
Minnetonka, Minnesota

1



EROSION CONTROL NOTES:

SEE SWPPP ON SHEETS SW1.0-SW1.5

GROUNDWATER INFORMATION:

PER GEOTECHNICAL REPORT BY INTERTEK PSI, INC., DATED 5-8-17 PERCHED GROUNDWATER WAS OBSERVED IN TWO OF THE BORINGS, BUT THE REPORT INDICATED THAT STATIC GROUNDWATER WAS BELOW THE LEVEL OF THE BORINGS WHICH EXTENDED TO A DEPTH OF 894.00

CITY OF MINNETONKA GRADING NOTES:

1. RESERVED FOR CITY SPECIFIC GRADING NOTES.

GENERAL GRADING NOTES:

1. SEE SITE PLAN FOR HORIZONTAL LAYOUT & GENERAL GRADING NOTES.
2. THE CONTRACTOR SHALL COMPLETE THE SITE GRADING CONSTRUCTION (INCLUDING BUT NOT LIMITED TO SITE PREPARATION, SOIL CORRECTION, EXCAVATION, EMBANKMENT, ETC.) IN ACCORDANCE WITH THE REQUIREMENTS OF THE OWNER'S SOILS ENGINEER. ALL SOIL TESTING SHALL BE COMPLETED BY THE OWNER'S SOILS ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED SOIL TESTS AND INSPECTIONS WITH THE SOILS ENGINEER.
3. GRADING AND EXCAVATION ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT REQUIREMENTS & PERMIT REQUIREMENTS OF THE CITY.
4. PROPOSED SPOT GRADES ARE FLOW-LINE FINISHED GRADE ELEVATIONS, UNLESS OTHERWISE NOTED.
5. GRADES OF WALKS SHALL BE INSTALLED WITH 5% MAX. LONGITUDINAL SLOPE AND 1% MIN AND 2% MAX. CROSS SLOPE, UNLESS OTHERWISE NOTED.
6. PROPOSED SLOPES SHALL NOT EXCEED 3:1 UNLESS INDICATED OTHERWISE ON THE DRAWINGS. MAXIMUM SLOPES IN MAINTAINED AREAS IS 4:1
7. PROPOSED RETAINING WALLS, FREESTANDING WALLS, OR COMBINATION OF WALL TYPES GREATER THAN 4' IN HEIGHT SHALL BE DESIGNED AND ENGINEERED BY A REGISTERED RETAINING WALL ENGINEER. DESIGN DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF GRADE STAKES THROUGHOUT THE DURATION OF CONSTRUCTION TO ESTABLISH PROPER GRADES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR A FINAL FIELD CHECK OF FINISHED GRADES ACCEPTABLE TO THE ENGINEER/LANDSCAPE ARCHITECT PRIOR TO TOPSOIL AND SODDING ACTIVITIES.
9. IF EXCESS OR SHORTAGE OF SOIL MATERIAL EXISTS, THE CONTRACTOR SHALL TRANSPORT ALL EXCESS SOIL MATERIAL OFF THE SITE TO AN AREA SELECTED BY THE CONTRACTOR, OR IMPORT SUITABLE MATERIAL TO THE SITE.
10. EXCAVATE TOPSOIL FROM AREAS TO BE FURTHER EXCAVATED OR REGRADED AND STOCKPILE IN AREAS DESIGNATED ON THE SITE. THE CONTRACTOR SHALL SALVAGE ENOUGH TOPSOIL FOR RESPREADING ON THE SITE AS SPECIFIED. EXCESS TOPSOIL SHALL BE PLACED IN EMBANKMENT AREAS, OUTSIDE OF BUILDING PADS, ROADWAYS AND PARKING AREAS. THE CONTRACTOR SHALL SUBCUT CUT AREAS, WHERE TURF IS TO BE ESTABLISHED, TO A DEPTH OF 6 INCHES. RESPREAD TOPSOIL IN AREAS WHERE TURF IS TO BE ESTABLISHED TO A MINIMUM DEPTH OF 6 INCHES.
11. FINISHED GRADING SHALL BE COMPLETED. THE CONTRACTOR SHALL UNIFORMLY GRADE AREAS WITHIN LIMITS OF GRADING, INCLUDING ADJACENT TRANSITION AREAS. PROVIDE A SMOOTH FINISHED SURFACE WITHIN SPECIFIED TOLERANCES, WITH UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE SHOWN, OR BETWEEN SUCH POINTS AND EXISTING GRADES. AREAS THAT HAVE BEEN FINISH GRADED SHALL BE PROTECTED FROM SUBSEQUENT CONSTRUCTION OPERATIONS, TRAFFIC AND EROSION. REPAIR ALL AREAS THAT HAVE BECOME RUTTED BY TRAFFIC OR ERODED BY WATER OR HAS SETTLED BELOW THE CORRECT GRADE. ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO EQUAL OR BETTER THAN ORIGINAL CONDITION OR TO THE REQUIREMENTS OF THE NEW WORK.
12. PRIOR TO PLACEMENT OF THE AGGREGATE BASE, A TEST ROLL WILL BE REQUIRED ON THE STREET AND/OR PARKING AREA SUBGRADE. THE CONTRACTOR SHALL PROVIDE A LOADED TANDEM AXLE TRUCK WITH A GROSS WEIGHT OF 25 TONS. THE TEST ROLLING SHALL BE AT THE DIRECTION OF THE SOILS ENGINEER AND SHALL BE COMPLETED IN AREAS AS DIRECTED BY THE SOILS ENGINEER. THE SOILS ENGINEER SHALL DETERMINE WHICH SECTIONS OF THE STREET OR PARKING AREA ARE UNSTABLE. CORRECTION OF THE SUBGRADE SOILS SHALL BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SOILS ENGINEER. NO TEST ROLL SHALL OCCUR WITHIN 10' OF ANY UNDERGROUND STORM RETENTION/DETENTION SYSTEMS.
13. TOLERANCES
    - 13.1. THE BUILDING SUBGRADE FINISHED SURFACE ELEVATION SHALL NOT VARY BY MORE THAN 0.30 FOOT ABOVE, OR 0.30 FOOT BELOW, THE PRESCRIBED ELEVATION AT ANY POINT WHERE MEASUREMENT IS MADE.
    - 13.2. THE STREET OR PARKING AREA SUBGRADE FINISHED SURFACE ELEVATION SHALL NOT VARY BY MORE THAN 0.05 FOOT ABOVE, OR 0.10 FOOT BELOW, THE PRESCRIBED ELEVATION OF ANY POINT WHERE MEASUREMENT IS MADE.
    - 13.3. AREAS WHICH ARE TO RECEIVE TOPSOIL SHALL BE GRADED TO WITHIN 0.30 FOOT ABOVE OR BELOW THE REQUIRED ELEVATION, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
    - 13.4. TOPSOIL SHALL BE GRADED TO PLUS OR MINUS 1/2 INCH OF THE SPECIFIED THICKNESS.
14. MAINTENANCE
    - 14.1. THE CONTRACTOR SHALL PROTECT NEWLY GRADED AREAS FROM TRAFFIC AND EROSION, AND KEEP AREA FREE OF TRASH AND DEBRIS.
    - 14.2. CONTRACTOR SHALL REPAIR AND REESTABLISH GRADES IN SETTLED, ERODED AND RUTTED AREAS TO SPECIFIED TOLERANCES. DURING THE CONSTRUCTION, IF REQUIRED, AND DURING THE WARRANTY PERIOD, ERODED AREAS WHERE TURF IS TO BE ESTABLISHED SHALL BE RESEEDED AND MULCHED.
    - 14.3. WHERE COMPLETED COMPACTED AREAS ARE DISTURBED BY SUBSEQUENT CONSTRUCTION OPERATIONS OR ADVERSE WEATHER, CONTRACTOR SHALL SCARIFY, SURFACE, RESHAPE, AND COMPACT TO REQUIRED DENSITY PRIOR TO FURTHER CONSTRUCTION.

GRADING PLAN LEGEND:

	EX. 1' CONTOUR ELEVATION INTERVAL
1137	1.0' CONTOUR ELEVATION INTERVAL
41.26	SPOT GRADE ELEVATION (GUTTER/FLOW LINE UNLESS OTHERWISE NOTED)
891.00 G	SPOT GRADE ELEVATION GUTTER
891.00 TC	SPOT GRADE ELEVATION TOP OF CURB
891.00 BS/TS	SPOT GRADE ELEVATION BOTTOM OF STAIRS/TOP OF STAIRS
	CURB AND GUTTER (T.O = TIP OUT)
EOF=1135.52	EMERGENCY OVERFLOW

GOPHER STATE ONE CALL
WWW.GOPHERSTATEONECALL.ORG
(800) 252-1166 TOLL FREE
(651) 454-0002 LOCAL

1" = 30'-0"
15'-0" 0 30'-0"

CivilSite GROUP
4931 W. 35TH ST. SUITE 200
ST. LOUIS PARK, MN 55416
CivilSiteGroup.com
Matt Pavek 763-213-3944
Pat Sarver 952-250-2003

PROJECT
OLD EXCELSIOR SENIOR LIVING
17710 & 17724 OLD EXCELSIOR BLVD, MINNETONKA, MN 55345

RM SENIOR LIVING MINNETONKA LLC
1964 WEST WAYZATA BOULEVARD, SUITE #200, LONG LAKE, MN 55356

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.

David J. Knaeble
DATE 09/17/17 LICENSE NO. 48776

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
08/29/17	CITY SUBMITTAL
9/17/17	WATERSHED RESUBMITTAL

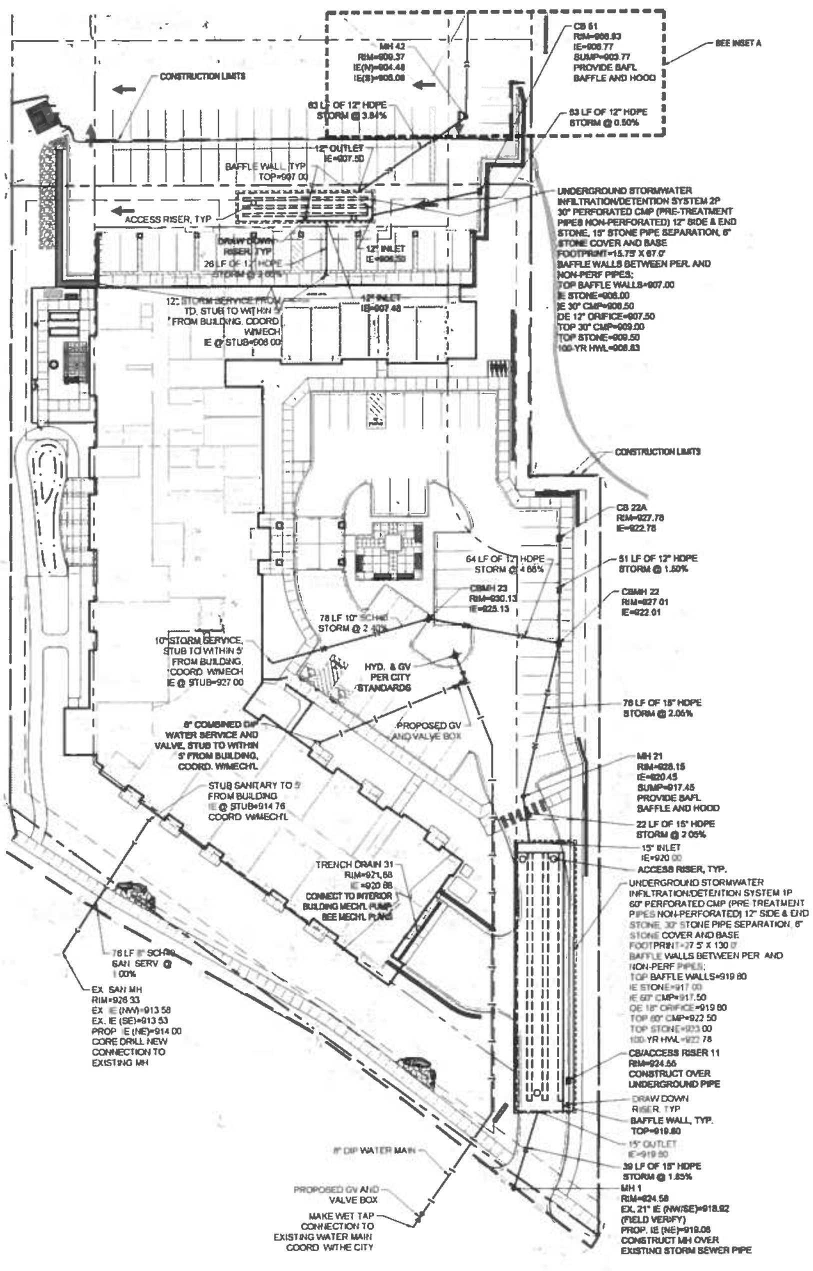
REVISION SUMMARY

DATE	DESCRIPTION

PROJECT NO. 18133

GRADING PLAN

C3.0

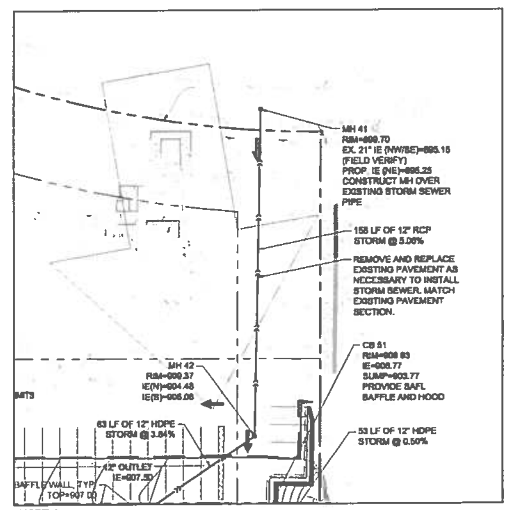


GENERAL UTILITY NOTES:

1. SEE SITE PLAN FOR HORIZONTAL DIMENSIONS AND LAYOUT.
2. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES AND TOPOGRAPHIC FEATURES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF DISCREPANCIES OR VARIATIONS FROM THE PLANS.
3. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.
4. UTILITY INSTALLATION SHALL CONFORM TO THE CURRENT EDITION OF "STANDARD SPECIFICATIONS FOR WATER MAIN AND SERVICE LINE INSTALLATION" AND "SANITARY SEWER AND STORM SEWER INSTALLATION" AS PREPARED BY THE CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM), AND SHALL CONFORM WITH THE REQUIREMENTS OF THE CITY AND THE PROJECT SPECIFICATIONS.
5. CASTINGS SHALL BE SALVAGED FROM STRUCTURE REMOVALS AND RE-USED OR PLACED AT THE DIRECTION OF THE OWNER.
6. ALL WATER PIPE SHALL BE CLASS 52 DUCTILE IRON PIPE (DIP) UNLESS OTHERWISE NOTED.
7. ALL SANITARY SEWER SHALL BE SDR 26 POLYVINYL CHLORIDE (PVC) UNLESS OTHERWISE NOTED.
8. ALL STORM SEWER PIPE SHALL BE HDPE UNLESS OTHERWISE NOTED.
9. PIPE LENGTHS SHOWN ARE FROM CENTER TO CENTER OF STRUCTURE OR TO END OF FLARED END SECTION.
10. UTILITIES ON THE PLAN ARE SHOWN TO WITHIN 5' OF THE BUILDING FOOTPRINT. THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR THE FINAL CONNECTION TO BUILDING LINES. COORDINATE WITH ARCHITECTURAL AND MECHANICAL PLANS.
11. CATCH BASINS AND MANHOLES IN PAVED AREAS SHALL BE SUMPED 0.04 FEET. ALL CATCH BASINS IN GUTTERS SHALL BE SUMPED 0.15 FEET PER DETAILS. RIM ELEVATIONS SHOWN ON THIS PLAN DO NOT REFLECT SUMPED ELEVATIONS.
12. ALL FIRE HYDRANTS SHALL BE LOCATED 5 FEET BEHIND BACK OF CURB UNLESS OTHERWISE NOTED.
13. HYDRANT TYPE, VALVE, AND CONNECTION SHALL BE IN ACCORDANCE WITH CITY REQUIREMENTS. HYDRANT EXTENSIONS ARE INCIDENTAL.
14. A MINIMUM OF 8 FEET OF COVER IS REQUIRED OVER ALL WATERMAIN, UNLESS OTHERWISE NOTED. EXTRA DEPTH MAY BE REQUIRED TO MAINTAIN A MINIMUM OF 18" VERTICAL SEPARATION TO SANITARY OR STORM SEWER LINES. EXTRA DEPTH WATERMAIN IS INCIDENTAL.
15. A MINIMUM OF 18 INCHES OF VERTICAL SEPARATION AND 10 FEET OF HORIZONTAL SEPARATION IS REQUIRED FOR ALL UTILITIES, UNLESS OTHERWISE NOTED.
16. ALL CONNECTIONS TO EXISTING UTILITIES SHALL BE IN ACCORDANCE WITH CITY STANDARDS AND COORDINATED WITH THE CITY PRIOR TO CONSTRUCTION.
17. CONNECTIONS TO EXISTING STRUCUTRES SHALL BE CORE-DRILLED.
18. COORDINATE LOCATIONS AND SIZES OF SERVICE CONNECTIONS WITH THE MECHANICAL DRAWINGS.
19. COORDINATE INSTALLATION AND SCHEDULING OF THE INSTALLATION OF UTILITIES WITH ADJACENT CONTRACTORS AND CITY STAFF
20. ALL STREET REPAIRS AND PATCHING SHALL BE PERFORMED PER THE REQUIREMENTS OF THE CITY. ALL PAVEMENT CONNECTIONS SHALL BE SAWCUT. ALL TRAFFIC CONTROLS SHALL BE PROVIDED BY THE CONTRACTOR AND SHALL BE ESTABLISHED PER THE REQUIREMENTS OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD) AND THE CITY. THIS SHALL INCLUDE BUT NOT BE LIMITED TO SIGNAGE, BARRICADES, FLASHERS, AND FLAGGERS AS NEEDED. ALL PUBLIC STREETS SHALL BE OPEN TO TRAFFIC AT ALL TIMES. NO ROAD CLOSURES SHALL BE PERMITTED WITHOUT APPROVAL BY THE CITY.
21. ALL STRUCTURES, PUBLIC AND PRIVATE, SHALL BE ADJUSTED TO PROPOSED GRADES WHERE REQUIRED. THE REQUIREMENTS OF ALL OWNERS MUST BE COMPLIED WITH. STRUCTURES BEING RESET TO PAVED AREAS MUST MEET OWNERS REQUIREMENTS FOR TRAFFIC LOADING.
22. CONTRACTOR SHALL CORDINATE ALL WORK WITH PRIVATE UTILITY COMPANIES.
23. CONTRACTOR SHALL COORDINATE CONNECTION OF IRRIGATION SERVICE TO UTILITIES. COORDINATE THE INSTALLATION OF IRRIGATION SLEEVES NECESSARY AS TO NOT IMPACT INSTALLATION OF UTILITIES.
24. CONTRACTOR SHALL MAINTAIN AS-BUILT PLANS THROUGHOUT CONSTRUCTION AND SUBMIT THESE PLANS TO ENGINEER UPON COMPLETION OF WORK.
25. ALL JOINTS AND CONNECTIONS IN STORM SEWER SYSTEM SHALL BE GASTIGHT OR WATERTIGHT. APPROVED RESILIENT RUBBER JOINTS MUST BE USED TO MAKE WATERTIGHT CONNECTIONS TO MANHOLES, CATCHBASINS, OR OTHER STRUCTURES
26. ALL PORTIONS OF THE STORM SEWER SYSTEM LOCATED WITHIN 10 FEET OF THE BUILDING OR WATER SERVICE LINE MUST BE TESTED IN ACCORDANCE WITH MN RULES, CHAPTER 4714, SECTION 1109.0.

CITY OF MINNETONKA UTILITY NOTES:

1. RESERVED FOR CITY SPECIFIC UTILITY NOTES



INSET A

UTILITY LEGEND:

- CATCH BASIN
- MANHOLE
- GATE VALVE AND VALVE BOX
- PROPOSED FIRE HYDRANT
- WATER MAIN
- SANITARY SEWER
- STORM SEWER
- FES AND RIP RAP

GOPHER STATE ONE CALL
WWW.GOPHERSTATEONECALL.ORG
(800) 252-1166 TOLL FREE
(651) 454-0002 LOCAL

1" = 30'-0"
15'-0" 0 30'-0"

CivilSite
GROUP
4931 W. 35TH ST. SUITE 200
ST. LOUIS PARK, MN 55416
CivilSiteGroup.com
Matt Pavek 763-213-3944
Pat Sarver 952-250-2003

PROJECT
OLD EXCELSIOR SENIOR LIVING
17710 & 17724 OLD EXCELSIOR BLVD, MINNETONKA, MN 55345

RM SENIOR LIVING MINNETONKA LLC
1964 WEST WAYZATA BOULEVARD, SUITE #200, LONG LAKE, MN 55356

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.

David J. Knaeble
DATE 08/17/17 LICENSE NO. 48776

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
06/28/17	CITY SUBMITTAL
8/17/17	WATERSHED RESUBMITTAL

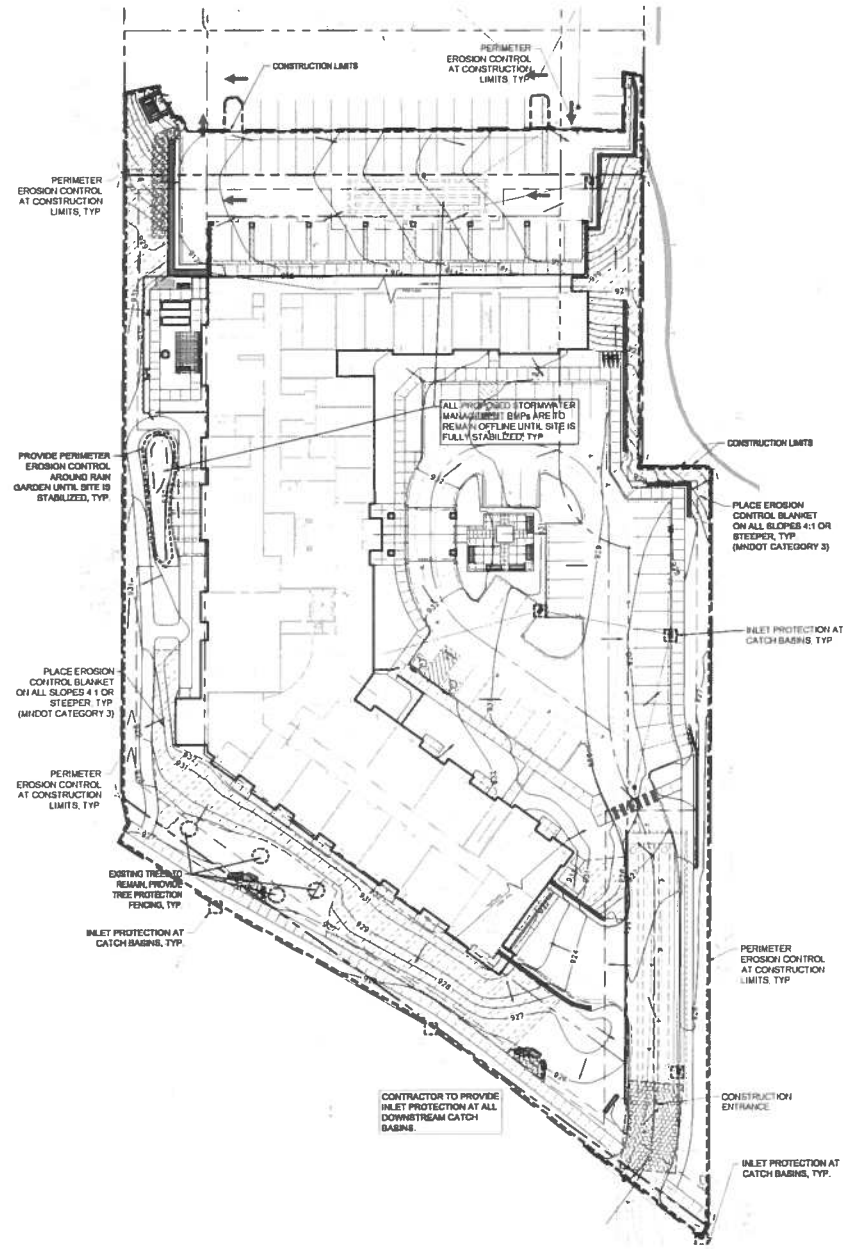
REVISION SUMMARY

DATE	DESCRIPTION

PROJECT NO. 16133

UTILITY PLAN

C4.0



ALL SPECIFIED EROSION AND SEDIMENT CONTROL PRACTICES, AND MEASURES CONTAINED IN THIS SWPPP ARE THE MINIMUM REQUIREMENTS. ADDITIONAL PRACTICES MAY BE REQUIRED DURING THE COURSE OF CONSTRUCTION

SWPPP NOTES:

1. THIS PROJECT IS GREATER THAN ONE ACRE AND WILL REQUIRE AN MPCA NPDES PERMIT. AN EROSION CONTROL PERMIT IS ALSO REQUIRED FROM THE CITY OF MINNETONKA
2. SEE SHEETS SW1.0 - SW1.5 FOR ALL EROSION CONTROL NOTES, DESCRIPTIONS, AND PRACTICES
3. SEE GRADING PLAN FOR ADDITIONAL GRADING AND EROSION CONTROL NOTES
4. CONTRACTOR IS RESPONSIBLE FOR SWPPP IMPLEMENTATION, INSPECTIONS, AND COMPLIANCE WITH NPDES PERMIT

CITY OF MINNETONKA EROSION CONTROL NOTES:

1. NATURAL TOPOGRAPHY AND SOIL CONDITIONS MUST BE PROTECTED, INCLUDING RETENTION ONSITE OF NATIVE TOPSOIL TO THE GREATEST EXTENT POSSIBLE.
2. 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.
3. ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPS MUST BE REMOVED UPON FINAL STABILIZATION.

RPBCWD EROSION CONTROL NOTES:

1. 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 TAKING CARE TO AVOID UTILITIES, TREE ROOTS AND OTHER EXISTING VEGETATION PRIOR TO FINAL REVEGETATION OR OTHER STABILIZATION.
2. THE CONTRACTOR MUST INSPECT, MAINTAIN AND REPAIR ALL DISTURBED SURFACES AND ALL EROSION AND SEDIMENT CONTROL FACILITIES AND SOIL STABILIZATION MEASURES EVERYDAY WORK IS PERFORMED ON THE SITE AND AT LEAST WEEKLY UNTIL LAND-DISTURBING ACTIVITY IS CEASED. THEREAFTER, THE CONTRACTOR MUST PERFORM THESE RESPONSIBILITIES AT LEAST WEEKLY UNTIL VEGETATIVE COVER IS ESTABLISHED. THE CONTRACTOR SHALL MAINTAIN A LOG OF ACTIVITIES UNDER THIS SECTION FOR INSPECTION BY THE DISTRICT ON REQUEST.

LEGEND:

- EX. 1' CONTOUR ELEVATION INTERVAL
- 1137 — 1.0' CONTOUR ELEVATION INTERVAL
- DRAINAGE ARROW
- SILT FENCE / BIOROLL - GRADING LIMIT
- INLET PROTECTION
- STABILIZED CONSTRUCTION ENTRANCE
- EROSION CONTROL BLANKET

GOPHER STATE ONE CALL
WWW.GOPHERSTATEONECALL.ORG
(800) 252-1166 TOLL FREE
(651) 454-0002 LOCAL

1" = 20'-0"
10'-0" 0 20'-0"

CivilSite GROUP
4931 W. 35TH ST. SUITE 200
ST. LOUIS PARK, MN 55416
CivilSiteGroup.com
Matt Reves 763-213-3644
Pat Bonner 952-250-2023

PROJECT
OLD EXCELSIOR SENIOR LIVING
17710 & 17724 OLD EXCELSIOR BLVD, MINNETONKA, MN 55345
RM SENIOR LIVING MINNETONKA LLC
1954 WEST WAYZATA BOULEVARD, SUITE #200, LONG LAKE, MN 55356

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David J. Kaebble
DATE 05/17/17 LICENSE NO. 46778

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
05/17/17	CITY SUBMITTAL
8/17/17	WATERSHED RESUBMITTAL

REVISION SUMMARY

DATE	DESCRIPTION

PROJECT NO. 16133

SWPPP - PROPOSED CONDITIONS

SW1.1

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: 2017-53

Received complete: July 27, 2017

Applicant: Midwest Mastercraft Incorporated

Consultant: Chuck Plowe, Plowe Engineering, Inc.

Project: Midwest Mastercraft – This is new construction on an existing lot of record. It involves the demolition of an existing building and the construction of a new building, including bituminous parking improvements. The project also involves the construction of an underground infiltration basin and associated stormwater conveyances.

Location: 17717 State Highway 7 Minnetonka, Minnesota 55345

Reviewer: Scott Sobiech and Adam Howard, Barr Engineering

Rules: Applicable rules checked

	Rule B: Floodplain Management		Rule H: Appropriation of Public Waters
X	Rule C: Erosion and Sediment Control		Rule I: Appropriation of Groundwater
	Rule D: Wetland and Creek Buffers	X	Rule J: Stormwater Management
	Rule E: Dredging and Sediment Removal		Rule K: Variances and Exceptions
	Rule F: Shoreline/Streambank Stabilization	X	Rule L: Permit Fees
	Rule G: Waterbody Crossings	X	Rule M: Financial Assurances

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.
L	**Permit Fee**		Yes	$1,500 was received on July 6, 2017.
M	**Financial Assurance**		See Comment	The financial assurance has been calculated at $43,900.

Project Description

The project site information is summarized below:

1. Total Site Area: 1.11 acres
2. Existing Site Impervious Area: 0.84 acre
3. New (Increase) in Site Impervious Area: 0.87 acre (0.03 acre increase in site impervious area)
4. Total Disturbed Area: 0.39 acres

Exhibits:

1. Permit Application dated July 6, 2017.
2. Civil Design Plan Sheets (Sheets C1-3 and S1) dated July 6, 2017 (received July 6, 2017, revised July 26, 2017, set C2 revised August 14, 2017).
3. ADS Stormtech Chamber Conceptual Layout (Sheets 1 – 5) dated July 24, 2017 (revised August 14, 2017)
4. Stormwater Management Narrative dated July 5, 2017 (revised July 26, 2017).
5. HydroCAD Model in July 26, 2017 Stormwater Management Design Memo (revised August 14, 2017).
6. Report of Geotechnical Exploration by ITCA Allied Engineering Company dated June 13, 2017.
7. P8 Model (electronic copy) August 17, 2017

Rule Specific Permit Conditions

Rule C: Erosion and Sediment Control

Because the project will disturb 0.39 acres (16,988 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 Plowe Engineering, Inc. includes installation of silt fence, inlet protection for storm sewer catch basins, protection of infiltration practices, rock construction entrance, placement of a minimum of 6 inches of topsoil, decompaction of areas compacted during construction, and retention of native topsoil onsite. To conform to the RPBCWD Rule C requirements the following revisions are needed:

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

C2. Submission of updated drawing showing the rock construction entrance detail.

Rule J: Stormwater Management

Because the project will alter 0.39 acres (16,988 square feet) 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 apply to the disturbed and increased impervious area because the project impacts less than 50% of the existing impervious surface on the parcel.

The developer is proposing the construction of an underground infiltration chamber that will have overflow directed to the existing storm sewer to the north. Pretreatment of runoff is provided by a sump manhole.

Rate Control

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

The applicant used a HydroCAD hydrologic model to simulate runoff rates for pre- and post-development conditions for the 2-, 10-, and 100-year frequency storm events using a nested rainfall distribution, and a 100-year frequency, 10-day snowmelt event. The existing and proposed 2-, 10-, and 100-year frequency discharges from the site 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
Delton Ave.	3.0	2.9	4.9	4.8	8.8	8.6	0.23	0.22
Hutchins Drive	0.03	0.03	0.05	0.05	0.11	0.11	0.0	0.0

Volume Abstraction

Subsection 3.1.b of Rule J requires the abstraction onsite of 1.1 inches of runoff from the fully reconstructed and new impervious surface of the parcel. An abstraction volume of 1,540 cubic feet is required from the 0.39 acres (16,988 square feet) of impervious area on the project for volume retention. The Applicant proposed one underground infiltration feature to meet this requirement. Pretreatment of runoff will be provided by a sump manhole (sub-criterion 3.1b.i). The table below summarizes the volume abstraction on the site.

Soil borings performed by ITCA Allied Engineering Company show that soils in the project area are primarily sand (SP) with some gravel (SW); the MN Stormwater Manual indicates an infiltration rate of

0.45 inches per hour for such soils. The soil borings indicate groundwater at an elevation of 884.2. Groundwater is at least 3 feet below the bottom of the proposed infiltration basins (Rule J, Subsection 3.1.b.ii). The table below summarizes the volume abstraction on the site. Based on information reviewed, the proposed project conforms to Rule J, Subsection 3.1.b.

Required Abstraction Depth (inches)	Provided Abstraction Depth (inches)	Provided Abstraction Volume (cubic feet)
1.1	1.11	1,569

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 an underground infiltration chamber to achieve the required TP and TSS removals and submitted a P8 model to estimate the TP and TSS removals.

Pollutant of Interest	Regulated Site Loading (lbs/yr)	Required Load Removal (lbs/yr)[1]	Provided Load Reduction (lbs/yr)
Total Suspended Solids (TSS)	431	388 (90%)	411 (95%)
Total Phosphorus (TP)	1.4	0.84 (60%)	1.2 (86%)

[1]Required load reduction is calculated based on the removal criteria in Rule J, Subsection 3.1c and the new and reconstructed impervious area site load.

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 structures and the adjacent stormwater management feature are summarized below.

Location Riparian to Stormwater Facility	Low Floor Elevation of Building (feet)	100-year Event Flood Elevation of Adjacent Stormwater Facility (feet)	Freeboard (feet)
Proposed Building	894.4	890.97 (Underground Infiltration Basin)	3.43

The low floor elevation of the proposed of the proposed building is 3.43 feet higher than the 100-year flood elevation of the adjacent underground basin. The RPBCWD engineer finds that the proposed project is in conformance 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.

J1. Permit applicant must provide 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.

Rule L: Permit Fee:

Fees for the project are:

Rule C & J $1,500

Rule M: Financial Assurance:

Rules C: Silt fence: 672 L.F. x $2.50/L.F. =.....$1,700

Restoration: 0.39 acres x $2,500/acre =.....$975

Rules J: Underground Infiltration: $22,300 x 125% = ...$27,900

Contingency (10%) $3,100

Administration (30%) $10,200

Total Financial Assurance.....$43,900

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

Recommendation:

Approval, contingent upon:

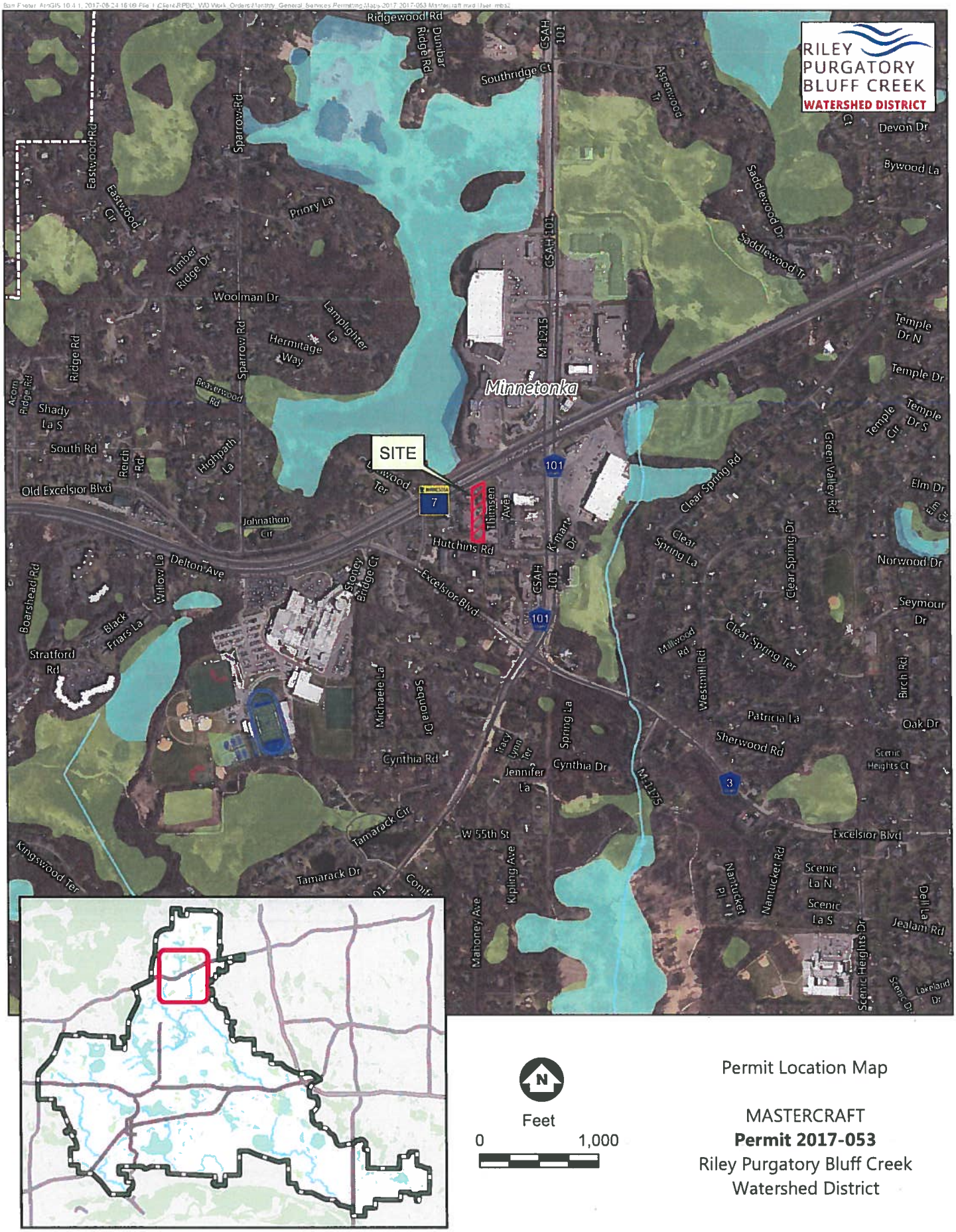
1. Continued compliance with General Requirements.
2. Financial Assurance in the amount of $43,900.
3. Submission of the name and contact information of the individual responsible for erosion and sediment control for the site.
4. Receipt of updated drawings showing the rock construction entrance detail
5. Receipt in recordation a maintenance declaration for the stormwater management facilities. 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.

Board Action

It was moved by Manager _____, seconded by Manager _____ to approve permit application No. 2017-053 with the conditions recommended by staff.

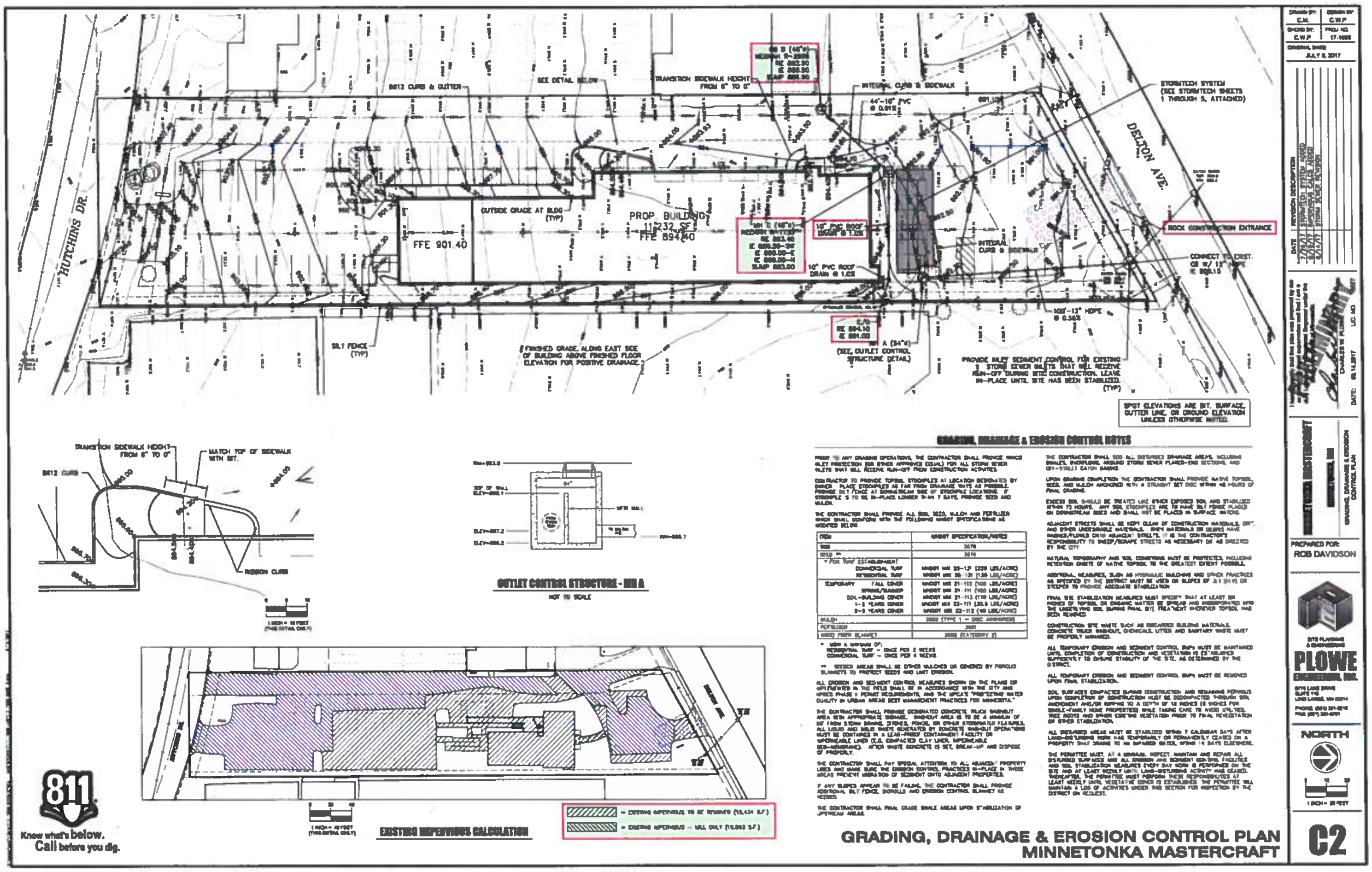


Feet

0 1,000

Permit Location Map

MASTERCRAFT
Permit 2017-053
Riley Purgatory Bluff Creek
Watershed District


HUTCHINS DR.
DELTON AVE.
PROP. BUILDING
11,232 SF
FFE 894.40
FFE 901.40
OUTSIDE GRADE AT BLDG (TYP)
B612 CURB & GUTTER
SEE DETAIL BELOW
TRANSITION SIDEWALK HEIGHT FROM 6" TO 0"
INTEGRAL CURB & SIDEWALK
STORMTECH SYSTEM (SEE STORMTECH SHEETS 1 THROUGH 5, ATTACHED)
ROCK CONSTRUCTION ENTRANCE
10" PVC ROOF DRAIN @ 1.0%
SILT FENCE (TYP)
FINISHED GRADE ALONG EAST SIDE OF BUILDING ABOVE FINISHED FLOOR ELEVATION FOR POSITIVE DRAINAGE
(SEE OUTLET CONTROL STRUCTURE DETAIL)
PROVIDE INLET SEDIMENT CONTROL FOR EXISTING STORM SEWER INLETS THAT WILL RECEIVE RUN-OFF DURING SITE CONSTRUCTION. LEAVE IN-PLACE UNTIL SITE HAS BEEN STABILIZED. (TYP)
SPOT ELEVATIONS ARE BIT. SURFACE, GUTTER LINE, OR GROUND ELEVATION UNLESS OTHERWISE NOTED.
MATCH TOP OF SIDEWALK WITH BIT.
RIBBON CURB
OUTLET CONTROL STRUCTURE - MH A
NOT TO SCALE
EXISTING IMPERVIOUS CALCULATION
GRADING, DRAINAGE & EROSION CONTROL NOTES
Know what's below. Call before you dig.
PREPARED FOR: ROB DAVIDSON
PLOWE ENGINEERING, INC.
NORTH
GRADING, DRAINAGE & EROSION CONTROL PLAN
MINNETONKA MASTERCRAFT
C2

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: 2017-055

Received complete: July 27, 2017

Applicant: Paul Bourgeois, ISD #276

Consultant: Cliff Buhman, Inspec

Project: Scenic Heights Elementary 2018 Building Additions – Minnetonka Schools is proposing to add a new gymnasium 0.18 acre in area and classroom 0.02 acre in area onto Scenic Heights Elementary School. The project will also involve the installation of storm sewer for routing to existing BMP.

Location: 5650 Scenic Heights Drive, Minnetonka 55345

Reviewer: Terry Jeffery, Permit Coordinator

Rules: Applicable rules checked

	Rule B: Floodplain Management		Rule H: Appropriation of Public Waters
X	Rule C: Erosion and Sediment Control		Rule I: Appropriation of Groundwater
	Rule D: Wetland and Creek Buffers	X	Rule J: Stormwater Management
	Rule E: Dredging and Sediment Removal		Rule K: Variances and Exceptions
	Rule F: Shoreline/Streambank Stabilization		Rule L: Permit Fees
	Rule G: Waterbody Crossings		Rule M: Financial Assurances

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.
L	**Permit Fee**		NA	Governmental Agency
M	**Financial Assurance**		NA	Governmental Agency

Project Description

The project proposes the construction of two additions onto Scenic Heights Elementary School totaling 0.2 acre. In conjunction with these additions, storm sewer will be added to capture and convey this runoff to the existing underground detention and infiltration system. Total new and disturbed impervious surface is equal to 0.42 acre. This existing underground detention system with underlying infiltration will provide the required storm water rate, volume and quality control. The project site information is summarized below:

1. Total Site Area: 18.98 acres (826,769 square feet)
2. Existing Site Impervious Area: 5.43 acres (236,531 square feet)
3. New (Increase) in Site Impervious Area: 0.15 acres (6,534 square feet)
4. Disturbed Site Impervious Area: 0.27 acres (11,761 square feet)
5. Total Disturbed Area: 0.45 acres

Exhibits:

1. Permit Application dated July 24, 2017.
2. Design Plan Sheets C1 – C5 dated July 26, 2017
3. Storm Water Management Plan dated July 27, 2017
4. Existing Drainage Plan dated July 26, 2017
5. Proposed Drainage Plan dated July 26, 2017
6. MIDS calculator results dated July 26, 2017
7. Infiltrometer test results dated October 14, 2013

Rule Specific Permit Conditions

Rule C: Erosion and Sediment Control

Because the project will alter 0.45 acres (19,602 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 Inspec, Inc includes installation of silt fence and inlet protection for storm sewer catch basins, the retention of native soils, soil decompaction and placement of six (6) inches of topsoil. To conform to the RPBCWD Rule C requirements the following revisions are needed:

C1. The Applicant must provide the name and contact information of the 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 0.45 acres (19,602 square feet) of surface area, approval under the RPBCWD Stormwater Management Rule is required (Rule J, Subsection 2.1). The criteria listed in Subsection 3.1 will apply to the disturbed areas on the project parcel because the project only increases the impervious by 2.7 percent and only disturbs 4.9 percent of the existing impervious surface on the parcel. (Rule J, Subsection 2.3) Total new and disturbed impervious surface equals 0.42 acres or 7.7 percent of the existing impervious surface on the site. This is under the 50 percent disturbed or expanded impervious area threshold for applicability of stormwater management requirements.

The school is proposing to use an existing underground detention system with underlying infiltration and an existing biofiltration basin to provide the rate control, volume abstraction, and water quality management on the site.

Rate Control

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 from the new and disturbed impervious areas. The Applicant used HydroCAD models to simulate runoff rates for pre- and post-development conditions for the 2-, 10-, and 100-year frequency storm events using a nested rainfall distribution, and a 100-year frequency, 10-day snowmelt event. The existing and proposed 2-, 10-, and 100-year frequency discharges from the site are summarized in the table below. The project modeling confirms the proposed project conforms to 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
21" RCP at north property line	4.56	0.59	8.01	1.53	12.74	3.53	1.13	0.26

Volume Abstraction

Subsection 3.1.b of Rule J requires the abstraction onsite of 1.1 inches of runoff from the new and disturbed impervious surface of the parcel (0.42 acre). An abstraction volume of 0.038 acre-feet (1,655 cubic feet) is required from the 0.42 acre (18,298 square feet) of new or reconstructed impervious area on the project for volume retention. Based on infiltrometer testing performed by Braun Intertec, the infiltration rates were measured at 2.14 inches per hour at a depth of two feet and 7.61 inches per hour at a depth of 7 feet below grade in the location of the underground infiltration feature. These depths are equivalent to the top of the infiltration feature and the bottom of the infiltration feature

respectively. Soil borings performed by Braun Intertec encountered groundwater at 917.6 feet. This is 14.5 feet below the bottom of the underground infiltration system and 11 feet below the bottom of the rain garden. This is compliant with Rule J, Subsection 3.1.b.ii.

The existing system provides abstraction for 1.1" of runoff from 3.32 acres of existing impervious surface, utilizing 0.519 acre-feet (22,607 cubic feet) of available 0.571 acre-feet (24,858 cubic feet) abstraction capacity. The system retains available abstraction capacity of 0.052 acre-feet (2,265 cubic feet) – sufficient to treat the additional 0.038 acre-feet (1,655 cubic feet) of runoff from the proposed building additions required to comply with the RPBCWD abstraction standard. The Applicant proposes to use excess capacity in an existing underground detention system with underlying infiltration to provide the required abstraction.

The new drainage area is exclusively roof drainage. The applicant contends that these areas are not prone to large sediment sources such as winter road treatment or soil erosion and, therefore, pretreatment for these roof areas is an unnecessary additional cost. Staff agrees with this assessment.

The table below summarizes the volume abstraction on the site for the proposed 2018 additions. The proposed project is in conformance with Rule J, Subsection 3.1.b.

Required Abstraction Depth (inches)	Required Abstraction Volume (cubic feet)	Provided Abstraction Volume (cubic feet)[1]	Remaining Abstraction Volume (cubic feet)
1.1	1,655	2,265	610

[1] The volume reduction shown is the amount provided beyond that which is already utilized by runoff from the existing larger, undisturbed impervious area.

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 excess capacity in an existing underground detention system with underlying infiltration to achieve the required TP and TSS removals and submitted MIDS modeling to assess expected TP and TSS removal rates.

The existing underground system, was installed in 2009 to address storm water management for improvements made to Scenic Heights Elementary School at that time. The system was expanded in 2014 for additional improvements and in anticipation of these proposed 2018 additions. These improvements, made in 2009 and 2014, added 1.28 acres of impervious surface. With the proposed addition of the gymnasium and the classroom, total added impervious surface resulting from the 2009, 2014 and proposed 2018 improvements is equal to 1.7 acres. After accommodating prior site improvements, the treatment practice has the available capacity to remove 390.7 pounds of TSS and

2.15 pounds of TP on an annual basis. The regulated load from the proposed new and disturbed impervious surface for the 2018 improvements is 140.7 pounds of TSS and 0.774 pound of TP.

Given the drainage areas on the site, the system provides water quality treatment for runoff from 3.32 acres of the existing impervious surface. This, combined with the proposed site improvements, results in the system reducing the TSS load 781 lbs and the TP load 4.31 lbs. The table below summarizes the water quality treatment provided for the site. Based on information reviewed, the proposed project conforms to Rule J, Subsection 3.1.c.

Pollutant of Interest	Regulated Site Loading (lbs/yr)	Required Load Removal (lbs/yr)[1]	Provided Load Reduction (lbs/yr)
Total Suspended Solids (TSS)	140.7	126.86 (90%)	781 (>100%)[2]
Total Phosphorus (TP)	0.774	0.465 (60%)	4.31 (>100%)[2]

[1]Required load reduction is calculated based on the removal criteria in Rule J, Subsection 3.1c and the new and reconstructed impervious area site load.

[2]The TSS and TP removal is higher than required removal because the system treats a larger, undisturbed area of the existing impervious area.

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 structures and the adjacent stormwater management feature are summarized below. The RPBCWD permit coordinator concurs that the proposed project is in conformance with Rule J, Subsection 3.6.

Structure	Low Floor Elevation (feet)	100-year Event Flood Elevation (feet)	Freeboard (feet)
Elementary School	941.69	935.84	5.85

Maintenance

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

J1. Permit applicant must provide a draft maintenance and inspection plan. Once approved by RPBCWD, the plan must be documented in a written agreement with the RPBCWD.

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. The applicant must provide the name and contact information of general contractor responsible for the site.

Findings

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

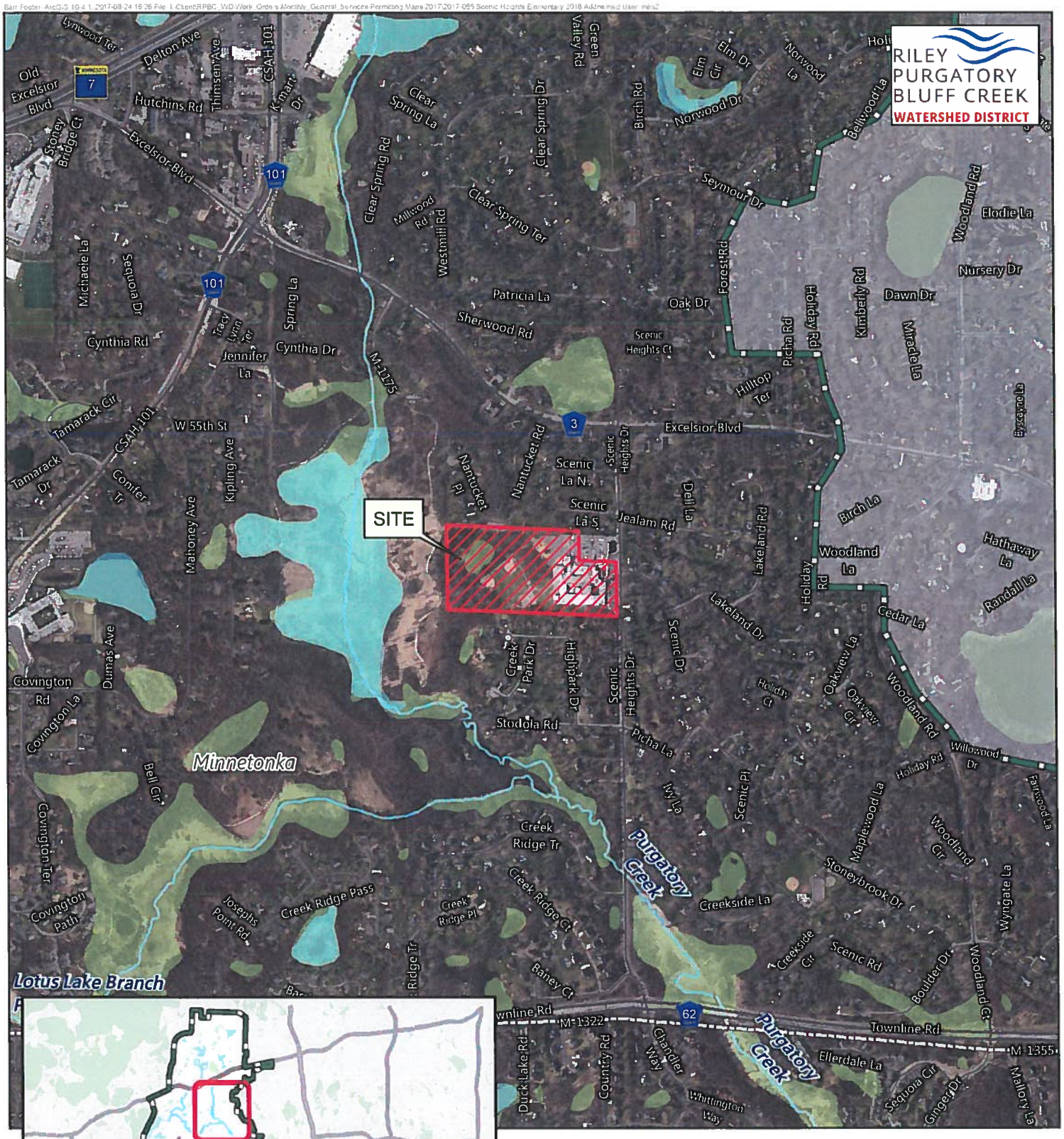
Recommendation:

Approval, contingent upon:

1. Continued compliance with General Requirements.
2. Permit applicant must provide a draft maintenance agreement and inspection plan for the management of stormwater BMPs, including exhibit clearly identifying stormwater BMPs location. Once approved by RPBCWD, the school district must enter an agreement with RPBCWD to maintain the project facilities in accordance with the plan.

Board Action

It was moved by Manager _____, seconded by Manager _____ to approve permit application No. 2017-055 with the conditions recommended by staff.



Permit Location Map

SCENIC HEIGHT ELEMENTARY
2018 BUILDING ADDITIONS
Permit 2017-055
Riley Purgatory Bluff Creek
Watershed District

1
L3.0
SITE LAYOUT PLAN
SCALE: 1" = 20'

ATS&R
Armstrong Torseth Skold & Rydeen, Inc.

ARCHITECTURE | ENGINEERING
PLANNING | TECHNOLOGY
INTERIOR DESIGN | LANDSCAPE ARCHITECTURE

8501 GOLDEN VALLEY ROAD
SUITE 300
MINNEAPOLIS, MN 55427

TEL: 763.545.3731
FAX: 763.525.3289
WEB: www.atsr.com

CONSULTANTS

Renovations and Additions to:
Scenic Heights Elementary School

Minnetonka Public Schools District 276
5650 Scenic Heights Drive
Minnetonka, Minnesota 55345

KEYPLAN

DRAWN BY
RJS

CHECKED BY
DMM

ISSUED FOR
PRELIMINARY - NOT FOR CONSTRUCTION

ISSUE DATE

SHEET NAME
SITE LAYOUT PLAN AND SITE DETAILS

ATS&R PROJECT NO.
18028

SHEET NUMBER
L3.0

File - \\land\2016\18028 Scenic Hts ES Gym Addition\dwg\18028-Site_Scenic Hts.dwg Date - Jun 29, 2017 Time - 12:30pm

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: 2017-056

Received complete: July 26, 2017

Applicant: City of Minnetonka, ATTN: Tom Deitrich

Consultant: NA

Project: Covington Road Storm Sewer Replacement– This project involves the replacement of an existing, degraded 36-inch corrugated metal pipe (CMP) culvert which conveys the Silver Creek branch of Purgatory Creek under Covington Road. The replacement pipe will be a 36-inch reinforced concrete pipe (RCP).

Location: Covington Road approximately 975 feet east of Vine Hill Road in Minnetonka

Reviewer: Terry Jeffery, Permit Coordinator

Rules: Applicable rules checked

X	Rule B: Floodplain Management		Rule H: Appropriation of Public Waters
X	Rule C: Erosion and Sediment Control		Rule I: Appropriation of Groundwater
X	Rule D: Wetland and Creek Buffers		Rule J: Stormwater Management
	Rule E: Dredging and Sediment Removal		Rule K: Variances and Exceptions
	Rule F: Shoreline/Streambank Stabilization		Rule L: Permit Fees
X	Rule G: Waterbody Crossings		Rule M: Financial Assurances

Rule Conformance Summary

Rule	Issue	Conforms to RPBCWD Rules?	Comments
B	**Floodplain Management and Drainage Alterations**	Yes	
C	**Erosion Control Plan**	See Comment	See Rule Specific Permit Condition C1
D	**Wetland and Creek Buffers**	See Comment	See Rule Specific Permit Condition D1
G	**Waterbody Crossings**	See Comment	See Rule Specific Permit Condition G1
L	**Permit Fees**	Not Applicable	Governmental Entity
M	**Financial Assurances**	Not Applicable	Governmental Entity

Project Description

The linear project proposes to replace an existing corrugated metal pipe (CMP) culvert underneath Covington Road in Minnetonka. The culvert is severely degraded and the side slope for Covington Road adjacent to the culvert is being eroded, compromising the integrity of the slopes and threatening the road above. This degradation and erosion is also resulting in sediment deposition into Purgatory Creek, adversely impacting water quality.

The project will be an open cut trench and will realign the culvert approximately 15 feet east of the current location on the downstream end to improve flow characteristics as it will align more closely with the natural channel. A temporary culvert will be placed during construction to maintain flows within the Silver Lake Branch of Purgatory Creek.

The project occurs within the right-of-way for Covington Road so the site information is limited to the project limits and is summarized below:

1. Total Site Area: 3,000 square feet
2. Existing Site Impervious Area: 1,440 square feet[1]
3. Existing Impervious Area Disturbed: 1,440 square feet
4. New (Increase) in Site Impervious Area: 0.0 acres (0 square feet) (0% increase in site impervious area)
5. Total Disturbed Area: 3,000 square feet

Exhibits:

1. Permit Application dated July 25, 2017
2. Project narrative letter dated July 25, 2017 (revised August 18, 2017)
3. Stream Buffer Figure (revision received August 2, 2017)
4. Design Plans Sheets dated July 25, 201y (revision received August 15, 2017)
5. Wetland Conservation Act (WCA) Notice of Decision (NOD) wetland type and boundary determination dated November 16, 2016
6. WCA NOD Utility Exemption dated June 30, 2017
7. Cut/Fill analysis dated July 25, 2017
8. Hydraulic Flood analysis dated August 18, 2017.
9. Response to comments revision received August 2, 2017.

[1] Covington Road, from Vine Hill Road to County Road 101, has approximately 63,720 square feet of impervious surface.

Rule Specific Permit Conditions

Rule B: Floodplain Management and Drainage Alterations

Because the proposed culvert replacement involves the placement of 164 cubic yards of fill below the 100-year flood elevation of Purgatory Creek (Elevation 897.79), the project activities must conform to the RPBCWD's Floodplain Management and Drainage Alterations rule (Rule B). This material is a result of the translocation from one flood plain area to another to accommodate the realignment of the culvert to match the alignment of the channel more closely. It does not involve the import and placement of new material below the flood elevation.

Placement of fill below the 100-year flood elevation is prohibited unless fully compensatory storage at the same elevation (+/- 1 foot) and within the floodplain of the same waterbody is provided (Rule B, Subsection 3.2). The supporting materials demonstrate, and staff concurs, that 164 cubic yards of fill will be placed and 164 cubic yards of compensatory storage will be created below the 100-year floodplain, thus providing no net decrease in the floodplain storage. The compensatory storage is provided at the same elevation (+/- 1 foot) below the 100-year floodplain, thus the project conforms to Rule B, Subsection 3.2. The project will not alter surface flows (Rule B, Subsection 3.3). Given the nat]ure of the reconstructed structures – bridge and culvert – the culvert and road tarmac is exempt under Rule B, Subsection 3.4.a. A note is shown on the plans requiring that activities must be conducted to minimize the potential transfer of aquatic invasive species conforming to Rule B, Subsection 3.5.

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

Rule C: Erosion and Sediment Control

Because the project will involve the removal and placement of 328 cubic yards of material 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 the City of Minnetonka includes the installation of floating silt curtain, the installation of silt fence, the installation of erosion control blanket, decompaction of pervious areas compacted during construction, retention of native topsoil onsite, and turf establishment. To conform to the RPBCWD Rule C requirements the following revisions are needed:

C1. The Applicant must provide the name and contact information of the individual responsible for erosion and sediment control at the site. Rule D: Wetland and Creek Buffers

Because the proposed work triggers a permit under RPBCWD Rules B and G and Purgatory Creek is disturbed by the proposed construction activities, Rule D, Subsections 2.1a and 3.1 require buffer on the entire creek on the subject property.

Purgatory Creek flows through the project site and requires an average buffer width of 50 feet from the creek centerline, minimum 30 feet in accordance with Rule D, Subsection 3.1.a.v for a public waters watercourse. The applicant provided a buffer zone and marker location map showing that the proposed buffer area extends the required widths and to the property limits.

A note on the erosion control plan indicates the Applicant is proposing revegetating disturbed areas within the proposed buffer with MN State Seed Mix 34-262 - Wet Prairie a native mix in conformance with Rule D, Subsection 3.2. A note is included on the plan sheet indicating the project will be constructed 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.

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

D1. Buffer areas and maintenance requirements must be documented in an agreement approved by RPBCWD. As a public entity, Minnetonka may comply with this requirement by entering into a maintenance agreement with the RPBCWD.

Rule G: Waterbody Crossings and Structures

The project proposes replacement of a 30-inch corrugated metal pipe (CMP) culvert crossing of Purgatory Creek, a public water, for Covington Road, with a 30-inch reinforced concrete pipe (RCP) culvert that will expand to 36 inches on the downstream end. This activity requires conformance with RPBCWD's Waterbody Crossings Rule (Rule G). The criteria in subsections 3.1, 3.2, 3.5, 3.6, and 3.7 apply to the project. As there is no new outfall proposed and there is no proposed directional horizontal drilling, as such, criteria 3.3 and 3.4 do not apply.

This work represents a public benefit by replacing a deteriorating CMP culvert, maintaining transportation connectivity (Rule G, Subsection 3.1a) and correcting significant erosion on the side slopes at the downstream end of the culvert. The proposed crossing was modeled, using the existing District model, by the applicant. The analysis shows that the proposed 100-year frequency flood elevation upstream of the crossing (897.7) will be 0.1 foot below the existing elevation 906.7 M.S.L. and the downstream flood elevation will match the existing flood elevation of 888.2 M.S.L., thus confirming the project will not increase the flood stage of the existing water body conforming to Rule G, Subsection 3.2a.

This portion of Purgatory Creek is not used for navigation, thus the requirement of Rule G, Subsection 3.2b does not apply to this project. The project will not adversely affect water quality or cause increased scour, erosion or sedimentation because the stabilization materials are sized and designed appropriately to withstand the erosion potential along an existing eroded section of Purgatory Creek and provide a stable creek system consistent with the criteria in Rule G, Subsection 3.2c. Because this is an in-kind replacement wildlife will continue to be able to use Purgatory Creek as it is used under existing

conditions, thus preserving wildlife passage. The potential for fish passage will be maintained through the proposed culvert crossing, thus consistent with Rule G, Subsection 3.2d.

A no-build option would result in flows through the existing deteriorating cmp culvert continuing to cause downstream erosion. A bridge spanning the creek was determined to not be feasible because of existing private and public utilities present between the culvert and road surface. The applicant modeled several scenarios and staff concurs that that modeling shows that the proposed solution provides the most minimal impact solution relative to the area and the creek system which is consistent with Rule G, Subsection 3.2e.

The applicant considered a number of different alternatives to the proposed solution. Cured in-place lining, utilizing different material, and leaving as-is were all considered. Staff concurs with the applicant's assessment that the proposed alignment and material represents the minimal impact solution and is, therefore, compliant with Rule G, Subsections 3.5a and 3.5b.

The applicant analyzed numerous pipe sizes, materials, and pipe grade scenarios. The selected iteration involves maintaining a 30" inlet on the upstream side and increasing the pipe diameter to 36" on the downstream end. The grade will be flattened to one-half of one percent. This results in no increase in flood stage from existing conditions. Staff concurs that the proposal is compliant with Rule G, Subsection 3.5c and 3.5d.

The proposed culvert replacement will align the culvert more closely to the natural channel alignment. That area where the culvert is to be removed will be restore to the original condition. Staff determines that the plan is compliant with Rule G, Subsection 3.6.

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

Rule G, Subsection 3.7d requires compliance with the applicable criteria in subsections 3.2 to 3.4 of Rule F. The streambank stabilization work is to prevent erosion and not for cosmetic purposes (Rule F, Subsection 3.3j). Regarding the section 3.2 sequencing analysis, which requires an applicant to show that proposed stabilization practices are consistent with sheer stresses at the location of the proposed stabilization: modeling indicates the flow velocities during the 100-year event in this portion of the Silver Lake Branch of Purgatory Creek are 13.7 feet per second (fps). This stream velocity significantly exceeds the velocities that can be sustained by the native soils in the area (1.75-3.75 fps). This velocity also exceeds the velocities that vegetation or soils bioengineering practices can withstand (3-6 fps and 3-10

fps respectively). These data show that neither bioengineering nor a combination of bioengineering and riprap will achieve streambank stabilization at the Covington Road crossing, and use of riprap is necessary.

The project is proposing to install MnDOT Class V Riprap. The project proposes the use of stone rip-rap having an average size of 15 inches, with a geotextile (MNDOT 3733) and transition layer of 6 inches of granular bedding consistent with Rule F, Subsections 3.3b and 3.3d. Notes on the plan sheet prohibit the use of limestone or dolomite consistent with Rule F, Subsections 3.3b. The proposed riprap can withstand flow velocities up to 16 ft/sec, which is consistent with the flow velocities in Purgatory Creek at this location (Rule F, Subsection 3.2 and Subsection 3.3b).

Plans submitted confirm the proposed streambank stabilization follows the natural alignment of the creek and will not cover emergent vegetation (Rule F, Subsection 3.3c and 3.3e). The project, as shown on the plans, will not reduce the cross-sectional area of the creek or increase the upstream stage, consistent with Rule F, Subsection 3.3h.

As noted under rules B and D, plans for the project include provisions for the minimization of transfer of AIS in compliance with 3.7e.

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

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

Rule J: Stormwater Management

Conformance with the RPBCWD Stormwater Management rule (Rule J) is not required for this project because it is a linear project constructed in right-of-way and stormsewer easements that result in no net increase in impervious area. A patch – (60 feet by 24 feet or 1,440 square feet) - of existing bituminous pavement will be removed and replaced for the project. Since less than 5,000 square feet of impervious surface will be reconstructed, so compliance with the RPBCWD stormwater-management rules is not required (Rule J, subsection 2.4).

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. The applicant must provide the name and contact information of general contractor responsible for the site.

Findings

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

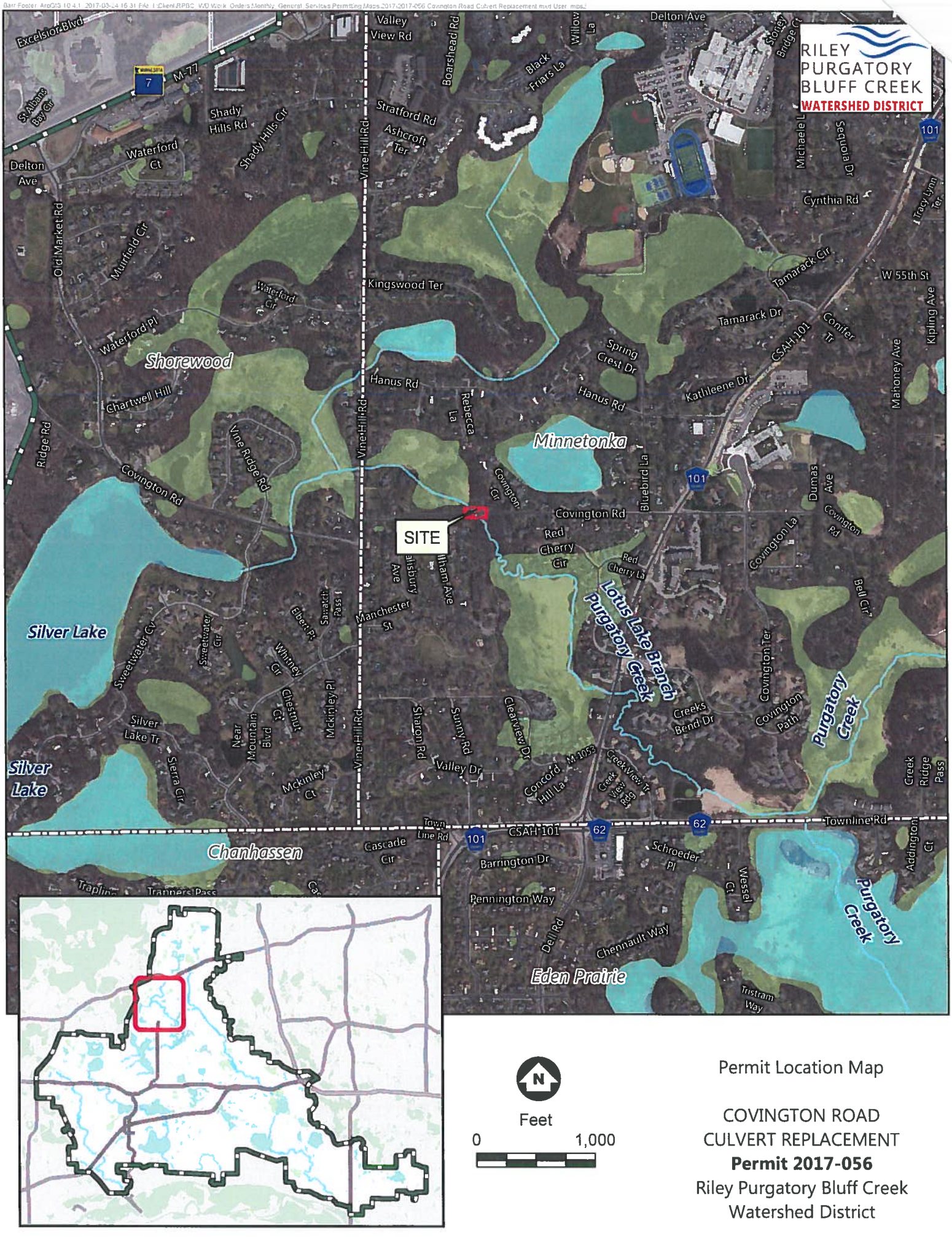
Recommendation:

Approval, contingent upon:

1. Continued compliance with General Requirements.
2. Permit applicant must provide a draft maintenance agreement and inspection plan for the waterbody crossing and buffer areas, including exhibit clearly identifying buffer area, buffer monument locations. Once approved by RPBCWD, the City must enter an agreement with RPBCWD to maintain the project facilities in accordance with the plan.

Board Action

It was moved by Manager _____, seconded by Manager _____ to approve permit application No. 2017-056 with the conditions recommended by staff.



Feet

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Permit Location Map

COVINGTON ROAD
CULVERT REPLACEMENT
Permit 2017-056
Riley Purgatory Bluff Creek
Watershed District

City of minnetonka
Where quality is our nature

14600 Minnetonka Blvd. • Minnetonka, MN 55345
(952) 939-8200 • Fax (952) 939-8244
eminnetonka.com

August 18, 2017

Riley Purgatory Bluff Creek Watershed District
Attn: Terry Jeffery
18681 Lake Drive East
Chanhassen, MN 55317

RE: Covington Road – Pipe Replacement

Dear Mr. Jeffery,

This letter accompanies a formal application for a pipe replacement project located west of the intersection of Covington Road and Covington Circle in the city of Minnetonka. To facilitate the permitting process, I've summarized the key elements of the project below.

Background: The Silver Lake branch of Purgatory Creek currently passes underneath Covington Road in a 36-inch corrugated metal pipe (CMP), which has deteriorated significantly in the past few years. Previous coordination with watershed district staff revealed that this particular area of Purgatory Creek is a high priority for stabilization in an effort to reduce downstream sediment loading. After review and coordination with district staff, the City of Minnetonka has determined that open-cut replacement and realignment of the pipe with the channel of Purgatory Creek will better support stabilization initiatives in this portion of the creek corridor. In pursuit of this goal, the Riley Purgatory Bluff Creek watershed district awarded Maintenance Funds to the city in the amount of $25,000 to complete the project.

To provide additional high-level overview, the current 36-inch CMP will be replaced with a 30-inch reinforced concrete pipe (RCP) that expands to a 36-inch RCP and two flared end sections (FES) on the upstream and downstream ends. The 30-inch section at the upstream end of the pipe will control flow rates, while the larger 36-inch section toward the downstream end of the pipe will prevent significant increases in velocity. The pipe outlet will be relocated approximately 15 feet eastward to better align with the natural shape of Purgatory Creek and to reduce streambank erosion. The upstream invert that exists under current conditions will be kept consistent to maintain the hydraulic characteristics of the system. As part of this project, the side-slopes bordering Covington Road will be stabilized to the extent practical in conformance with the district's floodplain and streambank requirements. Additionally, disturbance will be minimized wherever possible when working in close proximity to the fringe wetland bordering Purgatory Creek.

Summary of Rule Conformance

Floodplain Management and Drainage Alterations:
As part of this project, no additional fill will be brought into the floodplain. The existing side slopes immediately south of Covington Road will be stabilized to the maximum extent practicable using the material displaced with the pipe removal and replacement. Additional notes and detail can be found on the grading plan accompanying this application. Erosion control features have been included as part of the grading plan, along with the 100-year flood elevation, and a materials balance table.

Wetland and Creek Buffers:
As shown on the attached plans, buffers are shown 50 ft from the centerline of the creek, and to the maximum extent practical (right-of-way area was limiting in several locations). Additionally, sign locations have been included to demarcate where the creek buffer is located. Buffer areas will utilize MnDOT seed mix 34-261.

Shoreline and Streambank Stabilization:
Per the District's rules and per Section 6.2.2. of the Minnesota Department of Transportation (MnDOT) Drainage Manual, Outlet velocities between approximately 10 ft/s and 12 ft/s should utilize 24" Class IV riprap with 12" granular or geotextile filters. The placement of the riprap will be limited to minimize impacts to the greatest extent practical.

Streambank side slopes will be stabilized with vegetation wherever possible.

Waterbody Crossings & Structures:
Per the District's rules, pipe replacement projects in contact with the bed or bank of a waterbody are obligated to meet the criteria of the waterbody crossings and structures rule. The following outline demonstrates how the city will satisfy the requirements of the rule:

3.1) This project provides a demonstrated public benefit by replacing a deteriorating culvert, maintaining transportation connectivity (Rule G, Subsection 3.1a), and ensuring the structural integrity of Covington Road, as the current pipe has corroded significantly and is near failure. Further, the realignment of the pipe with the natural channel shape of Purgatory Creek will reduce streambank erosion and sediment loading downstream.

3.2) The project will:

a) Retain adequate hydraulic capacity and assure no net increase in the flood stage of Purgatory Creek. The proposed crossing was modeled in PC-SWMM by the applicant. The analysis shows that the proposed 100-year frequency flood elevation upstream of the crossing (897.7) does not exceed the existing flood elevation of 897.8. The downstream flood elevation matches the existing flood elevation of 888.2 M.S.L., confirming the project will not increase the flood stage of the existing water body, conforming to Rule G, Subsection 3.2a.

b) Not change the navigational capacity of Purgatory Creek, as none currently exists.

c) Will not adversely affect water quality or cause increased scour, erosion or sedimentation because the stabilization materials are sized and designed appropriately to withstand the erosion potential along an existing eroded section of Riley Creek and provide a stable creek system consistent with the criteria in Rule G, Subsection 3.2c. The project will realign the pipe with the natural shape of Purgatory Creek, maintain the existing upstream invert, and reduce streambank erosion by adjusting the location of the outlet.

d) Wildlife passage will be maintained to the extent that it exists under the current condition.

e) This project represents the minimal impact solution. The alternatives to this methodology include taking no action and utilizing a cured in place liner to structurally reinforce the existing pipe.

Taking no action could cause risk to public safety as the roadway will have increased risk to side slope or subgrade failure with a failing pipe. Additionally, sediment loading would continue to occur with the existing position of the outlet. For these reasons, this alternative was not pursued.

The 'cured in place lining' alternative was also considered. This alternative involves utilizing a cured in place resin that would coat the interior of the existing pipe to structurally reinforce it and increase its lifespan. However, this alternative would result in direct machinery impacts to the creek, a reduction in the cross-sectional area of the existing pipe, and would present no solution to the long-term streambank erosion issue due to pipe alignment. For these reasons, this alternative was not pursued.

A bridge spanning the creek was considered, but determined to not be feasible because existing private and public utilities are present above and below the proposed culvert. In addition, a 30-inch sanitary sewer is located just east of the creek crossing. A bridge would result in more site disturbance, thus exposing more soil to potential temporary erosion.

Use of a 36-inch RCP pipe was considered. However, due to the higher efficiency of this pipe material, in comparison to the existing CMP, this alternative resulted in minor increases in flood elevations downstream of the Covington Road crossing. For this reason, this alternative was not pursued.

Use of a 30-inch RCP pipe or a 33-inch RCP was considered. However, the reduced cross sectional area of the pipe, as compared to the existing 36-inch CMP, resulted in increased velocities. For this reason, this alternative was not pursued.

Use of a larger arch pipe with the bottom filled with sediment was also considered to provide the desired hydraulic capacity but reduce velocities. However, due to concerns regarding constructability and concerns that the bottom sediment may scour, thus changing the hydraulic function, this option was not pursued.

3.3) Construction/improvement of the outfall structure will:

a) Incorporate riprap as energy dissipation to further reduce the erosive potential of the creek flow. As shown in the shoreline and streambank section, the MnDOT Drainage Manual recommends utilizing 24" Class IV riprap with 12" granular filter. The placement of the riprap will be limited to the extent practical to prevent any impact to the creek.

3.4) This project does not involve horizontal drilling.

3.5) This project:

a) Represents the minimal impact solution. See response 3.2(e).

b) Represents the minimum encroachment to accomplish the intended purpose. Per the response to 3.2(e), the pipe alignment will be shifted from the current location, 15 eastward to realign the crossing with the natural shape of Purgatory Creek to reduce streambank erosion.

c) As noted previously, the project will meet the District's floodplain standards.

d) Will not cause adverse effects to water quality and the physical or biological character of the waterbody.

3.6) This project will not remove any structures or waterway obstructions.

3.7) This project will:

a) Not involve any disturbance between March 15 – June 15.

b) Stabilize banks immediately after completing the work, and will revegetate as soon as growing conditions allow.

c) Take all applicable precautions against aquatic invasive species.

d) Comply with the relevant sections of the Shoreline and Streambank Stabilization Rule. Modeling indicates the flow velocity during the 100-year event in this portion of Purgatory Creek is 13.7 feet per second (fps), which exceeds the permissible velocities for streambank bioengineering practices (Technical Supplement 14I, Part 654 National Engineering Handbook. USDA). Therefore, neither bioengineering nor a combination of bioengineering and riprap will achieve streambank stabilization at the Covington Road crossing, and use of riprap is necessary. The project is proposing to install MnDOT Class IV Riprap, which has an average size of 12 inches.

Sincerely,

Tom Dietrich
Water Resources Engineering Coordinator

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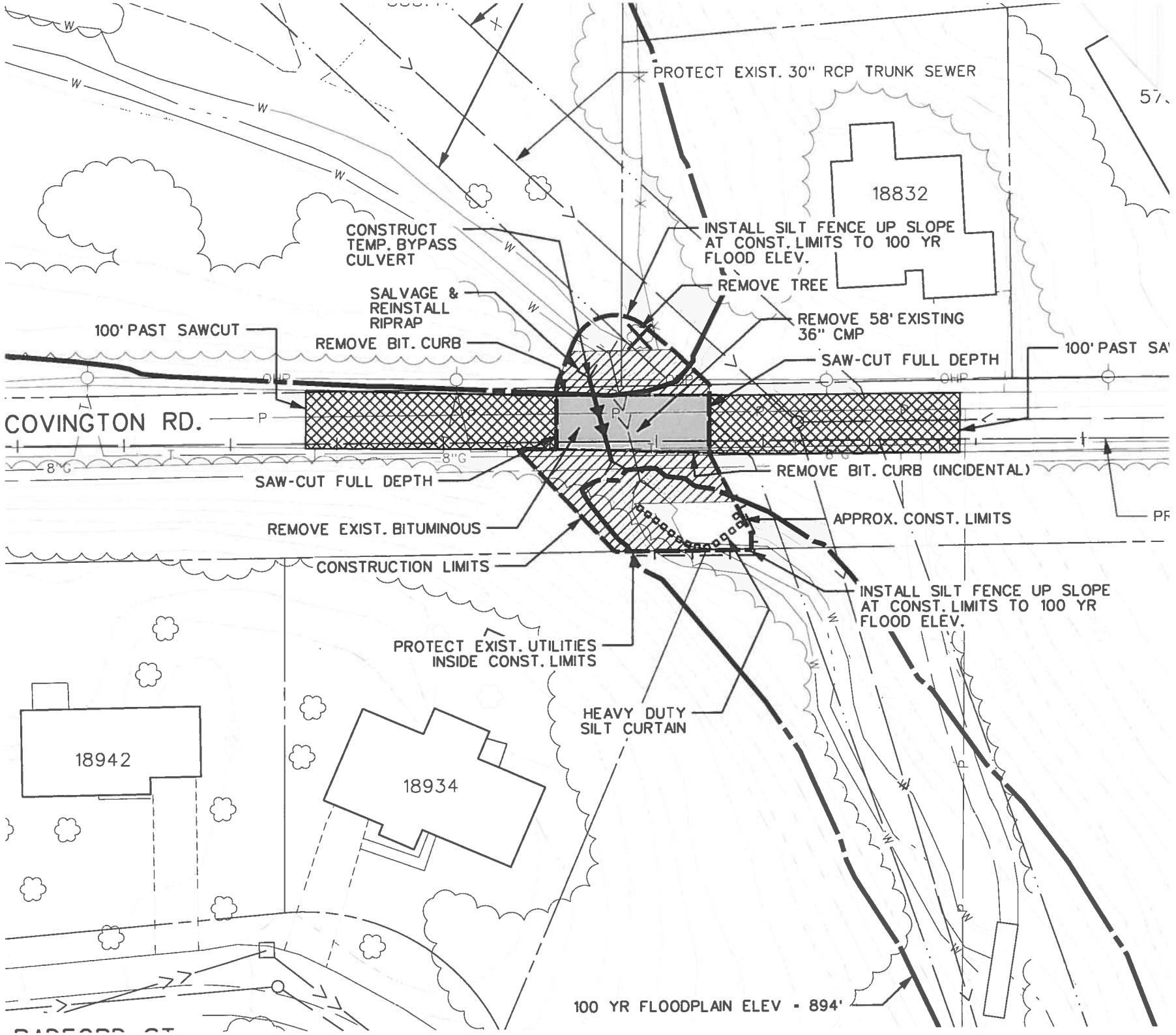

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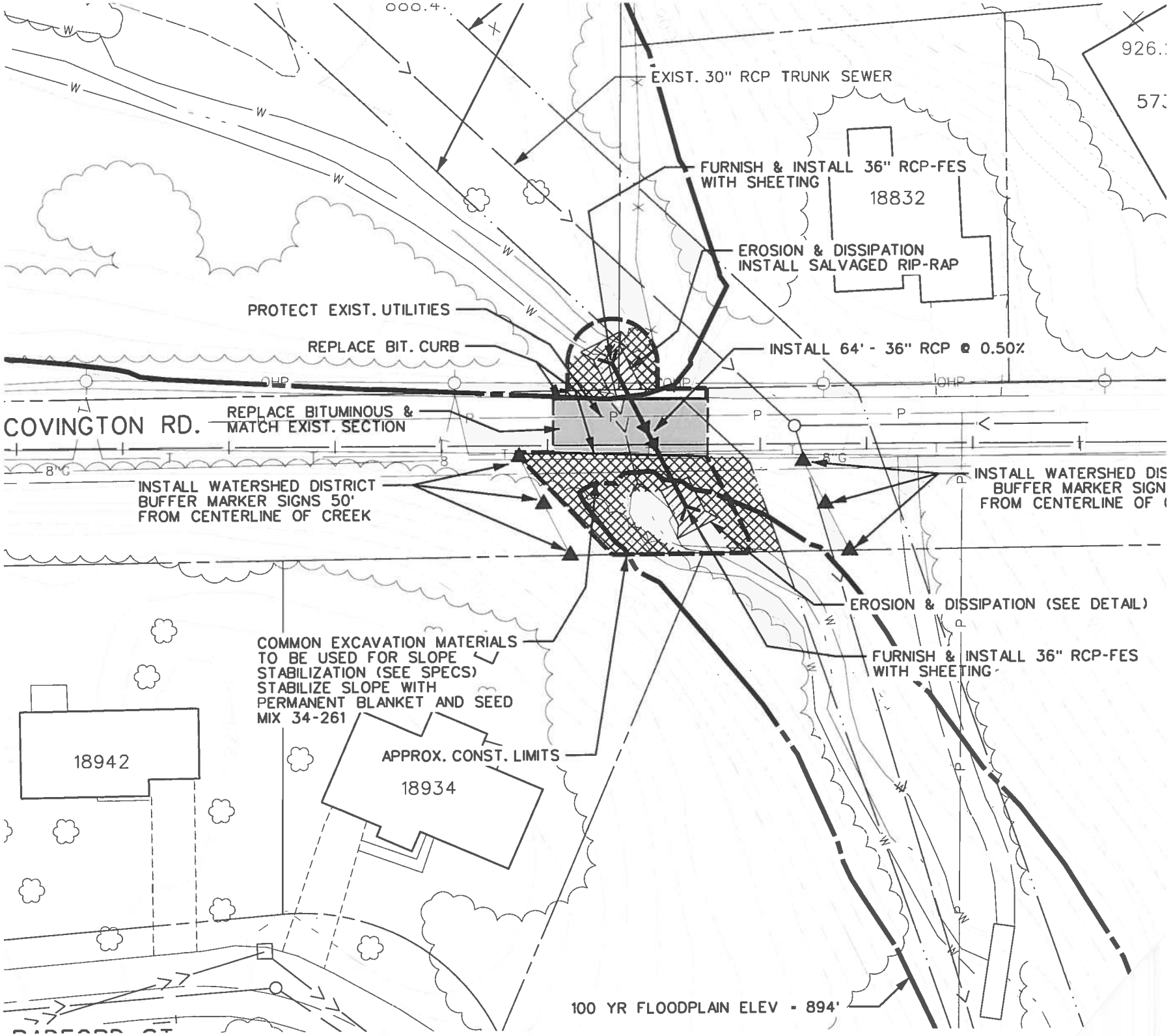

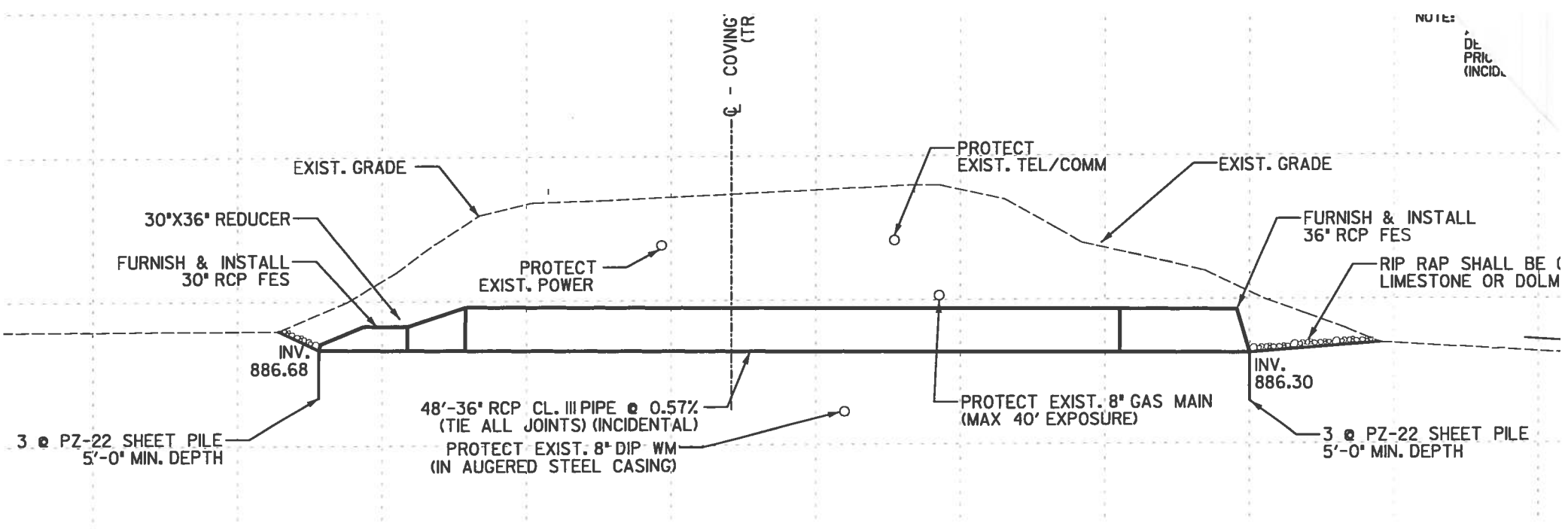

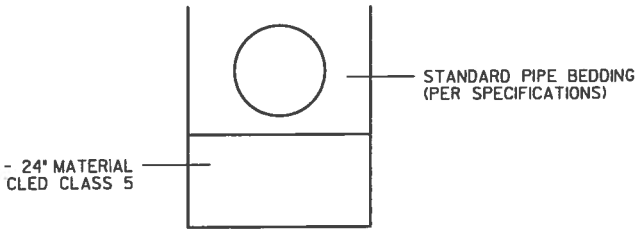

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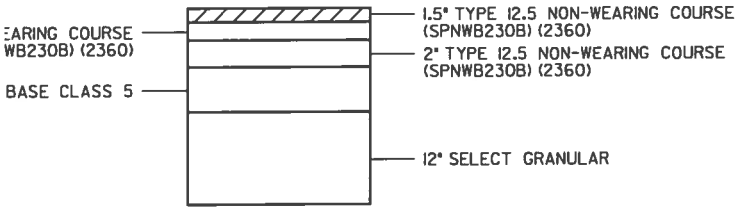
(NOT TO SCALE)

TOR SHALL BE PREPARED FOR ADDITIVE WORK DEPENDING ON IN SITU SOILS



MINIMUM PAVEMENT SECTION

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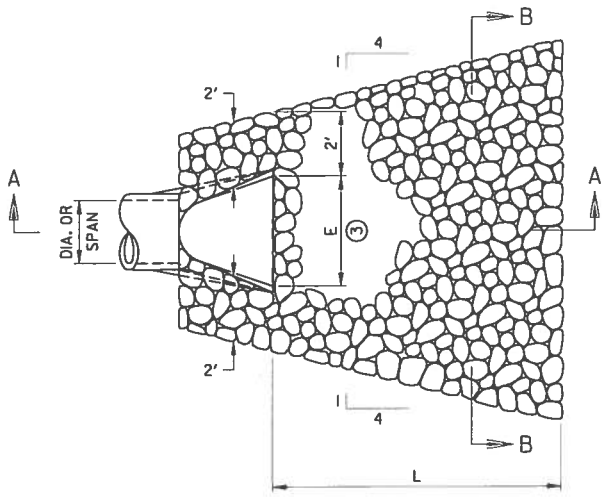

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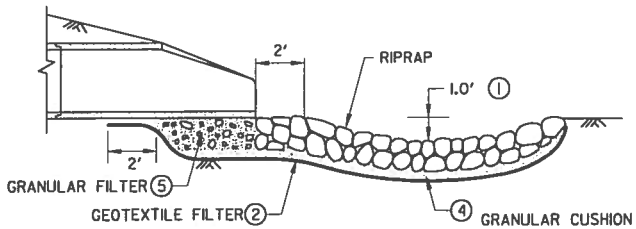
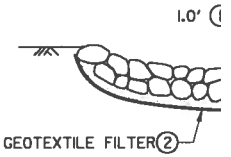


SECTION A-A



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NOTES:

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RIPRAP DETAIL

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: 2017-057

Original Application Received complete: July 25, 2017

Applicant: Target, Zachary J. Kartak

Consultant: Adam Basse, LHB, Inc

Project: Eden Prairie Center Retaining Wall Rehabilitation–Removal and replacement of the existing retaining wall, concrete sidewalk, and associated grading and drainage for the new retaining wall along the southwest side of the Target store at Eden Prairie Center. The applicant proposes 563 feet of filtration trench with elevated draintile to promote infiltration to provide storm water quantity, volume and quality control.

Location: 8251 Flying Cloud Drive, Eden Prairie, MN

Reviewer: Scott Sobiech, Barr Engineering

Rules: Applicable rules checked

	Rule B: Floodplain Management		Rule H: Appropriation of Public Waters
X	Rule C: Erosion and Sediment Control		Rule I: Appropriation of Groundwater
	Rule D: Wetland and Creek Buffers	X	Rule J: Stormwater Management
	Rule E: Dredging and Sediment Removal		Rule K: Variances and Exceptions
	Rule F: Shoreline/Streambank Stabilization	X	Rule L: Permit Fees
	Rule G: Waterbody Crossings	X	Rule M: Financial Assurances

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.
L	**Permit Fee**		**Yes**	**$1,500 was received on August 1, 2017.**
M	**Financial Assurance**		See Comment	The financial assurance has been calculated at $6,930.

Project Description

The Eden Prairie Center Retaining Wall Rehabilitation project involves the removal and replacement of the existing retaining wall that is deteriorating, concrete sidewalk, and associated grading and drainage for 398 feet of new retaining wall along the southwest side of the Target store at Eden Prairie Center. The applicant proposes 563 feet of filtration trench with elevated draintile to promote infiltration to provide storm water quantity, volume and quality control.

The project site information is summarized below:

1. Total Site Area: 10.6 acres
2. Existing Site Impervious Area: 9.49 acres (413,253 square feet)
3. Post Construction Site Impervious: 9.48 acres (412,949 square feet)
4. New (Increase) in Site Impervious Area: -0.01 acres (-436 square feet) (0.1% decrease in site impervious area)
5. Disturbed impervious surface: 0.03 acres (1,306 square feet) (0.3% of existing site impervious area)
6. Total Disturbed Area: 0.27 acres

Exhibits:

1. Permit Application dated July 25, 2017.
2. Project Plan Sheets (28 sheets) dated July 21, 2017 (revised August 21, 2017, sheets C5.01 and C6.01 revised August 24, 2017).
3. Stormwater Management Report dated July 21, 2017 (revised August 21, 2017)
4. Geotechnical Exploration Report dated June 14, 2017.
5. Revised HydroCAD Model received August 22, 2017)
6. Revised MIDS Model received August 22, 2017
7. Letter from Target authorizing LHB to apply for permit dated August 22, 2017.

Rule Specific Permit Conditions

Rule C: Erosion and Sediment Control

Because the project will alter 0.27 acres 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 LHB, Inc. includes 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, and retention of native topsoil onsite. To conform to the RPBCWD Rule C requirements the following revisions are needed:

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

Rule J: Stormwater Management

Because the project will alter 0.27 acres of land-surface area the project must meet the criteria of RPBCWD's Stormwater Management rule (Rule J, Subsection 2.1). Under paragraph 2.5 of Rule J, Common scheme of development, activities subject to Rule J on a parcel or adjacent parcels under common or related ownership will be considered in the aggregate, and the requirements applicable to the activity under this rule will be determined with respect to all development that has occurred on the site or on adjacent sites under common or related ownership since the date this rule took effect (January 1, 2015). Because a project was permitted (RPBCWD Permit 2015-041) and completed during the 2016 construction season the current activities proposed must be considered in aggregate with the activities conducted under Permit 2015-041. The work conducted under Permit 2015-041 did not create any new impervious surfaces or disturb existing impervious surfaces resulting in no impervious surface to treat to the stormwater management criteria, thus the project conformed to Rule J.

The present project does not add new impervious surface and only disturbs a combined 0.3 percent of the existing impervious surface on the parcel. The criteria listed in Subsection 3.1 will apply to runoff from the disturbed and reconstructed impervious areas on the project parcel because the aggregate impervious disturbance (0.3 percent) and imperviousness increase (0.0 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 2015-041 application (Rule J, Subsection 2.3).

The project includes 563 feet of filtration trench with elevated draintile to promote infiltration to provide storm water quantity, volume and water quality management for the site. Pretreatment of runoff will be provided with vegetated filter strip.

Rate Control

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

Modeled Discharge Location	2-Year Discharge (cfs)		10-Year Discharge (cfs)		100-Year Discharge (cfs)		10-Day Snowmelt (cfs)	
	Ex	Prop	Ex	Prop	Ex	Prop	Ex	Prop
SW Corner	0.5	0.5	1.1	1.0	2.1	1.6	0.05	0.04

The proposed project is in conformance with RPBCWD Rule J, Subsection 3.1.a.

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 120 cubic feet is required from the 1,306 square feet of disturbed impervious area on the project for volume retention. The applicant proposes 563 feet of infiltration trench to abstract runoff from the site.

Soil borings performed by Braun Intertec show that soils in the project area are primarily clays; the MN Stormwater Manual indicates an infiltration rate of 0.06 inches per hour for such soils. The soil borings show no groundwater to a boring depth of 19 feet. This indicates that groundwater is at least 3 feet below bottom of the proposed filtration trench with elevated draintile to promote infiltration (Rule J, Subsection 3.1.b.ii). The Engineer concurs with the Applicant provided volume control calculations supporting that volume abstraction is provided through the filtration trench with elevated draintile to promote infiltration to infiltrate 1.1 inches of runoff from the disturbed impervious areas on the site. Pretreatment of runoff will be provided with vegetated filter strip (3.1.b.i). The proposed project conforms to RPBCWD Rule J, Subsection 3.1.b.

Required Abstraction Depth (inches)	Required Abstraction Volume (cubic feet)	Provided Abstraction Volume (cubic feet)
1.1	120	157

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 an infiltration basin and stormwater pond with filtration bench to achieve the required TP and TSS removals and submitted a P8 model to estimate the TP and TSS removals.

Pollutant of Interest	Regulated Site Loading (lbs/yr)	Required Load Removal (lbs/yr)[1]	Provided Load Reduction (lbs/yr)
Total Suspended Solids (TSS)	9.6	8.64(90%)	8.7 (91%)
Total Phosphorus (TP)	0.05	0.03 (60%)	0.036 (67%)

[1]Required load reduction is calculated based on the removal criteria in Rule J, Subsection 3.1c and the load generated from the disturbed impervious area on the site.

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 according to Rule J, Subsection 3.6. The low floor elevation of the Target building and the adjacent stormwater management feature is summarized below. The information demonstrates the project meets the requirements of Rule J, Subsection 3.6.

Location Riparian to Stormwater Facility	Low Floor Elevation of Building (feet)	100-year Event Flood Elevation of Adjacent Stormwater Facility (feet)	Freeboard (feet)
Target Building	901.98	893.24	8.74

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

Rule L: Permit Fee:

Fees for the project are:

Rule C & J $1,500

Rule M: Financial Assurance:

Rules C: Silt fence: 50 L.F. x $2.50/L.F. = ... $200

Restoration: 0.27 acres x $2,500/acre = ... $680

Rules J: Infiltration: 657 sq. ft. x $6/sq. ft. = ... $3,950

Contingency (10%) $500

Administration (30%) $1,600

Total Financial Assurance $6,930

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

Recommendation:

Approval of the permit contingent upon:

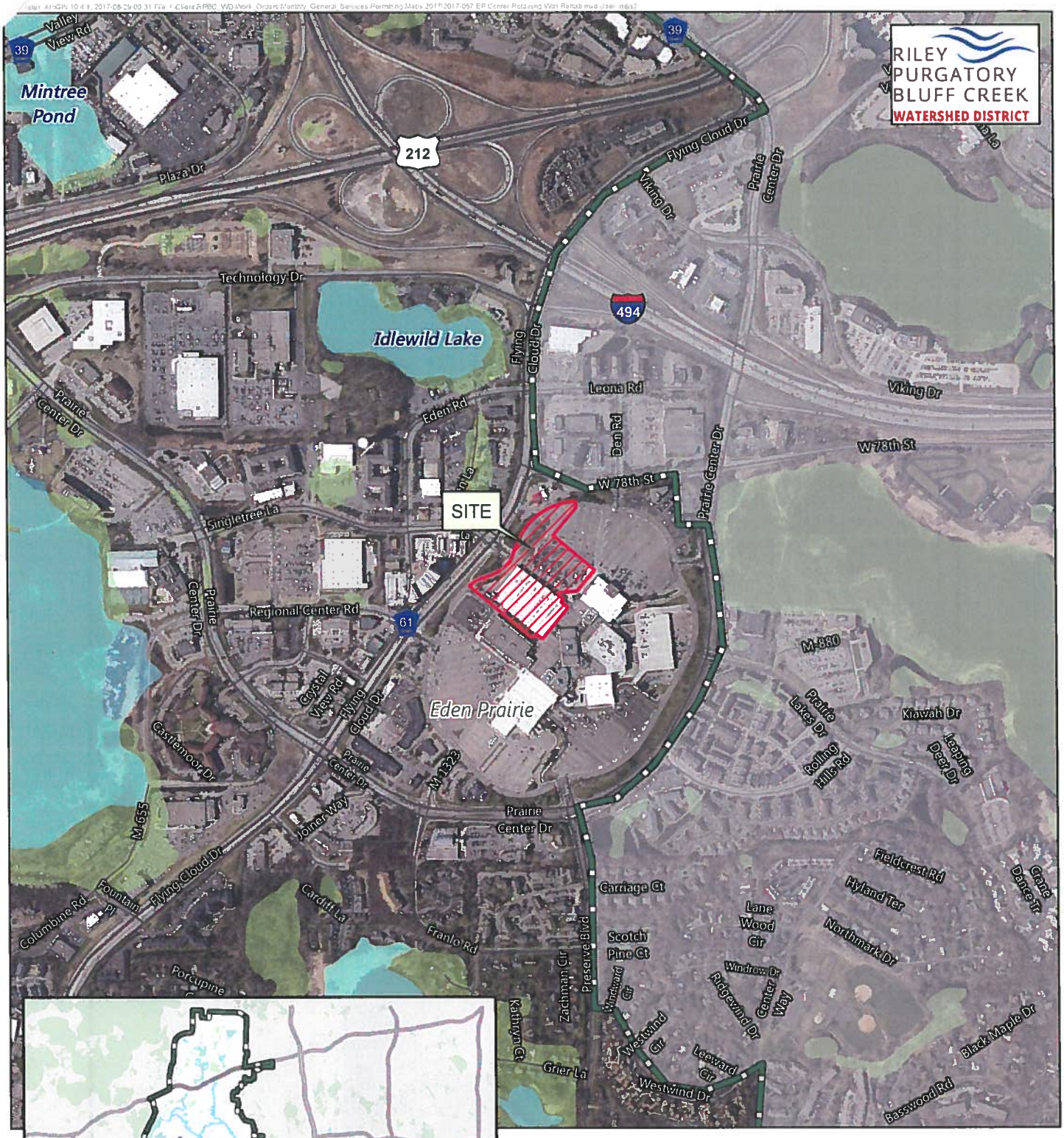
1. Continued compliance with General Requirements.
2. Financial Assurance in the amount of $6,930.
3. Receipt of the name and contact information of the individual responsible for erosion control at the site. RPBCWD must be notified if the responsible individual changes during the permit term.
4. Receipt in recordation a maintenance declaration for the stormwater management facilities. 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.

Board Action

It was moved by Manager _____, seconded by Manager _____ to approve permit modification for permit No. 2017-057 with the conditions recommended by staff.



Permit Location Map

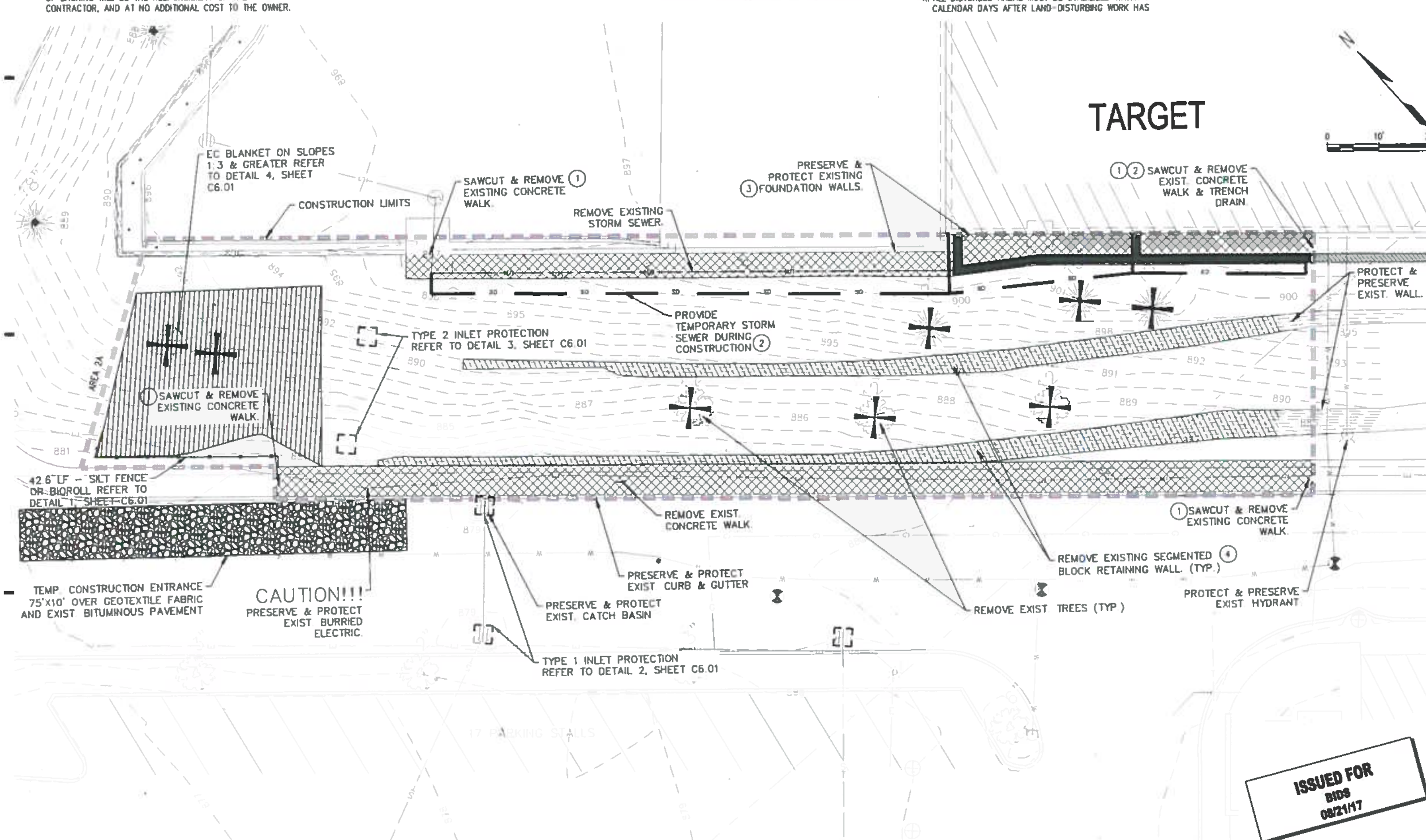
EDEN PRAIRIE CENTER
RETAINING WALL REHAB
Permit 2017-057
Riley Purgatory Bluff Creek
Watershed District

KEYED NOTES

1. SAWCUT ALL CONCRETE FULL DEPTH AND AT THE NEAREST EXISTING JOINT. DO NOT REMOVE PARTIAL CONCRETE PANELS UNLESS DIRECTED BY THE ENGINEER.
2. PROVIDE CONSTRUCTION DEWATERING. EXISTING STORM SEWER & TRENCH DRAINS WILL BE ACTIVE UPSTREAM OF THE REMOVED SECTION. THE CONTRACTOR SHALL FURNISH AND INSTALL TEMPORARY PIPING AS NECESSARY TO DIVERT FLOW FROM THE ACTIVE SYSTEM DURING CONSTRUCTION.
3. PRESERVE & PROTECT THE EXISTING FOUNDATION WALLS. DO NOT INTERFERE WITH THE 1:1 BEARING SPLAY OF THE EXISTING FOOTINGS. PROVIDE SHORING AS NECESSARY TO PRESERVE THE BEARING SURFACE. ALL SHORING AND DESIGN OF SHORING WILL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND AT NO ADDITIONAL COST TO THE OWNER.
4. REMOVE EXISTING RETAINING WALL TO THE EXTENTS SHOWN. REFER TO SHEET C4.00-C4.04 FOR ADDITIONAL REMOVAL REQUIREMENTS.

SHEET NOTES

a. NATURAL TOPOGRAPHY AND SOIL CONDITIONS MUST BE PROTECTED, INCLUDING RETENTION ONSITE OF NATIVE TOPSOIL TO THE GREATEST EXTENT POSSIBLE.
b. 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.
c. 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.
d. CONSTRUCTION SITE WASTE SUCH AS DISCARDED BUILDING MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICALS, LITTER AND SANITARY WASTE MUST BE PROPERLY MANAGED.
e. 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.
f. ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPS MUST BE REMOVED UPON FINAL STABILIZATION.
g. 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.
h. 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.
j. THE PERMITTEE MUST, AT A MINIMUM, INSPECT, MAINTAIN AND REPAIR ALL DISTURBED SURFACES AND ALL EROSION AND SEDIMENT CONTROL FACILITIES AND SOIL STABILIZATION MEASURES EVERY DAY WORK IS PERFORMED ON THE SITE AND AT LEAST WEEKLY UNTIL LAND-DISTURBING ACTIVITY HAS CEASED. THEREAFTER, THE PERMITTEE MUST PERFORM THESE RESPONSIBILITIES AT LEAST WEEKLY UNTIL VEGETATIVE COVER IS ESTABLISHED. THE PERMITTEE WILL MAINTAIN A LOG OF ACTIVITIES UNDER THIS SECTION FOR INSPECTION BY THE DISTRICT ON REQUEST.



LHB PERFORMANCE DRIVEN DESIGN. LHBcorp.com
21 W. Superior St., Ste 500 | Duluth, MN 55802 | 218.727.8446

CDP CIVIL DESIGN PROFESSIONALS INNOVATIVE ENGINEERING SOLUTIONS

CLIENT:
EDEN PRAIRIE CENTER
8251 FLYING CLOUD DR, SUITE 125
EDEN PRAIRIE, MN 55344

THIS SQUARE APPEARS 1/2" x 1/2" ON FULL SIZE SHEETS

NO	DATE	ISSUED FOR
2	08/21/17	ISSUED FOR BID
1	07/21/17	WATERSHED SUBMITTAL

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.

SIGNATURE:

TYPED OR PRINTED NAME: ADAM BESSE

DATE: 08/21/17 REG. NO. 53597

PROJECT NAME:
EDEN PRAIRIE CENTER RETAINING WALL REHABILITATION
8251 FLYING CLOUD DR, SUITE 125
EDEN PRAIRIE, MN 55344

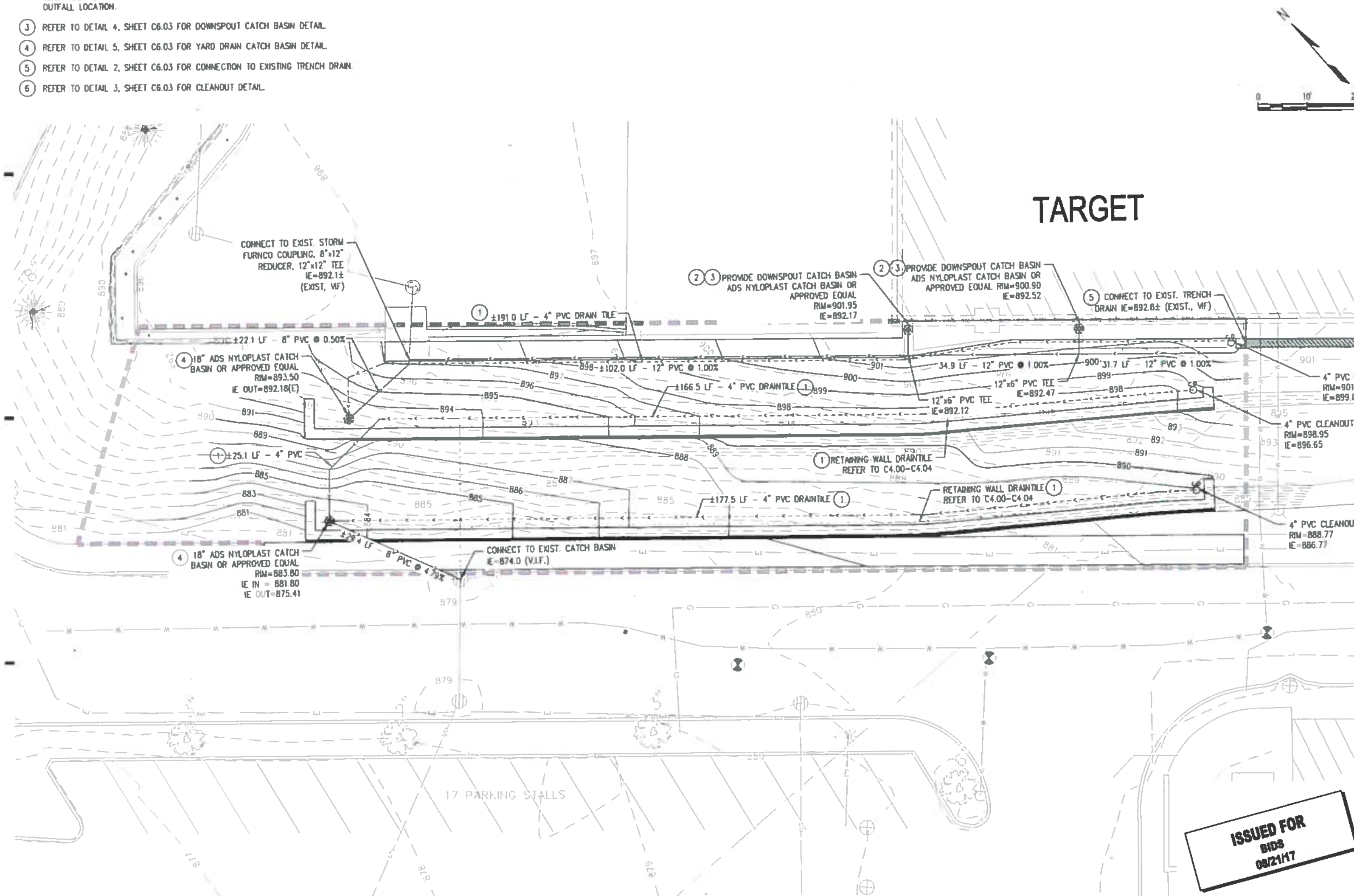
DRAWING TITLE:
DEMOLITION, REMOVALS & EROSION CONTROL PLAN

ISSUED FOR BIDS 08/21/17

FILE:
DRAWN BY: CPD
CHECKED BY:
PROJ. NO: 160770
DRAWING NO:
C1.01

KEYED NOTES

1. NOT ALL DRAINTILE FITTINGS ARE SHOWN IN THE PLAN. CONTRACTOR SHALL PROVIDE ALL FITTINGS NECESSARY TO COMPLETE THE WORK.
2. LOCATION OF CATCH BASINS ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD VERIFY DOWNSPOUT LOCATION AND CENTER PROPOSED CATCH BASINS AT THE OUTFALL LOCATION.
3. REFER TO DETAIL 4, SHEET C6.03 FOR DOWNSPOUT CATCH BASIN DETAIL.
4. REFER TO DETAIL 5, SHEET C6.03 FOR YARD DRAIN CATCH BASIN DETAIL.
5. REFER TO DETAIL 2, SHEET C6.03 FOR CONNECTION TO EXISTING TRENCH DRAIN.
6. REFER TO DETAIL 3, SHEET C6.03 FOR CLEANOUT DETAIL.



ISSUED FOR BIDS 08/21/17

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CDP CIVIL DESIGN PROFESSIONALS — INNOVATIVE ENGINEERING SOLUTIONS

CLIENT: EDEN PRAIRIE CENTER

8251 FLYING CLOUD DR, SUITE 125
EDEN PRAIRIE, MN 55344

THIS SQUARE APPEARS 1/2" x 1/2" ON FULL SIZE SHEETS.

NO	DATE	ISSUED FOR
2	08/21/17	ISSUED FOR BID
1	07/21/17	WATERSHED SUBMITTAL

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SIGNATURE:

TYPED OR PRINTED NAME: ADAM BESSE

DATE: 08/21/17 REG. NO. 52597

PROJECT NAME:
EDEN PRAIRIE CENTER RETAINING WALL REHABILITATION

8251 FLYING CLOUD DR, SUITE 125
EDEN PRAIRIE, MN 55344

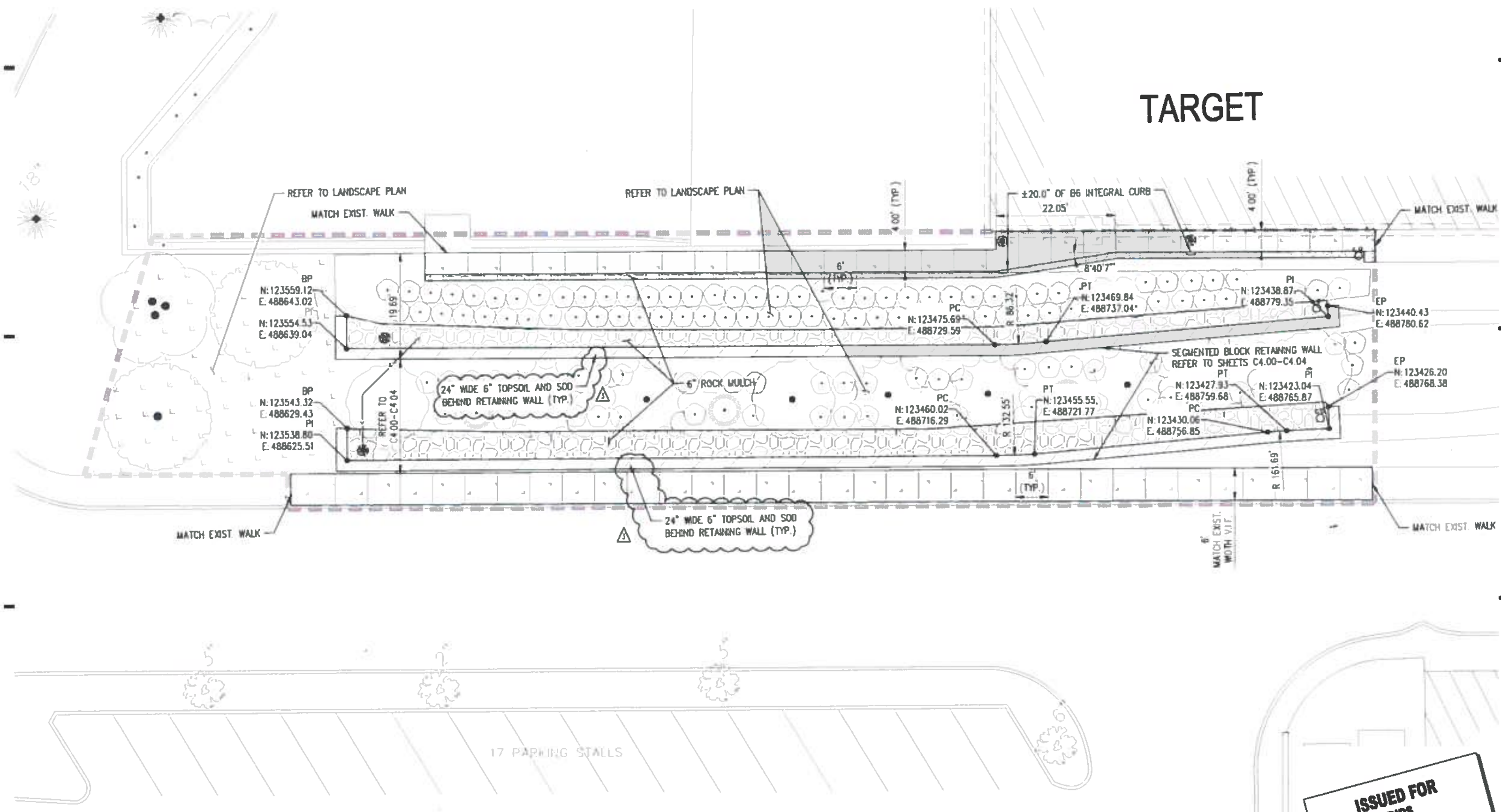
DRAWING TITLE:
UTILITY PLAN

FILE: [illegible]
DRAWN BY: DPG
CHECKED BY: AFB
PROJ. NO: 160779
DRAWING NO:

C2.01

NOTES

1. COORDINATES ARE BASED ON SURVEY PROVIDED BY HARRY S JOHNSON CO, INC. THE CONTRACTOR SHALL VERIFY COORDINATES PRIOR TO CONSTRUCTION.
2. COORDINATES ARE PROVIDED FOR GENERAL LOCATION OF WALL ELEMENTS. DIMENSIONS & LAYOUT ON SHEETS C4.00-C4.04 SHALL CONTROL.



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CIVIL DESIGN PROFESSIONALS
INNOVATIVE ENGINEERING SOLUTIONS

CLIENT:

EDEN PRAIRIE CENTER

8251 FLYING CLOUD DR, SUITE 125
EDEN PRAIRIE, MN 55344

THIS SQUARE APPEARS 1/2" x 1/2" ON FULL SIZE SHEETS.

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.

SIGNATURE:

TYPED OR PRINTED NAME: ADAM BESSE

DATE: 08/21/17 REG. NO. 52597

PROJECT NAME:

EDEN PRAIRIE CENTER RETAINING WALL REHABILITATION

8251 FLYING CLOUD DR, SUITE 125
EDEN PRAIRIE, MN 55344

DRAWING TITLE:

SURFACING & LAYOUT PLAN

ISSUED FOR BIDS 08/24/17

DRAWING NO: C5.01

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: 2017-023

Original Application: Conditionally approved at June 6, 2017 meeting

Modification Request Received complete: August 29, 2017

Applicant: Eden Prairie Assembly of God, Jac Perrin

Consultant: Bed Ford, Rehder & Associates

Project: Eden Prairie Assembly of God – Construction of a 14,794 square foot addition, an infiltration basin, and a grassed swale.

Location: 16591 Duck Lake Trail, Eden Prairie, MN

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

Rules: Applicable rules checked

	Rule B: Floodplain Management		Rule H: Appropriation of Public Waters
X	Rule C: Erosion and Sediment Control		Rule I: Appropriation of Groundwater
	Rule D: Wetland and Creek Buffers	X	Rule J: Stormwater Management
	Rule E: Dredging and Sediment Removal		Rule K: Variances and Exceptions
	Rule F: Shoreline/Streambank Stabilization	X	Rule L: Permit Fees
	Rule G: Waterbody Crossings	X	Rule M: Financial Assurances

Rule Conformance Summary

Rule	Issue		Conforms to RBPCWD Rules?	Comments
C	**Erosion Control Plan**		No	See Rule Specific Permit Condition C1.
J	**Stormwater Management**	Rate	Yes	
		Volume	Yes	
		Water Quality	Yes	
		Low Floor Elev.	Yes	
		Maintenance	No	See Rule Specific Permit Condition J1.
L	**Permit Fee**		Yes	$1,500 was received on March 22, 2017.
M	**Financial Assurance**		See Comment	The financial assurance has been calculated at $38,550.

Project Description

The project proposes the construction of a 14,794 square foot building addition and an infiltration basin followed by a grassed swale to provide storm water quantity, volume and quality control. Pretreatment for the infiltration basin will be provided by a 3' sump manhole. The permit was conditionally approved on June 7, 2017. The applicant has not fulfilled the conditions for issuance of the permit, and construction has not started.

The requested permit modification revises the proposed design by removing the proposed parking lot modifications and reducing the size of the proposed infiltration basin to reflect the reduced new and reconstructed impervious area. The following permit review reanalyzed the entire proposed project because of the revised grading and reduced infiltration basin footprint. Only limited comparison with the prior review report are provided where needed to provide context for prior approval.

The project site information is summarized below:

	Original Project	Modification Request
Total Site Area (acres)	10.08	10.08
Existing Site Impervious (acres)	2.22	2.22
New (Increase) in Site Impervious Area (acres)	0.21 (9.5% increase)	0.204 (9.2% increase)
Disturbed impervious surface	0.38 (17.1% Disturbance)	0.006 (0.2% Disturbance)
Total Disturbed Area (acres)	1.5	0.96

Exhibits for Modification Request:

1. Design Plan Sheets dated August 22, 2017.
2. Stormwater Management Report dated March 16, 2017 (revised July 10, 2017).
3. MIDS calculator water quality computations received August 29, 2017).

Rule Specific Permit Conditions

Rule C: Erosion and Sediment Control

Because the project will alter 0.96 acres (41,818 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 Rehder & Associates, Inc. includes installation of silt fence, inlet protection for storm sewer catch basins, a rock construction entrance, decompaction of areas compacted during construction, and retention of native topsoil onsite. To conform to the RPBCWD Rule C requirements the following revisions are needed:

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

Rule J: Stormwater Management

Because the project will alter 0.96 acres (41,818 square feet) of surface area, approval under the RPBCWD Stormwater Management Rule is required. The proposed land-disturbing activities will increase the imperviousness of the entire site by 9.2% (i.e., well less than the 50 percent increase threshold in section 2.3 for application of the stormwater criteria to all impervious area of the project site), and disturb 0.2% of the existing impervious area (i.e., less than 50 percent of the existing impervious area), therefore under the paragraph 2.3 redevelopment framework, the RPBCWD stormwater management criteria apply only to the new and disturbed impervious surface on the site.

The Applicant is proposing an infiltration basin followed by a grassed swale to provide the required rate control, volume abstraction and water quality management on the site.

Rate Control

In order to meet the rate control criteria listed in Subsection 3.1.a, the 2-, 10-, and 100-year post development peak runoff rates must be equal to or less than the existing discharge rates at all locations where stormwater leaves the site. The Applicant used 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 site includes three discharge locations from the site. The existing and proposed 2-, 10-, and 100-year frequency discharges from the site are summarized in the table below. The proposed project conforms to RPBCWD Rule J, Subsection 3.1.a.

Modeled Discharge Location	2-Year Discharge (cfs)		10-Day Snowmelt (cfs)		10-Year Discharge (cfs)		100-Year Discharge (cfs)	
	Ex	Prop	Ex	Prop	Ex	Prop	Ex	Prop
West	7.9	7.9	5.3	5.3	15.8	15.8	32.4	32.4
Southeast	1.2	1.2	0.7	0.7	2.4	2.4	5.0	5.0
Northeast	10.2	9.6	5.2	5.2	18.2	17.4	34.4	33.4

Volume Abstraction

Subsection 3.1.b of Rule J requires the abstraction onsite of 1.1 inches of runoff from the fully reconstructed impervious surface of the parcel. An abstraction volume of 839 cubic feet is required from the 0.21 acres (9,148 square feet) total new and reconstructed impervious area on the project for volume retention. The drawing show one infiltration basin with pretreatment of runoff provided by a sump manhole. The table below summarizes the volume abstraction on the site.

Required Abstraction Depth (inches)	Required Abstraction Volume (cubic feet)	Provided Abstraction Volume (cubic feet)
1.1	839	866

Soil borings performed by Braun show that soils in the project area are primarily clays; the MN Stormwater Manual indicates an infiltration rate of 0.06 inches per hour for such soils. The soil boring at the location of the proposed infiltration basin shows no groundwater was observed to a boring elevation of 923.3 feet. Groundwater is at least 3 feet below the bottom of the proposed infiltration basin (Rule J, Subsection 3.1.b.ii). Pretreatment for the infiltration basin is provided by a sump manhole (Rule J, Subsection 3.1.b.i). The proposed project is in conformance with RPBCWD Rule J, Subsection 3.1.b.

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 one infiltration basin followed by a grassed swale to achieve the required TP and TSS removals and submitted MIDS Calculator models to estimate the TP and TSS removals. The table below summarized the water quality treatment provided for the site. Based on information reviewed, the proposed project conforms to Rule J, Subsection 3.1.c.

Pollutant of Interest	Regulated Site Loading (lbs/yr)	Required Load Removal (lbs/yr)[1]	Provided Load Reduction (lbs/yr)
Total Suspended Solids (TSS)	129.9	116.9 (90%)	603 (>100%)[2]
Total Phosphorus (TP)	0.72	0.43 (60%)	2.11 (>100%)[2]

[1]Required load reduction is calculated based on the removal criteria in Rule J, Subsection 3.1c and the new and reconstructed impervious area site load.

[2]The TSS and TP removal is higher than required removal because the infiltration system and swale treat a larger, undisturbed area of the existing impervious area.

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 structures and the adjacent stormwater management feature are summarized below.

Stormwater Facility	Low Floor Elevation of Building (feet)	100-year Event Flood Elevation (feet)	Freeboard (feet)	Provided Distance Between Building and Adjacent Stormwater Feature (feet)	Required Separation to Groundwater based on Appendix J, Plot 2 (feet)	Provided Separation to Groundwater based on Soil Boring B-1 (feet)
Proposed Infiltration Basin	930.0	933.98	-3.98	50	~3	6.7

The low floor elevation of the building is less than the 100-year event flood elevation of the infiltration basin. The topography between the building and the proposed infiltration basin is sufficiently high to prevent the 100-year flood elevation from inundating the structure. An analysis in accordance with Appendix J1 was completed for the building. The horizontal distance between the building and the infiltration basin is 50 feet; therefore, the required separation to groundwater at the building is 3 feet in order to be in compliance with Plot 2 in Appendix J1. As shown in the above table the proposed structure provides adequate separation from groundwater in conformance 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.

J1. Permit applicant must provide a draft maintenance and inspection plan/declaration. Once approved by RPBCWD, the plan must be recorded on the deed in a form acceptable to the District.

Rule L: Permit Fee:

Fees for the project are:

Rule C & J $1,500

Rule M: Financial Assurance:

Rules C: Silt fence: 890 L.F. x $2.50/L.F. = ... $2,300

Restoration: 0.96 acres x $2,500/acre = ... $2,400

Rules J: Infiltration: 3,705 sq. ft. x $6.00/sq. ft. = ... $22,250

Contingency (10%) $2,700

Administration (30%) $8,900

Total Financial Assurance $38,550

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

Recommendation:

Approval, contingent upon:

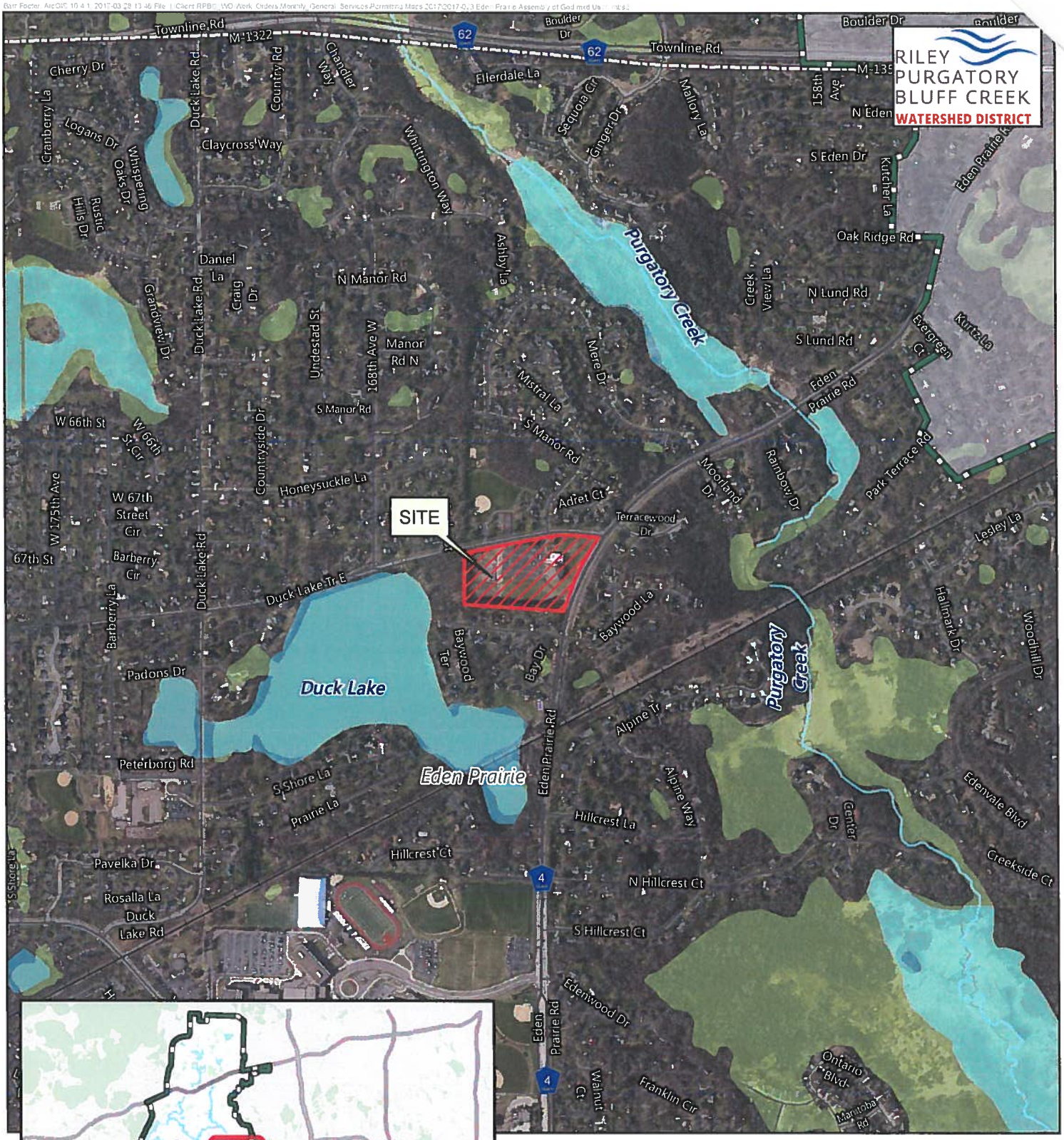
1. Continued compliance with General Requirements.
2. Financial Assurance in the amount of $38,550.
3. Applicant providing the name and contact information of the individual responsible for erosion and sediment control for the project.
4. Submission of a receipt showing recordation of a maintenance declaration for the storm water management facilities. A draft of the declaration 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.

Board Action

It was moved by Manager _____, seconded by Manager _____ to approve permit modification for application No. 2017-023 with the conditions recommended by staff.

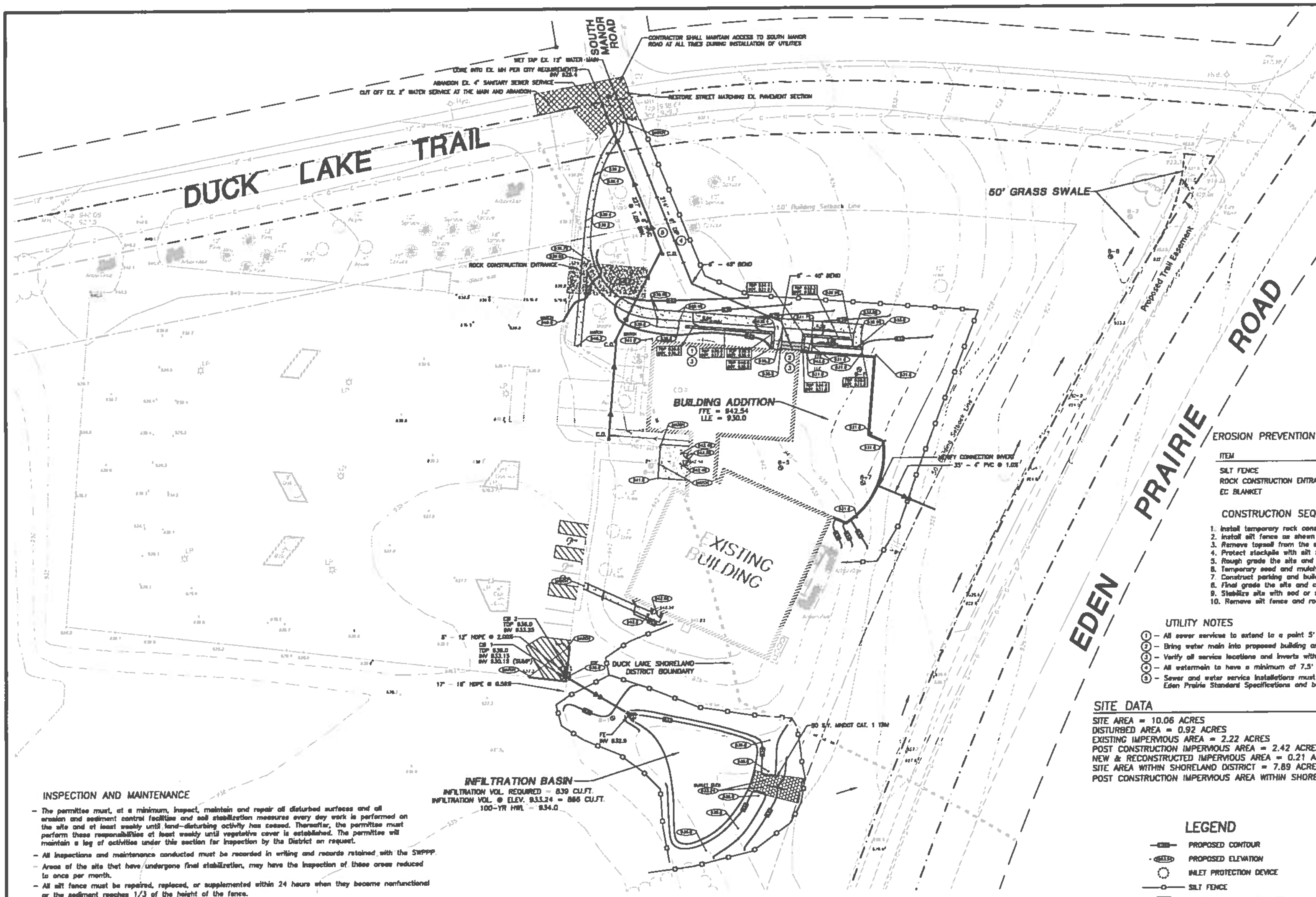


Feet

0 1,000

Permit Location Map

EDEN PRAIRIE
ASSEMBLY OF GOD
Permit 2017-023
Riley Purgatory Bluff Creek
Watershed District



EROSION PREVENTION & SEDIMENT CONTROL BMP'S

ITEM	QUANTITY
SILT FENCE	1,090 FEET
ROCK CONSTRUCTION ENTRANCE	50 TONS 1"-2" WASHED ROCK
EC BLANKET	120 S.Y.

CONSTRUCTION SEQUENCE SCHEDULE

1. Install temporary rock construction entrance and continuously inspect.
2. Install silt fence as shown on the plans.
3. Remove topsoil from the site and place in temporary stockpile location.
4. Protect stockpile with silt fence.
5. Rough grade the site and construct pre-treatment station
6. Temporary seed and mulch disturbed areas on site.
7. Construct parking and building addition.
8. Final grade the site and construct filtration basin.
9. Stabilize site with sod or seed.
10. Remove silt fence and rock construction entrance.

UTILITY NOTES

(1) – All sewer services to extend to a point 5' from proposed building.
(2) – Bring water main into proposed building and cap at the floor.
(3) – Verify all service locations and inverts with mechanical engineer before construction.
(4) – All watermain to have a minimum of 7.5' of cover.
(5) – Sewer and water service installations must be in accordance with the City of Eden Prairie Standard Specifications and building & plumbing codes as applicable.

SITE DATA

SITE AREA = 10.06 ACRES
DISTURBED AREA = 0.92 ACRES
EXISTING IMPERVIOUS AREA = 2.22 ACRES
POST CONSTRUCTION IMPERVIOUS AREA = 2.42 ACRES
NEW & RECONSTRUCTED IMPERVIOUS AREA = 0.21 ACRES
SITE AREA WITHIN SHORELAND DISTRICT = 7.89 ACRES
POST CONSTRUCTION IMPERVIOUS AREA WITHIN SHORELAND DISTRICT = 1.91 ACRES (24.2%)

INSPECTION AND MAINTENANCE

- The permittee must, at a minimum, inspect, maintain and repair all disturbed surfaces and all erosion and sediment control facilities and soil stabilization measures every day work is performed on the site and at least weekly until land-disturbing activity has ceased. Thereafter, the permittee must perform these responsibilities at least weekly until vegetative cover is established. The permittee will maintain a log of activities under this section for inspection by the District on request.
- All inspections and maintenance conducted must be recorded in writing and records retained with the SWPPP.
- Areas of the site that have undergone final stabilization, may have the inspection of these areas reduced to once per month.
- All silt fence must be repaired, replaced, or supplemented within 24 hours when they become nonfunctional or the sediment reaches 1/3 of the height of the fence.
- Temporary and permanent sedimentation basins must be drained and the sediment removed when the depth of the sediment reaches 1/2 the storage volume. Removal must be completed within 72 hours of discovery.
- Surface waters and conveyance systems must be inspected for evidence of sediment being deposited. Removal and stabilization must take place within seven (7) days of discovery unless precluded by legal, regulatory, or physical access constraints.
- Construction site vehicle exit locations must have sediment removed from off-site paved surfaces within 24 hours of discovery.
- Infiltration areas shall be graded to finished grade when all contributing drainage areas have been stabilized. Protect infiltration area from sediment and heavy equipment compaction during/after construction with silt fence.

POLLUTION PREVENTION MANAGEMENT

- All solid waste must be disposed of off-site per the MPCA disposal requirements.
- All hazardous waste must be properly stored with restricted access to storage areas to prevent vandalism. Storage and disposal of hazardous waste must be in compliance with MPCA Regulations.
- Excess concrete/water from concrete trucks shall be disposed of in portable washout concrete basin or disposed of in a contained area.

EROSION CONTROL NOTES

- Contractor is responsible for all notifications and inspections required by General Storm Water Permit.
- All erosion control measures shown shall be installed prior to grading operations and maintained until all areas disturbed have been restored.
- Sweep paved public streets as necessary where construction sediment has been deposited.
- Each area disturbed by construction shall be restored per the specifications within 14 days after the construction activity in that portion of the site has temporarily or permanently ceased.
- 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 taking care to avoid utilities, tree roots and other existing vegetation prior to final revegetation or other stabilization.
- Temporary soil stockpiles must have silt fence around them and cannot be placed in surface waters, including storm water conveyances such as curb and gutter systems, or conduits and ditches.
- Excess concrete/water from concrete trucks shall be disposed of in portable washout concrete basin or disposed of in a contained area.

GRADING NOTES

- All elevations shown are to final surfaces.
- Contractor is responsible for obtaining, a National Pollutant Discharge Elimination system (NPDES) General Storm Water Permit for Construction Activity before construction begins.

CATCH BASIN/MANHOLE SCHEDULE

STRUCTURE NO.	BARREL SIZE	NEENAH CASTING NO.
CB 1	48"	R-3067V
CB 2	24" X 36"	R-3067V

LEGEND

- PROPOSED CONTOUR
- PROPOSED ELEVATION
- INLET PROTECTION DEVICE
- SILT FENCE
- MNDOT CAT. 8 EC BLANKET
- EXISTING CONTOUR
- EXISTING ELEVATION
- PROPOSED CONCRETE
- PROPOSED STD. DUTY BITUMINOUS
- BOUNDARY/ROW/BLOCK LINE
- EASEMENT
- BUILDING/PARKING SETBACK LINE
- EXISTING WATERMAIN
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER

N

0 15 30 60 90
Scale in Feet

Rehder & Associates, Inc.
Civil Engineers, Planners and Land Surveyors

STATION NINETEEN
Architects - Incorporated
2001 UNIVERSITY AVENUE SOUTHEAST SUITE 100
MINNEAPOLIS, MINNESOTA 55414
PHONE (612) 623.1800
FAX (612) 623.0012

I hearby 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

SIGNATURE:	
ENGINEER:	Benton G. Ford, P.E.
REGISTRATION NUMBER:	24392
DATE:	08/22/2017
DRAWN BY:	NPA
CHECKED BY:	BGF

PROJECT TITLE
EDEN PRAIRIE ASSEMBLY OF GOD
EDEN PRAIRIE, MINNESOTA

Project Number 4485

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No.	Date	Appr	Revision Notes

No.	Date	Issue Notes

Phase: CITY SUBMISSION

Sheet Title: GRADING, DRAINAGE, EROSION CONTROL & UTILITY PLAN

Drawing No. C3

resourceful. naturally.
engineering and environmental consultants

BARR

Memorandum

To: Riley Purgatory Bluff Creek Watershed District Board of Managers
From: Barr Engineering Company
Subject: Permit Application 2017-039: Mission Hills Senior Living -- 2nd Extension of Review Period
Date: August 22, 2017
Project: 23270053.14

Project Description

Permit No: 2017-039

Received complete: May 22, 2017

Applicant: Headwaters Development, Michael Hoagberg
Consultant: BKBM Engineers, Keith Matte
Project: Mission Hills Senior Living -- Disturbance of 8.65 acres to construct a 55,000 square foot senior housing building, eight townhome buildings and five biofiltration basins.
Location: Northeast Quadrant of MN Highway 101 and US Highway 212, Chanhassen, MN

Rules Implicated:

	Rule B: Floodplain Management		Rule H: Appropriation of Public Waters
X	Rule C: Erosion and Sediment Control		Rule I: Appropriation of Groundwater
	Rule D: Wetland and Creek Buffers	X	Rule J: Stormwater Management
	Rule E: Dredging and Sediment Removal		Rule K: Variances and Exceptions
	Rule F: Shoreline/Streambank Stabilization	X	Rule L: Permit Fees
	Rule G: Waterbody Crossings	X	Rule M: Financial Assurances

Recommendation

On May 22, 2017, Headwaters Development submitted a complete permit application for construction of a new senior living building and eight townhome buildings along with new parking lots, roadways and landscaping. Five bioretention facilities with elevated draintile to provide infiltration will provide stormwater quantity, volume and quality control.

Based on the Engineer's review of the submitted plans, the latest site designs and stormwater management approach do not provide the required volume abstraction.

On July 18, 2017, the applicant's representative requested a 60-day extension of the RPBCWD review period. Staff agreed and the Board extended the review period by 60 days to September 19, 2017, for permit 2017-039 Mission Hills Senior Living.

The extended permit review period for Permit 2017-039 expires on September 19, 2017 which is before the Board's regular October meeting. The applicant has requested an additional extension of the application-review period to allow the application to be considered at the October Board meeting. Staff recommends that the Board grant the extension to October 5, 2017 as requested for permit 2017-039 to allow the Applicant time to supply the revised design and the Engineer time to complete a review.

From: Keith Matte
To: Scott Sobiech
Cc: Nate Anderson; Terry Jeffery; Smith, Stephanie
Subject: RE: Permit 2017-039: Mission Hills Senior Living - An Progress on added abstraction
Date: Tuesday, August 22, 2017 7:58:09 AM

Scott

Please extend us to the next meeting date.

I apologize for this lapse. The architect shifted a wing of the building that required a redo of approximately 30% of the site. In a plus, we were able to reduce retaining wall considerable.

Keith Matte P.E.(MN, ND)
Associate

BKBM ENGINEERS

5930 Brooklyn Blvd., Minneapolis, MN 55429
Direct: 763-843-0446 | Main 763-843-0420
Minneapolis | Denver
www.bkbm.com

Every Relationship. Every Day.
Celebrating our 50th Year

From: Scott Sobiech [mailto:SSobiech@barr.com]
Sent: Monday, August 21, 2017 6:20 PM
To: Keith Matte <kmatte@bkbm.com>
Cc: Nate Anderson <nanderson@bkbm.com>; Terry Jeffery <tjeffery@rpbcwd.org>; Smith, Stephanie <sbsmith@ci.chanhassen.mn.us>
Subject: Re: Permit 2017-039: Mission Hills Senior Living - An Progress on added abstraction

Keith
Please let me know the date you would like to extent to and an extension duration. Please keep in mind that the Board mets the first Wednesday of the month

Thanks

Scott Sobiech
952-832-2755 office
763-219-3479 cell

On Aug 21, 2017, at 3:38 PM, Keith Matte <kmatte@bkbm.com> wrote:

Scott

We are having some difficulty with the modeling, due to some architectural changes. I am requesting another extension.

Thank you,

Keith Matte P.E.(MN, ND)
Associate

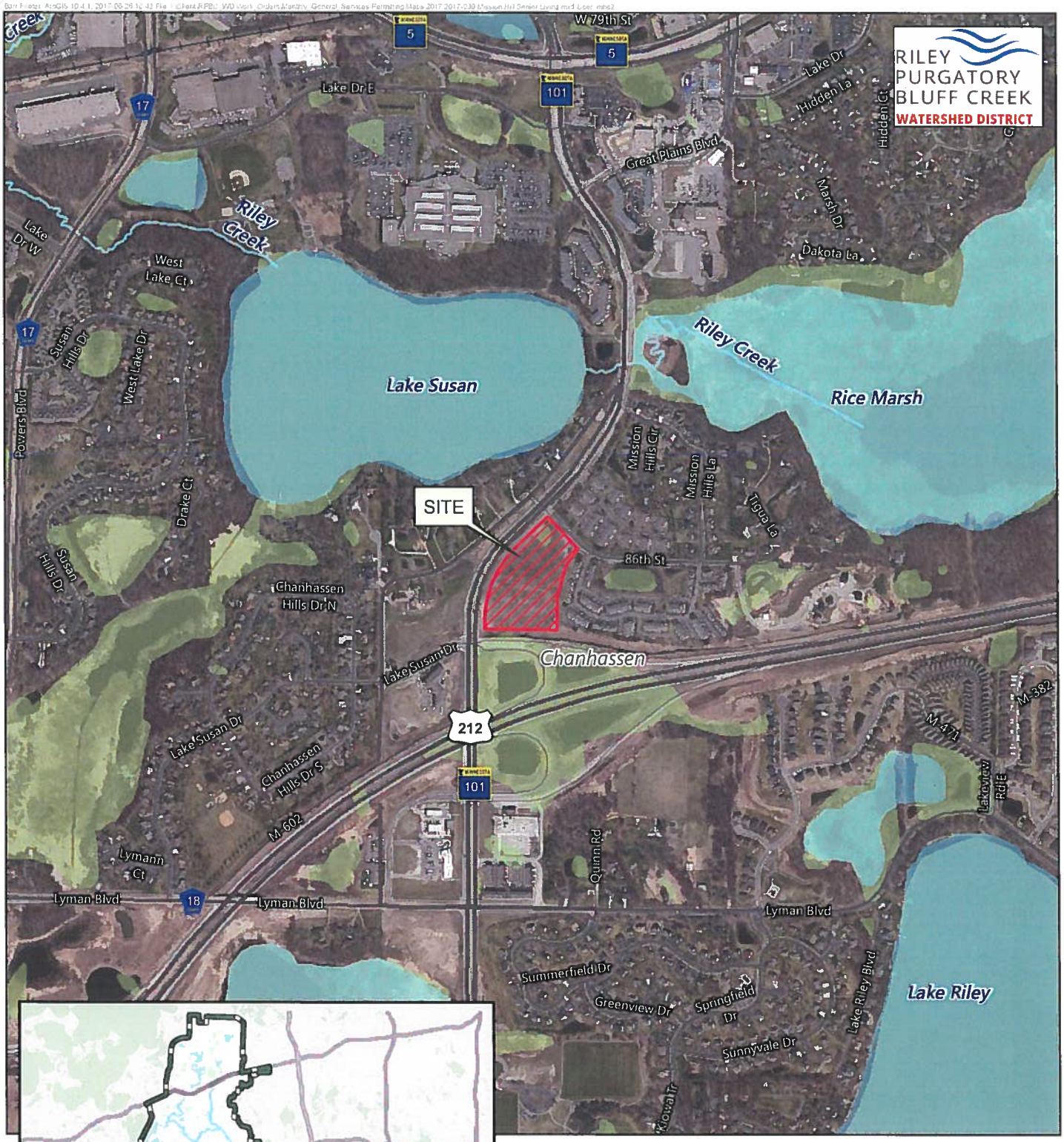
<image001.jpg>

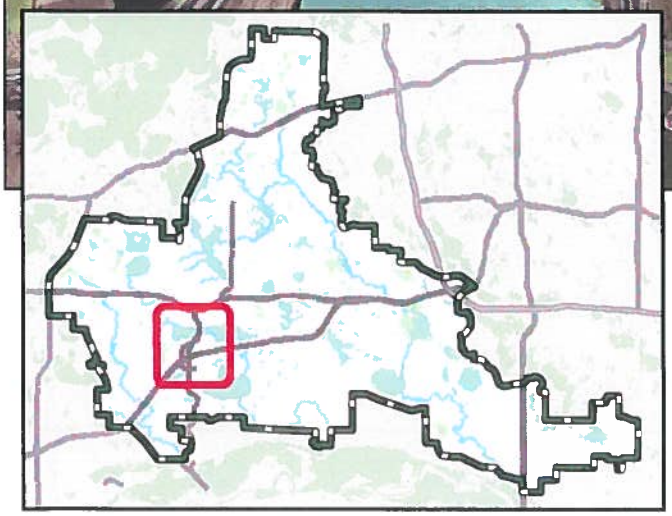
5930 Brooklyn Blvd., Minneapolis, MN 55429
Direct: 763-843-0446 | Main 763-843-0420
Minneapolis | Denver
www.bkbm.com

Every Relationship. Every Day.
Celebrating our 50th Year

From: Scott Sobiech [mailto:SSobiech@barr.com]
Sent: Tuesday, August 15, 2017 1:13 PM
To: Keith Matte <kmatte@bkbm.com>
Cc: Nate Anderson <nanderson@bkbm.com>; Terry Jeffery <tjeffery@rpbcwd.org>; Smith, Stephanie <sbsmith@ci.chanhassen.mn.us>
Subject: RE: Permit 2017-039: Mission Hills Senior Living - An Progress on added abstraction

Keith
Just want to check on the status of the Mission Hills project. As a reminder, the application review period was extended until September 19, 2017 to allow the Applicant time to supply revised submissions and give the us time to complete a review. I believe the last item you were working on addressing was abstraction beyond 0.55 inches. Because the Board only meets once per month, the Board will need to take some action on the permit at the September 6, 2017 meeting. In order to remain under consideration for us to make a recommendation to the Board for the September meeting, we would need to have a revised submittal ASAP. If you will not have a revised submittal by August 22, please let send me an email and request a second extension and I'll draft a memo for the Board packet. Please let me know if you have any questions.





Feet

0 1,000

Permit Location Map

MISSION HILL SENIOR LIVING
Permit 2017-039
Riley Purgatory Bluff Creek
Watershed District

RILEY PURGATORY BLUFF CREEK
WATERSHED DISTRICT

14500 Martin Drive | Suite 1500
Eden Prairie, MN 55344
952-607-6512
www.rpbcwd.org

Friday, September 1, 2017

Re: Master Water Stewards Contract

Dear Managers,

As part of our Education and Outreach Program, the District sponsors citizens to participate in the Master Water Stewards certification program. It is a volunteer stewardship program that offers extensive training from top industry professionals, and equips participants with the knowledge and skills needed to help improve water quality as local leaders in their communities. Stewards complete a capstone project that includes a best management practice like a raingarden or cistern, and an education and outreach campaign. After completing the program, stewards volunteer 50 hours towards clean water projects within the District in the first year, and 25 hours every year after to maintain their certification. Currently the District has 11 active stewards, six from the first cohort and four from the second. The first year's cohort is involved in many volunteer projects working toward their certification hours, and the second year's cohort are working toward completing their capstone projects. This year, the District is looking to sponsor 4-6 residents in the program, at a cost of $2,500 per steward with stewards contributing $200.

Staff recommends that board authorize the administrator to enter into a contract with Freshwater Society for an amount not to exceed $15,000.

Sincerely,

Claire Bleser

Claire Bleser, Administrator

Staff Recommendation

Manager _____, Seconded by Manager _____ to authorize Administrator Bleser to enter a contract with Freshwater Society for the Master Water Stewards Program not to exceed $15,000.

Item k. Approve staff recommendations for cost-share applications

APPLICANT	ADDRESS	SUB-WATERSHED	PROJECT TYPE	POLLUTION REMOVAL	AREA RESTORED	PROJECT COST	FUNDING REQUEST	STAFF REC	CAC REC
CHRISTOPHER	7300 Laredo Drive, Chan	Lotus Lake	Lake buffer	(30 linear ft of buffer)	280ft^2	$963.90	$722.93	Fund at $722.93	Fund at $722.93
PAVELKO	7203 Frontier Trail, Chan	Lotus Lake	Lake buffer	(144 linear ft of buffer)	1600ft^2	$3845.95	$2884.46	Fund at $2884.46	Fund at $2884.46
SUNRISE HILLS HOA	7205 Sunrise Hills, Chan	Lotus Lake	Lake buffer	(50 linear ft of buffer)	1200ft^2	$3636.90	$2727.68	Fund at $2727.68	NA

Staff recommend the two residential, and one homeowner association cost-share applications in the table above be approved for funding at the amounts listed.

Board action

It was moved by Manager_____, seconded by Manager _____ to approve funding to two residential and one homeowner association cost-share applications listed in the table above, in the amounts recommended by staff/CAC.

RILEY
PURGATORY
BLUFF CREEK
WATERSHED DISTRICT

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

August 31, 2017

To: The RPBCWD Board of Managers
Re: CAC comments on cost-share applications

The watershed district's Citizen Advisory Committee (CAC) met on August 21, 2017 and reviewed two homeowner applications for cost-share. After discussion, the CAC motioned to recommend the projects for funding, but asked that staff look into a few plant selection recommendations. The concerns were that 1) red twig dogwood and New England aster would be targeted by deer, and that 2) slender mountain mint requires sandy, well drained soil. Staff consulted with our technical advisory from Carver County Soil and Water Conservation District about these concerns which were addressed as follows: 1) there are currently red twig dogwood onsite that are doing well, which suggest the location is suitable, and New England aster is typically listed as a deer-resistant plant. Staff will recommend that these plants be monitored for predation and covered if necessary; 2) the soil is sandy loam to loam, and the slender mountain mint should perform well, therefore staff do not recommend a change.

If you have any questions about this, please reach out at any time.

Sincerely,

Michelle Jordan
Community Outreach Coordinator

RILEY
PURGATORY
BLUFF CREEK
WATERSHED DISTRICT

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

August 31, 2017

To: The RPBCWD Board of Managers
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If you have any questions about this, please reach out at any time.

Sincerely,

Michelle Jordan
Community Outreach Coordinator

Cost share grant application
2017

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

Do not fill in gray boxes. District use only.

Applicant type (check one) ☒ Homeowner ☐ Non-profit - 501(c)(3)
☐ Business or corporation ☐ Public agency or local government unit ☐ School

Project type (check all that apply) ☐ Raingarden ☐ Vegetated swale ☒ Lake/creek/wetland buffer
☐ Shoreline/bank stabilization ☐ Wetland restoration ☐ Pervious hard surface ☐ Infiltration basin
☐ Conservation practice ☐ Other _____

Applicant information

Works or resides in district? Y

Name Pat & Kathy Pavelko Address 7203 Frontier Trail
City/State/Zip Chanhassen MN 55317
Phone 612-308-9542 Alt phone 952-270-8188 Email kat pavelko@gmail com

Primary contact

☒ Same as applicant (leave blank)

Name _____ Address _____
City/State/Zip _____
Phone _____ Alt phone _____ Email _____

Project location

Address 7203 Frontier Trail City/State/Zip Chanhassen MN 55317
Property Identification Number (PID) 25.8210020
Property owner(s) Pat & Kathy Pavelko

Project located in district? Y

Project summary

Tributary to a waterbody? No / Yes, indirectly / Yes, adjacent: Y

Title Pavelko Lake Buffer
Total project cost ~~$3130.95~~ $3845.95 Grant amount requested ~~$2348.21~~ $2884.46
Estimated start date Fall 2017 Estimated completion date Fall 2017
Sub-watershed Lotus Lake

Project located in priority drainage area? Y

Is project tributary to a water body? ☐ No, water remains on site ☐ Yes, indirectly ☒ Yes, directly adjacent

2-3 sentence project description

144ft shoreline buffer Lotus Lake

Is this work required as a part of a permit? ☒ No ☐ Yes

(If yes: describe how the project provides water quality treatment beyond permit requirements on the next page.)

Site visit

One of the requirements for a complete application is a site visit from district staff.

Have you had a site visit? ☐ No ☒ Yes

(If you answered no, please contact staff to schedule one: 952-607-6512)

Project details

Do not fill in gray boxes. District use only.

Checklist To be considered complete the following must be included with the application.

- ☐ location map
- ☐ site plan & design schematics
- ☐ itemized budget or contractor bid
- ☐ project time-line
- ☐ proof of property ownership
- ☐ plant list & planting plan (if project includes plants)

Is time-line reasonable?	Y
Is budget reasonable?	Y
Is plan comprehensive?	Y
Does plant list conform to district's approved plant list?	Y

Description

Describe the current site conditions, as well as site history, and past management.

In the past this area was pasture and farmland. As a result lake was polluted. As homes were built holding ponds were created but have not been able to sufficiently eliminate the runoff going directly into lake. At times there has been flooding that has resulted in rivers of dirt and fish (such as carp) plus chemicals from roadways going directly into lake. As a result we have seen a decline in water quality and an increase in invasive species.

What are the project objectives and expected outcomes? Give any additional project details.

In the past runoff has been a significant problem that is ongoing. For the health and water quality of our lake we need to provide a natural landscape barrier that will help prevent runoff from directly entering the lake. See attachment for list of flowers, shrubs, etc. to be included in this project

Are there multiple objectives?	Y
Does the project have well-defined, measurable results?	Y

List other key participants and their roles Over 50 homes belonging to our association that is located directly adjacent to our lot. With their participation and ours we hope to benefit the community with an increase in Lotus Lake water quality and an increase in natural habitat.

Does the project demonstrate strong partnerships & support?	Y

Which cost share goals does the project support? (check all that apply)

- ☒ Improve watershed resources
- ☒ Increase awareness of the vulnerability of watershed resources.
- ☒ Increase familiarity with and acceptance of solutions to improve waters
- ☒ Foster water resource stewardship

How does the project support the goals you checked?

Our project will:

1. Improve watershed resources by decreasing runoff and providing a natural habitat for butterflies, birds, and bees.
2. Increase awareness of the vulnerability of our natural resources Lake users and Association members will not only see a more aesthetically pleasing landscape but understand that a natural landscape is needed for the health of the area. As a result we believe the people in association and lake shore owners and users will be better stewards of the water resources and possibly change their habits to be more environmentally friendly.

Project details (continued)

Do not fill in gray boxes.
District use only.

Benefits Estimate the project benefits in terms of restoration and/or **annual** pollution reduction. If you are working with a designer or contractor, they can provide these numbers. If you need help, contact the district cost share program coordinator.

Benefit	Amount	
Water captured		gal / year
Water infiltrated		gal / year
Phosphorus removed	.10	lbs / year
Sediment removed	7.22	lbs / year
Land restored	~~1,800~~ 1200	ft²

144 linear feet

provides buffering

Does the project provide water quality treatment?	some
Does the project provide restoration?	Y
Is there educational value to the project?	Y
Will the project be visible to the public?	Y

How will you share the project results with your community?

We are hoping to do this project in conjunction with neighboring association. Over 55 homes belong to association and will see the natural landscape as will community of lakeshore owners and lake users. In addition the association has a facebook page and E-mail communication that this project will be shared on.

Are there other projects that could be initiated as a result of this one?

Yes. As awareness increases and as other homeowners see this project we believe others will opt to implement the same sort of landscaping plan to benefit the lake.

Evaluation

How will the project be monitored and evaluated? As the homeowners we hope to be good stewards of the lake. We will upkeep the natural habitat and use best practices to conserve our water resources. At any time the RPBCWD would like to use our project to gain support for buffers we would be willing to share our experiences.

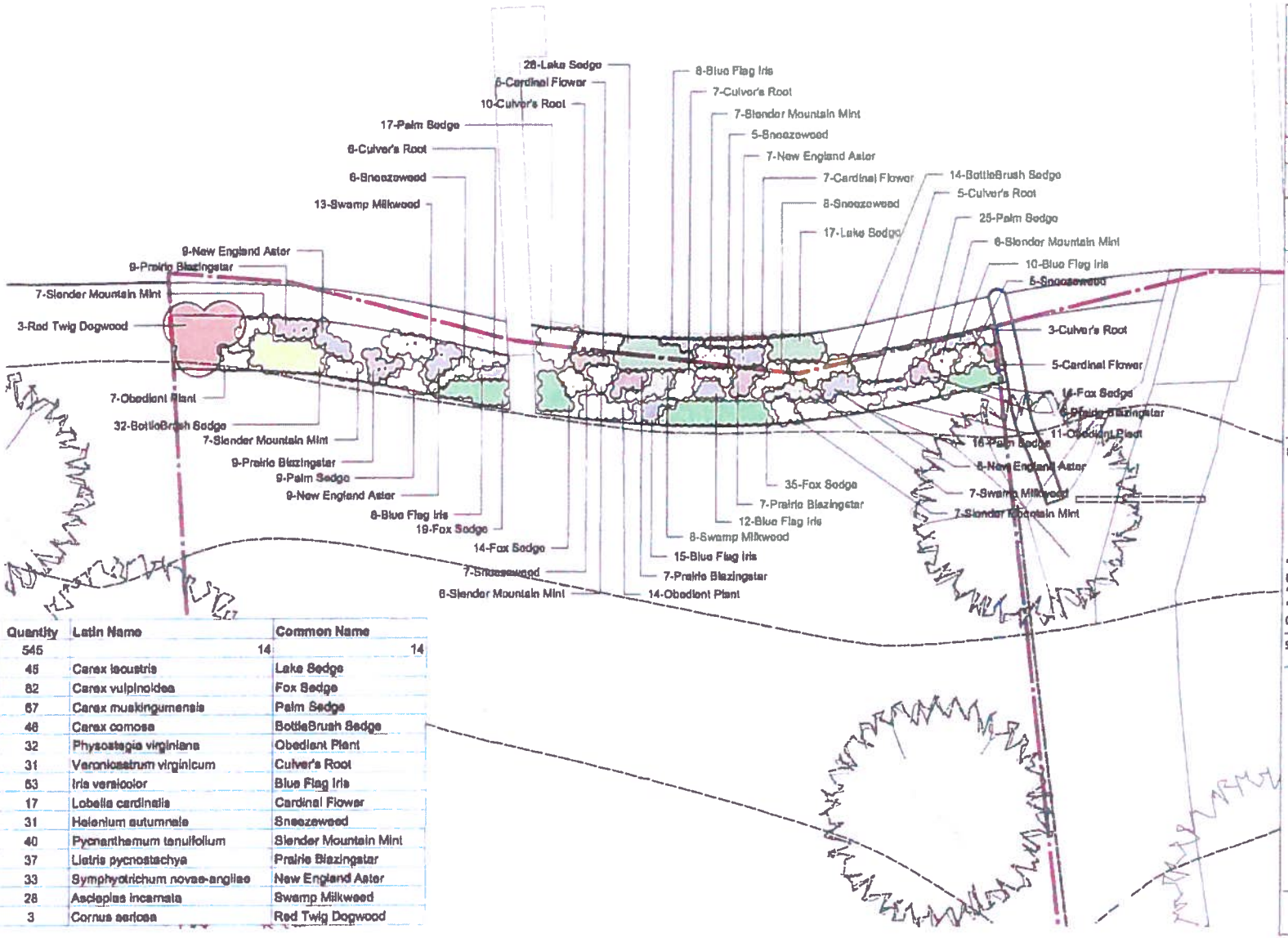
Maintenance agreement

I acknowledge that receipt of a grant is contingent upon agreeing to maintain the project for the number of years outlined in the cost share guidelines document ☒ Yes

Authorization

Name of landowner or responsible party Pat + Kathy Pavelko

Signature Kathryn L Pavelko Date



Quantity	Latin Name	Common Name
545	14	14
45	Carex lacustris	Lake Sedge
82	Carex vulpinoidea	Fox Sedge
67	Carex muskingumensis	Palm Sedge
48	Carex comosa	BottleBrush Sedge
32	Physostegia virginiana	Obedient Plant
31	Veronicastrum virginicum	Culver's Root
53	Iris versicolor	Blue Flag Iris
17	Lobelia cardinalis	Cardinal Flower
31	Helenium autumnale	Sneezeweed
40	Pycnanthemum tenuifolium	Slender Mountain Mint
37	Liatris pycnostachya	Prairie Blazingstar
33	Symphyotrichum novae-angliae	New England Aster
28	Asclepias incarnata	Swamp Milkweed
3	Cornus sericea	Red Twig Dogwood

CARVER SWCD
(952)466-5290
CO.CARVER.MN.US/SWCD

Carver Soil & Water Conservation District
11360 HWY. 212, #6
COLOGNE, MN 55322

PROJECT: PAVELKO

LOCATION: FRONTIER TRL

AGENCY:
RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

DESIGNER: Seth Ristow
DATE: 8/03/17
REVISION:
REVISION:
REVISION:
CHECKED BY:

NOTES:

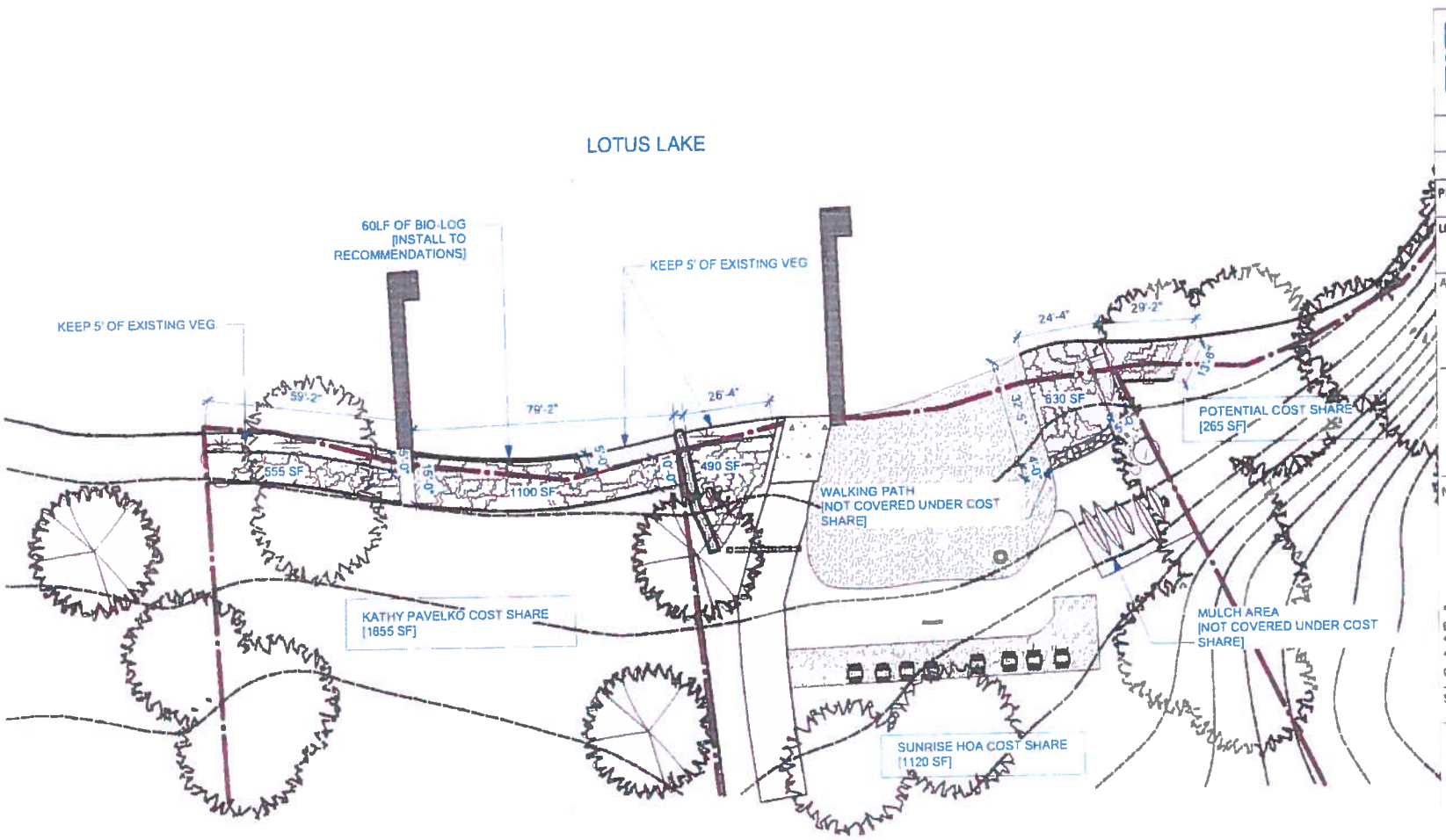
*CALL GOPHER 1 PRIOR TO EXCAVATION
*SITE VERIFY ELEVATIONS
*CALL CARVER SWCD WITH QUESTIONS

SCALE: 1/16"=1'

PLANTING PLAN

NOT FOR CONSTRUCTION

L1.1



CARVER SWCD
(952)466-5230
CO.CARVER.MN.US/SWCD

Carver Soil & Water Conservation District
11360 HWY 212, #6
COLOGNE, MN 55322

PROJECT: LOTUS SHORELINES

LOCATION: FRONTIER TRL.

AGENCY:
RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

DESIGNER: Seth Ristow
DATE: 8/03/17
REVISION:
REVISION:
REVISION:
CHECKED BY:

NOTES:

*CALL GOPHER 1 PRIOR TO EXCAVATION
*SITE VERIFY ELEVATIONS
*CALL CARVER SWCD WITH QUESTIONS

SCALE: 1"=30'

SITE PLAN

NOT FOR CONSTRUCTION

L1.0

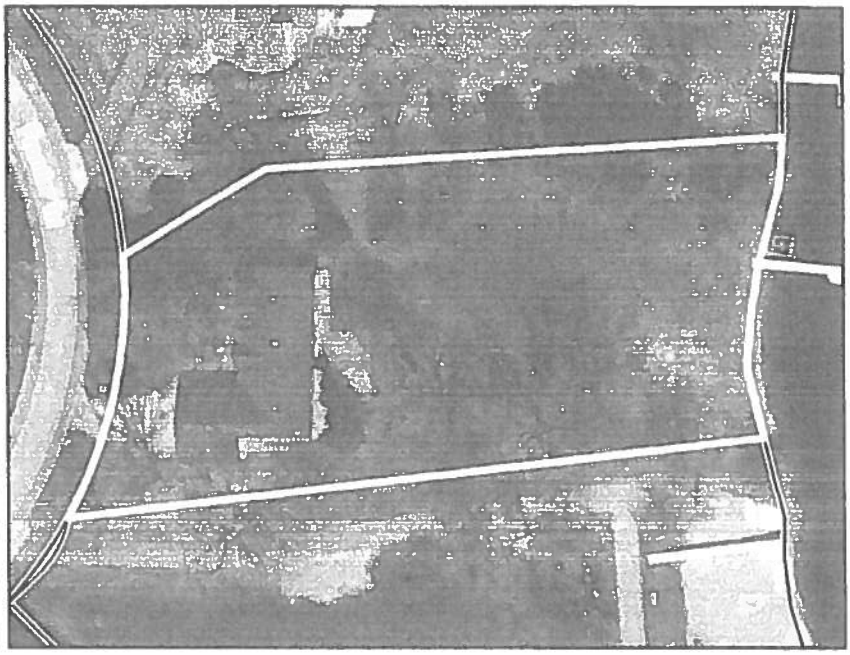
Property Card

Parcel ID Number 258210020

Taxpayer Information

Taxpayer Name
PATRICK F & KATHRYN

Mailing Address
7203 FRONTIER TRL
CHANHASSEN, MN 55317-9605



Property Address

Address
7203 FRONTIER TRL

City
CHANHASSEN, MN 55317

Parcel Information

Uses	Res 1 unit	GIS Acres	1.05
		Deeded Acres	
		Plat	SUNRISE HILLS SECOND ADDITION
		Lot	002
		Block	001
Tax Description			

Building Information

Building Style	1 Story Frame	Above Grade Finished Sq Ft	2473
Year Built	1962	Garage	Y

Miscellaneous Information

School District	Watershed District	Homestead	Green Acres	Ag Preserve
0112	WS 064 RILEY PURG,BLUFF	Y	N	N

Assessor Information

	2016 Values (Payable 2017)	2017 Values (Payable 2018)	
Estimated Market Value			
Land	$496,400.00	$529,000.00	Date of Sale
Building	$357,900.00	$368,300.00	Sale Value
Total	$854,300.00	$897,300.00	

i.Smith Earthscapes

Sunrise HOA
Lotus Lake
Chanhassen, MN 55317

Proposal

Date: 8/9/2017

i.Smith Earthscapes 651-334-5871 www.ismithearthscapes.com

	Details		Price
Canoe Rack Project			
Demo and Removal of Existing Plant Growth:			
All existing shrubs and weeds will be removed and hauled off-site for recycling.			
Demo Total:		$	270.00
Stepping Stone Walking Path:			
NY Bluestone will be used to create a walking path from beach area to the canoe rack. Walk will continue to the fence line.			
Approx 12 pcs Installed:	$55 ea	$	660.00
Mulch Installation:			
Dark Shredded Hardwood Mulch will be installed under and around canoe rack.			
Approx 4 yds Mulch:	$115/yd	$	460.00
	Canoe Area Total:	**$**	**1,390.00**
Drainage Trench Project			
Drainage Trench:			
Exinsting Drainage Trench will be reshaped to allow smooth flow of water. Trench will be filled with angular Rip Rap on top of filter fabric to eliminate erosion. 6" - 15" Superior Trap Rock will be used.			
Trench Total:		$	575.00
Pavelko Cost Share Project			
Shoreline Prep:			
Unwanted organic material will be removed according to site design prepared by SWCD. Area will be weeded, chemically treated, or cut down as necessary.			
Prep Total:		$	585.00
Mulch Application:		$	675.00
Bio Log Installation:			
Bio Logs will be installed according to design created by SWCD			
Install Total:		$	175.00
Protection Fence Installation:			
4' T Fence Installed to keep animals away from new plants. Fence to be installed surrounding entire area.			
Fence Total:		$	615.00
Plant List:			
Cost of Plants includes the plant, delivery and installation.			

Name and Size	Price Each	Qty	Total
Lake Sedge 3.5"	$ 3.50	45	$ 157.50
Fox Sedge 3.5"	$ 2.25	82	$ 184.50
Palm Sedge 3.5"	$ 2.50	67	$ 167.50
BottleBrush Sedge 3.5"	$ 3.25	46	$ 149.50
Obedient Plant 3.5"	$ 3.25	32	$ 104.00
Culver's Root 3.5"	$ 2.50	31	$ 77.50
Blue Flag Iris 3.5"	$ 3.50	53	$ 185.50
Cardinal Flower 3.5"	$ 2.50	17	$ 42.50
Sneezeweed #1	$ 8.95	31	$ 277.45
Slender Mountain Mint 3.5"	$ 2.50	40	$ 100.00
Prairie Blazingstar 3.5"	$ 2.50	37	$ 92.50
New England Aster 3.5"	$ 2.50	33	$ 82.50
Swamp Milkweed 3.5"	$ 2.50	28	$ 70.00
Red Twig Dogwood #5	$ 35.00	3	$ 105.00
Plant Total:			**$ 1,795.95**
		Pavelko Total:	**$ 3,845.95**

Sunrise HOA Cost Share Project

Shoreline Prep:

Unwanted organic material will be removed according to site design prepared by SWCD. Area will be weeded, chemically treated, or cut down as necessary.

Prep Total:	**$ 475.00**
Mulch Application:	**$ 575.00**

Protection Fence Installation:

4' T Fence Installed to keep animals away from new plants. Fence to be installed surrounding entire area.

Fence Total:	**$ 385.00**

Plant List:

Cost of Plants includes the plant, delivery and installation.

Name and Size	Price Each	Qty	Total
Lake Sedge 3.5"	$ 3.50	44	$ 154.00
Fox Sedge 3.5"	$ 2.25	42	$ 94.50
Palm Sedge 3.5"	$ 2.50	78	$ 195.00
BottleBrush Sedge 3.5"	$ 3.25	17	$ 55.25
Obedient Plant 3.5"	$ 3.25	28	$ 91.00
Culver's Root 3.5"	$ 2.50	23	$ 57.50
Blue Flag Iris 3.5"	$ 3.50	45	$ 157.50
Cardinal Flower 3.5"	$ 2.50	14	$ 35.00
Sneezeweed #1	$ 8.95	17	$ 152.15
Slender Mountain Mint 3.5"	$ 2.50	26	$ 65.00
Prairie Blazingstar 3.5"	$ 2.50	20	$ 50.00

New England Aster 3.5"	$	2.50	18	$ 45.00
Swamp Milkweed 3.5"	$	2.50	22	$ 55.00
Red Twig Dogwood #5	$	35.00	3	$ 105.00
Bush Honeysuckle #5	$	35.00	9	$ 315.00
Plant Total:				**$ 1,626.90**

Sunrise Hoa Total: $ 3,061.90

Potential Cost Share Project

Shoreline Prep:

Unwanted organic material will be removed according to site design prepared by SWCD. Area will be weeded, chemically treated, or cut down as necessary.

Prep Total:	**$ 225.00**
Mulch application:	**$ 175.00**

Protection Fence Installation:

4' T Fence Installed to keep animals away from new plants. Fence to be installed surrounding entire area.

Fence Total:	**$ 245.00**

Plant List:

Cost of Plants includes the plant, delivery and installation.

Name and Size	Price Each	Qty	Total
Lake Sedge 3.5"	$ 3.50	36	$ 126.00
Palm Sedge 3.5"	$ 2.50	24	$ 60.00
Obedient Plant 3.5"	$ 3.25	7	$ 22.75
Prairie Blazingstar 3.5"	$ 2.50	9	$ 22.50
Swamp Milkweed 3.5"	$ 2.50	10	$ 25.00
Sneezeweed #1	$ 8.95	7	$ 62.65
Plant Total:			**$ 318.90**

Potential Total: $ 963.90

Cost share grant application
2017

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

Do not fill in gray boxes. District use only.

Applicant type (check one) ☒Homeowner ☐Non-profit - 501(c)(3)
☐Business or corporation ☐Public agency or local government unit ☐School

Project type (check all that apply) ☐Raingarden ☐Vegetated swale ☒Lake/creek/wetland buffer
☐Shoreline/bank stabilization ☐Wetland restoration ☐Pervious hard surface ☐Infiltration basin
☐Conservation practice ☐Other

Applicant information

Works or resides in district? Y

Name Steven & Michelle Christopher Address 7300 Laredo Dr
City/State/Zip Chanhassen / MN / 55317
Phone 952-463-5586 Alt phone 952-242-7135 Email Michelleachristopher@yahoo.com

Primary contact

☐Same as applicant (leave blank)

Name Kathy Pavelko Address 7203 Frontier Trail
City/State/Zip Chanhassen MN 55317
Phone 612-308-9542 Alt phone Email KaTpavelko@gmail.com

Project location

Address 7300 Laredo Dr City/State/Zip Chanhassen, MN 55317
Property Identification Number (PID) 25820013O
Property owner(s) Steven & Michelle Christopher

Project located in district? Y

Project summary

Tributary to a waterbody? No / Yes, indirectly / Y Yes, adjacent

Title Chrisopher Landscape Buffer
Total project cost ~~$543.90~~ $963.90 Grant amount requested ~~$407.92~~ $722.93
Estimated start date Fall 2017 Estimated completion date Fall 2017
Sub-watershed Lotus Lake

Project located in priority drainage area? Y

Is project tributary to a water body? ☐No, water remains on site ☐Yes, indirectly ☒Yes, directly adjacent

2-3 sentence project description

Shoreline buffer on Lotus Lake

Is this work required as a part of a permit? ☒No ☐Yes

(If yes: describe how the project provides water quality treatment beyond permit requirements on the next page.)

Site visit

One of the requirements for a complete application is a site visit from district staff.

Have you had a site visit? ☐No ☒Yes

(If you answered no, please contact staff to schedule one: 952-607-6512)

Project details

Do not fill in gray boxes. District use only.

Checklist To be considered complete the following must be included with the application.

- ☐ location map
- ☐ site plan & design schematics
- ☐ itemized budget or contractor bid
- ☐ project time-line
- ☐ proof of property ownership
- ☐ plant list & planting plan (if project includes plants)

Is time-line reasonable?	Y
Is budget reasonable?	Y
Is plan comprehensive?	Y
Does plant list conform to district's approved plant list?	Y

Description

Describe the current site conditions, as well as site history, and past management.

Previously site was pasture and farmland. Quality of lake water was very poor. As homes were built holding ponds were created. At times now because of the amount of residences on and near lake the lake quality has deteriorated.

What are the project objectives and expected outcomes? Give any additional project details.

To provide a natural landscape barrier to protect lake from direct runoff
See attachment for list of flowers shrubs etc to be included in project

Are there multiple objectives?	Y
Does the project have well-defined, measurable results?	Y

List other key participants and their roles

neighbors and lake shore association will also be participating in trying to create this barrier

Does the project demonstrate strong partnerships & support?	Y

Which cost share goals does the project support? (check all that apply)

- ☒ Improve watershed resources
- ☒ Increase awareness of the vulnerability of watershed resources
- ☒ Increase familiarity with and acceptance of solutions to improve waters
- ☒ Foster water resource stewardship

How does the project support the goals you checked?

1. Improve watershed resources by decreasing runoff and providing a more natural habitat for native animals
2. Increase awareness that other lake owners and users have of providing and encouraging the natural landscape.

Project details (continued)

Do not fill in gray boxes.
District use only.

Benefits Estimate the project benefits in terms of restoration and/or **annual** pollution reduction. If you are working with a designer or contractor, they can provide these numbers. If you need help, contact the district cost share program coordinator.

Benefit	Amount	
Water captured		gal / year
Water infiltrated		gal / year
Phosphorus removed		lbs / year
Sediment removed		lbs / year
Land restored	280	ft²

(30 linear feet)

provides buffering

Does the project provide water quality treatment?	Some
Does the project provide restoration?	Y

How will you share the project results with your community?

Lake homeowners and association members will be able to see first hand how well the natural landscape barrier enhances the lakeshore

Is there educational value to the project?	Y
Will the project be visible to the public?	Y

visibility with HOA and lake

Are there other projects that could be initiated as a result of this one?

Yes. As more people see the best conservation practices being put into place we hope they will follow our lead.

Evaluation

How will the project be monitored and evaluated? As homeowner we will be upkeeping so as to preserve our water resources

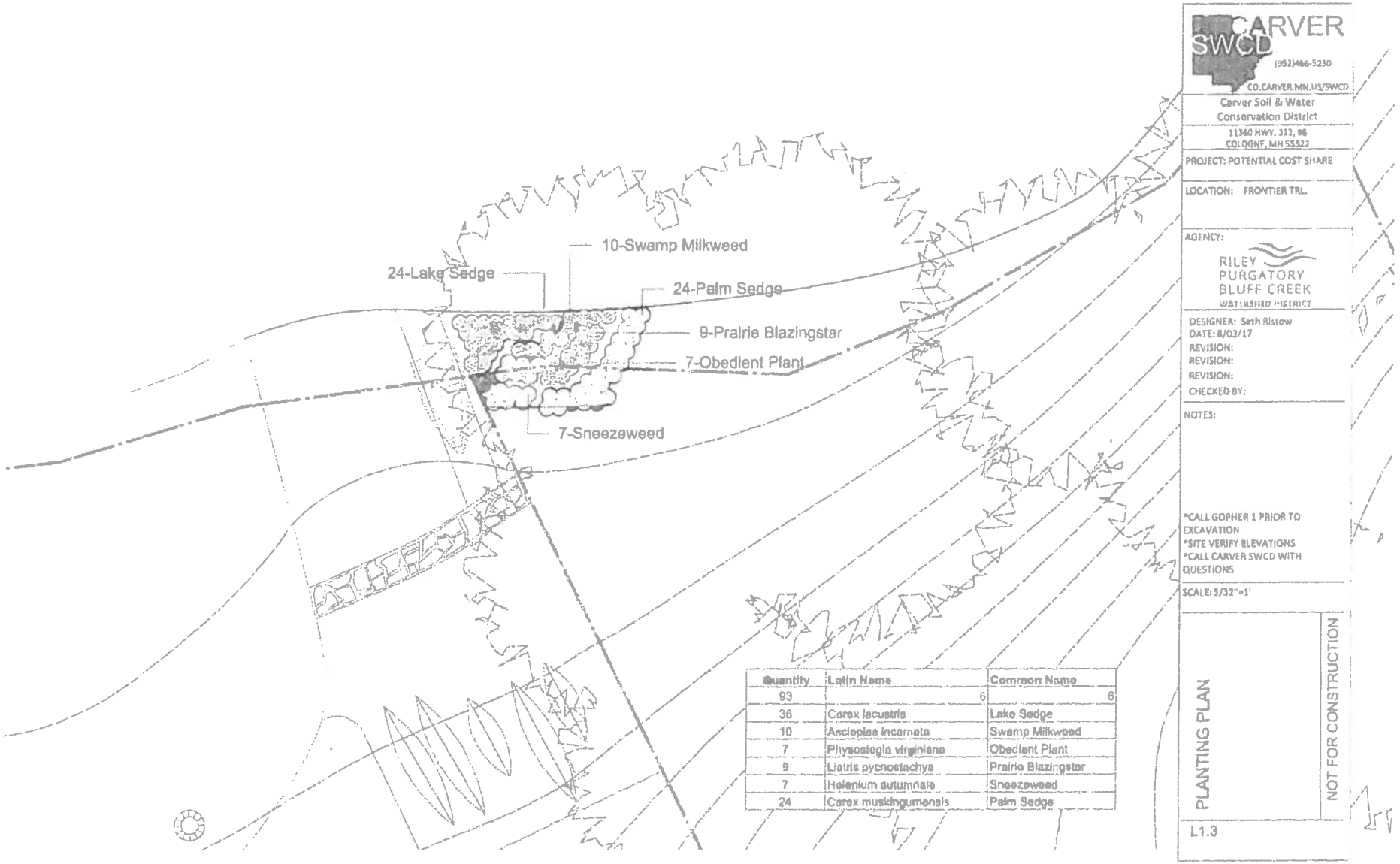
Maintenance agreement

I acknowledge that receipt of a grant is contingent upon agreeing to maintain the project for the number of years outlined in the cost share guidelines document ☒ Yes

Authorization

Name of landowner or responsible party _____

Signature _____ Date 8/13/17



Quantity	Latin Name	Common Name
93	6	6
36	Carex lacustris	Lake Sedge
10	Asclepias incarnata	Swamp Milkweed
7	Physostegia virginiana	Obedient Plant
9	Liatris pycnostachya	Prairie Blazingstar
7	Helenium autumnale	Sneezeweed
24	Carex muskingumensis	Palm Sedge

CARVER SWCD
(952)466-5230
CO.CARVER.MN.US/SWCD

Carver Soil & Water Conservation District
11360 HWY. 212, #6
COLOGNE, MN 55322

PROJECT: POTENTIAL COST SHARE

LOCATION: FRONTIER TRL.

AGENCY:
RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

DESIGNER: Seth Ristow
DATE: 8/03/17
REVISION:
REVISION:
REVISION:
CHECKED BY:

NOTES:

*CALL GOPHER 1 PRIOR TO EXCAVATION
*SITE VERIFY ELEVATIONS
*CALL CARVER SWCD WITH QUESTIONS

SCALE: 3/32"=1'

PLANTING PLAN

NOT FOR CONSTRUCTION

L1.3

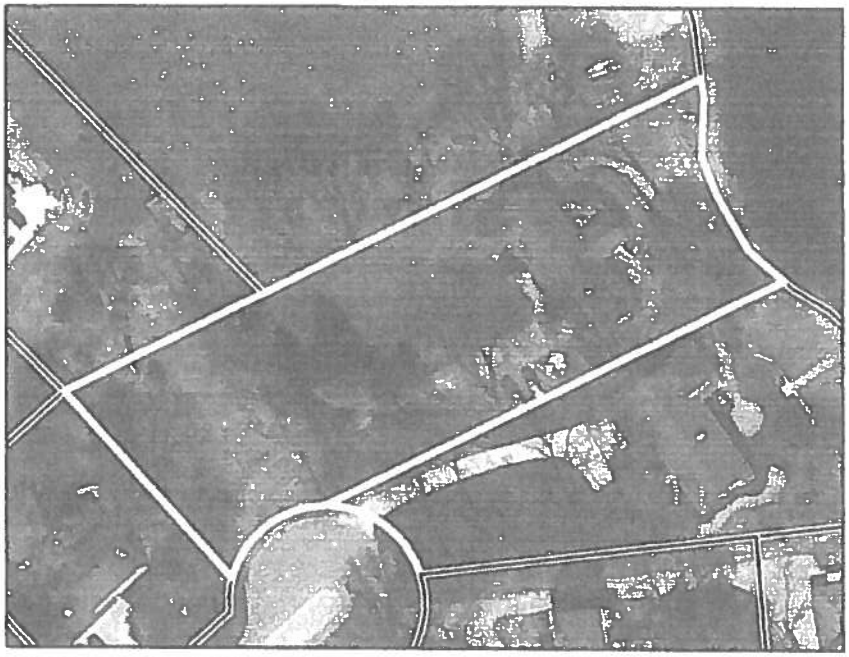
Property Card

Parcel ID Number 258200130

Taxpayer Information

Taxpayer Name
STEVEN A CHRISTOP
MICHELLE A CHRISTO R

Mailing Address
7300 LAREDO DR
CHANHASSEN, MN 55317-9608



Property Address

Address
7300 LAREDO DR

City
CHANHASSEN, MN 55317

Parcel Information

Uses Res 1		
	Deeded Acres	
	Lot	
Tax Description		

Building Information

Building Style 1 Story Frame	Above Grade Finished Sq Ft 1640	
Year Built 1962		

Miscellaneous Information

School District	Wa	Homestead		Ag Preserve
0112	WS 064	N		N

Assessor Information

Estimated Market Value			
Land	$490,200.00	$520,400.00	Date of Sale 8/22/2014
Building	$181,800.00	$223,900.00	Sale Value $665,500.00
Total	$672,000.00	$744,300.00	

i.Smith Earthscapes

Sunrise HOA
Lotus Lake
Chanhassen, MN 55317

Proposal

Date: 8/9/2017

i.Smith Earthscapes 651-334-5871 www.ismithearthscapes.com

	Details		Price
Canoe Rack Project			
Demo and Removal of Existing Plant Growth:			
All existing shrubs and weeds will be removed and hauled off-site for recycling.			
Demo Total:		$	270.00
Stepping Stone Walking Path:			
NY Bluestone will be used to create a walking path from beach area to the canoe rack. Walk will continue to the fence line.			
Approx 12 pcs Installed:	$55 ea	$	660.00
Mulch Installation:			
Dark Shredded Hardwood Mulch will be installed under and around canoe rack.			
Approx 4 yds Mulch:	$115/yd	$	460.00
	Canoe Area Total:	**$**	**1,390.00**
Drainage Trench Project			
Drainage Trench:			
Exinsting Drainage Trench will be reshaped to allow smooth flow of water. Trench will be filled with angular Rip Rap on top of filter fabric to eliminate erosion. 6" - 15" Superior Trap Rock will be used.			
Trench Total:		$	575.00
Pavelko Cost Share Project			
Shoreline Prep:			
Unwanted organic material will be removed according to site design prepared by SWCD. Area will be weeded, chemically treated, or cut down as necessary.			
Prep Total:		$	585.00
Mulch Application:		$	675.00
Bio Log Installation:			
Bio Logs will be installed according to design created by SWCD			
Install Total:		$	175.00
Protection Fence Installation:			
4' T Fence Installed to keep animals away from new plants. Fence to be installed surrounding entire area.			
Fence Total:		$	615.00
Plant List:			
Cost of Plants includes the plant, delivery and installation.			

Name and Size	Price Each	Qty	Total
Lake Sedge 3.5"	$ 3.50	45	$ 157.50
Fox Sedge 3.5"	$ 2.25	82	$ 184.50
Palm Sedge 3.5"	$ 2.50	67	$ 167.50
BottleBrush Sedge 3.5"	$ 3.25	46	$ 149.50
Obedient Plant 3.5"	$ 3.25	32	$ 104.00
Culver's Root 3.5"	$ 2.50	31	$ 77.50
Blue Flag Iris 3.5"	$ 3.50	53	$ 185.50
Cardinal Flower 3.5"	$ 2.50	17	$ 42.50
Sneezeweed #1	$ 8.95	31	$ 277.45
Slender Mountain Mint 3.5"	$ 2.50	40	$ 100.00
Prairie Blazingstar 3.5"	$ 2.50	37	$ 92.50
New England Aster 3.5"	$ 2.50	33	$ 82.50
Swamp Milkweed 3.5"	$ 2.50	28	$ 70.00
Red Twig Dogwood #5	$ 35.00	3	$ 105.00
Plant Total:			**$ 1,795.95**
		Pavelko Total:	**$ 3,845.95**

Sunrise HOA Cost Share Project

Shoreline Prep:

Unwanted organic material will be removed according to site design prepared by SWCD. Area will be weeded, chemically treated, or cut down as necessary.

Prep Total:	**$ 475.00**
Mulch Application:	**$ 575.00**

Protection Fence Installation:

4' T Fence Installed to keep animals away from new plants. Fence to be installed surrounding entire area.

Fence Total:	**$ 385.00**

Plant List:

Cost of Plants includes the plant, delivery and installation.

Name and Size	Price Each	Qty	Total
Lake Sedge 3.5"	$ 3.50	44	$ 154.00
Fox Sedge 3.5"	$ 2.25	42	$ 94.50
Palm Sedge 3.5"	$ 2.50	78	$ 195.00
BottleBrush Sedge 3.5"	$ 3.25	17	$ 55.25
Obedient Plant 3.5"	$ 3.25	28	$ 91.00
Culver's Root 3.5"	$ 2.50	23	$ 57.50
Blue Flag Iris 3.5"	$ 3.50	45	$ 157.50
Cardinal Flower 3.5"	$ 2.50	14	$ 35.00
Sneezeweed #1	$ 8.95	17	$ 152.15
Slender Mountain Mint 3.5"	$ 2.50	26	$ 65.00
Prairie Blazingstar 3.5"	$ 2.50	20	$ 50.00

New England Aster 3.5"	$	2.50	18	$ 45.00
Swamp Milkweed 3.5"	$	2.50	22	$ 55.00
Red Twig Dogwood #5	$	35.00	3	$ 105.00
Bush Honeysuckle #5	$	35.00	9	$ 315.00
Plant Total:				**$ 1,626.90**

Sunrise Hoa Total: $ 3,061.90

Potential Cost Share Project

Shoreline Prep:

Unwanted organic material will be removed according to site design prepared by SWCD. Area will be weeded, chemically treated, or cut down as necessary.

Prep Total:	**$ 225.00**
Mulch application:	**$ 175.00**

Protection Fence Installation:

4' T Fence Installed to keep animals away from new plants. Fence to be installed surrounding entire area.

Fence Total:	**$ 245.00**

Plant List:

Cost of Plants includes the plant, delivery and installation.

Name and Size	Price Each	Qty	Total
Lake Sedge 3.5"	$ 3.50	36	$ 126.00
Palm Sedge 3.5"	$ 2.50	24	$ 60.00
Obedient Plant 3.5"	$ 3.25	7	$ 22.75
Prairie Blazingstar 3.5"	$ 2.50	9	$ 22.50
Swamp Milkweed 3.5"	$ 2.50	10	$ 25.00
Sneezeweed #1	$ 8.95	7	$ 62.65
Plant Total:			**$ 318.90**

Potential Total: $ 963.90

Cost share grant application
2017

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

Do not fill in gray boxes. District use only.

Applicant type (check one) ☐Homeowner ☒Non-profit - 501(c)(3)
☐Business or corporation ☐Public agency or local government unit ☐School

Project type (check all that apply) ☐Raingarden ☐Vegetated swale ☒Lake/creek/wetland buffer
☐Shoreline/bank stabilization ☐Wetland restoration ☐Pervious hard surface ☐Infiltration basin
☐Conservation practice ☐Other_____

Applicant information

Works or resides in district? Y

Name Sunrise Hills Association Address 7205 Frontier Trl Chanhassen,
City/State/Zip Chanhassen, MN 55317
Phone 612-308-9542 Alt phone 952-270-8188 Email kazpavelko@gmail com

Primary contact

☐Same as applicant (leave blank)

Name Kathryn Pavelko Address 7203 Frontier Trail
City/State/Zip Chanhassen MN 55317
Phone 612-308-9542 Alt phone 952-270-8188 Email kazpavelko@gmail com

Project location

Address 7205 Frontier Trail City/State/Zip Chanhassen, MN 55317
Property Identification Number (PID) 256780010
Property owner(s) Sunrise Hills Assoc.

Project located in district? Y

Project summary

Tributary to a waterbody? No / Yes, indirectly / Yes, adjacent: Y

Title Sunrise Hill Lake Buffer
Total project cost ~~2676.90~~ $3636.9 Grant amount requested ~~2007.68~~ $2727.68
Estimated start date Fall 2017 Estimated completion date Fall 2017
Sub-watershed Lotus Lake

Project located in priority drainage area? Y

Is project tributary to a water body? ☐No, water remains on site ☐Yes, indirectly ☒Yes, directly adjacent

2-3 sentence project description

Shoreline buffer Lotus Lake

Is this work required as a part of a permit? ☒No ☐Yes
(If yes: describe how the project provides water quality treatment beyond permit requirements on the next page.)

Site visit

One of the requirements for a complete application is a site visit from district staff.
Have you had a site visit? ☐No ☒Yes
(If you answered no, please contact staff to schedule one: 952-607-6512)

Project details

Do not fill in gray boxes. District use only.

Checklist To be considered complete the following must be included with the application.

- ☐ location map
- ☐ site plan & design schematics
- ☐ itemized budget or contractor bid
- ☐ project time-line
- ☐ proof of property ownership
- ☐ plant list & planting plan (if project includes plants)

Is time-line reasonable?	Y
Is budget reasonable?	Y
Is plan comprehensive?	Y
Does plant list conform to district's approved plant list?	Y

Description

Describe the current site conditions, as well as site history, and past management.

Past history the shore line was farm and pasture land. Homeowners Association is now owners. Road, beach, and private access to Lotus Lake. Runoff into lake from street and drainge pipe continues to be a problem. Association would like to eliminate as much direct runoff as possible by having a natural barrier between the lake and lot. Quality of water in Lotus Lake seems to have declined and association wants to improve this

What are the project objectives and expected outcomes? Give any additional project details.

Runoff has been significant problem in the past. Association would like to create a natural landscape barrier that will help prevent chemicals, invasive species, and detrimetal runoff from entering the lake. (See attachment for list of flowers, shrubs, etc to be included in project).

Are there multiple objectives?	Y
Does the project have well-defined, measurable results?	Y

List other key participants and their roles Over 55 homes belong to Sunrise Hills Association. Homeownes and general community who use this lake will benefit from cleaner water and the increase in a natural habitat. We believe that all of these community members are key participants because they use and love the lake.

Does the project demonstrate strong partnerships & support?	Y

Which cost share goals does the project support? (check all that apply)

- ☒ Improve watershed resources
- ☒ Increase awareness of the vulnerability of watershed resources
- ☒ Increase familiarity with and acceptance of solutions to improve waters
- ☒ Foster water resource stewardship

How does the project support the goals you checked?

Decreases runoff.
Increase natural habitat
Lake homeowners and association members will become more aware of the steps that can be taken to improve our Lake. Also, they will have a concrete look at what a natural barrier can do for the lake and how it will look so that others will join in the effort to improve our watershed resources. Stewardship of our natural resources will have started and others will follow suit!

Project details (continued)

Do not fill in gray boxes.
District use only.

Benefits Estimate the project benefits in terms of restoration and/or **annual** pollution reduction. If you are working with a designer or contractor, they can provide these numbers. If you need help, contact the district cost share program coordinator.

Benefit	Amount	
Water captured		gal / year
Water infiltrated		gal / year
Phosphorus removed		lbs / year
Sediment removed		lbs / year
Land restored	1200	ft²

50 linear feet

provides buffering

Does the project provide water quality treatment?	some
Does the project provide restoration?	Y

How will you share the project results with your community?

56 Home owners belong to the sunrisehills association. Our members will see the natural landscaping because all members frequent the association beach. They are invested in this beautiful natural resource called Lotus Lake In addition we highlight on our association Facebook page and Email communication. Other lakeshore owners and users of Lake will see the natural landscape

Is there educational value to the project?	Y
Will the project be visible to the public?	Y

Are there other projects that could be initiated as a result of this one?

Yes! As awareness increases and other homeowners see the project we believe others will follow and implement

Evaluation

How will the project be monitored and evaluated?

The Sunrise Hills Association has a governing board that will closely monitor this project

Maintenance agreement

I acknowledge that receipt of a grant is contingent upon agreeing to maintain the project for the number of years outlined in the cost share guidelines document ☒ Yes

Authorization

Name of landowner or responsible party Micah Commander (President)

Signature _____ Date 8/9/17

Property Card

Parcel ID Number 256780010

Taxpayer Information

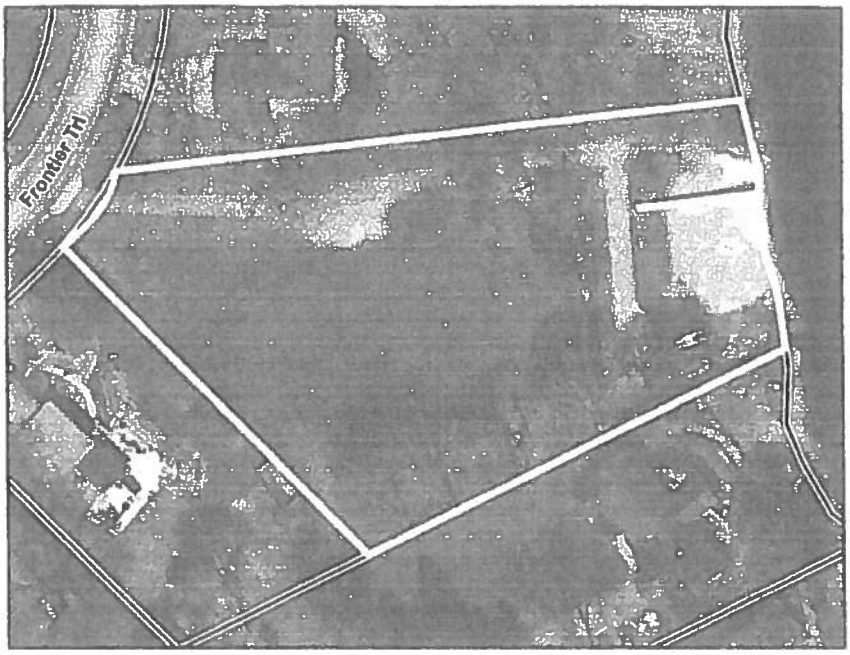
Taxpayer Name
SUNRISE HILLS
C/O CHARLES ROBBINS

Mailing Address
7340 LONGVIEW CIR
CHANHASSEN, MN 55317-9797

Property Address

Address
7205 FRONTIER TRL

City
CHANHASSEN, MN 55317



Parcel Information

Uses	T E Misc Co D 3	GIS Acres 1.33	Net Acres
		Deeded Acres	
		Plat RLS 16	
		Lot	
		Block	
Tax Description	TRACT A		

Building Information

Building Style	Above Grade Finished Sq Ft	Bedrooms
Year Built	Garage	

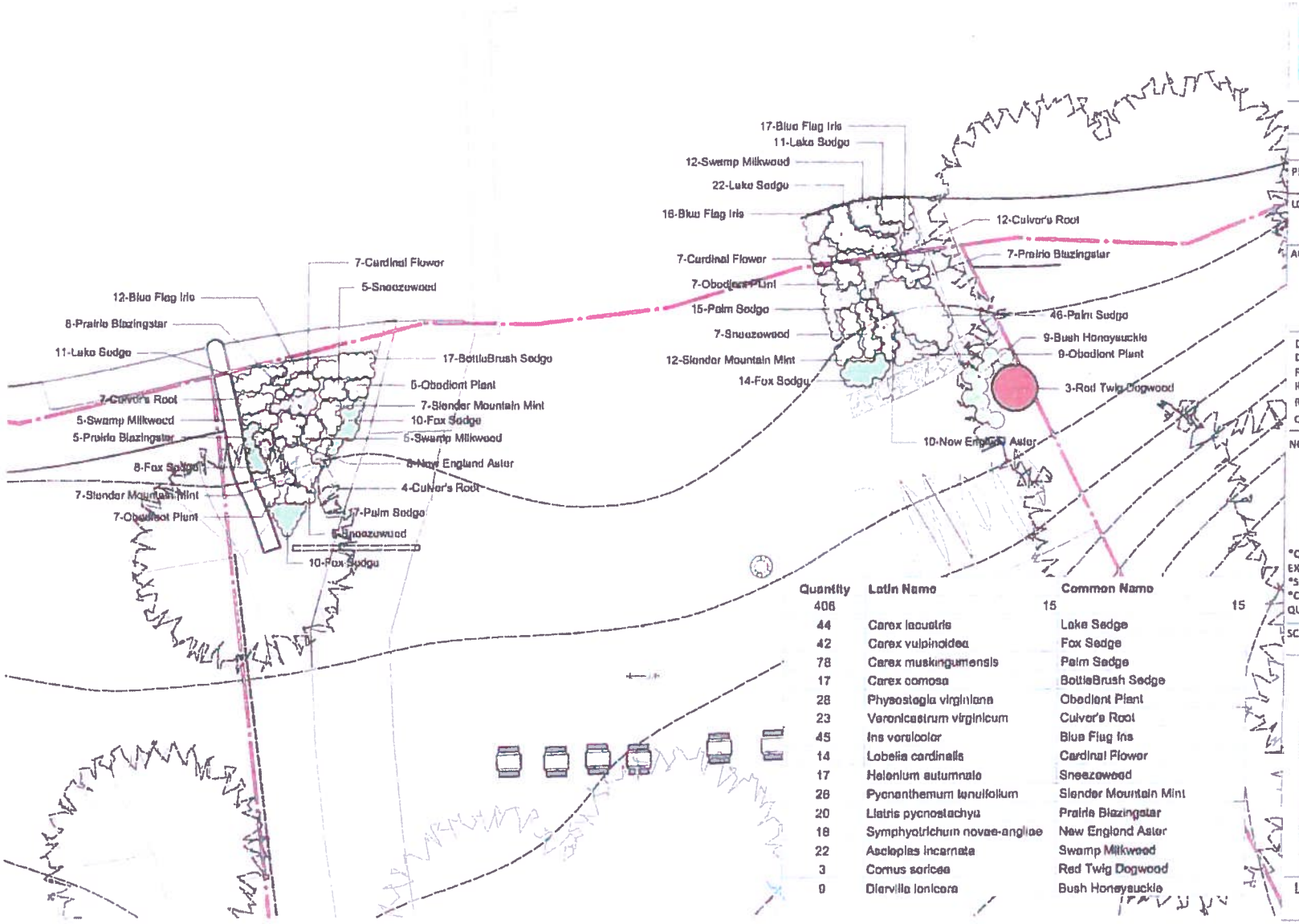
Miscellaneous Information

School District	Watershed District	Homestead	Green Acres	Ag Preserve
0112	WS 064 RILEY PURG BLUFF	N	N	N

Assessor Information

	2016 Values (Payable 2017)	2017 Values (Payable 2	
Estimated Market Valu			
Lan	$0.00	$0.00	Date of Sale
Buildin	$0.00	$0.00	Sale Value
T	$0.00	$0.00	

Tuesday A



Quantity	Latin Name	Common Name
406		15 15
44	Carex lacustris	Lake Sedge
42	Carex vulpinoidea	Fox Sedge
78	Carex muskingumensis	Palm Sedge
17	Carex comosa	BottleBrush Sedge
28	Physostegia virginiana	Obedient Plant
23	Veronicastrum virginicum	Culver's Root
45	Iris versicolor	Blue Flag Iris
14	Lobelia cardinalis	Cardinal Flower
17	Helenium autumnale	Sneezeweed
26	Pycnanthemum tenuifolium	Slender Mountain Mint
20	Liatris pycnostachya	Prairie Blazingstar
18	Symphyotrichum novae-angliae	New England Aster
22	Asclepias incarnata	Swamp Milkweed
3	Cornus sericea	Red Twig Dogwood
9	Diervilla lonicera	Bush Honeysuckle

CARVER SWCD
(952)466-5230
CO.CARVER.MN.US/SWCD
Carver Soil & Water Conservation District
11360 HWY 212, #6
COLOGNE, MN 55322

PROJECT: SUNRISE HOA

LOCATION: FRONTIER TRL

AGENCY: RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

DESIGNER: Seth Ristow
DATE: 8/03/17
REVISION:
REVISION:
REVISION:
CHECKED BY:

NOTES:

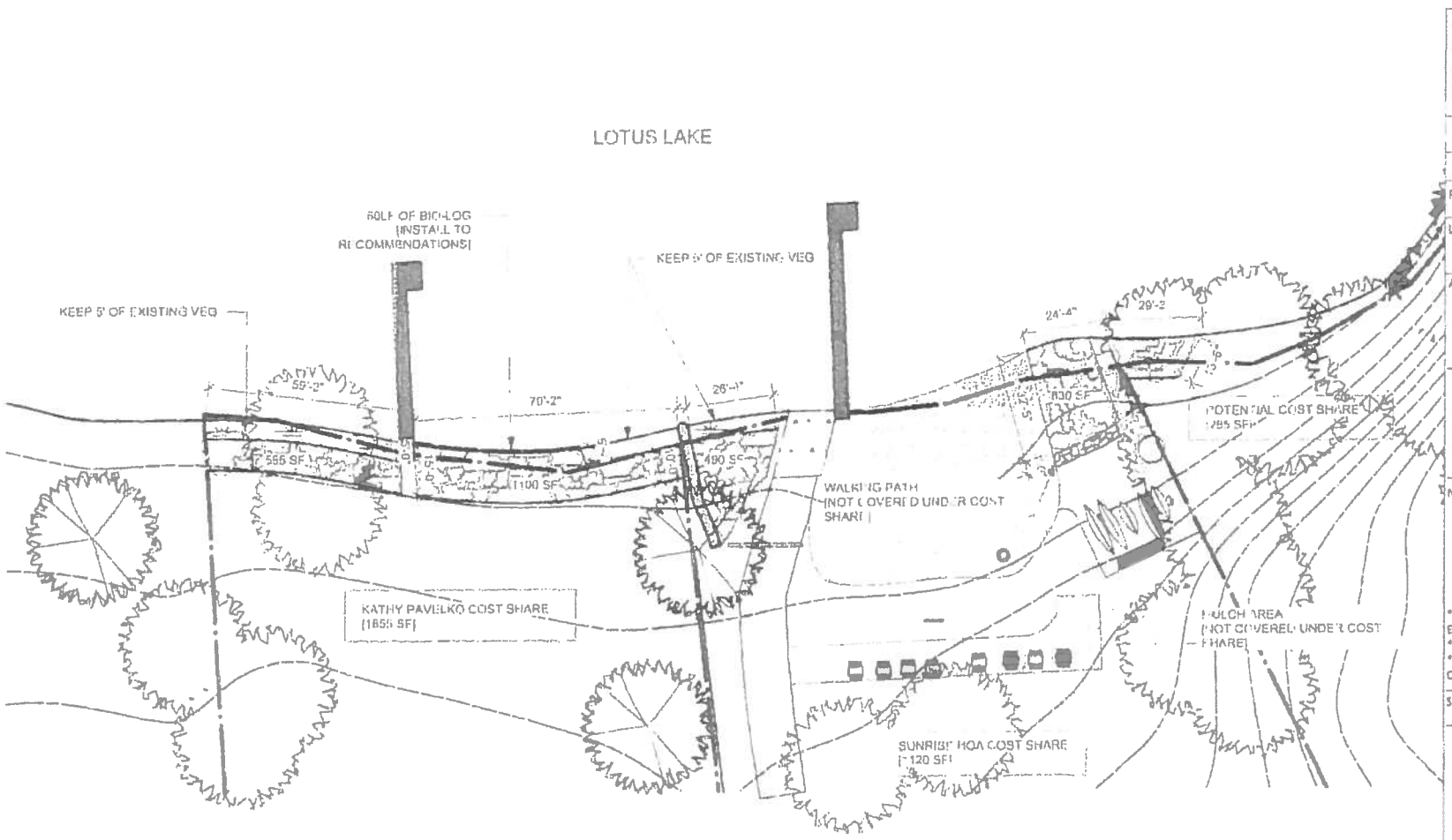
*CALL GOPHER 1 PRIOR TO EXCAVATION
*SITE VERIFY ELEVATIONS
*CALL CARVER SWCD WITH QUESTIONS

SCALE: 1/16"=1'

PLANTING PLAN

NOT FOR CONSTRUCTION

L1.2



CARVER SWCD
(952)466-5230
CO.CARVER.MN.US/SWCD

Carver Soil & Water Conservation District
11360 HWY 212, #6
COLOGNE, MN 55322

PROJECT: LOTUS SHORELINES

LOCATION: FRONTIER TRL

AGENCY:
RILEY PURGATORY BLUFF CREEK
WATERSHED DISTRICT

DESIGNER: Seth Ristow
DATE: 8/03/17
REVISION:
REVISION:
REVISION:
CHECKED BY:

NOTES:

*CALL GOPHER 1 PRIOR TO EXCAVATION
*SITE VERIFY ELEVATIONS
*CALL CARVER SWCD WITH QUESTIONS

SCALE: 1"=30'

SITE PLAN

NOT FOR CONSTRUCTION

L1.0

i.Smith Earthscapes

Sunrise HOA
Lotus Lake
Chanhassen, MN 55317

Proposal

Date: 8/9/2017

i.Smith Earthscapes 651-334-5871 www.ismithearthscapes.com

	Details		Price
Canoe Rack Project			
Demo and Removal of Existing Plant Growth:			
All existing shrubs and weeds will be removed and hauled off-site for recycling.			
Demo Total:		$	270.00
Stepping Stone Walking Path:			
NY Bluestone will be used to create a walking path from beach area to the canoe rack. Walk will continue to the fence line.			
Approx 12 pcs Installed:	$55 ea	$	660.00
Mulch Installation:			
Dark Shredded Hardwood Mulch will be installed under and around canoe rack.			
Approx 4 yds Mulch:	$115/yd	$	460.00
	Canoe Area Total:	**$**	**1,390.00**
Drainage Trench Project			
Drainage Trench:			
Exinsting Drainage Trench will be reshaped to allow smooth flow of water. Trench will be filled with angular Rip Rap on top of filter fabric to eliminate erosion. 6" - 15" Superior Trap Rock will be used.			
Trench Total:		$	575.00
Pavelko Cost Share Project			
Shoreline Prep:			
Unwanted organic material will be removed according to site design prepared by SWCD. Area will be weeded, chemically treated, or cut down as necessary.			
Prep Total:		$	585.00
Mulch Application:		$	675.00
Bio Log Installation:			
Bio Logs will be installed according to design created by SWCD			
Install Total:		$	175.00
Protection Fence Installation:			
4' T Fence Installed to keep animals away from new plants. Fence to be installed surrounding entire area.			
Fence Total:		$	615.00
Plant List:			
Cost of Plants includes the plant, delivery and installation.			

Name and Size	Price Each	Qty	Total
Lake Sedge 3.5"	$ 3.50	45	$ 157.50
Fox Sedge 3.5"	$ 2.25	82	$ 184.50
Palm Sedge 3.5"	$ 2.50	67	$ 167.50
BottleBrush Sedge 3.5"	$ 3.25	46	$ 149.50
Obedient Plant 3.5"	$ 3.25	32	$ 104.00
Culver's Root 3.5"	$ 2.50	31	$ 77.50
Blue Flag Iris 3.5"	$ 3.50	53	$ 185.50
Cardinal Flower 3.5"	$ 2.50	17	$ 42.50
Sneezeweed #1	$ 8.95	31	$ 277.45
Slender Mountain Mint 3.5"	$ 2.50	40	$ 100.00
Prairie Blazingstar 3.5"	$ 2.50	37	$ 92.50
New England Aster 3.5"	$ 2.50	33	$ 82.50
Swamp Milkweed 3.5"	$ 2.50	28	$ 70.00
Red Twig Dogwood #5	$ 35.00	3	$ 105.00
Plant Total:			**$ 1,795.95**
		Pavelko Total:	**$ 3,845.95**

Sunrise HOA Cost Share Project

Shoreline Prep:

Unwanted organic material will be removed according to site design prepared by SWCD. Area will be weeded, chemically treated, or cut down as necessary.

Prep Total:	**$ 475.00**
Mulch Application:	**$ 575.00**

Protection Fence Installation:

4' T Fence Installed to keep animals away from new plants. Fence to be installed surrounding entire area.

Fence Total:	**$ 385.00**

Plant List:

Cost of Plants includes the plant, delivery and installation.

Name and Size	Price Each	Qty	Total
Lake Sedge 3.5"	$ 3.50	44	$ 154.00
Fox Sedge 3.5"	$ 2.25	42	$ 94.50
Palm Sedge 3.5"	$ 2.50	78	$ 195.00
BottleBrush Sedge 3.5"	$ 3.25	17	$ 55.25
Obedient Plant 3.5"	$ 3.25	28	$ 91.00
Culver's Root 3.5"	$ 2.50	23	$ 57.50
Blue Flag Iris 3.5"	$ 3.50	45	$ 157.50
Cardinal Flower 3.5"	$ 2.50	14	$ 35.00
Sneezeweed #1	$ 8.95	17	$ 152.15
Slender Mountain Mint 3.5"	$ 2.50	26	$ 65.00
Prairie Blazingstar 3.5"	$ 2.50	20	$ 50.00

New England Aster 3.5"	$	2.50	18	$ 45.00
Swamp Milkweed 3.5"	$	2.50	22	$ 55.00
Red Twig Dogwood #5	$	35.00	3	$ 105.00
Bush Honeysuckle #5	$	35.00	9	$ 315.00
Plant Total:				**$ 1,626.90**

Sunrise Hoa Total: $ 3,061.90

Potential Cost Share Project

Shoreline Prep:

Unwanted organic material will be removed according to site design prepared by SWCD. Area will be weeded, chemically treated, or cut down as necessary.

Prep Total:	**$ 225.00**
Mulch application:	**$ 175.00**

Protection Fence Installation:

4' T Fence Installed to keep animals away from new plants. Fence to be installed surrounding entire area.

Fence Total:	**$ 245.00**

Plant List:

Cost of Plants includes the plant, delivery and installation.

Name and Size	Price Each	Qty	Total
Lake Sedge 3.5"	$ 3.50	36	$ 126.00
Palm Sedge 3.5"	$ 2.50	24	$ 60.00
Obedient Plant 3.5"	$ 3.25	7	$ 22.75
Prairie Blazingstar 3.5"	$ 2.50	9	$ 22.50
Swamp Milkweed 3.5"	$ 2.50	10	$ 25.00
Sneezeweed #1	$ 8.95	7	$ 62.65
Plant Total:			**$ 318.90**

Potential Total: $ 963.90

Minutes: Monday August 21, 2017

RPBCWD Citizen's Advisory Committee Monthly Meeting

Location: RPBCWD new offices: 18681 Lake Street, Chanhassen

CAC Members

Anne Deuring	P	Peter Iverson	P	Joan Palmquist	A
Jim Boettcher	P	Matt Lindon	P	Dorothy Pedersen	P
Paul Bulger	P	Sharon McCotter	P	David Ziegler	P

Others

Terry Jefferies	Outreach & Permitting Coordinator	P
Michelle Jordan	District Liaison	P

Summary of key actions/motions for the Board of Managers:

1. Dorothy Pedersen made a motion: The CAC would encourage the board consider hosting a 25/25 Town Hall meeting in conjunction with 9 Mile, Lower MN and/or Minnehaha watersheds within the next month. Let the CAC would like to know specifically how we can help. Pete seconded and the motion passed.
2. Matt made a motion: The CAC supports the direction of the budget, as presented by Terry Jeffrey, with the follow up on Bluff Creek research. Dorothy seconded and the motion passed
3. Sharon made a motion: The CAC support Joan moving forward with launching the speaker's bureau with limited staff time as outlined in Joan's proposal. Dorothy seconded. The CAC recommends Joan present at the September managers meeting.
4. Dorothy made a motion: The CAC request Terry's staff time to use some of our education budget for a spring 2018 tour of wetlands in our district; the presentation would be open to the public. Jim seconded the motion and it passed. Terry suggested that he could investigate options.
5. Dorothy made a motion: The CAC recommend the Board approve the cost shares grants as presented with recommendations on the plant selection. Pete seconded and the motion passed.

Meeting

1. **Call to Order:** President Pedersen called the August 21 meeting of the CAC to order approximately 6:40 P.M. Attendance noted above.

2. **Approval of the Agenda:** Agenda approved with additions of one new business topic and movement of the budget discussion to the first new business topic, noted in minutes, below. Motion was made (Ziegler/Lindon) and passed.

3. **Approval of meeting minutes from July 2017:** One correction to the minutes from Anne, change the word "silk" sock to "silt" sock. Motion to approve minutes with the correction made by Ziegler/Bulger and passed unanimously.

4. **Matters of General Public Interest: None**

5. **Election of new CAC Chair (Dorothy/Michelle)**
   The CAC needed to hold an election of a new CAC president with Dorothy's appointment to RPBCWD Board of Managers. Elections for a new president ensued.
   - Ziegler nominated McCotter. Sharon declined as she is too busy but would like to remain VP.
   - McCotter nominated Ziegler and Pedersen seconded the nomination.
   - Bulger nominated himself and Deuring seconded the nomination.

   Sharon asked Dorothy to explain the job responsibilities and time commitment. Dorothy did. A written ballot was taken and Ziegler won (6-2).

6. **July Board of Managers meeting**, if any questions. (Ziegler)
   Dave shared that Perry indicated he would not be going forward with another term on the watershed. He has served in some capacity for over 22 years. With her appointment to the board of managers, this is Dorothy's last CAC meeting as a CAC member.

7. **Old Business**
   a. Update on 10-year plan, comments due in September (Michelle) (INFORM)
      - There was a good discussion on how we would get access to the plan, in advance, to allow us time to review it in detail
      - Staff will look into a shared site/service to allow multiple comments to be added to one document
      - Sharon's inability to access via PC was mitigated with the suggestion of using a tablet; Dorothy offered a tablet should we need one.

   b. Storm Drain Subcommittee fall cleanup (Sharon, Matt, David, Anne and Dorothy) (INFORM)

   Fall Leaf Clean-up (Sharon) - Sharon and Vanessa Strong (Chanhassen) met early in August to discuss specifics of the Chanhassen fall leaf clean up. Vanessa and Sharon both have follow-up lists that need to be answered before a plan can be drafted. They will meet in a couple of weeks once they have the answers they need to finalize a plan. Sharon will follow-up with Paul from Shorewood after a draft clean-up plan has been put together.

   Chanhassen stenciling pilot (Matt) – Matt tried contacting Vanessa Strong from Chanhassen regarding the storm drain marking but has not heard back from her. Terry offered that Krista has run the stenciling program for the last 10 years and would be a good contact.

   Adopt a drain program with tracking through Volgistics (Anne and David) – Anne and David spoke with Jo from Minnetonka. She indicated she does not need any help with Volgistics and was not really interested in a storm drain marking program. However she was very interested in neighbor to neighbor campaigns. Anne took the opportunity to share the silt sock idea. Jo has seen the 8 inch silt socks cause flooding issues during a significant rain event. A smaller (less than the current 8 inches) sock might be doable. Minnetonka does

not sweep the streets in fall. Jo is taking the silt sock idea back to the rest of her staff and will circle back with Anne and David in a few weeks.

Grass clippings awareness (Dorothy) - Dorothy left a message with Paul from Shorewood and has not heard back. She will follow-up with him and if he doesn't respond she will talk with Julie. Dorothy is still committed to the grass clippings campaign.

Eden Prairie – Matt made contact with Leslie. She does not want to do a stenciling program: paint doesn't work with youth groups, special storage is required because it is a dangerous substance. Terry suggested having the markers say, this water drains to (a specific body of water) to make it more personable and relatable. Matt suggested they put the plaque into new storm drain curbs to improve their staying power. Terry said, the cities mill and overlay the roads and replace curb and gutter on a rotating basis with new work, so ultimately we can get to a number of drains over time.

Matt spoke with Leslie and she is interested in participating with us on some of our activities. Matt and Sharon will meet to discuss what activities the CAC can support and who can accommodate her requests.

David indicated there is a former landfill site in EP that might be a good compost site for clean-up activities. The city is looking into how to best use this land. Residents are encouraged to provide input on the Aspire web site http://edenprairie.org/city-government/departments/community-development/planning/aspire-eden-prairie-2040

c. Website update (Michelle)(Discuss) – Michelle shared specifics about the Scenic Heights School Forest and how the information will be displayed on our website. Some very cool technology showing the before and future "after" renderings of the area. There will be a community info meeting on Wednesday, August 23 so neighbors are aware of what is happening. With the removal of significant buckthorn, the area will appear a lot less wooded and a lot more open. Project will get kicked off in winter. Great collaborative project.

8. New Business

a. 2018 Draft Budget Presentation (Terry) (INFORM)

Terry Jeffrey started by bringing us up to speed on his background. Forest resources and engineering – hired to do project management and plan review. Started with private consulting and has moved to the regulatory, public segment. Terry indicated everyone at RPBCWD is rowing the boat in the same direction. Terry commended us for helping turn the organization around.

He then went through the 10 year plan and the corresponding details. The budget is broken into administrative, programs and projects and each of the creek reaches.

Permitting costs and engineering should come down as Terry learns more, gets more specialized, and takes on more work. Permits request volume should go up with implementation of Light Rail. Permits become more complicated for redo's versus new.

We discussed how to boost cost share grant applications. Dorothy suggested reaching out to the lake associations. There will be more follow up on the cost shares before, during and after. Maintenance and reporting could be deterrents to people applying so having the master water stewards to help with those pieces could help mitigate the situation. A number of CAC members thought it would be a good idea to provide anyone who does a planting as part of their project, a good plant identification guide.

Wetlands were a priority in the district on the survey. Wetland assessments don't reflect what is on the ground today. We need to identify where these wetlands are thus the need for a functional assessment of the wetlands. Dollars are not earmarked for education around this but since it's in its infancy there is room to make dollars for it. People forget there are laws that impact wetlands.

Terry was able to get to the right resource at Emerson to be part of the Lake Susan reuse project. Unfortunately the project was cost prohibitive for them.

Lower Purgatory creek restoration was postponed a bit. The city got some additional money because of a road project that is no longer being done ($400,000); they will probably put $300,000 to the creek restoration project. Hyland Lake will get a little financial support. Terry is going to check the projects in Bluff Creek as it looks like the western initiatives were not included in the budget.

Dorothy commended the board on bringing more services in house versus engineering firms. Terry explained that while some of the costs are high, some of the costs are part of the due diligence Scott and Michael from BARR perform. (SEE TWO MOTIONS AT BEGINNING OF THIS DOCUMENT.)

b. Speakers Bureau (Michelle) (ACTION)

Michelle, by proxy, presented Joan's speaker bureau recommendation. There are two different speakers opportunities – formal presentations and tabling at fairs and events. Requests for presentations would come through Michelle. This program would be put in into our volunteer training program to give us a chance to work through the process. The CAC's role would be to take the reins to make it happen. There are a number of requests for neighborhood event speakers; currently we don't advertise speakers because of limited resources. Michelle sees this fitting into what we are already doing. Dorothy said she would be interested in volunteering to speak. There will be some work to set it up initially but Joan is committed. Ann and Matt will join Joan's committee. (SEE MOTION AT BEGINNING OF THIS DOCUMENT.)

c. Groundwater report: (Paul, Matt and Pete) (INFORM)

Paul, Matt and Pete are in process of reviewing the 72 page BARR document on groundwater. They have had some preliminary discussions about ways the watershed can engage the cities in water conservation. There is a lot of data available but it is not all together in one place. Wealth of info on contamination sites and yet that info is not integrated with the report. The sub-committee has just scratched the service. Many maps provide a general assessment of ground water and where depleted ground waters will occur. Great summary document and a good start however it doesn't address what's next. The sub-team was looking for recommendations. Matt would like us to use the information to make folks aware – possibly part of the speaker's bureau. Pete indicated they need targeted info. Paul would like the review to continue.

Well monitoring was also mentioned. Rule I is the groundwater rule which includes existing wells. A free permit is required with yearly reporting. Matt suggested that they get the cities to make known what their programs are especially any tiered water rates like EP. The sub-committee will continue.

If the CAC wants to speak up with ideas, it's a good time since the program is in its infancy. (SEE MOTION AT BEGINNING OF THIS DOCUMENT.)

We had a discussion on Governor Dayton's 25/25 proposal. The board had asked that we consider setting up something with 9 Mile and Minnehaha. We need to get local stakeholders to define what 25/25 means – only lakes and rivers? We need to define what restoration means? Regional may also need to be defined. We suggest an information gathering session in this location. There is a script and prepared materials, we would need to organize and prepare. (SEE MOTION AT BEGINNING OF THIS DOCUMENT.)

d. Carver County update (Jim) (INFORM)

Jim shared a project sponsored by the Carver County Water Management Organization called Copper Hill Stormwater Reuse Site – Carver, MN. Very cool reuse program for watering lawns with no obvious downsides. How can we help? Jim is recommending we put a bug in the cities ear for new qualifying areas. Dorothy indicated Shorewood is considering developing a golf course into homes. She would recommend it to them. Lots of discussion on reuse; how to repurpose existing ponds, cost share dollars are available. This information could also be good for educating builders. Jim will talk with Terry J. to get his opinion on next steps.

e. Cost Share Review (Michelle)

Cost share review/discussion – On the HOA application, David asked about buffering the sides of the beach to avoid the water from eroding the beach into the lake. Michelle will chat with Seth. Dorothy indicated slender mountain mint needs super sandy soil and New England aster and red dogwood will get eaten by the deer. (SEE MOTION AT BEGINNING OF THIS DOCUMENT.)

A huge thank you from all of the CAC members for Dorothy's leadership over the past three years. We are in a significantly better place because of Dorothy and look forward to working with her in her new role.

9. **Adjournment:** Approximately 9:40 the motion to adjourn was made by Dorothy seconded by Jim, passed and the meeting was adjourned.

Upcoming Events

- Board of Managers Meeting and Workshop, Wednesday, September 6, 5:30 pm, District Office
- Next CAC meeting: September 25, 2017, District Office, 6:30 pm
  Please note change of date! Comments on the 10 year plan due at this meeting!

September topics for CAC:

- Primary topic will be a review of the 10 year plan

- Updates from any of the sub-committees needing approval to move forward are also encouraged

Respectfully submitted by Sharon McCotter, stand in recorder

The Silt Sock Solution

As a responsible environmentalist, I have been caring for storm drains for a long time. I have cleared branches and clumps off the top of the grate only to looked down into the drain and see all the smaller gunk already in the drain. I have vigilantly swept my street on either side of the drain. Our cities sweep the streets spring and fall but trees drop things year-round: bud scales, flowers, seeds, twigs and leaves. Hard rain events bring down leaves and other debris that goes into the storm drain before the rain event ends. I joined the CAC and have learned that nonpoint pollution of our waterways is the biggest single water problem — storm drains! And the cost of treating despoiled waterways is a huge chunk of the watershed budget. I have come to understand that even the best education and awareness tools and the most diligent efforts don't keep gunk out of the storm drains. I am proposing a pilot project that is educational, creates awareness, **and** approaches **total filtering** of storm drains.

A "silt sock solution" would provide 24/7 protection of our storm drains. A silt sock is a tube made of filter fabric and stuffed with wood shavings. You have seen these tubes protecting drains near construction sites. They are readily available at construction supply stores. Wrapping the silt socks around our storm drains would allow water to pass through but prevents the silt, leaves and grass clippings from polluting our watershed.

The silt socks would require care and maintenance such as removing accumulation periodically and taking them up during snow plowing season and street sweeping events.

Engagement – Neighbor to neighbor
I am planning a kick-off of the pilot project on my street with a simple party around a storm drain – cookies and lemonade – at which the silt sock solution would be explained. Any neighbor not in attendance would receive printed explanatory materials. Preordained Silt Sock Stewards (volunteers) would be identified/introduced. The Silt Sock Steward will be responsible for periodically rolling a wheel barrow down the street to the storm drain, lift up the silt sock, shovel up the debris, and replace the silt sock, then roll the debris back to their non-food-garden compost pile (high in nutrients).

Coordinate with the City
I plan to talk to the City of Minnetonka to thoroughly explain the pilot and ask for conceptual support and alerts to street sweeping. Cities already have the ability to send email messages alerting us to mosquito treatments, police reports and Farmers Markets, so why not street sweeping and plowing?

Cost
There are many types, but a very common silt sock is 20' long and cost $30 (Menards), but one storm drain only needs 9'. I cut one silt sock in two and tied it off with a zip tie. I think most streets would have volunteers willing to pop for this initially, but if the idea grows we may need to get business-like and approach our cities or watershed for funds.

Make them beautiful
Silt socks are ugly and connote temporary construction. I can anticipate reluctance "in our pretty neighborhood" to have them lying about in the street. However, I have spray painted a demonstration silt sock and it is possible to make them look, if not beautiful, at least intentional. I can envision neighbors possibly having fun with this, i.e. kids helping with painting/stenciling the silt socks, painting their names or hand prints. I could also see artists having fun with it — street art! Storm drain jewelry?!

What about bicycles?
Besides art and simple explanatory verbiage, the silt socks can be painted with reflective paint or reflective plastic disks that will be visible by cyclists at night. I have spoken with serious cyclists and am assured that the silt socks do not protrude enough to be a problem.

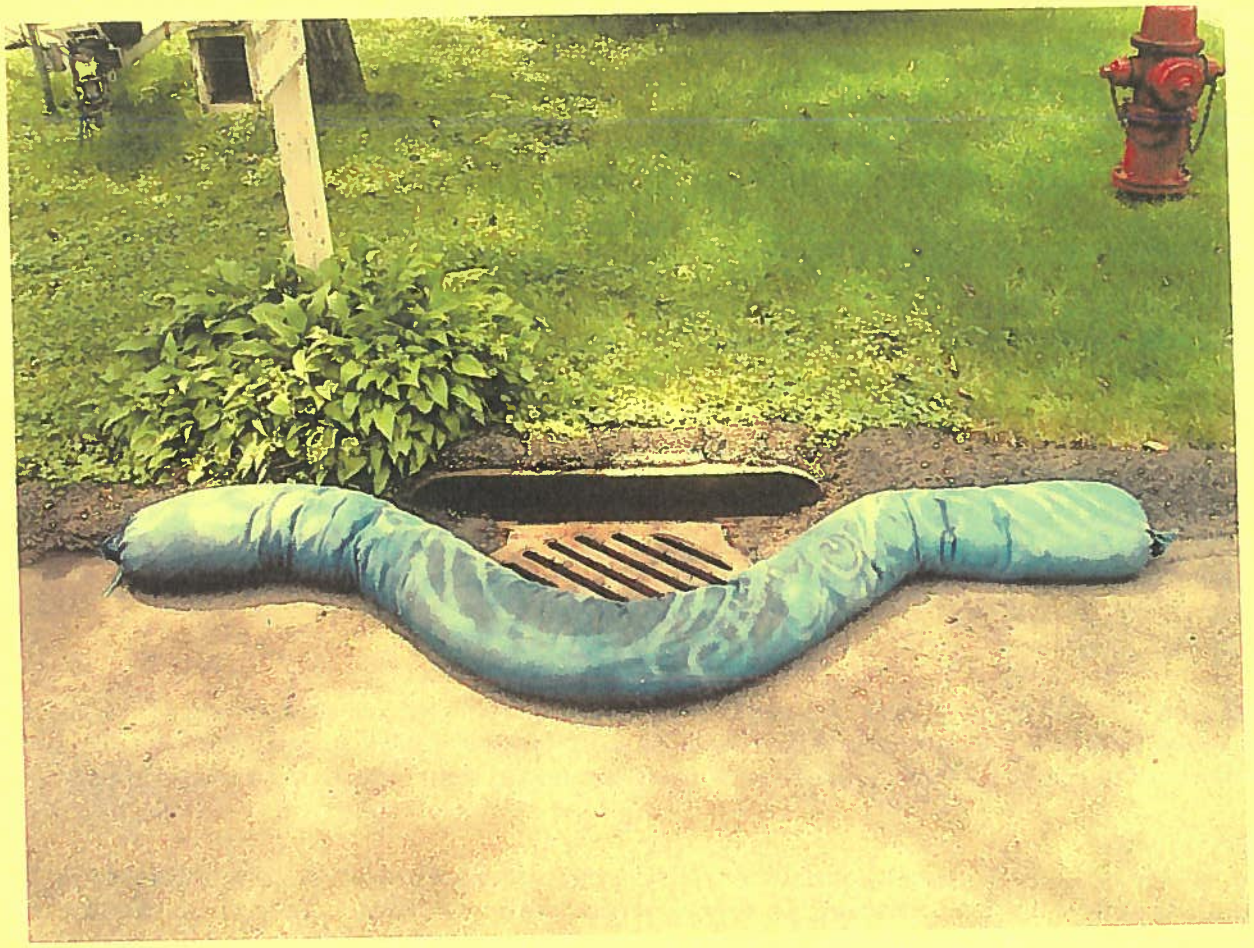
Expand to next street
A Storm Drain Steward hosts a storm drain party on a connecting street or a representative from the connecting street is invited to the previous party.

The difficult streets will be major thoroughfares where neighbors don't really know each other, like Hwy. 101. There may be Super Silt Sock Stewards (volunteers) willing to travel with wheelbarrow a longer distance. I don't really have an answer except maybe the City Public Works could step in here.

This thing grows and grows until nobody can stand the idea of anything going down the storm drain and is revolted at the sight of an unprotected storm drain. Eventually, hopefully, we will figure out a storm drain design that includes a total filter.

Anne Deuring

Photos of a start of a ready-for-action silt sock. Additional explanatory verbiage to be added, e.g. Clean water starts here, RPBCWD logo, etc.



CLEAN WATER STARTS HERE

CLEAN WATER STARTS HERE

Draft Proposal to Create RPBCWD Speaker's Bureau
August 21, 2017
For Review by CAC

Objectives: The purpose of this initiative is to recruit, organize and train a group of Watershed District ambassadors who can supplement the work of District staff in community education and outreach. The creation of this group will support E&O goals as outlined in the 10-year plan. By informing and educating members of our community and engaging them in dialogue, they will become even stronger supporters and advocates of the importance of water resources.

Types of presentations:

To begin we will focus on two types of presentations:

1. Community or neighborhood **fairs or events**, where the District will have a table top exhibit and representatives will talk with residents and answer their questions. These typically occur on weekends or weeknights and are several hours long.
2. More formal **presentations**, where the District has been asked to speak to a group about the Watershed and the work we do. A presentation already exists for this ("Watershed 101") which we will use as a base. Other topics may be added as well.

Both these will serve to:

- Educate various audiences as to the scope and details of our work
- Develop stronger relationships with volunteers and members of the community
- Encourage audiences to increase their level of participation and advocacy

Scheduling events:

Staff will continue to respond to requests for specific events and decide which ones to approve. Those that are approved—and are appropriate for bureau members—will be sent to members of the bureau, to see who wants to cover the event.

Note: When the speaker's bureau is launched we will be able to accept more invitations, as well as engage in more outreach, contacting organizations and offering to attend meetings, and present our educational messages. We will also investigate whether Community Education (one-night classes) might be an appropriate venue.

Training:

- Training of speakers will be on a continuing education basis, with periodic refresher courses or in-service trainings.
- We will begin by familiarizing everyone with the existing "Watershed 101" presentation, recording and scripting it for consistency and accuracy. Obviously, Speakers will not read the script verbatim, but the script will remind them of how Michelle delivers it, to help us maintain continuity.

- Other materials to be provided include FAQs to address common questions, and speaker guidelines on how to represent themselves, how to handle questions they don't know the answer to, etc.

- Special training will be provided for people working at community fairs or other events where we are manning a table. This will involve attending at least one, and ideally two or three events where a staff member is also present, so they can listen, learn and capture questions to add to the FAQ list. When a speaker is ready to be the only or the senior person at a table, they will be certified as such.

- The next phase of continuing education will be training some volunteers so they can do "wet" trainings, working with groups out on the water doing observation and discussion. This will be in the next phase of Speaker Bureau rollout.

- **Note:** It is not the intent of this initiative to train people to speak in public, but rather to take those who are comfortable doing this and provide them with ready to go, easy to present materials so they can speak on behalf of the Watershed.

Specifics:

- The group will consist of 6-10 volunteers (more if needed), potentially including members of CAC, current or previous members of the Watershed Board, Master Water Stewards and other general volunteers. The first set of recruits will come from this group of known volunteers.

- Note: Having the Speaker's Bureau will provide additional resources to Michelle for her E&O responsibilities, so the net impact on her time should be positive.

- All materials used for the program will be reviewed and approved by Staff and the CAC before any presentations are made.

- Each year an annual update will be conducted, to share stories and ideas of what is working well, etc. and provide new, updated statistics, etc.

- Records will be kept of presentations made; number of people contacted, recommendations for participating in the event again next year, etc. to track impact of the program. Speaker's will be asked to complete a review form and submit it to the district office within one week of a speaking engagement

- When we are ready, the existence of this group will be publicized in the community, soliciting opportunities to present at meetings (e.g. Lions, Elks, etc.) and social and/or faith based gatherings (e.g. Senior Center, Lenten soup suppers, etc.)

Timeline:

August: Proposal reviewed by staff (Michelle)

This proposal submitted to CAC and feedback solicited. CAC to vote on whether this is an appropriate initiative for the CAC. Call for volunteers if others want to get involved.

September: If motion to proceed passes, then revised proposal will be submitted to Board for their review and comments. Also, Joan will reach out to the Rochester Stormwater Management group to see if they will share the materials they use for their speaker's program.

October/November/December: Meet with staff to identify what materials already exist; review input from community meetings as part of 10-year plans for types of questions to address, etc. Goal to have core "Watershed 101" presentation scripted, annotated and ready to go in 2018. Also develop list of other presentations that exist, as well as those that could be created or enhanced. Recruit Speaker Bureau members from existing volunteer base. Also list of possible events and organizations to contact.

January/February: Conduct initial trainings and be ready for community events (table top exhibits)

TBD: Begin publicizing the bureau and scheduling speaker's engagements

Spring of 2018 and annually thereafter: Training/refresher training and distribution of new data/statistics when they become available.

Target Audiences

a. Residents
b. Teachers
c. K-12 students
d. Businesses and professionals
e. Home Owner Associations
f. Others: Community Organizations like Lions or Girls Scouts,
g. Grant funders
h. People interested in cost sharing grants

Note: Local Leaders/elected officials and Lake Association representatives are also targets of interest—but will typically be handled directly by staff.

Our Mission:

- To protect, manage, and restore the waters in our community.

Other Details:

- Watershed District's Website: http://www.rpbcwd.org/

RILEY
PURGATORY
BLUFF CREEK
WATERSHED DISTRICT

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

August 31, 2017

To: The RPBCWD Board of Managers
Re: CAC Speaker's Bureau proposal

I am writing in support of the Speaker's Bureau project proposed by the Citizen Advisory Committee. The Speaker's Bureau, a small group of volunteers trained in tabling and presenting at events, would increase the capacity of the watershed district to reach out to the community. The bureau would utilize existing, vetted volunteers, and fit well as a next step in continuing education and training for the District's growing volunteer base. A subcommittee of CAC members would work to prepare the bureau for launch, utilizing existing District presentations and materials and identifying resource gaps. This would minimize the additional staff time needed for administering the program. However, all materials, event scheduling, and volunteer selection would be authorized by staff, ensuring organized, consistent messaging that supports the District's mission.

If you have any questions regarding this recommendation, please reach out to me at any time.

Sincerely,

Michelle Jordan
Community Outreach Coordinator
952-607-6841
mjordan@rpbcwd.org

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: 2017-047

Original Application Received complete: August 4, 2017

Applicant: HP Holdings, LLC

Consultant: Sathre-Bergquist, Inc., Thomas Welshinger

Project: Fawn Hill–Construction of a 10-lot single family home subdivision. An infiltration basin and using an existing stormwater detention pond with filtration bench will provide storm water quantity, volume and quality control.

Location: 7240 Galpin Boulevard, Chanhassen, MN

Reviewer: Scott Sobiech, Barr Engineering

Rules: Applicable rules checked

	Rule B: Floodplain Management		Rule H: Appropriation of Public Waters
X	Rule C: Erosion and Sediment Control		Rule I: Appropriation of Groundwater
X	Rule D: Wetland and Creek Buffers	X	Rule J: Stormwater Management
	Rule E: Dredging and Sediment Removal	X	Rule K: Variances and Exceptions
	Rule F: Shoreline/Streambank Stabilization	X	Rule L: Permit Fees
	Rule G: Waterbody Crossings	X	Rule M: Financial Assurances

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 Condition D1.
J	**Stormwater Management**	Rate	See Comment	See Rule K variance discussion
		Volume	Yes	
		Water Quality	Yes	
		Low Floor Elev.	Yes	
		Maintenance	See Comment	See Rule Specific Permit Condition J1.
K	**Variances and Exceptions**		See comments	Variance requested from Rule J 3.1, location of rate control measurement.
L	**Permit Fee**		Yes	$3,300 was received on June 20, 2017.
M	**Financial Assurance**		See Comment	The financial assurance has been calculated at $73,100.

Project Description

The Fawn Hill Development is a 10-lot single family residential development within the city limits of Chanhassen, Minnesota. The site is west of State Highway 117 (Galpin Boulevard) and north of State Highway 5. An existing wetland is located on the southwester portion of the site. Construction of an infiltration basin and use of an existing stormwater pond with filtration bench located partially off-site will provide storm water quantity, volume and quality control.

The project site information is summarized below:

1. Total Site Area: 11.6 acres
2. Existing Site Impervious Area: 0.42 acres (18,295 square feet)
3. Post Construction Site Impervious: 1.44 acres (62,726 square feet)
4. New (Increase) in Site Impervious Area: 1.02 acres (44,431 square feet) (243% increase in site impervious area)
5. Disturbed impervious surface: 0.37 acres (15,910 square feet) (87% of existing site impervious area)
6. Total Disturbed Area: 5.66 acres

Exhibits:

1. Permit Application dated June 20, 2017.
2. Project Sheets (11 sheets) dated June 14, 2017 (revised July 31, 2017).
3. Updated grading plan received August 30, 2017
4. Updated storm sewer plan received August 30, 2017
5. Project Narrative dated June 20, 2017.
6. Stormwater Management Plan dated June 20, 2017 (received August 30, 2017)
7. Geotechnical Exploration Report dated June 27, 2017.
8. Wetland Delineation Report by Arrowhead Environmental Consulting dated August 16, 2013.
9. MNRAM Classification documentation dated August 2, 2017
10. HydroCAD Model submitted July 24, 2017 (received August 30, 2017)
11. P8 Models submitted July 24, 2017 (received August 30, 2017)
12. InfoSWMM model submitted August 25, 2017 (received August 30, 2017)
13. ALTA survey dated June 8, 2017
14. Response to review comments dated July 7, 2017, August 3, 2017, August 24, 2017 and August 25, 2017
15. Letter from Anne Marcotte, property owner, giving permission for HP Holdings, LLC to apply for watershed permit (dated August 18, 2017).

16. Letter from Gary Eidson, applicant's attorney, regarding property rights for existing pond (dated August 23, 2017)
17. Variance Request received August 25, 2017
18. Draft watershed declaration received August 25, 2017
19. Unexecuted Fawn Hill development Contract received August 25, 2017
20. As-Built drawings for Vista at Bentz Farm dated May 22, 2015
21. Vistas at Bentz Farm Development Contract dated December 12, 2014

Rule Specific Permit Conditions

Rule C: Erosion and Sediment Control

Because the project will alter over 5.66 acres 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 Sathre-Bergquist, Inc. includes 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, and retention of native topsoil onsite. To conform to the RPBCWD Rule C requirements the following revisions are needed:

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

Rule D: Wetland and Creek Buffers

Because the proposed work triggers a permit under RPBCWD Rule J and the onsite wetland is protected by the state Wetland Conservation Act, Rule D, Subsections 2.1a and 3.1 require buffer on the portion of the wetland downgradient from the proposed land-disturbing activities. No draining, filling of the onsite wetland is proposed.

A 2013 wetland delineation for the site was conducted by Arrowhead Environmental Consulting and the report was included with the submittal. The MnRAM analysis submitted on August 2, 2017 indicates that the wetland onsite is a high value wetland (Appendix D1). Rule D, Subsection 3.1.a.iii requires a wetland buffer with an average of 60 feet from the delineated edge of the wetland, minimum 30 feet. The buffer widths are summarized in the table below.

Regulated Feature	RPBCWD Wetland Value	Require Minimum Width[1] (ft)	Require Average Width[1] (ft)	Provided Minimum Width (ft)	Provided Buffer Width(ft)
Wetland	High	30	60	60	60

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

The Applicant is proposing revegetating disturbed areas within the proposed buffer with native vegetation in conformance with Rule D, Subsection 3.2. 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.

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

D1. Buffer areas and maintenance requirements must be documented in a declaration recorded after review and approval by RPBCWD in accordance with Rule D, Subsection 3.4.

Rule J: Stormwater Management

Because the project will alter over 5.66 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 parcel because the project will increase the imperviousness of the entire parcel by more than 100 percent (Rule J, Subsection 2.3).

Construction of an infiltration basin and use of an existing stormwater pond with filtration bench located partially off-site will provide storm water runoff rate, volume and quality control. The applicant also proposes to modify the portion of the existing stormwater pond and filtration bench on the applicant's property.

Rate Control

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

Modeled Discharge Location	2-Year Discharge (cfs)		10-Year Discharge (cfs)		100-Year Discharge (cfs)		10-Day Snowmelt (cfs)	
	Ex	Prop	Ex	Prop	Ex	Prop	Ex	Prop
Existing Pond Outlet	20.1	13.5	44.0	36.9	89.2	87.7	5.5	5.4

Because the Applicant is relying on capacity provided by the existing constructed pond that extends off the subject property for rate control, approval of a variance is required (see variance discussion below).

With the approval of a variance, the proposed project would conform to the rate control requirements in Rule J, subsection 3.1a.

Volume Abstraction

Subsection 3.1.b of Rule J requires the abstraction onsite of 1.1 inches of runoff from all impervious surface of the parcel. An abstraction volume of 5,750 cubic feet is required from the 1.44 acres (62,726 square feet) of impervious area on the project for volume retention. The Applicant proposes to construct an infiltration basin to abstract runoff from the site.

Soil borings performed by Haugo Geotechnical Services show that soils in the project area are primarily clays; the MN Stormwater Manual indicates an infiltration rate of 0.06 inches per hour (in/hr) for such soils. However, infiltrometer testing in the areas of the proposed best management practice found the infiltration rate to be between 1.93 in/hr and 2.13 in/hr. Based on the infiltrometer testing the RPBCWD engineer concurs with the applicant's use of an infiltration rate of 1.0 in/hr in the design of the infiltration basin. A sump manhole will provide pretreatment of runoff prior to discharging to the infiltration basin (subsection 3.1.b.i). The soil borings for the site indicate groundwater at an elevation of 958.3. Groundwater is at least 3 feet below the bottom of the proposed infiltration basin (Rule J, Subsection 3.1.b.ii). The table below summarizes the volume abstraction on the site. Based on information reviewed, the proposed project conforms to Rule J, Subsection 3.1.b.

Required Abstraction Depth (inches)	Required Abstraction Volume (cubic feet)	Provided Abstraction Volume (cubic feet)
1.1	5,750	5,881

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 an infiltration basin, modification to the portion of the existing stormwater pond with filtration bench on-site and using the existing stormwater pond with filtration bench located partially off-site to achieve the required TP and TSS removals and submitted a P8 model to estimate the TP and TSS removals.

Pollutant of Interest	Regulated Site Loading (lbs/yr)	Required Load Removal (lbs/yr)[1]	Provided Load Reduction (lbs/yr)
Total Suspended Solids (TSS)	2,691	2,411 (90%)	2,423 (90.2%)
Total Phosphorus (TP)	8.6	5.16 (60%)	6.9 (80.2%)

[1]Required load reduction is calculated based on the removal criteria in Rule J, Subsection 3.1c and the load generated from all the impervious area on the site.

Based on information reviewed, the proposed project conforms to Rule J, Subsection 3.1.c. Because the water quality performance shown relies in part on an off-site facility, the applicant must provide documentation of rights to use the facility and a maintenance declaration for the facility enforceable by RPBCWD.

Low floor Elevation

No structure may be constructed or reconstructed such that its lowest floor elevation is less than 2 feet above the 100-year event flood elevation according to Rule J, Subsection 3.6. The low floor elevation of the homes and the adjacent stormwater management feature is summarized below.

Location Riparian to Stormwater Facility	Low Floor Elevation of Building (feet)	100-year Event Flood Elevation of Adjacent Stormwater Facility (feet)	Freeboard (feet)
Block 1, Lot 1	966.1	964.08	2.02
Block 1, Lot 2	968.1	964.08	4.02
Existing Bentz Farm, Lot 8	965.1	958.57	6.53
Existing Bentz Farm, Lot 9	962.6	958.57	4.03
Existing Bentz Farm, Lot 10	962.6	958.57	4.03
Existing Bentz Farm, Lot 11	963.6	958.57	5.03

The Engineer concurs with the Applicant's information showing the project meets the requirements of 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 draft maintenance and inspection plan for the onsite infiltration basin and filtration bench, documentation of a legal right to drain to the offsite facility and a maintenance declaration for the partially offsite facility enforceable by RPBCWD. Once approved by RPBCWD, the declarations must be recorded on the relevant deeds in a form acceptable to the District.

Rule K: Variances and Exceptions:

The applicant is requesting variances from Rule J, Subsection 3.1a requiring that rate control be meet at all point where discharge leaves the site. According to RPBCWD's Rule K, the Board of Managers must find that because of unique conditions inherent to the subject property the application of the provision 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.

The following is the RPBCWD engineer's assessment of information relevant to the applicant's request for a variance to measure rate control at the existing pond outlet, which is off-site, rather than at the parcel boundary which bisects the existing pond:

- Related to variance criterion 1 – To meet RPBCWD stormwater criteria and requirements, Applicant proposes to utilize a facility that extends off-site. If the variance is granted, use of the planned facilities and existing facility will provide stormwater management in compliance with Rule J at the existing offsite pond outlet, preventing degradation of downgradient water resources.

- To help demonstrate that the project will not 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 (variance criterion 3), the engineer concurs with the applicant provided computations showing that enlarging the portion of the existing pond that is on the applicant's property and using the portion of the pond that is off-site will result in the post development discharge volume being less than predevelopment conditions. Thus, measuring rate control at the existing pond outlet will not adversely affect the water resources or be detrimental to neighboring properties.

- The applicant has taken measures relevant to variance criterion 4 to offset the shortfall from the requirement: The applicant proposes to add the on-site infiltration basin on the project site so

the discharge rate leaving the stormwater pond under developed conditions is less than predeveloped conditions.

- With regard to variance criterion 5, the existing stormwater pond is partially on the applicant's site and partially off-site. The outlet from the pond was constructed prior to the proposed development and is located off-site which causes to a substantial degree the need for the variance.

Recommend approval of the variance with the following conditions:

K1. Permit Applicant must provide documentation of authorization from the drainage and utility easement holder to use facility and a maintenance instrument enforceable by RPBCWD for the stormwater management facility on the properties to the south.

Rule L: Permit Fee:

Fees for the project are:

Rule C & J $3,300

Rule M: Financial Assurance:

Rules C: Silt fence: 1,880 L.F. x $2.50/L.F. = ... $4,700

Restoration: 5.66 acres x $2,500/acre = ... $14,200

Rules D: Wetland Buffer: $5,000 + $1,000/acre over 10 acres = ... $5,000

Rules J: Infiltration: 4,530 sq. ft. x $6/sq. ft. = ... $27,200

Contingency (10%) $5,100

Administration (30%) $16,900

Total Financial Assurance $73,100

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 conforms to will conform to Rules C and D if the Rule Specific Permit Conditions listed above are met.
3. The applicant is seeking a variance from strict compliance with Rule J, but complying with the rule-specific permit conditions above and granting the variance will allow the project to achieve compliance with Rule J criteria through use of off-site facilities.

Recommendation:

Approval of the permit contingent upon:

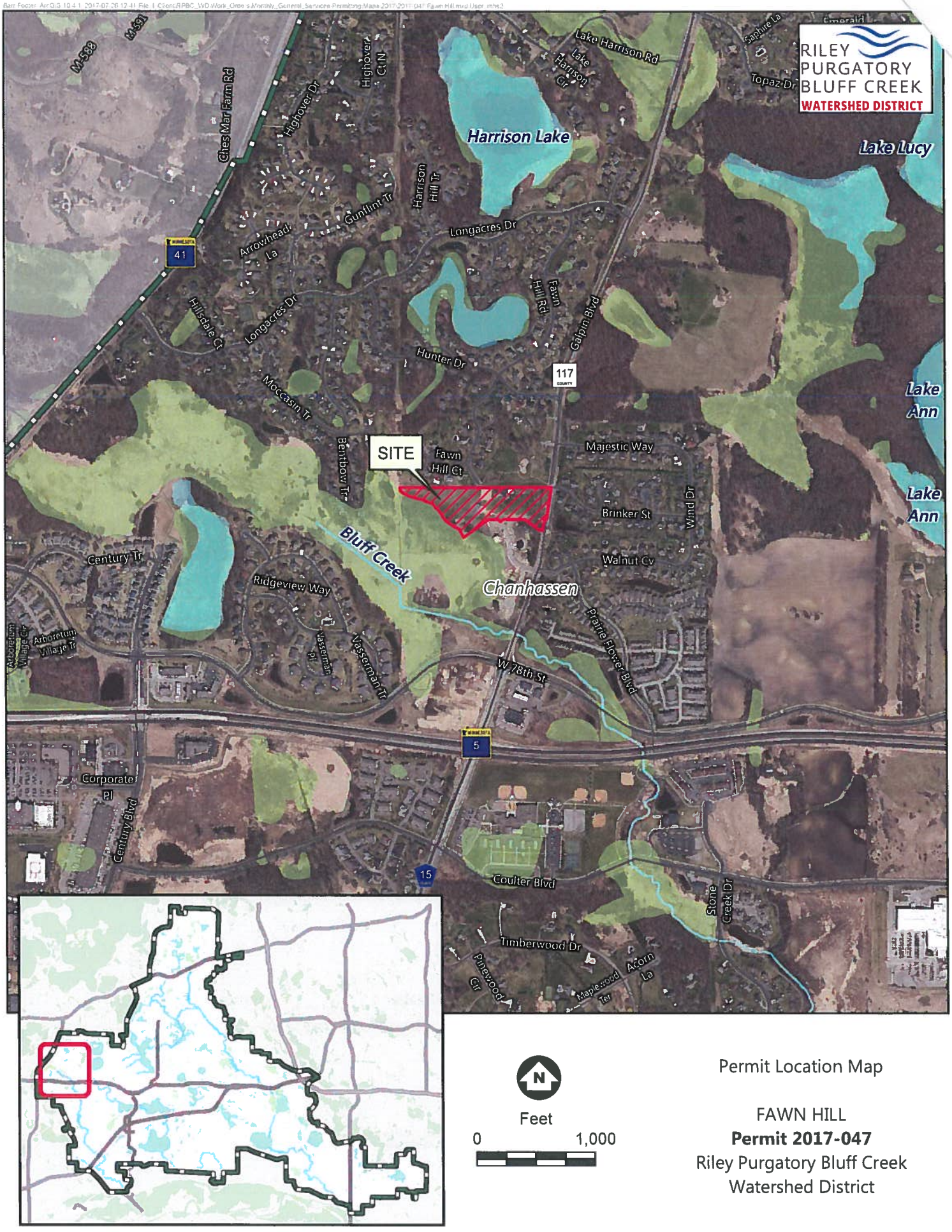
1. Continued compliance with General Requirements.
2. Financial Assurance in the amount of $73,100.
3. Receipt of updated construction plans depicting all the stormwater facilities.
4. The Applicant providing to the District documentation of authorization from the drainage and utility easement holder to use stormwater management facility on the properties to the south and a maintenance instrument enforceable by RPBCWD for the facility. If the maintenance commitment is from a public entity, an agreement signed by an authorized party on behalf of the entity may submitted to meet this condition.
5. Receipt in recordation a maintenance declaration for the onsite 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. Single-family homes to be constructed on lots in the subdivision created under the terms of permit 2017-047, if issued, must have an impervious surface area and configuration materially consistent with the approved plans. Home design proposed that differs materially from the approved plans will be subject to re-review for compliance with all applicable regulatory requirements.

Board Action

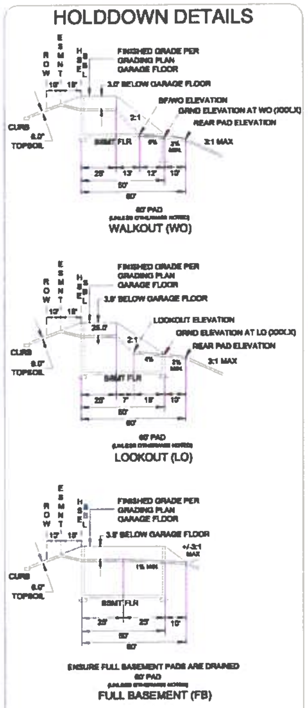
It was moved by Manager _____, seconded by Manager _____ to approve permit modification for permit No. 2017-047 with the conditions recommended by staff.



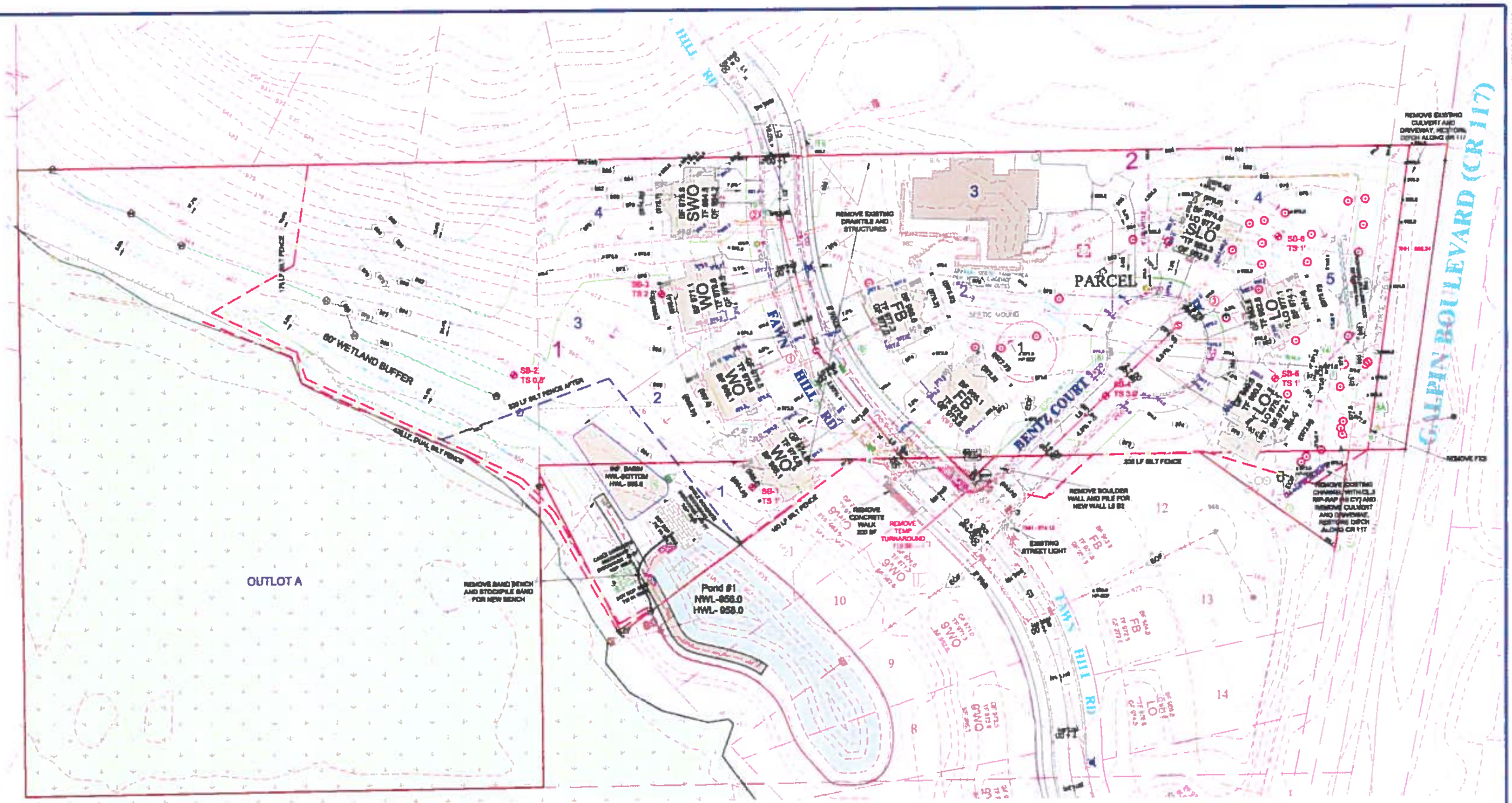
Permit Location Map

FAWN HILL
Permit 2017-047
Riley Purgatory Bluff Creek
Watershed District

HOLDDOWN DETAILS



NOTES:
1. GRADE (###.#) BEHIND EACH HOMESITE IS THE LOW GROUND ELEVATION AND PROPOSED TOP OF TOPSOIL. SUBGRADE SHALL BE DOWN 0.50 FEET.
2. ESTABLISH FINISH GRADE AT ALL 10' FRONT YARD UTILITY EASEMENT LOCATIONS.
3. THESE DETAILS REFERENCE A 9' POURED FOUNDATION WALL, AND A 0.7' DROP FROM REAR TOP FOUNDATION TO GROUND ELEVATION FOR ALL LOOKOUTS AND WALKOUTS.



EXISTING DRIVEWAYS AND CULVERTS SHALL BE REMOVED AND THE DITCH SHALL BE RESTORED ALONG GALPIN BLVD (CR 117)

CONSTRUCTION NOTES

1. INSTALL SILT FENCE AS SHOWN ON PLAN, AS REQUIRED BY THE CITY OF CHANHASSEN OR DIRECTED BY THE ENGINEER.

2. SAND AND SILT MUST BE REMOVED FROM THE POND AS NECESSARY DURING CONSTRUCTION AND AT THE COMPLETION OF THE PROJECT.

3. BEGIN GRADING. TEMPORARY DRAINAGE PIPE SHALL BE USED FOR INTERMEDIATE DRAINAGE DURING THE CONSTRUCTION PERIOD AS NECESSARY AND DIRECTED BY THE ENGINEER.

4. INSPECT PONDS, SILT FENCE, AND ROCK ENTRANCE BERM AFTER ALL RAINFALL EVENTS AS REQUIRED BY THE NPDES PERMIT.

5. STREET SECTION -
2.0" WEAR COURSE
2.0" BASE COURSE
12" CLASS 5
24" SELECT GRANULAR BORROW

BLUFF CREEK OVERLAY DISTRICT MONUMENT

6. DRIVEWAY SLOPES-
MINIMUM-2.0%
MAXIMUM-10.0%

7. FB, LO, WO PADS 3:1 MAX. ALL OTHER SLOPES 4:1 MAX (UNLESS NOTED)

8. CONTRACTOR TO REMOVE SEPTIC SYSTEM AND CAP WELL

EXISTING UTILITIES SHOWN ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ANY AND ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES ARISING OUT OF HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES.

9. DEVELOPER WILL BE RESPONSIBLE FOR TEMPORARY DUST AND EROSION CONTROL UNTIL TURF IS ESTABLISHED. IF YARDS ARE ADJACENT TO A DITCH SWALE, THEN EROSION CONTROL MUST REMAIN UNTIL ALL ADJACENT PROPERTY HAS TURF ESTABLISHMENT.

10. RESTORATION -8.5 ACRES
A. RESTORE ALL DISTURBED AREAS WITH 6" OF TOPSOIL, OR EXISTING ON-SITE ORGANIC MTRL.
B. SEED POND SLOPES AND DETENTION AREAS WITH MN/DOT 310 OR BWSR P8 SEED MIX AT A RATE OF 100 LBS/ACRE AND FERTILIZE WITH 20-0-10 AT 100 LBS/ACRE.
C. SEED ALL OTHER DISTURBED AREAS WITH MNDOT 250 AND FERTILIZE WITH 20-0-10 AT 100 LBS/ACRE AND BWSR(NATIVE VEGETATION) SEED MIX FOR WETLANDS AT A RATE OF 100 LBS/ACRE AND DO NOT FERTILIZE. (UNLESS OTHERWISE NOTED)
D. ONLY PHOSPHOROUS FREE FERTILIZER IS TO BE USED ON SITE.
E. MULCH WITH TYPE 1 AT A RATE OF 2 TONS/ACRE AND DISC ANCHOR IMMEDIATELY AFTER PLACEMENT. USE WOODFIBER BLANKET ON ALL SLOPES 3:1 (FT) OR GREATER.
F. PLACE APPROVED STORM SEWER INLET PROTECTION IN OR AROUND ALL STORM SEWER INLETS AND MAINTAIN UNTIL STREET CONSTRUCTION IS COMPLETED. REFER TO CITY DETAILS 5302 & 5302A FOR APPROVED DEVICES.
G. MAINTAIN ALL SILT FENCE UNTIL TURF HAS BEEN ESTABLISHED.
H. RESTORATION WORK WILL BE COMPLETED WITHIN 72 HOURS OF GRADING COMPLETION.

11. MATERIALS THAT ARE PROHIBITED FROM RETAINING WALL CONSTRUCTION INCLUDE SMOOTH FACE CONCRETE, POURED IN PLACE CONCRETE, MASONRY, RAILROAD TIES, OR TIMBER. STAMPED OR PATTERNED CONCRETE IS ALLOWED IN RETAINING WALL CONSTRUCTION.

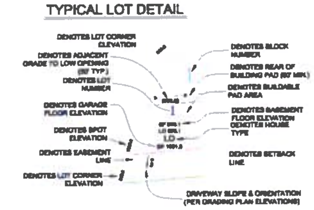
12. BOULDERS MAY NOT BE USED ON WALLS TALLER THAN 6' IN HEIGHT.

13. A HOMEOWNERS ASSOCIATION SHALL BE CREATED TO TAKE OWNERSHIP OF THE RETAINING WALLS

14. SILT FENCE: BEFORE GRADING - 1550 LF
SILT FENCE: AFTER GRADING - 330 LF

15. ACTIVITIES MUST BE CONDUCTED SO AS TO MINIMIZE THE POTENTIAL TRANSFER OF AQUATIC INVASIVE SPEACIES (E.G., ZEBRA MUSSELS, EURASIAN WATERMILFOIL, ETC.) TO THE MAXIMUM EXTENT POSSIBLE.

TYPICAL LOT DETAIL



NORTH

SCALE IN FEET

DRAWING NAME	NO.	BY	DATE	REVISIONS
BASE_FAWN	01	CAW	07/07/17	RPBCWD COMMENTS
DRAWN BY	02	TCW	07/12/17	COUNTY COMMENTS
TCW	03	TCW	07/18/17	CITY COMMENTS
CHECKED BY	04	TCW	07/31/17	RPBCWD COMMENTS
RSM	05	TCW	08/30/17	CITY COMMENTS
DATE				
06/14/17				

I HEREBY CERTIFY THAT THIS PLAN OR SPECIFICATION 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.

ROBERT S. MOLSTAD, P.E.
Date: 06/14/17 Lic. No. [illegible]

SATHRE-BERGQUIST, INC.
150 SOUTH BROADWAY WAYZATA, MN. 55391 (952) 476-6000

CITY PROJECT NO. —

CHANHASSEN, MINNESOTA

GRADING PLAN
FAWN HILL
HP HOLDINGS, LLC

FILE NO. 37865-001-200

05

11

Variance Request

A variance is requested for the rate control requirement, specifically the point at which the rate control standards are applied.

A regional pond was constructed as part of the Bentz Farm development to manage stormwater runoff for both the Bentz Farm development and the Fawn Hill development. The permitting of the project was completed through the City of Chanhassen, prior to RPBCWD implementing their regulations. The outlet structure for the regional pond is located on the Bentz Farm development. As a result, a variance is being requested to look at the outlet structure as the point where stormwater leaves the site for the Fawn Hill development.

a. how substantial the variation is from the rule provision;
   The variation to the rule simply looks at the regional stormwater ponds outlet point as the point at which rate control for the site is calculated. Overall rate control is still being met for the site, the analysis point being used is the regional pond outlet which is located offsite.
b. the effect of the variance on government services;
   This will have no impact on government services. The City of Chanhassen is responsible for maintenance of the pond. Currently there is an easement for the portion of the regional pond located in the Bentz farm development and there will be an easement granted for the new portion of the regional pond located in the Fawn Hill development. Maintaining a single regional pond will optimize maintenance efforts of the City.
c. 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;
   No substantial changes are caused by this variance. Downstream water resources are not impacted by the variance. Flood levels are not impacted in the existing stormwater pond.
d. 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;
   No feasible alternative exists. An alternative was considered to meet the rate control requirement. This alternative would require a wall (~10feet in height) constructed in the pond separating the Bentz Farm portion of the pond from the Fawn Hill portion, then installing a new outlet structure on the Fawn Hill development. This would cause increased maintenance for the City as well as potentially causing additional environmental impacts as a result of the work needed within the existing pond. Therefore this was considered not feasible.
e. 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
   The variance is requested because there is an existing pond located on site, constructed prior to the RPBCWD initiating their permitting program. The project needs to ensure we are meeting the regulations of the RPBCWD and creating a stormwater management feature that is in the best interest of the watershed. The regional pond was designed to provide rate control for both developments, the outlet is simply located off of the Fawn Hill site. This single regional pond option is the most effective to meet the rate control requirements and will be the most beneficial approach for the downstream watershed.

f. in light of all of the above factors, whether allowing the variance will serve the interests of justice.
The proposed variance will serve the interests of justice.

August 18, 2017

Anne E. Marcotte

7240 Galpin Blvd

Excelsior, MN 55331

To who it may concern:

I am aware that HP Holdings, LLC is applying for a permit from the Watershed District to perform work on said property and give them permission to apply for that permit.

Sincerely,

Anne E Marcotte

Anne E. Marcotte (as trustee of Anne E. Marcotte Rev Inter Trust)

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: 2017-034

Received complete: July 13, 2017

Applicant: City of Chanhassen

Consultant: WSB

Project: Park Road Mill and Overlay with Riley Creek Crossing Replacement– This project involves a mill and overlay of Park Road between Audubon Road and Powers Boulevard. The project will also replace the existing Riley Creek Crossing.

Location: Park Road between Audubon Road and Powers Boulevard in Chanhassen

Reviewer: Scott Sobiech, Barr Engineering

Rules: Applicable rules checked

X	Rule B: Floodplain Management		Rule H: Appropriation of Public Waters
X	Rule C: Erosion and Sediment Control		Rule I: Appropriation of Groundwater
X	Rule D: Wetland and Creek Buffers		Rule J: Stormwater Management
	Rule E: Dredging and Sediment Removal	X	Rule K: Variances and Exceptions
	Rule F: Shoreline/Streambank Stabilization		Rule L: Permit Fees
X	Rule G: Waterbody Crossings		Rule M: Financial Assurances

Rule Conformance Summary

Rule	Issue	Conforms to RPBCWD Rules?	Comments
B	**Floodplain Management and Drainage Alterations**	Yes	
C	**Erosion Control Plan**	Yes	
D	**Wetland and Creek Buffers**	See Comment	See Rule Specific Permit Condition D1
G	**Waterbody Crossings**	See Comment	See Rule Specific Permit Condition G1
K	**Variances and Exceptions**	See comments	Variance requested from Rule F 3.3g, applicable under Rule G.
L	**Permit Fees**	Not Applicable	Governmental Entity
M	**Financial Assurances**	Not Applicable	Governmental Entity

Project Description

The linear project proposes to mill and overlay Park Road between Audubon Road and Powers Boulevard as well as 635 feet of Park Place. In addition, the proposed project will replace the existing Riley Creek box culvert crossing in-kind and will construct 60 feet of retaining wall. The proposed project will result in no net increase in impervious area. The project will rehabilitate 190,740 square feet of existing impervious surface within RPBCWD. The project qualifies as a linear project, proposes no new impervious surface, and proposes less than 5,000 square feet of new or reconstructed impervious surface, so compliance with the RPBCWD stormwater-management criteria is not required. The project site information is summarized below:

1. Total Site Area: 6.0 acres
2. Existing Site Impervious Area: 5.4 acres (235,224 square feet)
3. Existing Impervious Area Disturbed: 0.11 acres (4,600 square feet) (1.9% disturbance of site impervious area)
4. New (Increase) in Site Impervious Area: 0.0 acres (0 square feet) (0% increase in site impervious area)
5. Total Disturbed Area: 5.4 acres

Exhibits:

1. Permit Application dated April 12, 2017
2. Project narrative, including figures, dated April 13, 2017
3. Stream Buffer Figure (revision received August 2, 2017)
4. Design Plans Sheets dated July 25, 2016 (revision dated August 15, 2017)
5. Drainage and Flowage Easement Figure
6. Draft buffer maintenance agreement
7. Hydraulic Flood analysis dated May 19, 2016.
8. Risk Assessment for Encroachment Design dated May 19, 2016
9. Response to comments dated July 13, 2017
10. Park Road Culvert Hydrology & Hydraulic Analysis Memo dated July 7, 2017
11. No Rise Certificate dated July 12, 2017
12. Existing and proposed conditions SWMM Models for 2, 10, 100 year events received July 13, 2017
13. Cut/Fill analysis dated August 1, 2017
14. Response to comments revision received August 2, 2017, and August 18, 2017.
15. Variance request dated August 22, 2017

Rule Specific Permit Conditions

Rule B: Floodplain Management and Drainage Alterations

Because the proposed culvert replacement involves the placement of 0.31 cubic yards of fill below the 100-year flood elevation of the Riley Creek (Elevation 906.7), the project activities must conform to the RPBCWD's Floodplain Management and Drainage Alterations rule (Rule B).

The applicant is proposing a retaining wall with the footing at elevation 909.0 (NVGD29) providing more than the 2.0 feet of required separation between the structure and the flood elevation complying with Rule B, Subsection 3.1. Rule B, Subsection 3.4 does not allow placing, constructing or reconstructing structures or paved surfaces within 100 feet of the centerline of any watercourse; bridges and other crossings and structures that trigger review under Rule G and trails for nonmotorized use are exempt from the prohibition. The applicant is proposing two structures, the roadway culvert and a retaining wall, within 100 feet of the centerline of Riley Creek. Because the culvert, retaining wall and impervious surface are components of a crossing regulated under Rule G, the provision in Rule B, Subsection 3.4, does not apply to proposed project.

Placement of fill below the 100-year flood elevation is prohibited unless fully compensatory storage at the same elevation (+/- 1 foot) and within the floodplain of the same waterbody is provided (Rule B, Subsection 3.2). The supporting materials demonstrate, and the RPBCWD Engineer concurs, that 0.31 cubic yards of fill will be placed and 29.91 cubic yards of compensatory storage will be created below the 100-year floodplain, thus providing a net increase in the floodplain storage. The compensatory storage is provided at the same elevation (+/- 1 foot) below the 100-year floodplain, thus the project conforms to Rule B, Subsection 3.2. The project will not alter surface flows (Rule B, Subsection 3.3). A note on the plans requiring that activities must be conducted to minimize the potential transfer of aquatic invasive species conforming to Rule B, Subsection 3.5.

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

Rule C: Erosion and Sediment Control

Because the project will disturb 235,224 square feet) of land surface 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 the WSB & Associates includes installation of inlet protection for storm sewer catch basins, decompaction of pervious areas compacted during construction, and retention of native topsoil onsite. Brent Carron, Valley Paving, will be responsible for erosion control at the site. The proposed project conforms to the erosion and sediment control requirements of Rule C.

Rule D: Wetland and Creek Buffers

Because the proposed work triggers a permit under RPBCWD Rules B and G and Riley Creek is disturbed by the proposed construction activities, Rule D, Subsections 2.1a and 3.1 require buffer around the entire creek on the property.

Riley Creek flows through the project site and requires an average buffer width of 50 feet from the creek centerline, minimum 30 feet in accordance with Rule D, Subsection 3.1.a.v for a public waters watercourse. The applicant provided a buffer zone and marker location map showing that the proposed buffer area extends the required average widths and to the property limits. The buffer widths summarized in the table below.

Regulated Feature	RPBCWD Wetland Value	Required Minimum Width[1] (ft)	Required Average Width[1] (ft)	Provided Minimum Width (ft)	Provided Average Width (ft)
Riley Creek	NA	30	50	42	54

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

A note on the erosion control plan indicates the Applicant is proposing revegetating disturbed areas within the proposed buffer with native vegetation in conformance with Rule D, Subsection 3.2. 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.

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

D1. Buffer areas and maintenance requirements must be documented in an agreement approved by RPBCWD. As a public entity, Chanhassen may comply with this requirement by entering into a maintenance agreement with the RPBCWD.

Rule G: Waterbody Crossings and Structures

The project proposes an in-kind replacement of a 12-foot by 9-foot concrete box culvert crossing of Riley Creek, public water, for Park Road, thus conformance with RPBCWD's Waterbody Crossings Rule (Rule G) is required for this project. The criteria in subsections 3.1, 3.2 and 3.7 apply to the project.

This work represents a public benefit by replacing a deteriorating box culvert, maintaining transportation connectivity (Rule G, Subsection 3.1a) and correcting some erosion at the downstream end of the culvert. The proposed crossing was modeled in SWMM by the applicant. The analysis shows that the proposed 100-year frequency flood elevation upstream of the crossing (906.7) will match the existing elevation 906.7 M.S.L. and the downstream flood elevation will also match the existing flood

elevation of 905.7 M.S.L., thus confirming the project will not increase the flood stage of the existing water body conforming to Rule G, Subsection 3.2a. The applicant also provided a No Rise Certificate signed by a professional engineer confirming that the elevation will not change.

This portion of Riley Creek is not used for navigation, thus the requirement of Rule G, Subsection 3.2b does not apply to this project. The project will not adversely affect water quality or cause increased scour, erosion or sedimentation because the stabilization materials are sized and designed appropriately to withstand the erosion potential along an existing eroded section of Riley Creek and provide a stable creek system consistent with the criteria in Rule G, Subsection 3.2c. Because this is an in-kind replacement wildlife will continue to be able to use Riley Creek as it is used under existing conditions, thus preserving wildlife passage. The potential for fish passage will be maintained through the proposed bridge crossing, thus consistent with Rule G, Subsection 3.2d.

A no-build option would result in flows through the existing deteriorating box culvert continuing to cause downstream erosion. A bridge spanning the creek was determined to not be feasible because of existing private and public utilities are present between the box culvert and road surface to allow for maintenance without future maintenance disturbance of the creek. In addition, the sanitary sewer is a gravity system that must be kept at the current elevations to maintain positive flow. A bridge would result in more site disturbance, thus exposing more soil to potential temporary erosion. Because the box culvert option is an in-kind replacement the flow characteristic will be unchanged, thus having the minimal impact to the area and the creek system which is consistent with Rule G, Subsection 3.2e.

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

Rule G, Subsection 3.7d requires compliance with the applicable criteria in subsections 3.2 to 3.4 of Rule F. The streambank stabilization work is to prevent erosion and not for cosmetic purposes (Rule F, Subsection 3.3j). Regarding the section 3.2 sequencing analysis, which requires an applicant to show that proposed stabilization practices are consistent with sheer stresses at the location of the proposed stabilization: modeling indicates the flow velocities and average shear stress during the 100-year event in this portion of Riley Creek are 5.8 feet per second (fps) and 2.4 pounds per square foot (lb/ft^2), respectively. This shear stress significantly exceeds the shear stress that can be sustained by the native soils in the area and the shear stress vegetation alone can withstand (0.02-0.26 lb/ft^2 and 0.7-1.7 lb/ft^2, respectively). These data show that neither bioengineering nor a combination of bioengineering and riprap will achieve streambank stabilization at the Park Road crossing, and use of riprap is necessary. The project is proposing to install MnDOT Class III Riprap. The project proposes the use stone rip-rap

having an average size of 9 inches, with a geotextile (MNDOT 3733) and transition layer of 6 inches of granular bedding consistent with Rule F, Subsections 3.3b and 3.3d. Notes on the plan sheet prohibit the use of limestone or dolomite consistent with Rule F, Subsections 3.3b. The proposed riprap can withstand shear stress of 3.8 lb/ft^2, which is consistent with the erosion intensity for the flow in Riley Creek at this location (Rule F, Subsection 3.2 and Subsection 3.3b).

Plans submitted confirm the proposed streambank stabilization follows the natural alignment of the creek and will not cover emergent vegetation (Rule F, Subsection 3.3c and 3.3e). The riprap is proposed to extend to the top of the streambanks upstream and downstream of the crossing which consistent with Rule F, Subsection 3.3f. The project also calls for the finished streambanks slopes in some areas that are steeper than 3H:1V which does not conform to Rule F, Subsection 3.3g so the applicant has requested a variance from this provision (see variance discussion below). The project, as shown on the plans, will not reduce the cross-sectional area of the creek or increase the upstream stage, consistent with Rule F, Subsection 3.3h.

As noted under rules B and D, plans for the project include provisions for the minimization of transfer of AIS in compliance with 3.7e.

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

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

Rule K: Variances and Exceptions

Rule G, Subsection 3.7d requires compliance with the applicable criteria in subsections 3.2 to 3.4 of Rule F. The applicant is requesting a variance from subsection 3.3g of Rule F requiring the slope of the streambank stabilization be 3:1 (horizontal to vertical) or flatter. According to RPBCWD's Rule K, the Board of Managers must find that because of unique conditions inherent to the subject property compliance with the slope criterion 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.

While the applicant must address these criteria to support a variance request (see attached submittal from applicant), the following is the RPBCWD engineer's assessment of information from the request relevant to the applicant's request for a variance from standard requiring the slope of the streambank stabilization be 3:1 (horizontal to vertical) or flatter:

- Related to variance criterion 1 – The applicant is conducting work on approximately 85 feet of streambank to facilitate the replacement of the crossing. Only 37 feet, or 43%, of disturbed streambank will be constructed steeper than the standard.
- To help demonstrate that the project will not 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 (variance criterion 3), the applicant provided computations showing no change in flood elevations or increases in flows or anticipated stream flow velocities for events up to the 100-year, 24-hour event. The RPBCWD engineer concurs with the analysis. Thus the variance in streambank slope will not adversely affect the water resources or be detrimental to neighboring properties.
- The applicant has taken measures relevant to variance criterion 4 to offset the shortfall from the slope requirement: The applicant has configured the site grading such that 43 percent of the streambank work will achieve the required 3H:1V slope, leaving only 37 feet that will be steeper than the standard. Achieving the full 3H:1V would require additional site disturbance and removal of mature tree, including associated root system currently helping stabilize the streambank. In addition, as part of its plans to comply with Rule C the applicant is proposing to cover the slope with erosion control blanket to further help reduce erosion potential.
- With regard to variance criterion 5, grades surrounding the existing box culvert are already graded to 2H:1V and the area is fully vegetated with mature trees and other native species– site conditions that the applicant did not create or exacerbate.

Rule J: Stormwater Management

Conformance with the RPBCWD Stormwater Management rule (Rule J) is not required for this project because it is a linear project constructed in right-of-way and stormsewer easements which entails reconstruction creating less than 5,000 square feet of new and/or fully reconstructed impervious surface (Rule J, subsection 2.4).

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. The applicant must provide the name and contact information of general contractor responsible for the site.

Findings

1. The proposed project includes the information necessary, plan sheets and erosion control plan for review.
2. The proposed project conforms to Rules B and C.
3. The applicant is seeking a variance from strict compliance with the Rule G, Subsection 3.7d which requires compliance with the applicable criteria in subsections 3.2 to 3.4 of Rule F, specifically, subsection 3.3g of Rule F requiring slopes be no greater than 3:1, but otherwise the project complies with Rule G.
4. The proposed project will conform to Rule D if the Rule Specific Permit Conditions listed above are met.

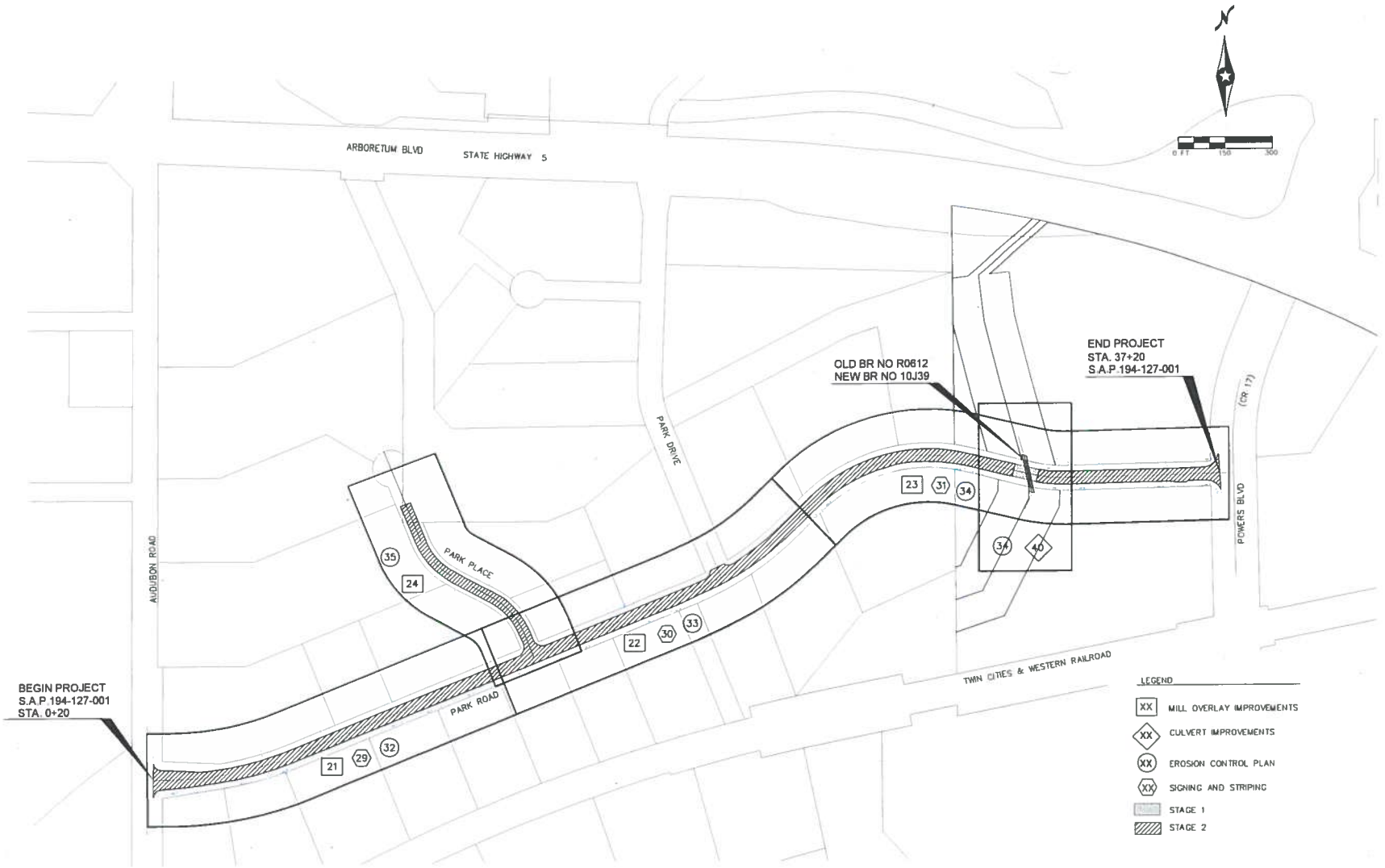
Recommendation:

Approval, contingent upon:

1. Continued compliance with General Requirements.
2. Permit applicant must provide a draft maintenance agreement and inspection plan for the waterbody crossing and buffer areas. Once approved by RPBCWD, the City must enter an agreement with RPBCWD to maintain the project facilities in accordance with the plan.

Board Action

It was moved by Manager _____, seconded by Manager _____ to approve permit application No. 2017-034 with the conditions recommended by staff.



2016 STREET REHABILITATION
PROJECT NO. 16-04
PARK ROAD AND PARK PLACE
CHANHASSEN, MINNESOTA

WSB
701 Xenia Avenue South, Suite 300
Minneapolis, MN 55416
Tel (763) 541-4800 Fax (763) 541-1700
wsbeng.com
engineers | surveyors | environmental | construction

CITY PROJECT NO. 16-04
SAP NO. 194-127-001

GENERAL LAYOUT

SHEET 2 OF 50 SHEETS

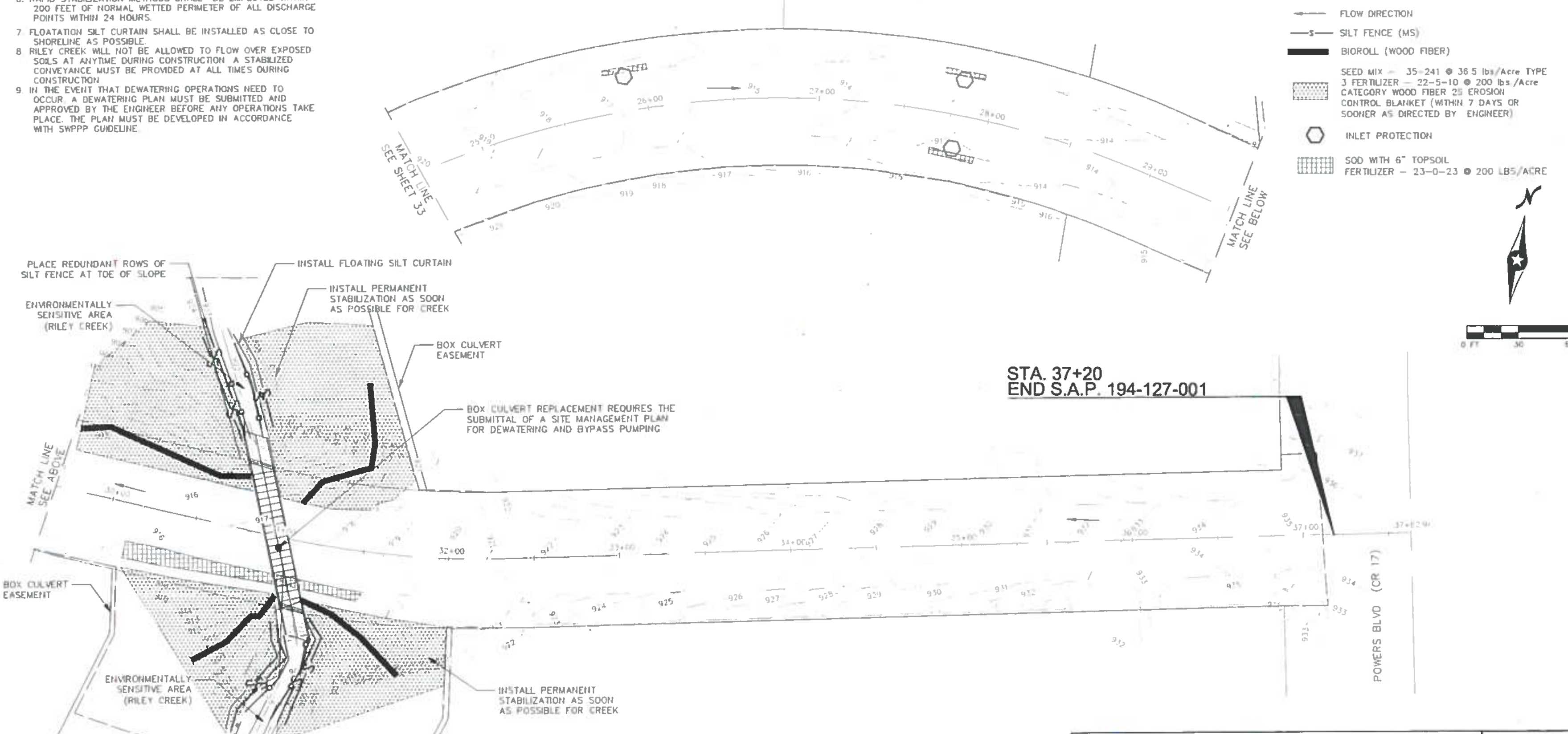
PARK ROAD

NOTES:

1. ALL STREETS IN AND ADJACENT TO THE PROJECT SHALL REMAIN CLEAN AND PASSABLE AT ALL TIMES. ADJACENT STREET AND CURB LINE TO BE SWEPT FREE OF DEBRIS AT THE END OF EACH WORK DAY, OR AS OFTEN AS NEEDED TO ENSURE PUBLIC SAFETY.
2. CONTRACTOR SHALL PROVIDE PROPER INLET AND OUTLET CONTROLS UNTIL ALL SOURCES WITH POTENTIAL FOR DISCHARGING TO THE INLETS AND OUTLETS HAVE BEEN STABILIZED.
3. THE CONTRACTOR SHALL PROVIDE PERIMETER CONTROL DAY-TO-DAY AT DISTURBED UNSTABILIZED AREAS WHERE EROSION OR SEDIMENTATION COULD BE AN ISSUE. ADDITIONAL EROSION AND SEDIMENT CONTROL MAY BE ADDED DURING ANY PHASE OF CONSTRUCTION AS DIRECTED BY THE ENGINEER.
4. STABILIZATION OF DISTURBED AREAS SHALL BE DONE BY PERMANENT TURF ESTABLISHMENT WHENEVER POSSIBLE.
5. IN THE EVENT THAT PERMANENT STABILIZATION CANNOT BE IMPLEMENTED WITHIN 7 DAYS AFTER CONSTRUCTION ACTIVITY IN THE DISTURBED AREA HAS CEASED, TEMPORARY STABILIZATION BMPS MUST BE SCHEDULED TO OCCUR WITHIN THAT 7 DAY TIME FRAME (EXCEPT WHERE CALLED OUT BY NOTE #6).
6. RAPID STABILIZATION METHODS SHALL BE EMPLOYED WITHIN 200 FEET OF NORMAL WETTED PERIMETER OF ALL DISCHARGE POINTS WITHIN 24 HOURS.
7. FLOATATION SILT CURTAIN SHALL BE INSTALLED AS CLOSE TO SHORELINE AS POSSIBLE.
8. RILEY CREEK WILL NOT BE ALLOWED TO FLOW OVER EXPOSED SOILS AT ANYTIME DURING CONSTRUCTION. A STABILIZED CONVEYANCE MUST BE PROVIDED AT ALL TIMES DURING CONSTRUCTION.
9. IN THE EVENT THAT DEWATERING OPERATIONS NEED TO OCCUR, A DEWATERING PLAN MUST BE SUBMITTED AND APPROVED BY THE ENGINEER BEFORE ANY OPERATIONS TAKE PLACE. THE PLAN MUST BE DEVELOPED IN ACCORDANCE WITH SWPPP GUIDELINE.
10. BANKS MUST BE STABILIZED IMMEDIATELY AFTER COMPLETION OF PERMITTED WORK AND REVEGETATED AS SOON AS GROWING CONDITIONS ALLOW.
11. NATURAL TOPOGRAPHY AND SOIL CONDITIONS MUST BE PROTECTED, INCLUDING RETENTION ONSITE OF NATIVE TOPSOIL TO THE GREATEST EXTENT POSSIBLE.
12. 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.
13. 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.
14. CONSTRUCTION SITE WASTE SUCH AS DISCARDED BUILDING MATERIALS, CONCRETE WASHOUT, CHEMICALS, LITTER AND SANITARY WASTE MUST BE PROPERLY MANAGED.
15. 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.
16. ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPS MUST BE REMOVED UPON FINAL STABILIZATION.
17. 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 WHILE TAKING CARE TO AVOID UTILITIES, TREE ROOTS AND OTHER EXISTING VEGETATION PRIOR TO FINAL REVEGETATION OR OTHER STABILIZATION.
18. 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.
19. THE PERMITTEE MUST, AT A MINIMUM, INSPECT, MAINTAIN AND REPAIR ALL DISTURBED SURFACES AND ALL EROSION AND SEDIMENT CONTROL FACILITIES AND SOIL STABILIZATION MEASURES EVERY DAY WORK IS PERFORMED ON THE SITE AND AT LEAST WEEKLY UNTIL LAND-DISTURBING ACTIVITY HAS CEASED. THEREAFTER, THE PERMITTEE MUST PERFORM THESE RESPONSIBILITIES AT LEAST WEEKLY UNTIL VEGETATIVE COVER IS ESTABLISHED. THE PERMITTEE WILL MAINTAIN A LOG OF ACTIVITIES UNDER THIS SECTION FOR INSPECTION BY THE DISTRICT ON REQUEST.

LEGEND

- FLOATING CURTAIN
- CONSTRUCTION LIMITS
- FLOW DIRECTION
- SILT FENCE (MS)
- BIOROLL (WOOD FIBER)
- SEED MIX — 35-241 @ 36.5 lbs/Acre TYPE 3 FERTILIZER — 22-5-10 @ 200 lbs./Acre CATEGORY WOOD FIBER 25 EROSION CONTROL BLANKET (WITHIN 7 DAYS OR SOONER AS DIRECTED BY ENGINEER)
- INLET PROTECTION
- SOD WITH 6" TOPSOIL FERTILIZER — 23-0-23 @ 200 LBS/ACRE



2016 STREET REHABILITATION
PROJECT NO. 16-04
PARK ROAD AND PARK PLACE
CHANHASSEN, MINNESOTA

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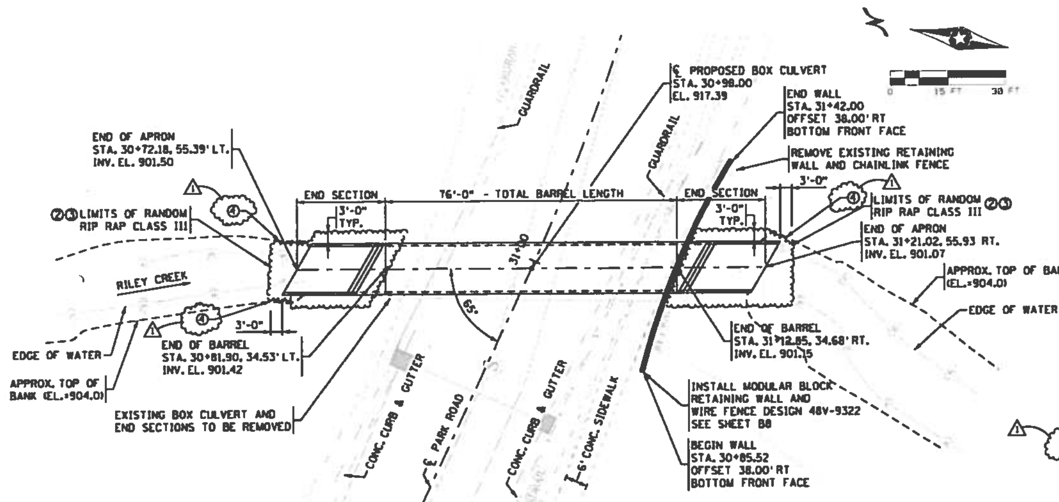
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
ERIC ECLAHAN, P.E.
DATE: 07/25/18 LIC. NO. 45934

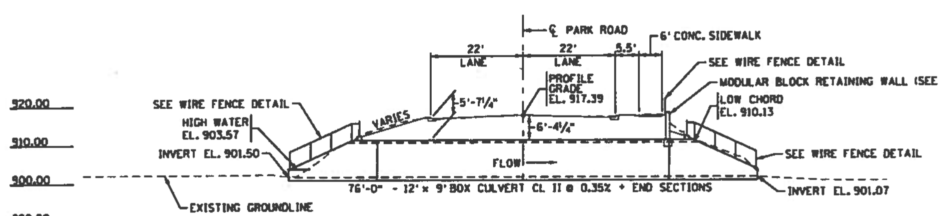
SCALE	AS NOTED	REVISION NO.	DATE	EXPLANATION
PLAN BY	EAE	1	8/14/17	REVISED NOTES
CHECKED BY	KBK			
PROJECT NO.	01684-78			

CITY PROJECT NO. 16-04	PARK ROAD	SHEET 34R OF 50 SHEETS
SAP NO. 194-127-001	EROSION CONTROL	



NOTE: ALL UTILITIES TO BE RELOCATED SEE ROADWAY PLANS.

GENERAL PLAN



GENERAL ELEVATION

12'-0" X 9'-0" PRECAST CONCRETE BOX CULVERT

CONSTRUCTION NOTES

THE 2016 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

BARS MARKED WITH THE SUFFIX "E" SHALL BE EPOXY COATED IN ACCORDANCE WITH SPEC. 3301

THE BARS SHOWN IN THE PLAN ARE IN U.S. CUSTOMARY DESIGNATIONS.

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

FINISH ALL EXPOSED EDGES OF CONCRETE WITH ½" OR ¾" CHAMFER OR RADIUS, UNLESS OTHERWISE NOTED.

ACTIVITIES MUST BE CONDUCTED SO AS TO MINIMIZE THE POTENTIAL TRANSFER OF AQUATIC INVASIVE SPECIES (E.G., ZEBRA MUSSELS, EURASIAN WATERMILFOIL, ETC.) TO THE MAXIMUM EXTENT POSSIBLE.

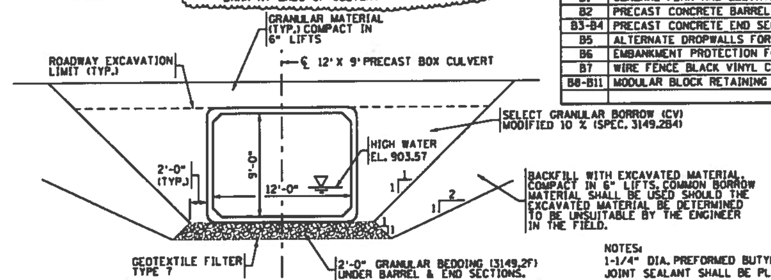
REFER TO GEOTECH REPORT B1600358 DATED MARCH 4, 2016 BY BRAUN.

① SEE SPECIAL PROVISIONS AND ROADWAY PLANS FOR CONSTRUCTION DEWATERING REQUIREMENTS.

② PLACE 6" (MIN.) LAYER OF SELECT GRANULAR BORROW MOD 10% W/ GEOTEXTILE FILTER & RIPRAP.

③ SUBMIT RIPRAP STONE SELECTION TO ENGINEER FOR FINAL APPROVAL. (LIMESTONE DOLOMITE NOT TO BE USED).

④ RIPRAP NOT TO EXTEND ABOVE TOP OF STREAM BANK AT ENDS OF CULVERT



TYPICAL CULVERT SECTION

DESIGN DATA

2014 AND CURRENT INTERIM AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS
LOAD AND RESISTANCE FACTOR DESIGN METHOD
DESIGN LOADING HL-93 LIVE LOAD

INSIDE HEIGHT.......9'-0"
INSIDE WIDTH.......12'-0"
LENGTH.......76'-0"
UNIT WEIGHT FILL.......120 LBS./CU.FT.
SKEW ANGLE.......25°00'00"
ANGLE INTERNAL FRICTION.......32°
MINIMUM FILL DEPTH.......5.61'
MAXIMUM FILL DEPTH.......6.44'

DESIGN ALLOWS FOR 2" FUTURE WEARING COURSE (20 PSF)

MAXIMUM ALLOWABLE DESIGN STRESSES:
MAX ALLOWABLE GROSS BEARING PRESSURE: 4,500 PSF
MAX BEARING LOAD (DESIGN): 1,500 PSF
REINFORCED CONCRETE:
f'c = 4,000 PSI n = 8 (WALLS)
f'c = 5,000 PSI n = 8 (CULVERT AND END SECTIONS)
fy = 60,000 PSI REINFORCEMENT BARS
fy = 65,000 PSI WWF REINFORCEMENT

DESIGN SPEED: OVER = 40 MPH
ADT (2016) = 2,500
ADT (2036) = 3,310

HL-93 OPERATING RATING FACTOR = 1.3 (LRFR)

LIST OF SHEETS

NO.	DESCRIPTION
B1	GENERAL PLAN AND ELEVATION
B2	PRECAST CONCRETE BARREL DETAILS
B3-B4	PRECAST CONCRETE END SECTION
B5	ALTERNATE DROPWALLS FOR BOX CULVERTS
B6	EMBANKMENT PROTECTION FOR BOX CULVERTS
B7	WIRE FENCE BLACK VINYL COATED
B8-B11	MODULAR BLOCK RETAINING WALL

NOTES:
1-1/4" DIA. PREFORMED BUTYL RUBBER MASTIC JOINT SEALANT SHALL BE PLACED AROUND THE ENTIRE JOINT (TOP, BOTTOM, AND SIDES) AT ALL CULVERT JOINT LOCATIONS AND IS INCIDENTAL.

WATERPROOFING SHALL BE PER MNDOT SPEC. 2481 (OR GEOTEXTILE SPEC. 2412) AND SHALL EXTEND AROUND THE JOINT (TOP, AND SIDES) OF EACH BOX CULVERT SECTION AND IS INCIDENTAL.

② INCLUDES GEOSYNTHETIC REINFORCEMENT, COARSE FILTER AGGREGATE, DRAINAGE SYSTEM, AND SELECT GRANULAR BORROW (MOD). TYPE 1 GEOTEXTILE FABRIC AND ALL WALL COMPONENTS EXCEPT FOOTING.

HYDRAULIC ENGINEERS RECOMMENDATION

DATED: 5/11/16 (NGVD88)
STREAM OR DITCH DESIGNATION RILEY CREEK
DRAINAGE AREA 2.58 SQ. MI.
MAX. DISCHARGE ON RECORD UNKNOWN DESIGN DISCHARGE (100YR. FREQ.) 60 C.F.S.
MAX. HIGHWATER ELEVATION N/A DESIGNED HIGHWATER ELEVATION 903.57
DESIGNED MEAN VELOCITY THROUGH STRUCTURE 2.54 F.P.S.
LOW SUPERSTRUCTURE AT OR ABOVE ELEVATION 910.13
FLOWLINE ELEVATION 901.50 SKEW ANGLE 0°
WATERWAY AREA REQ'D. BELOW ELEVATION 903.57 = 23.47 SQ. FT. @ RIGHT ANGLES TO CHANNEL
IN THE INTEREST OF FLOOD PLAIN ZONING THE REGIONAL FLOOD (100 YR. FREQ.) IS 60 C.F.S. AT STAGE 903.23 AND MEAN VELOCITY OF 4.6 F.P.S. WITH 0.02 FT. SWELLHEAD. THE ABOVE RECOMMENDATION WILL PROVIDE A STRUCTURE OF ADEQUATE WATERWAY TO PASS THE REGIONAL FLOOD WITHIN CRITERIA ESTABLISHED BY THE DEPARTMENT OF NATURAL RESOURCES.
PIER SCOUR EL. NA

SCHEDULE OF QUANTITIES FOR 12' x 9' CONCRETE BOX CULVERT - BRIDGE NO. 10J39

	2401.601	2104.501	2104.501	2104.509	2401.501	2401.541	2451.507	2105.522	2511.501	2511.515	2412.511	2412.512	2557.501	2411.618 ②
ITEM	STRUCTURE EXCAVATION ①	REMOVE CONCRETE BOX CULVERT	REMOVE RETAINING WALL	REMOVE CONCRETE BOX CULVERT END SECTION	STRUCTURAL CONCRETE (1G52)	REINFORCEMENT BARS	GRANULAR BEDDING (CV)	SELECT GRANULAR BORROW (CV) MOD 10 %	RANDOM RIPRAP, CLASS III	GEOTEXTILE FILTER TYPE 7	12 X 9 PRECAST CONCRETE BOX CULVERT	12 X 9 PRECAST CONCRETE BOX CULVERT END SECTION	WIRE FENCE DESIGN 48V-9322	PREFABRICATED MODULAR BLOCK WALL
UNIT	LUMP SUM	LIN. FT.	LIN. FT.	EACH	CU. YD.	LB	CU. YD.	CU. YD.	CU. YD.	SQ. YD.	LIN. FT.	EACH	LIN. FT.	SQ. FT.
QUANTITY	1	82	59	2	17.8	212.8	165	779	64	250	76 (P)	2	162	402

REVISION NO. DATE	EXPLANATION
1 8-15-17	REVISED RIPRAP LIMITS

SCALE AS NOTED | DESIGN BY: CO | PLAN BY: BJR | CHECKED BY: CO | PROJECT NO. | RECORD COPY BY: | DATE:

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
LICENSED PROFESSIONAL ENGINEER CARL OSBERG REG NO. 42732
DATE 8/15/2017

2016 STREET MILL AND OVERLAY IMPROVEMENTS
PARK PLACE AND PARK ROAD
CHANHASSEN, MINNESOTA

WSB & Associates, Inc.
701 Xenia Avenue South, Suite 300
Minneapolis, MN 55416
www.wsbeng.com
INFRASTRUCTURE • ENGINEERING • PLANNING • CONSTRUCTION

MINNESOTA DEPARTMENT OF TRANSPORTATION

BRIDGE NO. 10J39
GENERAL PLAN AND ELEVATION

SPAN IDENTIFICATION NO. 513

PARK ROAD OVER RILEY CREEK
IN THE CITY OF CHANHASSEN

SEC. 14 TWP. 116N R. 23W
CITY OF CHANHASSEN CARVER COUNTY

APPROVED __________ DATE __________
CARVER COUNTY/COUNTY HIGHWAY ENGINEER

CITY PROJECT NO. 16-04
SAP NO. 197-127-001

GENERAL PLAN AND ELEVATION

SHEET B1 OF B11 SHEETS

8/15/2017
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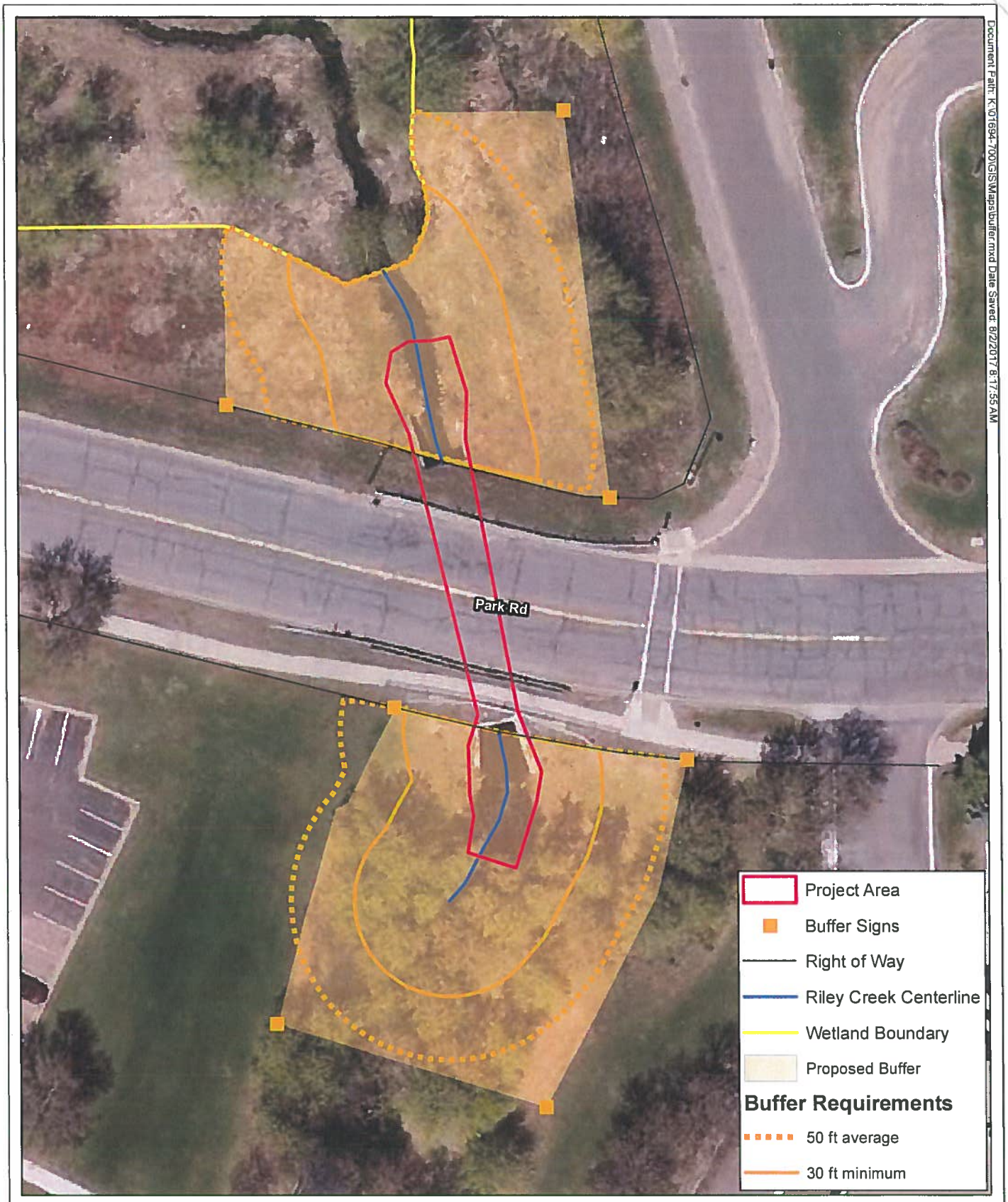


Figure 2 - Stream Buffer
Park Road Mill and Overlay
City of Chanhassen

N

0 75 Feet

1 inch = 40 feet

701 Xenia Avenue South | Suite 300 | Minneapolis, MN 55416 | (763) 541-4800

Memorandum

To: ***Board of Managers***
Riley Purgatory Bluff Creek Watershed District

From: ***Eric Eckman, PE***

Date: August 22, 2017

Re: ***Variance Request for Rule F Subsection 3.3g***
Permit 2017-034, City of Chanhassen – Park Road

Dear Board of Managers,

On behalf of the City of Chanhassen, WSB & Associates, Inc. requests the Board of Managers to consider granting a variance from the requirements of Rule F, Shoreline and Streambank Stabilization, for permit 2017-034. The existing conditions of the site make adhering to the requirements of Rule F impractical and the proposed improvements limit the disturbance to the native species that provide a natural buffer for Riley Creek.

Background and Existing Conditions

The project includes removal and in-kind replacement of the existing concrete box culvert underneath the Park Road crossing of Riley Creek in the City of Chanhassen. The box culvert replacement is part of a larger resurfacing project along Park Road between Audubon Road and Powers Boulevard (CR 117). The existing box culvert has shown major structural deficiencies and is in need of replacement. The grades surrounding the existing box culvert are already graded to 2H:1V and the area is fully vegetated with mature trees and other native species. These species help control soil erosion and provide a natural buffer adjacent to Riley Creek. The pictures in Exhibit 1 show the existing vegetation with mature trees and the existing slopes which do not show signs of soil erosion due to the steeper grades.

Rule F, Shoreline and Streambank Stabilization

The provisions under Rule F, 3.3g state "the finished, stabilized slope of any shoreline will not be steeper than 3:1 (horizontal to vertical)".

Compliance with this rule would cause a significant impact to the native plants surrounding the box culvert and Riley Creek which serve to protect the area from soil erosion. In order to achieve 3H:1V slopes a significant area that would not be otherwise disturbed by the proposed improvements would be regraded. Included with this would be further removal of existing vegetation which includes mature trees with established root systems that help prevent soil erosion adjacent to Riley Creek.

Variance Request Criteria, Rule K

1.1 How substantial the variation is from the rule provision

The proposed grades vary from 2.2H:1V and 2.8H:1V while the rule states a maximum of 3H:1V. However, the proposed grades are similar to the existing grades and the proposed improvements limit the amount of native vegetation that is disturbed. In order to prevent soil erosion during the revegetation process a wood fiber erosion control blanket will be used to stabilize the slopes. Once the slope is fully revegetated the area will return to its current state which does not show any signs of soil erosion along the steeper slopes.

1.2 The effect of the variance on government services

The variance to allow a steeper slope would not have any adverse effects on government services.

1.3 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

The need for the variance is due to our efforts to avoid substantially changing the native areas and existing conditions surrounding the box culvert. As mentioned above, the root systems of the mature trees and the established native vegetation help prevent soil erosion. Further disturbance beyond what is necessary to replace the box culvert would significantly impact the surrounding habitat and have an adverse effect on water resources. As shown by Exhibit 2, the proposed improvements result in a "net cut" within the 100-year flood elevation which is an improvement upon the existing conditions. Since the proposed improvements include an in-kind replacement of the box culvert the drainage patterns and flows will not change from the existing conditions and it will not pose any changes to neighboring properties.

1.4 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

Due to the existing grades exceeding the 3H:1V slope requirement there are very few options available to impose a 3H:1V slope into the area that do not involve a significantly larger disturbance to native vegetation. Since the native vegetation has shown the ability to adequately prevent soil erosion from occurring on the steep slopes it was determined that leaving this vegetation in place was the best option to minimize impacts to Riley Creek.

1.5 How the practical difficulty occurred, including whether the landowner, the landowner's agent or representative, or a contractor, created the need for the variance

The practical difficulty exists because the grades around the existing box culvert already exceed the slope requirements and extend along the streambank beyond the practical construction limits of the proposed improvements.

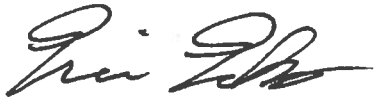
1.6 In light of all of the above factors, whether allowing the variance will serve the interests of justice.

Granting the variance will serve in the interests of justice because the existing conditions of the site restrict other practical solutions. Additionally, the variance is a reasonable solution and is requested in order to minimize impacts to the native vegetation and natural buffer that protects Riley Creek.

Conclusion

WSB & Associates, Inc on behalf of the City of Chanhassen requests a variance of the requirements of Rule F, Shoreline and Streambank Stabilization. The project site has unique existing conditions that do not allow the requirements to be practically applied and we believe granting the variance would be in the best interests of justice.

Sincerely,



Eric Eckman, PE
Project Manager

EXHIBIT 1

Pictures of existing conditions

Picture 1: South side of box culvert – mature trees and existing vegetative cover

Picture 2: North side of box culvert – mature trees and existing vegetative cover

Picture 3: North side of box culvert, east bank of Riley Creek (Existing slope – 2.4H:1V)

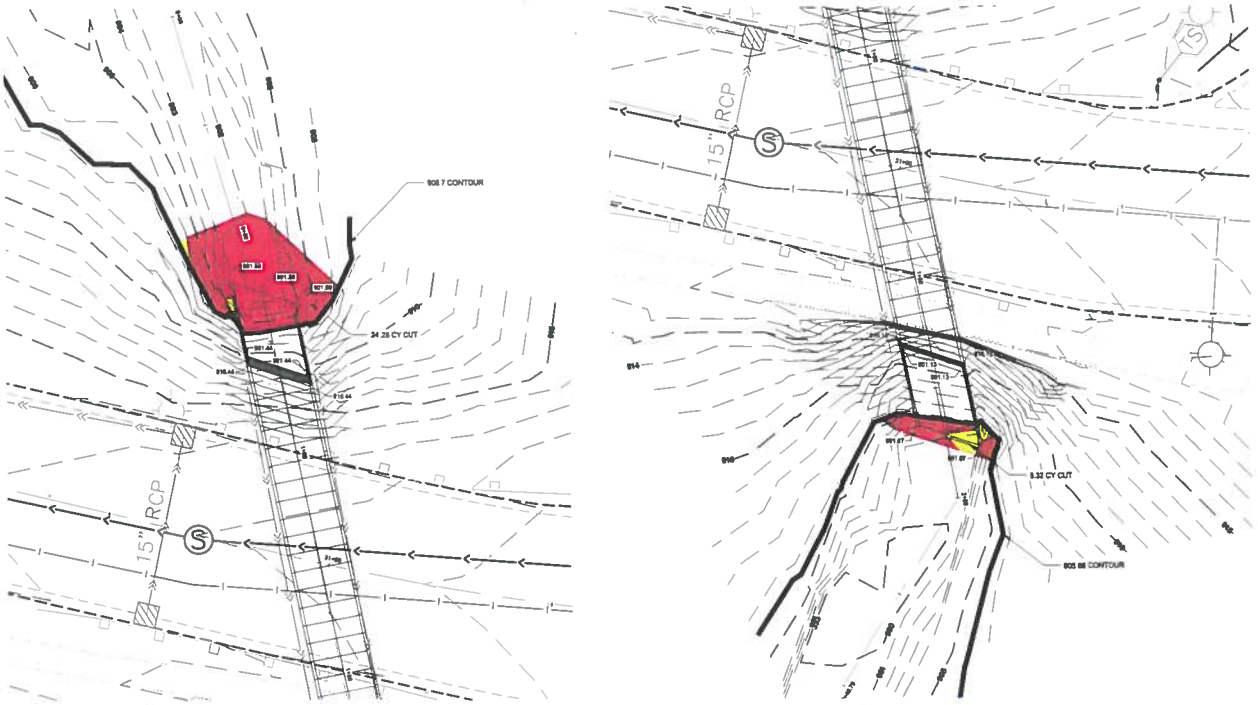
Picture 4: North side of box culvert, west bank of Riley Creek (Existing slope – 2.7H:1V)

Picture 5: South side of box culvert, west bank of Riley Creek (Existing slope – 1.8H:1V)

Picture 6: South side of box culvert, east bank of Riley Creek (Existing slope – 2.6H:1V)

EXHIBIT 2

Proposed Grading



WSB

WSB PROJECT NO. 01694-700

SCALE:	DESIGN BY
AS SHOWN	DEH
PLAN BY	CHECK BY:
DEH	DEH

REVISIONS

NO.	DATE	DESCRIPTION

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.

ERIC ECKMAN, P.E. LIC. NO. 49884

DATE:

2016 STREET REHABILITATION PROJECT NO. 16-04 PARK ROAD AND PARK PLACE CHANHASSEN, MINNESOTA

FLOODPLAIN VOLUME

C.P. 16-04

SHEET 1 OF 1

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

Treasurers Report

July 31, 2017

REPORT INDEX

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT
Cash Disbursements
July 31, 2017

Accounts Payable		Amount
Barr Engineering Company	$	65,151.91
CenterPoint Energy		22.00
CenturyLink		459.84
Claire Bleser		40.00
Dell Five Business Park G-I		22,218.26
Dunn and Semington Printing		48.27
Hach Company		14.04
HealthPartners		7,096.78
JMSC Futurity, PLLC		1,395.00
Josh Maxwell		139.25
Klein Bank Visa		8,068.62
Natural Shore Technologies, Inc		480.00
Richfield Bus Company		778.92
RMB Environmental Laboratories, Inc.		3,896.00
Smith Partners PLLP		10,044.28
Spee-Dee Delivery Service Inc.		324.43
Spotless Cleaning Service LLC		962.37
SRF Consulting Group		4,009.55
Terry Jeffery		31.23
The Lincoln Nathional Life Insurance Company		864.63
Wenck Associates Inc		679.00
Xcel Energy		15.88
Xcel Energy		666.59
Zachary Dickhausen		123.70
Total Accounts Payable	**$**	**127,530.55**

Payroll Disbursements		Amount
Payroll Processing Fee	$	145.00
Employee Salaries		27,069.89
Employee Payroll Taxes		2,026.30
PERA Match		1,905.60
Total Payroll Disbursements	**$**	**31,146.79**

Total Disbursements	**$**	**158,677.34**

Memos

The 2016 mileage rate is 0.54¢ per mile. The 2017 mileage rate is 53.5¢. Klein Bank Visa will be paid online.

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT
Fund Performance Analysis - Table 1
July 31, 2017

	2017 Budget	Month Ended Jul. 31, 2017	Year to Date Jul. 31, 2017
REVENUES			
Interest Income	0.00	283.07	300.24
Other Income	0.00	0.00	225.00
Other Income - Refunds	0.00	3,610.18	5,485.18
Other Income - District Floodplain	0.00	0.00	22,080.00
Plan Implementation Levy	2,859,000.00	1,461,133.54	1,470,610.37
Permit Income	15,000.00	5,050.00	24,350.00
TOTAL REVENUES	**$ 2,874,000.00**	**$ 1,470,076.79**	**$ 1,523,050.79**
EXPENDITURES			
Administration			
Accounting/Audit	$ 39,500.00	$ 1,540.00	$ 25,108.30
Advisory Committee	4,000.00	0.00	3,408.83
Engineering Services	103,000.00	7,357.00	48,673.70
Insurance and Bonds	12,000.00	783.58	5,485.07
Legal Services	75,000.00	3,949.06	38,498.40
Manager Expenses	18,500.00	566.14	7,566.95
Dues and Memberships	8,000.00	0.00	4,000.00
Office Costs	95,000.00	10,895.26	105,118.60
Permit Review and Inspection	90,000.00	16,290.70	121,059.89
Recording Services	15,000.00	0.00	5,643.49
Employee Cost	450,000.00	34,803.27	208,796.96
Total Administration Costs	**$ 910,000.00**	**$ 76,185.01**	**$ 573,360.19**
Programs and Projects			
District Wide			
‡ Education & Outreach	$ 114,000.00	6,315.03	37,582.65
AIS Inspection and Early Response	75,000.00	0.00	62.24
Cost Share Program	200,000.00	0.00	5,370.79
District Wide Floodplain Eval- Atlas 14	30,000.00	0.00	1,559.32
Data Collection	180,000.00	12,643.11	67,076.58
U of M Plant Restoration	75,000.00	0.00	27,931.26
TMDL	10,000.00	0.00	1,028.00
Watershed - 10 Year Plan	75,000.00	14,282.20	70,248.17
○ Repair and Maintanance	100,000.00	0.00	0.00
○ ♦ Community Resilience MPCA	0.00	934.50	28,426.55
Creek Restoration Action Straegies Phase 2	20,000.00	0.00	11,487.00
District Groundwater Assessment	30,000.00	8,177.00	26,452.00
Total District Wide Costs	**$ 909,000.00**	**$ 42,351.84**	**$ 277,224.56**
Bluff Creek One Water			
○ ♦ Fish Passage Bluff Creek	$ 0.00	0.00	8,392.43
○ Bluff Creek Tributary	0.00	911.50	18,205.77
○ ♦ Chanhassen HS reuse	50,000.00	615.00	96,927.90
Total District Wide Costs	**$ 50,000.00**	**$ 1,526.50**	**$ 123,526.10**

○ Denotes Multi-Year Project - See Table 2 for details
♦ Grants are supplementing the projects - See table 3 for further details
* Denotes the project will be overlapping by one year as it was not fully complete by year end.
‡ Includes the Master Design items - See Table 2 to details

See Accountants Compilation Report

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT
Fund Performance Analysis - Table 1
July 31, 2017

	2017 Budget	Month Ended Jul. 31, 2017	Year to Date Jul. 31, 2017
Riley Creek One Water			
Lake Riley EWM Treatment	$ 25,000.00	0.00	22,325.20
○ Lake Riley Alum Treatment	0.00	0.00	681.85
○ ♦ Lake Susan Improvement Phase 2	0.00	0.00	13,476.02
○ ♦ Chanhassen Town Center	0.00	0.00	12,605.56
Rice Marsh Lake Aeration	0.00	0.00	15.88
Lake Riley - CLP Treatment	10,000.00	0.00	7,173.37
Lake Susan - CLP Treatment	10,000.00	0.00	3,074.30
Rice Marsh Lake WQ Improvement - Phase 1	20,000.00	0.00	0.00
Rice Marsh Lake Winter Fish Kill Prevention	10,000.00	15.88	398.57
Riley Creek Restoration	600,000.00	2,233.00	21,525.60
Total Riley Creek One Water Costs	**$ 675,000.00**	**$ 2,248.88**	**$ 81,276.35**
Purgatory Creek One Water			
○ Purgatory Creek Restoration	$ 0.00	200.00	34,411.50
Mitchell Lake Plant Management	15,000.00	0.00	2,261.83
Red Rock Lake Plant Management	15,000.00	0.00	4,064.89
Starring Lake Plant Management	20,000.00	0.00	7,949.98
♦ Fire Station 2 Water Reuse	20,000.00	4,009.55	17,778.74
Purgatory Creek Rec Area	50,000.00	0.00	0.00
Hyland Lake UAA	20,000.00	8,144.00	13,990.50
Lotus Lake - Phase 1	20,000.00	0.00	0.00
Silver Lake Restoration - Phase 1	20,000.00	0.00	0.00
○ ♦ Scenic Heights	0.00	5,485.50	19,880.60
Total Purgatory Creek One Water Costs	**$ 180,000.00**	**$ 17,839.05**	**$ 100,338.04**
Contingency Reserve			
Contingency Reserve	$ 135,000.00	$ 0.00	$ 0.00
Total Contingency Reserve Costs	**$ 135,000.00**	**$ 0.00**	**$ 0.00**
TOTAL EXPENDITURES	**$ 2,859,000.00**	**$ 140,151.28**	**$ 1,155,725.24**
Excess (Deficiency)	**$ 15,000.00**	**$ 1,329,925.51**	**$ 367,325.55**

○ Denotes Multi-Year Project - See Table 2 for details
♦ Grants are supplementing the projects - See table 3 for further details
* Denotes the project will be overlapping by one year as it was not fully complete by year end.
‡ Includes the Master Design Items - See Table 2 to details

See Accountants Compilation Report

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT
Multi-Year Project Performance Analysis - Table 2
July 31, 2017

	Total Available for Project	2017 Budget	Month Ended Jul. 31, 2017	Year to Date Jul. 31, 2017	Lifetime Costs	Remaining Budget Funds
Projects						
○ ♦ Chanhassen Town Center	63,000.00	0.00	0.00	12,605.56	35,196.56	27,803.44
○ ♦ Fish Passage Bluff Creek	415,000.00	0.00	0.00	8,392.43	33,185.82	381,814.18
○ Lake Lucy Iron Enhanced	85,000.00	0.00	0.00	0.00	62.32	84,937.68
○ Lake Riley Alum Treatment	260,000.00	0.00	0.00	681.85	235,659.41	24,340.59
○ Lake Susan Improvements	275,000.00	0.00	0.00	0.00	272,134.10	2,865.90
○ ♦ Lake Susan Improvement Ph 2	383,400.00	0.00	0.00	13,476.02	30,217.80	353,182.20
○ Purgatory Creek Restoration	661,094.00	0.00	200.00	34,411.50	365,637.06	295,456.94
○ ♦ Chanhassen HS Reuse	250,000.00	50,000.00	615.00	96,927.90	108,065.00	141,935.00
○ ♦ Community Resilience MPCA	47,000.00	0.00	934.50	28,426.55	46,601.68	398.32
○ ♦ Scenic Heights	260,000.00	0.00	5,485.50	19,880.60	19,880.60	240,119.40
○ Bluff Creek Tributary	200,000.00	0.00	911.50	18,205.77	18,205.77	181,794.23
Total Multi-Year Project Costs	**$ 2,899,494.00**	**$ 50,000.00**	**$ 8,146.50**	**$ 233,008.18**	**$ 1,164,846.12**	**$ 1,734,647.88**
Programs						
○ Repair and Maintenance	$102,005.00	100,000.00	0.00	0.00	0.00	102,005.00
○ Survey and Analysis	37,257.00	0.00	0.00	0.00	24,165.26	13,091.74
Total Program Costs	**$ 139,262.00**	**$ 100,000.00**	**$ 0.00**	**$ 0.00**	**$ 24,165.26**	**$ 115,096.74**
Other						
Total Other	**$ 0.00**	**$ 0.00**	**$ 0.00**	**$ 0.00**	**$ 0.00**	**$ 0.00**
Total Multi-Year Project Costs	**$ 3,038,756.00**	**$ 150,000.00**	**$ 8,146.50**	**$ 233,008.18**	**$ 1,189,011.38**	**$ 1,849,744.62**

Grant and Other Income Performance Analysis - Table 3
July 31, 2017

	Total Available for Project	Total Grant Amount	Required District Match	Additional District Funds	Partner Funds
○ ♦ Chanhassen Town Center	$ 63,000.00	$ 48,000.00	$ 12,000.00	$ 3,000.00	$ 0.00
○ ♦ Fish Passage Bluff Creek	415,000.00	150,000.00	37,500.00	77,500.00	150,000.00
○ ♦ Lake Susan Improvement Ph 2	383,400.00	233,400.00	58,350.00	91,650.00	0.00
♦ Metropolitan Council - WOMP	5,000.00	5,000.00	0.00	0.00	0.00
○ ♦ Chanhassen HS Reuse	250,000.00	200,000.00	50,000.00	0.00	0.00
♦ Fire Station 2 Water Reuse	98,287.00	73,715.00	24,572.00	0.00	0.00
○ ♦ Community Resilience MPCA	47,000.00	27,000.00	10,000.00	0.00	10,000.00
○ ♦ Scenic Heights	260,000.00	50,000.00	0.00	165,000.00	45,000.00
Total Grants and Other Income	**$ 1,521,687.00**	**$ 787,115.00**	**$ 192,422.00**	**$ 337,150.00**	**$ 205,000.00**

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

♦ Grants are supplementing the projects - See table 3 for further details

* Denotes the project will be overlapping by one year as it was not fully complete by year end.

‡ Includes the Master Design Items - See Table 2 to details

See Accountants Compilation Report

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

Balance Sheet

As of July 31, 2017

ASSETS		
Current Assets		
Checking	$	2,058,230.67
Money Market Savings		0.00
Investments		2,469,000.00
Standing Cash in Investment Account		283.07
Total Current Assets	$	4,527,513.74
Other Assets		
Security Deposit		9,744.00
Prepaid Expenses		34,046.98
Delinquent Property Taxes		17,622.16
Total Other Assets	$	61,413.14
Total Assets	$	**4,588,926.88**
LIABILITIES AND NET ASSETS		
Liabilities		
Current Liabilities		
Accounts Payable	$	287,813.35
Payroll Withholding		137.72
Accrued Payroll		10,816.15
PERA Withholding		1,980.18
Total Current Liabilities	$	300,747.40
Other Current Liabilities		
Retainages Payable		23,786.93
Total Other Current Liabilities	$	23,786.93
Long-Term Liabilities		
Deferred Revenues	$	17,622.16
Unearned Revenue		132,396.16
Permit Escrows		678,050.00
Total Long-Term Liabilities	$	828,068.32
Total Liabilities	$	1,152,602.65
Net Assets		
Cumulative Fund Balance	$	3,068,998.68
Excess (Deficiency) Current		367,325.55
Total Net Assets	$	3,436,324.23
Total Liabilities and Net Assets	$	**4,588,926.88**

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

Klein Bank Visa Activity

July 20, 2017

DATE	PURCHASE FROM	AMT	DESCRIPTION	ACCT #	Total
21-Jun	JJS Dockside	$ 12.29	Conferences & Training - M	70302	
23-Jun	Country Inn & Suites	$ 210.68	Conferences & Training - M	70302	
23-Jun	Country Inn & Suites	$ 210.68	Conferences & Training - M	70302	$ 433.65
12-Jul	Savoy Pizza	$ 100.86	Manager Expense	70402	
12-Jul	Walgreens	$ 5.18	Manager Expense	70402	
12-Jul	Kowalski's	$ 26.45	Manager Expense	70402	$ 132.49
21-Jun	JJS Dockside	$ 11.21	Conferences & Training - S	71002	
22-Jun	Brigid's Cross Irish Pub	$ 12.79	Conferences & Training - S	71002	
23-Jun	Country Inn & Suites	$ 363.68	Conferences & Training - S	71002	$ 387.68
21-Jun	Cantabria Coffee	$ 10.67	Education & Outreach	93002	
29-Jun	Crumb Gourmet Deli	$ 131.83	Education & Outreach	93002	
29-Jun	Speedy Buttons	$ 184.80	Education & Outreach	93002	
29-Jun	Kowalski's	$ 24.89	Education & Outreach	93002	
30-Jun	JL Darling	$ 199.55	Education & Outreach	93002	
5-Jul	Quality Logo Products	$ 224.42	Education & Outreach	93002	
5-Jul	Ink Technologies	$ 244.00	Education & Outreach	93002	
6-Jul	GH Global Industries	$ 157.13	Education & Outreach	93002	
13-Jul	Rubber Stamp End	$ 24.50	Education & Outreach	93002	
13-Jul	Wayfair	$ 170.80	Education & Outreach	93002	
14-Jul	Amazon	$ 65.97	Education & Outreach	93002	
14-Jul	Starbucks	$ 25.90	Education & Outreach	93002	
17-Jul	Amazon	$ 65.75	Education & Outreach	93002	
17-Jul	4imprint	$ 188.86	Education & Outreach	93002	
18-Jul	JL Darling	$ 60.80	Education & Outreach	93002	$ 1,779.87
27-Jun	Merlin's Ace Hdwe	$ 23.61	Data Collection	100802	
27-Jun	Advanced Telemetry	$ 2,805.00	Data Collection	100802	
27-Jun	Marathon Petrol	$ 48.72	Data Collection	100802	
28-Jun	Amazon	$ 78.88	Data Collection	100802	
28-Jun	Holiday Station	$ 55.13	Data Collection	100802	
5-Jul	Chanhassen Goodyear	$ 367.66	Data Collection	100802	
7-Jul	Amazon	$ 30.99	Data Collection	100802	
8-Jul	Amazon	$ 11.39	Data Collection	100802	
8-Jul	Teledyne Insturments	$ 278.92	Data Collection	100802	
10-Jul	Home Depot	$ 19.81	Data Collection	100802	
14-Jul	Verizon Wireless	$ 35.10	Data Collection	100802	
17-Jul	Amazon	$ 146.48	Data Collection	100802	
17-Jul	Mills Fleet Farm	$ 213.72	Data Collection	100802	
19-Jul	Superamerica	$ 51.00	Data Collection	100802	$ 4,166.41
23-Jun	General Delivery	$ 17.92	Office Cost	170402	
26-Jun	Randy's Sanitation	$ 118.72	Office Cost	170402	
26-Jun	Office Depot	$ 36.03	Office Cost	170402	
28-Jun	Cub Foods	$ 13.38	Office Cost	170402	
28-Jun	Target	$ 28.82	Office Cost	170402	
30-Jun	General Delivery	$ 39.30	Office Cost	170402	
11-Jul	Amazon	$ 50.17	Office Cost	170402	
12-Jul	Joann Fabrics	$ 33.48	Office Cost	170402	
14-Jul	Verizon Wireless	$ 541.40	Office Cost	170402	
14-Jul	General Delivery	$ 17.92	Office Cost	170402	
15-Jul	Microsoft	$ 90.83	Office Cost	170402	
20-Jul	CenturyLink	$ 180.55	Office Cost	170402	$ 1,168.52
TOTAL PURCHASES		**$ 8,068.62**			**$ 8,068.62**
Total Credits					-
TOTAL DUE		**$ 8,068.62**			**$ 8,068.62**

Moving People
and
Business Forward

Riley Purgatory Bluff Creek
Watershed District
Eden Prairie, MN

To the Board of Managers:

Accountant's Opinion

The Riley Purgatory Bluff Creek Watershed District is responsible for the accompanying July 31, 2017 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 the 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 outside 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.

JMSC, PLLC
St. Louis Park, MN
August 29, 2017

Resolution 2017-009

RESOLUTION TO PETITION CHANGES OF BOUNDARY BETWEEN RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT, NINE MILE CREEK WATERSHED DISTRICT, MINNEHAHA CREEK WATERSHED DISTRICT, AND LOWER MINNESOTA RIVER WATERSHED DISTRICT

WHEREAS, as a result of the recent generation of more precise topographic data, the hydrologic boundaries of the Lower Minnesota River Watershed District (LMRWD), Nine Mile Creek Watershed District (NMCWD), Minnehaha Creek Watershed District (MCWD), and Riley Purgatory Bluff Creek Watershed District (RPBCWD) can be more precisely ascertained; and

WHEREAS, these improved data and the ongoing subdivision and development of land allow for the legal boundary of these watersheds to more closely follow the hydrologic boundary; and

WHEREAS, the purpose of Minnesota Statutes Chapters 103B and 103D is to facilitate water resource management on a watershed basis; the legal boundaries of watershed management organizations should conform as closely as is practicable to hydrologic boundaries;;

WHEREAS, the attached Exhibit A identifies the specific parcels to be assigned to the each watershed district based on this updated hydrologic information, the parcels to be allocated to each district are contiguous to each, and the alteration of the legal boundary of each watershed to include the identified parcels will advance the purposes of Minnesota Statutes Chapters 103B and 103D; the proposed boundary changes are therefore consistent with the purposes and requirements of sections 103B.205 to 103B.255;

WHEREAS, LMRWD, NMCWD, and MCWD have adopted written statements of concurrence in this boundary change petition;

WHEREAS, all four watershed districts are wholly within the Twin Cities Metropolitan Area and may change the watershed district boundaries pursuant to Minnesota Statutes Section 103B.215;

NOW, THEREFORE BE IT RESOLVED, the Riley-Purgatory-Bluff Creek Watershed District hereby adopts this petition to the Minnesota Board of Water and Soil Resources pursuant to Minnesota Statutes 103B.215 to alter the boundaries of the LMRWD, NMCWD, MCWD, and RPBCWD.

The question was on the adoption of the resolution and there were _____ yeas and ____ nays as follows:

	Yea	Nay	Abstain	Absent
CHADWICK				
CRAFTON				
PEDERSEN				
YETKA				
WARD				

Upon vote, the president declared the resolution _____.

* * * * * * * * * * * *

I, _____, secretary of the Riley-Purgatory-Bluff Creek Watershed District, do hereby certify that I have compared the above resolution with the original thereof as the same appears of record and on file with the District and find the same to be a true and correct transcription thereof.

IN TESTIMONY WHEREOF, I set my hand this _____ day of _____, 2017.

_____
Secretary