



Bassett Creek Watershed Management Commission

Regular Meeting
Thursday August 17, 2017
8:30 – 11:00 a.m.

Council Conference Room, Golden Valley City Hall, Golden Valley, MN

AGENDA

1. CALL TO ORDER and ROLL CALL

2. **CITIZEN FORUM ON NON-AGENDA ITEMS** - *Citizens may address the Commission about any item not contained on the regular agenda. A maximum of 15 minutes is allowed for the Forum. If the full 15 minutes are not needed for the Forum, the Commission will continue with the agenda. The Commission will take no official action on items discussed at the Forum, with the exception of referral to staff or a Commissions Committee for a recommendation to be brought back to the Commission for discussion/action.*

3. APPROVAL OF AGENDA

4. CONSENT AGENDA

- A. Approval of Minutes – July 20, 2017 Commission Meeting
- B. Approval of August 2017 Financial Report
- C. Approval of Payment of Invoices
 - i. Keystone Waters, LLC – July Administrator Services
 - ii. Keystone Waters, LLC – July Meeting Materials Distribution Expenses
 - iii. Barr Engineering – July 2017 Engineering Services
 - iv. Triple D Espresso – August 2017 Meeting Refreshments
 - v. Wenck – July 2017 WOMP Monitoring
 - vi. Wenck – July Routine Lake Monitoring
 - vii. Lawn Chair Gardener – July 2017 Administrative and Education Services
 - viii. Kennedy & Graven – June Legal Services
 - ix. AIS Consulting Services – Zebra Mussel Samplers
- D. Approval of Northwood East Ballfield Improvements, New Hope
- E. Approval to Reimburse Commissioner Scanlan for Water Resources Conference Registration

5. BUSINESS

- A. Receive Presentation on METRO Blue Line Extension (Bottineau) Light Rail Transit Project
- B. Consider Approval of 90% Design Plans for Plymouth Creek Restoration Project (CIP 2017CR-P)
 - i. Revised 90% Design Plans and Revised Tree Survey
 - ii. Commission Engineer Review Memo
 - iii. Landowner Comments
- C. Consider Approval of 90% Design Plans for Four Seasons Mall Area Water Quality Project (Agora Development) (2013 CIP NL-2)
 - i. Location Map and 90% Design Plans
 - ii. Commission Engineer Review Memo
- D. Consider Approval of 50% Design Plans for Main Stem Erosion Repair Project (CIP 2017CR-M)
- E. Consider Adopting 2018 Operating Budget

6. COMMUNICATIONS

- A. Administrator's Report
 - i. Report on Hennepin County AIS Funding
 - ii. [Information on Recruiting Master Water Stewards](#)
 - iii. Parking Lot & Sidewalk Winter Maintenance Training
- B. Chair
- C. Commissioners
- D. TAC Members
- E. Committees
- F. Legal Counsel
- G. Engineer

7. INFORMATION ONLY (Information online only)

- A. CIP Project Updates: Available Online <http://www.bassettcreekwmo.org/projects>
- B. Grant Tracking Summary and Spreadsheet
- C. Freshwater Society Recruiting Master Water Stewards
- D. [Governor Dayton's 25% by 2025 Clean Water Initiative](#) – Town Hall Meetings
- E. Met Council Water Resources 2016 Year in Review Report
- F. WCA Notice of Decision, Plymouth
- G. WCA Notice of Decision, Golden Valley

8. ADJOURNMENT

Upcoming Meetings & Events

- AIS Research and Management Showcase: Wednesday September 13th, 8:30 a.m. – 5:00 p.m., University of Minnesota, St. Paul, [Info and Registration](#)
- Golden Valley Arts and Music Festival: Saturday September 16th, 10:00 a.m. – 3:00 p.m., Golden Valley City Hall
- BCWMC Public Hearing and Regular Meeting: Thursday September 21st, 8:30 a.m., Golden Valley City Hall
- Water Resources Conference: October 17-18, St. Paul RiverCentre, [Info and Registration](#)
- City of Minnetonka City Wide Open House: Tuesday October 10th, 5:00 – 8:00 p.m., Minnetonka City Hall
- Sidewalk and Parking Lot Winter Maintenance Training Course: Friday October 13th, 8:30 a.m. – 1:30 p.m., Crystal Community Center



Bassett Creek Watershed Management Commission

AGENDA MEMO

Date: July 12, 2016

To: BCWMC Commissioners

From: Laura Jester, Administrator

RE: Background Information for 8/17/17 BCWMC Meeting

1. **CALL TO ORDER and ROLL CALL**
2. **CITIZEN FORUM ON NON-AGENDA ITEMS**
3. **APPROVAL OF AGENDA – ACTION ITEM with attachment**
4. **CONSENT AGENDA**
 - A. Approval of Minutes – July 20, 2017 Commission meeting- **ACTION ITEM with attachment**
 - B. Approval of August 2017 Financial Report - **ACTION ITEM with attachment**
 - C. Approval of Payment of Invoices - **ACTION ITEM with attachments (online)** – *I have reviewed the following invoices and recommend approval of payment.*
 - i. Keystone Waters, LLC – July Administrator Services
 - ii. Keystone Waters, LLC – July Meeting Materials Distribution Expenses
 - iii. Barr Engineering – July 2017 Engineering Services
 - iv. Triple D Espresso – August 2017 Meeting Refreshments
 - v. Wenck – July 2017 WOMP Monitoring
 - vi. Wenck – July Routine Lake Monitoring
 - vii. Lawn Chair Gardener – July 2017 Administrative and Education Services
 - viii. Kennedy & Graven – June Legal Services
 - ix. AIS Consulting Services – Zebra Mussel Samplers
 - D. Approval of Northwood East Ballfield Improvements – **ACTION ITEM with attachment** – *The proposed project is located in the Bassett Creek Park Pond Subwatershed along the North Branch of Bassett Creek in New Hope. The project includes work in the floodplain with the addition of clean fill and light grading to bring the east softball field in Northwood Park to a playable condition. The project results in 16,600 square feet (0.31 acres) of disturbance (grading) and does not create any new or fully reconstructed impervious surfaces. Staff recommends approval.*
 - E. Approval to Reimburse Commissioner Scanlan for Water Resources Conference Registration – **ACTION ITEM no attachment** – *The 2017 BCWMC Education and Outreach Budget includes \$1,400 to reimburse Commissioners for registration costs for trainings and other educational events. Currently \$995 remains in that budget line. Commissioner Scanlan is requesting reimbursement up to \$245 to attend the Water Resources Conference in October. Staff recommends approval.*
5. **BUSINESS**
 - A. Receive Presentation on METRO Blue Line Extension (Bottineau) Light Rail Transit Project – **INFORMATION ITEM with attachment** – *Staff with the Met Council's consulting engineers, SRF, will provide an overview of the Blue Line LRT project which will run adjacent to Bassett Creek in Minneapolis and Golden Valley (mostly through Wirth Park), and will highlight areas of the alignment that may impact the creek. Blue Line staff have been working closely with Commission and city staff to address impacts to water resources. (Commission engineering expenses are reimbursed by the Met Council through an agreement executed in Oct 2015.) Project plans will be officially reviewed by the Commission Engineer in the coming months.*

- B. Consider Approval of 90% Design Plans for Plymouth Creek Restoration Project (CIP 2017CR-P) – **ACTION ITEM with attachments** – *At the June 2017 meeting, the Commission approved the 60% design plans with Commission Engineer comments and Commissioner input at the meeting. At the July meeting, the Commission reviewed and discussed the 90% plans and heard concerns from adjacent landowners. The Commission took no action on the plans in July and asked that revisions be considered to address landowner concerns and Commission comments. City staff and their consultants, Wenck Associates, Commissioner Prom, and I met with landowners on reach 3 (downstream of Fernbrook Road) on July 26th. The 90% plans were revised according to consensus reached at that meeting regarding specific tree removals. Additional revisions to the plans include a lower number of disc stop poles recommended within the disc golf course. Submittals here include revised 90% plans (full plan set available online), revised tree survey (available online), a revised table of project costs (found in the Commission Engineer’s memo), and additional comments from landowners. Staff recommends conditional approval of the 90% plans with comments included in the Commission Engineer’s memo.*
- i. Revised 90% Design Plans and Revised Tree Survey – **full plan set and tree survey available online (Note: printed sheets C-601 through C-605 from July meeting packet are the same and were not re-printed for this packet)**
 - ii. Commission Engineer Review Memo – **attached**
 - iii. Landowner Comments – **attached**
- C. Consider Approval of 90% Design Plans for Four Seasons Mall Area Water Quality Project (Agora Development) (2013 CIP NL-2) - **ACTION ITEM with attachments** – *At their February 2017 meeting, the Commission approved an agreement with Rock Hill Management to provide up to \$848,148 (less Commission expenses) of Four Seasons Mall Water Quality Improvement CIP funds for pollutant removals above and beyond the pollutant removals required for the Agora development. (An agreement with the City of Plymouth was also approved providing access to the city-owned wetland and ensuring on-going maintenance of the project. Find both agreements with online meeting materials.) 90% designs are presented here with pollutant removals of 100.76 lbs of TP above and beyond requirements. The Commission Engineer recommends approval of the plans with conditions stated in the engineers memo.*
- i. Location Map and 90% Design Plans – **attached**
 - ii. Commission Engineer Review Memo – **attached**
- D. Consider Approval of 50% Design Plans for Main Stem Erosion Repair Project (CIP 2017CR-M) – **ACTION ITEM with attachment** – *At their meeting in September 2016, the Commission approved an agreement with the City of Minneapolis to design and construct the Main Stem Erosion Repair Project. The City hired Barr Engineering to design the project. 50% plans will be presented at this meeting.*
- E. Consider Adopting 2018 Operating Budget – **ACTION ITEM with attachment** – *At their meeting in May 2017, the Commission approved a proposed 2018 operating budget and city assessments. These items were distributed to all member city clerks, requesting comments on the proposed budget by August 1st (per the BCWMC Joint Powers Agreement). No comments or questions were received from member cities. Staff recommends approval of the proposed 2018 operating budget and city assessments as approved in May.*

6. COMMUNICATIONS

- A. Administrator’s Report - **INFORMATION ITEM with attachment**
- i. Report on Hennepin County AIS Funding – **INFORMATION ITEM no attachment**
 - ii. [Information on Recruiting Master Water Stewards](#) – **INFORMATION ITEM with link**

- iii. Parking Lot & Sidewalk Winter Maintenance Training – **INFORMATION ITEM with attachment**
- B. Chair
- C. Commissioners
- D. TAC Members
- E. Committees
- F. Legal Counsel
- G. Engineer

7. INFORMATION ONLY (Information online only)

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Bassett Creek Watershed Management Commission

DRAFT Minutes of Regular Meeting
Thursday July 20, 2017
8:30 a.m.
Golden Valley City Hall, Golden Valley MN

Commissioners and city staff present:

City	Commissioner	Alternate Commissioner	Technical Advisory Committee Members (City Staff)
Crystal	Guy Mueller, Vice Chair	Absent	Mark Ray
Golden Valley	Absent	Jane McDonald Black	Tom Hoffman
Medicine Lake	Clint Carlson	Gary Holter	Absent
Minneapolis	Michael Welch	NA (vacant)	Liz Stout
Minnetonka	Mike Fruen	Absent	Tom Dietrich
New Hope	Absent	Absent	Megan Albert
Plymouth	Jim Prom	John Byrnes	Derek Asche
Robbinsdale	Absent	Wayne Sicora	Richard McCoy, Marta Roser
St. Louis Park	Absent	Patrick Noon	Erick Francis
Administrator	Laura Jester, Keystone Waters		
Engineer	Karen Chandler, Barr Engineering		
Recorder	Dawn Pape, Lawn Chair Gardener		
Legal Counsel	Troy Gilchrist, Kennedy & Graven		
Presenters/ Guests/Public	Lucius Jonett and Ed Matthiesen (Wenck Associates), John and Jeanne Starr (Plymouth residents), John and Mary Ephardt (Plymouth residents)		

1. CALL TO ORDER AND ROLL CALL

On Thursday July 20, 2017 at 8:31 a.m. in the Council Conference Room at Golden Valley City Hall (7800 Golden Valley Rd.), Vice-Chair Mueller called to order the meeting of the Bassett Creek Watershed Management Commission (BCWMC) and asked for roll call to be taken.

2. CITIZEN FORUM ON NON-AGENDA ITEMS

None.

3. APPROVAL OF AGENDA

Administrator Jester requested adding item 5F to consider adopting a resolution authorizing the Commission's engineer to execute conditional licensing agreement.

MOTION: Alternative Commissioner Jane McDonald Black moved to approve the agenda as amended. Commissioner Fruen seconded the motion. Upon a vote, the motion carried 6-0 [Cities of New Hope, Minneapolis and Robbinsdale absent from vote].

4. CONSENT AGENDA

No discussion.

MOTION: Alternative Commission Jane McDonald Black moved to approve the consent agenda and Commissioner Fruen seconded the motion. Upon a vote, the motion carried 6-0 [New Hope, Minneapolis and Robbinsdale absent from vote].

The following items were approved as part of the consent agenda: the June 15, 2017 Commission meeting minutes, the July 2017 financial report, the payment of invoices, setting the Technical Advisory Committee meeting for Aug. 4, 2017, setting a public hearing on the 2018 CIP project for Sept 21, 2017, and a project at 1820 Major Dr. N, Golden Valley.

The general and construction account balances reported in the July 2017 Financial Report are as follows:

Checking Account Balance	\$630,985.56
TOTAL GENERAL FUND BALANCE	\$630,985.56
TOTAL CASH & INVESTMENTS ON-HAND (7/12/17)	\$3,460,793.47
CIP Projects Levied – Budget Remaining	(\$4,473,990.33)
Closed Projects Remaining Balance	(\$1,013,196.86)
2012-2016 Anticipated Tax Levy Revenue	\$10,014.74
2017 Anticipated Tax Levy Revenue	\$643,220.55
Anticipated Closed Project Balance	(\$359,961.57)

[Commissioner Welch arrives.]

5. BUSINESS**A. Consider Approval of 90% Design Plans for Plymouth Creek Restoration Project (CIP 2017CR-P)**

Engineer Chandler noted that this is the second time the Commission has seen these restoration project plans

made by the City of Plymouth's engineering consultant, Wenck Associates. The Commission conditionally approved the 60% design plans at the June meeting.

The Commission Engineer's comment letter on the 60% plans requested additional information about some issues. Engineer Chandler said she was pleased with the way Wenck addressed most of the comments. She walked through the following comments and responses from Wenck.

- An increase in the flood elevation had not yet been addressed by Wenck. Mr. Matthiesen (Wenck) noted that cross vanes will be removed from the design. Engineer Chandler noted she was much more comfortable with that situation.
- Regarding estimated pollutant removals, the Commission Engineer concurred with Wenck's response that the total reduction in pollutant loading as a result of the project is estimated as 90,800 pounds per year total suspended sediment and 52.2 pounds per year total phosphorus, as estimated in the feasibility study.
- Regarding educational signage in the park/disc golf course, Engineer Chandler pointed out that depending on a scout or volunteer to complete the signage for the Plymouth Creek restoration project might result in a significant lag in getting the sign installed, since there is currently no one lined up to take on this project.
- At the last meeting, there was a discussion about a need for a table/graphic showing disc golf course-related project components and costs versus other restoration features and costs. Wenck included a breakdown of disc golf course-related project costs versus stream restoration costs with the 90% plans.
- More information was provided regarding the tree survey and tree removals: 57 larger-diameter trees (10-inch diameter or larger) are needed for the project (for use in restoration measures); 53 of the 83 trees slated for removal fit this criterion, so an additional four trees will need to be removed for use in the project. The four trees would be selected from the "harvest if needed" trees in the tree survey.
- There was an open house about the project on June 26, 2017 with seven people in attendance. Five attendees were from the Park Place Apartments and they had questions pertaining to the water level of the wetland upstream of the project. Two attendees, John and Jeanne Starr (3450 Fernbrook Ln N.), also attended the open house. The Starrs have concerns about the steep slope of their property that leads into the creek, and whether the project would address the overall slope stability as well as the conservation area on an adjacent property and whether that prevents removal of trees.
- The Commission Engineer noted that several trees slated for removal in a particular area downstream of Fernbrook (reach 3) likely don't need to be removed because the trees are not located in an actively eroding area, the trees are located in a conservation area, and the stream restoration measures in this area may not require additional sunlight.
- The Commission Engineer recommended approval of the 90% plans with several comments as shown in the Engineer's memo.

At the request of Commissioner Welch, Commission Legal Counsel Gilchrist provided information about the conservation agreement or covenant between two property owners (including the Starrs) and St. Paul Companies. He noted it is not unusual for private developers to have agreements with adjacent landowners and that this agreement seeks to preserve vegetation, including trees, and limits the developer's ability to build on the site. He noted the city's drainage and utility easement along the creek allows the city to perform the type of work proposed in this project.

[Alternate Commissioner Sicora arrives.]

Plymouth resident John Ebhardt voiced his concerns about plans for an access road in front of his house. Mr. Asche clarified that the access road is a temporary, dirt road that will be replanted with shrubs but may be

utilized again in the future to maintain the project.

Another resident, John Starr, added that he is concerned about the conservation area and honoring the agreement that's in place. He voiced concerns about not having enough documentation about the project, about how the proposed tree removal may significantly alter the natural area, and how the big woods habitat for foxes and owls may be destroyed. Mr. Asche explained that the City of Plymouth does want to respect the conservation area and that saving trees from unnecessary removal is a priority. There was some discussion about the process used for removing trees and possible damage to the understory. Engineers from Wenck explained the situation, noting that it's better for water quality if some trees are taken out in order to establish grasses to control erosion. There was further discussion about tree removals and whether or not some trees may be near the end of their lifecycle.

Commissioner Welch requested that staff extend every courtesy to adjacent landowners in understanding and addressing their concerns about the project, and to work towards a design that satisfies everyone. He noted that the primary driver of the project should be to improve water quality with consideration for riparian health.

There was discussion about the costs of various project components, including the costs of disc golf course improvements to enhance and protect stream restoration measures vs. stream stabilization measures themselves. Mr. Asche noted that various measures are needed to control golf course traffic away from streambanks. There was also a discussion about the disc stop poles and their high cost and some discussion about other techniques that could be used to protect trees. Commissioners asked that the City of Plymouth consider their ability to share in the costs of items that may be more related to improving/protecting the park or upland trees as opposed to items that directly improve water quality or protect stream restoration features.

Commissioners asked that the 90% plans be brought back to the August meeting with any revisions resulting from conversations with landowners.

B. Receive Update on Proposed Revisions to Lakeview Park Pond CIP Project

Administrator Jester reported that at the April Commission meeting a plan amendment was proposed to utilize funds originally slated for a water quality improvement project in Lakeview Park to instead purchase flood-prone homes. She reported that the City of Golden Valley received additional DNR funding to acquire homes and that the CIP funds are no longer needed to purchase homes. Further, she reported that in the future, these CIP funds may be requested if the stormwater pond slated for this area can remove more pollutants than required to meet the road reconstruction project pollutant removals (above and beyond).

C. Consider Adoption of Minor Plan Amendment to Update Capital Improvement Program

Administrator Jester explained that at the April meeting, the Commission submitted a minor plan amendment to review agencies to update the CIP table in the plan. She reminded Commissioners that the Metropolitan Council, Department of Natural Resources (DNR), Department of Agriculture, and Board of Water and Soil Resources (BWSR) had no comments. At the April meeting, the Commission extended the comment period until June 28, 2017 to accommodate Hennepin County's timeline. The Hennepin County Commissioners approved the minor plan amendment in June.

Administrator Jester recommended approval of the minor plan amendment with changes to Table 5-3 in the CIP program.

MOTION: Commissioner Welch moved to approve the minor plan amendment and Commissioner Prom seconded the motion. Upon a vote, the motion carried 8-0 [New Hope was absent from vote].

D. Consider Recommendations from Aquatic Plant Management/Aquatic Invasive (APM/AIS) Species Committee

Administrator Jester reported that the APM/AIS Committee had been working hard over the last year (eight

meetings) to discuss these issues. She noted the committee included participation from a variety of organizations and representatives of lakes including: DNR, Three Rivers Park District, Minneapolis Park and Recreation Board, Hennepin County, Metropolitan Council, Parkers Lake, Sweeney Lake, Medicine Lake, BCWMC Commissioners, Administrator Jester, and Commission Engineers Chandler and Rattei.

Administrator Jester provided background information about discussions and presentations during committee meetings and reviewed the types of projects the committee recommends for a Commission role. She noted that projects with a primary objective of improving water quality or aquatic habitat, or projects that protect the function of the BCWMC Flood Control Project should have Commission involvement. Projects with a primary objective of improving recreation or protecting human health and safety should have Commission involvement, but only as a partner with other organizations. She then walked through recommendations #1 – 5.

The first item reviewed was early detection training, which the committee identified as a high priority because of its high impact for little effort. The committee recommended that the Commission cooperate with other organizations to train groups or individuals on early detection of AIS in all water bodies. Possible Commission activities include advertising training sessions, helping to recruit participants, assisting with venue coordination, reimbursing registration costs for Commissioners and active volunteers, and providing some funding. Because training programs and curricula already exist, the Commission should not develop its own program.

The second item presented was early detection monitoring. The committee recommended that the Commission purchase \$600 worth of zebra mussel sampler plates (approximately 50 plates) with 2017 APM/AIS funds. These supplies would be used by Citizen Assisted Monitoring Program (CAMP) volunteers and lake residents who live on “Priority 1” lakes and CAMP lakes. Further, the Commission should cooperate with other organizations and/or actively recruit and train volunteers to detect zebra mussels on all Priority 1 lakes, aiming for at least one volunteer in each lake quadrant. Finally, the committee recommended that the Commission recruit one “AIS captain” per lake to field calls and questions from volunteers and to collect samples, as needed, to reduce time spent by the Commission administrator. It was noted this monitoring is also listed as a high priority because of the high impact for relatively little effort.

The third recommendation presented is the rapid response plan development. The committee recommends that the Commission begin developing a rapid response action plan for key species (including zebra mussels and starry stonewort) in Priority 1 lakes using the 2017 APM/AIS budget (up to \$15,000). The committee recommends that the Commission request a proposal from the Commission Engineer to develop lake-specific rapid response plans that considers infestation thresholds for action, considers experience and recommendations of the DNR and other organizations, assigns responsible parties, and lists possible funding partners for plan implementation. This recommendation is also a high priority so that the Commission, cities, and other organizations are poised to respond to infestations efficiently and effectively.

The fourth recommendation is the rapid response to new infestations. The committee recommends that the Commission consider following the rapid response plan guidance, once developed.

The fifth recommendation is regarding inventories and studies. It was noted that “inventories and studies” could include a detailed inventory of all AIS, an assessment of the proximity of AIS to BCWMC water bodies, an analysis of various pathways of AIS into the BCWMC, and an assessment of vulnerability of each water body to various AIS. The committee recommends that additional water quality parameters be added to routine BCWMC monitoring starting in 2018 to assess the vulnerability of water bodies to harboring AIS. It is estimated that this additional work will cost \$2,800 in 2018 and could be drawn from the APM/AIS budget.

MOTION: Alternative Commissioner McDonald Black moved to approve recommendations one through five from the Aquatic Plant Management/Aquatic Invasive Species Committee and Commissioner Welch seconded the motion. Upon a vote, the motion carried 8-0 [New Hope was absent from vote].

E. Receive Information on 2018 Clean Water Fund Grant Request for Proposals

Administrator Jester reported that there is less funding available for Clean Water Fund grants this year and that two categories of grants were removed from the program this year. She reported that she and Commission Engineer Chandler do not recommend applying for grant funds for the 2018 Winnetka Pond Dredging Project

because the project is not likely to score well and the time involved in generating a grant application is considerable. The Commission agreed that no Clean Water Fund grant application be developed this year. Administrator Jester did note, however, that the native plant buffer on Winnetka Pond might be eligible for a Hennepin County Opportunity Grant.

F. XP-SWMM Model

Administrator Jester reported that the Commission Legal Counsel and Commission Engineer had developed a conditional use license agreement for use of the BCWMC XP-SWMM model. She requested that the Commission adopt a resolution allowing the Commission Engineer to be the signatory representing the Commission on the license agreement.

Commissioner Welch commented that deviations from the agreement should be considered by the Commission Legal Counsel. Alternate Commissioner Sicora asked for clarification about whether the model or a program is being shared. He advised that the language should be revised so it's clear that entities are being allowed to use the modeling data and that the Commission is not supplying the XP-SWMM software itself.

Commission Legal Counsel recommended changes to the resolution and agreement to reflect discussion above.

MOTION: Commissioner Welch moved to adopt the resolution, as amended and Commissioner Carlson seconded the motion. Upon a vote, the motion carried 8-0 [New Hope was absent from vote].

6. COMMUNICATIONS

A. Administrator's Report

i. Report on Invitation to Participate in Local Government Water Roundtable Workgroup

Administrator Jester reported that she has tentatively accepted (with Chair de Lambert's approval) BWSR's invitation to be one of two administrators representing watershed management organizations on the local government water roundtable workgroup for a limited time. She noted her attendance would be expected at no more than three day-long meetings to discuss the creation of a pilot program for a performance-based watershed implementation funding program.

MOTION: Commissioner Welch moved to approve Administrator expenditures up to \$2,500 for participation on the roundtable and Alternative Commissioner McDonald Black seconded the motion. Upon a vote, the motion carried 8-0 [New Hope was absent from vote].

Administrator Jester also encouraged participation in the Governor's 25% by 2025 town hall meetings and announced that registration is open for the Water Resources Conference.

B. Report from Chair

Vice Chair Mueller reported that Neill Elementary School in Crystal vastly improved the infiltration in their parking lot and should be commended by the Commission. Vice Chair Mueller also noted his written comments in item 7C (in "Information Only") regarding the Commission's recent decision to significantly revise the water quality requirements for linear projects.

C. Commissioners

i. Report on Minneapolis Park and Recreation Board Ecological Systems Plan Technical Advisory Committee

Commissioner Welch reported that he attended a meeting of this group in late June and that the Minneapolis Park and Recreation Board is developing an ecological management plan. He reported they have an ambitious schedule to finish the plan by end of year. He noted that although it is not a high priority for BCWMC, he felt BCWMC needed to be involved and that he would attend meetings as he's able.

D. TAC Members

i. Receive Update on City of Minnetonka Local Water Management Plan Development

Tom Dietrich with the City of Minnetonka reported that the city is developing its local water management plan using Barr Engineering as a consultant. Commissioner Welch noted that this puts the Commission Engineer in a tough position and that Barr shouldn't review its own work so an outside consultant may be needed. Administrator Jester noted that one option, to keep costs low, is for her to review as much of the Minnetonka and Golden Valley LWMPs as possible and to hire a different consulting firm "on retainer" to assist with reviewing more technical aspects of the plans. Commissioners liked this idea.

E. Committees

No reports.

F. Legal Counsel

- i. Commission Legal Counsel Gilchrist reported that the Commission will not be served in the registration action mentioned at last month's meeting as the matter is outside of the Commission's jurisdiction.

G. Engineer

- i. Commission Engineer Chandler reported that they were contacted by a doctoral student requesting data on aquatic plant surveys, which they supplied with little effort.

7. INFORMATION ONLY (Information online only)

- A. CIP Project Updates: Available Online <http://www.bassettcreekwmo.org/projects>
- B. Grant Tracking Summary and Spreadsheet
- C. Comments from Commissioner Mueller on Application of MIDS in Linear Projects
- D. [Governor Dayton's 25% by 2025 Clean Water Initiative](#) – Town Hall Meetings
- E. WCA Notice of Application, Plymouth

8. ADJOURNMENT

The meeting was adjourned at 11:00 a.m.

Signature/Title

Date

Signature/Title

Date

Bassett Creek Watershed Management Commission General Account
General Fund (Administration) Financial Report
Fiscal Year: February 1, 2017 through January 31, 2018
MEETING DATE: August 17, 2017

Item 4B.
BCWMC 8-17-17 (UNAUDITED)

BEGINNING BALANCE	12-Jul-17		630,985.56
ADD:			
General Fund Revenue:			
Interest less Bank Fees		29.91	
Met Council	Tunnel	2,284.58	
Permits:			
City of New Hope	BCWMC 2017-27	1,400.00	
Morries Minnetonka	BCWMC 2017-28	1,700.00	
Reimbursed Construction Costs		8,634.72	
	Total Revenue and Transfers In		14,049.21
DEDUCT:			
Checks:			
2990 Barr Engineering	July Engineering	31,514.31	
2991 Kennedy & Graven	June Legal	1,880.55	
2992 Keystone Waters LLC	July Admin/Mtg Materials	4,173.17	
2993 Lawn Chair Gardener	Minutes/newsletter/Social	1,864.94	
2994 Triple D Espresso	August Meeting	103.98	
2995 Wenck Associates	Outlet Monitor/Lake Mon	4,128.14	
2996 AIS Consulting Services	Zebra Mussel Sampler	600.00	
	Total Checks/Deductions		44,265.09
ENDING BALANCE	8-Aug-17		600,769.68

Bassett Creek Watershed Management Commission General Account
General Fund (Administration) Financial Report
Fiscal Year: February 1, 2017 through January 31, 2018
MEETING DATE: August 17, 2017

(UNAUDITED)

	2017 / 2018 BUDGET	CURRENT MONTH	YTD 2017 / 2018	BALANCE
OTHER GENERAL FUND REVENUE				
ASSESSMENTS TO CITIES-PREPAID			0.00	
ASSESSMENTS TO CITIES	500,000	0.00	500,001.00	(1.00)
PROJECT REVIEW FEES	60,000	0.00	48,500.00	11,500.00
WOMP REIMBURSEMENT	5,000	0.00	4,500.00	500.00
MET COUNCIL REIMBURSEMENTS-LRT PROJECTS	7,000	0.00	9,218.17	(2,218.17)
MET COUNCIL - METRO BLOOMS	0	0.00	17,272.51	(17,272.51)
MISCELLANEOUS	0	0.00	3,289.50	(3,289.50)
TRANSFERS FROM LONG TERM FUND & CIP	38,072	0.00	0.00	38,072.00
REVENUE TOTAL	610,072	0.00	582,781.18	27,290.82
EXPENDITURES				
ENGINEERING & MONITORING				
TECHNICAL SERVICES	125,000	11,901.50	45,698.00	79,302.00
DEV/PROJECT REVIEWS	65,000	4,063.00	34,504.91	30,495.09
NON-FEE/PRELIM REVIEWS	15,000	2,519.23	7,556.63	7,443.37
COMMISSION AND TAC MEETINGS	14,000	595.00	5,180.00	8,820.00
SURVEYS & STUDIES	20,000	1,383.00	1,610.78	18,389.22
WATER QUALITY/MONITORING	74,300	3,236.34	23,363.75	50,936.25
WATER QUANTITY	11,500	413.36	2,593.16	8,906.84
WATERSHED INSPECTIONS -EROSION CONTROL	1,000	0.00	0.00	1,000.00
ANNUAL FLOOD CONTROL INSPECTIONS	12,000	0.00	0.00	12,000.00
REVIEW MUNICIPAL PLANS	8,000	0.00	1,179.00	6,821.00
WOMP	15,500	1,357.80	5,586.24	9,913.76
XP-SWMM MODEL UPDATES/REVIEWS	10,000	1,538.50	1,696.50	8,303.50
APM / AIS WORK	35,000	600.00	19,350.45	15,649.55
ENGINEERING & MONITORING TOTAL	406,300	27,607.73	148,319.42	257,980.58
ADMINISTRATION				
ADMINISTRATOR	67,200	3,998.11	21,690.00	45,510.00
LEGAL COSTS	18,500	1,880.55	6,270.78	12,229.22
AUDIT, INSURANCE & BONDING	15,500	0.00	10,350.00	5,150.00
FINANCIAL MANAGEMENT	3,200	0.00	40.76	3,159.24
MEETING EXPENSES	2,000	103.98	519.90	1,480.10
ADMINISTRATIVE SERVICES	18,000	1,117.53	2,803.03	15,196.97
ADMINISTRATION TOTAL	124,400	7,100.17	41,674.47	82,725.53
OUTREACH & EDUCATION				
PUBLICATIONS/ANNUAL REPORT	2,500	0.00	1,138.50	1,361.50
WEBSITE	4,400	0.00	525.99	3,874.01
PUBLIC COMMUNICATIONS	2,500	0.00	511.50	1,988.50
EDUCATION AND PUBLIC OUTREACH	20,000	922.47	33,502.08	(13,502.08)
WATERSHED EDUCATION PARTNERSHIPS	15,500	0.00	3,850.00	11,650.00
OUTREACH & EDUCATION TOTAL	44,900	922.47	39,528.07	5,371.93
MAINTENANCE FUNDS				
EROSION/SEDIMENT (CHANNEL MAINT)	25,000	0.00	0.00	25,000.00
LONG TERM MAINTENANCE (moved to CF)	25,000	0.00	0.00	25,000.00
MAINTENANCE FUNDS TOTAL	50,000	0.00	0.00	50,000.00
TMDL WORK				
TMDL IMPLEMENTATION REPORTING	20,000	0.00	542.50	19,457.50
TMDL WORK TOTAL	20,000	0.00	542.50	19,457.50
TOTAL EXPENSES	645,600	35,630.37	230,064.46	415,535.54

BCWMC Construction Account
Fiscal Year: February 1, 2017 through January 31, 2018
August 2017 Financial Report

(UNAUDITED)

Cash Balance 07/12/2017				
Cash		2,468,793.47		
	Total Cash		2,468,793.47	
Ally Bk Midvale Utah C/D (9/25/2017 1.25%)		248,000.00		
Capital One Bk-McLean VA C/D (9/25/2017 1.15%)		248,000.00		
Capital One Bk-Glen Allen VA C/D (9/25/2017 1.15%)		248,000.00		
Key Bk Natl Assn Ohio C/D (10/02/2017 1.15%)		248,000.00		
	Total Investments		992,000.00	
	Total Cash & Investments			3,460,793.47
Add:				
Interest Revenue (Bank Charges)		150.65		
	Total Revenue			150.65
Less:				
CIP Projects Levied - Current Expenses - TABLE A		(8,634.72)		
Proposed & Future CIP Projects to Be Levied - Current Expenses - TABLE B		0.00		
	Total Current Expenses			(8,634.72)
	Total Cash & Investments On Hand	07/12/17		3,452,309.40
Total Cash & Investments On Hand		3,452,309.40		
CIP Projects Levied - Budget Remaining - TABLE A		(4,465,355.61)		
Closed Projects Remaining Balance		(1,013,046.21)		
2012 - 2016 Anticipated Tax Levy Revenue - TABLE C		10,014.74		
2017 Anticipated Tax Levy Revenue - TABLE C		643,220.55		
Anticipated Closed Project Balance		(359,810.92)		
Proposed & Future CIP Project Amount to be Levied - TABLE B		0.00		

TABLE A - CIP PROJECTS LEVIED

		Approved Budget	Current Expenses	2017 YTD Expenses	INCEPTION To Date Expenses	Remaining Budget	Grant Funds Received
Lakeview Park Pond (ML-8) (2013)		196,000	0.00	0.00	11,589.50	184,410.50	
Four Seasons Mall Area Water Quality Proj (NL-2)		990,000	987.00	15,657.50	157,509.34	832,490.66	
2014							
Schaper Pond Enhance Feasibility/Project (SL-1)(SL-3)		612,000	3,325.72	8,979.53	312,242.98	299,757.02	
Briarwood / Dawnview Nature Area (BC-7)		250,000	0.00	0.00	250,000.00	0.00	
Twin Lake Alum Treatment Project (TW-2)		163,000	0.00	0.00	91,037.82	71,962.18	
2015							
Main Stem 10th to Duluth (CR2015)		1,503,000	0.00	0.00	946,447.15	556,552.85	
2016							
Honeywell Pond Expansion (BC-4) ¹		810,930	0.00	0.00	25,307.00	785,623.00	
Northwood Lake Pond (NL-1) ²		822,140					
Budget Amendment		611,600	1,433,740	0.00	416.00	1,438,689.98	(4,949.98) 670,000
2017							
Main Stem Cedar Lk Rd-Dupont (2017CR-M)	2017 Levy	400,000	1,064,472	0.00	196.00	114,757.79	949,714.21
	2018 Levy	664,472					
Plymouth Creek Restoration (CR-P)	2017 Levy	580,930	863,573	4,322.00	8,173.70	73,777.83	789,795.17
	2018 Levy	282,643					267,298
		7,886,715	8,634.72	33,422.73	3,421,359.39	4,465,355.61	

TABLE B - PROPOSED & FUTURE CIP PROJECTS TO BE LEVIED

	Approved Budget - To Be Levied	Current Expenses	2017 YTD Expenses	INCEPTION To Date Expenses	Remaining Budget
2018					
Bassett Creek Park & Winnetka Ponds Dredging (BCP-2)		0.00	29,441.20	60,760.25	(60,760.25)
2018 Project Totals	0	0.00	29,441.20	60,760.25	(60,760.25)
2019					
Bryn Mawr Meadows (BC-5)	0	0.00	0.00	5,282.80	(5,282.80)
2019 Project Totals	0	0.00	0.00	5,282.80	(5,282.80)
Total Proposed & Future CIP Projects to be Levied	0	0.00	29,441.20	66,043.05	(66,043.05)

BCWMC Construction Account

Fiscal Year: February 1, 2017 through January 31, 2018

(UNAUDITED)

August 2017 Financial Report
TABLE C - TAX LEVY REVENUES

	County Levy	Abatements / Adjustments	Adjusted Levy	Current Received	Year to Date Received	Inception to Date Received	Balance to be Collected	BCWMO Levy
2017 Tax Levy	1,303,600.00		1,303,600.00	0.00	0.00	660,379.45	643,220.55	1,303,600.00
2016 Tax Levy	1,222,000.00	(6,075.91)	1,215,924.09	0.00	0.00	1,211,989.75	3,934.34	1,222,000.00
2015 Tax Levy	1,000,000.00	1,935.37	1,001,935.37	0.00	0.00	998,801.29	3,134.08	1,000,000.00
2014 Tax Levy	895,000.00	(7,436.49)	887,563.51	0.00	0.00	885,449.96	2,113.55	895,000.00
2013 Tax Levy	986,000.00	(10,440.29)	975,559.71	0.00	0.00	974,888.42	671.29	986,000.00
2012 Tax Levy	762,010.00	(7,488.24)	754,521.76	0.00	0.00	754,360.28	161.48	762,010.00
				0.00			653,235.29	

OTHER PROJECTS:

	Approved Budget	Current Expenses / (Revenue)	2017 YTD Expenses / (Revenue)	INCEPTION To Date Expenses / (Revenue)	Remaining Budget
TMDL Studies					
TMDL Studies	135,000.00	0.00	0.00	107,765.15	27,234.85
TOTAL TMDL Studies	135,000.00	0.00	0.00	107,765.15	27,234.85
Flood Control Long-Term					
Flood Control Long-Term Maintenance	673,373.00	0.00	14,912.00	320,742.41	
Less: State of MN - DNR Grants			(9,300.00)	(93,000.00)	
	673,373.00	0.00	5,612.00	227,742.41	445,630.59
Annual Flood Control Projects:					
Flood Control Emergency Maintenance	500,000.00	0.00	0.00	0.00	500,000.00
Annual Water Quality					
Channel Maintenance Fund	350,000.00	0.00	35,915.00	157,157.95	192,842.05
Total Other Projects	1,658,373.00	0.00	41,527.00	492,665.51	1,165,707.49

Cash Balance 07/12/2017 **1,063,206.44**

Add:

Transfer from GF 0.00

Less:

Current (Expenses)/Revenue 0.00

Ending Cash Balance 07/12/17 **1,063,206.44**
Additional Capital Needed **(102,501)**

Bassett Creek Construction Project Details

8/9/2017

	CIP Projects Levied										
	Total	2013	2013	2014	2014	2014	2015	2016	2016	2017	2017
	CIP Projects Levied	Lakeview Park Pond (ML-8)	Four Seasons Mall Area Water Quality Project (NL-2)	Schaper Pond Enhancement Feasibility / Project (SL-1) (SL-3)	Briarwood / Dawnview Water Quality Improve Proj (BC-7)	Twin Lake In-Lake Alum Treatment Project (TW-2)	Main Stem - 10th Ave to Duluth (CR2015)	Honeywell Pond Expansion (BC-4)	Northwood Lake Pond (NL-1)	Main Stem-Cedar Lk Rd to Dupont (2017 CR-M)	Plymouth Creek Restoration (2017 CR-P)
Original Budget	7,275,115	196,000	990,000	612,000	250,000	163,000	1,503,000	810,930	822,140	1,064,472	863,573
Added to Budget	611,600								611,600		
Expenditures:											
Feb 2004 - Jan 2014	269,971.68	11,589.50	101,635.49	89,594.90	19,598.09	23,793.65	11,179.35	7,461.95	5,118.75		
Feb 2015-Jan 2016	313,510.98		25,866.35			432.00	93,862.65	6,442.53	94,823.44	42,671.88	49,412.13
Feb 2016-Jan 2017	2,804,454.00		14,350.00	213,668.55	230,401.91	66,812.17	841,405.15	11,402.52	1,338,331.79	71,889.91	16,192.00
Feb 2017-Jan 2018	33,422.73		15,657.50	8,979.53					416.00	196.00	8,173.70
Total Expenditures:	3,421,359.39	11,589.50	157,509.34	312,242.98	250,000.00	91,037.82	946,447.15	25,307.00	1,438,689.98	114,757.79	73,777.83
Project Balance	4,465,355.61	184,410.50	832,490.66	299,757.02		71,962.18	556,552.85	785,623.00	(4,949.98)	949,714.21	789,795.17
	Total	2013	2013	2014	2014	2014	2015	2016	2016	2017	2017
	CIP Projects Levied	Lakeview Park Pond (ML-8)	Four Seasons Mall Area Water Quality Project (NL-2)	Schaper Pond Enhancement Feasibility / Project (SL-1) (SL-3)	Briarwood / Dawnview Water Quality Improve Proj (BC-7)	Twin Lake In-Lake Alum Treatment Project (TW-2)	Main Stem - 10th Ave to Duluth (CR2015)	Honeywell Pond Expansion (BC-4)	Northwood Lake Pond (NL-1)	Main Stem-Cedar Lk Rd to Dupont (2017 CR-M)	Plymouth Creek Restoration (2017 CR-P)
Project Totals By Vendor											
Barr Engineering	410,556.76	6,338.95	58,678.04	84,231.03	13,089.74	15,712.00	15,825.00	13,157.98	17,966.00	111,939.39	73,618.63
Kennedy & Graven	11,961.70	1,200.55	2,471.95	993.40	1,038.35	1,058.65	2,223.75	796.00	1,701.45	318.40	159.20
City of Golden Valley	1,414,281.03			213,668.55	230,401.91	66,812.17	903,398.40				
City of Minneapolis											
City of Plymouth	75,759.35		75,759.35								
City of New Hope	1,413,267.55								1,413,267.55		
City of Crystal											
MPCA	2,500.00									2,500.00	
Blue Water Science	3,900.00					3,900.00					
Misc											
2.5% Admin Transfer	83,378.02	4,050.00	20,600.00	13,350.00	5,470.00	3,555.00	25,000.00	11,353.02			
Transfer to General Fund											
Total Expenditures	3,415,604.41	11,589.50	157,509.34	312,242.98	250,000.00	91,037.82	946,447.15	25,307.00	1,432,935.00	114,757.79	73,777.83
	Total	2013	2013	2014	2014	2014	2015	2016	2016	2017	2017
	CIP Projects Levied	Lakeview Park Pond (ML-8)	Four Seasons Mall Area Water Quality Project (NL-2)	Schaper Pond Enhancement Feasibility / Project (SL-1) (SL-3)	Briarwood / Dawnview Water Quality Improve Proj (BC-7)	Twin Lake In-Lake Alum Treatment Project (TW-2)	Main Stem - 10th Ave to Duluth (CR2015)	Honeywell Pond Expansion (BC-4)	Northwood Lake Pond (NL-1)	Main Stem-Cedar Lk Rd to Dupont (2017 CR-M)	Plymouth Creek Restoration (2017 CR-P)
Levy/Grant Details											
2010 - 2014 Levies	1,881,000	162,000	824,000	534,000	218,800	142,200					
2014/2015 Levy	1,000,000						1,000,000				
2015-2016 Levy	1,222,000							810,930	411,070		
2016-2017 Levy	1,303,600								322,670	580,930	400,000
2017-2018 Levy	947,115									282,643	664,472
Construction Fund Balance	703,000	34,000	166,000				503,000				
BWSR Grant- BCWMO	470,000								470,000		
DNR Grants-LT Maint											
Total Levy/Grants	7,526,715	196,000	990,000	534,000	218,800	142,200	1,503,000	810,930	1,203,740	863,573	1,064,472
BWSR Grants Received									670,000		267,298
MPCA Grant-CWP (Total \$300,000)									75,000.00		
									19,932.80		

Bassett Creek Construction Project Details

	Proposed & Future CIP Projects (to be Levied)			DNR Grant From GF	Other Projects					Totals - All Projects
	Total	2018	2019		Total					
	Proposed & Future CIP Projects (to be Levied)	Bassett Cr Pk & Winnetka Ponds Dredging (2018 BCP-2)	Bryn Mawr Meadows		Other Projects	TMDL Studies	Flood Control Emergency Maint	Flood Control Long- Term Maint	Channel Maint	
Original Budget Added to Budget					1,278,373.00 (250,000.00) 93,000.00 380,000.00	105,000.00	500,000.00	748,373.00 (250,000.00) 93,000.00 175,000.00	175,000.00	8,553,488.00 361,600.00 93,000.00 380,000.00
Expenditures:										
Feb 2004 - Jan 2014	5,282.80		5,282.80		245,426.23	107,765.15		43,195.48	94,465.60	520,680.71
Feb 2015-Jan 2016					137,357.54			110,580.19	26,777.35	450,868.52
Feb 2016-Jan 2017	31,319.05	31,319.05			152,070.74			152,070.74		2,987,843.79
Feb 2017-Jan 2018	29,441.20	29,441.20			50,811.00			14,896.00	35,915.00	113,674.93
Total Expenditures:	66,043.05	60,760.25	5,282.80		585,665.51	107,765.15		320,742.41	157,157.95	4,073,067.95
Project Balance	(66,043.05)	(60,760.25)	(5,282.80)		1,165,707.49	27,234.85	500,000.00	445,630.59	192,842.05	5,565,020.05
Project Totals By Vendor	Total	2018	2019		Total					Totals - All Projects
	Proposed & Future CIP Projects (to be Levied)	Bassett Cr Pk & Winnetka Ponds Dredging (2018 BCP-2)	Bryn Mawr Meadows		Other Projects	TMDL Studies	Flood Control Emergency Maint	Flood Control Long- Term Maint	Channel Maint	
Barr Engineering	66,043.05	60,760.25	5,282.80		387,939.50	104,888.70		283,050.80		864,539.31
Kennedy & Graven					2,648.25	1,164.30		1,099.35	384.60	14,609.95
City of Golden Valley					55,287.50				55,287.50	1,469,568.53
City of Minneapolis					38,823.35				38,823.35	38,823.35
City of Plymouth					26,747.50				26,747.50	102,506.85
City of New Hope										1,413,267.55
City of Crystal										
MPCA										2,500.00
Blue Water Science										3,900.00
Misc					5,704.41	1,712.15		3,992.26		5,704.41
2.5% Admin Transfer					32,600.00			32,600.00		83,378.02
Transfer to General Fund										32,600.00
Total Expenditures	66,043.05	60,760.25	5,282.80		549,750.51	107,765.15		320,742.41	121,242.95	4,031,397.97
Levy/Grant Details	Total	2018	2019		Total					Totals - All Projects
	Proposed & Future CIP Projects (to be Levied)	Bassett Cr Pk & Winnetka Ponds Dredging (2018 BCP-2)	Bryn Mawr Meadows		Other Projects	TMDL Studies	Flood Control Emergency Maint	Flood Control Long- Term Maint	Channel Maint	
2010 -2014 Levies				2010-2013		30,000		100,000	100,000	1,881,000
2014/2015 Levy				2014/2015	50,000.00			25,000	25,000	1,050,000
2015-2016 Levy				2015/2016						
2016-2017 Levy				2016/2017						
2017-2018 Levy				2017/2018						
Construction Fund Balance				2015/2016	50,000.00			25,000	25,000	753,000
BWSR Grant- BCWMO				2016/2017	50,000.00			25,000	25,000	520,000
DNR Grants-LT Maint				DNR Grant	93,000.00			93,000		
Total Levy/Grants					473,000.00	30,000		268,000	175,000	4,204,000



Memorandum

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Co.
Subject: Item 4D – Northwood East Ballfield Improvements – New Hope, MN
BCWMC August 17, 2017 Meeting Agenda
Date: August 9, 2017
Project: 23270051 2017 2134

4D Northwood East Ballfield Improvements – New Hope, MN BCWMC 2017-27

Summary:

Proposed Work: Grading

Basis for Commission Review: Fill in the floodplain

Impervious Surface Area: No change

Recommendation: Approval

General Background & Comments

The proposed project is located in the Bassett Creek Park Pond Subwatershed along the North Branch of Bassett Creek just east of Boone Avenue in New Hope, MN. The left outfield of the east softball field at Northwood Park has settled one to two feet relative to the original 1997 design, causing a safety concern. The proposed project includes the addition of clean fill and light grading to bring the field to a playable condition. The proposed project results in 16,600 square feet (0.31 acres) of disturbance (grading) and does not create any new or fully reconstructed impervious surfaces.

Floodplain

The proposed project includes work in the floodplain of the North Branch of Bassett Creek. The September 2015 BCWMC Requirements for Improvements and Development Proposals (Requirements) document requires that projects within the floodplain maintain no net loss in floodplain storage and no increase in flood level at any point along the trunk system (managed to at least a precision of 0.00 feet). At its May 18, 2017 meeting, the BCWMC approved the XP-SWMM Phase II (Atlas 14) model and adopted the revised (Atlas 14) floodplain elevations for the Bassett Creek Trunk System. Based on this approval and adoption, the floodplain elevation along the North Branch of Bassett Creek downstream of Boone Avenue is 891.4 feet NAVD88.

Based on the plans and information provided by the applicant, the proposed project will maintain a net increase in flood storage of 99 cubic yards from the original 1997 design. Temporary stockpiles may be placed in the floodplain during construction.

Wetlands

The project appears to involve work adjacent to wetlands. The City of New Hope is the LGU for administering the Minnesota Wetland Conservation Act of 1991.

Stormwater Management

The proposed project does not create any new or fully reconstructed impervious areas and therefore does not trigger stormwater management review. Drainage patterns under existing and proposed conditions will remain the same and the proposed project will not result in changes to land use or topography.

Water Quality Management

The proposed project does not create any new or fully reconstructed impervious areas and therefore does not trigger water quality review.

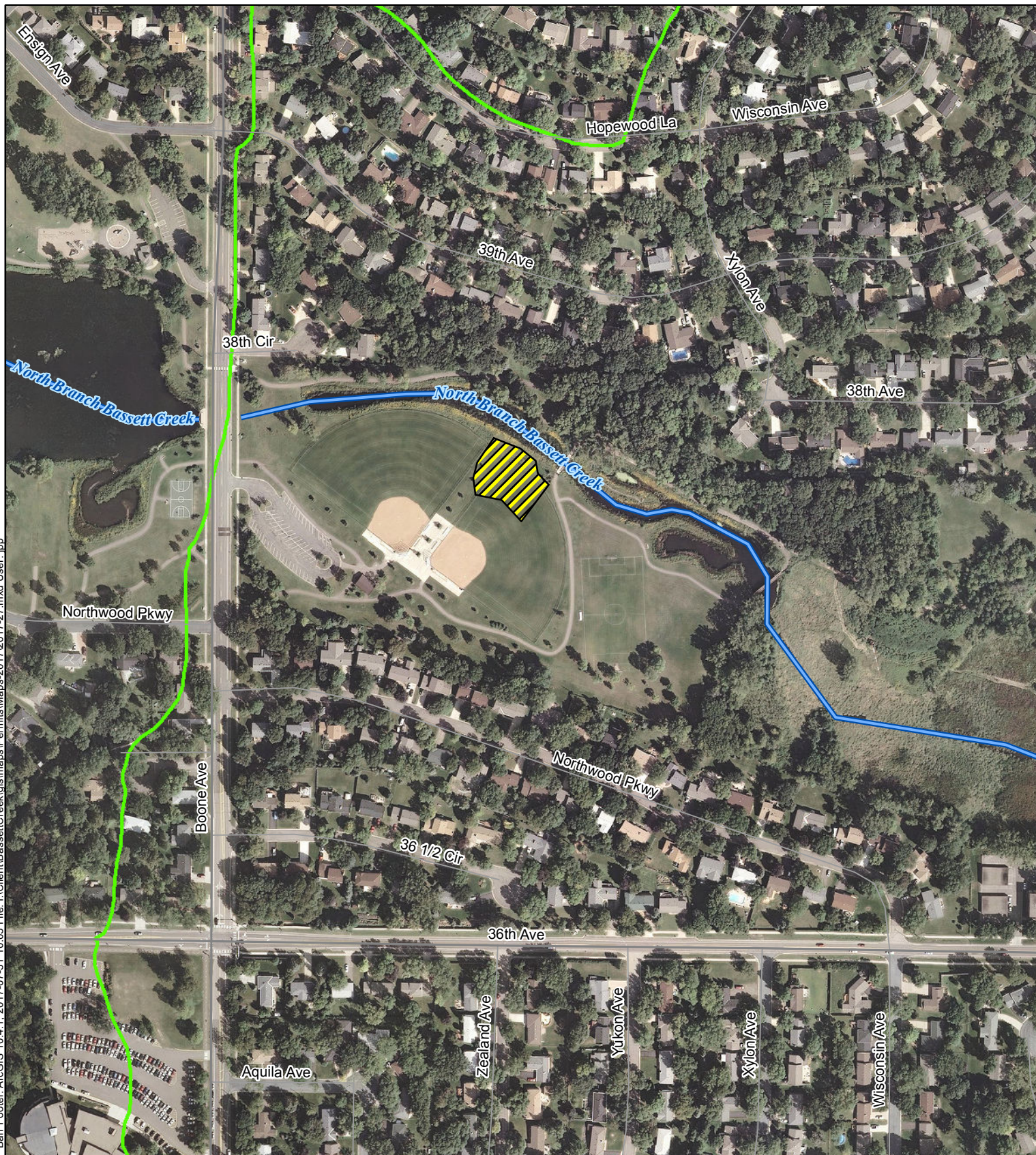
Erosion and Sediment Control

The proposed project includes more than 10,000 square feet of disturbance and more than 200 cubic yards of fill; therefore, the proposed project must meet the BCWMC erosion and sediment control requirements. Proposed temporary erosion and sediment control features include silt fence and Hydromulch. Permanent erosion and sediment control features includes stabilization with sod.

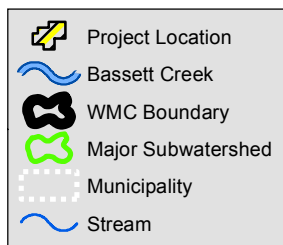
Recommendation

Approval

Barr Footer: ArcGIS 10.4.1, 2017-07-31, 10:05 File: I:\Client\BassettCreek\gis\maps\Permits\Maps 2017\2017-27.mxd User: jpp



Imagery Source: Aerial Express (2009)



Feet

0 300 600



LOCATION MAP
APPLICATION 2017-27
Northwood East Ballfield Improvements
New Hope, MN

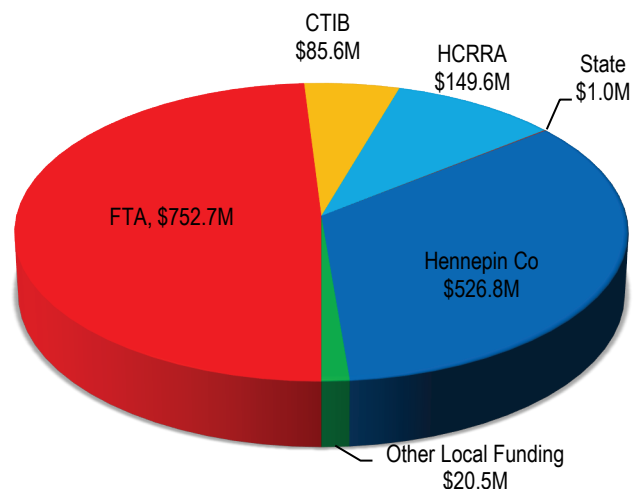
Project Facts

Route and Stations

The planned METRO Blue Line Extension (Bottineau) light rail transit project will operate about 13 miles northwest from downtown Minneapolis through north Minneapolis, Golden Valley, Robbinsdale, Crystal and Brooklyn Park, drawing riders northwest of Brooklyn Park. The line will have 11 new stations in addition to Target Field Station where it will continue as the METRO Blue Line, providing one-seat rides to Minneapolis-St. Paul International Airport and the Mall of America. It will connect Minneapolis and the region's northwest communities with existing LRT on the METRO Green Line, future LRT on the METRO Green Line Extension (Southwest LRT), bus rapid transit on the METRO Orange Line and METRO Red Line, the Northstar commuter rail line and local and express bus routes. See map on reverse side.

Cost Estimate

The Blue Line Extension is estimated to cost \$1.536 billion. At this time, it is anticipated that funds for capital costs will come from the Federal Transit Administration, Hennepin County, Hennepin County Regional Railroad Authority, Counties Transit Improvement Board and other local cost participation including Brooklyn Park and Minnesota Department of Transportation.



Timeline

In July 2016, the Federal Transit Administration published the Final Environmental Impact Statement and in September 2016, the FTA issued its Record of Decision. Blue Line Extension will begin passenger service in 2022. Next steps include:

- 2018: The FTA is expected to award a Full Funding Grant Agreement, which commits the federal government to pay 49 percent of the project's capital cost. The Metropolitan Council will award construction contracts and begin construction.
- 2019–2021: Heavy construction.
- 2022: Passenger service begins.



METRO

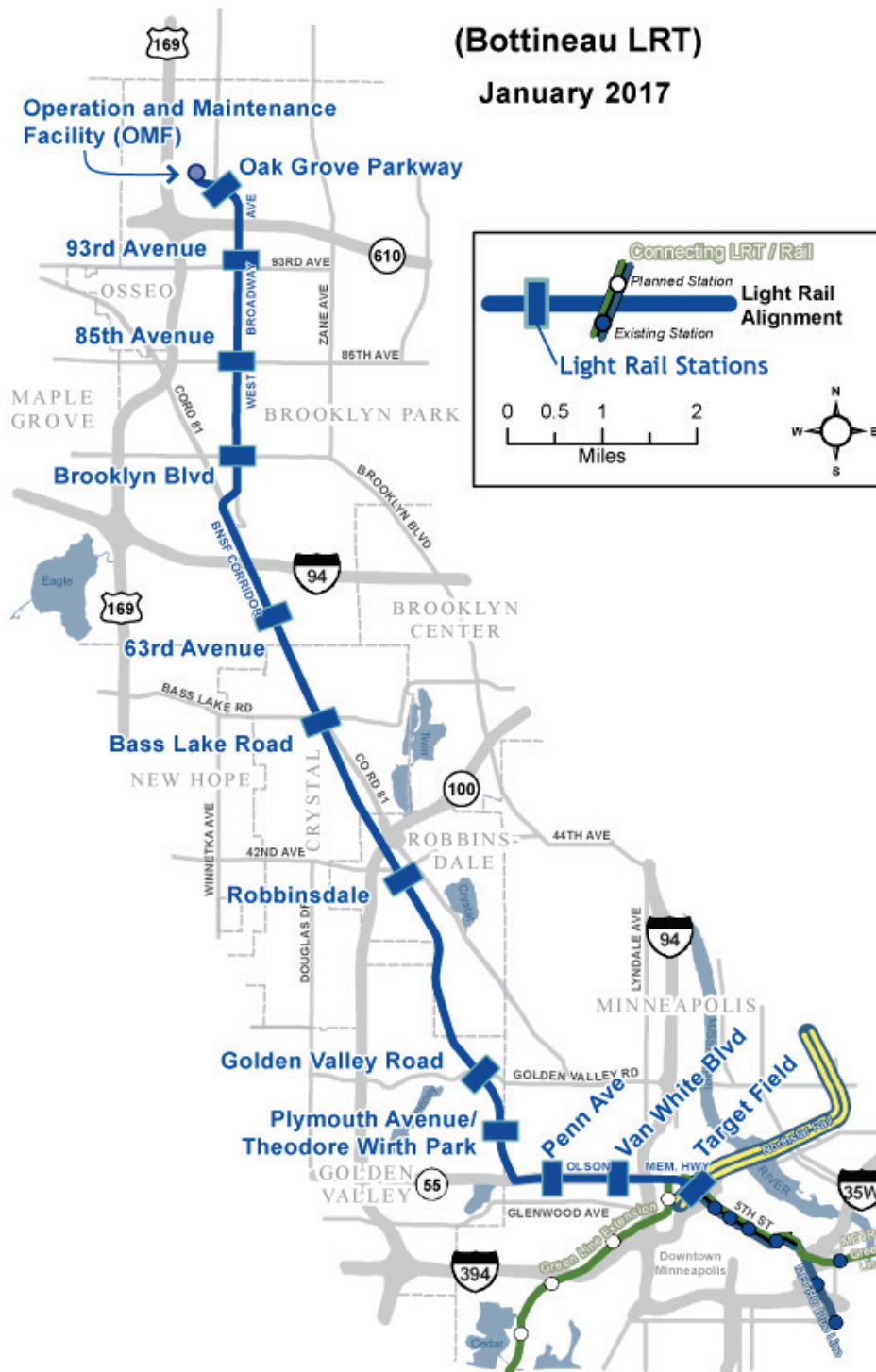
Blue Line EXTENSION

Opening 2022

METRO Blue Line Extension

(Bottineau LRT)

January 2017

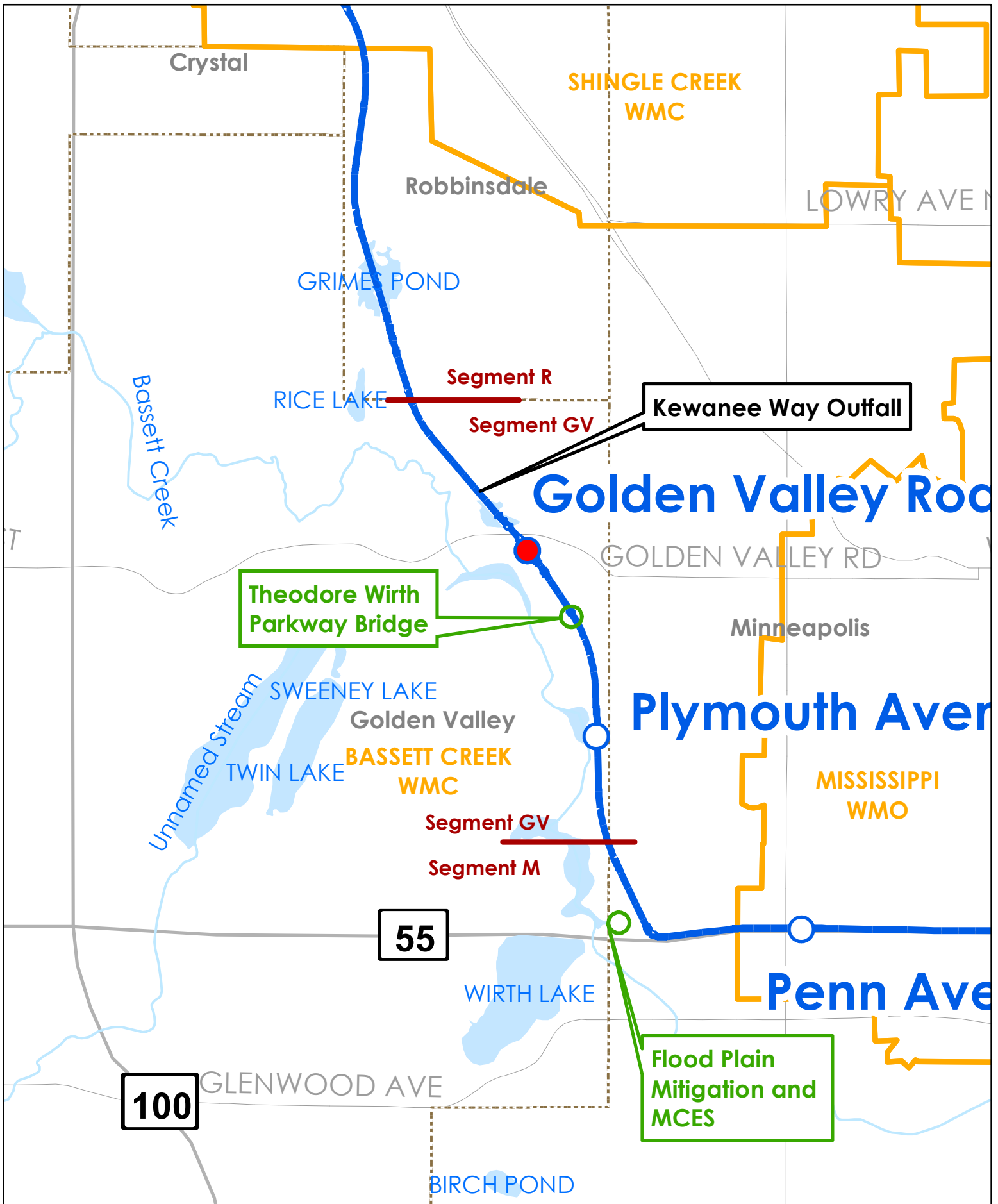


www.BlueLineExt.org

[Twitter.com/BlueLineExt](https://twitter.com/BlueLineExt)

June 2017





0 0.125 0.25
Miles

METRO Blue Line LRT Extension Project

August 2017





Item 5B.
BCWMC 8-17-17
Full plans and tree survey online
Also see sheets C-601 thru
C-605 from July printed materials
(no change)

NOTE: TREE AND BRUSH CLEARING SHALL
BE LIMITED AS MUCH AS POSSIBLE
AND ONLY AS DIRECTED BY
ENGINEER.

CLEAR ALL BRUSH <8", PROTECT
SPECIMEN TREES (MAY BE <8")
AS MARKED BY ENGINEER (TYP.)

CLEAR ALL BRUSH <8", PROTECT
SPECIMEN TREES (MAY BE <8")
AS MARKED BY ENGINEER (TYP.)

CLEAR ALL BRUSH

LEGEND

REV	REVISION DESCRIPTION	DWN	APP	REV DATE
2	FOR BID	SJB	EAM	08/01/17
1	90% DESIGN	SJB	EAM	06/30/17
0	60% DESIGN	SJB	EAM	04/20/17

SEAL
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.
ED MATTHIESEN
DATE 08/01/17 REG. NO. 16800

PRIME CONSULTANT

Responsive partner. Exceptional outcomes.

PROJECT TITLE
PLYMOUTH CREEK
CHANNEL RECONSTRUCTION

CITY OF PLYMOUTH
3400 PLYMOUTH BOULEVARD
PLYMOUTH, MN 55447

SHEET TITLE EXISTING CONDITIONS AND REMOVALS 27+18 TO 18+00			
DWN BY SJB	CHK'D LNJ	APP'D EAM	DWG DATE MAR 2017
PROJECT NO. 1756-10	SHEET NO. C-101	SCALE AS SHOWN	REV NO. 2



LEGEND

DECIDUOUS TREE/REMOVAL	ACCESS ROUTE BOUNDARY	EXISTING FENCE	PROPERTY LINE	ROOTWAD WITH STONE TOE	WATER EDGE	RETAINING WALL	PROPOSED CHANNEL CENTERLINE	PROJECT AREA LIMITS	ROOTWAD WITH LOG TOE	VEGETATED RIPRAP TOE	CITY OF PLYMOUTH DRAINAGE & UTILITY EASEMENT	CLEARING LIMITS

REV	REVISION DESCRIPTION	DWN	APP	REV DATE
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DATE 08/01/17 REG. NO. 16800

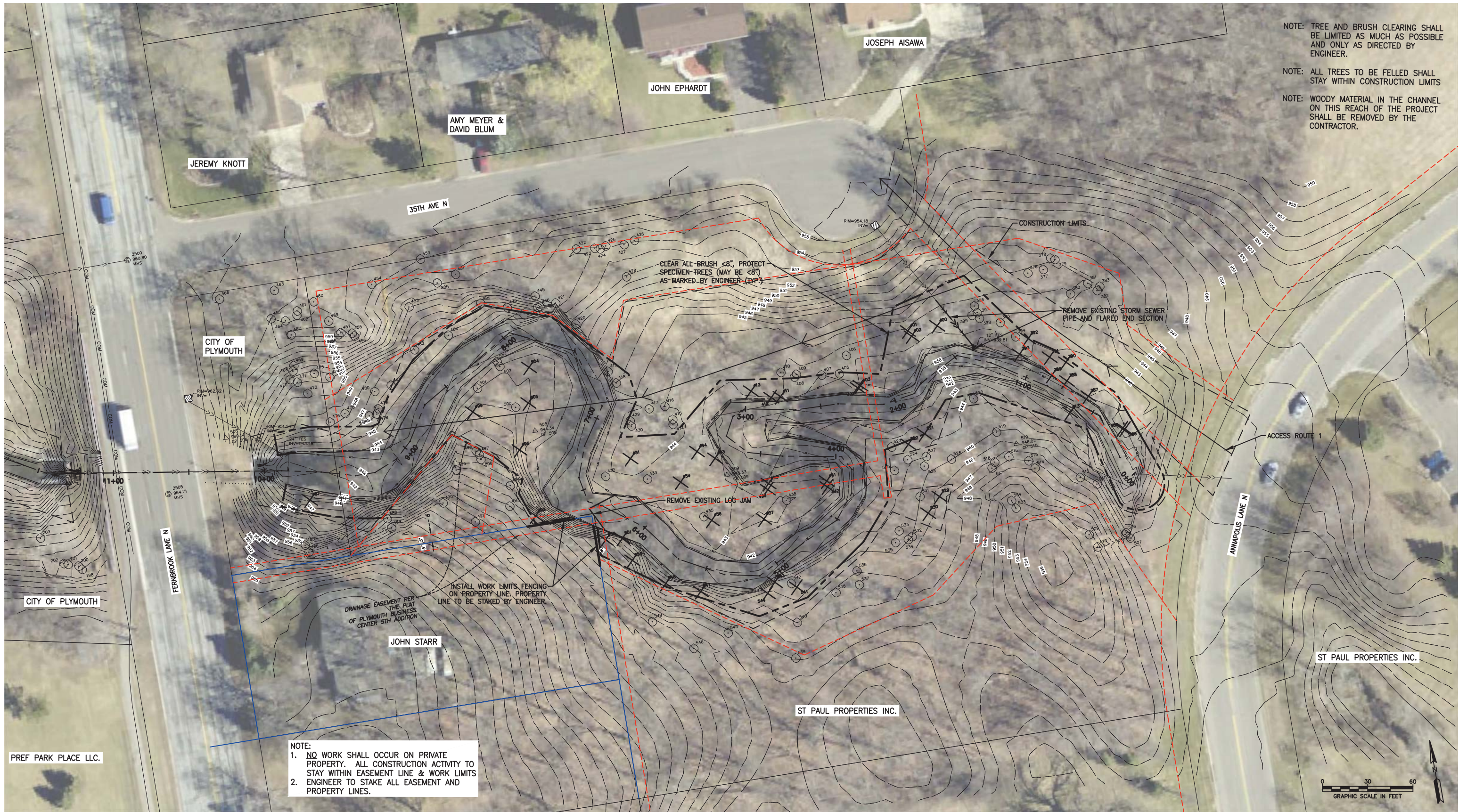
PRIME CONSULTANT

WENCK ASSOCIATES

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PROJECT TITLE
PLYMOUTH CREEK CHANNEL RECONSTRUCTION
CITY OF PLYMOUTH
3400 PLYMOUTH BOULEVARD PLYMOUTH, MN 55447

SHEET TITLE			
EXISTING CONDITIONS AND REMOVALS 18+00 TO 9+00			
DWN BY SJB	CHK'D LNJ	APP'D EAM	DWG DATE MAR 2017
SCALE		AS SHOWN	
PROJECT NO. 1756-10	SHEET NO. C-102		REV NO. 2



NOTE: TREE AND BRUSH CLEARING SHALL BE LIMITED AS MUCH AS POSSIBLE AND ONLY AS DIRECTED BY ENGINEER.

NOTE: ALL TREES TO BE FELLED SHALL STAY WITHIN CONSTRUCTION LIMITS

NOTE: WOODY MATERIAL IN THE CHANNEL ON THIS REACH OF THE PROJECT SHALL BE REMOVED BY THE CONTRACTOR.

NOTE:
1. NO WORK SHALL OCCUR ON PRIVATE PROPERTY. ALL CONSTRUCTION ACTIVITY TO STAY WITHIN EASEMENT LINE & WORK LIMITS
2. ENGINEER TO STAKE ALL EASEMENT AND PROPERTY LINES.

LEGEND			
	DECIDUOUS TREE/REMOVAL		WATER EDGE
	ACCESS ROUTE BOUNDARY		RETAINING WALL
	EXISTING FENCE		PROPOSED CHANNEL CENTERLINE
	PROPERTY LINE		PROJECT AREA LIMITS
	ROOTWAD WITH STONE TOE		ROOTWAD WITH LOG TOE
	RIPRAP TOE		VEGETATED RIPRAP TOE
	CITY OF PLYMOUTH DRAINAGE & UTILITY EASEMENT		CLEARING LIMITS

REV	REVISION DESCRIPTION	DWN	APP	REV DATE
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PROJECT TITLE

PLYMOUTH CREEK CHANNEL RECONSTRUCTION

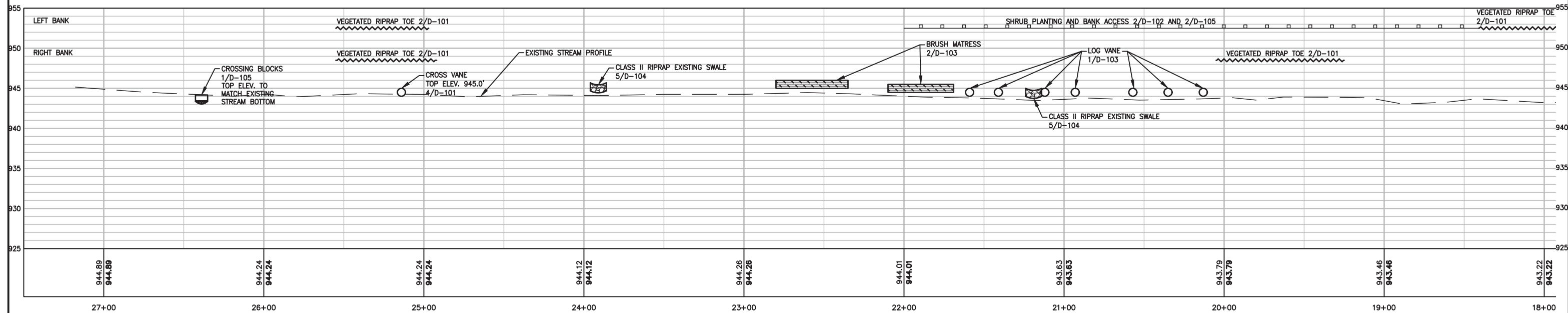
CITY OF PLYMOUTH

3400 PLYMOUTH BOULEVARD
PLYMOUTH, MN 55447

SHEET TITLE			
EXISTING CONDITIONS AND REMOVALS 9+00 TO 0+00			
DWN BY SJB	CHK'D LNJ	APP'D EAM	DWG DATE MAR 2017
PROJECT NO. 1756-10	SHEET NO. C-103	SCALE AS SHOWN	REV NO. 2



PLYMOUTH CREEK CENTERLINE STA 27+18 TO 18+00



LEGEND

	DECIDUOUS TREE		WATER EDGE
	ACCESS ROUTE BOUNDARY		RETAINING WALL
	EXISTING FENCE		PROPOSED CHANNEL CENTERLINE
	PROPERTY LINE		PROJECT AREA LIMITS
	ROOTWAD WITH STONE TOE		ROOTWAD WITH LOG TOE
	BARE ROOT SHRUB PLANTING		VEGETATED RIPRAP TOE
	SHRUB PLANTING WITH BANK ACCESS		

CITY OF PLYMOUTH
DRAINAGE & UTILITY
EASEMENT

REV	REVISION DESCRIPTION	DWN	APP	REV DATE
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ED MATTHIESSEN
DATE 08/01/17 REG. NO. 16800

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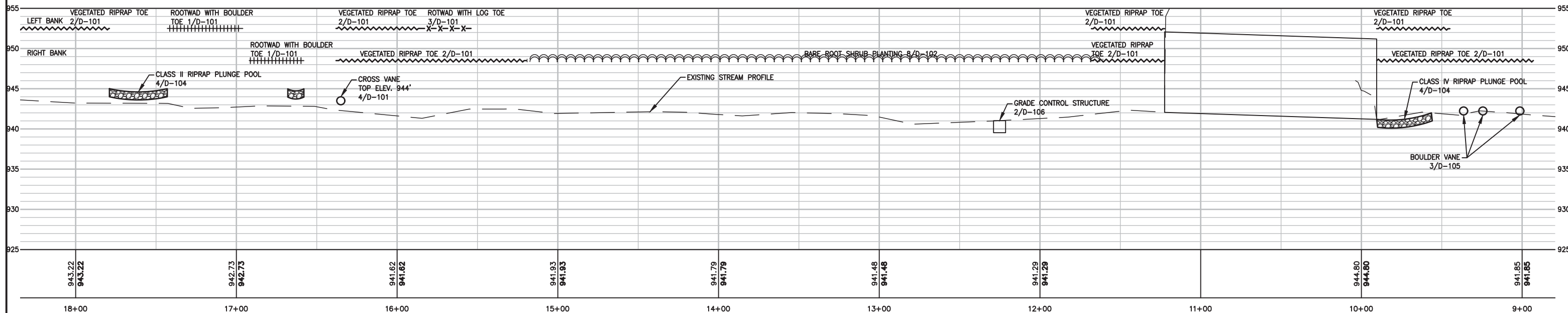
PROJECT TITLE
PLYMOUTH CREEK
CHANNEL RECONSTRUCTION

CITY OF PLYMOUTH
3400 PLYMOUTH BOULEVARD
PLYMOUTH, MN 55447

SHEET TITLE			
STABILIZATION PLAN AND PROFILE 27+18 TO 18+00			
DWN BY	CHK'D	APP'D	DWG DATE
SJB	LNJ	EAM	MAR 2017
PROJECT NO.		SCALE AS SHOWN	
1756-10		C-104	
SHEET NO.		REV NO.	
		2	



PLYMOUTH CREEK CENTERLINE STA 18+00 TO 9+00



LEGEND	
	DECIDUOUS TREE
	ACCESS ROUTE BOUNDARY
	EXISTING FENCE
	PROPERTY LINE
	ROOTWAD WITH STONE TOE
	BARE ROOT SHRUB PLANTING
	SHRUB PLANTING WITH BANK ACCESS
	WATER EDGE
	RETAINING WALL
	PROPOSED CHANNEL CENTERLINE
	PROJECT AREA LIMITS
	ROOTWAD WITH LOG TOE
	VEGETATED RIPRAP TOE

	CITY OF PLYMOUTH DRAINAGE & UTILITY EASEMENT
	WATER EDGE
	RETAINING WALL
	PROPOSED CHANNEL CENTERLINE
	PROJECT AREA LIMITS
	ROOTWAD WITH LOG TOE
	VEGETATED RIPRAP TOE

REV	REVISION DESCRIPTION	DWN	APP	REV DATE
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ED MATTHIESSEN	
DATE 08/01/17	REG. NO. 16800

PRIME CONSULTANT

WENCK ASSOCIATES

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PROJECT TITLE

PLYMOUTH CREEK CHANNEL RECONSTRUCTION

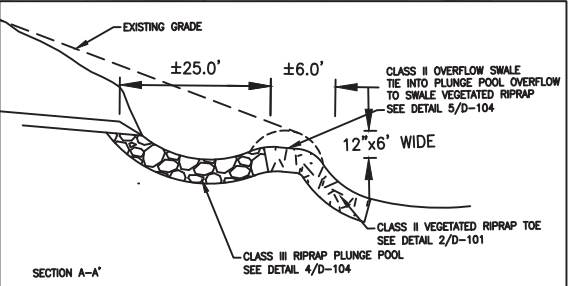
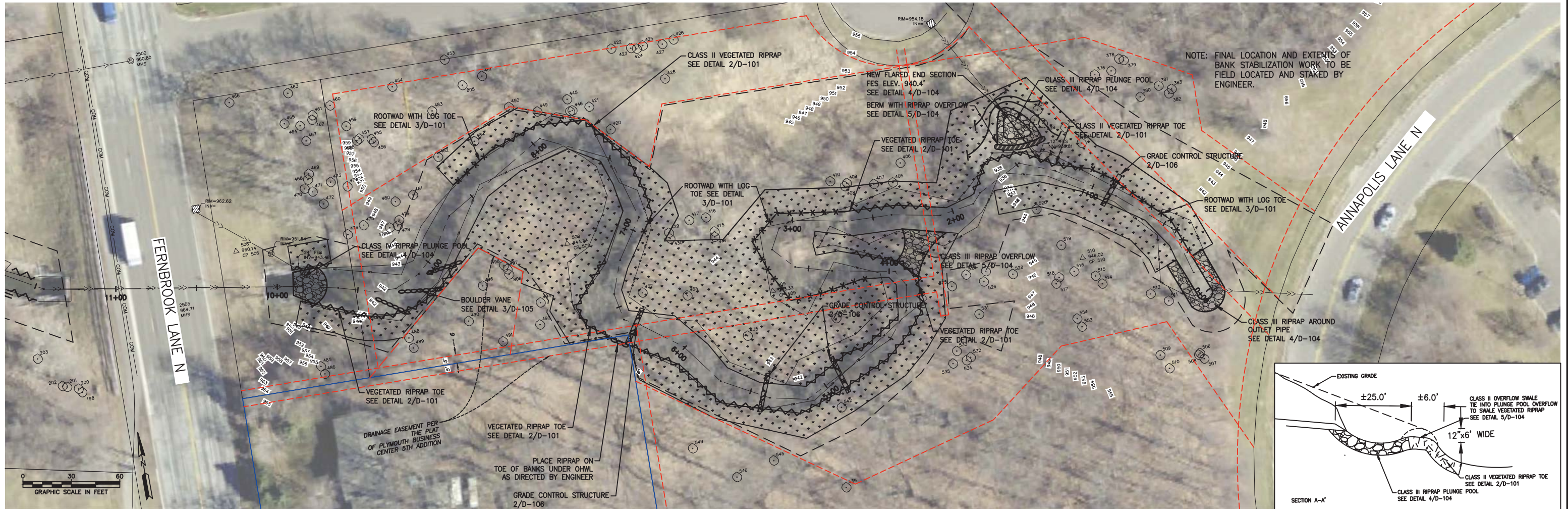
CITY OF PLYMOUTH

3400 PLYMOUTH BOULEVARD
PLYMOUTH, MN 55447

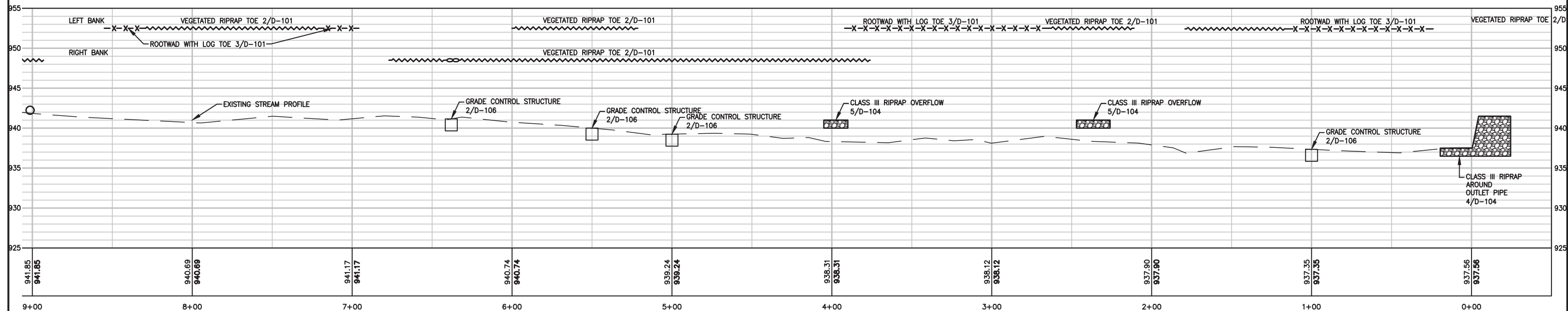
SHEET TITLE

STABILIZATION PLAN AND PROFILE 18+00 TO 9+00

DWN BY	CHK'D	APP'D	DWG DATE
SJB	LNJ	EAM	MAR 2017
PROJECT NO.	SHEET NO.	SCALE	REV NO.
1756-10	C-105	AS SHOWN	2



PLYMOUTH CREEK CENTERLINE STA 9+00 TO 0+00



LEGEND	
	DECIDUOUS TREE
	ACCESS ROUTE BOUNDARY
	EXISTING FENCE
	PROPERTY LINE
	ROOTWAD WITH STONE TOE
	BARE ROOT SHRUB PLANTING
	SHRUB PLANTING WITH BANK ACCESS

	WATER EDGE
	RETAINING WALL
	PROPOSED CHANNEL CENTERLINE
	PROJECT AREA LIMITS
	ROOTWAD WITH LOG TOE
	VEGETATED RIPRAP TOE

CITY OF PLYMOUTH
DRAINAGE & UTILITY
EASEMENT

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PRIME CONSULTANT

Responsive partner. Exceptional outcomes.

PROJECT TITLE
PLYMOUTH CREEK
CHANNEL RECONSTRUCTION
CITY OF PLYMOUTH
3400 PLYMOUTH BOULEVARD
PLYMOUTH, MN 55447

SHEET TITLE			
STABILIZATION PLAN AND PROFILE 9+00 TO 0+00			
DWN BY SJB	CHK'D LNJ	APP'D EAM	DWG DATE MAR 2017
PROJECT NO. 1756-10	SHEET NO. C-106	SCALE AS SHOWN	REV NO. 2

Memorandum

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Co.
Subject: Item 5B – Consider Approval of 90% Design Plans for Plymouth Creek Restoration Project, Annapolis Lane through Plymouth Creek Park (CIP 2017 CR-P), Plymouth BCWMC August 17, 2017 Meeting Agenda
Date: August 9, 2017
Project: 23270051 2017 635

5B. Consider Approval of 90% Design Plans for Plymouth Creek Restoration Project, Annapolis Lane through Plymouth Creek Park (CIP 2017CR-P), Plymouth

Summary

Proposed Work: 2017 Plymouth Creek Restoration Project (CIP 2017CR-P)

Basis for Commission Review: 90% plan review

Change in Impervious Surface: N.A.

Recommendation:

- 1) Conditional approval of 90% drawings
- 2) Authorize BCWMC Engineer to provide administrative approval after final plans have been revised and comments have been sufficiently addressed.

The 2017 Plymouth Creek Restoration project (CIP 2017CR-P) is being funded by the BCWMC's ad valorem levy (via Hennepin County). The City of Plymouth provided 90% design plans to the BCWMC for review and comment at the Commission's July meeting. Based on the comments and discussion at the July meeting, the Commission took no action on the plans, but requested that the City bring the 90% plans back to the Commission, along with additional information. The City of Plymouth provided revised 90% design plans for review at the August Commission meeting.

Feasibility Study Summary

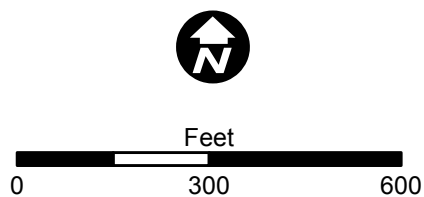
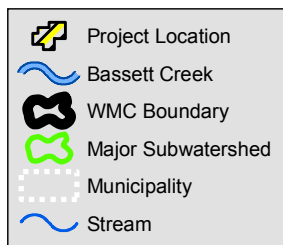
The BCWMC completed the 2017 Plymouth Creek Restoration Project Feasibility Report (Barr, March 2016) to examine the feasibility of restoring sites along the 2,500-foot reach of the creek in Plymouth Creek Park and between Fernbrook Lane North and Annapolis Lane North (Figure 1). The feasibility report identified 21 sites where bank erosion, bank failure, and infrastructure repairs were needed, in addition to removal of debris and fallen trees.

The feasibility report identified 2-4 design options for each site and a final recommendation for each site. For most sites, the feasibility report included two alternative designs: 1) a bioengineering (or soft armoring) approach that uses techniques that rely primarily on vegetation; 2) a more structural (or hard

Barr Footer: ArcGIS 10.4.1, 2017-06-07 11:21 File: I:\Client\BassetCreek\gis\maps\Permits\Maps-2017\2017CR-P.mxd User: jrv



Imagery Source: Aerial Express (2009)



**LOCATION MAP
APPLICATION 2017CR-P
Plymouth Creek Stream
Restoration Project
Plymouth, MN**

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Co.
Subject: Item 5B – Consider Approval of 90% Design Plans for Plymouth Creek Restoration Project, Annapolis Lane through Plymouth Creek Park (CIP 2017 CR-P), Plymouth
BCWMC August 17, 2017 Meeting Agenda
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armoring) approach that uses rock and other non-vegetative materials. Some sites included additional alternatives that did not focus on preserving the existing alignment or channel configuration, such as remeandering the channel or reconnecting to the floodplain. Recommendations, based on site-specific considerations, included a mix of hard and soft armoring approaches, and additional alternatives to realign the channel.

The feasibility report estimated that this restoration project would require the removal of approximately 100-150 trees and estimated that project implementation would reduce the total phosphorus load by 52 pounds per year and the total suspended sediment load by 90,800 pounds per year.

Project Summary

The 90% design plans follow many of the recommendations from the feasibility study and include the use of root wads, log vanes, rock/cross vanes, debris clearing and vegetation management. The plans also include the use of vegetated riprap and specific measures to improve the disc golf course adjacent to the creek in Plymouth Creek Park. Measures to improve the disc golf course include a low flow crossing where it was observed that golfers are frequently retrieving discs; disc stop poles to prevent discs from damaging trees and going into the creek; installation of boardwalk sections; and improvements to greens to improve erosion control.

The plans differ from the feasibility recommendations in a few areas, primarily involving the use of hard armoring slightly more than the feasibility recommendations. A concise summary of the differences between the design plans and the feasibility study was provided in the 60% design review.

Temporary and permanent erosion and sediment control measures include:

- Rock construction entrances
- Silt fence
- Inlet protection
- Bioroll
- Floating silt curtain
- Erosion control blanket
- Seeding

The plans show the removal of approximately 120 trees over the project length, including 94 to be re-used as part of bioengineering techniques and 26 trees that are too small (< 10" diameter) to be re-used on site.

Previous Reviews

The City of Plymouth submitted the 60% design plans for this project, and the BCWMC conditionally approved the 60% plans at its June 15, 2017 meeting. Following the conditional approval of the 60% design plans, the City of Plymouth revised and submitted the design drawings to the 90% level with the inclusion of the comments from the BCWMC's 60% review comments. The 90% design drawings submitted in June sufficiently addressed the majority of the BCWMC Engineer's comments provided as

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part of the review of the preliminary 60% plans. At its meeting in July, the Commission discussed the 90% plans and heard concerns from adjacent landowners. The Commission requested that Commission and city staff meet with landowners and develop plans that satisfy all parties, while maintaining the primary project objective of improved water quality. As a result, one on-site meeting was held with landowners, in addition to communications by phone and email. The City of Plymouth provided revised plans and supporting information on August 1, 2017.

While the revised plans address some landowner concerns with regards to tree loss, the 90% plans do not sufficiently address the Commission Engineer's comment requiring no change in the flood level resulting from the proposed design. The modeling results provided with the revised 90% plans no longer show an increase in the modeled flood elevation on private property; however the results still show a 0.2-foot increase in the modeled flood elevation at one cross section on City property within Plymouth Creek Park. The City is requesting a variance from BCWMC requirements to allow for this increase in the modeled flood elevation. The formal variance request and supporting information will be provided at the Commission meeting.

The Commission Engineer technically supports the variance request, as the increase is relatively small (0.2 foot = 2.4 inches), does not affect other properties and causes no damages to structures on the city property. However, the Commission should consider the following policy-related items in its decision-making:

- The Commission (as far as we know) has not granted a variance that increases flood elevations in the past, so granting the variance would be precedent-setting.
- The Commission will likely receive similar variance requests in the future from public and private property owners, based on precedence.

If the Commission does not grant the variance, then the plans must be revised so there is no increase in the modeled flood elevation. If the Commission grants the variance, the City may need to obtain a FEMA Letter of Map Revision (LOMR) to allow the increased flood elevation. The Commission Engineer recommends that the City consult with Minnesota Department of Natural Resources (MDNR) floodplain staff regarding whether a LOMR will be required.

The City's consultant sufficiently addressed and provided responses to many comments on the 60% plans with their June 30th submittal, and the responses were included in the [memo for the July BCMWC meeting](#). The Commission Engineer's July 90% design review memo included the following additional comments (Wenck August 1st responses and the Commission Engineer's comments are noted):

1. Modeling or other documentation must be submitted to verify no change in the flood level caused by the proposed design

Wenck response:

At the July 20, 2017 commission meeting we discussed our approach to modify the design by taking out the cross vanes causing flood elevation increase on the private properties. Instead,

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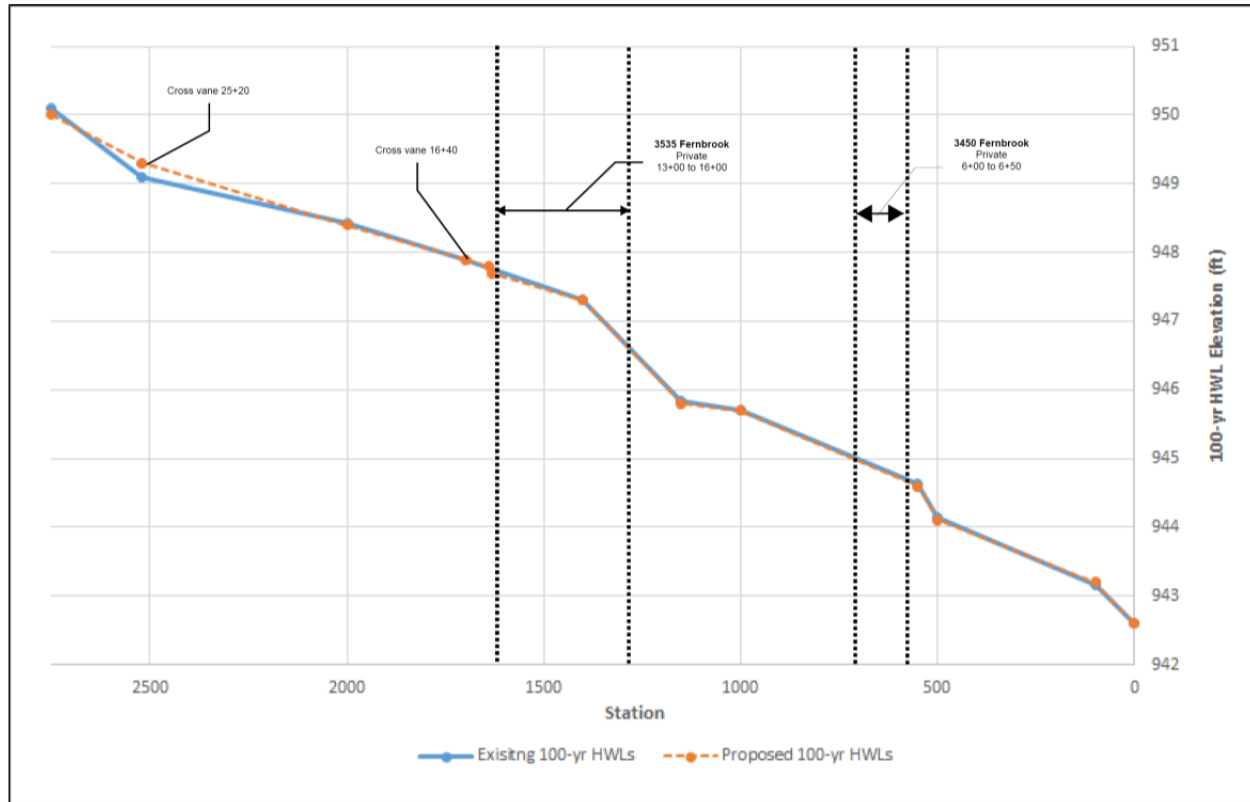
installing rock check dams set into the streambed, matching existing elevation, in their place to protect against future head cutting.

The design plans were revised and the model rerun to show that there will be no increase in the flood level on the private properties at 3535 Fernbrook Lane N and 3450 Fernbrook Lane N. 5 of the 7 cross vanes originally proposed have been replaced with rock check dams. 2 of the 7 cross vanes originally proposed remain at stations 25+20 and 16+40.

The modeling results of the corrected effective XPSWMM model we received from Barr Engineering and updated is shown below. There is no increase in the flood level on the private properties at 3535 Fernbrook Lane N and 3450 Fernbrook Lane N.

100-yr HWL Comparison			
XPSWMM Node	Project	Existing	Proposed
	Station	HWL (ft)	HWL (ft)
N-PCE-239	2750	950.1	950.0
CV-25+20	2520		949.3
N-PCE-141	2520	949.1	949.3
N-PCE-140	2000	948.4	948.4
N-PCE-139	1700	947.9	947.9
CV-16+40	1640		947.8
N-PCE-139.2	1632		947.7
N-PCE-139.1	1400	947.3	947.3
N-PCE-039	1150	945.8	945.8
N-PCE-137	1000	945.7	945.7
N-PCE-136.3	550	944.6	944.6
N-PCE-136.2	500	944.1	944.1
N-PCE-136.0	100	943.2	943.2
PCE-037A	0	942.6	942.6

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Commission Engineer comment:

The results still show a 0.2-foot increase in the modeled flood elevation at one cross section on City property within Plymouth Creek Park (Station 25+20). If the Commission does not grant the City's variance request, then the plans must be revised so there is no increase in the modeled flood elevation.

2. Construction limits on the plan sheets should be shown, including all access routes to (and between) stabilization areas.

Wenck response:

Construction limits have been added to the plan sheets. The revised final plan set is attached.

Commission Engineer comment:

Comment addressed.

3. The information in the tree survey and on the plan sheets must be reviewed for discrepancies and corrected as needed.

Wenck response:

Tree removals have changed slightly because of the meeting on July 26, 2017 with landowners around reach 3 of the project (Between Fernbrook lane and Annapolis Lane). The trees previously noted as, "harvest, if needed," are now being shown as remove or not to be more clear on what is actually being removed. The information in the tree survey and on the plan sheets has been

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updated with the final design changes and reviewed to remove discrepancies. The revised final plan set and updated tree survey/tree removal appendix are attached.

Commission Engineer comment:

Comment addressed (the tree survey is included in the electronic packet).

4. We recommend that the following trees not be removed: #495, 499, 501-505, and 509 (shown on sheet C-103 and called out in tree survey).

Wenck response:

These trees were reviewed during the meeting with landowners around reach 3 of the project (Between Fernbrook lane and Annapolis Lane). Attendees included:

- Ed Matthiesen, Wenck Associates
- Seth Bossert, Wenck Associates
- Derek Asche, City of Plymouth
- Jim Prom, City of Plymouth
- Various Homeowners
- Representative with St. Paul Properties, Inc.
- Laura Jester, Bassett Creek Watershed Management Commission

These trees were reviewed on an individual basis and a group consensus was reached to keep or remove trees in this area based on species, size, health and the objectives of this project. The final design plan sheets have been updated with this information and are attached.

Commission Engineer comment:

Comment addressed (tree removals are listed in the tree survey and shown on sheets C-101, C-102, and C-103 of the attached construction plans).

5. A stilling basin downstream of the Fernbrook Lane culvert calls for Class III riprap but the detail on sheet D-104 calls for Class IV. The appropriate riprap size should be verified and the plan sheets modified accordingly.

Wenck response:

Class IV riprap is required per the City of Plymouth standard plate based on the size of the Fernbrook lane box culvert. The plan sheets have been updated and are attached.

Commission Engineer comment:

Comment addressed.

6. The erosion and sediment control plans show installation of erosion control blanket only after final grading. We recommend using additional erosion control measures (e.g., compost logs) during construction on the banks and along the stream side of access routes to provide additional erosion control prior to final stabilization.

Wenck response:

The erosion and sediment control plans have been updated to separate out areas that will be

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seeded and blanketed per the bank stabilization details at the time of construction (most likely winter 2017/2018) and are considered final stabilization.

The remaining areas will be hydro-seeded and hydro-mulched during the spring 2018 buffer establishment. These areas will have trees and brush removed, but the banks will not be disturbed and will not require temporary or permanent stabilization practices.

A note has been added to the construction plans that, "all disturbance during construction of the bank stabilization practices shall be stabilized with temporary vegetative cover spread at 1.5 times the usual rate per acre. If temporary cover is to remain in place beyond the present growing season, two-thirds of the seed mix shall be composed of perennial grasses."

Another note has been added that, "if construction occurs when the ground is not frozen, erosion control logs shall be installed along the stream side of access routes to provide additional erosion control prior to final stabilization."

Commission Engineer comment:

All disturbed areas should be seeded with a cover crop, at minimum, within 7 days after work in the area is complete. Even if areas are not graded, they may be disturbed due to construction traffic and turning vehicles, and erosion control will be required. For example, access routes on sheets EC-103 and EC-104 of the plans do not show any stabilization; however, these areas will likely be disturbed enough during construction that temporary stabilization measures will be necessary. The extent of stabilization measures should be reviewed and modified as necessary.

The hatching for erosion control blanket and hydromulch in the legend on sheets EC-103 and EC-104 of the plans do not match the call-outs for which areas will be stabilized with these measures. The discrepancy should be corrected. The legend also includes hatching for disk anchored mulch, which is shown to be used on graded banks. We suggest using erosion control blanket or hydromulch on stream banks because disk anchored mulch can be washed away too easily.

7. Temporary vegetative cover must be spread at 1.5 times the usual rate per acre. If temporary cover is to remain in place beyond the present growing season, two-thirds of the seed mix shall be composed of perennial grasses.

Wenck response:

A note has been added to the construction plans as explained above in item #6.

Commission Engineer comment:

Comment addressed.

8. Educational signage in the park/disc golf course must be provided/installed before the city receives final reimbursement for the project.

Wenck response:

The locations for future installation of 5 education signs by the City has been shown on the

construction plans. Each of the signs will provide public education on one of the following topics, depending on their location:

1. Overall project summary and information
2. Stream Stabilization feature (Cross Vanes)
3. Stream Stabilization feature (Root Wad)
4. Stream Stabilization feature (Vegetative Buffer)
5. Managing Traffic to Protect the Stream Buffer

The City will ensure the signs are installed before requesting final reimbursement for the project. A line item has been added to the final construction cost estimate to show that it is included in the project budget.

Commission Engineer comment:

Comment addressed – the attached revised construction cost estimate shows the addition of the educational signage. It appears that the City may be paying for the signs.

9. The final plans must be submitted to the BCWMC Engineer for review and approval after modifications have been completed.

Wenck response:

Final, for construction, plans are included with this memo for review.

Commission Engineer comment:

Final plans must be submitted to the BCWMC Engineer for review and approval after modifications have been completed.

At their July meeting, the Commission also:

- Requested that staff work with adjacent landowners to understand and address their concerns about the project, and to work towards a design that satisfies everyone; with the primary focus on improving water quality with consideration for riparian health.

Commission Engineer comment:

As noted earlier in this memo, a meeting was held on July 26, 2017; attendees included:

- Ed Matthiesen, Wenck Associates
- Seth Bossert, Wenck Associates
- Derek Asche, City of Plymouth
- Jim Prom, City of Plymouth
- Various Homeowners
- Representative with St. Paul Properties, Inc.
- Laura Jester, Bassett Creek Watershed Management Commission

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Co.
Subject: Item 5B – Consider Approval of 90% Design Plans for Plymouth Creek Restoration Project, Annapolis Lane through Plymouth Creek Park (CIP 2017 CR-P), Plymouth
BCWMC August 17, 2017 Meeting Agenda
Date: August 9, 2017
Page: 10

In addition to tree removals, the meeting attendees discussed the project design and construction access, and agreed that no work is needed on the steep north facing slope on the south side of the stream, adjacent to the Starr's property (which is consistent with project design).

Discussed the costs of various project components including the costs of disc golf course improvements to enhance and protect stream restoration measures vs. stream stabilization measures themselves. There was also a discussion about the disc stop poles and their high cost and some discussion about other techniques that could be used to protect trees. Commissioners requested that the City of Plymouth consider their ability to share in the costs of items that may be more related to improving/protecting the park or upland trees as opposed to items that directly improve water quality or protect stream restoration features.

Commission Engineer comment:

The attached revised construction cost estimate shows the golf course-related project components and costs vs. other restoration features and costs. The golf course-related costs (\$199,740) are 28% of the total project costs (\$703,863); the remaining costs (\$504,123) are solely for stream stabilization work. The table (and construction plans) continues to show the use of disc stop poles, but as a bid alternate and with a much smaller number of poles (57 compared with 132). This results in a decreased estimated cost for disc stop poles (\$42,750 compared with \$99,000).

Recommendations

- A. Authorize BCWMC Engineer to provide administrative approval after final plans have been revised and comments have been sufficiently addressed.
- B. Approve the City's requested variance request to raise the modeled flood elevation 0.2 foot on city property at Station 25+20.
- C. Conditional approval of 90% drawings based on the following comments:
 - 1. If the Commission does not grant the City's variance request, then modeling or other documentation must be submitted to verify no change in the flood level caused by the proposed design.
 - 2. Erosion control and seeding plans must be revised to show the correct hatching, show anticipated stabilization, and add erosion control measures for the full extent of anticipated disturbed areas within the construction limits and access paths.
 - 3. The final plans must be submitted to the BCWMC Engineer for review and approval after modifications have been completed.
- D. If the Commission grants the City's variance request, the City should consult with MDNR floodplain staff regarding whether a FEMA Letter of Map Revision (LOMR) will be required to allow the increased flood elevation.

PLYMOUTH CREEK STREAM RESTORATION
CITY PROJECT NO. 16007
FINAL ENGINEERS ESTIMATE
AUGUST 1, 2017

Bid Item	Description	Units	Unit Price	Stream Stabilization Reach 1 & Reach 2		Stream Stabilization Reach 3		Disc Golf Course Improvement for Stabilization	
				Quantity	Entension	Quantity	Entension	Quantity	Entension
	BASE BID - Fall/Winter 2017/2018 Construction								
1	Fall/Winter Mobilization and Demobilization	LS	\$25,000.00	0.6	\$15,000.00	0.4	\$10,000.00	0	\$0.00
2	Tree Clearing & Harvesting	LS	\$25,000.00	0.6	\$15,000.00	0.4	\$10,000.00	0	\$0.00
3	Chip Onsite and Spread Woodchips on Existing Trails & Course Greens	LS	\$15,000.00	1	\$15,000.00	0	\$0.00	0	\$0.00
4	Haul and Dispose Offsite All Unchipped Wood	LS	\$15,000.00	0	\$0.00	1	\$15,000.00	0	\$0.00
5	Remove and Dispose of 12" RCP Flared End Section	EA	\$250.00		\$0.00	1	\$250.00	0	\$0.00
6	Remove 12" RCP Pipe	LF	\$10.00		\$0.00	40	\$400.00	0	\$0.00
7	Furnish and Install 12" RCP Flared End Section	EA	\$1,000.00		\$0.00	1	\$1,000.00	0	\$0.00
8	New Tie Rod Installation	LS	\$1,000.00		\$0.00	1	\$1,000.00	0	\$0.00
9	Construct, Maintain, & Restore Site Access and Staging Areas	LS	\$15,000.00	0.6	\$9,000.00	0.4	\$6,000.00	0	\$0.00
10	Woven ECB, Rolanka BioD-Mat 40	SY	\$6.00	1255	\$7,530.00	2130	\$12,780.00	0	\$0.00
11	Non-Woven ECB Cat 3 Type Straw 2S (No Poly Netting)	SY	\$3.00	1255	\$3,765.00	2130	\$6,390.00	0	\$0.00
12	Footer Log & Log Vanes	EA	\$50.00	21	\$1,050.00	33	\$1,650.00	0	\$0.00
13	Root Wad	EA	\$350.00	17	\$5,950.00	37	\$12,950.00	0	\$0.00
14	Seating Log	EA	\$450.00	0	\$0.00	0	\$0.00	4	\$1,800.00
15	Silt Fence, Type MS - Maintained	LF	\$4.00	200	\$800.00	200	\$800.00	0	\$0.00
16	Flotation Silt Curtain Type Moving Water - Maintained	LF	\$35.00	25	\$875.00	25	\$875.00	0	\$0.00
17	Sediment Control Log Type Straw (Or Bioroll) - Maintained	LF	\$6.00	3000	\$18,000.00	1000	\$6,000.00	0	\$0.00
18	Inlet Protection - Maintained	EA	\$500.00	2	\$1,000.00	3	\$1,500.00	0	\$0.00
19	Temporary Construction Entrance - Maintained	EA	\$2,500.00	2	\$5,000.00	2	\$5,000.00	0	\$0.00
20	Street Sweeper (With Pickup Broom)	HR	\$125.00	10	\$1,250.00	10	\$1,250.00	0	\$0.00
21	Temporary Sedimentation Basin - Maintained	LS	\$2,500.00	1	\$2,500.00	1	\$2,500.00	0	\$0.00
22	Class II Riprap, No Limestone (Veg Riprap Toe, RGC, Swales & Brush Mattress)	TON	\$120.00	436	\$52,320.00	334	\$40,080.00	0	\$0.00
23	Class III Riprap, No Limestone (Channel Overflow & Plunge Pools)	TON	\$120.00	0	\$0.00	200	\$24,000.00	0	\$0.00
24	Class IV Riprap, No Limestone (Down stream of Fernbrook)	TON	\$120.00	0	\$0.00	65	\$7,800.00	0	\$0.00
25	24" to 36" Fieldstone Boulders (Cross Vanes, Rootwads, Course Greens)	TON	\$150.00	60	\$9,000.00	110	\$16,500.00	70	\$10,500.00
26	MN DOT Type V, Non-Woven Geotextile Fabric	SY	\$5.00	890	\$4,450.00	1020	\$5,100.00	210	\$1,050.00
27	Brush Mattress	SY	\$65.00	30	\$1,950.00	0	\$0.00	0	\$0.00
28	CU Structural Soils	TON	\$110.00	0	\$0.00	0	\$0.00	70	\$7,700.00
29	Common Excavation - On-site (EV)	CY	\$15.00	130	\$1,950.00	0	\$0.00	70	\$1,050.00
30	Subgrade Preparation	SY	\$15.00	0	\$0.00	0	\$0.00	100	\$1,500.00
31	Granite Charcoal Stepper	EA	\$500.00	0	\$0.00	0	\$0.00	8	\$4,000.00
32	Trap Rock Step	EA	\$500.00	0	\$0.00	0	\$0.00	68	\$34,000.00
33	Aggregate Base CL 5	TON	\$45.00	0	\$0.00	0	\$0.00	50	\$2,250.00
34	Aggregate Base CL 2	TON	\$35.00	0	\$0.00	0	\$0.00	45	\$1,575.00
35	Grass Pave2	SY	\$40.00	0	\$0.00	0	\$0.00	100	\$4,000.00
36	Timber Edge Path	LF	\$50.00	0	\$0.00	0	\$0.00	335	\$16,750.00
37	Woodchip or Gravel, If not reusing from tree removal	CY	\$75.00	0	\$0.00	0	\$0.00	110	\$8,250.00
38	Boardwalk	LF	\$150.00	0	\$0.00	0	\$0.00	155	\$23,250.00
39	4" Drain Tile Pipe	LF	\$30.00	0	\$0.00	0	\$0.00	155	\$4,650.00
40	Seeding - Dormant	AC	\$2,500.00	0.25	\$625.00	0.44	\$1,100.00	0	\$0.00
41	Native Seed Mix	LB	\$50.00	5	\$250.00	10	\$500.00	0	\$0.00
42	Fescue Seed Mix	LB	\$2.50	25	\$62.50	44	\$110.00	150	\$375.00
				Total Fall Base Bid			\$190,535.00		\$122,700.00
ALT-1	Bid Alternate - Disc Stop Poles	EA	\$750.00	0	\$0.00	0	\$0.00	57	\$42,750.00
					\$172,327.50		\$190,535.00		\$165,450.00

PLYMOUTH CREEK STREAM RESTORATION
CITY PROJECT NO. 16007
FINAL ENGINEERS ESTIMATE
AUGUST 1, 2017

	BASE BID - Spring 2018 Vegetation								
43	Spring Mobilization and Demobilization	LS	\$3,500.00	0.6	\$2,100.00	0.4	\$840.00	0	\$0.00
44	Tree Planting	EA	\$500.00	0	\$0.00	0	\$0.00	2	\$1,000.00
45	Shrub Planting,	EA	\$50.00	560	\$28,000.00	0	\$0.00	0	\$0.00
46	Perennial Planting Enhancement of Seeded Areas	EA	\$15.00	400	\$6,000.00	0	\$0.00	0	\$0.00
47	Bare Root Shrubs	EA	\$5.00	240	\$1,200.00	0	\$0.00	0	\$0.00
48	Live stakes	EA	\$5.00	50	\$250.00	0	\$0.00	0	\$0.00
49	Seeding	AC	\$2,500.00	0.38	\$950.00	0.42	\$1,050.00	0	\$0.00
50	Native Seed Mix	LB	\$50.00	8	\$400.00	9	\$450.00	0	\$0.00
51	Fescue Seed Mix	LB	\$2.50	38	\$95.00	42	\$105.00	0	\$0.00
52	Hydraulic Matrix, Type Mulch	LB	\$2.00	760	\$1,520.00	840	\$1,680.00	0	\$0.00
53	Vegetation Establishment and Maintenance	LS	\$15,000.00	0.6	\$9,000.00	0.4	\$3,600.00	0	\$0.00
					\$49,515.00			\$7,725.00	\$1,000.00

SUBTOTAL	\$221,842.50	\$198,260.00	\$166,450.00
20% CONTINGENCY	\$44,368.50	\$39,652.00	\$33,290.00
TOTAL BASE BID	\$266,211.00	\$237,912.00	\$199,740.00
Project Total			\$703,863.00

City-1	Educational signage	EA	\$ 600	5	\$ 3,000	0	\$ -	0	\$ -
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From: my_attic_mn@comcast.net
To: [Laura Jester](#); [Derek Asche](#); [Lucius N. Jonett](#); [Jim Prom](#)
Cc: [Ed A. Matthiesen](#); [Murphy, Jan](#); kslavik@plymouthmn.gov; council@plymouthmn.gov
Subject: Plymouth Creek Restoration Project
Date: Wednesday, August 9, 2017 4:50:56 PM
Attachments: [WENCK-DRAFT Plans 070117 \(City Property\)Page 39 ClearCut.pdf](#)
[Email-Dr. Frelich,UM.pdf](#)
[F2014-10PlymouthBusinessCenter.jpg](#)
[F2014-10x.jpg](#)

Item 5Biii.
BCWMC 8-17-17

Laura,
Please include this in the next meeting minutes packet.

Attached:
Email-Dr. Frelich,UM.pdf
WENCK-DRAFT Plans 070117 (City Property)Page 39 ClearCut.pdf - Map of seeded area
Attached google photos:
F2014-10x.jpg stand of trees which includes Conservation Area and residential properties
F2014-10PlymouthBusinessCenter.jpg - view of Plymouth Business Center and small stand of trees which includes Conservation Area and residential properties

The Plymouth Creek Restoration project had a goal that we supported wholeheartedly - restoring the creek and the creek habitat. We questioned the "prairie" method, but did not think it applied to the protected areas. We did not realize there would be large seeded areas that would prevent future growth of trees in the forested area. Also, we did not realize that there would be a "harvest" area of trees in a Conservation Area to supply Reachs 1, 2 and 3. We did not find out until much later that work could be done in a 50 foot work area on each side of the creek. (The seeded area drawing actually shows "clear cut" and seeding as much as 60 feet from creek centerline). We did not realize that the maintenance would be open ended, and trees could be taken out in the future.

A Clean Water Project should not have such a drastic impact on adjoining properties. If the conservation agreement is not honored and tree removal and/or grading is used, the project will significantly affect the values and functions of the residents' and the commercial property owner's properties.

The development of the Plymouth Business Center Phase VI with respect to the residents involved zoning, access to Fernbrook and the fact that residents are completely surrounded by St. Paul Properties. There are additional plans for the area. The Conservation Area, referred to as a significant natural buffer, was and is our protection as long time residents. During the Conservation Agreement development, we were supported from the beginning by the Plymouth City Council. We only found out at the June 26 public meeting that no one in the project realized there was a conservation agreement on this area, even though we mentioned it at the earlier public meetings. We did not realize that one of the "significant assumptions" was there was no need for a title search for project work. At the July 20 BCWMC meeting, it seemed to be the first time most were introduced to the fact that the Plymouth Business Center property surrounded the creek almost entirely in Reach 3. In the early studies, the City of Plymouth claimed property ownership with the Creek

and easements and a 50 foot buffer. This "property" would include St. Paul Companies property. We would like to mention that our property juts into the creek on our NE corner, also having an extensive area of property in the buffer.

At a meeting at the site with the neighbors it was directed that we talk about 3 specific areas, since the BCWMC has said they need not enforce our land agreement with the property owner. Basically BCWMC and City of Plymouth are telling us they do not have to enforce an agreement we have with the Property Owner of the Plymouth Business Center who dedicated the Conservation Area by requirement of the City of Plymouth in order to achieve rezoning to build the Plymouth Business Center Phase VI. Due to the conversations at the BCWMC meeting about what this easement was, we feel we need to note that the City of Plymouth was fully involved during the Conservation Agreement development from the beginning and required the Plymouth Business Center project to accommodate the natural area in their planning and zoning applications. There was always to be no grading or tree removal in this area. In addition, the trees were used in a tree count that was filed as part of the site plans for the commercial development. Currently, City of Plymouth and St. Paul Companies are teaming as "the Property" and ignoring Conservation Area rules. We feel the City of Plymouth should not be partnering with St. Paul Companies in Reach 3 of this project. There are too many questions of legalities, too many questions of conflicts of interest. They should be considering all aspects including protection of clean water, old growth sugar maple - basswood forest, habitat, as well as rights of a property owner. We feel there is a strong conflict of interest in St. Paul Companies helping define grading, vegetation changes, etc. in this Conservation Area.

Even though we lived here 15 years before the property purchase and rezoning by St. Paul Companies, we now have been reguidered and have inherited potentially limited ability to do what we wish with our property.

Only very recently did we go into the archived Plymouth Planning Commission records and also watch our 25 year old tapes of the City Council Meetings. The online archived City of Plymouth planning for 1990 details the process. This protected conservation area was required by the City of Plymouth as a buffer for the residents as part of rezoning for the business center and was part of the final plat for Plymouth Business Center 5th Addition Phase VI. This is file # 90063. We have a copy of the proposed building plan, since we were involved.

Information from proposed building plan: access easement area per doc no. 5853924 (this is the # of the conservation agreement). North conservation easement per doc no. 5853924 & 2250308. We do not have the final building plans. I am using the documents we have here.

From Plymouth current city code:

*530.01. Subd. 2. The purposes of these tree preservation regulations include, but are not limited to, 1) prevention of soil erosion and sedimentation, 2) improved air quality, 3) reduced noise pollution, 4) energy conservation through natural insulation and shading, 5) control of the urban heat island effect, 6) increased property values, 7) **protection of privacy by maintaining and establishing buffers between***

conflicting land uses, and 8) providing habitat for wildlife.

530.03. Scope. The regulations contained in this section shall apply to all properties involving 1) a preliminary plat application received after August 15, 1995, or 2) a lot division application resulting in the creation of one or more new development parcels, received after August 15, 1995. The City does, however, strongly encourage preservation of healthy trees on all properties within the City. (Ord. 2009-08, 5/12/2009)

811.03. Procedures to Establish a Natural Preserve. Subd. 2. Designation as part of platting for site plan approval. If a property owner requests natural preserve designation in conjunction with a plat or site plan approval, the property owner shall follow the same requirements set forth in Subd. 1(b) through Subd. 1(f) above.

However, approval of a natural preserve that is requested with the platting or site plan approval process will occur as part of the Council approval of the tree preservation plan or landscaping plan associated with such request rather than in a separate resolution. (Ord. 2008- 08, 3/25/2008; Ord. 2009-08, 5/12/2009)

We were supportive in the beginning for the task of the project -- clean water. But we then realized that trees from the Conservation Area would be used for **material** to achieve this goal. The creek and immediate banks need maintenance. We do note that the photos at Reach 1 and 2 show an area with lots of foot traffic, resulting in bare dirt next to the creek. In Reach 3, when you go past the immediate banks there are 100's of sugar maples (large and small) that have their own contributions to clean water with layered leaves that percolate the absorption of water. In the current plan, these trees would be clear cut under 8 inch diameters. These areas would be seeded and they are large enough to open the perimeter of the forest to buckthorn which would not be removed since it is a Conservation Area and the hardwood forest would be destroyed.

Our Conservation Agreement prevents us from agreeing to tree removal. However, all research supports that this undisturbed hardwood forest is better for clean water than the current plan with tree removal in Reach 3. We can agree with a clean water approach that falls within the guidelines of the Conservation Agreement.

There is literally no foot traffic here. We have been here 40 years. It has been an ideal site for conservation of a sugar maple-basswood forest stand (F2014-10x.jpg shows the combined residential properties and conservation area) of an originally much larger stand of the "Big Woods". As you can see from the aerial view - commercial area (F2014-10PlymouthBusinessCenter.jpg), there has been a significant reduction in forest due to the developed commercial area. It can also be seen that the conservation area is very small relative to the developed commercial area (considering that a significant portion of the canopy shown is on the residential properties). The current hardwood stand provides a unique clean water and wildlife habitat. Based on our experience, we are convinced that the clear cut and seeded plan is not a good fit to the tall tree environment.

We did seek some expert opinion on the value of the forest from Dr. Lee Frelich, Director, University of Minnesota Center for Forest Ecology; Fellow - Institute of the

Environment. He acknowledges the need for stabilization and clean water, but supports a better way to do it. He appreciated the diversity of habitat, wetlands on the west side of Plymouth creek park lead downstream to big woods forest ½ mile downstream. I have attached a follow up letter.

We disagree with the current plan. We would support a Reach 3 plan that honors the Conservation Agreement. A compromise has legal risks.

Best Regards,

John & Jeanne Starr
3450 Fernbrook Lane N
Plymouth, MN 55447

Footnote:

There are archived planning commission meetings, tapes and notes, audio tapes of resident/developer meetings, etc.

Re: Forest Preservation Photos Attached

From : Lee Frelich <frel001@umn.edu>

Mon, Aug 07, 2017 08:49 AM

Subject : Re: Forest Preservation Photos Attached**To :** my attic mn <my_attic_mn@comcast.net>

Thanks for the information and photographs; the photo showing the larger perspective makes it clear how rare wooded habitat is in that part of the metro area. Good luck with your effort.

Lee

Lee E. Frelich
Director, The University of Minnesota Center for Forest Ecology
Fellow, Institute on the Environment
Phone: 612-624-3671, cell: 612-991-1359
<http://cffe.cfans.umn.edu/>

On Sat, Aug 5, 2017 at 2:22 PM, <my_attic_mn@comcast.net> wrote:

Hello again. We wanted to send you an accurate representation of the forested area we spoke about yesterday. We live on the edge at 3450 Fernbrook. You can clearly see the maples in Oct. 2014. This is a google maps photo. The trees a little south of us are already zoned for commercial use of the property. We are hoping to keep this habitat!

From: "my attic mn" <my_attic_mn@comcast.net>**To:** frel001@umn.edu**Sent:** Saturday, August 5, 2017 12:16:13 AM**Subject:** Forest Preservation

Dear Dr. Frelich,

Thank you for your time and interest today in discussing the unique habitat and features of the small sugar maple/basswood forest adjacent to our home. Tree removal and understory grading is part of the Basset Creek Watershed project plan for Plymouth Creek Restoration that will be voted on August 17, 2017. The goal of the project is clean water.

Our limited experience, as lifetime city types, comes from 40 years of living on the edge of this beautiful forest and creek, plus about a month's worth of research on the web about forest characteristics and the benefit of trees to clean water.

We have been trying to share our experience with the City of Plymouth as a means of revising the current plan that, at best, will degrade this forest and possibly even destroy its natural means of recovery. We have sent information to people involved describing our wildlife and bird habitat (red & grey fox dens, deer, raccoon, bats, great horned owl nests, barred owls, red tailed hawk nests, pileated woodpecker nests, and others).

Of particular interest to me was hearing of the hundreds of species of pollinators and bees that require unique habitats -- some require a forest. The Plymouth Creek Park wetlands area is greatly different than the forest downstream and presents maximum diversity in the pollinators and each has unique habitats for mammals and birds. Perhaps it is a rare remnant stand leftover from the Big Woods of Minnesota.

We will be working very hard to present to everyone the importance of the remaining Forest with its contribution to clean water, and wish everyone to honor the current Conservation Area agreement that is already in place. We are trying to facilitate clean water without taking trees in the process.

We are reach 3 in the project.

Here are the relevant links:

Project:

<http://www.bassettcreekwmo.org/index.php?cID=284>

Ecologically significant area:

[https://gis.hennepin.us/naturalresources/map/default.aspx?](https://gis.hennepin.us/naturalresources/map/default.aspx?C=463846.9045000002,4985390.21645&L=9&T=road&D=true&LID=2&PID=2211822220030&VIS=)

[C=463846.9045000002,4985390.21645&L=9&T=road&D=true&LID=2&PID=2211822220030&VIS=](https://gis.hennepin.us/naturalresources/map/default.aspx?C=463846.9045000002,4985390.21645&L=9&T=road&D=true&LID=2&PID=2211822220030&VIS=)

Thank you again,

Jeanne & John Starr
3450 Fernbrook Lane N
Plymouth, MN 55447
[763-559-0489](tel:763-559-0489)



LEGEND	
	DECIDUOUS TREE
	ACCESS ROUTE BOUNDARY
	EXISTING FENCE
	PROPERTY LINE
	STRAW MULCH W/ DISK ANCHORING AND MN SEED MIX 34-262
	EROSION CONTROL BLANKET AND MN SEED MIX 34-262

	WATER EDGE
	RETAINING WALL
	PROPOSED CHANNEL CENTERLINE
	PROJECT AREA LIMITS
	FLOTATION SILT CURTAIN
	INLET PROTECTION
	BIOROLL
	SILT FENCE



REV	REVISION DESCRIPTION	OWN	APP	REV DATE
1	90% DESIGN	SJB	EAM	06/30/17
0	60% DESIGN	SJB	EAM	04/20/17

NOT FOR
CONSTRUCTION

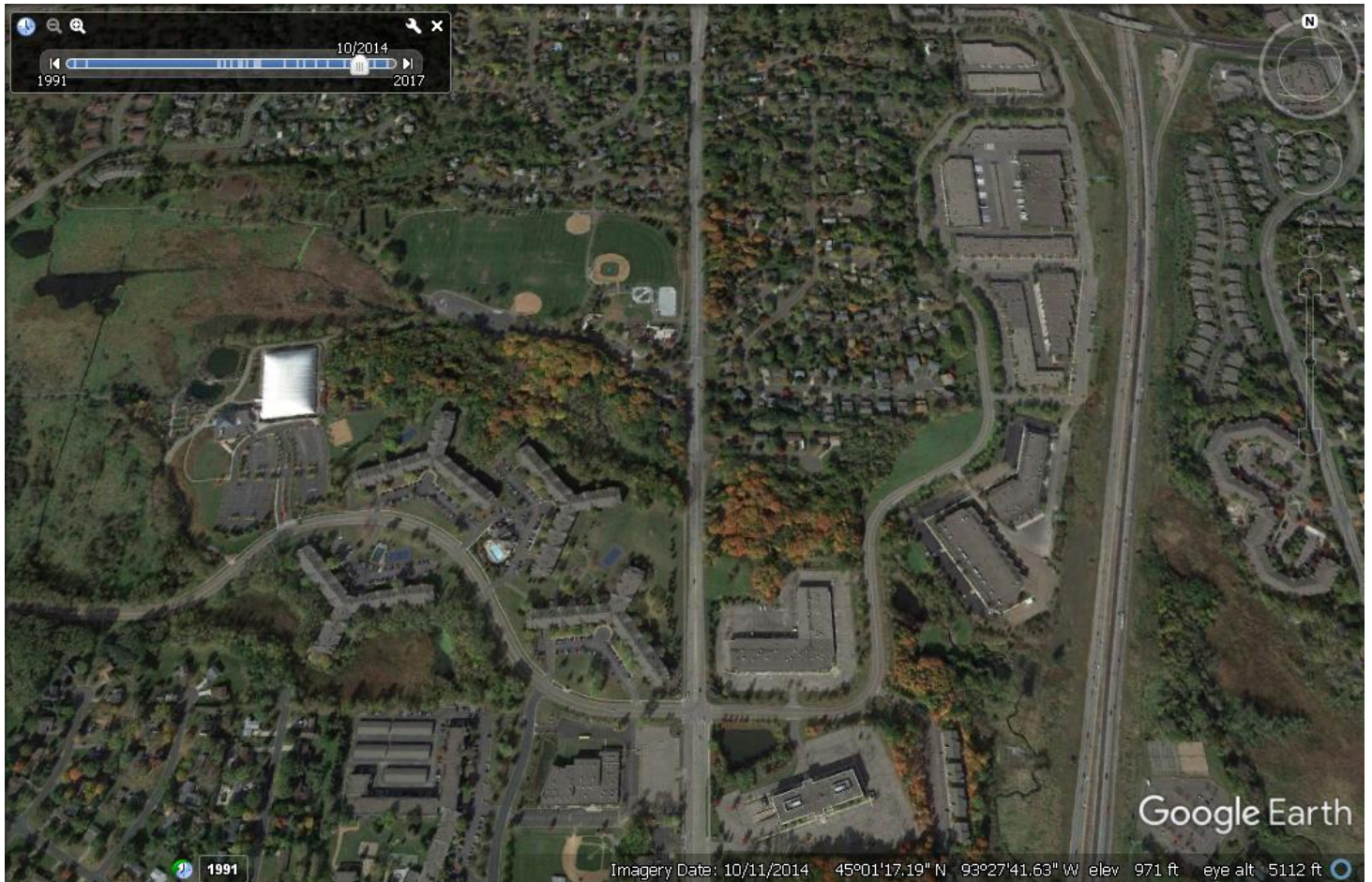
PRIME CONSULTANT

Responsive partner. Exceptional outcomes.

PROJECT TITLE
**PLYMOUTH CREEK
CHANNEL RECONSTRUCTION**

CITY OF PLYMOUTH
3400 PLYMOUTH BOULEVARD
PLYMOUTH, MN 55447

SHEET TITLE			
EROSION AND SEDIMENT CONTROL PLAN 9+00 TO 0+00			
OWN BY SJB	CHK'D LNJ	APP'D EAM	DWG DATE MAR 2017
PROJECT NO. 1756-10	SHEET NO. EC-104	SCALE AS SHOWN	REV NO. 1



After having everyone out to the site today, we wanted to express our interest in the relationship between trees, forest and water quality. There are also clean air benefits. Some information that seemed directly relevant is included in:

<http://urbanforestrynetwork.org/benefits/index.htm>

Trees Increase Water Retention and Quality

Trees have been shown to influence the flow of water. Trees reduce topsoil erosion by catching precipitation with their leaf canopies. This lessens the force of storms and slows down water runoff which in turn ensures that our groundwater supplies are continually being replenished. Research has indicated that 100 mature trees intercept approximately 100,000 gallons of rainfall per year and for every 5 percent of tree cover added to a community, storm water runoff is reduced by approximately 2 percent. Along with breaking the fall of rainwater, tree roots remove nutrients that are harmful to water ecology and quality. Leaves that have fallen from the trees and begun to decay form an organic layer that allows water to percolate into the soil which also aids in the reduction of runoff and soil erosion. All of this also helps reduce street flooding and sedimentation in streams.

Observed today were some quite interesting plants in our backyard that are unique to hardwood forests or adjacent areas, types of sedges and also ferns. This was just a quick look.

This is a Conservation Area and includes part of the Ecologically Significant Area: 4.05 Acres Maple-Basswood Forest as listed on the Hennepin County Website for this property, PID 22-118-22-22-0030.

The creek in this area is in need of maintenance. We have felt that the new culvert in 2014 has contributed to recent changes. The yellow boom discarded on the land was used to direct flow during the construction process. It captured a large number of trees and debris. When the boom was removed and left in the woods, there was no cleanup of the debris that was accumulated in the creek. There hasn't been this kind of a backup in our 40 years here.

Addressing this project, we think that clearcutting in the forest has no definable benefit to clean water. Protecting the banks is an obvious need, but cutting the understory trees and harvest of mature trees would undermine the lifecycle of this forest. The invasive species, mostly buckthorn, will move into the Conservation Areas and no one will remove them. This would be counterproductive to the existing forest benefit to clean air and clean water.

Ref: http://www.dnr.state.mn.us/forests_types/oldgrowth/importance.html

Genetic Reservoirs

We are just beginning to understand the full implications of preserving genetic diversity. But what is understood points toward the importance of genetic diversity for forest health, forest research, and forest restoration and conservation.

The tallest, straightest trees in Minnesota's forests were cut between 1850 and 1920, and often their offspring were destroyed by fire, plowing, or subsequent timber cutting. We do not know whether the forest's remaining trees have the same genes as those that disappeared, but some researchers suspect they do not. Dr. Lee Frelich at the University of Minnesota who studies old trees in areas that were never clear cut, suspects that the old trees are genetically predisposed to grow taller than trees in surrounding heavily cut landscapes that are often established from seed from trees by-passed by loggers. This theory can be tested by comparing remaining old-growth stands to those managed using traditional forestry and timber practices.

Old-growth forests can thus serve a source of biological restoration. Thousands of years of genetic heritage are embodied in these stands. Having survived under changing conditions, old-growth trees may contain genes that will enable them to survive global climate change, new diseases, and the uncertainties of the future better than their neighbors. These stands could be invaluable for the restoration of commercial forests, agricultural lands, and urban forests.

Our main objections center around loss of forest. Removing obstructive, diseased and type of tree seem an acceptable form of clean water/forest management.

Sugar maples are a shade tolerant species. Over the years we have observed that even though the forest was not thinned, it manages to take care of itself. Each tree is not a symmetrical, big box tree, but a much taller "forest" tree. Because of the height of the trees, the size and position of the forest relative to the creek, and the wandering nature of the creek, achieving sunlight without destruction of the forest seems improbable. Seasonally the only difference of sunlight occurs when the trees have foliage for ~5 months. A question might be asked: Can selective removal of trees exceed the clean water benefits of the forest?

http://www.dnr.state.mn.us/forests_types/oldgrowth/importance.html

Species benefits

- *More kinds of lichen and fungi species live in old-growth forests than younger ones.*
- *A larger amount of nitrogen-fixing lichens--organisms providing critical nutrients--is found in old-growth forests than younger ones.*
- *Many beetles live in old-growth than other forest types.*

- *Dragonflies are more common and in greater variety where streams and lakes are next to old-growth forests.*
- *Woodpeckers and 39 species of songbirds are more frequent in older forests than younger.*
- *Several kinds of hawks and owls prefer older forests.*
- *We do not know whether the forest's remaining trees have the same genes as those that disappeared, but some researchers suspect they do not. Dr. Lee Frelich at the University of Minnesota who studies old trees in areas that were never clear-cut, suspects that the old trees are genetically predisposed to grow taller than trees in surrounding heavily cut landscapes that are often established from seed from trees by-passed by loggers. This theory can be tested by comparing remaining old-growth stands to those managed using traditional forestry and timber practices.*
- *Old-growth forests can thus serve a source of biological restoration. Thousands of years of genetic heritage are embodied in these stands. Having survived under changing conditions, old-growth trees may contain genes that will enable them to survive global climate change, new diseases, and the uncertainties of the future better than their neighbors. These stands could be invaluable for the restoration of commercial forests, agricultural lands, and urban forests.*

When this project began, it didn't take into consideration the existence or clean water value of the "old growth" forest.

Thank you again for taking an interest in the project site.

John and Jeanne Starr
3450 Fernbrook Lane N
Plymouth, MN 55447

Please see from the 2017 Plans:

http://www.bassettcreekwmo.org/application/files/5714/9790/5222/Plymouth_Cr_Resto_Project_60_Plans_April_2017.pdf

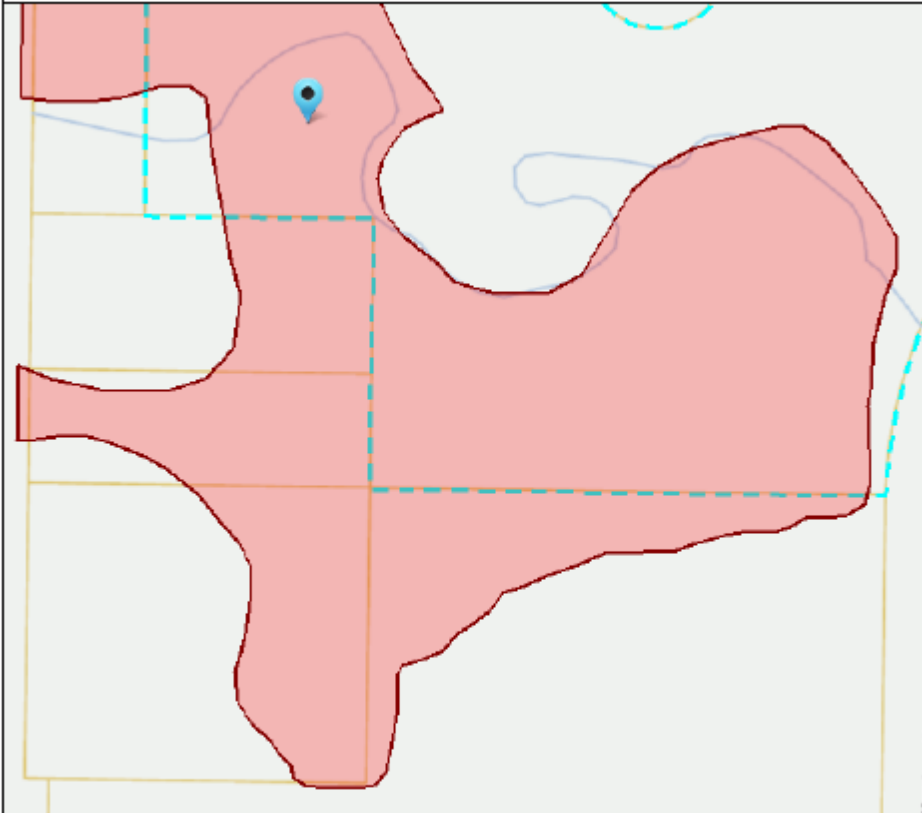
Map C-103 shows harvest area

Map ec104 extended seed and blanket areas requiring clear cut (as stated in meeting)



Hennepin County Natural Resources Map

Date: 7/27/2017



Results for point location (UTM 15N):

X, Y: 463717.999, 4985371.484

On Property:

PID: 2211822220030

Address: 40 ADDRESS

UNASSIGNED, PLYMOUTH,
00000

Owner Name: ST PAUL
PROPERTIES INC

Acres: 6.83

Land Cover

Type: Maple-basswood forest

Class: Forests

Invasive Species: Common and
glossy buckthorn, Garlic mustard

Natural Area Quality: Moderate
Quality

Acres: 4.05

Acres in Parcel: 2.28

PID: 2211822220030
Address: 40 ADDRESS UNASSIGNED,
PLYMOUTH
Owner Name: ST PAUL PROPERTIES INC
Acres: 6.83
Point Location (UTM 15N): 463717.999, 4985371.484

Comments:

1 inch = 100 feet



This data is furnished "AS IS" with no
representation as to completeness or accuracy;
(i) is furnished with no warranty of any kind; and
(ii) is not suitable for legal, engineering or
surveying purposes. Hennepin County shall not
be liable for any damage, injury or loss resulting
from this data.

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Ecologically Significant Area

Type: Maple-basswood forest

Invasive Species: Common and glossy
buckthorn, Garlic mustard

Natural Area Quality: Moderate Quality

Acres: 4.05

Acres in Parcel: 2.28

Soils

Name: Lester loam, 6 to 10 percent slopes,
moderately eroded

Soil Type: L22C2

Drainage Class: Well drained

Hydrologic Group: C

Fema Floodplains - 100 Year

Flood Zone: AE FLOODWAY

Watershed

Name: Bassett Creek

At each of the early Plymouth Creek Restoration Project public meetings, we mentioned that the Reach 3 property has a conservation agreement with the adjacent residential property owners. We thought there would be some action on that information. On June 27th, after a length of time without any response or action by the project, we emailed a copy of the agreement.

Quoting from our 7/27/17 email: "We are trying to support the project to get the task of cleaning up the creek accomplished. It seems that the clean water objective can be accomplished by avoiding violation of the Conservation Agreement." In a previous email, we referenced recent research about the significant benefit of old growth forests on water quality, including erosion and water table benefits. That research seems to suggest, everything considered, that this forest is better for water quality than an open field with full sun. **Can this project be modified to have the reach 3 area be a clean water section cleaned by nature at its best, a hardwood forest?**

This project is starting with the removal of a few healthy trees, but is open ended on future removals. The selected trees, despite some being right on the banks of the creek, might last many decades prior to falling or having any short term negative impact on water quality (if any). Removal of these trees will have little or no affect on sunlight reaching the creek area. The mature trees are 60 to 80 feet tall, with "reach" in any direction that can exceed 35 feet. We use the term reach, because tree growth seems to reach to the open areas of sunlight in these old growth forests.

In the 7/26/17 meeting at 35th Ave, John asked Derek Asche what maximum distance from the creek would be used to allow a tree to be taken. Derek's answer was 20 feet. If the goal is sunlight on the creek and creek banks, 20 feet is too small due to the height and reach / crown of the huge trees. Our decades of experience with these trees and forest is that shade tolerant plants do not grow here as expected. The understory maple and buckthorn seem to have the needed tolerance for growing under the shade canopy. If trees are removed to avoid shade on creek and banks, the needed "standoff distance" for trees is so large that destruction of this hardwood forest over time would be assured.

City of Plymouth and St. Paul Companies are allowing/promoting the removal of trees from the conservation area, which is a violation of the agreement that St. Paul Companies has with the residents. We believe that the City of Plymouth has the right to clear the creek including the banks. We do not believe they have rights beyond the banks they show in the project's 50 foot standoff. St. Paul Companies, in granting more rights beyond the creek banks, is in violation of the conservation agreement they are obligated to defend.

The statement in Derek's July 7th email: "The City is not party to the Conservation Easement (attached) as it is between you and the commercial property owner." is incorrect. The City was involved from the very development and beginnings of the conservation agreement concept, trying to protect the rights of both the residents and commercial property owner. This agreement was a result of a settlement in a zoning dispute, where it was being proposed that commercial property was going to be developed immediately adjacent to residential property. The settlement, finally giving fair treatment of the

residents, took over 6 months to achieve, with the City of Plymouth defining limits of its capabilities in these actions. At settlement, all 3 parties gained:

- Developer got the rezoning, constructed large business centers
 - Developer dedicated a small Conservation Area Buffer
- City acquired new large business centers and the associated increased property taxes
- Residents got a Conservation Area buffer backed by contract

We cannot allow removal of trees from the conservation area for the purpose of sunlight without being in violation of the agreement. St. Paul Companies has the same obligations.

A few **facts** about the project:

- The “property” does not fit within the City of Plymouth/St. Paul Companies properties plus easements.
- The statement, “The Property intersects parcels owned by the following entities: City of Plymouth and St. Paul Properties, Inc.”, is incomplete.

As stated above, if Reach 3 is cleared and maintained within the limits of the conservation agreement, we can support the project and would have no basis to object. As we have summarized, based on examples from the Hurricane Katrina research and 40 years of experience of living adjacent to the old growth forest, we believe forest protection has clean water benefits in this urban environment.

John & Jeanne Starr
3450 Fernbrook Ln N
Plymouth, MN 55447
(763) 559-0489

In addition: Our use of St. Paul Companies above refers to the past and current property owners. We realize that St. Paul Companies may no longer be the official property owner and manager, and that the company may have changed over this period of time due to mergers and/or acquisitions.

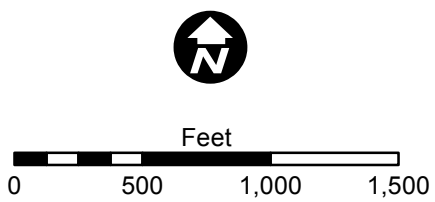
Item 5Ci.
BCWMC 8-17-17



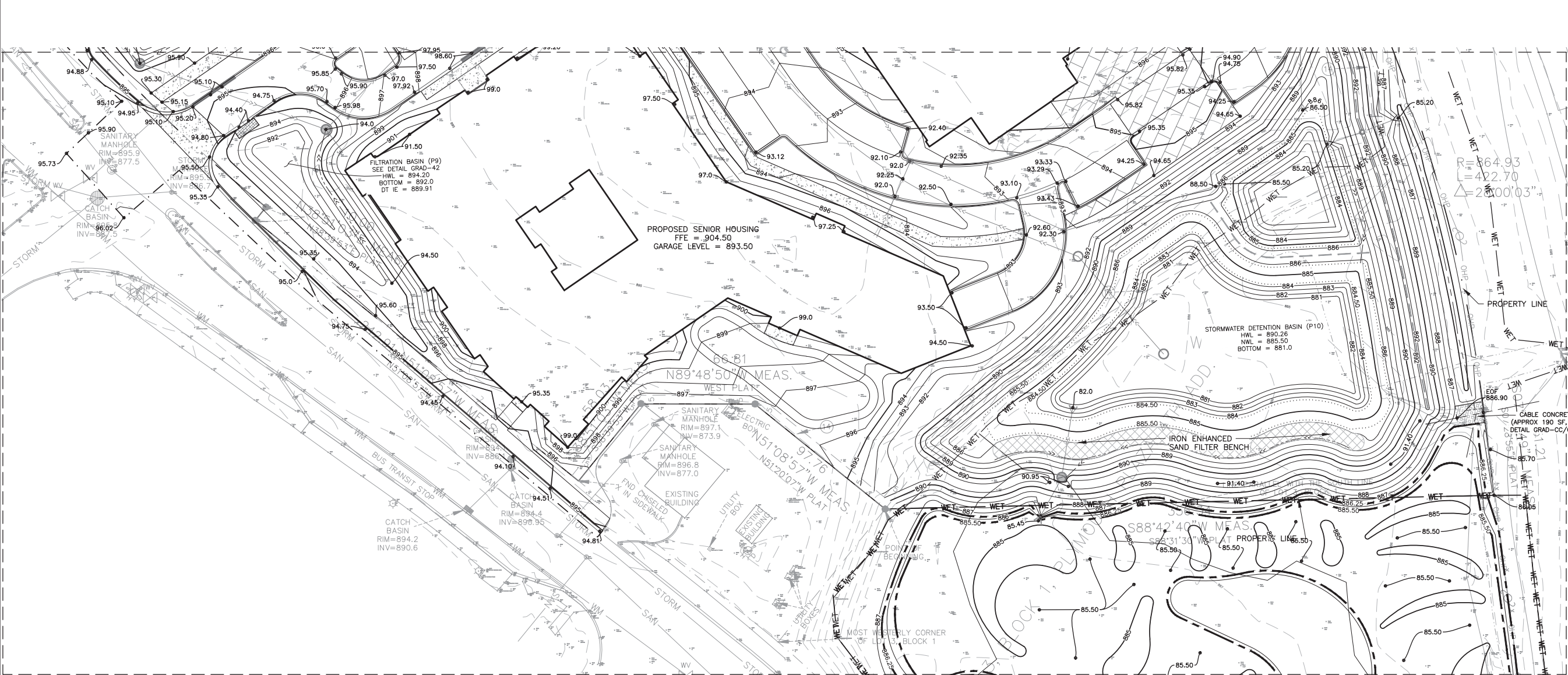
Barr Footer: ArcGIS 10.4.1, 2017-08-09 15:40 File: I:\Client\BassettCreek\GIS\Maps\Permits\Maps-2017\2017-CIP-Agora.mxd User: jpp

Imagery Source: Aerial Express (2009)

- Project Location
- Bassett Creek
- WMC Boundary
- Major Subwatershed
- Municipality
- Stream



LOCATION MAP
Agora Development and CIP Project (NL-2)
Rockford Road and Highway 169
Plymouth, MN



"AGORA"

PLYMOUTH MN

ROCK HILL MANAGEMENT



R=864.93
L=422.70
Δ=2'00"03"

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
Steven E. Ceballos
Typed or Printed Name
4/25/16 10/20/16
Date # Date

ORIGINAL ISSUE: 05/26/2017
REVISIONS
No. Description Date

160301
PROJECT NUMBER
SEG JH/RAT
DRAWN BY CHECKED BY
KEY PLAN

"AGORA"
SITE GRADING PLAN

C4.5

GRADING LEGEND:

- MANHOLE/CATCHBASIN/FLARED END
- MINOR CONTOUR ELEVATION
- MAJOR CONTOUR ELEVATION
- STORM SEWER
- FLOW LINES
- GRADE BREAK LINES
- TIP OUT GUTTER
- MATCH EXISTING
- SPOT ELEVATIONS
- PROPOSED FLOW ARROW

GENERAL GRADING AND DRAINAGE NOTES:

- ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN PLACE BEFORE BEGINNING SITE GRADING ACTIVITIES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING QUANTITIES OF CUT, FILL AND WASTE MATERIAL TO BE HANDLED, AND FOR THE AMOUNT OF GRADING TO BE DONE. ALL COSTS ASSOCIATED WITH IMPORTING SUITABLE MATERIAL, AND EXPORTING UNSUITABLE/EXCESS/WASTE MATERIAL SHALL BE INCLUDED IN THE BID PRICE.
- CONTRACTOR SHALL STRIP, STOCKPILE AND RE-SPREAD EXISTING ONSITE TOPSOIL, IF MATERIAL IS APPROVED BY THE LANDSCAPE ARCHITECT AND/OR SPECIFICATIONS. PROVIDE A UNIFORM THICKNESS OF 6" MINIMUM IN ALL DISTURBED AREAS TO BE LANDSCAPED.
- CONTRACTOR SHALL DISPOSE OF ANY EXCESS SOIL MATERIAL UNLESS OTHERWISE DIRECTED.
- REFER TO LANDSCAPE PLAN FOR PERMANENT TURF RESTORATION AND PLANTING INFORMATION.
- MAINTAIN TEMPORARY PROTECTION MEASURES DURING CONSTRUCTION ACTIVITIES. SEE SITE REMOVALS PLAN FOR ADDITIONAL INFORMATION. PROVIDE ADDITIONAL PROTECTION AS NECESSARY AS WORK PROGRESSES.
- SEE CIVIL SITE PLAN FOR SITE LAYOUT.
- PROPOSED CONTOURS AND SPOT ELEVATIONS ARE TO FINISHED SURFACE GRADE.
- SPOT ELEVATIONS SHOWN ADJACENT TO CURB REFER TO GUTTER/FLOW LINE. SPOT ELEVATION SHOWN FOR TOP OF CURB ARE LABELED WITH TC (TOP OF CURB). SPOT LABELED ME REFERS TO MATCH EXISTING GRADE, EOF REFERS TO EMERGENCY OVERFLOW ELEVATION, TW REFERS TO TOP OF WALL AND BW REFERS TO BOTTOM OF WALL.
- PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS AT ALL TIMES.
- NO GRADED SLOPES SHALL EXCEED 3:1 (HORIZONTAL TO VERTICAL) UNLESS OTHERWISE NOTED.
- UNIFORMLY GRADE AREAS WITHIN LIMITS OF GRADING AND PROVIDE A SMOOTH FINISHED SURFACE WITH UNIFORM SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE SHOWN OR BETWEEN SUCH POINTS AND EXISTING GRADES.
- LIMIT THE DISTURBED AREA AS MUCH AS POSSIBLE AND CONDUCT GRADING OPERATIONS IN A MANNER TO MINIMIZE THE POTENTIAL FOR EROSION.



Know what's below.
Call before you dig.

STATE LAW: 48 HOURS BEFORE EXCAVATING OR DEMOLISHING BUILDINGS, CALL 811 FOR FIELD LOCATION OF UNDERGROUND UTILITY LINES. THIS SERVICE LOCATES UTILITY OWNED LINES BUT NOT PRIVATE LINES.
THE LOCATIONS OF UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED. THE EXACT LOCATION OF ALL UTILITIES (PUBLIC AND PRIVATE) MUST BE DETERMINED BEFORE COMMENCING WORK.



"AGORA"

PLYMOUTH MN

ROCK HILL MANAGEMENT



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
Steven E. Cohn
Typed or Printed Name
475 10/20/16
License # Date

ORIGINAL ISSUE: 05/26/2017

REVISIONS
No. Description Date

160301
PROJECT NUMBER
SEG JH/RAT
DRAWN BY CHECKED BY
KEY PLAN

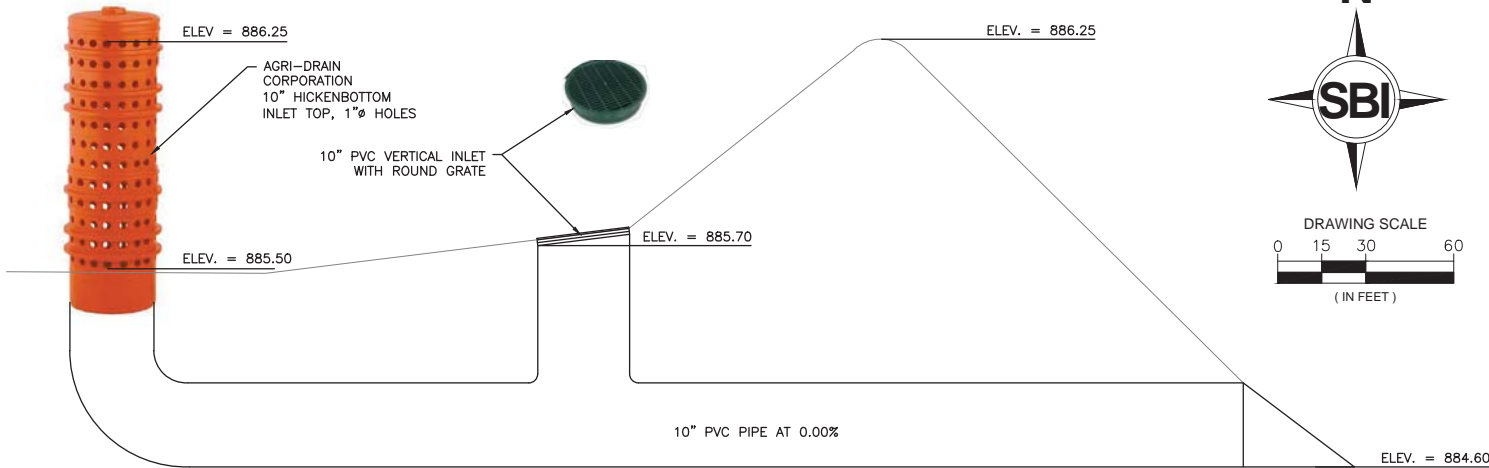
"AGORA"
SITE GRADING PLAN –
WETLAND
RESTORATION
C4.6

GRADING LEGEND:

- MANHOLE/CATCHBASIN/FLARED END
- MINOR CONTOUR ELEVATION
- MAJOR CONTOUR ELEVATION
- STORM SEWER
- FLOW LINES
- GRADE BREAK LINES
- TIP OUT GUTTER
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WRED-1 | EXTENDED DETENTION OUTLET SYSTEM
NOT TO SCALE



Know what's below.
Call before you dig.

STATE LAW: 48 HOURS BEFORE EXCAVATING OR DEMOLISHING BUILDINGS, CALL 811 FOR FIELD LOCATION OF UNDERGROUND UTILITY LINES. THIS SERVICE LOCATES UTILITY OWNED LINES BUT NOT PRIVATE LINES.
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Memorandum

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Co.
Subject: Item 5C. Consider Approval of 90% Plans for Four Seasons Mall Area Water Quality (Agora) Project (2013 CIP NL-2), Plymouth
BCWMC August 17, 2017 Meeting Agenda
Date: August 9, 2017
Project: 23270051 2017 623

5C. Consider Approval of 90% Plans Four Seasons Mall Area Water Quality (Agora) Project (2013 CIP NL-2), Plymouth

Summary

Proposed Work: Four Seasons Mall Area Water Quality (Agora) Project (2013 CIP NL-2)

Basis for Commission Review: 90% plan review

Change in Impervious Surface: N.A.

Recommendation:

- 1) Conditional approval of 90% drawings
- 2) Authorize BCWMC Engineer to provide administrative approval after final plans have been revised and comments have been sufficiently addressed.

The Four Seasons Mall Area Water Quality (Agora) Project (2013 CIP NL-2) is located in the Northwood Lake subwatershed, southwest of the TH 169 and Rockford Road interchange. The Agora CIP project will be funded by the BCWMC's ad valorem levy, already collected by Hennepin County. The Agora developer's consultant provided the 90% design CIP plans to the BCWMC for review and comment, as set forth in the BCWMC CIP project flow chart.

General Background & Comments

At their December 2016 meeting, the Commission took action to contribute up to \$830,000 of Four Seasons Mall Area Water Quality Treatment Project CIP funds for "above-and-beyond" stormwater management practices to be provided at the Agora development site (on the old Four Seasons Mall location) and the adjacent wetland to the south of the site. At that time, it was estimated that the proposed stormwater management practices would remove 109 pounds of phosphorus above-and-beyond the BCWMC's requirements.

At their January 2017 meeting, the Commission took action directing staff to enter into an agreement directly with the developer, Rock Hill Management. At their February meeting, the Commission approved an agreement with Rock Hill Management and a separate agreement with the City of Plymouth allowing the developer access to a city-owned parcel to construct a wetland restoration project and to ensure ongoing maintenance of the CIP project components. The agreements were executed in February. The

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agreement between BCWMC and Rock Hill Management requires that the CIP project remove at least 100 pounds of total phosphorus (TP) above-and-beyond the BCWMC requirements for the Agora development project.

Also at their February meeting, the Commission conditionally approved the Agora development project as part of the BCWMC project review program. Although the entire development site was reviewed separately, the stormwater best management practices (BMPs) on the development site that provide above-and-beyond treatment are part of the CIP project and are therefore part of this 90% CIP review.

90% Design Review Summary

The Agora CIP project is closely connected to the Agora development project. The Agora CIP project includes the wetland restoration south of the Agora development site and the BMPs on the development site that provide above-and-beyond treatment, most notably the stormwater pond with iron-enhanced filter bench at the south end of the Agora site (see attached plan sheets). The structural BMPs on the Agora development site include: two iron-enhanced sand filtration basins, two filtration basins, one infiltration basin with amended soils to peat layer, permeable pavers with subsurface storage, a wetland walk with plant uptake, and a stormwater pond with an iron-enhanced sand filter bench. The 90% design CIP plans, along with the Agora development plans indicate that the Agora CIP project will provide 100.76 pounds of annual TP removal above-and-beyond the TP removal required for the Agora development project. This meets the TP removal requirement of the agreement between BCWMC and Rock Hill Management.

Per the Commission Engineer's recommendation, the 90% design optimizes the wetland restoration and constructed stormwater pond designs by directing more flows through the stormwater pond, which takes advantage of the additional treatment provided by the pond (and the iron-enhanced sand filter), reduces the flowrates and velocities entering the wetland restoration, and directs more flows to the west end of the wetland restoration (prevents short-circuiting).

Under existing conditions, the wetland receives flows from the North Branch of Bassett Creek, the Four Seasons Mall site, Lancaster Lane, and the drainage area south and west of Lancaster Lane. Under proposed conditions, the stormwater runoff from the Agora development site will be initially routed to various structural BMPs on the Agora development site, then, along with low flows from the North Branch of Bassett Creek, stormwater will be routed into the proposed stormwater pond. The proposed stormwater pond will discharge to the wetland through an outlet control structure on the northeast side of the wetland. High flows from the North Branch of Bassett Creek will overtop a shallow berm, bypass the stormwater pond, and discharge into the wetland in the northeast corner. Stormwater runoff from Lancaster Lane and the drainage area south and west of Lancaster Lane will remain the same.

The TP removal for each BMP is summarized in Table 1 below:

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Table 1. BMP Total Phosphorus (TP) Removal Summary

BMP Name	TP Loading (lbs/yr)	TP Removal (lbs/yr)	Percent Removal¹
P1 Iron enhanced sand filter basin	29.46	12.91	44%
P2 Iron enhanced sand filter basin	5.50	3.78	69%
P4 Infiltration basin with amended soils to peat layer	3.81	3.51	92%
P5a Permeable pavers (west)	0.93	0.57	61%
P5b Underground storage beneath permeable pavers (west)	2.02	2.02	100%
P6a Permeable pavers (east)	0.97	0.65	67%
P6b Underground storage beneath permeable pavers (east)	1.68	1.68	100%
P7 Wetland walk with plant uptake	2.61	0.78	30%
P8 Filtration basin	0.96	0.66	69%
P9 Filtration basin	0.64	0.44	68%
P10b Constructed stormwater pond with sediment forebay and IESF bench:			
• onsite loading	9.89	7.42	75%
• off-site loading – from North Branch	99.11	42.48	43%
P10b Subtotal	109.00	49.90	46%
AGORA DEVELOPMENT SITE SUBTOTAL	157.59	76.90	49%
Wetland Restoration (remaining offsite loading – from North Branch)	56.64	2.08	4%
Wetland Restoration (offsite loading – from West)	125.76	47.80	38.0%
AGORA WETLAND RESTORATION SUBTOTAL	182.40	49.88	27%
TOTAL (AGORA DEVELOPMENT SITE AND WETLAND RESTORATION)	283.34	126.78	45%
Minus Agora Development treatment requirement		14.35	
Minus Agora wetland existing treatment		11.67 ²	
ABOVE-AND-BEYOND TREATMENT TOTAL	283.34	100.76	35%

¹Percent Removal is calculated as TP Removal divided by TP Loading, this calculation does not distinguish between onsite and offsite drainage.

²Monitoring data suggest the existing treatment provided by the wetland could be much lower.

The agreement between BCWMC and Rock Hill Management (RHM, Agora developer) requires that the developer develop and record “an operations and maintenance plan to provide for the ongoing maintenance of the stormwater improvements constructed on the Agora Parcel, which will include a chloride management plan.” The plan has not yet been submitted to the Commission Engineer for review.

According to the agreement between BCMWMC and RHM, the Commission will reimburse the developer for costs incurred to construct the Project, up to a maximum of \$848,148 (from BCWMC CIP funds). Table 2 below summarizes the estimated cost of the stormwater BMPs for the project. As shown in the table, the total estimated cost to construct all of the BMPs is \$1,610,735. Subtracting out from Table 2 the items not included in Table 1, the total estimated cost is \$1,545,735.

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Table 2. BMP Construction Cost Estimates

BMP Name	Cost Estimate
P1 Iron enhanced sand filter basin	\$90,000.00
P2 Iron enhanced sand filter basin	\$70,000.00
P3 Swale <i>(not included in Table 1 above)</i>	\$15,000.00
P4 Infiltration basin with amended soils to peat layer	\$0
P5 Permeable pavers with underground storage (west)	\$240,162.50
P6 Permeable pavers with underground storage (east)	\$240,162.50
P7 Wetland walk	\$336,910.00
P8 Filtration basin	\$29,250.00
P9 Filtration basin	\$29,250.00
P10a+b Sediment forebay for stormwater pond	\$50,000.00
P10c Constructed stormwater pond with IESF bench:	\$225,000.00
Wetland Restoration	\$235,000.00
Other pre-treatment items (sump manholes, pipes, SAFL Baffles, etc.) <i>(not included in Table 1 above)</i>	\$50,000.00
Total Estimated Costs	\$1,610,735.00

Recommendations

- A. Authorize BCWMC Engineer to provide administrative approval after final plans have been revised and comments have been sufficiently addressed.
- B. Conditional approval of 90% drawings based on the following comments:
 - 1) An operations and maintenance plan must be submitted that provides for the ongoing maintenance of the stormwater improvements constructed on the Agora Parcel, and includes a chloride management plan.
 - 2) The plans must show how flows entering the wetland restoration area from the North Branch of Bassett Creek and from the storm sewer flows from the west will be managed during construction.
 - 3) The developer must obtain all required local, state, and federal permits for the project.
 - 4) Outstanding comments from the BCWMC's June 9, 2017 letter regarding the Agora development site (BCWMC application review #2017-01) must be addressed prior to final BCWMC approval of the Agora CIP project plans. (Note: the Commission Engineer reviewed the floodplain information submitted as part of the 90% design review; any concerns will be addressed as part of the Agora development project re-submittal review).
 - 5) The final plans must be submitted to the BCWMC Engineer for review and approval after modifications have been completed.

August 9, 2017

Laura Jester
Administrator
Bassett Creek Watershed Management Commission
16145 Hillcrest Lane
Eden Prairie, MN 55346

RE: 50% Design Plans –Bassett Creek Main Stem Erosion Repair Project

Dear Ms. Jester,

Please find attached the 50% design plans and the engineering letter presenting information about the feasibility study, the design features of the project, and the approval/permitting needs for the Bassett Creek Main Stem Erosion Repair Project.

This project is being constructed by the city per the cooperative agreement between the City of Minneapolis and the BCWMC and the plans and specifications are subject to approval by the Commission. I request that this project be included with the Commission packet for the August 17th Regular meeting. City staff and the project design engineer will be at that meeting to present the project and answer any questions.

If you have any questions or need any additional information please contact me at 612-673-5284 or Elizabeth.stout@minneapolismn.gov.

Thank you.



Elizabeth Stout, PE, CFM
Water Resources Regulatory Coordinator
City of Minneapolis – Public Works

August 8, 2017

Elizabeth Stout, PE, CFM
Water Resources Regulatory Coordinator
City of Minneapolis – Public Works
105 S 5th Avenue, Suite 200
Minneapolis, MN 55401

Re: 50% Design Plans – Bassett Creek Main Stem Stabilization

Dear Ms. Stout:

Attached please find the 50% design plans for the Bassett Creek Main Stem Stabilization Project. The Bassett Creek Watershed Management Commission (BCWMC) is funding the Bassett Creek Main Stem Stabilization Project (BCWMC CIP 2017CR-M) through a 2017-2018 ad valorem levy (via Hennepin County). Per the cooperative agreement between the City of Minneapolis and the BCWMC, the city is to construct the project, and the plans and specifications are subject to approval by the Commission. Also, per the BCWMC's CIP project flow chart, the 50% design plans for this project must be submitted to the BCWMC for review and approval. If the attached 50% plans meet the city's approval, we recommend submitting them, along with this letter, to the BCWMC for inclusion in the meeting packet for their August 17 meeting. Barr staff will present the 50% plans to the BCWMC at the meeting and answer any questions from the BCWMC.

The remainder of this letter presents information about the feasibility study, the design features of the project, and approval/permitting needs.

Feasibility Study Summary and Selected Project

Bank erosion along the main stem of Bassett Creek in Minneapolis between Glenwood Avenue and Irving Avenue was evaluated in 2005 for an erosion inventory performed by Minneapolis Park and Recreation Board (MPRB). Portions of the reach were stabilized in a previous BCWMC CIP project (2012CR-M).

The BCWMC completed the *Feasibility Report for the Bassett Creek Main Stem Erosion Repair Project* (May 2016) to evaluate options for stabilizing additional eroding banks at sites along the Bassett Creek Main Stem between Cedar Lake Road and the entrances to the Old and New Bassett Creek tunnels as well as at the Fruen Mill site between Glenwood Avenue North and the Soo Line Railroad Bridge crossing. The study evaluated multiple stabilization options for 15 sites along Bassett Creek, including bioengineering and hard armoring techniques. The analysis considered various advantages and disadvantages of each option and included a detailed assessment of probable lifecycle costs. Based on the results of the analysis, the recommended stabilization measures for each site are summarized in Table 1.

Table 1 Bassett Creek Feasibility Study and 50% Design Summary

Site	Reach and Station (50% Design Plans)	Existing Conditions Description	Recommended Alternative (Feasibility Study)	Design Modifications (50% Design Plans)
1	Reach 2 1+60 to 4+00	Eroding pedestrian trail	Design trail for sub-mergence at high flows	Trail surface stabilization method TBD
2	Reach 2 0+10 to 5+60	Bank armored with concrete and stone	Grade stream bank and vegetate	None
3	Reach 2 4+00 to 5+00	Bank erosion adjacent to riprap	Extend riprap to tie into historic wall	None
4	Reach 2 6+00 to 7+30	Undercut concrete swale and downstream banks	Install riprap toe protection	None
5	Reach 2 6+00 to 7+30	High eroding bank	Install VRSS and riprap toe protection	None
6	Reach 1 2+10 to 7+50	Steep undercut and eroding bank	Install VRSS and riprap toe protection	None
7	Reach 1 2+00 to 7+50	Stream bed with imported materials	Install boulder or log vanes to create step-pools	Boulder cross vanes selected
8	Reach 1 2+10 to 10+60	Paved top of stream bank	Remove debris and stabilize top of bank	Willow live stakes selected for stabilization
9	Reach 1 8+10 to 11+00	Undercut outer stream bank	Install willow stakes and live fascines	None
10	Reach 1 8+60	Culvert perched at low flows	Shorten culvert and add riprap	None
11	Reach 1 15+40	Culvert perched at low flows	Add riprap at existing culvert	None
12	Reach 1 13+70 to 15+80	Eroding stream bank toe	Install riprap toe protection and cross vane	None
13	Reach 1 16+80 to 21+40	Undercut outer stream bank	Install willow stakes and live fascines	None
14	Reach 1 22+70 to 27+70	Bare lower stream banks	Improve vegetation without grading	Willow live stakes selected for stabilization
15	Not applicable	Overflow channel with woody debris	Clear trees and remove woody debris	None

Design Features – 50% Plans

The primary design features for the Project are shown in the 50% plans and summarized in Table 1. These features include:

- Restoring the vegetative buffer and improving stream bank vegetation, using a custom native seed mix that focuses on resilient species that will be more resistant to invasive species and the

industrial/urban environment; the seed mix specified includes species that are typically available and substitutions are possible in the event of seed unavailability.

- Installing a variety of stream stabilization measures, including riprap, live fascines, vegetated reinforced soil stabilization (VRSS), rock vanes, and riprap toe protection.
- Removing non-native channel bed material (brick and concrete block).

Hydraulic modeling of Bassett Creek for the project is ongoing, using the Bassett Creek model developed by the BCWMC, additional survey data collected by Barr, and hydraulic structure (bridge) information provided by the city. The model will be used to confirm stability of the project features and materials under various flow conditions and to verify that the project does not cause any increase in flood elevations as required by the BCWMC.

Design elements that are pending at the time of this 50% plan submittal include the following items, which will be finalized and added to the plans as necessary prior to the 90% submittal:

- Methods used to stabilize the foot path opposite the Fruen Mill site (Site 1 in Table 1), which will be determined in consultation with the city and MPRB and evaluated with the hydraulic model for the project.
- Sizing of rock materials used for riprap toe stabilization and boulder vanes, which will be evaluated with the hydraulic model for the project.
- Elevations and upstream/downstream stationing will be added to the plans for all proposed toe stabilization measures following evaluation with the hydraulic model.
- Protocols for addressing invasive species in water, soil, and woody material will be added to the plans.

Contaminated soils are known to be present within the project site and many of the adjacent properties. In conjunction with the feasibility study, the BCWMC completed a *Phase II Investigation Report* (April 2016). As noted in the 50% plans, all disturbed soils will be tested and managed in accordance with the Response Action Plan prepared for the project, and Barr staff will provide environmental oversight during project grading activities.

As stated in the feasibility study, the total reduction in pollutant loading as a result of the project is estimated as 48,300 pounds per year total suspended sediment and 27.8 pounds per year total phosphorus.

Approvals/Permit Requirements

In addition to BCWMC approval of the plans, other permits/approvals will be required for this project. Permit applications are being prepared for the following permit submittals:

- Minnesota Department of Natural Resources' (MDNR) public waters work permit
- USACE 404 permit, including a Section 106 review for historic and cultural resources
- Minnesota Pollution Control Agency (MPCA) National Pollutant Discharge Elimination System/State Disposal System Construction Stormwater (CSW) General Permit and Stormwater Pollution Prevention Plan (SWPPP), which is included in draft form in the 50% plans

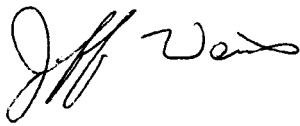
- City of Minneapolis Erosion and Sediment Control plan
- MPRB Construction Permit
- Burlington Northern Santa Fe (BNSF) Railroad access agreements (pending discussion with BNSF)

Recommendations

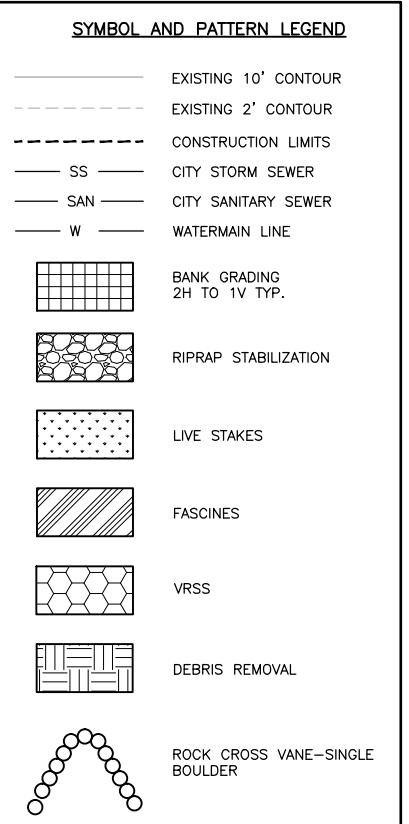
We recommend that the city request 1) BCWMC approval of the 50% drawings, and 2) BCWMC authorization for the city to proceed with final plans and contract documents, and permitting.

If you have any questions, please contact me at 952-832-2706 or jweiss@barr.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeff Weiss", with a stylized flourish at the end.

Jeff Weiss, P.E.
Senior Water Resources Engineer



										I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.										CLIENT 06/30/17 BID CONSTRUCTION										 Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435 Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com										Scale AS SHOWN Date 06/30/2017 Drawn EPF Checked AKH Designed BARR Approved JDW										CITY OF MINNEAPOLIS MINNEAPOLIS, MINNESOTA																				BASSETT CREEK MAIN STEM STABILIZATION MINNEAPOLIS, MN																				BARR PROJECT No. 23/27-1579.00 CLIENT PROJECT No.																			
A EPF PJH2 JDW 06/30/2017 ISSUED FOR REVIEW										PRINTED NAME JEFFREY D. WEISS										RELEASED TO/FOR										DATE RELEASED										PLAN AND PROFILE REACH 1 (STA. 21+00 TO 27+75)																				DWG. No. C-05										REV. No. A																																							
NO. BY CHK. APP. DATE REVISION DESCRIPTION										SIGNATURE DATE 06/30/2017 LICENSE # 48031										A B C 0 1 2 3																																																																																									

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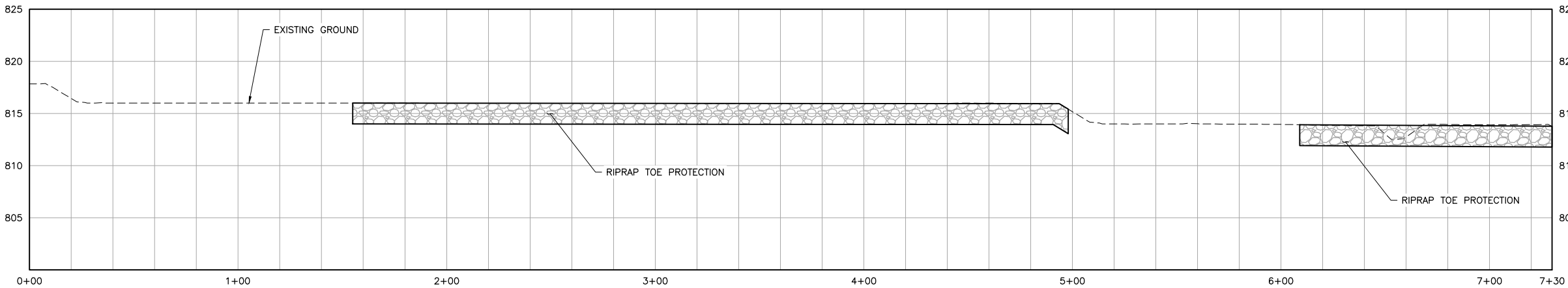
1. TOPOGRAPHIC SURVEY CONDUCTED BY BARR ENGINEERING IN MARCH 2017 IN HENNEPIN COUNTY FEET PROJECTION.
2. PARCELS AND STORM SEWER LINE WORK PROVIDED BY CITY OF MINNEAPOLIS.
3. CONTRACTOR IS RESPONSIBLE TO LOCATE AND FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO WORK.
4. ALL EXISTING ROADS, PARKING LOTS, TRAILS, FENCES, AND SIGNS SHALL BE PROTECTED DURING CONSTRUCTION.
5. CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL BMPs PRIOR TO COMMENCEMENT OF WORK.
6. ALL GROUND DISTURBANCE SHALL BE STABILIZED AND RESTORED WITH TOPSOIL AND SEED WITH EROSION CONTROL BLANKET.

SYMBOL AND PATTERN LEGEND

- EXISTING 10' CONTOUR
EXISTING 2' CONTOUR
CONSTRUCTION LIMITS
SS CITY STORM SEWER
SAN CITY SANITARY SEWER
W WATERMAIN LINE
- BANK GRADING
2H TO 1V TYP.
- RIPRAP STABILIZATION
- LIVE STAKES
- FASCINES
- VRSS
- DEBRIS REMOVAL
- ROCK CROSS VANE--SINGLE BOULDER

1 PLAN: REACH 2

0 30 60
SCALE IN FEET



2 PROFILE: REACH 2

0 30 60
HORIZONTAL SCALE IN FEET

0 6 12
VERTICAL SCALE IN FEET

50% PLAN SET
ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

				I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.		CLIENT BID CONSTRUCTION	8/30/17					BARR Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277	Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435 Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com	Scale AS SHOWN Date 06/30/2017 Drawn EPF Checked AKH Designed BARR Approved JDW	CITY OF MINNEAPOLIS MINNEAPOLIS, MINNESOTA	BASSETT CREEK MAIN STEM STABILIZATION MINNEAPOLIS, MN PLAN AND PROFILE REACH 2	BARR PROJECT No. 23/27-1579.00 CLIENT PROJECT No. -	
NO.	BY	CHK	APP	DATE	REVISION DESCRIPTION	PRINTED NAME JEFFREY D. WEISS SIGNATURE DATE 06/30/2017 LICENSE # 48031	RELEASED TO/FOR	A	B	C	0	1	2	3			DWG. No. C-06	REV. No. A

2018 Proposed Operating Budget

Bassett Creek Watershed Management Commission

Item 5E.
BCWMC 8-17-17

Item	2014 Budget	2014 Actual	2015 Budget	2015 Actual	2016 Budget	2016 Actual	2017 Budget	2018 Proposed Budget	See Notes
ENGINEERING & MONITORING									
Technical Services	120,000	109,391	120,000	116,972	120,000	112,502	125,000	125,000	
Development/Project Review s (funded by fees)	65,000	52,643	65,000	51,622	65,000	94,619	65,000	75,000	(A)
Non-fee and Preliminary Review s			15,000	53,686	15,000	35,253	15,000	10,000	(B)
Commission and TAC Meetings	16,000	15,984	14,500	11,525	13,000	11,808	14,000	12,000	(C)
Surveys and Studies	20,000	7,446	20,000	22,109	25,000	24,444	20,000	12,000	(D)
Water Quality / Monitoring	45,000	74,090	63,000	77,429	76,000	75,892	74,300	80,700	(E)
Shoreland Habitat Monitoring					6,000	2,468	-		
Water Quantity	11,000	12,100	11,500	9,115	11,500	8,731	11,500	6,300	(F)
Assistance on Erosion Control Inspections	1,000	225	1,000		1,000	-	1,000	1,000	(G)
Annual Flood Control Project Inspections	20,000	17,031	10,000	9,996	10,000	8,867	12,000	48,000	(H)
Municipal Plan Review	2,000	764	2,000		2,000	2,491	8,000	8,000	(I)
Watershed Outlet Monitoring Program	17,000	13,917	17,000	15,786	17,000	17,002	15,500	20,500	(J)
Annual XP-SWMM Model Updates/Reviews							10,000	10,000	(K)
APWAIS Work							35,000	32,000	(L)
Subtotal Engineering & Monitoring	\$317,000	\$303,591	\$339,000	\$368,240	\$361,500	\$394,077	\$406,300	\$440,500	
PLANNING									
Watershed-wide XP-SWMM Model (I & II)	0	0	-		-	-	-		
Watershed-wide P8 Water Quality Model	0	0	-		-	-	-		
Next Generation Plan Development	40,000	55,198	30,000	28,277	-	-	-		
Subtotal Planning	\$40,000	\$55,198	\$30,000	\$28,277	\$0	\$0	\$0	\$0	\$0
ADMINISTRATION									
Administrator	60,000	53,917	62,000	59,395	62,000	59,033	67,200	67,200	(M)
Legal	18,500	22,269	18,500	12,969	18,500	15,470	18,500	17,000	(N)
Financial Management	3,045	3,045	3,200	3,200	3,200	3,277	3,200	3,200	
Audit, Insurance & Bond	15,500	12,476	15,500	13,181	15,500	14,606	15,500	15,500	
Digitize Historic Paper Files/Data			2,500	-	5,000	2,167	-		
Meeting Catering Expenses	3,000	1,836	2,500	1,564	2,200	1,572	2,000	1,600	(O)
Administrative Services	35,800	22,763	32,000	29,843	25,000	11,583	18,000	15,000	(P)
Subtotal Administration	\$135,845	\$116,306	\$136,200	\$120,152	\$131,400	\$107,708	\$124,400	\$119,500	
OUTREACH & EDUCATION									
Publications / Annual Report	2,000	2,272	4,000	1,430	2,500	1,246	2,500	1,500	(Q)
Website	2,000	0	12,000	11,802	3,500	2,275	4,400	4,200	(R)
Watershed Education Partnerships	15,500	11,100	15,500	10,700	15,500	9,550	15,500	13,850	(S)
Education and Public Outreach	15,000	20,292	17,000	12,830	22,500	25,710	20,000	22,000	(T)
Public Communications	3,000	1,198	3,000	2,270	2,500	1,128	2,500	2,500	
Subtotal Outreach & Education	\$37,500	\$34,862	\$51,500	\$39,032	\$46,500	\$39,909	\$44,900	\$44,050	
MAINTENANCE FUNDS									
Erosion/Sediment (Channel Maintenance)	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	(U)
Long-Term Maint. (Flood Control Project)	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	(V)
Subtotal Maintenance Funds	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	
TMDL WORK									
TMDL Implementation Reporting	20,000	20,000	20,000	15,881	20,000	18,950	20,000	10,000	(W)
Subtotal TMDL Work	\$20,000	\$20,000	\$20,000	\$15,881	\$20,000	\$20,000	\$20,000	\$10,000	
GRAND TOTAL	\$600,345	\$579,957	\$626,700	\$621,582	\$609,400	\$611,694	\$645,600	\$664,050	

NOTES

(A) Majority of costs are covered by review fees. 2018 budget assumes 40 submittals at average cost of \$2,000 - \$2,500 per review, which is based on 2014 -2016 trend of increasing number of submittals and increased number of complex reviews (including MIDS)

(B) Assumes reduction in non-fee reviews in 2018 because reviews for light rail projects should be completed. This was a new line item in 2015 used to cover reviews for which either we do not receive an application fee or it's too early in the process for us to have received an application fee (such as the Blue Line LRT, SWLRT, MnDOT projects, etc.). Through agreements with Met Council, some of these costs were recovered in 2015, 2016 and 2017.

(C) Assumes actual meeting attendance is similar to 2015 and 2016. Engineer attendance at BCWMC meetings and TAC meetings (and Plan Steering Cmte Meetings thru 2015). 2010- 2013 estimates based on 18 meetings. 2014 estimate based on 30 meetings. 2015 estimate based on 24 meetings. 2016 estimated based on 18 meetings (12 BCWMC and 5 TAC). 2017 budget increased to allow for additional BCWMC Engineer staff to attend Commission/TAC meetings (total of 3 assumed).

(D) For Commission-directed surveys and studies - e.g., past work has included watershed tours, Medicine Lake outlet work, Flood Control Project Maintenance and Responsibilities, Sweeney Lake sediment monitoring. Budget reduced from previous years for overall budget savings.

(E) Routine lake and new stream monitoring. See details on next page.

(F) Water Quality (lake level) monitoring budget lowered: will result in fewer data points.

(G) After recommendations from the TAC and Budget Committee, the Commission's ended the erosion and sediment control inspection program (Watershed Inspection) in 2014 due to duplication with activities required by the member cities. Some budget remains here to provide, as requested by the Commission, some oversight of city inspection activities (reports of inspections are available from each city). May require additional budget if BCWMC Engineer is to inspect MnDOT and Hennepin County projects.

(H) Includes the 2nd Street (deep) tunnel inspection, following NAASCO protocol (\$36,000), and the usual annual inspection (\$12,000). The cost of tunnel inspection has significantly increased over the last 20 years due to developing industry standards and safety considerations and confined space OSHA requirements. NAASCO is essentially a system of identifying tunnel defects using consistent and industry standard terminology. The City of Minneapolis requires NAASCO coding for consistency with all of its tunnel systems. The alternative would be a standard walkthrough to look for any urgent issues such as large voids that require immediate attention – this is limited to one day in the tunnel to reduce costs. The 2008 deep tunnel inspection was much less expensive to the BCWMC because the City performed all of the surface attendant duties and provided the crane and man basket access and the ladder access for the inspection and emergency egress. The budget includes \$10,000 for subcontractors for crane, operator and man basket and for the confined space emergency extraction team. Although the city funded a portion of the BCWMC double box culvert inspection in 2014 to ensure the project was performed according to NAASCO, they did so because the BCWMC budgets were already set. The BCWMC Watershed Plan and newly adopted policies for long term maintenance of the Flood Control Project indicates that inspections are the responsibility of the BCWMC. The Commission Engineer recommends the BCWMC perform a NAASCO inspection in 2018. The budget also include a GIS interface that helps display results. 2014 budget included inspection of double box culvert (performed once every 5 years). 2016 and 2015 budgets included typical annual inspection. 2017 budget included annual inspection + follow-up with cities, stemming from Flood Control Project Maintenance and Responsibilities-related effort.

NOTES CONTINUED

(I) 2018 budget assumed same as 2017, as some reviews will likely come before the Commission in 2018. 2017 budget assumes review of updated/revised municipal local water plans/official controls likely to come before Commission in 2017. Assume 4 cities at \$2,000 each. This task has also included review of adjacent WMO plan amendments, and review of city ordinances.

(J) Monitoring at the Watershed Outlet Monitoring Program site in Minneapolis through an agreement with Met Council. Commission is reimbursed \$5,000 from Met Council. Met Council pays for equipment, maintenance, power, cell service, and lab analyses. Monitoring protocol changed in 2017 with collection of bi-monthly samples (up from once-per-month sampling). \$20,500 includes \$16,000 for Wenck or similar contractor + \$4,500 for Barr's data management and analyses

(K) Make updates to XP-SWMM model, coordinate with P8 model updates, assist cities with model use.

(L) Funds to implement recommendations of Aquatic Plant Management/Aquatic Invasive Species Committee likely including curly-leaf pondweed control in Medicine Lake.

(M) No increase in Administrator hourly rate. \$70/hour for average of 80 hours per month.

(N) Slight budget decrease over previous years to be more in line with actual spending in last few years. Hourly rate will increase from \$199/hr in 2017 to \$201/hr in 2018.

(O) Budget decrease to be in line with current expenses. Catering expenses for meetings = coffee, juice, rolls, fruit

(P) Recording Secretary \$42/hr rate * 21 hrs/mo (6.5 hrs for minutes, 14.5 for social media, writing articles, coordinating with city communication staff) + \$370 annual mileage + \$250/mo meeting packet printing/mailling + \$546 contingency

(Q) Budget decrease to be more in line with actual expenses in last few years. Costs associated with Commission Engineer assistance with annual report

(R) Based on 2017-2019 agreement with HDR for website hosting and maintenance activities.

(S) Includes CAMP (\$5,000), River Watch (\$2,000), Metro Watershed Partners (\$3,500), Metro Blooms (\$3,000), Children's Water Festival (\$350). Does not allow for additional partnerships or increases in contributions.

(T) Includes funding for West Metro Water Alliance at \$13,000 plus funding for other educational supplies and materials including educational signage, display materials, Commissioner training, etc.

(U) Will be transferred to Channel Maintenance Fund

(V) Will be transferred to Long-Term Maintenance Fund

(W) Budget reduced from previous years for overall budget savings. Task includes reporting on TMDL implementation and updating P8 model to include new BMPs.

Water Quality Monitoring Tasks and Budget

Task	Proposed Budget
<p>Routine Lake Monitoring on Parkers and Westwood Lakes: Detailed lake monitoring includes monitoring one location on each lake on six occasions for selected parameters (total phosphorus, soluble reactive phosphorus, total nitrogen, pH and chlorophyll a), sample analysis, phytoplankton and zooplankton collection and analysis, an aquatic plant survey (two occasions), preparation of a presentation and preparation of a final report (following template of 2016 reports). Estimated amount includes field assistance from St. Louis Park/Westwood Nature Center staff and Three Rivers Park District staff. Additionally, the Minneapolis Park and Rec Board will monitor Wirth Lake in 2018 using similar methods and collecting the same data as BCWMC methods.</p>	\$34,000
<p>First of 2 yrs of stream water quality/quantity monitoring designed to approximate the Met Council's WOMP station. Originally this was slated for all three stations along the creek (the Sweeney Branch, North Branch and Plymouth Creek) to be monitored in the same year. To reduce costs, committee and staff recommend spreading out monitoring over 6 years (2 years/site * 3 sites). Recommendation to monitor North Branch in 2018/2019. Includes 16 grab samples (although Met Council recommends 24 grab samples), 16 event samples, initial site evaluation, design, and equipment installation, labor and laboratory costs. Equipment would be purchased in 2017 with "Surveys and Studies" budget.</p>	\$19,400
<p>Biotic index monitoring to correspond with stream water quality monitoring. Includes macroinvertebrate monitoring and habitat survey, macroinvertebrate analyses (microscopic identification/ enumeration), computation of HBI and M-IBI, trend analyses, data summary/analyses, and preparation of report and presentation for BCWMC Meeting. Proposed for the North Branch of Bassett Creek site + 2 sites on the Main Stem of Bassett Creek. A 3rd Main Stem site (at the WOMP station) will be monitored for biota by the Met Council.</p>	\$17,300
<p>General water quality: Potential items/issues include additions to the MPCA's impaired waters list (perhaps including Fish IBI and Plant IBI listings), new AIS species, and possible coordination with the MPCA regarding their upcoming 2020 TMDL-related efforts.</p>	\$10,000
Total	\$80,700

2017 Financial Information					
Fund Balance as of January 31, 2017 (audited)		\$		350,939	
Expected income from assessments in 2017	+	\$		500,000	
Expected interest income in 2017	+	\$		-	
Expected income from project review fees	+	\$		60,000	
Expected income from CIP Administrative Funds	+	\$		26,072	
Expected transfer from Long-term Maint Fund for Flood Control Project	+	\$		12,000	
Expected income from WOMP reimbursement	+	\$		5,000	
Expected income from reimbursements from 2016/2017 work ¹	+	\$		14,000	
Estimated funds available for fiscal year 2017		\$		968,011	
Estimated expenditures for fiscal year 2017	-	\$		645,600	
Estimated fund balance as of January 31, 2018		\$		322,411	
¹ Already invoiced for work on Blue Line LRT + work expected this year					
2018 Revenues					
Expected Income					
Proposed Assessments to cities	+	\$		515,050	
Use of fund balance	+	\$		14,000	
CIP Administrative Funds (2.0% of est. requested levy of \$1.35M)	+	\$		27,000	
Project review fees	+	\$		55,000	
Transfer from Long-term Maint Fund for Flood Control Proj Inspections ²	+	\$		48,000	
WOMP reimbursement	+	\$		5,000	
Expected reimbursement for Blue Line LRT work	+	\$		-	
Interest income in 2017	+	\$		-	
		\$		664,050	
Expected Expenses					
Total operating budget		\$		664,050	
Fund Balance Details					
Est. Beginning Fund Balance (Jan 31, 2018)		\$		322,411	
Use of Fund Balance (see income above)	-	\$		14,000	
Est. Remaining Fund Balance (Jan 31, 2019)		\$		308,411	
² Requires reducing Long Term Flood Control Project Amount by \$23,000.					

**Bassett Creek Watershed Management Commission
2018 Proposed Assessments**

Community	For Taxes Payable in 2017	2017 Percent	Current Area Watershed	Percent	Average	2012 Assessment	2013 Assessment	2014 Assessment	2015 Assessment	2016 Assessment	2017 Assessment	2018 Proposed Assessment (3% increase from 2017)
	Net Tax Capacity	of Valuation	in Acres	of Area	Percent	\$461,045	\$515,016	\$490,345	\$490,345	\$490,345	\$500,000	\$515,050
Crystal	\$7,808,179	5.36	1,264	5.09	5.22	\$24,941	\$27,424	\$25,504	\$25,868	\$25,771	\$26,118	\$26,904
Golden Valley	\$37,384,452	25.66	6,615	26.63	26.14	\$115,080	\$129,126	\$123,033	\$121,964	\$127,675	\$130,715	\$134,649
Medicine Lake	\$972,923	0.67	199	0.80	0.73	\$3,484	\$3,909	\$3,479	\$3,543	\$3,600	\$3,672	\$3,783
Minneapolis	\$9,756,021	6.70	1,690	6.80	6.75	\$32,661	\$35,236	\$32,953	\$33,235	\$32,885	\$33,747	\$34,763
Minnetonka	\$9,373,403	6.43	1,108	4.46	5.45	\$24,920	\$28,464	\$27,402	\$28,121	\$27,536	\$27,234	\$28,053
New Hope	\$7,785,981	5.34	1,252	5.04	5.19	\$25,533	\$27,648	\$26,479	\$25,681	\$25,627	\$25,959	\$26,740
Plymouth	\$62,940,854	43.20	11,618	46.77	44.98	\$209,101	\$235,310	\$224,959	\$225,159	\$220,974	\$224,912	\$231,682
Robbinsdale	\$2,609,710	1.79	345	1.39	1.59	\$8,022	\$8,479	\$7,743	\$7,587	\$7,843	\$7,950	\$8,189
St. Louis Park	\$7,067,617	4.85	752	3.03	3.94	\$17,303	\$19,420	\$18,792	\$19,184	\$18,433	\$19,695	\$20,287
TOTAL	\$145,699,140	100.00	24,843	100.00	100.00	\$461,045	\$515,045	\$490,345	\$490,345	\$490,345	\$500,000	\$515,050



Bassett Creek Watershed Management Comm

Item 6A.
BCWMC 8-17-17

MEMO

Date: August 10, 2017
From: Laura Jester, Administrator
To: BCWMC Commissioners
RE: **Administrator's Report**

Aside from this month's agenda items, the Commission Engineers, city staff, committee members, and I continue to work on the following Commission projects and issues.

CIP Projects (more resources at <http://www.bassettcreekwmo.org/projects.>)

2017 Plymouth Creek Restoration Project, Annapolis Lane to 2,500 feet Upstream (2017CR-P): (See Item 5B) The final feasibility study and project information are available online at <http://www.bassettcreekwmo.org/index.php?cID=284>. The BCWMC recently executed agreements with the BWSR for a \$400,000 Clean Water Fund grant and with Hennepin County for a \$50,000 Opportunity Grant. A subgrant agreement with the City was recently executed. Project design is underway through a contract between the City and Wenck Associates. The City will soon apply for permits from the U.S. Army Corps of Engineers and the Department of Natural Resources. Ninety-percent designs were reviewed and discussed at the June 2017 meeting, were revised per public comment (including discussions during an on-site meeting with landowners June 26, 2017). Revised 90% plans will be presented at this meeting. The project is slated for construction next winter.

2017 Main Stem Bassett Creek Streambank Erosion Repair Project (2017CR-M): (See Item 5D) The feasibility study for this project was approved at the April Commission meeting and the final document is available on the project page at: <http://www.bassettcreekwmo.org/index.php?cID=281>. A Response Action Plan to address contaminated soils in the project area was completed by Barr Engineering with funding from Hennepin County and was reviewed and approved by the MPCA. At the September 2016 meeting, the Commission held a public hearing on the project and adopted a resolution ordering the project and certifying a final levy to Hennepin County. Also at that meeting, the Commission entered an agreement with the City of Minneapolis to design and construct the project. The Commission was awarded an Environmental Response Fund grant from Hennepin County for \$150,300 and a grant agreement is in the process of being signed by the county. A subgrant agreement with the City will be developed. The City hired Barr Engineering to design and construct the project. Fifty-percent designs will be presented at this meeting.

2013 Four Season Area Water Quality Project/Agora Development (NL-2): (See Item 5C) At their meeting in December 2016, the Commission took action to contribute up to \$830,000 of Four Seasons CIP funds for stormwater management at the Agora development on the old Four Seasons Mall location. At their February 2017 meeting the Commission approved an agreement with Rock Hill Management and an agreement with the City of Plymouth allowing the developer access to a city-owned parcel to construct a wetland restoration project and to ensure ongoing maintenance of the CIP project components. The developer submitted plans for the wetland restoration portion of the project to the Commission Engineer in late May. The Commission Engineer and the developer's consultant, Solution Blue, worked through several details. 90% plans will be presented at this meeting. At this time, the development parcel has not yet been sold to Rock Hill Management.

2014 Schaper Pond Diversion Project, Golden Valley (SL-3): Last August, the Commission Engineer reported that the structure had been vandalized and repair was needed. The City executed a change order with Sunram

Construction (the contractor for the project) to add weights to some of the baffle anchors; which was accomplished this spring. Unfortunately, city staff recently noticed that another anchor had pulled out. This was an anchor that had not been given the extra weights this spring. Based on discussions with the Commission Engineer, the City is recommending adding weights to all remaining anchors and reinstalling the anchor that has pulled out. The city is waiting to hear from the Sunram Construction about a time line to complete the work. Depending on the response, the City may decide to complete the work with its own staff. The contractor has some final vegetation establishment to complete before the contract can be closed. Erosion control will be removed once the final stabilization is completed. This summer, the Commission Engineer is monitoring the effectiveness of the pond.

2014 Twin Lake In-lake Alum Treatment, Golden Valley (TW-2): (No update since January.) At their March 2015 meeting, the Commission approved the project specifications and directed the city to finalize specifications and solicit bids for the project. The contract was awarded to HAB Aquatic Solutions. The alum treatment spanned two days: May 18- 19, 2015 with 15,070 gallons being applied. Water temperatures and water pH stayed within the desired ranges for the treatment. Early transparency data from before and after the treatment indicates a change in Secchi depth from 1.2 meters before the treatment to 4.8 meters on May 20th. There were no complaints or comments from residents during or since the treatment. Water monitoring continues to determine if and when a second alum treatment is necessary. Lake monitoring this summer will help determine if a second dose of alum is needed to retain water quality.

2015 Main Stem Restoration Project 10th Avenue to Duluth Street, Golden Valley (2015CR): (No update since June.) The restoration project is being constructed in two phases, each under separate contract. Phase one included stream bank shaping, placement of field stone rock and 12-inch bio-logs, and repair of storm sewer outlets. The first phase of the project began in November 2015 and was finished in June 2016. Turf establishment and minor restoration repairs in Phase 1 were accepted in late October 2016. Repairs to some areas where flooding impacted rocks or biologs were completed and accepted in mid-December 2016. Phase 1 of the construction project has entered the warranty period.

Phase 2 of the project includes the establishment of native vegetation along the stream, including grasses, wildflowers, shrubs, live stakes and fascines, and cordgrass plugs. The second phase of the contract, Native Buffer Vegetation installation is underway. The project has been seeded and stabilized and maintenance mowing and spot treatments have been completed. Applied Ecological Services (AES) installed live stakes and fascines this spring and completed the tree and shrub planting along the restoration project. AES will continue to monitor and maintain the native vegetation through 2018. It is anticipated that the total contract amount for both Phase one and Phase two will be within the Watershed's overall project budget.

2016 Northwood Lake Improvement Project, New Hope (NL-1): Northwood Lake Improvement Project is nearing completion with all major work complete. The storm water tank was fully operational in June and will be irrigating the fields for the summer. The educational sign is being designed and will be installed soon. The 2nd rain garden was planted with the fescue grass in June.

I recently submitted grant audit materials to MPCA which were approved. A grand opening of the park was held on May 15th. Friends of Northwood Lake disseminated water quality educational materials, including BCWMC materials. A semi-annual grant report was submitted to the MPCA last month.

Photos and construction progress are available at: <http://www.ci.new-hope.mn.us/departments/publicworks/2016infrastructure.shtml>

2016 Honeywell Pond Expansion Project, Golden Valley (BC-4): (No update since June.) In spring 2016, the Honeywell Pond Project was bid as part of the City of Golden Valley and Hennepin County's Douglas Drive (CSAH

102) Reconstruction Project. The reconstruction project began in June 2016. Excavation of the pond basin is complete and the disturbed soils around the pond were temporarily stabilized. The force main work was recently completed. WSB and Park Construction are finalizing the shop drawings for the lift station. The connection to Sandburg Athletic Complex was bid as part of the Douglas Drive Landscaping Project. Hoffman & McNamara are in the process of finalizing the irrigation system and will make the connection at Honeywell Pond. Final stabilization of the Pond will be completed this fall.

2018 Bassett Creek Park Pond & Winnetka Pond Dredging, Crystal (BCP-2): The final feasibility study for this project was approved at the May 2017 meeting and is now available on the project page online at <http://www.bassettcreekwmo.org/index.php?cid=403>. Hennepin County Commissioners recently approved the 2018 maximum levy request for this project. At its September 2017 meeting, the Commission will hold a public hearing on the project and consider a resolution to order the project and enter an agreement for design and construction with the City of Crystal.

Other Work

Administrative, Financial, CIP Projects:

- Completed interim grant report and invoice for MPCA for Northwood Lake Improvement Project
- Corresponded with landowners, Plymouth staff, and Hennepin County staff re: Plymouth Creek Restoration Project
- Reviewed and revised Watershed Plan to incorporate recent plan amendment, floodplain elevation changes, and linear project requirement changes
- Distributed public hearing notice to city clerks

Education and AIS:

- Developed and sent email to Commissioners with upcoming events and opportunities
- Coordinated with Dawn Pape regarding newly approved educational activities
- Coordinated with AIS Consulting Services to order 50 zebra mussel sampler plates
- Discussed AIS funding with Hennepin County staff; requested and received reimbursement to BCWMC for \$600 in zebra mussel sampler plates
- Developed and submitted grant report and invoice to Met Council for Harrison Neighborhood Project
- Attended WMWA monthly meeting



WANT TO **ATTRACT GREAT CLIENTS** *and*

STAND OUT IN THE FIELD WITH INDUSTRY RECOGNIZED CERTIFICATION?

CONCERNED ABOUT SAFETY, LIABILITY *and* **PROTECTING DRINKING WATER?**

Attend a **FREE WORKSHOP** to **EARN INDUSTRY RECOGNIZED CERTIFICATION:** "Voluntary Environmental Certification Level 1: Snow and Ice Control Best Practices"

WHO SHOULD COME

- Winter maintenance contractors
- Park, county & city maintenance staff
- Property owners and managers
e.g. Commercial, retail, school districts, faith-based organizations...

PARTICIPANTS WILL ...

- Learn which products to use based on temperature and weather conditions for max. removal/safety and min. costs.
- Receive a "Winter Parking Lot and Sidewalk Maintenance Manual"
- Earn industry recognized "Voluntary Environmental Certification Level 1: Snow and Ice Control Best Practices Certification"
- Enjoy a **free continental breakfast and lunch**

REGISTER TODAY!
SPACE IS LIMITED. 

FRIDAY, OCTOBER 13, 2017
8:30 am – 1:30 pm

CRYSTAL COMMUNITY CENTER
in the Activity Room
4800 Douglas Dr N,
Crystal, MN 55429