

Memorandum

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Co.
Subject: Item 4F – Three Rivers Park District Bassett Creek Regional Trail– New Hope
BCWMC March 17, 2016 Meeting Agenda
Date: March 9, 2016
Project: 23270051 2016 2070

4F Three Rivers Park District Bassett Creek Regional Trail – Crystal/New Hope

Summary:

Proposed Work: Improvements to existing multi-use trail including pavement repair and replacement, painting, and curb and gutter repair.

Basis for Commission Review: Work within the floodplain, and road or other linear project disturbing more than five acres of land.

Impervious Surface Area: Decrease approximately 4,800 square feet (0.11 acres)

Recommendation: Conditional approval

General Background & Comments

At its August 18, 2011 meeting, the BCWMC reviewed the Draft Bassett Creek Regional Trail Master Plan provided by the Three Rivers Parks District (TRPD). The Executive Summary of draft Master Plan illustrates segments A, B, C, D, and E of the proposed regional trail, extending from French Regional Park through the Cities of Plymouth, New Hope, Crystal, Golden Valley to the Minneapolis Grand Rounds at Theodore Wirth Park. Attached for reference is the Executive Summary from the Master Plan and the BCWMC's August 19, 2011 letter regarding its review.

This phase of the proposed project includes construction of and improvements to 2.8 miles of off-road, multi-use trail from Boone Avenue in New Hope to Welcome Avenue in Crystal, representing segments C, D and E as shown in the referenced Executive Summary. The general layout consists of a 10-foot wide paved trail, which is separated from vehicular traffic and which provides a minimum 2-foot wide boulevard between new trail sections and existing roads. The project will relocate and renovate sections of curb and gutter, storm sewer, and utilities to accommodate construction of the trail. Other trail work includes accessibility improvements at intersections, signing, and striping.

The project is in the Bassett Creek Park Pond subwatershed and includes grading of 7.14 acres as part of the project. The proposed project results in a decrease of approximately 4,800 square feet (0.11 acres) of impervious surface, from 4.29 acres under existing conditions to 4.18 acres of impervious surface under proposed conditions. In areas where the existing trail is being improved or pavements repaired, there is no proposed change in impervious surface area. The proposed decrease in impervious surface area is being achieved by narrowing certain roadways, including sections of Boone Avenue, Nevada Avenue, 32nd

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Co.
Subject: Item 4F – 2016 Three Rivers Park District Bassett Creek Regional Trail – New Hope and Crystal
Date: March 9, 2016
Page: 2
Project: 23270051 2016 2070

Avenue North, and 36th Avenue North, in order to accommodate the trail and accompanying vegetated boulevards.

Floodplain

Construction of the proposed multi-use public trail will include work within the floodplain of Bassett Creek. The trail will cross the North Branch of Bassett Creek three times. The locations and flood elevations of these crossings are listed in the table below, ordered from upstream to downstream.

Crossing Name @ Bassett Creek North Branch	City	100 Year Flood Elevation (feet)¹
Boone Avenue (US)	New Hope	889.5
Boone Avenue (DS)	New Hope	889.3
Winnetka Avenue (US)	New Hope	889
Winnetka Avenue (DS)	Crystal	888
32nd Avenue (US)	Crystal	854
32nd Avenue (DS)	Crystal	849.6

¹From Table 2-9 in the Bassett Creek Watershed Management Commission 2015 – 2025 Watershed Management Plan. The plans, dated January 12, 2016, indicate 149 cubic yards of fill will be placed in the floodplain and 288 cubic yards of compensating storage volume will be provided in the segment between Boone Avenue and Winnetka Avenue. According to the plans, all excavation and fill volumes were calculated based on the elevation of the 100-year zone AE floodplain, established at elevation 889 feet by the preliminary DFIRM for Hennepin County.

Wetlands

The plans show work occurring within the boundaries of a delineated wetland. The Cities of New Hope and Crystal are the LGUs for administering the Minnesota Wetland Conservation Act of 1991 within their respective jurisdictions and will determine any wetland impacts.

Stormwater Management

The drainage patterns under existing and proposed conditions will remain similar; this project will not result in major changes to land use or topography. This project will reduce stormwater runoff rates and volumes by decreasing the amount of impervious surfaces within the project area.

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Co.
Subject: Item 4F – 2016 Three Rivers Park District Bassett Creek Regional Trail – New Hope and Crystal
Date: March 9, 2016
Page: 3
Project: 23270051 2016 2070

Water Quality Management

The project creates 4.18 acres of new and/or fully reconstructed impervious surfaces. Based on the September 2015 BCWMC Requirements for Improvements and Development Proposals (Requirements Document), the majority of the impervious trail surfaces can be considered pervious because they include a downstream buffer area that is at least half the width of the paved trail. Communications with the applicant's engineer indicate that approximately 0.33 acres of trail surface can be considered impervious area because it lacks a sufficient width of downstream buffer. Therefore, based on the Requirements Document, water quality treatment in accordance with MIDS is not required.

Erosion and Sediment Control

Since the area to be graded is greater than 10,000 square feet, the proposed project must meet the BCWMC erosion control requirements. Proposed temporary erosion control features include seeding, erosion control blanket, sodding, inlet protection, compost log, and rock construction entrances.

Recommendation

Conditional approval based on the following comments:

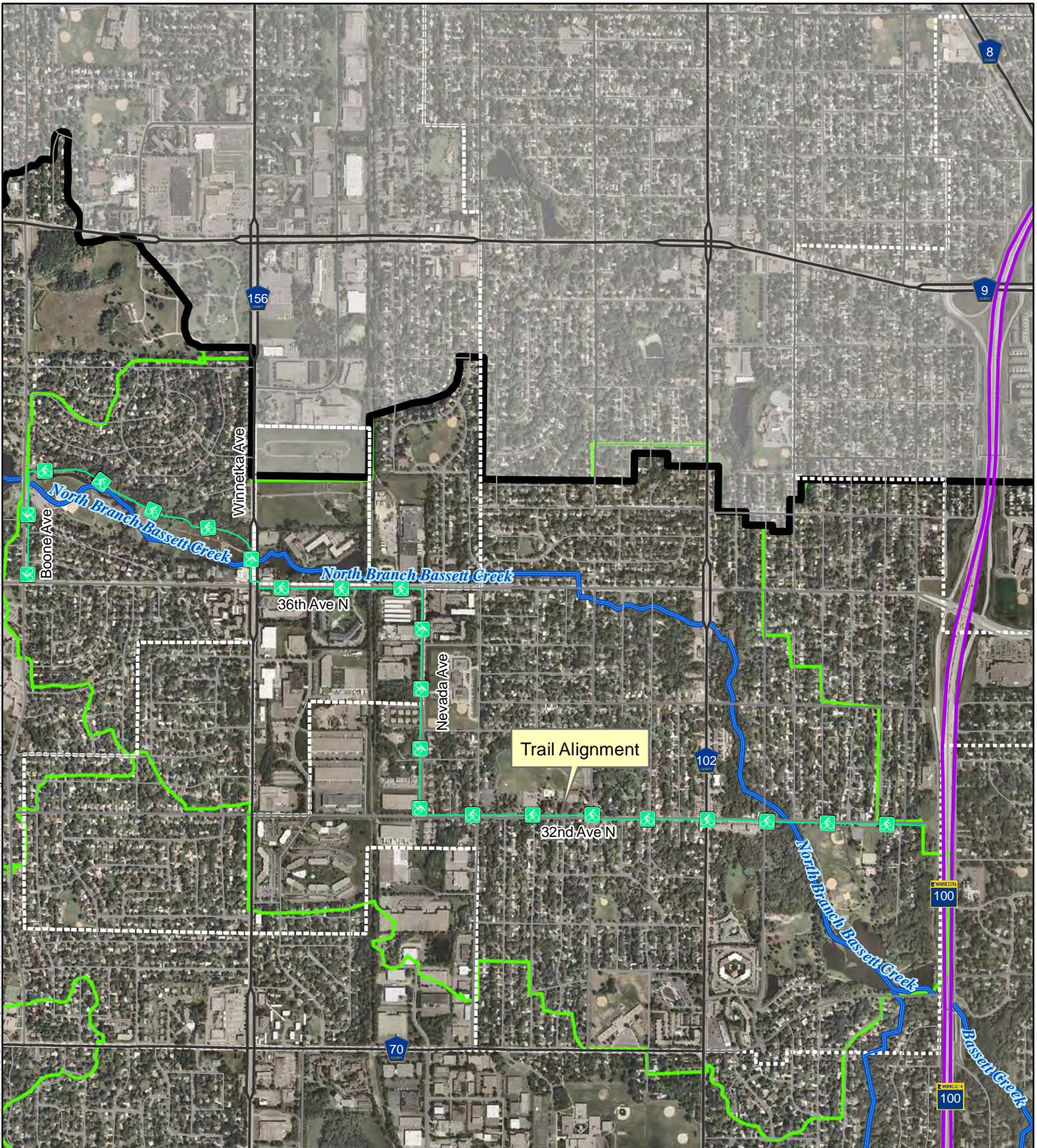
1. Applicant must provide excavation and fill volumes, showing no net increase in fill within the floodplain, based on the BCWMC flood elevations (not preliminary DFIRM).
2. The culvert on sheet 53, approximate trail station 427+75, must be labeled to correspond with the appropriate drainage profile.
3. The outlet velocity at the culvert at approximately station 427 +75 (assumed to correspond with point 5110 on Sheet 70, Drainage Profiles) exceeds 14 feet per second when the pipe is flowing full. Addition of a drop structure or modifying the design to allow a shallower pipe slope is recommended to reduce outlet velocities to less than 8 feet per second (assuming riprap is also used) or less than 4 feet if no energy dissipation is provided.
4. Include a detail specifying the quantity and type of riprap and filter used for erosion control at culvert outfalls.
5. The following erosion control comments must be added to the plans:
 - Temporary or permanent mulch must be uniformly applied by mechanical or hydraulic means and stabilized by disc-anchoring or use of hydraulic soil stabilizers.
 - Temporary vegetative cover must be provided consisting of a suitable, fast-growing, dense grass seed mix spread, at a minimum, at the MnDOT-specified 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.
6. In accordance to item 4 in the BCWMC August 19, 2011 letter, the BCWMC is enthusiastic about the opportunity this trail project would provide to publicize and highlight some of the natural water resource features (creeks, lakes, wetlands, etc.) within the watershed and capital improvement projects (channel restoration, water quality basins, etc.) implemented by the BCWMC along the trail. The

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Co.
Subject: Item 4F – 2016 Three Rivers Park District Bassett Creek Regional Trail – New Hope and Crystal
Date: March 9, 2016
Page: 4
Project: 23270051 2016 2070

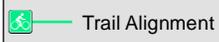
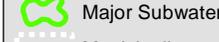
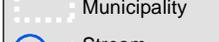
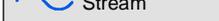
BCWMC would like to coordinate with Three Rivers Park District as they develop the public interpretation and trail signage plan.

7. Revised drawings (paper copy and final electronic files) must be provided to the BCWMC Engineer for final review and administrative approval.

Barr Footer: ArcGIS 10.3.1, 2016-03-08 21:08 File: I:\Client\BassettCreek\gis\maps\Permis\Maps-2016\2016-04.mxd User: arm



Imagery Source: Aerial Express (2009)

-  Trail Alignment
-  Bassett Creek
-  WMC Boundary
-  Major Subwatershed
-  Municipality
-  Stream



LOCATION MAP
APPLICATION 2016-04
Three Rivers Park District
Bassett Creek Regional Trail
New Hope and Crystal, MN

Memorandum

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Company
Subject: Item 5A – Draft Bassett Creek Regional Trail Master Plan
BCWMC August 18, 2011 Meeting Agenda
Date: August 10, 2011
Project: 23/27 051 2011

5A. Draft Bassett Creek Regional Trail Master Plan

Summary

Proposed Work: Regional Trail – Linear Project

Basis for Commission Review: Opportunity to provide comments

Change in Impervious Surface: unknown

Recommendation: For discussion (should the BCWMC want to provide comments)

General Background & Comments

Three Rivers Park District (TRPD), in coordination with Cities of Plymouth, New Hope, Crystal, and Golden Valley; has prepared a draft Master Plan for the Bassett Creek Regional Trail (Plan). The proposed trail will extend approximately 7 miles from French Regional Park to Theodore Wirth Regional Park. Several segments of the trail have been completed; others are in the planning stages. TRPD is giving the opportunity to provide comments on the draft master plan. Attached is the executive summary.

The trail crosses the North Branch or Bassett Creek Main Stem at five locations. The trail generally consists of a 10-foot wide paved surface separated from vehicular traffic. As shown in the following figure, minimum boulevard width of 2-ft between road and trail is proposed for new sections of the trail. The Plan does not indicate the proposed increase in impervious surface associated with full development of the trail. It is anticipated the project will be constructed over several years. Runoff from the project discharges to the Medicine Lake, North Branch, Sweeney Lake, and Bassett Creek Main Stem subwatersheds. See the attached executive summary from the Plan.

Recommendation

We recommend the BCWMC discuss the following issues and direct staff to provide comments to the TRPD:

- a. **Water Quality:** The Plan does not indicate the proposed increase in impervious surface along the trail corridor. The Plan states:

Bassett Creek trail development is not anticipated to negatively effect Bassett Creek as best management practices will be followed during regional trail construction and maintenance activities, including erosion control measures and vegetation establishment as required.

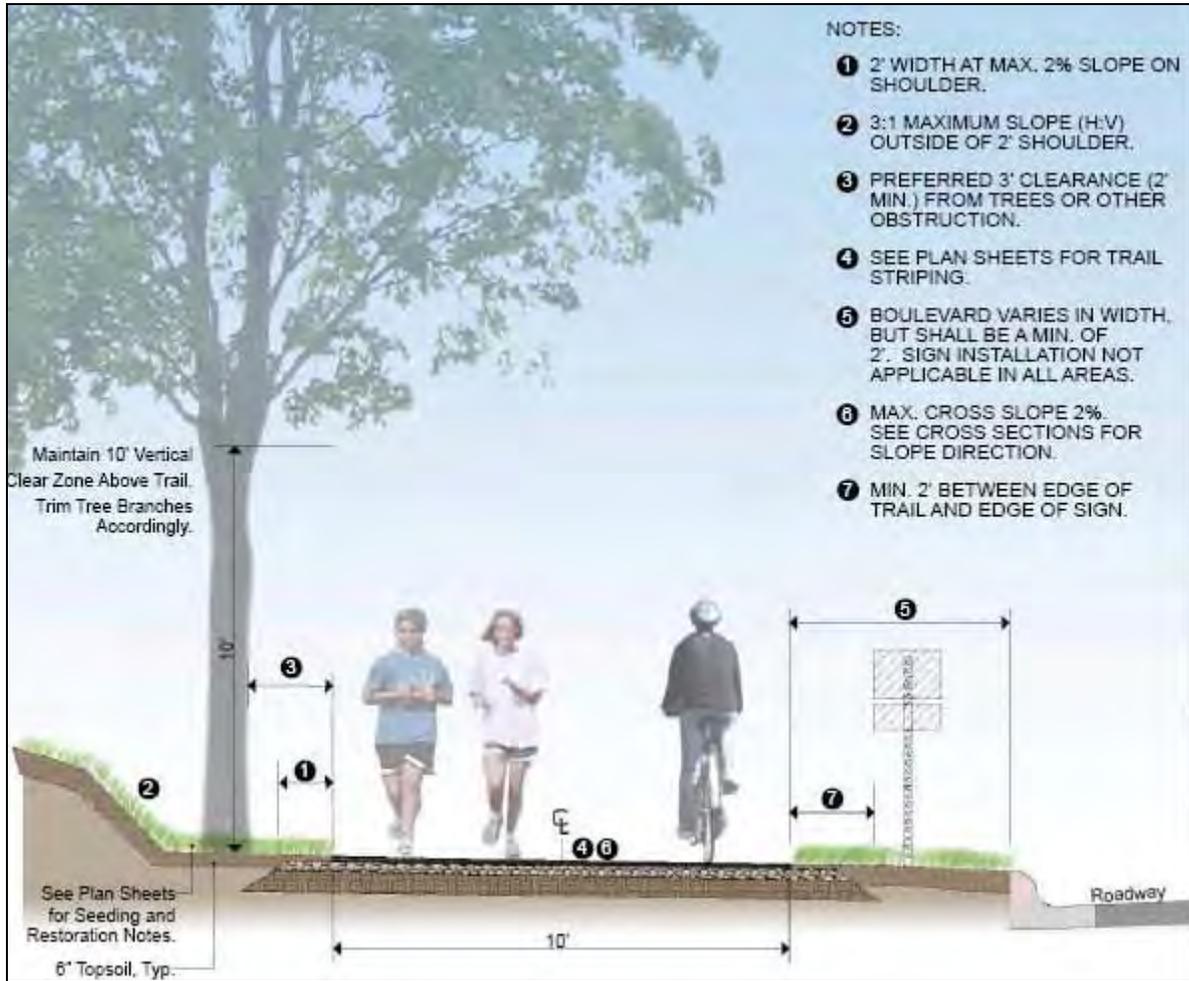
However, since specific water quality features were not addressed, it appears this statement is related more to construction issues then to increased impervious surface. Under the current *Requirements for Improvements and Development Proposals Document (Requirements Document)*, this project would be reviewed as a road (linear) project. Paragraph 4.6 of the Requirements Document state:

4.6 Road Projects

BMPs must be considered to improve the quality of stormwater runoff from road construction and reconstruction projects. The most desirable BMP reduces pollutants to the maximum extent practicable and reduces runoff. The BCWMC realizes that existing development and right-of-way constraints will limit the type of BMPs that can be implemented. At a minimum, temporary measures will be required to address erosion and sediment control during construction. The BCWMC will work with the project applicant to assist with determining the appropriate temporary and permanent BMPs to implement for the project. The project applicant must submit a description of the evaluation process used to identify feasible BMPs to be implemented on the project.

The BCWMC should discuss whether to prepare comments based on its current standards or on anticipated standards that may be required during development of the project. The BCWMC should also discuss impacts of TMDL studies for Medicine Lake, Sweeney Lake, and Wirth Lake. At a minimum the following comments are suggested:

- The Plan should include proposed increases in impervious surface along each trail segment and discuss best management practices to address water quality.
 - The Commission urges TRPD to incorporate infiltration and filtration measures, as feasible, along the trail. Maximizing the boulevard width to disconnect the trail from the street is recommended to reduce water quality impacts.
- b. **Floodplain:** *Recommended Comment:* The project must be constructed to ensure flood profiles are not increased along the creek. Proposed floodplain fill must be mitigated in accordance to the BCWMC floodplain policies.
- c. **BMP Maintenance:** *Recommended Comment:* Operation and Maintenance Plan should address maintenance of water quality and storm water BMPs.
- d. **Erosion Control:** *Recommended Comment:* The BCWMC's goal is to prevent erosion and sedimentation to the greatest extent possible to protect water resources from increased water quality problems. Temporary and permanent best management practices (BMPs) must be implemented to control construction and post-development runoff and erosion from the site





Three Rivers
PARK DISTRICT

July 25, 2011

Three Rivers
Park District
Board of
Commissioners

Bassett Creek Watershed Management Commission
c/o Amy Herbert, Barr Engineering
4700 West 77th Street
Minneapolis, MN 55432

Sara Wyatt
District 1

RE: Bassett Creek Regional Trail Master Plan

Dear Ms. Herbert:

Marilynn Corcoran,
District 2

Three Rivers Park District (Park District) is concluding the master plan process for the Bassett Creek Regional Trail. The Metropolitan Council 2030 Regional Parks Policy Plan requires that local, state, and federal recreation providers within the regional trail service area be given the opportunity to provide comment on the draft master plan.

Joan Peters
District 3

The Park District Board of Commissioners approved distribution of the draft master plan for public comment on July 21, 2011. Please provide written comments to the address below by August 24, 2011.

Dale Woodbeck,
Vice Chair
District 4

Ann Rexine, Planner
Three Rivers Park District
3000 Xenium Lane North
Plymouth, MN 55441

John Gibbs
District 5

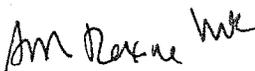
In the event your agency elects to not provide any comments, please notify me upon the decision so the master plan review and approval process can move forward without undue delay.

Please call me at 763-694-1103 with any concerns or questions. Thank you for your timely response.

Larry Blackstad, Chair
Appointed

Sincerely,

Barbara Kinsey
Appointed



Ann Rexine
Planner

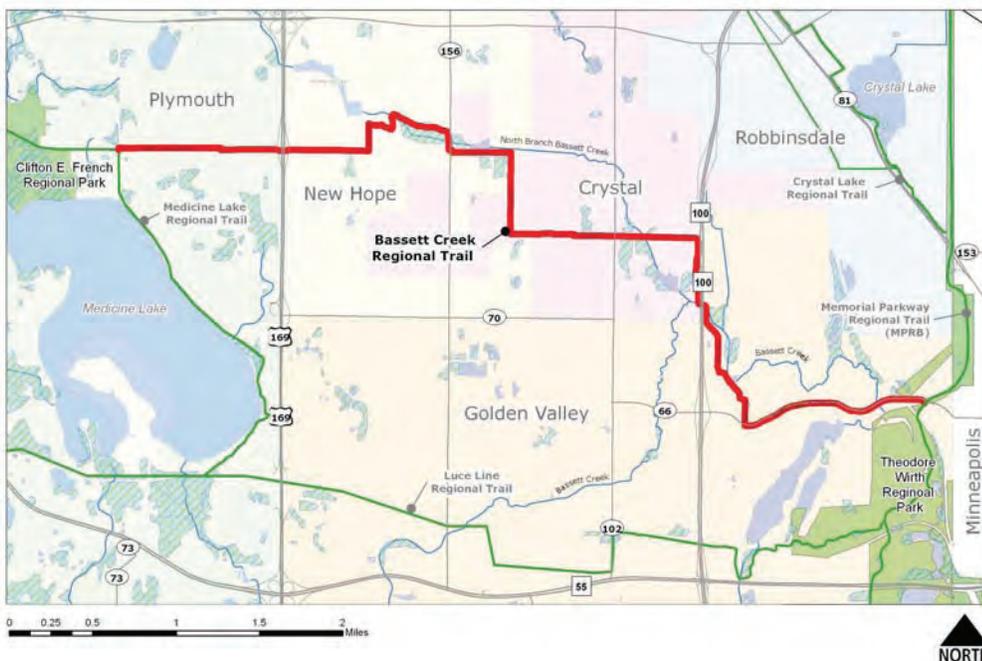
Cris Gears
Superintendent

Enclosure: Bassett Creek Regional Trail Master Plan – C.D.

\\Hpas400\h\PROJECTS\Regional Trails\TBC G2 - Bassett Creek Trail Master Plan\B Planning & Design\Bassett Creek 30 Day Public Comment\TBC Comment Period Letter_Adjacent.doc

Executive Summary

The Bassett Creek Regional Trail will fill a gap in the regional park and trail system with a safe, accessible and enjoyable option. Currently, many Twin Cities metropolitan area residents traveling to and through the first tier suburbs do not have access to safe, convenient and attractive off-road regional trail networks. The Bassett Creek Regional Trail will expand commuting, transit and recreational access to vital employment, retail and recreational sites in the metropolitan region - providing safety, economic development, mobility and environmental benefits. As a linking trail, the Bassett Creek Regional Trail may help reduce congestion and increase transportation efficiency.



Bassett Creek Regional Trail Location & Contextual Relationship

Source: Three Rivers Park District

When completed, the regional trail will measure approximately seven miles from French Regional Park, through the Cities of Plymouth, New Hope, Crystal, and Golden Valley to the Minneapolis Grand Rounds at Theodore Wirth Regional Park. The Bassett Creek Regional Trail will provide direct and indirect access to residential neighborhoods, two elementary schools, a middle and high school, commercial nodes, and numerous connections to local and regional parks and trail systems.

The regional trail corridor generally follows a route extending east and south from French Regional Park along 36th Avenue in Plymouth, over Trunk Highway 169 (TH 169) to Boone Avenue in New Hope. At Boone Avenue,

the regional trail diverts through Northwood Park before reconnecting with 36th Avenue to Nevada Avenue in Crystal. From Nevada Avenue, the regional trail corridor traverses south to 32nd Avenue and across Trunk Highway 100 (TH 100) into Golden Valley. From TH 100, the regional trail corridor traverses alongside Lilac Drive, Unity Avenue, Minnequa Drive, Westbend Road, Regent Avenue and Golden Valley Road/County Road 66 (CR 66) before connecting to its eastern destination at Theodore Wirth Regional Park.

Three Rivers Park District (Park District) established a regional trail master planning process that included representatives from all affected municipalities, public agencies, and the general public to provide opportunities for input that contributed to the master plan outcome. A Bassett Creek Regional Trail Task Force was established that guided the trail master plan and coordinated planning efforts within the local communities and greater region. Members of the Task Force included representatives from the following affected stakeholders: Cities of Plymouth, New Hope, Crystal and Golden Valley, Hennepin County Transportation Department, and Minneapolis Park and Recreation Board.

The Park District presented general regional trail information and the preliminary Bassett Creek Regional Trail route to adjacent communities at City Council and Park Board meetings during the fall of 2010. While no formal action was taken by each community, informal approval of the regional trail route was indicated.

The Park District, in conjunction with the adjacent trail communities, hosted a public open house where the general public reviewed the work of Task Force planning efforts and provided comment.

Active use of the Bassett Creek Regional Trail is expected to provide walking/hiking, bicycling, running/jogging, bicycling, in-line skating, and dog walking opportunities during the non-winter months. The Park District's seasonal-use data of existing regional trails indicates that significant use of the trail will occur in the spring, summer and fall seasons. Winter use of the Bassett Creek Regional Trail is dependent on weather conditions and independent winter use agreements with local communities to maintain and operate the trail during the winter season (defined as November 15 to March 31).

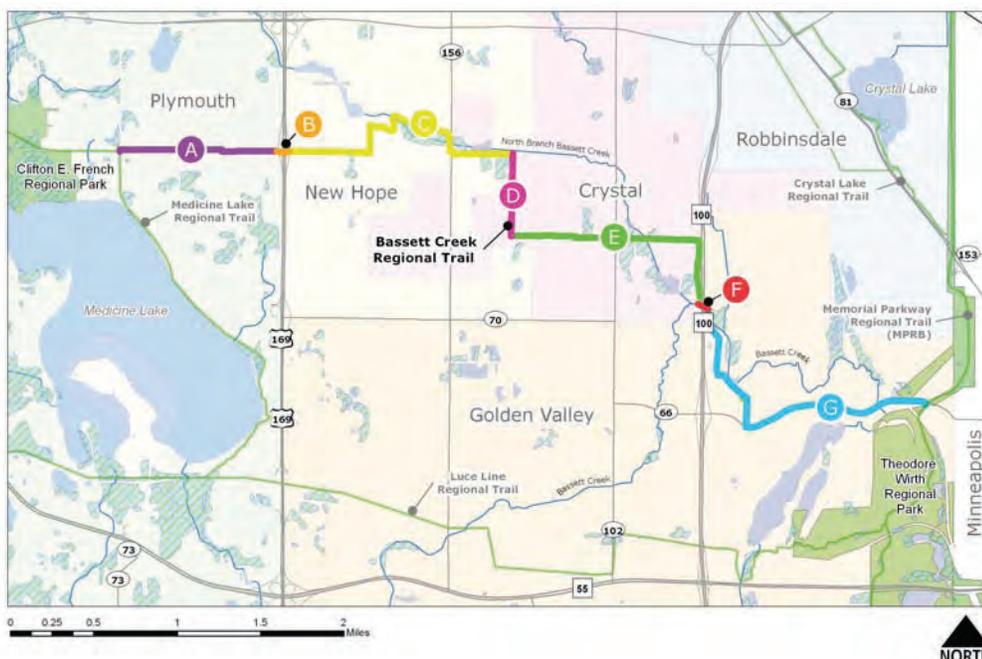
When fully constructed, the Bassett Creek Regional Trail is projected to generate 176,425 annual visits. Bassett Creek Regional Trail will connect single and multifamily residential neighborhoods, local schools, institutions, commercial areas and major recreation sites. These local and regional connections are intended to provide underserved Park District communities with a safe, multi-modal transportation option.

The Bassett Creek Regional Trail route is comprised of constructed and unconstructed segments, in varying states of Park District design standard compliance. Bassett Creek Regional Trail has been divided into seven major segments. A detailed route assessment is provided in the master plan document.

Bassett Creek Regional Trail Segments

Segment	From	To	Along Through	Length
Plymouth				
A	Zachary Lane (adjacent to French Regional Park)	TH 169 Pedestrian Bridge	36th Avenue	1.10 mile
Plymouth New Hope				
B	TH 169 Pedestrian Bridge			0.06 mile
New Hope				
C	TH 169 Pedestrian Bridge	Nevada Avenue	36th Avenue Boone Avenue Northwood Park Winnetka Avenue 36th Avenue	1.63 mile
New Hope Crystal				
D	36th Avenue	32nd Avenue	Nevada Avenue	0.50 mile
Crystal				
E	Nevada Avenue	TH 100 Pedestrian Bridge	32nd Avenue Valley Place Park Bassett Creek Park	1.57 mile
Crystal Golden Valley				
F	TH 100 Pedestrian Bridge			0.18 mile
Golden Valley				
G	TH 100 Pedestrian Bridge	Theodore Wirth Parkway (Theodore Wirth Regional Park)	Lilac Drive Briarwood Nature Area Unity Avenue/Minnaqua Drive Westbend Road Regent Avenue Golden Valley Road/CR 66	1.98 mile

Total 7.03 miles



Source: Three Rivers Park District

Operations & Maintenance Plan

Bassett Creek Regional Trail is operated under Park District ordinances and policies. The regional trail is overseen by professional public safety operations and maintenance staff. Services and maintenance staffing levels increase as needed and as funding permits through the employment of seasonal staff. Park Service Officers and Park Police Officers provide public safety services. Volunteers also assist with trail patrol.

Specific patrol of the Bassett Creek Regional Trail will be the primary responsibility of trail patrol staff assigned to French Regional Park, however all public safety staff patrol trails and on an as-needed basis or when call load presents an opportunity to conduct alternative patrol.

Due to extensive property holdings, geographic distribution of facilities and the need to create an efficient and cost-effective work force, the Park District organizes and budgets maintenance services in six geographic clusters that provide maintenance service to Park District regional parks, park reserves and regional trails. The French Work Cluster provides maintenance services for the Bassett Creek Regional Trail.

Estimated Costs & Funding

Regional trail implementation has both initial costs (acquisition and development) and ongoing costs (operations and maintenance). Trail development will occur as opportunities to coordinate with other agencies/projects occur, funding becomes available, and at the discretion of the Park District Board of Commissioners. Individual development projects may move forward to coincide with development adjacent to the trail corridor for purposes of cost savings.

Regional trail development includes the cost to prepare the site, reconfigure roadways as required, modify drainage patterns where necessary, pave the trail, and install striping, and landscaping. In total, the estimated development cost for the Bassett Creek Regional Trail is \$2,205,725. Additional items including wayfinding signage, traffic signage and devices, rest stops and miscellaneous trail costs are included in Appendix B | Detailed Capital Improvement Cost Estimate.

Annual operations and maintenance costs are estimated at \$26,000 per year with one-time costs estimated at \$3,000.