

TO: Michael C. Van Milligen, City Manager
FROM: Gus Psihoyos, City Engineer *GPS*
DATE: April 15, 2015
SUBJECT: Upper Bee Branch Creek – Channel, Streets, & Utilities Project
(CIP#7201654 & 3401654)

INTRODUCTION

The enclosed resolution is in reference to the public hearing for the Upper Bee Branch Creek – Channel, Streets and Utilities Project.

BACKGROUND

Since 1999 there has been six Presidential Disaster Declarations which included the Bee Branch Creek Watershed. The Drainage Basin Master Plan, completed and adopted by the City Council in 2001, established that there are more than 1,100 properties at risk of flood damage as a result of the flash flooding. Based on a subsequent study in 2009 by the Federal Emergency Management Agency (FEMA), there are 1,373 properties in the flood prone area. In addition to homes, there are over 70 businesses in the at-risk area with over \$500 million in annual sales. Eighty-five percent (85 %) of the impacted properties have buildings that are potentially eligible for listing on the National Register of Historic Places, the official list of the Nation's historic places worthy of preservation. In fact, fifty-seven percent (57%) of the buildings are more than 100 years old. The flood prone area in the Bee Branch Watershed encompasses historic neighborhoods offering some of the community's most affordable workforce housing. Most residents are working families, many are elderly -- those least likely to recover from repetitive flood loss. Repetitive flood damage leads to disinvestment; from 2004 to 2009, while commercial property values grew by 39% citywide, they fell by 6% in the Bee Branch Watershed flood prone area.

Since 2001, the City has implemented many of the improvements outlined in the Drainage Basin Master Plan. But since 2001 several intense, rain storms have occurred in the Dubuque metropolitan area so that revisiting the predicted hydrology and hydraulic behavior of the Bee Branch Watershed was appropriate. Over a twelve year period starting in 1999, there have been three 100-year storms, two 50-year storms, one 25-year storm, and one 10-year storm. Finally, it is important to consider how additional flood mitigation efforts undertaken by the City since 2001 fit with the overall

effort to mitigate flooding. Therefore, work began to update/amend the Drainage Basin Master Plan.

On November 18, 2013 the City Council passed Resolution 335-13 adopting the 2013 Drainage Basin Master Plan Amendment. The 2013 Amendment did not replace the 2001 Drainage Basin Master Plan. Instead, it built upon its foundation. The amended Drainage Basin Master Plan outlined several improvements throughout the Bee Branch watershed to mitigate the effects of future flooding and disasters. Collectively, the improvements form the basis of the Bee Branch Watershed Flood Mitigation Project outlined in Table 1 below.

Table 1. Twelve phases of the Bee Branch Watershed Flood Mitigation Project

Phase	Description	
1	Carter Road Detention Basin	Complete
2	West 32 nd Street Detention Basin	Complete
3	Historic Millwork District	Complete
4	Lower Bee Branch Creek Restoration	Functional
5	Flood Mitigation Gate Replacement	
6	Impervious Surface Reduction (Green Alleys)	Under Construction
7	Upper Bee Branch Creek Restoration	Under Design
8	22 nd Street Storm Sewer Improvements	
9	Flood Mitigation Maintenance Facility	
10	North End Storm Sewer Improvements	
11	Water Plant Flood Protection	
12	17 th Street Storm Sewer Improvements	

With a total estimated cost of \$179 million, the Bee Branch Watershed Flood Mitigation Project will prevent an estimated \$582 million in damages over the 100-year design life of the project. That represents a return on investment of roughly \$3 for each \$1 spent.

On November 18, 2013 the City Council adopted Resolution 336-13, approving the City's application for \$98,494,178 in state sales tax increment funding for the Bee Branch Watershed Flood Mitigation Project. In addition, the City Council passed Resolution 337-13 establishing that the City would provide up to \$76,678,802 of local monies to be used to meet the match requirement for the City's receipt of the \$98.5 million in state sales tax increment funding. The local match was to be provided from three sources: the Stormwater Utility fee, grants that the City already has acquired, and assessments associated with the construction of pervious (green) alleys. The local match also includes \$13 million in City expenditures associated with the completion of the first three phases of the 12-Phase Project.

The Bee Branch Watershed Flood Mitigation Project represents a multi - phased, fiscally responsible investment. It reflects a holistic approach to mitigate flooding as it will also improve water quality, stimulate investment, and enhance the quality of life of watershed residents.

On December 4, 2013, the Iowa Flood Mitigation Board voted to approve the City's use of \$98,494,178 for the Bee Branch Watershed Flood Mitigation Project. This funding will allow much of the protection to be provided over the next six years, instead of over the next 20 years (only some of the 240 alleys will take up to 20 years).

On February 3, 2014 the City Council adopted Resolution 31-14 authorizing the execution of a funding agreement (Funding Agreement) with the State of Iowa Flood Mitigation Board and authorizing the City's use of sales tax increment funding for the Bee Branch Watershed Flood Mitigation Project.

On March 5, 2014 the City Council passed Ordinance 16-14 establishing the stormwater utility fee rate structure necessary to fund the various phases and improvements associated with the Bee Branch Watershed Flood Mitigation Project. The result was that the lowering of rates previously established by Ordinance 21-12 in Fiscal Years 2015, 2016, 2017, 2018, 2019, 2020, and 2021. A comparison the current Stormwater Utility rates established via Ordinance 16-14 to the previously adopted rates established via Ordinance 21-12 are outlined in Table 2 below.

Table 2. Comparison of the current Stormwater Utility rates established via Ordinance 16-14 to the previously adopted rates established via Ordinance 21-12.

	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22 & Beyond
Rates Established by Ordinance 21-12	\$8.00	\$8.50	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00
Current Rates Established by Ordinance 16-14	\$5.98	\$6.38	\$6.81	\$7.27	\$7.76	\$8.29	\$8.85	\$9.00

On April 13, 2015 the Iowa Flood Mitigation Board approved an amendment to the Funding Agreement thereby accelerating the City's receipt of sales tax increment from the state. Per the amendment, the City will receive an additional \$5.65 million in the first five years (2014-2018) offset by an equal amount in the last three years (2031, 2032, & 2033). This amendment allows for reducing project debt financing and instead increasing pay-as-you-go financing.

DISCUSSION

The Upper Bee Branch Creek Restoration Project (Phase 7 of the Bee Branch Watershed Flood Mitigation Project) will be constructed through multiple contracts with the Upper Bee Branch Creek – Channel, Streets, & Utilities Project as the first.

As the name suggests, the improvements associated with this contract are generally associated with the channel grading, the reconstruction of streets, and the relocation of

City utilities [storm sewer, sanitary sewer, and water main] from Garfield Avenue to 24th Street.

The grading work involves the removal and hauling away of roughly 200,000 cubic yards of soil to create the 2,000-foot long creek and flood plain area. Some of the excess soil can be hauled and placed at the Technology Park to expand buildable area. Additional excess soil can be hauled and placed in the Port of Dubuque to enhance the outdoor concert space along 5th Street. These options are available to the contractor if they do not have a more economical place to waste dirt. To create the design flood capacity, creek construction includes the installation of retaining walls at various points along the length of the project. The creation of the flood plain involves the planting of over 300,000 square feet of vegetative surface restoration and the planting of over 550 trees and shrubs.

The streets to be reconstructed as part of the project include Garfield Avenue at Kniest Street, Kniest Street between Rhomberg Avenue and Lincoln Avenue, Lincoln Avenue near Kniest Street, and finally 24th Street between Washington Street and Prince Street. Limited portions of Rhomberg Avenue and 22nd Street will also be reconstructed where they intersect the creek corridor. Prince Street, between 22nd Street and 24th Street, will be resurfaced as part of the project with new curb and gutter. The streets used as truck routes will be evaluated for maintenance or replacement upon project completion.

The utility work will include the relocation/reconstruction of roughly 4,000 feet of 8-inch through 36-inch sanitary sewer and roughly 3,000 feet of 6-inch through 20-inch water main at various locations. Storm sewer relocation includes roughly 3,000 linear feet of 12-inch through 72-inch storm sewer sizes. Included in the storm sewer work is the installation of baffle boxes at locations where storm sewers are to discharge into the proposed creek. The purpose of the baffle box system is to capture trash, yard waste, and sediment in the storm sewer and prevent it from entering into the creek. The location of each collection system is such that it can be easily accessed by city maintenance equipment for the collection and proper disposal of waste material. This will help minimize long term maintenance costs.

Additional site work associated with this contract includes the installation of over 10,000 feet of conduit and fiber, over 60 lights, over 50 security cameras, drinking fountains, bike racks, benches, and interpretive signs.

Attachment A illustrates the elements of the overall Upper Bee Branch Creek Restoration Project to be constructed as part of the Upper Bee Branch Creek – Channel, Streets, & Utilities Project contract.

The schedule for the Upper Bee Branch Creek – Channel, Streets, & Utilities Project is as follows:

Receipt of Bids:
Award of Contract:

May 7, 2015
May 18, 2015

Notice to Proceed:
 Construction Substantially Complete (functional):
 Construction Complete:

June 1, 2015
 December 1, 2016
 May 1, 2017

RECOMMENDATION

I recommend that the City Council approve construction plans and specifications for the Upper Bee Branch Creek – Channel, Streets, & Utilities Project.

BUDGET IMPACT

The estimate of probable costs for the Upper Bee Branch Creek – Channel, Streets, & Utilities Project is as follows:

Construction	\$18,518,300
Contingency	925,915
Engineering	2,916,632
Total Project Cost	\$22,360,847

The project will be funded by the Fiscal Year 2016 appropriation in the amount of \$43,359,000 for the Bee Branch Creek Restoration Project – Phase 4 and Phase 7 of the Bee Branch Watershed Flood Mitigation Project [CIP#7201654].

The \$98,494,178 in sales tax increment funding from the state as part of the State Flood Mitigation Program will not be disbursed in one lump sum nor will it be disbursed as the City incurs expenses. Instead, the City is to receive the funding over a twenty-year period starting in 2014. The legislation enacting the program recognized that the issuance of debt might be required in order to immediately realize the flood mitigation improvements. In fact, a new type of revenue bond was born, a sales tax increment revenue bond. The funding plan associated with the City’s application for \$98.5 million in State aid, the outlined that the City would issue up to \$90.1 million in debt. The table below reflects the debt presented in Table C-7 of the City’s application.

Debt	Previously Issued	Future Issuance
General Obligation Bonds	\$16,503,604	\$31,724,000
U.S. EPA Clean Water SRF	\$19,010,295	\$30,154,872
Sales Tax Increment Revenue Bond	-	\$28,257,938
Total Debt Financing	\$35,513,899	\$90,136,810

In accordance with the adopted Fiscal Year 2016 budget, the Upper Bee Branch Creek Restoration Project will be funded through the issuance of debt. All of the debt will be retired utilizing the schedule of annual payments of sales tax increment from the state.

If the improvements were to be funded without issuing additional debt, the Upper Bee Branch Creek Restoration Project would not be complete until Fiscal Year 2038.

Because the going interest rate for debt is on par with inflation, the overall cost of the project will not increase due to the issuance of debt.

REQUESTED ACTION

I respectfully request the City Council to approve plans, specifications, form of contract and the estimated cost for the Upper Bee Branch Creek – Channel, Streets, & Utilities Project.

Attach.

Prepared by Deron Muehring, Civil Engineer II

Cc: Barry Lindahl, City Attorney
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