

Project Summary and Environmental Assessment

The City of Champaign has applied to the Illinois Environmental Protection Agency's (IEPA) Water Pollution Control loan program to request funding to help finance a stormwater control improvements project. The following project summary and environmental assessment has been prepared by the IEPA to assist the loan applicant in complying with the public notice requirements. This report is based on information submitted by the City of Champaign. Sources of information include the following documents: the City of Champaign, West Washington Street Watershed Master Plan and Facility Plan report, dated September, 2009 and April 30, 2015 supplemental report, with April 30, 2015 cover letter; the March 30, 2016 information provided in response to IEPA's January 6, 2016 Facility Plan review letter, and the June 2, 2016 information provided in response to the IEPA's May 12, 2016 email request for information. The planning reports and response information were prepared by Clark Dietz, Inc.

Part I – Project Information

Loan Applicant: City of Champaign

County: Champaign

Project Name: West Washington Street stormwater improvements

Project Number: L175333 (Phase 2) and L175334 (Phase 3)

Current Population Served: 81,055 total, (3,283 in the project area)

Future Population (20 year): 146,000 total, (3,283 in the project area)

Project Description: The proposed project consists of stormwater control improvements and is divided into three phases. Phase 1 was completed in 2014 includes an 11 acre-foot detention basin and sewer pipes with "green" features. Phase 2 proposes to construct a 17.8 acre foot detention basin with 6,125 linear feet of 12-inch to 54-inch diameter storm sewers that will connect to the Phase 1 detention basin. Phase 2 will also include green features, such as native plants, rain garden/bio-retention, and curb cuts that drain into bio-swales. Phase 3 proposes the construction of 4,200 linear feet of 12-inch to 42-in diameter storm sewers in the area south and east of the Phase 1 basin to allow surface drainage into the stormwater detention system from flood prone areas. Only Phases 2 and 3 of the project are being considered for IEPA loan funding.

Project Location: The Phase 1 detention basin is located at the intersection of North Russell Street and West Washington Street. The Phase 2 detention basin is proposed to be located along Glen Park Drive, between Miller Avenue and North Mattis Avenue. The Phase 3 storm sewers will be constructed along parts of these streets: West Washington, North Edwin, West Church, North James, West Park Avenue and Flora Drive. All locations are within Champaign, Illinois. The proposed project locations are shown on Attachment A.

Project Justification: The West Washington Street watershed has experienced severe surface flooding. Records from the 1920's indicate flooding has been a problem historically. Surface

flooding triggers stormwater infiltration into the watershed’s sanitary sewer system, which results in sewage backups into basements and sanitary manhole overflows. The project is intended to improve stormwater quality, provide hydraulic relief of the storm sewer system and reduce local flooding. Flow rate will be reduced and sediment will be collected and removed from runoff. The first flush of non-point source pollutants from cars, lawns, litter, yard waste and pet waste will be captured before they enter Copper Slough, which is the receiving stream for the watershed. Sanitary sewer overflows will be reduced. In addition, new park-like green spaces will be created around the detention basins.

Estimated Construction Start Date: March, 2017 (Phase 2), June, 2018 (Phase 3)

Estimated Construction Completion Date: September, 2017 (Phase 2), September, 2018 (Phase 3)

Project Cost Estimate: \$15,766,931 (Phase 2), \$7,706,000 (Phase 3)

Part II – Environmental Issues Associated With the Project

Project construction impacts: Temporary adverse environmental impacts such as construction-associated noise, blowing dust, air emissions, traffic disruption, and soil erosion will likely occur during construction.

Illinois Department of Natural Resources: (IDNR) EcoCAT website review results and the final evaluation letter, dated May 16, 2016, indicate that there are no anticipated impacts to threatened and endangered species, wetlands or other natural areas from any parts of the project.

Illinois Historic Preservation Agency: An IHPA letter dated May 26, 2016 indicates that there are no anticipated impacts to historic, architectural, and archaeological resources from the proposed project.

Part III – Project Implementation and Affordability for Residents and Utility Customers

The estimated costs for the project are:	Phase 2	Phase 3
Construction	\$12,773,857	\$6,000,000
Contingency (10%)	\$1,277,386	\$600,000
Design Engineering	\$778,910	\$480,000
Construction Engineering	\$1,067,452	\$480,000
Legal	\$50,000	\$50,000
Land (not IEPA loan eligible)	\$500,000	\$0
Total Project	\$16,447,605	\$7,610,000

The City intends to finance the proposed project with loans from the IEPA Water Pollution Control Loan Program (WPCLP). The costs of purchasing land for this project are not eligible to use IEPA loan funding and the City has identified other non-eligible costs that will have to be paid with local funding. After subtracting these ineligible costs from the project total, the estimated IEPA loan amounts are \$12,116,339 for Phase 2 and \$7,610,000 for Phase 3. A \$12,116,339 loan, at the current interest rate of 1.86% for a twenty year period, would have an

annual repayment of approximately \$725,933 (Phase 2). A \$7,610,000 loan, at the current interest rate of 1.86% for a twenty year period, would have an annual repayment of approximately \$455,942 (Phase 3).

Source of Loan Repayment: The City of Champaign proposes to repay the loans using existing sales and property taxes. In 2013, the City implemented a stormwater utility fee, which generates approximately \$2.6 million annually. Funds from the stormwater utility fee are allocated to projects related to the operation and maintenance of the City's stormwater infrastructure, including cleaning and televising, repairs and stormwater quality improvements. Prior to the stormwater utility fee, sales and property taxes paid for all operation and maintenance activities, in addition to all large capital drainage improvements projects. Implementation of the stormwater utility fee freed up \$2.6 million annually in sales and property taxes that previously paid for other City-wide operation and maintenance activities. This available \$2.6 million sales and property tax revenue has been allocated to pay for large scale capital drainage improvement projects, including Phase 2 and 3 of the West Washington Street stormwater improvements projects. Starting in FY 2021/22, the \$2.6 million that is reserved annually in the Stormwater Management Fund, will increase to \$3.1 million annually.

Current Average Monthly Residential Cost of Service: An average residential property owner with 0-6,000 square feet of impervious area pays \$4.94 per month.

How is the monthly residential rate/cost of service calculated? Champaign's current single family or duplex dwelling parcel stormwater utility fee charge system is a monthly flat fee of \$4.94, \$10.55, or \$13.64 based on the amount of impervious area that is on the parcel. All other parcels that are not single family or duplex dwellings are charged \$5.24 for each 3,478 square feet of impervious surface area on the parcel.

Projected Average Monthly Residential Cost of Service: Because the City previously implemented the stormwater utility fee in anticipation of stormwater improvements, additional rate increases are not necessary to finance this project. Therefore, the projected cost for an average residential parcel will remain the same \$4.94 per month.

Number of Customers or Service Connections: The City Champaign has a total population of approximately 81,055. There are reported to be 19,311 single family or duplex dwelling parcels and 2,257 other parcels billed by the City.

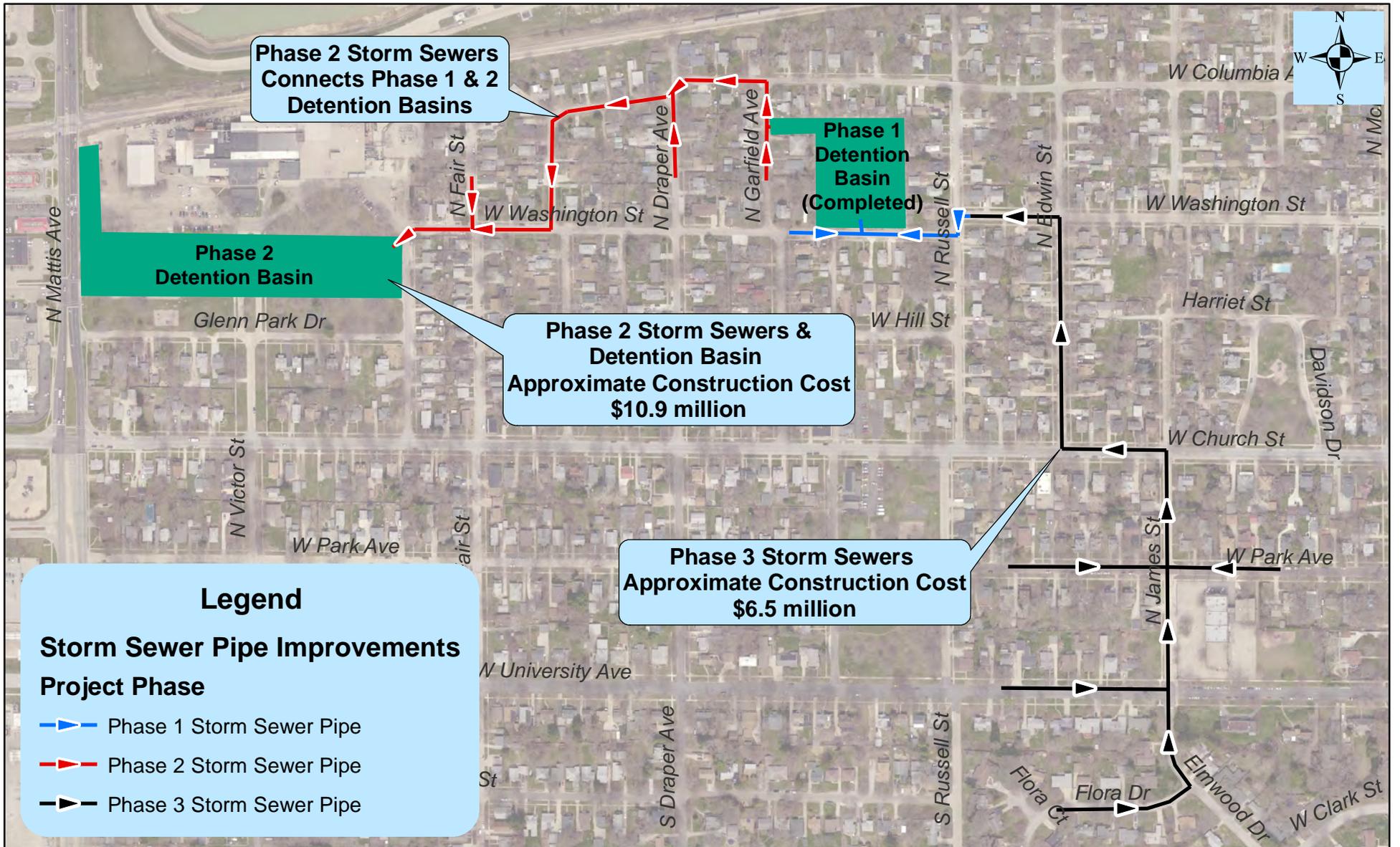
Median Household Income (MHI): The MHI for Champaign is \$42,077.

Financial Impact of the proposed project: In order to determine the financial impact of the proposed project on the community, a percentage comparison of the MHI to the annual cost for stormwater service is utilized. According to the most recent census information, the average MHI for the City of Champaign is \$42,077. The projected total annual stormwater utility fee cost of \$59.28, is 0.14 percent of the MHI for the area. Any amount less than 2.0 percent is considered to be affordable under State and Federal loan program criteria.

Public comments are invited on the proposed project. For further information contact:

Chris Nifong, Project Manager
Infrastructure Financial Assistance Section
Illinois Environmental Protection Agency
Bureau of Water
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

Phone # (217)782-2027



Attachment A

**- Figure 2-
West Washington Street Drainage Improvements
Project Phases**



**City of Champaign
Public Works Dept.
702 Edgebrook Dr.
Champaign, IL 61820**

**Supplemental Report To
2009 West Washington Street Watershed
Master Plan and Facility Plan**

April 2015

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Before the Agency will begin review of a Facilities Plan, **ALL of the items below** comprising the basic minimum requirements of a Facilities Plan must be included and the **page number(s) of ALL items** noted. **If any of the basic information is not provided the planning and loan application will be returned.**

Facilities planning should contain all pertinent information detailed in Ill Adm. Code 35 Section 365.520(e). Loan Applicant should be familiar with their planning responsibilities as detailed in Section 365.520 and 530.

Loan Applicant: City of Champaign Agency Use: L17

Consulting Engineer: Clark Dietz, Inc. Phone: (217) 403-4700

Project Description: Phase 2 West Washington Street Drainage Improvements.

This is a stormwater and flood control project that will utilize green infrastructure as project elements.

The attached facility plan and supplemental information provides details about the project.

Page(s)

3 * Loan applicant's background information including location, historical population, makeup of customer base, conditions affecting growth, and 20 year design population/customer base.
* Page 3 of Appendix A, Supplemental Report.

Fig. 1 * Map(s) of existing FPA boundaries and discussion of any necessary modifications.
Note: FPA boundary modifications entail additional requirements, review and sign-offs.
* Figure 1 on page 5 of Appendix A, Supplemental Report.

2-4 * Detailed description of the EXISTING collection system and treatment facilities, along with a clear identification for the need of the proposed project(s).
* Pages 2-4, Appendix A, Supplemental Report.

NA Where applicable, information regarding an anti-degradation analysis pursuant to Ill. Adm. Code 35 Section 302.105 for a new or modified NPDES Permit.

NA Discussion of existing and proposed NPDES Permit limits.

2-4 * Detailed discussion of the chosen alternative's capability to maintain compliance with all applicable laws and regulations in addition to addressing the identified system need(s).
* Pages 3-6, Appendix A, Supplemental Report.

1-6 * Basis of Design for Chosen Alternative. The preliminary engineering data should include, to the extent appropriate, flow diagrams, unit process descriptions, detention times, flow rates, unit capacities, etc. to demonstrate that the proposed project will be designed in accordance with 35 Ill. Adm Code 370.
* Pages 1-6, Appendix B, Supplemental Report.

Page(s)

1, 2 * Inventory of environmental impacts of chosen alternative and a discussion of the measures required during design and construction to mitigate or minimize negative environmental impacts. The discussion should address at a minimum; rare and endangered species, historic and cultural resources, prime agricultural land, air and water quality, recreational areas, wetlands, floodplains and other sensitive environmental areas.

Note: The IEPA Loan Applicant Environmental Checklist must be signed by the loan applicant's authorized representative and submitted to the Agency with all applicable sign-offs before a final Planning approval can be issued.

*** Pages 1, 2, Appendix C, Supplemental Report.**

Fig. 1 * Reproducible 8.5 x 11 inch map(s) showing the project(s) location(s) relative to the community.
* Figure 1 on Page 5, Appendix A, Supplemental Information.

1-5 * Detailed cost estimate for the alternative selected. Include cost items for design engineering, construction engineering, bidding, legal, construction and construction contingency.
* Page 1-5, Appendix D, Supplemental Report.

1 * Implementation plan for the proposed project including the anticipated construction schedule, the financial schedule, including necessary financial arrangements for assuring adequate annual debt service and O,M & R coverage requirements and a description of the dedicated source of revenue necessary for loan repayment. List any other funding involved in the project.
* Page 1, Appendix E, Supplemental Report.

1-15 * Detailed description of the existing residential rate structure, average water consumption or the basis for billing, current average monthly residential bill, any proposed rate changes and the proposed average monthly residential bill as a result of the project(s). **(See Page 3)**
* Page 1-15, Appendix F, Supplemental Report.

Three Copies of the Facilities Plan and related documents should be submitted to:

Infrastructure Financial Assistance Section (IFAS)
Illinois Environmental Protection Agency
1021 North Grand Ave. East
P.O. Box 19276
Springfield, IL 62794-9276

IFAS will distribute the planning documents to the appropriate Agency staff for review, comment and approval. IFAS will contact the loan applicant if further information is needed.

One copy of completed Existing User Charge and O,M, and R Certification Sheet found on page 3 (attached) should be submitted w/ the Facilities Plan

Number of current residential customers served by system 1,400
 Actual average residential water use per customer per month (based on historical billing data) NA
 Current average monthly residential bill: NA

Provide details that apply to your specific user rate charges or mark N/A in box:

NA Water Use Charges _____ per _____ Gallons
 _____ per _____ Cubic Feet

NA Flat Fee or Monthly User Charge _____

NA Debt Service Charge _____

NA Capital Improvement Charge _____

NA Wholesale Charge _____

NA Meter Service Fee _____ General
 _____ Amount _____ Size
 _____ Amount _____ Size

X Other Stormwater Utility Fee, see Appendix F of the Supplemental Information

1. Is the water/sewer fund annually operating in a positive or a negative balance at this time? (circle one) positive negative
2. Based upon your most recent annual budget please indicate the net operating income for your water/sewer fund: \$8.5 million
***Net Operating Income = Total Revenue - Total Cost of Providing Service**
***Total Revenue = Revenue from user charges, commercial, residential, or wholesale, plus any other dedicated water/sewer fund revenue**
***Total Cost of Providing Service = All Operation and Maintenance costs (including replacement fund) plus dedicated water/sewer fund debt**
3. Will a rate increase or other revenue generating action be necessary to pay for this project? (circle one) yes no
4. If a rate increase (or other cost increase) is necessary, please provide the proposed user rate charges and proposed average monthly residential water bill as an attachment.

 Authorized Representative (printed)

 Authorized Representative (signature)

 Date

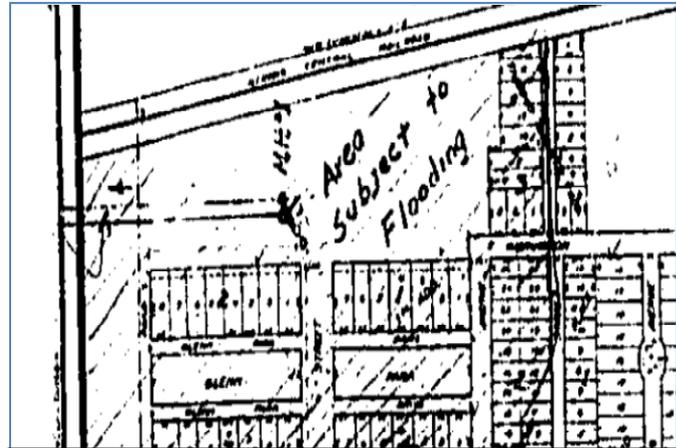
Appendix A

Project Overview

Appendix A – Project Overview

1.0 Project Summary

1.1 Introduction. The West Washington Street Watershed has a long history of flooding problems that date back to at least 1927. Between 2008 and 2014, heavy rainfall events in the City brought flooding back to the watershed again with hundreds of watershed residents experiencing flooded basements and impassable streets filled with floodwater. In addition, stormwater infiltration into the sanitary sewer system has caused reported sewage backups in basements and sanitary manhole overflows onto the ground. This reported pollution from the sanitary sewer system and non-point source pollutants from the watershed are mixing with floodwaters during heavy rain events to create potential health and safety issues and water quality issues in the Copper Slough Channel, which is the receiving stream for the watershed.



1927 City Map Indicating Watershed Flooding



1.2 Problem. The watershed is 408 acres in size with approximately 1,400 households located within the watershed boundaries. The watershed has approximately 74,000 feet of storm sewer in it that collects and directly transports stormwater to the Copper Slough Channel, which is located approximately a half mile to the west, as shown on Figure 1.

A hydraulic analysis of the watershed indicates that approximately 40 acre-feet of stormwater floods the watershed during the 50 to 100 year storm events. The flooding is primarily attributed to an undersized storm sewer system that was not built to today's design standards. In 2009, City Council established the West Washington Street Watershed as one of the top three watersheds within the City that needed stormwater infrastructure improvements.

1.3 Project Goal. The goal of this project is to bring the flood protection level in the watershed up to a 40-year standard by constructing new detention basins, storm sewer piping, rain gardens and other green infrastructure that absorbs stormwater. This comprehensive flood control strategy will reduce surface flooding and stormwater infiltration into the sanitary sewer system and contain many non-point source pollutants, which will improve stormwater quality in the watershed and the Copper Slough Channel. The City has completed Phase 1 of the project and is now moving forward with

Supplemental Report - West Washington Street Drainage Improvements

plans for Phase 2 and 3. The City would like to use the State Revolving Loan program as the funding source for the loan eligible components of Phase 2 and 3 of the project.

2.0 Existing Problem Analysis and Proposed Solutions

2.1 Introduction. The West Washington Street Watershed is located in an older developed, medium density, residential neighborhood that also has industrial and commercial land use practices in it. The watershed is 408 acres in size and has approximately 1,400 households within the watershed boundaries. Severe surface flooding has occurred numerous times in the watershed over the last seven years. Figure 1 depicts the magnitude of the flooding across the watershed with peak flood volume levels reaching 40 acre-feet and several feet in depth. This surface flooding triggers stormwater infiltration into the watershed's sanitary sewer system, which results in sewage backups into basements and sanitary manhole overflows. As a result of this flooding, watershed residents have experienced property damage and the loss of use of the street system at key flood prone areas.

The developed watershed has very little unused area for stormwater infiltration into the ground, and therefore stormwater runoff from the watershed drains directly into the storm sewer system, which discharges directly into the Copper Slough Channel, the watershed's receiving stream located approximately a half mile to the west. Since stormwater runoff drains directly into the storm sewer system, non-point source pollutants and sediment from the watershed are deposited into the Copper Slough Channel via the storm sewer system. During heavy rainfall events, sanitary sewer overflows also contribute pollutants to the stormwater that discharges into the Copper Slough Channel. The City's goal with this project is to reduce flooding and improve stormwater quality in the watershed by constructing improvements that include traditional stormwater infrastructure in conjunction with stormwater absorbing green features that slow down the rate of stormwater flow and help infiltrate non-point source pollutants before they reach the Copper Slough Channel. The City has successfully used this approach on other projects, such as the Boneyard Creek and John Street Projects.

2.2 Master Plan/Facility Plan Developed. A watershed drainage master plan/facility plan was completed in 2009 that indicated approximately 40 acre-feet of new detention basin storage was needed in order to achieve the flood control objective of providing a 40-year protection level for the watershed. A copy of the 2009 Watershed Master Plan/Facility Plan along with a 2012 update is included with this document submission.

The facility plan proposes the use of a comprehensive stormwater management strategy to reduce surface flooding and improve stormwater quality in the Copper Slough Channel. This comprehensive approach includes the use of traditional detention basins at multiple locations throughout the watershed along with new storm sewers and stormwater absorbing infrastructure such as rain gardens, bio-swales, permeable pavements and deep rooted native plantings. By incorporating detention basins and green infrastructure into the project, the first flush of non-point source pollutants from cars, lawns, litter, yard waste, and pet waste will be captured before they enter the Copper Slough Channel. This approach will reduce the flow rate and improve stormwater quality in the Copper Slough Channel. In addition, stormwater infiltration into the sanitary sewer system will be reduced resulting in fewer sanitary sewer overflows in the watershed and Copper Slough Channel.

Supplemental Report - West Washington Street Drainage Improvements

Another added benefit of the comprehensive approach is that new park-like green spaces will be created around the detention basins, which will be an educational amenity and recreation area for the community to enjoy.

2.3 Proposed Solution. Due to the scale and high cost of the improvements proposed in the 2009 Facility Plan, the project was divided into three phases, as shown on Figure 2. Phase 1 of the plan was completed in November 2014. This phase included a detention basin, storm sewer installation, rain gardens, and a bio-swale at the intersection of North Russell Street and West Washington Street, where the watershed experienced some of the worst flooding. Phase 2 and 3 of the project will incorporate a detention basin and storm sewer improvements that will be tied into the Phase 1 improvements in order to have an integrated system that reduces flooding and improves stormwater quality. Phase 2 of the project is currently in the final design stage and Phase 3 has not been started yet. The three phases of the project are discussed in more detail in Section 2.4 through 2.6 below.

The 2009 Facility Plan was updated in 2012 to account for the availability of property for detention basins. Details of this update are included in the attached Technical Memorandum, dated March 21, 2012 and entitled in the subject line “West Washington Watershed Drainage Analysis Update”.

2.4 Phase 1 (Completed in 2014). Phase 1 was completed in November 2014 and consisted of new large diameter storm sewer pipes, an 11 acre-feet detention basin, curb-cut inlets, a bio-swale, deep rooted native plantings and rain gardens. This design is intended to improve stormwater quality, provide hydraulic relief of the storm sewer system, and reduce local flooding. The rain gardens not only provide stormwater improvements but will also be used as an educational tool to demonstrate the use of natural storage to infiltrate stormwater. The detention basin itself will collect non-point source pollutants, sediments, litter and debris, which will be removed by the City’s maintenance plan. Furthermore the slopes of the basin have been seeded with native prairie plants and native wetland plugs are planted along the shore line. The Phase I detention basin also includes community amenities, such as a lighted walking path around the basin, benches, a gazebo, rock outcroppings and landscape beds to create a park-like setting in the neighborhood. Figure 3 shows the completed Phase 1 project.

2.5 Phase 2. Phase 2 includes a 17.8 acre-feet detention basin located along Glenn Park Drive and the installation of a new storm sewer system that ties the Phase 1 detention basin to the Phase 2 detention basin. In addition, Phase 2 will include deep rooted native plants along the detention basin side slopes, wetland plugs along the shore line, a bio-swale, and a large rain garden/bioretenion feature. Figure 4 shows a rendering of the concept plan for the Phase 2 detention basin with a large rain garden/bioretenion feature that will be able to collect non-point source pollutants from street runoff and the WIRCO foundry’s parking lot and building runoff. The detention basin itself will also function as a sediment removal device, which will keep sediment out of the Copper Slough Channel.

In addition, the City is proposing to create curb cuts that drain into roadside bio-swales along the route of the new storm sewer that will connect the Phase 1 detention basin with the Phase 2 detention basin.

The Phase 2 detention basin is located at one of the lowest topographic areas in the watershed, which makes it the best location for a detention basin. Most of the land that the City needs to purchase in order to complete the project is vacant, and owned by WIRCO (an industrial plant); so the City will

Supplemental Report - West Washington Street Drainage Improvements

not have to displace residential occupants. The land located to the south of the Phase 2 detention basin is owned by the Champaign Park District, who are very supportive of the project. One of the project goals is to create a new green space that is an extension of the existing Glenn Park that is located south of the detention basin. This will become an amenity and a recreational area for community members to enjoy. The City will have to eliminate the westbound leg of Glenn Park Drive in order to construct the Phase 2 detention basin, which will reduce impervious surfaces in the area. A separate truck entrance will be constructed into the WIRCO foundry, which will eliminate truck traffic on local residential streets.

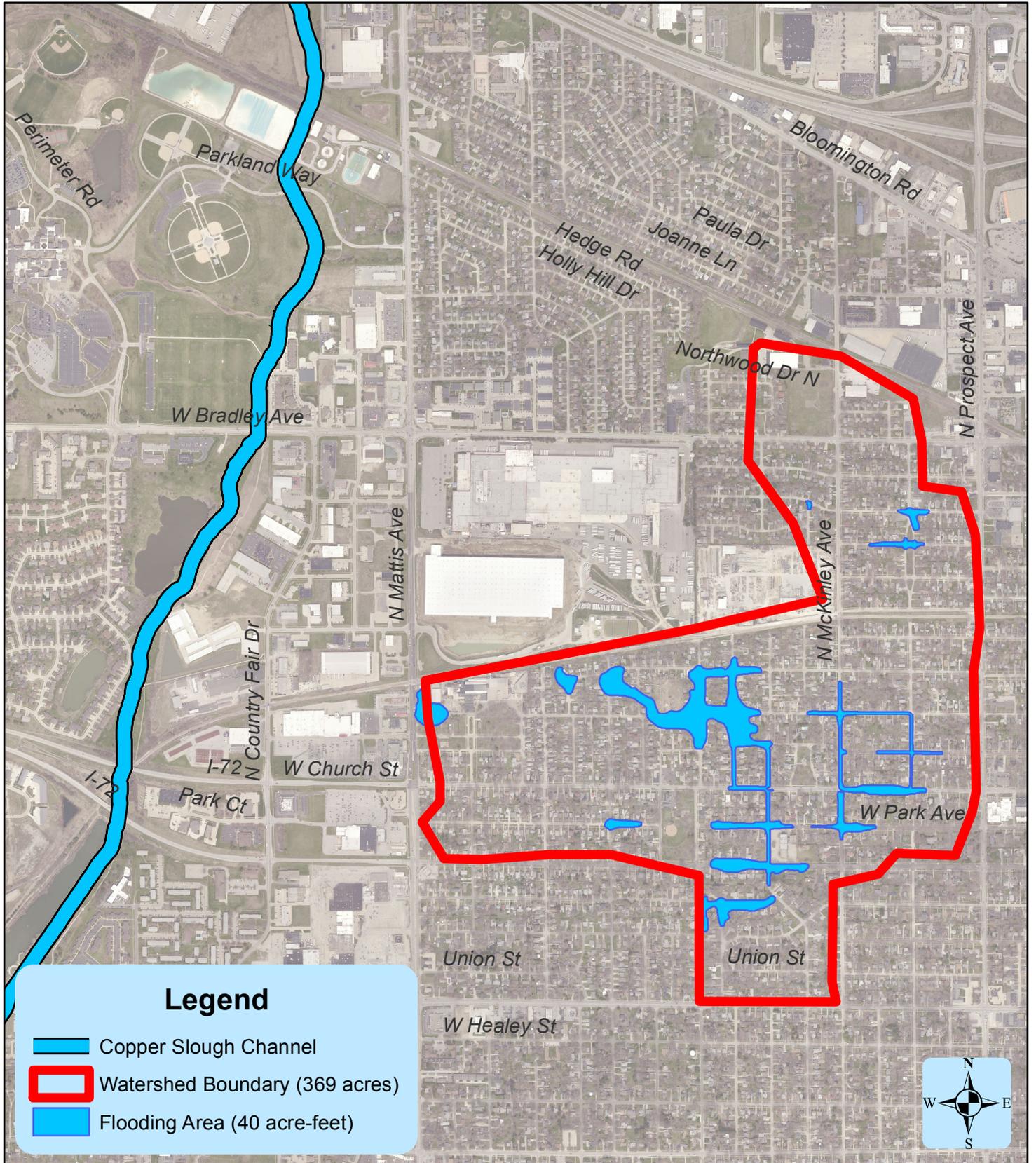
Final design for Phase 2 is \$778,910 and the construction cost is estimated to be approximately \$10.6 million. The City anticipates that Phase 2 will be constructed in 2016.

2.6 Phase 3. Phase 3 of the project consists of a new storm system that will be extended to the flooding areas located to the south of the Phase 1 detention basin, as depicted on Figure 2. Specially, storm sewers will be extended along Edwin Street to Park Street, University Avenue and Flora Court where severe flooding occurs in the watershed. The storm sewers in Phase 3 will discharge into the Phase 1 detention basin, which will remove sediment and non-point source pollutants from this watershed sub-basin. It is anticipated that final design on Phase 3 will begin in 2016 and construction in 2017. Final design for Phase 3 is estimated to be approximately \$600,000 and the construction cost is estimated to be approximately \$6.0 million.

2.7 Stormwater Quality Public Education And Buy In. The success of the Phase 1 improvements is attributed to effective communications and the development of a partnership between the City and the residential Steering Committee on the project. This City-Steering Committee partnership has been carried into the planning and design for Phase 2. In addition, the City has been partnering and coordinating with project stakeholders on the Phase 2 project, including the Park District, IDOT, and WIRCO, who is one of the major private industrial businesses in the watershed. Through these partnerships, the City has gained valuable information about the watershed that typical computer modeling cannot predict, such as areas with large numbers of flooded basements and sanitary overflows.

In addition, these partnerships have given City staff an opportunity to discuss the benefits of the green infrastructure approach with the Steering Committee and watershed stakeholders, who in turn reach out to watershed residents to discuss these practices. This approach has helped to foster buy in from watershed residents on the flood control and stormwater quality aspects of using rain gardens, bio-swales, deep rooted native plants around the detention basin, and other green infrastructure practices on the projects. By providing green infrastructure on the Phase 1 project, the City has a real-world example in the watershed to show residents how these practices work. Including green infrastructure in future project phases will help to further promote these practices on a City-wide level.

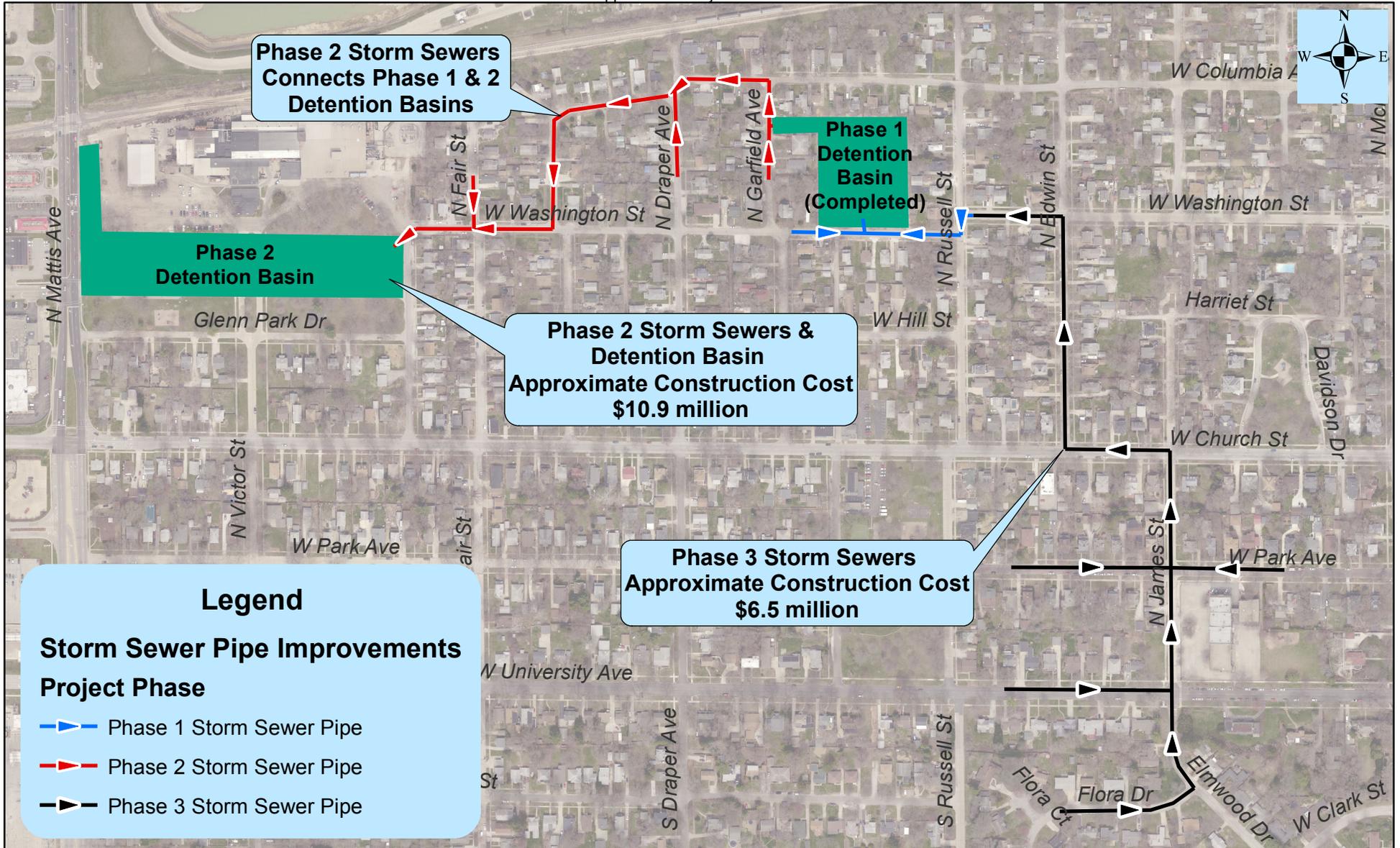
Some homeowners in the watershed have taken advantage of the City's stormwater utility rebate programs that offers cash incentives to purchase rain barrels, plant rain gardens, or construct permeable pavement, and green roofs on private property. This approach provides additional flood protection and stormwater quality improvement to the City's storm sewers by diverting the stormwater runoff from roofs and driveways.



**- Figure 1 -
West Washington Street Drainage Improvements
Flooding Area**



City of Champaign
Public Works Dept.
702 Edgebrook Dr.
Champaign, IL 61820



**- Figure 2-
West Washington Street Drainage Improvements
Project Phases**



City of Champaign
Public Works Dept.
702 Edgebrook Dr.
Champaign, IL 61820

– Figure 3 – West Washington Street Drainage Improvements Phase 1 Detention Basin



4,900 square feet of rain gardens,
600 square feet of bioswale
with curb cuts to drain
stormwater off the street.





Glenview Park Stormwater Basin Alternate 1



Glenview Park Multi-Use Path Character

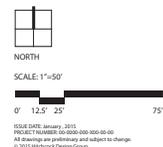


Glenview Park Neighborhood Character

Figure 4 - Phase 2 Detention Basin (17.8 acre-feet)



Basin Alternate 1
West Washington St Drainage Improvements, Phase II
 Champaign, Illinois



PREPARED FOR
City of Champaign
 IN ASSOCIATION WITH
Clark-Dietz

DATE: 01/15/2015
 PROJECT NUMBER: 00-000-000-00-00
 All drawings are preliminary and subject to change.
 © 2015 Hitchcock Design Group



Glenview Park From Mattis Avenue



Glenview Park From Miller Avenue

Figure 4 - Phase 2 Detention Basin (17.8 acre-feet)



Basin Alternate 1
West Washington St Drainage Improvements, Phase II
 Champaign, Illinois



NORTH



ISSUE DATE: January, 2015
 PROJECT NUMBER: 00-000-000-00-00
 All drawings are preliminary and subject to change.
 © 2015 Hitchcock Design Group

DESIGNED FOR:
 City of Champaign

IN ASSOCIATION WITH:
 Clark-Dietz

Appendix B
March 21, 2012 Technical Memorandum
“West Washington Watershed
Drainage Analysis Update”



TECHNICAL MEMORANDUM

To: City of Champaign
From: Clark Dietz, Inc.
Date: March 21, 2012
Subject: West Washington Watershed Drainage Analysis Update

Purpose of Discussion

The proposed improvements developed in the West Washington Street Watershed Master Plan for the City of Champaign in September 2009, identified a recommended drainage improvement strategy that combined conveyance and detention improvements to address flooding in the watershed. These improvements included four local detention ponds and a new trunk sewer connecting local drainage problem areas with the detention basins. Upon initial review of the four detention pond sites, it was determined that the Concrete Facility Pond would not be feasible and therefore the City would only move forward with three of the four ponds. The Glenn Park East and West Ponds (formerly the Alloy Casting Ponds) will be slightly modified according to initial discussions between the City and the property owner. The west pond will be more rectangular and not extend as far north along Mattis Avenue, while the east pond will have a more curved northern bank that follows the curvature of the existing pavement. The proposed Edwin Street Trunk Sewer would also be realigned along Edwin Street and James Street, rather than Russell Street. The trunk sewer would also extend further south to connect a local depression on Flora Drive directly to the new trunk sewer. Discussion in the following sections will address these changes and discuss additional design details of each component of the proposed watershed drainage improvements.

Robinson Court Detention Pond Design Considerations

The Robinson Court Detention Pond (Figure 1) will serve as the critical component in the storm water management strategy for this watershed due to the close proximity to the severe and frequent flooding that occurs at the intersection of Russell Street and Washington Street. The Robinson Court site is approximately 2.1 acres (275 ft by 335 ft) and has been purchased by the City in anticipation of the detention pond. The basin will have a 20 foot buffer strip around the pond, with a 10:1 slope, so that a vegetative cushion and decorative fence can be installed around the pond. The actual basin footprint will be 1.61 acres at an elevation of 757.0 and be sloped at a 3:1 side slope to the bottom (0.96 acres at 747.0). The bottom of the basin would slope towards the outlet pipe at an elevation of 744.2.

The new 54-inch diameter Edwin Street Trunk Sewer would discharge into the pond at the southeast corner and a multi-stage outlet structure would connect the pond to the existing 36-inch diameter storm sewer. The pond outlet structure would consist of an 18-inch diameter sewer at an invert elevation of 744.2, a 30-inch diameter sewer with an invert elevation of 749.0, and a six foot long overflow weir at an elevation of 754.5. The 18-inch outlet pipe is designed to convey base flows in the watershed, small wet weather events, and dewater the basin after large wet weather events. The conveyance capacity of the 18-inch pipe is significantly lower than the 54-inch inflow pipe, which will result in detained flows without overwhelming the downstream existing 36-inch storm sewer. In order to closer match the flow in the existing 36-inch storm sewer for medium

*TECHNICAL MEMORANDUM – Champaign, Illinois
West Washington Drainage Analysis Update*

sized (1-year to 10-year) wet weather events, a second pipe would be installed approximately halfway up the slope of the basin. This pipe would need to be 30-inch diameter and will convey flows to the downstream 36-inch pipe without overflowing the weir up to the peak 10-year storm event. Any wet weather event in excess of the 10-year storm event or any debris blockage of the two outlet pipes would result in flow over the six foot long overflow weir into the 36-inch sewer. The two outlet pipes will be the primary methods of draining the basin; however, the overflow weir will act as a redundant outlet path that will limit the surface flooding in the system if a problem occurs with the pond outlet pipes.

Figure 1: Robinson Court Pond



The storm water detention within the Robinson Court Pond would be in the 7.5 to 13 acre-feet range for medium to large wet weather events. The overflow weir elevation was set at an elevation that would limit the flooding at the intersection of Russell Street and Washington Street when there was a few inches of flow over the weir; however, during large wet weather events flows in the new Edwin Street Trunk Sewer will exceed the conveyance capacity of the downstream 36-inch sewer and the detention capacity of the pond. In this instance, a small notch on the southeast corner of the pond would be needed to direct flow towards the intersection of Russell Street and Washington Street to control where the excess water is directed.

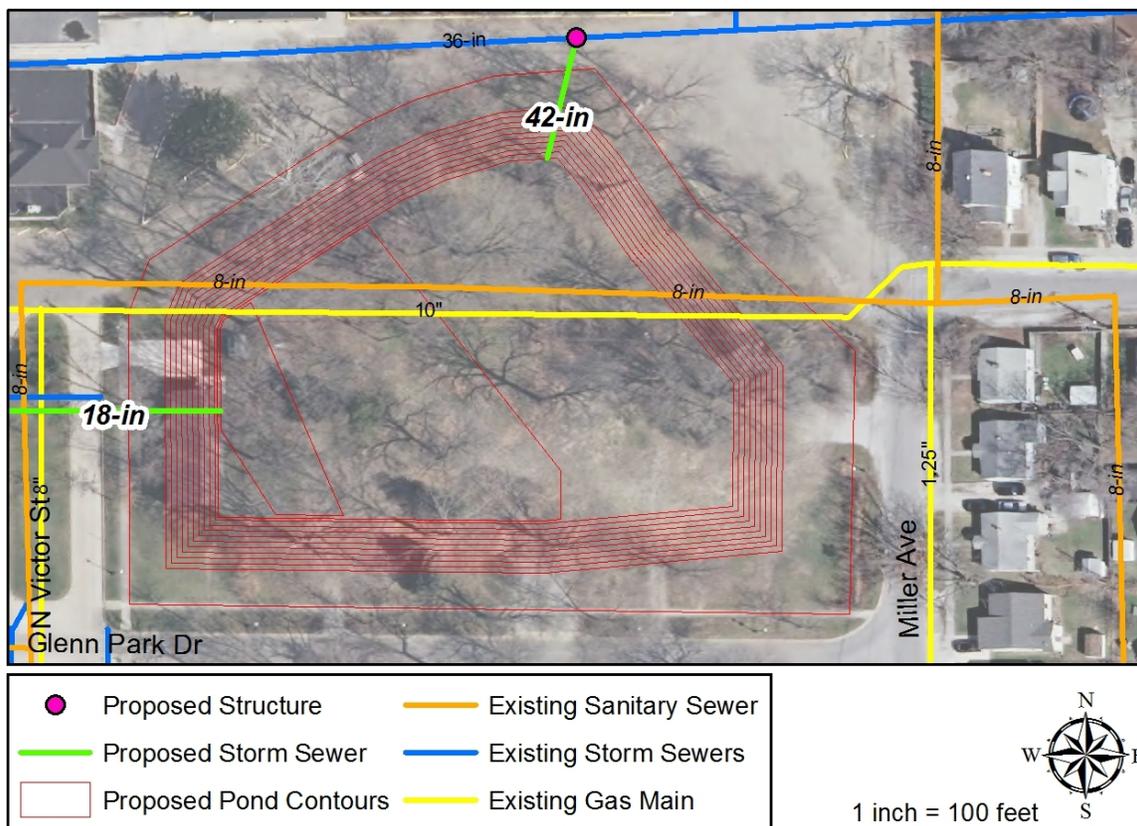
Glen Park Detention Ponds Design Considerations

The ponds northeast of the intersection of Mattis Avenue and Glenn Park Drive were named the Alloy Casting Ponds in the West Washington Street Watershed Master Plan. These ponds have been renamed Glenn Park East and Glenn Park West Ponds to avoid the numbering confusion and

*TECHNICAL MEMORANDUM – Champaign, Illinois
West Washington Drainage Analysis Update*

accommodate the facility name change. These two ponds will almost act like a single pond; however, due to variations in the surrounding topography at each of the two pond sites, a smaller (18-inch) cross connection pipe will be used to allow a slight elevation difference between the two ponds as the ponds are filling. The Glenn Park East Pond previously had a maximum footprint of 1.0 acre in the watershed master plan, but under the new pond extents and layout, shown in Figure 2, the site is approximately 2.2 acres and the pond footprint is 1.57 acres. The top pond contour would be at elevation 748.0 and the pond would also have a 20 foot buffer between the sidewalk and the pond for either a vegetative or decorative fence boundary. The pond would have side slopes at 3:1 to elevation 739.0 (1.0 acre), where the bottom would slope to the west to the 18-inch outlet pipe that conveys flows to the Glenn Park West Pond. The pond inflow would consist of a new 42-inch diameter pipe from the 36-inch existing trunk sewer, where a diversion structure would need to be located to ensure that base flow is directed past the detention basins.

Figure 2: Glenn Park East Pond



The emergency overflow of the pond would need to cross Victor Street at the north end of the roadway, where existing pavement elevations are around 747.5. No regarding or modifications to Victor Street should be necessary in order to convey the water west to the Glenn Park West Pond; however, modeling shows that during the 100-year storm event, overflows via the emergency overflow weir should be only a couple of inches deep during the peak of the event. Pond detention volumes would typically be between 5.0 and 12.0 ac-ft for medium to large wet weather events. An issue that will need to be addressed during design is the relocation of the sanitary sewer around the eastern and southern banks.

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West Washington Drainage Analysis Update*

Figure 3: Glenn Park West Pond



The Glenn Park West Pond in Figure 3 is approximately 1.16 acres, on a 1.7 acre site and will be the most downstream pond of the three new ponds. The pond will have a similar 3:1 side slope and buffer zone at the top and will have a top elevation of 745.0 and bottom of 736.1. The pond inlet will be the 18-inch pipe from the Glenn Park East Pond; however, the outlet structure will also double as the pond inlet during the early parts of the storm event. The outlet will consist of a 10-inch diameter pipe with an invert elevation of 736.1 and a six foot long overflow weir at an elevation of 743.5. Due to the low area to the northwest of the basin, there is no official emergency overflow weir, but the existing low area will contain a few inches of standing water during the 100-year storm event.

An existing gas main is located along the northern side of both ponds and may need to be relocated. Further investigation is required to determine the exact location and depth of the gas main and impacts to the ponds.

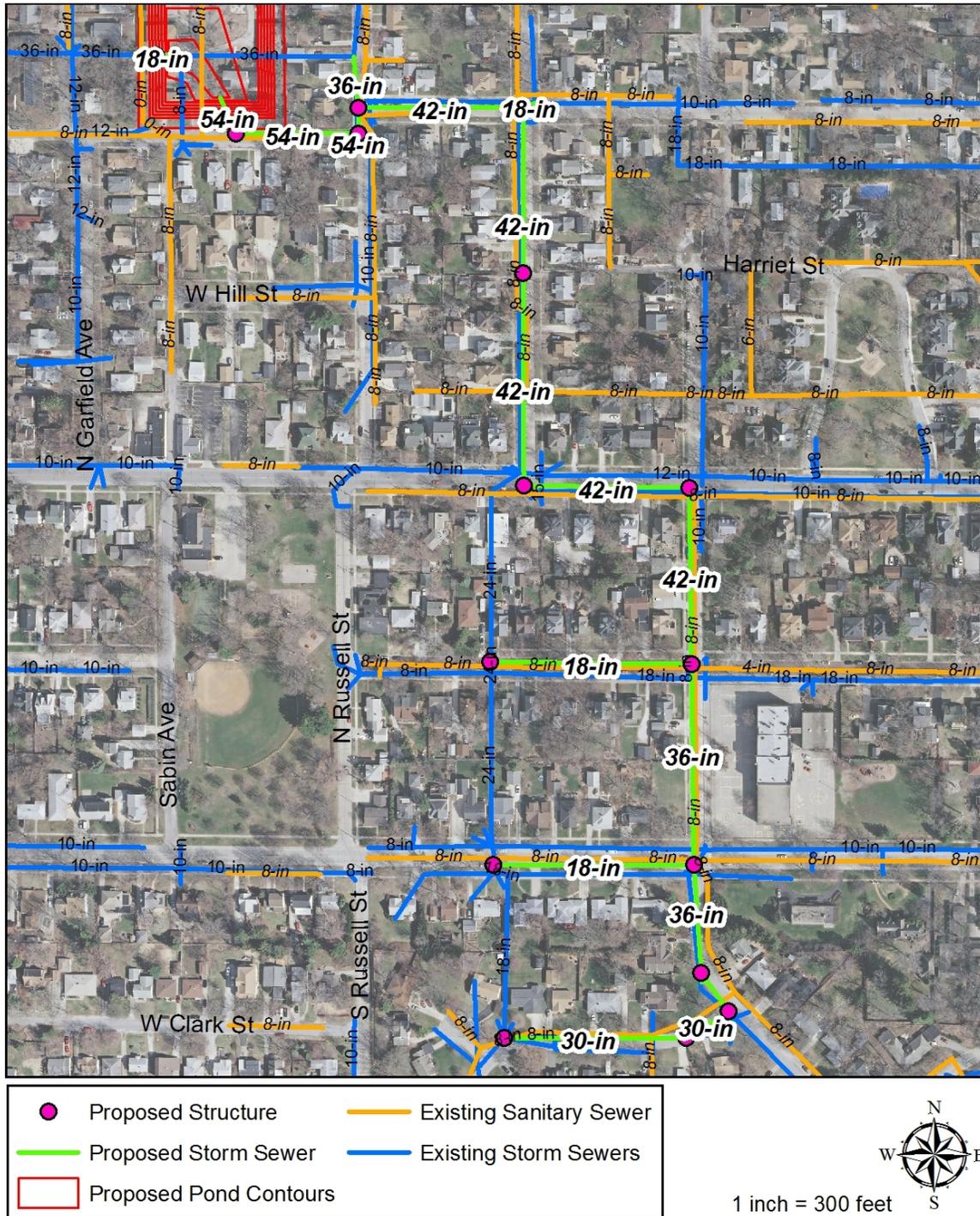
Edwin Street Trunk Storm Sewer Design Considerations

Local flooding issues along the existing Edwin Street Trunk Sewer at Flora Drive, University Avenue, and Park Avenue are a result of an undersized sewer and downstream flooding elevating the hydraulic grade line in the system. The Robinson Court Pond will be constructed to lower the downstream water elevation, while the undersized sewer issue is addressed by replacing the existing trunk sewer with a larger diameter pipe. This new trunk storm sewer will locate the pipe

TECHNICAL MEMORANDUM – Champaign, Illinois
West Washington Drainage Analysis Update

within City right-of-way and directly connect the upstream drainage issues to the new storm water detention basin at Robinson Court.

Figure 4: Edwin Street Trunk Storm Sewer



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West Washington Drainage Analysis Update*

The new Edwin Street Trunk Storm Sewer, shown in Figure 4, will require approximately 4,200 lineal feet of storm sewer ranging in size from 18 inches to 54 inches. The 54-inch diameter sewer will run from the Robinson Court Pond to the intersection of Russell Street and Washington Street. The slope of the pipe would need to be near 0.1% in order to remain deep enough to avoid the existing sanitary sewer on Russell Street and connect the McKinley Avenue Trunk Sewer with a new 36-inch diameter sewer down Russell Street. The 42-inch diameter pipe would extend upstream to the intersection of James Street and Park Avenue, with a 0.2% slope and several drops at manholes to follow the relatively steep grade of Edwin Street and avoid the sanitary sewer on Edwin Street. A 36-inch diameter sewer down James Street, to Flora Drive would need to avoid the existing sanitary sewer on University Avenue at a 0.2% slope and would need to connect to the existing sewer on James Street from the south.

The local flooding areas would connect to the new Edwin Street Trunk Storm Sewer with 18-inch diameter pipes along Park Avenue and University Avenue and a 30-inch diameter pipe along Flora Drive. These local collector sewers could either connect to existing manholes and inlets if sufficient configuration and inlet openings are determined or with new manholes and inlet configurations. The inlet openings will be the limiting factor of localized flooding for most events smaller than the 10-year storm event; however, inlet opening and the downstream hydraulic grade line will result in localized flooding for storm events in excess of the 10-year event.

Basin Characteristics and Results Summary Tables

The following table summarizes the basin characteristics and simulation results of the three proposed detention basins.

Basin	Robinson Court	Glenn Park East	Glenn Park West
Bottom Elevation	744.2	738.0	736.1
Top Elevation	757.0	748.0	745.0
Maximum Depth (ft)	12.8	10.0	8.9
Site Size (ac)	2.1	2.2	1.7
Basin Footprint (ac)	1.61	1.57	1.16
Inlet Pipe Diameter (in)	54	42	18
Inlet Pipe Invert	744.6	739.8	737.7
Outlet Pipe Diameter (in)	18/30	18	10
Outlet Pipe Invert	744.2/749.0	738.0	736.1
Overflow Weir Length (ft)	6	N/A	6
Overflow Weir Elevation	754.5	N/A	743.5
Emergency Overflow	SE Corner	NW Corner	None
Maximum HWE before nearby flooding	754.9	746.5	744.0
2-year HWE	753.19	742.63	741.62
2-year Storage Volume (ac-ft)	8.20	4.57	3.53
2-year Max Discharge Rate (cfs)	43.26	8.59	3.00
10-year HWE	754.61	744.09	743.16
10-year Storage Volume (ac-ft)	10.19	6.40	5.00
10-year Max Discharge Rate (cfs)	45.07	9.22	3.34
100-year HWE	756.53	747.89	744.34
100-year Storage Volume (ac-ft)	13.09	11.87	6.28
100-year Max Discharge Rate (cfs)	44.93	12.04	16.93

Appendix C

Environmental Impact Analysis

Appendix C – Environmental Impact Analysis

1.1 Evaluation of Environmental Impacts

This section includes an evaluation of the environmental impacts of the proposed project. The evaluation was completed for the following features:

- Farmland
- Air Quality (dust, odor, etc.) Groundwater
- Sole Source Aquifer Drinking Water Supplies 100-Year Floodplains
- Displacement due to structures sited in the floodplain Wetlands
- Surface Waters
- Natural & Scenic Rivers (310 IAC 4) Exceptional Use Streams (IAC 327 2-1-11 (b)) Outstanding State Resources (IAC 327 2-1-2(3))
- Federally & State-listed Endangered & Non-endangered plant & animal species and their habitats
- Historical I Architectural I Archeological sites Open Space & Recreational Opportunities National Natural Landmarks

All of the proposed detention basin and storm sewer work will occur in existing or proposed public right-of-ways and easements. The existing land has been previously disturbed as part of the original road construction or development.

The following sections describe impacts on the above environmental features.

1.2 Farmland. The location of the proposed stormwater infrastructure improvements is surrounded by residential and commercial areas. Farmland will not be impacted by the proposed improvements.

1.3 Air Quality. Short-term (construction related) impacts to the study area include noise and dust generated by construction activities. The construction contractors will be required to minimize noise during construction through the use of equipment properly fitted with mufflers and noise deadening devices. The construction contractors will be required to control dust during construction through measures including, but not limited to the use of watering trucks and street sweepers.

No long-term (operational) negative impacts exist.

1.4 Groundwater. Short-term (construction related) impacts to the study area include the likely need for localized dewatering of portions of the excavations to facilitate the construction of the proposed improvements. There are no anticipated negative impacts from groundwater along the proposed sewer route.

No long-term (operational) negative impacts exist.

Supplemental Report - West Washington Street Drainage Improvements

- 1.5 Sole Source Aquifer.** The construction and operation of the proposed project will not impact a sole source aquifer.
- 1.6 Drinking Water Supplies.** The construction and operation of the proposed project will not impact drinking water supplies.
- 1.7 100-Year Floodplain.** The proposed stormwater infrastructure improvements are located outside of the 100-year floodplain boundary. The 100-year floodplain will not be used as a source of fill nor will any fill be placed in the floodplain as a result of this activity.
- 1.8 Wetlands.** No existing wetlands will be impacted by this project.
- 1.9 Surface Waters.** The construction and operation of the project will not negatively impact surface waters. The project will not adversely affect Exceptional Use streams, Outstanding State Resource waters or Natural and Scenic Rivers.
- 1.10 Endangered Species and Habitat.** The construction and operation of the project will not negatively impact state or federal- listed endangered species or their habitat. The project will be implemented to minimize impact to non-endangered species and their habitat.
- 1.11 Historical/Architectural/Archeological Sites.** The construction and operation of the project will not negatively impact any historical, architectural, or archaeological sites.
- 1.12 Open Space and Recreational Areas.** The proposed project's construction and operation will not destroy any open space or recreational areas. The project will be constructed adjacent to an existing park and the intent of the project is to create new green space to compliment the park. See the project narrative for a detail description of the project.
- 1.13 National Natural Landmarks.** The construction and operation of the proposed project will not impact National Natural Landmarks.
- 1.14 Potential Mitigation Measures.** The construction contractor(s) will be required to provide best management practice erosion control measures such as silt fence installation, straw bale inlet protection, etc. throughout the duration of the construction of the project. Dust will be minimized through measures such as use of watering trucks and street sweepers on a daily basis. Noise will be minimized through use of properly maintained construction equipment.
- Other mitigation measures as outlined by IEPA, IDNR, the U.S. Fish and Wildlife Service or other appropriate agencies will be utilized as outlined in any correspondence received.
- 1.15 Induced Impacts.** The City of Champaign will ensure, through local zoning laws and other means, that future development, as well as future collection and distribution systems, storage or treatment works projects will not negatively impact archaeological/historical/structural resources. The City of Champaign will require new development and treatment works projects to be constructed within the guidelines of IEPA, IDNR, Natural Resources Conservation Services, U.S. Fish and Wildlife Service and other environmental review agencies.

Appendix D

Project Costs

Table 1 - West Washington Drainage Improvements Phase 2 Costs		
Item	Amount	Loan Reimbursable Amount
Design Engineering/Bidding	\$778,910	\$613,002
Construction	\$10,674,524	\$8,401,432
Construction Engineering	\$1,067,452	\$840,085

Total \$12,520,886 \$9,854,519

Table 2 - West Washington Drainage Improvements Phase 3 Costs		
Item	Amount	Loan Reimbursable Amount
Design Engineering/Bidding	\$480,000	\$480,000
Construction	\$6,000,000	\$6,000,000
Construction Engineering	\$480,000	\$480,000

Total \$6,960,000 \$6,960,000

Total For Phase 2 and 3 \$16,814,519

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRELIMINARY ESTIMATE OF COST
W. WASHINGTON ST. PHASE 2
DRAINAGE IMPROVEMENTS

Project Washington St. Ph. 2
Route
Section
City Champaign

COLUMBIA AVE. STORM SEWER ROUTE & GLENN PARK BASINS ALT. 1

CODE NO.	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL COST
	TREE REMOVAL AND PRUNNING	L SUM	1	\$50,000.00	\$50,000.00
20200100	EARTH EXCAVATION	CU YD	67,600	\$10.00	\$676,000.00
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	200	\$25.00	\$5,000.00
21000300	GRANULAR EMBANKMENT, SPECIAL	TON	410	\$35.00	\$14,350.00
21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	550	\$4.50	\$2,475.00
21101505	TOPSOIL EXCAVATION AND PLACEMENT	CU YD	2,300	\$12.00	\$27,600.00
21101625	TOPSOIL FURNISH AND PLACE, 6"	SQ YD	7,000	\$8.00	\$56,000.00
21101645	TOPSOIL FURNISH AND PLACE, 12"	SQ YD	400	\$15.00	\$6,000.00
	SEEDING, FERTILIZER, AND MULCH	ACRE	2.0	\$6,000.00	\$12,000.00
25200100	SODDING	SQ YD	7,200	\$9.00	\$64,800.00
25200200	SUPPLEMENTAL WATERING	UNIT	170	\$100.00	\$17,000.00
28000400	PERIMETER EROSION BARRIER	FOOT	1,000	\$4.00	\$4,000.00
28000500	INLET AND PIPE PROTECTION	EACH	5	\$200.00	\$1,000.00
28000510	INLET FILTERS	EACH	54	\$250.00	\$13,500.00
35100700	AGGREGATE BASE COURSE TYPE, A 8"	SQ YD	4,500	\$16.00	\$72,000.00
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	50	\$50.00	\$2,500.00
40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	200	\$60.00	\$12,000.00
	HOT-MIX ASPHALT SURFACE COURSE	TON	400	\$125.00	\$50,000.00
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	150	\$300.00	\$45,000.00
	PCC PAVEMENT 8"	SQ YD	8,200	\$54.00	\$442,800.00
42300200	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 6 INCH	SQ YD	470	\$70.00	\$32,900.00
42300400	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH	SQ YD	900	\$75.00	\$67,500.00
42400300	PORTLAND CEMENT CONCRETE SIDEWALK 6 INCH	SQ FT	19,500	\$7.50	\$146,250.00
	PORTLAND CEMENT CONCRETE SIDEWALK 7 INCH	SQ FT	10,000	\$8.50	\$85,000.00
42400800	DETECTABLE WARNINGS	SQ FT	336	\$25.00	\$8,400.00
44000100	PAVEMENT REMOVAL	SQ YD	1,200	\$11.00	\$13,200.00
44000155	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"	SQ YD	3,800	\$5.00	\$19,000.00
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	2,980	\$15.00	\$44,700.00
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	3,760	\$9.00	\$33,840.00
44000600	SIDEWALK REMOVAL	SQ FT	8,800	\$2.00	\$17,600.00
	STORM SEWER 12"	FOOT	470	\$60.00	\$28,200.00
	STORM SEWER 15"	FOOT	320	\$70.00	\$22,400.00
	STORM SEWER 18"	FOOT	60	\$75.00	\$4,500.00
	STORM SEWER 24"	FOOT	90	\$85.00	\$7,650.00
	STORM SEWER 36"	FOOT	190	\$130.00	\$24,700.00
	STORM SEWER 42"	FOOT	1,320	\$150.00	\$198,000.00
	STORM SEWER 54"	FOOT	590	\$190.00	\$112,100.00
	SANITARY SEWER 8"	FOOT	600	\$90.00	\$54,000.00
	STORM SEWER REMOVAL	FOOT	1,520	\$20.00	\$30,400.00
	SANITARY SEWER REMOVAL	FOOT	600	\$15.00	\$9,000.00
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	4,420	\$95.00	\$419,900.00
	PIPE UNDERDRAINS	FOOT	150	\$25.00	\$3,750.00
	MANHOLES 4' DIA.	EACH	5	\$2,800.00	\$14,000.00
	MANHOLES 5' DIA.	EACH	2	\$4,000.00	\$8,000.00
	MANHOLES 6' DIA.	EACH	1	\$5,200.00	\$5,200.00
	MANHOLES 7' DIA.	EACH	10	\$9,000.00	\$90,000.00
	MANHOLES 9' DIA.	EACH	2	\$14,000.00	\$28,000.00
	SANITARY MANHOLES	EACH	5	\$3,500.00	\$17,500.00
	BASIN OVERFLOW STRUCTURE	EACH	1	\$35,000.00	\$35,000.00
	OUTLET STRUCTURE	EACH	1	\$35,000.00	\$35,000.00
	INLETS	EACH	34	\$1,700.00	\$57,800.00
	MANHOLES TO BE ADJUSTED	EACH	13	\$500.00	\$6,500.00

Appendix D - Project Costs

CODE NO.	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL COST
	REMOVING MANHOLES	EACH	9	\$600.00	\$5,400.00
	REMOVING INLETS	EACH	22	\$500.00	\$11,000.00
60604400	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.18	FOOT	5,800	\$28.00	\$162,400.00
67000400	ENGINEERS FIELD OFFICE	CAL MO	12	\$2,000.00	\$24,000.00
67100100	MOBILIZATION	L SUM	1	\$407,000.00	\$407,000.00
	TRAFFIC CONTROL AND PROTECTION	L SUM	1	\$122,000.00	\$122,000.00
	PAVEMENT MARKINGS	L SUM	1	\$24,000.00	\$24,000.00
Z0004542	HOT-MIX ASPHALT REMOVAL (SPECIAL)	SQ YD	7,800	\$9.00	\$70,200.00
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	\$122,000.00	\$122,000.00
XX007733	SALVAGED AGGREGATE MATERIAL 8"	SQ YD	6,000	\$10.00	\$60,000.00
	CLASS C PATCH, 8"	SQ YD	200	\$130.00	\$26,000.00
	TRAFFIC SIGNAL SYSTEM RECONSTRUCTION	L SUM	1	\$200,000.00	\$200,000.00
	REMOVE LIGHTING SYSTEM	L SUM	1	\$10,000.00	\$10,000.00
	SITE LIGHTING SYSTEM	L SUM	1	\$374,000.00	\$374,000.00
	BUILDING REMOVALS	L SUM	1	\$60,000.00	\$60,000.00
	SPECIAL WASTE REMEDIATION	L SUM	1	\$5,000.00	\$5,000.00
	REINFORCED CONCRETE RETAINING WALLS	FOOT	630	\$3,400.00	\$2,142,000.00
	PEDESTRIAN RAILING 6'	FOOT	670	\$200.00	\$134,000.00
	SECURITY GATES POWER OPERATED	EACH	2	\$30,000.00	\$60,000.00
	SITE LANDSCAPING & ARCHITECTURAL FEATURES	L SUM	1	\$1,211,415.00	\$1,211,415.00
	SITE IRRIGATION SYSTEM	L SUM	1	\$50,000.00	\$50,000.00
	BASIN AERATION SYSTEM (COMPLETE)	EACH	1	\$13,000.00	\$13,000.00
	CONTINGENCY 10%				\$855,000.00
BASE PLAN TOTAL					\$9,402,430.00

ALTERNATE PLANS		ALT. PLAN TOTALS
	WASHINGTON ST. ALTERNATE DRAINAGE AND PAVING PLAN	\$717,370.00
	DRAPER AVE. ALTERNATE DRAINAGE AND PAVING PLAN	\$304,867.00
	GARFIELD AVE. ALTERNATE DRAINAGE AND PAVING PLAN	\$249,857.50
PROJECT GRAND TOTAL		\$10,674,524.50

 INDICATES NON-LOAN ELIGIBLE WORK.

 INDICATES PAY ITEM WHERE QUANTITY OR UNIT PRICE WILL BE REDUCED FOR EPA LOAN

NOTE: THE ESTIMATE OF COST IS BASED ON UNIT PRICES PROJECTED FOR THE YEAR 2016.

Created by: RLH 3-25-15

 DOES NOT INCLUDE LAND ACQUISITION, ENGINEERING OR UTILITY RELOCATIONS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PRELIMINARY ESTIMATE OF COST
W. WASHINGTON ST. PHASE 2
DRAINAGE IMPROVEMENTS

Project	Washington St. Ph. 2
Route	
Section	
City	Champaign

EPA LOAN ELIGIBLE ONLY ESTIMATE OF COST

CODE NO.	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL COST
	TREE REMOVAL AND PRUNNING	L SUM	1	\$50,000.00	\$50,000.00
20200100	EARTH EXCAVATION	CU YD	67,600	\$10.00	\$676,000.00
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	200	\$25.00	\$5,000.00
21000300	GRANULAR EMBANKMENT, SPECIAL	TON	410	\$35.00	\$14,350.00
21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	550	\$4.50	\$2,475.00
21101505	TOPSOIL EXCAVATION AND PLACEMENT	CU YD	2,300	\$12.00	\$27,600.00
21101625	TOPSOIL FURNISH AND PLACE, 6"	SQ YD	7,000	\$8.00	\$56,000.00
21101645	TOPSOIL FURNISH AND PLACE, 12"	SQ YD	400	\$15.00	\$6,000.00
	SEEDING, FERTILIZER, AND MULCH	ACRE	2.0	\$6,000.00	\$12,000.00
25200100	SODDING	SQ YD	7,200	\$9.00	\$64,800.00
25200200	SUPPLEMENTAL WATERING	UNIT	170	\$100.00	\$17,000.00
28000400	PERIMETER EROSION BARRIER	FOOT	1,000	\$4.00	\$4,000.00
28000500	INLET AND PIPE PROTECTION	EACH	5	\$200.00	\$1,000.00
28000510	INLET FILTERS	EACH	54	\$250.00	\$13,500.00
35100700	AGGREGATE BASE COURSE TYPE, A 8"	SQ YD	4,500	\$16.00	\$72,000.00
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	50	\$50.00	\$2,500.00
40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	200	\$60.00	\$12,000.00
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	150	\$300.00	\$45,000.00
	PCC PAVEMENT 8"	SQ YD	8,200	\$35.50	\$291,100.00
42300200	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 6 INCH	SQ YD	470	\$70.00	\$32,900.00
42300400	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH	SQ YD	900	\$75.00	\$67,500.00
42400300	PORTLAND CEMENT CONCRETE SIDEWALK 6 INCH	SQ FT	8,800	\$7.50	\$66,000.00
42400800	DETECTABLE WARNINGS	SQ FT	336	\$25.00	\$8,400.00
44000100	PAVEMENT REMOVAL	SQ YD	1,200	\$11.00	\$13,200.00
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	2,980	\$15.00	\$44,700.00
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	3,760	\$9.00	\$33,840.00
44000600	SIDEWALK REMOVAL	SQ FT	8,800	\$2.00	\$17,600.00
	STORM SEWER 12"	FOOT	470	\$60.00	\$28,200.00
	STORM SEWER 15"	FOOT	320	\$70.00	\$22,400.00
	STORM SEWER 18"	FOOT	60	\$75.00	\$4,500.00
	STORM SEWER 24"	FOOT	90	\$85.00	\$7,650.00
	STORM SEWER 36"	FOOT	190	\$130.00	\$24,700.00
	STORM SEWER 42"	FOOT	1,320	\$150.00	\$198,000.00
	STORM SEWER 54"	FOOT	590	\$190.00	\$112,100.00
	SANITARY SEWER 8"	FOOT	600	\$90.00	\$54,000.00
	STORM SEWER REMOVAL	FOOT	1,520	\$20.00	\$30,400.00
	SANITARY SEWER REMOVAL	FOOT	600	\$15.00	\$9,000.00
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	4,420	\$95.00	\$419,900.00
	PIPE UNDERDRAINS	FOOT	150	\$25.00	\$3,750.00
	MANHOLES 4' DIA.	EACH	5	\$2,800.00	\$14,000.00
	MANHOLES 5' DIA.	EACH	2	\$4,000.00	\$8,000.00
	MANHOLES 6' DIA.	EACH	1	\$5,200.00	\$5,200.00
	MANHOLES 7' DIA.	EACH	10	\$9,000.00	\$90,000.00
	MANHOLES 9' DIA.	EACH	2	\$14,000.00	\$28,000.00
	SANITARY MANHOLES	EACH	5	\$3,500.00	\$17,500.00
	BASIN OVERFLOW STRUCTURE	EACH	1	\$35,000.00	\$35,000.00
	OUTLET STRUCTURE	EACH	1	\$35,000.00	\$35,000.00
	INLETS	EACH	34	\$1,700.00	\$57,800.00
	MANHOLES TO BE ADJUSTED	EACH	13	\$500.00	\$6,500.00
	REMOVING MANHOLES	EACH	9	\$600.00	\$5,400.00
	REMOVING INLETS	EACH	22	\$500.00	\$11,000.00
60604400	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.18	FOOT	5,800	\$28.00	\$162,400.00

Appendix D - Project Costs

CODE NO.	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL COST
67000400	ENGINEERS FIELD OFFICE	CAL MO	10	\$2,000.00	\$20,000.00
67100100	MOBILIZATION	L SUM	1	\$320,000.00	\$320,000.00
	TRAFFIC CONTROL AND PROTECTION	L SUM	1	\$96,000.00	\$96,000.00
	PAVEMENT MARKINGS	L SUM	1	\$5,000.00	\$5,000.00
Z0004542	HOT-MIX ASPHALT REMOVAL (SPECIAL)	SQ YD	7,800	\$9.00	\$70,200.00
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	\$96,000.00	\$96,000.00
XX007733	SALVAGED AGGREGATE MATERIAL 8"	SQ YD	6,000	\$10.00	\$60,000.00
	CLASS C PATCH, 8"	SQ YD	200	\$130.00	\$26,000.00
	REMOVE LIGHTING SYSTEM	L SUM	1	\$10,000.00	\$10,000.00
	SITE LIGHTING SYSTEM	L SUM	1	\$166,000.00	\$166,000.00
	BUILDING REMOVALS	L SUM	1	\$60,000.00	\$60,000.00
	SPECIAL WASTE REMEDIATION	L SUM	1	\$5,000.00	\$5,000.00
	REINFORCED CONCRETE RETAINING WALLS	FOOT	630	\$3,400.00	\$2,142,000.00
	PEDESTRIAN RAILING 6'	FOOT	670	\$200.00	\$134,000.00
	SITE LANDSCAPING & ARCHITECTURAL FEATURES	L SUM	1	\$435,000.00	\$435,000.00
	BASIN AERATION SYSTEM (COMPLETE)	EACH	1	\$13,000.00	\$13,000.00
	CONTINGENCY 10%				\$671,000.00
BASE PLAN TOTAL					\$7,376,065.00

ALTERNATE PLANS		ALT. PLAN TOTALS
	WASHINGTON ST. ALTERNATE DRAINAGE AND PAVING PLAN	\$614,720.00
	DRAPER AVE. ALTERNATE DRAINAGE AND PAVING PLAN	\$227,684.50
	GARFIELD AVE. ALTERNATE DRAINAGE AND PAVING PLAN	\$182,962.50
PROJECT GRAND TOTAL		\$8,401,432.00

INDICATES PAY ITEM WHERE QUANTITY OR UNIT PRICE HAVE BEEN REDUCED FOR EPA LOAN ELIGIBILITY

NOTE: THE ESTIMATE OF COST IS BASED ON UNIT PRICES PROJECTED FOR THE YEAR 2016.

Created by: RLH 3-25-15

DOES NOT INCLUDE LAND ACQUISITION, ENGINEERING OR UTILITY RELOCATIONS

Appendix E

Project Schedule

**Appendix E
Project Schedule**

Task	Completion Date
Submittal of Facility Plan to IEPA	April 2015
Beginning of Submittal of Loan Forms to IEPA	May 2015
Receipt of Planning Document Approval	June 2015
Phase 2 Timeline	
Complete Phase 2 Project Design	December 2015
IEPA Issues Phase 2 Construction Permit	January 2016
Bid Advertisement Phase 2 Project	January 2016
Bid Opening Phase 2 Project	February 2016
Award of Phase 2 Construction Contract	February 2016
Construction Start Phase 2 Project	March 2016
Complete Phase 2 Construction	July 2017
Phase 3 Timeline	
Start Phase 3 Project Design	February 2016
IEPA Issues Phase 3 Construction Permit	January 2017
Bid Advertisement Phase 3 Project	January 2017
Bid Opening Phase 3 Project	February 2017
Award of Phase 3 Construction Contract	February 2017
Construction Start Phase 3 Project	March 2017
Complete Phase 3 Construction	March 2018

Appendix F
Financial Impact Analysis
And Stormwater Utility Fee
User Rates

Appendix F – Financial Impact Analysis

1.1 Funding Source (Stormwater Management Fund). Funding for the project including operation, maintenance, design, construction and administration will come from the City's Stormwater Management Fund, which is funded through a combination of sales tax, property tax and the City's stormwater utility fee. Projections of annual revenue in the Stormwater Management Fund are shown on Exhibit F.1, which shows annual revenue rising from \$8.5 million in FY 15/16 to \$10.5 million in FY 24/25. Exhibit F.1 also shows stormwater expenditures and the ending balance in the fund over a 10 year period. The Stormwater Management Fund allocates \$2.5 million annually for the West Washington Street Drainage Improvement Project and two other high priority flood control projects. This amount is accounted for in Exhibit F.1.

1.2 Debt Service Payments. A hypothetical debt financing analysis was performed on Phase 2 and 3 of the West Washington Street Drainage Improvement project to see the impacts the project would have on the Stormwater Management Fund. The analysis assumed that the loan eligible reimbursable amounts for Phase 2 and 3 would be \$16.8 million with a loan period of 20-years at an interest rate of 2.6 percent. This analysis found that annual payments on the loan would be approximately \$1 million per year over the 20-year life of the loan. Total interest payments would be approximately \$5.1 million for a total of approximately \$21.9 million for total principal plus total interest. Annual loan repayments on the West Washington Street Drainage Improvement Project would be approximately \$1 million. Since the Stormwater Management Fund allocates \$2.5 million annually for this project and the two other high priority flood control projects, this would leave \$1.5 million available for the two other high priority projects. This amount would be adequate to pay for these projects.

1.3 Stormwater Utility Fee. In 2013, the City enacted the stormwater utility fee that is discussed in the Section 1.1. This fee was set up to help pay for large stormwater management capital improvement projects, such as the West Washington Street Drainage Improvement Project. The stormwater utility fee brings in approximately \$2.5 million annually. The stormwater utility fee rate structure is show on page 2 of Exhibit F.2, which is the stormwater utility fee ordinance for the City.

Stormwater Management Fund Statement 21

	<u>FY13/14 Actual</u>	<u>FY14/15 Budget</u>	<u>FY14/15 Estimate</u>	<u>FY15/16 Budget</u>	<u>FY17P</u>	<u>FY18P</u>	<u>FY19P</u>	<u>FY20P</u>	<u>FY21P</u>	<u>FY22P</u>	<u>FY23P</u>	<u>FY24P</u>	<u>FY25P</u>
Beginning Balance	<u>2,840,199</u>	<u>4,690,793</u>	<u>4,690,793</u>	<u>444,126</u>	<u>306,426</u>	<u>303,706</u>	<u>247,785</u>	<u>272,570</u>	<u>563,317</u>	<u>677,685</u>	<u>447,520</u>	<u>377,607</u>	<u>467,829</u>
Revenues													
Revenue Transfers	3,758,423	3,812,459	3,866,767	3,967,238	4,070,334	4,176,125	4,284,682	4,396,077	4,510,386	4,627,684	4,748,051	4,871,568	4,998,317
Revenues	4,608,732	4,577,624	4,588,593	4,590,069	4,765,655	4,963,824	4,978,848	5,175,765	5,169,824	5,359,829	5,347,934	5,544,587	5,529,850
Total Revenues	<u>8,367,155</u>	<u>8,390,083</u>	<u>8,455,360</u>	<u>8,557,306</u>	<u>8,835,989</u>	<u>9,139,949</u>	<u>9,263,529</u>	<u>9,571,842</u>	<u>9,680,209</u>	<u>9,987,513</u>	<u>10,095,985</u>	<u>10,416,155</u>	<u>10,528,167</u>
Expenditures													
Capital Expenses	1,597,635	5,182,629	4,986,693	3,010,152	4,119,496	3,489,496	3,779,496	3,994,009	3,994,009	4,494,009	4,494,009	4,494,009	4,494,009
Commodities	1,380	5,000	1,000	1,010	1,020	1,030	1,040	1,050	1,061	1,072	1,083	1,094	1,105
Contractual Services	994,671	3,607,286	3,544,038	1,621,738	1,679,253	1,686,498	1,688,686	1,696,280	1,698,512	1,706,474	1,708,751	1,717,110	1,719,422
Expenditure Transfers	3,922,875	4,046,535	4,170,296	4,062,106	3,038,940	4,018,847	3,769,523	3,589,757	3,872,259	4,016,123	3,962,055	4,113,720	4,116,811
Total Expenditures	<u>6,516,561</u>	<u>12,841,450</u>	<u>12,702,027</u>	<u>8,695,006</u>	<u>8,838,709</u>	<u>9,195,870</u>	<u>9,238,744</u>	<u>9,281,096</u>	<u>9,565,841</u>	<u>10,217,678</u>	<u>10,165,898</u>	<u>10,325,933</u>	<u>10,331,347</u>
Total Ending Balance	<u>4,690,794</u>	<u>239,426</u>	<u>444,126</u>	<u>306,426</u>	<u>303,706</u>	<u>247,785</u>	<u>272,570</u>	<u>563,317</u>	<u>677,685</u>	<u>447,520</u>	<u>377,607</u>	<u>467,829</u>	<u>664,649</u>
Fund Balances													
Non-Spendable	0	0	0	0	0	0	0	0	0	0	0	0	0
Restricted	0	0	0	0	0	0	0	0	0	0	0	0	0
Committed	4,690,794	239,426	444,126	306,426	303,706	247,785	272,570	563,317	677,685	447,520	377,607	467,829	664,649
Assigned	0	0	0	0	0	0	0	0	0	0	0	0	0
Unassigned	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

Comments:

Budget Worksheet - 10 years

	FY2010/11	FY2011/12	FY2012/13	FY2013/14	FY2014/15 Budget	FY2014/15 Amended	FY2014/15 YTD	FY2014/15 Revised	FY2015/16 Budget
301 PROPERTY TAXES	1,335,355	1,346,021	1,349,924	1,375,642	1,349,339	1,349,339	595,278	1,342,412	1,355,836
339 STORMWATER FEES	25,459	18,750	19,041	14,400	0	0	20,650	20,000	0
34301 STORMWATER UTILITY FEE	0	0	339,338	2,662,931	2,770,780	2,770,780	2,093,221	2,771,137	2,771,137
350 SALE OF CITY PROPERTY	0	0	12,500	0	0	0	0	0	0
352 CITY EXPENSE REIMBURSEMENTS	170,469	197,032	16,000	136,455	17,600	17,600	15,922	23,400	19,600
35201 CITY EXPENSE RIBE - SPECIFIC	0	0	0	0	1,025	1,025	0	0	1,025
35202 CITY EXPENSE RIBE - OTHER SPECIFIC	0	1,000	1,327	0	1,538	1,538	0	0	1,538
354 REFUNDS	520,041	416,959	398,822	385,119	410,644	410,644	191,444	410,644	405,681
360 INTEREST & INVESTMENT INCOME	33,067	36,406	19,716	26,309	12,498	12,498	20,902	21,000	21,052
371 INTERGOVERNMENTAL REVENUES-STATE	0	289,088	317,964	0	0	0	0	0	0
373 INTERGOVERNMENTAL REVENUES	0	0	0	7,876	14,200	14,200	7,876	0	14,200
402 TFR FROM GENERAL OPERATING FUND	3,472,738	3,595,645	3,656,072	3,758,423	3,812,459	3,812,459	1,906,230	3,866,767	3,967,238
423 TFR FROM CAPITAL IMPROVEMENTS FUND	0	0	1,600,000	0	0	0	0	0	0
472 TFR FROM 2010 DRAINAGE BOND FUND	13,570,894	4,166,029	0	0	0	0	0	0	0
Total	19,128,023	10,066,930	7,730,704	8,367,155	8,390,083	8,390,083	4,851,523	8,455,360	8,557,306

Appendix F.1 - Stormwater Fund Statement

FY2016/17 Budget	FY2017/18 Budget	FY2018/19 Budget	FY2019/20 Budget	FY2020/21 Budget	FY2021/22 Budget	FY2022/23 Budget	FY2023/24 Budget	FY2024/25 Budget
1,383,638	1,412,694	1,443,074	1,474,822	1,489,570	1,504,466	1,519,511	1,534,706	1,550,053
0	0	0	0	0	0	0	0	0
2,937,405	3,113,649	3,113,649	3,300,468	3,300,468	3,498,496	3,498,496	3,708,406	3,708,406
0	0	0	0	0	0	0	0	0
6,600	6,600	6,600	6,600	6,600	6,600	6,600	6,600	6,600
1,025	1,025	1,025	1,025	1,025	1,025	1,025	1,025	1,025
1,538	1,538	1,538	1,538	1,538	1,538	1,538	1,538	1,538
400,145	392,961	377,552	355,849	335,106	312,134	285,141	256,636	226,498
21,105	21,157	21,210	21,263	21,316	21,370	21,423	21,477	21,530
0	0	0	0	0	0	0	0	0
14,200	14,200	14,200	14,200	14,200	14,200	14,200	14,200	14,200
4,070,334	4,176,125	4,284,682	4,396,077	4,510,386	4,627,684	4,748,051	4,871,568	4,998,317
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
8,835,989	9,139,949	9,263,529	9,571,842	9,680,209	9,987,513	10,095,985	10,416,155	10,528,167

COUNCIL BILL NO. 2012 - 044

AN ORDINANCE

AMENDING CHAPTER 19 AND CHAPTER 29.5 OF THE CHAMPAIGN MUNICIPAL CODE, 1985, AS AMENDED, BY ADDING SECTION 19.8.15.3 TO CHAPTER 19 AND ADDING ARTICLE VI TO CHAPTER 29.5
(Stormwater Utility Fee)

WHEREAS on October 27, 2009, in response to the flooding of various neighborhoods in the City of Champaign in 2008 and 2009, the City Council directed City staff to investigate the possibility of enacting a stormwater utility fee to fund needed improvements and maintenance of the City's stormwater facilities; and

WHEREAS, at the conclusion of a study session on March 23, 2010, the Council directed staff to develop an expenditure, revenue and billing plan for a stormwater utility fee; and

WHEREAS, on June 15, 2010, the City Council created and appointed members to a Stormwater Utility Fee Advisory Committee, made up of fourteen members of the community representing a variety of local interests, to work with City staff to develop a proposal to create a stormwater utility for the purpose of more effectively managing, protecting, controlling, regulating, using, constructing and enhancing the City's stormwater systems and facilities; and

WHEREAS, on August 3, 2010, the City Council approved a professional services contract with AMEC Earth and Environmental, Inc. of Indianapolis, Indiana (AMEC) to assist staff and the Stormwater Utility Fee Advisory Committee with the development of a stormwater utility; and

WHEREAS, the City's Stormwater Management Fund has been exhausted by expenditures on recent, large stormwater facility projects, including the Boneyard Creek Second Street Reach Project, the Washington Street East Project, and the John Street Drainage

Improvement Projects, and the City needs to find a new, dedicated source of revenue to fund necessary future stormwater facility maintenance and projects; and

WHEREAS, in response to the recommendations of the Stormwater Utility Fee Advisory Committee, City staff and AMEC, and based upon a careful and thorough analysis of the pertinent issues by those individuals, the Champaign City Council has determined it to be in the best interests of the residents of the City for the City to establish, pursuant to its powers as a Home Rule unit of government under Section 6 of Article VII of the Constitution of the State of Illinois, a stormwater utility, including a fee for the use of the City's stormwater systems and facilities, for purposes of more effectively managing, protecting, controlling, regulating, using, constructing and enhancing the City's stormwater systems and facilities.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CHAMPAIGN, ILLINOIS as follows:

Section 1. That Chapter 19 of the Champaign Municipal Code, 1985, entitled "Licenses and Permits", is hereby amended to add Section 19.8.15.3, which shall read as follows:

"Sec. 19.8.15.3. Stormwater utility fee.

The amount of the stormwater utility fee shall be as follows:

(a) A monthly flat fee as indicated below for any parcel that is the site of a single family or duplex dwelling based on which tier the parcel qualifies for based on the amount of impervious area that is on the parcel.

Tier 1 (0-6,000 square feet of impervious area)	\$ 4.94 per month
Tier 2 (6,001-8,000 square feet of impervious area)	\$10.55 per month
Tier 3 (over 8,000 square feet of impervious area)	\$13.64 per month

(b) For all other parcels in the City that are not the site of a single family or duplex dwelling, the amount of the stormwater utility fee shall be \$5.24 per Equivalent Residential Unit (ERU) or \$5.24 per Three thousand four hundred seventy-eight (3,478) square feet of impervious area on the parcel.

(c) For purposes of this Section, the term “parcel” shall have the same meaning that term has in Article VI in Chapter 29.5 of this Code.”

Section 2. That Chapter 29.5 of the Champaign Municipal Code, 1985. entitled “Stormwater Management Regulations”, is hereby amended to add Article VI entitled “Stormwater Utility”, which shall read as shown in Attachment A, attached hereto and incorporated by reference herein.

Section 3. That this ordinance shall be effective as of March 1, 2013.

Section 4. That the City Clerk is hereby directed to publish this ordinance immediately after passage.

Section 5. If any section, paragraph or provision of this ordinance is held to be invalid or unenforceable, such invalidity or unenforceability of such section, paragraph or provision shall not affect any of the remaining provisions of this ordinance, or the provision of the Code.

Section 6. The provisions of this ordinance shall take precedence and be interpreted as superseding any other ordinance or statutes in conflict with the provisions of this ordinance.

COUNCIL BILL NO. 2012- 044

PASSED:

APPROVED: _____
Mayor

ATTEST: _____
City Clerk

APPROVED AS TO FORM:

City Attorney

ATTACHMENT A

ARTICLE VI. STORMWATER UTILITY

Sec. 29.5-6.01. Stormwater utility and stormwater fund established.

(a) The City of Champaign hereby establishes a stormwater utility within the Public Works Department to provide for the management, protection, control, regulation, use, construction and enhancement of the City's stormwater systems and facilities.

(b) The City hereby establishes a stormwater enterprise fund. All revenues from the stormwater utility fee shall be deposited into the stormwater fund and used only for purposes of the stormwater utility as deemed appropriate by the City Council.

Sec. 29.5-6.02. Definitions.

(a) *Credit* means a conditional reduction to the amount of a stormwater service charge to an individual property based upon the provisions of the City of Champaign Stormwater Credit and Incentive Manual.

(b) *Direct Discharge* means the conveyance of stormwater runoff directly to a receiving stream (water of the State of Illinois) without entering the City-owned stormwater drainage system. For the purposes of the stormwater utility, these discharges also do not pass through City-owned or operated culverts or bridges once in the receiving stream.

(c) *District* means the Urbana & Champaign Sanitary District.

(d) *District Agreement* means the Intergovernmental Agreement for Billing Services for the Urbana & Champaign Sanitary District and the City of Champaign.

(e) *Duplex Property* means any residential property containing a single structure designed with two dwelling units for occupancy by one family in each unit. Each dwelling unit shall contain at least one bedroom, a kitchen, and a bathroom.

(f) *Equivalent Residential Unit (ERU)* shall be used as the basis for determining the stormwater service charge to a parcel. Three thousand four hundred seventy-eight (3,478) square feet of impervious area shall be one ERU. The number of ERUs attributed to a parcel will be determined by dividing the total impervious area (square feet) of the parcel by Three thousand four hundred seventy-eight (3,478) and rounding the result per Section 29.5-6.04.

(g) *Finance Director* means the Director of the Finance Department of the City of Champaign.

(h) *Gross Area* means the entire area of a parcel, including both the impervious and pervious areas.

(i) *Impervious Area* or *Impervious Surface* means those areas that prevent or impede the infiltration of stormwater into the soil. Common impervious areas include, but are not limited to, rooftops, sidewalks, walkways, patio areas, driveways, parking lots, storage areas, and awnings.

(j) *Incentive* means a one-time disbursement that fully or partially compensates a property owner for partnering with the City to achieve a stormwater management objective.

(k) *Parcel* means any designated lot, tract, or area of land, established by a plat or other legal means and to be used, developed or built upon as a unit.

(l) *Single Family Residential (SFR)* means developed land containing one dwelling structure which contains one or more bedrooms, with a bathroom and kitchen facilities, designed for occupancy by one family. SFR units may include houses, manufactured homes, and mobile homes located on one or more individual parcel or parcels of land.

(m) *Stormwater Utility* means a stormwater management program that may include all or part of the following: administration, engineering, planning, operations, enforcement, educational and capital programs.

Sec. 29.5-6.03. Stormwater utility fee created/amount/responsibility for payment.

(a) A stormwater utility fee is hereby created to fund activities of the Stormwater Utility.

(b) The amount of said fee is set forth in Section 19-8.15.3 of this code.

(c) The owner of each parcel of real property that is wholly or partially located within the corporate limits of the City shall be responsible for the payment of any stormwater utility fee assessed against said parcel.

Sec. 29.5-6.04. Stormwater utility fee rate structure.

The stormwater utility fee will be determined by distributing among parcels in the City certain stormwater operation, maintenance and rehabilitation costs as approved by City Council based on the demand for service that is determined for each parcel.

(a) The basis for determining the stormwater utility fee for each parcel shall be the amount of impervious area on the parcel. The billing unit shall be based on the mean level of imperviousness on single family residential parcels. This billing unit is known as an “Equivalent Residential Unit” or “ERU” and has been determined to be Three thousand four hundred seventy-eight (3,478) square feet of impervious surface in the City of Champaign.

(b) Each parcel that is the site of a single family dwelling unit or a duplex residential structure shall be grouped into one of three tiers based on the amount of impervious surface on the parcel. Each parcel will be billed at a flat rate as determined for that tier. The three tiers shall be defined as follows:

- (1) Tier 1 – parcels having 6,000 or fewer square feet of impervious area
- (2) Tier 2 – parcels having 6,001 – 8,000 square feet of impervious area
- (3) Tier 3 – parcels having more than 8,000 square feet of impervious area

(c) All other parcels in the City shall be billed based on the measured number of ERUs on the parcel. Fractional ERUs equal to or less than 0.5 shall be rounded down to the next whole ERU. Fractional ERUs greater than 0.5 shall be rounded up to the next whole ERU. For example, 10,000 square feet of impervious area represents 2.9 ERUs and would be rounded up to 3.0 ERUs for billing purposes.

(d) Fees to qualifying parcels may be adjusted if stormwater utility fee credits are approved by the City for on-site stormwater management (see Section 29.5-6.09).

Sec. 29.5-6.05. Stormwater utility fee applicability.

(a) The stormwater utility fee shall be charged to all parcels wholly or partially in the City that have at least 500 square feet of impervious area.

(b) The stormwater utility fee shall not be charged to streets and sidewalks that are inside the public right-of-way.

(c) Parcels that are annexed into the City after the stormwater utility becomes operational shall be subject to the fee upon completion by the Public Works Department of the applicable calculations of the amount of impervious surface on the parcels in question.

Sec. 29.5-6.06. Stormwater utility rate.

The City Council shall set and adjust the stormwater utility fee rates.

Sec. 29.5-6.07. Director of Public Works authority to delegate responsibilities.

Whenever there is a reference in this Article to responsibilities or powers assigned to the Director of Public Works, the Director shall have the authority to delegate the responsibilities or powers in question in writing to another specified employee in the Public Works Department.

Sec. 29.5-6.08. City of Champaign stormwater credit and incentive manual.

The Director of Public Works is hereby authorized to develop and publish a Stormwater Credit and Incentive Manual for purposes of establishing a program of incentives and credits that will reduce the stormwater utility fee that particular property owners will be required to pay, to promote efforts by said property owners to mitigate the effects of stormwater on the City's stormwater system and facilities. The Stormwater Credit and Incentive Manual shall not go into effect until fifteen (15) days after a copy of the manual has been provided to the City Council.

Sec. 29.5-6.09. Stormwater utility fee credits.

Persons subject to the stormwater utility fee shall be eligible to receive a stormwater utility charge credit and/or incentive based upon the requirements of the City of Champaign Stormwater Credit and Incentive Manual.

Any credit allowed against the stormwater utility charge is to be conditioned upon continuing compliance with the City of Champaign Stormwater Credit and Incentive Manual. Proof of compliance as defined in the manual will be required.

Sec. 29.5-6.10. Agreement for billing with the Urbana & Champaign Sanitary District.

(a) The City Manager is hereby authorized to enter into an Intergovernmental Agreement ("Billing Agreement") with the Urbana & Champaign Sanitary District ("District") for the District to bill for the City's stormwater utility fee to property owners in the City, subject to the City Council's approval of the initial terms and conditions of such an agreement. Said agreement shall, at a minimum, provide the following:

- i. A schedule for forwarding the proceeds from the billing to the City.
- ii. A financial penalty for delinquent payment of the fee.
- iii. A reasonable system for the collection of said fee.

(b) The City Manager is authorized to execute addenda or amendments to any Billing Agreement for collection of the stormwater utility fee which has been previously approved by the City Council for the purpose of making the billing arrangements contained in the agreement more efficient or for the purpose of adjusting the fees paid by the City to the District without prior City Council approval, provided that a copy of the proposed addenda or amendments shall be provided to the City Council at least fifteen (15) days prior to execution of said addenda or amendment.

(c) To the extent that any provision of this Article is superseded, amended, or changed by the terms of the Billing Agreement with the District, then the provisions of this Article shall not be effective or controlling while the Billing Agreement is in effect.

(d) To the extent the adopted procedures of the District contradict the provisions of this Article, the procedures in the agreement shall apply while the agreement is in force and effect.

Sec. 29.5-6.11. Collection of stormwater utility fees by the City.

If the City is unable to enter into an agreement with the District for the collection of the stormwater utility fee, or the agreement with the District for the collection of said fee is terminated for any reason, then the City Manager shall have the authority to formulate and implement written procedures for collection of said fee by the City, provided that the City

Manager shall provide the City Council with a copy of any proposed procedures at least fifteen (15) days prior to the time said procedures are to go into effect.

Sec. 29.5-6.12. Stormwater utility fee amounts.

(a) The stormwater fee for all parcels shall be based on a tiered flat rate for residential and duplex parcels or on the number of ERUs and the current monthly stormwater utility rate for all other parcels.

(b) The stormwater utility fee for any parcel will remain constant from month to month unless one of the following changes occur:

- (1) A physical modification to the parcel that changes its level of imperviousness;
- (2) A credit for on-site stormwater management is either awarded or revoked;
- (3) The stormwater utility fee rate is changed by the City Council; or
- (4) Any other billing adjustment as described in Section 29.5-6.20-22 is applied to the account.
- (5) The new fee will be assessed on all bills processed on or after the effective date of the fee or new fee.

Sec. 29.5-6.13. Lien for delinquent stormwater utility fee.

Whenever the stormwater utility fee for a parcel becomes delinquent as set forth in the collection process implemented by the Urbana & Champaign Sanitary District or the City Manager in accordance with this Article, the delinquent fee together with outstanding penalties shall become and constitute a lien upon the parcel.

Sec. 29.5-6.14. Notice of lien.

Statements rendered for such delinquent stormwater utility fee shall be deemed notice of the lien to the owner of the property if such statement is mailed to the owner of the parcel as shown in the records of the supervisor of assessments by first class mail. No additional notice of lien is required to be sent to the owner nor is a copy of the claim of lien required to be sent to the owner.

Sec. 29.5-6.15. Contents of lien claim.

The claim of lien for delinquent stormwater utility fee shall be made in the form of a sworn statement by the Finance Director setting forth the following information:

- (a) A description of the parcel, sufficient for identification;
- (b) The amount or amounts of money due including outstanding penalties and interest charges;

- (c) The date or dates when such amount or amounts became delinquent; and
- (d) The owner of record of the property as disclosed by the records of the supervisor of assessments within ninety (90) days before the last statement date.
- (e) Said claim shall be recorded in the Office of the Recorder for Champaign County.

Sec. 29.5-6.16 Additional lien charge.

In all cases where the stormwater utility fee has become delinquent and the City elects to file a claim for lien as set forth in this Article, there shall be added to the amount due prior to recording, in addition to other charges, penalties and interest amounts then due, such charges and expenses as are necessary and required to verify the legal description of the parcel and ownership information and to prepare and record the claim of lien and release the claim for lien. Such additional charge shall be included in the amount claimed due by the lien claim. The amount of the additional charge shall be established by rule or regulation of the Finance Director.

Sec. 29.5-6.17. Other remedies.

In addition to the recording of a lien, the City may seek payment for delinquent stormwater utility fees, penalties and interest, including any additional lien charges due, by filing suit to collect the same.

Sec. 29.5-6.18. Adjustments to stormwater bills.

A parcel's stormwater utility rate and/or computed number of ERUs may be adjusted by the Director of Public Works to an amount which more properly represents the impervious surfaces on a parcel. This may be done upon presentation by the property owner of factual evidence which, in the Director's sole discretion, establishes that the impervious area used to determine the parcel's stormwater utility tier or the computed number of ERUs was incorrect.

Sec. 29.5-6.19. Responsibility for initiating adjustment process.

The owner of the parcel is responsible for initiating any review of the impervious area computation for a parcel or any other computations involved in determining the stormwater utility fee for that parcel by filing an application for an adjustment of the fee, hereinafter referred to in this Article as an "application for an adjustment", and presenting factual evidence in support of a change in the fee.

Sec. 29.5-6.20. Application for adjustment.

The owner of the parcel must file an application for an adjustment on forms provided by the City, and file the application and factual evidence in support of the adjustment with the Director of Public Works.

Sec. 29.5-6.21. Decision on application.

The Director of Public Works shall make a decision approving or denying the application for an adjustment within sixty (60) days of receipt of a completed application for an adjustment. The Director's decision shall be in writing and, if the decision is to deny the application, it shall state the reasons for said denial. The decision shall be mailed to the applicant at the address as shown on the application for an adjustment.

Sec. 29.5-6.22. Effective date of adjustment.

If an application for an adjustment is approved by the Director of Public Works, the stormwater fee shall be adjusted accordingly for the specified parcel and will apply to the next regularly generated bill.

Sec. 29.5-6.23. Appeal from denial of application for an adjustment.

(a) General. An applicant for an adjustment may appeal a denial of said application to the City Manager by filing a written appeal at the office of the City Manager within ten (10) calendar days of the date of mailing of the decision denying said application.

(b) Form for appeal. An appeal to the City Manager shall be submitted on a form provided by the Director of Public Works and must be accompanied by any documentation or other evidence the appellant wishes the City Manager to consider in deciding the appeal.

(c) Time/Form of Decision. The City Manager shall review and make a decision whether to allow or deny the appeal within sixty (60) days of receipt of a completed appeal application. Said decision shall be in writing and, if it denies the appeal, it shall state the reasons for the denial.

(d) Decision by the City Manager a Final Administrative Decision. The City Manager's decision on an appeal from a denial of an application for an adjustment shall be a final administrative decision of the City and may be appealed to the local Circuit Court for Champaign County in accordance with Illinois law.

Sec. 29.5-6.24. - Responsibility of owner.

The failure of any owner of property to receive a bill or statement for the stormwater utility fee shall not be grounds for nonpayment or grounds to extend or defer the date upon which payment is due or avoid the inclusion of penalties. Owners of property which are subject to the stormwater utility fee and the recording of a claim of lien pursuant to the terms of this Article shall be charged with notice of the existence of the charge and are responsible for ascertaining from the City all amounts, if any, due as provided in this Article.

Sec. 29.5-6.25. Accounts.

The Finance Director shall establish a proper system of accounts and shall keep proper books, records and accounts in which complete and correct entries shall be made of all transactions relative to the stormwater fund.

In addition to the financial statements, the statistical section of the Comprehensive Annual Financial Report shall also reflect the revenues and operating expenses of the stormwater fund. The financial information to be shown in the audit report shall include the following:

- (1) Billing data to show total number of billing units per fiscal year.
- (2) Debt service for the next succeeding fiscal year.
- (3) Number of stormwater utility ratepayers.

Sec. 29.5-6.26. Access to records.

The City shall allow any relevant agency of the State of Illinois or their authorized representative to have access to any applicable books, documents, paper and records of the stormwater utility fee for the purpose of making audit, examination, excerpts and transcriptions thereof to ensure compliance with the terms of loan agreements and rules of any state loans.

Sec. 29.5-6.27. Authority of Directors to issue rules and regulations.

The Directors of Finance and Public Works may issue rules and regulations necessary to implement this Article provided that a copy of each rule or regulation is filed with the City Manager and City Clerk and distributed to the Mayor and each Council Member at least fifteen (15) days before the rule or regulation becomes effective.