City of Columbia

701 East Broadway, Columbia, Missouri 65201

Agenda Item Number: (C)
Department Source: Public Works
To: City Council
From: City Manager & Staff
Council Meeting Date: 8/03/2015
Re: Public Hearings for the Flat Branch Watershed Relief Sewer Project No. 3 (Elm Street-Providence to Hitt Street, and Sixth Street-Elm Street to one half block south of Broadway); Ninth and Elm Storm Drain Replacement Project; and Ninth and Elm Pedestrian Scramble Project

Documents Included With This Agenda Item

Council memo
Supporting documentation includes: Maps

Executive Summary

Public hearings for construction of the Flat Branch Watershed Relief Sewer Project No. 3 (Elm Street-Providence to Hitt Street, and Sixth Street-Elm Street to one half block south of Broadway); the Ninth and Elm Storm Drain Replacement Project; and the Ninth and Elm Pedestrian Scramble Project. An IP meeting for all three projects was held on February 5, 2015 with ten people attending. The project "walk through" for City Council members was held on March 26, 2015.

Discussion

The design of the Flat Branch Watershed Relief Sewer Project No. 3, the Ninth and Elm Storm Drain Replacement Project, and the Ninth and Elm Pedestrian Scramble Project are all being coordinated in order to allow the projects to be bid and constructed together under a single contract. This will reduce the overall cost of the three projects by completing the pavement repair work only once as well as minimize the duration in which construction activities are taking place within Elm and Ninth Street Right of Way.

The Flat Branch Watershed Relief Sewer and the Ninth and Elm Storm Drain Replacement projects are being designed by Engineering Surveys and Services. The Ninth and Elm Pedestrian Scramble Project is being designed by City staff.

Flat Branch Watershed Relief Sewer Project No. 3 (R105-15)
This project is anticipated to consist of approximately 3,120 linear feet of gravity sewer ranging in size from 18-inch to 8-inch in diameter. The work will be located along Elm Street from Providence Road to Hitt Street, and along Sixth Street from Elm Street to one half block south of Broadway, as shown on the attached diagram. The proposed project will provide increased sewer capacity for the downtown area and the upper portion of the Flat Branch Watershed.

The project is being designed, and will be bid, to allow both open cut and trenchless (tunnelling or boring) construction methods. It is anticipated that the base bid for the project will be to utilize open cut construction methods and associated pavement repairs for the entire length of the project. Trenchless construction methods will be bid as an alternate for the installation of new pipe between manhole locations. After the City receives construction bids, staff will determine which construction methods are most cost effective and least disruptive for this project.

Ninth and Elm Storm Drain Replacement (R106-15)
This project includes the replacement of a failing storm box and inlets at the intersection of Ninth and Elm. Staff believes the existing storm structure was constructed in the early 1900's and consists of stacked rock walls and a concrete top. The structure is under the building corner, at the southeast corner of Ninth and Elm, and extends west under Ninth Street. A new 54' storm drain will be constructed on Elm Street with new inlets and junction boxes, and will connect to an existing 60" storm drain on the University property west of Ninth Street. See the Flat Branch Watershed Relief Sewer Diagram for the location of this work.

Ninth and Elm Pedestrian Scramble (R107-15)
In 2014, Public Works was asked to evaluate options to modify the Ninth and Elm Street intersection to provide a pedestrian scramble crossing. A pedestrian scramble can be defined as a 3-phase intersection, with the 1st phase being movement of north/south vehicle traffic, 2nd phase being movement of east/west vehicle traffic, and 3rd phase being movement of pedestrians only. The pedestrian scramble allows pedestrians to cross in any direction as no vehicles are moving at the same time. Generally, this style of pedestrian crossing adds some delay to both pedestrian and vehicle travel, but can decrease conflicts between pedestrian and vehicle movements at certain locations.

As a stand-alone project, the cost to modify the intersection was estimated at $239,000 due primarily to reconstruction of the intersection, and is not recommended. Most of the signal equipment at the location is 30+ years old and has met life expectancy. The sewer and storm projects will require extensive reconstruction at the intersection. This timing could provide an opportunity to replace outdated signal equipment, that is already in need of replacement, and implement the pedestrian scramble crossing option as a pilot to test its effectiveness at a reduced cost. The possibility of the pedestrian scramble was included in the Interested Parties (IP) meeting for the sewer project, and the council walk-through for the sewer project. The general feedback from these efforts has been positive. The signal equipment parts and scramble pedestrian features would be paid for from the Annual Streets fund at an estimated cost of $132,000. The diagram for this project is attached.

For all three projects, the bricks removed from the existing pavement will be cleaned, stockpiled and salvaged for future brick street repair and restoration project use. All pavement repairs associated with the three projects will consist of matching the existing concrete or asphalt surfaces with new concrete or asphalt.

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Fiscal Impact

Short-Term Impact: The total estimated cost for construction of all three projects is $2,625,000 ($2,300,000 for Flat Branch Watershed Sewer Project No. 3; $193,000 for the Ninth and Elm Storm Drain Replacement Project' and $132,000 for the Ninth and Elm Pedestrian Scramble Project)
Long-Term Impact: Total estimated cost for all three projects is $2,625,000.

Vision, Strategic & Comprehensive Plan Impact

Vision Impact: Environment, Downtown, Economic Development, Health
Strategic Plan Impact: Infrastructure
Comprehensive Plan Impact: Environmental Management, Infrastructure

Suggested Council Action

Following Council discussion and public input, Council should make a motion directing staff to proceed with final plans and specifications for the Flat Branch Watershed Relief Sewer Project No. 3 Project; the Ninth and Elm Storm Drain Replacement Project; and the Ninth and Elm Pedestrian Scramble Project.

Legislative History

07/06/15 (R105-15, R106-15 & R107-15) Setting Public Hearings for August 3, 2015
09/15/14 (R177-14) Authorizing agreement with Engineering Surveys and Services for surveying and design of the Flat Branch Watershed Relief Sewer Project No. 3 (Elm Street and Sixth Street)
07/21/14 (Ord 22135) Appropriating funds for Flat Branch watershed relief sewer projects.
06/16/14 (REP58-14) Report on Downtown Sewer Funding Strategies

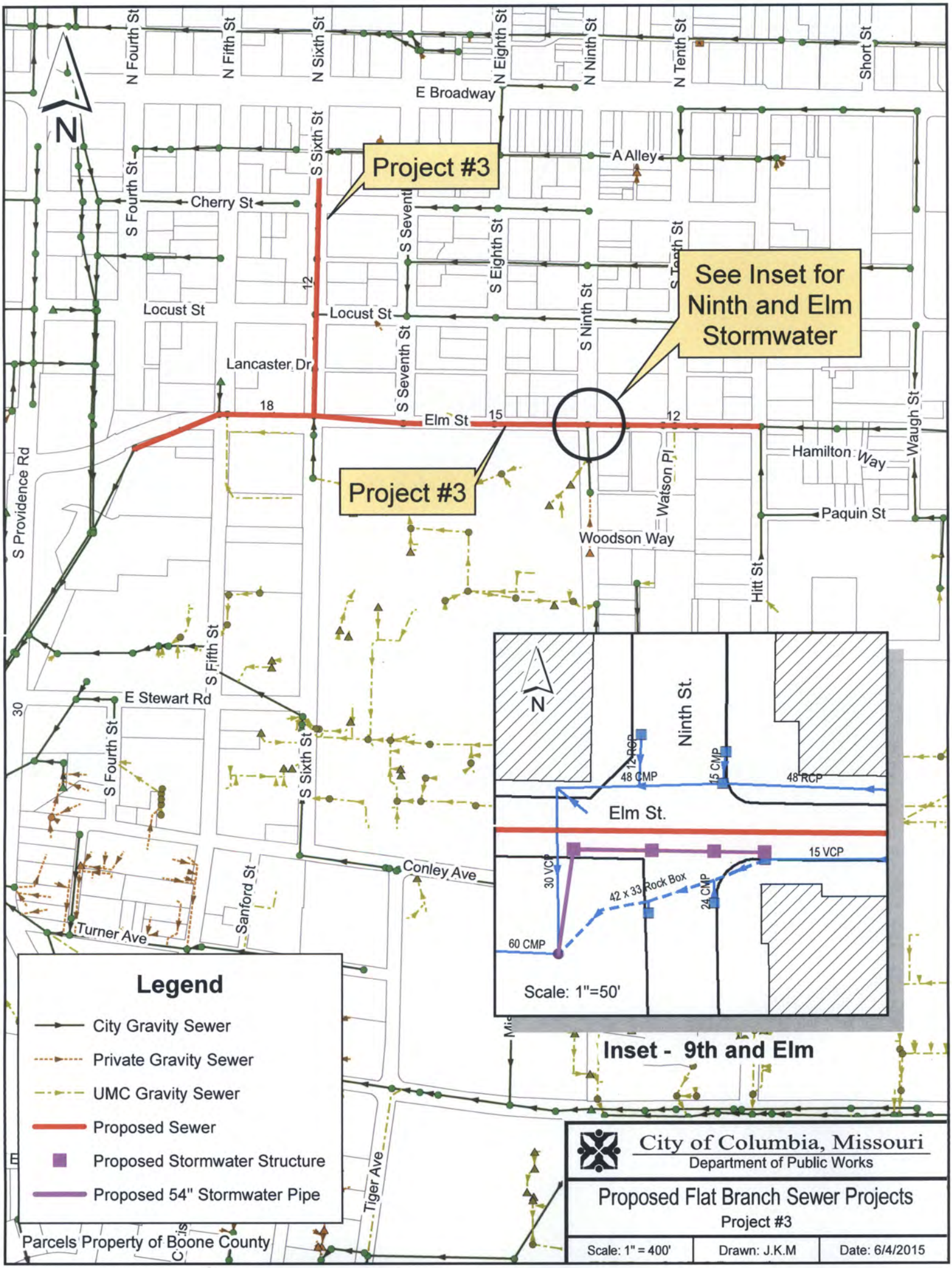
Department Approved

City Manager Approved

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SUPPORTING DOCUMENTS INCLUDED WITH THIS AGENDA ITEM ARE AS FOLLOWS:

Maps


N
N Fourth St
N Fifth St
N Sixth St
N Eighth St
N Ninth St
N Tenth St
Short St
E Broadway
A Alley
Project #3
S Sixth St
S Fourth St
Cherry St
S Seventh St
S Eighth St
S Tenth St
See Inset for Ninth and Elm Stormwater
12
Locust St
Locust St
S Ninth St
Lancaster Dr
18
Elm St
15
12
S Seventh St
Project #3
Watson Pl
Hamilton Way
Waugh St
S Providence Rd
Paquin St
Woodson Way
Hitt St
S Fifth St
E Stewart Rd
30
S Fourth St
S Sixth St
Conley Ave
Sanford St
Turner Ave
Tiger Ave
N
Ninth St.
12 RCP
48 CMP
15 CMP
48 RCP
Elm St.
15 VCP
30 VCP
42 x 33 Rock Box
24 CMP
60 CMP
Scale: 1"=50'
Inset - 9th and Elm
Legend
City Gravity Sewer
Private Gravity Sewer
UMC Gravity Sewer
Proposed Sewer
Proposed Stormwater Structure
Proposed 54" Stormwater Pipe
Parcels Property of Boone County
City of Columbia, Missouri
Department of Public Works
Proposed Flat Branch Sewer Projects
Project #3
Scale: 1" = 400'
Drawn: J.K.M
Date: 6/4/2015

Pedestrian Scramble

Location and How it Works

How diagonal crosswalks work

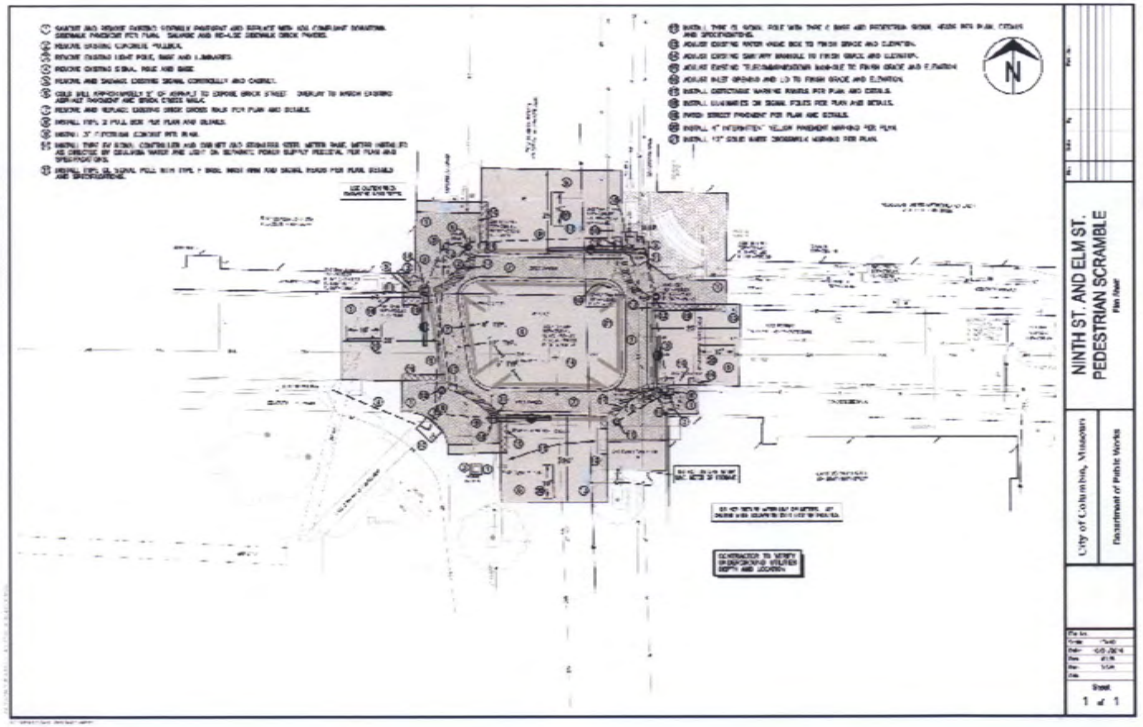
Making it easier—and safer– for people, bicyclists and drivers to get around is critical pie of planning for an active downtown. That's the goal behind Columbia's first "Scramble Intersection" being proposed at Ninth Street and Elm Street.



Acceptable Directions to Cross During Walk Time



Proposed Changes



Flat Branch Watershed Relief Sewers

Project #3: ***Elm Street,*** *Providence Road to Hitt Street*

Sixth Street, *Elm Street to North of Cherry*