



City of Columbia

701 East Broadway, Columbia, Missouri 65201

Department Source: Public Works

To: City Council

From: City Manager & Staff

Council Meeting Date: May 2, 2016

Re: Supplemental Memo for Public Hearing – Fairview Road and Chapel Hill Road Intersection Improvements

Executive Summary

Resolution 34-16 was placed on the April 4, 2016 Council agenda setting a public hearing for May 2, 2016 for the construction of Fairview Road and Chapel Hill Road intersection improvements. At the April 4th meeting, Council requested that the May 2nd public hearing be postponed for at least one month to allow Councilman Thomas to meet with concerned residents located near the proposed roundabout, and to allow staff additional time to respond to Council questions. Staff recommends that the public hearing be postponed until June 20, 2016.

Discussion

At the April 4, 2016 Council meeting, Council made a motion to postpone the May 2, 2016 public hearing to a later date. Staff recommends that the public hearing be held on June 20, 2016. Council also requested staff respond to the following questions in bold:

What were the negative comments received at the I.P. meeting? Councilman Thomas felt that the majority of attendees were not in favor of the roundabout.

Concern: The speeds through the roundabout will make it unsafe for pedestrians and bicyclists and will make it difficult for drivers to enter the intersection from Fairview Estates.

Staff response: Roundabouts, in general, are safer for pedestrians than a four-way stop because pedestrians only need to cross one leg of traffic at a time, and there is a better understanding of traffic movement since traffic is only going one way through the roundabout. In comparison, at a four-way stop the pedestrian will need to cross two legs of traffic and be aware of what traffic is doing at all four entrances of the intersection prior to crossing the street. One of the major complaints at this intersection is that drivers do not come to a complete stop and instead speed through the intersection. The geometry of the roundabout will require the drivers to slow down and go through the roundabout at a uniform rate of between 15 mph and 20 mph. If a signal is installed, the drivers will be able to drive through the intersection at a much faster speed. There is concern that eastbound drivers may go through the intersection at an excessive rate and could lose control going over the hill.

Concern: The intersection being located at the top of the hill will make it less safe.

Staff response: During winter weather, the roundabout will allow vehicles to continue slowly moving instead of coming to a complete stop on the hill. If a signal is installed, traffic would



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be required to stop on the hill. In addition, the tree line along the south side of Chapel Hill will need to be cleared in order to provide the needed sight distance for a signal (see Supplemental A-Probable Tree Removal).

Concern: The landscape and wall at Fairview Estates entrance needs to be maintained or replaced.

Staff Response: Staff will work with the Fairview Estates Homeowners Association to replace the landscaped entrance and wall where disturbed. Also, the island in the middle of the roundabout may be landscaped as well.

Concern: The roundabout needs to be bigger than a mini roundabout.

Staff response: The diameter of the proposed roundabout is 110 feet. The diameter of the mini roundabout at Fairview and Rollins is 60 feet.

Concern: The existing traffic delays do not warrant an improvement.

Staff Response: The addition of the left turn lanes on Chapel Hill during the construction of the Scott Blvd Phase II project have helped with movement through the intersection; however, these turn lanes are narrow and not considered a permanent solution for the intersection. Staff anticipates additional future collisions due to the turning movements from the turn lanes.

The traffic at this intersection is anticipated to continue to increase as the City grows to the south and southwest. Traffic is also anticipated to increase at this intersection during the construction of the improvements along Nifong, between Providence and Forum; at Nifong and Sinclair intersection; and at Vawter School and Old Mill Creek intersection. The construction of the two intersection projects along Nifong is planned for 2018, and widening Nifong is planned for 2020.

This intersection improvement project was identified to be funded from the one-fourth of one percent sales tax ballot approved by voters in 2015. Public Works is taking a proactive approach to improving this intersection for both existing and future needs.

What were the results of the speed study conducted at Rollins & Fairview Road roundabout?

A speed study was conducted at this intersection on February 4, 2016 (see attached Supplemental B-Speed Study). The results of the study show slower speeds within the mini roundabout. Over 140 records were recorded and operating speeds were below 25 mph within the roundabout (see attached Supplemental C-Speed Data).

There were no reported calls for service recorded at the 911 center for this location between January 1, 2015 and April 1, 2016, indicating no collisions at the intersection within that time frame. Prior to the conversion to the roundabout, there were typically 1-3 collisions reported each year at the all-way stop (a crash rate of about 2). Staff plans to mill and overlay the intersection as part of a maintenance project, and will modify the markings to enhance the visual acuity of the entry lanes as part of that work (see attached Supplemental D-Proposed Intersection Markings). The conversion of the Fairview & Rollins roundabout has been a



statistical success in that it has reduced collisions and reduced fuel consumption and emissions. Options for additional advance signing and markings are being considered, but do not appear to be necessary at this time. Staff does continue to receive negative (and some positive) feedback regarding the roundabout. Fully reconstructing this location would cost at least \$750,000, depending on the scope of services.

How did staff determine that a roundabout is needed at Chapel Hill and Fairview? Staff to provide the number of cars typically backed up at this intersection.

This project was prioritized by Council for construction in 2017 to be funded from the one-fourth of one percent sales tax approved by voters in 2015. The traffic at this intersection is anticipated to continue to increase as the City grows to the south and southwest. Traffic is also anticipated to increase at this intersection during the Nifong improvements, previously discussed in this memo.

Staff found that peak hour westbound vehicle backup was about 373 feet, to Handley Place (see Supplemental E-Diagram) with approximately 18 cars. Current intersection with all way stop control has a Level of Service (LOS) F. The roundabout design is based on 20 years of vehicle projections (22% increase). After the roundabout is constructed, LOS will be B with current traffic, but is estimated to be LOS D after 22 years.

Fiscal Impact

Short-Term Impact: The estimated cost for this project is \$600,000 and will be funded with 0.25% Capital Improvement Sales Tax.

Long-Term Impact: Routine maintenance is estimated at \$2,000 per year and will be included in Street Division's operating budget.

Vision & Strategic Plan Impact

Vision Impacts:

Primary Impact: Transportation, Secondary Impact: Community Facilities & Services, Tertiary Impact: Environment

Strategic Plan Impacts:

Primary Impact: Infrastructure, Secondary Impact: Public Safety, Tertiary Impact: Economy

Comprehensive Plan Impacts:

Primary Impact: Infrastructure, Secondary Impact: Mobility, Connectivity, and Accessibility, Tertiary Impact: Economic Development



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Legislative History

Date	Action
04/04/2016	R34-16 Setting a public hearing for May 2, 2016 for construction of Fairview Road and Chapel Hill Road intersection improvements. Interested Parties meeting
01/28/2016	

Suggested Council Action

Amend R34-16 to postpone the May 2, 2016 public hearing to June 20, 2016 for the Fairview Road and Chapel Hill Road intersection improvement project.