



Department Source: Public Works

To: City Council

From: City Manager & Staff

Council Meeting Date: March 18, 2024

Re: Public Hearing for the construction of the Fairview Road and Chapel Hill Road Roundabout Project.

Executive Summary

Staff is requesting a public hearing for the construction of the Fairview Road and Chapel Hill Road Roundabout project. The initial interested parties meeting for this project was held on January 28, 2016 and an initial public hearing was held at the June 20, 2016 council meeting. A second interested parties meeting was held on December 14, 2023. The total project cost estimate for the roundabout project is \$1,240,000.

Discussion

A roundabout improvement project at the intersection of Chapel Hill Road and Fairview Road was included in the list of proposed projects to be completed for the 10-year CIP sales tax ballot renewal in 2015. This sales tax renewal was voted on in August of 2015.

The Chapel Hill and Fairview intersection was evaluated over a period of several years (from before 2003 to 2014) for potential improvements. At different times there were different levels of collision concern at this intersection. There were and remain efficiency concerns during peak hours that will continue to become more pronounced at other times of the day and more significant during peak times moving forward.

While there have generally been low volumes of collision, the collision rate (number of collisions per million entering vehicles) ranged from around 1 to 3, generally around 2.0 over the times reviewed. That level of collision rate is around the high part of average for an all way stop. While there have not been extensive crash concerns to date, the location has some long-term safety risks as volumes increase.

A roundabout was determined to be the best overall long-term intersection improvement based on the long term anticipated volumes at the intersection. By pursuing a roundabout improvement at the location, the intersection would be both more efficient at all times of the day for all modes of travel and overall would operate at a safer level for those same modes.

As an interim step, left turn lanes at the intersection were added. While these lanes have served some purpose as a stop gap measure in reducing queues at the location during peak times, the narrow lanes do present an adverse impact to non-motorized and motorized travel due to complex movements occurring at the same time and reducing dedicated cycle space.

Another concern is traffic cutting through neighborhood streets around the northwest area of this location. This is somewhat due to inefficient movements at the intersection making



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those routes potentially more attractive to drivers due delays at this intersection. While it is difficult to pin down the exact volumes or percentages of traffic utilizing streets for cut through, at least a portion of traffic utilizing streets such as Alsup/Bradshaw, Bray, Cunningham, Jake, Middlebush and, likely to some lesser extent, some of the other neighborhood streets to the northeast due to delays at this intersection. However, with a previous decision by Council to remove the extension of Cunningham to Rollins from the CATSO Major Thoroughfare Plan (Bonnie View Nature Sanctuary), there are limited options to reduce or deter cut-through on these neighborhood streets. The removal of that connectivity for the surrounding area essentially concentrates traffic to the Fairview and Chapel Hill intersection, meaning that the intersection needs to operate as efficiently as possible to make other routes less attractive. Installing traffic calming on streets with issues will help to likely keep speeds lower, but is not likely to reduce volumes by much.

These factors, along with the basis that all-way stops provide less safe overall operating conditions than roundabouts, indicate that a roundabout is the best overall long-term solution for the intersection. The proposed project will include the following improvements:

- Construction of a single lane, 110-foot diameter roundabout based on Federal Highway Administration (FHWA) Urban Single-Lane roundabout (100 ft. to 130 ft. diameter) standards. The roundabout will be designed to accommodate commercial vehicles and school buses.
- Construction of 5-foot wide sidewalk with grass strip and splitter islands on each leg of the roundabout for safer alternatives for pedestrians to cross the intersection.
- Construction of 5-foot wide sidewalk with grass strip along the northeast side of Chapel Hill Road to fill in the sidewalk gap between Fairview Road and Handley Place.

Extensive street right of way already exists on the northwest corner of the intersection, but some permanent street easements and temporary construction easements are expected to be needed in order to complete the construct the project.

The first interested parties meeting for the Fairview Road and Chapel Hill Road improvement project was held on January 28, 2016 and the initial public hearing was held at the June 20, 2016 City Council meeting. At the public hearing many residents voiced concerns about the roundabout and Council voted not to move forward with final plans. At the public hearing Council directed staff to complete a detailed study of the congestion issues at the Fairview and Chapel Hill intersection and also to complete a safety evaluation of the existing Rollins Road and Fairview Road mini-roundabout.

Completion of the two intersection studies were put on hold until 2022 in order to allow additional road improvement projects in the area to be completed and then to allow traffic to even-out after the improvements were completed. These road improvement projects included the construction of the roundabout at Forum & Green Meadows (2019), the road widening along Forum between Green Meadows and Nifong (2020), the road widening



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along Nifong between Providence and Willowcreek (2020-2021), the roundabout at Nifong & Sinclair (2020), and the roundabout at Nifong and Old Mill Creek (2020).

A local engineering firm, Allstate Consultants, was hired in February of 2022 to complete the traffic study at each intersection. The objectives of the study were to analyze the existing and anticipated traffic flow through the intersections and to evaluate options for traffic control and/or geometric improvements to reduce the intersection delay and improve safety. Allstate Consultants completed the field study in March of 2022 and finalized the report in May of 2023.

In a council report at the October 23, 2023 Council meeting, staff provided the traffic study information to Council for consideration. Staff requested Council acceptance of the report and requested Council authorization to hold a second interested parties meeting and a second public hearing for the proposed roundabout improvement at the Chapel Hill and Fairview intersection. Council authorized staff to move forward with the public improvement process.

Construction of the sidewalk to fill in the sidewalk gap on the northeast side of Chapel Hill Road between Fairview Road and Handley Place was not included in the initial interested parties meeting and initial public hearing for the project. Construction of the sidewalk to fill in the sidewalk gap is included as a listed project in the City's sidewalk master plan. The sidewalk gap is approximately 650 feet and will connect to the existing sidewalk just east of Handley Place.

A second interested parties meeting was held on December 14, 2023. Thirty-seven comments were received regarding the project and 48 citizens signed the attendance sheet for the meeting. The **Summary of Concerns and Responses for the Proposed Fairview & Chapel Hill Roundabout** exhibit provides a summary of the main concerns that were voiced by residents and staff responses to those concerns.

The estimated total project cost (roundabout improvements and sidewalk extension) is \$1,240,000. The project will be funded with the ¼ cent Capital Improvement Program (CIP) sales tax. Construction of the project is anticipated to begin in summer of 2026.

Fiscal Impact

Short-Term Impact: The total project estimate is \$1,240,000 and will be funded with the ¼-cent Capital Improvement Program (CIP) sales tax.

Long-Term Impact: none



Strategic & Comprehensive Plan Impact

Strategic Plan Impacts:

Primary Impact: Reliable Infrastructure, Secondary Impact: Safe Neighborhoods, Tertiary Impact: Resilient Economy

Comprehensive Plan Impacts:

Primary Impact: Infrastructure, Secondary Impact: Land Use & Growth Management, Tertiary Impact: Mobility, Connectivity, and Accessibility

Legislative History

Date	Action
02/19/2024	R30-24 Setting a public hearing: proposed construction of a single-lane roundabout with splitter islands and sidewalks at the intersection of the Fairview Road and Chapel Hill Road, and construction of a sidewalk along the northeast side of Chapel Hill Road between Fairview Road and Handley Place.
10/02/2023	REP55-23 Update regarding the Chapel Hill/Fairview Intersection and the Rollins/Fairview Intersection
06/20/2016	PH17-16 Construction of a single-lane roundabout, splitter islands, and five-foot sidewalks and the installation of additional street lighting at the intersection of Fairview Road and Chapel Hill Road.
05/02/2016	R34-16 A-Setting a Public Hearing for June 20, 2016 for construction of the Fairview Road & Chapel Hill Road intersection improvements.
04/04/2016	R34-16 Setting a Public Hearing for May 2, 2016 for construction of the Fairview Road & Chapel Hill Road intersection improvements project (Tabled).

Suggested Council Action

Approve the construction of the Fairview Road and Chapel Hill Road Roundabout project.