



AGENDA ITEM SUMMARY

City Council

STAFF

Caryn Champine, Director of PDT
Drew Brooks, Interim Deputy Director of PDT
Tyler Stamey, City Traffic Engineer

SUBJECT

Resolution 2023-013 Repealing Resolution 2001-120, Establishing Criteria for Arterial Intersection Analysis.

EXECUTIVE SUMMARY

The purpose of this item is to consider repealing Resolution 2001-120. This resolution established that:

- An intersection alternatives analysis must be completed for any major improvement at arterial/arterial and arterial/collector intersections to assist transportation staff in determining the most appropriate improvements for the intersection.
- The analysis shall include evaluation of a roundabout and traditional intersection improvements.
- The City Manager shall submit proposals for roundabouts to City Council for a final determination. This is not required if a roundabout is not selected as the preferred alternative.

Very few modern roundabouts were in use in the Front Range in the early 2000's and this resolution was a tool to help encourage their implementation. Roundabouts have become much more common since then, and several have been successfully constructed in Fort Collins and surrounding communities. In general, roundabouts have proven to be an efficient and safe intersection control type for certain intersections. Additionally, Fort Collins adopted the Master Street Plan, which identified many intersections throughout the community as potential locations for roundabouts.

Alternatives outside of traditional intersection controls and roundabouts should also be considered as we move forward to better align with the vision and priorities of our community and allow Fort Collins to remain nimble to innovations in traffic engineering and design.

Repealing this resolution will:

- Allow the City to evolve and improve our intersection alternatives criteria to reflect the vision, priorities and conditions of our community at the time.
- Allow additional intersection alternatives to be considered beyond roundabouts and traditional intersections.
- Change authority on the final determination of roundabouts from City Council's authority to City staff.

STAFF RECOMMENDATION

Staff recommends adoption of the Resolution.

BACKGROUND / DISCUSSION

In 2001, the City of Fort Collins adopted Resolution 2001-120, which required roundabouts to be considered as an option for intersection control at arterial/arterial and arterial/collector intersections. The resolution also established the following criteria to be considered in an intersection control alternatives analysis for arterial street intersections:

- **Accident Analysis:** A short-term accident analysis will be completed comparing the safety aspects of the roundabout to the traditional intersection. The costs of accidents as well as the type of accidents occurring will be evaluated. The costs associated will be based on data provided through the National Institute for Insurance Safety.
- **Average Delay:** The City currently has Level of Service (LOS) standards for both signalized and unsignalized intersections. LOS is based on the average delay per vehicle during the peak hours of the roadway. The analysis will make a comparison of the current and projected (20 year) delay at the intersection.
- **Environmental Factors:** the analysis will include an evaluation of the emissions at an intersection under both scenarios. The analysis will include the emissions of carbon monoxide, hydrocarbon, and oxides of nitrogen. The analysis will include other factors such as impacts to existing trees and vegetation, wetlands, and noise impacts.
- **Cost:** This section of the alternative analysis will include capital costs as well as long-term maintenance and operation costs.
- **Alternative Mode Mobility:** The study will include an evaluation of pedestrian and bicycle mobility.
- **Spatial Requirements:** The amount of land area needed for each type of intersection will be evaluated. Roundabouts generally, but not always, require more land area at an intersection than a traditional intersection. However, the roundabout may provide more than enough capacity to postpone or eliminate the need for roadway widening between intersections.

As adopted, the resolution requires consideration of only two intersection control types: roundabouts or traditional intersections. Additionally, the resolution requires the City Manager to submit a proposal to City Council for review and approval if a roundabout is selected as the preferred intersection control type.

Since 2001, the following roundabouts have been constructed in Fort Collins:

- County Fair Lane & Old Mill Road
- Ziegler Road & Kechter Road
- Council Tree Avenue & Corbett Drive
- 4500 Snow Mesa Drive (Front Range Village)
- East Horsetooth Road & Ziegler Road
- 182 East Willox Lane
- Trilby Road & Zephyr Road
- Laurel & Remington
- Shields & Vine
- East Lincoln Avenue & Cordova Road

Many roundabouts have also been constructed in neighboring communities and have generally become more accepted by the community. Fort Collins is also seeing a growing trend of new intersection concepts and ideas to better promote active modes of transportation and safety. The current resolution limits the City's options to roundabouts or traditional intersections.

The framework of the evaluation criteria still applies when making intersection control decisions, though the practice has evolved to incorporate more options. Intersection Control Evaluation should be performed by a professional engineer trained in traffic engineering, with the approval of the City Traffic Engineer.

CITY FINANCIAL IMPACTS

NA

BOARD / COMMISSION / COMMITTEE RECOMMENDATION

NA

PUBLIC OUTREACH

NA

ATTACHMENTS

1. Resolution for Consideration
2. Resolution 2001-120