



Staff Report

To: The Loop CID Board

From: Carrie Gartner

Date: February 16, 2018

Re: Positive Economic Impact of Roundabouts - Case Studies

Case Study: South Golden Road, Golden, CO

South Golden Road which is one of Golden, Colorado's primary strip commercial corridors and is similar to the Business Loop in a number of ways. The street has four through lanes and a center turn lane. While used mainly as a through street, access to businesses and from side streets was a significant problem. Plans for a new shopping center elevated residents' concerns about traffic in the corridor.

Four roundabouts were installed as part of a corridor-wide improvement plan. The overall goals were to slow traffic, and improve access, safety, and aesthetics.



Before Photo

Before conditions:

- Unpleasant travel corridor
- Wide roadways
- Numerous unorganized access points
- Poor safety performance due to left turns at higher speeds (“suicide lane”)
- Center turn lane (“suicide turn lane”)
- Wide 80 pedestrian crossing (84 feet), difficult to cross without traffic signal

After conditions:

- Vibrant community corridors—attractive for business
- Slower pace but faster travel times
- Improved business access
- Traffic flows increased 22% since 2001
- Pedestrians access to businesses improved
- Improved safety (greater than 50%)
- 50% increase in retail sales tax revenue
- Additional retail/office space constructed on the corridors since roundabout installation

Detailed Results

Accidents Decreased: Total annual accidents dropped from a pre-installation high of 123 accidents per year to only 19. Injuries also dropped from 31 injuries in the 3 years pre-installation to only 1 in the 4 years after installation.

Slower Speeds: Post-installation, speeds declined from 47 mph to 33 mph (as measured by top speeds between the roundabouts.)

Faster Travel Time: Prior to the roundabouts, the section of corridor had 2 traffic signals and average travel time through the corridor (with green lights) was calculated to be 78 seconds. A third traffic signal was being considered which would have increased travel time to 103 seconds. Post installation travel time through the corridor dropped to 68 seconds.

Easier Access to Businesses: Pre-installation, businesses relied on left-turns with an average delay at business access points of 28 seconds, and a maximum delay of 118 seconds. Post-installation, right in/right out access was created and the average delay into businesses was reduced to 13 seconds with a maximum delay of 40 seconds.

Economic Impact: Sales tax revenues along the corridor, increased 60% in the six years post-installation. South Golden become the only area in the city reporting continued growth in sales tax revenues in the face of a metro-wide economic slowdown. In addition, over 75,000 square feet of retail/office space has been built in the corridor since the installation of the roundabouts.

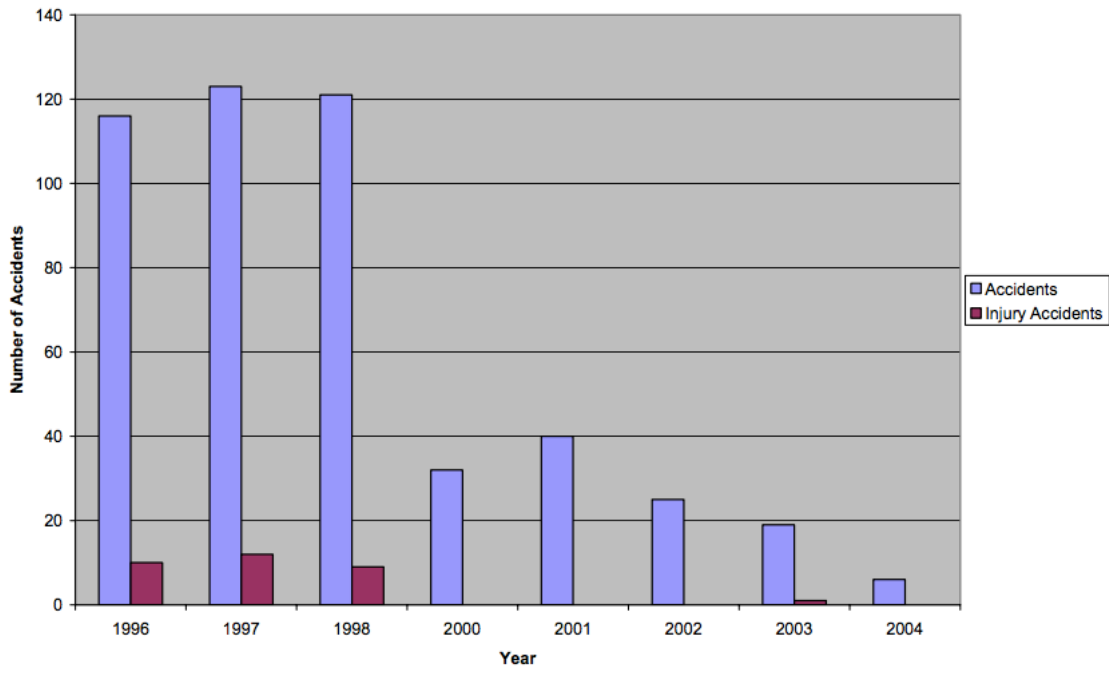


FIGURE 1
Accident History

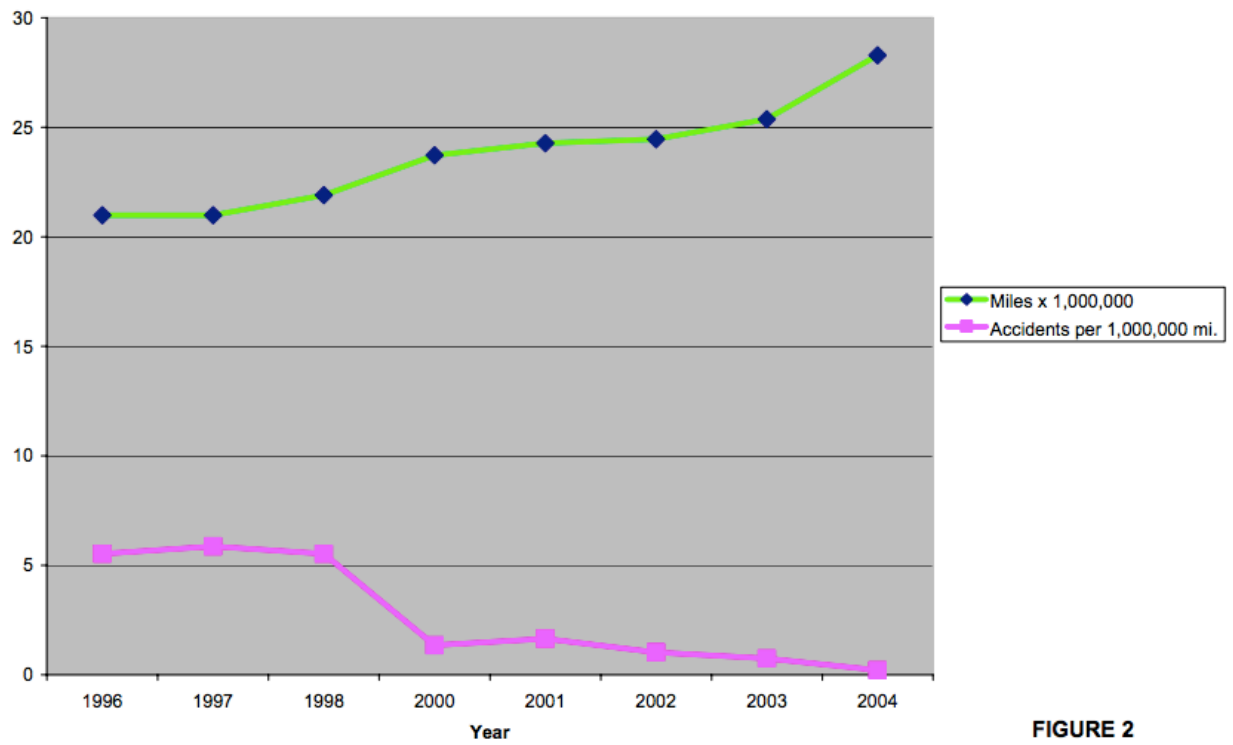


FIGURE 2
Accidents Rates

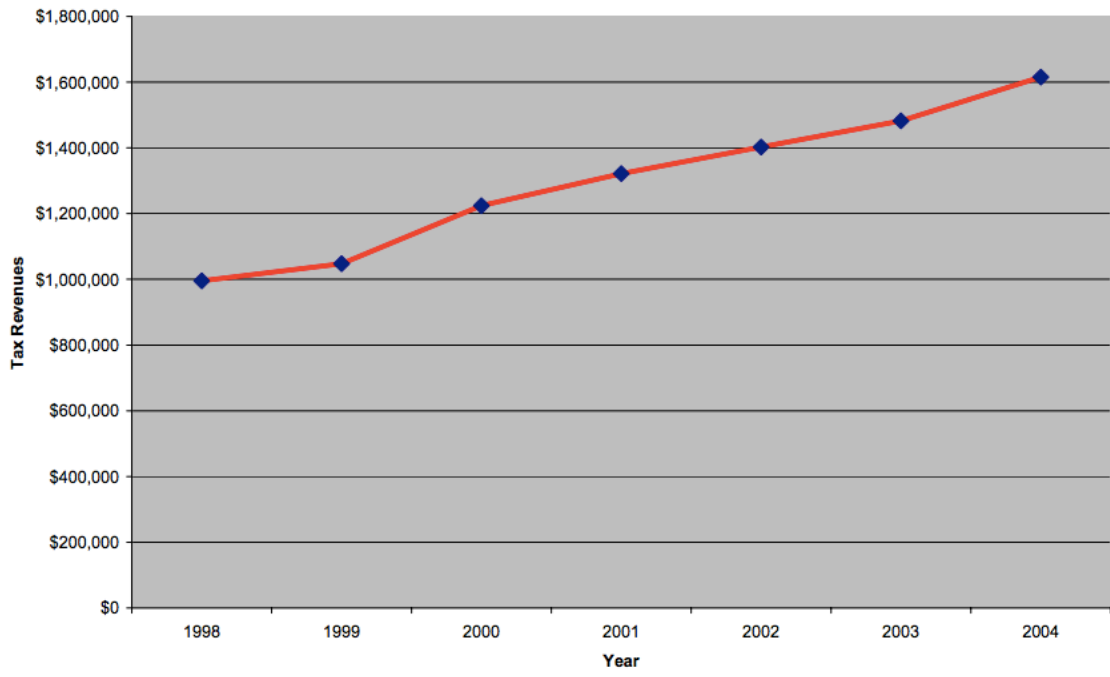
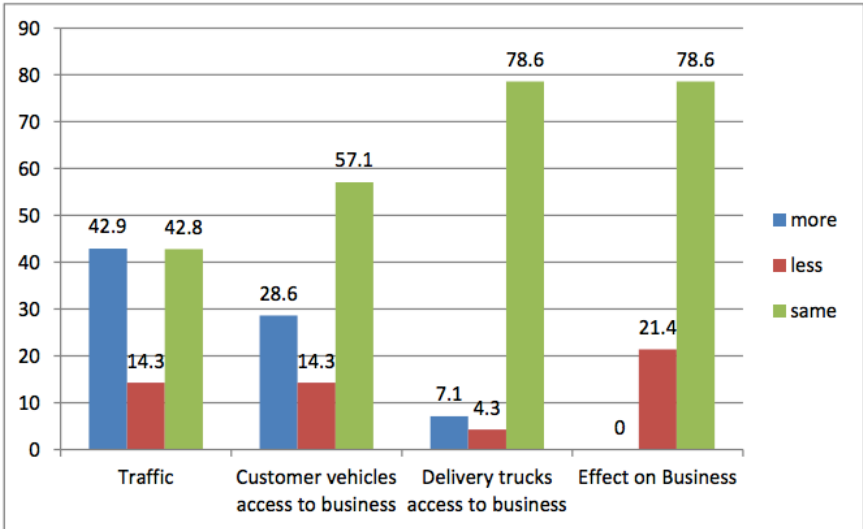


FIGURE 3
Yearly Sales Tax Revenue

Additional Examples of Positive Economic Impact

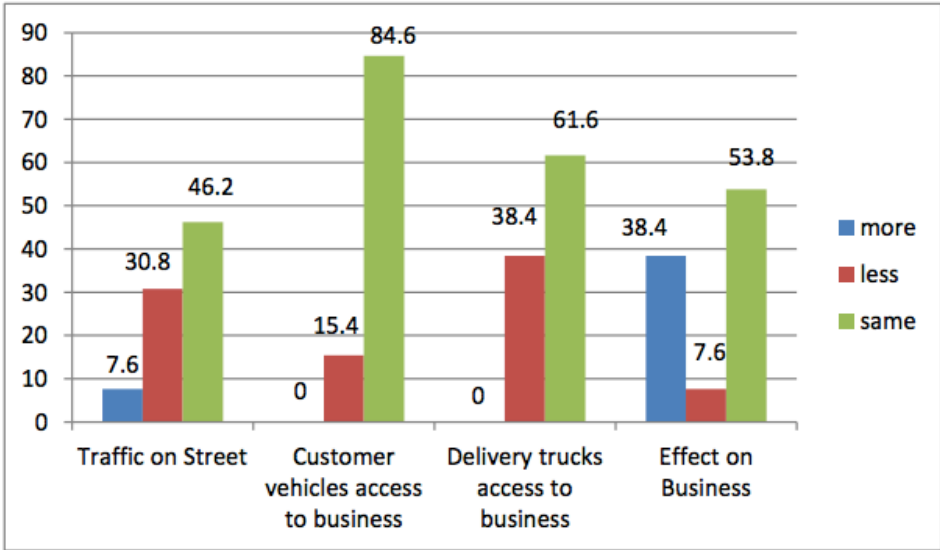
Case Study: Carmel, Indiana

Carmel has over 100 roundabouts and plans to install more. Surveys of businesses owners post-installation of a new roundabout found 78.6% of the businesses reporting that the business performance was same and only 21.4% of businesses reporting a decrease (survey taken during the recession). According to the business owners’ perceptions, only 7.1% of their customers and 23.1% of their suppliers disliked the roundabouts.



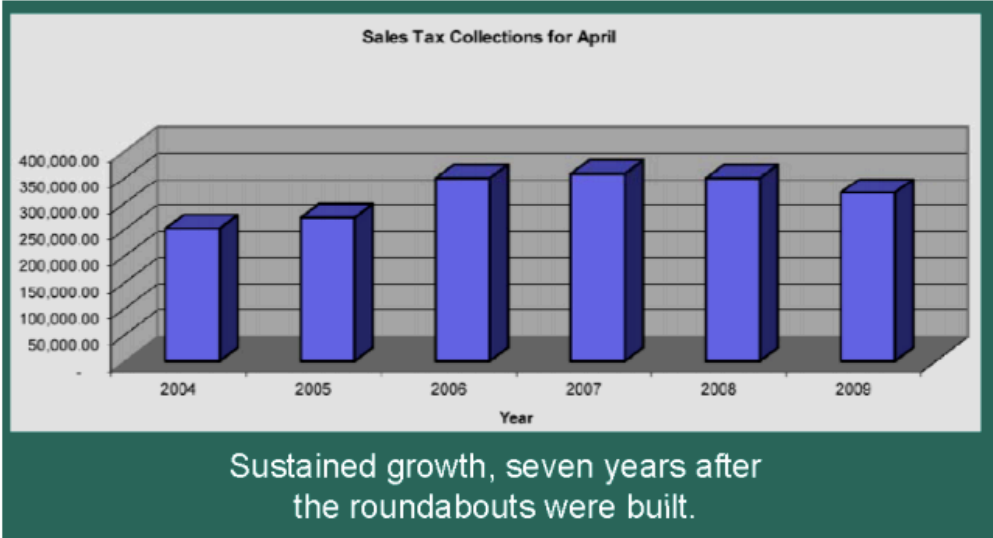
Case Study: Topeka, KS

A post-installation survey was conducted among business owners near new roundabout. Business owners reported that their business has been either increased (38.4% of respondents) or remained the same (53.8% of respondents), for a total of 92.2%.



Case Study: Avon, CO

Five signaled intersections were replaced with roundabouts, largely to address business access issues. In the 7 years following the roundabout installation, the city saw sustained growth in sales tax revenues. Even the recession of 2009 did not lead to a drop in revenues to the pre-roundabout levels.



Case Study: Hamilton, Indiana

An economic impact study for a proposed improvement and roundabout project on State Road 37 by Economic Development Research Group Inc. estimated a \$390 million economic impact for the corridor improvement project. The report shows the improvements would stimulate \$725 million in new business sales within 25 years. During the peak of construction, there would be 635 jobs generated. In the long term, there would be 172 permanent jobs created by 2040. The project is still in the planning stages.

References

Ariniello, Alex J. (2004) Are Roundabouts Good for Business? LSC Transportation Consultants, Inc.

Erdody, Lindsey (2015) State Road 37 roundabout project could have \$390M economic impact. Indiana Business Journal.

Godavarthy, R.P., Mirzazadeh, B., Russell, E.R. and Landman, D. (2016) Roundabout’s Impact on Nearby Businesses. Journal of Transportation Technologies, 6, 181-191.

Russell, Eugene R., Landman, Dean and Godavarthy, Ranjit (2014) A Study of the Impact of Roundabouts on Traffic Flows and Business. Kansas State University Transportation Center