

# Are Roundabouts Good for Business?

TRB National Roundabout Conference  
May 23 - 25, 2005  
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City of Golden  
COLORADO





# Now it looks like this

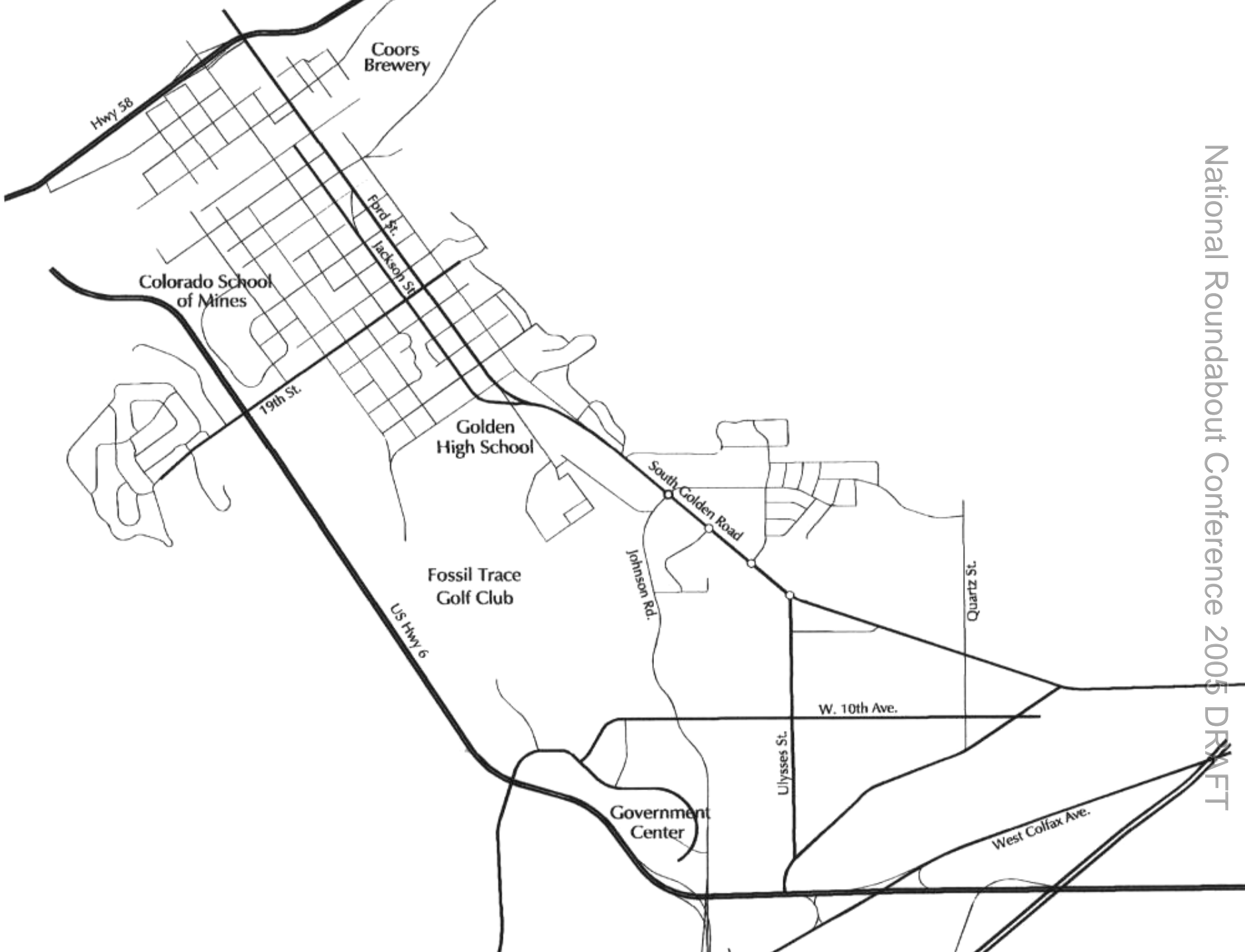


# Background

## City of Golden

- 17,000 people
- Colorado School of Mines
- Coors Brewery







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# South Golden Road

## Suburban Highway

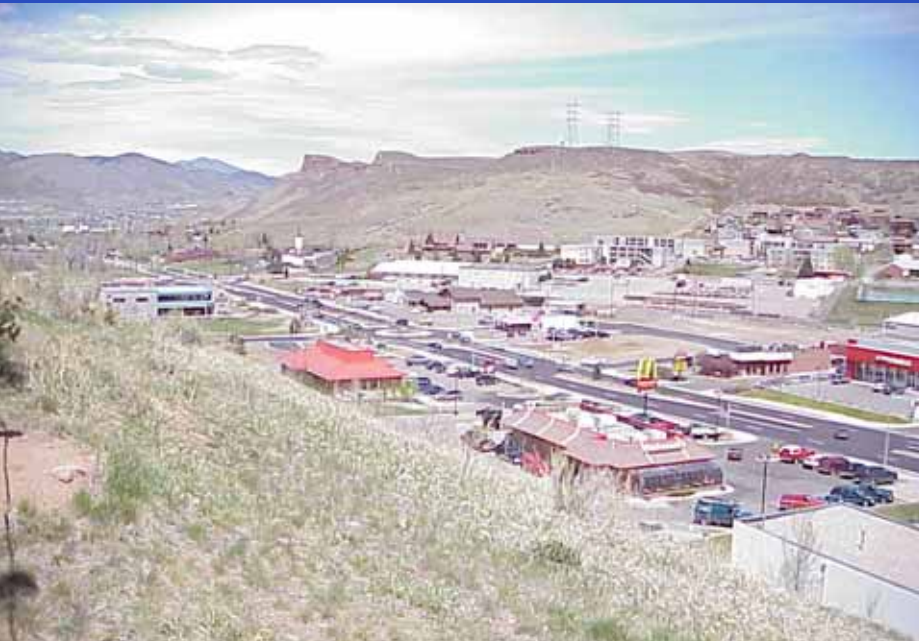
- Four Travel Lanes
- Center Turn Lane
- Wide Parking/Shoulders
- 84 feet in Width
- Driveways allowed indiscriminately



# Strip Retail Area

Businesses, including

- Several Fast Food Restaurants
- Small Shopping Center





# Safety Concerns

- Unrestricted Access
- Center Turn Lane
- Width of roadway encouraged speeding
- Was difficult to cross



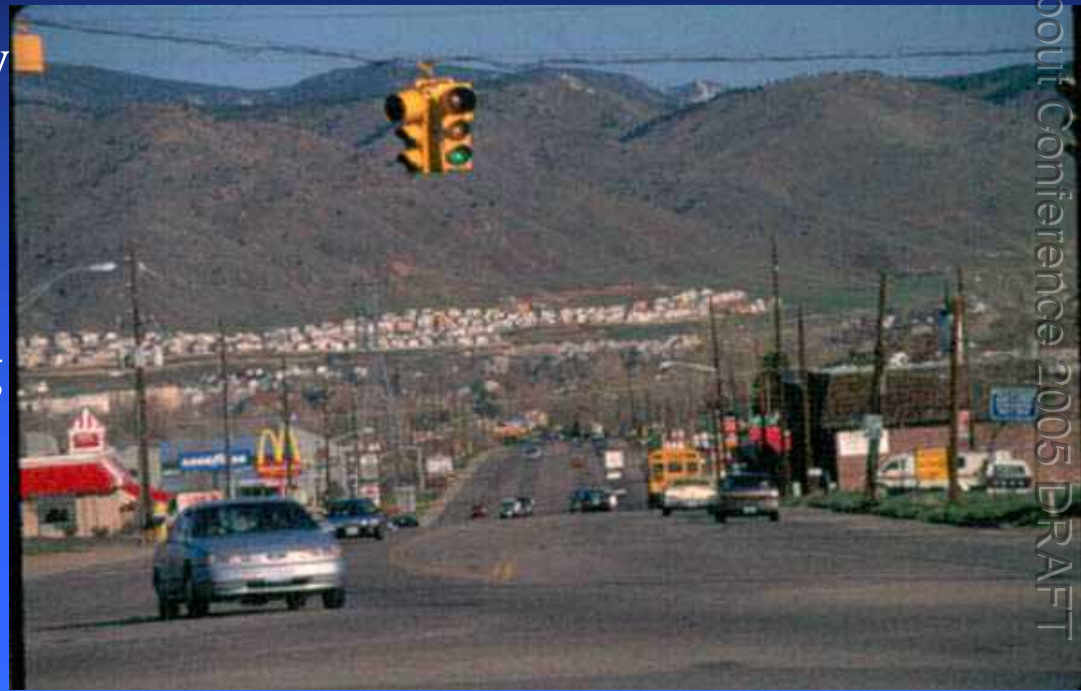
# Impetus To Project Start



- Development proposal for a shopping center
- Need for a traffic signal at Utah Street

# City Objectives for South Golden Road

- Reduce vehicular conflicts and increase safety
- Create a more aesthetically pleasing area
- Create a more pedestrian-friendly environment
- Reduce delays for entering traffic at Utah Street
- Reduce queue delays to reduce travel time



# Initial Concept for South Golden Road

- Narrow the roadway
- Provide medians and wide detached sidewalks
- Construct two roundabouts at Utah Street and Ulysses Street



# City Reaction

- Receptive to roundabout concept
  - Traffic calming aspects
  - Obvious operational qualities of roundabout concept
  - Ease of U-Turns at the roundabouts
  - Requested addition of a third roundabout



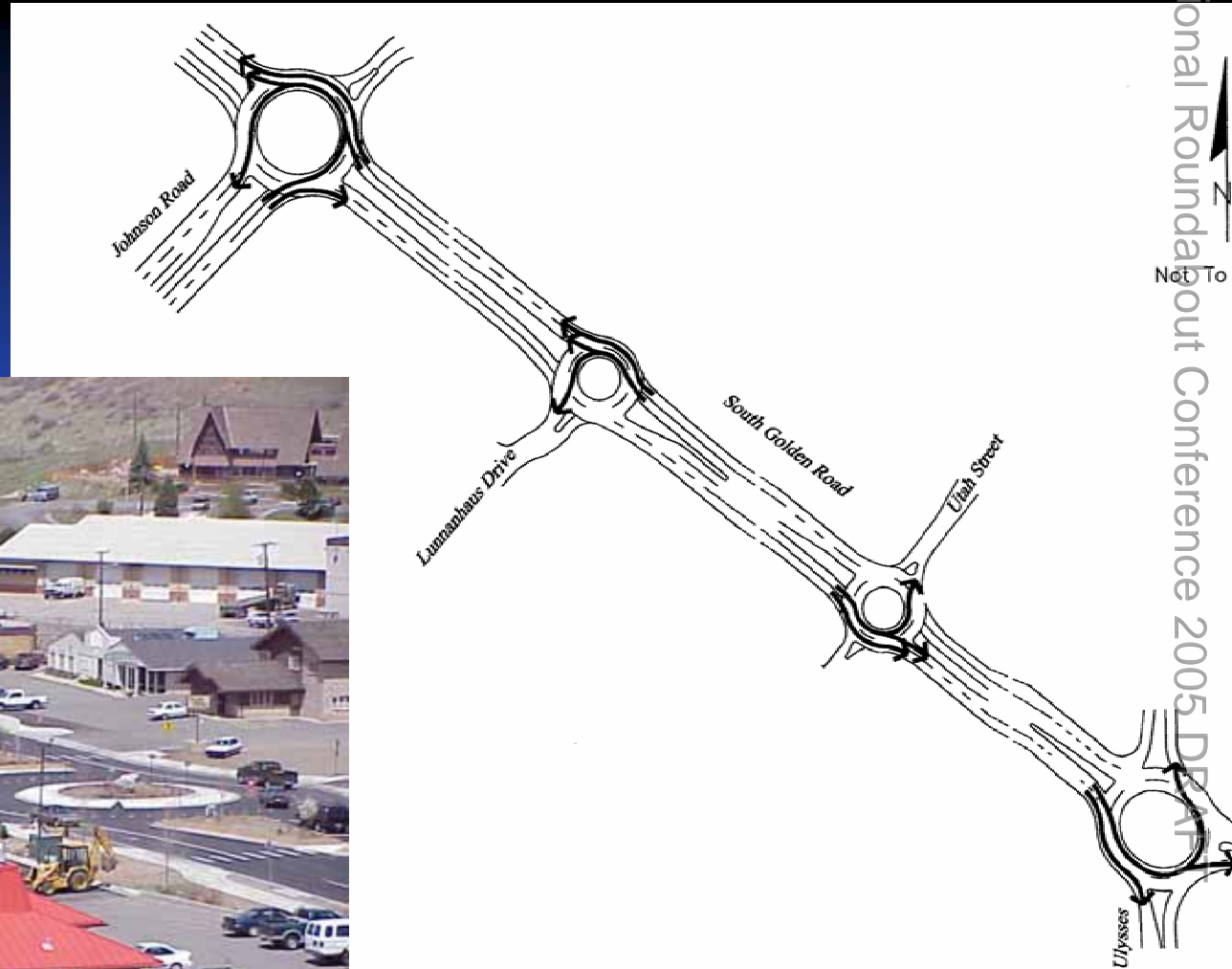
# Selling the Roundabout

- Biggest opponent was King Soopers, the major tenant of the new shopping center
- City offered to tear roundabout out if sales revenues didn't meet expectations



# Selling The Roundabout

- Meeting with local merchants
- Fourth roundabout



# Implementation

- Ulysses roundabout constructed on fast track schedule
- Opened in November, 1998
- King Soopers exceeded its sales projections
- The other three roundabouts were completed in 1999





# Roundabout Dimensions

S. Golden Road Roundabouts	Inside Diameter	Outside Diameter
Ulysses Street (single-lane)	90	145
Utah Street	50	105
Lunnanhaus Drive	50	105
Johnson Road	100	155



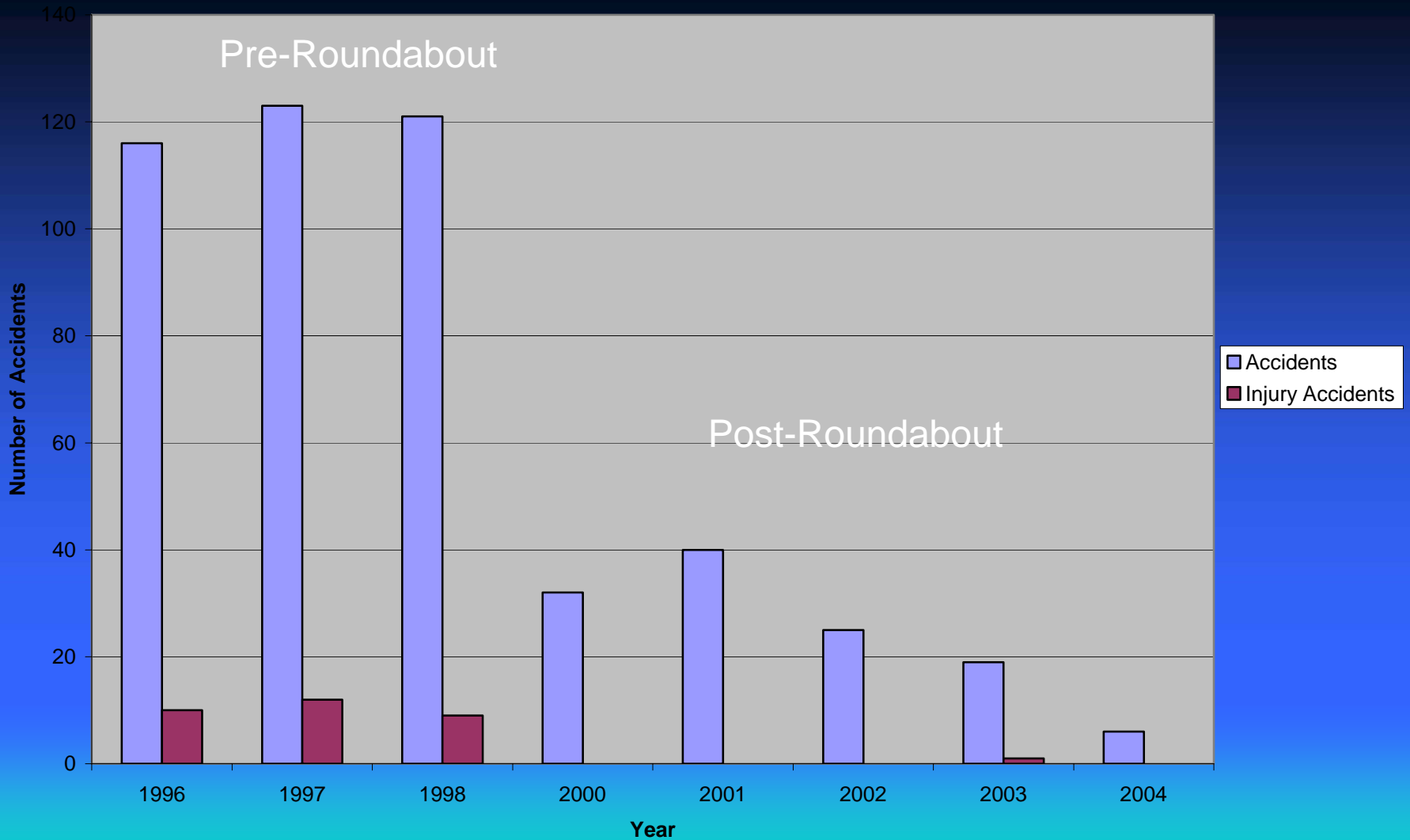
# Project Costs

The 3/4mile long project cost 1.3 million. This included:

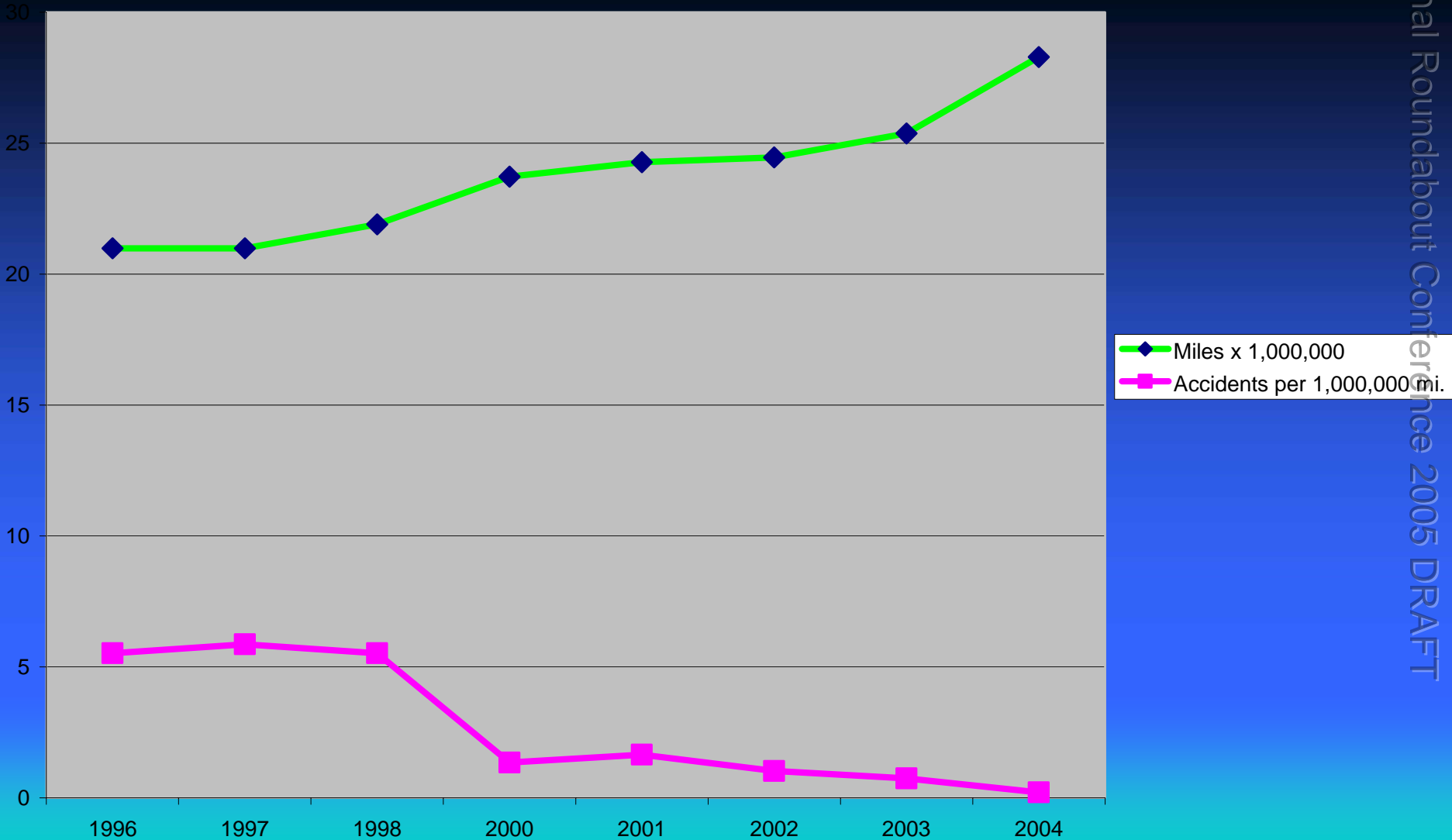
- Four Roundabouts
- Roadway Reconstruction
- Medians, Detached Sidewalks, Utility Relocations
- Design and Landscaping



# Accident History



# Accident Rate History



# Slower Speeds But Faster Travel Times

Prior to roundabouts:

- 2 traffic signals
- Average travel time of 78 seconds
- With 3rd signal  
Predicted travel time of 103 seconds

After The Roundabouts:

- Travel time reduced to 68 seconds



# Business Access

## Seconds of Delay

	<u>Before</u>	<u>After</u>
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Average Delay at Access Points	28	13
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Maximum Delay at Access Points	118	40
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# Other Examples

- Roundabouts Gaining Acceptance by Business Community



Superior Marketplace  
Superior, Colorado

750,000 SF  
Shopping Center

3.5.2005



16.2.2002

**Mixed Use Development**  
**670 acres**  
**5,000 employees**  
**1,500 Dwelling Units**  
**300 SF Retail**

HWY 257

**Promontory, Greeley, CO**

US 34 Bypass

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# Loveland, CO



4.10.1999



Factory Outlet Shopping Center



4.10.1999

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# Douglas County, CO



**Future Light  
Rail Station**

**Transit-Oriented Development  
1,200 Acres  
2,000 Dwelling Units  
5 million SF Office/Retail  
Major Hospital  
Light Rail Station**

**School**

**Rec. Center**



**Harvest Junction**  
**Longmont, CO**

# Avon, CO



# Sales Tax Revenues

- 60% increase in sales tax revenues
- Only area in Golden to experience continued sales tax growth

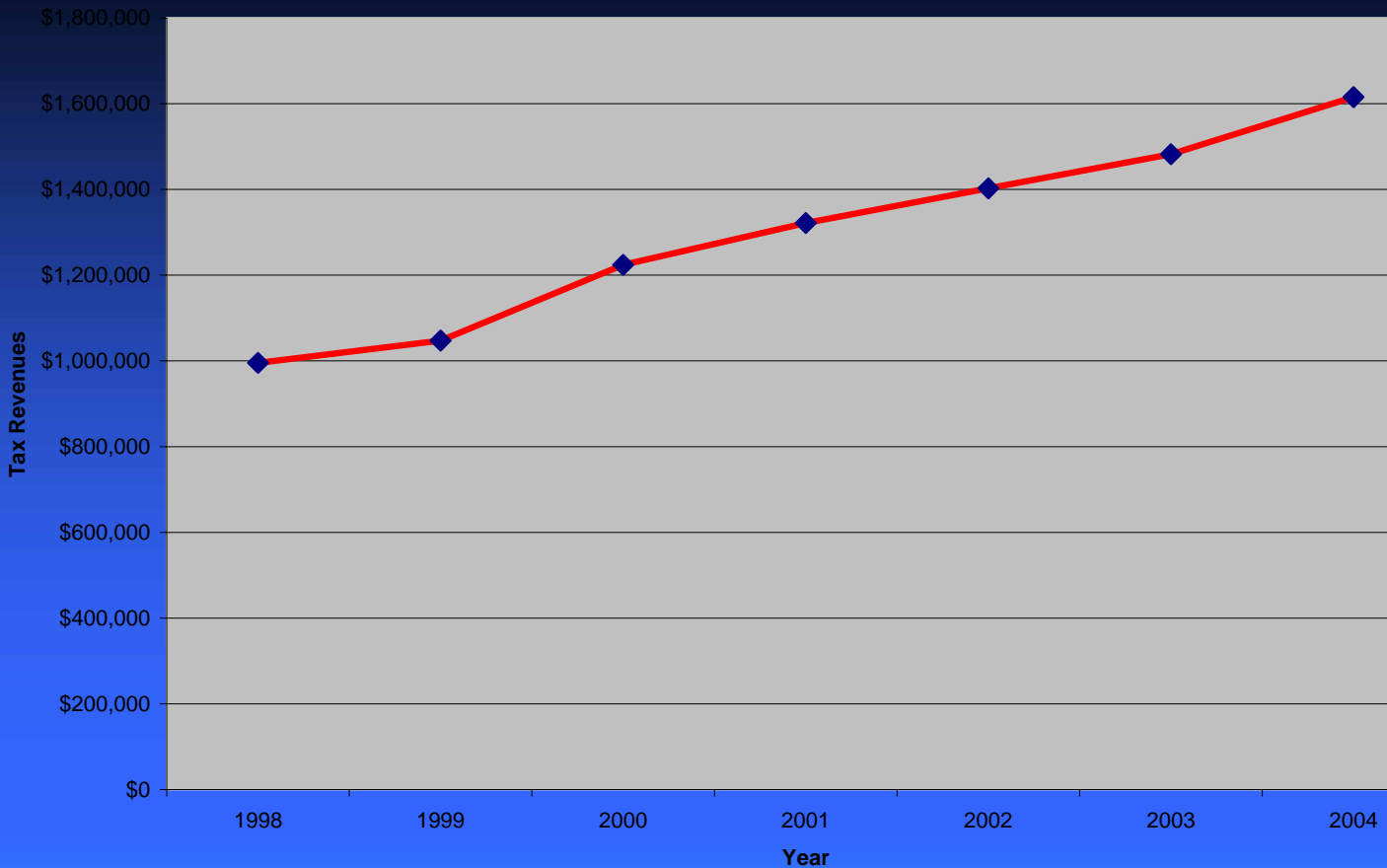


FIGURE 3  
Yearly Sales Tax Revenue

# Summary and Conclusions

- Roundabouts in a Strip Commercial Area
- Slower Speeds, Faster Travel
- Reduced Delay at Access Points
- 88% Reduction in Accident Rates
- 60% Increase in Sales Tax Revenues



# Are Roundabouts Good for Business?



# Are Roundabouts Good for Business?

Golden's Answer is  
**Yes !**

