

# Signal Timing Briefs

October 2013 - T14-7

Mobility

DRCOG

DENVER REGIONAL COUNCIL OF GOVERNMENTS

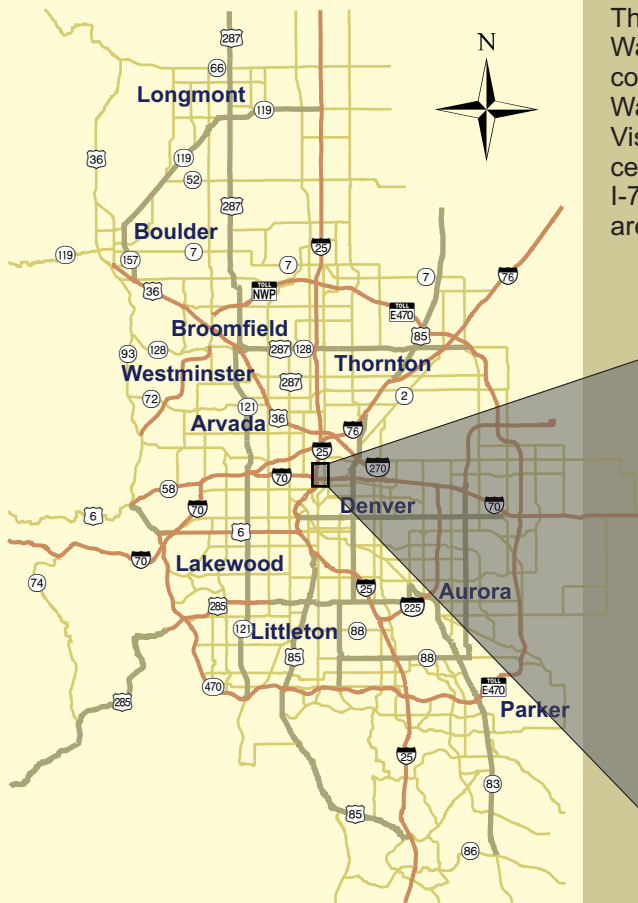
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## Washington Street: 51st Avenue to Brighton Boulevard

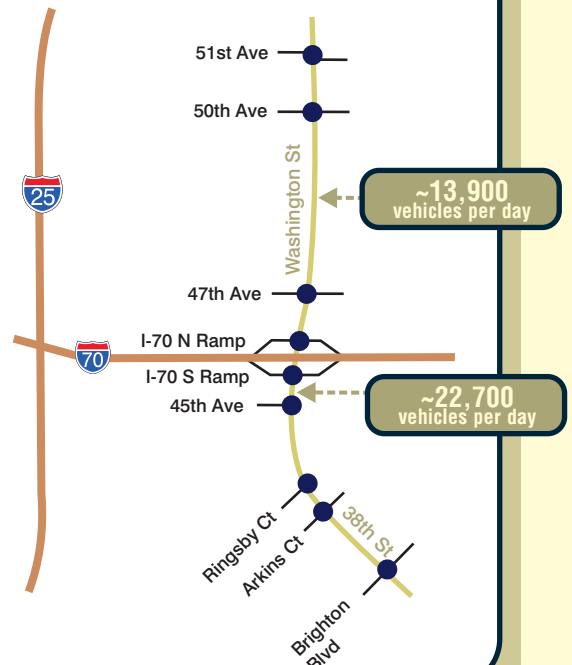
The Denver Regional Council of Governments leads multijurisdictional partnerships to achieve optimal signal timing and coordination on area roadways. Adjustments to signal timing are key to ensuring the smoothest possible flow for drivers, saving time and money. Signal timing also minimizes greenhouse gas emissions and other pollutant emissions, preserving and enhancing air quality.

### Project Description

The City of Denver installed signal equipment upgrades on Washington Street. This project implemented timing and coordination plans for nine signals on Washington Street. Washington Street is a principal arterial roadway in the Metro Vision Regional Transportation Plan that travels north-south in the central Denver metro area. Washington Street provides access to I-70 in the project area. Land use along the roadway in the project area is mostly commercial and industrial.



### Washington Street



#### Project Partner's Signals

● City and County of Denver

### Project Achievements

#### Performance Measures

Vehicle hours of travel  
 Fuel consumption  
 Time and fuel costs  
 Total greenhouse gas emissions  
 Total criteria pollutant emissions

#### Daily Benefits

159 hours reduction  
 97 gallons decrease  
 \$3,700 savings  
 2,041 pounds reduction  
 22 pounds reduction

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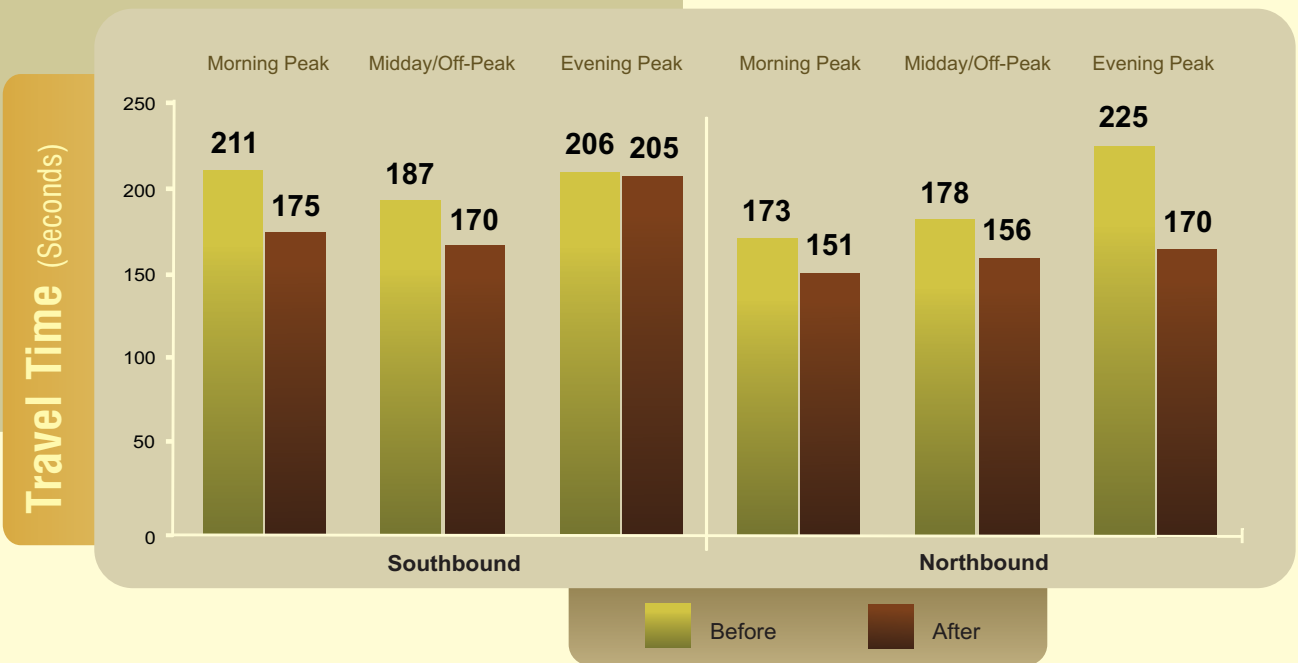
## Timing Revision:

Time Period	Morning Peak		Midday/Off-Peak		Evening Peak	
	Before	After	Before	After	Before	After
	Cycle Length (seconds)	6:30 a.m. - 3:00 p.m.	5:00 - 2:00 p.m. <sup>1</sup>	none	9:00 a.m. - 2:00 p.m. <sup>1</sup>	2:00 - 6:30 p.m.
Other Timing Parameters	100 (No change)		100 (No change)		100 (No change)	
	--	Revised	--	Revised	--	Revised

<sup>1</sup> The signals at Arkins Court., Ringsby Court., and 45th Avenue operate with an off-peak plan. The other signals run the morning plan until 2 p.m.

### Travel Time Improvements (1.2 miles end to end)

Improvements were obtained during all periods in both directions, except for the southbound direction in the evening peak that remained essentially unchanged.



## Overall Improvements

The value to motorists, in terms of weekday time and fuel savings, is calculated to be approximately \$3,700 daily or about \$930,000 annually. An additional benefit of the project is improved reliability of signal operations, thanks to equipment upgrades. These upgrades allow traffic signal malfunctions to be quickly detected and reported. This results in less stopping and delays for the traveling public.