



STATEWIDE TRAVEL-TIME DATA COLLECTION & ANALYSIS FINAL REPORT 2007-2009



NAVJOY
Consulting Services, Inc.

Acknowledgements

Our thanks to the following staff who have contributed to the successful completion of the third and final year of this project:

◆ David Reeves	Colorado Department of Transportation, Project Manager
◆ Mehdi Baziar	Colorado Department of Transportation
◆ Tim Baker	Colorado Department of Transportation
◆ Aaron Moss	Colorado Department of Transportation
◆ Juan Robles	Colorado Department of Transportation
◆ Dave Shrank	Texas Transportation Institute
◆ Stan Young	University of Maryland
◆ Navin Nageli	Navjoy, Project Officer
◆ Pradeep Nimmatoori	Navjoy, Project Manager
◆ Lance Goeddel	Navjoy, Data Collection Manager
◆ Danny Montoya	Navjoy, Project Engineer
◆ Leonid Chacikjanc	Navjoy, Project Engineer

In addition, our special thanks to staff from CDOT Regions and the ITS Branch for participating in this project.

Table of Contents

Executive Summary	iv
Section 1: Introduction.....	1
1.1 Background.....	1
1.2 Project Purpose and Methodology	1
1.3 Anticipated Use of Travel Time Data and Report	2
Section 2: Results.....	3
2.1 Historical Comparison of Travel Times	3
2.2 Travel Rate Index Corridor Comparisons.....	4
2.3 Travel Time Variability Corridor Comparisons	4
2.4 HOV/HOT Travel Time Comparisons.....	5
2.5 Transit Data.....	5
2.6 I-70 Corridor Winter Data Collection.....	5
2.7 Congestion Costs	5
2.8 3 Year Comparisons of Corridor Measures	6
2.9 Corridor Reports	7
Section 3: Conclusions.....	8
3.1 Project Benefits	8
3.2 Challenges Encountered and Lessons Learned.....	8
3.3 Future Year(s) Data Collection.....	8
Glossary	10

List of Appendices

Appendix A - Statewide Travel Time Corridor List
Appendix B - Project Methodology
Appendix C - Historical Composite Travel Time Comparisons
Appendix D - TRI Comparisons
Appendix E - TTV Comparisons
Appendix F - HOV/HOT Travel Time Comparisons
Appendix G - Individual Corridor Reports
Appendix H - I-70 Winter Travel Time Report
Appendix I - Overall Corridor Measures Table

List of Tables

Table 1: 2007 - 2009 Interstate Corridor List.....	A-1
Table 2: 2007 - 2009 US Highway Corridor List.....	A-2
Table 3: 2007 - 2009 State Highway Corridor List.....	A-4
Table 4: Travel Time Delay Codes.....	B-2
Table 5: Historical Composite Travel Times.....	C-1
Table 6: Interstate Travel Rate Index for AM Commuter & Saturday Recreational Peaks.....	D-1
Table 7: Interstate Travel Rate Index for PM Commuter & Sunday Recreational Peaks.....	D-1
Table 8: US Hwy Travel Rate Index for AM Commuter & Saturday Recreational Peaks.....	D-2
Table 9: US Hwy Travel Rate Index for PM Commuter & Sunday Recreational Peaks.....	D-3
Table 10: State Hwy Travel Rate Index for AM Commuter & Saturday Recreational Peaks....	D-4
Table 11: State Hwy Travel Rate Index for PM Commuter & Sunday Recreational Peaks.....	D-5
Table 12: Interstate Travel Time Variability for AM Commuter & Saturday Recreational Peaks	E-1
Table 13: Interstate Travel Time Variability for PM Commuter & Sunday Recreational Peaks	E-1
Table 14: US Highway Travel Time Variability for AM Commuter & Saturday Recreational Peaks	E-2
Table 15: US Highway Travel Time Variability for PM Commuter & Sunday Recreational Peaks.....	E-3
Table 16: State Highway Travel Time Variability for AM Commuter & Saturday Recreational Peaks.....	E-4
Table 17: State Highway Travel Time Variability for PM Commuter & Sunday Recreational Peaks.....	E-5
Table 18: 2009 HOV/HOT Travel Time Comparisons.....	F-1
Table 19: 3-Year HOV/HOT and General Lanes Trend Analysis.....	F-3
Table 20: Overall Corridor Measures.....	H-1

Executive Summary

Background and Purpose

Traffic congestion is one of the most significant issues adversely impacting mobility on highways across the state of Colorado. Roadway congestion can lead to increased crashes, increased driver stress, and a reduced quality of life. One of the primary steps to addressing congestion is to understand when and where it is occurring on the transportation network. Within CDOT, the Division of Transportation Development (DTD) is responsible for the development and collection of mobility performance measures to quantify how well corridors operate in relation to the volume of vehicles that use them.

The purpose of this project was to collect and analyze travel time data for 71 congested corridors (volume to capacity ratio ≥ 0.85) representing nearly 845 miles of highways in Colorado over three consecutive years. This allows CDOT to establish baseline conditions for each corridor and to monitor performance on congested corridors on an annual basis. It also aids in the development of a congestion management system and resource allocation process to address congestion within the State. This year (2009) was the third and final year of the project.

Data collection and analysis for 2009 was performed similar to the project's first two years (2007 & 2008) for all project corridors. This year's project also included data collection for the I-70 (C-470 to SH 9) corridor during the peak winter ski season similar to Year 2008 season.

Project Results Summary

Several corridor performance measures were developed for each of the congested corridors in the report and the following includes the 3-year comparison highlights for each measure.

- Historical comparison of travel times – Of the 71 corridors sampled, 35 corridors (49 percent) showed increased travel times during peak time periods.
- Travel Rate Index (TRI) comparison – 36 corridors (51 percent) had a peak period TRI value of 1.20 or more for all three years. This means a trip during a peak period takes at least 20 percent longer than the same trip in the off-peak time period.
- Travel Time Variability (TTV) comparison – 15 corridors (21 percent) had a peak period TTV value of 50 percent or more for all three years. This indicates that a trip can take one-half times as long or longer as another trip during the same time period.
- Overall Congestion Costs – Based on an estimated total person hours of delay over the three year project life are 167 million hours, the total congestion costs are estimated at \$2.6 billion over the 3-year period. This is based on a person time value of \$15.50 per hour used for 2007 and \$16.00 per hour used for 2008 and 2009, as identified in the Annual Urban Mobility reports by the Texas Transportation Institute.
- I-70 Corridor (winter ski season) Comparison – The average travel time for the eastbound direction is increased by 24% from year 2008. The average travel time for the westbound direction is decreased by 4% from year 2008. The annual congestion cost as a result of increase in annual vehicle hours of delay increased almost 1.5 times from \$95 million to \$145 million.

Section 1: Introduction

This report summarizes the results of the third consecutive and final year of the Colorado Department of Transportation's (CDOT) Statewide Travel Time Data Collection and Analysis project for the Year 2009. Additionally, this report provides summary highlights of three-year data comparisons for project corridors.

1.1 Background

Traffic congestion is one of the most significant issues adversely impacting mobility on highways across Colorado. CDOT's Division of Transportation Development (DTD) is responsible for the development and collection of mobility performance measures to quantify how well corridors operate in relation to the volume of vehicles that use them.

Traditional methods of measuring performance such as volume to capacity (v/c) ratios, levels of service, etc. are useful but do not always provide a good understanding of corridor performance. These measures can also be difficult to relate in lay terms or to the typical traveler and commuter's daily driving experience. Travel time data is increasingly being collected to augment or replace traditional mobility performance measures. Travel time data serves as a useful tool to measure levels of congestion and overall quality of service for corridors. It has the ability to identify areas of congestion and excessive delay, identical to actual driving conditions encountered by the traveling public. CDOT's DTD has conducted travel time studies on select congested corridors (v/c ratio ≥ 0.85) since the year 2000. Over the years, the scope and funding for travel time studies have increased to include many congested corridors in the State. This project (initial project year 2007) was unique in two ways; first in that it included travel time data collection for all congested corridors in Colorado and second in that data collection was to be performed over three consecutive years. It was envisioned that this project would provide a foundation in establishing baseline congested corridor conditions. This year's (2009) project builds upon the first two years of data collection and provides CDOT with three years worth of consecutive travel time data for all 71 identified congested corridors in the State.

In addition to collecting data for all 71 congested corridors, winter travel time data was again collected for the I-70 Corridor to follow-up the winter data collected in 2008. This allows CDOT to evaluate the performance of the corridor over two winter seasons. Similar to last year's project, this year's project also incorporated individual corridor average vehicle occupancy (AVO) values from the CDOT's 2008 AVO study.

1.2 Project Purpose and Methodology

The purpose of this project was to collect and analyze travel time and traffic count data to measure the performance of 71 congested corridors in Colorado over three consecutive years. Of the 71 corridors, there were 60 commuter and 11 recreational corridors. The corridors studied include 13 interstate segments, 30 US highway segments, and 28 state highway segments representing 845 highway centerline miles. A complete list of the 2007 – 2009 project corridors is listed in Tables 1 thru 3 of Appendix A. Tables 1 thru 3 show the corridors by interstates, US

CDOT Statewide Travel Time Data Collection and Analysis Project Data Collection Year 2009

highways, state highways and include corridor mileage, corridor location in CDOT Region(s), and corridor type (commuter or recreational). Travel time data was collected using the floating car method using either Global Positioning System (GPS) or Distance Measuring Instrument (DMI) equipment. Appendix B provides more detailed information about the project methodology.

1.3 Anticipated Use of Travel Time Data and Report

Travel time data allows CDOT staff to monitor performance for congested corridors on an annual basis. It also aids in the development of a congestion management system and resource allocation process to address congestion within the state. Additionally, the data presented in this report will be more easily related to the typical commuters' driving experience and garner support from both the traveling public and CDOT decision makers.

Having three consecutive years worth of travel time data for all 71 congested corridors provides an excellent baseline to monitor individual corridor performance in the future and is anticipated to be useful for other CDOT purposes. Anticipated uses are diverse and range from indentifying corridor congestion points for mitigation measures to assisting CDOT planners, planning partners and traffic engineers with calibration of any traffic models used to predict traffic growth along the State's highway and street networks.

Section 2: Results

The results of the project are presented in two distinct ways. One way is to compare each corridor against past years data. The other way is to compare corridors against each other using measures such as Travel Rate Index (TRI) and Travel Time Variability (TTV). In addition, project results include HOV/HOT travel time comparisons against general purpose lanes and I-70 corridor winter travel time report.

The following sections provide highlights of the project results. Highlights are first presented for year 2009 data collection activities followed by 3-year comparison highlights.

2.1 Historical Comparison of Travel Times

Historical data forms the basis for monitoring a corridor's performance. Composite travel times are the overall average travel time for both directions on a corridor. Appendix C - Table 5 shows the historical comparison of composite travel times. With the completion of this final year of the project, there is now historical data for all 71 corridors based on a minimum of three years of consecutive data collection. The trend calculation is based on comparing the first two years of data and then comparing the next two years and so on and finally averaging the composite calculation based on the total number of years and the data.

The highlights of the historical comparison are listed below:

Commuter Corridors (60 Corridors)

- 31 commuter corridors show an overall composite travel time trend increase for both morning and afternoon peaks.
- 17 commuter corridors show an overall composite travel time trend decrease for both morning and afternoon peaks.
- Of the remaining corridors 3 commuter corridors show an overall composite travel time trend increase for the morning peak period only and 9 commuter corridors show an overall composite travel time trend increase for the afternoon peak period only.

Recreational Corridors (11 Corridors)

- 5 recreational corridors show an overall composite travel time trend increase for both the Saturday and Sunday peak periods.
- 4 recreational corridors show an overall composite travel time trend decrease for both Saturday and Sunday peaks.
- Of the remaining corridors 2 recreational corridors show an overall composite travel time trend increase for the Sunday peak period only.

2.2 Travel Rate Index Corridor Comparisons

TRI is a corridor measure that indicates how long a peak trip takes in comparison to an off-peak trip. TRI is calculated from the ratio of travel time during the peak period time to off peak period time. A TRI value of 1.2 indicates that a trip during a peak period takes 20 percent longer than the same trip in the off-peak period.

$$\text{TRI Formula} = \text{PP}_{\text{TT}} / \text{OP}_{\text{TT}}$$

$$\text{OP}_{\text{TT}} = (\text{A}_L + \text{N}_L + \text{P}_L) / 3$$

A_L – Lowest AM/Saturday peak trip (by direction)

N_L – Lowest noon-peak/Sat-Sun off-peak trip (by direction)

P_L – Lowest PM/Sunday peak trip by direction

OP_{TT} – Off-peak trip time equivalent

PP_{TT} – Peak period travel time

Appendix D – Tables 6 through 11 show the TRI values for interstates, US highways and state highways for both commuter and recreational corridors.

- For commuter corridors (regardless of interstate, US highway or state highway), TRI values are generally higher in the PM peak as compared to the AM peak.
- For recreational corridors, TRI values for interstates and US highways are generally higher in the Sunday peak as compared to the Saturday peak period. However, TRI values for state highways are generally higher in the Saturday peak as compared to the Sunday peak.
- There were 21 commuter corridors that had a TRI value of 1.2 or more during the AM peak period as compared to 25 last year.
- There were 34 commuter corridors that had a TRI value of 1.2 or more during the PM peak period as compared to 45 last year.
- There were 2 recreational corridors that had a TRI value of 1.2 or more during Saturday peak period similar to last year.
- There were 2 recreational corridors that had a TRI value of 1.2 or more during Sunday peak period as compared to one last year.

2.3 Travel Time Variability Corridor Comparisons

TTV is a corridor measure that indicates how much variability exists between the highest and lowest travel time runs during the peak periods. A value of 100 percent indicates that a trip can take twice as long as another trip on the same corridor during the same time period. TTV indicates the relative reliability of travel times during the peak period. Appendix E – Tables 12 to 17 show TTV values for interstates, US highways and state highways for both commuter and recreational corridors.

- For commuter corridors (regardless of interstate, US highway or state highway), TTV values are generally higher in the PM peak as compared to the AM peak.

CDOT Statewide Travel Time Data Collection and Analysis Project

Data Collection Year 2009

- For recreational corridors (regardless of interstate, US highway or state highway), TTV values are generally higher in the Sunday peak as compared to the Saturday peak.

2.4 HOV/HOT Travel Time Comparisons

As part of the project, travel times were collected for the HOV/HOT lanes and general purpose lanes on I-25, US 36 and US 85 corridors during morning and afternoon peak periods. Appendix F – Table 18 shows the detailed comparison of 2009 travel times and includes the general limits and time periods of operation for the HOV/HOT lanes. Table 19 in Appendix F shows the three-year trend analysis for the HOV/HOT lanes. The following are highlights of the comparison:

- On the I-25 corridor, the travel times in HOV/HOT lanes were 41 and 28 percent lower than general purpose lanes in the AM and PM peak periods, respectively.
- On the US-36 corridor, the travel times in HOV/HOT lanes were 26 percent lower than general purpose lanes in the AM peak periods. There was no change for the PM peak periods.
- On the US-85 corridor, the travel times in HOV lanes were 14 and 31 percent lower than general purpose lanes in the AM and PM peak periods, respectively.

2.5 Transit Data

Transit data was collected in 2007. However, it was determined that no meaningful conclusions could have been drawn from 2007 data. Therefore, it was agreed that transit data collection would be dropped for subsequent years of this project.

2.6 I-70 Corridor Winter Data Collection

Travel times were collected along the I-70 (C-470 to SH 9) corridor during the winter season (January, 2010). Appendix H details the I-70 winter corridor travel time data. The highlights of the travel time data collection are listed below:

- Sunday evening peak I-70 eastbound travel times (4-7pm) averaged the longest time and also incurred the most delay.
- Westbound I-70 delay incurred by inbound ski-traffic tends to occur between Floyd Hill and the US 40 Empire exit.
- I-70 eastbound delay incurred by returning ski traffic tends to occur leading up to the Eisenhower Tunnel and between Georgetown and Idaho Springs.

2.7 Congestion Costs

The methodology employed by this project to calculate high-level congestion costs is simple and consistent. It is based on broad assumptions and does not include trips diverted or postponed due to congestion, costs to general business, commercial trucking and tourism, etc. Using the travel time data collected for each corridor, the average vehicle delay during the day was determined. It was assumed that this average delay would be encountered by the daily traffic traveling the corridor to obtain the average vehicle hours of delay. A vehicle occupancy rate was then used to

CDOT Statewide Travel Time Data Collection and Analysis Project

Data Collection Year 2009

determine person hours of delay. Unlike the first year's project, where a standard vehicle occupancy rate of 1.1 was used, a corridor specific average vehicle occupancy (AVO) rate was used similar to last years project. These corridor specific AVO numbers were taken from the 2008 Average Vehicle Occupancy Study of the State Highway System completed in July, 2008. It is acknowledged that these values are based on weekday data, and this is a limitation when applied to recreational corridors, whose data was collected during weekends. Unfortunately, no weekend AVO data is available. In order to determine the congestion costs, the project used a value of a person's time at \$16.00 per hour, as reported by the Texas Transportation Institute (TTI) June 2009 report. The value of time in 2007 was \$15.50 but in 2008 and 2009 it was increased to \$16.00.

For the 71 corridors included in this project, the annual vehicle hours of delay are estimated at 52 million. The annual person hours of delay are estimated at 64 million. The annual congestion costs for interstates, US highways and state highways are \$374, \$393 and \$254 million, respectively. The total annual congestion costs for all corridors included in this project are estimated at \$1 billion.

Similar to the first two year's travel time studies, congestion and delay were measured using travel times from several travel time runs through the various corridors using the floating car methodology. Delay for the average day was obtained from the difference between a calculated travel time using posted speed limits and the observed average travel times. An annual congestion cost was then obtained from the average daily delay. This study does not predict future congestion but rather attempts to create a good base travel time and associated delay that can then be used to track differences between modeled versus actual data. In CDOT's 2035 Statewide Transportation Plan, congestion was modeled using all 2005 congested roads and applying a travel time formula to get a congestion time for the average commuter traveling these corridors in 2035. A similar calculation was used to obtain delay averages in minutes per person for 2035 using expected congestion levels for the same group of segments used to calculate 2035 delays. Because of the differences in actual versus modeled data, methodologies and associated assumptions used, there are differences in the congestion totals from this comprehensive travel time study versus the 2035 Statewide Transportation Plan.

2.8 Three Year Comparisons of Corridor Measures

- Travel Rate Index (TRI) comparison – Of the 71 corridors sampled, 36 corridors (51 percent) had a peak period TRI value of 1.20 or more for all three years. This means a trip during a peak period takes at least 20 percent longer than the same trip in the off-peak period.
- Travel Time Variability (TTV) comparison – 15 corridors (21 percent) had a peak period TTV value of 50 percent or more for all three years. This indicates that a trip can take one-half times as long or longer as another trip on the same corridor during the same period.
- Overall Congestion Costs – Estimated total person hours of delay for the project life are 167 million hours, this equates to a total estimated congestion cost of \$2.6 billion for all project corridors. Congestion costs are based on a person time value of \$15.50 per hour

CDOT Statewide Travel Time Data Collection and Analysis Project Data Collection Year 2009

used for 2007 and \$16.00 per hour used for 2008 and 2009, as identified in the Annual Urban Mobility reports by the Texas Transportation Institute.

2.9 Corridor Reports

Individual corridor reports for the 71 corridors studied in this project are contained in Appendix G. Each corridor report includes a short summary, corridor map, corridor characteristics and performance measures on the first page from data collected in 2009. Additionally, a second page highlights 3 years worth of corridor travel times by direction, annual corridor congestion costs and hours of delay as well as corridor trends based off of three years of consecutive data. Appendix I – Table 20 shows key corridor measures for all 71 corridors for all three years worth of data collection.

Section 3: Conclusions

3.1 Project Benefits

This project represents the third consecutive and final year that CDOT has collected data on all of the congested corridors in Colorado and the first time CDOT has had the opportunity to examine corridor performance with additional measures (i.e. Travel Time Variability, congestion costs, etc). The individual corridor reports provide a concise and comprehensive snap shot of corridor performance for both year 2009 data collection as well as 3 year comparison highlights.

As a result, this year's project builds upon the last two years data and forms the basis for CDOT to focus in on several additional operational measures as they relate to corridor and system performance. These additional measures are more aligned with the typical corridor driving experience of the traveling public. This project's data collection will also help CDOT develop baseline conditions for all congested corridors in the State and provide a basis for evaluating corridor performance as traffic volumes continue to change in the future. Finally, in view of budgetary concerns facing the State, CDOT can use this projects data to selectively choose corridors to monitor in the future as well as to augment other CDOT project data needs.

3.2 Challenges Encountered and Lessons Learned

Accidents and weather were the two most common factors that adversely impacted travel time data collection. Accidents contributed more towards lost data collection than weather. Typically, both factors were overcome by building slack in the data collection schedule. When accidents were encountered, travel time data was still collected and analyzed to provide CDOT with a perspective on potential delays due to such incidents but were omitted from the corridor performance measures calculations.

As with special events in the Denver area, local events along corridors outside the Denver area had a serious impact on corridor performance. Local events varied from fairs, bike races, running races, main street bazaars, to craft shows. These events are not as easily identifiable before scheduling data collection. When such local events were encountered, data collection was postponed to a later date.

3.3 Future Year(s) Data Collection

With the completion of this multi-year project, future annual data collection activities may not be warranted or economically feasible for every corridor. Based on the data collected for this project, CDOT can selectively choose to monitor fewer corridors on an annual or other basis in the future.

CDOT should explore emerging technologies that are able to capture congestion and travel time using mobile devices with built-in GPS equipment. It is not clear if the data from such devices will offer the level of granularity as the project methodology.

CDOT Statewide Travel Time Data Collection and Analysis Project

Data Collection Year 2009

Any future data collection would help augment data collected for this project, which is anticipated to help form the basis for populating a Congestion Management System (CMS) and assist with a resource allocation process within CDOT. If resources are constrained, CDOT should give higher priority for future data collection to corridors that show higher travel time variability and higher travel time indices.

Regardless of the data source, organization, filing and access of travel time data are significantly important due to the sheer volume of data being collected. Data logically archived also facilitates the ease of transfer into a CMS database or other resource allocation tools.

Glossary

AM Peak Period – 7 AM to 9 AM on a typical weekday

AVO – Average Vehicle Occupancy – Based on the 2008 Average Vehicle Occupancy Study of the Colorado State Highway System

CDOT – Colorado Department of Transportation

CMS – Congestion Management System

DMI – Distance Measuring Instrument

DTD – Division of Transportation Development

GPS – Global Positioning System

HOV – High Occupancy Vehicle

HOT – High Occupancy Toll

Noon Peak Period – 11 AM to 1 PM on a typical weekday

PM Peak Period – 4 PM to 6 PM on a typical weekday

Recreational Peak Period – 11:30 AM to 5:30 PM on Saturday and Sunday

Recreational Off-Peak Period – 9:30 to 11:30 AM and 5:30 to 7:30 PM on Saturday and Sunday

T-REX – Transportation Expansion Project

TRI – Travel Rate Index

TTI – Texas Transportation Institute

TTV – Travel Time Variability

v/c Ratio – Volume to Capacity ratio

CDOT Statewide Travel-Time Data Collection and Analysis Project
Appendix A – 2007 – 2009 Statewide Travel Time Corridor List

Table 1: 2007-2009 Interstate Corridor List

No.	Corridor	Limits	Mileage	CDOT Engineering Region	Corridor Type
1	I-25	Lincoln Ave. to Broadway	14.0	6	Commuter
2	I-25	Broadway to US 36	11.3	6	Commuter
3	I-25	Lincoln Ave. to Meadows Pkwy.	8.7	1,6	Commuter
4	I-25	S. Academy Blvd. to N. Gate Rd.	20.3	2	Commuter
5	I-25	US 36 to SH 14	52.3	4,6	Commuter
6	I-70	C-470 to I-25	13.1	6	Commuter
7	I-70	I-25 to Peña Blvd.	10.3	6	Commuter
8	I-70	SH 9 to C-470	55.6	1,6	Recreational
9	I-70	Edwards to Vail East Exit	17.0	3	Recreational
10	I-70	Rifle to No Name Interchange	27.8	3	Recreational
11	I-76	I-25 to I-70	5.1	6	Commuter
12	I-225	I-70 to I-25	12.0	6	Commuter
13	I-270	I-70 to I-76	5.0	6	Commuter
	13 Interstate Corridors	Total miles	252.5		

CDOT Statewide Travel-Time Data Collection and Analysis Project
Appendix A – 2007 – 2009 Statewide Travel Time Corridor List

Table 2: 2007 – 2009 US Highway Corridor List

No.	Corridor	Limits	Mileage	CDOT Engineering Region	Corridor Type
14	US 6	I-70 to I-25	8.9	6	Commuter
15	US 6-North Ave.	1st St. to I-70 Business	4.1	3	Commuter
16	US 6-Vasquez Blvd.	56th Ave. to 77th Ave.	2.9	6	Commuter
17	US 6/ SH 119	SH 93 to Gregory St.	19.1	1	Recreational
18	US 24	SH 67 to I-25	25.0	2	Commuter
19	US 34	US 287 to US 85	21.2	4	Commuter
20	US 34	CR 63 to CR 43	7.4	4	Recreational
21	US 36	Canyon Blvd. to SH 157	2.9	4	Commuter
22	US 36	SH 157 to I-25	18.1	4,6	Commuter
23	US 36	SH 66 to Canyon Blvd.	14.8	4	Commuter
24	US 40	CR 129 to Pine Grove Rd.	3.3	3	Recreational
25	US 40	CR 8/5 to I-70	31.1	1,3	Recreational
26	US 50	Ute Ave. to 27.00 Rd.	2.0	3	Commuter
27	US 50	Purcell Blvd. to Fortino Blvd.	4.0	2	Commuter
28	US 50	SH 141 to 27.00 Rd.	4.6	3	Commuter
29	US 85	I-76 to US 34	38.8	4,6	Commuter
30	US 85-Santa Fe Dr.	Highlands Ranch Pkwy. to SH 40	14.8	1,6	Commuter
31	US 85	Meadows Pkwy. to Highlands Ranch Pkwy.	13.4	1	Commuter
32	US 160	CR 2301 to CR 25	2.4	5	Commuter
33	US 160	CR 207 to US 550 South	7.7	5	Commuter
34	US 160	US 550 to US 160 Business	15.2	5	Commuter
35	US 285-Hampden Ave.	US 85 to I-25	4.6	6	Commuter
36	US 285-Hampden Ave.	SH 121 to US 85	4.5	6	Commuter
37	US 287-S. College Ave.	Drake Rd. to Mulberry St.	2.0	4	Commuter

CDOT Statewide Travel-Time Data Collection and Analysis Project
Appendix A – 2007 – 2009 Statewide Travel Time Corridor List

Table 2: 2007 - 2009 US Highway Corridor List Continued

No.	Corridor	Limits	Mileage	CDOT Engineering Region	Corridor Type
38	US 287	US 36 to Nickel St.	9.6	4,6	Commuter
39	US 287	Midway Blvd. to US 34	35.2	4,6	Commuter
40	US 287-Federal Blvd.	US 40 to US 36	6.8	6	Commuter
41	US 550	US 160 North to 25th St.	1.7	5	Commuter
42	US 550	CR 220 to US 160 South	0.8	5	Commuter
43	US 550	CR 203A to CR 250	9.9	5	Commuter
	30 US Highway Corridors	Total miles	336.8		

CDOT Statewide Travel-Time Data Collection and Analysis Project
Appendix A – 2007 – 2009 Statewide Travel Time Corridor List

Table 3: 2007 -2009 State Highway Corridor List

No.	Corridor	Limits	Mileage	CDOT Engineering Region	Corridor Type
44	C-470	SH 121 to I-70	13.9	6	Commuter
45	C-470	SH 121 to I-25	11.5	6	Commuter
46	SH 2-Colorado Blvd.	US 285 to I-70	8.8	6	Commuter
47	SH 2	72nd Ave. to 96th Ave.	4.0	6	Commuter
48	SH 7-Arapahoe Rd.	Cherryvale Rd. to US 287	5.9	4	Commuter
49	SH 7-Baseline Rd.	US 287 to I-25	6.9	6	Commuter
50	SH 9	I-70 to CR 1900	2.5	1	Recreational
51	SH 9	I-70 to Boreas Pass Rd.	11.1	1	Recreational
52	SH 30	I-25 to I-225	10.0	6	Commuter
53	SH 30	I-225 to Hampden Ave.	9.5	6	Commuter
54	SH 45-Pueblo Blvd.	Lehigh St. to SH 96	1.2	2	Commuter
55	SH 82	I-70 to Old SH 82	23.7	3	Recreational
56	SH 82	Old SH 82 to West Hallam Ave.	16.7	3	Recreational
57	SH 83-Parker Rd.	I-225 to SH 2	6.7	6	Commuter
58	SH 83-Parker Rd.	Lincoln Ave. to I-225	9.6	1,6	Commuter
59	SH 88-Arapahoe Rd.	I-25 to SH 83	4.5	6	Commuter
60	SH 88-Bellevue	SH 88/Federal to I-25	6.7	6	Commuter
61	SH 88-Federal Blvd.	US 6 to US 285	5.2	6	Commuter
62	SH 93	SH 58/US 6 to US 36	18.3	4,6	Commuter
63	SH 95-Sheridan Blvd.	US 285 to I-70	9.1	6	Commuter
64	SH 95-Sheridan Blvd.	I-70 to US 36	5.3	6	Commuter
65	SH 119-Diagonal Hwy.	US 287 to I-25	6.8	4	Commuter
66	SH 119	Sugarloaf Rd. to Broadway St.	5.3	4	Commuter

CDOT Statewide Travel-Time Data Collection and Analysis Project
Appendix A – 2007 – 2009 Statewide Travel Time Corridor List

Table 3: 2007 - 2009 State Highway Corridor List Continued

No.	Corridor	Limits	Mileage	CDOT Engineering Region	Corridor Type
67	SH 119-Diagonal Hwy.	US 36 to US 287	12.0	4	Commuter
68	SH 121-Wadsworth Blvd.	US 40/Colfax to US 36	12.9	6	Commuter
69	SH 121-Wadsworth Blvd.	C-470 to US 40/Colfax	13.2	6	Commuter
70	SH 177- S. University Blvd.	C-470/Lincoln Ave. to I-25	8.6	6	Commuter
71	SH 340	20 3/4 Rd. to I-70 Business	5.7	3	Commuter
	28 State Highway Corridors	Total miles	255.6		

This section discusses the data collection and analysis methodologies. The data collection methodology details how data was collected from start to completion of the project while the analysis methodology details how the raw data was processed.

B.1 Data Collection

This project used the floating car method to collect travel time data. In a floating car study a data collection vehicle with Global Positioning System (GPS) or Distance Measuring Instrument (DMI) equipment travels the study corridor at the same speeds in relation to normal commuters on the corridor. For this project the majority of travel time data was collected using GPS equipment. DMI equipment was used on corridors with poor GPS signal reception, i.e. corridors with tunnels and canyons. Relevant data (travel time, speed, and delay) is then extrapolated from each set of travel time runs for a specified corridor and sample period.

Travel time data collection started in April and continued until December 2009. Data collection adhered to strict guidelines to ensure that it was consistent with previous collection methods and best represented existing conditions encountered by the typical motorist. The following data collection guidelines were used.

B.1.1 Travel Time Data Collection Guidelines

- **Commuter corridor data collection** – Travel times for commuter corridors were collected for morning (7-9 am), noon (11 am – 1 pm), and afternoon (4-6 pm) peak periods. Travel time data was only collected Tuesday through Thursday to avoid variations in traffic patterns associated with the start and end of the typical work week. Commuter travel time data collection took place between April and June, and again between September and December 2009.
- **Recreational corridor data collection** – Travel times for recreational corridors were collected for Saturday and Sunday peak (11:30 am – 5:30 pm) and off-peak (9:30 – 11:30 am and 5:30 – 7:30 pm) periods. Recreational travel time data collection took place in July and August 2009.
- **I-70 Winter corridor data collection** – Travel times for winter corridor were collected on Saturday and Sunday for morning (westbound 7:00 am – 11:00 am), afternoon (eastbound 4:00 pm – 7:00 pm) and off-peak (eastbound and westbound 11:00 am – 4:00 pm) periods.
- **Number of travel runs** - Eight travel time runs per period per direction were determined to be the optimal number of travel runs. In the past, CDOT has collected six and in some cases up to twelve travel time runs, but eight runs were determined to provide the best balance for yielding statistically significant data at a reasonable cost. In most instances, eight runs typically result in a margin of error within 1 mph (+/-) at a 95% confidence level.

- **Other Considerations**

- o **Holidays** - Holidays significantly impact travel patterns and do not provide for typical commuter or recreational driving conditions. Travel time runs were not collected on holidays or the days that immediately preceded or followed the holiday. Data was not collected for the following holidays; Memorial Day, Independence Day, Labor Day, and Columbus Day.
- o **Special Events** - Special events impact corridor traffic patterns often inducing congestion levels far above normal conditions. Special events that potentially could have altered traffic patterns include Colorado Rockies baseball games, the Taste of Colorado, Ride the Rockies bike race, etc. Data was not collected when a special event was noted on a study corridor.
- o **HOV/HOT Lanes** - Travel time data was also collected for high occupancy vehicle/high occupancy toll (HOV/HOT) lanes. Corridors where these lanes exist include I-25, US 36, and US 85. Data was only collected in the segment of the corridor where these special purpose lanes existed. This data enables comparison of the special purpose lanes with adjacent general purpose lanes.
- o **Delay Codes** – Travel time data was collected unless one of the following two conditions was encountered.
 1. An accident, construction, or other incident that closes the roadway or causes traffic to be detoured off the roadway.
 2. Weather that significantly impacted travel speeds.

Any other type of delay encountered was documented with delay codes for further analysis to either validate or discard the completed travel time run from analysis. Raw data excluded from analysis due to the two above issues was saved and clearly marked. This data may have value in predicting operational characteristics during road closures or adverse weather situations. Delay codes are listed in the table below.

Table 4: Travel Time Delay Codes

CODE	CODE DEFINITION
A	Accident encountered
C	Construction encountered
CG	Congestion due to insufficient capacity of roadway or turning movement bay
G	Any general comment as the cause of slowdown/congestion (i.e.; Sunday drivers, scenic pull off, business entry, animals on the road)
P	Delay caused by vehicles parking/exiting parking on mainline street
PB	Passenger bus causing delay
Ped	Heavy pedestrian crossing causing delay
R	On/off ramp causing congestion to mainline
S	Traffic signal malfunction
SS	Perceived congestion due to incorrect traffic control device

B.1.2 Hourly Traffic Counts

Hourly traffic counts were collected concurrently with travel time data for each corridor. This data gives a picture of the daily vehicle demand on each study corridor during the study period. For corridors less than 5 miles long, traffic counts were collected at one location approximately in the middle of the corridor. For corridors 5 miles or longer, traffic data was collected at three locations; at both ends and approximately in the middle of the corridor. Data was collected for 72 hours continuously at each location for both directions of travel at 1 hour intervals.

B.2 Analysis Methodology

The analysis methodology approach was to develop specific performance measures from travel time data that allow both individual corridor and system wide comparisons. Comparing individual corridor performance from one year to the next is useful for monitoring a corridor's condition, while comparing one corridor to another allows for monitoring corridors on a relative basis.

Past CDOT travel time studies primarily focused on corridor measures such as composite travel time, average travel time, average speed, average daily traffic, and travel time indices. For the initial project year (2007) report, additional measures were developed to include annual vehicle hours of delay, annual person hours of delay, and annual congestion costs. Additionally, the graphical representation of some measures was enhanced to provide additional data. For this years report the same performance measures were used to insure consistency between comparisons of the two years of data collected. The following is a brief explanation of each corridor performance measure used for the 2007, 2008, and 2009 project analysis.

- **High – Low Chart** - This chart graphically shows the range of travel time by direction and period. The highest and lowest travel times encountered as well as the average travel time on each corridor are plotted to illustrate travel time variability.

CDOT Statewide Travel-Time Data Collection and Analysis Project

Data Collection Year 2009

Appendix B – Project Methodology

- **Travel Rate Index (TRI)** – This is the ratio of morning, evening, or weekend peak travel time against off-peak travel time. This indicates how long a peak trip takes in comparison to an off-peak trip in the same direction. **NOTE:** Off-peak trip times were derived by averaging the lowest travel time trip per period sampled for each data collection period by direction.

$$\text{TRI Formula} = \text{PP}_{\text{TT}} / \text{OP}_{\text{TT}}$$

$$\text{OP}_{\text{TT}} = (\text{A}_L + \text{N}_L + \text{P}_L) / 3$$

A_L – Lowest AM/Saturday peak trip (by direction)

N_L – Lowest noon-peak/Sat-Sun off-peak trip (by direction)

P_L – Lowest PM/Sunday peak trip by direction

OP_{TT} – Off-peak trip time equivalent

PP_{TT} – Peak period travel time

- **Volume to Capacity (v/c) ratio** – This information was provided by CDOT. It is a general indication of how close a corridor is to being at full capacity and is calculated by dividing the demand volume by the available capacity. A v/c ratio of 1 indicates that all of the available capacity is being used by the existing volume.
- **Vehicle Counts per Day** – This is the three day vehicle volume average for either a single count location or three count locations (for corridors over five miles) during the period of data collection.
- **Delay values** – Vehicle and person hours of delay based on travel time runs, hourly count averages, and a corridor specific average occupancy value taken from the 2008 CDOT Average Vehicle Occupancy study weighted by corridor attributes (functional classification and region).
- **Congestion values** – Congestion values are costs incurred by drivers due to delay. This value is calculated from person hours of delay assuming a standard value of time of \$16.00 per hour (based on the June 2009 publication by the Texas Transportation Institute).

Sample Commuter Corridor Congestion Formula:

Annual congestion cost = Average daily vehicle delay * Average Daily Traffic * Vehicle Occupancy * Value of time per person * weekdays in a year

CDOT Statewide Travel-Time Data Collection and Analysis Project
Data Collection Year 2009
Appendix C – Historical Composite Travel Times

Table 5: Historical Composite Travel Times

No.	Corridor	Historical Composite Travel Time (MM:SS)										Trend
		Peak Period	2000	2001	2002	2003	2004	2005/6	2007	2008	2009	
1	I-25 (Lincoln Ave. to Broadway)	AM Peak	26:52	21:23	20:56	16:43	20:16	21:04	18:12	16:36	17:51	-0:06:52
		Noon	14:32	14:24	17:14	13:57	13:34	13:48	13:33	12:15	13:27	-0:02:26
		PM peak	29:08	31:16	24:39	19:26	26:03	23:30	20:15	21:00	20:09	-0:09:32
2	I-25 (Broadway to US 36)	AM Peak			11:11	12:31	14:10	10:39	12:15	16:24	13:51	+0:02:58
		Noon			09:52	11:44	09:18	10:12	09:54	11:12	10:57	+0:00:36
		PM peak			11:13	16:35	16:12	15:01	20:30	17:15	22:51	+0:08:41
3	I-25 (Lincoln Ave. to Meadows Pkwy.)	AM Peak							08:21	07:51	07:45	-0:00:36
		Noon							07:30	07:24	07:06	-0:00:24
		PM peak							07:57	07:57	07:15	-0:00:42
4	I-25 (S. Academy Blvd. to N. Gate Rd.)	AM Peak							21:03	19:39	17:57	-0:03:06
		Noon							20:09	20:06	17:21	-0:02:48
		PM peak							21:45	22:06	19:18	-0:02:27
5	I-25 (US 36 to SH 14)	AM Peak							44:24	46:18	47:57	+0:03:33
		Noon							44:27	44:54	45:54	+0:15:57
		PM peak							46:06	47:48	47:27	+0:01:21
6	I-70 (C-470 to I-25)	AM Peak			12:28	13:48	13:13	13:54	12:15	13:42	13:54	+0:00:40
		Noon			12:40	13:13	12:20	12:44	12:15	13:00	13:39	+0:00:31
		PM peak			12:42:00	12:28:00	13:47	13:11	14:48	14:45	14:12	+0:02:10
7	I-70 East (I-25 to Pena Blvd.)	AM Peak		12:33	12:07	09:46	10:10	10:44	10:39	10:42	10:54	-0:01:17
		Noon		10:16	10:48	09:44	09:18	10:07	09:30	09:45	10:36	-0:00:14
		PM peak		13:33	14:24	13:49	14:30	17:59	18:39	12:24	15:21	+0:01:43

CDOT Statewide Travel-Time Data Collection and Analysis Project
Data Collection Year 2009
Appendix C – Historical Composite Travel Times

Table 5: Historical Composite Travel Times

No.	Corridor	Historical Composite Travel Time (MM:SS)										Trend
		Peak Period	2000	2001	2002	2003	2004	2005/6	2007	2008	2009	
8	I-70 (SH 9 to C-470)											
		SAT Peak							58:48	53:15	58:39	-0:00:09
		Off-Peak							60:36	56:18	60:24	-0:00:12
		SUN peak							73:27	63:42	81:15	+0:07:48
9	I-70 (Edwards to Vail East Exit)											
		SAT Peak							15:18	15:45	15:51	+0:00:33
		Off-Peak							15:48	15:36	15:45	-0:00:03
		SUN peak							15:15	15:00	15:42	+0:00:27
10	I-70 (Rifle to No Name Interchange)											
		SAT Peak							27:42	23:12	24:30	-0:03:12
		Off-Peak							27:30	22:54	24:24	-0:03:06
		SUN peak							27:36	23:09	24:33	-0:03:03
11	I-76 (I-25 to I-70)											
		AM Peak							05:15	05:45	06:45	+0:01:30
		Noon							05:00	05:39	06:03	+0:01:03
		PM peak							05:06	06:51	06:09	+0:01:03
12	I-225 (I-70 to I-25)											
		AM Peak							20:42	17:51	18:27	-0:02:15
		Noon							12:18	12:48	13:09	+0:00:51
		PM peak							19:03	16:24	18:51	-0:00:12
13	I-270 (I-70 to I-76)											
		AM Peak		04:52	05:32	05:09	05:35	05:51	06:42	06:15	07:12	+0:02:04
		Noon		04:30	04:42	04:41	03:59	04:41	04:48	04:54	05:21	+0:00:40
		PM peak		11:16	07:57	08:31	08:25	08:21	10:45	09:39	09:12	+0:00:03
14	US 6 (I-70 to I-25)											
		AM Peak				09:34	08:34	09:32	09:54	10:33	09:54	+0:01:08
		Noon				07:45	07:52	08:11	09:06	08:18	08:15	+0:00:40
		PM peak				07:55	08:29	08:40	09:21	09:33	08:39	+0:01:05

CDOT Statewide Travel-Time Data Collection and Analysis Project
Data Collection Year 2009
Appendix C – Historical Composite Travel Times

Table 5: Historical Composite Travel Times

No.	Corridor	Historical Composite Travel Time (MM:SS)										Trend
		Peak Period	2000	2001	2002	2003	2004	2005/6	2007	2008	2009	
15	US 6-North Ave. (1st St. to I-70 Business)	AM Peak							07:24	07:24	08:48	+0:01:24
		Noon							08:42	08:36	09:39	+0:00:57
		PM peak							10:03	09:21	09:24	-0:00:39
16	US 6-Vasquez Blvd. (56th Ave. to 77th Ave.)	AM Peak							06:18	05:12	05:18	-0:01:00
		Noon							05:21	04:51	05:42	+0:00:21
		PM peak							07:00	06:51	06:54	-0:00:06
17	US 6/SH 119 (SH 93 to Gregory St.)	SAT Peak							28:21	28:33	27:54	-0:00:27
		Off-Peak							28:21	29:03	29:18	+0:00:57
		SUN peak							28:45	28:54	29:18	+0:00:33
18	US 24 (SH 67 to I-25)	AM Peak							32:30	30:18	32:27	-0:00:03
		Noon							32:00	30:54	32:36	+0:00:36
		PM peak							32:39	32:15	33:12	+0:00:33
19	US 34 (US 287 to US 85)	AM Peak				27:25	24:03	25:36	26:27	28:39	25:51	+0:00:38
		Noon				27:46	26:13	26:30	27:45	27:15	26:42	-0:00:08
		PM peak				30:04	27:30	27:29	29:33	29:42	28:33	+0:00:09
20	US 34 (CR 63 to CR 43)	SAT Peak							17:15	16:36	17:33	+0:00:18
		Off-Peak							17:21	16:48	17:27	+0:00:06
		SUN peak							17:03	16:45	17:48	+0:00:45
21	US 36 (Canyon Blvd. to SH 157)	AM Peak							04:00	04:03	03:51	-0:00:09
		Noon							08:12	03:51	04:03	-0:00:03
		PM peak							04:21	04:06	04:15	-0:00:06

CDOT Statewide Travel-Time Data Collection and Analysis Project
Data Collection Year 2009
Appendix C – Historical Composite Travel Times

Table 5: Historical Composite Travel Times

No.	Corridor	Historical Composite Travel Time (MM:SS)										Trend
		Peak Period	2000	2001	2002	2003	2004	2005/6	2007	2008	2009	
22	US 36 (SH 157 to I-25)	AM Peak		18:00	18:36	19:41	20:58	18:36	21:00	19:39	22:30	+0:03:12
		Noon		17:38	16:47	15:31	15:56	16:43	17:54	16:12	17:12	+0:00:10
		PM peak		17:12	18:11	19:22	19:19	17:36	20:33	17:12	18:06	+0:00:16
23	US 36 (SH 66 to Canyon Blvd.)	AM Peak							18:03	18:15	19:03	+0:01:00
		Noon							20:48	19:09	20:21	-0:00:27
		PM peak							19:33	19:30	20:15	+0:00:42
24	US 40 (CR 129 to Pine Grove Rd.)	SAT Peak							07:15	07:09	07:06	-0:00:09
		Off-Peak							06:54	06:45	06:51	-0:00:03
		SUN peak							06:51	06:45	06:54	+0:00:03
25	US 40 (CR 8/5 to I-70)	SAT Peak							42:18	42:18	43:27	+0:01:09
		Off-Peak							42:21	41:54	44:27	+0:02:06
		SUN peak							42:03	43:12	43:24	+0:01:21
26	US 50 (Ute Ave. to 27.00 Rd.)	AM Peak							04:03	03:45	03:30	-0:00:33
		Noon							04:42	03:42	03:30	-0:01:12
		PM peak							04:09	03:33	03:27	-0:00:42
27	US 50 (Purcell Blvd. to Fortino Blvd.)	AM Peak							05:15	05:03	04:57	-0:00:18
		Noon							05:09	04:54	05:00	-0:00:09
		PM peak							05:39	05:12	05:42	+0:00:03
28	US 50 (SH 141 to 27.00 Rd.)	AM Peak							05:27	05:21	05:48	+0:00:21
		Noon							05:18	05:09	05:45	+0:00:27
		PM peak							05:15	05:30	05:45	+0:00:30

CDOT Statewide Travel-Time Data Collection and Analysis Project
Data Collection Year 2009
Appendix C – Historical Composite Travel Times

Table 5: Historical Composite Travel Times

No.	Corridor	Historical Composite Travel Time (MM:SS)										Trend
		Peak Period	2000	2001	2002	2003	2004	2005/6	2007	2008	2009	
29	US 85 (I-76 to US 34)	AM Peak		44:02	40:59	47:25	43:15	40:37	44:00	42:09	44:06	-0:00:33
		Noon		43:35	40:43	46:18	43:24	41:27	43:57	41:45	44:12	+0:00:02
		PM peak		45:07	42:20	47:12	44:36	41:14	44:03	44:00	45:45	-0:00:00
30	US 85-Santa Fe Dr. (Highlands Ranch Pkwy. to SH 40)	AM Peak	31:29	26:18	27:30	32:16	31:28	28:14	30:09	27:09	27:15	-0:01:45
		Noon	26:04	23:35	23:47	24:59	32:15	24:53	26:24	25:54	26:24	+0:01:29
		PM peak	33:26	27:48	30:46	32:38	32:19	28:10	31:24	30:48	31:33	-0:00:14
31	US 85 (Meadows Pkwy. to Highlands Ranch Pkwy.)	AM Peak							16:24	15:51	16:09	-0:00:15
		Noon							16:12	15:36	15:57	-0:00:15
		PM peak							16:39	16:21	16:33	-0:00:06
32	US 160 (CR 2301 to CR 25)	AM Peak							03:45	03:27	04:12	+0:00:27
		Noon							04:15	03:51	04:36	+0:00:21
		PM peak							04:06	03:54	04:51	+0:00:45
33	US 160 (CR 207 to US 550 South)	AM Peak							10:57	11:51	13:18	+0:02:21
		Noon							10:48	12:03	13:39	+0:02:51
		PM peak							11:45	12:30	13:06	+0:01:21
34	US 160 (SH 550 to US 160 Business)	AM Peak				20:10	18:15	22:48	17:27	18:36	20:27	-0:00:25
		Noon				20:12	19:46	23:39	16:51	17:36	20:09	-0:01:56
		PM peak				21:11	18:48	24:13	17:24	17:21	18:03	-0:03:50
35	US 285-Hampden Ave. (US 85 to I-25)	AM Peak				09:36	10:22	10:59	10:51	11:09	13:06	+0:02:43
		Noon				08:22	09:27	09:59	09:36	09:51	11:03	+0:02:13
		PM peak				10:40	13:31	12:35	11:57	12:12	12:51	+0:01:09

CDOT Statewide Travel-Time Data Collection and Analysis Project
Data Collection Year 2009
Appendix C – Historical Composite Travel Times

Table 5: Historical Composite Travel Times

No.	Corridor	Historical Composite Travel Time (MM:SS)										Trend
		Peak Period	2000	2001	2002	2003	2004	2005/6	2007	2008	2009	
36	US 285-Hampden Ave. (SH 121 to US 85)	AM Peak							05:51	05:45	07:03	+0:01:12
		Noon							05:09	05:06	06:06	+0:00:57
		PM peak							06:00	06:18	06:42	+0:00:42
37	US 287-S. College Ave. (Drake Rd. to Mulberry St.)	AM Peak							04:03	04:09	03:51	-0:00:12
		Noon							04:39	05:09	05:03	+0:00:24
		PM peak							05:21	05:54	05:06	-0:00:15
38	US 287 (US 36 to Nickel St.)	AM Peak							17:06	15:15	15:33	-0:01:33
		Noon							16:27	15:00	16:45	+0:00:18
		PM peak							19:18	17:03	18:51	-0:00:27
39	US 287 (Midway Blvd. to US 34)	AM Peak							46:27	48:45	47:48	+0:01:21
		Noon							46:54	49:27	50:21	+0:03:27
		PM peak							50:48	53:27	54:18	+0:03:30
40	US 287-Federal Blvd. (US 40 to US 36)	AM Peak				13:35	13:33	13:45	14:30	13:42	16:33	+0:02:17
		Noon				13:45	12:11	13:07	14:27	13:45	14:36	+0:01:28
		PM peak				15:28	14:28	15:32	17:36	15:30	17:30	+0:02:11
41	US 550 (US 160 North to 25th St.)	AM Peak							04:33	04:15	03:48	-0:00:45
		Noon							04:12	04:18	04:18	+0:00:06
		PM peak							05:03	04:51	05:03	-0:00:00
42	US 550 (CR 220 to US 160 South)	AM Peak							01:33	01:39	01:21	-0:00:12
		Noon							01:15	01:33	01:21	+0:00:06
		PM peak							01:18	01:30	01:18	-0:00:00

CDOT Statewide Travel-Time Data Collection and Analysis Project
Data Collection Year 2009
Appendix C – Historical Composite Travel Times

Table 5: Historical Composite Travel Times

No.	Corridor	Historical Composite Travel Time (MM:SS)										Trend
		Peak Period	2000	2001	2002	2003	2004	2005/6	2007	2008	2009	
43	US 550 (CR 203A to CR 250)	AM Peak							10:27	10:30	10:30	+0:00:03
		Noon							10:33	10:27	10:39	-0:00:06
		PM peak							10:30	11:30	10:45	+0:00:15
44	C-470 (SH 121 to I-70)	AM Peak							13:09	12:36	13:18	+0:00:09
		Noon							12:21	12:54	12:51	+0:00:30
		PM peak							12:33	13:54	14:06	+0:01:33
45	C-470 (SH 121 to I-25)	AM Peak			11:47	11:35	13:10	12:05	15:18	14:24	13:09	+0:02:33
		Noon			10:56	11:30	10:35	11:35	10:27	10:42	12:03	+0:00:21
		PM peak			13:10	11:52	12:27	16:13	13:03	11:18	16:54	+0:02:17
46	SH 2-Colorado Blvd. (US 285 to I-70)	AM Peak				22:20	20:47	23:35	23:51	23:51	23:06	+0:01:54
		Noon				21:24	19:57	21:03	25:09	22:21	22:24	+0:02:20
		PM peak				24:18	28:21	26:52	26:57	27:42	28:12	+0:02:31
47	SH 2 (72nd Ave. to 96th Ave.)	AM Peak							05:54	05:03	06:03	+0:00:09
		Noon							05:21	05:00	06:00	+0:00:39
		PM peak							05:30	05:30	06:27	+0:00:57
48	SH 7-Arapahoe Rd. (Cherryvale Rd. to US 287)	AM Peak							10:15	10:09	09:24	-0:00:51
		Noon							08:42	09:15	08:39	-0:00:03
		PM peak							09:36	10:24	10:54	+0:01:18
49	SH 7-Baseline Rd. (US 287 South to I-25)	AM Peak							11:21	10:42	11:06	-0:00:15
		Noon							10:45	10:57	10:27	-0:00:18
		PM peak							10:45	11:24	11:03	+0:00:18

CDOT Statewide Travel-Time Data Collection and Analysis Project
Data Collection Year 2009
Appendix C – Historical Composite Travel Times

Table 5: Historical Composite Travel Times

No.	Corridor	Historical Composite Travel Time (MM:SS)										Trend
		Peak Period	2000	2001	2002	2003	2004	2005/6	2007	2008	2009	
50	SH 9 (I-70 to CR 1900)	SAT Peak							04:54	04:03	04:06	-0:00:48
		Off-Peak							04:36	03:57	03:12	-0:01:24
		SUN peak							05:15	03:48	04:45	-0:00:30
51	SH 9 (I-70 to Boreas Pass Rd.)	SAT Peak							19:33	19:12	20:15	+0:00:42
		Off-Peak							18:00	19:00	19:15	+0:01:15
		SUN peak							18:33	18:45	19:51	+0:01:18
52	SH 30 (I-25 to I-225)	AM Peak						19:58	21:12	22:39	19:39	+0:00:09
		Noon						20:12	20:00	21:51	21:30	+0:01:44
		PM peak						20:41	24:06	26:06	23:39	+0:03:16
53	SH 30 (I-225 to Hampden Ave.)	AM Peak							14:09	14:36	14:18	+0:00:09
		Noon							14:24	14:15	13:57	-0:00:27
		PM peak							15:09	17:36	15:24	+0:00:15
54	SH 45-Pueblo Blvd. (Lehigh St. to SH 96)	AM Peak							02:15	02:15	02:06	-0:00:09
		Noon							02:12	02:03	01:57	-0:00:15
		PM peak							02:30	02:24	02:12	-0:00:18
55	SH 82 (I-70 to Old SH 82)	SAT Peak							29:45	28:39	28:03	-0:01:42
		Off-Peak							29:09	28:24	28:51	-0:00:18
		SUN peak							29:15	27:48	28:09	-0:01:06
56	SH 82 (Old SH 82 to West Hallam Ave.)	SAT Peak							20:12	19:21	20:42	+0:00:30
		Off-Peak							19:42	18:45	20:57	+0:01:15
		SUN peak							20:03	18:18	20:21	+0:00:18

CDOT Statewide Travel-Time Data Collection and Analysis Project
Data Collection Year 2009
Appendix C – Historical Composite Travel Times

Table 5: Historical Composite Travel Times

No.	Corridor	Historical Composite Travel Time (MM:SS)										Trend
		Peak Period	2000	2001	2002	2003	2004	2005/6	2007	2008	2009	
57	SH 83-Parker Rd. (I-225 to SH 2)	AM Peak							15:07	16:15	16:33	+0:01:26
		Noon							14:51	14:21	15:45	+0:00:54
		PM peak							17:45	19:15	19:51	+0:02:06
58	SH 83-Parker Rd. (Lincoln Ave. to I-225)	AM Peak							16:51	16:36	16:36	-0:00:15
		Noon							14:21	14:09	14:48	+0:00:27
		PM peak							17:36	17:27	19:00	+0:01:24
59	SH 88-Arapahoe Rd. (I-25 to SH 83)	AM Peak							10:42	11:09	09:45	-0:00:57
		Noon							11:51	08:57	09:36	-0:02:15
		PM peak							13:30	11:06	13:30	-0:00:00
60	SH 88-Bellevue (SH 88/Federal to I-25)	AM Peak							15:09	13:30	14:03	-0:01:06
		Noon							12:51	12:21	13:33	+0:00:42
		PM peak							15:54	15:57	15:06	-0:00:48
61	SH 88-Federal Blvd. (US 6 to US 285)	AM Peak							10:48	10:15	11:09	+0:00:21
		Noon							11:33	11:54	11:21	-0:00:12
		PM peak							12:48	14:27	13:24	+0:00:36
62	SH 93 (SH 58/US 6 to US 36)	AM Peak							23:45	23:39	24:12	+0:00:27
		Noon							22:57	22:51	23:42	+0:00:45
		PM peak							23:36	23:54	24:39	+0:01:03
63	SH 95-Sheridan Blvd. (US 285 to I-70)	AM Peak				17:37	17:30	18:47	18:57	16:57	18:00	+0:00:04
		Noon				17:14	16:24	17:31	18:51	17:48	17:48	+0:01:12
		PM peak				22:42	20:28	20:53	22:03	21:06	21:45	-0:00:14

CDOT Statewide Travel-Time Data Collection and Analysis Project
Data Collection Year 2009
Appendix C – Historical Composite Travel Times

Table 5: Historical Composite Travel Times

No.	Corridor	Historical Composite Travel Time (MM:SS)										Trend
		Peak Period	2000	2001	2002	2003	2004	2005/6	2007	2008	2009	
64	SH 95-Sheridan Blvd. (I-70 to US 36)											
		AM Peak							10:18	09:36	10:24	+0:00:06
		Noon							10:12	10:00	11:12	+0:01:00
		PM peak							12:03	11:24	12:33	+0:00:30
65	SH 119-Diagonal Hwy. (US 287 to I-25)											
		AM Peak							10:21	09:15	09:39	-0:00:42
		Noon							07:45	07:48	12:45	+0:05:00
		PM peak							08:33	08:42	09:09	+0:00:36
66	SH 119 (Sugarloaf Rd. to Broadway St.)											
		AM Peak							08:24	08:21	08:51	+0:00:27
		Noon							08:36	08:27	08:54	+0:00:18
		PM peak							08:54	09:24	09:09	+0:00:15
67	SH 119-Diagonal Hwy. (US 36 to US 287)											
		AM Peak				15:38	17:04	16:49	18:15	17:36	17:21	+0:01:40
		Noon				15:09	15:33	16:25	16:57	16:21	16:24	+0:01:06
		PM peak				17:31	19:36	18:19	19:27	20:36	18:36	+0:00:42
68	SH 121-Wadsworth Blvd. (US 40/Colfax to US 36)											
		AM Peak				23:31	24:03	23:34	24:51	23:36	25:30	+0:01:24
		Noon				23:02	23:40	20:53	25:24	24:48	24:15	+0:02:00
		PM peak				27:47	26:16	26:30	29:57	28:30	28:51	+0:02:13
69	SH 121-Wadsworth Blvd. (C-470 to US 40/Colfax)											
		AM Peak				23:34	23:19	23:45	24:12	22:27	23:06	-0:00:38
		Noon				22:47	23:32	22:36	24:03	23:45	23:48	+0:01:02
		PM peak				25:24	26:42	25:49	28:09	26:57	27:27	+0:01:54
70	SH 177-S. University Blvd. (C-470/Lincoln Ave. to I-25)											
		AM Peak							19:51	20:54	20:15	+0:00:24
		Noon							16:42	19:51	19:18	+0:02:36
		PM peak							18:57	21:12	20:48	+0:01:51

CDOT Statewide Travel-Time Data Collection and Analysis Project
Data Collection Year 2009
Appendix C – Historical Composite Travel Times

Table 5: Historical Composite Travel Times

No.	Corridor	Historical Composite Travel Time (MM:SS)										Trend
		Peak Period	2000	2001	2002	2003	2004	2005/6	2007	2008	2009	
71	SH 340 (20 3/4 Rd. to I-70 Business)											
		AM Peak							09:21	09:00	09:27	+0:00:06
		Noon							09:00	08:33	09:30	+0:00:30
		PM peak							09:18	08:51	08:45	-0:00:33

CDOT Statewide Travel-Time Data Collection and Analysis Project
Data Collection Year 2009
Appendix D – Travel Rate Index Comparisons

Table 6: Interstate Travel Rate Index for AM commuter and Saturday Recreational Peaks

AM Peak or Saturday Peak Travel Rate Index						
Interstate	Limits	Travel Rate Index (TRI)				
		TRI	PD*	TRI	SD**	Combined Average
I-225	I-70 to I-25	1.47	SB	1.19	NB	1.33
I-25	Lincoln Ave. to Broadway	1.43	NB	1.09	SB	1.26
I-270	I-70 to I-76	1.34	EB	1.08	WB	1.21
I-76	I-25 to I-70	1.25	WB	1.05	EB	1.15
I-25	Meadows Pkwy. to Lincoln Ave.	1.22	NB	1.03	SB	1.13
I-25	US 36 to SH 14	1.10	NB	1.09	SB	1.10
I-25	Broadway to US 36	1.29	SB	0.89	NB	1.09
I-70***	SH 9 to C-470	1.09	WB	1.03	EB	1.06
I-70***	Rifle to No Name Interchange	1.09	EB	1.01	WB	1.05
I-25	S. Academy Blvd. to N. Gate Rd.	1.06	SB	1.03	NB	1.05
I-70	C-470 to I-25	1.04	EB	1.03	WB	1.04
I-70***	Edwards to Vail East Exit	1.02	EB	1.02	WB	1.02
I-70	I-25 to Peña Blvd.	1.07	EB	0.92	WB	1.00
PD* - Peak direction(direction of higher TRI value)						
SD** - Secondary direction(direction of lower TRI value)						
*** - Denotes Saturday TRI value for recreational corridor						

Table 7: Interstate Travel Rate Index for PM commuter and Sunday Recreational Peaks

PM Peak or Sunday Peak Travel Rate Index						
Interstate	Limits	Travel Rate Index (TRI)				
		TRI	PD*	TRI	SD**	Combined Average
I-25	Broadway to US 36	1.83	SB	1.73	NB	1.78
I-270	I-70 to I-76	1.86	WB	1.09	EB	1.48
I-70 ***	SH 9 to C-470	1.87	EB	1.06	WB	1.47
I-25	Lincoln Ave. to Broadway	1.46	NB	1.40	SB	1.43
I-70	I-25 to Peña Blvd.	1.54	WB	1.23	EB	1.39
I-225	I-70 to I-25	1.46	NB	1.28	SB	1.37
I-25	S. Academy Blvd. to N. Gate Rd.	1.18	NB	1.06	SB	1.12
I-25	US 36 to SH 14	1.08	NB	1.08	SB	1.08
I-70	C-470 to I-25	1.08	WB	1.03	EB	1.06
I-25	Meadows Pkwy. to Lincoln Ave.	1.07	SB	1.03	NB	1.05
I-76	I-25 to I-70	1.06	EB	1.04	WB	1.05
I-70***	Rifle to No Name Interchange	1.06	EB	1.04	WB	1.05
I-70***	Edwards to Vail East Exit	1.01	EB	1.01	WB	1.01
PD* - Peak direction(direction of higher TRI value)						
SD** - Secondary direction(direction of lower TRI value)						
*** - Denotes Sunday TRI value for recreational corridor						

CDOT Statewide Travel-Time Data Collection and Analysis Project
Data Collection Year 2009
Appendix D – Travel Rate Index Comparisons

Table 8: US Highway Travel Rate Index for AM commuter and Saturday Recreational Peaks

AM Peak or Saturday Peak Travel Rate Index						
US Highway	Limits	Travel Rate Index (TRI)				
		TRI	PD*	TRI	SD**	Combined Average
US 36	SH 157 to I-25	1.35	WB	1.28	EB	1.32
US 285-Hampden Ave.	US 85 to I-25	1.38	EB	1.22	WB	1.30
US 285-Hampden Ave.	SH121 to US 85	1.47	EB	1.07	WB	1.27
US 6	I-70 to I-25	1.45	EB	1.03	WB	1.24
US 6- Vasquez Blvd.	56th Ave. to 77th Ave.	1.35	SB	1.04	NB	1.20
US 287-Federal Blvd.	US 40 to US 36	1.27	SB	1.11	NB	1.19
US 160	US 550 to US 160 Business	1.31	WB	1.03	EB	1.17
US 50	Ute Ave. to 27.00 Rd	1.26	WB	1.07	EB	1.17
US 160	CR 207 to US 550 South	1.24	EB	1.06	WB	1.15
US 36	Canyon Blvd. to SH 157	1.23	WB	1.02	EB	1.13
US 85-Santa Fe Dr.	Highlands Ranch Pkwy. to SH 40	1.18	NB	1.07	SB	1.13
US 550	CR 220 to US 160 S	1.12	NB	1.11	SB	1.12
US 40***	CR 129 to Pine Grove Rd.	1.12	WB	1.11	EB	1.12
US 550	US 160 N to 25th St.	1.17	SB	1.04	NB	1.11
US 50	SH 141 to 27.00 Rd	1.13	WB	1.06	EB	1.10
US 160	CR 2301 to CR 25	1.12	EB	1.06	WB	1.09
US 287	US 36 to Nickel St.	1.11	SB	1.07	NB	1.09
US 6-North Ave.	1st St. to I-70 Business	1.13	EB	1.03	WB	1.08
US 50	Purcell Blvd. to Fortino Blvd.	1.09	EB	1.06	WB	1.08
US 85	Meadows Pkwy. to Highlands Ranch Pkwy.	1.09	SB	1.05	NB	1.07
US 550	CR 203A to CR 250	1.06	NB	1.04	SB	1.05
US 34***	CR 63 to CR 43	1.06	WB	1.04	EB	1.05
US 85	I-76 to US 34	1.05	NB	1.05	SB	1.05
US 36	SH 66 to Canyon Blvd.	1.05	NB	1.05	SB	1.05
US 6***	SH 93 to Gregory St.	1.05	EB	1.04	WB	1.05
US 287-S. College Ave.	Drake Rd. to Mulberry St.	1.07	SB	1.01	NB	1.04
US 40***	CR 8/5 to I-70	1.05	NB	1.02	SB	1.04
US 24	SH 67 to I-25	1.04	EB	1.04	WB	1.04
US 34	US 287 to US 85	1.02	EB	1.00	WB	1.01
US 287	Midway Blvd. to US 34	0.99	NB	0.99	SB	0.99
PD* - Peak direction(direction of higher TRI value)						
SD** - Secondary direction(direction of lower TRI value)						
*** - Denotes Saturday TRI value for recreational corridor						

CDOT Statewide Travel-Time Data Collection and Analysis Project
Data Collection Year 2009
Appendix D – Travel Rate Index Comparisons

Table 9: US Highway Travel Rate Index for PM commuter and Sunday Recreational Peaks

PM Peak or Sunday Peak Travel Rate Index						
US Highway	Limits	Travel Rate Index (TRI)				
		TRI	PD*	TRI	SD**	Combined Average
US 6-Vasquez Blvd.	56th Ave. to 77th Ave.	1.71	NB	1.36	SB	1.54
US 550	US 160 North to 25th St.	1.57	SB	1.38	NB	1.48
US 287-S. College Ave.	Drake Rd. to Mulberry St.	1.67	SB	1.12	NB	1.40
US 287	US 36 to Nickel St.	1.39	NB	1.24	SB	1.32
US 85-Santa Fe Dr.	Highlands Ranch Pkwy. to SH 40	1.38	SB	1.23	NB	1.31
US 285-Hampden Ave.	US 85 to I-25	1.35	WB	1.20	EB	1.28
US 287-Federal Blvd.	US 40 to US 36	1.29	NB	1.23	SB	1.26
US 36	Canyon Blvd. to SH 157	1.27	EB	1.24	WB	1.26
US 160	CR 2301 to CR 25.00	1.33	WB	1.17	EB	1.25
US 50	Purcell Blvd. to Fortino Blvd.	1.29	EB	1.18	WB	1.24
US 285-Hampden Ave.	SH 121 to US 85	1.37	WB	1.05	EB	1.21
US 6-North Ave.	1st St. to I-70 Business	1.16	EB	1.14	WB	1.15
US 50	Ute Ave. to 27.00 Rd.	1.19	WB	1.09	EB	1.14
US 160	CR 207 to US 550 South	1.17	WB	1.10	EB	1.14
US 287	Midway Blvd. to US 34	1.13	NB	1.13	SB	1.13
US 34	US 287 to US 85	1.14	WB	1.09	EB	1.12
US 36	SH 66 to Canyon Blvd.	1.13	NB	1.10	SB	1.12
US 6/SH 119***	SH 93 to Gregory St.	1.14	EB	1.06	WB	1.10
US 85	Meadows Pkwy. to Highlands Ranch Pkwy.	1.14	SB	1.05	NB	1.10
US 6	I-70 to I-25	1.15	WB	1.03	EB	1.09
US 85	I-76 to US 34	1.11	SB	1.07	NB	1.09
US 40***	CR 129 to Pine Grove Rd.	1.10	EB	1.08	WB	1.09
US 50	SH 141 to 27.00 Rd.	1.10	WB	1.07	EB	1.09
US 550	CR 220 to US 160 South	1.09	NB	1.05	SB	1.07
US 24	SH 67 to I-25	1.08	EB	1.05	WB	1.07
US 550	CR 203A to CR 250	1.07	SB	1.06	NB	1.07
US 36	SH 157 to I-25	1.11	EB	1.00	WB	1.06
US 40***	CR 8/5 to I-70	1.08	SB	1.03	NB	1.06
US 34***	CR 63 to CR 43	1.07	EB	1.04	WB	1.06
US 160	US 550 to US 160 Business	1.06	EB	1.01	WB	1.04
PD* - Peak direction(direction of higher TRI value)						
SD** - Secondary direction(direction of lower TRI value)						
*** - Denotes Sunday TRI value for recreational corridor						

CDOT Statewide Travel-Time Data Collection and Analysis Project
Data Collection Year 2009
Appendix D – Travel Rate Index Comparisons

Table 10: State Highway Travel Rate Index for AM commuter and Saturday Recreational Peaks

AM Peak or Saturday Peak Travel Rate Index						
State Highway	Limits	Travel Rate Index (TRI)				
		TRI	PD*	TRI	SD**	Combined Average
SH 9***	I-70 to CR 1900	1.24	SB	1.20	NB	1.22
SH 45-Pueblo Blvd.	Lehigh St. to SH 96	1.28	NB	1.09	SB	1.19
SH 119-Diagonal Hwy.	US 287 to I-25	1.25	WB	1.11	EB	1.18
SH 9***	I-70 to Boreas Pass Rd.	1.22	SB	1.12	NB	1.17
SH 7-Baseline Rd.	US 287 S to I-25	1.19	WB	1.11	EB	1.15
SH 340	20 3/4 Rd. to I-70 Business	1.15	EB	1.10	WB	1.13
SH 7-Arapahoe Rd.	Cherryvale Rd. to US 287	1.21	WB	1.02	EB	1.12
SH 177-S. University Blvd.	C-470/Lincoln Ave. to I-25	1.20	NB	1.04	SB	1.12
SH 2	72th Ave. to 96th Ave.	1.13	NB	1.10	SB	1.12
SH 88-Arapahoe Rd.	I-25 to SH 83	1.30	EB	0.92	WB	1.11
SH 83-Parker Rd.	Lincoln Ave. to I-225	1.13	NB	1.09	SB	1.11
SH 88-Bellevue	SH 88/Federal to I-25	1.13	EB	1.08	WB	1.11
SH 119-Diagonal Hwy.	US 36 to US 287	1.13	WB	1.08	EB	1.11
SH 121-Wadsworth Blvd.	US 40/Colfax to US 36	1.09	SB	1.08	NB	1.09
SH 83-Parker Rd.	I-225 to SH 2	1.12	NB	1.03	SB	1.08
SH 30	I-225 to Hampden Ave.	1.09	WB	1.06	EB	1.08
SH 119	Sugarloaf Rd. to Broadway St.	1.08	WB	1.08	EB	1.08
SH 82***	I-70 to Old SH 82	1.08	NB	1.07	SB	1.08
C-470	SH 121 to I-25	1.17	EB	0.96	WB	1.07
SH 2-Colorado Blvd.	US 285 to I-70	1.16	SB	0.98	NB	1.07
SH 93	SH 58/US 6 to US 36	1.07	SB	1.06	NB	1.07
C-470	SH 121 to I-70	1.08	WB	1.03	EB	1.06
SH 82***	Old SH 82 to West Hallam Ave.	1.07	NB	1.05	SB	1.06
SH 95-Sheridan Blvd.	US 285 to I-70	1.05	SB	1.02	NB	1.04
SH 30	I-25 to I-225	1.05	EB	1.02	WB	1.04
SH 121-Wadsworth Blvd.	C-470 to US 40/Colfax	1.04	NB	0.99	SB	1.02
SH 88-Federal Blvd.	US 6 to US 285	1.02	NB	1.02	SB	1.02
SH 95	I-70 to US 36	1.01	NB	0.99	SB	1.00
PD* - Peak direction(direction of higher TRI value)						
SD** - Secondary direction(direction of lower TRI value)						
*** - Denotes Saturday TRI value for recreational corridor						

CDOT Statewide Travel-Time Data Collection and Analysis Project
Data Collection Year 2009
Appendix D – Travel Rate Index Comparisons

Table 11: State Highway Travel Rate Index for PM commuter and Sunday Recreational Peaks

PM Peak or Sunday Peak Travel Rate Index						
State Highway	Limits	Travel Rate Index (TRI)				
		TRI	PD*	TRI	SD**	Combined Average
SH 88-Arapahoe Rd.	I-25 to SH 83	1.72	EB	1.18	WB	1.45
SH 9***	I-70 to CR 1900	1.62	SB	1.21	NB	1.42
C-470	SH 121 to I-25	1.61	WB	1.12	EB	1.37
SH 83-Parker Rd.	I-225 to SH 2	1.43	SB	1.18	NB	1.31
SH 2-Colorado Blvd.	US 285 to I-70	1.32	SB	1.30	NB	1.31
SH 7-Arapahoe Rd.	Cherryvale Rd. to US 287 N	1.51	EB	1.05	WB	1.28
SH 83-Parker Rd.	Lincoln Ave. to I-225	1.33	NB	1.21	SB	1.27
SH 95-Sheridan Blvd.	US 285 to I-70	1.30	SB	1.21	NB	1.26
SH 30	I-25 to I-225	1.28	EB	1.21	WB	1.25
SH 45-Pueblo Blvd.	Lehigh St. to SH 96	1.38	NB	1.10	SB	1.24
SH 121-Wadsworth Blvd.	US 40 to US 36	1.27	SB	1.19	NB	1.23
SH 88	US 6 to US 285	1.27	SB	1.18	NB	1.23
SH 95-Sheridan Blvd.	I-70 to US 36	1.26	SB	1.15	NB	1.21
SH 121-Wadsworth Blvd.	C-470 to US 40	1.25	SB	1.17	NB	1.21
SH 2	72nd Ave. to 96th Ave.	1.21	SB	1.19	NB	1.20
SH 88-Bellevue	SH 88-Federal to I-25	1.28	WB	1.10	EB	1.19
SH 119-Diagonal Hwy.	US 36 to US 287	1.20	EB	1.17	WB	1.19
SH 30	I-225 to Hampden Ave.	1.20	EB	1.12	WB	1.16
SH 177-S. University Blvd.	C-470/Lincoln Ave to I-25	1.25	SB	1.05	NB	1.15
SH 9***	I-70 to Boreas Pass Rd.	1.18	SB	1.12	NB	1.15
SH 119-Diagonal Hwy.	US 287 to I-25	1.16	EB	1.10	WB	1.13
SH 7-Baseline Rd.	US 287 to I-25	1.13	EB	1.12	WB	1.13
C-470	SH 121 to I-70	1.21	EB	1.03	WB	1.12
SH 119	Sugarloaf Rd. to Broadway St.	1.17	EB	1.07	WB	1.12
SH 93	SH 58/US 6 to US 36	1.09	NB	1.09	SB	1.09
SH 82 ***	I-70 to Old SH 82	1.09	SB	1.08	NB	1.09
SH 82***	Old SH 82 to West Hallam Ave.	1.05	NB	1.04	SB	1.05
SH 340	20 3/4 Rd to I-70 Business	1.07	EB	1.01	WB	1.04
PD* - Peak direction(direction of higher TRI value)						
SD** - Secondary direction(direction of lower TRI value)						
*** - Denotes Sunday TRI value for recreational corridor						

CDOT Statewide Travel-Time Data Collection and Analysis Project
Data Collection Year 2009
Appendix E – Travel Time Variability Comparisons

Table 12: Interstate Travel Time Variability for AM commuter and Saturday Recreational Peaks

AM Peak or Saturday Peak Travel Time Variability						
Interstate	Limits	Travel Time Variability (TTV)				
		TTV	PD*	TTV	SD**	Combined Average
I-270	I-70 to I-76	84	WB	80	EB	82
I-225	I-70 to I-25	74	SB	63	NB	69
I-25	Lincoln Ave. to Broadway	94	NB	25	SB	60
I-76	I-25 to I-70	80	WB	10	EB	45
I-25	Lincoln Ave. to Meadows Pkwy.	71	NB	7	SB	39
I-25	Broadway to US 36	38	SB	33	NB	36
I-70***	SH 9 to C-470	41	WB	17	EB	29
I-25	US 36 to SH 14	34	NB	19	SB	27
I-25	S. Academy Blvd. to N. Gate Rd.	19	SB	18	NB	19
I-70***	Rifle to No Name Interchange	12	WB	9	EB	11
I-70	I-25 to Peña Blvd.	12	EB	8	WB	10
I-70	C-470 to I-25	12	EB	8	WB	10
I-70***	Edwards to Vail East Exit	6	WB	5	EB	6
PD* - Peak direction(direction of higher TTV value)						
SD** - Secondary direction(direction of lower TTV value)						
*** - Denotes Saturday TRI value for recreational corridor						

Table 13: Interstate Travel Time Variability for PM commuter and Sunday Recreational Peaks

PM Peak or Sunday Peak Travel Time Variability						
Interstate	Limits	Travel Time Variability (TTV)				
		TTV	PD*	TTV	SD**	Combined Average
I-25	Broadway to US 36	215	SB	70	NB	143
I-25	Lincoln Ave. to Broadway	101	NB	86	SB	94
I-70***	SH 9 to C-470	133	EB	15	WB	74
I-225	I-70 to I-25	68	NB	40	SB	54
I-270	I-70 to I-76	54	WB	26	EB	40
I-25	S. Academy Blvd. to N. Gate Rd.	34	NB	7	SB	21
I-25	US 36 to SH 14	19	SB	14	NB	17
I-70	I-25 to Peña Blvd.	18	WB	10	EB	14
I-70	C-470 to I-25	18	WB	10	EB	14
I-76	I-25 to I-70	12	EB	7	WB	10
I-25	Lincoln Ave. to Meadows Pkwy.	9	SB	6	NB	8
I-70***	Rifle to No Name Interchange	5	EB	4	WB	5
I-70***	Edwards to Vail East Exit	5	WB	2	EB	4
PD* - Peak direction(direction of higher TTV value)						
SD** - Secondary direction(direction of lower TTV value)						
*** - Denotes Sunday TRI value for recreational corridor						

CDOT Statewide Travel-Time Data Collection and Analysis Project
Data Collection Year 2009
Appendix E – Travel Time Variability Comparisons

Table 14: US Highway Travel Time Variability for AM commuter and Saturday Recreational Peaks

AM Peak or Saturday Peak Travel Time Variability						
US Highway	Limits	Travel Time Variability (TTV)				
		TTV	PD*	TTV	SD**	Combined Average
US 285-Hampden Ave.	US 85 to I-25	127	WB	77	EB	102
US 36	SH 157 to I-25	119	EB	68	WB	94
US 285-Hampden Ave.	SH 121 to US 85	104	EB	25	WB	65
US 6-Vasquez Blvd.	56th Ave. to 77th Ave.	63	NB	58	SB	61
US 6	I-70 to I-25	105	EB	9	WB	57
US 287-Federal Blvd.	US 40 to US 36	78	SB	35	NB	57
US 160	US 550 to US 160 Business	101	WB	10	EB	56
US 550	US 160 North to 25th St.	51	NB	41	SB	46
US 36	Canyon Blvd. to SH 157	77	WB	14	EB	46
US 287-S. College Ave.	Drake Rd. to Mulberry St.	46	NB	44	SB	45
US 160	CR 207 to US 550	58	EB	30	WB	44
US 6-North Ave.	1st St. to I-70 Business	45	WB	38	EB	42
US 50	Purcell Blvd. to Fortino Blvd.	56	EB	17	WB	37
US 85-Santa Fe Dr	Highlands Ranch Pkwy. to SH 40	40	NB	31	SB	36
US 50	Ute Ave to 27.00 Rd	46	WB	21	EB	34
US 287	US 36 to Nickel St.	35	NB	31	SB	33
US 160	CR 2301 to CR 25	35	EB	27	WB	31
US 550	CR 220 to US 160 South	27	SB	24	NB	26
US 36	SH 66 to Canyon Blvd.	26	SB	17	NB	22
US 40***	CR 129 to Pine Grove Rd.	25	WB	10	EB	18
US 50	SH 141 to 27.00 Rd	20	WB	14	EB	17
US 550	CR 203A to CR 250	16	NB	15	SB	16
US 6/SH 119***	SH 93 to Gregory St.	17	EB	13	WB	15
US 85	I-76 to US 34	16	NB	13	SB	15
US 34	US 287 to US 85	16	EB	12	WB	14
US 85	Meadows Pkwy. to Highlands Ranch Pkwy.	14	SB	9	NB	12
US 287	Midway Blvd. to US 34	13	NB	7	SB	10
US 24	SH 67 to I-25	11	WB	9	EB	10
US 40***	CR 8/5 to I-70	8	SB	7	NB	8
US 34***	CR 63 to CR 43	9	WB	5	EB	7
PD* - Peak direction(direction of higher TTV value)						
SD** - Secondary direction(direction of lower TTV value)						
*** - Denotes Saturday TTV value for recreational corridor						

CDOT Statewide Travel-Time Data Collection and Analysis Project
Data Collection Year 2009
Appendix E – Travel Time Variability Comparisons

Table 15: US Highway Travel Time Variability for PM commuter and Sunday Recreational Peaks

PM Peak or Sunday Peak Travel Time Variability						
US Highway	Limits	Travel Time Variability (TTV)				
		TTV	PD*	TTV	SD**	Combined Average
US 550	US 160 North to 25th St.	217	SB	47	NB	132
US 287-S. College Ave.	Drake Rd. to Mulberry St.	103	SB	48	NB	76
US 285-Hampden Ave.	US 85 to I-25	71	EB	56	WB	64
US 6-Vasquez Blvd.	56th Ave to 77th Ave	71	NB	50	SB	61
US 285-Hampden Ave.	SH 121 to US 85	86	WB	32	EB	59
US 36	Canyon Blvd. to SH 157	64	WB	44	EB	54
US 287	US 36 to Nickel St.	51	NB	44	SB	48
US 85-Santa Fe Dr.	Highlands Ranch Pkwy. to SH 40	41	SB	31	NB	36
US 50	Ute Ave. to 27.00 Rd.	37	WB	26	EB	32
US 160	CR 2301 to CR 25	38	WB	24	EB	31
US 550	CR 220 to US 160 S	36	NB	25	SB	31
US 287-Federal Blvd.	US 40 to US 36	33	NB	24	SB	29
US 40***	CR 129 to Pine Grove Rd.	37	WB	20	EB	29
US 6-North Ave.	1st St to I-70 Business	33	EB	24	WB	29
US 6	I-70 to I-25	46	WB	10	EB	28
US 550	CR 203A to CR 250	23	SB	21	NB	22
US 50	Purcell Blvd. to Fortino Blvd.	27	WB	16	EB	22
US 160	CR 207 to US 550 South	21	EB	18	WB	20
US 50	SH 141 to 27.00 Rd.	21	WB	17	EB	19
US 6/SH 119***	SH 93 to Gregory St	21	EB	15	WB	18
US 34	US 287 to US 85	17	WB	16	EB	17
US 36	SH 66 to Canyon Blvd.	19	NB	12	SB	16
US 287	Midway Blvd to US 34	17	NB	13	SB	15
US 85	I-76 to US 34	17	SB	11	NB	14
US 34***	CR 63 to CR 43	14	WB	13	EB	14
US 85	Meadows Pkwy. to Highlands Ranch Pkwy.	19	SB	6	NB	13
US 24	SH 67 to I-25	13	EB	10	WB	12
US 36	SH 157 to I-25	20	EB	2	WB	11
US 40***	CR 8/5 to I-70	11	SB	8	NB	10
US 160	US 550 to US 160 Business	8	WB	7	EB	8
PD* - Peak direction(direction of higher TTV value)						
SD** - Secondary direction(direction of lower TTV value)						
*** - Denotes Sunday TTV value for recreational corridor						

CDOT Statewide Travel-Time Data Collection and Analysis Project
Data Collection Year 2009
Appendix E – Travel Time Variability Comparisons

Table 16: State Highway Travel Time Variability for AM commuter and Saturday Recreational Peaks

AM Peak or Saturday Peak Travel Time Variability						
State Highway	Limits	Travel Time Variability (TTV)				
		TTV	PD*	TTV	SD**	Combined Average
SH 88-Arapahoe Rd.	I-25 to SH 83	83	WB	49	EB	66
SH 45-Pueblo Blvd.	Lehigh St. to SH 96	89	NB	33	SB	61
SH 119-Diagonal Hwy.	US 287 to I-25	78	WB	40	EB	59
SH 2	72th Ave. to 96th Ave.	72	NB	27	SB	50
SH 9***	I-70 to CR 1900	57	NB	39	SB	48
SH 30	I-25 to I-225	47	WB	44	EB	46
SH 7-Arapahoe Rd.	Cherryvale Rd. to US 287	52	WB	35	EB	44
SH 121-Wadsworth Blvd.	C-470 to US 40/Colfax	64	NB	21	SB	43
SH 88-Bellevue	SH 88/Federal to I-25	39	EB	24	WB	32
SH 83-Parker Rd.	I-225 to SH 2	36	NB	26	SB	31
SH 121-Wadsworth Blvd.	US 40/Colfax to US 36	34	SB	27	NB	31
SH 2-Colorado Blvd.	US 285 to I-70	43	SB	13	NB	28
SH 7-Baseline Rd.	US 287 S to I-25	29	WB	26	EB	28
SH 119-Diagonal Hwy.	US 36 to US 287	31	SB	24	NB	28
SH 9***	I-70 to Boreas Pass Rd.	33	SB	20	NB	27
SH 95-Sheridan Blvd.	I-70 to US 36	29	SB	23	NB	26
SH 340	20 3/4 Rd. to I-70 Business	26	EB	24	WB	25
SH 88-Federal Blvd.	US 6 to US 285	28	NB	21	21	25
SH 83-Parker Rd.	Lincoln Ave. to I-225	27	NB	18	SB	23
SH 177-S. University Blvd.	C-470/Lincoln Ave. to I-25	32	NB	13	SB	23
SH 30	I-225 to Hampden Ave.	21	EB	20	WB	21
C-470	SH 121 to I-25	34	EB	5	WB	20
SH 119	Sugarloaf Rd. to Broadway St.	24	EB	12	WB	18
SH 82 ***	I-70 to Old SH 82	18	SB	16	NB	17
SH 95-Sheridan Blvd.	US 285 to I-70	18	NB	16	SB	17
C-470	SH 121 to I-70	27	WB	5	EB	16
SH 82***	Old SH 82 to West Hallam Ave.	11	SB	9	NB	10
SH 93	SH 58/US 6 to US 36	14	NB	12	SB	9
PD* - Peak direction(direction of higher TTV value)						
SD** - Secondary direction(direction of lower TTV value)						
*** - Denotes Saturday TTV value for recreational corridor						

CDOT Statewide Travel-Time Data Collection and Analysis Project
Data Collection Year 2009
Appendix E – Travel Time Variability Comparisons

Table 17: State Highway Travel Time Variability for PM commuter and Sunday Recreational Peaks

PM Peak or Sunday Peak Travel Time Variability						
State Highway	Limits	Travel Time Variability (TTV)				
		TTV	PD*	TTV	SD**	Combined Average
SH 9***	I-70 to CR 1900	139	SB	29	NB	84
C-470	SH 121 to I-25	80	WB	31	EB	56
SH 45-Pueblo Blvd.	Lehigh St. to SH 96	88	NB	18	SB	53
SH 2	72th Ave. to 96th Ave.	54	NB	30	SB	42
SH 88-Arapahoe Rd.	I-25 to SH 83	58	EB	23	WB	41
SH 7-Arapahoe Rd.	Cherryvale Rd. to US 287	47	EB	29	WB	38
SH 9***	I-70 to Boreas Pass Rd.	49	SB	27	NB	38
SH 88-Federal Blvd.	US 6 to US 285	38	SB	36	NB	37
SH 83-Parker Rd.	Lincoln Ave. to I-225	45	NB	24	SB	35
C-470	SH 121 to I-70	61	EB	7	WB	34
SH 2-Colorado Blvd.	US 285 to I-70	33	NB	33	SB	33
SH 83-Parker Rd.	I-225 to SH 2	34	SB	24	NB	29
SH 95-Sheridan Blvd.	US 285 to I-70	36	SB	21	NB	29
SH 7-Baseline Rd.	US 287 S to I-25	39	WB	15	EB	27
SH 121-Wadsworth Blvd.	C-470 to US 40/Colfax	37	SB	15	NB	26
SH 119	Sugarloaf Rd. to Broadway St.	31	EB	20	WB	26
SH 95	I-70 to US 36	27	SB	24	NB	26
SH 88-Bellevue	SH 88/Federal to I-25	41	WB	9	EB	25
SH 30	I-25 to I-225	27	EB	19	WB	23
SH 177-S. University Blvd.	C-470/Lincoln Ave. to I-25	35	SB	10	NB	23
SH 340	20 3/4 Rd. to I-70 Business	22	WB	21	EB	22
SH 121-Wadsworth Blvd.	US 40/Colfax to US 36	27	SB	16	NB	22
SH 119-Diagonal Hwy.	US 36 to US 287	22	SB	17	NB	20
SH 30	I-225 to Hampden Ave.	20	EB	18	WB	19
SH 119-Diagonal Hwy.	US 287 to I-25	23	WB	13	EB	18
SH 82 ***	I-70 to Old SH 82	18	SB	16	SB	17
SH 93	SH 58/US 6 to US 36	16	NB	14	SB	15
SH 82***	Old SH 82 to West Hallam Ave.	12	SB	11	NB	12
PD* - Peak direction(direction of higher TTV value)						
SD** - Secondary direction(direction of lower TTV value)						
*** - Denotes Sunday TTV value for recreational corridor						

CDOT Statewide Travel-Time Data Collection and Analysis Project

Data Collection Year 2009

Appendix F – HOV/HOT Travel Time Comparisons

As part of the project, travel times were collected for the HOV/HOT lanes on I-25, US 36 and US 85 corridors during morning and afternoon peak periods. The general limits and time periods of operation for the HOV/HOT lanes are identified below:

- For the I-25 corridor, the HOV/HOT lanes are open in the southbound direction between US 36 and 20th Street during the AM peak period. During the PM peak period, the HOV/HOT lanes are open in the northbound direction generally between 20th Street and US 36.
- For the US 36 corridor, the HOV/HOT lanes are open in the eastbound direction between Sheridan Boulevard and I-25 during the AM peak period. During the PM peak period, the HOV/HOT lanes are open in the westbound direction between I-25 and Federal Boulevard. Note that travelers utilizing the US 36 HOV lanes must also utilize the I-25 HOV lanes for access or egress.
- For the US 85 (Santa Fe Drive Corridor), the HOV lanes are active in the northbound direction between Bowles Avenue and I-25 during the AM peak period. During the PM peak period, the HOV lanes are active in the southbound direction between Florida Avenue and Bowles Avenue.

Below is a summary of 2009 HOV/HOT findings and a comparison of HOV/HOT lanes versus general purpose lanes.

- On the I-25 corridor, the travel times in HOV/HOT lanes were 41 and 28 percent lower than general purpose lanes in the AM and PM peak periods, respectively.
- On the US 36 corridor, the travel times in HOV/HOT lanes were 26 percent lower than general purpose lanes in the AM peak period. Travel times were virtually identical in the PM peak period, however, it should be noted that this does not include the additional saving realized when driving the HOV lane along I-25 which transitions to the HOV lane along US 36 in the westbound direction.
- On the US 85 corridor, the travel times in HOV lanes were 14 and 31 percent lower than general purpose lanes in the AM and PM peak periods, respectively.

Table 18: 2009 HOV/HOT Comparisons

Corridors	Time Period- Direction	Travel Time (Minutes)			% Time Saved
		HOV/HOT Lanes	General Purpose Lanes	Differences	
I-25	AM-Southbound	6.5	11.0	4.5	41
	PM-Northbound	7.3	10.2	2.9	28
US 36	AM-Eastbound	5.3	7.2	1.9	26
	PM-Westbound	2.8	2.7	-0.1	0
US 85	AM-Northbound	9.5	11.0	1.5	14
	PM-Southbound	9.2	13.1	4.0	31

CDOT Statewide Travel-Time Data Collection and Analysis Project
Data Collection Year 2009
Appendix F – HOV/HOT Travel Time Comparisons

Three Year comparison for HOV/HOT and General purpose lanes

Figure 1&2: I-25 Corridor Average Travel Times Comparisons for HOV/HOT and General Purpose Lanes

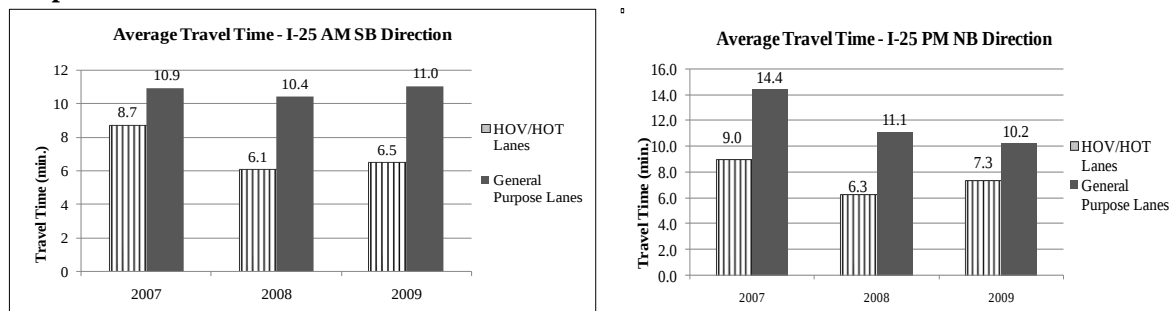


Figure 3&4: US 36 Corridor Average Travel Times Comparisons for HOV/HOT and General Purpose Lanes

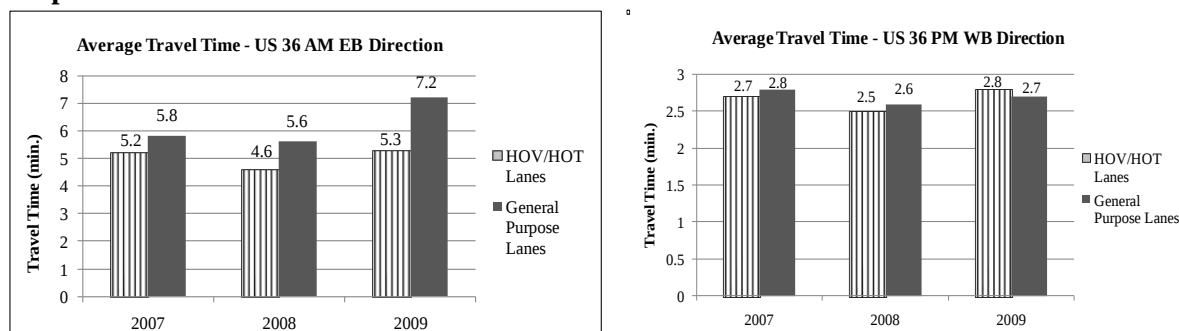
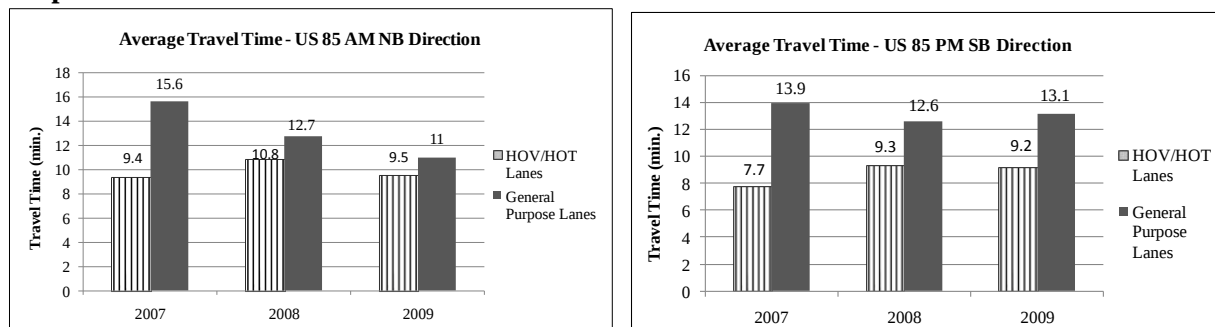


Figure 5&6: US-85 Corridor Average Travel Times Comparisons for HOV/HOT and General Purpose Lanes



CDOT Statewide Travel-Time Data Collection and Analysis Project
Data Collection Year 2009
Appendix F – HOV/HOT Travel Time Comparisons

Three Year Trend Highlights (Year 2007-2009)

- With the exception of US-85 corridor, the daily average travel time for I-25 and US-36 corridors reduced for both HOV/HOT lanes and general purpose lanes.

Table -19 below details the trend analysis for the 3 year average travel times.

Table 19: 3 Year Trend Analysis

Corridor	Lanes	Travel Time (Minutes)			Trend Analysis
		Year 2007	Year 2008	Year 2009	% Increased/Decreased
I-25 AM - Southbound	HOV/HOT Lanes	8.7	6.1	6.5	-8.33
	General Purpose Lanes	10.9	10.4	11.0	-1.69
I-25 PM - Northbound	HOV/HOT Lanes	9.0	6.3	7.3	-9.23
	General Purpose Lanes	14.4	11.1	10.2	-4.08
US 36 AM - Eastbound	HOV/HOT Lanes	5.2	4.6	5.3	-4.26
	General Purpose Lanes	5.8	5.6	7.2	-4.35
US 36 PM - Westbound	HOV/HOT Lanes	2.7	2.5	2.8	-3.07
	General Purpose Lanes	2.8	2.6	2.7	-1.89
US 85 AM - Northbound	HOV/HOT Lanes	9.4	10.8	9.5	4.52
	General Purpose Lanes	15.6	12.7	11	-1.85
US 85 PM - Southbound	HOV/HOT Lanes	7.7	9.3	9.2	2.99
	General Purpose Lanes	13.9	12.6	13.1	-2.34

I-25 (Lincoln Ave to Broadway) – Travel Time Report

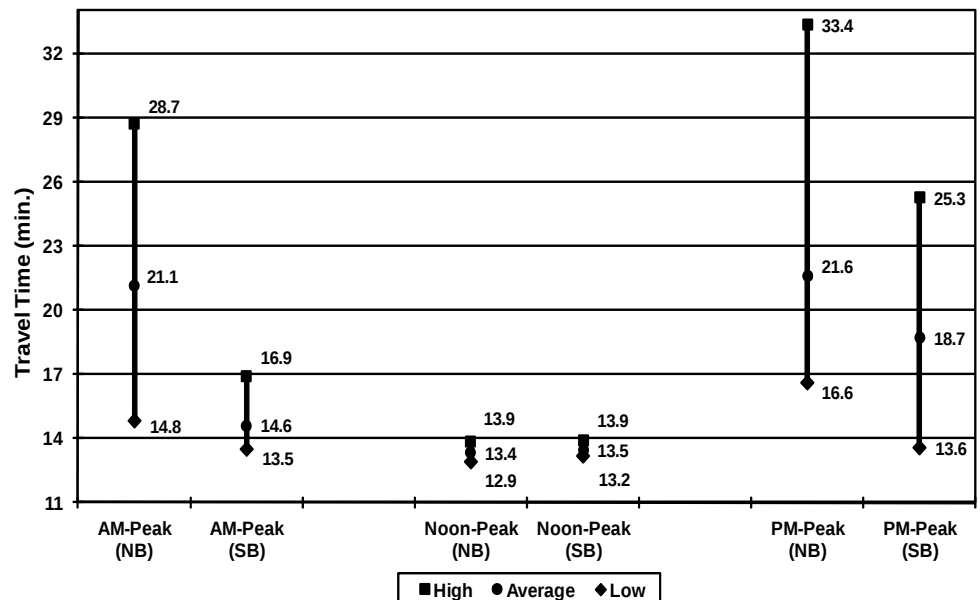
Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are generally heavier in the northbound direction during the morning peak period and near equally distributed between northbound and southbound directions during the afternoon peak period. Congestion is highly variable and can occur anywhere along the corridor, however, daily congestion is at its worst in the afternoon peak period northbound between Colorado Boulevard and Broadway and southbound approaching Lincoln Avenue. Travel time variability for northbound and southbound directions in the peak periods varies between 5 and 101 percent. This data was collected in October and November 2009.



Corridor Characteristics		Travel Rate Index	AM NB—1.43
Corridor Length	14.0 Miles		AM SB—1.09
Facility Type	Interstate - Urban		PM NB—1.46
Speed Limit	55 - 65 mph		PM SB—1.40
CDOT Region(s)	Region 6	Annual Vehicle Hours of Delay	2,193,400
Corridor Measures		Annual Person Hours of Delay	2,566,300
Traffic Count per Day	Avg: 153,200 (127,100 – 166,500)	Annual Congestion Costs	\$41,061,200
v/c Ratio	.62 – 0.94		

Travel Time Variability by Time Period for October and November 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.17 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

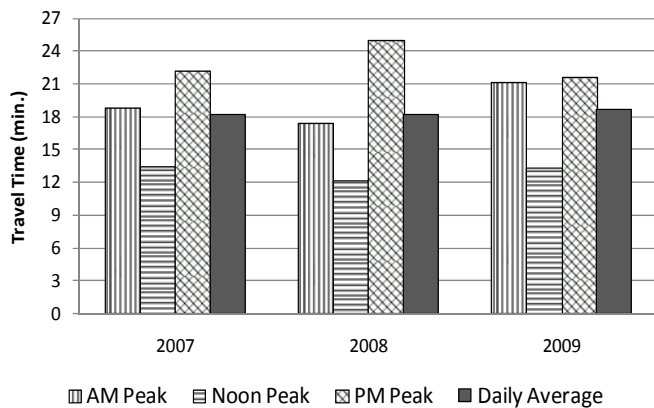
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

I-25 (Lincoln Ave to Broadway) – Three-Year Data Trend Analysis

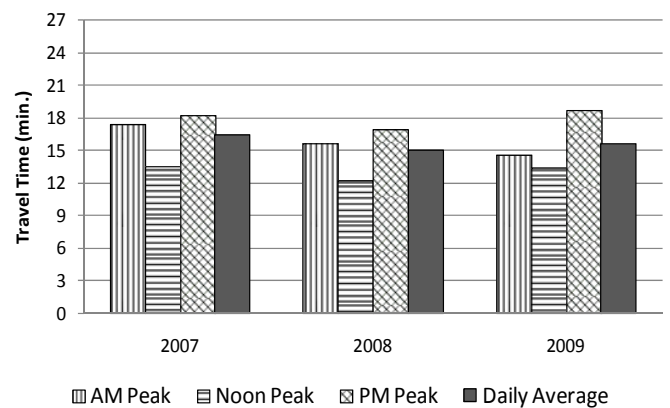
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time increased at the rate of +2.84% per year
- The SB Daily Average Travel Time decreased at the rate of -5.74% per year
- The Annual Cost of Congestion increased at the rate of +2.41% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -6.75% per year

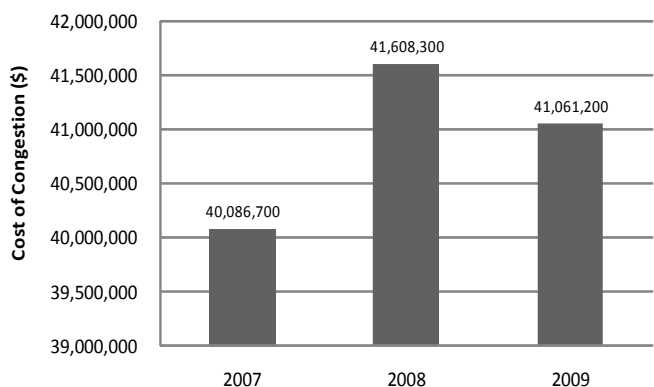
Average Travel Time (NB Direction)



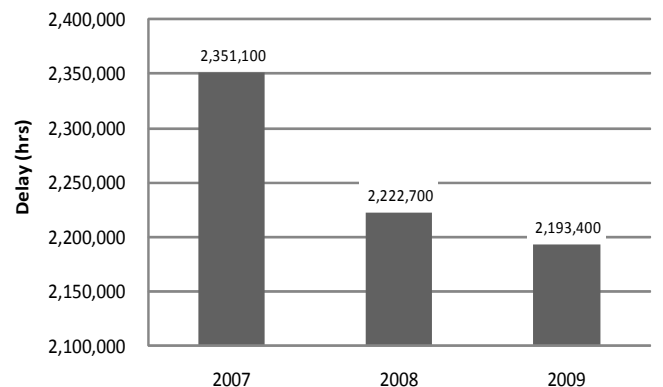
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

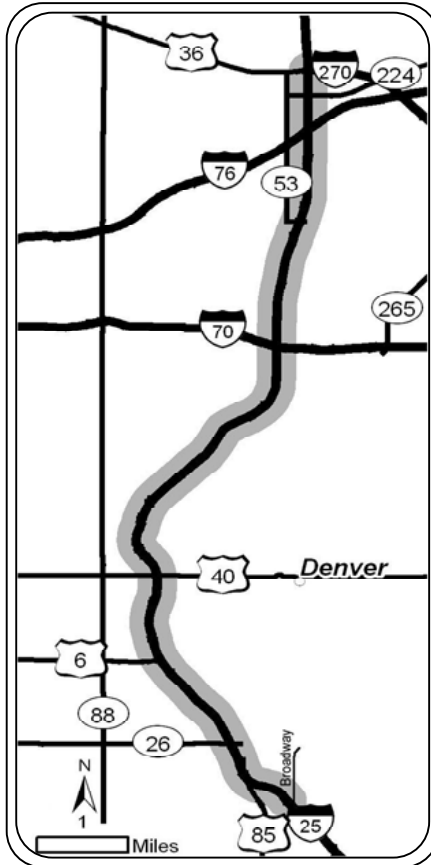


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

I-25 (Broadway to US 36) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are generally heavier in the southbound direction during the morning peak period and northbound in the afternoon peak period. Congestion can occur anywhere along the corridor, however, daily congestion occurs southbound in both morning and afternoon peak periods between 58th Avenue and Speer Boulevard and northbound in the afternoon peak period between Broadway and 23rd Avenue and approaching US-36. Travel time variability in the northbound and southbound directions in the peak periods varies between 4 and 216 percent. This data was collected in April and May 2009.



Corridor Characteristics

Corridor Length	11.3 Miles
Facility Type	Interstate - Urban
Speed Limit	55 mph

Travel Rate Index

AM NB—0.89

AM SB—1.29

PM NB—1.73

PM SB—1.83

CDOT Region(s)	Region 6
----------------	----------

Annual Vehicle Hours of Delay

5,232,400

Corridor Measures

Traffic Count per Day	Avg: 218,600 (199,300 – 238,000)
v/c Ratio	.78 – 1.00

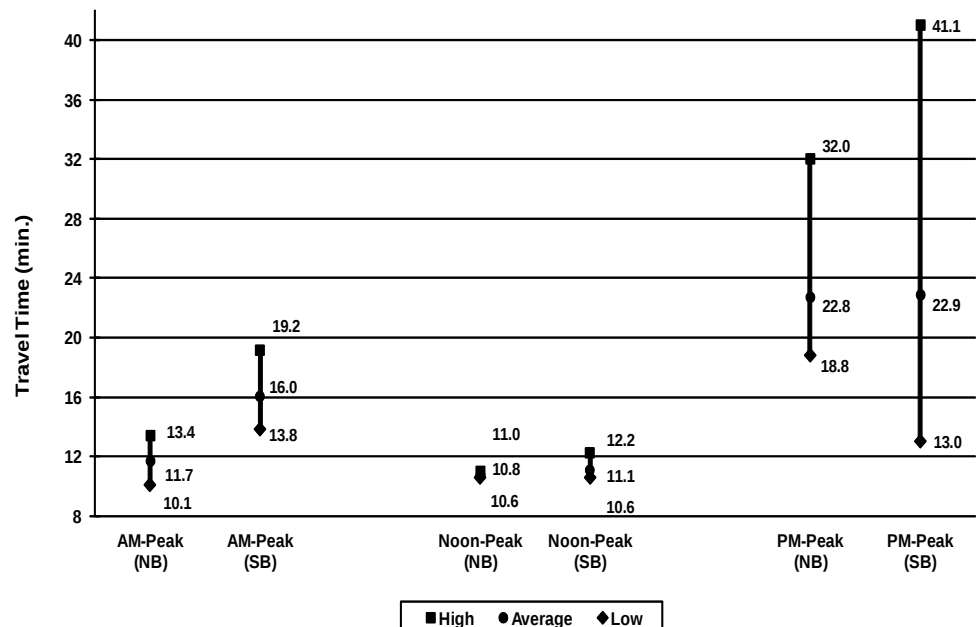
Annual Person Hours of Delay

6,121,900

Annual Congestion Costs

\$97,950,000

Travel Time Variability by Time Period for April and May 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.17 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

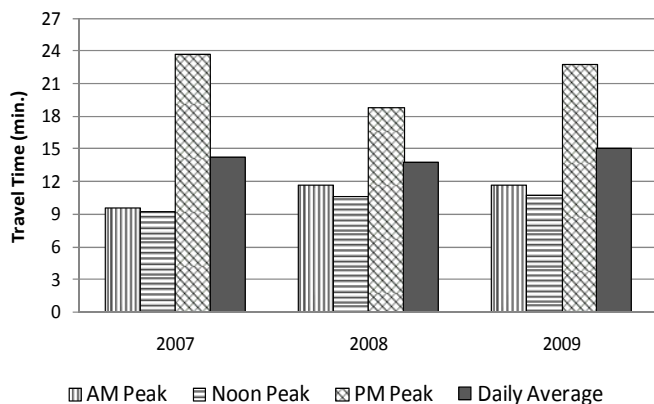
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

I-25 (Broadway to US 36) – Three-Year Data Trend Analysis

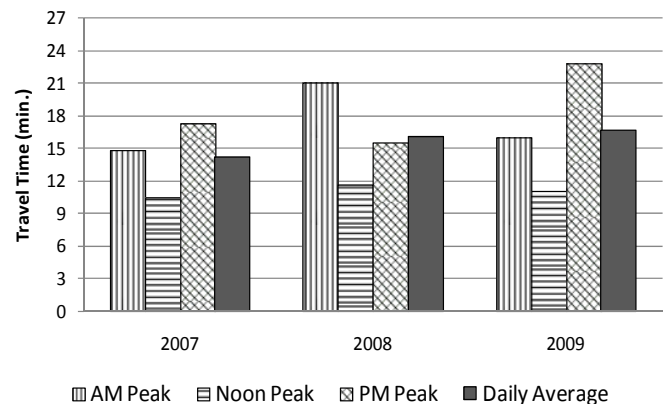
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time increased at the rate of +6.55% per year
- The SB Daily Average Travel Time increased at the rate of +16.91% per year
- The Annual Cost of Congestion increased at the rate of +39.64% per year
- The Annual Vehicle Hours of Delay increased at the rate of +27.16% per year

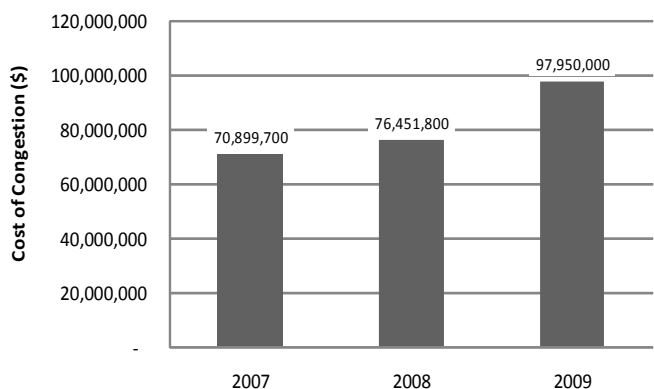
Average Travel Time (NB Direction)



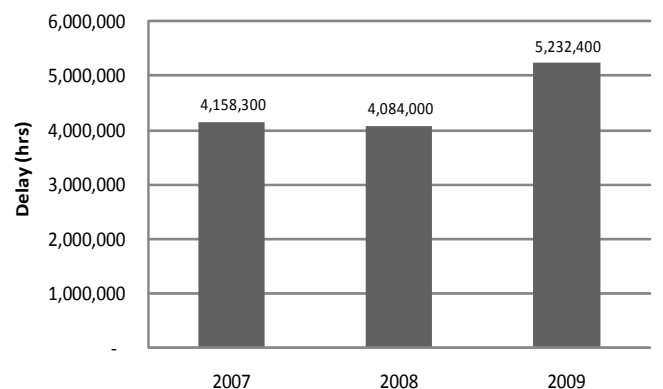
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

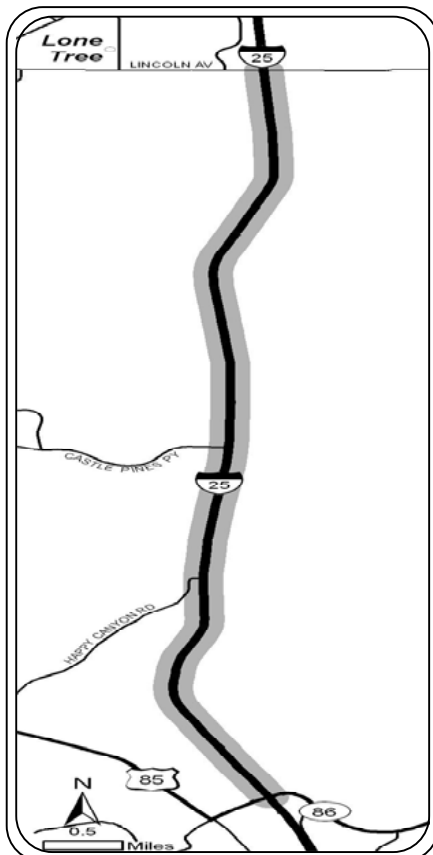


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

I-25 (Lincoln Ave to Meadows Pkwy) – Travel Time Report

Corridor Summary

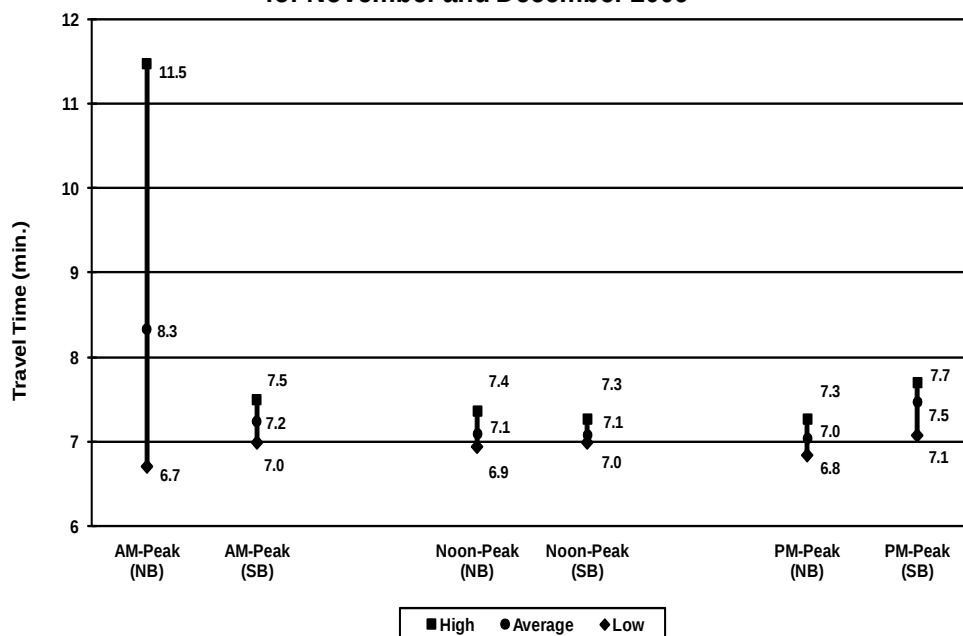
This is a commuter corridor. Traffic volumes along this corridor are heavier in the northbound direction during the morning peak period and southbound in the afternoon peak period. Congestion primarily occurs between Surrey Ridge Road and Lincoln Avenue. Travel time variability for northbound and southbound directions in the peak periods varies between 4 and 71 percent. This data was collected in November and December 2009.



Corridor Characteristics

Corridor Length	8.7 Miles	Travel Rate Index	AM NB—1.22
Facility Type	Interstate - Urban		AM SB—1.03
Speed Limit	65 - 75 mph		PM NB—1.03
CDOT Region(s)	Region 1 & Region 6		PM SB—1.07
Corridor Measures		Annual Vehicle Hours of Delay	158,400
		Annual Person Hours of Delay	198,000
		Annual Congestion Costs	\$3,168,200
Traffic Count per Day	Avg: 97,300 (90,900 – 103,600)		
v/c Ratio	.64 - .85		

Travel Time Variability by Time Period for November and December 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.25 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute - June 2009)

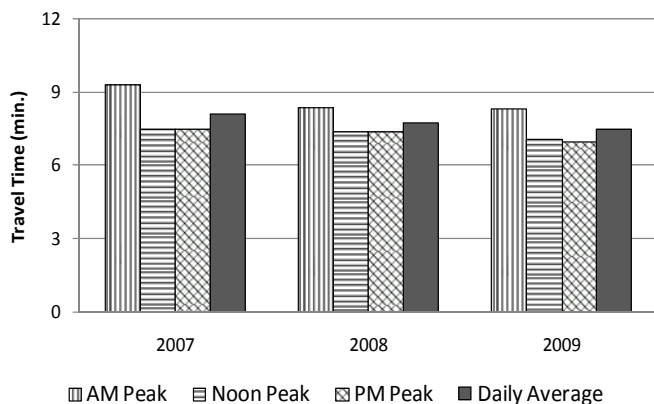
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

I-25 (Lincoln Ave to Meadows Pkwy) – Three-Year Data Trend Analysis

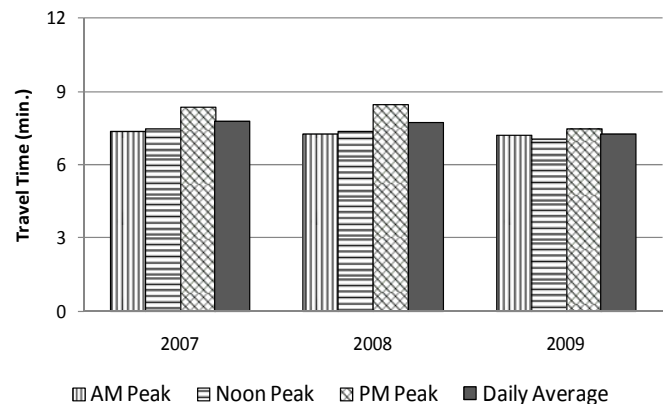
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time decreased at the rate of -7.69% per year
- The SB Daily Average Travel Time decreased at the rate of -6.24% per year
- The Annual Cost of Congestion decreased at the rate of -62.90% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -70.30% per year

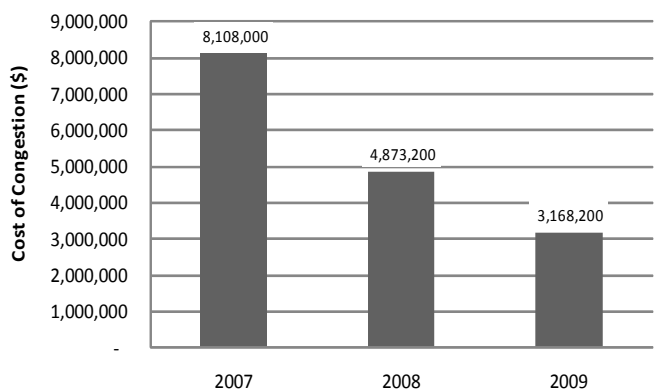
Average Travel Time (NB Direction)



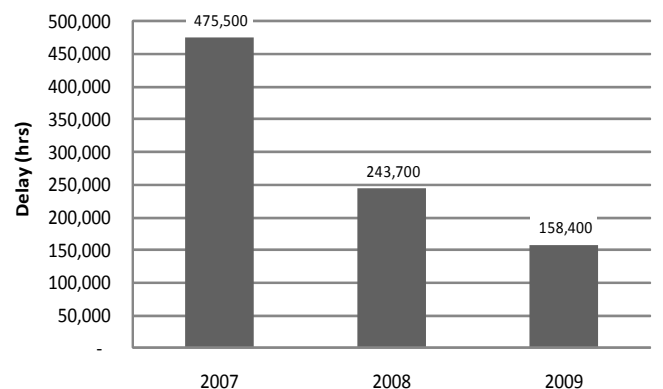
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

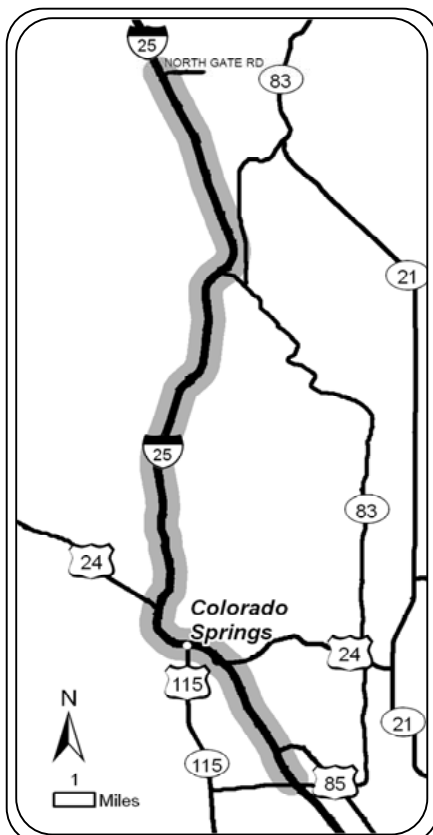


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

I-25 (S. Academy Blvd to N. Gate Rd) – Travel Time Report

Corridor Summary

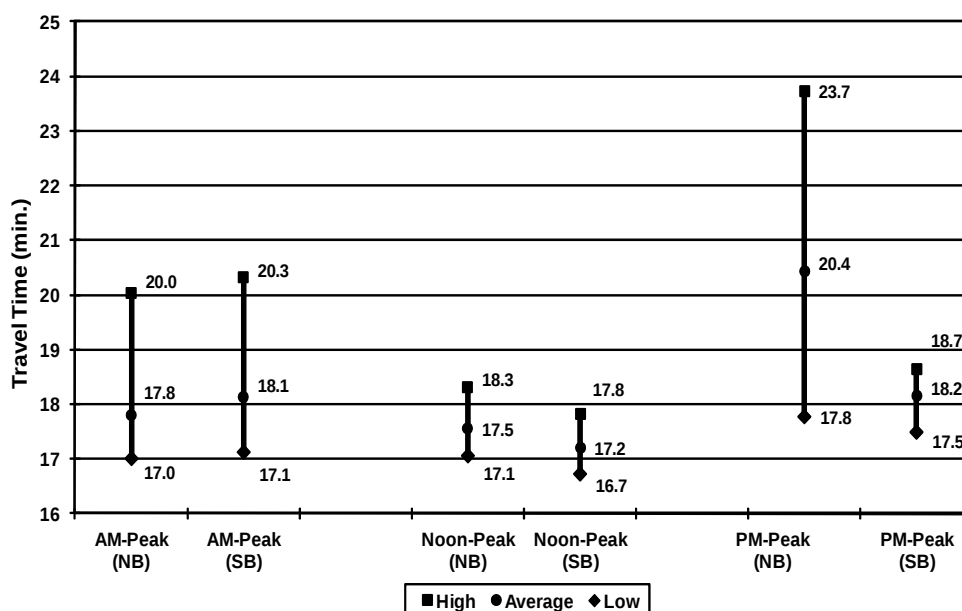
This is a commuter corridor. Traffic volumes along this corridor are generally heavier in the southbound direction during the morning peak period and northbound in the afternoon peak period. Congestion primarily occurs between Cimarron and Bijou Streets. Travel time variability for northbound and southbound directions in the peak period varies between 7 and 33 percent. This data was collected in November 2009.



Corridor Characteristics

Corridor Length	20.3 Miles	Travel Rate Index	AM NB—1.03
Facility Type	Interstate - Urban		AM SB—1.06
Speed Limit	55 – 75 mph		PM NB—1.18
CDOT Region(s)	Region 2		PM SB—1.06
Corridor Measures		Annual Vehicle Hours of Delay	297,300
		Annual Person Hours of Delay	377,500
		Annual Congestion Costs	\$6,040,500
Traffic Count per Day	Avg: 87,400 (64,600 – 119,600)		
v/c Ratio	0.50 - 0.98		

Travel Time Variability by Time Period for November 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.27 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

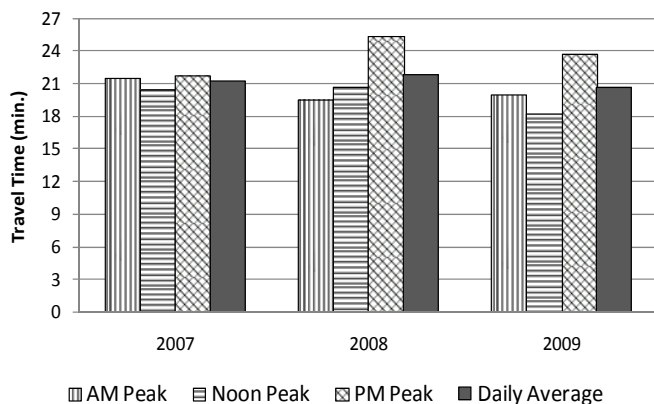
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

I-25 (S. Academy Blvd to N. Gate Rd) – Three-Year Data Trend Analysis

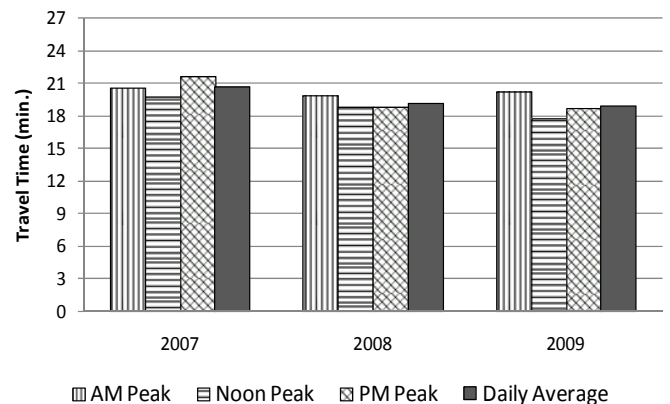
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time decreased at the rate of -2.73% per year
- The SB Daily Average Travel Time decreased at the rate of -8.62% per year
- The Annual Cost of Congestion decreased at the rate of -53.14% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -61.70% per year

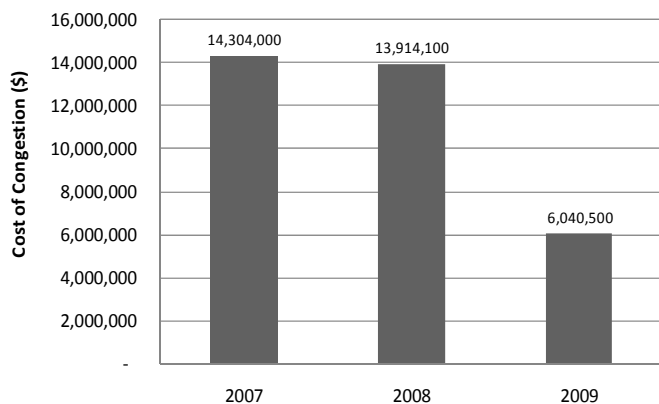
Average Travel Time (NB Direction)



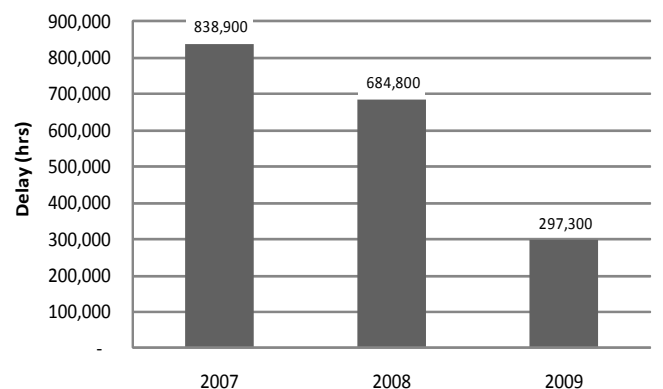
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

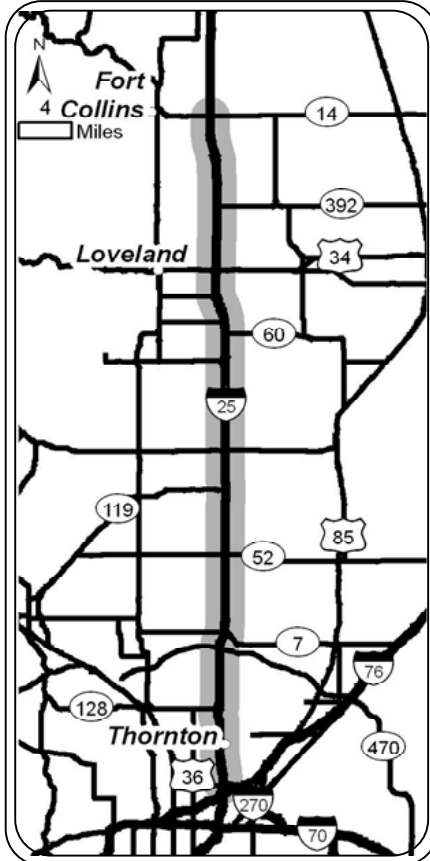


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

I-25 (US 36 to SH 14) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the southbound direction during the morning peak period and northbound in the afternoon peak period. Congestion primarily occurs between US36 and 120th Avenue southbound during the morning peak period and northbound during the afternoon peak period. Travel time variability for northbound and southbound directions in the peak periods varies between 10 and 34 percent. This data was collected in June 2009.



Corridor Characteristics

Corridor Length	52.3 Miles
Facility Type	Interstate – Urban/Rural
Speed Limit	55 – 75 mph

Travel Rate Index

AM NB—1.10

AM SB—1.09

PM NB—1.08

PM SB—1.08

CDOT Region(s)	Region 4 & Region 6
----------------	---------------------

Annual Vehicle Hours of Delay

1,837,900

Corridor Measures

Traffic Count per Day	Avg: 103,900 (48,200 – 196,600)
v/c Ratio	.49 – .99

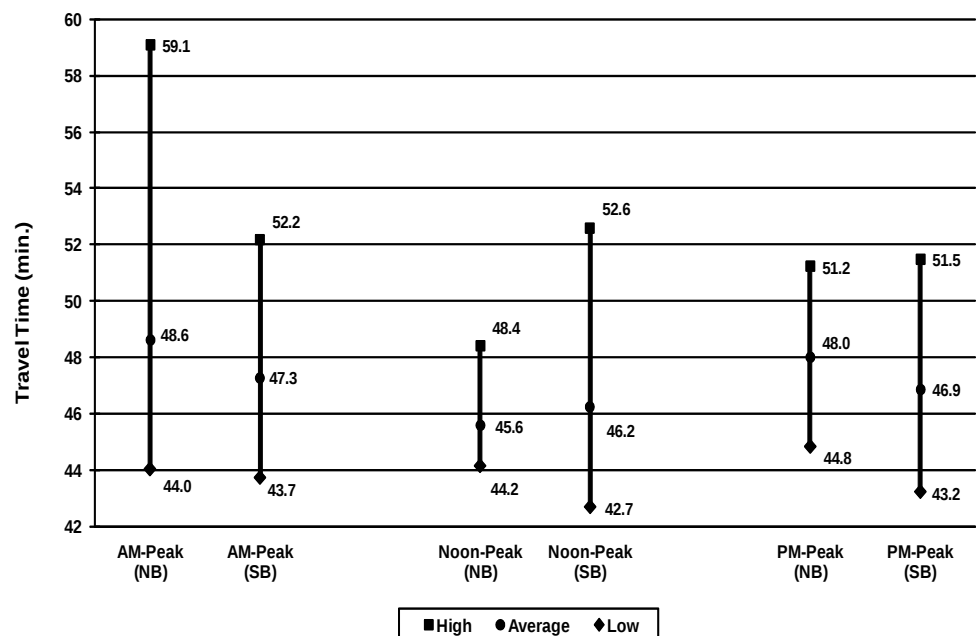
Annual Person Hours of Delay

2,334,200

Annual Congestion Costs

\$37,346,400

Travel Time Variability by Time Period for June 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.27 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

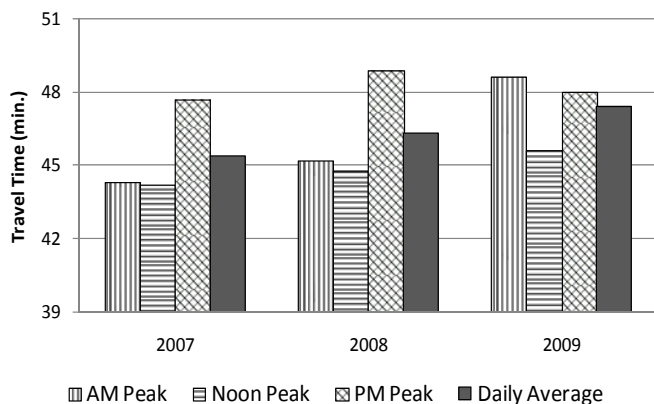
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

I-25 (US 36 to SH 14) – Three-Year Data Trend Analysis

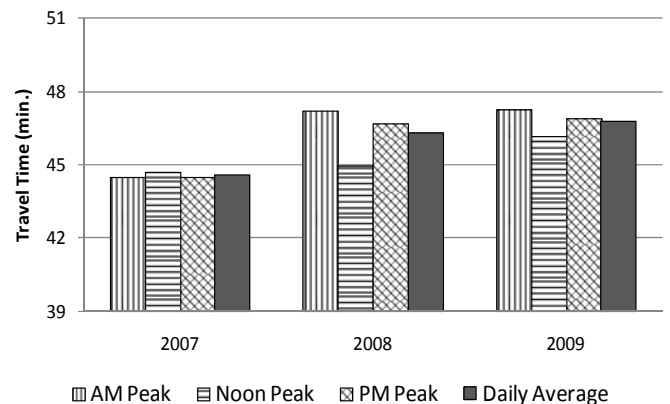
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time increased at the rate of +4.42% per year
- The SB Daily Average Travel Time increased at the rate of +4.98% per year
- The Annual Cost of Congestion increased at the rate of +116.79% per year
- The Annual Vehicle Hours of Delay increased at the rate of +81.20% per year

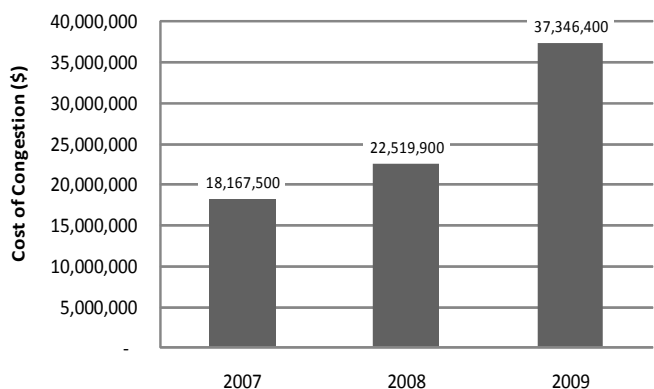
Average Travel Time (NB Direction)



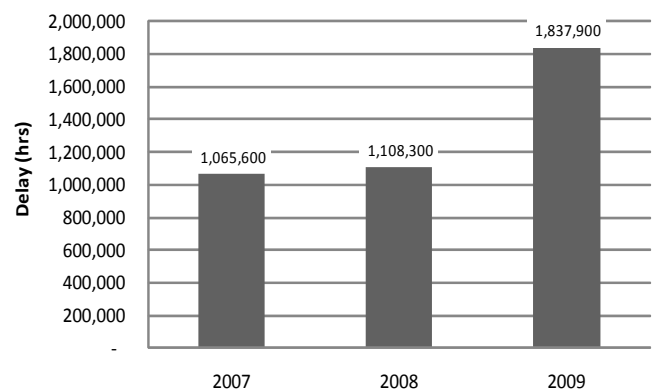
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

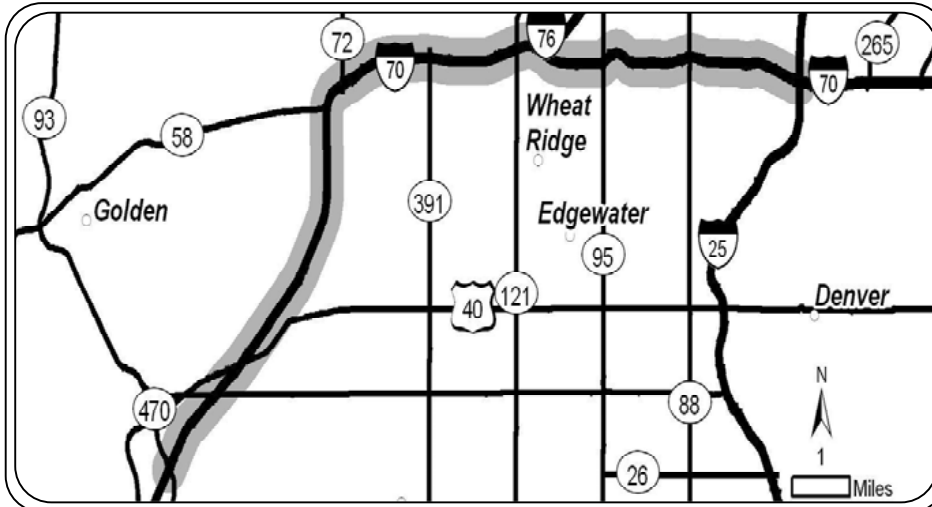


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

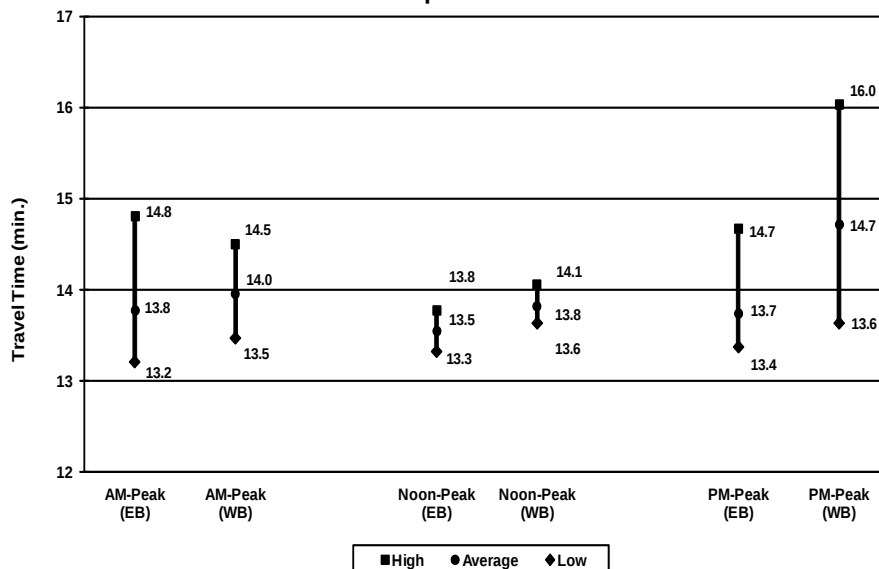
I-70 (C-470 to I-25) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are generally heavier in the eastbound direction during the morning peak period and westbound direction during the afternoon peak period. Congestion primarily occurs between Federal Boulevard and the I-25 interchange as well as between Ward Road and Wadsworth Boulevard. Travel time variability for westbound and eastbound directions in the peak periods varies between 4 and 18 percent. This data was collected in April 2009.



**Travel Time Variability by Time Period
for April 2009**



Corridor Characteristics

Corridor Length	13.1 Miles
Facility Type	Interstate - Urban
Speed Limit	55 - 65 mph
CDOT Region(s)	Region 6
Corridor Measures	
Traffic Count per Day	Avg: 114,100 (79,300 – 136,700)
v/c Ratio	.56 - .94
Travel Rate Index	AM EB—1.04
	AM WB—1.03
	PM EB—1.03
	PM WB—1.08
Annual Vehicle Hours of Delay	698,800
Annual Person Hours of Delay	817,700
Annual Congestion Costs	\$13,082,400

Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.17 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

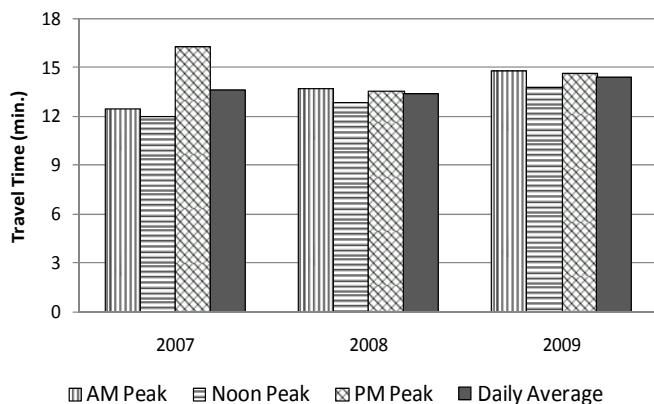
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

I-70 (C-470 to I-25) – Three-Year Data Trend Analysis

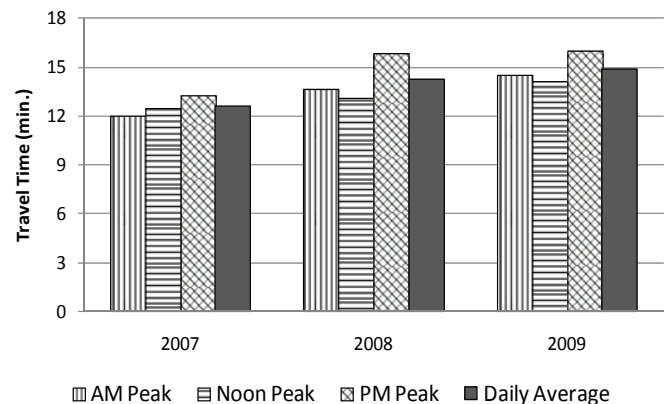
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time increased at the rate of +6.22% per year
- The WB Daily Average Travel Time increased at the rate of +17.75% per year
- The Annual Cost of Congestion increased at the rate of +11.38% per year
- The Annual Vehicle Hours of Delay increased at the rate of +1.18% per year

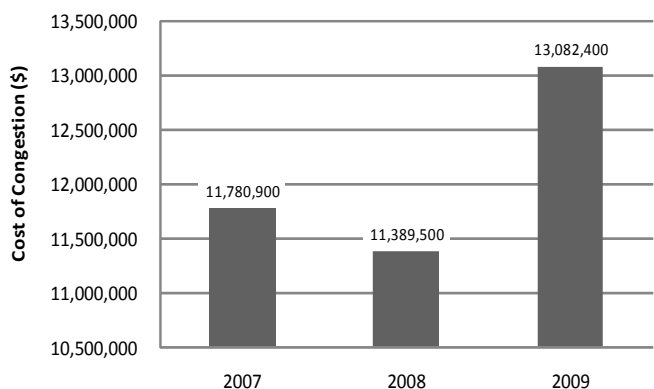
Average Travel Time (EB Direction)



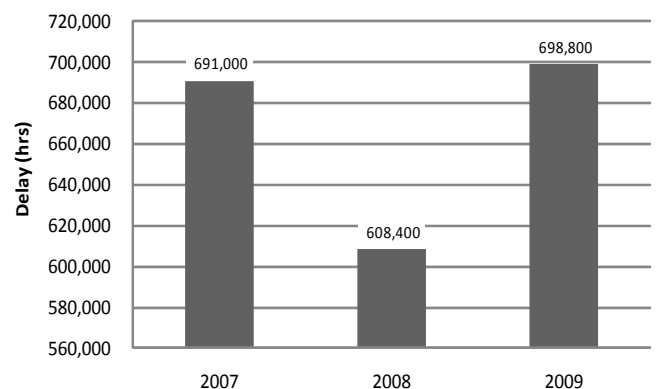
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

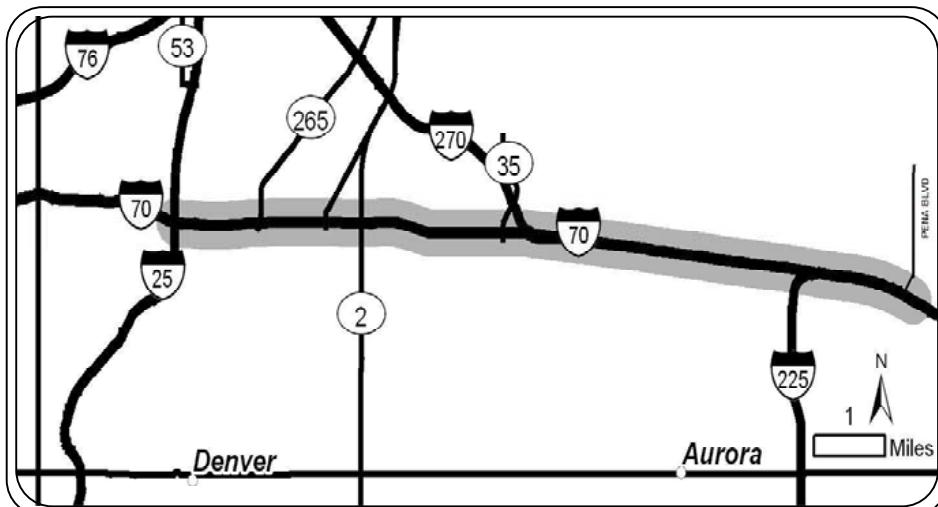


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

I-70 (I-25 to Peña Blvd) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are generally heavier in the westbound direction throughout the day. Congestion regularly occurs along the corridor, but is at its worst during the afternoon peak period. Travel time variability for westbound and eastbound directions in the peak periods varies between 3 and 67 percent. This data was collected in May 2009.



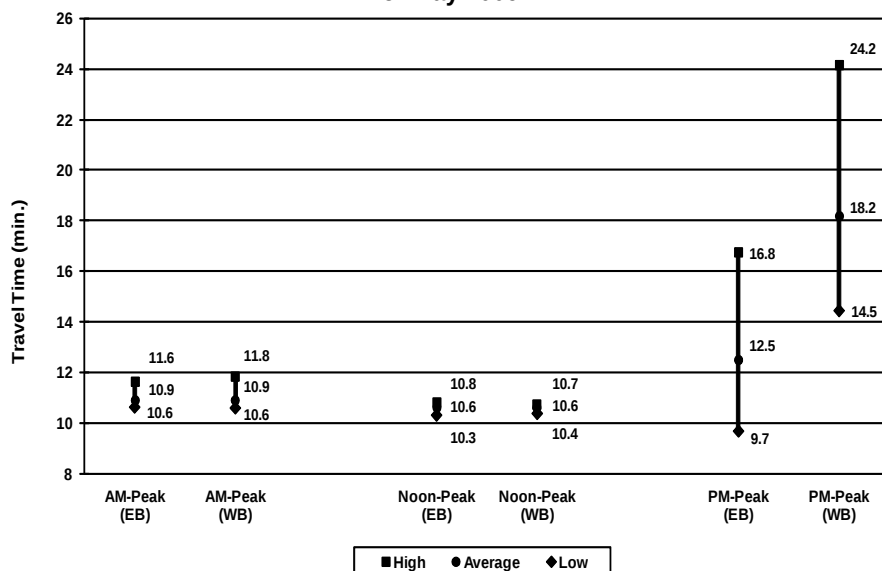
Corridor Characteristics

Corridor Length	10.3 Miles
Facility Type	Interstate - Urban
Speed Limit	55 mph
CDOT Region(s)	Region 6

Corridor Measures

Traffic Count per Day	Avg: 140,400 (117,900 – 164,000)
v/c Ratio	.69 - .94
Travel Rate Index	AM EB—1.07
	AM WB—0.92
	PM EB—1.23
	PM WB—1.54
Annual Vehicle Hours of Delay	2,696,200
Annual Person Hours of Delay	3,154,500
Annual Congestion Costs	\$50,472,500

Travel Time Variability by Time Period for May 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.17 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

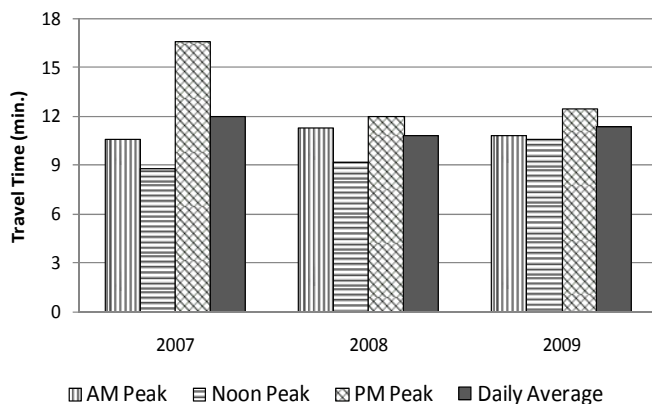
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

I-70 (I-25 to Peña Blvd) – Three-Year Data Trend Analysis

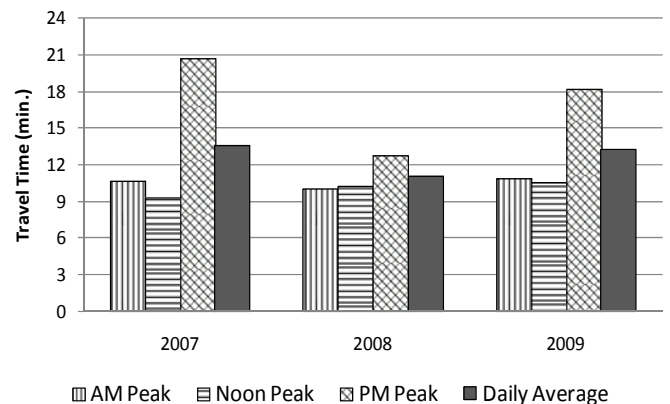
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time decreased at the rate of -5.74% per year
- The WB Daily Average Travel Time decreased at the rate of -2.63% per year
- The Annual Cost of Congestion increased at the rate of +12.95% per year
- The Annual Vehicle Hours of Delay increased at the rate of +0.61% per year

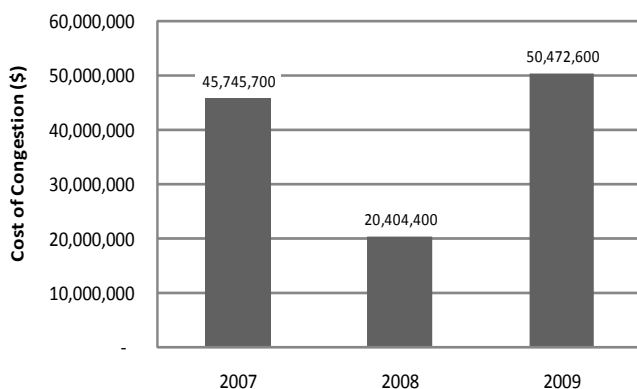
Average Travel Time (EB Direction)



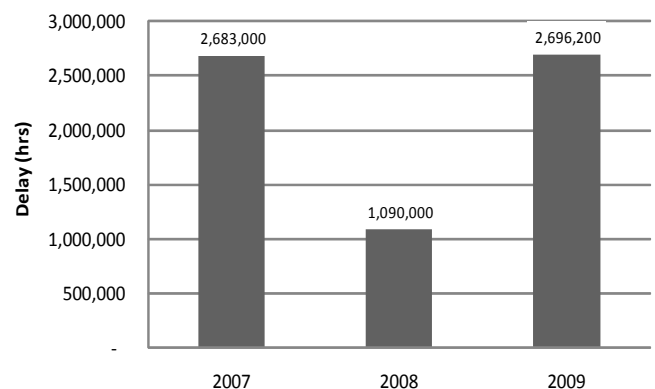
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

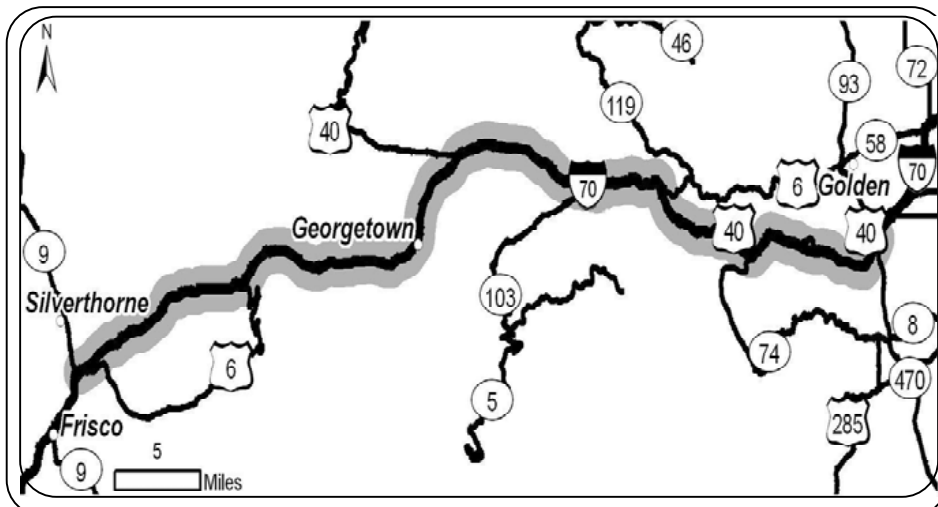


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

I-70 (SH9 to C-470) – Travel Time Report

Corridor Summary

This is a recreational corridor. Traffic volumes along this corridor are heavier in westbound direction during the Saturday peak period and eastbound during the Sunday peak period. Congestion primarily occurs approaching the Eisenhower Tunnel and Idaho Springs, but is at it worst eastbound in the Sunday peak period from State Highway 9 to the US6 exit. Travel time variability for westbound and eastbound directions in the peak periods varies between 9 and 132 percent. This data was collected in July and August 2009.



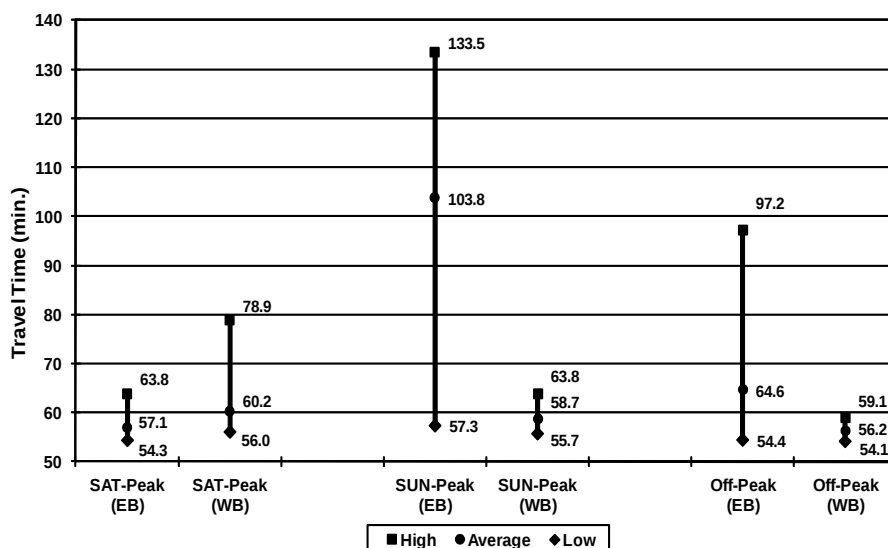
Corridor Characteristics

Corridor Length	55.6 Miles
Facility Type	Interstate – Urban/Rural
Speed Limit	50 – 65 mph
CDOT Region(s)	Region 1 and Region 6

Corridor Measures

Traffic Count per Day	Avg: 57,200 (34,500 – 93,000)
v/c Ratio	.51 - .90
Travel Rate Index	SAT EB—1.03
	SAT WB—1.09
	SUN EB—1.87
	SUN WB—1.06
Annual Vehicle Hours of Delay	2,364,300
Annual Person Hours of Delay	3,168,200
Annual Congestion Costs	\$50,691,300

Travel Time Variability by Time Period for July and August, 2009



Data Collection Period

The time periods of data collection included weekend Saturday & Sunday peak periods (11:30 AM to 5:30 PM) and Saturday & Sunday off-peak periods (9:30 AM to 11:30 AM & 5:30 PM to 7:30 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.34 persons per vehicle. Based on the 2009 Average Vehicle Occupancy Study of the Colorado State Highway System.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

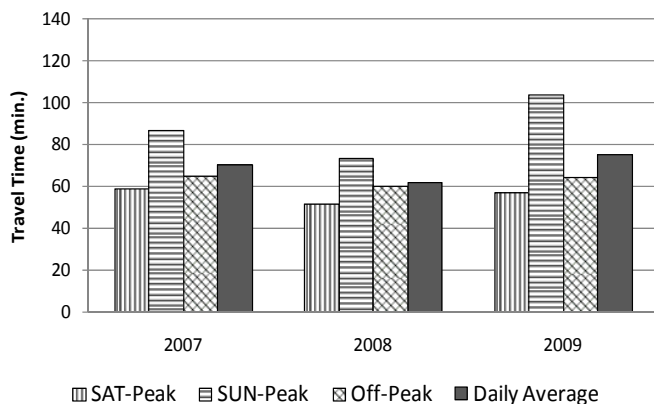
Travel Time Variability – The range of travel time for each period (Saturday Peak, Sunday Peak, Off Peak) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

I-70 (SH 9 to C-470) – Three-Year Data Trend Analysis

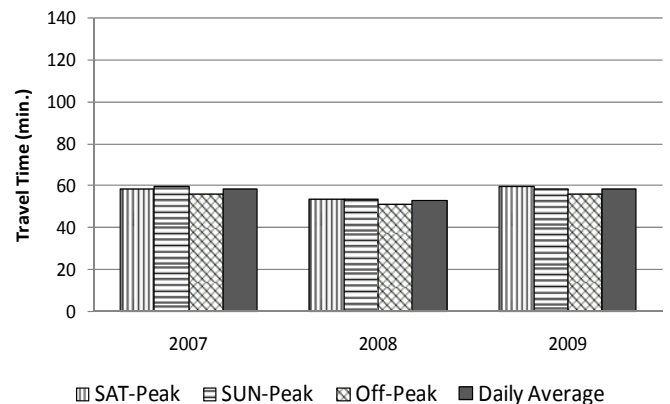
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time increased at the rate of +7.41% per year
- The WB Daily Average Travel Time increased at the rate of +0.06% per year
- The Annual Cost of Congestion increased at the rate of +170.69% per year
- The Annual Vehicle Hours of Delay increased at the rate of +111.42% per year

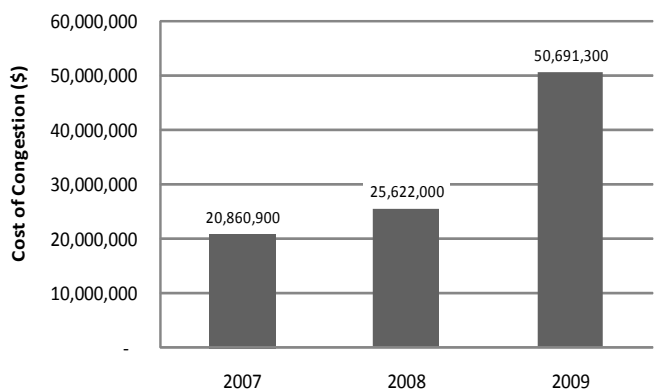
Average Travel Time (EB Direction)



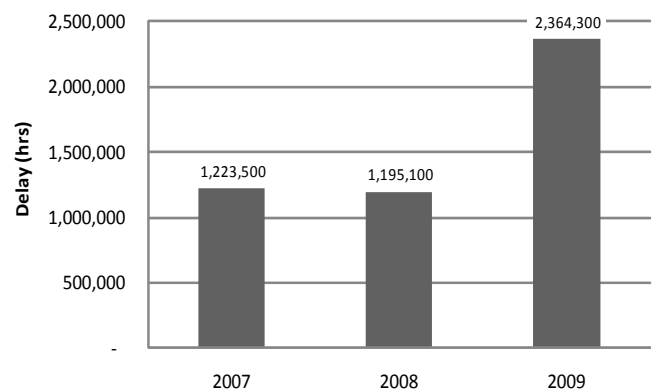
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

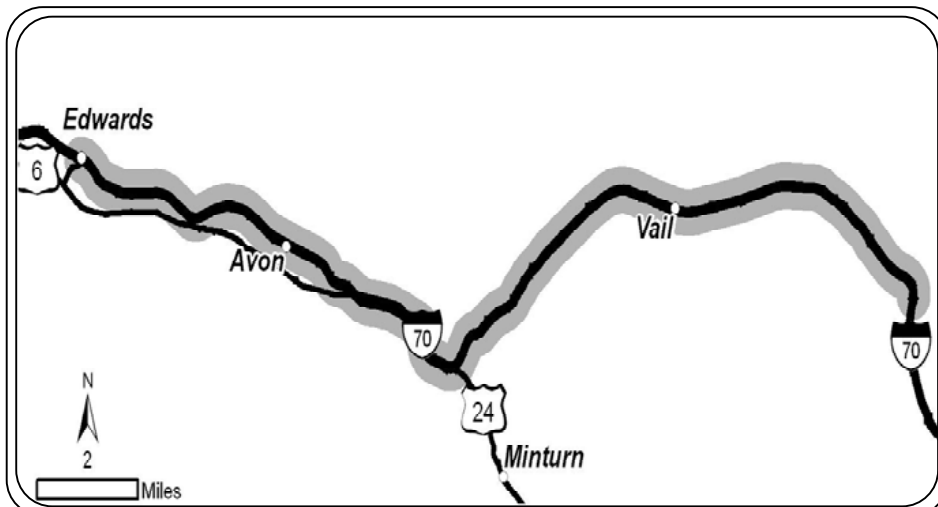


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

I-70 (Edwards to Vail East Exit) – Travel Time Report

Corridor Summary

This is a recreational corridor. Traffic volumes along this corridor are generally equally distributed between westbound and eastbound directions during both Saturday and Sunday peak periods. Travel time variability for westbound and eastbound directions in the peak periods varies between 3 and 6 percent. This data was collected in August 2009.



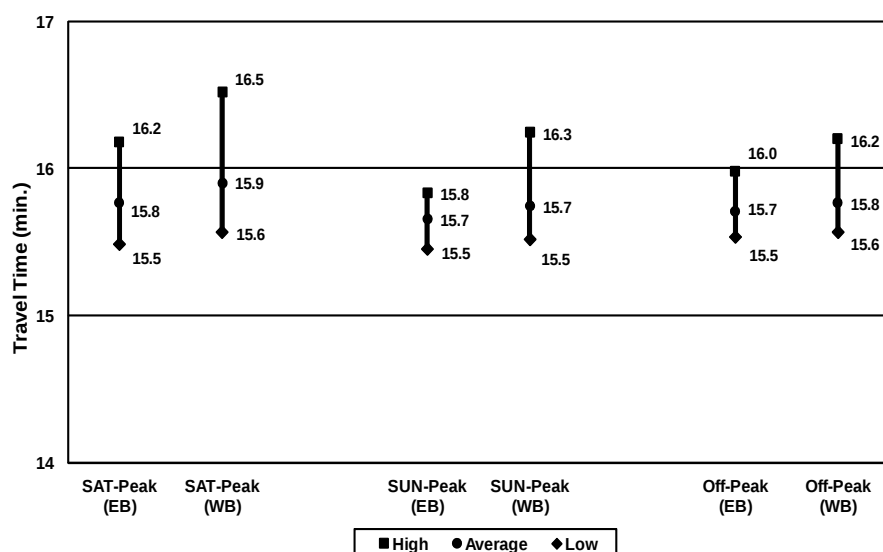
Corridor Characteristics

Corridor Length	17.0 Miles
Facility Type	Interstate – Urban/Rural
Speed Limit	65 – 75 mph
CDOT Region(s)	Region 3

Corridor Measures

Traffic Count per Day	Avg: 41,300 (38,300 – 44,400)
v/c Ratio	.46 - .55
Travel Rate Index	SAT EB—1.02
	SAT WB—1.02
	SUN EB—1.01
	SUN WB—1.01
Annual Vehicle Hours of Delay	42,500
Annual Person Hours of Delay	57,400
Annual Congestion Costs	\$918,700

Travel Time Variability by Time Period for August, 2009



Data Collection Period

The time periods of data collection included weekend Saturday & Sunday peak periods (11:30 AM to 5:30 PM) and Saturday & Sunday off-peak periods (9:30 AM to 11:30 AM & 5:30 PM to 7:30 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.35 persons per vehicle. Based on the 2009 Average Vehicle Occupancy Study of the Colorado State highway System.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

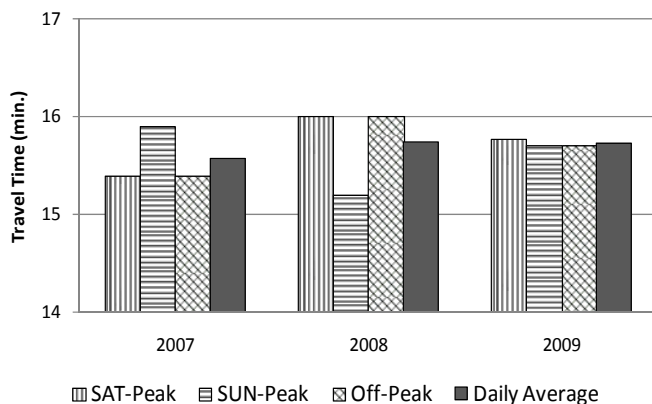
Travel Time Variability – The range of travel time for each period (Saturday Peak, Sunday Peak, Off Peak) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

I-70 (Edwards to Vail East Exit) – Three-Year Data Trend Analysis

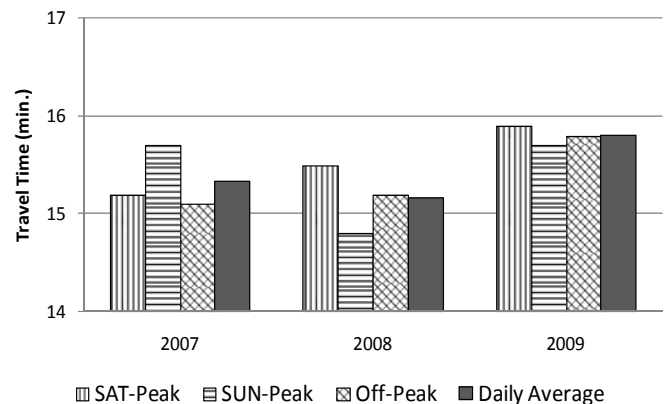
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time increased at the rate of +0.99% per year
- The WB Daily Average Travel Time increased at the rate of +3.08% per year
- The Annual Cost of Congestion decreased at the rate of -30.21% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -47.65% per year

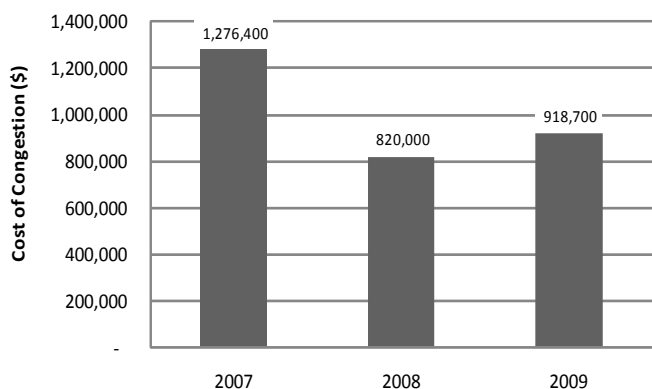
Average Travel Time (EB Direction)



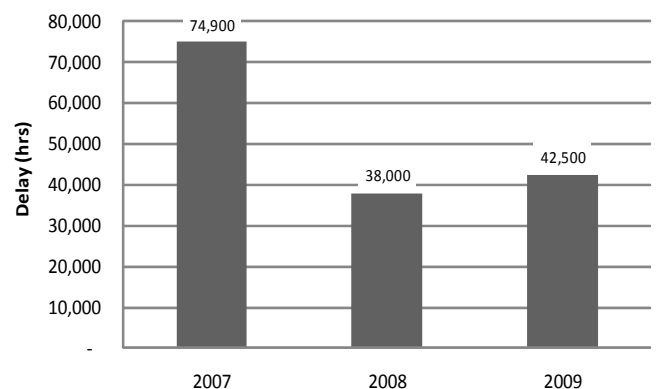
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

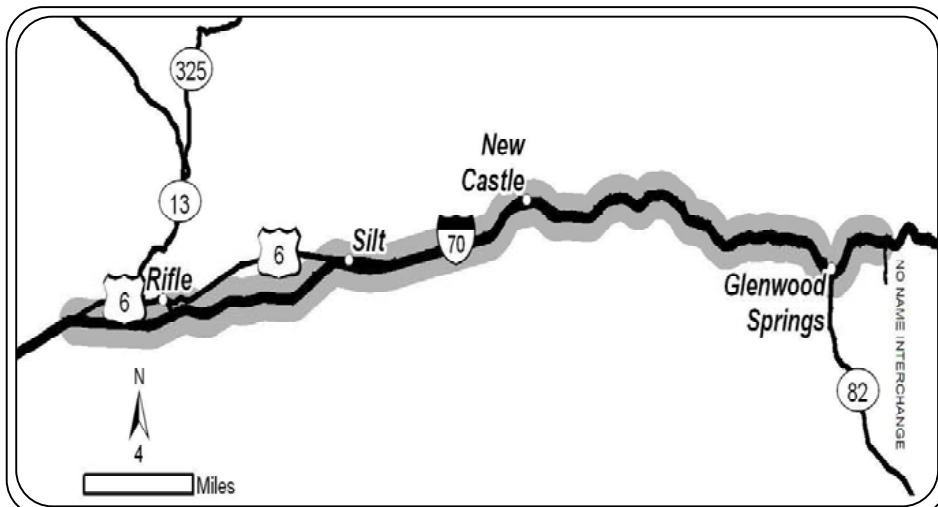


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

I-70 (Rifle to No Name Interchange) – Travel Time Report

Corridor Summary

This is a recreational corridor. Traffic volumes along this corridor are generally heavier in the eastbound direction during the Saturday peak period and westbound in the Sunday peak period. Travel time variability for westbound and eastbound directions in the peak periods varies between 4 and 26 percent. This data was collected in August 2009.



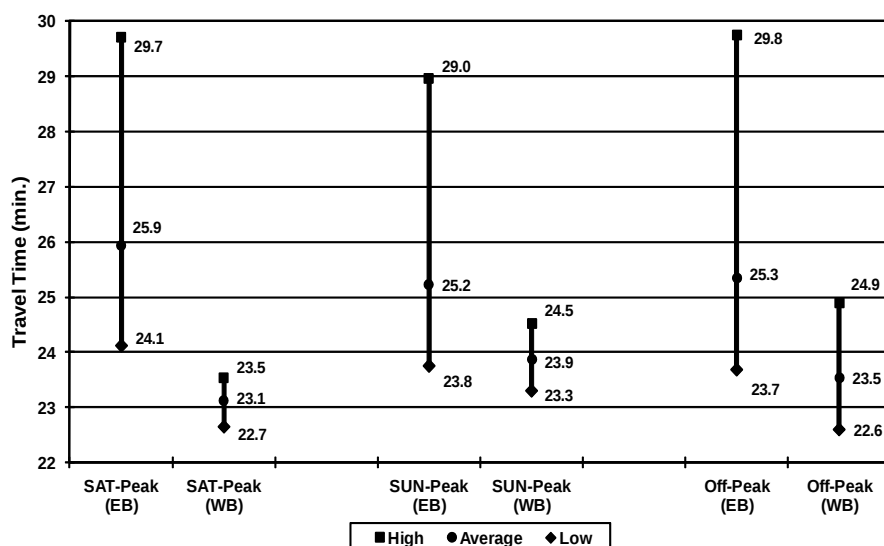
Corridor Characteristics

Corridor Length	27.8 Miles
Facility Type	Interstate – Urban/Rural
Speed Limit	50 - 75 mph
CDOT Region(s)	Region 3

Corridor Measures

Traffic Count per Day	Avg: 24,500 (21,400 – 30,300)
v/c Ratio	.32 - .57
Travel Rate Index	SAT EB—1.09
	SAT WB—1.01
	SUN EB—1.06
	SUN WB—1.04
Annual Vehicle Hours of Delay	76,000
Annual Person Hours of Delay	105,700
Annual Congestion Costs	\$1,691,300

Travel Time Variability by Time Period for August 2009



Data Collection Period

The time periods of data collection included weekend Saturday & Sunday peak periods (11:30 AM to 5:30 PM) and Saturday & Sunday off-peak periods (9:30 AM to 11:30 AM & 5:30 PM to 7:30 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.39 persons per vehicle. Based on the 2008 Average Vehicle Occupancy Study of the Colorado State highway System.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

Travel Time Variability – The range of travel time for each period (Saturday Peak, Sunday Peak, Off Peak) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

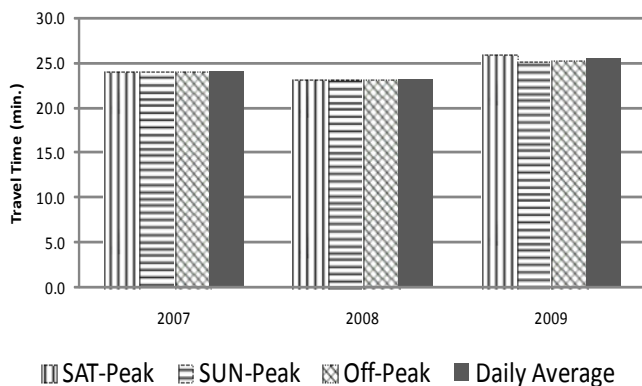
I-70 (Rifle to No Name Interchange) – Three-Year Data Trend Analysis

Three-Year Trend Analysis Highlights:

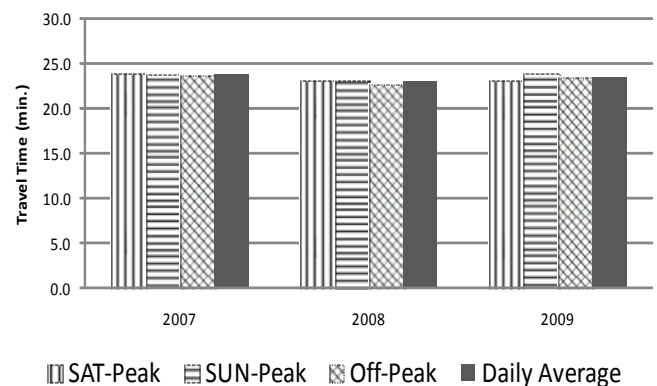
- The EB Daily Average Travel Time increased at the rate of +6.00% per year
- The WB Daily Average Travel Time decreased at the rate of -1.36% per year
- The Annual Cost of Congestion increased at the rate of +2764.45% per year**
- The Annual Vehicle Hours of Delay increased at the rate of +2761.16% per year**

** Increase in Annual congestion costs and Annual vehicle hours of delay is due to construction activities in Years 2008 and 2009

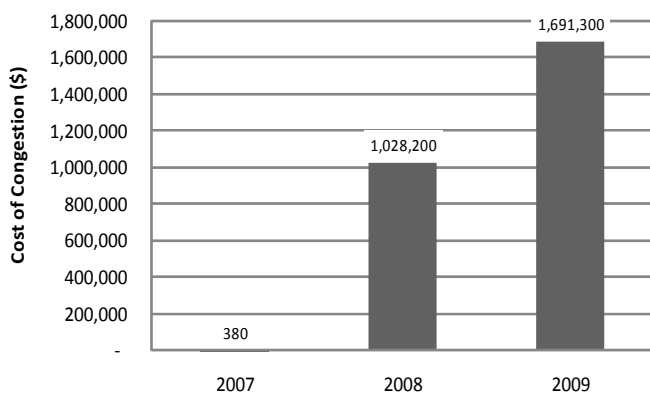
Average Travel Time (EB Direction)



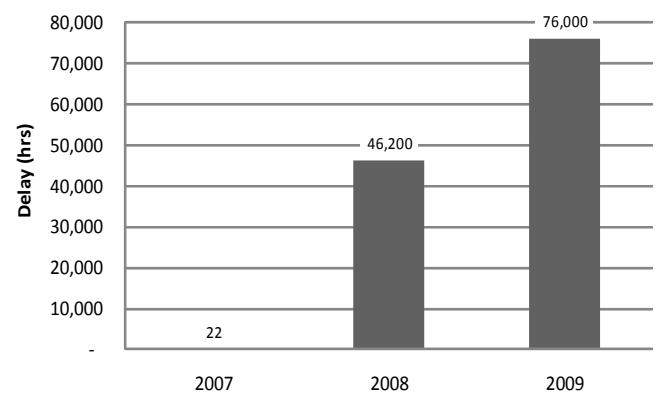
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

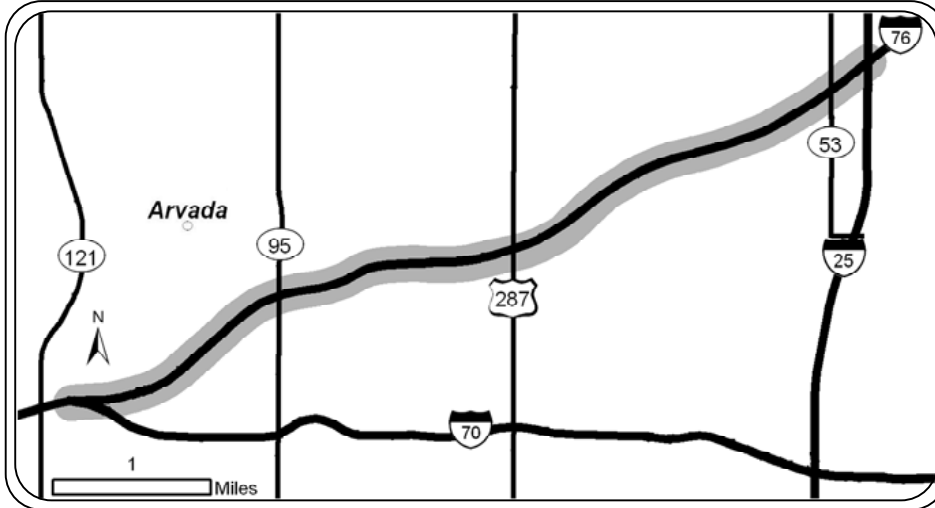


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

I-76 (I-25 to I-70) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the westbound direction during the morning peak period and eastbound in the afternoon peak period. Congestion primarily occurs approaching I-25. Travel time variability for westbound and eastbound directions in the peak periods varies between 7 and 80 percent. This data was collected in September 2009.



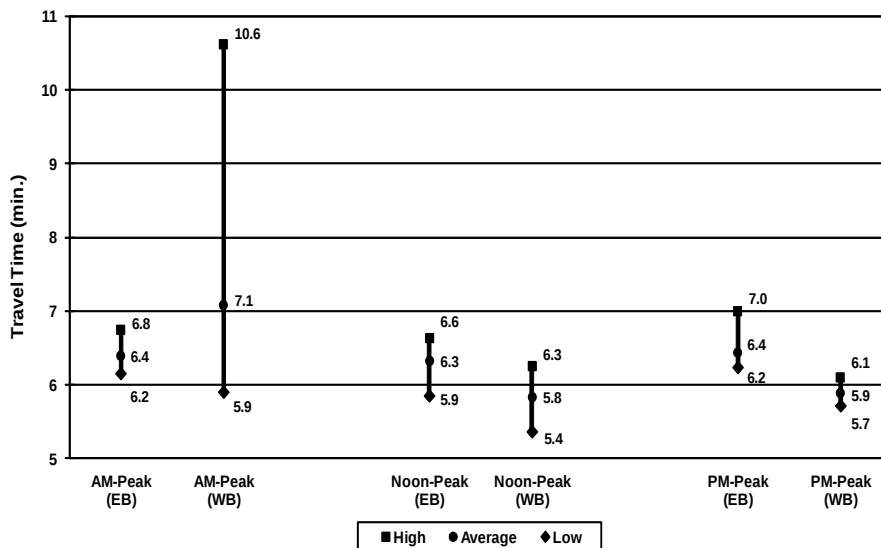
Corridor Characteristics

Corridor Length	5.1 Miles
Facility Type	Interstate - Urban
Speed Limit	55 mph
CDOT Region(s)	Region 6

Corridor Measures

Traffic Count per Day	Avg: 79,500 (78,100 – 81,100)
V/C Ratio	.89 – 1.02
Travel Rate Index	AM EB—1.05
	AM WB—1.25
	PM EB—1.06
	PM WB—1.04
Annual Vehicle Hours of Delay	75,300
Annual Person Hours of Delay	88,100
Annual Congestion Costs	\$1,409,600

Travel Time Variability by Time Period for September 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.17 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

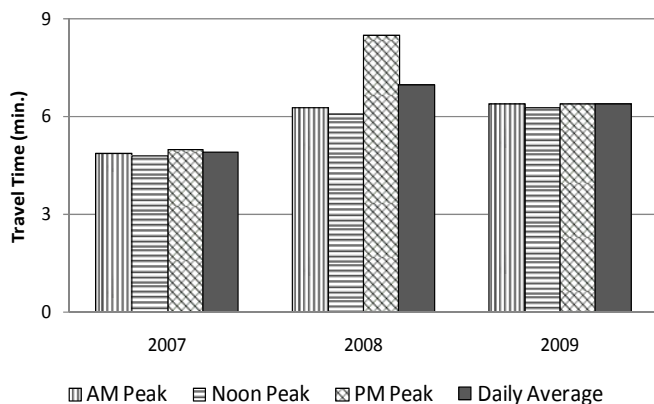
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

I-76 (I-25 to I-70) – Three-Year Data Trend Analysis

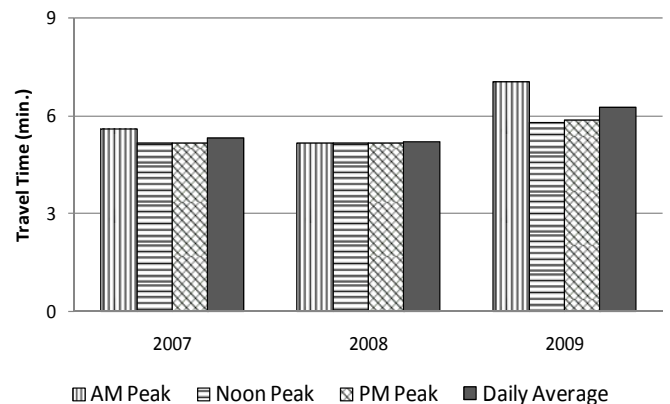
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time increased at the rate of +27.44% per year
- The WB Daily Average Travel Time increased at the rate of +18.03% per year
- The Annual Cost of Congestion decreased at the rate of -38.53% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -44.53% per year

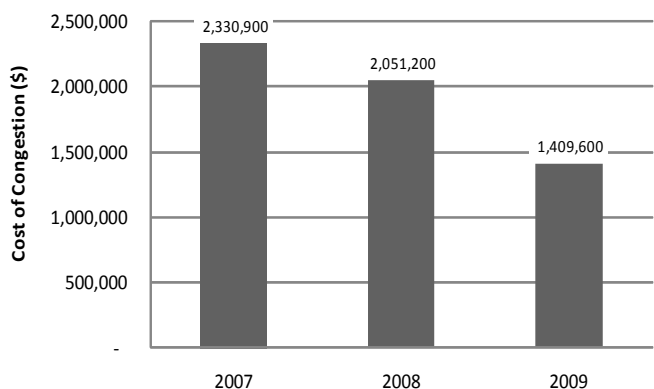
Average Travel Time (EB Direction)



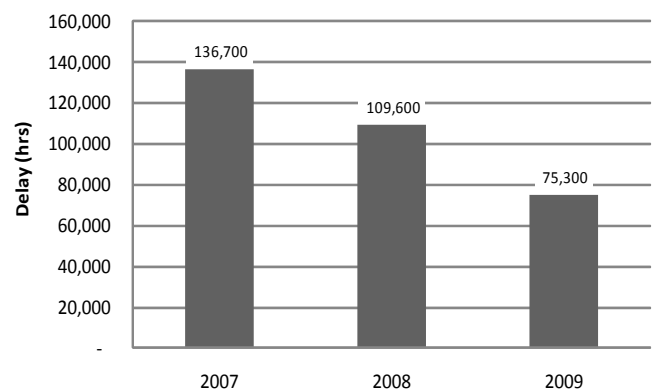
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

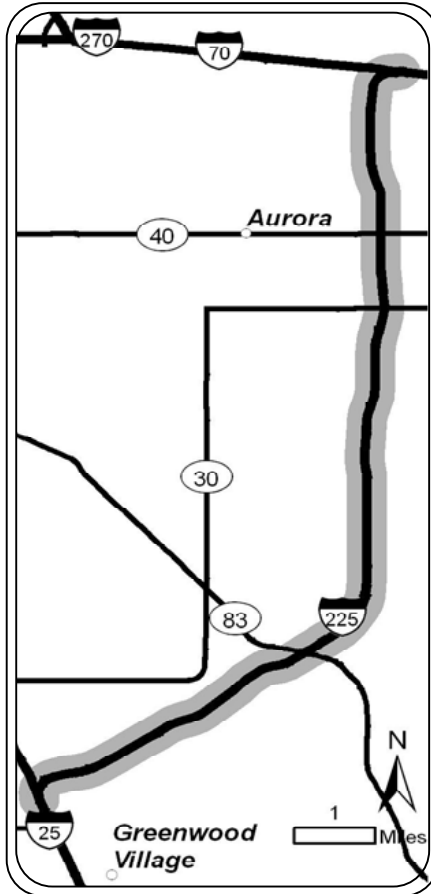


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

I-225 (I-70 to I-25) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are generally heavier in the northbound direction throughout the day. Congestion can occur throughout the corridor but is at its worst in segments such as between I-25 and Parker Road, Iliff and Alameda Avenues, and Colfax Avenue and I-70. Travel time variability for the northbound and southbound directions in the peak periods varies between 11 and 74 percent. This data was collected in June, 2009.



Corridor Characteristics

Corridor Length	12.0 Miles
Facility Type	Interstate - Urban
Speed Limit	55 - 65 mph

Travel Rate Index

AM NB—1.19

AM SB—1.47

PM NB—1.46

PM SB—1.28

CDOT Region(s)	Region 6
----------------	----------

Annual Vehicle Hours of Delay

2,742,700

Corridor Measures

Traffic Count per Day	Avg: 123,300 (119,400 – 130,800)
v/c Ratio	.74 – 1.11

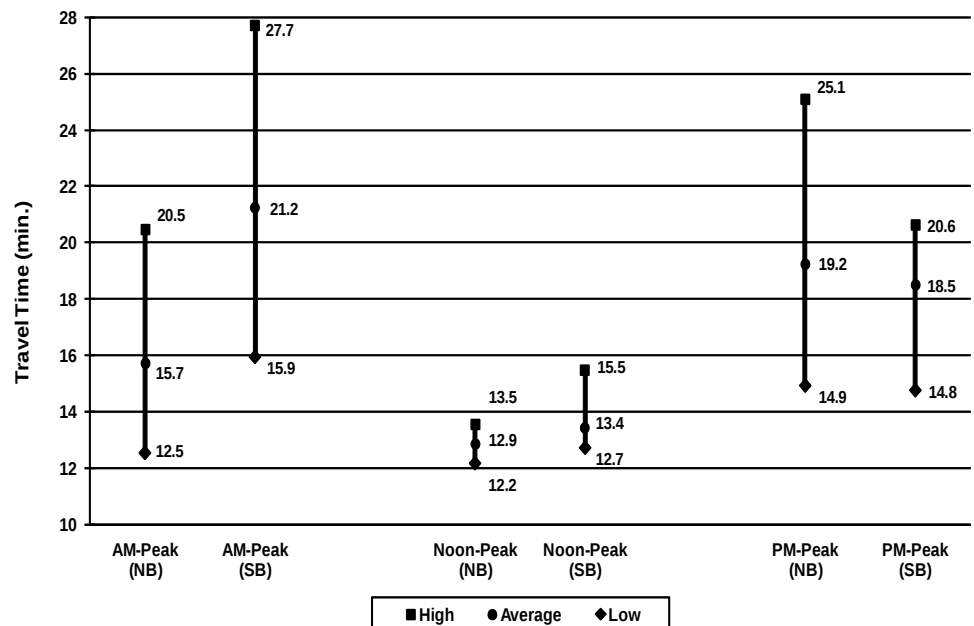
Annual Person Hours of Delay

3,209,000

Annual Congestion Costs

\$51,343,400

Travel Time Variability by Time Period for June 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.17 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

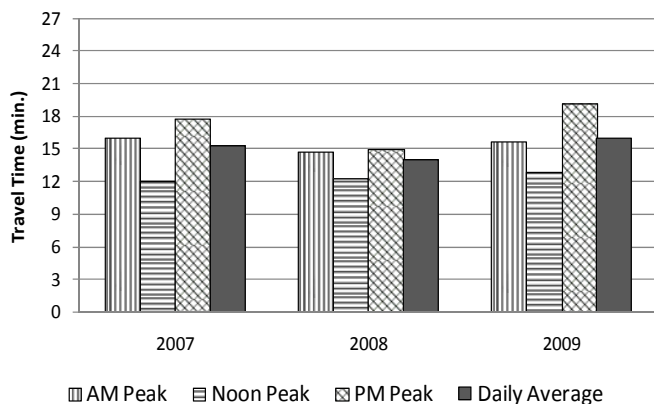
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

I-225 (I-70 to I-25) – Three-Year Data Trend Analysis

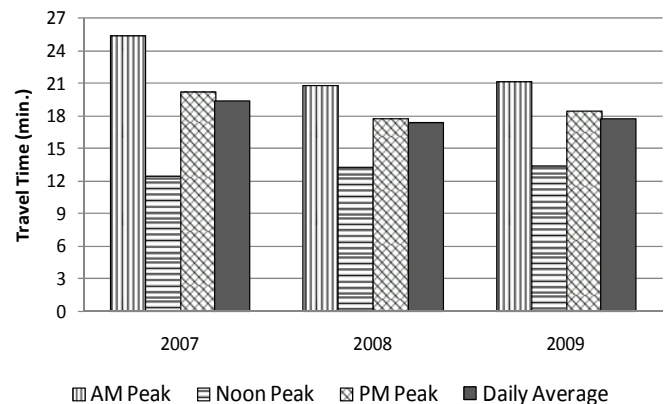
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time increased at the rate of +4.36% per year
- The SB Daily Average Travel Time decreased at the rate of -8.90% per year
- The Annual Cost of Congestion increased at the rate of +11.85% per year
- The Annual Vehicle Hours of Delay increased at the rate of +0.91% per year

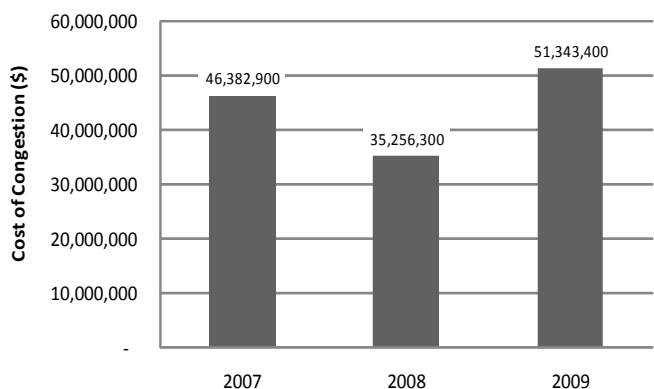
Average Travel Time (NB Direction)



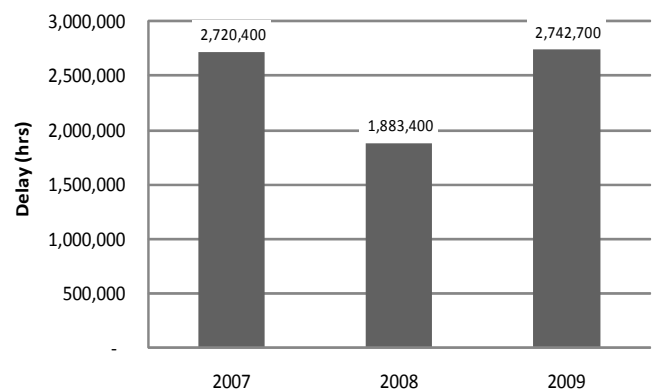
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

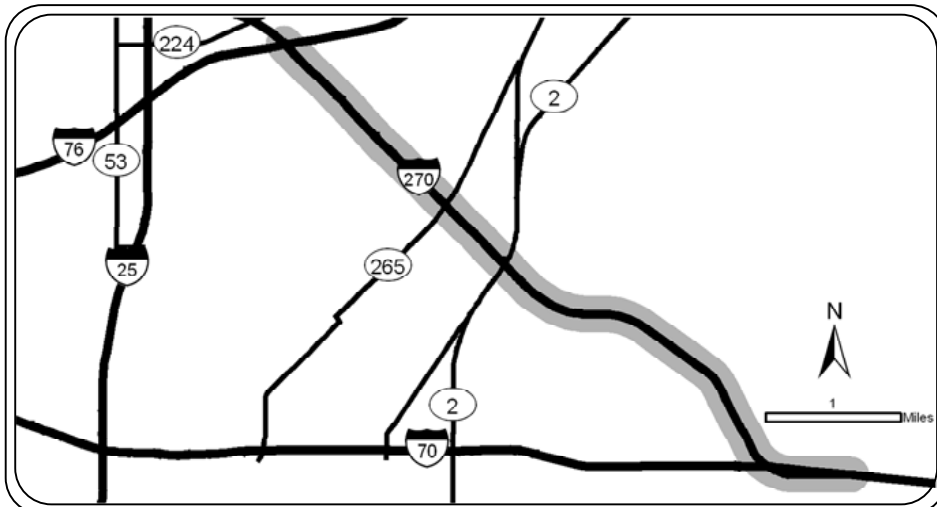


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

I-270 (I-70 to I-76) – Travel Time Report

Corridor Summary

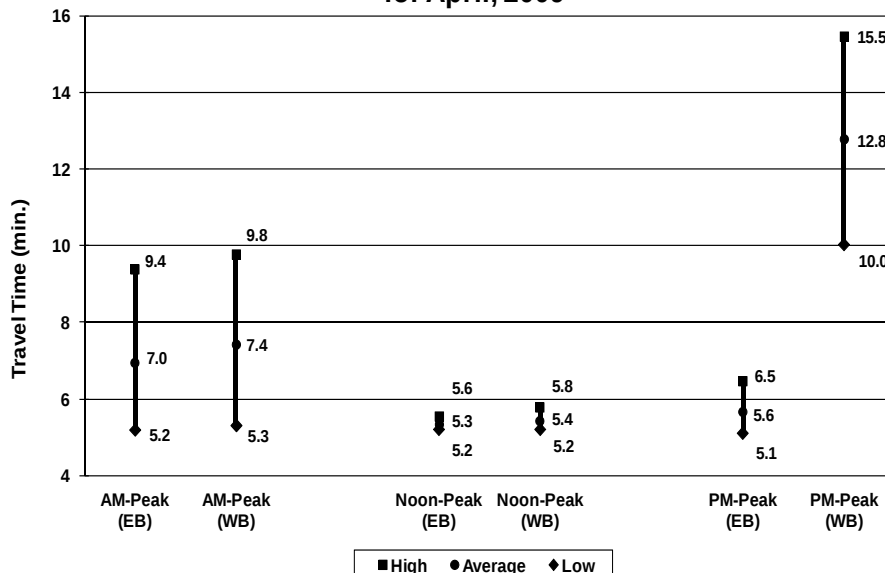
This is a commuter corridor. Traffic volumes along this corridor are generally heavier in the eastbound direction during both morning and afternoon peak periods. Congestion primarily occurs eastbound between I-76 and Vasquez Boulevard and westbound between I-70 and Vasquez Boulevard. Travel time variability for westbound and eastbound directions in the peak periods varies between 8 and 85 percent. This data was collected in April 2009.



Corridor Characteristics

Corridor Length	5.0 Miles
Facility Type	Interstate - Urban
Speed Limit	55 mph
CDOT Region(s)	Region 6
Corridor Measures	
Traffic Count per Day	Avg: 99,800 (90,900 – 113,200)
v/c Ratio	.82 - .85
Travel Rate Index	AM EB—1.34
	AM WB—1.08
	PM EB—1.09
	PM WB—1.86
Annual Vehicle Hours of Delay	1,009,600
Annual Person Hours of Delay	1,181,300
Annual Congestion Costs	\$18,900,500

Travel Time Variability by Time Period for April, 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.17 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

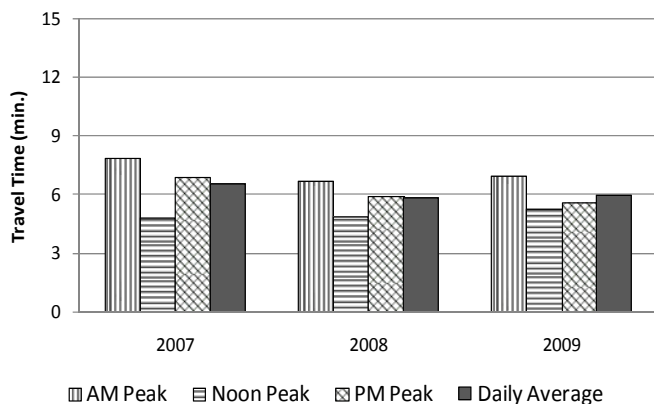
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

I-270 (I-70 to I-76) – Three-Year Data Trend Analysis

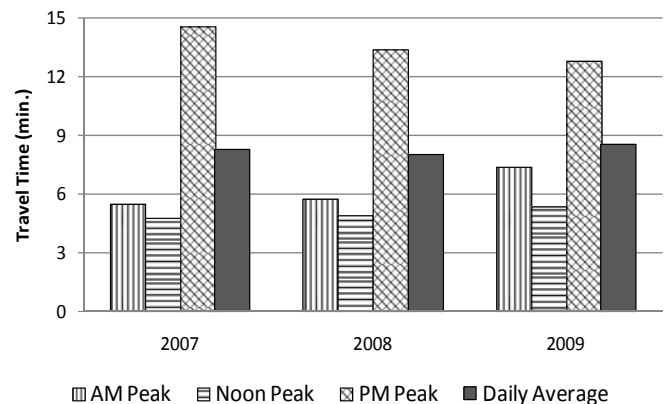
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time decreased at the rate of -8.86% per year
- The WB Daily Average Travel Time increased at the rate of +2.86% per year
- The Annual Cost of Congestion increased at the rate of +6.48% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -3.04% per year

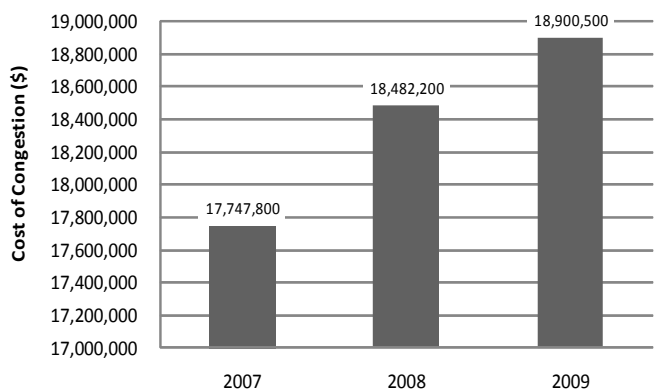
Average Travel Time (EB Direction)



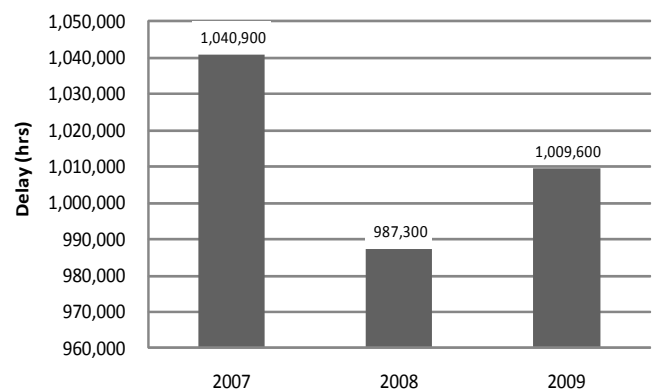
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

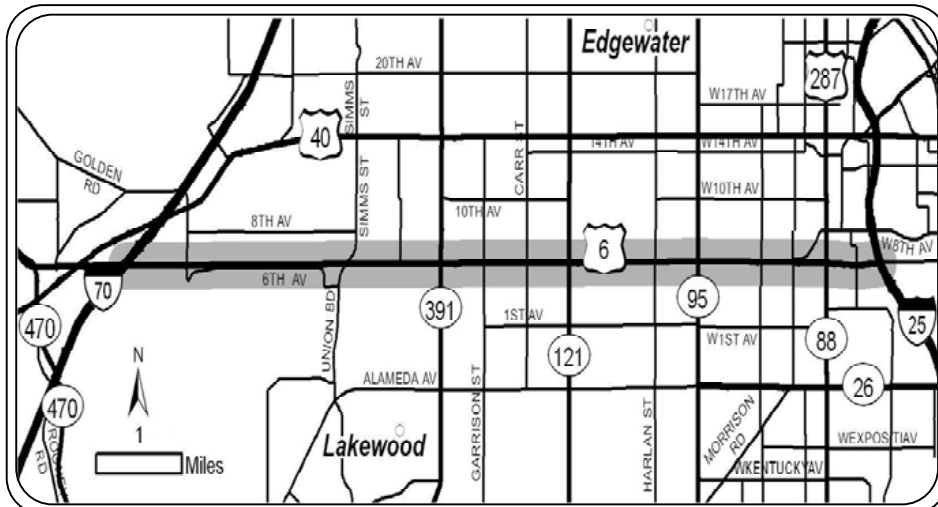


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 6 (I-70 to I-25) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the eastbound direction during the morning peak period and westbound in the afternoon peak period. Congestion primarily occurs between Wadsworth and Sheridan Boulevards and approaching the I- 25 interchange. Travel time variability for westbound and eastbound directions in the peak periods varies between 9 and 105 percent. This data was collected in April 2009.



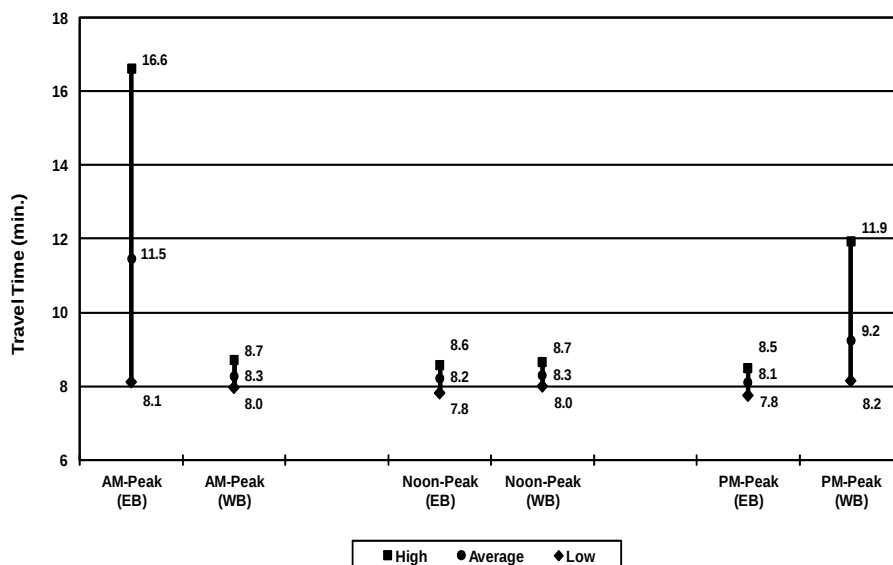
Corridor Characteristics

Corridor Length	8.9 Miles
Facility Type	Freeway - Urban
Speed Limit	55 & 65 mph
CDOT Region(s)	Region 6

Corridor Measures

Traffic Count per Day	Avg: 87,400 (63,200 – 100,000)
v/c Ratio	.45 - 1.04
Travel Rate Index	AM EB—1.45
	AM WB—1.03
	PM EB—1.03
	PM WB—1.15
Annual Vehicle Hours of Delay	357,900
Annual Person Hours of Delay	429,500
Annual Congestion Costs	\$6,872,100

Travel Time Variability by Time Period for April 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.2 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

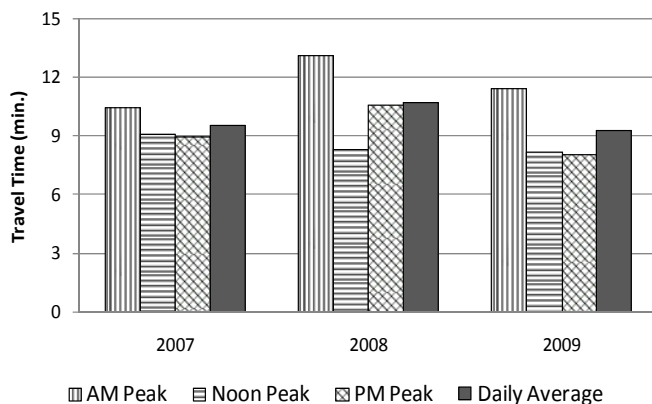
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 6 (I-70 to I-25) – Three-Year Data Trend Analysis

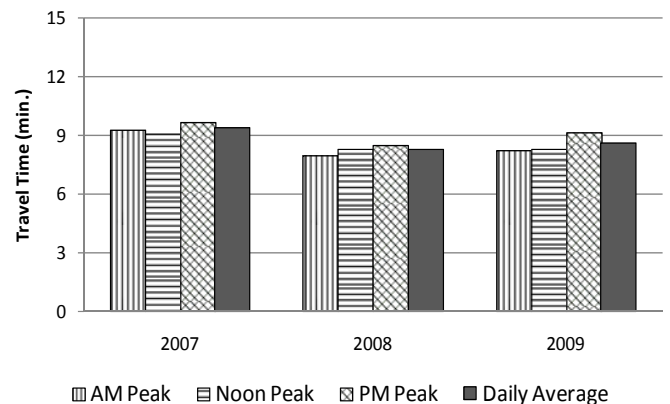
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time decreased at the rate of -2.78% per year
- The WB Daily Average Travel Time decreased at the rate of -8.54% per year
- The Annual Cost of Congestion decreased at the rate of -1.27% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -10.69% per year

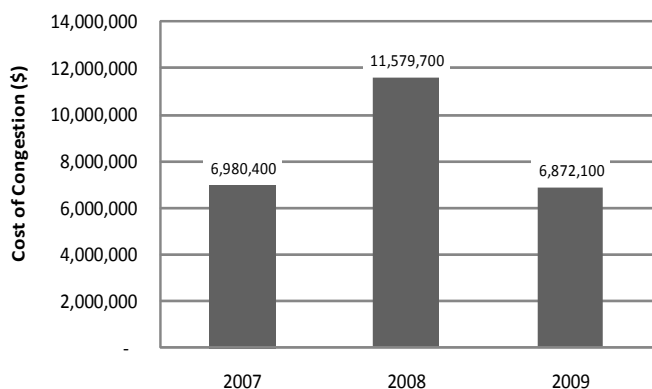
Average Travel Time (EB Direction)



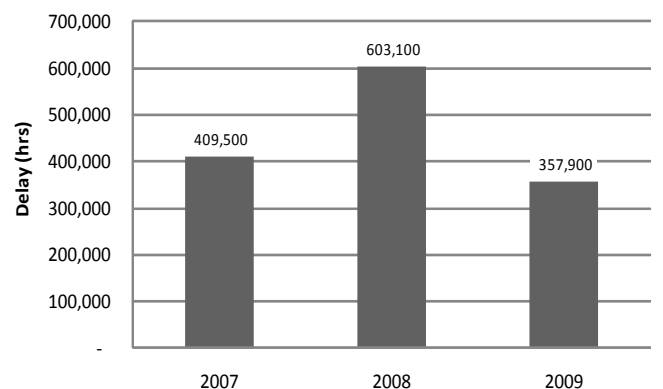
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

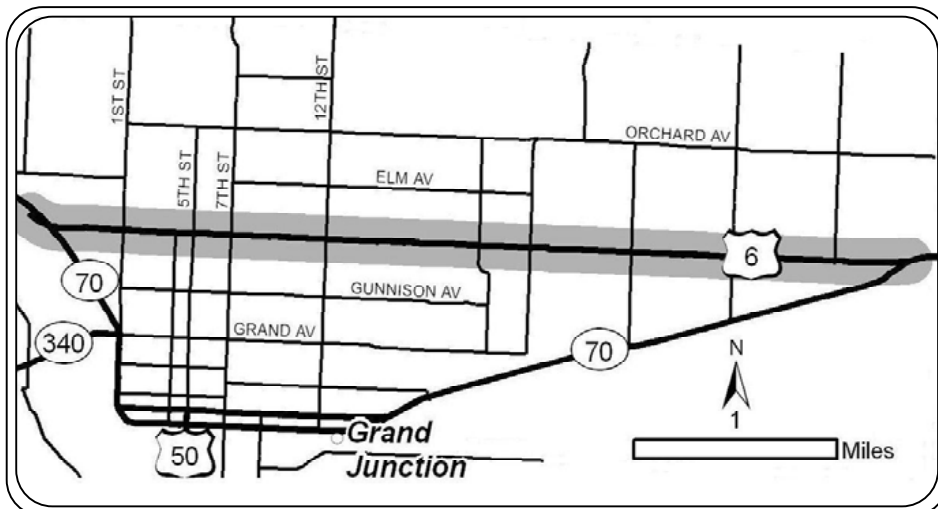


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 6 (1st St to I-70 Business) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the westbound direction during the morning peak period and eastbound in the afternoon peak period. Travel time variability for westbound and eastbound directions in the peak periods varies between 24 and 45 percent. This data was collected in October 2009.



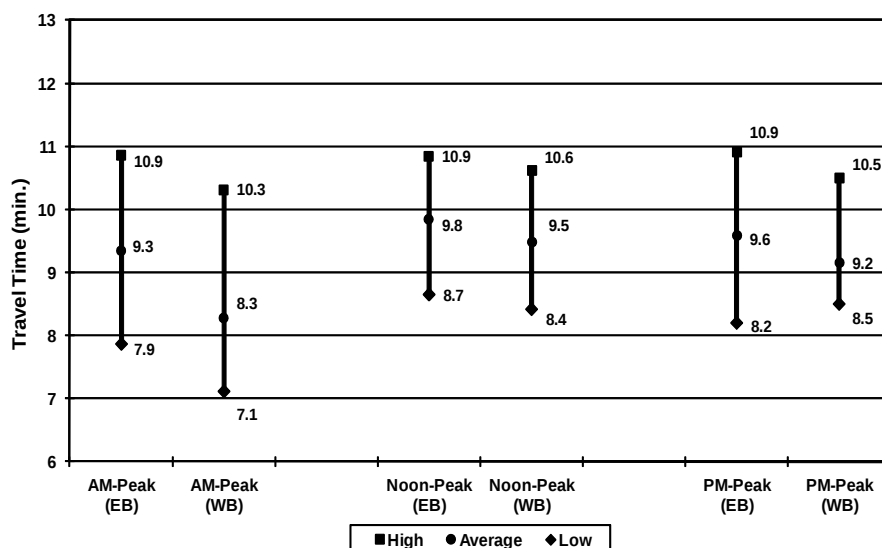
Corridor Characteristics

Corridor Length	4.1 Miles
Facility Type	Arterial - Urban
Speed Limit	30 – 40 mph
CDOT Region(s)	Region 3

Corridor Measures

Traffic Count per Day	Avg: 24,200
v/c Ratio	.45 - .61
Travel Rate Index	AM EB—1.13
	AM WB—1.03
	PM EB—1.16
	PM WB—1.14
Annual Vehicle Hours of Delay	171,400
Annual Person Hours of Delay	236,500
Annual Congestion Costs	\$3,784,500

Travel Time Variability by Time Period for October 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.38 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

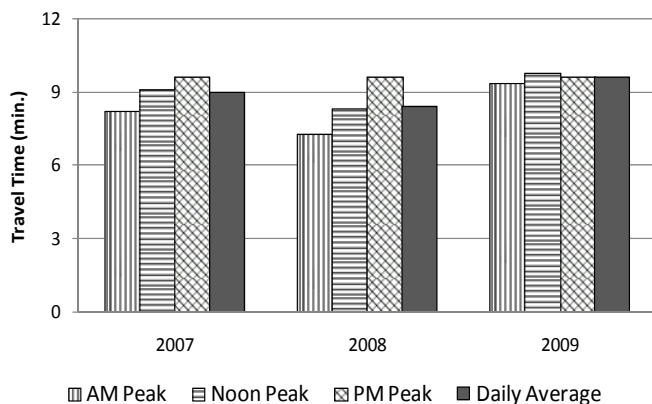
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 6 (1st St to I-70 Business) – Three-Year Data Trend Analysis

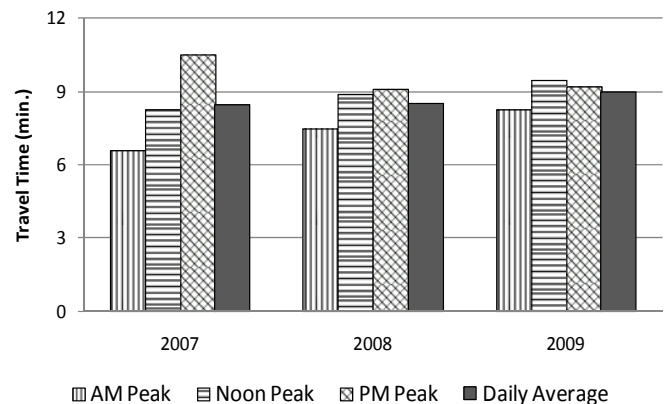
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time increased at the rate of +7.08% per year
- The WB Daily Average Travel Time increased at the rate of +6.24% per year
- The Annual Cost of Congestion decreased at the rate of -1.03% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -25.11% per year

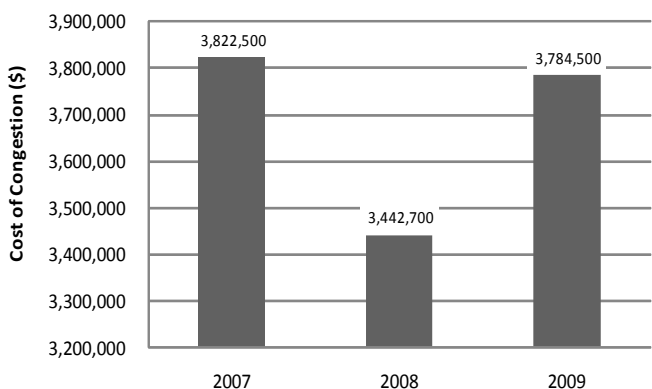
Average Travel Time (EB Direction)



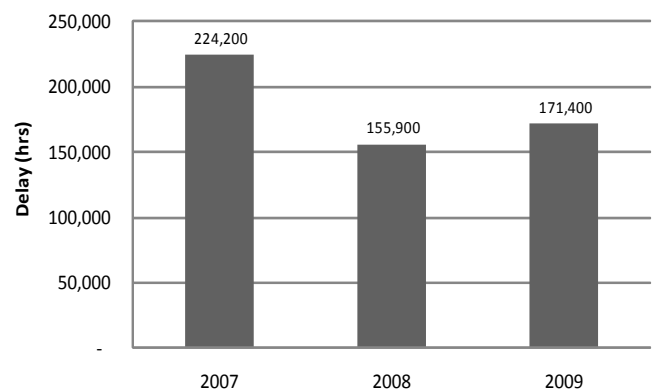
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

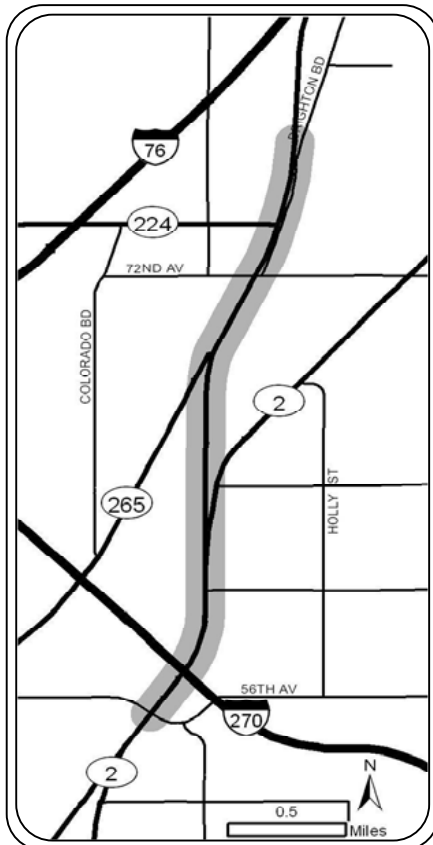


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 6 – Vasquez Blvd. (56th Ave to 77th Ave) – Travel Time Report

Corridor Summary

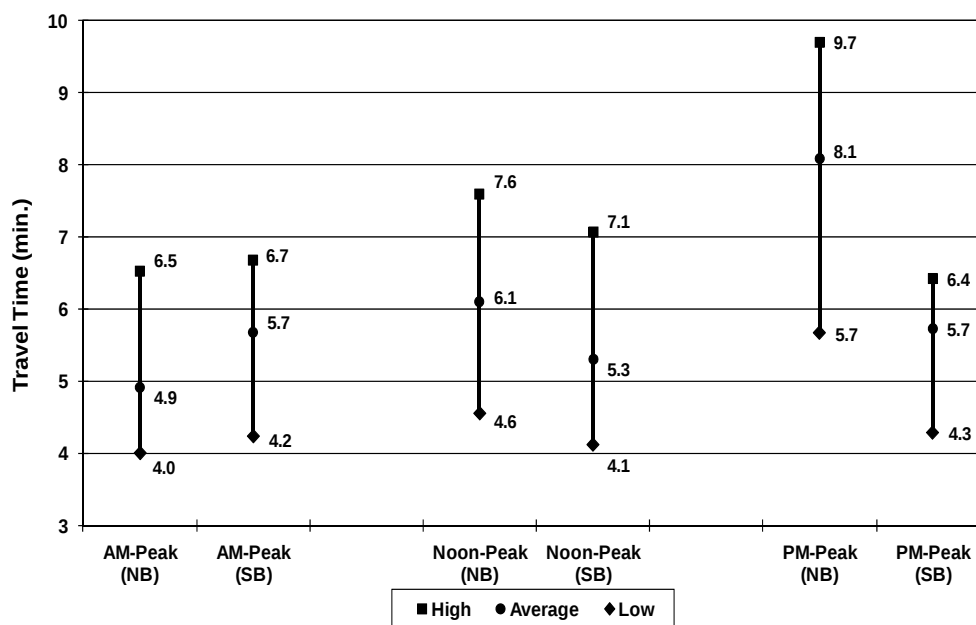
This is a commuter corridor. Traffic volumes along this corridor are heavier in the southbound direction during the morning peak period and northbound in the afternoon peak period. Congestion primarily occurs approaching 60th, 69th, and 72nd Avenues. Congestion is compounded by the high number of heavy vehicles that use this corridor. Travel time variability for northbound and southbound directions in the peak periods varies between 49 and 73 percent. This data was collected in April 2009.



Corridor Characteristics

Corridor Length	2.9 Miles	Travel Rate Index	AM NB—1.04
Facility Type	Arterial - Urban		AM SB—1.35
Speed Limit	45 mph		PM NB—1.71
CDOT Region(s)	Region 6		PM SB—1.36
Corridor Measures		Annual Vehicle Hours of Delay	372,900
		Annual Person Hours of Delay	473,600
		Annual Congestion Costs	\$7,578,100
Traffic Count per Day	Avg: 29,500		
v/c Ratio	.72 - .92		

Travel Time Variability by Time Period for April 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.27 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

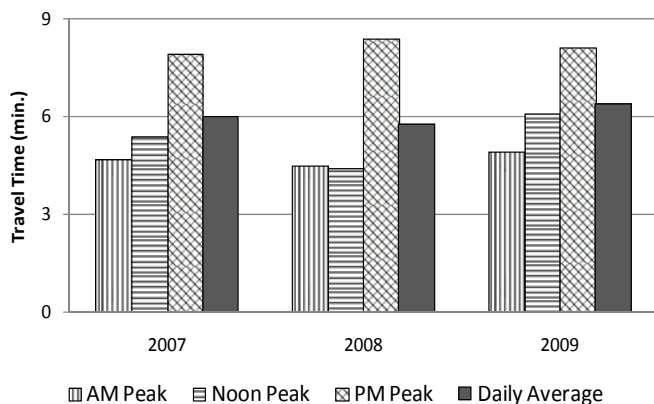
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 6 – Vasquez Blvd. (56th Ave to 77th Ave) – Three-Year Data Trend Analysis

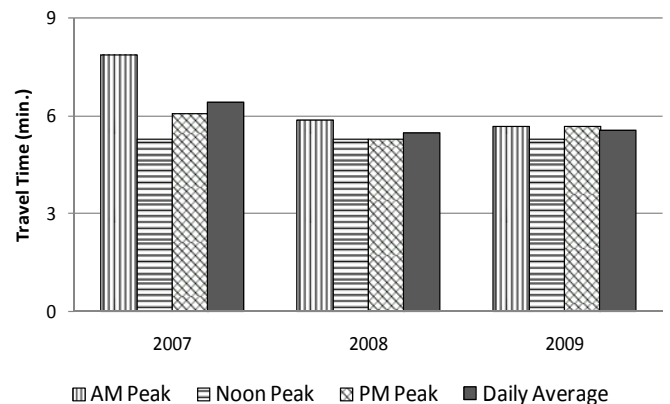
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time increased at the rate of +6.29% per year
- The SB Daily Average Travel Time decreased at the rate of -13.92% per year
- The Annual Cost of Congestion increased at the rate of +4.94% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -13.98% per year

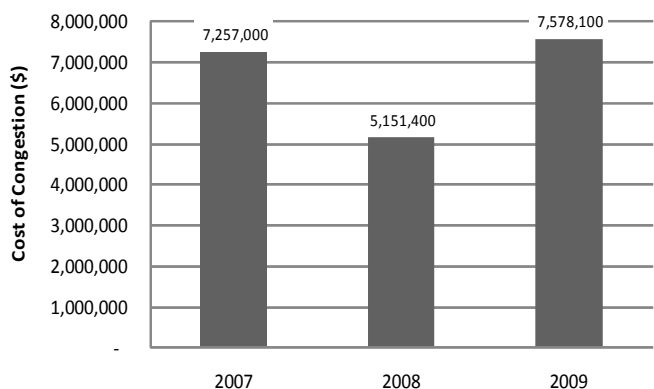
Average Travel Time (NB Direction)



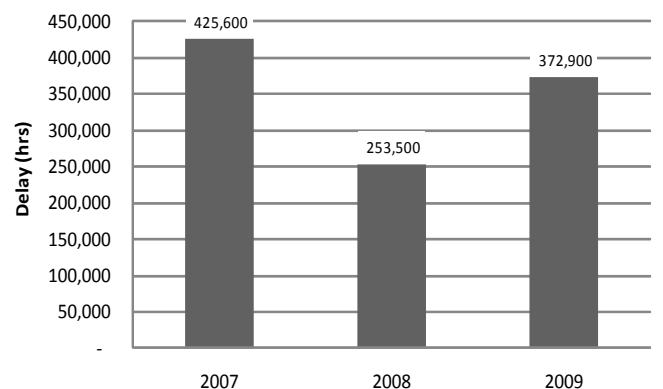
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

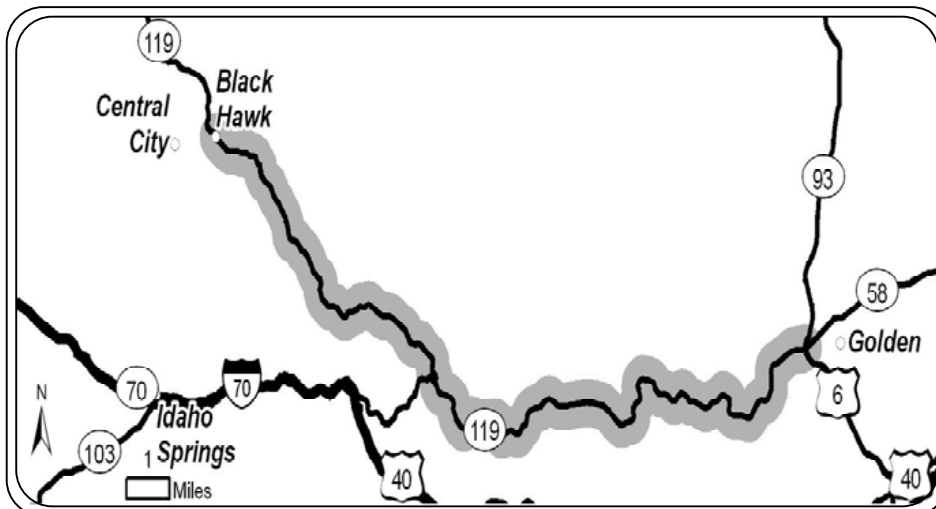


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 6/SH 119 (SH 93 to Gregory St) – Travel Time Report

Corridor Summary

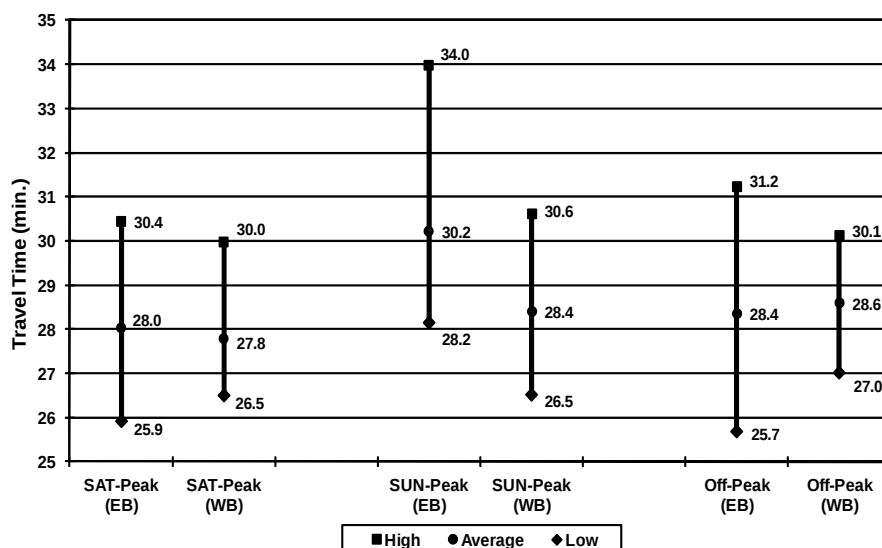
This is a recreational corridor. Traffic volumes along this corridor are heavier in the westbound direction during the Saturday peak period and near equally distributed in the westbound and eastbound directions during the Sunday peak period. Congestion primarily occurs between SH93 and the US6-SH119 Junction, and between Richman and Gregory Streets. Travel time variability for westbound and eastbound directions in the peak periods varies between 11 and 21 percent. This data was collected in July 2009.



Corridor Characteristics

Corridor Length	19.1 Miles
Facility Type	Arterial - Rural
Speed Limit	40 - 45 mph
CDOT Region(s)	Region 1
Corridor Measures	
Traffic Count per Day	Avg: 16,500 (10,000 – 19,900)
v/c Ratio	.86
Travel Rate Index	SAT EB—1.05
	SAT WB—1.04
	SUN EB—1.14
	SUN WB—1.06
Annual Vehicle Hours of Delay	151,100
Annual Person Hours of Delay	205,400
Annual Congestion Costs	\$3,287,100

Travel Time Variability by Time Period for July 2009



Data Collection Period

The time periods of data collection included weekend Saturday & Sunday peak periods (11:30 AM to 5:30 PM) and Saturday & Sunday off-peak periods (9:30 AM to 11:30 AM & 5:30 PM to 7:30 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.36 persons per vehicle. Based on the 2009 Average Vehicle Occupancy Study of the Colorado State Highway System.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

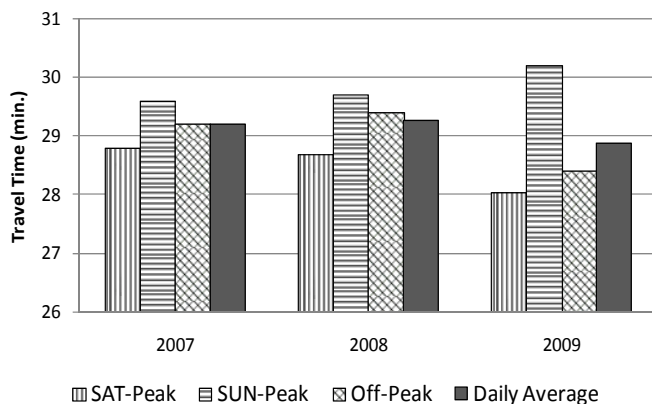
Travel Time Variability – The range of travel time for each period (Saturday Peak, Sunday Peak, Off Peak) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 6/SH 119 (SH 93 to Gregory St) – Three-Year Data Trend Analysis

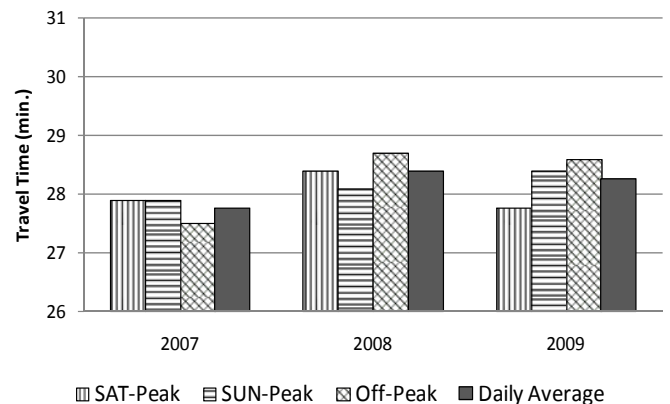
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time decreased at the rate of -1.10% per year
- The WB Daily Average Travel Time increased at the rate of +1.77% per year
- The Annual Cost of Congestion increased at the rate of +335.23% per year
- The Annual Vehicle Hours of Delay increased at the rate of +232.95% per year

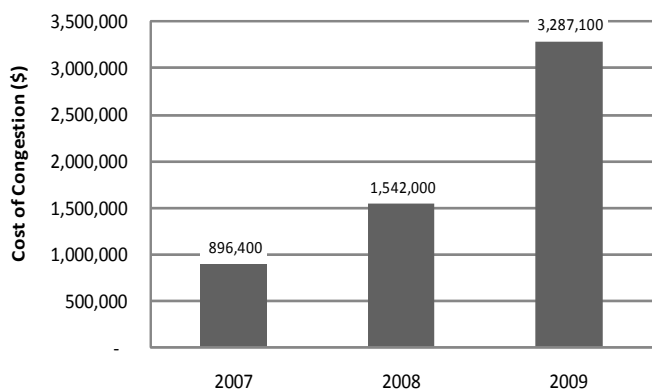
Average Travel Time (EB Direction)



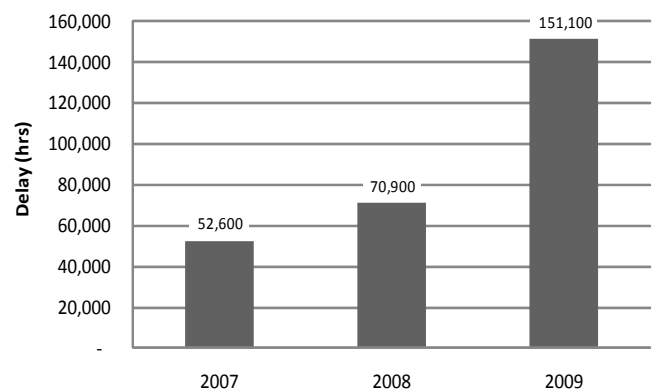
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

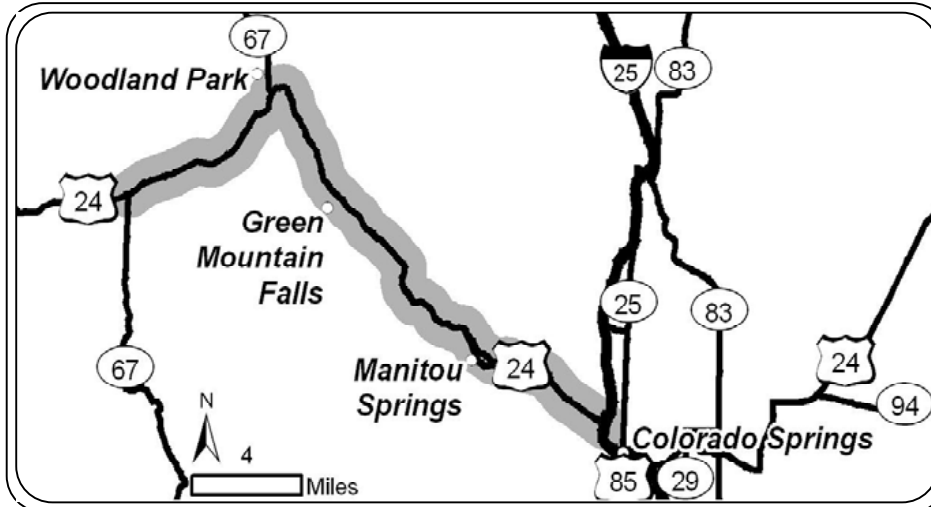


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 24 (SH 67 to I-25) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the eastbound direction during the morning peak period and westbound in the afternoon peak period. Congestion occurs approaching State Highway 67, Fountain Avenue, 8th Street, 21st Street, 31st Street, and I-25. Travel time variability for westbound and eastbound directions in the peak periods varies between 6 and 13 percent. This data was collected in November 2009.



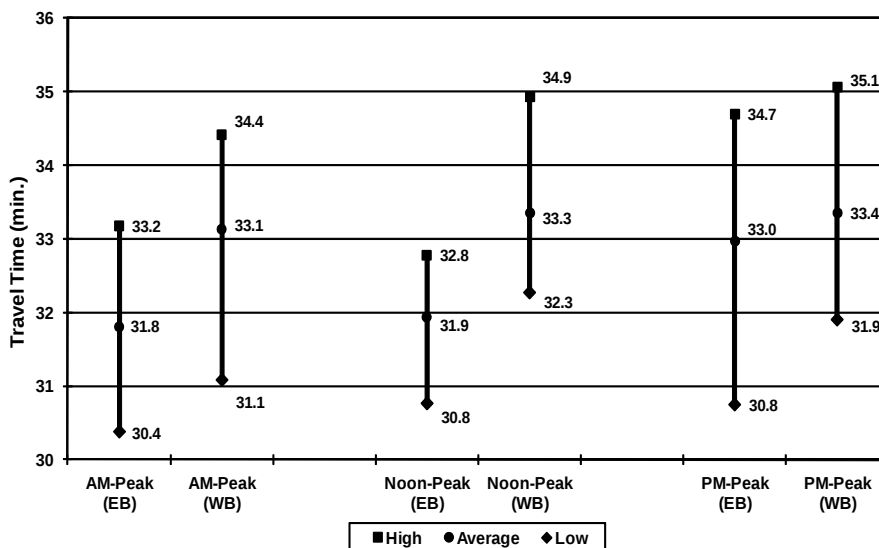
Corridor Characteristics

Corridor Length	25.0 Miles
Facility Type	Arterial – Urban/Rural
Speed Limit	35 – 60 mph
CDOT Region(s)	Region 2

Corridor Measures

Traffic Count per Day	Avg: 25,800 (14,900 – 35,700)
v/c Ratio	.54 – .97
Travel Rate Index	AM EB—1.04
	AM WB—1.04
	PM EB—1.08
	PM WB—1.05
Annual Vehicle Hours of Delay	468,100
Annual Person Hours of Delay	622,500
Annual Congestion Costs	\$9,960,300

Travel Time Variability by Time Period for November 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.33 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

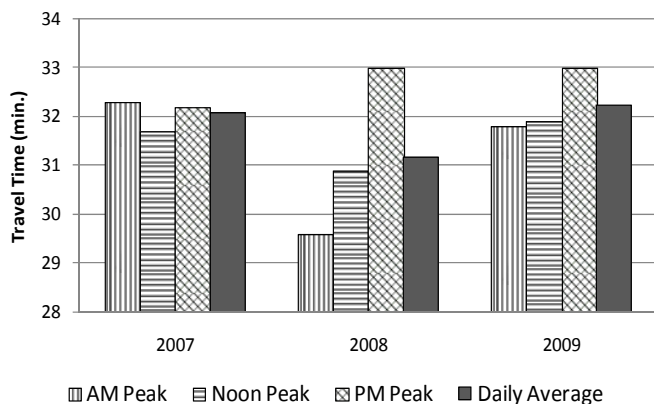
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 24 (SH 67 to I-25) – Three-Year Data Trend Analysis

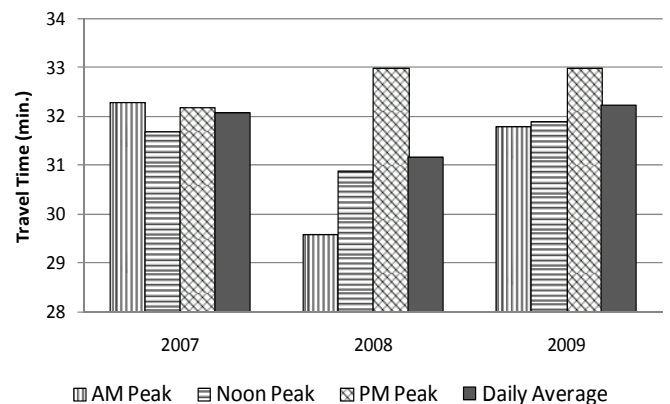
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time increased at the rate of +0.53% per year
- The WB Daily Average Travel Time increased at the rate of +1.81% per year
- The Annual Cost of Congestion increased at the rate of +20.70% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -4.94% per year

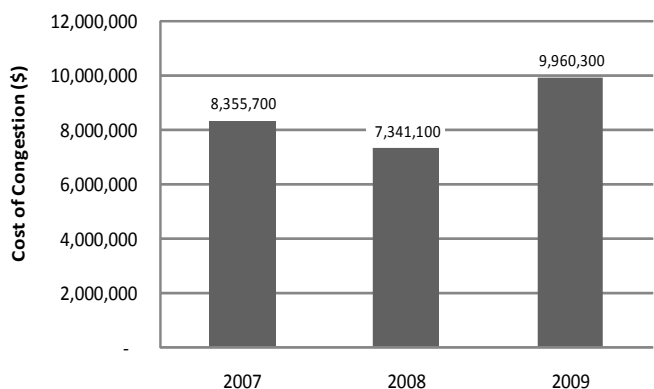
Average Travel Time (EB Direction)



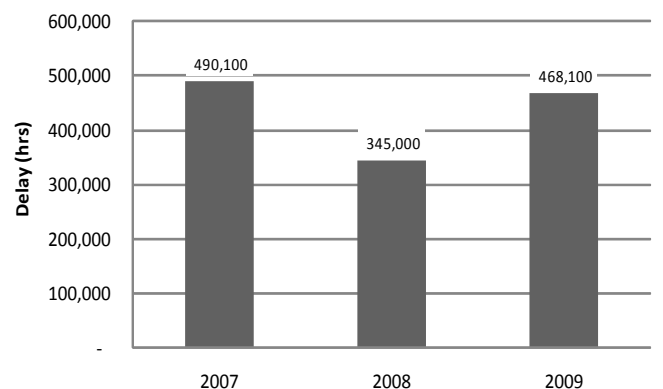
Average Travel Time (EB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

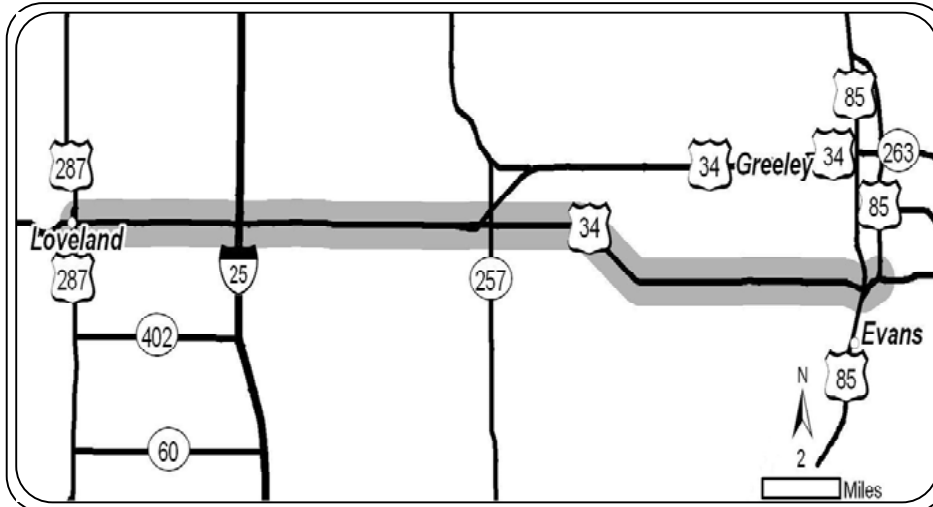


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 34 (US 287 to US 85) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are generally heavier in the eastbound direction throughout the day. Congestion primarily occurs approaching 11th, 35th, 47th, and Monroe Avenues as well as US287. Travel time variability for westbound and eastbound directions in the peak periods varies between 7 and 17 percent. This data was collected in early November 2009.



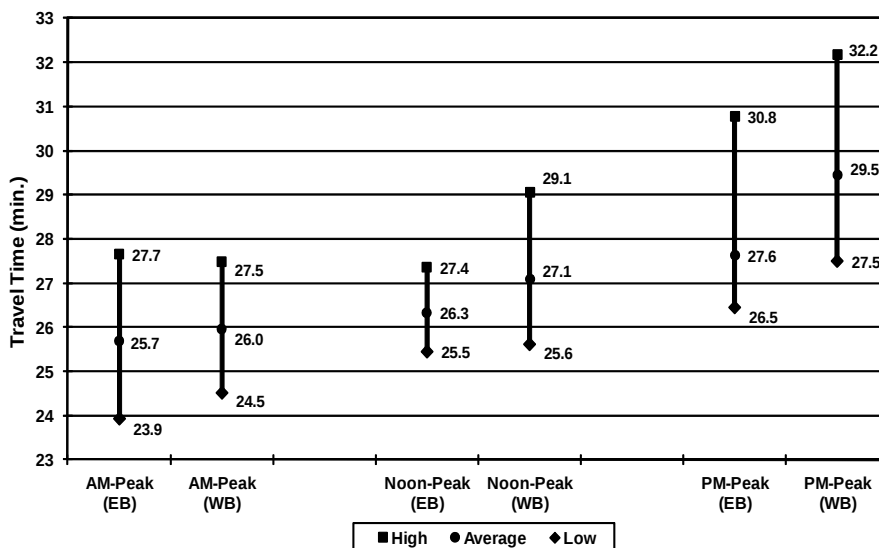
Corridor Characteristics

Corridor Length	21.2 Miles
Facility Type	Freeway/Arterial – Urban/Rural
Speed Limit	35 – 65 mph
CDOT Region(s)	Region 4

Corridor Measures

Traffic Count per Day	Avg: 35,300 (34,400 – 36,000)
v/c Ratio	.80 – 1.03
Travel Rate Index	AM EB—1.02
	AM WB—1.00
	PM EB—1.09
	PM WB—1.14
Annual Vehicle Hours of Delay	633,200
Annual Person Hours of Delay	804,200
Annual Congestion Costs	\$12,867,400

Travel Time Variability by Time Period for November 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.27 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

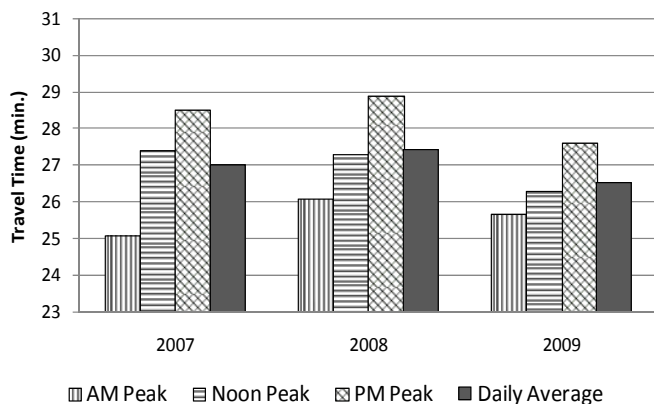
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 34 (US 287 to US 85) – Three-Year Data Trend Analysis

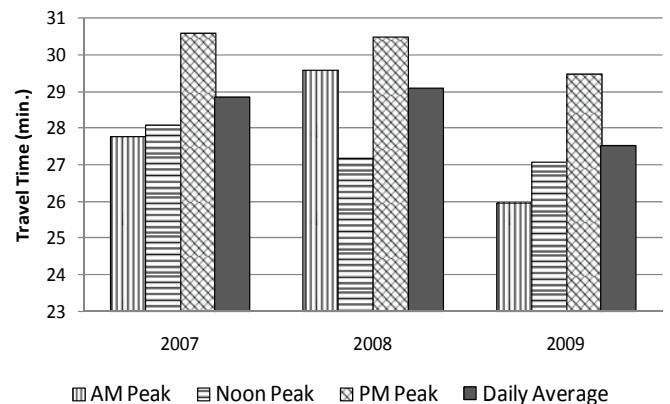
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time decreased at the rate of -1.73% per year
- The WB Daily Average Travel Time decreased at the rate of -4.50% per year
- The Annual Cost of Congestion increased at the rate of +14.70% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -2.08% per year

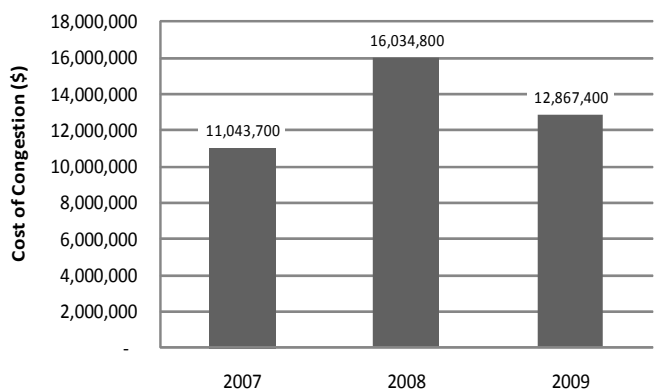
Average Travel Time (EB Direction)



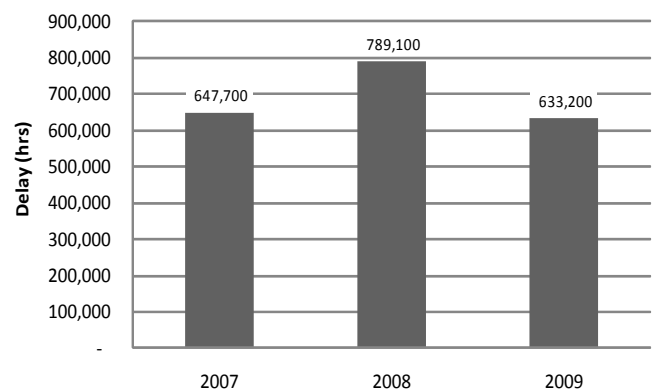
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

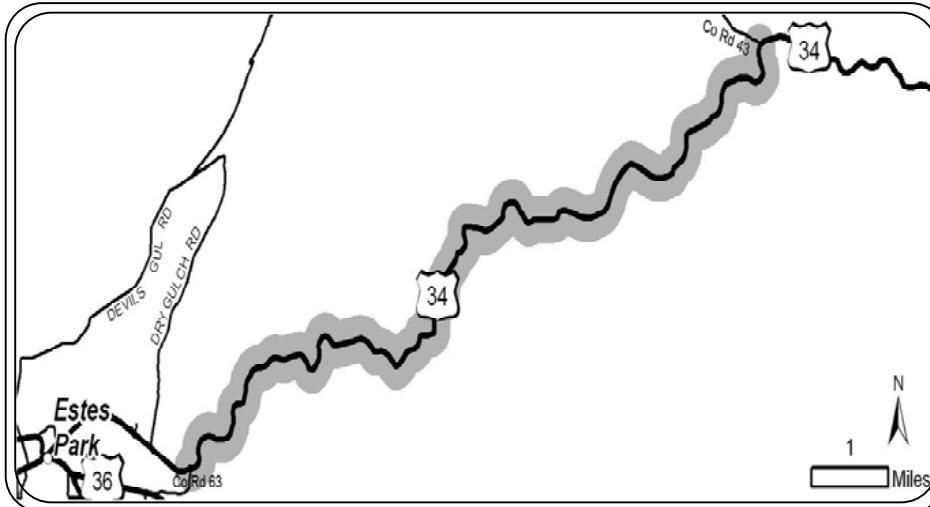


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 34 (CR 63 to CR 43) – Travel Time Report

Corridor Summary

This is a recreational corridor. Traffic volumes along this corridor are near equally distributed between westbound and eastbound directions for both Saturday and Sunday peak periods. Travel time variability for westbound and eastbound directions in the peak periods varies between 6 and 21 percent. This data was collected in July 2009.



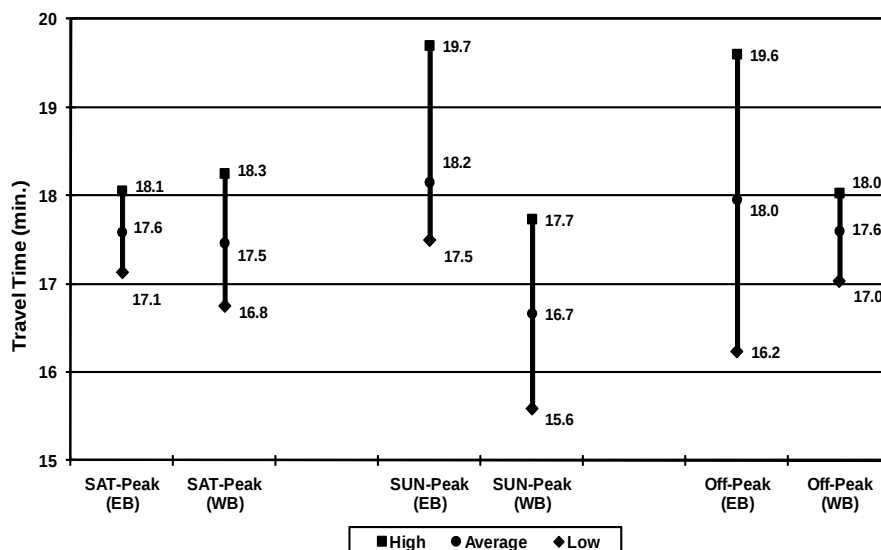
Corridor Characteristics

Corridor Length	7.4 Miles
Facility Type	Arterial – Urban/Rural
Speed Limit	40 mph
CDOT Region(s)	Region 4

Corridor Measures

Traffic Count per Day	Avg: 8,700 (8,400 – 9,200)
v/c Ratio	.87
Travel Rate Index	SAT EB—1.04
	SAT WB—1.06
	SUN EB—1.07
	SUN WB—1.04
Annual Vehicle Hours of Delay	27,000
Annual Person Hours of Delay	30,000
Annual Congestion Costs	\$479,400

Travel Time Variability by Time Period for July 2009



Data Collection Period

The time periods of data collection included weekend Saturday & Sunday peak periods (11:30 AM to 5:30 PM) and Saturday & Sunday off-peak periods (9:30 AM to 11:30 AM & 5:30 PM to 7:30 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.11 persons per vehicle. Based on the 2009 Average Vehicle Occupancy Study of the Colorado State Highway System.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

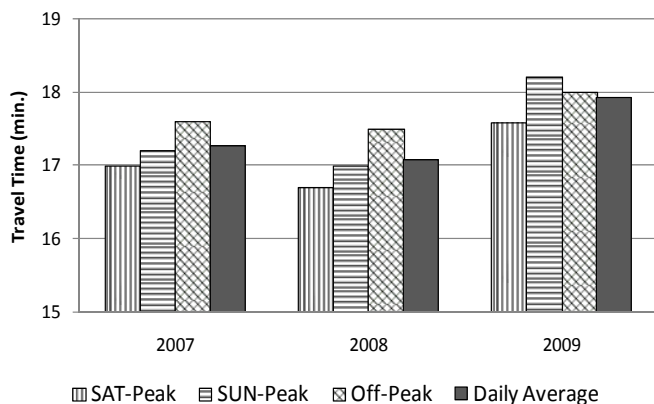
Travel Time Variability – The range of travel time for each period (Saturday Peak, Sunday Peak, Off Peak) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 34 (CR 63 to CR 43) – Three-Year Data Trend Analysis

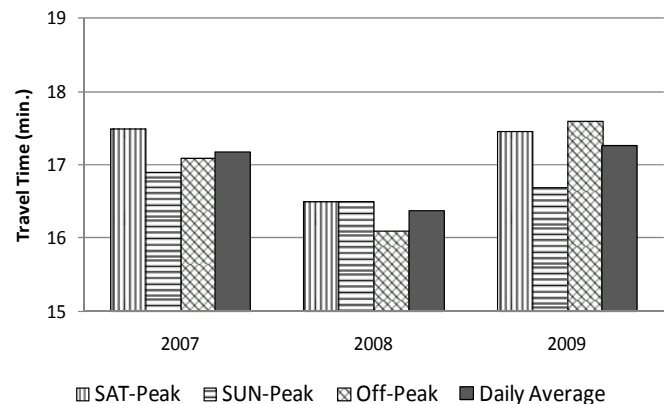
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time increased at the rate of +3.88% per year
- The WB Daily Average Travel Time increased at the rate of +0.53% per year
- The Annual Cost of Congestion increased at the rate of +27.94% per year
- The Annual Vehicle Hours of Delay increased at the rate of +22.33% per year

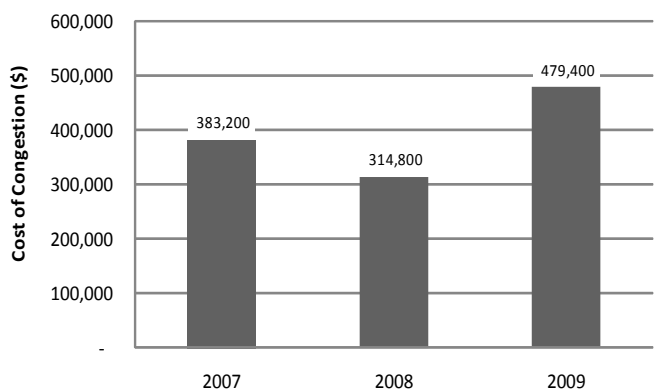
Average Travel Time (EB Direction)



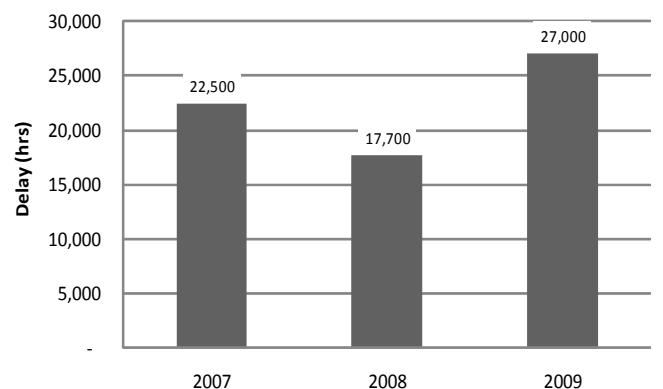
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

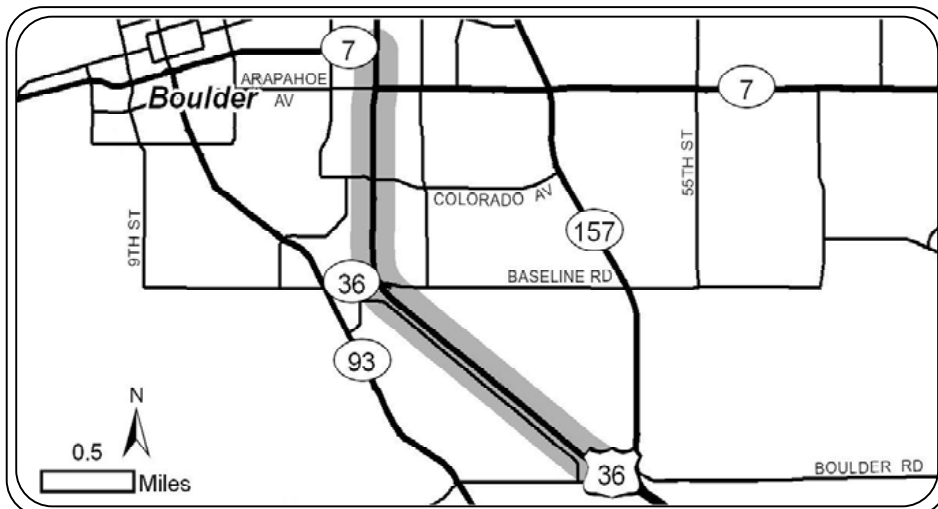


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 36 (Canyon Blvd to SH 157) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the westbound direction during the morning peak period and eastbound in the afternoon peak period. Congestion primarily occurs between Canyon Boulevard and Colorado Avenue. Travel time variability for westbound and eastbound directions in the peak periods varies between 13 and 79 percent. This data was collected in October 2009.



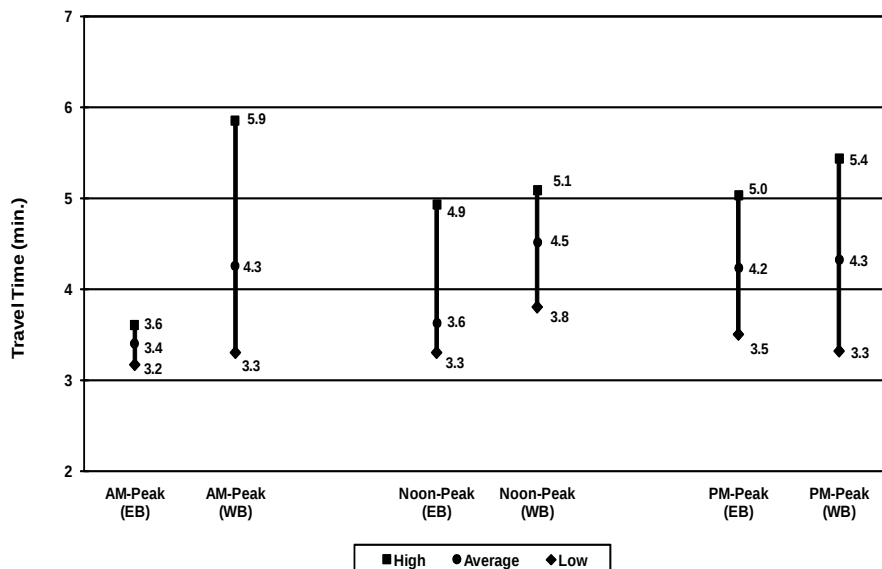
Corridor Characteristics

Corridor Length	2.9 Miles
Facility Type	Freeway/Arterial - Urban
Speed Limit	35 – 65 mph
CDOT Region(s)	Region 4

Corridor Measures

Traffic Count per Day	Avg: 47,200 (43,900 – 52,900)
v/c Ratio	.58 - .79
Travel Rate Index	AM EB—1.02
	AM WB—1.23
	PM EB—1.27
	PM WB—1.24
Annual Vehicle Hours of Delay	527,100
Annual Person Hours of Delay	685,200
Annual Congestion Costs	\$10,963,700

Travel Time Variability by Time Period for October 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.30 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

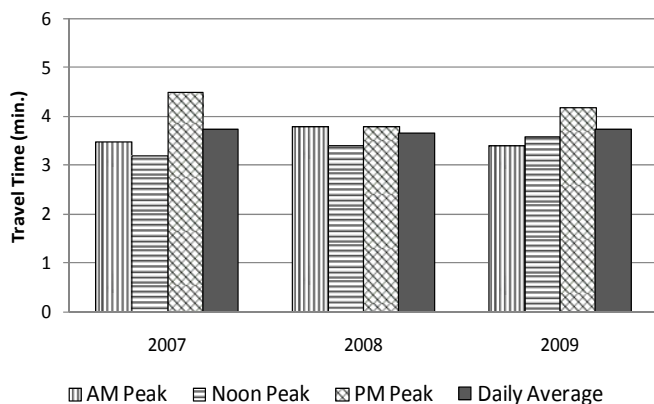
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 36 (Canyon Blvd to SH 157) – Three-Year Data Trend Analysis

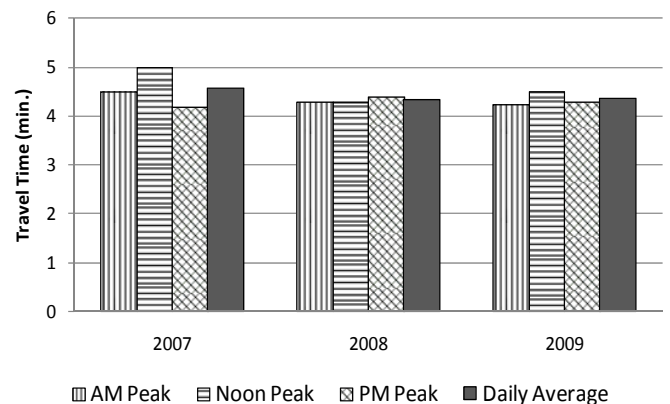
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time increased at the rate of +0.04% per year
- The WB Daily Average Travel Time decreased at the rate of -4.75% per year
- The Annual Cost of Congestion increased at the rate of +79.09% per year
- The Annual Vehicle Hours of Delay increased at the rate of +45.57% per year

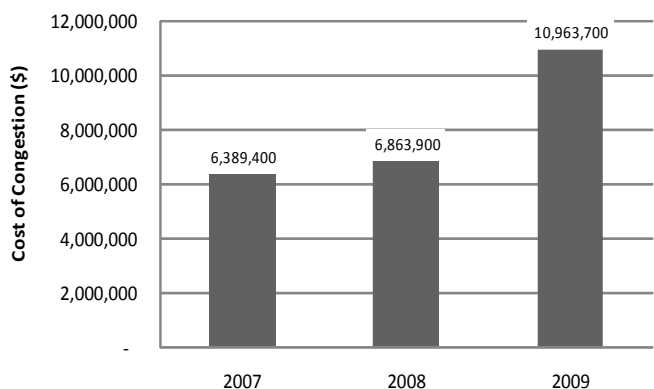
Average Travel Time (EB Direction)



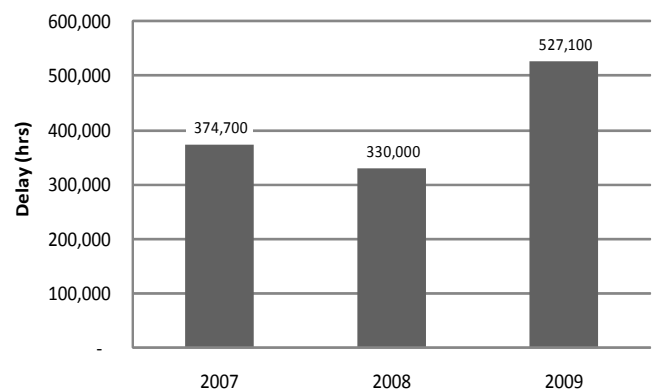
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

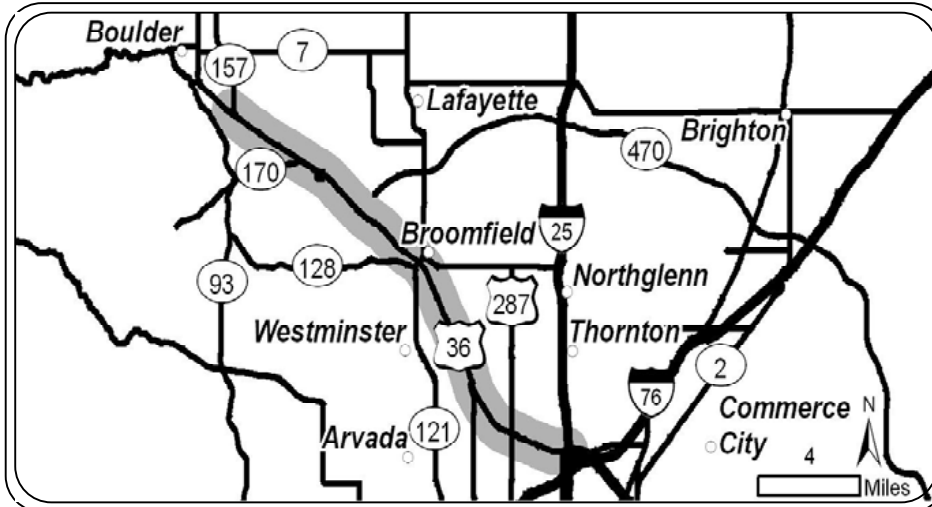


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 36 (SH 157 to I-25) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the eastbound direction during the morning peak period and westbound in the afternoon peak period near Federal Boulevard and heavier in the westbound direction in the morning and eastbound in the afternoon peak period west of Wadsworth Boulevard. Congestion occurs in sections along this corridor such as between Foothills Parkway and McCaslin Boulevard, US287 and Church Ranch Parkway, and Sheridan Boulevard and I-25. Travel time variability for westbound and eastbound directions in the peak periods varies between 2 and 120 percent. This data was collected in October 2009.



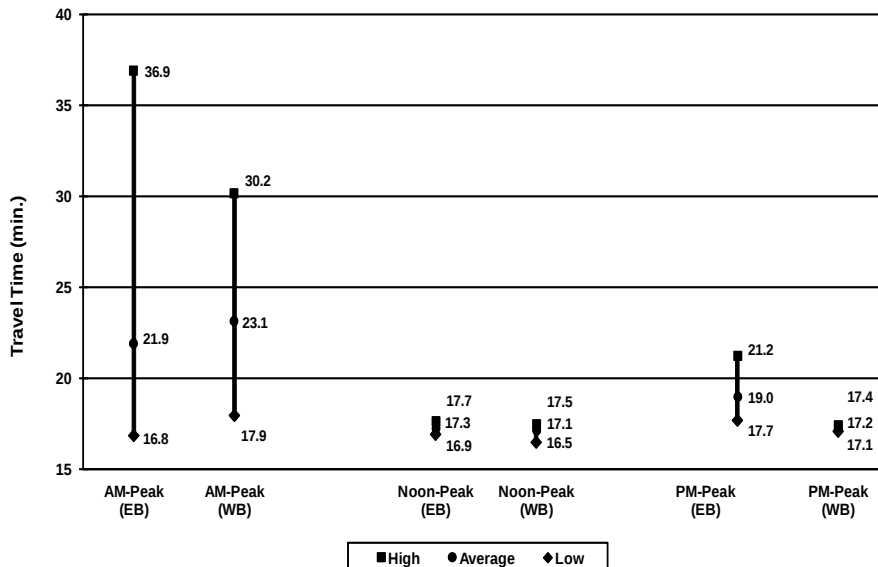
Corridor Characteristics

Corridor Length	18.1 Miles
Facility Type	Freeway – Urban/Rural
Speed Limit	45 – 65 mph
CDOT Region(s)	Region 4 & Region 6

Corridor Measures

Traffic Count per Day	Avg: 80,800 (52,900 – 110,700)
v/c Ratio	.58 - .90
Travel Rate Index	AM EB—1.28
	AM WB—1.35
	PM EB—1.11
	PM WB—1.00
Annual Vehicle Hours of Delay	677,300
Annual Person Hours of Delay	833,000
Annual Congestion Costs	\$13,328,700

Travel Time Variability by Time Period for October 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.23 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

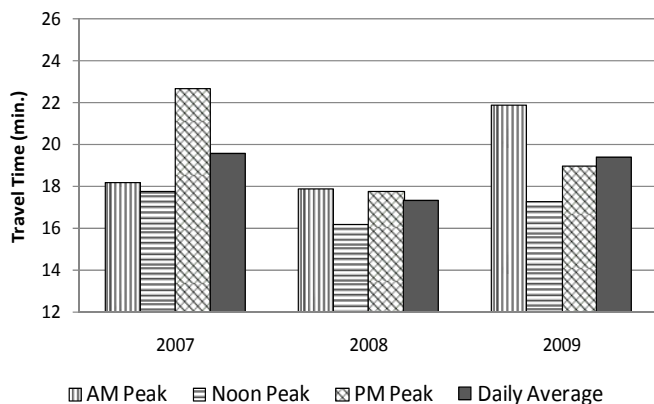
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 36 (SH 157 to I-25) – Three-Year Data Trend Analysis

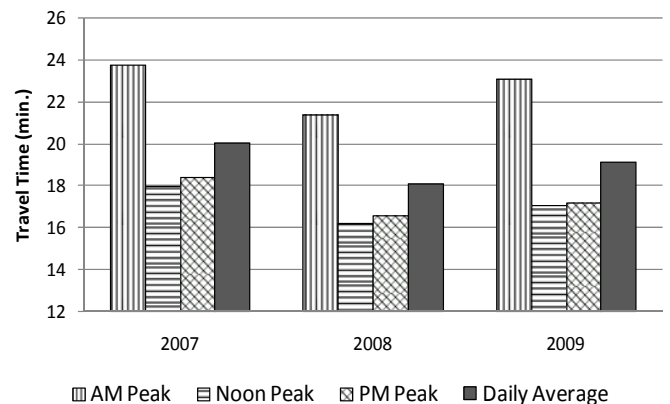
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time decreased at the rate of -0.91% per year
- The WB Daily Average Travel Time decreased at the rate of -4.74% per year
- The Annual Cost of Congestion decreased at the rate of -17.18% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -30.84% per year

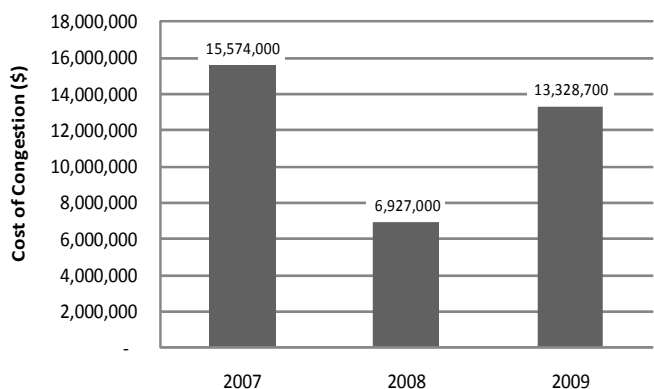
Average Travel Time (EB Direction)



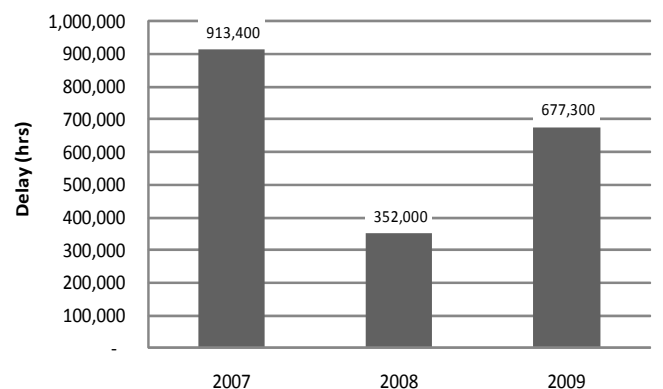
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

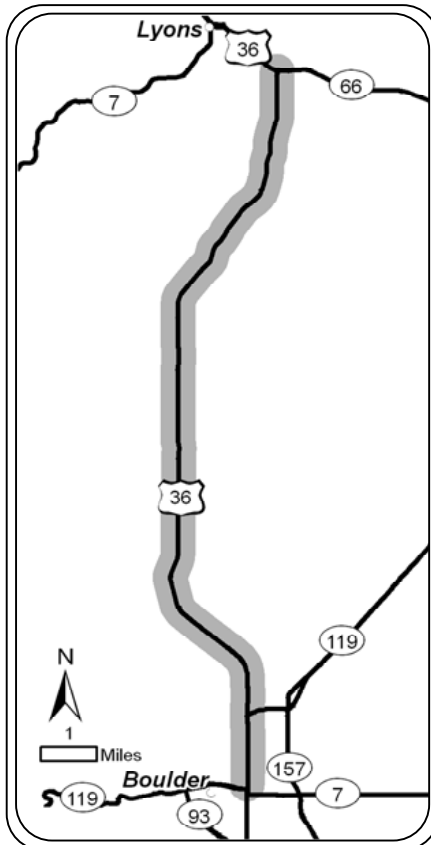


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 36 (SH 66 to Canyon Blvd) – Travel Time Report

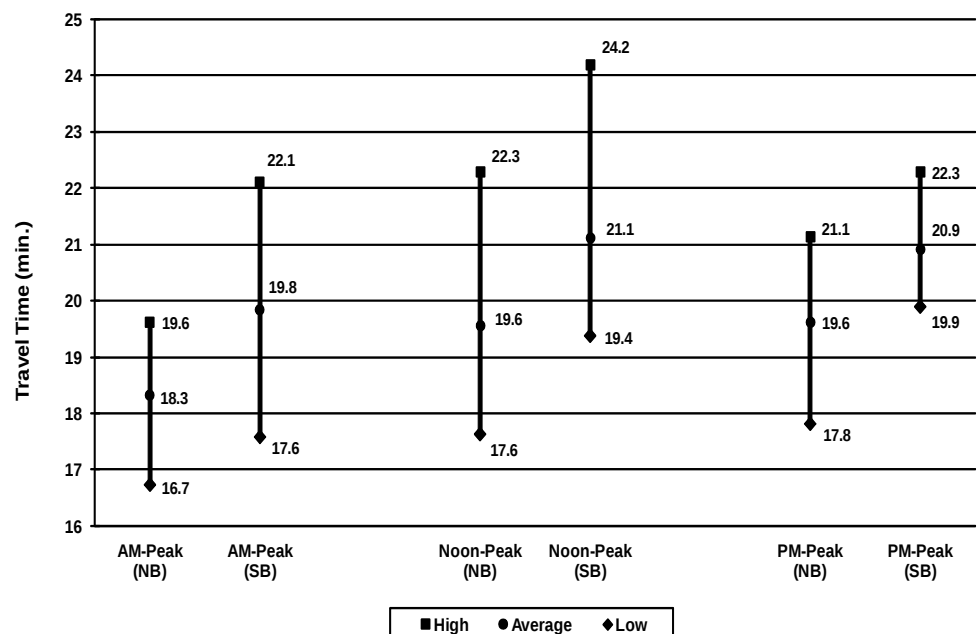
Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are generally heavier in the southbound direction during the morning peak period and northbound in the afternoon peak period. Congestion occurs between Arapahoe Road and Pearl Street and approaching State Highway 119/Diagonal Highway. Travel time variability for northbound and southbound directions in the peak periods varies between 9 and 27 percent. This data was collected in October 2009.



Corridor Characteristics		Travel Rate Index	AM NB—1.05
Corridor Length	14.8 Miles		AM SB—1.05
Facility Type	Arterial – Urban/Rural		PM NB—1.13
Speed Limit	35-50 mph		PM SB—1.10
CDOT Region(s)	Region 4	Annual Vehicle Hours of Delay	293,700
Corridor Measures		Annual Person Hours of Delay	340,700
Traffic Count per Day	Avg: 17,500 (9,300 – 31,700)	Annual Congestion Costs	\$5,451,000
v/c Ratio	.47 - .93		

Travel Time Variability by Time Period for October 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.16 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

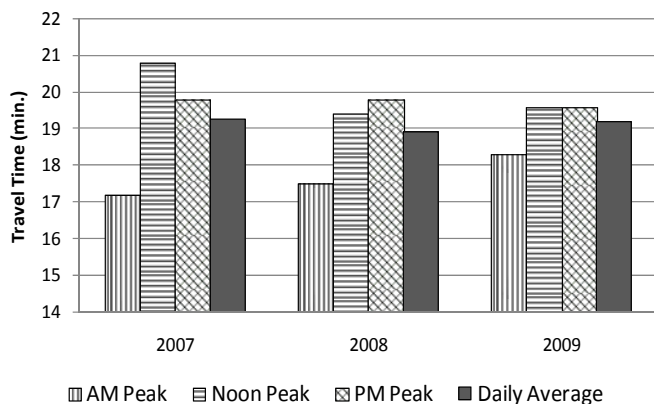
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 36 (SH 66 to Canyon Blvd) – Three-Year Data Trend Analysis

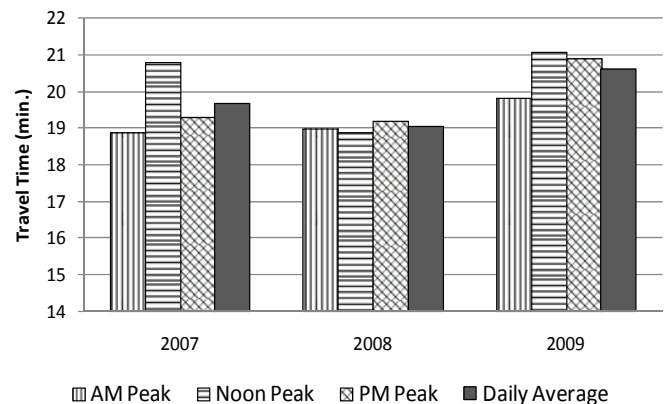
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time decreased at the rate of -0.49% per year
- The SB Daily Average Travel Time increased at the rate of +4.89% per year
- The Annual Cost of Congestion decreased at the rate of -27.17% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -33.86% per year

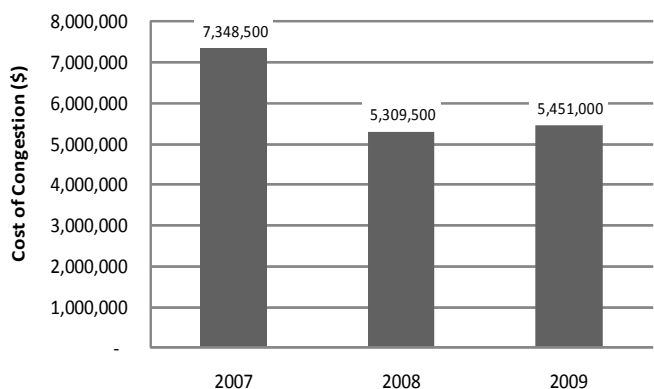
Average Travel Time (NB Direction)



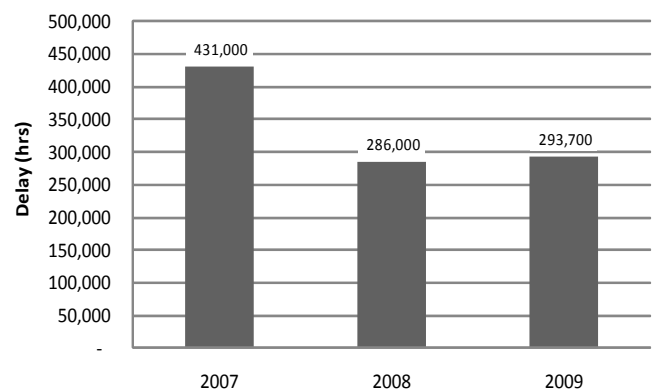
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

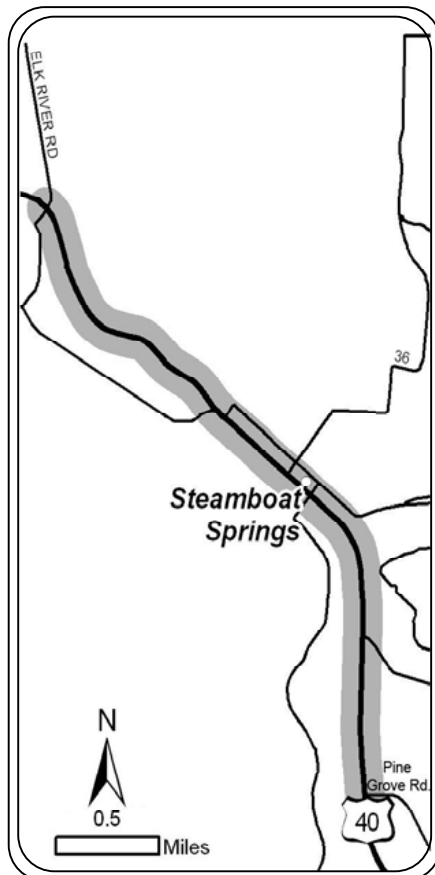


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 40 (CR 129 to Pine Grove Rd) – Travel Time Report

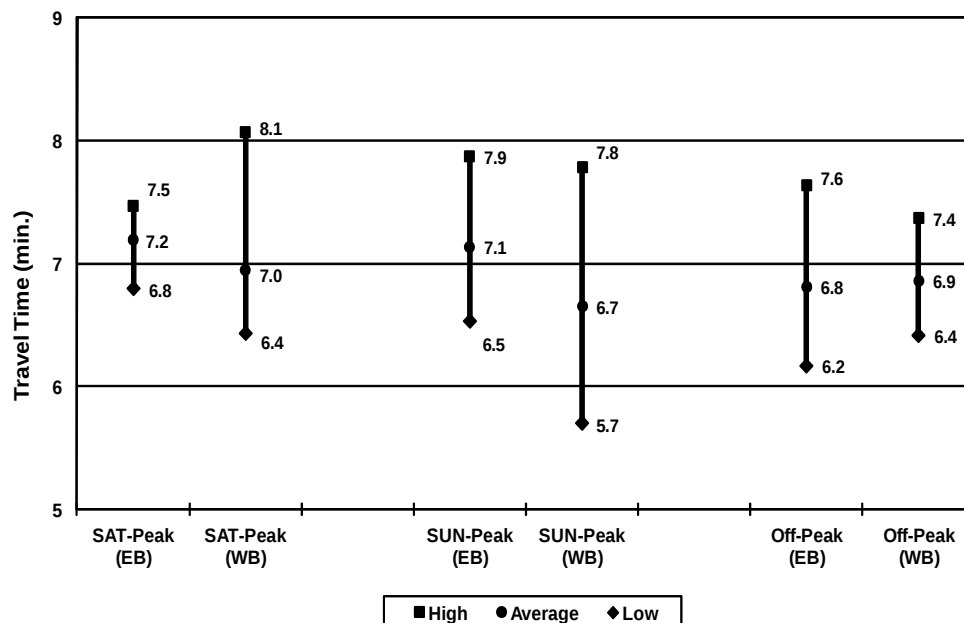
Corridor Summary

This is a recreational corridor. Traffic volumes along this corridor are near equally distributed in the westbound and eastbound directions throughout the day for both Saturday and Sunday peak periods. Travel time variability is affected by on-street parking in Downtown Steamboat Springs between 3rd and 7th Streets and varies for westbound and eastbound directions in the peak periods between 10 and 37 percent. This data was collected in August 2009.



Corridor Characteristics		Travel Rate Index	SAT EB—1.11
Corridor Length	3.3 Miles		SAT WB—1.12
Facility Type	Arterial - Urban		SUN EB—1.10
Speed Limit	25 - 40 mph		SUN WB—1.08
CDOT Region(s)	Region 3	Annual Vehicle Hours of Delay	70,400
Corridor Measures		Annual Person Hours of Delay	97,200
Traffic Count per Day	Avg: 16,800	Annual Congestion Costs	\$1,555,300
v/c Ratio	.56 – 1.14		

Travel Time Variability by Time Period for August 2009



Data Collection Period

The time periods of data collection included weekend Saturday & Sunday peak periods (11:30 AM to 5:30 PM) and Saturday & Sunday off-peak periods (9:30 AM to 11:30 AM & 5:30 PM to 7:30 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.38 persons per vehicle. Based on the 2009 Average Vehicle Occupancy Study of the Colorado State Highway System.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute - June 2009)

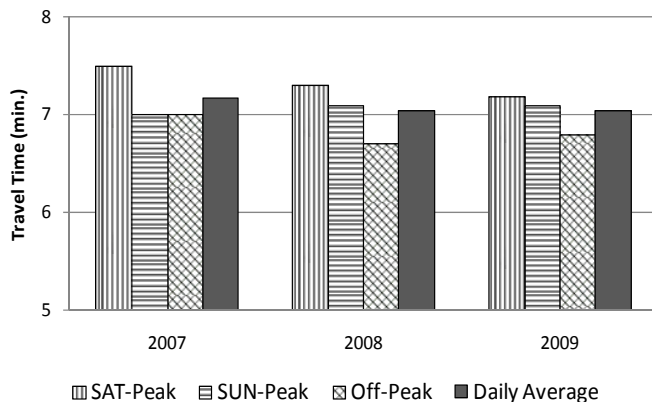
Travel Time Variability – The range of travel time for each period (Saturday Peak, Sunday Peak, Off Peak) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 40 (CR 129 to Pine Grove Rd) – Three-Year Data Trend Analysis

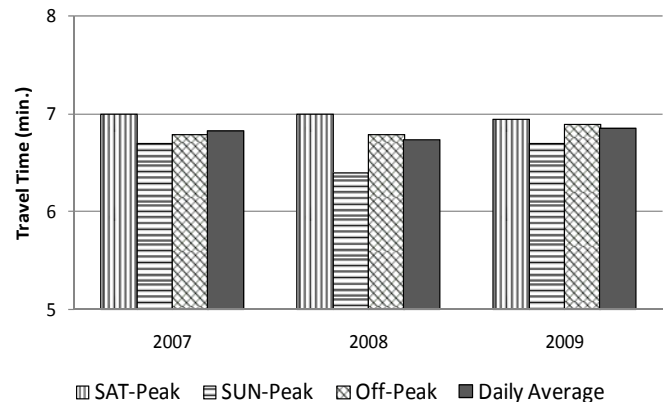
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time decreased at the rate of -1.91% per year
- The WB Daily Average Travel Time increased at the rate of +0.25% per year
- The Annual Cost of Congestion decreased at the rate of -26.82% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -44.64% per year

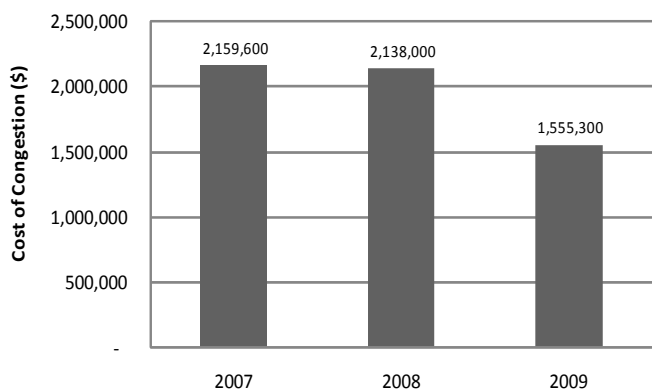
Average Travel Time (EB Direction)



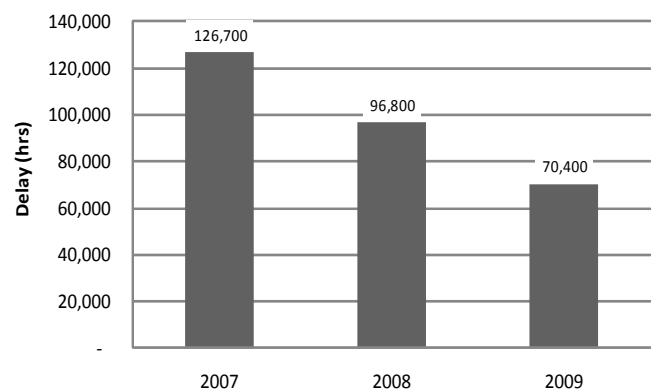
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

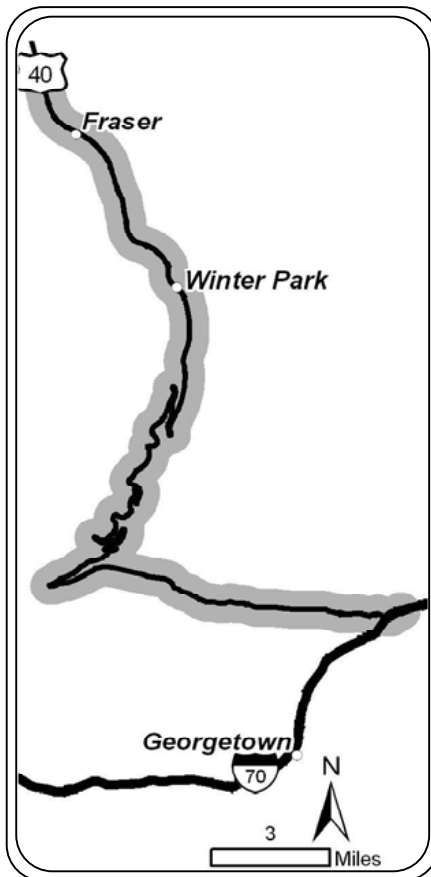


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 40 (CR 8/5 to I-70) – Travel Time Report

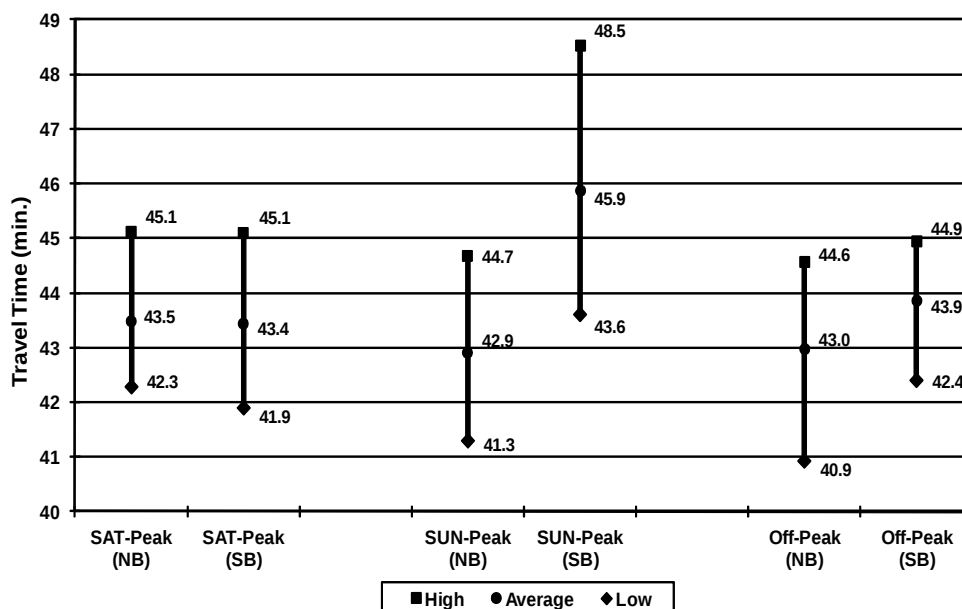
Corridor Summary

This is a recreational corridor. Traffic volumes along this corridor are generally heavier in the westbound direction during the Saturday peak period and eastbound during the Sunday peak period. Travel time variability for westbound and eastbound directions in the peak periods varies between 6 and 11 percent. This data was collected in July and August 2009.



Corridor Characteristics		Travel Rate Index	SAT NB—1.05
Corridor Length	31.0 Miles		SAT SB—1.02
Facility Type	Arterial - Rural		SUN NB—1.03
Speed Limit	35 - 55 mph		SUN SB—1.08
CDOT Region(s)	Region 1 and Region 3	Annual Vehicle Hours of Delay	154,200
Corridor Measures		Annual Person Hours of Delay	208,200
Traffic Count per Day	Avg: 12,500 (10,300 – 15,400)	Annual Congestion Costs	\$3,331,400
v/c Ratio	.70 - 1.00		

Travel Time Variability by Time Period for July and August 2009



Data Collection Period

The time periods of data collection included weekend Saturday & Sunday peak periods (11:30 AM to 5:30 PM) and Saturday & Sunday off-peak periods (9:30 AM to 11:30 AM & 5:30 PM to 7:30 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.35 persons per vehicle. Based on the 2009 Average Vehicle Occupancy Study of the Colorado State Highway System.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute - June 2009)

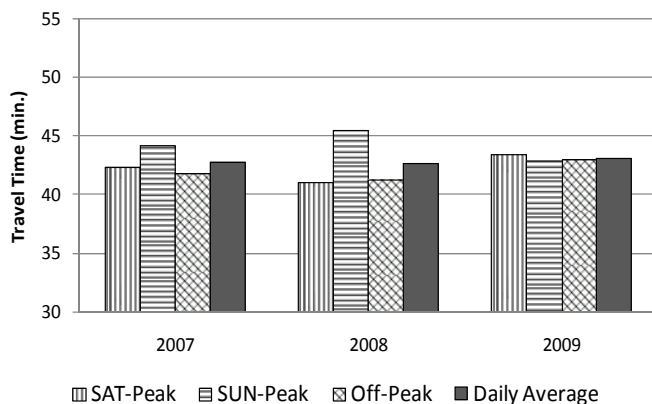
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Westbound-WB, Eastbound-EB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 40 (CR 8/5 to I-70) – Three-Year Data Trend Analysis

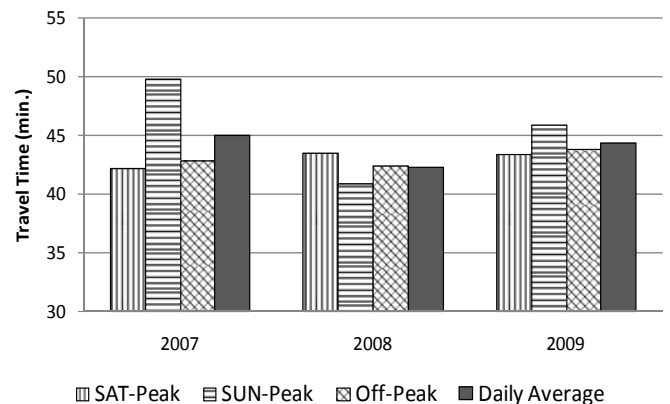
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time increased at the rate of +0.76% per year
- The SB Daily Average Travel Time decreased at the rate of -1.34% per year
- The Annual Cost of Congestion increased at the rate of +43.59% per year
- The Annual Vehicle Hours of Delay increased at the rate of +12.82% per year

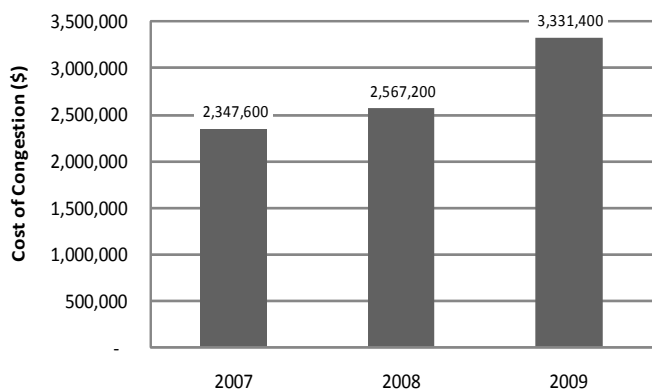
Average Travel Time (NB Direction)



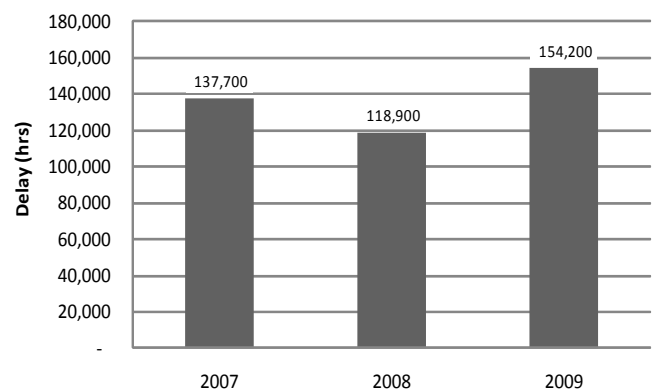
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

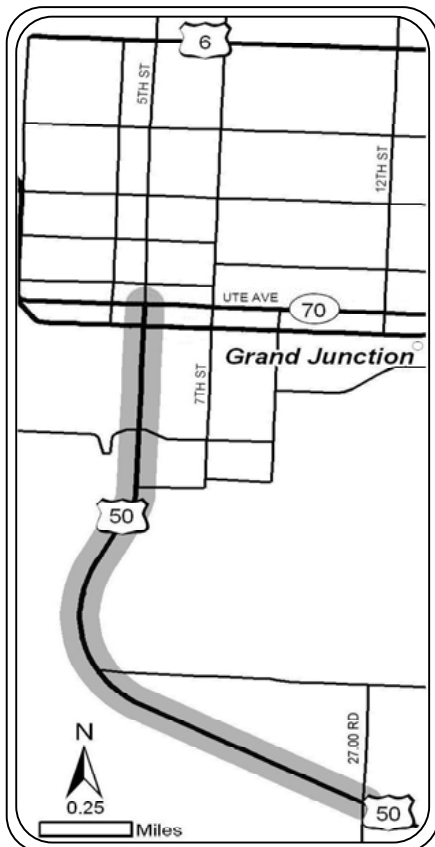


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 50 (Ute Ave to 27.00 Rd) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the westbound direction during the morning peak period and eastbound in the afternoon peak period. Congestion primarily occurs approaching 27th Road, Unweep, and Pitkin Avenues. Travel time variability for westbound and eastbound directions in the peak periods varies between 22 and 48 percent. This data was collected in October 2009.



Corridor Characteristics

Corridor Length	2.0 Miles
Facility Type	Arterial - Urban
Speed Limit	45 mph

Travel Rate Index

AM EB—1.07

AM WB—1.26

PM EB—1.09

PM WB—1.19

CDOT Region(s)	Region 3
----------------	----------

Annual Vehicle Hours of Delay

86,600

Corridor Measures

Traffic Count per Day	Avg: 21,500
V/C Ratio	.36 - .92

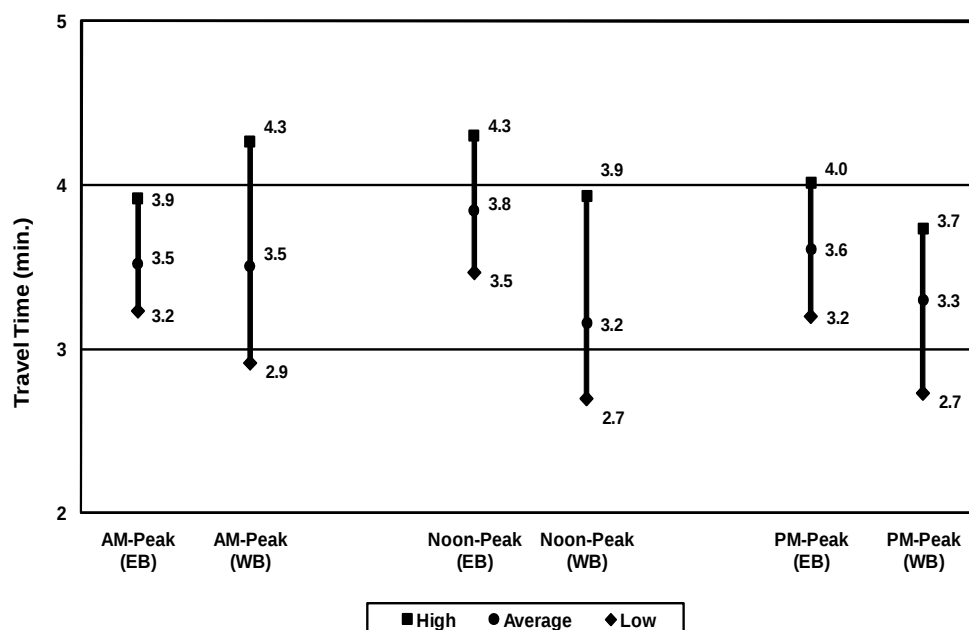
Annual Person Hours of Delay

119,500

Annual Congestion Costs

\$1,911,700

Travel Time Variability by Time Period for October 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.38 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute - June 2009)

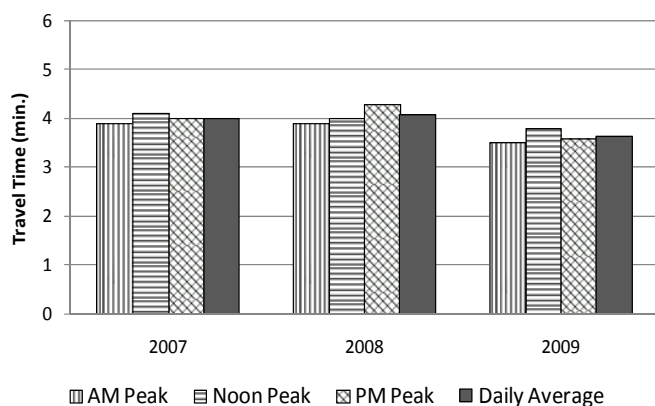
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 50 (Ute Ave to 27.00 Rd) – Three-Year Data Trend Analysis

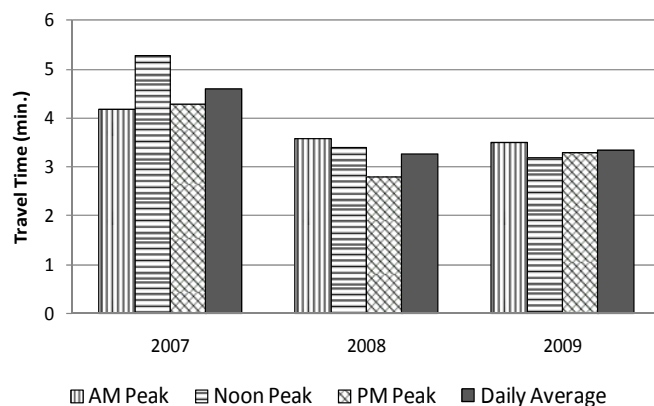
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time decreased at the rate of -8.83% per year
- The WB Daily Average Travel Time decreased at the rate of -28.94% per year
- The Annual Cost of Congestion decreased at the rate of -45.98% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -62.04% per year

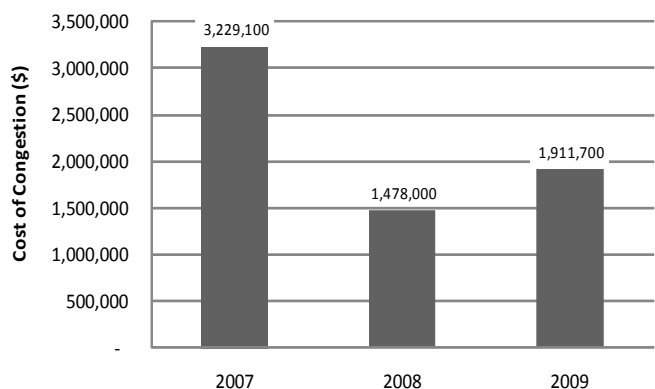
Average Travel Time (EB Direction)



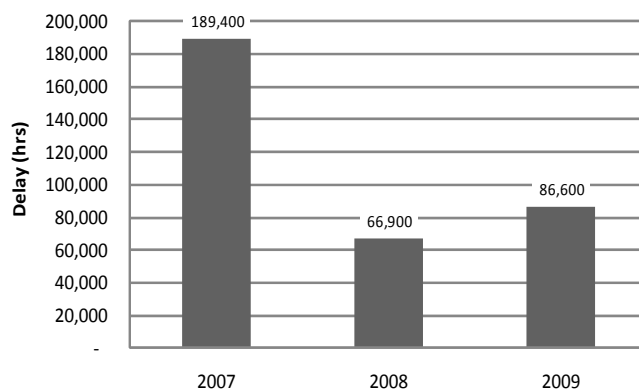
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

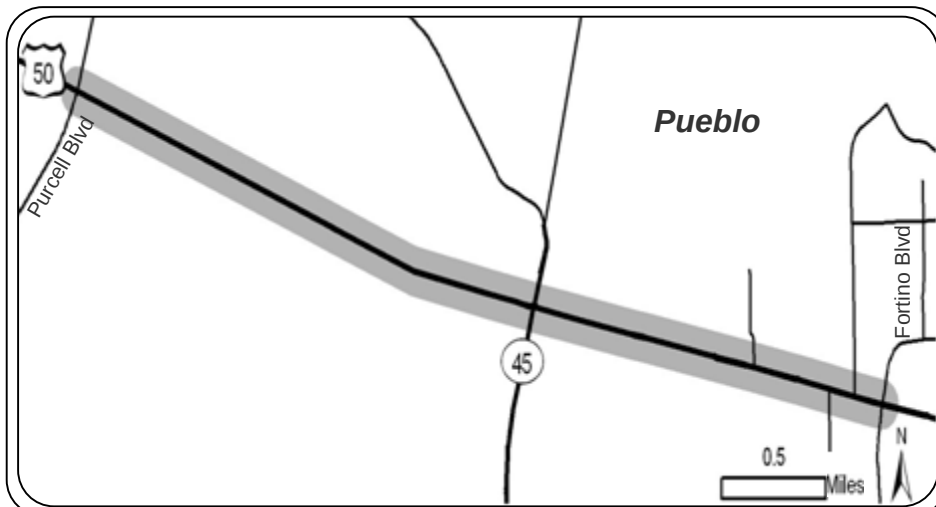


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 50 (Purcell Blvd. to Fortino Blvd.) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the eastbound direction during the morning peak period and westbound in the afternoon peak period. Congestion primarily occurs approaching Purcell and Fortino Boulevards. Travel time variability for westbound and eastbound directions in the peak periods varies between 17 and 59 percent. This data was collected in November 2009.



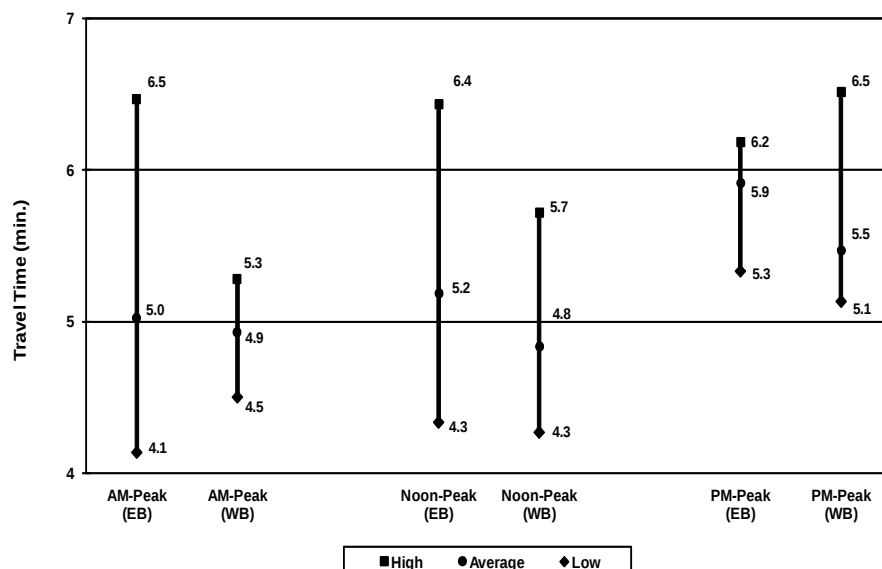
Corridor Characteristics

Corridor Length	4.0 Miles
Facility Type	Freeway - Urban
Speed Limit	45 – 65 mph
CDOT Region(s)	Region 2

Corridor Measures

Traffic Count per Day	Avg: 40,600
v/c Ratio	.88 - 1.06
Travel Rate Index	AM EB—1.09
	AM WB—1.06
	PM EB—1.29
	PM WB—1.18
Annual Vehicle Hours of Delay	182,300
Annual Person Hours of Delay	235,200
Annual Congestion Costs	\$3,762,600

Travel Time Variability by Time Period for November 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.29 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute - June 2009)

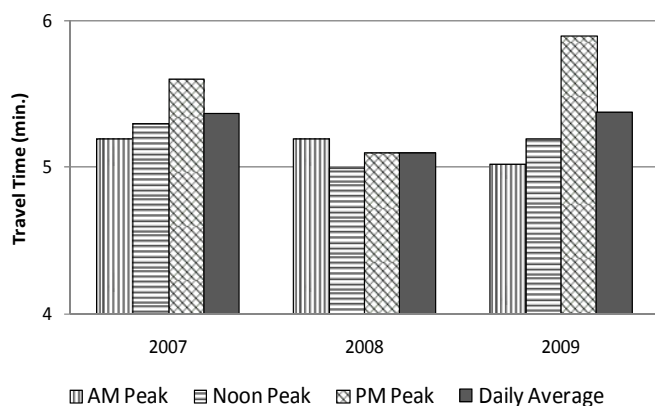
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 50 (Purcell Blvd. to Fortino Blvd.) – Three-Year Data Trend Analysis

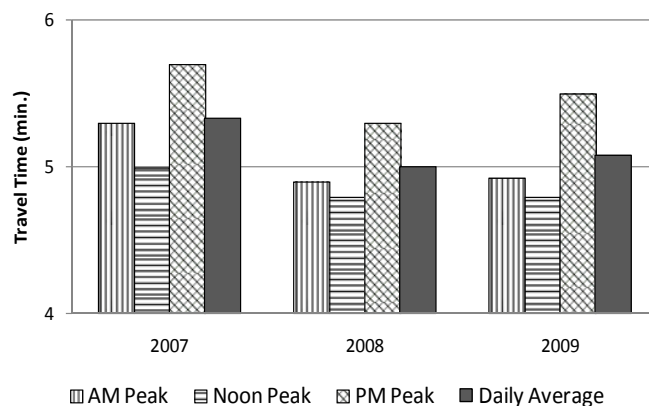
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time increased at the rate of +0.17% per year
- The WB Daily Average Travel Time decreased at the rate of -4.89% per year
- The Annual Cost of Congestion decreased at the rate of -22.51% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -38.61% per year

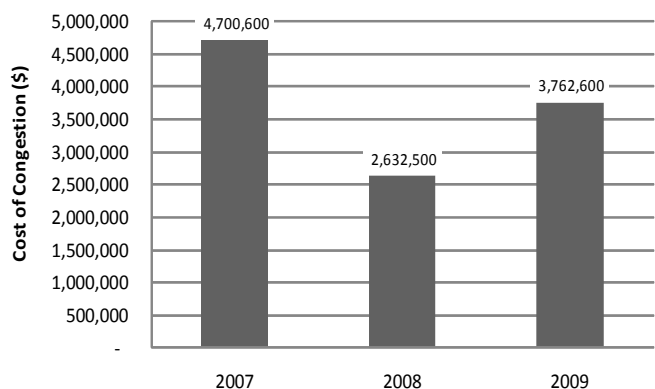
Average Travel Time (EB Direction)



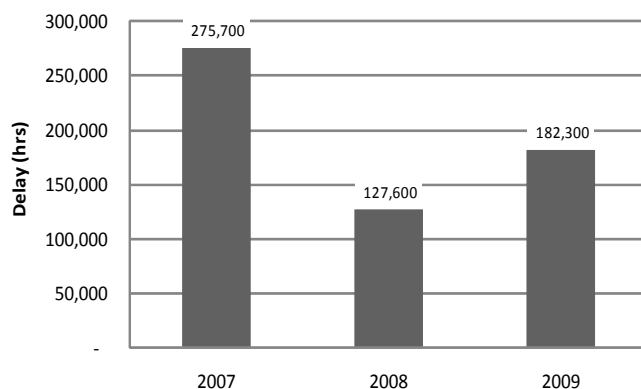
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

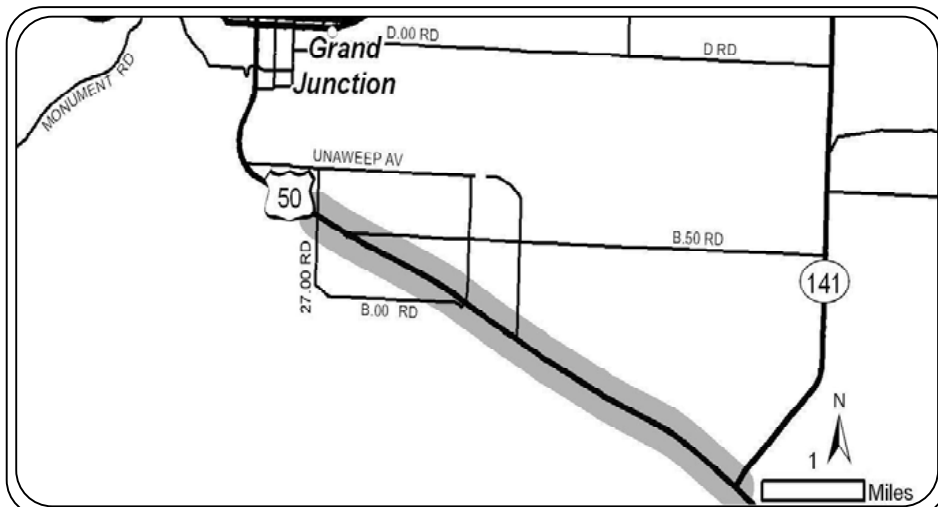


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 50 (SH 141 to 27.00 Rd) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the westbound direction during the morning peak period and eastbound in the afternoon peak period. Congestion primarily occurs approaching 27th, 29th, and 32nd (SH 141) Roads. Travel time variability for westbound and eastbound directions in the peak periods varies between 15 and 25 percent. This data was collected in October 2009.



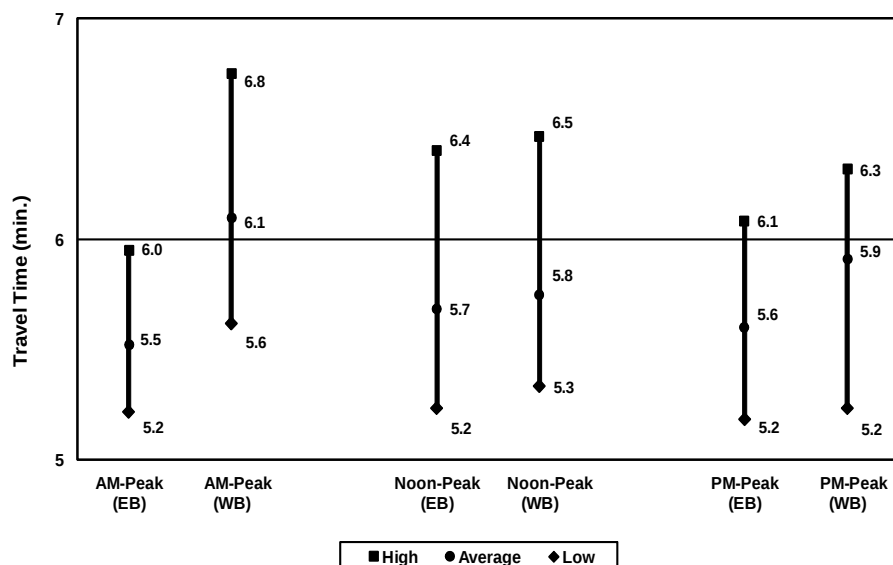
Corridor Characteristics

Corridor Length	4.6 Miles
Facility Type	Arterial – Urban/Rural
Speed Limit	45 – 55 mph
CDOT Region(s)	Region 3

Corridor Measures

Traffic Count per Day	Avg: 15,500 (10,600 – 21,500)
v/c Ratio	.33 - .51
Travel Rate Index	AM EB—1.06
	AM WB—1.13
	PM EB—1.07
	PM WB—1.10
Annual Vehicle Hours of Delay	83,000
Annual Person Hours of Delay	114,500
Annual Congestion Costs	\$1,832,000

Travel Time Variability by Time Period for October 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.38 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute - June 2009)

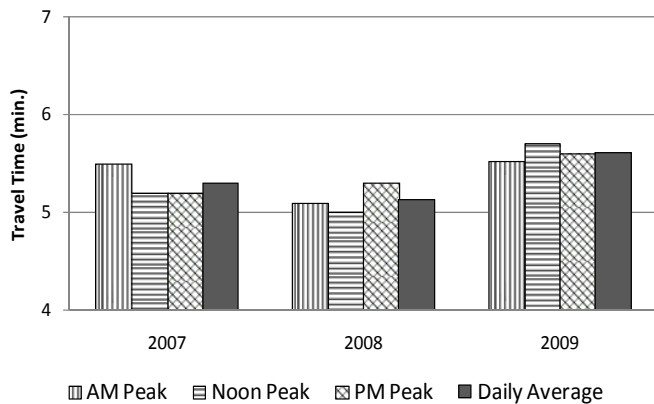
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 50 (SH 141 to 27.00 Rd) – Three-Year Data Trend Analysis

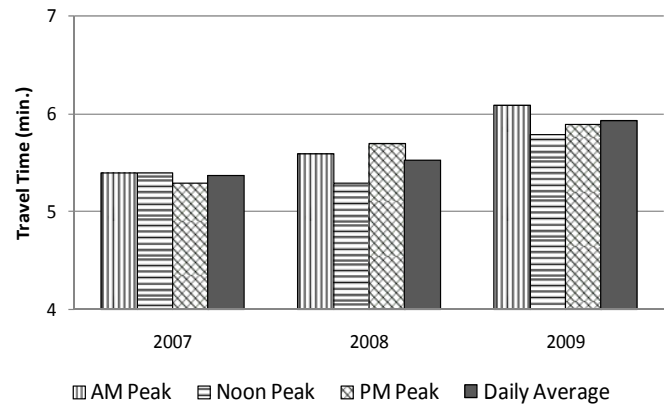
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time increased at the rate of +5.93% per year
- The WB Daily Average Travel Time increased at the rate of +10.60% per year
- The Annual Cost of Congestion increased at the rate of +170.28% per year
- The Annual Vehicle Hours of Delay increased at the rate of +106.39% per year

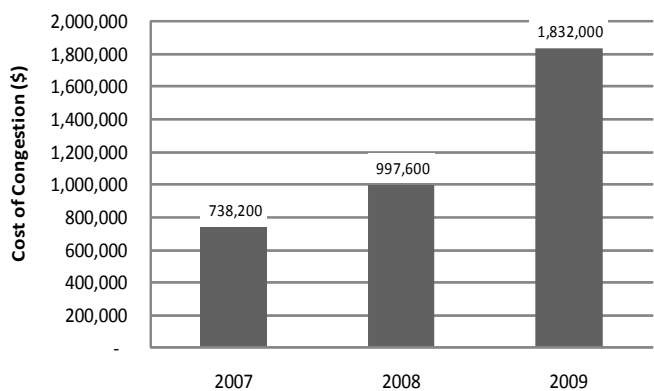
Average Travel Time (EB Direction)



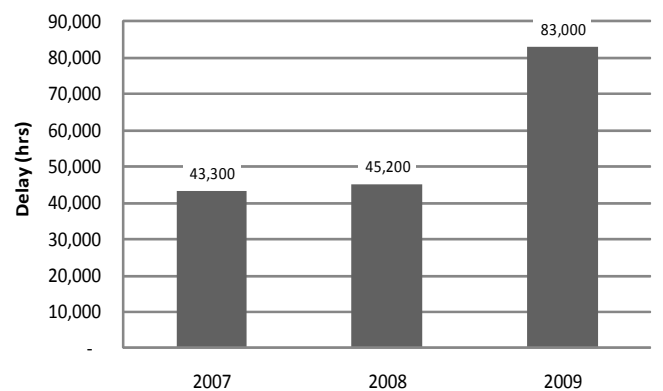
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

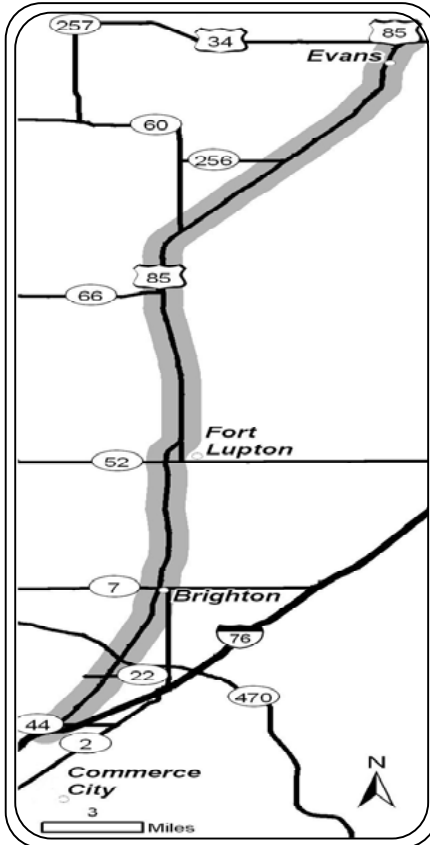


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 85 (I-76 to US 34) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are generally heavier in the southbound direction during the morning peak period and northbound in the evening peak period. Congestion occurs in multiple segments along the corridor such as between I-76 and 124th Avenue, Bromley Lane and 168th Avenue, and between 1st Street and US-34. Travel time variability for northbound and southbound directions in the peak periods varies between 11 and 17 percent. This data was collected in June 2009.



Corridor Characteristics

Corridor Length	38.8 Miles
Facility Type	Freeway/Arterial – Urban/Rural
Speed Limit	40 - 65 mph
CDOT Region(s)	Region 4 & Region 6

Travel Rate Index

AM NB—1.05

AM SB—1.05

PM NB—1.07

PM SB—1.11

Annual Vehicle Hours of Delay

667,400

Annual Person Hours of Delay

774,200

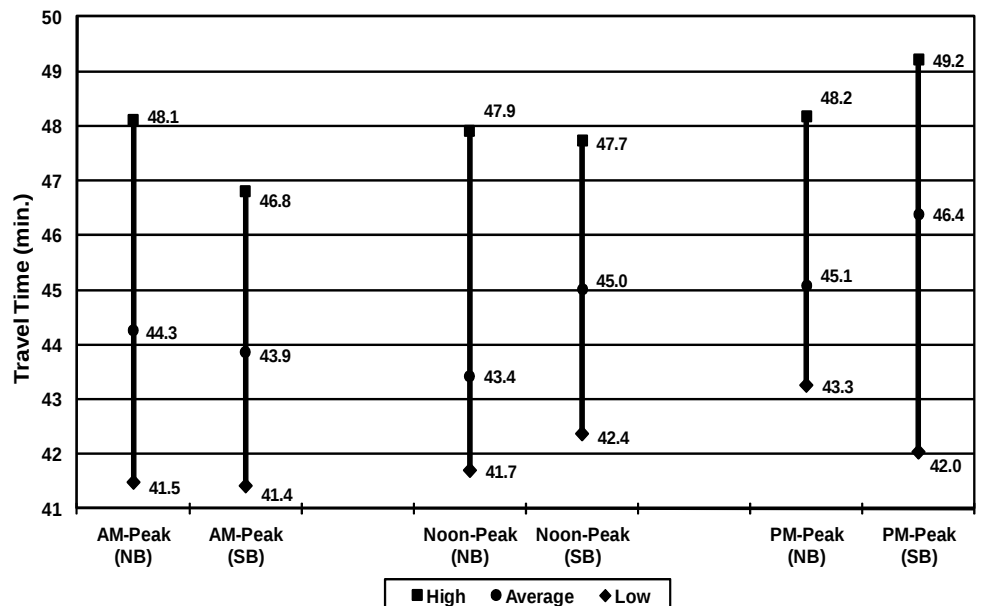
Annual Congestion Costs

\$12,386,800

Corridor Measures

Traffic Count per Day	Avg: 23,700 (16,900 – 35,200)
v/c Ratio	.12 - .93

Travel Time Variability by Time Period for June 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.16 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute - June 2009)

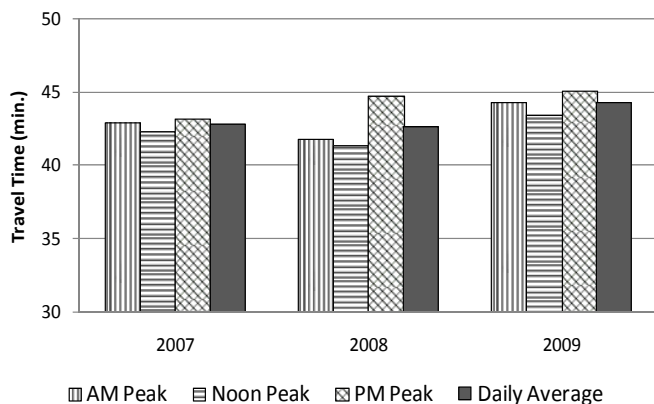
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 85 (I-76 to US 34) – Three-Year Data Trend Analysis

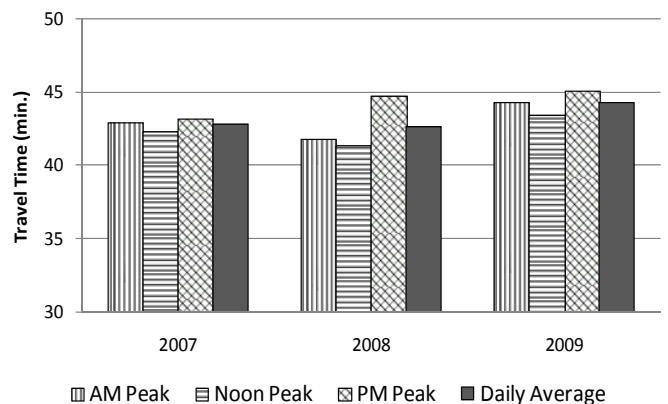
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time increased at the rate of +3.43% per year
- The SB Daily Average Travel Time decreased at the rate of -0.25% per year
- The Annual Cost of Congestion decreased at the rate of -9.74% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -17.68% per year

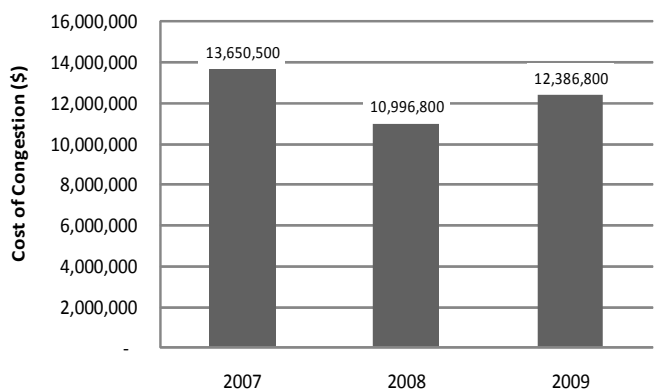
Average Travel Time (NB Direction)



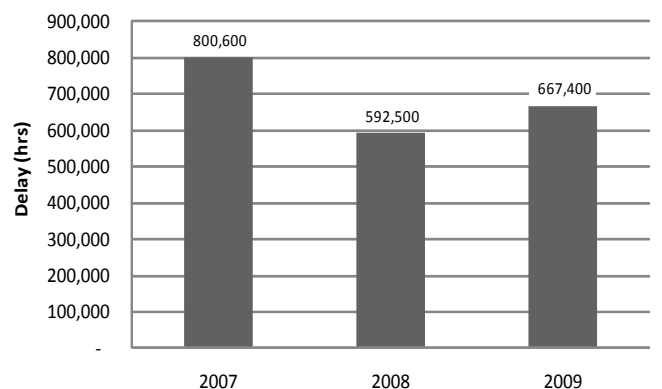
Average Travel Time (NB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

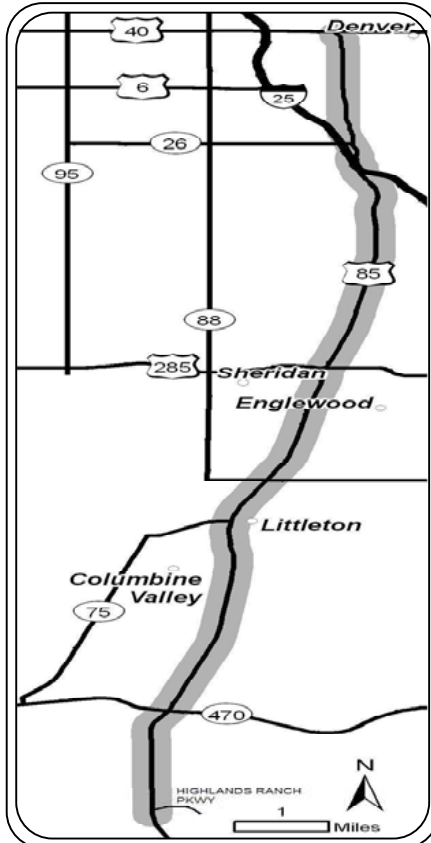


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 85 – Santa Fe Dr. (Highlands Ranch Pkwy to SH 40) – Travel Time Report

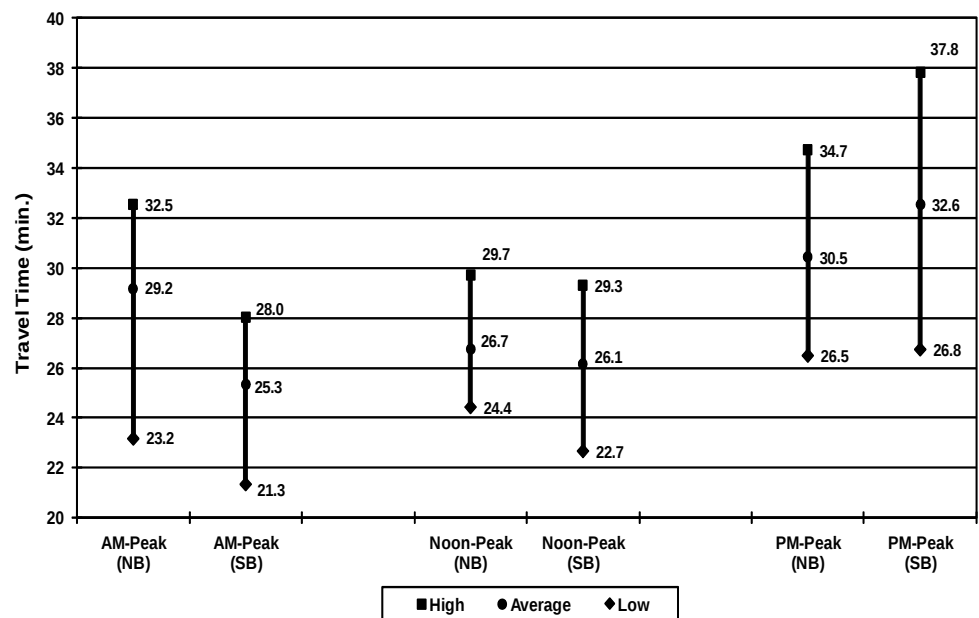
Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the northbound direction during the morning peak period and southbound in the afternoon peak period. Congestion occurs in multiple segments along the corridor such as between C470 and Mineral Avenue, Union and Dartmouth Avenues, and Mississippi and Alameda Avenues. Congestion is also encountered approaching Bowles and Colfax Avenues. Travel time variability for northbound and southbound directions in the peak periods varies between 22 and 41 percent. This data was collected in May 2009.



Corridor Characteristics		Travel Rate Index	AM NB—1.18
Corridor Length	14.8 Miles		AM SB—1.07
Facility Type	Freeway/Arterial – Urban		PM NB—1.23
Speed Limit	35 - 55 mph		PM SB—1.38
CDOT Region(s)	Regions 1 and Region 6	Annual Vehicle Hours of Delay	1,408,600
Corridor Measures		Annual Person Hours of Delay	1,690,400
Traffic Count per Day	Avg: 41,100 (18,800 – 72,600)	Annual Congestion Costs	\$27,046,000
v/c Ratio	.75 – 1.07		

Travel Time Variability by Time Period for May 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.2 persons per vehicle.

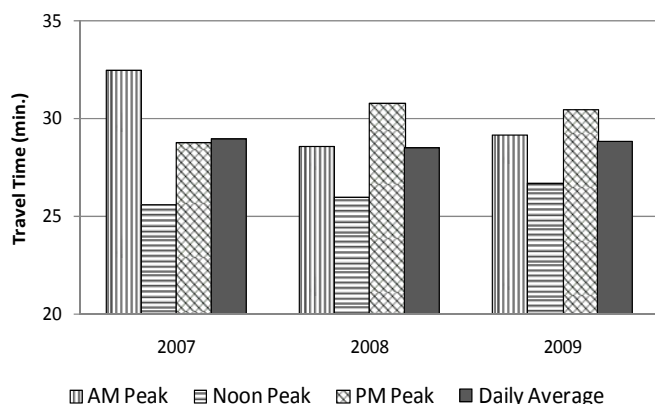
Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute - June 2009)

Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

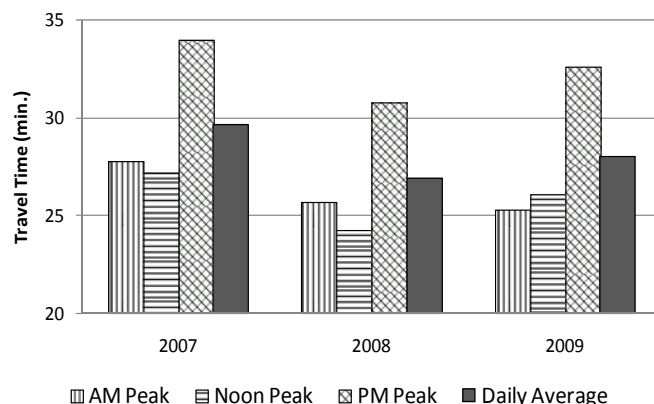
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time decreased at the rate of -0.61% per year
- The SB Daily Average Travel Time decreased at the rate of -5.72% per year
- The Annual Cost of Congestion increased at the rate of +123.94% per year
- The Annual Vehicle Hours of Delay increased at the rate of +103.22% per year

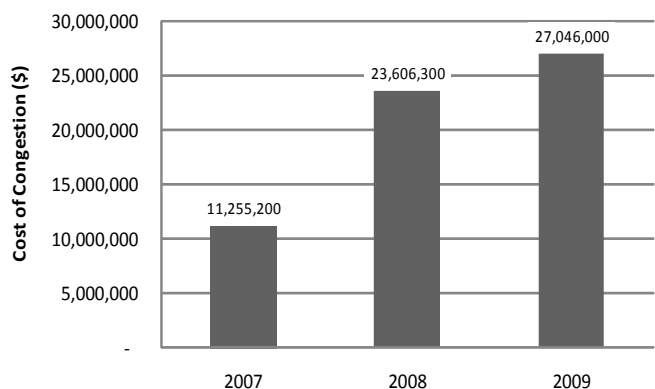
Average Travel Time (NB Direction)



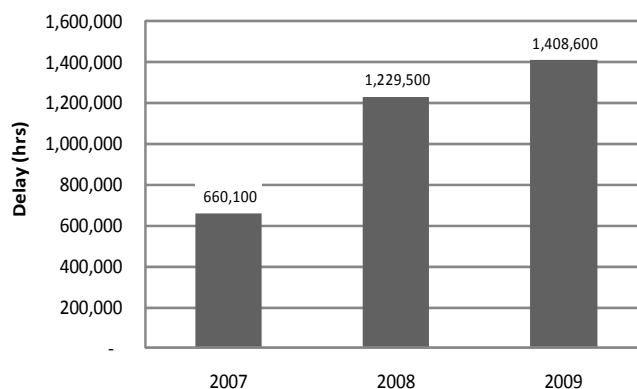
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

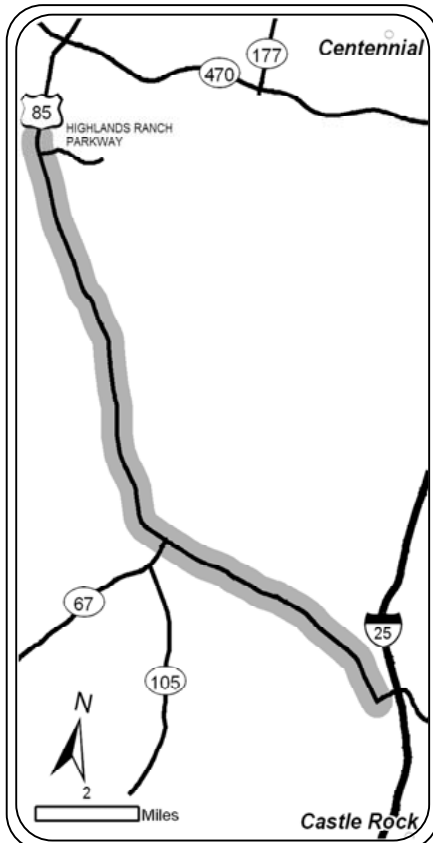


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 85 (Meadows Pkwy to Highlands Ranch Pkwy) – Travel Time Report

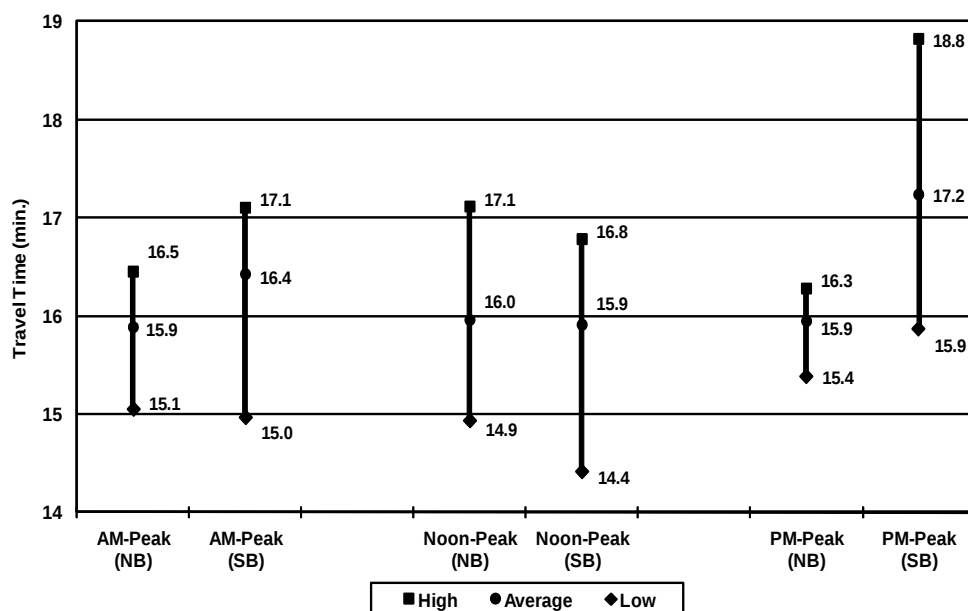
Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are near equally distributed between northbound and southbound directions throughout the day. Congestion primarily occurs approaching Meadows/Founders Parkway and near Highlands Ranch Parkway. Travel time variability for northbound and southbound directions in the peak periods varies between 6 and 18 percent. This data was collected in October and November 2009.



Corridor Characteristics		Travel Rate Index	AM NB—1.05
Corridor Length	13.4 Miles		AM SB—1.09
Facility Type	Arterial – Urban/Rural		PM NB—1.05
Speed Limit	45 - 55 mph		PM SB—1.14
CDOT Region(s)	Region 1	Annual Vehicle Hours of Delay	122,000
Corridor Measures		Annual Person Hours of Delay	154,900
Traffic Count per Day	Avg: 19,200 (14,700 – 26,500)	Annual Congestion Costs	\$2,478,900
v/c Ratio	.46 – .87		

Travel Time Variability by Time Period for October and November 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.27 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute - June 2009)

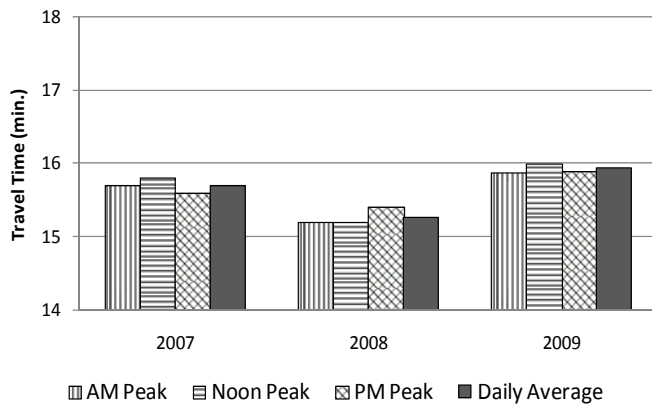
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 85 (Meadows Pkwy to Highlands Ranch Pkwy) – Three-Year Data Trend Analysis

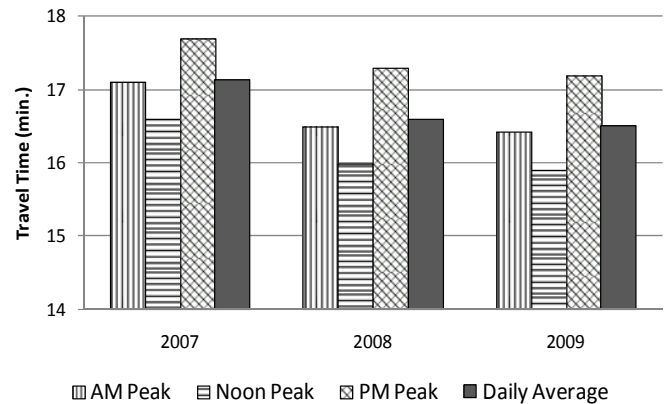
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time increased at the rate of +1.47% per year
- The SB Daily Average Travel Time decreased at the rate of -3.66% per year
- The Annual Cost of Congestion decreased at the rate of -44.27% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -55.35% per year

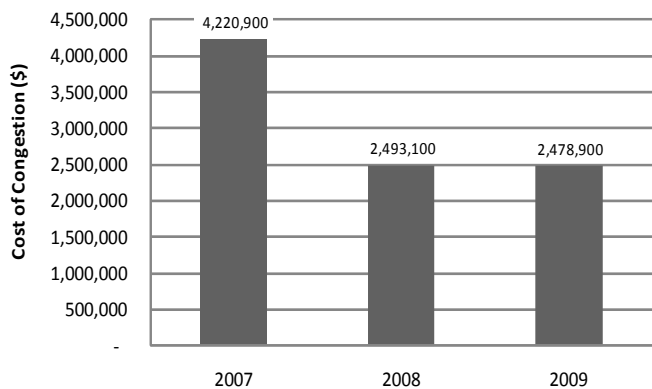
Average Travel Time (NB Direction)



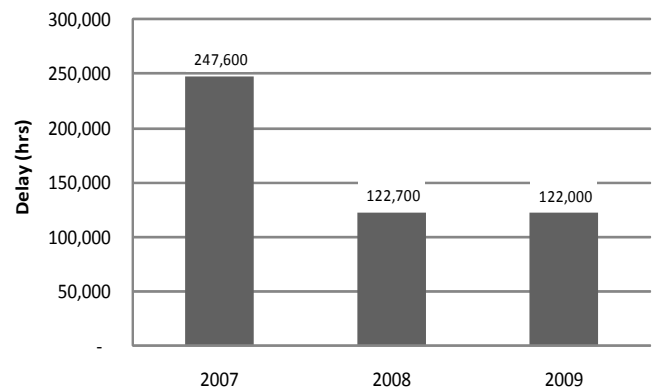
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

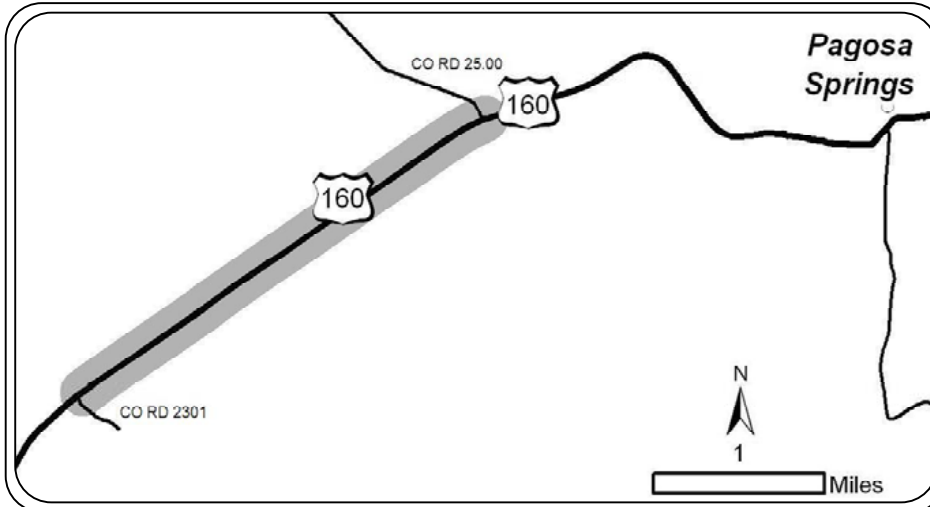


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 160 (CR 2301 to CR 25) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the eastbound direction during the morning peak period and westbound in the afternoon peak period. Congestion primarily occurs approaching Piedra Road, Pinon Causeway, and Pagosa Boulevard. Travel time variability for westbound and eastbound directions in the peak periods varies between 24 and 42 percent. This data was collected in June 2009.



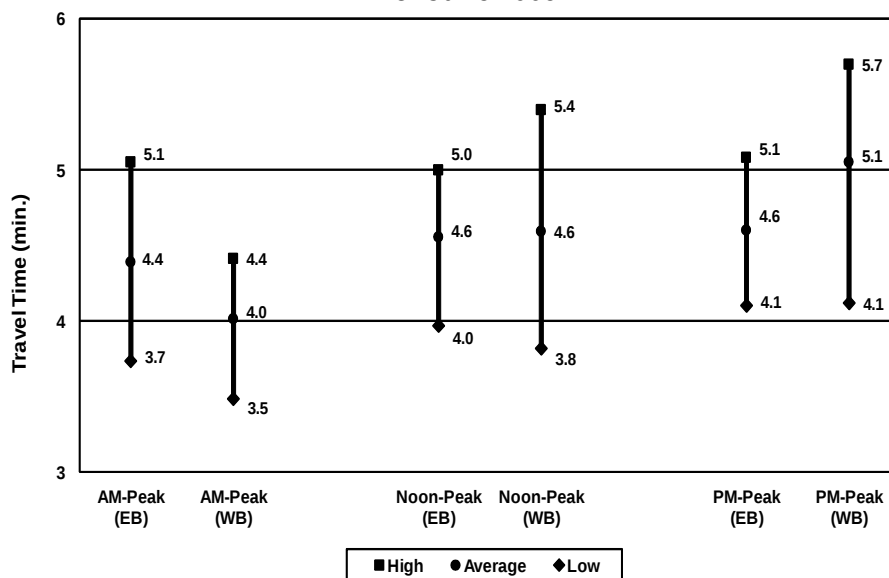
Corridor Characteristics

Corridor Length	2.4 Miles
Facility Type	Arterial - Urban
Speed Limit	60 mph
CDOT Region(s)	Region 5

Corridor Measures

Traffic Count per Day	Avg: 13,100
v/c Ratio	.58 - .82
Travel Rate Index	AM EB—1.12
	AM WB—1.06
	PM EB—1.17
	PM WB—1.33
Annual Vehicle Hours of Delay	67,500
Annual Person Hours of Delay	83,700
Annual Congestion Costs	\$1,338,500

Travel Time Variability by Time Period for June 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.24 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute - June 2009)

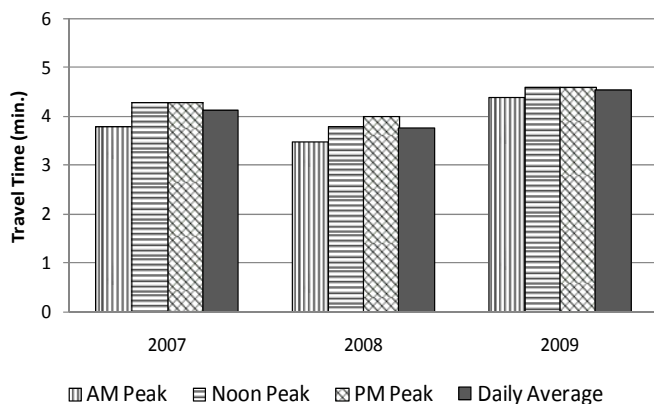
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 160 (CR 2301 to CR 25) – Three-Year Data Trend Analysis

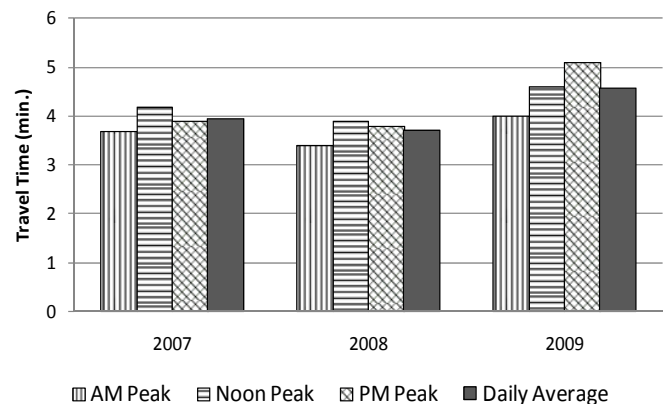
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time increased at the rate of +10.07% per year
- The WB Daily Average Travel Time increased at the rate of +17.06% per year
- The Annual Cost of Congestion increased at the rate of +73.78% per year
- The Annual Vehicle Hours of Delay increased at the rate of +47.75% per year

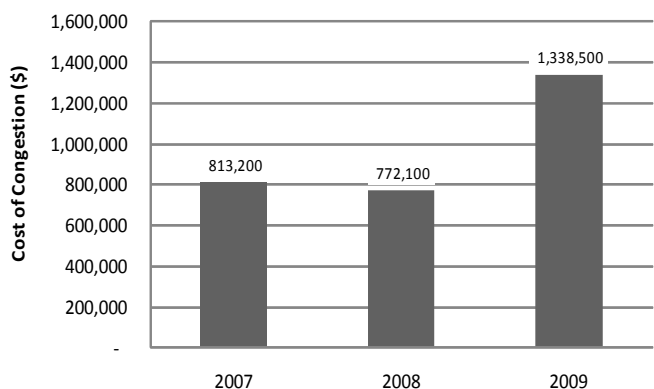
Average Travel Time (EB Direction)



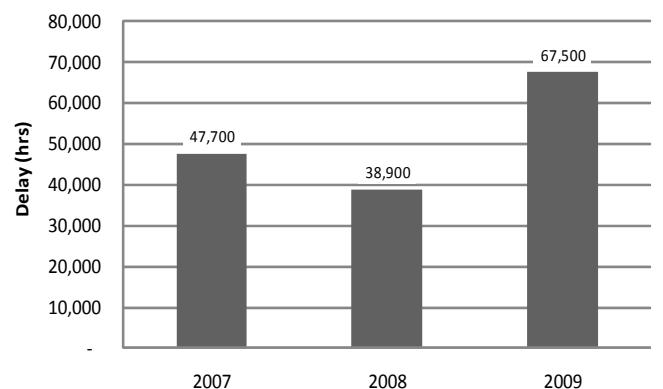
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

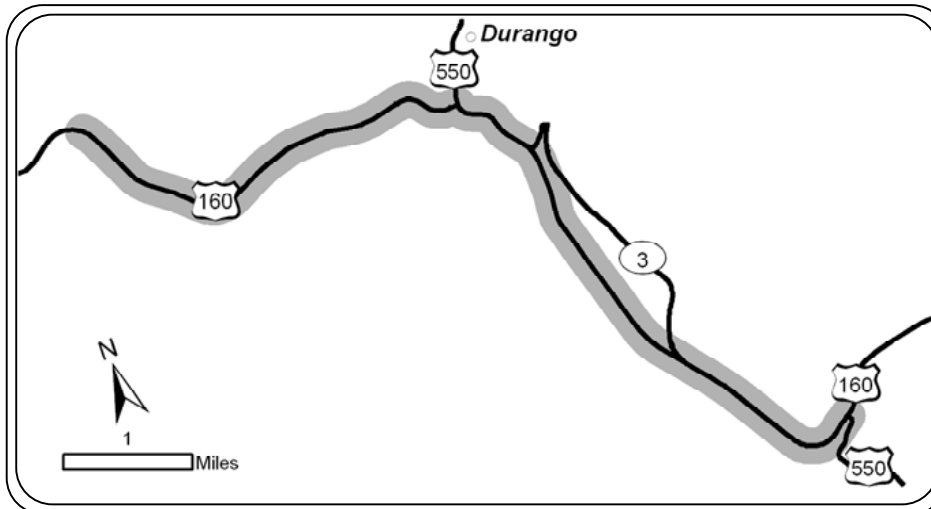


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 160 (CR 207 to US 550 South) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are generally heavier in the westbound direction during the morning peak period and eastbound in the afternoon peak period. Congestion primarily occurs approaching the north and south US550/US160 junctions. Travel time variability for westbound and eastbound directions in the peak periods varies between 14 and 59 percent. This data was collected in June 2009.



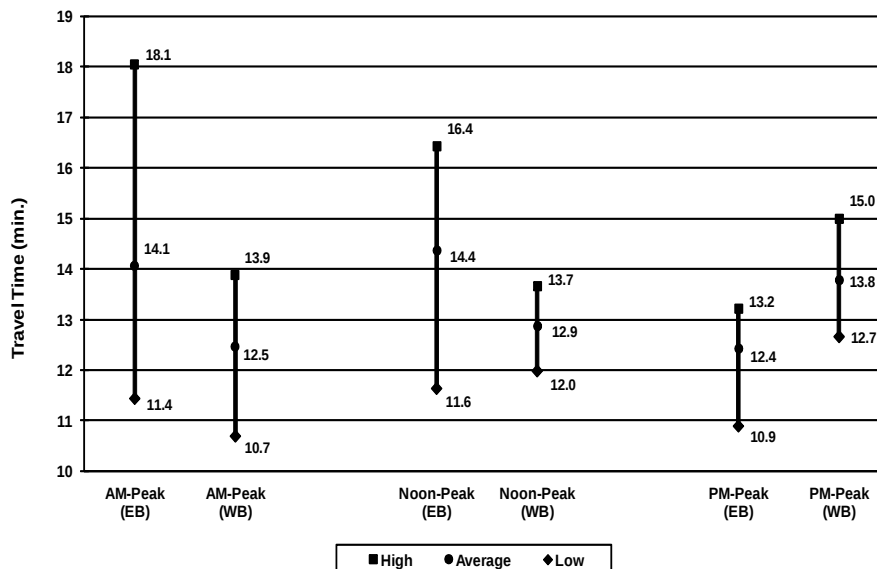
Corridor Characteristics

Corridor Length	7.7 Miles
Facility Type	Arterial – Urban/Rural
Speed Limit	35 – 65 mph
CDOT Region(s)	Region 5

Corridor Measures

Traffic Count per Day	Avg: 21,700 (10,600 – 29,100)
v/c Ratio	.52 - .95
Travel Rate Index	AM EB—1.24
	AM WB—1.06
	PM EB—1.10
	PM WB—1.17
Annual Vehicle Hours of Delay	391,900
Annual Person Hours of Delay	517,400
Annual Congestion Costs	\$8,277,700

Travel Time Variability by Time Period for June 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.32 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute - June 2009)

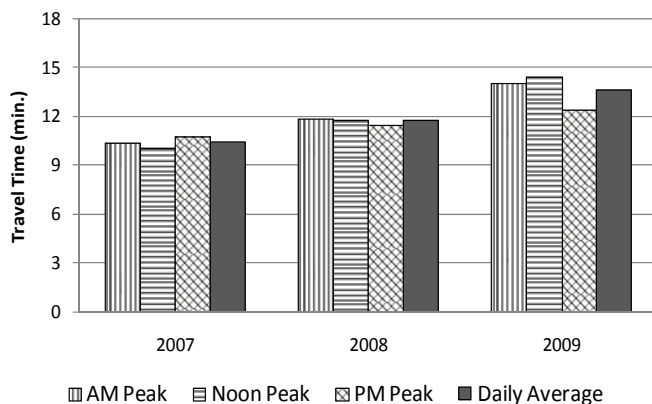
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 160 (CR 207 to US 550 South) – Three-Year Data Trend Analysis

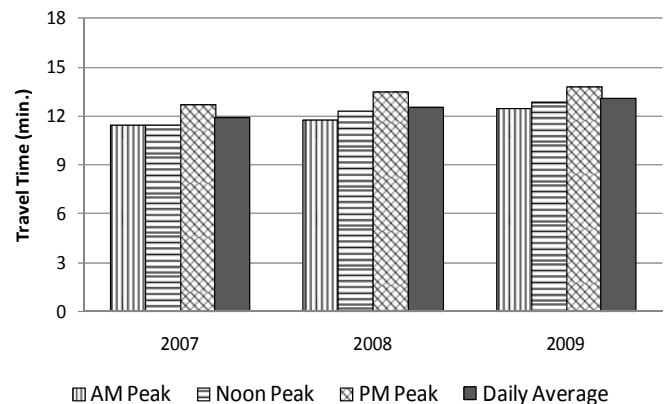
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time increased at the rate of +30.85% per year
- The WB Daily Average Travel Time increased at the rate of +9.70% per year
- The Annual Cost of Congestion increased at the rate of +101.05% per year
- The Annual Vehicle Hours of Delay increased at the rate of +67.20% per year

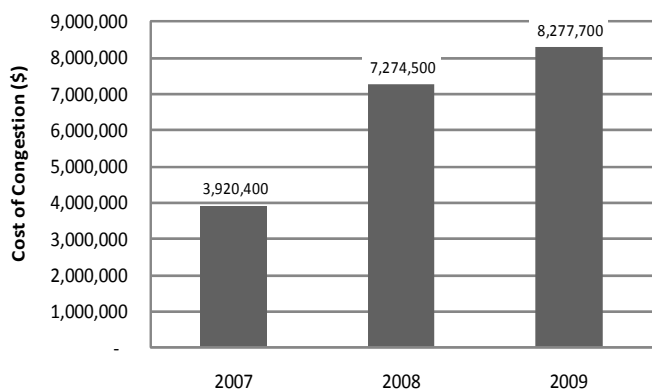
Average Travel Time (EB Direction)



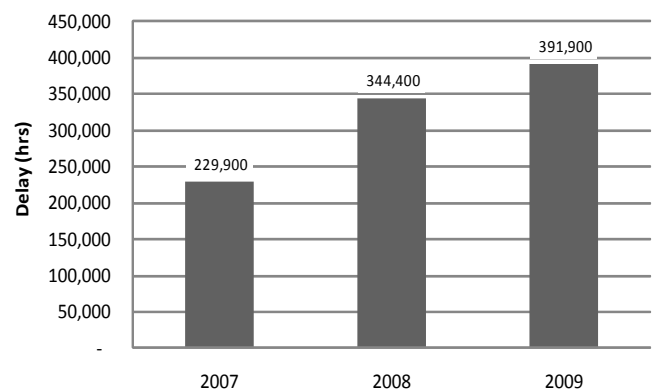
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

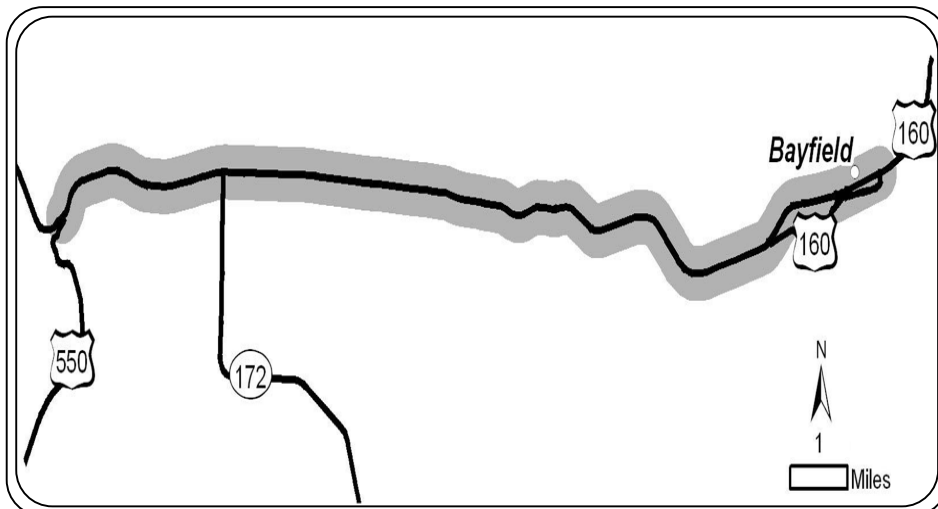


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 160 (US 550 to US 160 Business) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the westbound direction during the morning peak period and eastbound in the afternoon peak period. Congestion primarily occurs approaching CR 501/521, SH 172, CR 233 and US 550 south. Travel time variability for westbound and eastbound directions in the peak periods varies between 5 and 102 percent. This data was collected in June 2009.



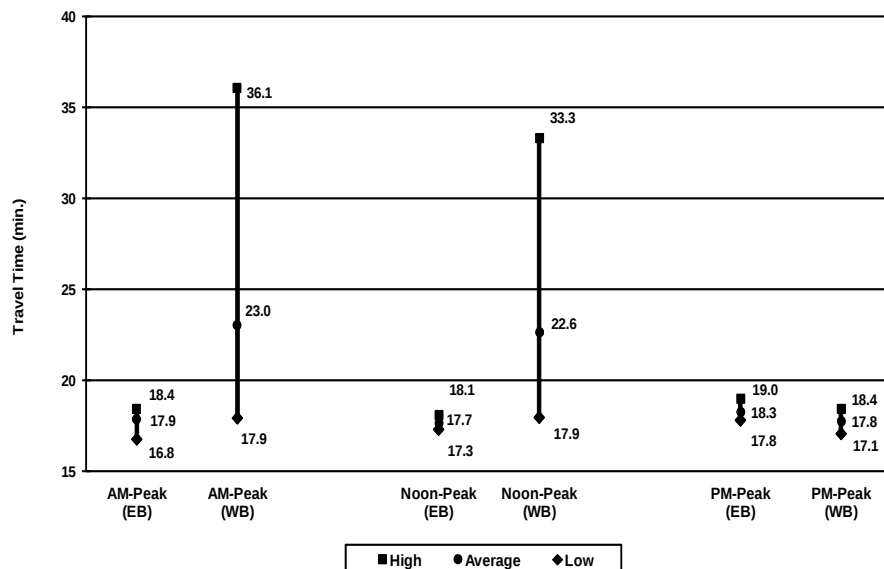
Corridor Characteristics

Corridor Length	15.2 Miles
Facility Type	Arterial – Urban/Rural
Speed Limit	45 – 60 mph
CDOT Region(s)	Region 5

Corridor Measures

Traffic Count per Day	Avg: 15,200 (7,600 – 23,600)
v/c Ratio	.59 - 1.03
Travel Rate Index	AM EB—1.03
	AM WB—1.31
	PM EB—1.06
	PM WB—1.01
Annual Vehicle Hours of Delay	287,600
Annual Person Hours of Delay	362,300
Annual Congestion Costs	\$5,797,400

Travel Time Variability by Time Period for June 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.26 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute - June 2009)

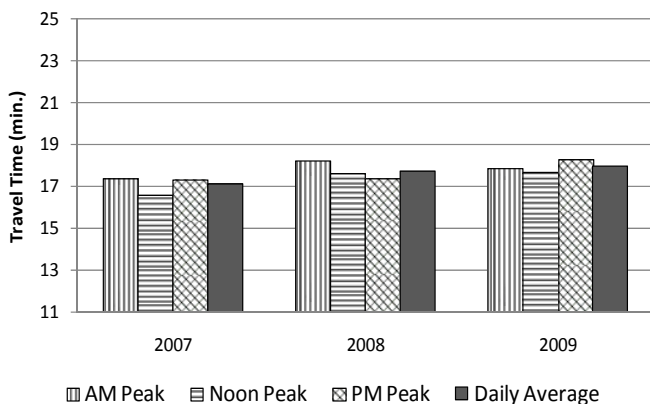
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 160 (US 550 to US 160 Business) – Three-Year Data Trend Analysis

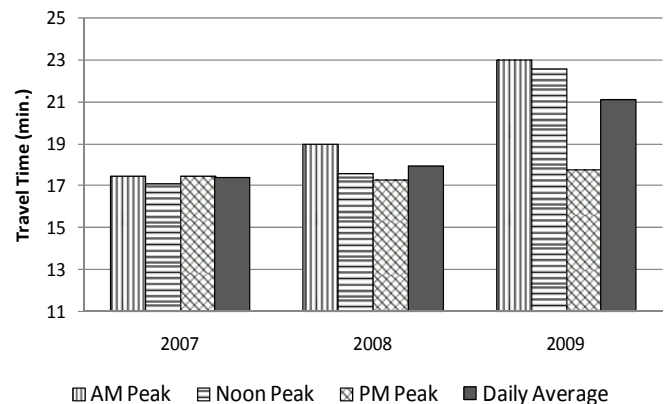
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time increased at the rate of +4.98% per year
- The WB Daily Average Travel Time increased at the rate of +22.28% per year
- The Annual Cost of Congestion increased at the rate of +66.12% per year
- The Annual Vehicle Hours of Delay increased at the rate of +41.55% per year

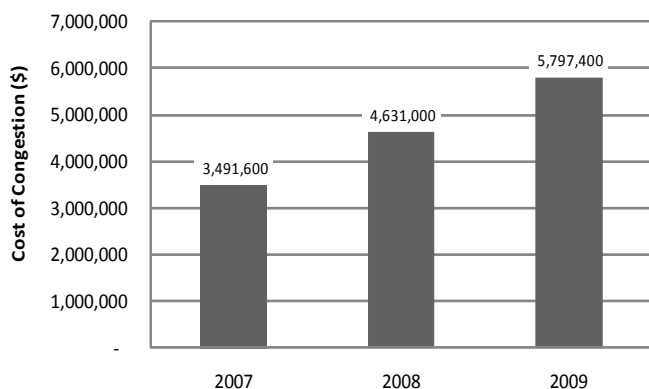
Average Travel Time (EB Direction)



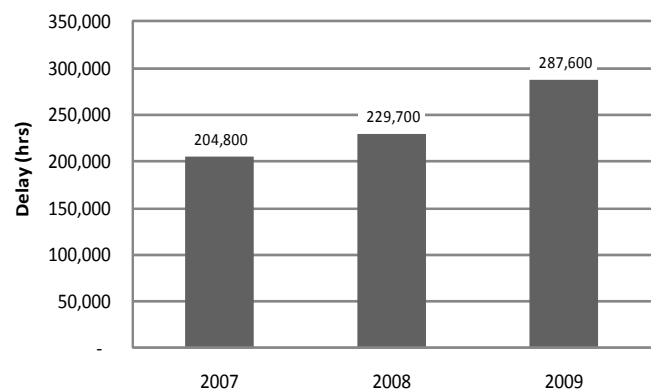
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

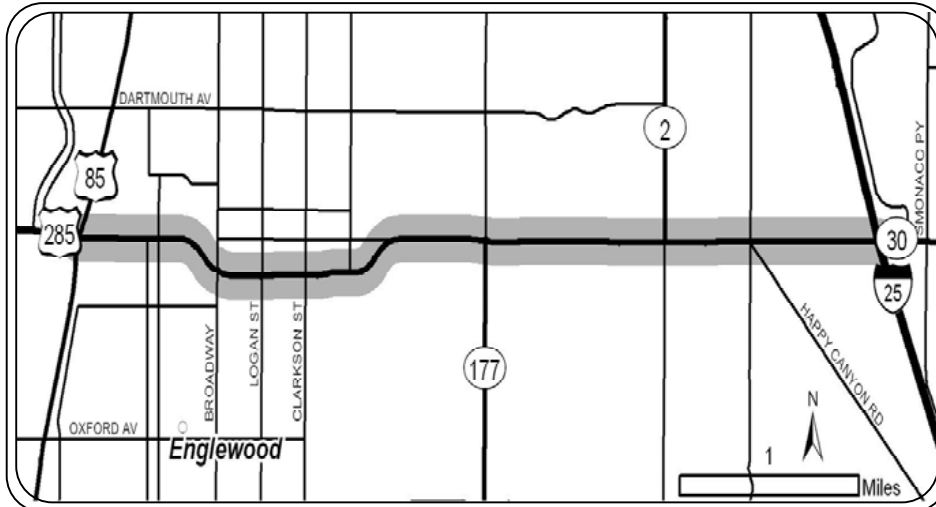


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 285 – Hampden Ave. (US 85 to I-25) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are generally heavier in eastbound direction during the morning peak period and westbound during the afternoon peak periods. Congestion primarily occurs in two segments along the corridor, between US-85 and Broadway, and between University Boulevard and Happy Canyon Road. Travel time variability for westbound and eastbound directions in the peak periods varies between 16 and 128 percent. This data was collected in April 2009.



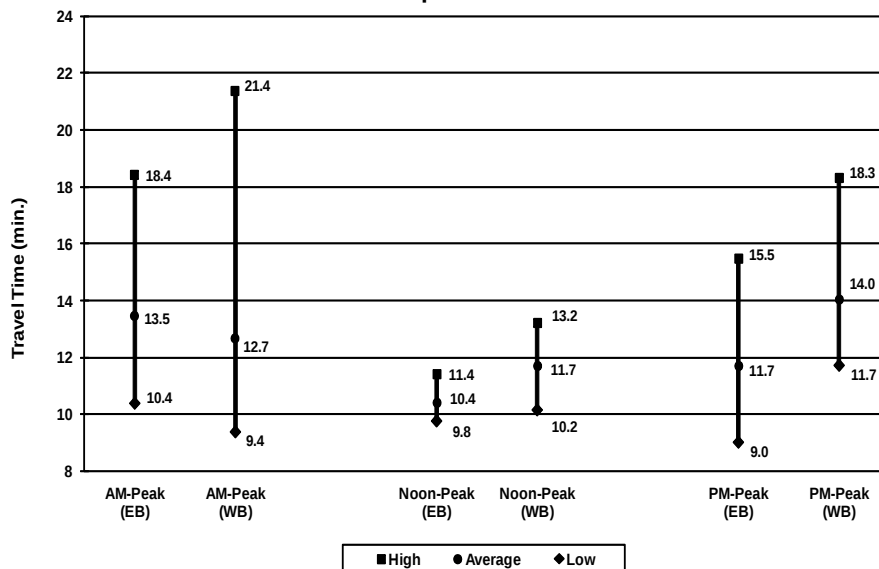
Corridor Characteristics

Corridor Length	4.6 Miles
Facility Type	Arterial - Urban
Speed Limit	35 – 55 mph
CDOT Region(s)	Region 6

Corridor Measures

Traffic Count per Day	Avg: 60,000
v/c Ratio	.80 – .98
Travel Rate Index	AM EB—1.38
	AM WB—1.22
	PM EB—1.20
	PM WB—1.35
Annual Vehicle Hours of Delay	1,363,600
Annual Person Hours of Delay	1,499,900
Annual Congestion Costs	\$23,249,100

Travel Time Variability by Time Period for April 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.27 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute - June 2009)

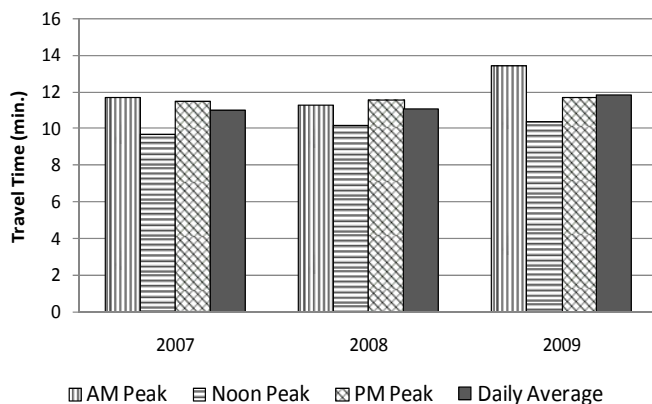
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 285 – Hampden Ave. (US 85 to I-25) – Three-Year Data Trend Analysis

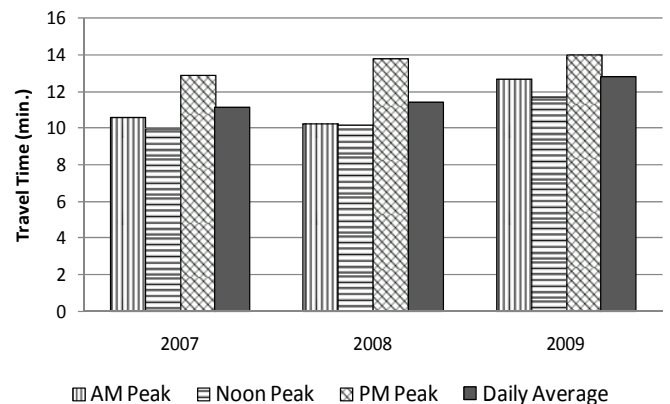
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time increased at the rate of +8.21% per year
- The WB Daily Average Travel Time increased at the rate of +14.81% per year
- The Annual Cost of Congestion increased at the rate of +12.71% per year
- The Annual Vehicle Hours of Delay increased at the rate of +12.71% per year

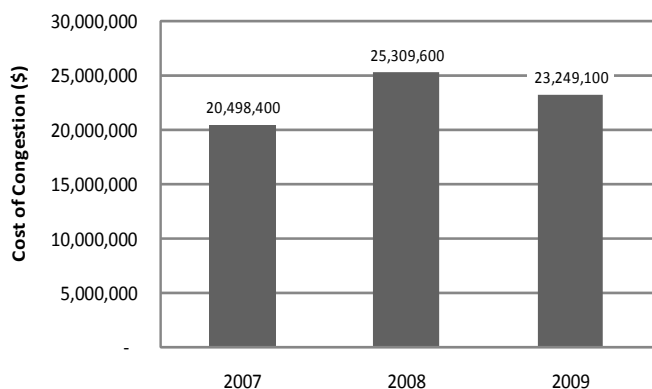
Average Travel Time (EB Direction)



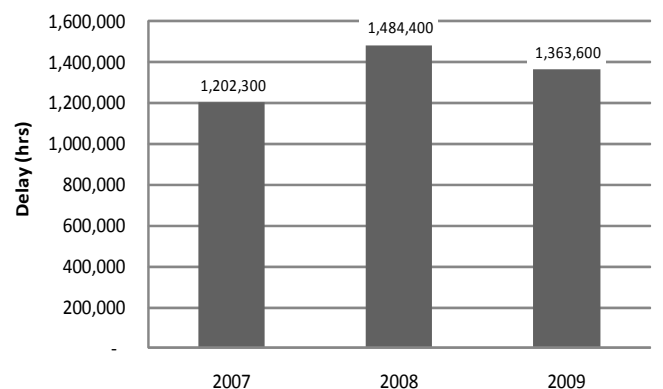
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

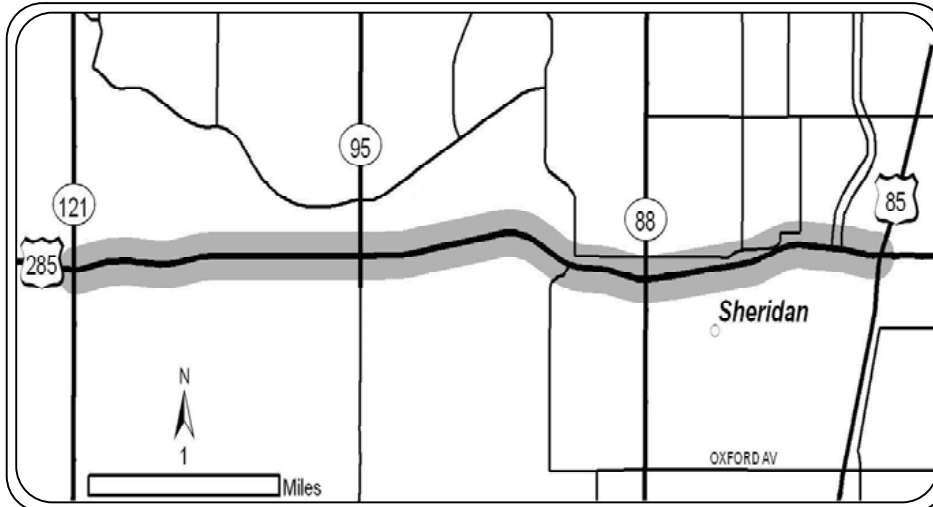


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 285- Hampden Ave. (SH 121 to US 85) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the westbound direction during the morning peak period and eastbound in the afternoon peak period. Congestion occurs primarily approaching the US-85 interchange, Federal and Lowell Boulevards. Travel time variability for westbound and eastbound directions in the peak periods varies between 23 and 103 percent. This data was collected in April 2009.



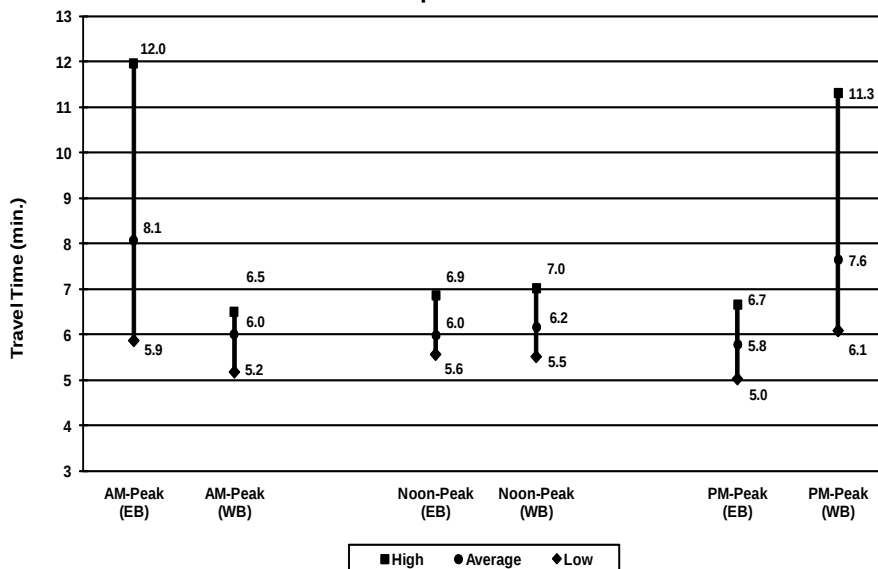
Corridor Characteristics

Corridor Length	4.5 Miles
Facility Type	Freeway - Urban
Speed Limit	35 - 55 mph
CDOT Region(s)	Region 6

Corridor Measures

Traffic Count per Day	Avg: 71,500
v/c Ratio	.86 – .90
Travel Rate Index	AM EB—1.47
	AM WB—1.07
	PM EB—1.05
	PM WB—1.37
Annual Vehicle Hours of Delay	571,800
Annual Person Hours of Delay	686,200
Annual Congestion Costs	\$10,978,700

Travel Time Variability by Time Period for April 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.20 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute - June 2009)

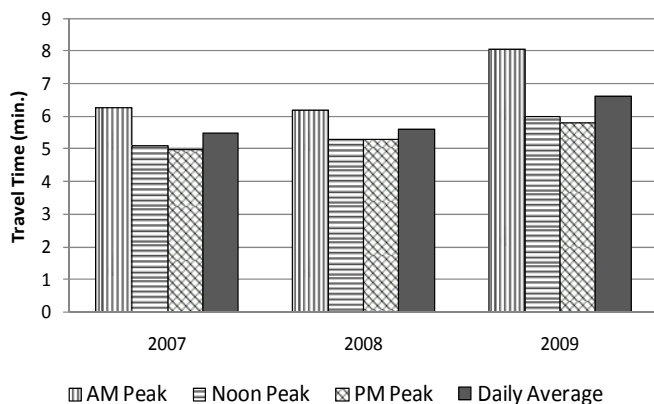
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 285- Hampden Ave. (SH 121 to US 85) – Three-Year Data Trend Analysis

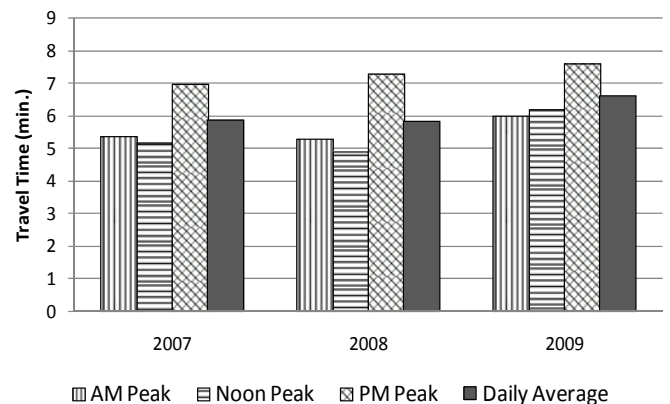
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time increased at the rate of +21.79% per year
- The WB Daily Average Travel Time increased at the rate of +12.86% per year
- The Annual Cost of Congestion increased at the rate of +392.94% per year
- The Annual Vehicle Hours of Delay increased at the rate of +314.02% per year

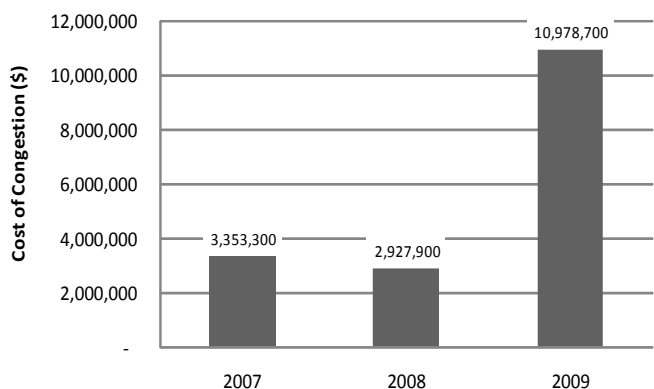
Average Travel Time (EB Direction)



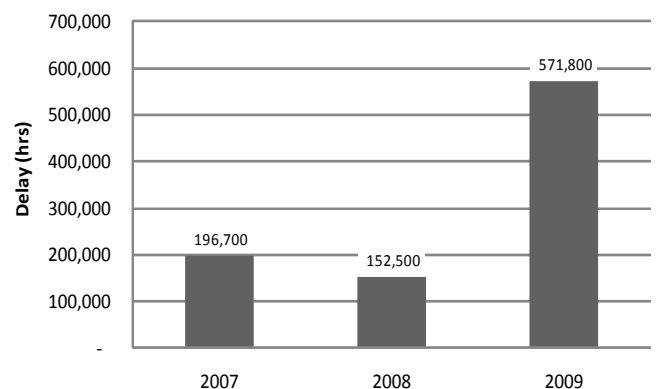
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

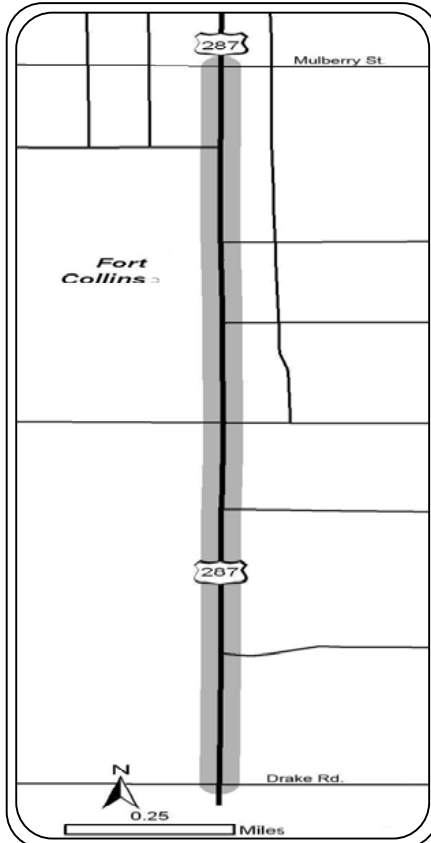


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 287- S. College Ave. (Drake Rd. to Mulberry St.) – Travel Time Report

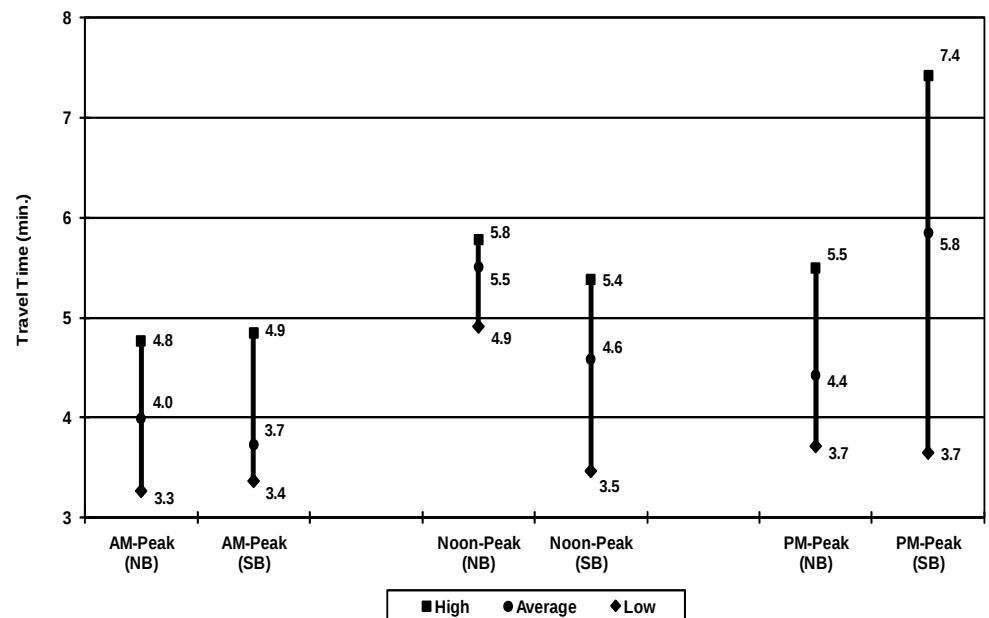
Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are generally heavier in the northbound direction during the morning peak period and southbound in the afternoon peak period. Congestion primarily occurs approaching Mulberry Street, Drake, and Prospect Roads. Travel time variability for northbound and southbound directions in the peak periods varies between 18 and 100 percent. This data was collected in April 2009.



Corridor Characteristics		Travel Rate Index	AM NB—1.01
Corridor Length	2.0 Miles		AM SB—1.07
Facility Type	Arterial – Urban		PM NB—1.12
Speed Limit	40 mph		PM SB—1.67
CDOT Region(s)	Region 4	Annual Vehicle Hours of Delay	566,400
Corridor Measures		Annual Person Hours of Delay	736,300
Traffic Count per Day	Avg: 46,900	Annual Congestion Costs	\$11,780,500
v/c Ratio	.68 - .82		

Travel Time Variability by Time Period for April 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.30 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute - June 2009)

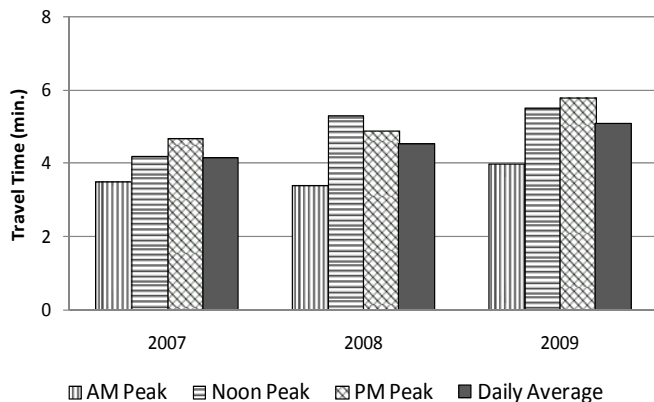
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 287- S. College Ave. (Drake Rd. to Mulberry St.) – Three-Year Data Trend Analysis

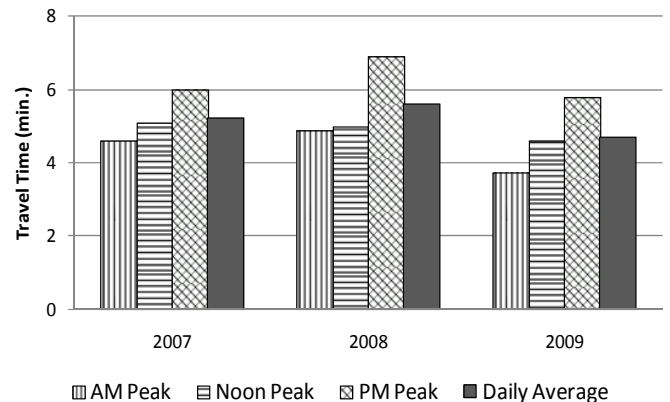
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time increased at the rate of +23.48% per year
- The SB Daily Average Travel Time decreased at the rate of -9.60% per year
- The Annual Cost of Congestion increased at the rate of +56.11% per year
- The Annual Vehicle Hours of Delay increased at the rate of +30.22% per year

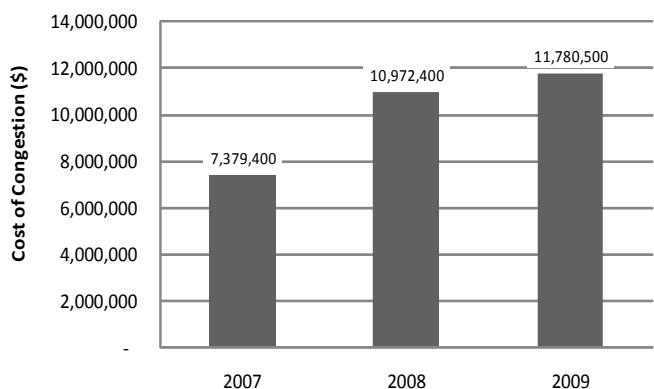
Average Travel Time (NB Direction)



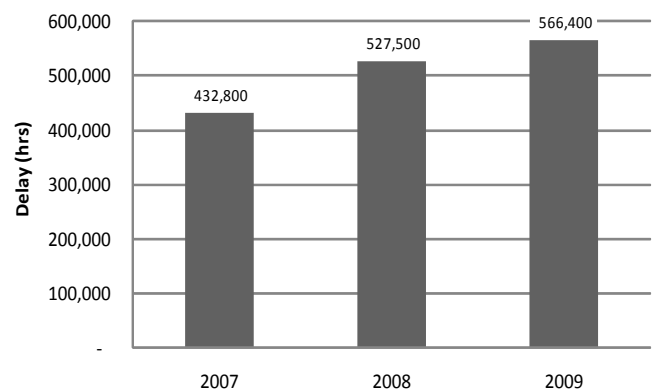
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

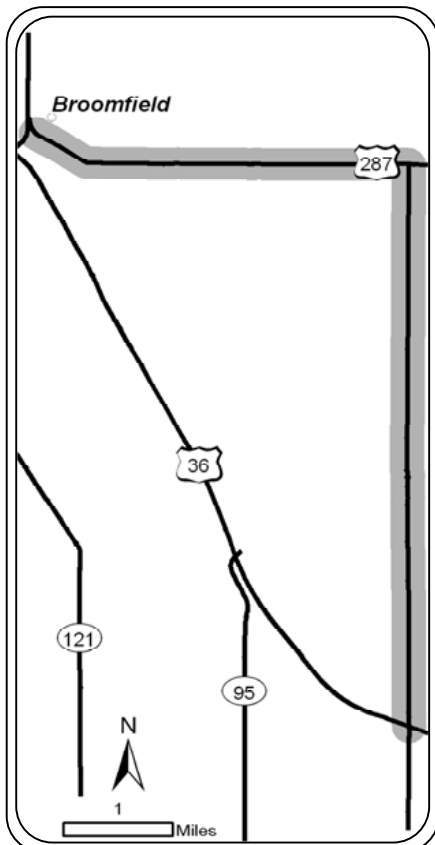


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 287 (US 36 to Nickel St.) – Travel Time Report

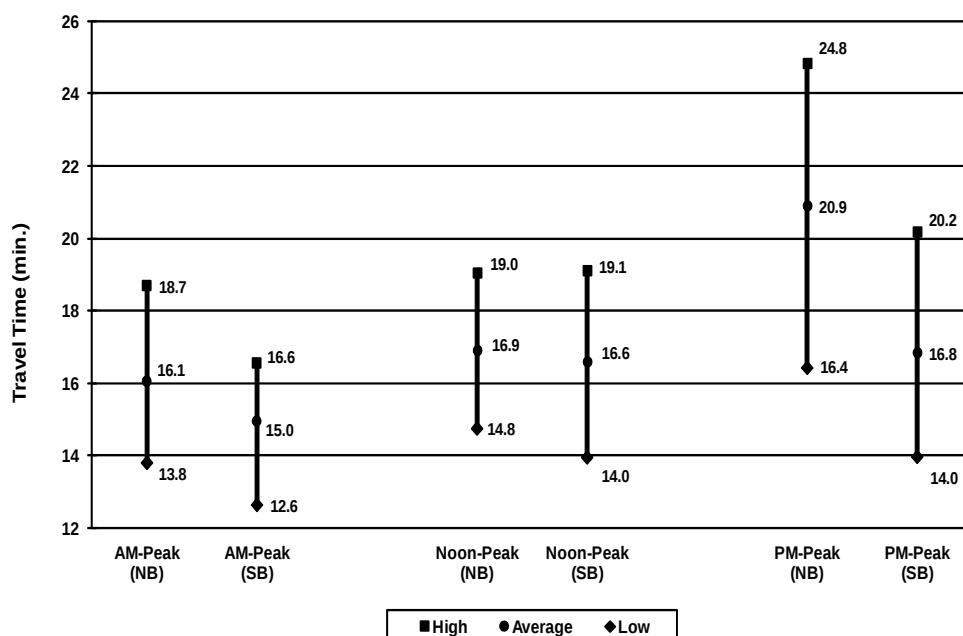
Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are generally heavier in southbound direction during the morning peak period and northbound during the afternoon peak period. Congestion occurs throughout the corridor but is at its worst approaching 84th Avenue, 120th Avenue and Lowell Boulevard. Travel time variability for northbound and southbound directions in the peak periods varies between 28 and 51 percent. This data was collected in June 2009.



Corridor Characteristics		Travel Rate Index	AM NB—1.07
Corridor Length	9.3 Miles		AM SB—1.11
Facility Type	Freeway/Arterial – Urban/Rural		PM NB—1.39
Speed Limit	30 – 55 mph		PM SB—1.24
CDOT Region(s)	Region 4 & Region 6	Annual Vehicle Hours of Delay	736,000
Corridor Measures		Annual Person Hours of Delay	934,700
Traffic Count per Day	Avg: 30,500 (23,600 – 37,900)	Annual Congestion Costs	\$14,955,000
v/c Ratio	.73 - 1.05		

Travel Time Variability by Time Period for June 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.27 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute - June 2009)

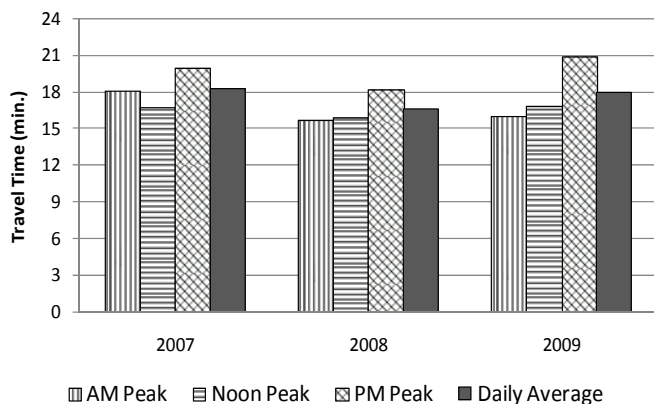
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 287 (US 36 to Nickel St.) – Three-Year Data Trend Analysis

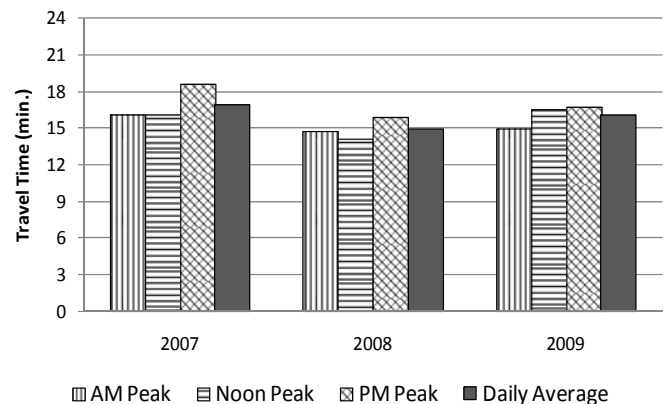
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time decreased at the rate of -1.95% per year
- The SB Daily Average Travel Time decreased at the rate of -4.98% per year
- The Annual Cost of Congestion decreased at the rate of -15.47% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -30.66% per year

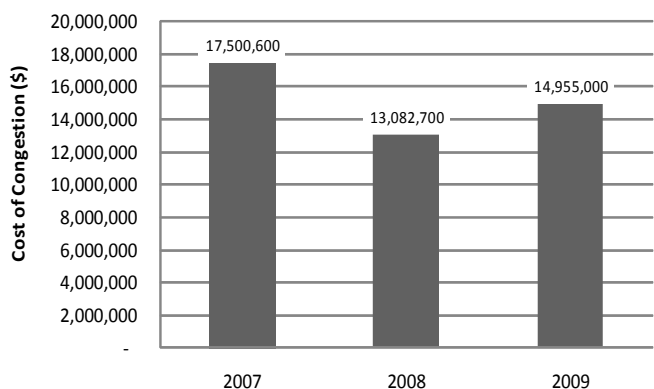
Average Travel Time (NB Direction)



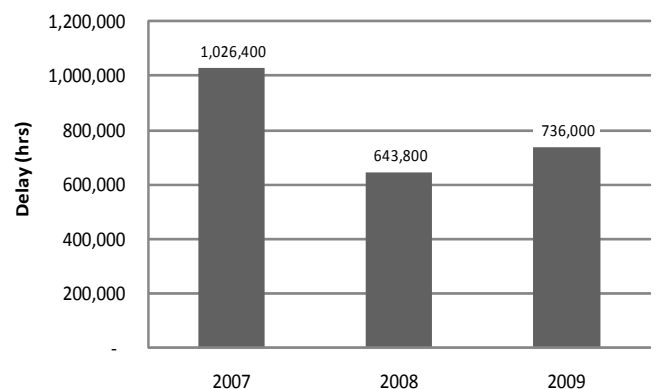
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

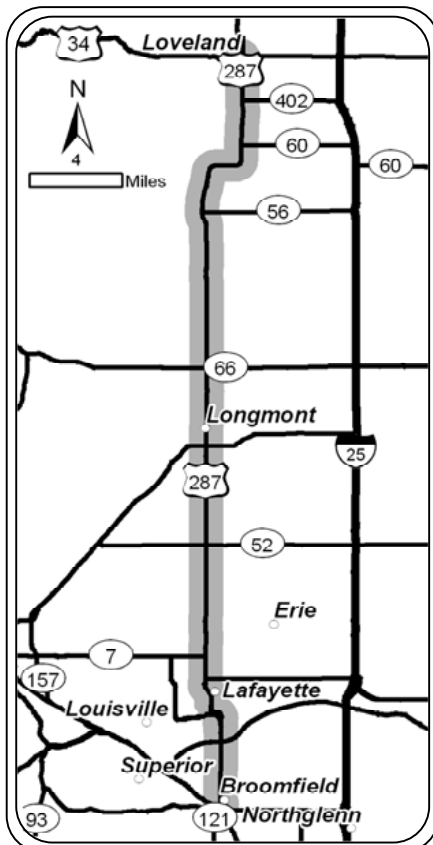


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 287 (Midway Blvd. to US 34) – Travel Time Report

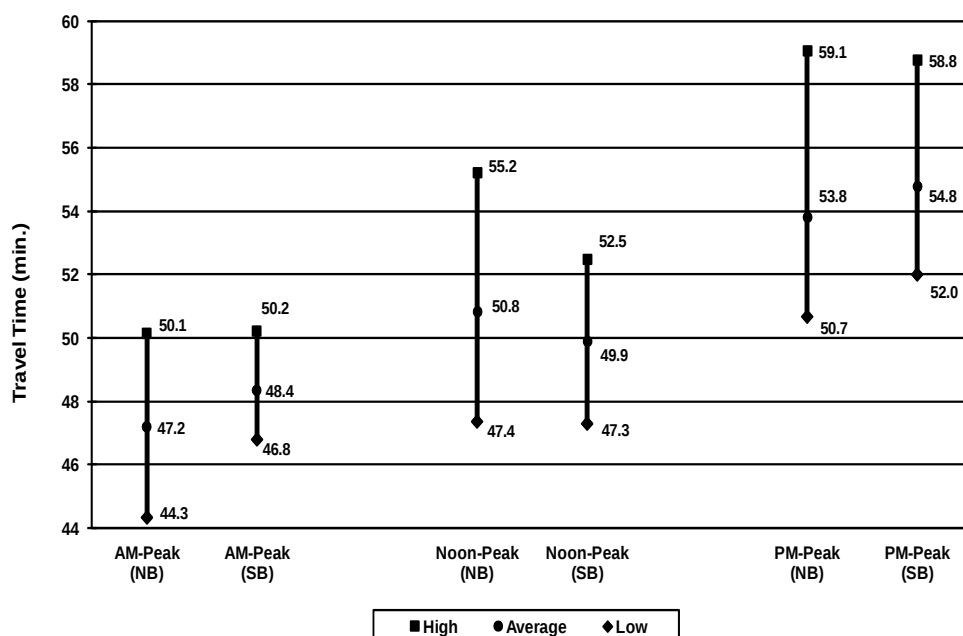
Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are generally heavier in the southbound directions in the morning peak period and northbound in the afternoon peak period. Congestion occurs throughout the corridor but is at its worst approaching Midway Boulevard, Baseline Road, SH-119, and US-34. Travel time variability for northbound and southbound directions in the peak periods varies between 7 and 17 percent. This data was collected in June 2009.



Corridor Characteristics		Travel Rate Index	AM NB—0.99
Corridor Length	35.2 Miles		AM SB—0.99
Facility Type	Freeway/Arterial – Urban/Rural		PM NB—1.13
Speed Limit	30 – 55 mph		PM SB—1.13
CDOT Region(s)	Region 4 & Region 6	Annual Vehicle Hours of Delay	1,407,200
Corridor Measures		Annual Person Hours of Delay	1,716,800
Traffic Count per Day	Avg: 30,900 (23,500 – 39,000)	Annual Congestion Costs	\$27,468,100
v/c Ratio	.44 - 1.12		

Travel Time Variability by Time Period for June 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.22 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

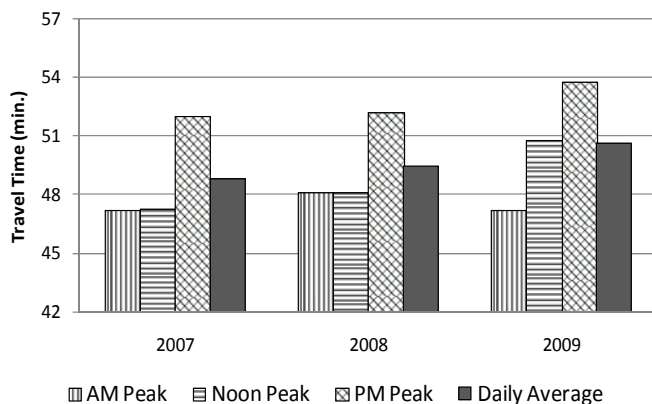
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 287 (Midway Blvd. to US 34) – Three-Year Data Trend Analysis

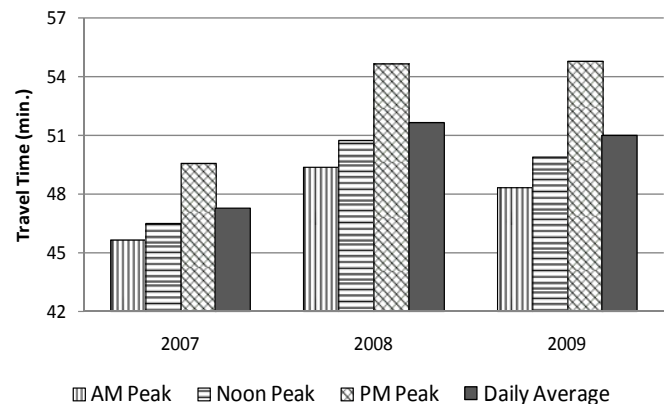
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time increased at the rate of +3.63% per year
- The SB Daily Average Travel Time increased at the rate of +7.80% per year
- The Annual Cost of Congestion increased at the rate of +32.20% per year
- The Annual Vehicle Hours of Delay increased at the rate of +16.53% per year

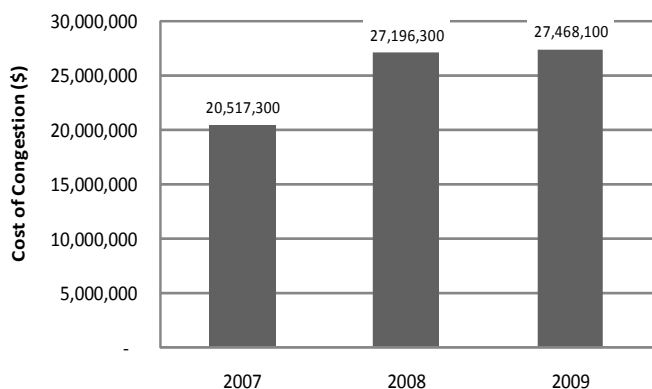
Average Travel Time (NB Direction)



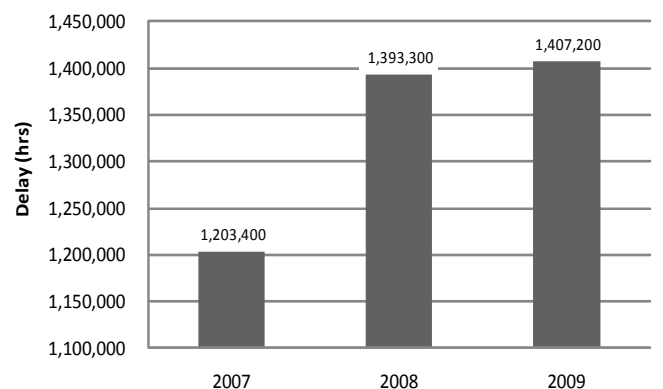
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

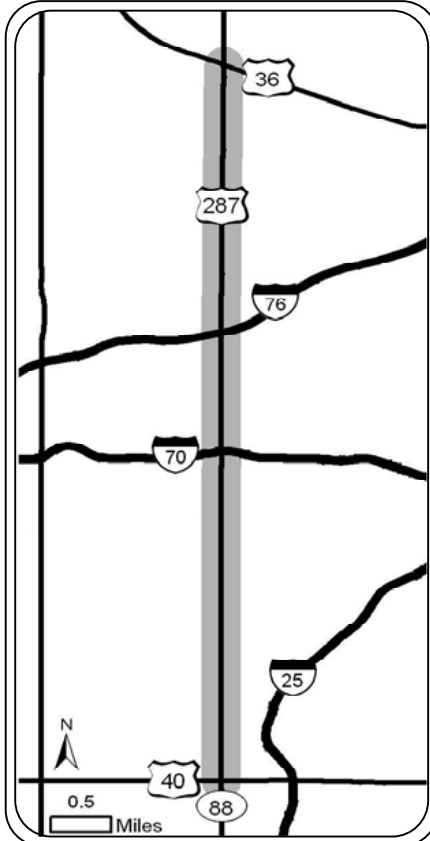


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 287 - Federal Blvd. (US 40 to US 36) – Travel Time Report

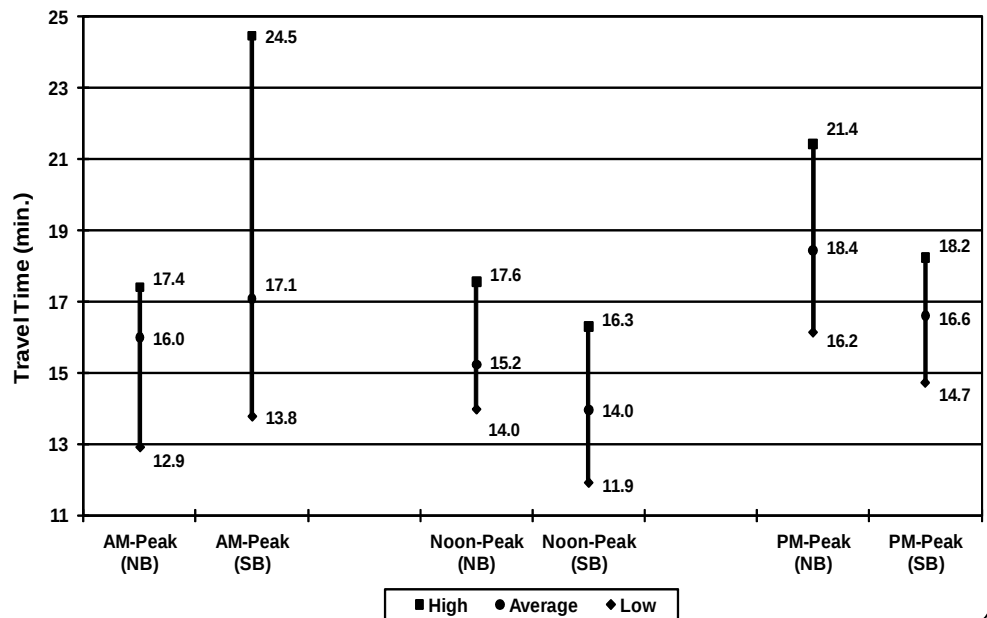
Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the southbound direction during the morning peak period and northbound in the afternoon peak period. Congestion primarily occurs approaching 29th, 38th, 64th, and 72nd Avenues, as well as Speer Boulevard. Travel time variability for northbound and southbound directions in the peak periods varies between 24 and 78 percent. This data was collected in October and November 2009.



Corridor Characteristics		Travel Rate Index	AM NB—1.11
Corridor Length	6.8 Miles		AM SB—1.27
Facility Type	Arterial - Urban		PM NB—1.29
Speed Limit	35 - 45 mph		PM SB—1.23
CDOT Region(s)	Region 6	Annual Vehicle Hours of Delay	767,800
Corridor Measures		Annual Person Hours of Delay	975,100
Traffic Count per Day	Avg: 35,500 (30,500 – 40,400)	Annual Congestion Costs	\$15,602,300
v/c Ratio	.66 – .99		

Travel Time Variability by Time Period for October and November 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.27 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute - June 2009)

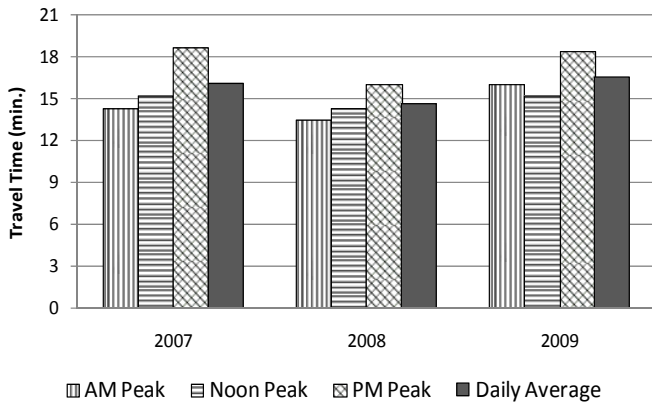
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 287 - Federal Blvd. (US 40 to US 36) – Three-Year Data Trend Analysis

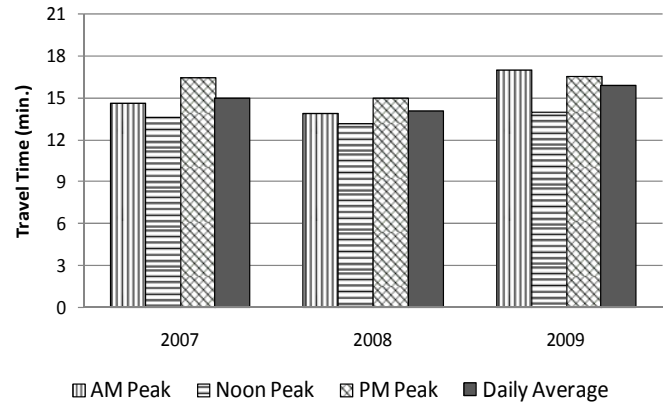
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time increased at the rate of +3.00% per year
- The SB Daily Average Travel Time increased at the rate of +6.40% per year
- The Annual Cost of Congestion increased at the rate of +7.45% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -12.10% per year

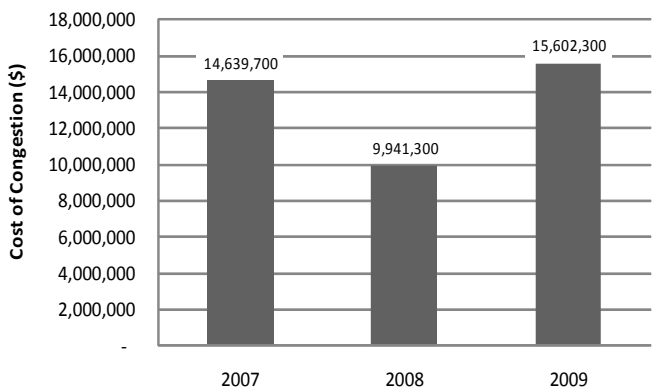
Average Travel Time (NB Direction)



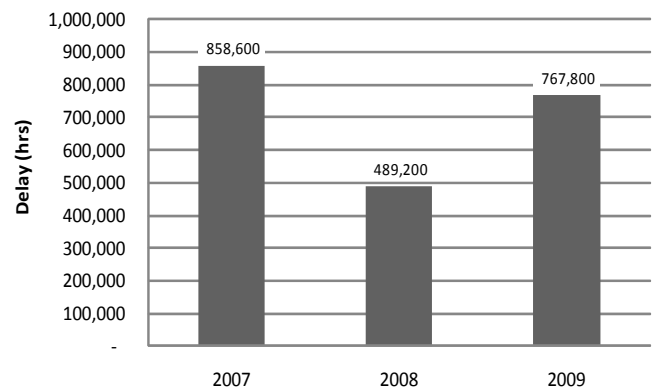
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

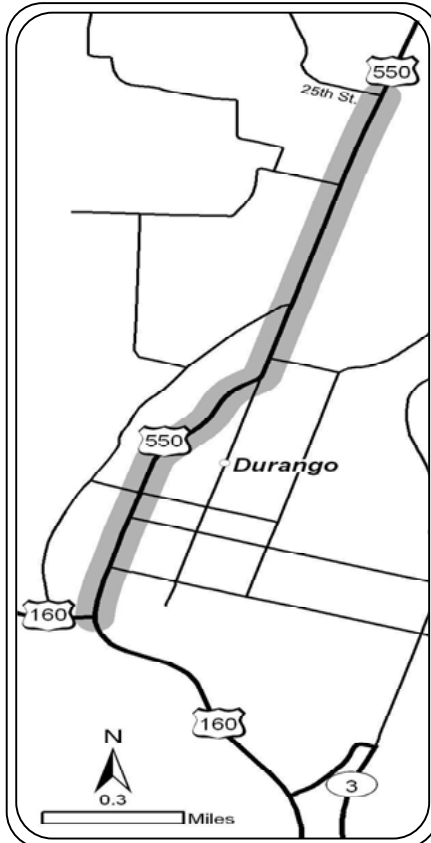


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 550 (US 160 North to 25th St.) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the southbound direction during the morning peak period and northbound in the afternoon peak period. Congestion primarily occurs approaching College Drive, Main, and 32nd Streets. Travel time variability for northbound and southbound directions in the peak periods varies between 26 and 219 percent. This data was collected in June 2009.



Corridor Characteristics

Corridor Length	1.7 Miles
Facility Type	Arterial – Urban/Rural
Speed Limit	35 mph

Travel Rate Index

AM NB—1.04

AM SB—1.17

PM NB—1.38

PM SB—1.57

CDOT Region(s)	Region 5
----------------	----------

Annual Vehicle Hours of Delay

246,000

Corridor Measures

Traffic Count per Day	Avg: 31,200
v/c Ratio	.78 - .93

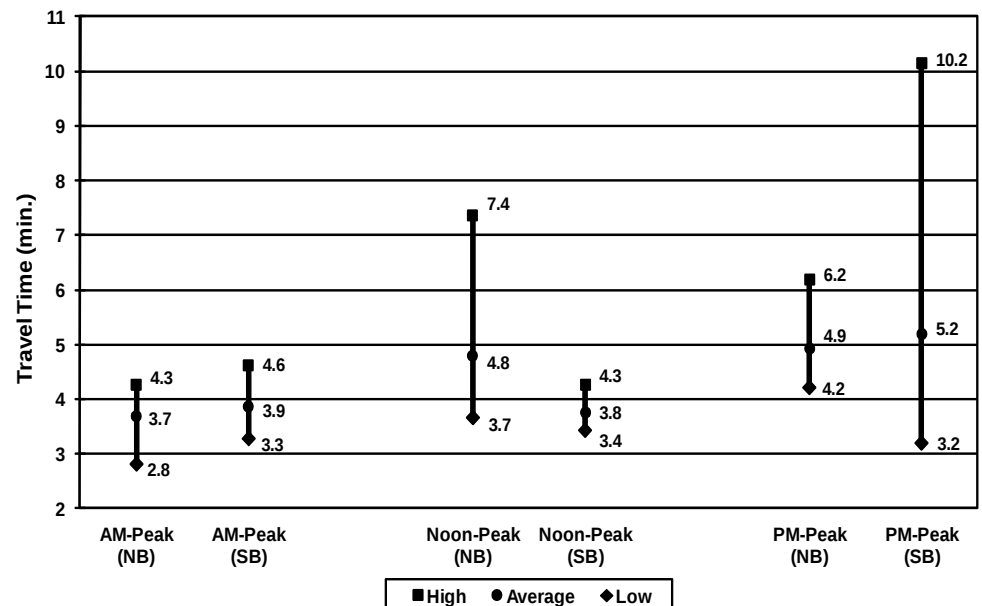
Annual Person Hours of Delay

329,600

Annual Congestion Costs

\$5,273,400

Travel Time Variability by Time Period for June 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.34 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute - June 2009)

Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.



Year 2009

Page 1 of 2

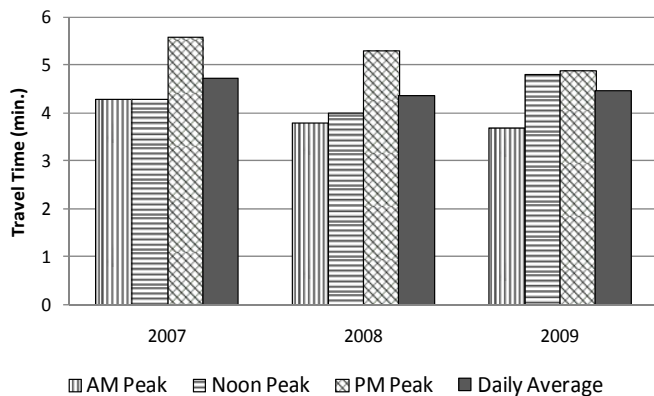


US 550 (US 160 North to 25th St.) – Three-Year Data Trend Analysis

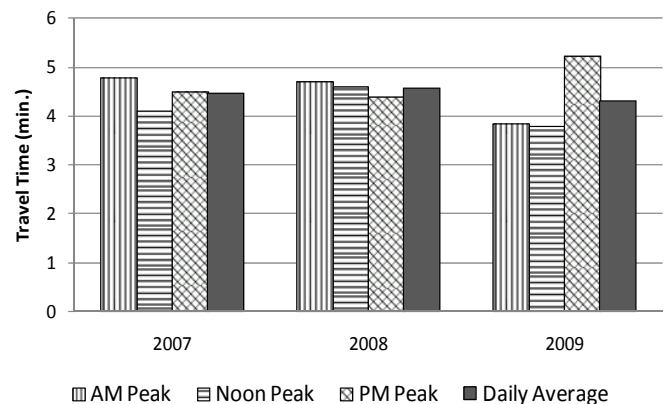
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time decreased at the rate of -5.73% per year
- The SB Daily Average Travel Time decreased at the rate of -3.74% per year
- The Annual Cost of Congestion decreased at the rate of -31.95% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -48.07% per year

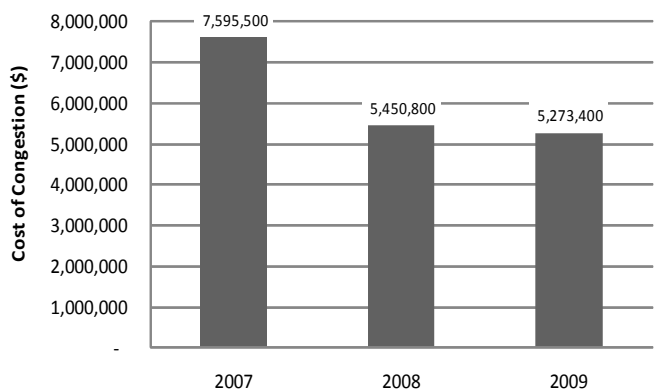
Average Travel Time (NB Direction)



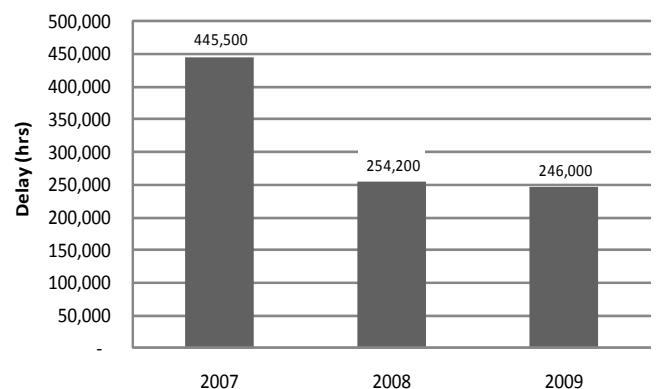
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

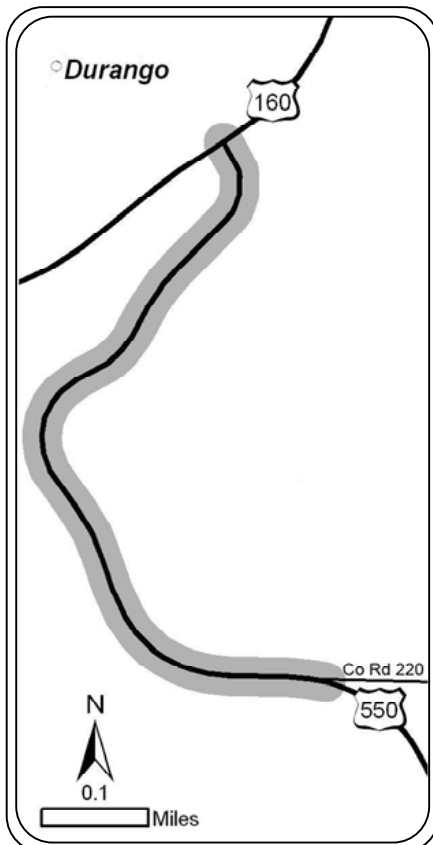


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 550 (CR 220 to US 160 South) – Travel Time Report

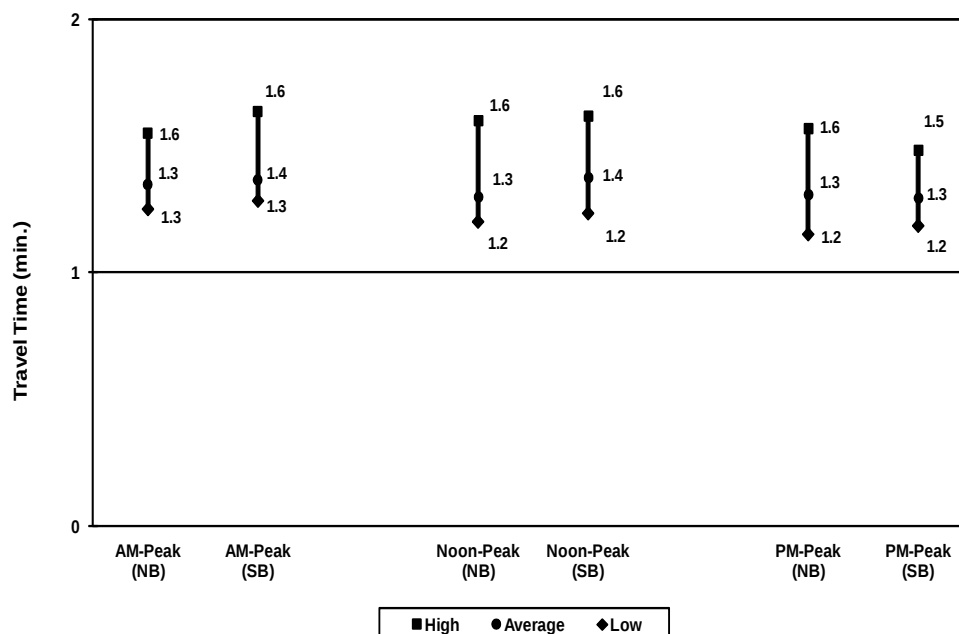
Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the northbound direction during the morning peak period and southbound in the afternoon peak period. Congestion primarily occurs approaching the US-160/SH-550 junction. Travel time variability for northbound and southbound directions in the peak periods varies between 23 and 33 percent. This data was collected in June 2009.



Corridor Characteristics		Travel Rate Index	AM NB—1.12
Corridor Length	0.80 Miles		AM SB—1.11
Facility Type	Arterial - Rural		PM NB—1.09
Speed Limit	35 - 45 mph		PM SB—1.05
CDOT Region(s)	Region 5	Annual Vehicle Hours of Delay	18,600
Corridor Measures		Annual Person Hours of Delay	23,100
Traffic Count per Day	Avg: 8,100	Annual Congestion Costs	\$369,200
v/c Ratio	.34 - .64		

Travel Time Variability by Time Period for June 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.24 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute - June 2009)

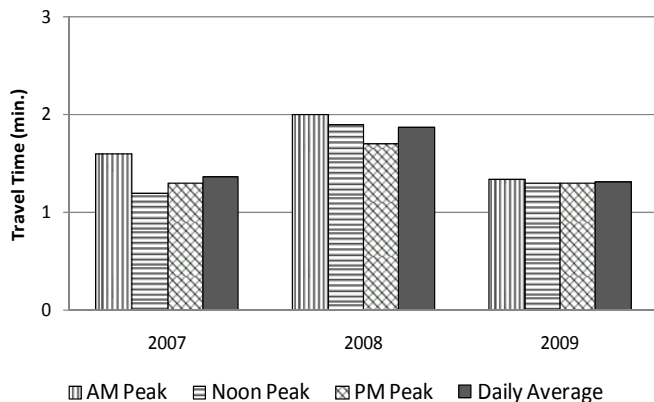
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 550 (CR 220 to US 160 South) – Three-Year Data Trend Analysis

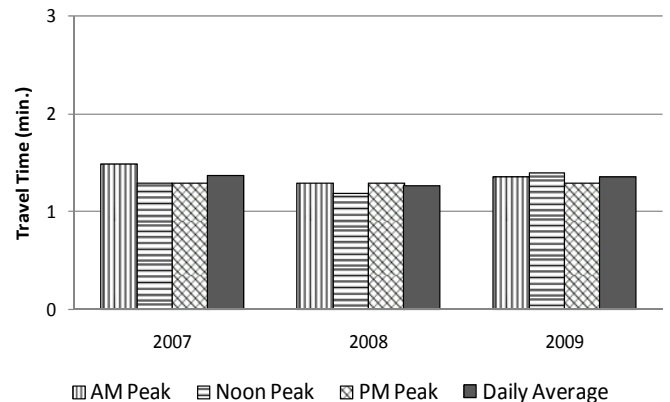
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time decreased at the rate of -3.33% per year
- The SB Daily Average Travel Time decreased at the rate of -0.88% per year
- The Annual Cost of Congestion decreased at the rate of -57.19% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -65.12% per year

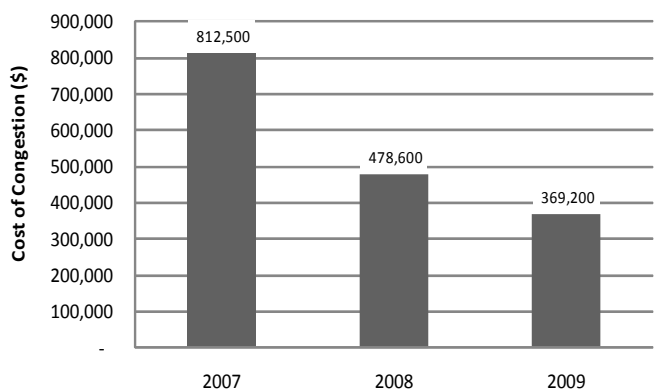
Average Travel Time (NB Direction)



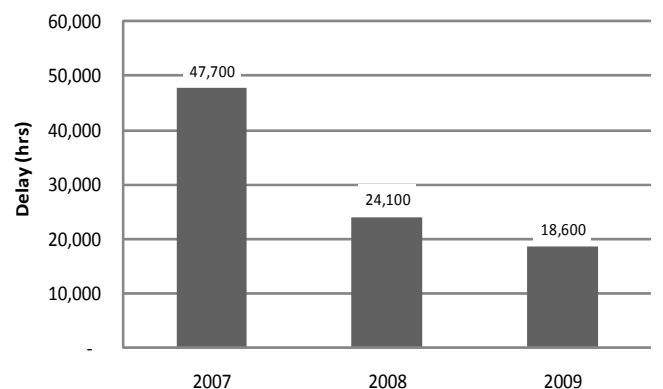
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

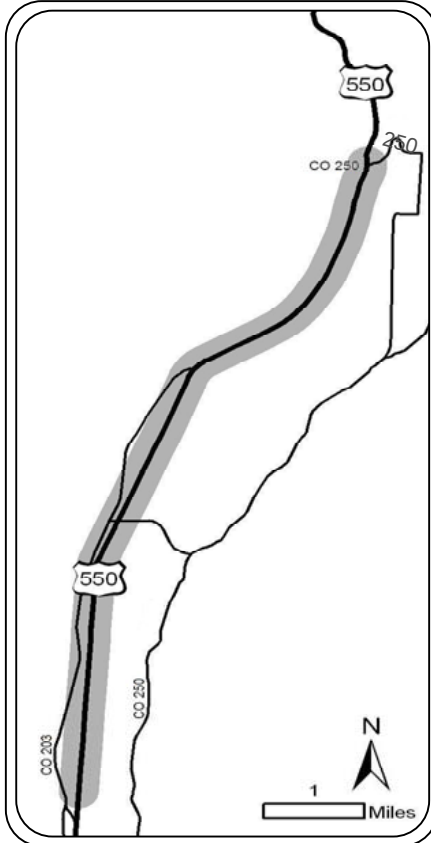


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

US 550 (CR 203A to CR 250) – Travel Time Report

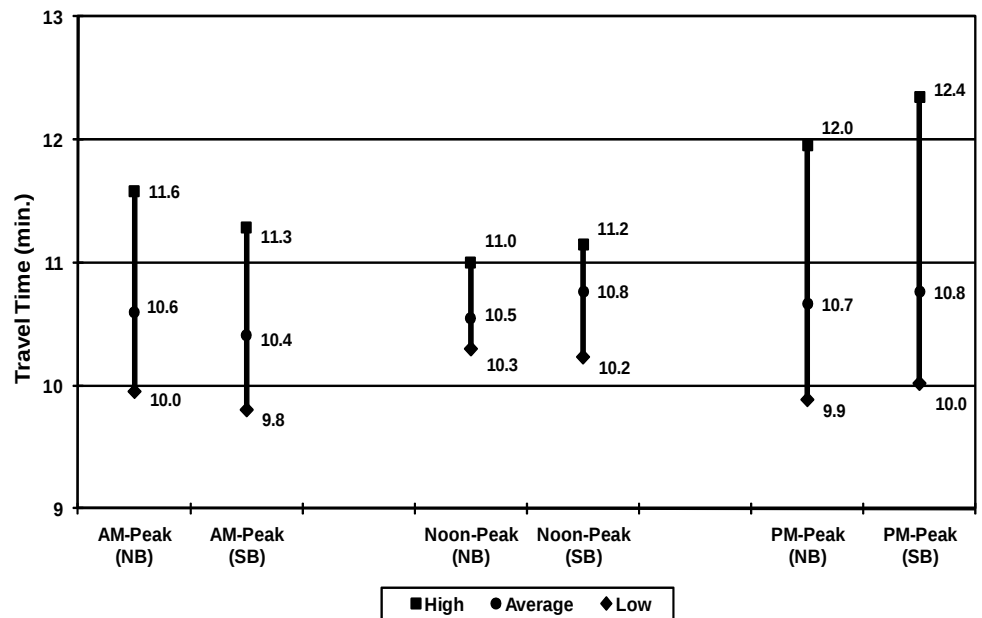
Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are generally equally distributed between northbound and southbound directions throughout the day, however volumes near County Road 250 are heavier northbound in the morning peak and southbound in the afternoon peak. Travel time variability for northbound and southbound directions in the peak periods varies between 7 and 24 percent. This data was collected in June and September 2009.



Corridor Characteristics		Travel Rate Index	AM NB—1.06
Corridor Length	9.9 Miles		AM SB—1.04
Facility Type	Arterial – Urban/Rural		PM NB—1.06
Speed Limit	35 – 60 mph		PM SB—1.07
CDOT Region(s)	Region 5	Annual Vehicle Hours of Delay	7,900
Corridor Measures		Annual Person Hours of Delay	10,000
Traffic Count per Day	Avg: 9,700 (5,300 – 13,300)	Annual Congestion Costs	\$159,600
v/c Ratio	.39 - .85		

Travel Time Variability by Time Period for June and September 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.27 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute - June 2009)

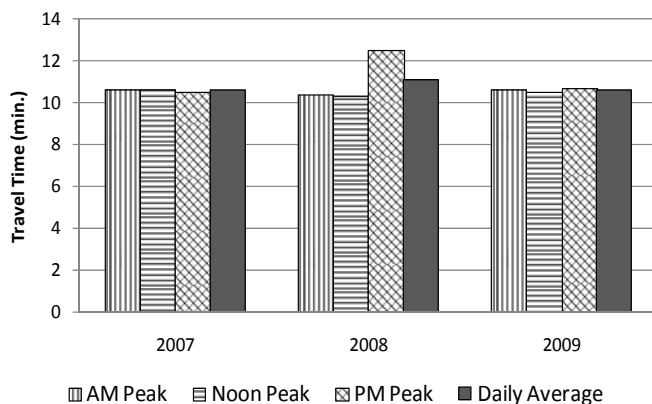
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

US 550 (CO Rd 203A to CO Rd 250) – Three-Year Data Trend Analysis

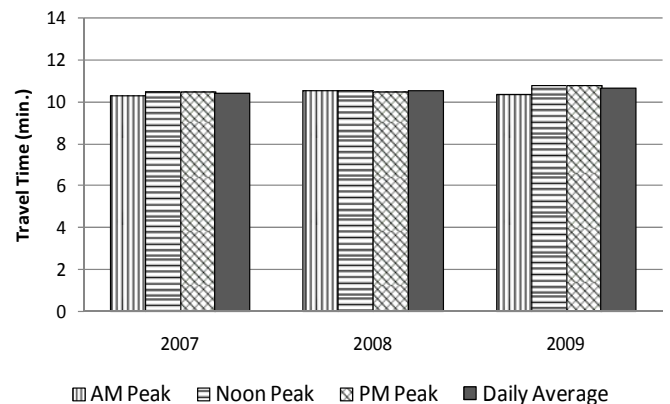
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time increased at the rate of +0.31% per year
- The SB Daily Average Travel Time increased at the rate of +2.26% per year
- The Annual Cost of Congestion decreased at the rate of -16.99% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -28.92% per year

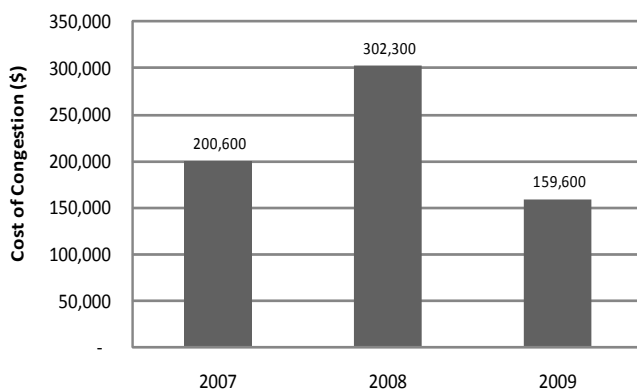
Average Travel Time (NB Direction)



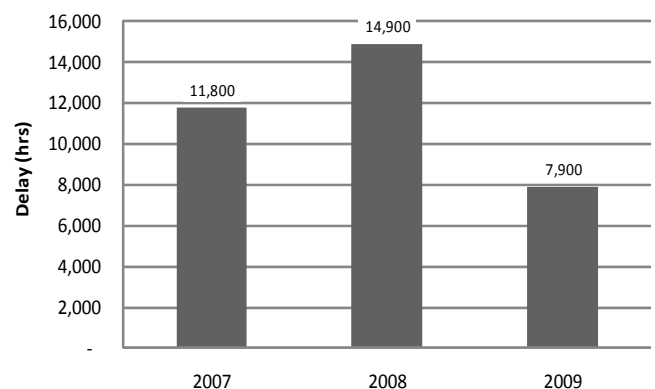
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

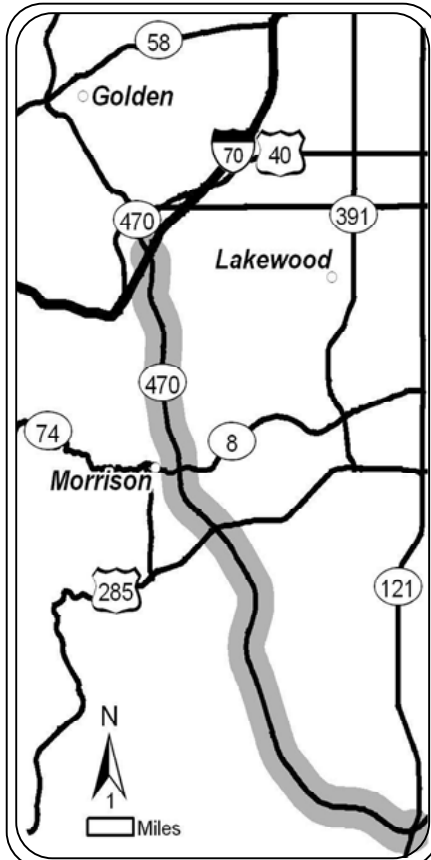


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

C-470 (SH 121 to I-70) – Travel Time Report

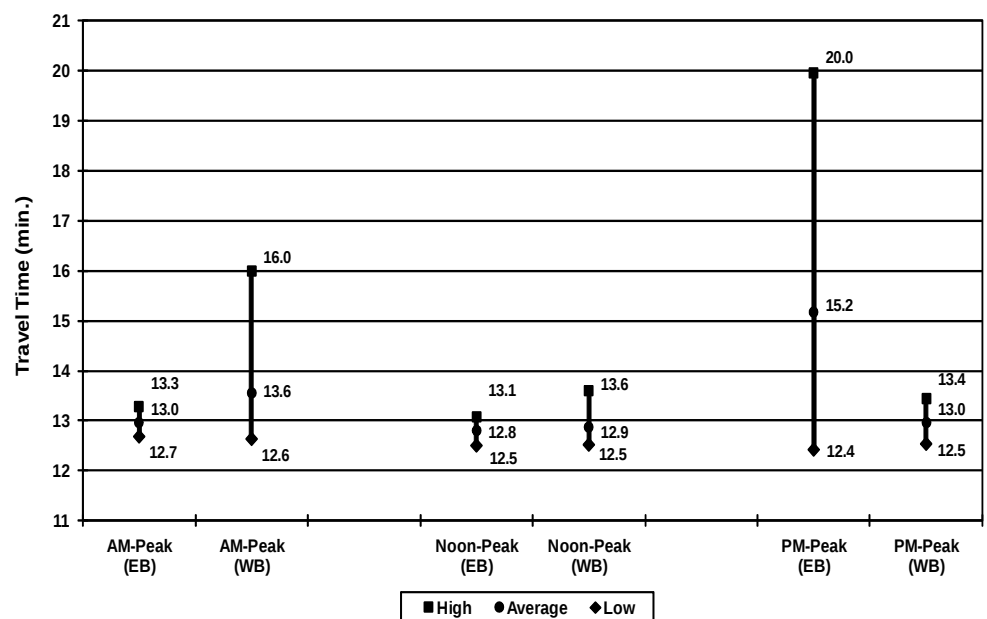
Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are generally heavier in the westbound direction during the morning peak period and eastbound in the afternoon peak period. Congestion primarily occurs approaching the US 285 interchange and Wadsworth Boulevard (SH121). Travel time variability for westbound and eastbound directions in the peak periods varies between 5 and 61 percent. This data was collected in May 2009.



Corridor Characteristics		Travel Rate Index	AM EB—1.03
Corridor Length	13.9 Miles		AM WB—1.08
Facility Type	Freeway - Urban		PM EB—1.21
Speed Limit	65 mph		PM WB—1.03
CDOT Region(s)	Region 6	Annual Vehicle Hours of Delay	238,800
Corridor Measures		Annual Person Hours of Delay	286,600
Traffic Count per Day	Avg: 64,400 (56,200 – 76,200)	Annual Congestion Costs	\$4,585,000
v/c Ratio	.59 – .96		

Travel Time Variability by Time Period for May 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.2 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

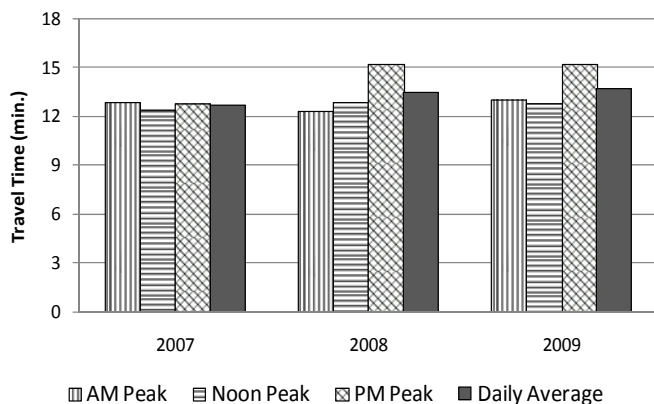
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

C-470 (SH 121 to I-70) – Three-Year Data Trend Analysis

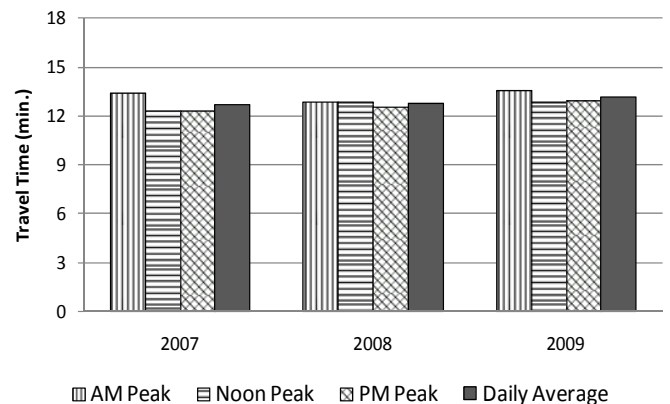
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time increased at the rate of +7.56% per year
- The WB Daily Average Travel Time increased at the rate of +3.96% per year
- The Annual Cost of Congestion increased at the rate of +4.23% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -6.64% per year

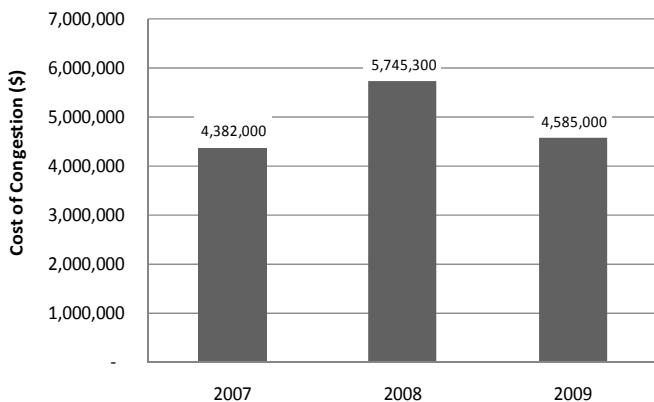
Average Travel Time (EB Direction)



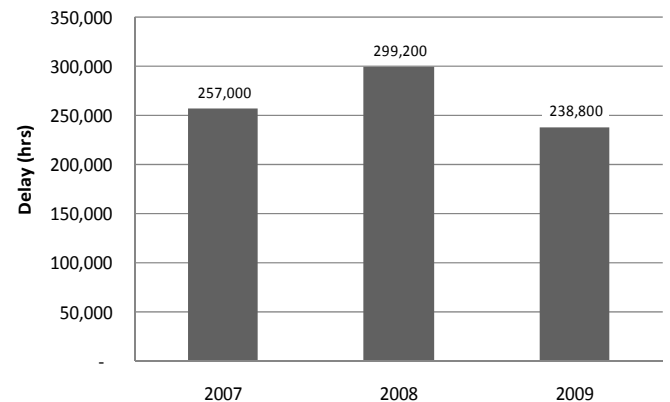
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

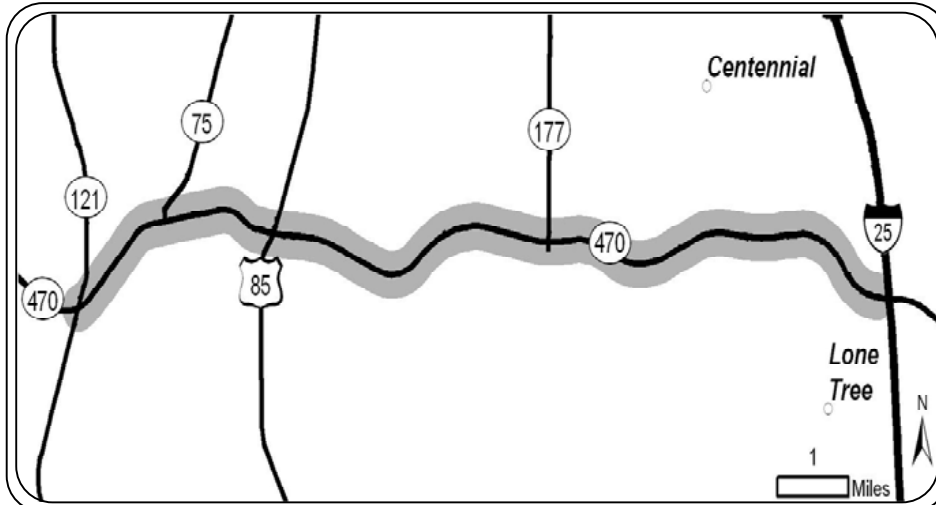


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

C-470 (SH 121 to I-25) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the eastbound direction during the morning peak period and westbound in the afternoon peak period. Congestion primarily occurs in the segment between US85 and Quebec Street. Travel time variability for westbound and eastbound directions in the peak periods varies between 4 and 80 percent. This data was collected in June 2009.



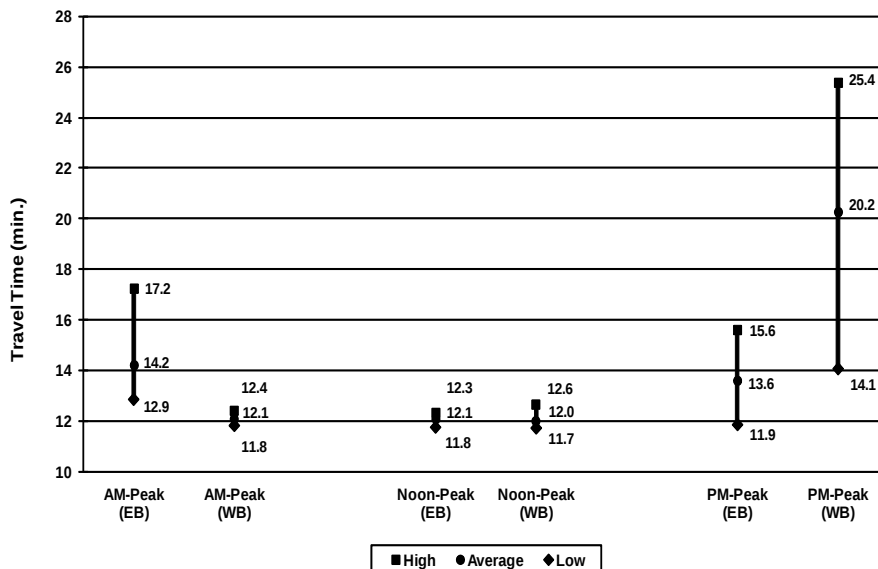
Corridor Characteristics

Corridor Length	11.5 Miles
Facility Type	Freeway - Urban
Speed Limit	65 mph
CDOT Region(s)	Region 6

Corridor Measures

Traffic Count per Day	Avg: 102,300 (80,500 – 117,900)
v/c Ratio	.86 - 1.09
Travel Rate Index	AM EB—1.17
	AM WB—0.96
	PM EB—1.12
	PM WB—1.61
Annual Vehicle Hours of Delay	1,121,000
Annual Person Hours of Delay	1,345,100
Annual Congestion Costs	\$21,522,400

Travel Time Variability by Time Period for June 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.20 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

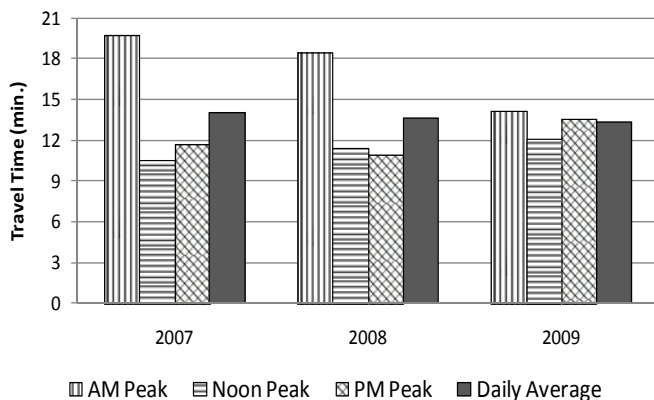
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

C-470 (SH 121 to I-25) – Three-Year Data Trend Analysis

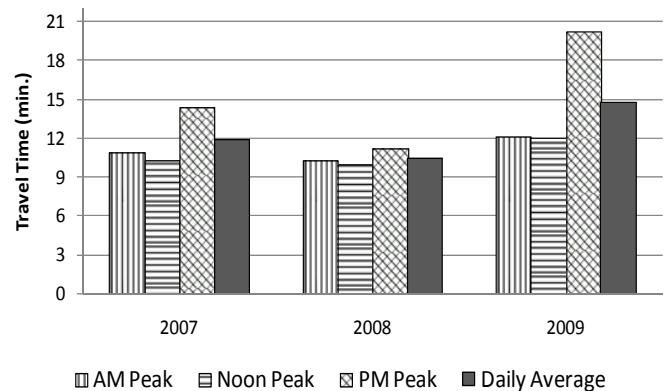
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time decreased at the rate of -5.01% per year
- The WB Daily Average Travel Time increased at the rate of +26.55% per year
- The Annual Cost of Congestion increased at the rate of +41.54% per year
- The Annual Vehicle Hours of Delay increased at the rate of +24.62% per year

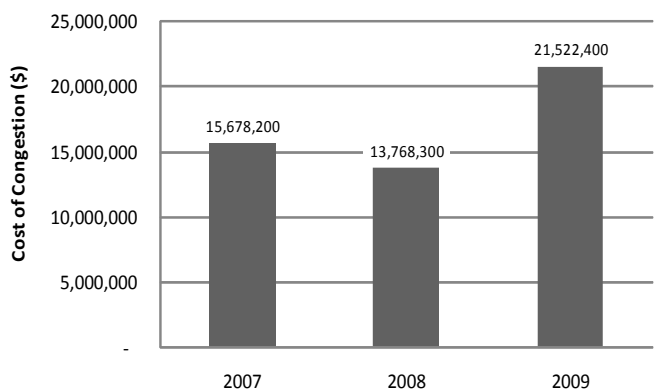
Average Travel Time (EB Direction)



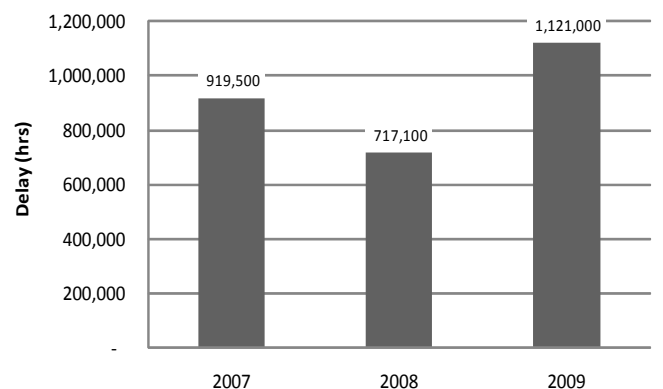
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

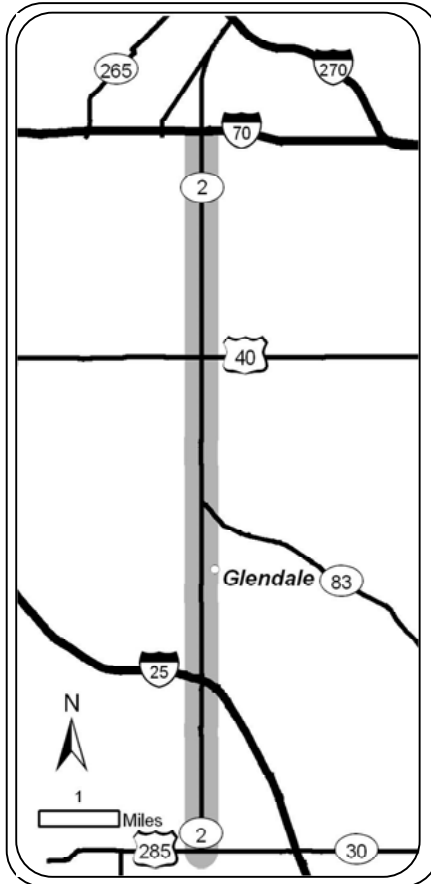


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

SH 2-Colorado Blvd. (US 285 to I-70) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are generally heavier in the southbound direction during the morning peak period and northbound in the afternoon peak period. Congestion occurs in several segments along the corridor such as between Montview Boulevard and 8th Avenue, Alameda and Mississippi Avenues, and Mexico and Evans Avenues. Travel time variability for northbound and southbound directions in the peak periods varies between 13 and 43 percent. This data was collected in April and May 2009.



Corridor Characteristics

Corridor Length	8.8 Miles
Facility Type	Arterial – Urban
Speed Limit	35 – 40 mph

Travel Rate Index

AM NB—0.98

AM SB—1.16

PM NB—1.30

PM SB—1.32

CDOT Region(s)	Region 6
----------------	----------

Annual Vehicle Hours of Delay

1,999,100

Corridor Measures

Traffic Count per Day	Avg: 42,300 (23,100 – 53,100)
-----------------------	----------------------------------

Annual Person Hours of Delay

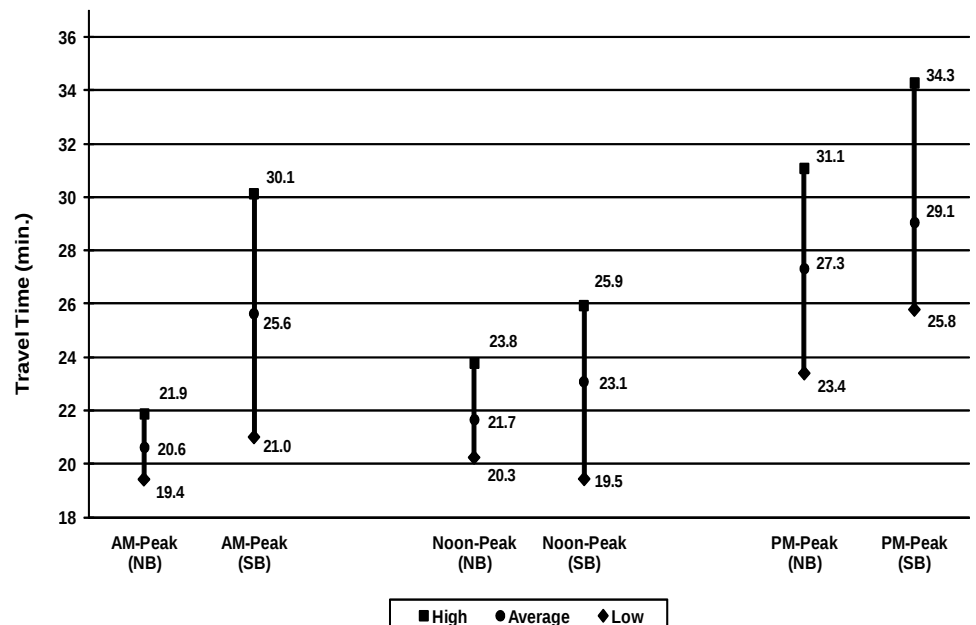
2,538,800

V/C Ratio	.49 – .95
-----------	-----------

Annual Congestion Costs

\$40,620,800

Travel Time Variability by Time Period for April and May 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.27 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.



Year 2009

Page 1 of 2

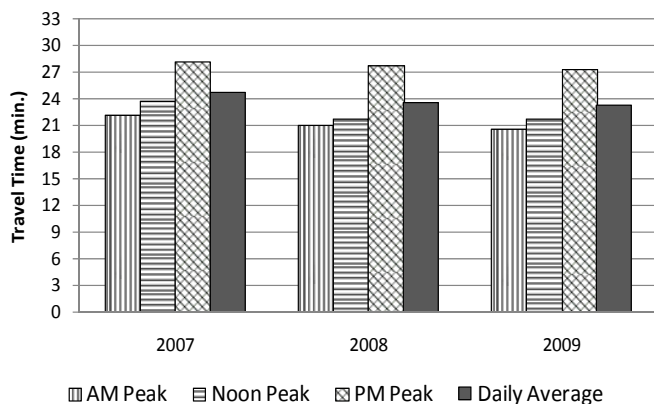


SH 2-Colorado Blvd. (US 285 to I-70) – Three-Year Data Trend Analysis

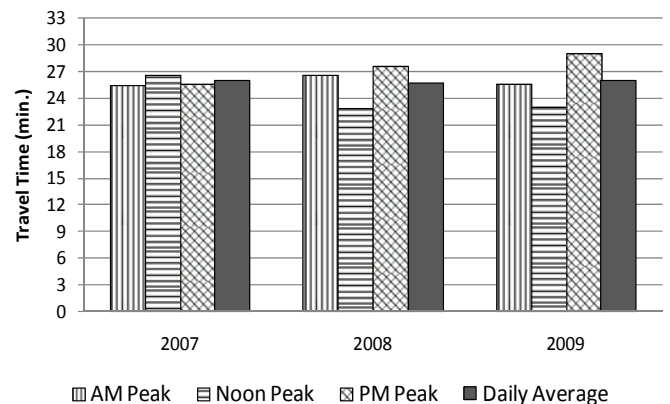
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time decreased at the rate of -6.08% per year
- The SB Daily Average Travel Time increased at the rate of +0.04% per year
- The Annual Cost of Congestion increased at the rate of +36.78% per year
- The Annual Vehicle Hours of Delay increased at the rate of +16.49% per year

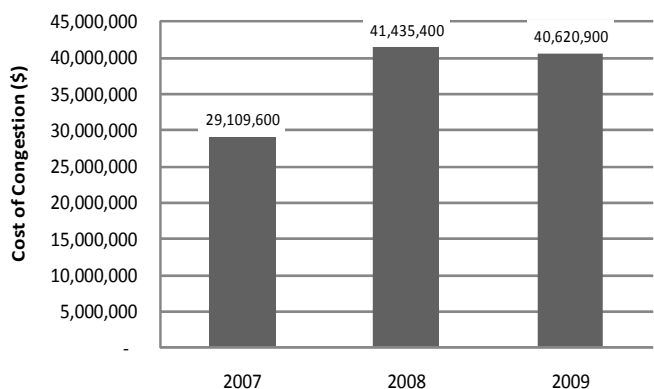
Average Travel Time (NB Direction)



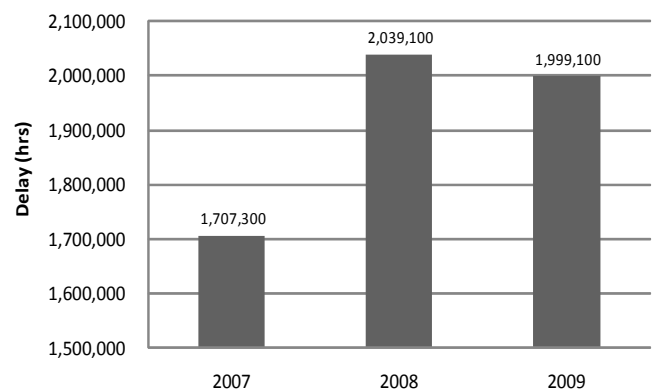
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

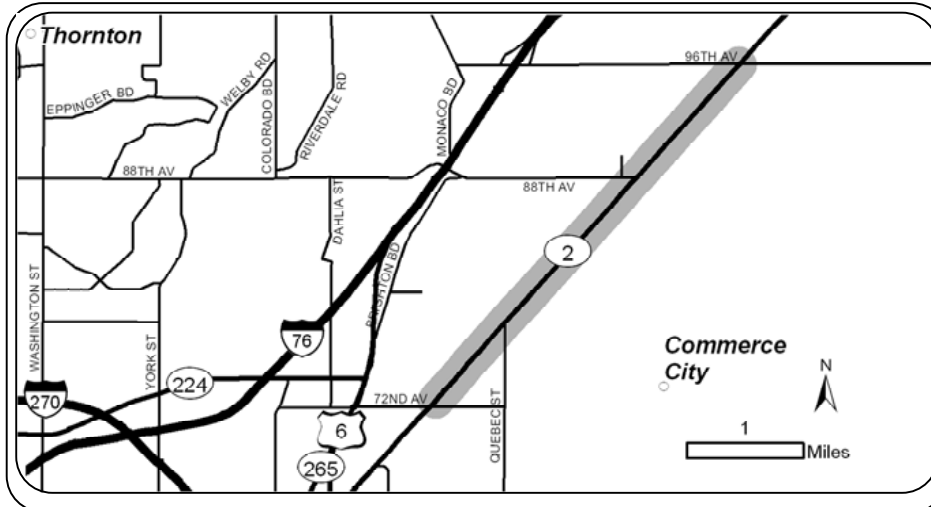


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

SH 2 (72nd Ave to 96th Ave) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the southbound direction during the morning peak period and northbound in the afternoon peak period. Congestion primarily occurs near 72nd Avenue, this is compounded by the high number of heavy vehicles that use this corridor. Travel time variability for northbound and southbound directions in the peak periods varies between 17 and 74 percent. This data was collected in April 2009.



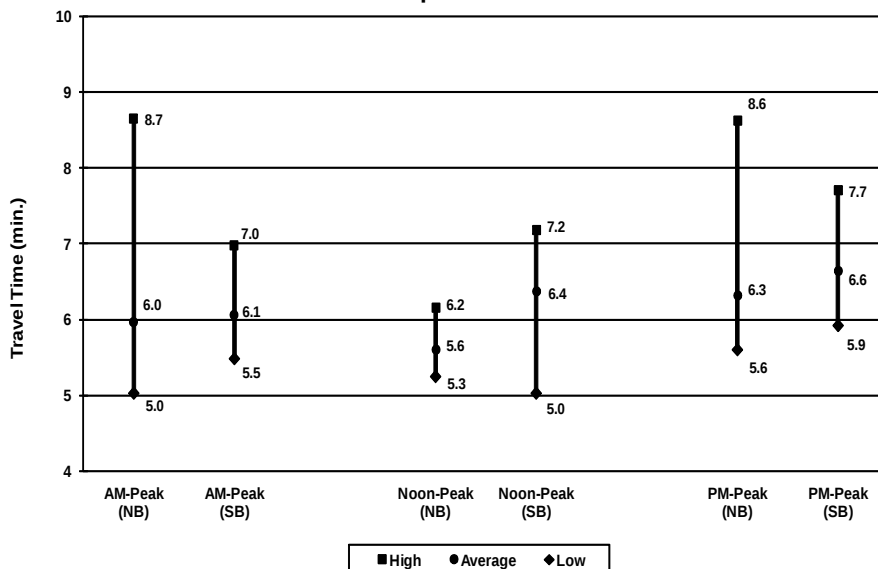
Corridor Characteristics

Corridor Length	4.0 Miles
Facility Type	Arterial - Urban
Speed Limit	40-55 mph
CDOT Region(s)	Region 6

Corridor Measures

Traffic Count per Day	Avg: 13,500
v/c Ratio	.74 - .92
Travel Rate Index	AM NB—1.13
	AM SB—1.10
	PM NB—1.19
	PM SB—1.21
Annual Vehicle Hours of Delay	80,000
Annual Person Hours of Delay	101,500
Annual Congestion Costs	\$1,624,700

Travel Time Variability by Time Period for April 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.27 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

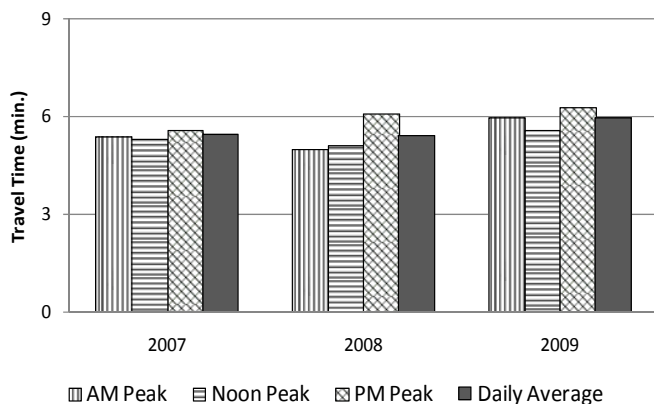
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

SH 2 (72nd Ave to 96th Ave) – Three-Year Data Trend Analysis

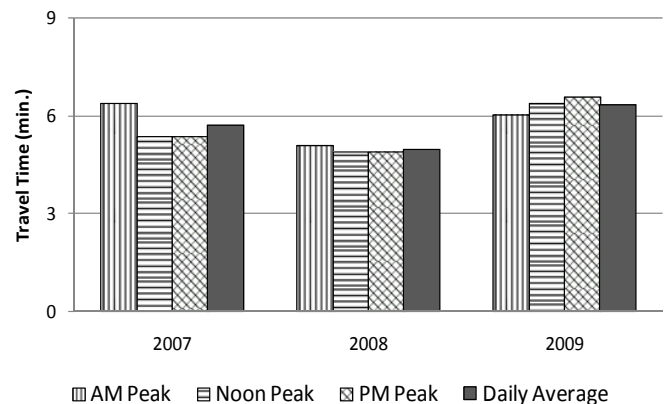
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time increased at the rate of +9.80% per year
- The SB Daily Average Travel Time increased at the rate of +11.54% per year
- The Annual Cost of Congestion increased at the rate of +35.99% per year
- The Annual Vehicle Hours of Delay increased at the rate of +14.46% per year

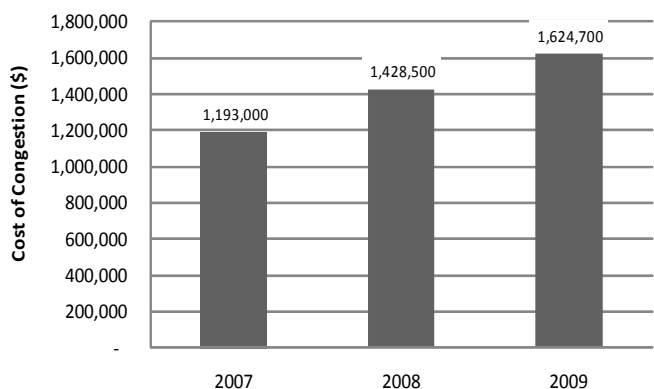
Average Travel Time (NB Direction)



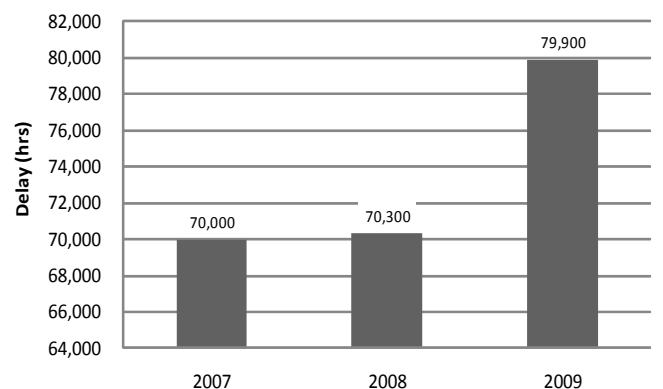
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

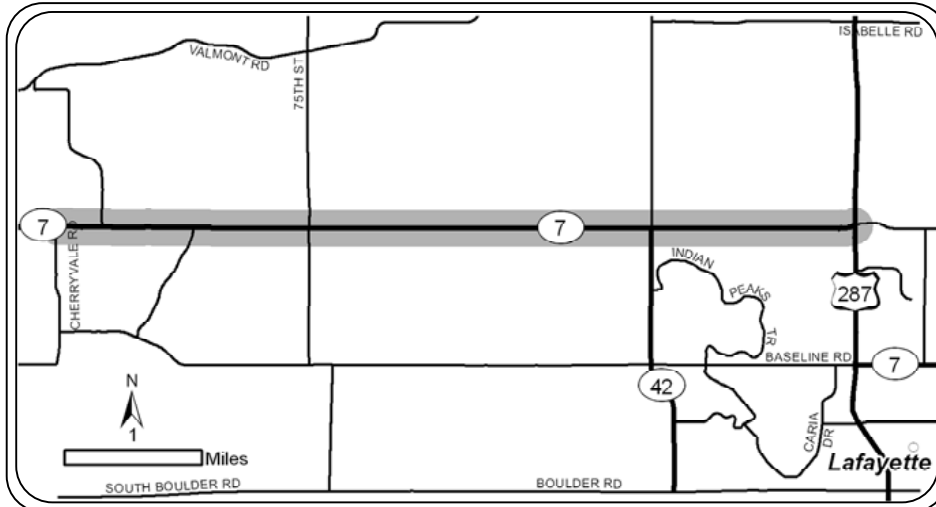


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

SH 7-Arapahoe Rd. (Cherryvale Rd to US 287) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the westbound direction during the morning peak period and eastbound in the afternoon peak period. Congestion primarily occurs approaching Cherryvale Road, 95th Street, and US287. Travel time variability for westbound and eastbound directions in the peak periods varies between 16 and 54 percent. This data was collected in April 2009.



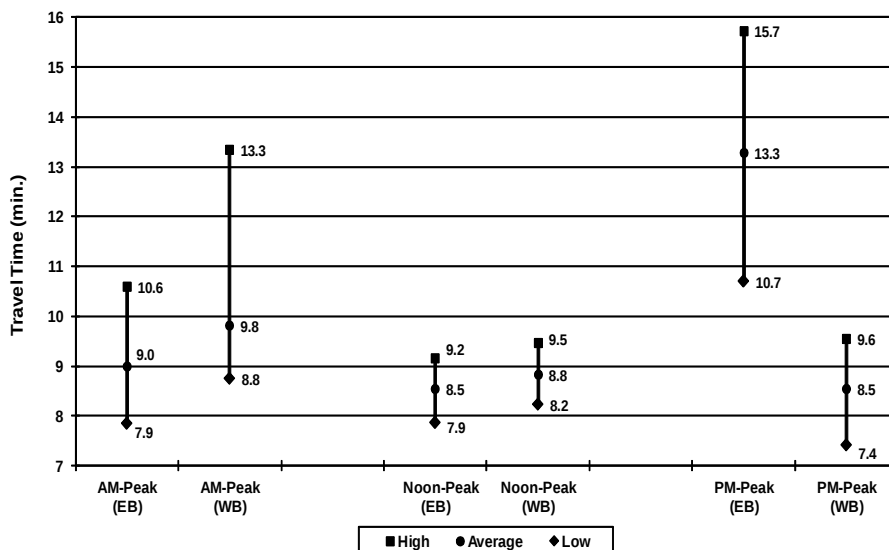
Corridor Characteristics

Corridor Length	5.9 Miles
Facility Type	Arterial – Urban/Rural
Speed Limit	40 - 50 mph
CDOT Region(s)	Region 4

Corridor Measures

Traffic Count per Day	Avg: 18,900 (16,700 – 20,900)
v/c Ratio	.96 – 1.13
Travel Rate Index	AM EB—1.02
	AM WB—1.21
	PM EB—1.51
	PM WB—1.05
Annual Vehicle Hours of Delay	215,600
Annual Person Hours of Delay	312,600
Annual Congestion Costs	\$5,002,000

Travel Time Variability by Time Period for April 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.45 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

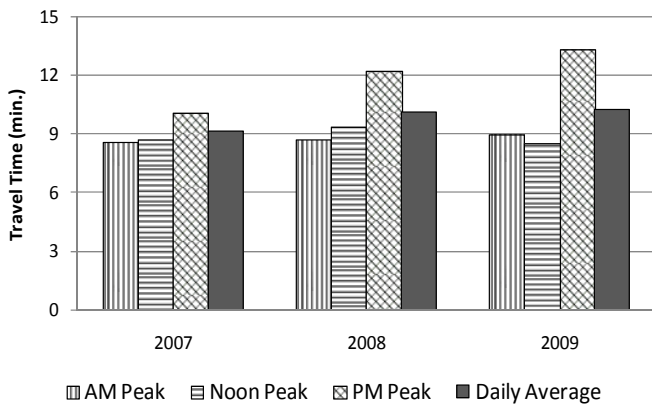
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

SH 7-Arapahoe Rd. (Cherryvale Rd to US 287) – Three-Year Data Trend Analysis

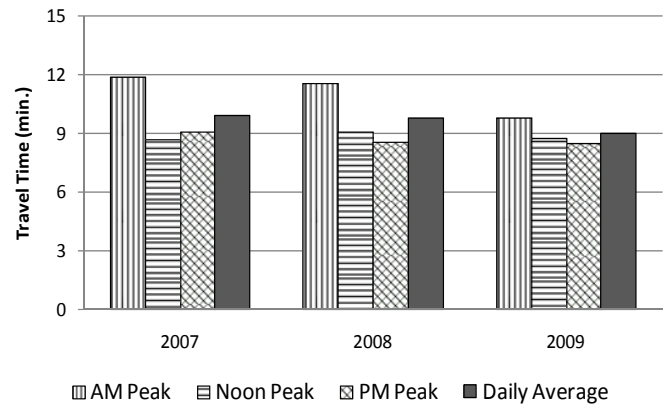
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time increased at the rate of +12.18% per year
- The WB Daily Average Travel Time decreased at the rate of -8.62% per year
- The Annual Cost of Congestion increased at the rate of +24.85% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -5.57% per year

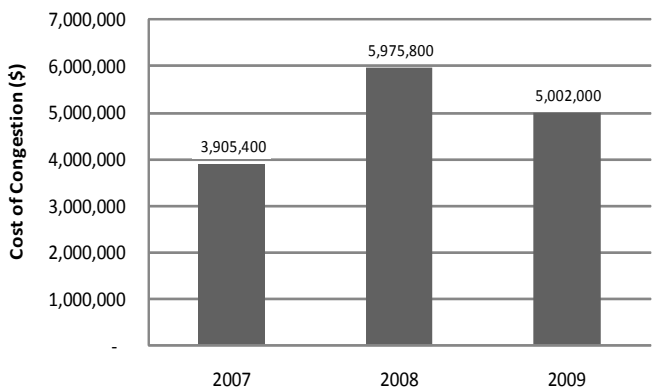
Average Travel Time (EB Direction)



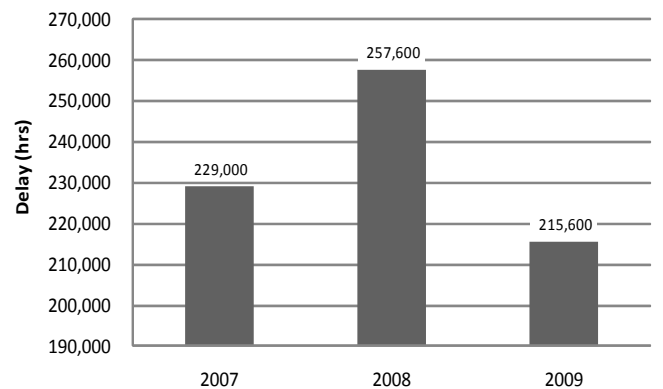
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

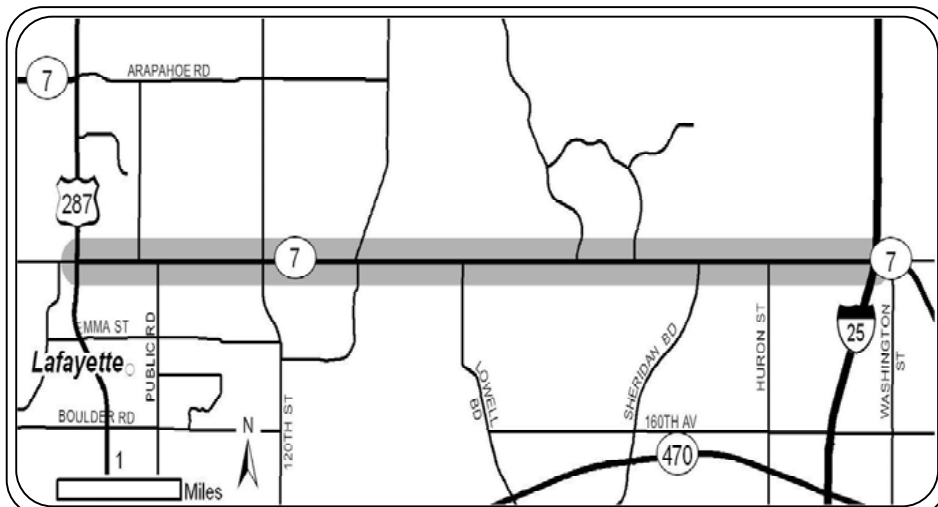


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

SH 7-Baseline Rd. (US-287 to I-25) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the westbound direction during the morning peak period and eastbound in the afternoon peak period. Congestion primarily occurs in the segment between Lowell Boulevard and 111th Street. Travel time variability for westbound and eastbound directions in the peak periods varies between 15 and 39 percent. This data was collected in April 2009.



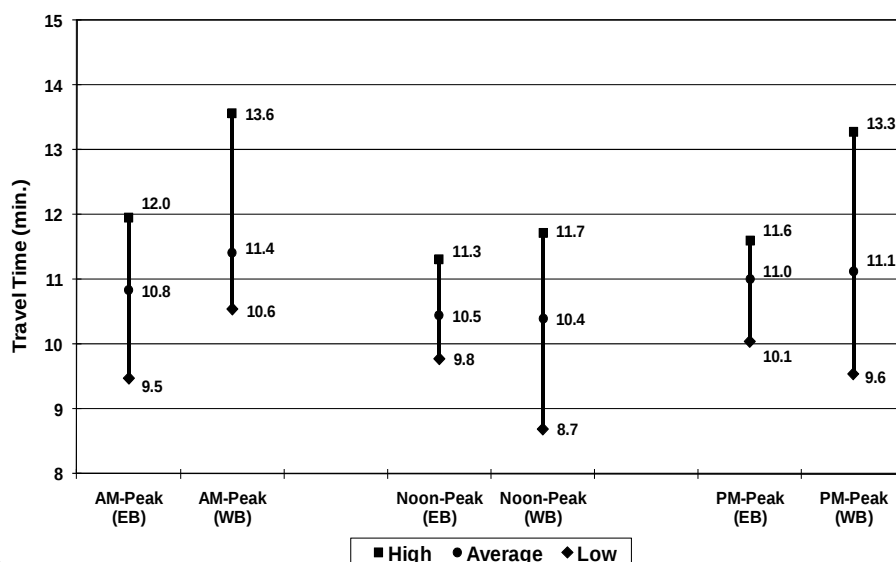
Corridor Characteristics

Corridor Length	6.9 Miles
Facility Type	Arterial - Urban
Speed Limit	45 – 65 mph
CDOT Region(s)	Region 6

Corridor Measures

Traffic Count per Day	Avg: 18,400 (16,200 – 19,600)
v/c Ratio	.79 – 1.11
Travel Rate Index	AM EB—1.11
	AM WB—1.19
	PM EB—1.13
	PM WB—1.12
Annual Vehicle Hours of Delay	397,800
Annual Person Hours of Delay	505,200
Annual Congestion Costs	\$8,083,600

Travel Time Variability by Time Period for April 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.27 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

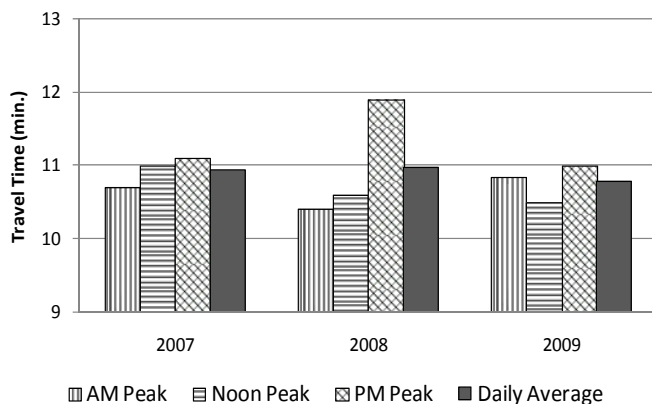
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

SH 7-Baseline Rd. (US-287 to I-25) – Three-Year Data Trend Analysis

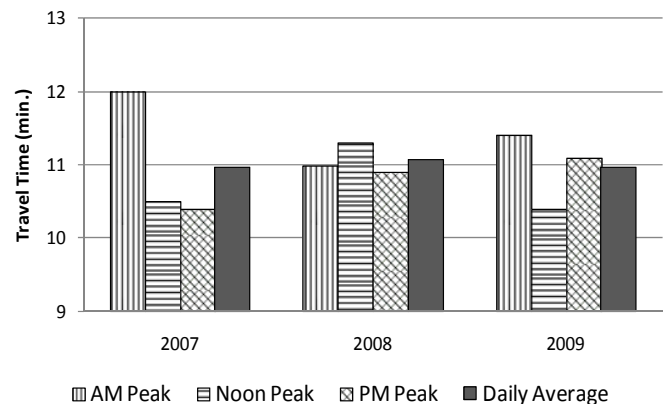
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time decreased at the rate of -1.41% per year
- The WB Daily Average Travel Time increased at the rate of +0.04% per year
- The Annual Cost of Congestion increased at the rate of +4.83% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -12.23% per year

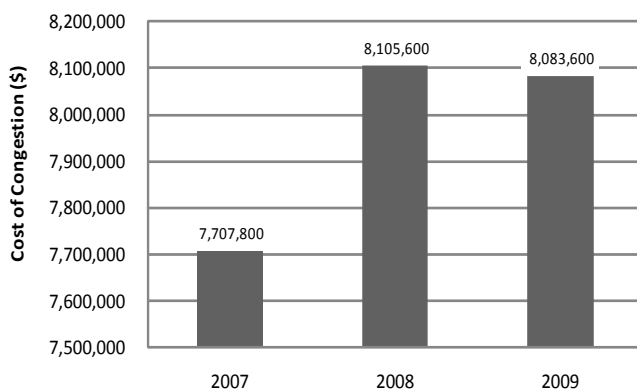
Average Travel Time (EB Direction)



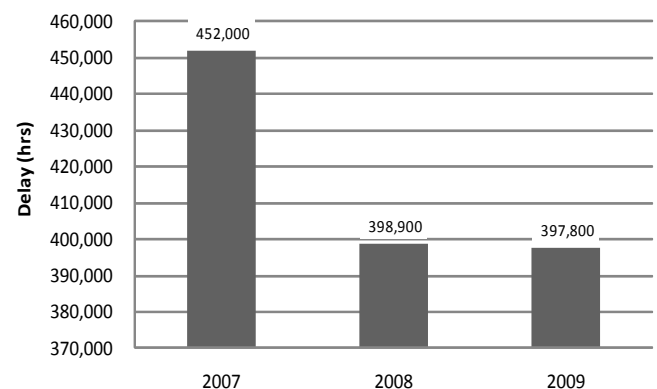
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

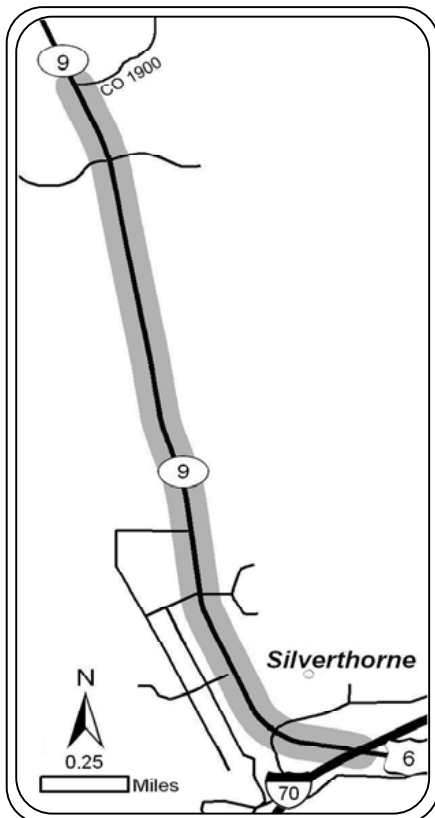


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

SH 9 (I-70 to CR 1900) – Travel Time Report

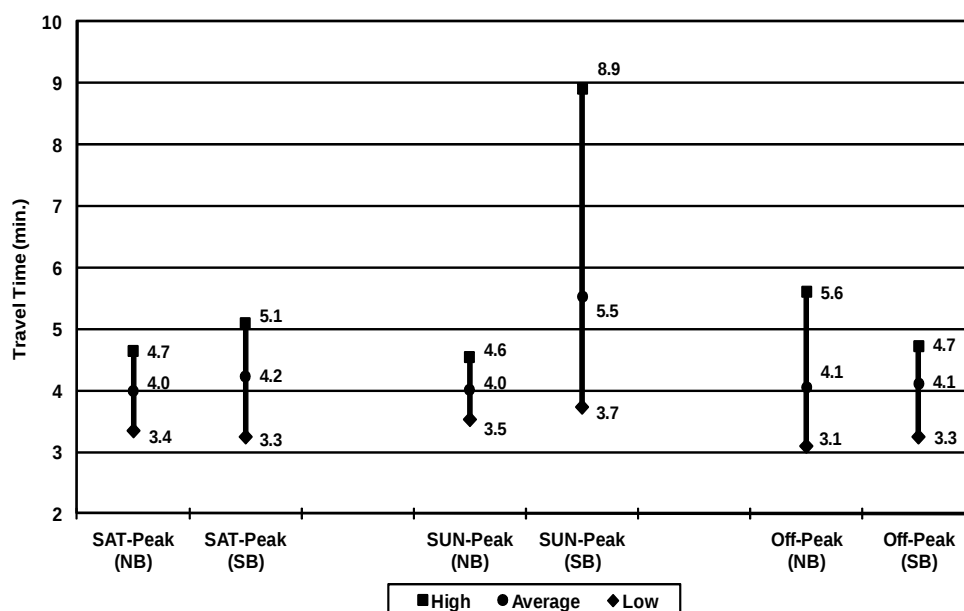
Corridor Summary

This is a recreational corridor. Traffic volumes along this corridor are heavier in the northbound direction during the Saturday peak period and southbound during the Sunday peak period. Congestion primarily occurs between 4th Street and the I-70 interchange. Travel time variability for northbound and southbound directions in the peak periods varies between 31 and 141 percent. This data was collected in August 2009.



Corridor Characteristics		Travel Rate Index	SAT NB—1.20
Corridor Length	2.5 Miles		SAT SB—1.24
Facility Type	Arterial – Urban/Rural		SUN NB—1.21
Speed Limit	35 – 55 mph		SUN SB—1.62
CDOT Region(s)	Region 1	Annual Vehicle Hours of Delay	41,100
Corridor Measures		Annual Person Hours of Delay	48,500
Traffic Count per Day	Avg: 14,600	Annual Congestion Costs	\$775,400
v/c Ratio	.50 - .89		

Travel Time Variability by Time Period for August 2009



Data Collection Period

The time periods of data collection included weekend Saturday & Sunday peak periods (11:30 AM to 5:30 PM) and Saturday & Sunday off-peak periods (9:30 AM to 11:30 AM & 5:30 PM to 7:30 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.18 persons per vehicle. Based on the 2009 Average Vehicle Occupancy Study of the Colorado State Highway System.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

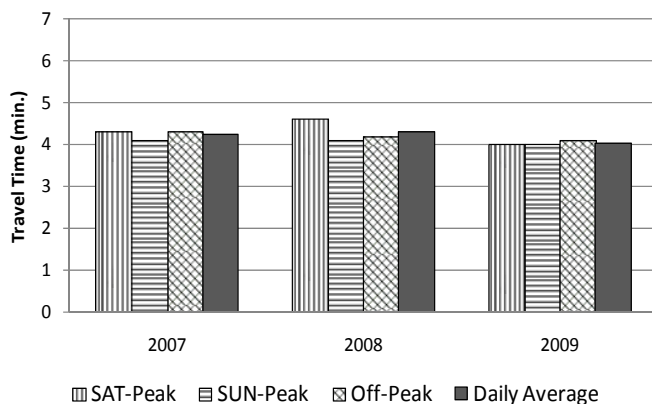
Travel Time Variability – The range of travel time for each period (Saturday Peak, Sunday Peak, Off Peak) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

SH 9 (I-70 to CR 1900) – Three-Year Data Trend Analysis

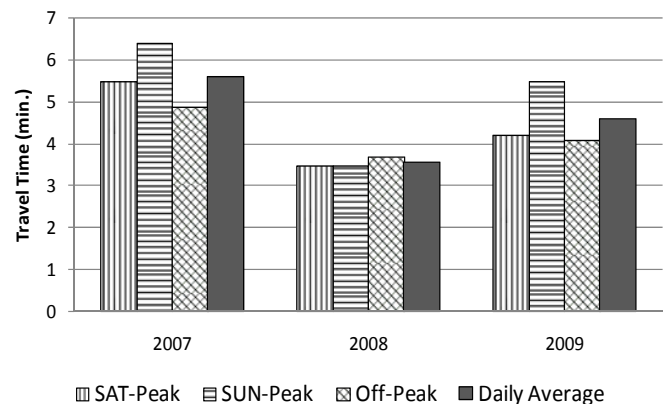
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time decreased at the rate of -4.69% per year
- The SB Daily Average Travel Time decreased at the rate of -19.46% per year
- The Annual Cost of Congestion decreased at the rate of -36.52% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -44.27% per year

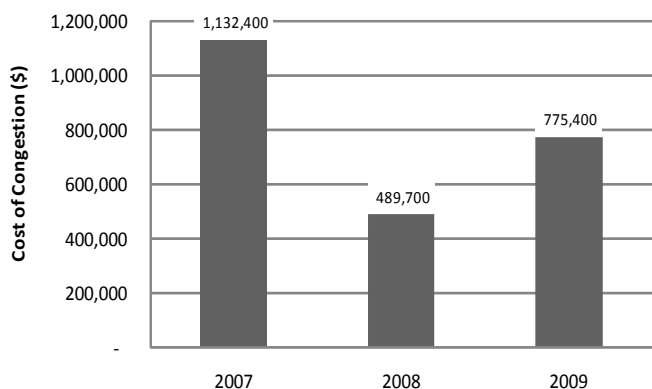
Average Travel Time (NB Direction)



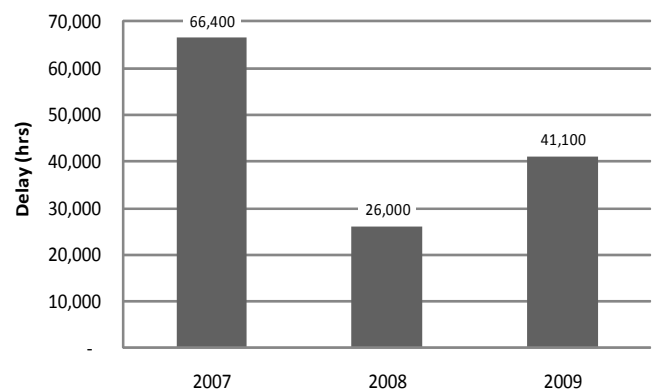
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

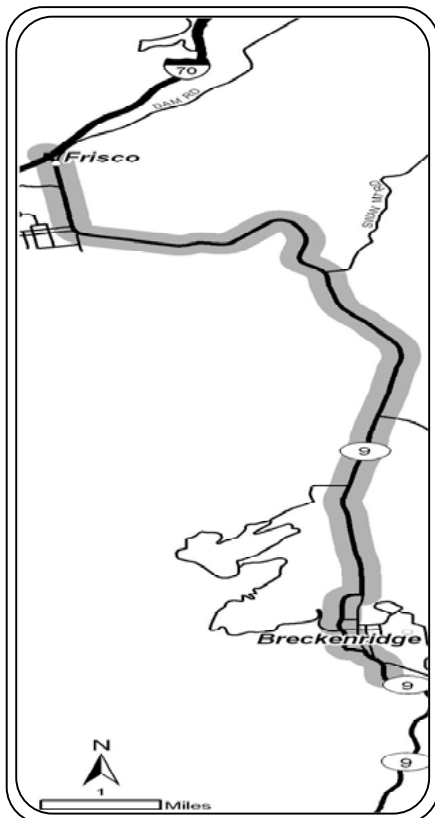


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

SH 9 (I-70 to Boreas Pass Rd) – Travel Time Report

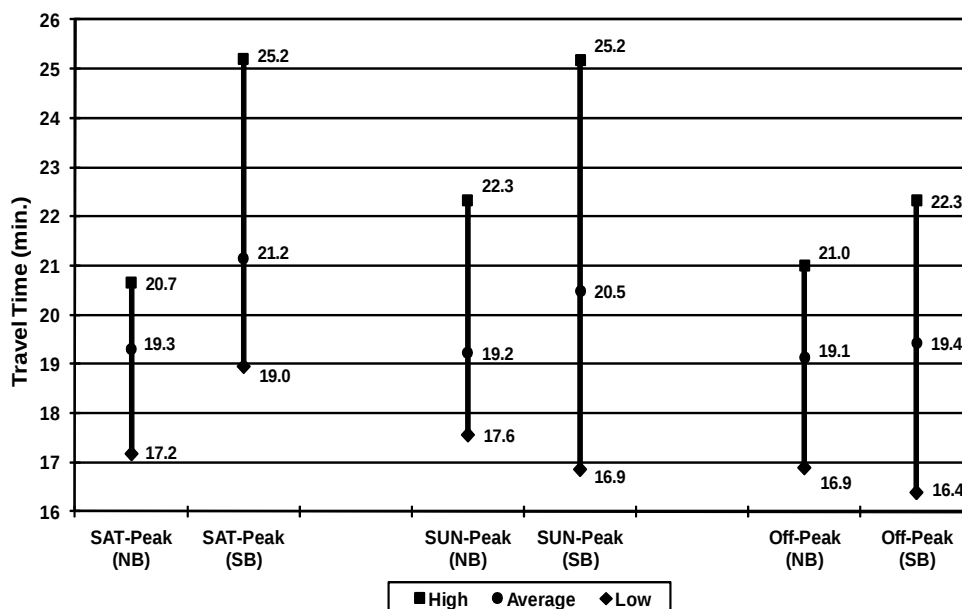
Corridor Summary

This is a recreational corridor. Traffic volumes along this corridor are near equally distributed in the northbound and southbound directions for both Saturday and Sunday peak periods. Congestion primarily occurs between Boreas Pass Road and County Road 450 and near Coyne Valley Road. Travel time variability for northbound and southbound directions in the peak periods varies between 20 and 49 percent. This data was collected in July 2009.



Corridor Characteristics		Travel Rate Index	SAT NB—1.12
Corridor Length	11.1 Miles		SAT SB—1.22
Facility Type	Arterial – Urban/Rural		SUN NB—1.12
Speed Limit	25 - 50 mph		SUN SB—1.18
CDOT Region(s)	Region 1	Annual Vehicle Hours of Delay	311,600
Corridor Measures		Annual Person Hours of Delay	398,800
Traffic Count per Day	Avg: 20,700 (14,500 – 25,700)	Annual Congestion Costs	\$6,380,700
v/c Ratio	.56 - .98		

Travel Time Variability by Time Period for July 2009



Data Collection Period

The time periods of data collection included weekend Saturday & Sunday peak periods (11:30 AM to 5:30 PM) and Saturday & Sunday off-peak periods (9:30 AM to 11:30 AM & 5:30 PM to 7:30 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.28 persons per vehicle. Based on the 2009 Average Vehicle Occupancy Study of the Colorado State Highway System.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

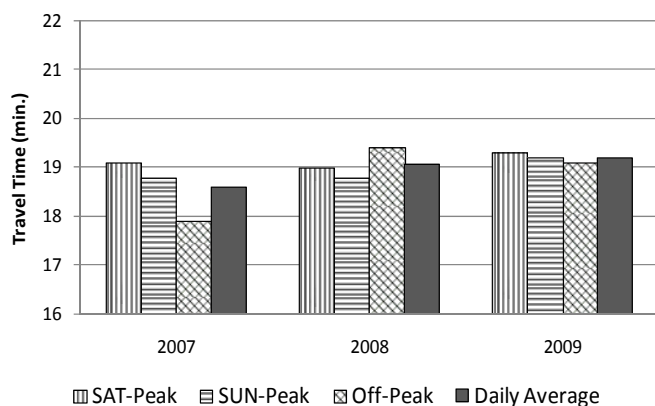
Travel Time Variability – The range of travel time for each period (Saturday Peak, Sunday Peak, Off Peak) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

SH 9 (I-70 to Boreas Pass Rd) – Three-Year Data Trend Analysis

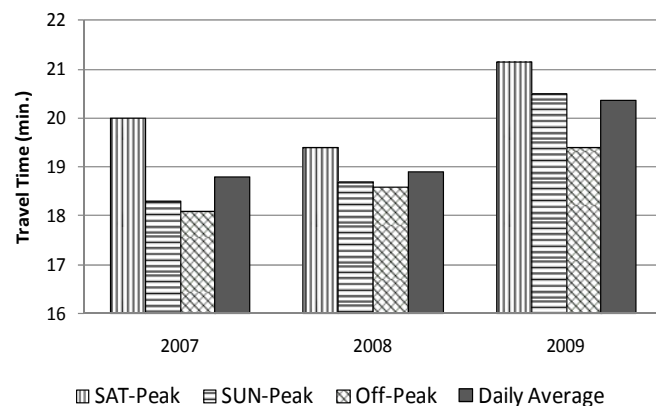
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time increased at the rate of +3.22% per year
- The SB Daily Average Travel Time increased at the rate of +8.36% per year
- The Annual Cost of Congestion increased at the rate of +46.12% per year
- The Annual Vehicle Hours of Delay increased at the rate of +21.76% per year

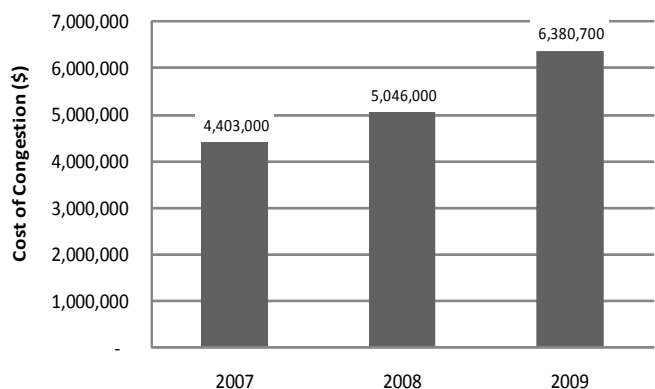
Average Travel Time (NB Direction)



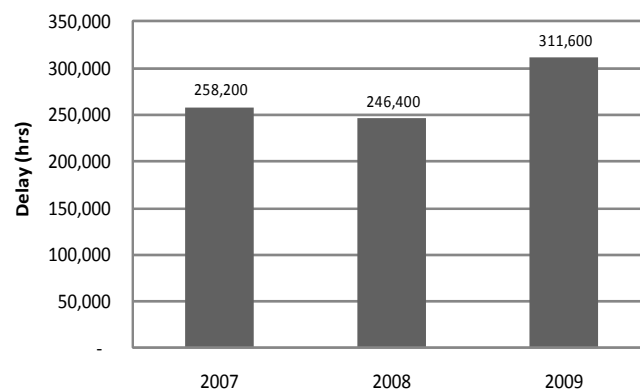
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

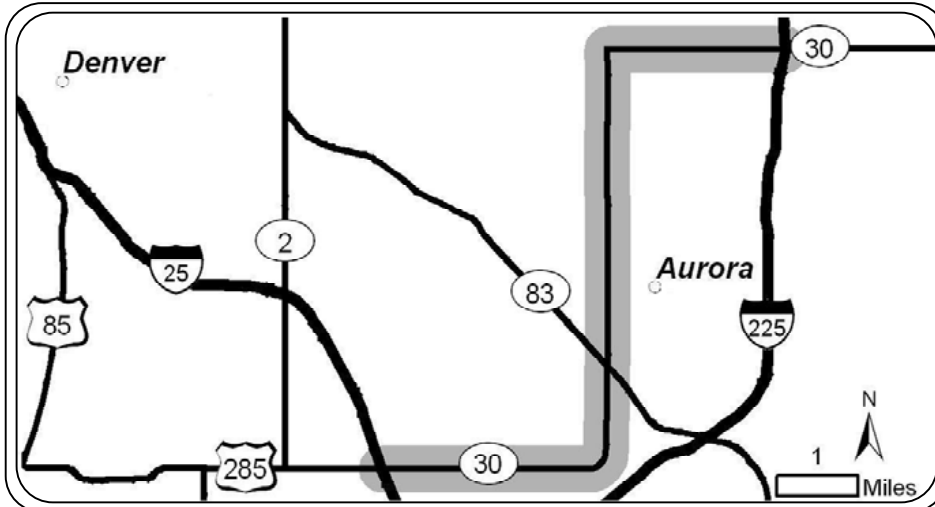


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

SH 30 (I-25 to I-225) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are generally heavier in the westbound direction during the morning peak period and eastbound in the afternoon peak period. Congestion occurs in multiple areas along the corridor such as approaching I-225, 6th Avenue, Mississippi Avenue, Parker Road, and I-25. Travel time variability for westbound and eastbound directions in the peak periods varies between 10 and 47 percent. This data was collected in September and October 2009.



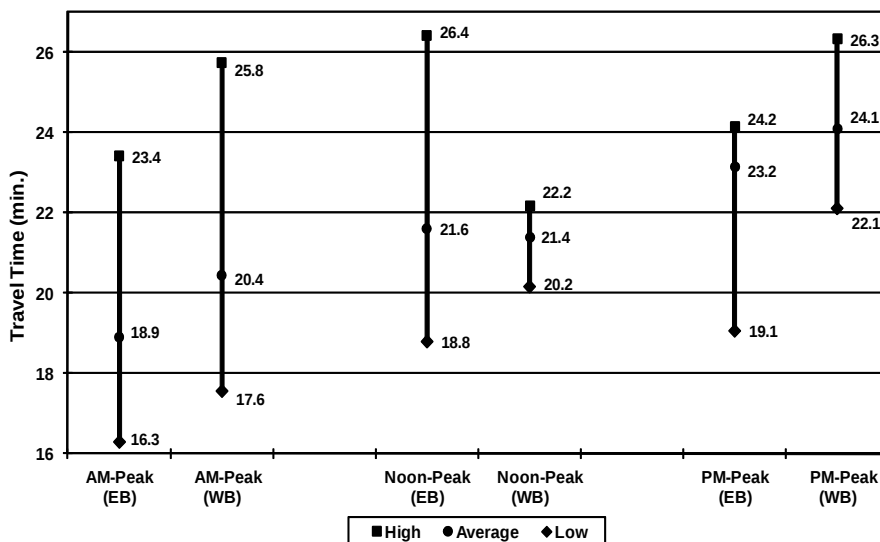
Corridor Characteristics

Corridor Length	10.0 Miles
Facility Type	Arterial - Urban
Speed Limit	40 – 45 mph
CDOT Region(s)	Region 6

Corridor Measures

Traffic Count per Day	Avg: 42,100 (33,600 – 46,800)
v/c Ratio	.67 - .98
Travel Rate Index	AM EB—1.05
	AM WB—1.02
	PM EB—1.28
	PM WB—1.21
Annual Vehicle Hours of Delay	1,363,400
Annual Person Hours of Delay	1,731,500
Annual Congestion Costs	\$27,704,600

Travel Time Variability by Time Period for September and October 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.27 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

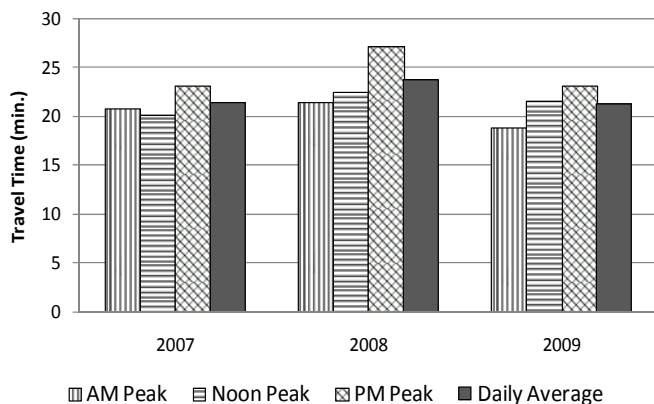
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

SH 30 (I-25 to I-225) – Three-Year Data Trend Analysis

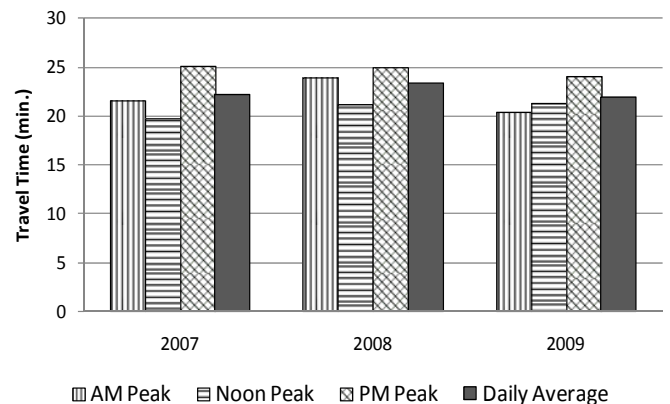
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time decreased at the rate of -0.58% per year
- The WB Daily Average Travel Time decreased at the rate of -0.81% per year
- The Annual Cost of Congestion increased at the rate of +8.36% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -8.14% per year

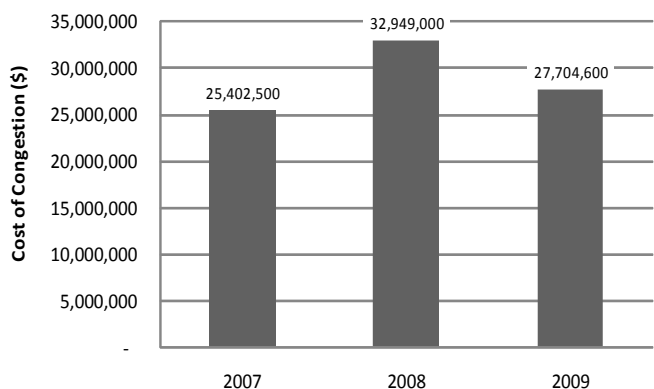
Average Travel Time (EB Direction)



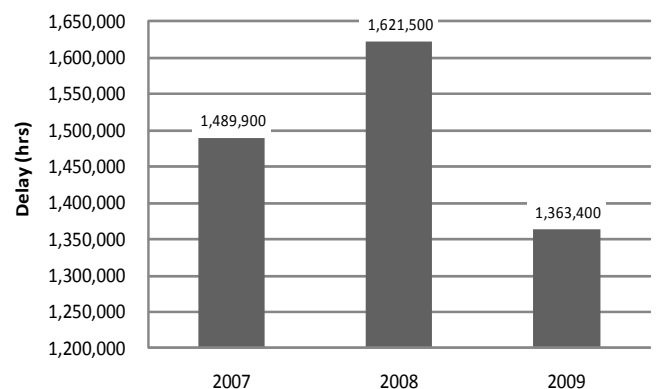
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

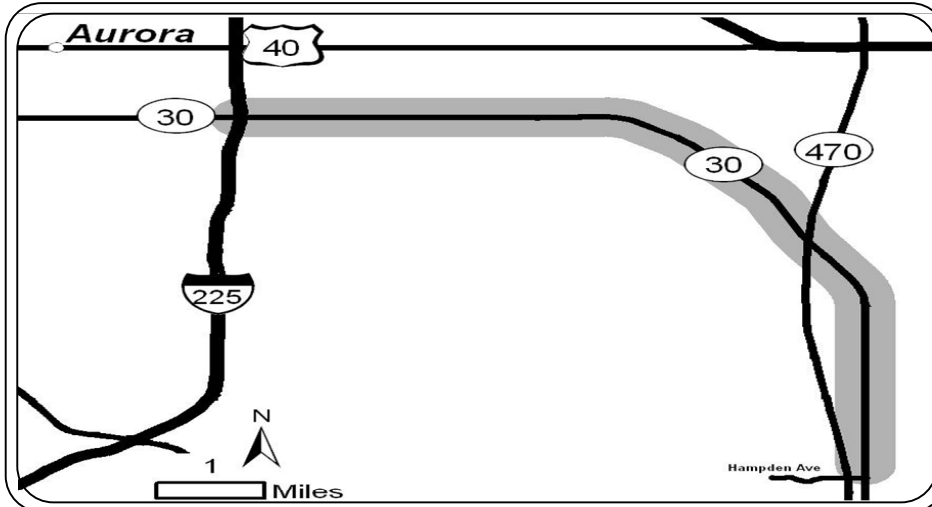


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

SH 30 (I-225 to Hampden Ave.) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the westbound directions during the morning peak period and eastbound in the afternoon peak period. Congestion occurs approaching I-225, Chambers Road, and Airport Boulevard. Travel time variability for westbound and eastbound directions in the peak periods varies between 18 and 29 percent. This data was collected in June 2009.



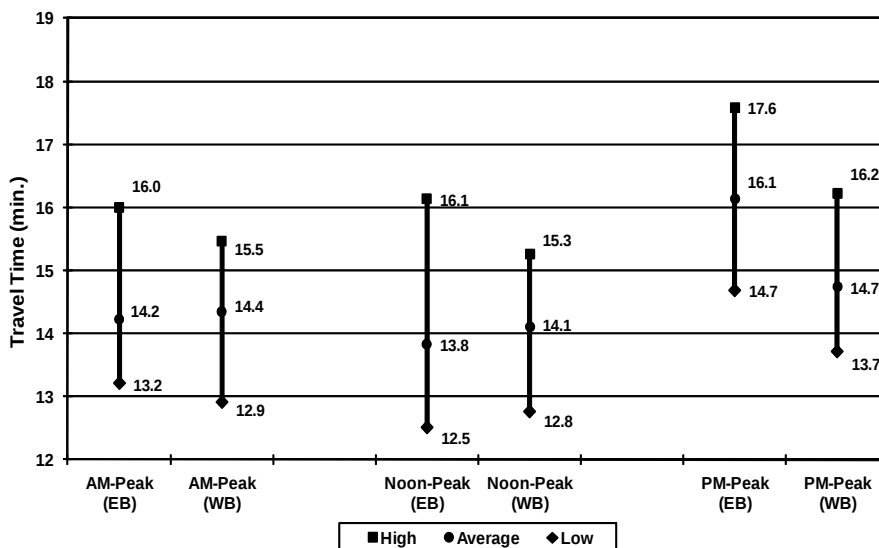
Corridor Characteristics

Corridor Length	9.5 Miles
Facility Type	Arterial - Urban
Speed Limit	40 – 55 mph
CDOT Region(s)	Region 6

Corridor Measures

Traffic Count per Day	Avg: 19,900 (12,300 – 33,000)
v/c Ratio	.53 - 1.06
Travel Rate Index	AM EB—1.06
	AM WB—1.09
	PM EB—1.20
	PM WB—1.12
Annual Vehicle Hours of Delay	300,700
Annual Person Hours of Delay	393,900
Annual Congestion Costs	\$6,303,100

Travel Time Variability by Time Period for June 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.31 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

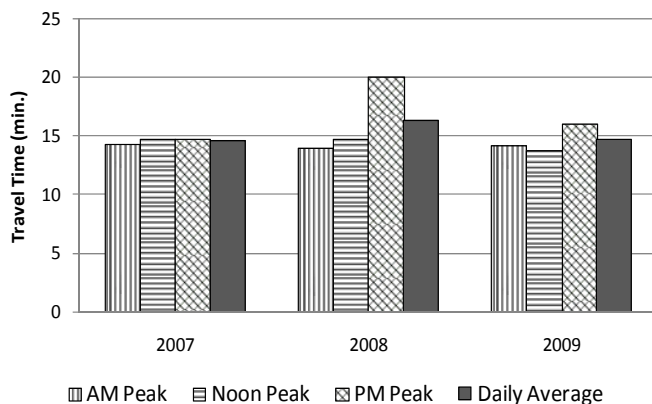
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

SH 30 (I-225 to Hampden Ave.) – Three-Year Data Trend Analysis

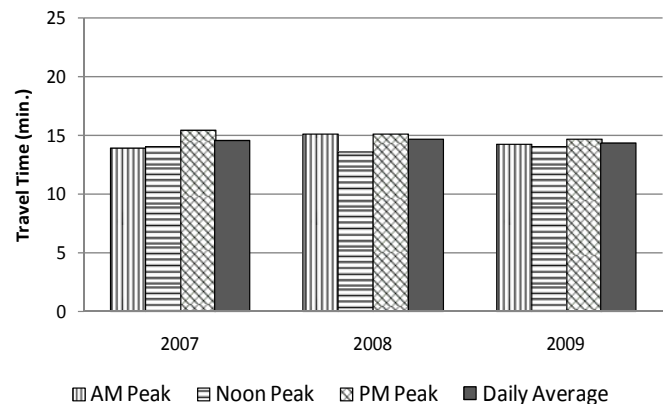
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time increased at the rate of +0.72% per year
- The WB Daily Average Travel Time decreased at the rate of -1.02% per year
- The Annual Cost of Congestion increased at the rate of +13.91% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -5.95% per year

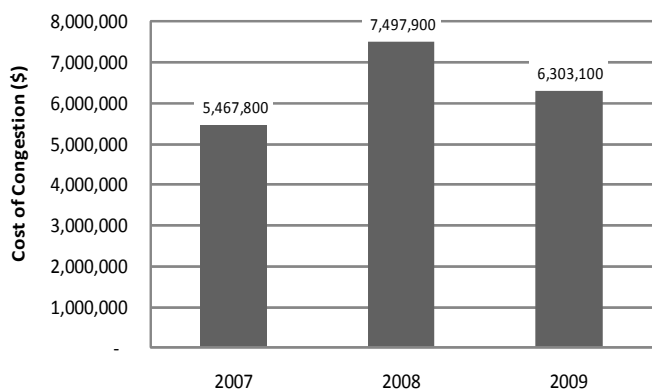
Average Travel Time (EB Direction)



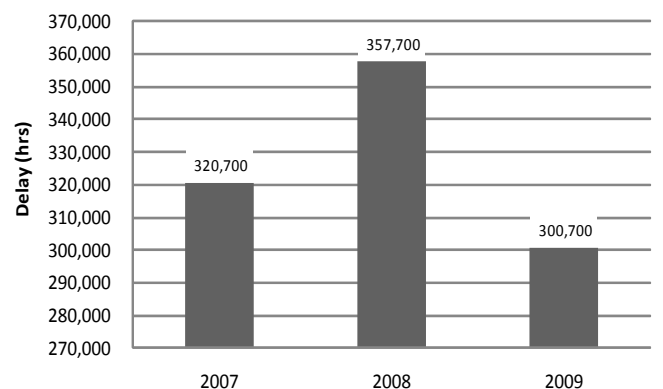
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

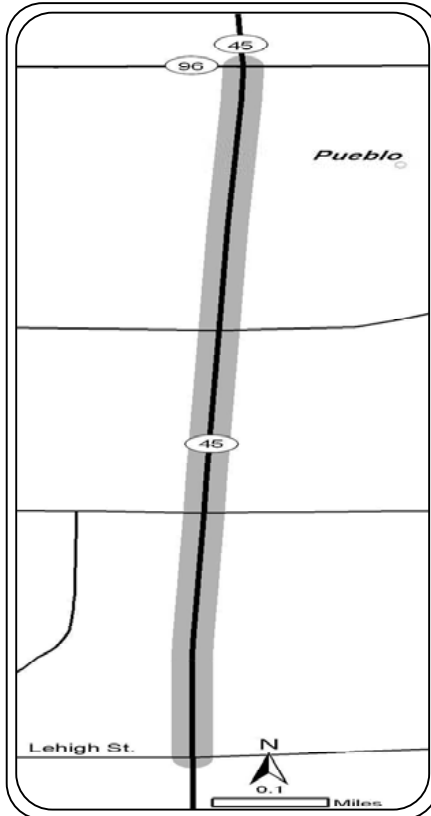


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

SH 45 – Pueblo Blvd. (Lehigh St. to SH 96) – Travel Time Report

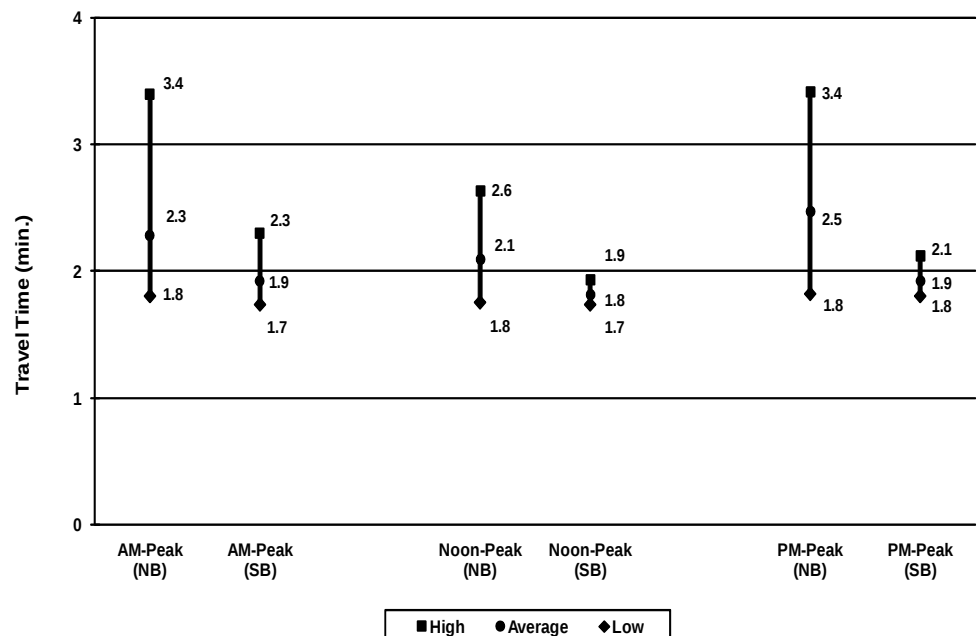
Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are generally heavier in the northbound direction during morning peak period and in the southbound direction during the afternoon peak period. Congestion primarily occurs approaching Thatcher Avenue. Travel time variability for northbound and southbound directions in the peak periods varies between 12 and 89 percent. This data was collected in November 2009.



Corridor Characteristics		Travel Rate Index	AM NB—1.28
Corridor Length	1.2 Miles		AM SB—1.09
Facility Type	Freeway/Arterial - Urban		PM NB—1.38
Speed Limit	40 – 45 mph		PM SB—1.10
CDOT Region(s)	Region 2	Annual Vehicle Hours of Delay	75,400
Corridor Measures		Annual Person Hours of Delay	96,600
Traffic Count per Day	Avg: 27,500	Annual Congestion Costs	\$1,545,000
v/c Ratio	.53 - .82		

Travel Time Variability by Time Period for November 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.28 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

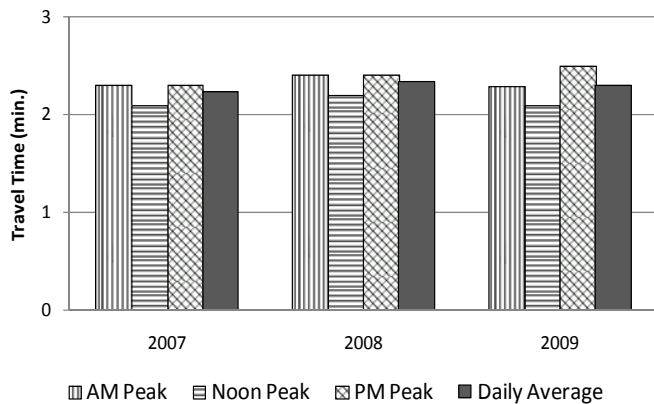
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

SH 45 – Pueblo Blvd. (Lehigh St. to SH 96) – Three-Year Data Trend Analysis

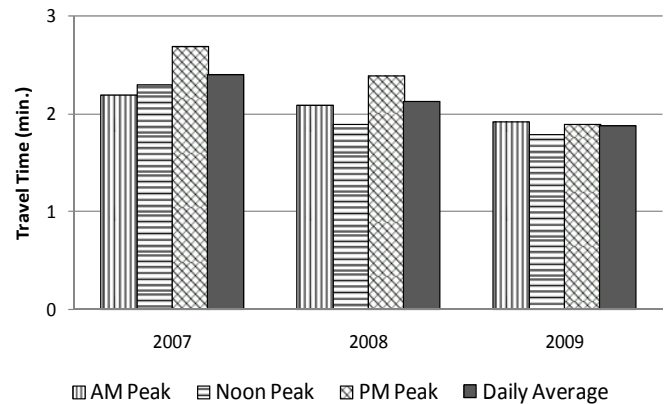
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time increased at the rate of +2.74% per year
- The SB Daily Average Travel Time decreased at the rate of -21.94% per year
- The Annual Cost of Congestion increased at the rate of +9.75% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -7.05% per year

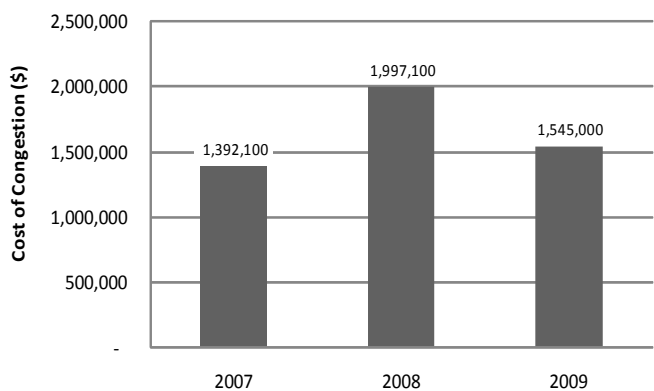
Average Travel Time (NB Direction)



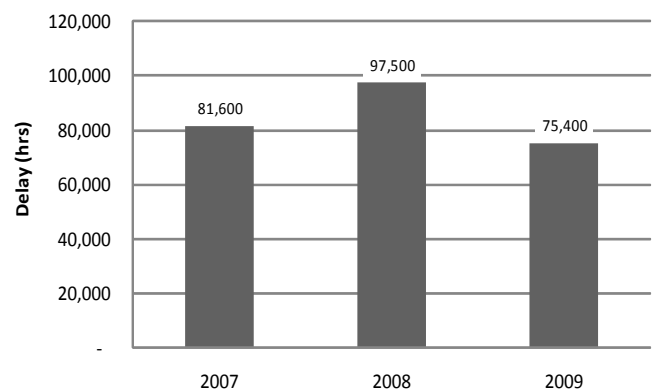
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

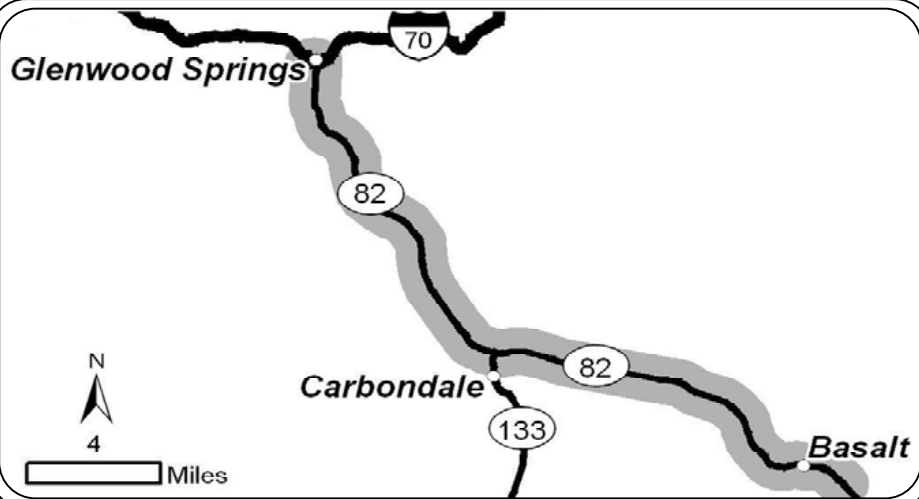


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

SH 82 (I-70 to Old SH 82) – Travel Time Report

Corridor Summary

This is a recreational corridor. Traffic volumes along this corridor are generally heavier in the northbound direction during both the Saturday and Sunday peak periods. Travel time variability for eastbound and westbound directions in the peak periods varies between 16 and 23 percent. This data was collected in August 2009.



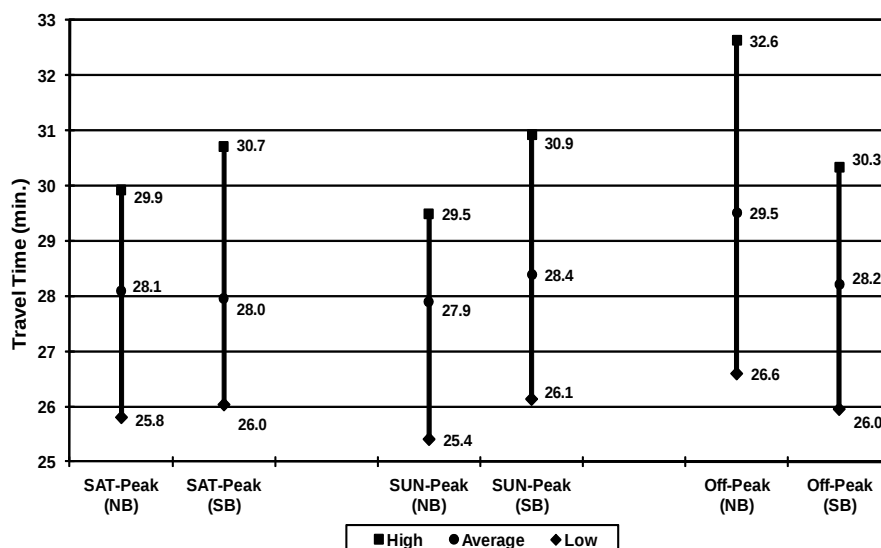
Corridor Characteristics

Corridor Length	23.7 Miles
Facility Type	Arterial – Urban/Rural
Speed Limit	25 - 65 mph
CDOT Region(s)	Region 3

Corridor Measures

Traffic Count per Day	Avg: 23,100 (18,000 – 28,400)
v/c Ratio	.44 - .98
Travel Rate Index	SAT NB—1.08
	SAT SB—1.07
	SUN NB—1.08
	SUN SB—1.09
Annual Vehicle Hours of Delay	473,900
Annual Person Hours of Delay	653,900
Annual Congestion Costs	\$10,463,100

Travel Time Variability by Time Period for August 2009



Data Collection Period

The time periods of data collection included weekend Saturday & Sunday peak periods (11:30 AM to 5:30 PM) and Saturday & Sunday off-peak periods (9:30 AM to 11:30 AM & 5:30 PM to 7:30 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.38 persons per vehicle. Based on the 2009 Average Vehicle Occupancy Study of the Colorado State highway System.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

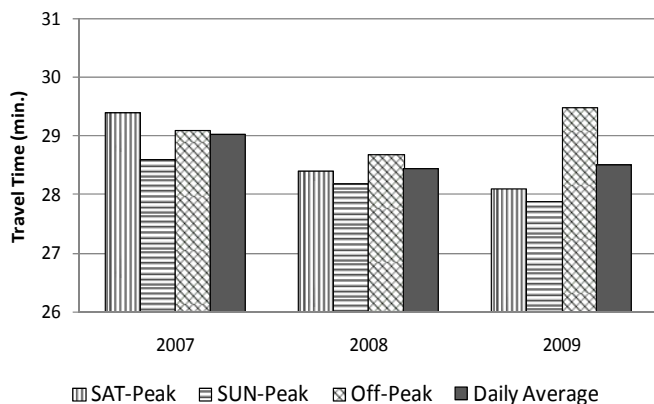
Travel Time Variability – The range of travel time for each period (Saturday-Peak, Off-Peak, Sunday-Peak) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

SH 82 (I-70 to Old SH 82) – Three-Year Data Trend Analysis

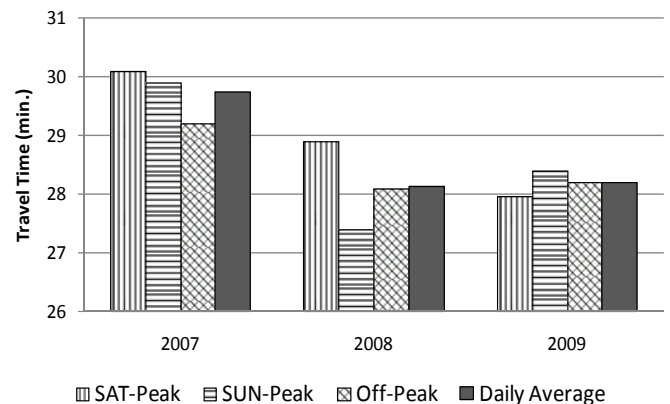
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time decreased at the rate of -1.85% per year
- The SB Daily Average Travel Time decreased at the rate of -5.25% per year
- The Annual Cost of Congestion increased at the rate of +27.73% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -0.81% per year

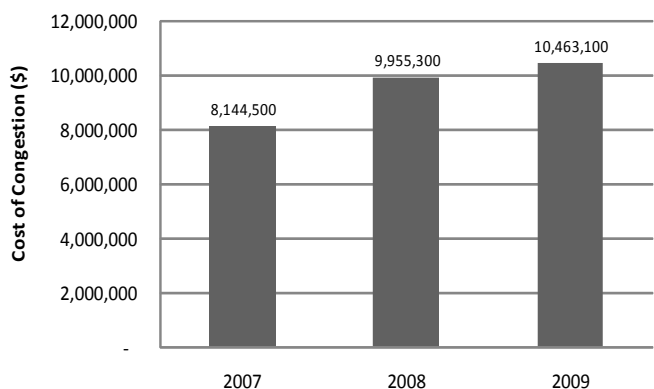
Average Travel Time (NB Direction)



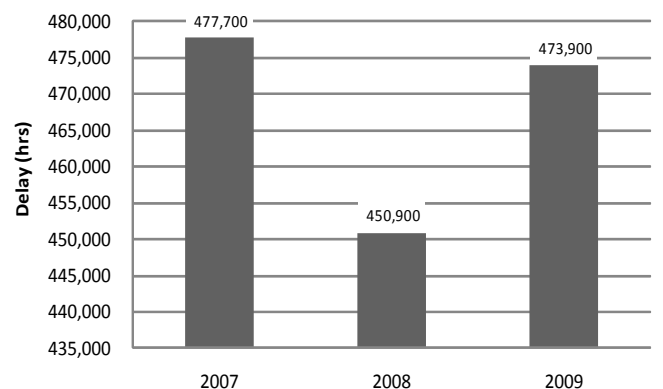
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

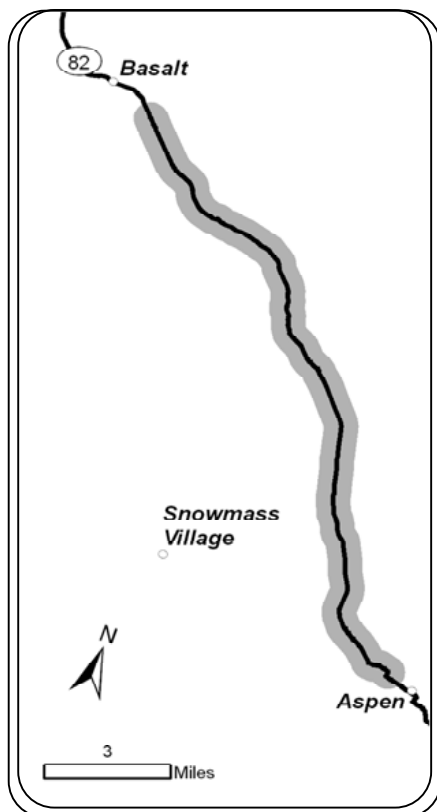


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

SH 82 (Old SH 82 to West Hallam Ave.) – Travel Time Report

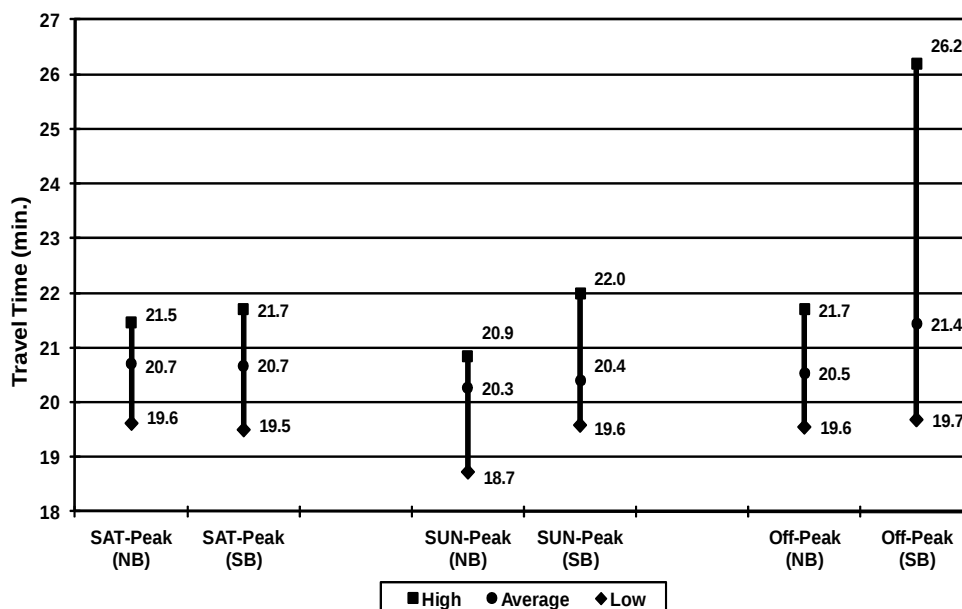
Corridor Summary

This is a recreational corridor. Traffic volumes along this corridor are heavier northbound during both Saturday and Sunday peak periods. Travel time variability for northbound and southbound directions in the peak periods varies between 10 and 33 percent. This data was collected in August 2009.



Corridor Characteristics		Travel Rate Index	SAT NB—1.07
Corridor Length	16.7 Miles		SAT SB—1.05
Facility Type	Arterial – Urban/Rural		SUN NB—1.05
Speed Limit	30 - 55 mph		SUN SB—1.04
CDOT Region(s)	Region 3	Annual Vehicle Hours of Delay	161,600
Corridor Measures		Annual Person Hours of Delay	224,600
Traffic Count per Day	Avg: 19,100 (15,900 – 24,300)	Annual Congestion Costs	\$3,594,000
v/c Ratio	.33 – 0.92		

Travel Time Variability by Time Period for August 2009



Data Collection Period

The time periods of data collection included weekend Saturday & Sunday peak periods (11:30 AM to 5:30 PM) and Saturday & Sunday off-peak periods (9:30 AM to 11:30 AM & 5:30 PM to 7:30 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.39 persons per vehicle. Based on the 2009 Average Vehicle Occupancy Study of the Colorado State highway System.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

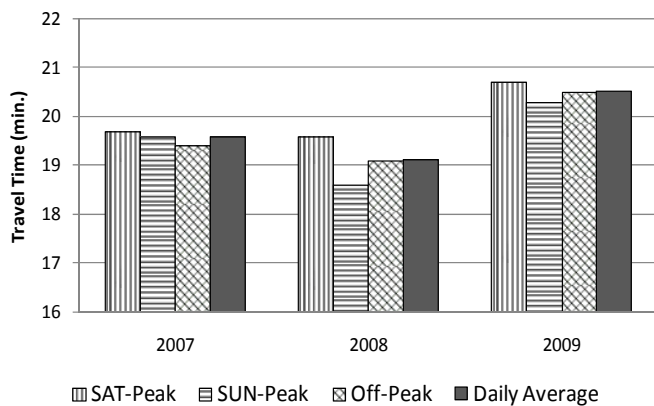
Travel Time Variability – The range of travel time for each period (Saturday-Peak, Off-Peak, Sunday-Peak) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

SH 82 (Old SH 82 to West Hallam Ave.) – Three-Year Data Trend Analysis

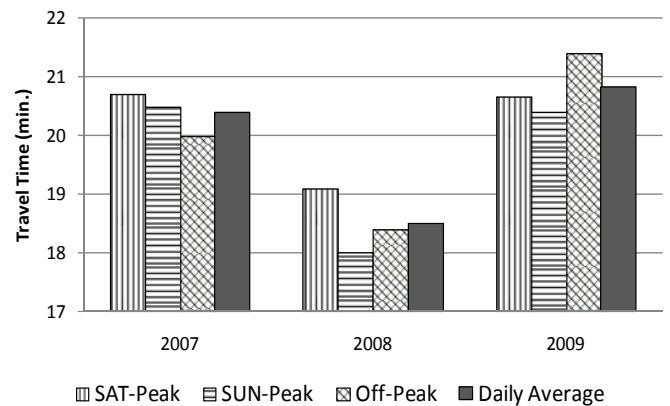
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time increased at the rate of +4.85% per year
- The SB Daily Average Travel Time increased at the rate of +2.13% per year
- The Annual Cost of Congestion increased at the rate of +36.27% per year
- The Annual Vehicle Hours of Delay increased at the rate of +4.21% per year

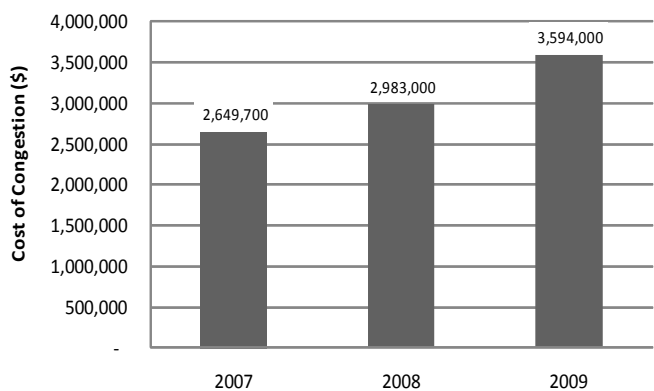
Average Travel Time (NB Direction)



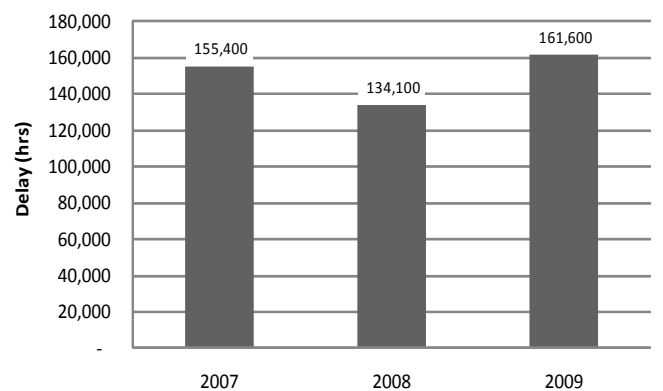
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

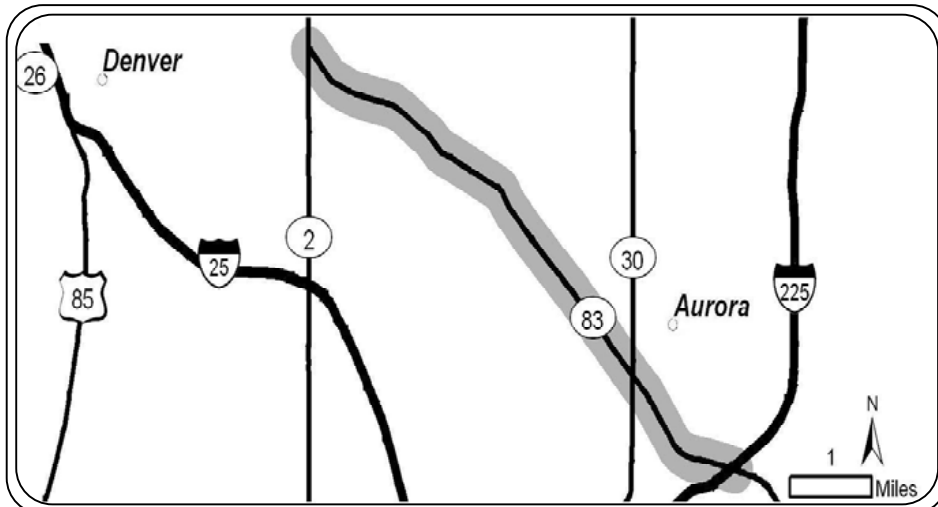


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

SH 83 – Parker Rd. (I-225 to SH 2) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the westbound direction during the morning peak period and eastbound in the afternoon peak period. Congestion occurs in multiple segments along the corridor such as between I-225 and Peoria Street, Havana Street and Iliff Avenue, and Mississippi Avenue and Monaco Parkway, as well as approaching Colorado Boulevard. Travel time variability for northbound and southbound directions in the peak periods varies between 13 and 36 percent. This data was collected in May 2009.



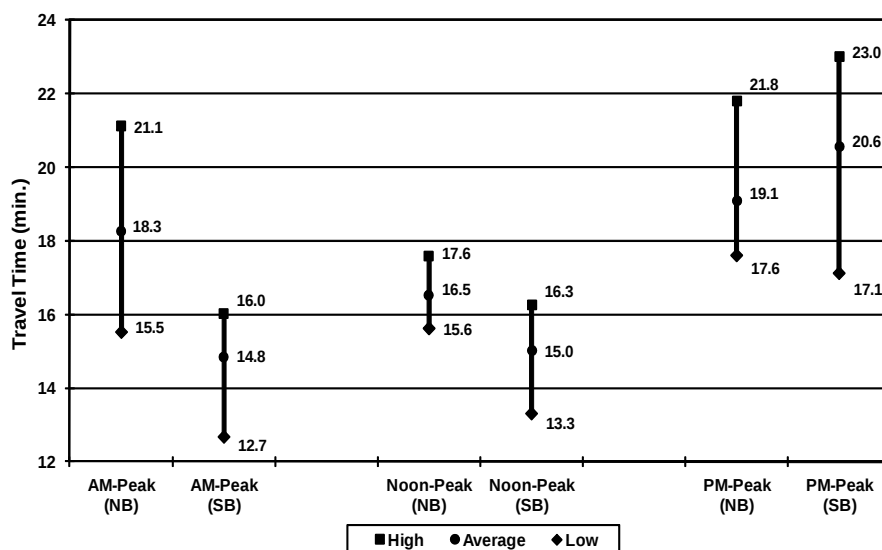
Corridor Characteristics

Corridor Length	6.7 Miles
Facility Type	Freeway/Arterial - Urban
Speed Limit	35 – 45 mph
CDOT Region(s)	Region 6

Corridor Measures

Traffic Count per Day	Avg: 41,000 (32,000 – 53,900)
v/c Ratio	.68 – 1.06
Travel Rate Index	AM NB—1.12
	AM SB—1.03
	PM NB—1.18
	PM SB—1.43
Annual Vehicle Hours of Delay	1,290,100
Annual Person Hours of Delay	1,638,400
Annual Congestion Costs	\$26,214,300

Travel Time Variability by Time Period for May 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.27 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

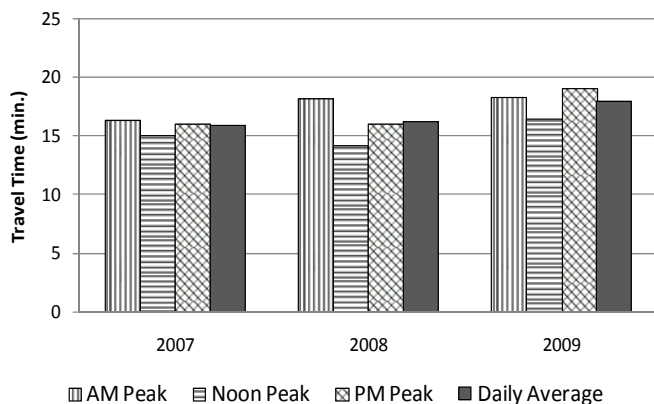
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

SH 83 – Parker Rd. (I-225 to SH 2) – Three-Year Data Trend Analysis

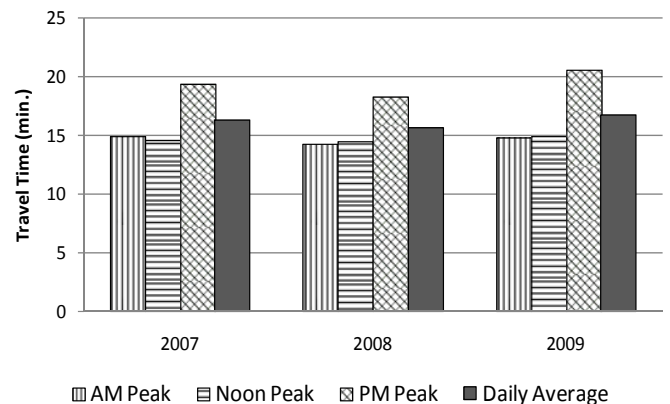
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time increased at the rate of +13.45% per year
- The SB Daily Average Travel Time increased at the rate of +2.91% per year
- The Annual Cost of Congestion increased at the rate of +61.76% per year
- The Annual Vehicle Hours of Delay increased at the rate of +36.75% per year

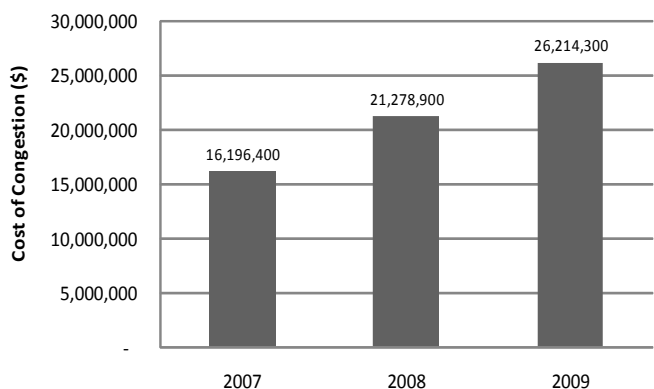
Average Travel Time (NB Direction)



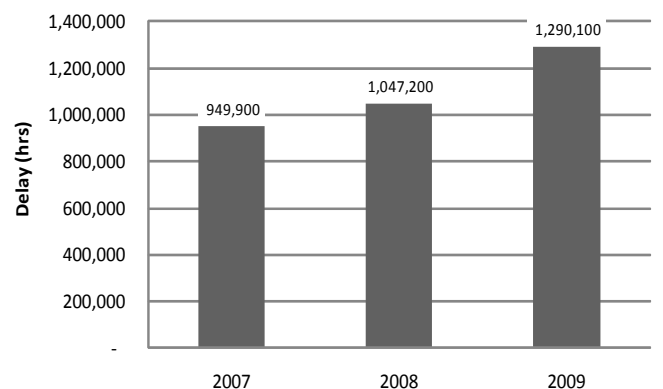
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

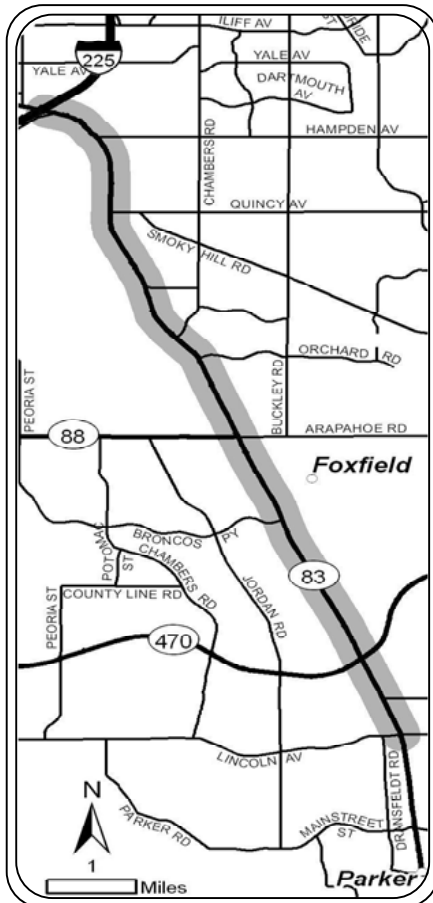


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

SH 83 - Parker Rd. (Lincoln Ave to I-225) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the northbound direction during the morning peak period and southbound in the afternoon peak period. Congestion primarily occurs in two segments along the corridor, between Arapahoe Road and Orchard Road and Quincy Avenue and I-225. Travel time variability for northbound and southbound directions in the peak periods varies between 13 and 45 percent. This data was collected in May and November 2009.



Corridor Characteristics

Corridor Length	9.6 Miles
Facility Type	Freeway/Arterial - Urban
Speed Limit	45 - 55 mph

Travel Rate Index

AM NB—1.13

AM SB—1.09

PM NB—1.33

PM SB—1.21

CDOT Region(s)	Region 1 and Region 6
----------------	-----------------------

Annual Vehicle Hours of Delay

1,740,100

Corridor Measures

Traffic Count per Day	Avg: 67,000 (55,600 – 82,400)
v/c Ratio	.72 – 1.13

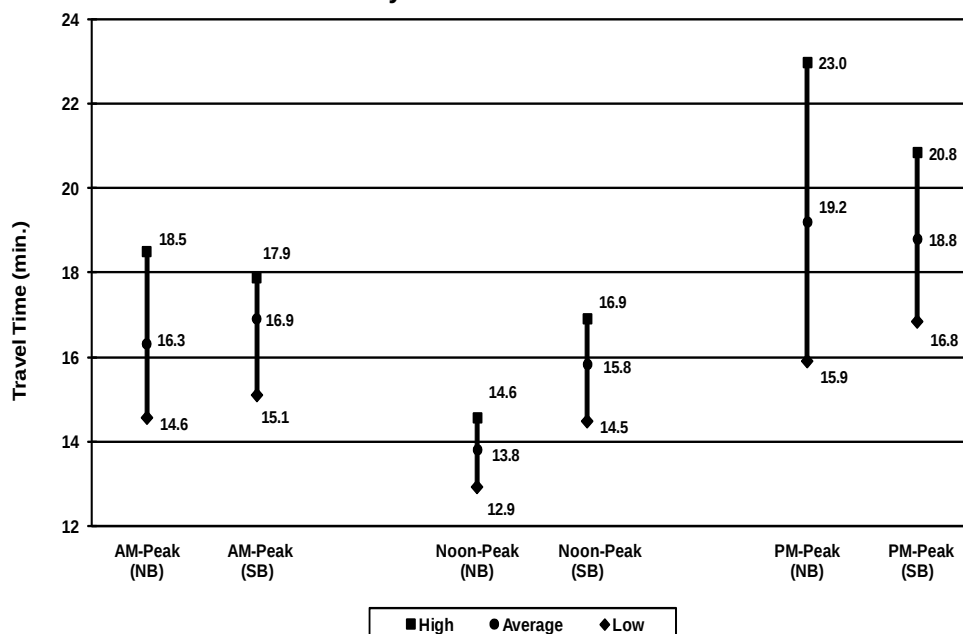
Annual Person Hours of Delay

2,070,700

Annual Congestion Costs

\$33,131,900

Travel Time Variability by Time Period for May and November 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.19 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

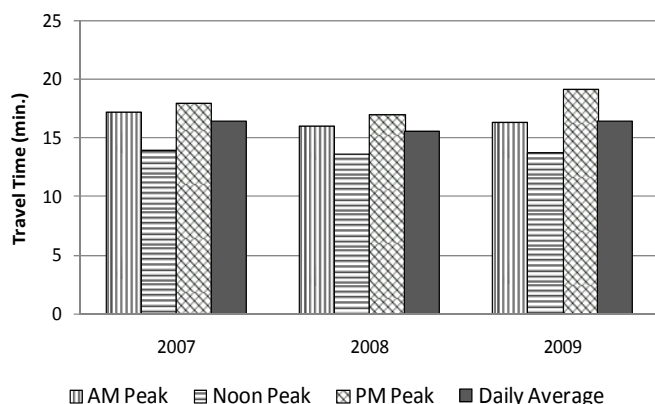
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

SH 83 - Parker Rd. (Lincoln Ave to I-225) – Three-Year Data Trend Analysis

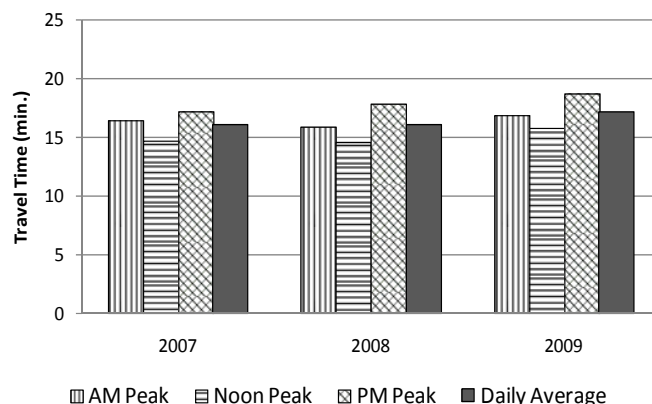
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time increased at the rate of +0.25% per year
- The SB Daily Average Travel Time increased at the rate of +6.46% per year
- The Annual Cost of Congestion increased at the rate of +63.16% per year
- The Annual Vehicle Hours of Delay increased at the rate of +46.77% per year

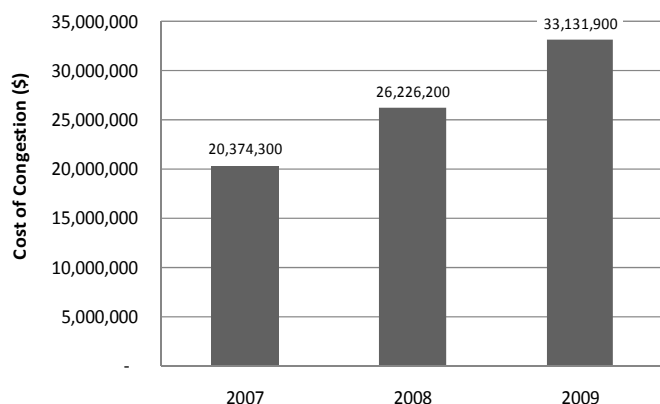
Average Travel Time (NB Direction)



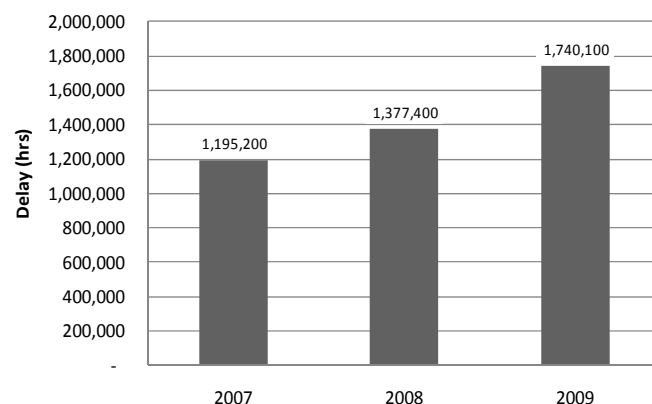
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

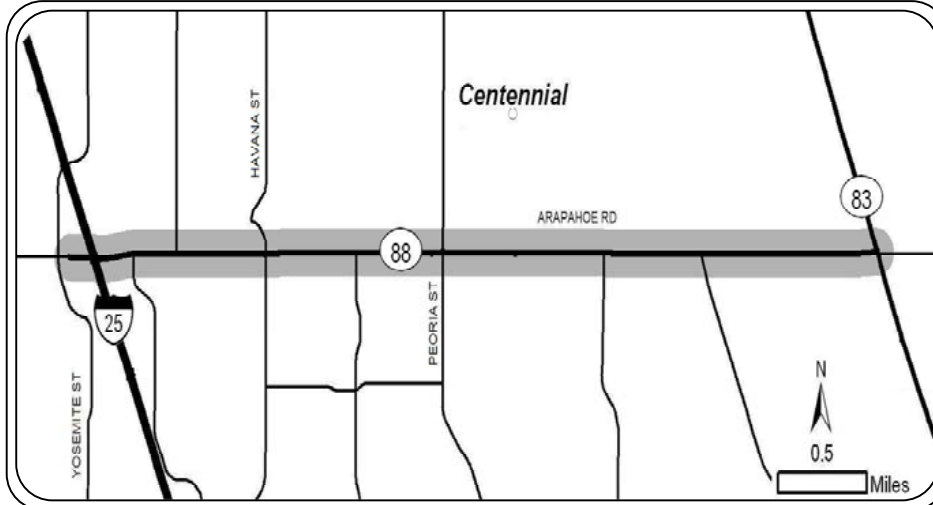


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

SH 88 – Arapahoe Rd. (I-25 to SH 83) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the westbound direction during the morning peak period and eastbound in the afternoon peak period. Congestion occurs in segments between I-25 and Boston Street, Jordan and Parker Roads, and approaching Peoria Street. Travel time variability for westbound and eastbound directions in the peak periods varies between 23 and 82 percent. This data was collected in May 2009.



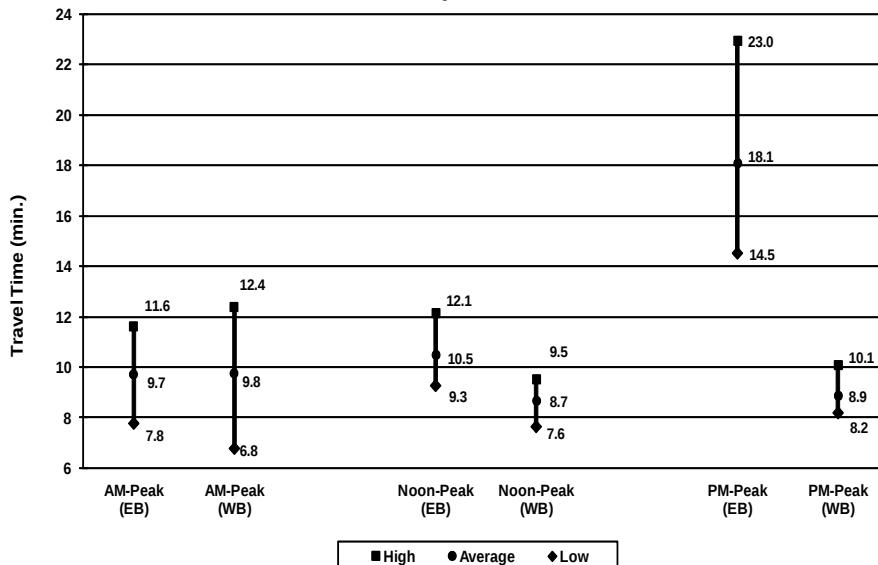
Corridor Characteristics

Corridor Length	4.5 Miles
Facility Type	Arterial - Urban
Speed Limit	40 – 55 mph
CDOT Region(s)	Region 6

Corridor Measures

Traffic Count per Day	Avg: 56,100 (54,700 – 58,600)
v/c Ratio	.91 – 1.07
Travel Rate Index	AM EB—0.92
	AM WB—1.30
	PM EB—1.72
	PM WB—1.18
Annual Vehicle Hours of Delay	1,272,700
Annual Person Hours of Delay	1,616,400
Annual Congestion Costs	\$25,861,900

Travel Time Variability by Time Period for May 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.27 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

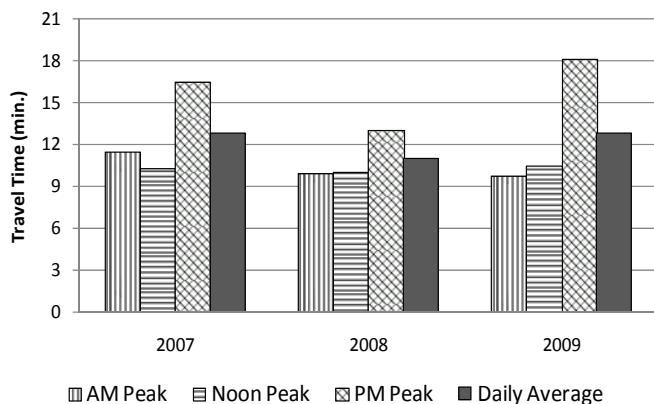
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

SH 88 – Arapahoe Rd. (I-25 to SH 83) – Three-Year Data Trend Analysis

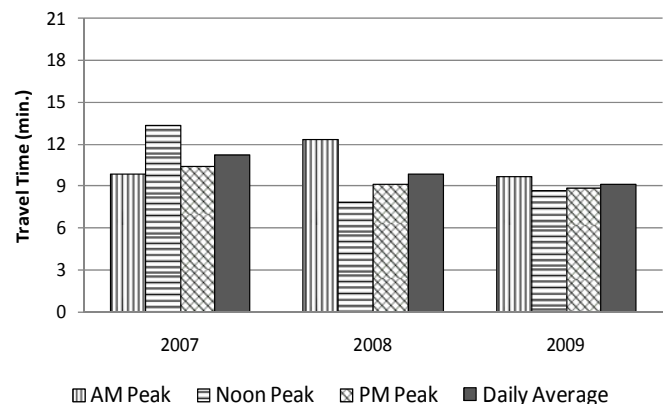
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time increased at the rate of +0.06% per year
- The WB Daily Average Travel Time decreased at the rate of -19.27% per year
- The Annual Cost of Congestion increased at the rate of +4.31% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -13.60% per year

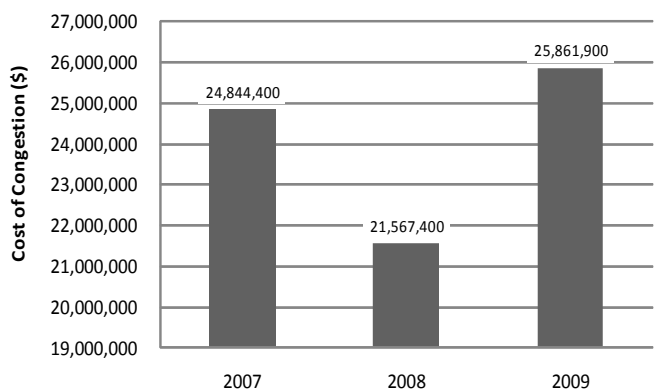
Average Travel Time (EB Direction)



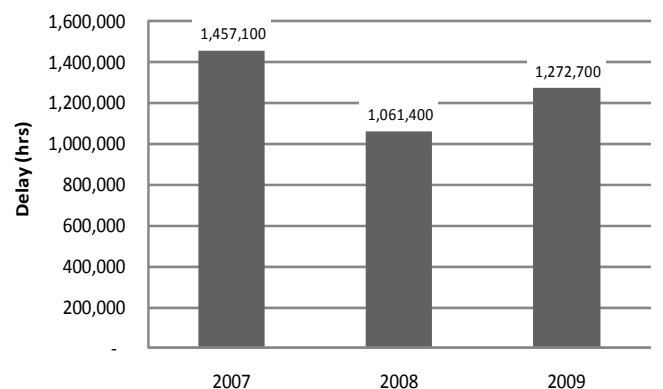
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

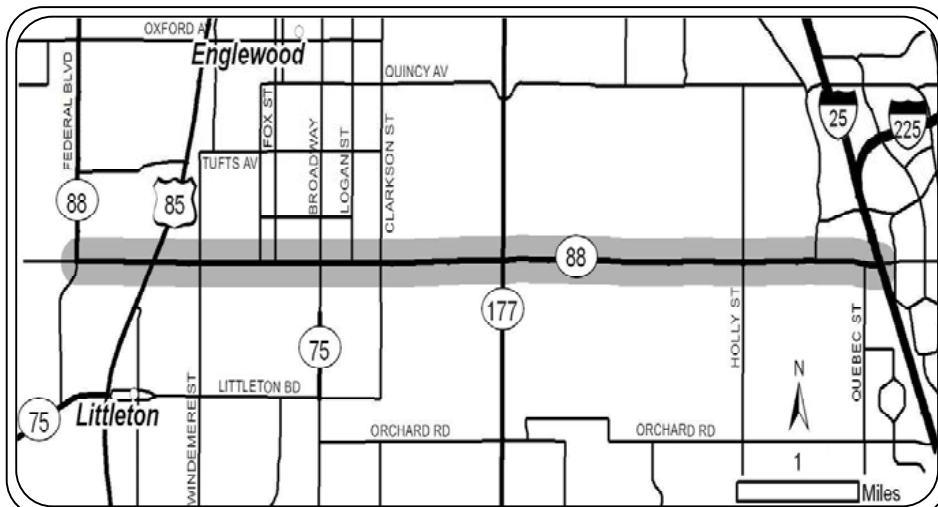


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

SH 88 - Belleview (SH 88 - Federal to I-25) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the eastbound direction during the morning peak period and westbound in the evening peak period. Congestion primarily occurs approaching Federal Boulevard, Broadway, University Boulevard, and the I-25 interchange. Travel time variability for westbound and eastbound directions in the peak periods varies between 9 and 50 percent. This data was collected in April 2009.



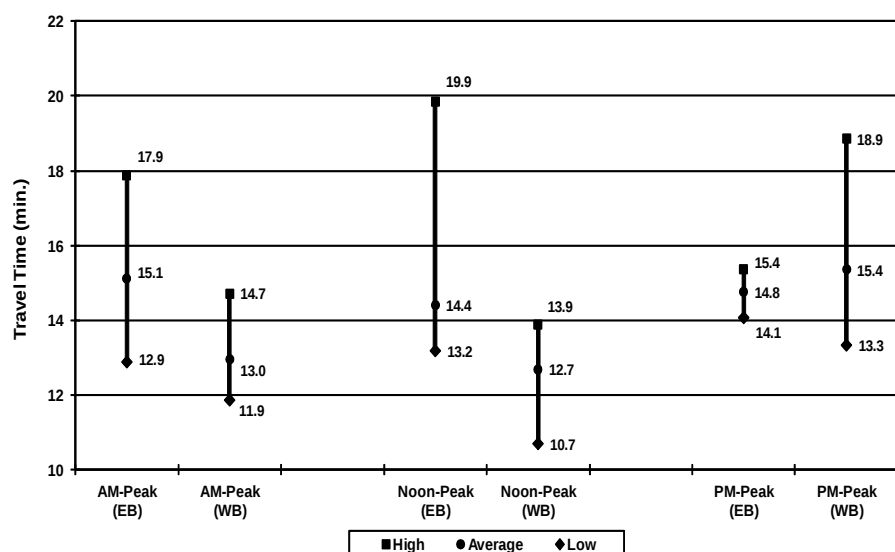
Corridor Characteristics

Corridor Length	6.7 Miles
Facility Type	Arterial - Urban
Speed Limit	35 – 40 mph
CDOT Region(s)	Region 6

Corridor Measures

Traffic Count per Day	Avg: 34,900 (30,600 – 39,200)
v/c Ratio	.67 - 1.09
Travel Rate Index	AM EB—1.13
	AM WB—1.08
	PM EB—1.10
	PM WB—1.28
Annual Vehicle Hours of Delay	568,900
Annual Person Hours of Delay	722,500
Annual Congestion Costs	\$11,560,300

Travel Time Variability by Time Period for April 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.27 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

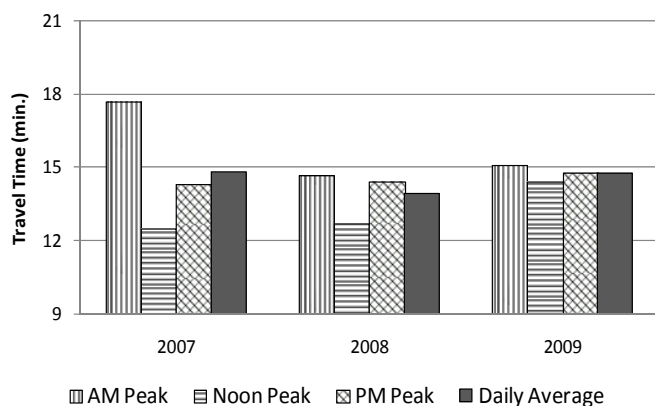
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

SH 88 - Belleview (SH 88 - Federal to I-25) – Three-Year Data Trend Analysis

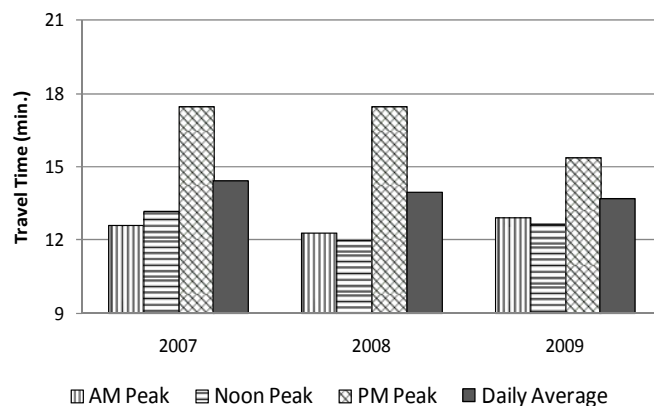
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time decreased at the rate of -0.42% per year
- The WB Daily Average Travel Time decreased at the rate of -5.19% per year
- The Annual Cost of Congestion increased at the rate of +21.40% per year
- The Annual Vehicle Hours of Delay increased at the rate of +2.33% per year

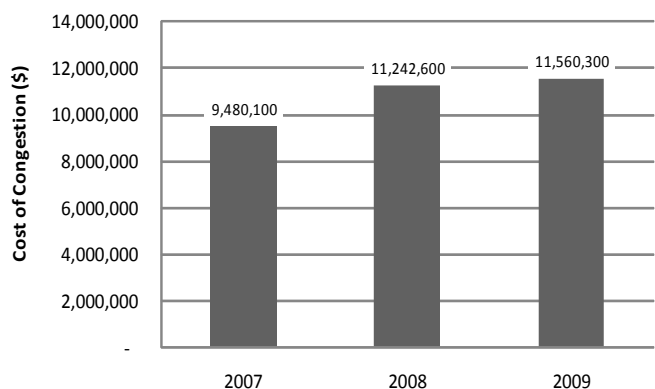
Average Travel Time (EB Direction)



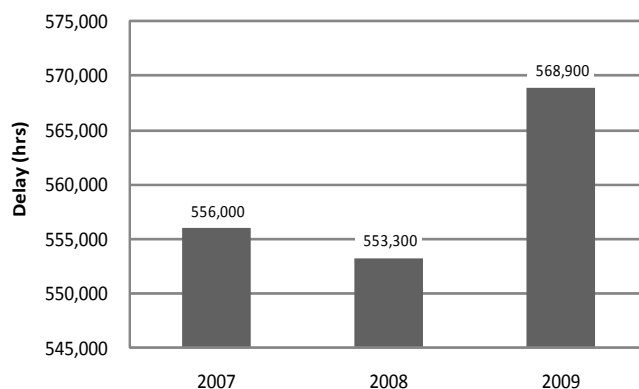
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

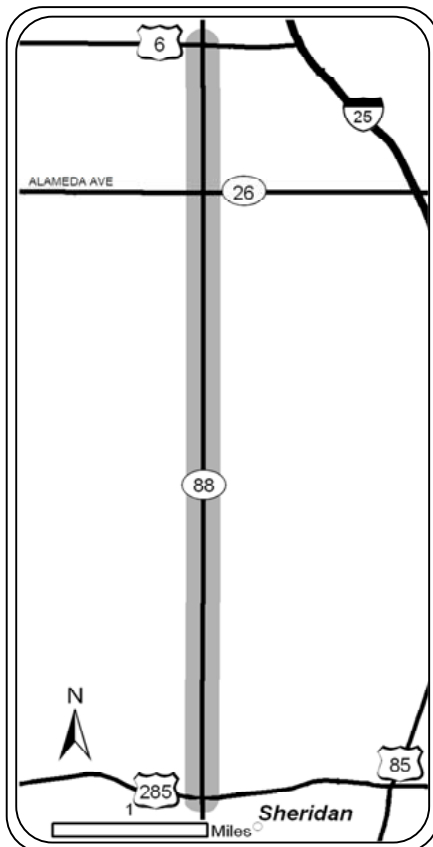


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

SH 88 – Federal Blvd. (US 6 to US 285) – Travel Time Report

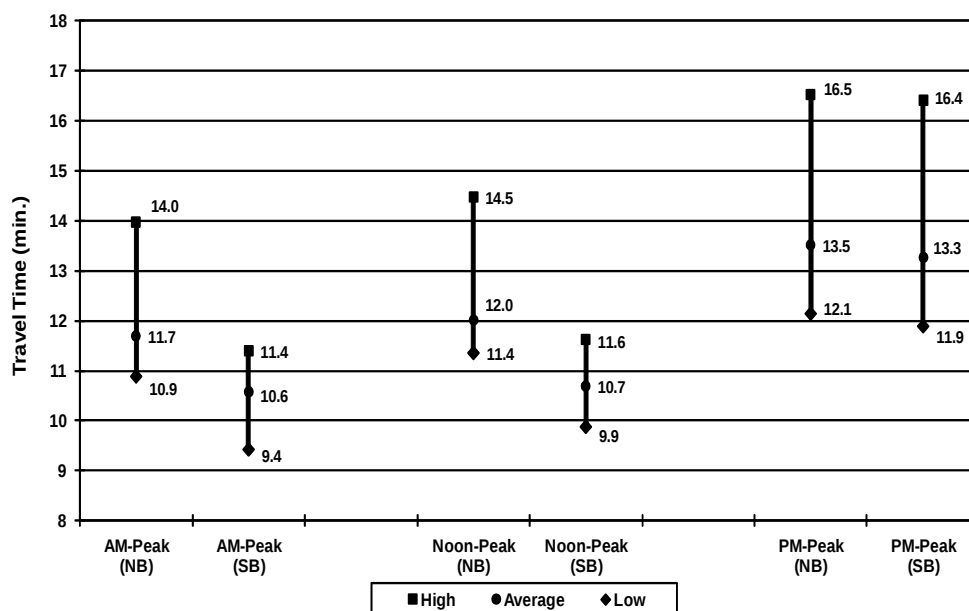
Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are generally heavier in the northbound direction during the morning peak period and southbound in the afternoon peak period. Congestion primarily occurs approaching Alameda, Mississippi, Florida, and Evans Avenues as well as US6 and US285 interchanges. Travel time variability for northbound and southbound directions in the peak periods varies between 17 and 38 percent. This data was collected in April 2009.



Corridor Characteristics		Travel Rate Index	AM NB—1.02
Corridor Length	5.2 Miles		AM SB—1.18
Facility Type	Arterial - Urban		PM NB—1.02
Speed Limit	35 - 40 mph		PM SB—1.27
CDOT Region(s)	Region 6	Annual Vehicle Hours of Delay	601,700
Corridor Measures		Annual Person Hours of Delay	764,200
Traffic Count per Day	Avg: 38,000 (26,800 – 48,200)	Annual Congestion Costs	\$12,227,300
v/c Ratio	.66 - .96		

Travel Time Variability by Time Period for April 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.27 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

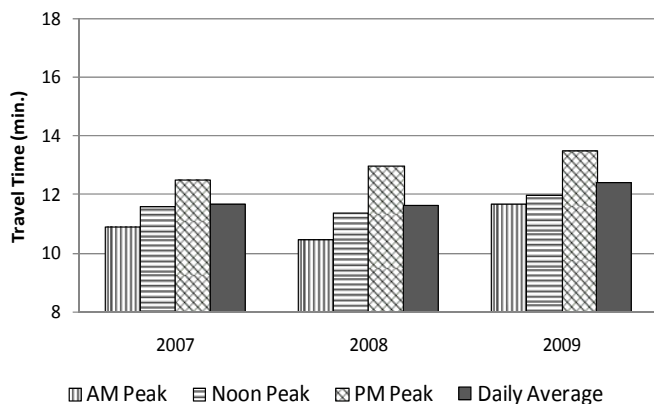
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

SH 88 – Federal Blvd. (US 6 to US 285) – Three-Year Data Trend Analysis

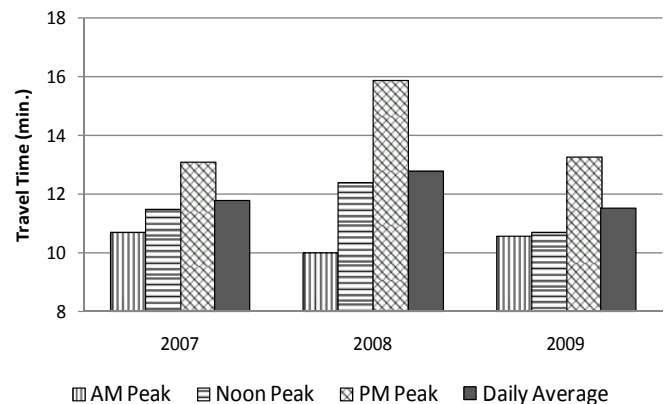
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time increased at the rate of +6.33% per year
- The SB Daily Average Travel Time decreased at the rate of -1.98% per year
- The Annual Cost of Congestion increased at the rate of +67.73% per year
- The Annual Vehicle Hours of Delay increased at the rate of +41.40% per year

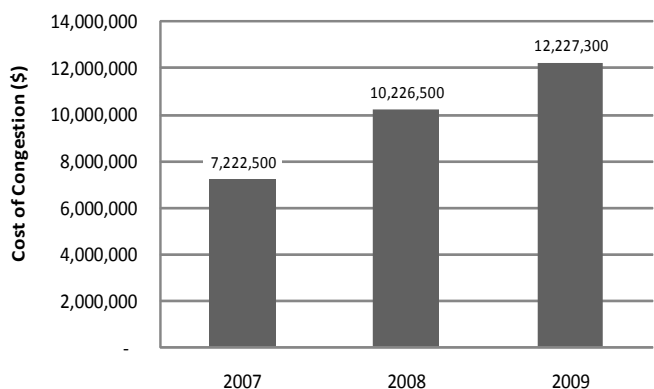
Average Travel Time (NB Direction)



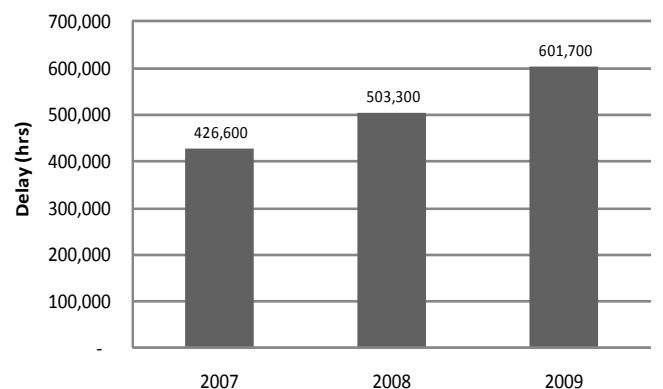
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

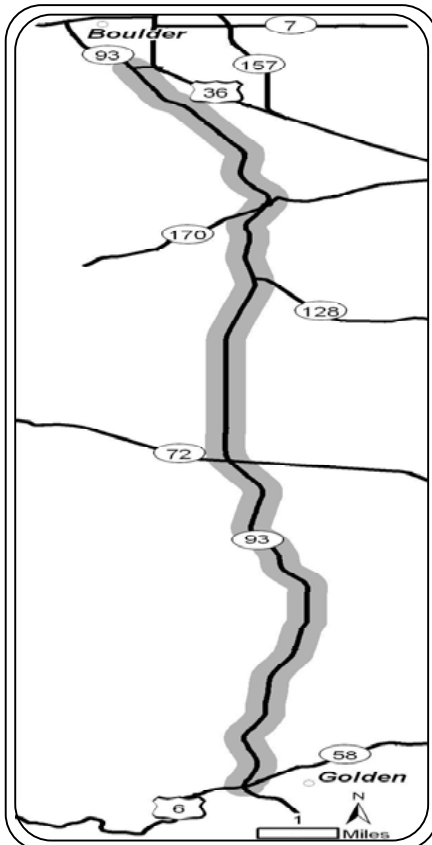


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

SH 93 (SH58/US 6 to US 36) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are near equally distributed between northbound and southbound directions throughout the day. Congestion primarily occurs approaching Table Mesa Drive and Baseline Road. Travel time variability for northbound and southbound directions in the peak periods varies between 12 and 16 percent. This data was collected in September and October 2009.



Corridor Characteristics

Corridor Length	18.3 Miles
Facility Type	Arterial – Urban/Rural
Speed Limit	30 - 55 mph

Travel Rate Index

AM NB—1.06
AM SB—1.07
PM NB—1.09
PM SB—1.09

CDOT Region(s)	Region 4 and Region 6
----------------	-----------------------

Annual Vehicle Hours of Delay

378,000

Corridor Measures

Traffic Count per Day	Avg: 20,500 (16,900 – 22,400)
v/c Ratio	.44 – 1.00

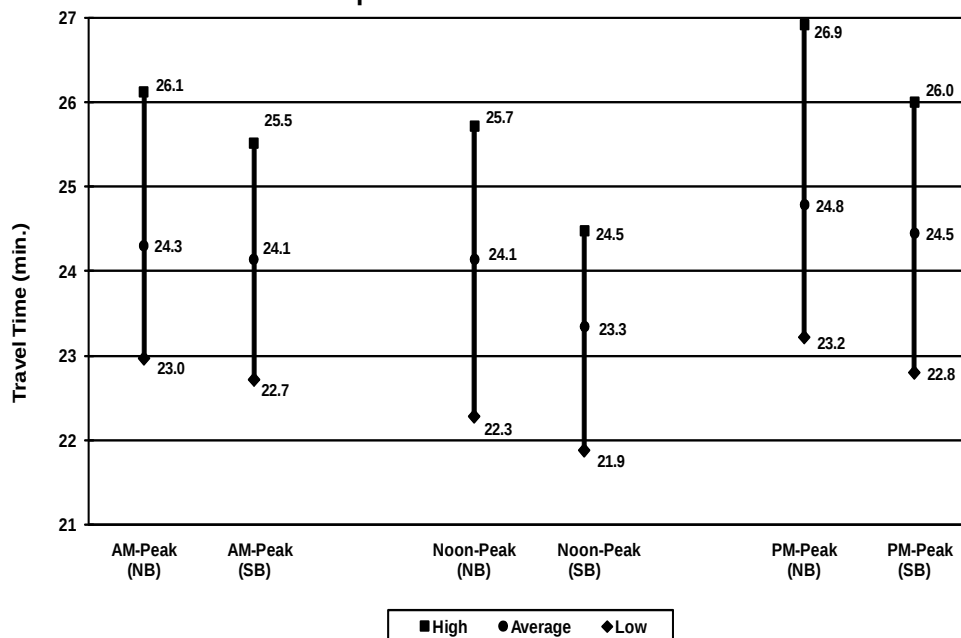
Annual Person Hours of Delay

480,100

Annual Congestion Costs

\$7,682,000

Travel Time Variability by Time Period for September and October 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.27 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

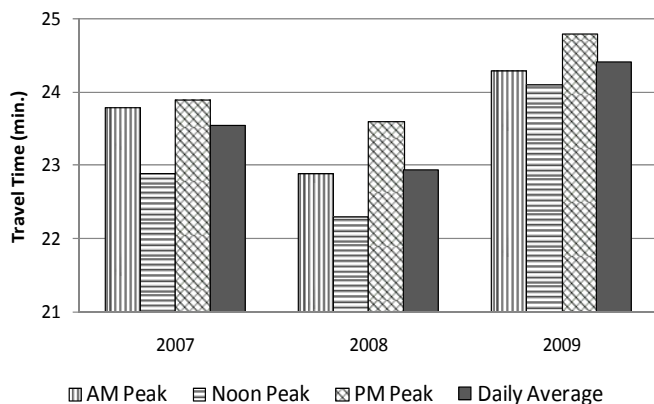
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

SH 93 (SH58/US 6 to US 36) – Three-Year Data Trend Analysis

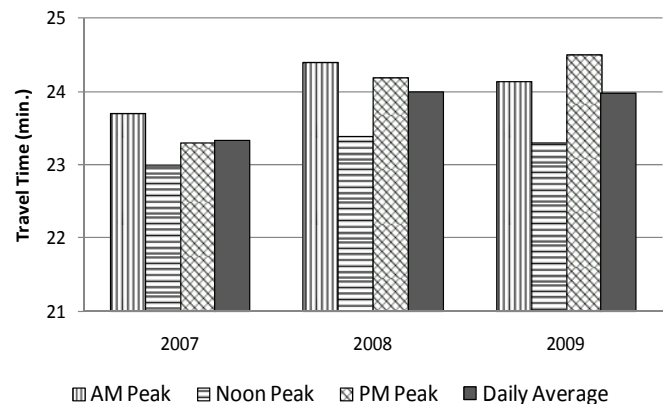
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time increased at the rate of +3.73% per year
- The SB Daily Average Travel Time increased at the rate of +2.76% per year
- The Annual Cost of Congestion increased at the rate of +44.51% per year
- The Annual Vehicle Hours of Delay increased at the rate of +21.01% per year

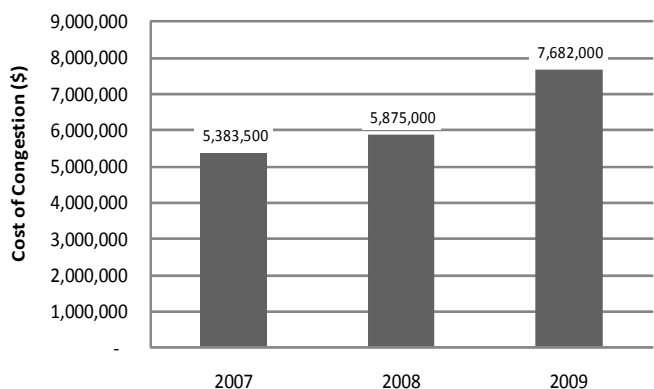
Average Travel Time (NB Direction)



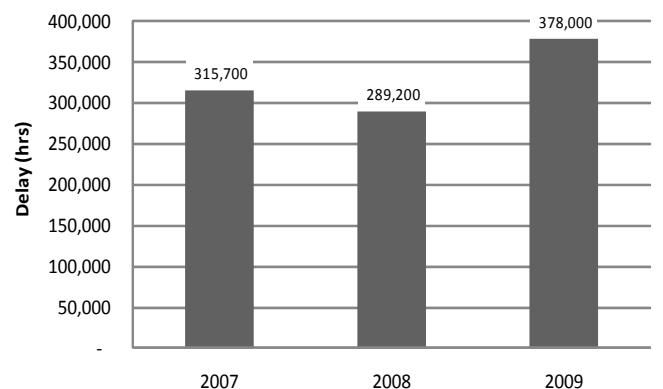
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

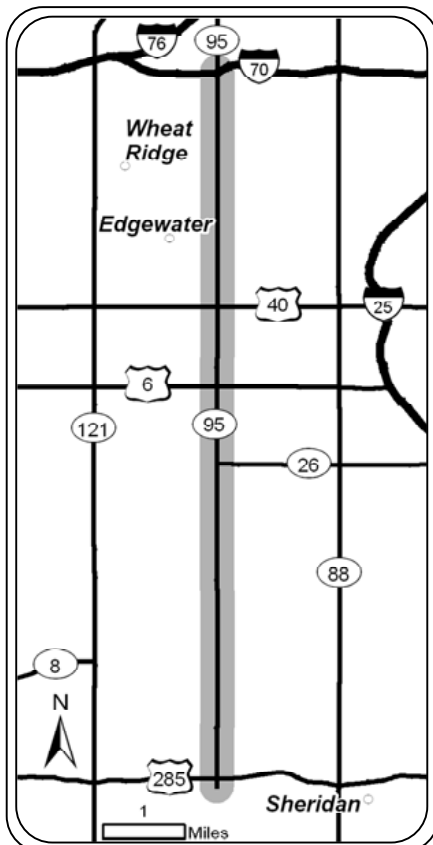


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

SH 95 – Sheridan Blvd. (US 285 to I-70) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are generally heavier in the northbound direction during the morning peak period and southbound in the afternoon peak period. Congestion primarily occurs approaching Colfax, Alameda, Florida, and Evans Avenues, as well as the US285 interchange. Travel time variability for northbound and southbound directions in the peak periods varies between 16 and 35 percent. This data was collected in October 2009.



Corridor Characteristics

Corridor Length	9.1 Miles
Facility Type	Arterial - Urban
Speed Limit	35 – 40 mph

Travel Rate Index

AM NB—1.02

AM SB—1.05

PM NB—1.21

PM SB—1.30

CDOT Region(s)	Region 6
----------------	----------

Annual Vehicle Hours of Delay

711,200

Corridor Measures

Traffic Count per Day	Avg: 35,900 (32,500 – 38,100)
v/c Ratio	.65 – 0.90

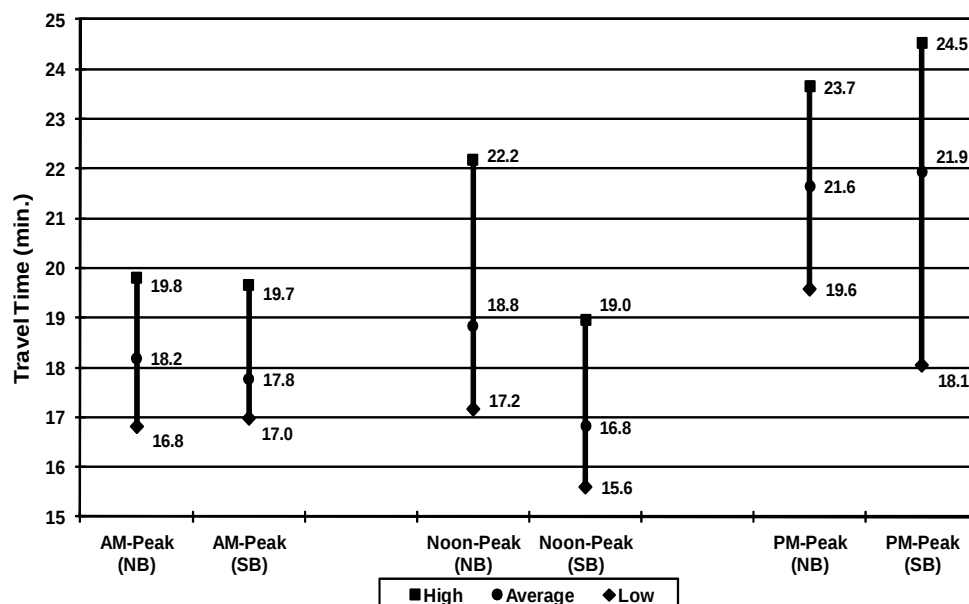
Annual Person Hours of Delay

903,200

Annual Congestion Costs

\$14,451,700

Travel Time Variability by Time Period for October 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.27 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

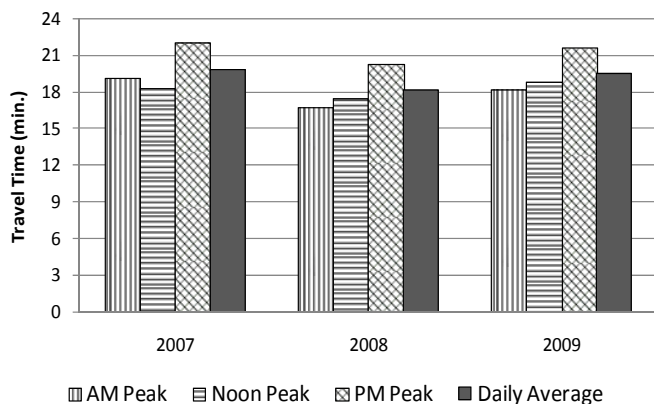
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

SH 95 – Sheridan Blvd. (US 285 to I-70) – Three-Year Data Trend Analysis

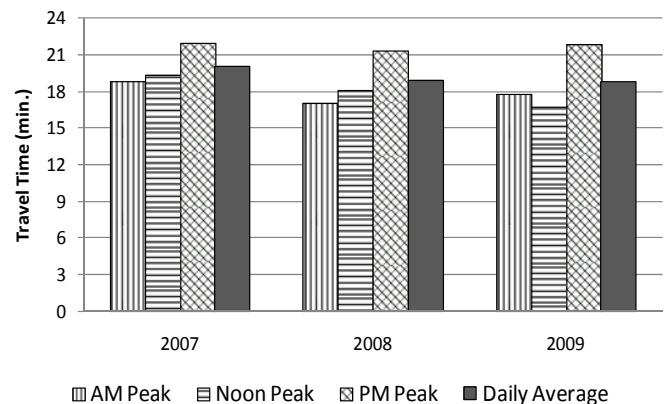
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time decreased at the rate of -1.57% per year
- The SB Daily Average Travel Time decreased at the rate of -6.25% per year
- The Annual Cost of Congestion increased at the rate of +51.62% per year
- The Annual Vehicle Hours of Delay increased at the rate of +27.40% per year

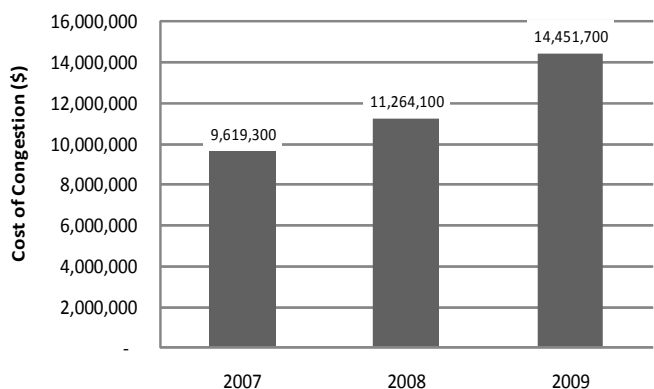
Average Travel Time (NB Direction)



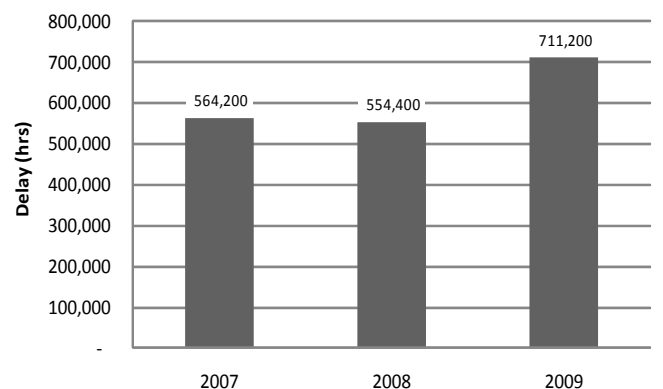
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

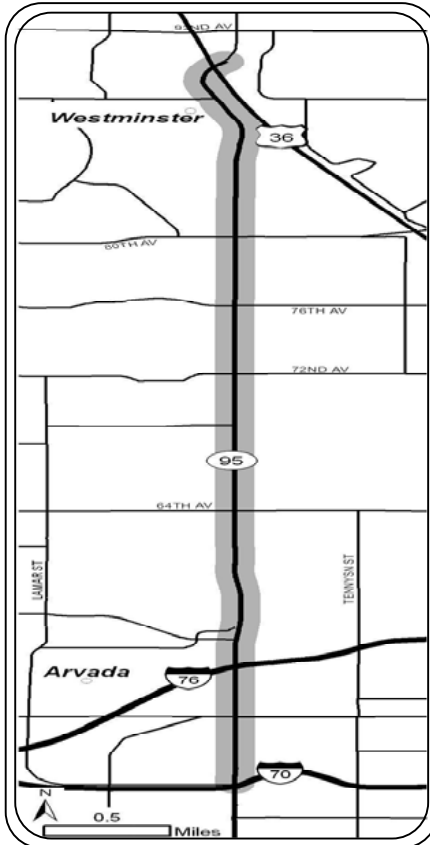


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

SH 95 - Sheridan Blvd. (I-70 to US 36) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are generally heavier in the southbound direction during the morning peak period and northbound in the afternoon peak period. Congestion primarily occurs approaching 52nd, 64th, 72nd, 80th, and 88th Avenues, as well as the US-36 interchange. Travel time variability for northbound and southbound directions in the peak periods varies between 15 and 29 percent. This data was collected in May 2009.



Corridor Characteristics

Corridor Length	5.3 Miles
Facility Type	Arterial - Urban
Speed Limit	35 – 45 mph

Travel Rate Index

AM NB—1.01

AM SB—0.99

PM NB—1.15

PM SB—1.26

CDOT Region(s)	Region 6
----------------	----------

Annual Vehicle Hours of Delay

884,500

Corridor Measures

Traffic Count per Day	Avg: 41,900 (35,100 – 51,700)
v/c Ratio	.79 – 1.12

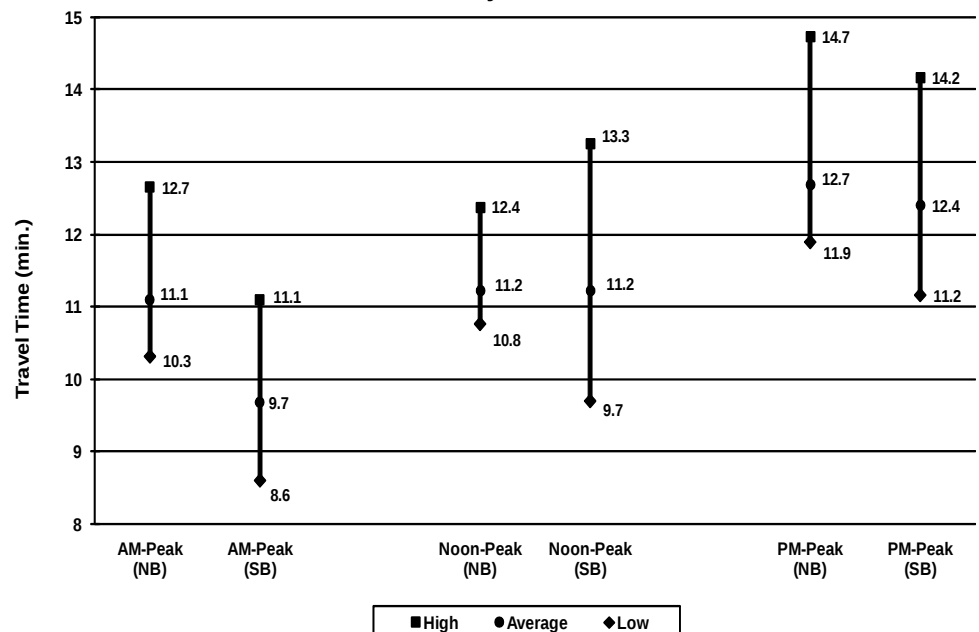
Annual Person Hours of Delay

1,123,400

Annual Congestion Costs

\$17,973,600

Travel Time Variability by Time Period for May 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.27 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.



Year 2009

Page 1 of 2

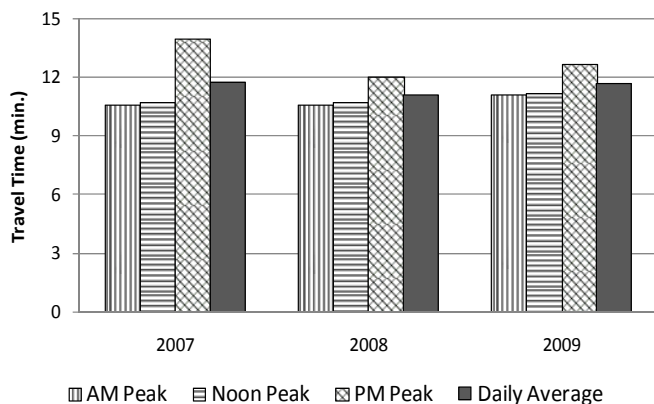


SH 95 - Sheridan Blvd. (I-70 to US 36) – Three-Year Data Trend Analysis

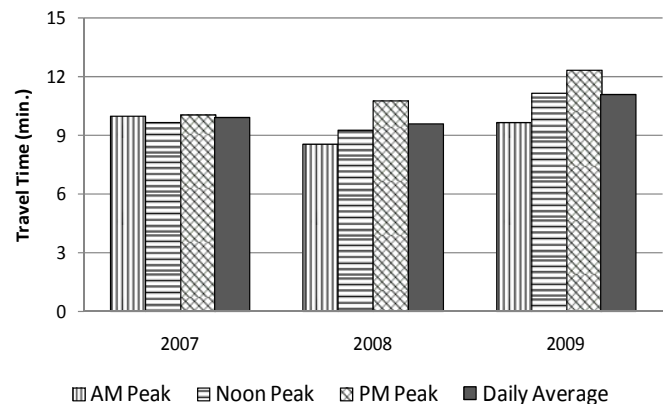
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time decreased at the rate of -0.88% per year
- The SB Daily Average Travel Time increased at the rate of +12.07% per year
- The Annual Cost of Congestion increased at the rate of +72.39% per year
- The Annual Vehicle Hours of Delay increased at the rate of +43.12% per year

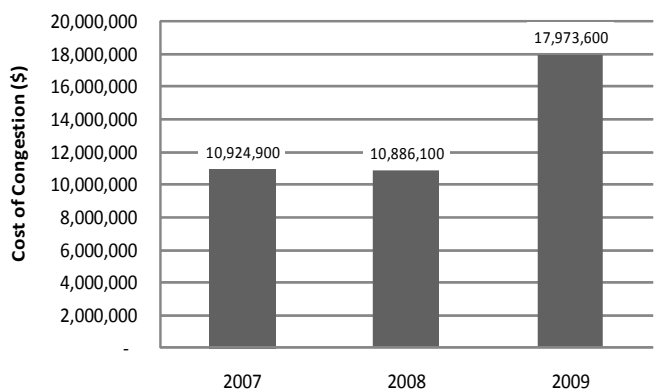
Average Travel Time (NB Direction)



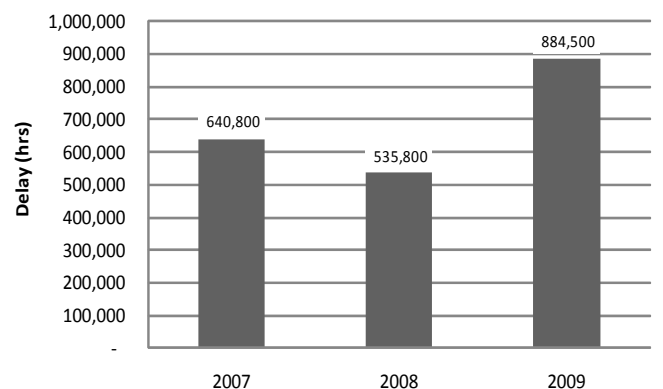
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

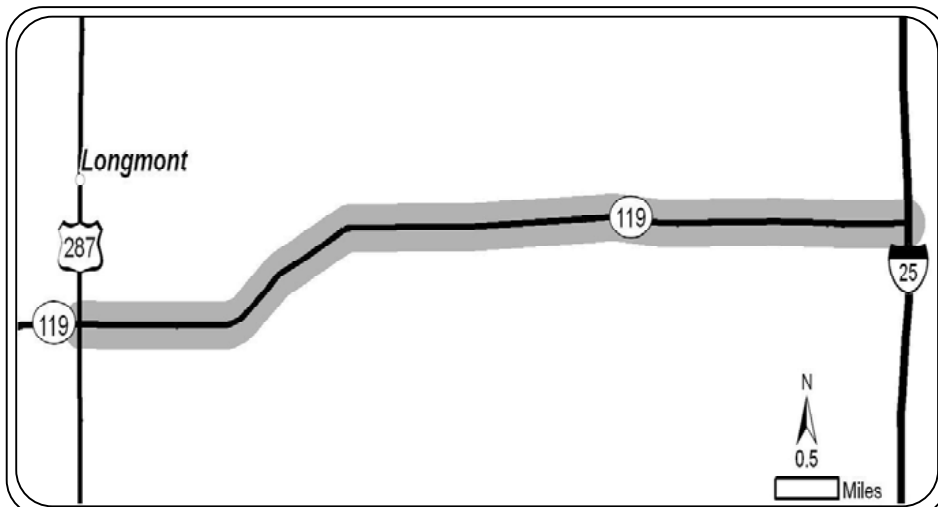


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

SH 119 – Diagonal Hwy. (US 287 to I-25) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the westbound direction during the morning peak period and eastbound in the afternoon peak period. Congestion primarily occurs approaching I-25, County Line Road, and US-287. Travel time variability for westbound and eastbound directions in the peak periods varies between 12 and 149 percent. This data was collected in October 2009.



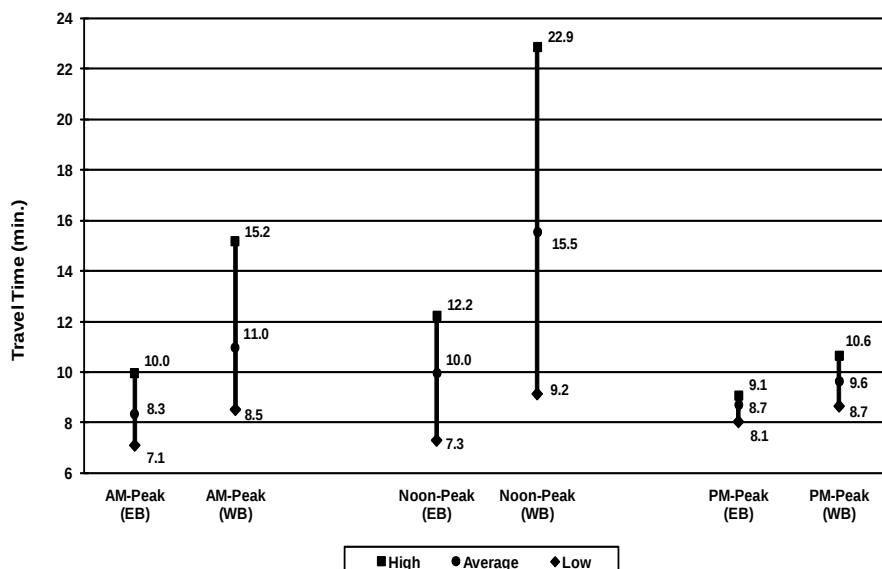
Corridor Characteristics

Corridor Length	6.8 Miles
Facility Type	Freeway/Arterial – Urban/Rural
Speed Limit	35 – 65 mph
CDOT Region(s)	Region 4

Corridor Measures

Traffic Count per Day	Avg: 34,100 (32,600 – 35,100)
v/c Ratio	.84 - 1.00
Travel Rate Index	AM EB—1.11
	AM WB—1.25
	PM EB—1.16
	PM WB—1.10
Annual Vehicle Hours of Delay	558,600
Annual Person Hours of Delay	681,400
Annual Congestion Costs	\$10,903,000

Travel Time Variability by Time Period for October 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.22 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

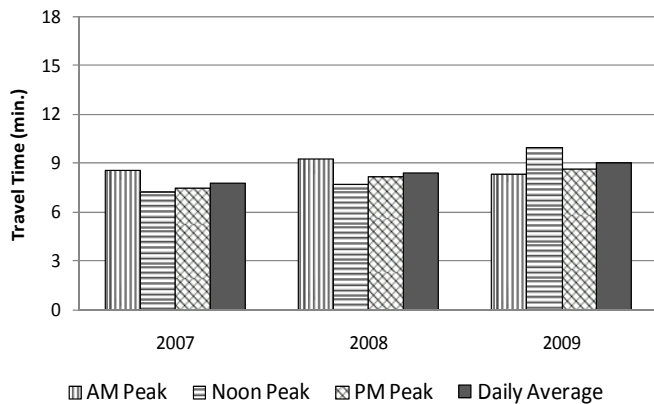
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

SH 119 – Diagonal Hwy. (US 287 to I-25) – Three-Year Data Trend Analysis

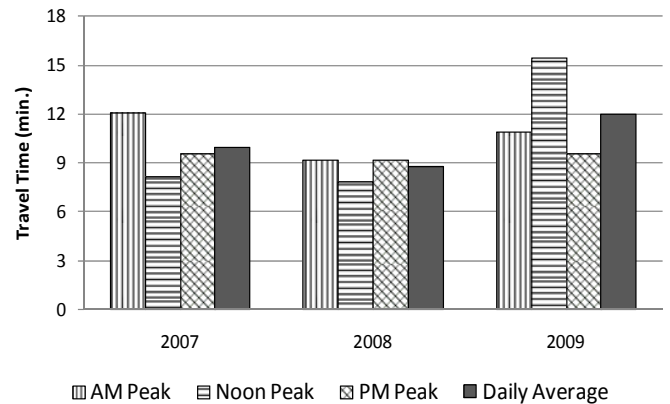
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time increased at the rate of +15.57% per year
- The WB Daily Average Travel Time increased at the rate of +22.24% per year
- The Annual Cost of Congestion increased at the rate of +87.28% per year
- The Annual Vehicle Hours of Delay increased at the rate of +60.86% per year

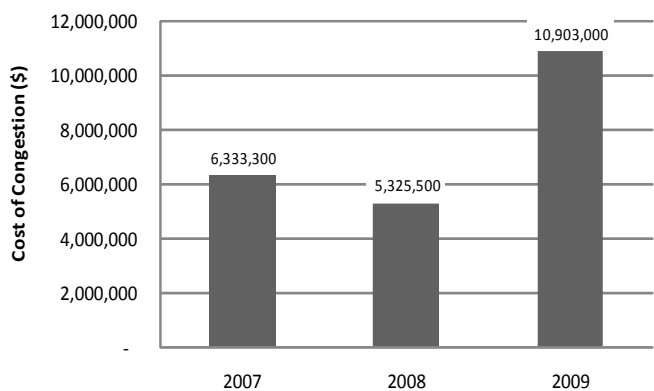
Average Travel Time (EB Direction)



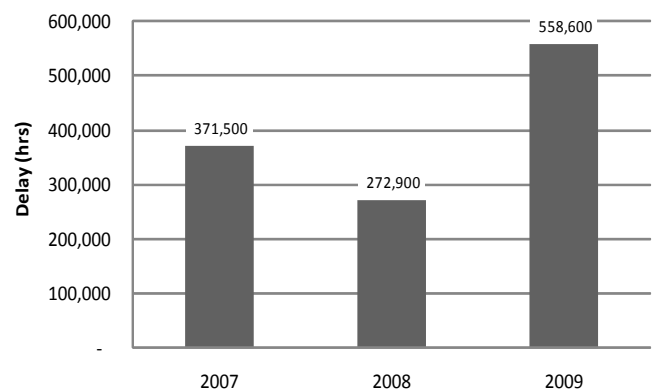
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

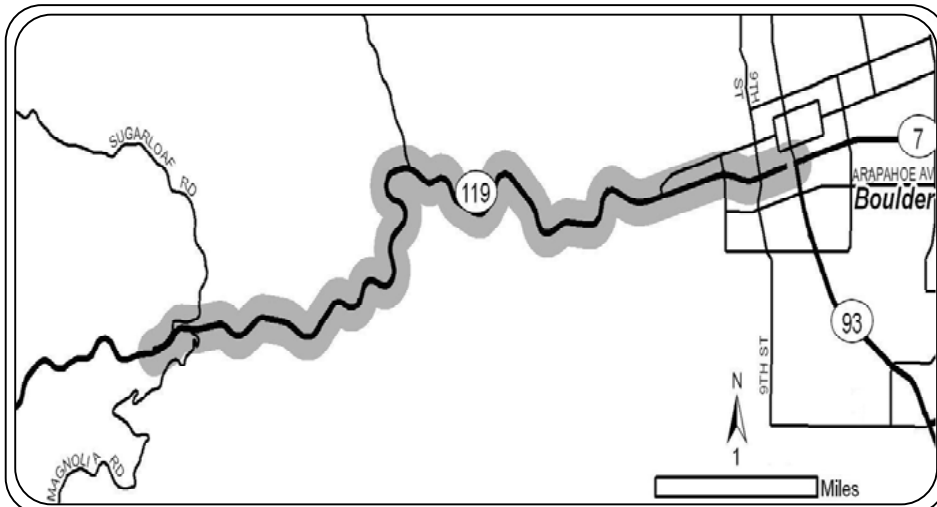


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

SH 119 (Sugarloaf Rd to Broadway St.) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are generally heavier in the eastbound direction during the morning peak period and westbound in the afternoon peak period. Congestion primarily occurs approaching Four Mile Canyon Drive, Pearl, 9th, and Broadway Streets. Travel time variability for westbound and eastbound directions in the peak periods varies between 12 and 31 percent. This data was collected in September 2009.



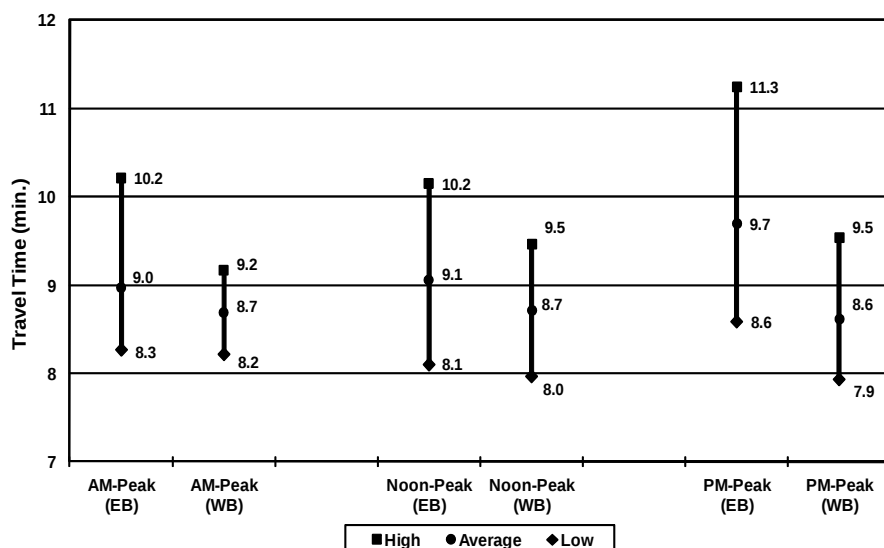
Corridor Characteristics

Corridor Length	5.3 Miles
Facility Type	Arterial – Urban/Rural
Speed Limit	35 – 40 mph
CDOT Region(s)	Region 4

Corridor Measures

Traffic Count per Day	Avg: 9,200 (7,600 – 12,000)
v/c Ratio	.36 - .91
Travel Rate Index	AM EB—1.08
	AM WB—1.08
	PM EB—1.17
	PM WB—1.07
Annual Vehicle Hours of Delay	61,400
Annual Person Hours of Delay	97,600
Annual Congestion Costs	\$1,560,800

Travel Time Variability by Time Period for September 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.59 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

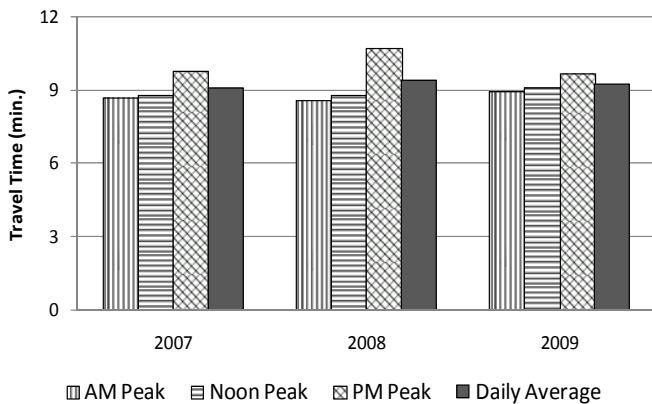
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

SH 119 (Sugarloaf Rd to Broadway St.) – Three-Year Data Trend Analysis

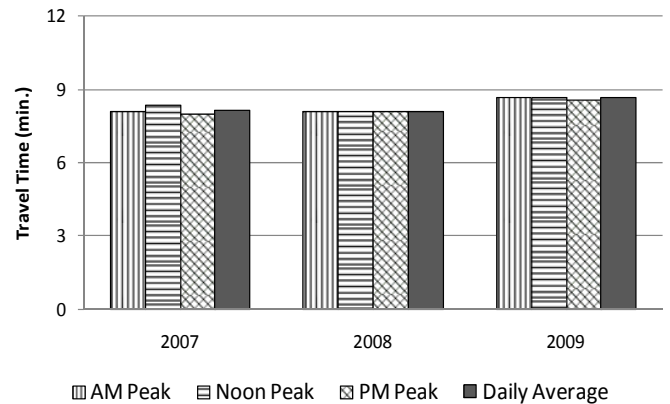
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time increased at the rate of +1.72% per year
- The WB Daily Average Travel Time increased at the rate of +6.13% per year
- The Annual Cost of Congestion increased at the rate of +48.85% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -1.04% per year

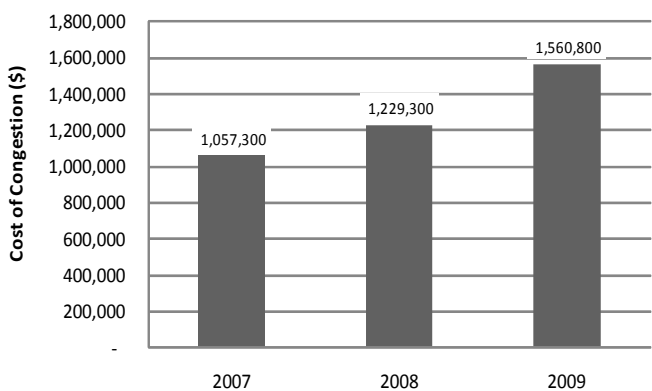
Average Travel Time (EB Direction)



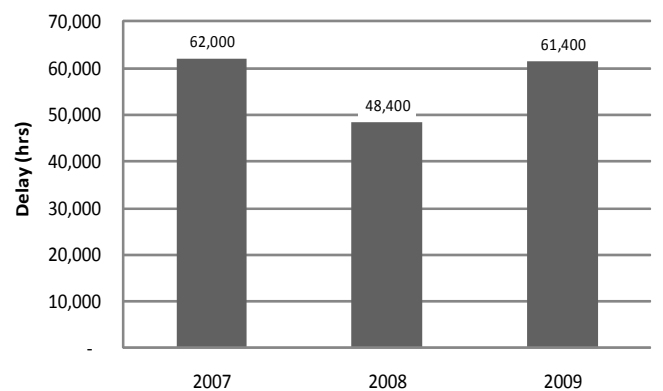
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

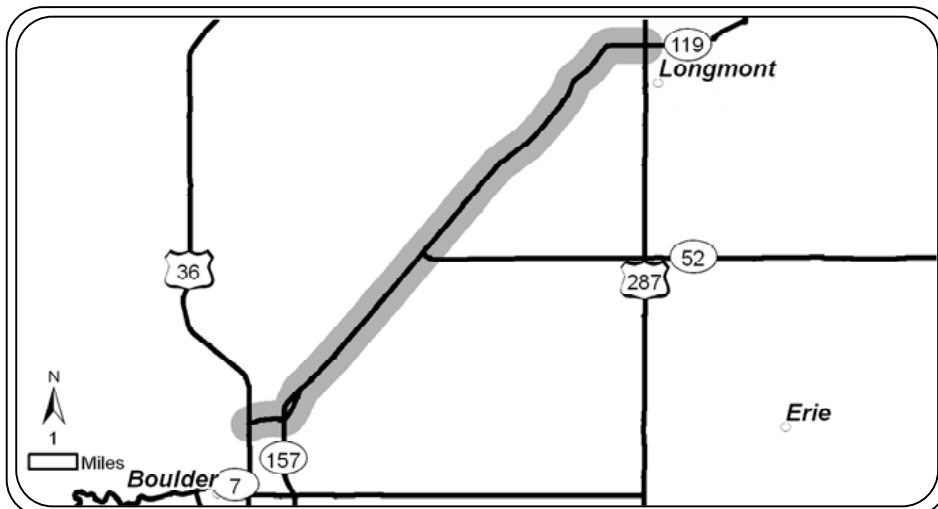


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

SH 119-Diagonal Hwy. (US 36 to US 287) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the westbound direction during the morning peak period and eastbound in the afternoon peak period. Congestion primarily occurs approaching 28th Street, Highway 52, Hover Street, and US287 (Main Street). Travel time variability for westbound and eastbound directions in the peak periods varies between 17 and 31 percent. This data was collected in October 2009.



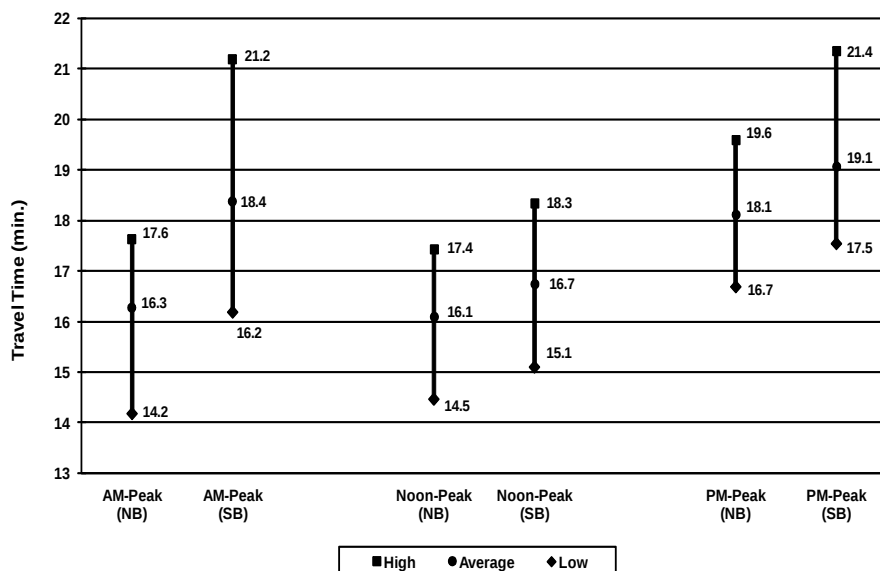
Corridor Characteristics

Corridor Length	12.0 Miles
Facility Type	Freeway/Arterial - Urban
Speed Limit	35 – 65 mph
CDOT Region(s)	Region 4

Corridor Measures

Traffic Count per Day	Avg: 33,700 (27,900 – 39,100)
v/c Ratio	.36 - .91
Travel Rate Index	AM EB—1.08
	AM WB—1.13
	PM EB—1.20
	PM WB—1.17
Annual Vehicle Hours of Delay	589,700
Annual Person Hours of Delay	760,700
Annual Congestion Costs	\$12,171,700

Travel Time Variability by Time Period for October 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.29 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

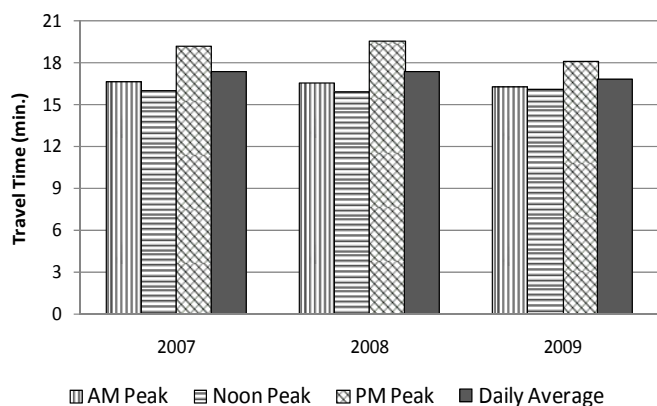
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

SH 119-Diagonal Hwy. (US 36 to US 287) – Three-Year Data Trend Analysis

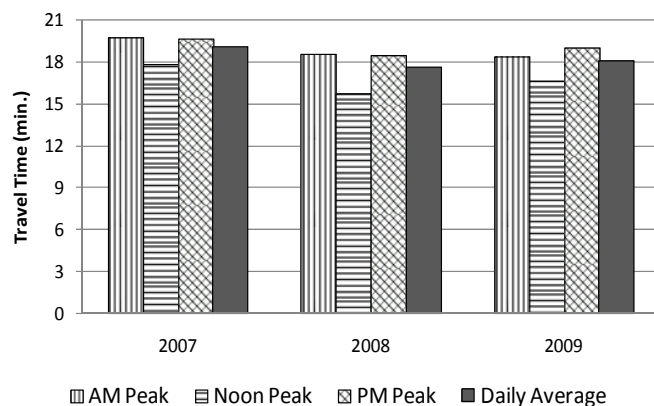
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time decreased at the rate of -2.73% per year
- The SB Daily Average Travel Time decreased at the rate of -5.70% per year
- The Annual Cost of Congestion increased at the rate of +7.84% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -9.60% per year

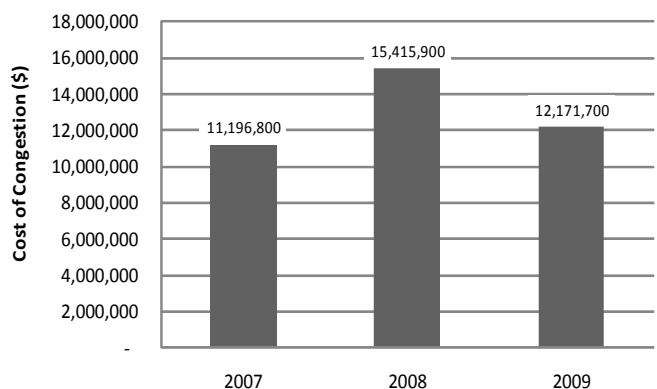
Average Travel Time (NB Direction)



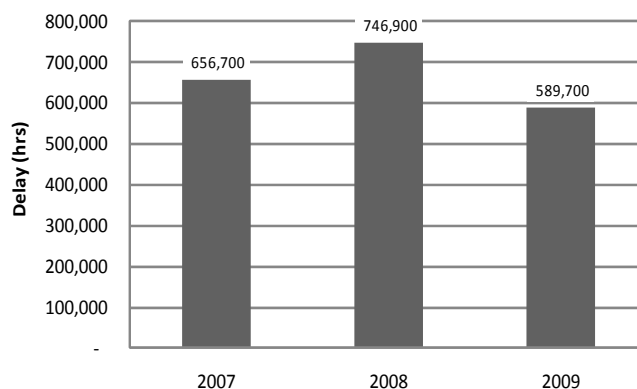
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

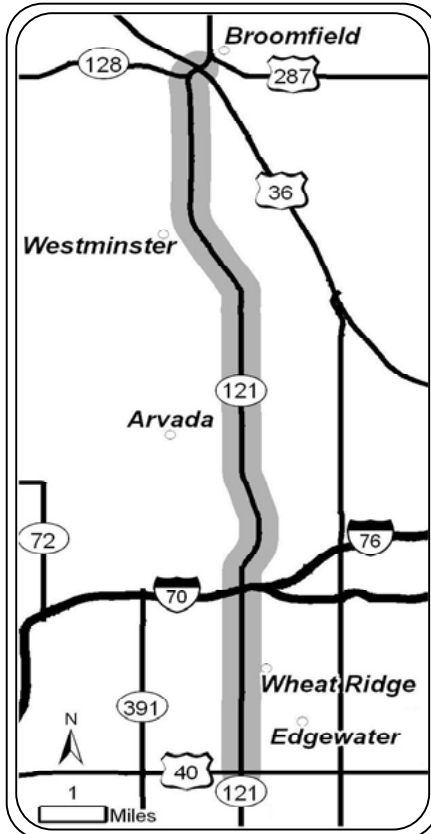


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

SH 121 – Wadsworth Blvd. (US 40 to US 36) – Travel Time Report

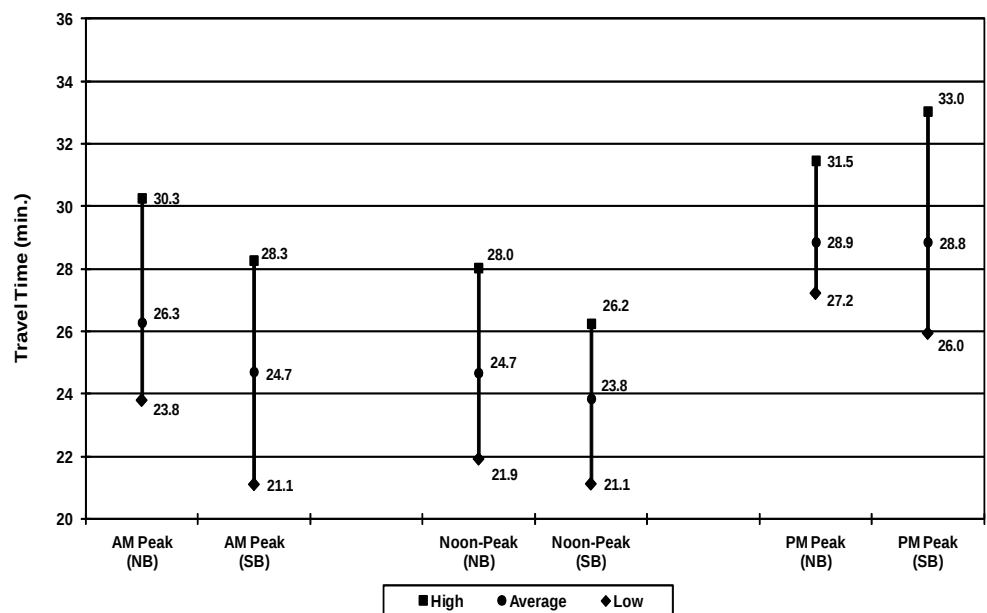
Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are generally heavier in the northbound direction during the morning peak and heavier southbound in the afternoon peak. Congestion occurs in multiple areas along the corridor such as near Colfax Avenue, I-70 interchange, 80th Avenue, and the US-36 interchange. Travel time variability for northbound and southbound directions in the peak periods varies between 16 and 34 percent. This data was collected in April 2009.



Corridor Characteristics		Travel Rate Index	AM NB—1.08
Corridor Length	12.9 Miles		AM SB—1.09
Facility Type	Arterial - Urban		PM NB—1.19
Speed Limit	40–55 mph		PM SB—1.27
CDOT Region(s)	Region 6	Annual Vehicle Hours of Delay	1,967,500
Corridor Measures		Annual Person Hours of Delay	2,498,800
Traffic Count per Day	Avg: 40,800 (30,100 – 49,800)	Annual Congestion Costs	\$39,980,600
v/c Ratio	.70 – 1.10		

Travel Time Variability by Time Period for April 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a “snapshot” of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.27 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

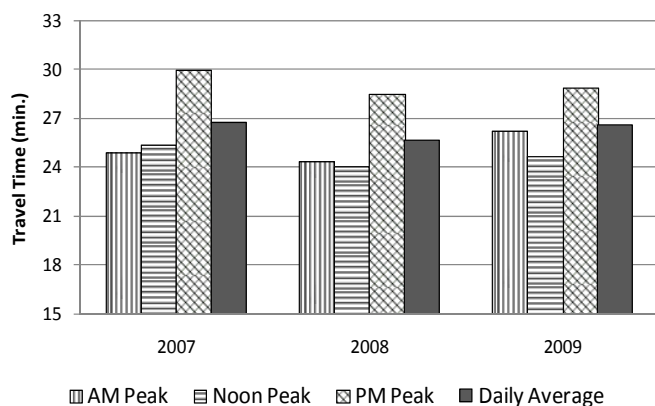
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

SH 121 – Wadsworth Blvd. (US 40 to US 36) – Three-Year Data Trend Analysis

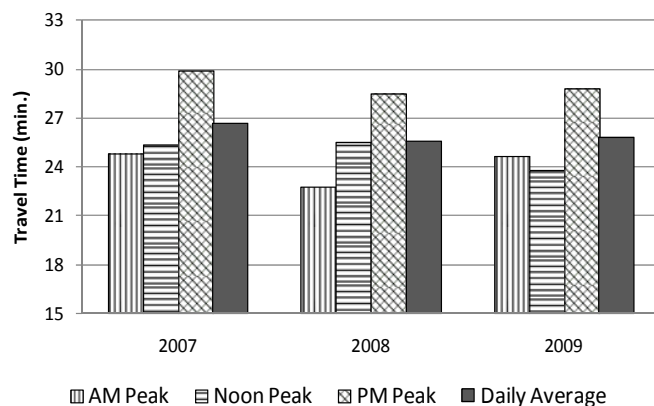
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time decreased at the rate of -0.53% per year
- The SB Daily Average Travel Time decreased at the rate of -3.51% per year
- The Annual Cost of Congestion increased at the rate of +21.93% per year
- The Annual Vehicle Hours of Delay increased at the rate of +1.84% per year

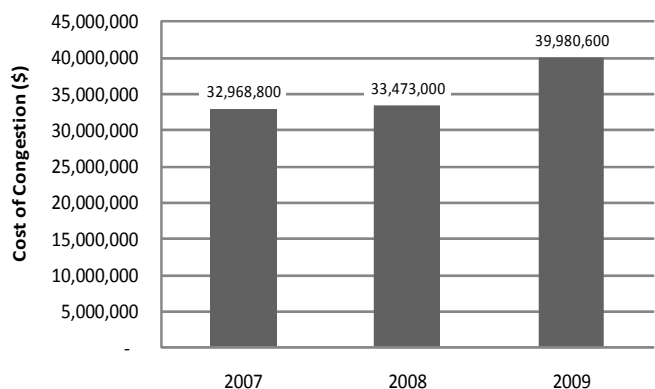
Average Travel Time (NB Direction)



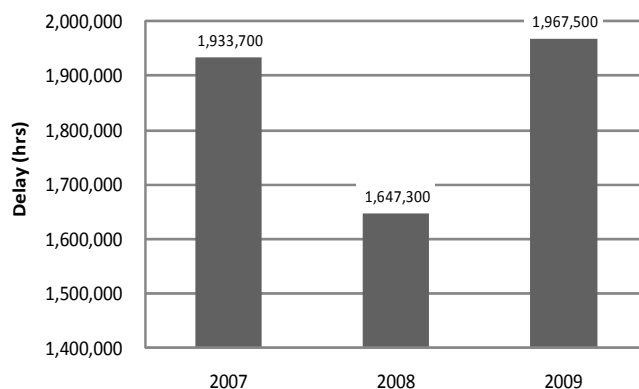
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

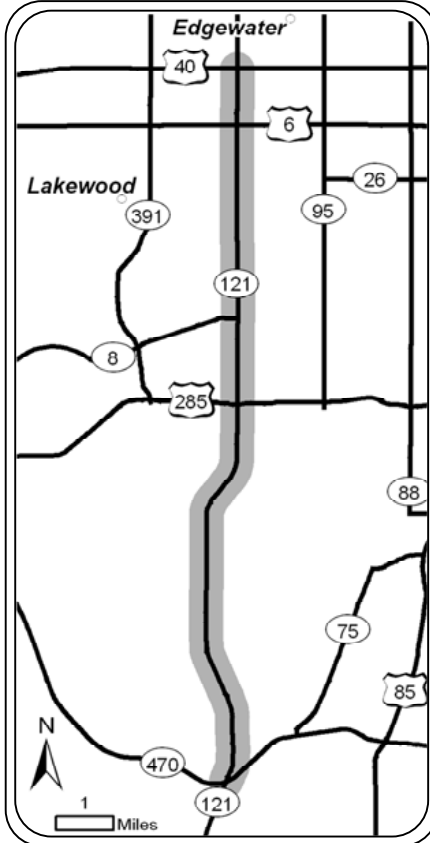


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

SH 121 – Wadsworth Blvd. (C-470 to US 40) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are generally heavier in the northbound direction during the morning peak period and southbound in the afternoon peak period. Congestion primarily occurs approaching Colfax, Alameda, Yale, Quincy, and Bowles Avenues, as well as C-470 and US-285 interchanges. Travel time variability for northbound and southbound directions in the peak periods varies between 15 and 64 percent. This data was collected in April and May 2009.



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Corridor Characteristics

Corridor Length	13.2 Miles
Facility Type	Freeway/Arterial - Urban
Speed Limit	40 - 45 mph

CDOT Region(s)	Region 6
----------------	----------

Corridor Measures

Traffic Count per Day	Avg: 40,300 (28,200 – 50,000)
v/c Ratio	.60 – 1.12

Travel Rate Index

AM NB—1.04

AM SB—0.99

PM NB—1.17

PM SB—1.25

Annual Vehicle Hours of Delay

1,023,900

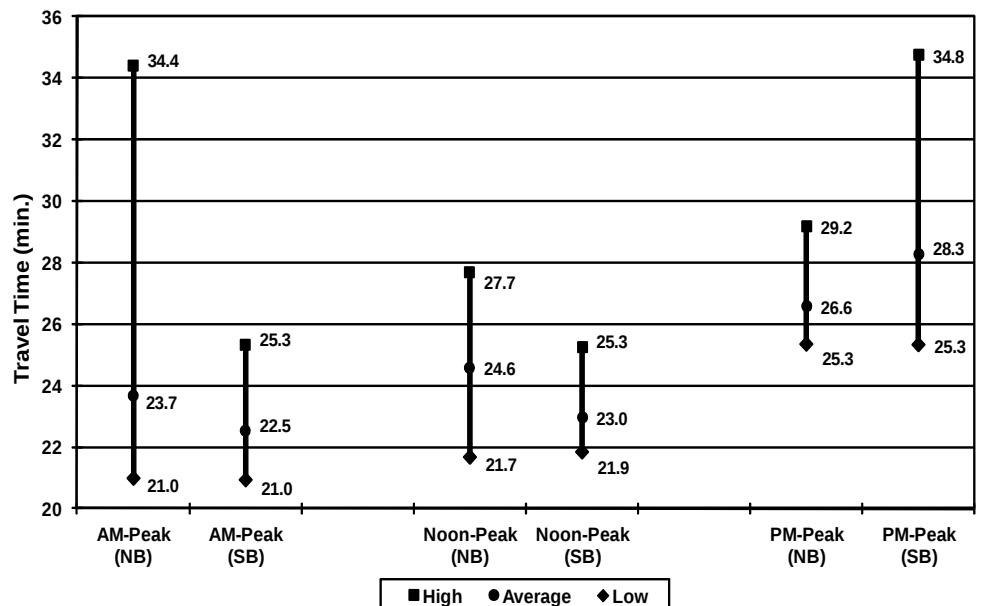
Annual Person Hours of Delay

1,279,900

Annual Congestion Costs

\$20,478,400

Travel Time Variability by Time Period for April and May 2009



Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.25 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.



Year 2009

Page 1 of 2

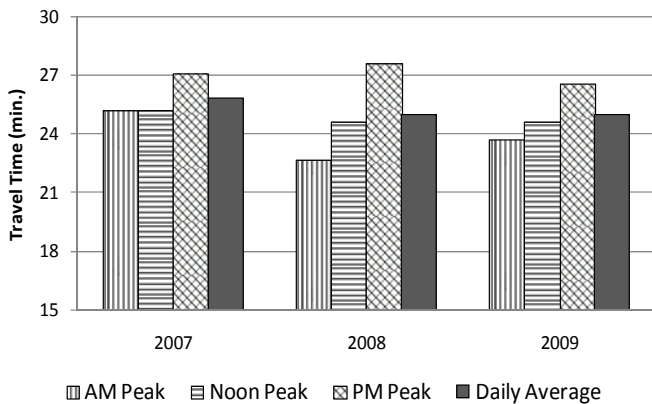


SH 121 – Wadsworth Blvd. (C-470 to US 40) – Three-Year Data Trend Analysis

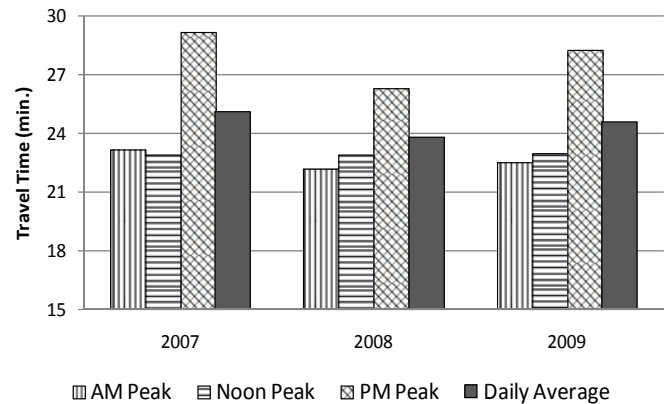
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time decreased at the rate of -3.38% per year
- The SB Daily Average Travel Time decreased at the rate of -2.00% per year
- The Annual Cost of Congestion increased at the rate of +17.06% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -0.80% per year

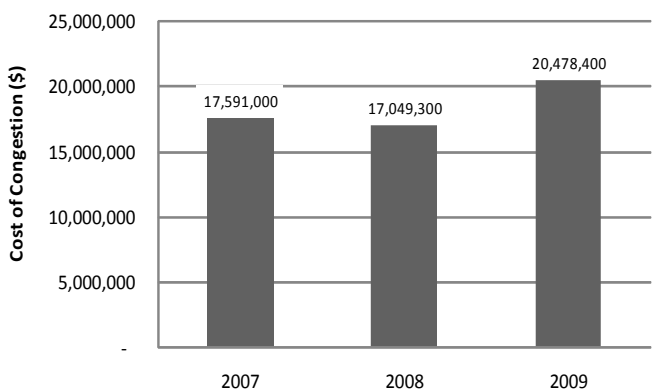
Average Travel Time (NB Direction)



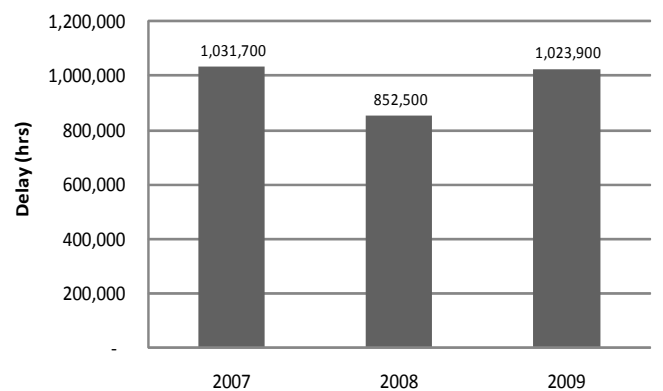
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

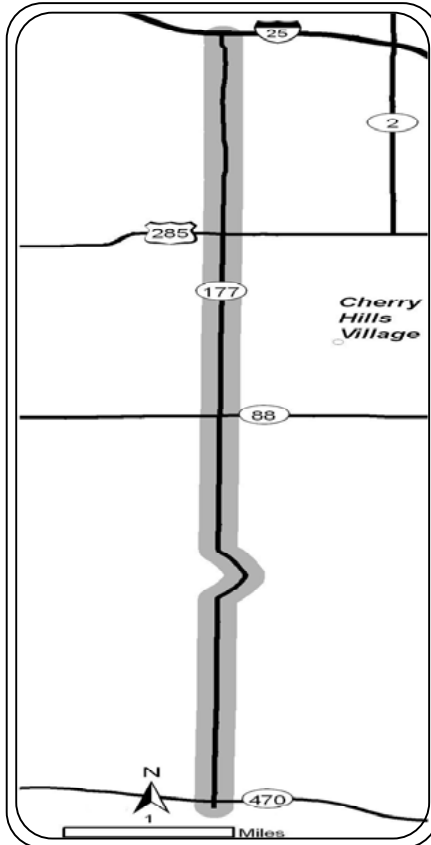


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

SH 177 - S. University Blvd. (C-470/Lincoln to I-25) – Travel Time Report

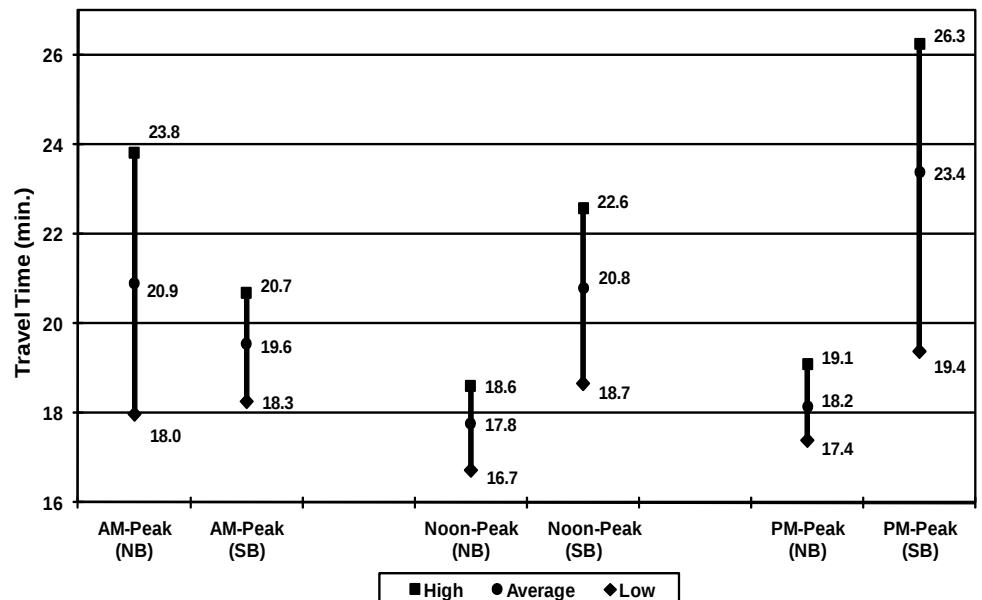
Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the northbound direction during the morning peak period and southbound in the afternoon peak period. Congestion primarily occurs approaching Evans, Hampden, and Bellevue Avenues, Orchard Road, and the C470 and I-25 interchanges. Travel time variability for northbound and southbound directions in the peak periods varies between 10 and 36 percent. This data was collected in May 2009 and June 2009.



Corridor Characteristics		Travel Rate Index	AM NB—1.20
Corridor Length	8.6 Miles		AM SB—1.04
Facility Type	Arterial - Urban		PM NB—1.05
Speed Limit	30 – 45 mph		PM SB—1.25
CDOT Region(s)	Region 6	Annual Vehicle Hours of Delay	960,400
Corridor Measures		Annual Person Hours of Delay	1,219,700
Traffic Count per Day	Avg: 33,900 (32,300 – 36,100)	Annual Congestion Costs	\$19,514,800
v/c Ratio	.70 - 1.00		

Travel Time Variability by Time Period for May and June 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.27 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

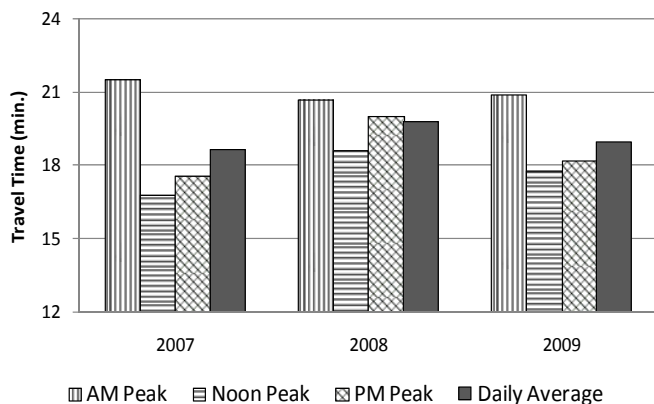
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Northbound-NB, Southbound-SB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

SH 177 - S. University Blvd. (C-470/Lincoln to I-25) – Three-Year Data Trend Analysis

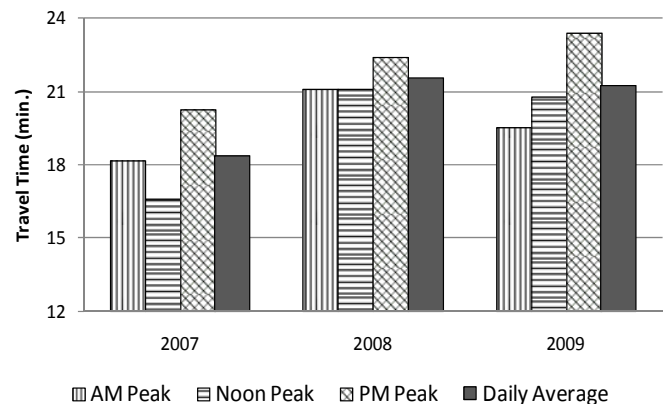
Three-Year Trend Analysis Highlights:

- The NB Daily Average Travel Time increased at the rate of +1.76% per year
- The SB Daily Average Travel Time increased at the rate of +15.23% per year
- The Annual Cost of Congestion increased at the rate of +75.90% per year
- The Annual Vehicle Hours of Delay increased at the rate of +50.28% per year

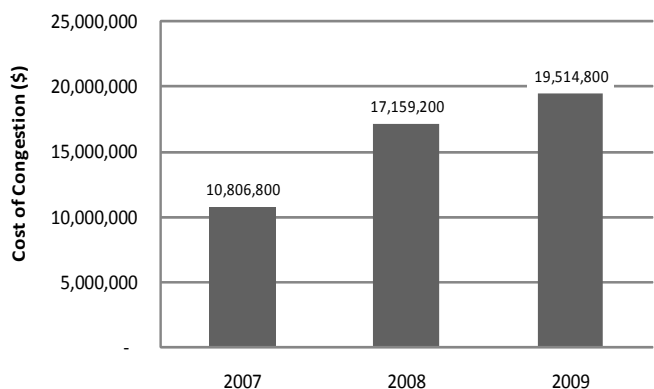
Average Travel Time (NB Direction)



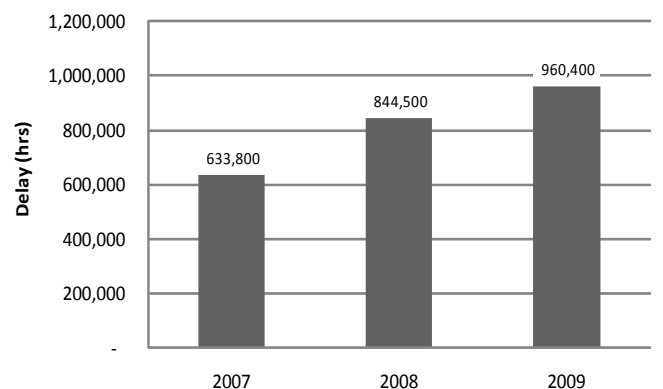
Average Travel Time (SB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay

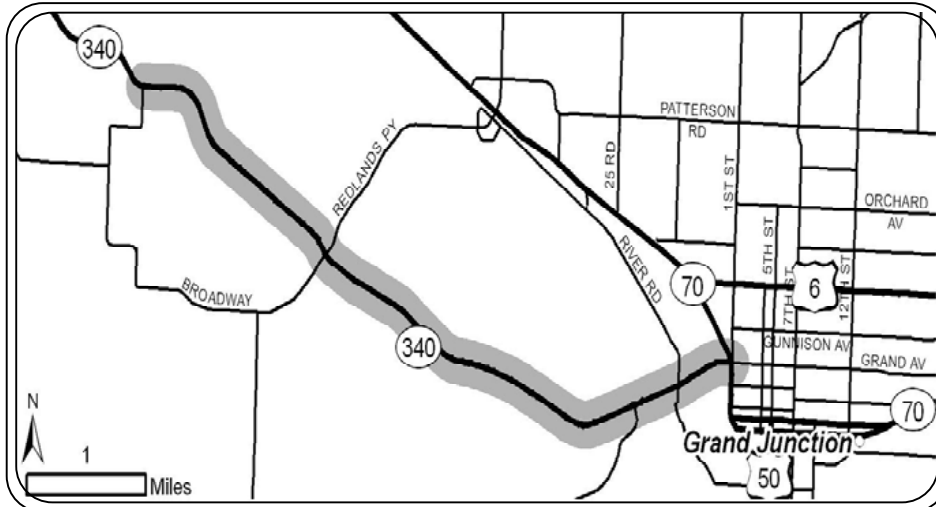


* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

SH 340 - Broadway (20 3/4 Rd to I-70 Business) – Travel Time Report

Corridor Summary

This is a commuter corridor. Traffic volumes along this corridor are heavier in the eastbound direction during the morning peak period and westbound in the afternoon peak period. Congestion primarily occurs between West Avenue and 1st Street and approaching Redlands Parkway and 20 3/4 Road. Travel time variability for westbound and eastbound directions in the peak periods varies between 16 and 29 percent. This data was collected in October 2009.



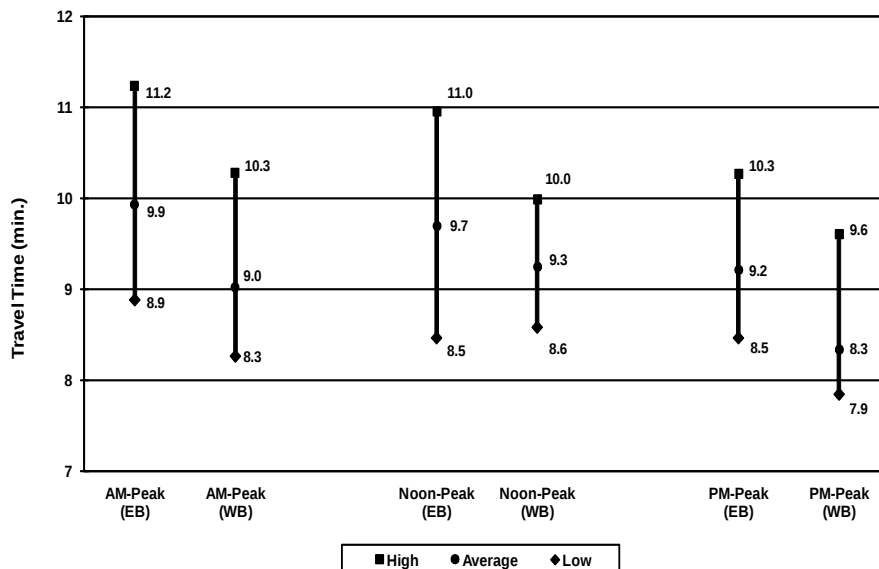
Corridor Characteristics

Corridor Length	5.7 Miles
Facility Type	Arterial - Urban
Speed Limit	45 mph
CDOT Region(s)	Region 3

Corridor Measures

Traffic Count per Day	Avg: 13,800 (7,300 – 23,800)
v/c Ratio	.49 - .83
Travel Rate Index	AM EB—1.15
	AM WB—1.10
	PM EB—1.07
	PM WB—1.01
Annual Vehicle Hours of Delay	68,400
Annual Person Hours of Delay	95,000
Annual Congestion Costs	\$1,520,200

Travel Time Variability by Time Period for October 2009



Data Collection Period

The time periods of data collection included weekday morning peak period (7 AM to 9 AM), Noon-peak period (11 AM to 1 PM) and afternoon peak period (4 PM to 6 PM). Eight travel runs were conducted in each direction & during each period. It should be noted that this data is a "snapshot" of one week of data collection for the corridor.

Glossary

Travel Rate Index – Ratio of Peak Travel Time against Off-Peak Travel Time.

Annual Vehicle Hours of Delay – Average delay encountered by vehicles during data collection periods.

Annual Person Hours of Delay – Delay incurred by the users assuming an occupancy of 1.39 persons per vehicle.

Annual Congestion Costs – Cost of congestion due to delay, assuming a value of time of \$16.00 per hour (per Texas Transportation Institute – June 2009)

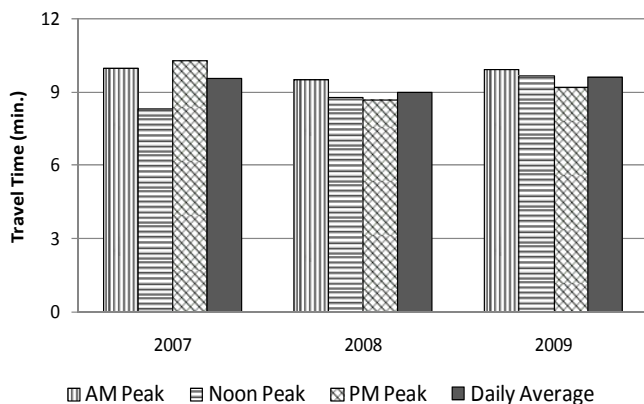
Travel Time Variability – The range of travel time for each period (Morning-AM, Noon-Peak, Afternoon-PM) and direction (Eastbound-EB, Westbound-WB). High and low are the highest and lowest travel times encountered. Average is based on travel time for the period.

SH 340 - Broadway (20 3/4 Rd to I-70 Business) – Three-Year Data Trend Analysis

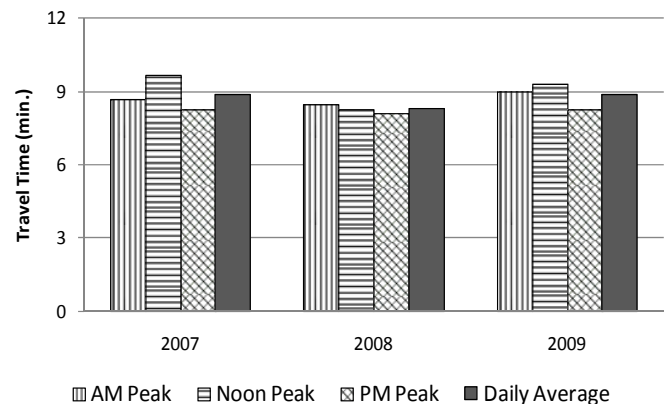
Three-Year Trend Analysis Highlights:

- The EB Daily Average Travel Time increased at the rate of +0.83% per year
- The WB Daily Average Travel Time decreased at the rate of -0.30% per year
- The Annual Cost of Congestion decreased at the rate of -17.88% per year
- The Annual Vehicle Hours of Delay decreased at the rate of -39.30% per year

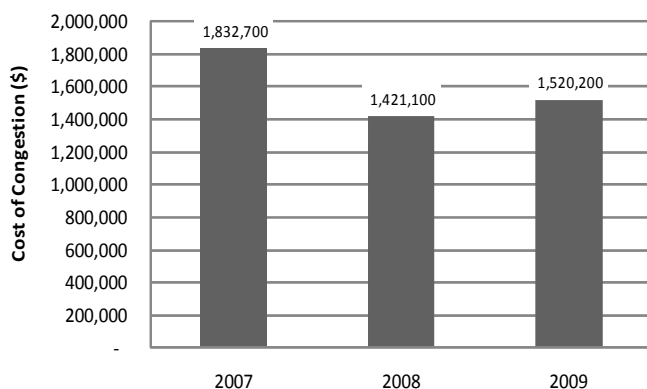
Average Travel Time (EB Direction)



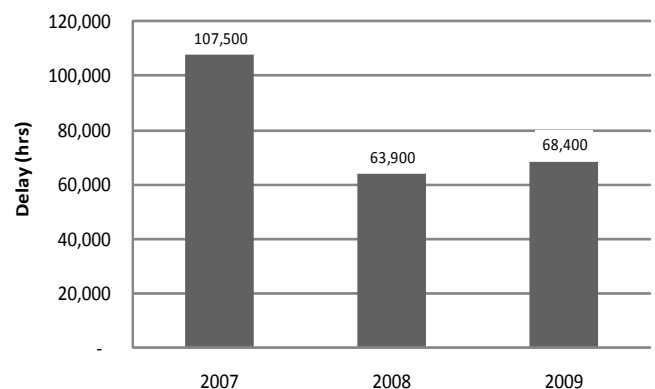
Average Travel Time (WB Direction)



Annual Congestion Cost (\$) *



Annual Vehicle Hours of Delay



* Annual congestion costs due to delay assuming a value of time of \$15.50 per hour in 2007 and \$16.00 per hour in 2008 and 2009 (per Texas Transportation Institute)

Appendix H

I-70 Corridor (C-470 to SH 9) Winter Travel Time Data Collection and Analysis Report



**Prepared
for
Colorado Department of Transportation**

Addendum to the 2009 CDOT Travel Time Study Report

January 2010

Addendum to the 2009 CDOT Travel Time Study Report

Table of Contents

Section 1: Introduction and Purpose of the Project	1
1.1 Introduction	1
1.2 Background and General Travel Time Project Overview	1
1.3 Purpose of the Project and Anticipated Use of Travel Time Data	1
1.4 Summary of Corridor Performance Measures	2
1.5 Purpose of the I-70 Winter Report	3
1.6 2 Year Comparison: I-70 corridor during winter and summer seasons.	3
Section 2: Analysis and Results	4
2.1 Traffic Volumes	4
2.2 Data Collection Periods.....	6
2.3 Travel Time Characteristics	6
2.4 Corridor Performance Measures	10
Section 3: Conclusion	10

List of Figures

Figure 1. Westbound Average Daily Volumes on I-70 at US 40/Empire for 2008	4
Figure 2. Eastbound Average Daily Volumes on I-70 at US 40/Empire for 2008.....	5
Figure 3. I-70 Mountain Corridor v/c Ratios.....	7
Figure 4. Posted Speed Limits Along I-70	8
Figure 5. Saturday Peak Average Travel Speeds	8
Figure 6. Sunday Peak Average Travel Speeds.....	9
Figure 7. Comparison of EB and WB Winter Average Travel Times for I-70	9

Section 1: Introduction and Purpose of the Project

1.1 Introduction

Interstate 70, between Denver and Silverthorne, is the primary route providing both summer and winter recreational access to and from the central Colorado mountains to the Denver metro area. As part of the CDOT Travel Time Project, travel time runs were collected during the summers between 2007 and 2009 to ascertain impacts on the corridor of the heavy tourism season. During the collection of 2008 data it was determined that winter data collection would also be valuable to ascertain the impacts of the heavy winter season tourism traffic on the corridor. Travel time data was collected on the corridor in January 2009 and 2010.

1.2 Background and General Travel Time Project Overview

Traffic congestion is one of the most significant issues adversely impacting mobility on highways across Colorado. CDOT's Division of Transportation Development (DTD) is responsible for the development and collection of mobility performance measures to quantify how well corridors operate in relation to the volume of vehicles that use them.

Traditional methods of measuring performance such as volume-to-capacity (v/c) ratios, levels of service, etc. are useful but do not always provide a good understanding of corridor performance. These measures can also be difficult to relate in lay terms or to the typical traveler and commuter's daily driving experience. Travel time data is increasingly being collected to augment or replace traditional mobility performance measures. Travel time data serves as a useful tool to measure levels of congestion and overall quality of service for corridors. It has the ability to identify areas of congestion and excessive delay, identical to actual driving conditions encountered by the traveling public. CDOT DTD has conducted travel time studies on select congested corridors (v/c ratio ≥ 0.85) since the year 2000. Over the years, the scope and funding for travel time studies have increased to include many congested corridors in the State. The previous two year's (2007, 2008) project included travel time data collection for all congested corridors in Colorado and established baseline corridor conditions. This year's (2009) project builds upon last years results by collecting travel time data for all 71 previous corridors as well as the I-70 corridor during the winter season which is the focus of this addendum.

1.3 Purpose of the Project and Anticipated Use of Travel Time Data

The purpose of this project is to collect and analyze travel time and traffic count data to measure the performance of 71 congested corridors in Colorado. Of the 71 corridors, there were 60 commuter and 11 recreational corridors. The corridors studied include 13 interstate segments, 30 US highway segments, and 28 state highway segments representing 845 highway centerline miles. A complete list of the 2009 project corridors and their characteristics are listed in Appendix A.

Travel time data was collected using the floating car method using either Global Positioning System (GPS) or Distance Measuring Instrument (DMI) equipment. Travel time data allows CDOT staff to monitor performance for congested corridors on an annual basis. It also aids in the development of a congestion management system and resource allocation process to address

Addendum to the 2009 CDOT Travel Time Study Report

congestion within the state. Additionally, travel time data can more easily be related to the typical traveler and commuter's driving experience and can more easily garner support from both the traveling public and CDOT decision makers.

1.4 Summary of Corridor Performance Measures

The results of both this study and the 2009 Travel Time Report are presented in several distinct ways that are meant to provide meaningful comparisons not only of a single corridor from one year to the next, but also of one corridor to another independent of length, location, or classification. The following detail the corridor performance measures.

Travel Rate Index Comparisons

Travel Rate Index (TRI) is a corridor measure that indicates how long a peak trip takes in comparison to an off-peak trip. TRI is calculated from the ratio of travel time during the peak period time to off peak period time. A TRI value of 1.2 indicates that a trip during a peak period takes 20 percent longer than the same trip in the off-peak period.

Travel Time Variability Corridor Comparisons

Travel Time Variability (TTV) is a corridor measure that indicates how much variability exists between the highest and lowest travel time runs during the peak periods. A value of 100 percent indicates that a trip can take twice as long as another trip on the same corridor during the same time period. TTV indicates the relative reliability of travel times during the peak period.

Congestion Costs

The methodology employed by this project to calculate high-level congestion costs is simple and consistent. It is based on broad assumptions and does not include trips diverted or postponed due to congestion, costs to general business, commercial trucking and tourism, etc. Using the travel time data collected for each corridor, the average vehicle delay during the day was determined. It was assumed that this average delay would be encountered by the daily traffic traveling the corridor to obtain the average vehicle hours of delay. A vehicle occupancy rate was then used to determine person hours of delay. Unlike last year's project, where a standard vehicle occupancy rate of 1.1 was used, a corridor specific average vehicle occupancy (AVO) rate was used. The corridor specific AVO numbers were taken from the 2008 CDOT Average Vehicle Occupancy Study completed in July, 2008. It should be noted that AVO numbers provided by this study were derived from data collected during the week and do not include weekend data. For the I-70 winter study only, a weekend winter peak AVO value of 2.4 was used. This value is based on the I-70 Ridership Survey by JF Sato, October 2008. In order to determine the congestion costs, the project used a value of person time of \$16.00 per hour as reported by the Texas Transportation Institute (TTI) June 2008 report.

Similar to last year's travel time study, congestion and delay were measured using travel times from several travel time runs through the various corridors using the floating car methodology. Delay for the average day was obtained from the difference between a calculated travel time using posted speed limits and the observed average travel times. An annual congestion cost was

Addendum to the 2009 CDOT Travel Time Study Report

then obtained from the average daily delay. This study does not predict future congestion but rather attempts to create a good base travel time and associated delay that can then be used to track differences between modeled versus actual data. In CDOT's 2035 Statewide Transportation Plan, congestion was modeled using all 2005 congested roads and applying a travel time formula to get a congestion time for the average commuter traveling these corridors in 2035. A similar calculation was used to obtain delay averages in minutes per person for 2035 using expected congestion levels for the same group of segments used to calculate 2035 delays. Because of the differences in actual versus modeled data, methodologies and associated assumptions used, there are differences in the congestion totals from this comprehensive travel time study versus the 2035 Statewide Transportation Plan.

1.5 Purpose of the I-70 Winter Report

For the 2009 CDOT Travel Time Project, travel times were collected for the Interstate 70 corridor between C-470 in Golden and SH 9 in Silverthorne during the 2009-10 winter season. This additional data collection was intended to collect and detail travel time characteristics during the winter season. This report summarizes the difference between summer and winter travel patterns and presents the finding of the data collection along this important stretch of I-70.

1.6 Two Year Comparison: I-70 corridor during winter and summer seasons.

- **Winter Season**
 - In 2009/10 winter ADT increased 16% in comparison with 2008/09 winter.
 - Annual Congestion Cost increased 1.5 times from \$95 million to \$145 million.
 - Average Travel Time for Eastbound direction increased by 23%.
 - Average Travel Time for Westbound direction decreased by 4%.
- **Summer Season**
 - In 2009 summer ADT stayed about the same as in summer 2008.
 - Annual Congestion Cost, as a result of increase in Annual Vehicle Hours of Delay, almost doubled from \$26 million to \$51 million.
 - Average Travel Time for Eastbound direction increased by 22%.
 - Average Travel Time for Westbound direction increased by 10%.

From the above summary of data:

- Annual Congestion Cost increased in 2009 in comparison to 2008 for I-70 corridor in both winter and summer seasons.
- Average Travel Time in Eastbound direction increased in both summer and winter seasons.

Section 2: Analysis and Results

2.1 Traffic Volumes

Unlike summer recreational season traffic patterns, winter season patterns tend to be highly directional (westbound in the morning/eastbound in the evening) and Saturday and Sunday patterns tend to mirror each other. This differs from summer traffic patterns that have predominately heavier westbound flows on Saturday and heavier eastbound flows on Sunday. Additionally, the timeframes for the peak hours of traffic flow tend to vary considerably for the two different seasons. Figures 1 and 2 illustrate this difference.

Figure 1 below shows the difference in westbound peak travel times for winter and summer seasons. As can be seen, the winter peak is not only earlier in the day, but is much more pronounced and of shorter duration in comparison to the summer peak. The hourly volume in the figure below is the average of:

- Friday, Saturday and Sunday for summer corridor.
- Saturday and Sunday for winter corridor.

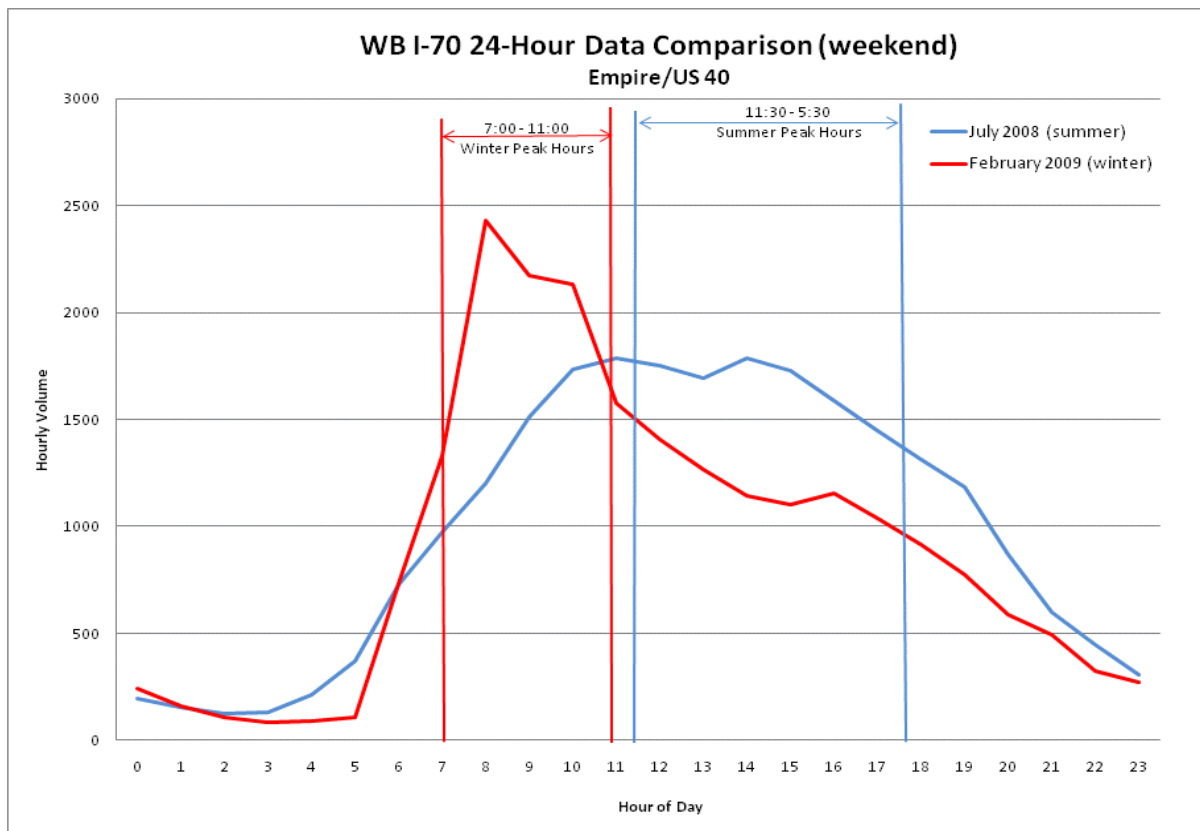


Figure 1. Westbound Average Daily Volumes on I-70 at US 40/Empire for 2008

Addendum to the 2009 CDOT Travel Time Study Report

Figure 2 below illustrates the difference in eastbound peak travel times for winter and summer seasons. As can be seen, the winter peak tends to occur a little later in the day and is much more pronounced and of shorter duration in comparison to the summer peak. The hourly volume in the figure below is the average of:

- Friday, Saturday and Sunday for summer corridor.
- Saturday and Sunday for winter corridor.

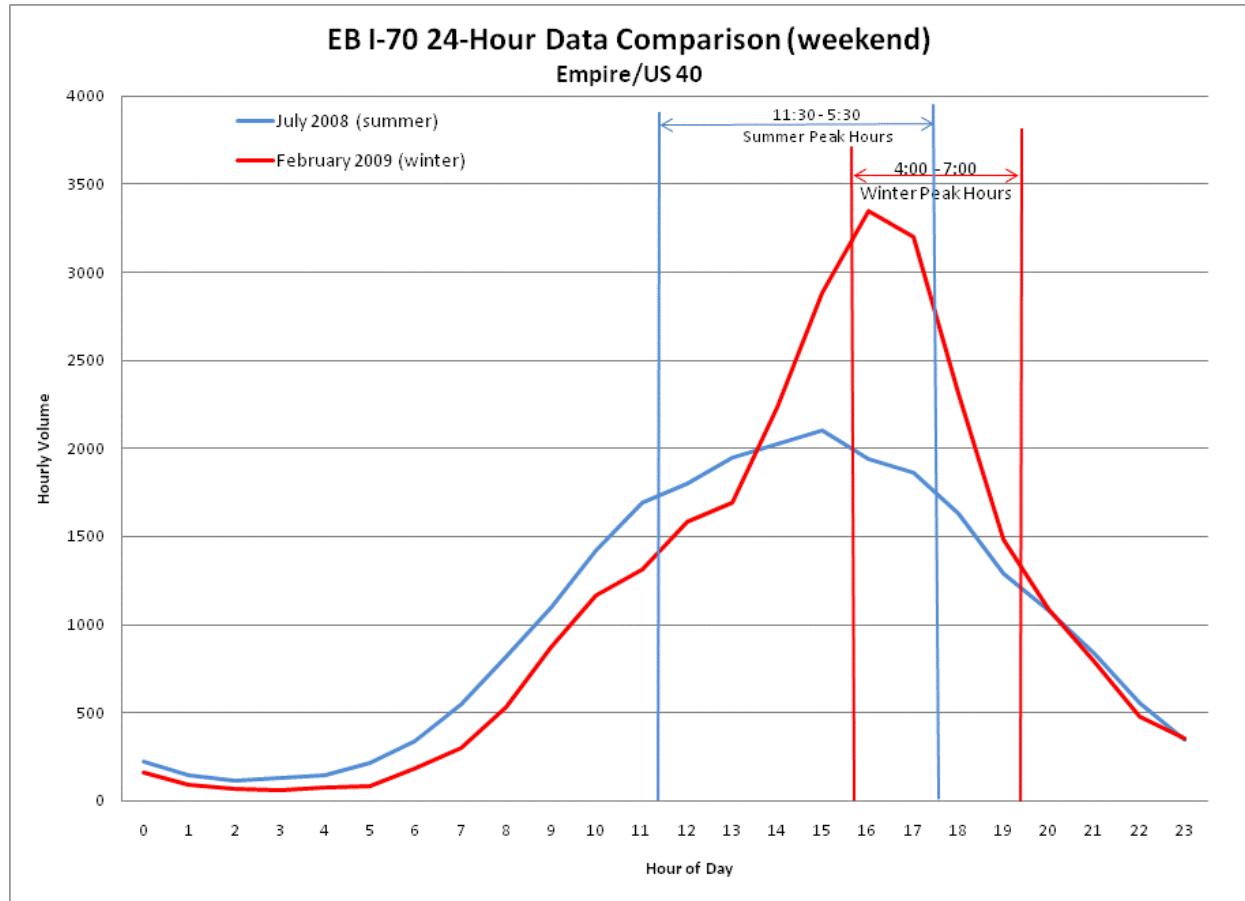


Figure 2. Eastbound Average Daily Volumes on I-70 at US 40/Empire for 2008

2.2 Data Collection Periods

Due to these differences between summer and winter season traffic patterns, it was decided that winter season data collection timeframes should vary from summer data collected on this corridor.

Winter data collection time frames were as follows:

- Saturday Peaks
Westbound 7-11 AM
Eastbound 4-7 PM
- Sunday Peaks
Westbound 7-11 AM
Eastbound 4-7 PM
- Off-Peak Periods
Saturday & Sunday
(westbound & eastbound)
11 AM to 4 PM

Summer data collection time frames were as follows:

- Saturday Peaks
Westbound and Eastbound 11:30 AM – 5:30 PM
- Sunday Peaks
Westbound and Eastbound 11:30 AM – 5:30 PM
- Off-Peak Periods
Saturday & Sunday
(Westbound & Eastbound)
9:30 AM – 11:30 AM and 5:30 PM – 7:30 PM

2.3 Travel Time Characteristics

Travel times were collected over the course of several weekends between January 2nd and January 24th, 2010. During the collection of this data it should be noted that no inclement weather (snowstorms) was encountered, as it would have increased travel times and delay. The following figures graphically illustrate the locations and varying degrees of congestion through v/c ratios and posted versus actual travel speeds.

Figure 3 displays the volume to capacity (v/c) ratio for the I-70 corridor. Volume to capacity is a simple ratio of the demand in traffic volume to the available capacity of the roadway that serves that demand. The closer that this ratio approaches 1, is an indication that all available roadway

Addendum to the 2009 CDOT Travel Time Study Report

capacity is being utilized. As can be seen on the figure, areas shaded in red operate at times with a v/c ratio over .85.



Figure 3. I-70 Mountain Corridor v/c Ratios

It can be seen in Figure 3 that the stretch of I-70 between Floyd Hill and west of Idaho Springs operates at times at a v/c ratio over .85. This area is typical of where increased travel times and delay are encountered in both directions between Denver and Silverthorne. However, if one was only to look at this v/c ratio figure, it might be incorrectly assumed that there are no other capacity issues along the corridor, and therefore no other areas of congestion and delay.

Figure 4 below illustrates posted speed limits along the I-70 corridor. 65 miles per hour (mph) is the most common speed limit followed by 55, 60, and 50 mph.

Addendum to the 2009 CDOT Travel Time Study Report

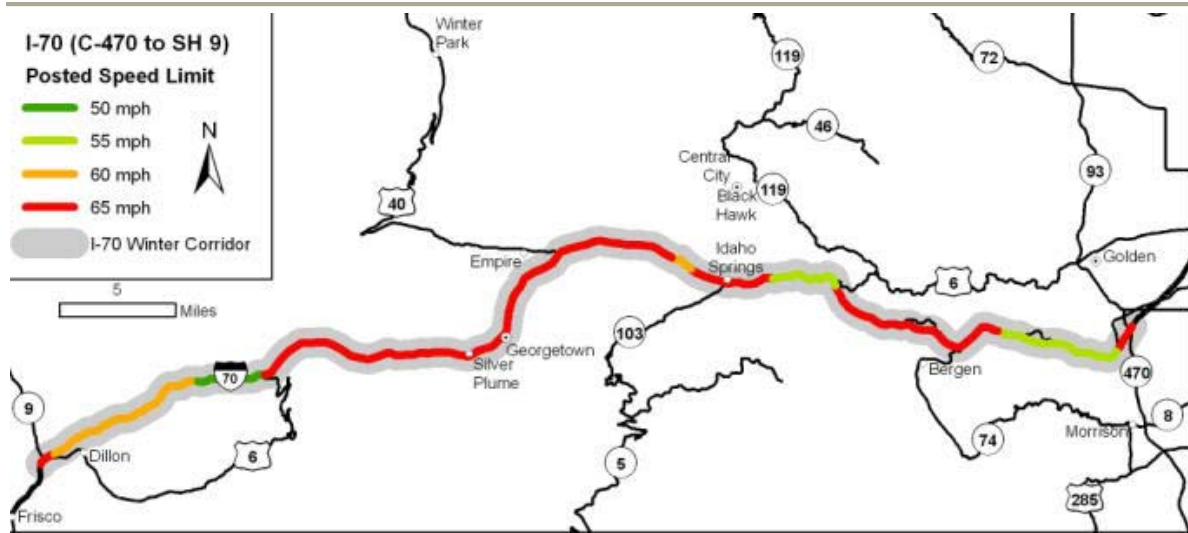


Figure 4. Posted Speed Limits Along I-70

Figures 5 and 6 are graphical display of average travel speeds as determined by this study along I-70 for both Saturday and Sundays. Westbound average travel speeds are noted above the I-70 corridor and eastbound speeds are noted below I-70. In comparing these speeds versus Figure 4 one can easily assess which stretches of I-70 have actual travel speeds much lower than posted speed limits. Not so apparent in Figure 3, but shown in Figures 5 and 6 are other areas where average speeds are much lower than posted speed limits and congestion and delay are encountered. Westbound these areas include between US 40 and Georgetown and between Silver Plume and the Eisenhower Tunnel. Eastbound these areas include between Silverthorne and the Eisenhower Tunnel, between Georgetown and US 40, and approaching C-470.



Figure 5. Saturday Peak Average Travel Speeds

Addendum to the 2009 CDOT Travel Time Study Report

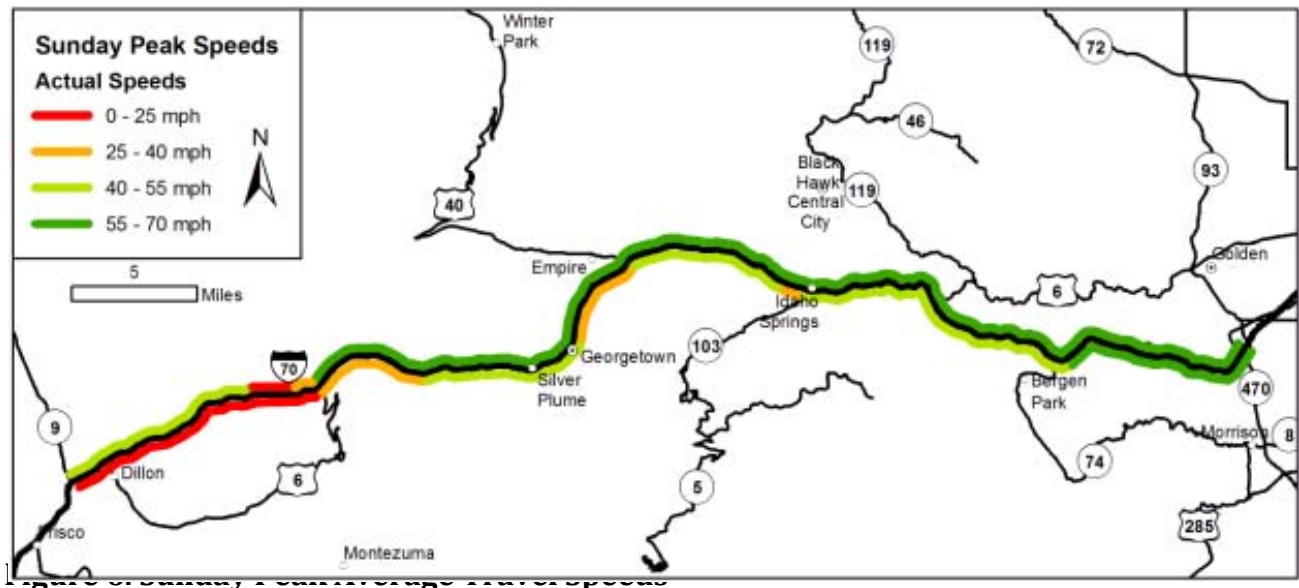


Figure 7 below shows the average travel time by direction for the Saturday and Sunday peak periods and the average combined travel time for Saturday and Sunday off-peak periods.

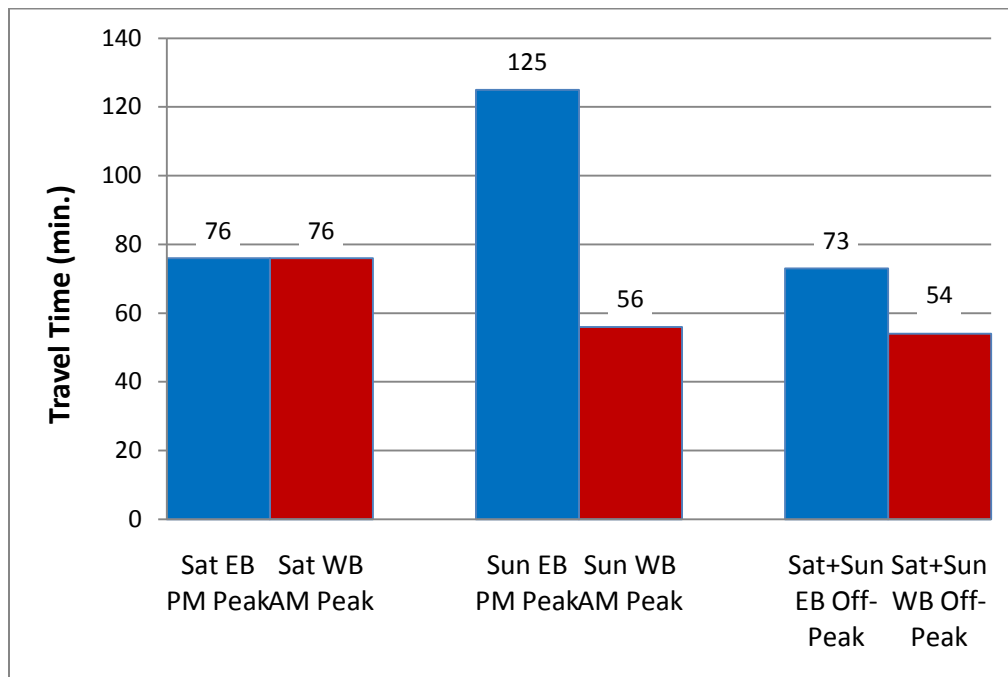


Figure 7. Comparison of EB and WB Winter Average Travel Times for I-70

Addendum to the 2009 CDOT Travel Time Study Report

In addition to the above notes made comparing the speed figures to the v/c ratio figure, the following highlights were derived from the travel time data collected and ensuing analysis.

- Sunday evening peak eastbound travel times (4-7pm) averaged the longest time (125 minutes) and also incurred the most delay.
- Saturday evening peak eastbound travel times (4-7pm) averaged the second longest (76.3 minutes) times and delays.
- Saturday morning peak westbound travel times (7-11am) averaged the third longest times (75.9 minutes) and delays.
- Westbound delay incurred by inbound ski-traffic tends to occur between Floyd Hill and the US 40 Empire exit.
- Eastbound delay incurred by returning ski traffic tends to occur leading up to the Eisenhower Tunnel and between Georgetown and Idaho Springs.

2.4 Corridor Performance Measures

Similar to the 71 corridors that data was collected for the 2009 Travel Time Report, a full corridor report detailing travel times for all periods sampled as well as performance measures derived from the data collected was developed for the I-70 winter data collection. For all corridor performance and congestion measures please see the I-70 Winter Corridor summary included at the end of this report.

Section 3: Conclusion

Without question the I-70 corridor is a hot topic discussion item when one talks about travel time, congestion, delays and monetary impacts to both business and recreational opportunities as a result of congestion and delay. While this supplemental data does not provide an answer to all these issues, it is hoped that the data collected will assist CDOT in evaluating the performance of the corridor during the winter season, and to take an informed approach in solving some the issues that are better quantified through the collection of travel time data.

Table 20: Overall Corridor Measures

No.	Corridor	Limits	Urban/ Recreational Corridor	CDOT Region	Mileage	Number of Hourly Count Locations	# of Runs per direction per period	Facility	Year	Traffic Count Per Day	TRI - AM/SAT- NB or EB	TRI - AM/SAT- SB or WB	TRI - PM/SUN- NB or EB	TRI - PM/SUN- SB or WB	Annual Hours of Delay	Annual Person Hours of Delay	Annual Congestion Costs
1	I-25	Lincoln Ave. to Broadway	U	6	14.0	3	8	I	2007	142,400	1.23	1.14	1.44	1.19	2,351,100	2,586,200	\$40,086,700
									2008	169,600	1.24	1.29	1.77	1.39	2,222,700	2,600,500	\$41,608,300
									2009	153,200	1.43	1.09	1.46	1.40	2,193,400	2,566,300	\$41,061,200
2	I-25	Broadway to US 36	U	6	11.3	3	8	I	2007	204,900	0.86	1.22	2.11	1.42	4,158,300	4,574,200	\$70,899,700
									2008	211,500	0.99	1.60	1.59	1.18	4,084,000	4,778,200	\$76,451,800
									2009	218,600	0.89	1.29	1.73	1.83	5,232,400	6,121,900	\$97,950,000
3	I-25	Lincoln Ave. to Meadows Pkwy.	U	1,6	8.7	1	8	I	2007	95,900	1.25	1.01	1.19	1.35	475,500	523,100	\$8,108,000
									2008	102,300	1.15	1.00	1.02	1.17	243,700	304,600	\$4,873,200
									2009	97,300	1.22	1.03	1.03	1.07	158,400	198,000	\$3,168,200
4	I-25	S. Academy Blvd. to N. Gate Rd.	U	2	20.3	3	8	I	2007	81,500	1.09	1.06	1.10	1.11	838,900	922,800	\$14,304,000
									2008	82,400	1.00	1.08	1.30	1.02	684,800	869,600	\$13,914,100
									2009	87,400	1.03	1.06	1.18	1.06	297,300	377,500	\$6,040,500
5	I-25	US 36 to SH 14	U	4,6	52.3	3	8	I	2007	95,400	1.03	1.06	1.11	1.06	1,065,600	1,172,100	\$18,167,500
									2008	100,900	1.02	1.10	1.10	1.08	1,108,300	1,407,500	\$22,519,900
									2009	103,900	1.10	1.09	1.08	1.08	1,837,900	2,334,200	\$37,346,400
6	I-70	C-470 to I-25	U	6	13.1	3	8	I	2007	120,700	1.03	1.01	1.35	1.12	691,000	760,100	\$11,780,900
									2008	119,000	1.10	1.05	1.09	1.21	608,400	711,800	\$11,389,500
									2009	114,100	1.04	1.06	1.03	1.08	698,800	817,700	\$13,082,400
7	I-70	I-25 to Pena Blvd.	U	6	10.3	3	8	I	2007	149,800	1.13	1.13	1.76	2.18	2,683,000	2,951,300	\$45,745,700
									2008	130,300	1.26	1.00	1.34	1.27	1,090,000	1,275,300	\$20,404,400
									2009	140,400	1.07	0.92	1.23	1.54	2,696,200	3,154,500	\$50,472,600
8	I-70	SH 9 to C-470	R	1,6	55.6	3	8	I	2007	60,700	1.06	1.06	1.55	1.08	1,223,500	1,345,900	\$20,860,900
									2008	57,400	1.03	1.10	1.48	1.07	1,195,100	1,601,400	\$25,622,000
									2009	57,200	1.03	1.09	1.87	1.06	2,364,300	3,168,200	\$50,691,300
9	I-70	Edwards to Vail East Exit	R	3	17.0	3	8	I	2007	37,000	1.04	1.04	1.08	1.07	74,900	82,400	\$1,276,400
									2008	41,500	1.08	1.08	1.03	1.03	38,000	51,300	\$820,000
									2009	41,300	1.02	1.02	1.01	1.01	42,500	57,400	\$918,700
10	I-70	Rifle to No Name Interchange	R	3	27.8	3	8	I	2007	24,400	1.01	1.02	1.01	1.01	22	24	\$400
									2008	26,100	1.06	1.07	1.06	1.07	46,200	64,300	\$1,028,200
									2009	24,500	1.09	1.01	1.06	1.04	76,000	105,700	\$1,691,300
11	I-76	I-25 to I-70	U	6	5.1	3	8	I	2007	71,000	1.06	1.10	1.09	1.03	136,700	150,400	\$2,330,900
									2008	89,200	0.96	1.05	1.29	1.04	109,600	128,200	\$2,051,200
									2009	79,500	1.05	1.25	1.06	1.04	75,300	88,100	\$1,409,600
12	I-225	I-70 to I-25	U	6	12.0	3	8	I	2007	120,600	1.26	1.62	1.40	1.31	2,720,400	2,992,400	\$46,382,900
									2008	118,800	1.28	1.65	1.32	1.40	1,883,400	2,203,500	\$35,256,300
									2009	123,300	1.19	1.47	1.46	1.28	2,742,700	3,209,000	\$51,343,400
13	I-270	I-70 to I-76	U	6	5.0	3	8	I	2007	87,000	1.56	0.72	1.36	1.94	1,040,900	1,145,000	\$17,747,800
									2008	100,400	1.34	0.85	1.18	1.99	987,300	1,155,100	\$18,482,200
									2009	99,800	1.34	1.08	1.09	1.86	1,009,600	1,181,300	\$18,900,500
14	US 6	I-70 to I-25	U	6	8.9	3	8	US	2007	98,400	1.18	1.04	1.02	1.08	409,500	450,500	\$6,980,400
									2008	88,300	1.52	1.03	1.24	1.08	603,100	723,700	\$11,579,700
									2009	87,400	1.45	1.03	1.03	1.15	357,900	429,500	\$6,872,100
15	US 6-North Ave.	1st St. to I-70 Business	U	3	4.1	1	8	US	2007	26,400	1.00	0.92	1.17	1.40	224,200	246,600	\$3,822,500
									2008	25,000	0.96	0.95	1.26	1.16	155,900	215,200	\$3,442,700
									2009	24,200	1.13	1.03	1.16	1.14	171,400	236,500	\$3,784,500
16	US 6-Vasquez Blvd.	56th Ave. to 77th Ave.	U	6	2.9	1	8	US	2007	36,600	0.99	1.88	1.64	1.46	425,600	468,200	\$7,257,000
									2008	27,800	1.14	1.33	2.14	1.19	253,500	322,000	\$5,151,400
									2009	29,500	1.04	1.35	1.71	1.36	372,900	473,600	\$7,578,100
17	US 6/SH 119	SH 93 to Gregory St.	R	1	19.1	3	8	US/SH	2007	14,300	1.01	0.97	1.04	0.97	52,600	57,800	\$896,400
									2008	14,200	1.04	1.05	1.04	1.04	70,900	96,400	\$1,542,000
									2009	16,500	1.05	1.04	1.14	1.06	151,100	205,400	\$3,287,100
18	US 24	SH 67 to I-25	U	2	25.0	3	8	US	2007	26,200	1.06	1.07	1.06	1.08	490,100	539,100	\$8,355,700
									2008	25,700	1.00	1.06	1.11	1.07	345,000	458,800	\$7,341,100
									2009	25,800	1.04	1.04	1.08	1.05	468,100	622,500	\$9,960,300
19	US 34	US 287 to US 85	U	4	21.2	3	8	US	2007	31,500	1.02	1.08	1.17	1.19	647,700	713,500	\$11,043,700
									2008	34,700	1.13	1.15	1.18	1.18	789,100	1,002,200	\$16,034,800
									2009	35,300	1.02	1.00	1.09	1.14	633,200	804,200	\$12,867,400
20	US 34	CR 63 to CR 43	R	4	7.4	3	8	US	2007	9,200	1.04	1.09	1.06	1.06	22,500	24,700	\$383,200
									2008	9,100	1.03	1.07	1.03	1.07	17,700	19,700	\$314,800
									2009	8,700	1.04	1.06	1.07	1.04	27,000	30,000	\$479,400
21	US 36	Canyon Blvd. to SH 157	U	4	2.9	3	8	US	2007	41,500	1.20	1.27	1.45	1.18	374,700	412,200	\$6,389,400
									2008	44,300	1.13	1.24	1.15	1.26	330,000	429,000	\$6,863,900
									2009	47,200	1.02	1.23	1.27	1.24	527,100	685,200	\$10,963,700
22	US 36	SH 157 to I-25	U	4, 6	18.1	3	8	US	2007	97,700	1.04	1.32	1.30	1.01	913,400	1,004,800	\$15,574,000
									2008	78,900	1.11	1.32	1.10	1.03	352,000	432,900	\$6,927,000
									2009	80,800	1.28	1.35	1.11	1.00	677,300	833,000	\$13,328,700
23	US 36	SH 66 to Canyon Blvd.	U	4	14.8	3	8	US	2007	20,100	0.98	1.06	1.12	1.09	431,000	474,100	\$7,348,500
									2008	18,300	0.99	1.09	1.12	1.10	286,100	331,800	\$5,309,500
									2009	17,500	1.05	1.05	1.13	1.10	293,700	340,700	\$5,451,000
24	US 40	CR 129 to Pine Grove Rd.	R	3	3.3	1	8	US	2007	24,200	1.14	1.19	1.06	1.13	126,700	139,300	\$2,159,600
									2008	22,600	1.14	1.20	1.11	1.09	96,800	133,600	\$2,138,000
									2009	16,800	1.11	1.12	1.10	1.08	70,400	97,200	\$1,555,300
25	US 40	CR 8/5 to I-70	R	1, 3	31.1	3	8	US	2007	11,400	1.05	1.04	1.09	1.23	137,700	151,500	\$2,347,700
									2008	12,200	1.07	1.10	1.19	1.03	118,900	160,400	\$2,567,200
									2009	12,500	1.05	1.02	1.03	1.08	154,200	208,200	\$3,331,400
26	US 50	Ute Ave. to 27.00 Rd.	U	3	2.0	1	8	US	2007	25,600	1.11	1.14	1.14	1.16	189,400	208,300	\$3,229,100
									2008	22,500	1.06	1.27	1.17	0.99	66,900	92,400	\$1,478,000

Table 20: Overall Corridor Measures

No.	Corridor	Limits	Urban/ Recreational Corridor	CDOT Region	Mileage	Number of Hourly Count Locations	# of Runs per direction per period	Facility	Year	Traffic Count Per Day	TRI - AM/SAT- NB or EB	TRI - AM/SAT- SB or WB	TRI - PM/SUN- NB or EB	TRI - PM/SUN- SB or WB	Annual Hours of Delay	Annual Person Hours of Delay	Annual Congestion Costs
									2009	21,500	1.07	1.26	1.09	1.19	86,600	119,500	\$1,911,700
27	US 50	Purcell Blvd. to Fortino Blvd.	U	2	4.0	1	8	US	2007	40,100	1.12	1.20	1.21	1.29	275,700	303,300	\$4,700,600
									2008	40,500	1.23	1.14	1.22	1.23	127,600	164,600	\$2,632,500
									2009	40,600	1.09	1.06	1.29	1.18	182,300	235,200	\$3,762,600
									2007	15,900	1.13	1.14	1.06	1.07	43,300	47,600	\$738,200
28	US 50	SH 141 to 27.00 Rd.	U	3	4.6	3	8	US	2008	16,500	1.06	1.13	1.10	1.16	45,200	62,400	\$997,600
									2009	15,500	1.06	1.13	1.07	1.10	83,000	114,500	\$1,832,000
									2007	26,100	1.06	1.05	1.07	1.05	800,600	880,700	\$13,650,500
									2008	25,800	1.03	1.04	1.10	1.06	592,400	687,300	\$10,996,800
29	US 85	I-76 to US 34	U	4, 6	38.8	3	8	US	2009	23,700	1.05	1.05	1.07	1.11	667,400	774,200	\$12,386,800
									2007	21,500	1.31	1.03	1.17	1.27	660,100	726,100	\$11,255,200
									2008	38,500	1.13	1.06	1.22	1.27	1,229,500	1,475,400	\$23,606,300
									2009	41,100	1.18	1.07	1.23	1.38	1,408,600	1,690,400	\$27,046,000
30	US 85-Santa Fe Dr.	Highlands Ranch Pkwy. to SH 40	U	1, 6	14.8	3	8	US	2007	50,900	1.04	1.06	1.03	1.10	247,600	272,300	\$4,220,900
									2008	19,700	1.06	1.07	1.07	1.13	122,700	155,800	\$2,493,100
									2009	19,200	1.05	1.09	1.05	1.14	122,000	154,900	\$2,478,900
									2007	10,900	1.12	1.05	1.25	1.11	47,700	52,500	\$813,200
31	US 85	Meadows Pkwy. to Highlands Ranch Pkwy.	U	1	13.4	3	8	US	2008	12,300	1.13	1.07	1.29	1.20	38,900	48,300	\$772,100
									2009	13,100	1.12	1.06	1.17	1.33	67,500	83,700	\$1,338,500
									2007	23,900	1.10	1.11	1.15	1.22	229,900	252,900	\$3,920,400
									2008	21,900	1.11	1.06	1.08	1.21	344,400	454,700	\$7,274,500
32	US 160	CR 2301 to CR 25	U	5	2.4	1	8	US	2009	21,700	1.24	1.06	1.10	1.17	391,900	517,400	\$8,277,700
									2007	16,100	1.09	1.08	1.08	1.08	204,800	225,300	\$3,491,600
									2008	15,900	1.09	1.13	1.04	1.03	229,700	289,400	\$4,631,000
									2009	15,200	1.03	1.31	1.06	1.01	287,600	362,300	\$5,797,400
33	US 160	CR 207 to US 550 South	U	5	7.7	3	8	US	2007	67,600	1.34	1.07	1.07	1.41	196,700	216,300	\$3,353,300
									2008	36,300	1.20	1.07	1.18	1.45	152,500	183,000	\$2,927,900
									2009	71,500	1.47	1.07	1.05	1.37	571,800	686,200	\$10,978,700
									2007	38,900	1.03	1.16	1.38	1.53	432,800	476,100	\$7,379,400
34	US 160	US 550 to US 160 Business	U	5	15.2	3	8	US	2008	43,000	0.97	1.25	1.38	1.76	527,500	685,800	\$10,972,400
									2009	46,900	1.01	1.07	1.12	1.67	566,400	736,300	\$11,780,500
									2007	38,300	1.09	1.17	1.24	1.36	1,026,400	1,129,000	\$17,500,600
									2008	29,700	1.05	1.14	1.21	1.22	643,800	817,700	\$13,082,700
35	US 285-Hampden Ave.	US 85 to I-25	U	6	4.6	1	8	US	2009	30,500	1.07	1.11	1.39	1.24	736,000	934,700	\$14,955,000
									2007	29,800	1.04	1.03	1.15	1.12	1,203,400	1,323,700	\$20,517,300
									2008	30,900	1.05	1.03	1.14	1.14	1,393,300	1,699,800	\$27,196,300
									2009	31,200	0.99	0.99	1.13	1.13	1,407,200	1,716,800	\$27,468,100
36	US 285-Hampden Ave.	SH 121 to US 85	U	6	4.5	1	8	US	2007	34,100	1.04	1.09	1.36	1.22	858,600	944,500	\$14,639,700
									2008	34,400	1.08	1.13	1.28	1.22	489,200	621,300	\$9,941,300
									2009	35,500	1.11	1.27	1.29	1.23	767,800	975,100	\$15,602,300
									2007	37,900	1.11	1.48	1.42	1.38	445,500	490,000	\$7,595,500
37	US 287	Drake Rd. to Mulberry St.	U	4	2.0	1	8	US	2008	33,100	1.10	1.31	1.55	1.22	254,200	340,700	\$5,450,800
									2009	31,200	1.04	1.17	1.38	1.57	246,000	329,600	\$5,273,400
									2007	9,700	1.36	1.23	1.09	1.03	47,700	52,400	\$812,500
									2008	9,000	1.62	1.09	1.37	1.06	24,100	29,900	\$478,600
38	US 287	US 36 to Nickel St.	U	4, 6	9.6	3	8	US	2009	8,100	1.12	1.11	1.09	1.05	18,600	23,100	\$369,200
									2007	9,400	1.06	1.05	1.06	1.07	11,800	12,900	\$200,600
									2008	10,000	1.06	1.07	1.28	1.06	14,900	18,900	\$302,300
									2009	9,700	1.06	1.04	1.06	1.07	7,900	10,000	\$159,600
39	US 287	Midway Blvd. to US 34	U	4, 6	35.2	3	8	US	2007	64,000	1.01	1.04	1.00	0.96	257,000	282,700	\$4,382,000
									2008	71,100	1.01	1.07	1.25	1.04	299,200	359,100	\$5,745,300
									2009	64,400	1.03	1.08	1.21	1.03	238,800	286,600	\$4,585,000
									2007	101,900	1.69	1.05	1.00	1.38	919,500	1,011,500	\$15,678,200
40	US 287-Federal Blvd.	US 40 to US 36	U	6	6.8	3	8	US	2008	92,300	1.76	1.01	1.04	1.15	717,100	860,500	\$13,768,300
									2009	102,300	1.17	0.96	1.12	1.61	1,121,000	1,345,100	\$21,522,400
									2007	41,500	1.02	1.16	1.30	1.17	1,707,300	1,878,000	\$29,109,600
									2008	45,300	0.99	1.17	1.31	1.21	2,039,100	2,589,700	\$41,435,400
41	SH 2-Colorado Blvd.	US 285 to I-70	U	6	8.8	3	8	SH	2009	42,300	0.98	1.16	1.30	1.32	1,999,100	2,538,800	\$40,620,800
									2007	19,500	1.10	1.44	1.15	1.21	70,000	77,000	\$1,193,000
									2008	14,600	1.12	1.16	1.36	1.13	70,300	89,300	\$1,428,500
									2009	13,500	1.13	1.10	1.19	1.21	80,000	101,500	\$1,624,700
42	SH 2	72nd Ave. to 96th Ave.	U	6	4.0	1	8	SH	2007	19,000	1.03	1.38	1.21	1.06	229,000	252,000	\$3,905,400
									2008	17,700	1.00	1.36	1.40	1.01	257,600	373,500	\$5,975,800
									2009	18,900	1.02	1.21	1.51	1.05	215,600	312,600	\$5,002,000
									2007	21,300	1.04	1.16	1.08	1.00	452,000	497,300	\$7,707,800
43	SH 7-Arapahoe Rd.	Cherryvale Rd. to US 287	U	4	5.9	3	8	SH	2008	20,100	1.08	1.10	1.24	1.08	398,900	506,600	\$8,105,600
									2009	18,400	1.11	1.19	1.13	1.12	397,800	505,200	\$8,083,600
									2007	16,000	1.13	1.25	1.09	1.46	66,400	73,100	\$1,132,400
									2008	14,900	1.28	1.07	1.16	1.06	26,000	30,600	\$489,700
44	SH 9	I-70 to CR 1900	R	1	2.5	1	8	SH	2009	14,600	1.20	1.24	1.21	1.62	41,100	48,500	\$775,400
									2007	24,700	1.10	1.13	1.08	1.04	258,200	284,100	\$4,403,100
									2008	19,200	1.07	1.12	1.05	1.08	246,400	315,400	\$5,046,000
									2009	20,700	1.12	1.22	1.12	1.18	311,600	398,800	\$6,380,700
45	SH 9	I-70 to Boreas Pass Rd.	R	1	11.1	3	8	SH	2007	45,500	1.07	1.13	1.19	1.32	1,489,900	1,639,900	\$25,402,500

Table 20: Overall Corridor Measures

No.	Corridor	Limits	Urban/ Recreational Corridor	CDOT Region	Mileage	Number of Hourly Count Locations	# of Runs per direction per period	Facility	Year	Traffic Count Per Day	TRI - AM/SAT- NB or EB	TRI - AM/SAT- SB or WB	TRI - PM/SUN- NB or EB	TRI - PM/SUN- SB or WB	Annual Hours of Delay	Annual Person Hours of Delay	Annual Congestion Costs
52	SH 30	I-25 to I-225	U	6	10.0	3	8	SH	2008	42,100	1.00	1.15	1.27	1.20	1,621,500	2,059,300	\$32,949,000
									2009	42,100	1.05	1.02	1.28	1.21	1,363,400	1,731,500	\$27,704,600
									2007	21,300	1.09	1.12	1.13	1.24	320,700	352,800	\$5,467,800
53	SH 30	I-225 to Hampden Ave.	U	6	9.5	3	8	SH	2008	21,100	0.94	1.14	1.34	1.14	357,700	468,600	\$7,497,900
									2009	19,900	1.06	1.09	1.20	1.12	300,700	393,900	\$6,303,100
									2007	26,200	1.26	1.20	1.31	1.47	81,600	89,800	\$1,392,100
54	SH 45-Pueblo Blvd.	Lehigh St. to SH 96	U	2	1.2	1	8	SH	2008	27,300	1.53	1.26	1.51	1.45	97,500	124,800	\$1,997,100
									2009	27,500	1.28	1.09	1.38	1.10	75,400	96,600	\$1,545,000
									2007	11,400	1.05	1.07	1.03	1.06	477,700	525,500	\$8,144,500
55	SH 82	I-70 to Old SH 82	R	3	23.7	3	8	SH	2008	23,800	1.08	1.11	1.07	1.05	450,900	622,200	\$9,955,300
									2009	23,100	1.08	1.07	1.08	1.09	473,900	653,900	\$10,463,100
									2007	23,900	1.06	1.05	1.05	1.04	155,400	171,000	\$2,649,700
56	SH 82	Old SH 82 to West Hallam Ave.	R	3	16.7	3	8	SH	2008	18,800	1.10	1.11	1.04	1.04	134,100	186,400	\$2,983,000
									2009	19,100	1.07	1.05	1.05	1.04	161,600	224,600	\$3,594,000
									2007	33,700	1.06	1.24	1.38	1.21	949,900	1,044,900	\$16,196,400
57	SH 83-Parker Rd.	I-225 to SH 2	U	6	6.7	3	8	SH	2008	34,000	1.30	1.01	1.44	1.29	1,047,200	1,329,900	\$21,278,900
									2009	41,000	1.12	1.03	1.18	1.43	1,290,100	1,638,400	\$26,214,300
									2007	59,800	1.23	1.21	1.29	1.26	1,195,200	1,314,800	\$20,374,300
58	SH 83-Parker Rd.	Lincoln Ave. to I-225	U	1, 6	9.6	3	8	SH	2008	65,100	1.26	1.16	1.28	1.26	1,377,400	1,639,100	\$26,226,200
									2009	67,000	1.13	1.09	1.33	1.21	1,740,100	2,070,700	\$33,131,900
									2007	57,500	1.17	1.28	1.67	1.35	1,457,100	1,602,900	\$24,844,400
59	SH 88-Arapahoe Rd.	I-25 to SH 83	U	6	4.5	3	8	SH	2008	57,900	1.09	1.57	1.43	1.17	1,061,400	134,800	\$21,567,400
									2009	56,100	0.92	1.30	1.72	1.18	1,272,700	1,616,400	\$25,861,900
									2007	31,400	1.44	1.08	1.17	1.50	556,000	611,600	\$9,480,100
60	SH 88-Belleview	SH 88/Federal to I-25	U	6	6.7	3	8	SH	2008	34,200	1.22	1.03	1.20	1.47	553,300	702,700	\$11,242,600
									2009	34,900	1.13	1.08	1.10	1.28	568,900	722,500	\$11,560,300
									2007	35,500	1.09	1.05	1.25	1.28	426,600	466,000	\$7,222,500
61	SH 88-Federal Blvd.	US 6 to US 285	U	6	5.2	3	8	SH	2008	31,800	1.02	0.96	1.26	1.52	503,300	639,200	\$10,226,500
									2009	38,000	1.02	1.02	1.18	1.27	601,700	764,200	\$12,227,300
									2007	19,900	1.10	1.07	1.11	1.06	315,700	347,300	\$5,383,500
62	SH 93	SH 58/US 6 to US 36	U	4, 6	18.3	3	8	SH	2008	20,000	1.05	1.05	1.08	1.05	289,200	367,200	\$5,875,000
									2009	20,500	1.06	1.07	1.09	1.09	378,100	480,100	\$7,682,000
									2007	35,700	1.05	1.03	1.21	1.21	564,200	620,600	\$9,619,300
63	SH 95-Sheridan Blvd.	US 285 to I-70	U	6	9.1	3	8	SH	2008	33,400	1.01	0.97	1.23	1.24	554,400	704,000	\$11,264,100
									2009	35,900	1.02	1.05	1.21	1.30	711,200	903,200	\$14,451,700
									2007	38,800	1.05	1.10	1.39	1.12	640,800	704,800	\$10,924,900
64	SH 95-Sheridan Blvd.	I-70 to US 36	U	6	5.3	3	8	SH	2008	38,700	1.05	0.99	1.19	1.24	535,800	680,400	\$10,866,300
									2009	41,900	1.01	0.99	1.15	1.26	884,500	1,123,400	\$17,973,600
									2007	33,400	1.21	1.60	1.06	1.27	371,500	408,600	\$6,333,300
65	SH 119-Diagonal Hwy.	US 287 to I-25	U	4	6.8	3	8	SH	2008	26,200	1.28	1.23	1.12	1.23	272,900	332,900	\$5,325,000
									2009	34,100	1.11	1.25	1.16	1.10	558,600	681,400	\$10,903,000
									2007	8,100	1.08	1.08	1.22	1.07	62,000	68,200	\$1,057,300
66	SH 119	Sugarloaf Rd. to Broadway St.	U	4	5.3	1	8	SH	2008	7,900	1.07	1.08	1.32	1.08	48,400	76,900	\$1,229,300
									2009	9,200	1.08	1.08	1.17	1.07	61,400	97,600	\$1,560,800
									2007	32,900	1.07	1.20	1.23	1.19	656,700	722,400	\$11,196,800
67	SH 119-Diagonal Hwy.	US 36 to US 287	U	4	12.0	3	8	SH	2008	34,800	1.03	1.17	1.41	1.16	746,900	963,500	\$15,415,900
									2009	33,700	1.08	1.13	1.20	1.17	589,700	760,700	\$12,171,700
									2007	41,500	1.11	1.05	1.38	1.30	1,933,700	2,127,000	\$32,968,800
68	SH 121-Wadsworth Blvd.	US 40/Colfax to US 36	U	6	12.9	3	8	SH	2008	40,300	1.06	0.98	1.27	1.23	1,647,300	2,092,100	\$33,473,000
									2009	40,800	1.08	1.09	1.19	1.27	1,967,500	2,498,800	\$39,980,600
									2007	39,800	1.08	1.02	1.16	1.28	1,031,700	1,134,900	\$17,591,000
69	SH 121-Wadsworth Blvd.	C-470 to US 40/Colfax	U	6	13.2	3	8	SH	2008	37,800	1.02	1.06	1.24	1.25	852,500	1,065,600	\$17,049,300
									2009	40,300	1.04	0.99	1.17	1.25	1,023,900	1,279,900	\$20,478,400
									2007	30,200	1.29	1.10	1.06	1.25	633,800	697,200	\$10,806,800
70	SH 177-S. University Blvd.	C-470/Lincoln to I-25	U	6	8.6	3	8	SH	2008	28,700	1.28	1.14	1.24	1.23	844,400	1,072,500	\$17,159,200
									2009	33,900	1.20	1.04	1.05	1.25	960,400	1,219,700	\$19,514,800
									2007	15,900	1.15	1.07	1.19	1.01	107,500	118,200	\$1,832,700
71	SH 340	203/4 Rd. to I-70 Business	U	3	5.7	3	8	SH	2008	12,800	1.19	1.12	1.20	1.06	63,900	88,800	\$1,421,100
									2009	13,800	1.15	1.10	1.07	1.01	68,400	95,000	\$1,520,200
														Total	2007		
						2008						42,616,300	51,412,900	\$841,173,700			
						2009						51,768,500	63,899,200	\$1,021,639,500			