

The New I-64 Economic and Regional Mobility Study

Quarterly Report # 4

September – November 2008



Before the Closure

Please indicate how much time it takes you to make certain trips now compared to how long it took you before the closure.

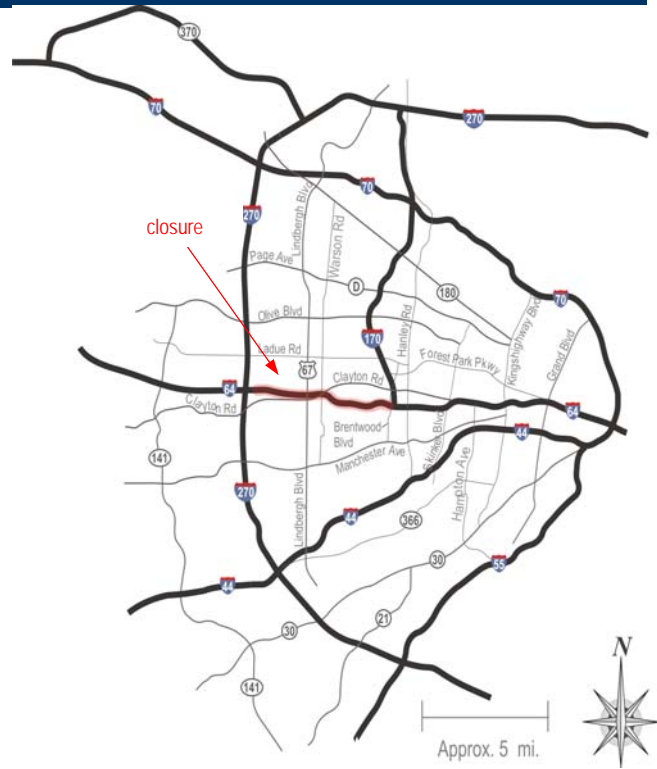
	Not at all (same or less time)	1 to 5 minutes longer	6 to 15 minutes longer	16 to 30 minutes longer	More than 30 minutes longer
Education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Workplaces of 100+ employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medical facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shopping centers and other retail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Travelling throughout the Louisville Region	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



1. Executive Summary

On January 2, 2008, the section of I-64 from Ballas Road to I-170 (see map) was completely closed for construction. The closure is planned to last through the December 14, 2008, at which time a section to the east will be closed for construction for the bulk of 2009. Construction proceeded well in the west closure section even with early-year rainy weather conditions that delayed some construction activities.

This quarterly report assesses the period September through November 2008 that includes the 9th, 10th and 11th months of the western closure, evaluating the three key areas of **Project Communications** (MoDOT’s provision of information to the public, and the public’s response to the project), **Mobility** (the effects of the closure on travel behavior, choices, and traffic flow), and **Economics** (the effects of the closure on businesses within the corridor as well as the economic health of the region). With the western closure now eleven months old, findings are beginning to emerge that will be of interest to MoDOT, the St. Louis region and the general public. To date, the research team has found:



Communications (pp. 2-8)	Mobility (pp. 9-21)	Economics (pp. 22-26)
<p>6,140 participants have given feedback through web surveys, mail surveys, personal interviews, and surveys administered by Motorist Assist and I-64 Traffic Response crews.</p> <p>The public is fairly satisfied with the closure, how information has been communicated, and how they are managing to move around the region.</p> <p>The closure has had varying effects on the public’s travel habits; with 75% indicating their travel frequency has changed for certain trips and earlier morning commute times.</p> <p>The public reported they are leaving 10 minutes plus earlier (40%) on their commute to work or home, although many trip times are relatively unchanged.</p> <p>Lane addition strategy along I-44, I-70 and I-270 received a 60% effectiveness rate; improved signal timing received 58%; and traveler information, DMS and 511 received 53%</p>	<p>The closure has re-routed approximately 140,000 to 150,000 vehicles per day; travelers have taken alternative routes, altered their travel schedules, and considered alternate modes.</p> <p>Freeway travel times are similar to the previous year and there is a noticeable peak spread and increased traffic volumes on some freeways with I-44 and I-170 seeing the greatest increase in traffic</p> <p>The RideFinders rideshare program experienced over a 41 percent jump in comparison to the last year and during the month of November, 9,753 participated in the program.</p> <p>Gas prices have probably contributed to the demand for these services. This impact will be monitored now that gas price is going down.</p> <p>Users at regional park-and-ride lots have decreased between August and November, 2008 by 283 vehicles.</p>	<p>Real estate – office vacancy rate has increase since 2007 and the region ranks 25th in vacancy rates compared other major metropolitan areas. Single-family housing has fallen consistent with national trends (41%). Multi-family housing has fallen significantly more than national trends (60% to 9%)</p> <p>Economics – both corridor and non-corridor employment in 2008 Quarter 2nd are close to 2007 Quarter 2nd. 1st Quarter compared to 2nd Quarter 2008 saw slight movements with jobs up, wages down, total taxable sales up and number establishments down. 3rd Quarter taxable sales was less than the 2nd Quarter, but more than 1st Quarter.</p> <p>Taxable Sales – are down for both corridor and non-corridor with corridor down slightly more - ranging from 1.6% to 4.2% for the first three quarters.</p> <p>The second business survey is currently available on-line for the business community’s response.</p>

2. Communications

Communications Highlights

The citizens of the St. Louis region are providing input to this research through online surveys, mailed surveys, handouts by Motorist Assist operators, and personal interviews. Highlights gleaned from these various surveys include:

- **Awareness.** From the responses to date, it appears that MoDOT effectively communicated the upcoming closure to the affected population in 2007; pre-closure awareness was reported as very high.
- **Satisfaction.** Respondents are largely satisfied with their ability to travel around the region and with the level of information that has been communicated by MoDOT and others regarding the closure.
- **Information Sources.** TV News appears to be the best way to reach the majority of the respondents, with radio news, newspapers, and road signs also being effective methods. For those who use the internet, online information sources are almost as effective as TV news. However, a portion of the general population does not obtain their information via the internet and other methods should continue to be used to reach them.
- **Traffic Congestion Migration Strategies.** These strategies effectiveness level ranges from 36% to 60% with the ineffective level ranging from 7% to 19%. The lane widening strategy received the highest level of effectiveness while also receiving the highest level ineffectiveness. The other noticeable fact was that 25% reported “No Idea” that the Motorist Assist and I-64 Traffic Response programs were used.
- **Commuter’s Time of Travel.** The shift to earlier commute times is 45% and a shift to later commute times is 9%. No change of time was 27 % with 8% reporting not applicable. Survey indicated that 35% are not leaving earlier or staying later.
- **Travel Mode.** Initial responses on how the closure has changed people’s mode of travel are somewhat inconclusive. It is clear that the dominant mode of travel by the respondents has been, and continues to be, the automobile.
- **Personal Impact.** The closure is affecting people’s trip choices. Survey respondents are indicating changes in basic trip destinations such as shopping, eating out and attending recreational activities. Overall, 75% of respondents are indicating that their frequency of travel to certain areas has been affected by the closure. Some residents have shifted their work hours, especially the respondents to the Web survey, who indicated a shift to earlier morning commutes. However, the web survey received a heavy early response when impact uncertainty to the closure was high. This issue will be explored in more detail as progress is made on the I-64 study.

To date, the responses have been fairly consistent over the various survey methods. This general agreement across surveys is important because it appears to demonstrate that one can generalize from the surveys to the general population (other than issues related to online access, which is by definition skewed in the Web survey responses).

Communication Assessment Objectives and Methods

Major Goals – Communication Assessment
Develop and implement survey instruments
Determine effectiveness of pre-closure notification
Measure participant satisfaction for key issues
Estimate changes in behavior
Hear everyone’s voice (obtain generalized sample)

Total Collected Surveys by Method

Web	1293
Mail	700
In-person	180
Motorist Assist	
MoDOT	3212
I-64 Traffic Response	755
TOTAL	6140

Four classes of survey instruments were developed to assess the communication aspects of this project:

- A continuous online survey was developed and enhanced on June 1, 2008. Links to the survey were placed and have been maintained on both MoDOT’s main website and the New I-64 Project site. MoDOT, through its project public outreach efforts, continues to encourage and promote public input via this survey method. Beginning on December 15th, the online survey will again be enhanced to reflect the opening of the I-64 west section and the closing of I-64 east section. This enhancement will seek information from the public on their opinions on the delivery of the new I-64 west section and the closing impacts of the I-64 east section.
- To help obtain a representative sample, a physical survey was developed and mailed to 10,000 respondents in twenty-eight zip codes near the I-64 project. This work was completed during the first quarter and summarized in the 1st quarterly report. This mailed survey was successful in helping achieve a better cross-sectional representation of the region’s population. Plans are underway to again distribute a mailed survey in early 2009. We will again survey the same area. This survey instrument will also be done after the I-64 project is completed.
- In-person surveys were utilized to assess public opinions at two major shopping locations in the immediate area of the closure (the St. Louis Galleria near I-64/I-170, and Schnuck’s grocery store at Lindbergh Boulevard and Clayton Road) in the 1st quarter of the closure. Public Official interviews are ongoing with both one-on-one interviews and future contacts through email survey questions. We have conducted interviews at the Zoo on September 20, 2008. Detailed information is provided in this quarterly report’s Appendix A.
- Project satisfaction measures were also added to the Motorist Assist and I-64 Traffic Response service surveys that are distributed to people serviced by Motorist Assist and I-64 Traffic Response operators. During the four quarter period, 900 - Motorist Assist and 159 - I-64 Traffic Response were received. This source continues to provide a good flow of information.

In order to facilitate comparisons of changes across survey types and from time to time, the statistics used in the project assessment usually do not include the “not sure” or “no opinion” percentages. This eliminates a major source of random variability and allows a more accurate observation of change over time. In addition, this methodology is consistent with how MoDOT calculates similar Tracker measures.

Communications Results

Use of I-64, Knowledge of the Closure

The survey results indicate that the public was very aware of the closure well before it occurred. 98.4 percent of the online respondents were aware of the upcoming closure in 2007, and since 97.2 percent of the online respondents traveled on the affected section of I-64 at least once per week before the closure, it appears that the target population received the needed advance information. The changes between the first quarter and second quarter report measurements were generally less than 1 percent. This information was reported in the second quarter. On June 1, 2008, the web survey was enhanced to gain additional information about the I-64 project. These enhancements were made to further explore potential impacts from the roadway closure. The knowledge of closure question, based on only a slight variation in the first two quarters and a high response of closure knowledge, was removed.

Satisfaction

The chart at the right summarizes survey respondents' opinions in the area of satisfaction in the 4th quarter and compares them to the combine 1st and 2nd quarters and 3rd quarter. As the chart indicates, the satisfaction level (in percentage of response) is still down for most response categories from the first two quarters based on information from the web survey. However, the 4th quarter is up from the 3rd quarter for most response categories.

The information received from Motorist Assist and I-64 Traffic Response surveys is higher than the online survey. This could be explained based on the

Satisfaction Level (Web Survey n=158)	4 th	3 rd	1 st & 2 nd
Public informed	79	73	91
Timely information	78	73	89
2 years vs. 6 to 8 years	74	71	76
Communication of alternatives	64	58	83
Overall satisfaction	70	69	78
Managing to move around area	60	60	72
Work zone traffic flow	55	46	69
Accurate/understandable signs	73	65	76
Satisfaction Level (MA Survey n=1059)			
2 years vs. 6 to 8 years	94	93	89
Managing to move around area	91	88	89
Satisfaction Level (Zoo Survey n=80)			
Public informed	94		
Timely information	89		
2 years vs. 6 to 8 years	86		
Communication of alternatives	88		
Overall satisfaction	90		
Managing to move around area	75		

sample sizes (158 online compared to 1059 MA) and/or how the survey was obtained. Those receiving a survey right after receiving valuable roadside services might be inclined to respond differently than someone who must seek out the online survey to input information. Work zone traffic flow rebounded from 3rd quarter low – up 9%. The other areas still range in the area 60 to 70%. The research team will continue to monitor these public opinions to see if a trend is forming or if the small sample size has impacted the outcome or is there a variation in response by different survey instruments.

The in-person interviews, conducted late in the first quarter at two major shopping locations near the closed section of I-64, showed general agreement with other survey results. Conducting surveys at shopping locations provides a potential correlation link with the economic component of this study. Consistency in data across all survey efforts helps validate that true public opinion is being gained. The Zoo survey opinions were closer the first two quarters' information and the 1st quarter interviews opinions. The information gained from all survey instruments will be compared and analyzed in the future annual and final reports to assess the consistency across different survey instruments.

Personal Impact of the Closure

The table below shows the 3rd and 4th quarter responses regarding the closure impact on travel. The travel destination of “attending recreational activities” was added when the web survey was enhanced on June 1, 2008. This activity will be monitored as the I-64 project prepares for the East closure, since a number of regional recreational facilities are located along I-64 near this closure.

The comparison between the 3rd and 4th Quarters showed some differences in “where I eat out”, “where I buy gas” and “attending recreational activities”. The research team will continue to monitor the survey responses on these travel destinations.

Survey Question – “The closure has changed” – Percentage of Agreement

Travel destinations	4 th Quarter	3 rd Quarter
Travel to certain areas	75	75
Where I shop	52	51
Where I eat out	52	43
Where I buy gas	39	25
Where I work	10	12
Where I live	10	13
Attending recreational activities (i.e. games, parks, etc.)	42	34

Survey Question “When do you routinely commute in St. Louis” – Response and Percentage

Time of Day	4 th Quarter	3 rd Quarter	1 st and 2 nd Quarters
Before 7 am	45 (13%)	23 (12%)	277 (22%)
7 to 9 am	100(29%)	53 (27%)	334 (27%)
9 am to Noon*	21 (6%)	16 (8%)	103 (8%)
Noon to 3 pm	22(6%)	18 (9%)	
3 pm to 6 pm	108 (32%)	63 (32%)	376 ((31%)
After 6 pm	44 (13%)	23 (12%)	145 (12%)

*First two quarters asked 9 am to 3 pm

Throughout the first 11 months, most commutes were being reported as being made between 7 and 9 am and 3 and 6 pm. The before 7 am is down when comparing 1st / 2nd Quarter’s responses to 3rd and 4th Quarter’s responses.

Information Sources and Communication Methods

TV News still continues to be best method of distributing information with Radio News, Internet and road signs running a close second. TV News and Internet are more pre-trip information sources while Radio news and road signs are more en-route information sources. It is noticeable that MoDOT’s three web sites are listed as 1st, 2nd, and 7th as sources of information.

Best Way to Distribute Information

Source	Responses
Internet	113
TV News	112
Road Signs	102
Radio News	86
Email from I-64/MoDOT	62
Newspaper	61
Mail from MoDOT	32
Radio Talk Shows	29
Project Display Boards	22
Others	10

Internet Sources

Source	Responses
New I-64 Web Site	90
MoDOT's Web Site	66
Post-Dispatch (STLToday.com)	52
TV 5 (KSDK.com)	52
TV 2 (MyFOXSTL.com)	32
TV 4 (KMOV.com)	23
Gateway Guide	19
Metro (MetroStLouis.org)	14
Radio 1120 AM	14
Radio 550 AM	11
Post 4 Traffic Online	10
Other	7
GetAroundSTL.com	5
DontGetStuck.org	3
MidMetro4.com	2

Traffic Congestion Strategies

Various traffic congestion strategies were implemented to reduce regional traffic congestion potentially caused by the displacement of 140,000 to 170,000 vehicles per day during the roadway closure. Public information is being sought on four of these strategies to evaluate to their impact in reducing the traffic congestion. The enhancement made on June 1, 2008 to the web survey will assist in this evaluation. The effectiveness level ranges in the 4th Quarter from 36% to 60% with the ineffective level ranging from 7% to 19%. The lane widening strategy continues received the highest level of effectiveness while also receiving the highest level ineffectiveness. The other noticeable fact was that 25% reported “No Idea” that the Motorist Assist and I-64 Traffic Response programs were used.

Effectiveness/Strategies	Lane widening along I-44, I-70 and I-270	Improve Signal Timing and Interconnection	Traveler Information on DMS and 511	Motorist Assist and I-64 Traffic Response Programs
	3 rd to 4 th Quarter	3 rd to 4 th Quarter	3 rd to 4 th Quarter	3 rd to 4 th Quarter
Very Effective	30 – 29	37 – 32	28 – 20	29 – 15
Slightly effective	33 – 31	20 – 26	32 – 33	16 – 21
No difference	12 – 6	9 – 11	22 – 14	15 – 16
Slightly ineffective	7 – 11	11 – 4	3 – 4	4 – 5
Very ineffective	10 – 8	5 – 10	4 – 9	3 – 2
Have not noticed	2 – 5	10 – 8	3 – 5	11 – 17
No idea	6 – 9	8 – 10	8 – 14	22 – 25

Commuters' Time of Travel

The shift in commute time question was added on June 1, 2008 to web survey. This question was added to gain additional in-sight and understanding of the public's opinion on the I-64 project. A time shift in beginning their commute to work or home does shift demand placed on the transportation system during peak period of travel. The following compares responses received in the 3rd and 4th Quarters to help in the evaluation of the commuter's time of travel:

Shift in Commute Time	3 rd Quarter	4 th Quarter
Little earlier < 10 minutes	13%	15%
Earlier > 10 minutes	26%	40%
Little Later < 10 minutes	2%	3%
Later > 10 minutes	11%	6%
No Change Time	30%	27%
Not applicable	18%	9%

The shift to earlier commute times is 55% (up from the 3rd Quarter) and a shift to later commute times is 9% (down slightly from the 3rd Quarter). No change of time was down from 30% to 27%. About 2/3 of the web survey participants in the 4th Quarter reported leaving earlier or later for their commuter

Travel Modes

The 4th quarter web surveys shows a trend developing in telecommuting for few times per week. Most the other 4th quarter travel mode responses moved back towards the first two quarters. Also, the increased carpooling shown in the table below appears to correlate to the increasing reported by RideFinders later in this report.

Travel Mode (Comparison of Travel Modes - Web Respondents Only)

Mode/Frequency	Never			Few Times a Week			Almost Every Day		
	Q4	Q3	Q1&2	Q4	Q3	Q1&2	Q4	Q3	Q1&2
Riding the Bus	95%	89%	94%	5%	10%	4%	1%	1%	2%
Biking	91%	87%	94%	9%	9%	5%	1%	4%	0%
Riding MetroLink	83%	78%	82%	14%	19%	15%	3%	3%	3%
Telecommuting	72%	75%	80%	24%	20%	17%	4%	5%	3%
Walking	86%	77%	88%	11%	16%	10%	3%	7%	2%
Driving with Others	47%	27%	51%	41%	49%	35%	12%	24%	14%
Driving Alone	3%	5%	6%	15%	18%	9%	81%	76%	85%

Demographics

The table below summarizes the responses to demographic questions from the 4th Quarter web survey only. Information from all survey instruments are being evaluated to ensure a valid cross-sectional representation of the region is obtained.

Demographics of Survey Respondents

Age	Web	Gender	Web
under 25	6 %	Male	53 %
26 to 40	35 %	Female	47 %
41 to 65	56 %		
Over 65	3 %	Income	Web
		Less than \$20,000	1 %
Race	Web	\$20,000 to \$40,000	8 %
American Indian	1 %	\$40,001 to \$60,000	19 %
Asian	2 %	\$60,001 to \$90,000	20 %
Black/African-American	3 %	\$90,001 to \$120,000	24 %
Hispanic/Latino	1 %	\$120,001 to \$150,000	13 %
White/Caucasian	91 %	\$150,001 to \$200,000	7 %
Other	1 %	More than \$200,000	7 %

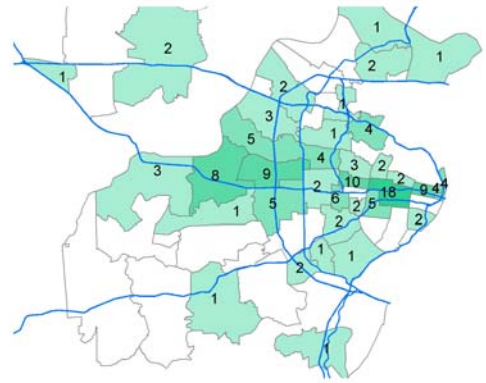
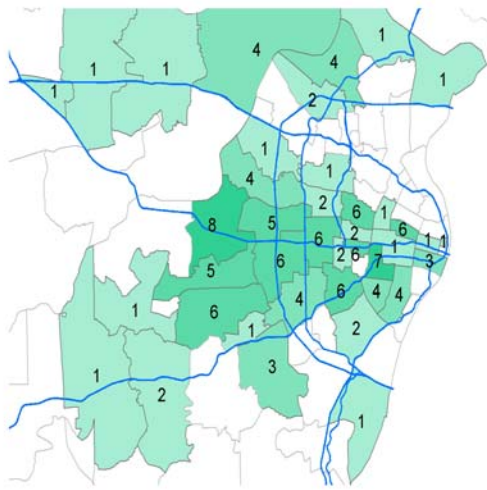
The map on this page illustrate the zip codes of survey respondents within Missouri (a small portion of the responses – around 2 to 3 percent – were from outside the state). These results are preliminary; future reports will likely aggregate zip codes into larger geographic units with more statistical robustness.

Survey Respondents' Residence, 4th Quarter - Commute Destination (by zip code)

Residence Location

Commute Destination

Web Only



3. Mobility

Mobility Highlights

The study team continued the development of a series of systems to automate the collection, processing, and display of the enormous stream of available data. Key findings to date are listed below:

- Approximately 140,000 to 150,000 daily vehicles used the segment of I-64 between Ballas Road and I-170 before its closure. The assessment of where those vehicles have gone is still underway; based on the data in this report, the only large traffic increase seen with available data was on I-44 and I-170. Volume data is still being evaluated for I-70, I-270, and the many parallel facilities that have been impacted by the closure. As more data will be available, we will be able to a more detail assessment of traffic volumes in the annual report.
- Analysis of Traffic.com travel-time data has indicated some minor variation in peak-hour travel times on key freeways in the region. However, a more detailed assessment will be made and reported in annual report.
- The RideFinders Rideshare program continued to experience increasing growth rates, with a 40+ percent jump in monthly rides in the year between November 2007 and November 2008. I-64 closure is a partial reason for this increase; however, the significant gas price increase has also contributed to people choosing to carpool or vanpool. The recent gas price decline will hopefully help in the determination of the causes for the significant increase in ridership.

Mobility Assessment Objectives and Methods

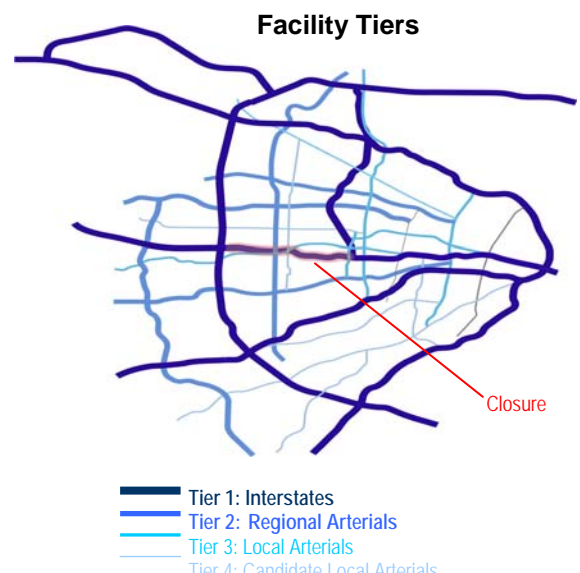
This assessment uses a variety of tools to measure the region's mobility before, during, and after the closure period. The assessment examines traveler shifts and their effects, using a

Major Goals – Mobility Assessment

- Assess the shifts (temporal, spatial, and modal) in travel demand throughout the region
- Assess congestion effects of the closure
- Assess closure effects on transit, ride-sharing, and park-and-ride demand.

multitude of data sources of varying resolution. The complexity and sheer size of the data set requires examinations at several levels, and future reports will continue to hone and refine the assessment.

The initial analysis of the region's roadways and highways is focused on facilities in four Tiers, as illustrated at right. Tier 4 facilities are being assessed to see whether they should be included in the Tier 3 grouping, or excluded from further analysis. For each of these facilities, relevant mobility data (traffic volumes, travel times, incidents) are being gathered throughout the duration of the closure to measure its regional impacts.



Mobility data is being obtained through numerous sources:

- MoDOT is providing historical traffic counts through its count program, as well as archived traffic data from the Gateway Guide system. In addition, MoDOT forces have conducted travel-time runs on key segments of Tier 2/3/4 facilities multiple times since the I-64 closure. MoDOT also maintains statistics for its park-and-ride facilities across the state, and is providing monthly count data for its facilities in the region.
- Traffic.com is a commercial web-based site that provides, for highways in metropolitan areas across the U.S., real-time traffic congestion, travel-time, and incident data. Traffic.com archives traffic volume, travel speed, and incident data and has an agreement to share this information with MoDOT. The research team developed customized software routines to download, organize, prune, and analyze this data. **Enhancement to this application are underway that will help better manage the large data files needed to aggregate data to a 5-minute interval.** They also provide travel times on limited arterials in the study's impacted area that are being collected.
- St. Louis County has conducted traffic counts and travel-time studies on regional arterials periodically since the closure.
- Metro collects ridership information on MetroLink, MetroBus, Call-A-Ride, and special services, and is providing statistics aggregated on a monthly basis. In addition, Metro collects parking data at its stations with park-and-ride facilities. The research team continues to work with them on gaining access to this information. This assessment will be further addressed in the annual report.
- RideFinders, sponsored by Madison County Transit, is the St. Louis regional rideshare program. Rideshare data is provided on a monthly basis.
- The research team is supplementing data collection where necessary, including travel-time runs, traffic counts, and field observations. This quarter field assessments were made on the arterial data being collected electronically daily to check the data validate.

Mobility Results

Pre-closure Capacity Improvements

It is important to note that regional mobility began to be affected by The New I-64 project even before the closure. Perhaps most notably, several highway/roadway capacity improvements were implemented by MoDOT and St. Louis County on parallel and complementary facilities, as listed at right. As the list indicates, one change has been reversed after monitoring field traffic flow operations.

In addition, Metro improved its transit system capacity in anticipation of the closure by increasing service frequency and adding new routes. The research team has recently received a complete list of these improvements, and they will be incorporated into the future annual reports.

Key Improvements to Regional Highways/Roadways

- I-70** Re-stripe from I-170 to I-270 (add lane in each direction)
- I-44** Re-stripe from I-270 to I-55/I-70 (add lane in each direction)
- I-270/I-64** Re-stripe I-270 North of I-64 to Route 340 (add lane in each direction) and re-stripe I-64 Eastbound ramp to I-270 Northbound
- I-270/I-44** Re-stripe interchange's ramps to improve traffic flow
- Clayton Road** Re-stripe from Mason Road to Lindbergh Blvd; upgrade various traffic signals; new traffic signals at Topping Road and Bopp Road
- Ladue Road** Upgrade various traffic signals; various new left/right-turn lanes; new traffic signals at Graeser Road/Warson Road
- Improved Signal Timing** along Page Avenue, Olive Boulevard, Manchester Road, Lindbergh Boulevard, Clayton Road, Brentwood Boulevard, Hanley Road, Big Bend Boulevard, Kingshighway Boulevard, Grand Boulevard, and Forest Park

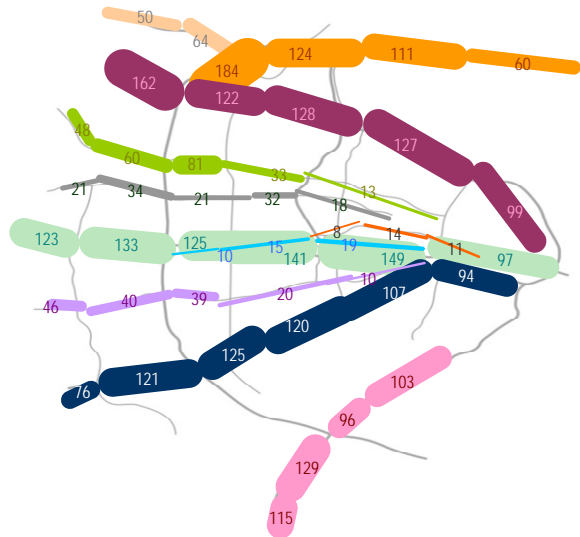
Traffic Volumes

Freeways

Prior to the closure, in baseline 2006, I-64 carried approximately 140,000 to 150,000 vehicles per day (vpd) on a typical weekday – this is Annual Average Daily Traffic, or AADT (excluding “outlier” days). 100 percent of this traffic was necessarily displaced (temporally and/or spatially) as a result of the closure.

Several sources are being used to evaluate the closure’s effects on traffic volumes - including before/after volumes (from MoDOT, Traffic.com, and St. Louis County), responses to the various public surveys developed, and selected aggregated data reported by MoDOT in its frequent e-mail briefings. The map at right, extracted from Traffic.com and MoDOT data, shows east-west daily traffic volumes for many of the key study facilities for the baseline year of 2006. Similar data has been extracted for the key north-south facilities (I-270, I-170, Lindbergh Boulevard, etc.) It is important to note that this information averages every non-holiday, non-“outlier” weekday from 2006, and therefore is not a good base against which to compare the effects of the closure for smaller periods (such as the current quarter under evaluation). However, it is useful for illustrating order-of-magnitude baseline conditions.

**Baseline Daily Weekday Traffic (000's)
East-West Corridors (2006, full year)**

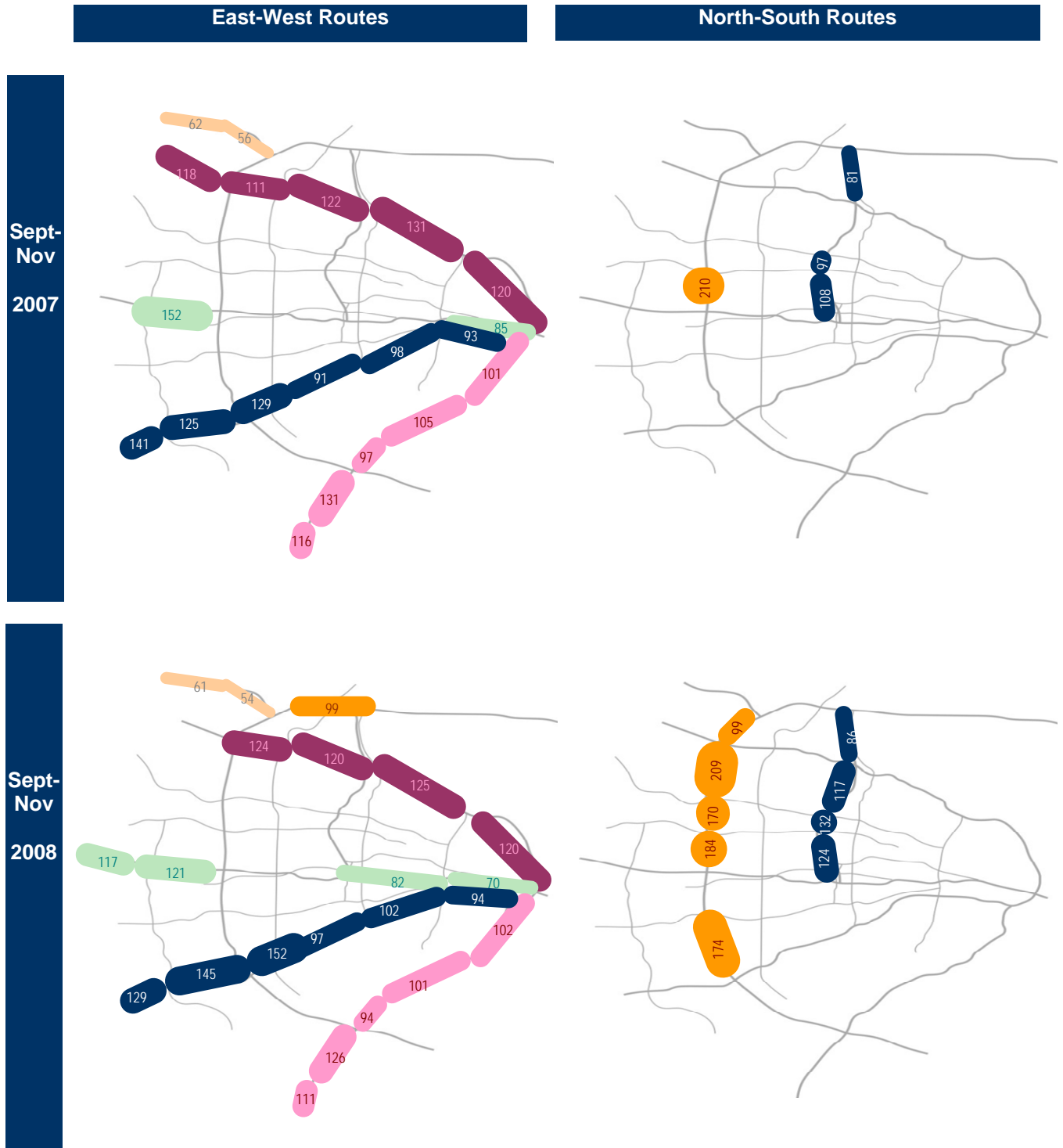


The maps on the next page show a more fair initial comparison for selected segments. They compare weekday September-November 2008 volumes with the September-November 2007 volumes. (Weekend volumes are also being assessed.)

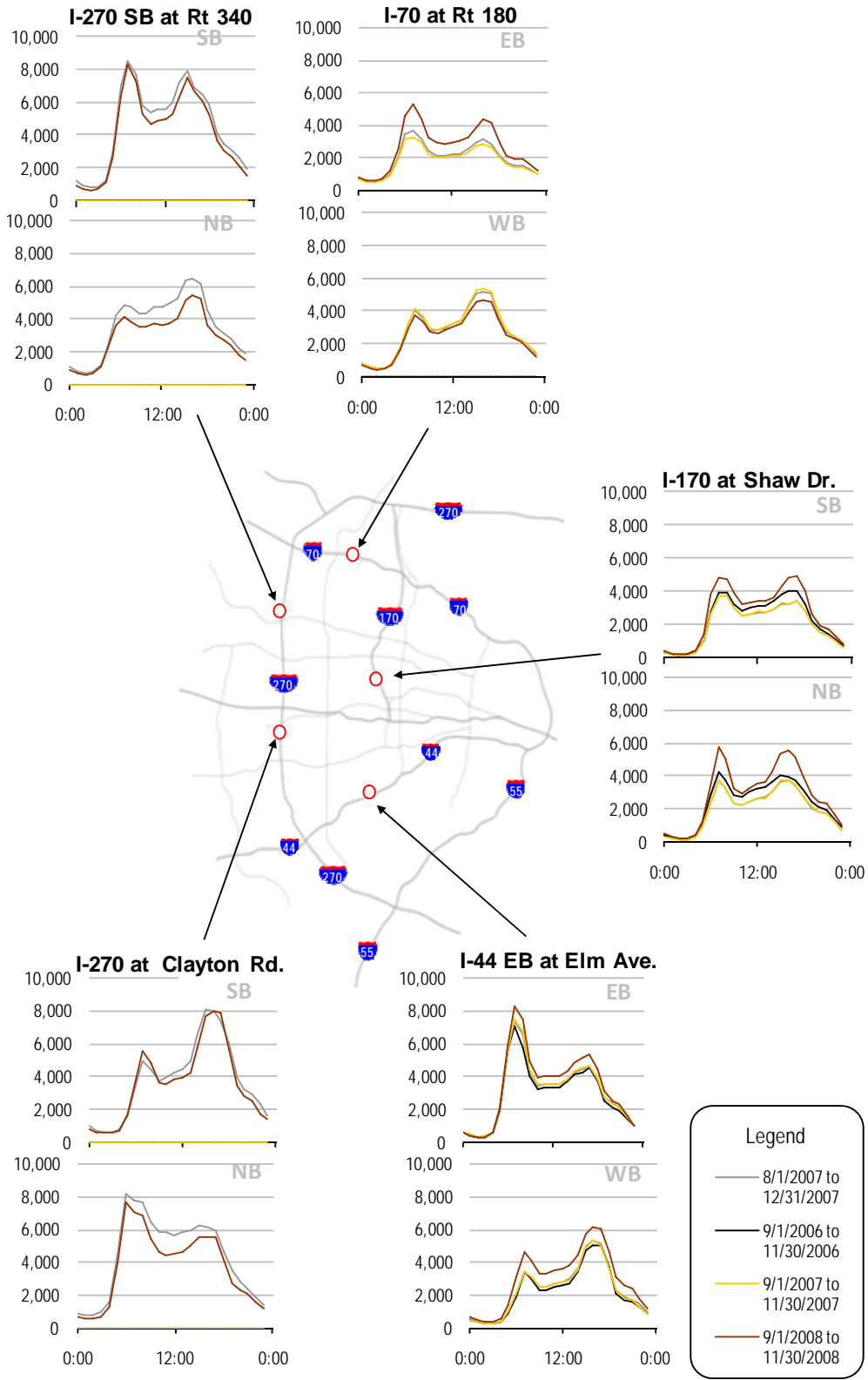
Based on these maps, the following preliminary conclusions can be gleaned:

- Daily traffic volumes on I-64 immediately east of the closure have decreased significantly since 2007 by 50,000 vpd.
- Daily volumes on I-55 appear to be roughly equivalent to those before the closure.
- Daily Volumes for I-44 just increased by 23,000 vpd just east of I-270.
- Daily Volumes for I-70 just increased by 13,000 vpd just east of I-270
- Volumes on I-170 between I-64 and I-270 have increased by approximately 16,000 – 35,000 vpd compared to the previous year.

Daily Traffic Volume Comparison (000's) on Selected Segments, 2008 vs. 2007 (PRELIMINARY)

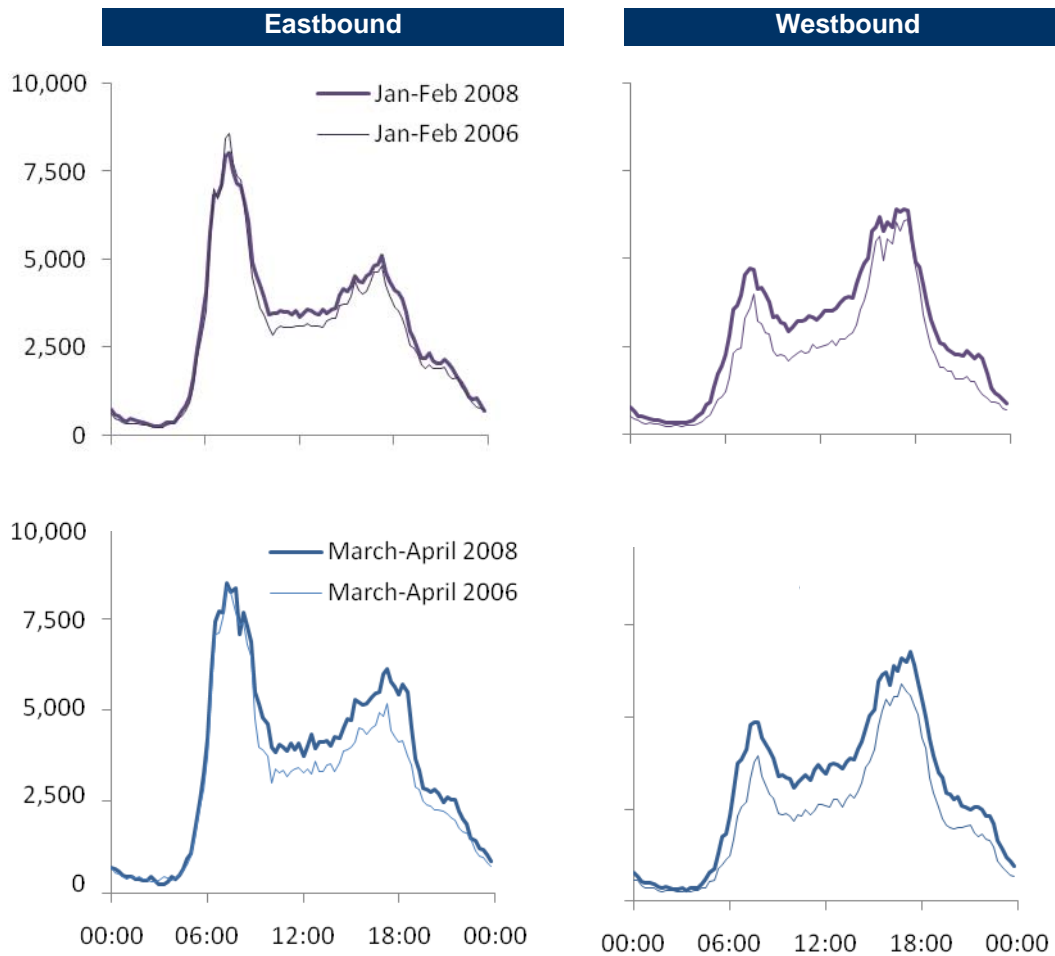


Below is the volume profile from select locations around the city. For reference, AM peak is top graph and PM peak is lower graph.



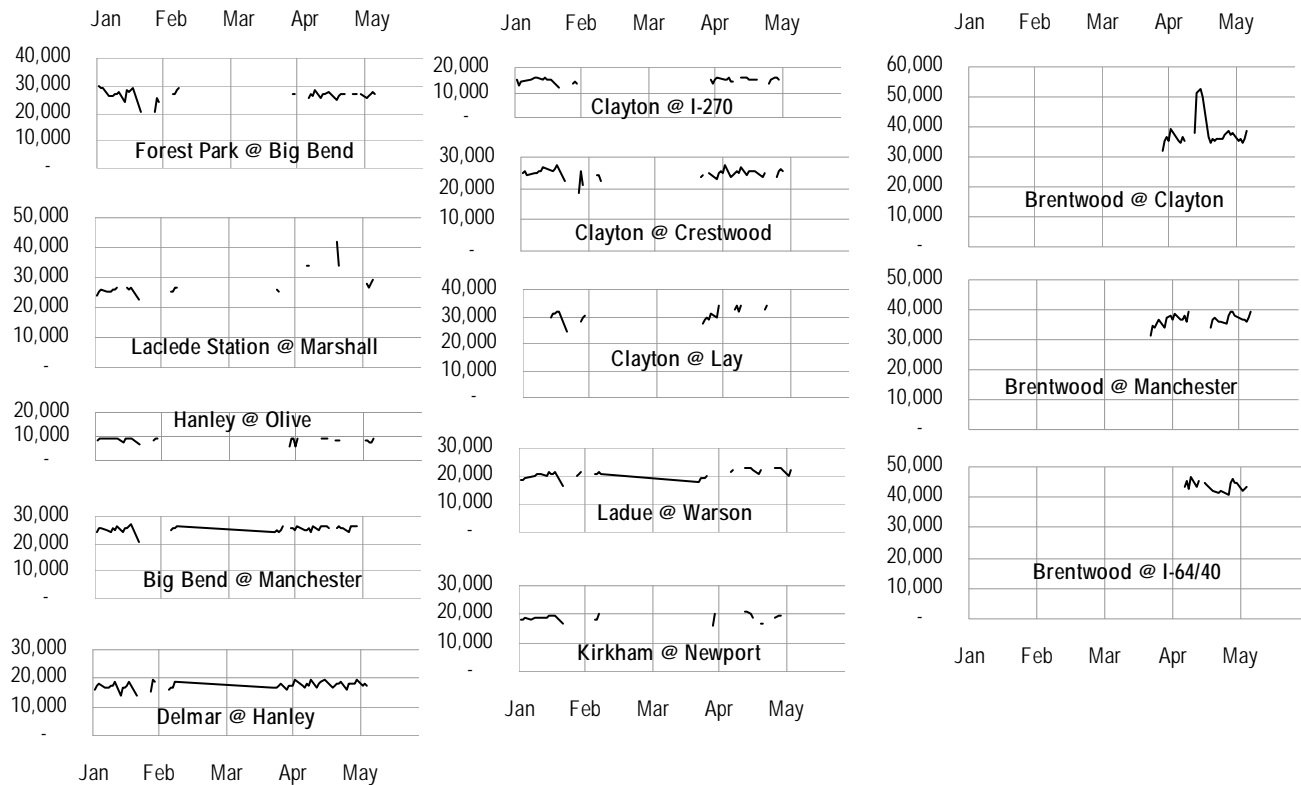
The Traffic.com data is also being examined at more refined resolutions, from hourly totals all the way down to five-minute volumes. The graphs below illustrate how the effect of the closure on the **duration of the peak period** is being examined. As the graphs indicate, overall volumes on this segment have generally increased, but the peak periods have spread as well. Five-minute data assessment requires significant data storage. We are currently developing SQL database server application that will provide better data management that will allow the team to aggregate data at a five-minute periods. This application will have a web-based access with pre-established queries developed. This application will be provide to MoDOT and East West Gateway for future usage. Further analysis of this spread will be undertaken in the annual reports at various sites.

**Example 15-Minute Traffic Volume Profiles
I-44 at Elm Avenue**



St. Louis County has been tracking arterial volumes since the I-64 closure. The graphs below illustrate ADT data available from the County and are under study to extract trend information. For many days on which data are not plotted, volumes are only available for one direction. No significant conclusions can yet be drawn from these data, but they will continue to be a resource as the study progresses. **This information was presented in the 2nd Quarterly report and will be updated in the annual report when the initial detailed evaluation and assessment will be made.**

Average Daily Traffic Volumes Recorded by St. Louis County, 2008



MoDOT also collects volume data from many of the arterials in the region using its ACTRA signal system and field detectors. The graphs on the following pages examine volume trends on many of the key arterials during both peak hours on a monthly basis since the closure, including a comparison to a pre-closure baseline. These table and graph presents a sample summary of data collected in the 2nd Quarter. **We continue to capture this information and will present it in more detail in the annual report when a further detailed assessment is made.** Several limitations of the data should be noted:

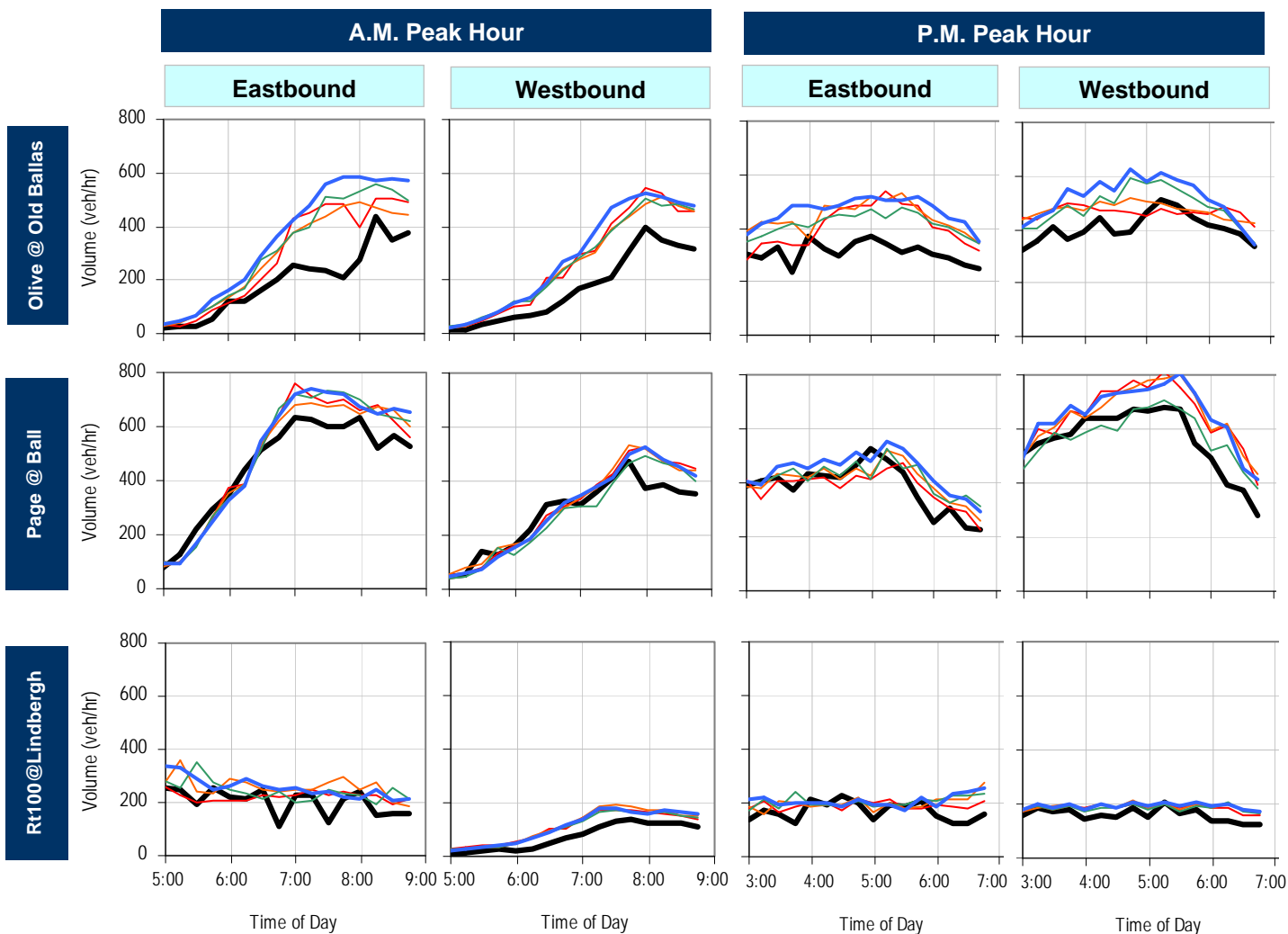
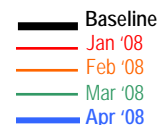
- The pre-closure data is from a single day, in most cases collected in November or December 2007.
- During the closure, not all days had available or usable data.
- This data reflects only through volumes approaching intersections; hence, right- and left-turning traffic is not included.

In spite of these limitations, the data reveals some anticipated patterns, such as volume increases on Page and Olive, which run parallel to the closure. Archiving and studying these data beyond the closure will help in understanding the closure's effects.

Summary of 2nd Quarter ACTRA Volume Reporting Since Closure, Key Arterials

	A.M. Peak Period	P.M. Peak Period
Olive	Eastbound and Westbound: 50% to 80% increase at Old Ballas	Eastbound: 30% to 50% increase Westbound: 14% to 27% increase. (p.m. volumes higher than a.m.)
Page	Eastbound: 7% to 11% increase. Westbound: up to 10% increase (a.m. volumes higher than p.m.)	Eastbound: 15% increase (after initial slight dip of -0.6%) Westbound: 3% to 17% increase
Manchester at Braeshire	Eastbound and Westbound: 4% to 17% increase	Eastbound: 6% reduction (after initial January dip of 20%) Westbound: 9% increase (after initial dip of 7%)
Manchester at Lindbergh	Eastbound: 10 to 27% increase Westbound: 44% to 53% increase	Eastbound and Westbound: 12% to 22% increase
Rte. 141 at Howard George	Southbound: 4% to 20% increase Northbound: dip below pre-closure (after January increase)	Southbound: 5 to 10% decrease Northbound: 4 to 7% increase (except February dip of 7%)
Lindbergh at Conway	Northbound and Southbound: 20% to 40 % decrease	Northbound and Southbound: 20% to 40 % decrease
Lindbergh at Manchester	Southbound: 200% average increase Northbound: 40 to 65% reduction	Northbound and Southbound: 40 to 65% reduction

East – West Routes



Travel Times

The research team is using Traffic.com's archived speed data to calculate travel times on freeway segments throughout the region. The table at right contains some of the data extracted. P.M. peak-period data are averaged over the current quarter, and compared with the last five months of 2007. The travel times in general do not show major variations from the pre-closure data, and also generally indicated faster travel times. The causes of these results will continue to be investigated, and could be attributable to a combination of peak-spreading, re-routing due to the closure, increased fuel costs, and other factors.

Travel Times (min.) Selected Freeway Sections - Preliminary

Peak Period (4 – 6 PM)

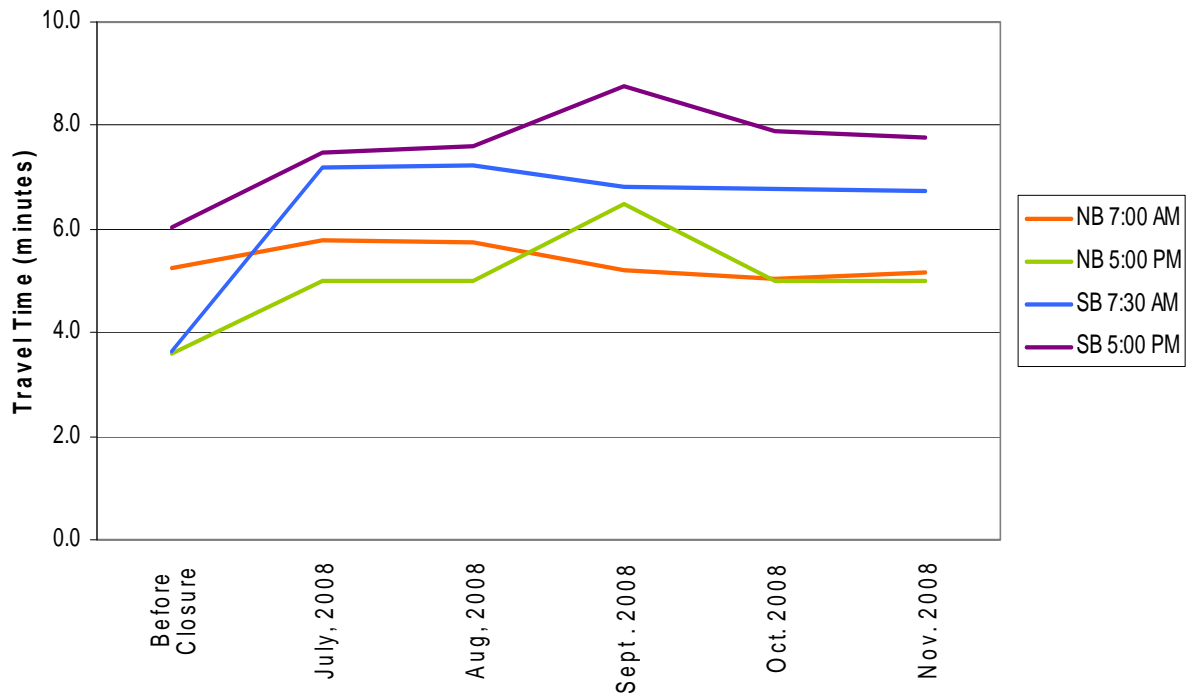
Freeway Segment Description	Distance in miles	Peak Period (4 – 6 PM)	
		8/1/2007 12/31/2007	9/1/2008 11/30/2008
I-70 EB from I-270 (Exit 232) to I-170 (Exit 238)	5.8	5.6	5.5
I-70 WB from I-270 (Exit 232) to I-170 (Exit 238)	6.1	6.3	5.7
I-170 NB from I-70 (Exit 7) to I-64/US 40 (Exit 0)	7.6	7.9	7.2
I-170 SB from I-70 (Exit 7) to I-64/US 40 (Exit 0)	7.7	7.9	7.7
I-270 NB from I-70 (Exit 20) to I-64 (Exit 12)	7.7	9.2	8.3
I-270 SB from I-70 (Exit 20) to I-64 (Exit 12)	8.8	9.8	8.8
I-270 NB from I-64 (Exit 12) to I-44 (Exit 5)	6.5	7.3	6.7
I-270 SB from I-64 (Exit 12) to I-44 (Exit 5)	6.6	12.7	9.8
I-44 EB from I-270 (Exit 276) to Kingshighway (Exit 287)	10.5	13.6	12.9
I-44 WB from I-270 (Exit 276) to Kingshighway (Exit 287)	10.5	12.0	12.2
I-64 EB from Rte 141 (Exit 22) to I-270 (Exit 25)	3.3	3.5	3.5
I-64 WB from Rte 141 (Exit 22) to I-270 (Exit 25)	3.3	2.9	3.0

Arterials

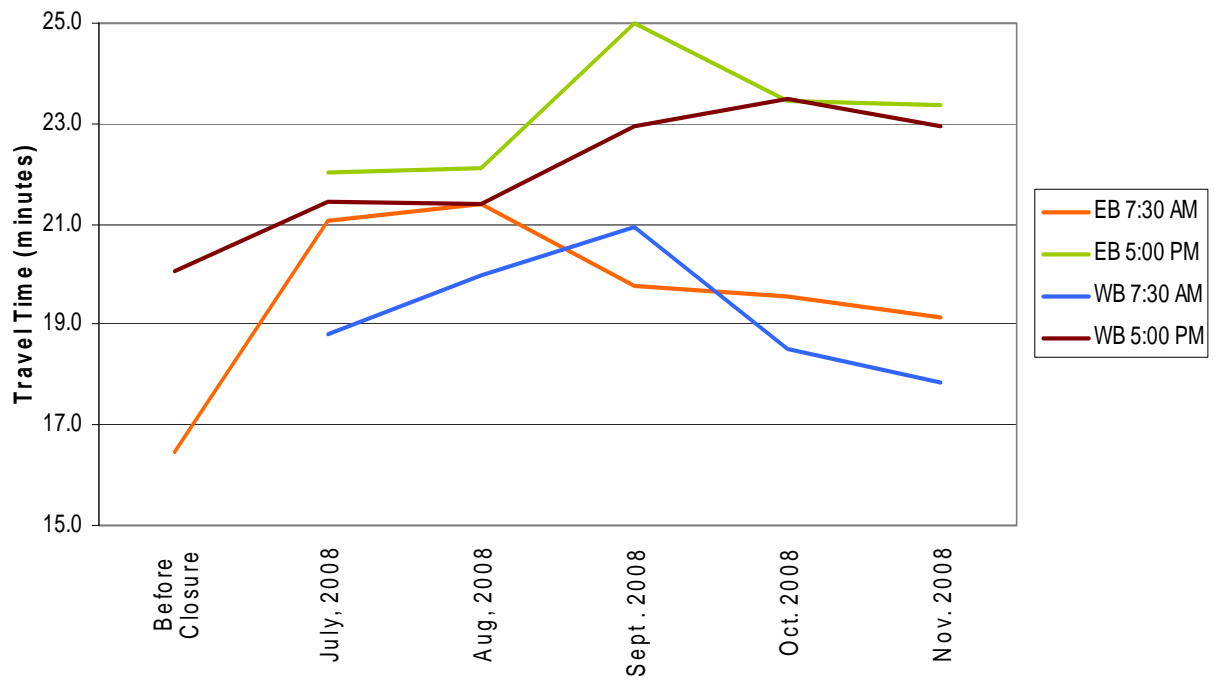
Information for four of the major arterial routes (available since July '08) is being supplied via Traffic.com and has been monitored by the research team as general indicators for arterial traffic flow near the closure area. These charts and graphs below include the times selected for comparing the before and after closure travel times. The research team has verified these travel times in the field. Once more data has been collected; a more robust analysis will be completed.

Route	Segment	Direction	Peak Period	Travel Time (Min)					
				Before Closure	July, 2008	Aug, 2008	Sept 2008	Oct. 2008	Nov. 2008
US 61/67	100 to I-64	NB	7:00 AM	5.3	5.8	5.8	5.2	5.1	5.2
			5:00 PM	3.6	5.0	5.0	6.5	5.0	5.0
		SB	7:30 AM	3.7	7.2	7.2	6.8	6.8	6.8
			5:00 PM	6.1	7.5	7.6	8.8	7.9	7.8
100	Barrett to Hanley	EB	7:30 AM	16.5	21.1	21.4	19.8	19.6	19.2
			5:00 PM	--	22.0	22.1	25.0	23.4	23.4
		WB	7:30 AM	--	18.8	20.0	21.0	18.5	17.9
			5:00 PM	20.1	21.4	21.4	23.0	23.5	23.0
MO141	I-44 to I-64	NB	7:00 AM	11.7	12.6	14.2	15.0	12.7	13.0
			5:00 PM	--	12.8	12.9	13.0	12.9	13.5
		SB	7:00 AM	--	11.1	11.5	12.7	11.6	10.3
			5:00 PM	14.0	11.7	12.4	14.8	13.2	13.1
D (Page)	I-270 to I-170	EB	7:30 AM	9.8	9.1	10.1	7.6	8.2	8.1
			5:00 PM	--	8.7	10.1	9.3	8.9	9.3
		WB	7:30 AM	--	11.3	11.7	8.6	7.6	7.9
			5:00 PM	10.6	11.2	11.6	8.5	8.7	8.4

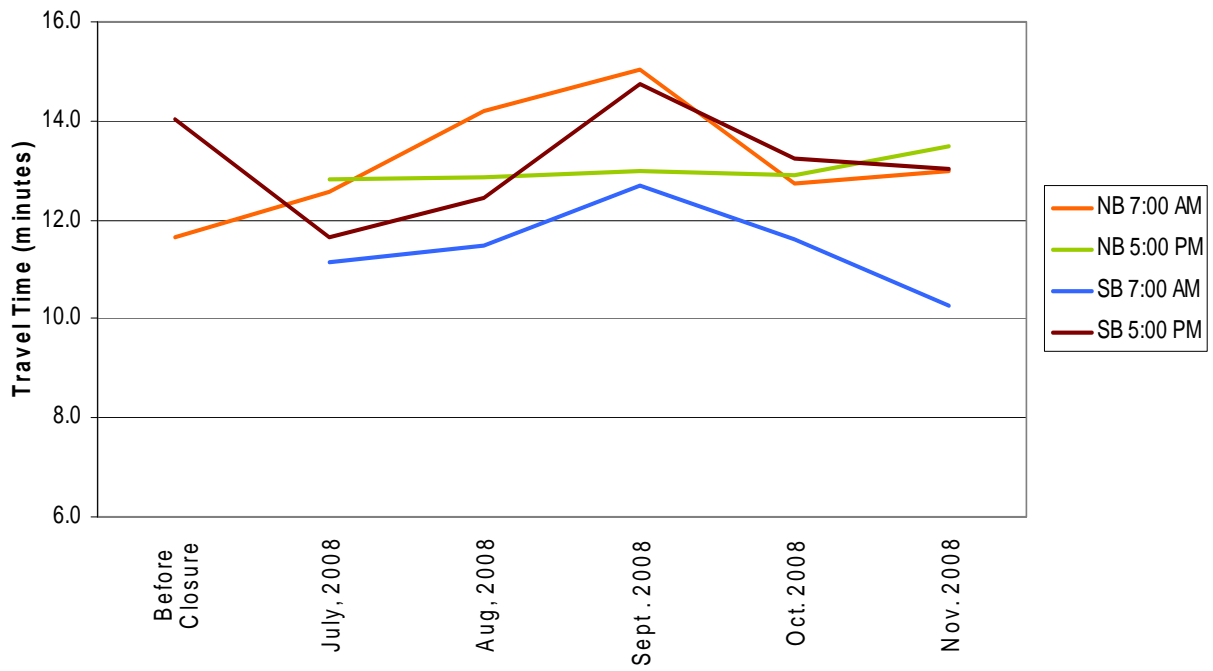
Routes US61/67 - Route 100 to I-64



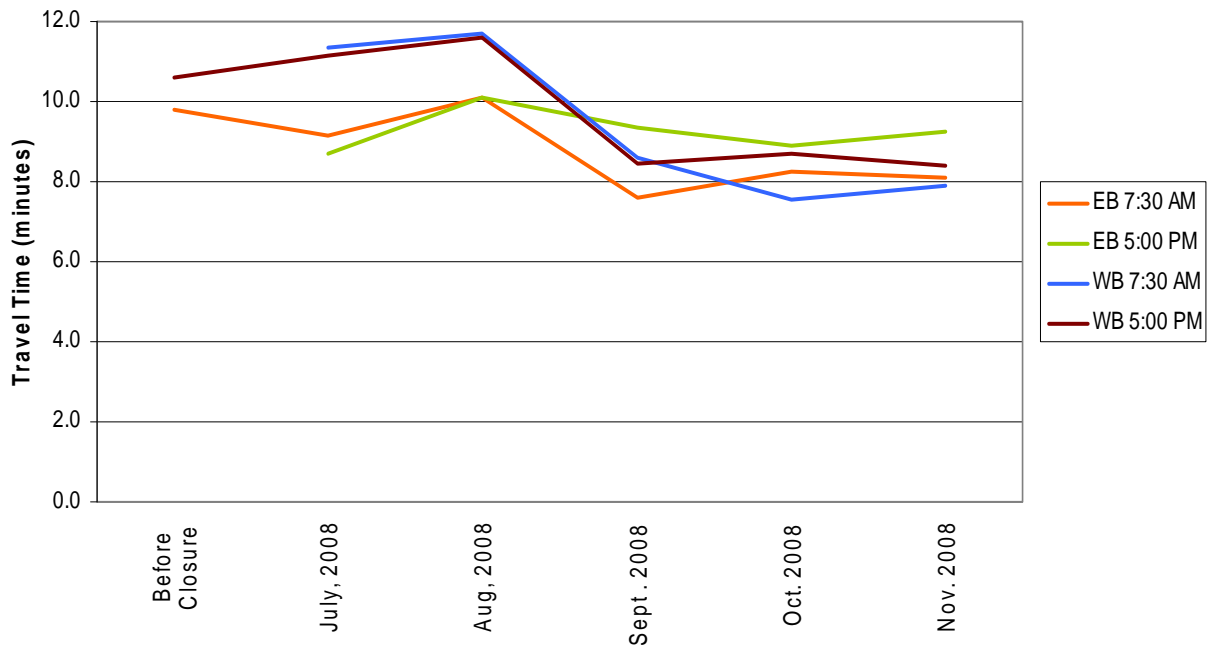
Route 100 - Barrett to Hanley



Route 141 - I-44 to I-64



Route D (Page) - I-270 to I-170



Park-and-Ride

The table below summarizes pre-closure construction and closure construction quarterly parking counts at MoDOT's Park-and-Ride lots in St. Louis region (Missouri four county metro area). Users at regional park-and-ride lots have decrease in this quarter, but remains higher than pre-closure construction. This information might help provide an indicator on how the gas price fluctuation has impacted the region over the past year or so with gas prices down significantly.

MoDOT Park-and-Ride Volumes

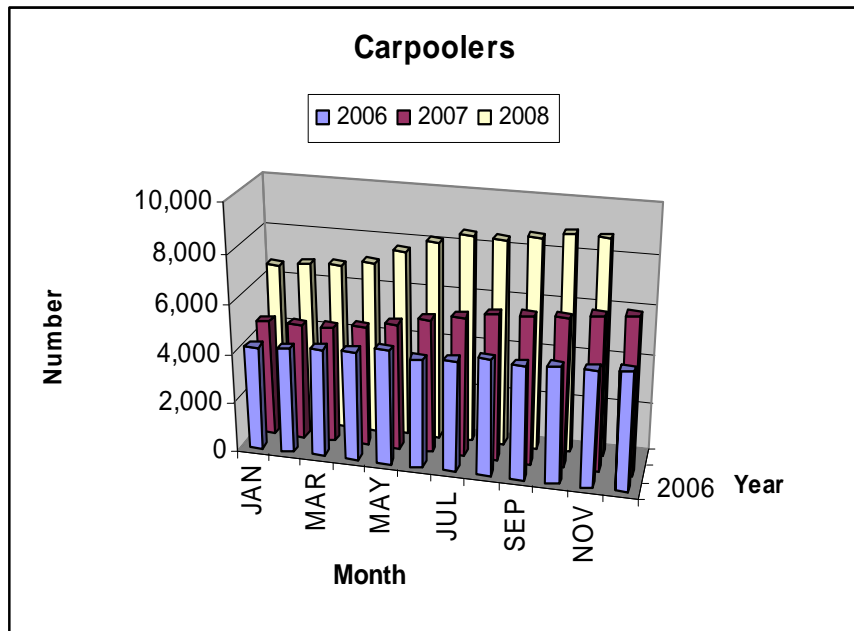
County	Lots	Total spaces	Vehicles Parked in Lot							
			Feb07	May07	Aug07	Nov07	Feb08	May08	Aug08	Nov 08
Franklin	6	413	295	205	189	175	168	167	202	193
Jefferson	11	962	321	337	379	386	367	430	448	435
St. Charles	12	1110	427	403	283	315	301	415	566	455
St. Louis	6	792	519	540	582	451	493	579	697	573
Total	35	3277	1562	1485	1433	1327	1329	1591	1913	1656

Transit

We continue to work with Metro St. Louis in determining an approach to analyze the impacts experience by the transit provider during the closure and construction along I-64. The annual report will provide a more detail assessment of transit, both bus and light rail.

Rideshare

RideFinders, sponsored by Madison County Transit, is the St. Louis regional rideshare program. The graph at right shows historical ridership for RideFinders, and indicates a general upward trend since 2006. The ridership has somewhat level out over the last 2 months to around 8800 carpools. This fact is also true with vanpoolers that are around 980 vanpoolers. This fact may also provide some indication of the regional impact experience with the reduction gas prices.



The research team is working with RideFinders to obtain more details to help correlate rideshare activities with I-64 closure statistics.

4. Economics

Economics Highlights

Major Components of Economic Analysis

Analysis of pre-closure, western closure, and current conditions, transitioning to the eastern closure

Determine the effectiveness of the reconstruction and traffic management strategies on the local economy

Identify the strategies that are the most appropriate for near-term and long-term

The primary highlight for this quarter is collection, analysis, and tracking of economic data and financial indicators since the western closure of I-64. To date, MERIC has provided HDR with economic data from the first quarter 2006 through the second quarter of 2008. In addition residential and commercial real estate data has been collected for the St. Louis metro area. Lastly, taxable sales data has been compiled up to and including the third-quarter of 2008. Given the time lag in available economic data indicators, this quarterly report will only focus on the currently available and

collected data up to the third quarter of 2008.

Economic Analysis Progress

Current activities to date include:

- Collection of the identified published economic, demographic, and fiscal data.
- Analysis of real estate data for the St. Louis metro and comparison to other metro areas
- Received ZIP-code-level data from MERIC for the first and second quarters of 2008. The economic data includes: industry employment, wage, and establishment data tabulations.
- Analysis of Third Quarter 2008 Taxable Sales Data from Missouri Department of Revenue (DOR)
- Finalizing, distributing, and publicizing the fall 2008 business survey

Real Estate

The office vacancy rates in the St. Louis metropolitan area have increased since the second quarter of 2007 to 14.57% and average office lease rates have fallen to \$18.39 per square foot. St. Louis ranks 25th in terms of its office vacancy rate compared to the major metropolitan areas in the US¹. As for residential housing, the number of building permits for single-family housing in the St. Louis metro has fallen, consistent with national trends, while multifamily housing permits have declined by 60% since the same period in 2007 is significant higher than the national trends.

Table 1 Housing Building Permits, in thousands²

	SINGLE-FAMILY			MULTIFAMILY		
	YTD Jul-08	YTD Jul-07	YTD PCT CHG	YTD Jul-08	YTD Jul-07	YTD PCT CHG
UNITED STATES	387.4	651.9	-41%	216.9	238.5	-9%
St. Louis Metro	3.19	5.42	-41%	0.63	1.57	-60%

¹ CB Richard Ellis

² National Association of Homebuilders

Economic Analysis

Figure 1 displays an employment index for the I-64 corridor and non-corridor regions of St. Louis city and county. The graph depicts positive growth from first quarter of 2007 through the fourth quarter of 2007. Employment growth declines in the first quarter of 2008, for the corridor and fell below the first quarter 2007 employment level for the non-corridor region. These trends are consistent with taxable sales as discussed below with a slight recovery in second quarter 2008. Not surprisingly, taxable sales fluctuate to a greater degree than employment, which experiences less volatile seasonal variation.

Figure 1 Employment Index by Region

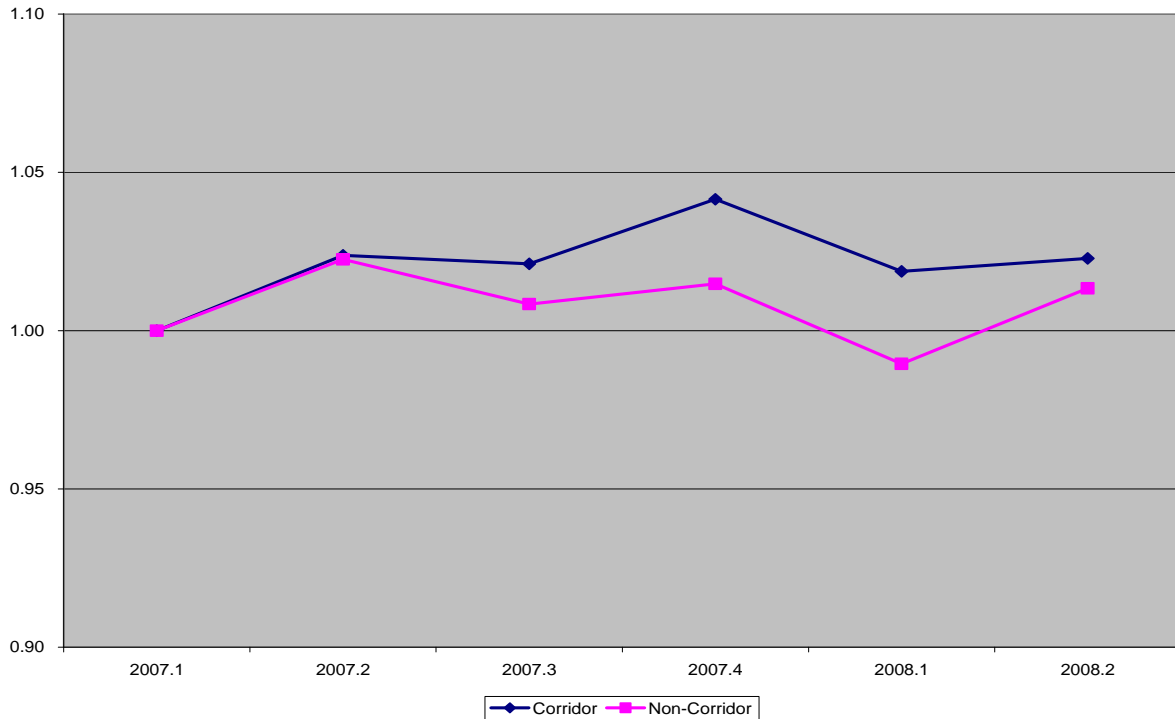


Table 2 below shows the major economic indicators for the corridor and non-corridor regions for the first two quarters of 2008. Table 2 shows that there is a modest recovery in terms of employment and total taxable sales for both regions. Despite the slight recovery in jobs and taxable sales in second quarter, there is a decline in both the number of establishments and total wages.

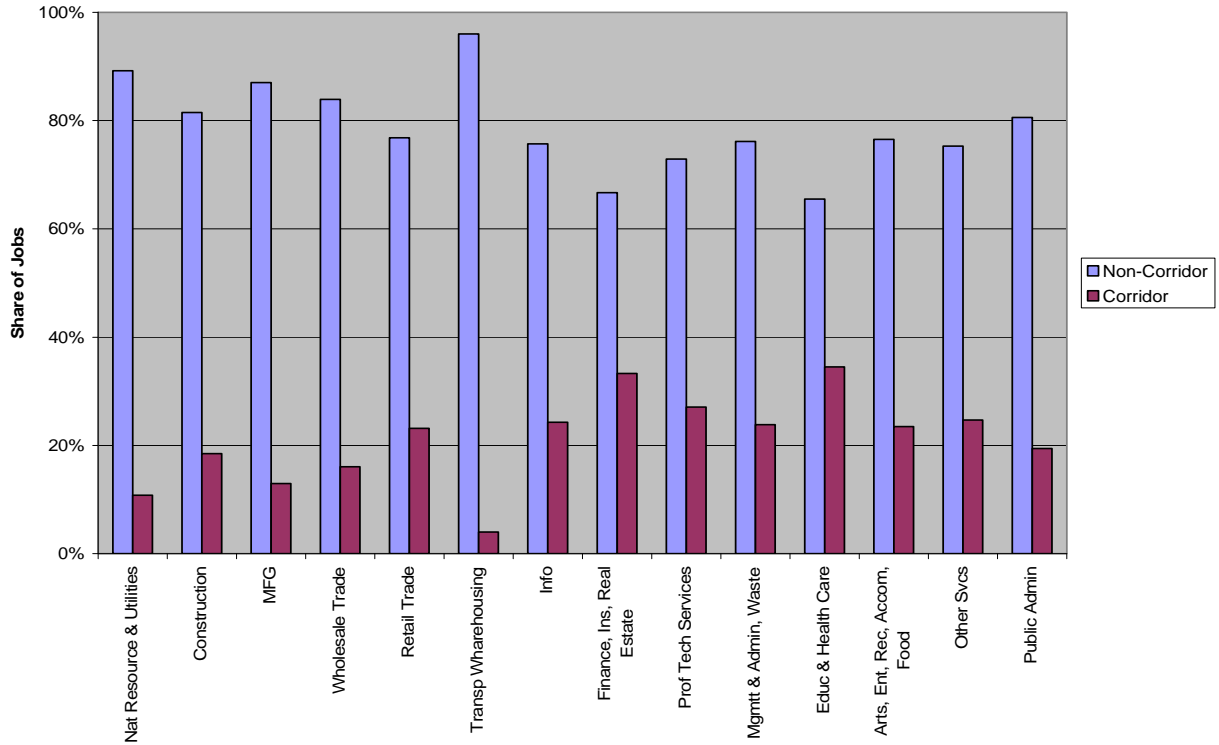
Table 2 St. Louis I-64 Corridor and Non-Corridor Economic Profile

	1st Quarter 2008		2nd Quarter 2008		3rd Quarter 2008	
	Corridor	Non-Corridor	Corridor	Non-Corridor	Corridor	Non-Corridor
Jobs	200,772	616,400	201,577	631,271	N/A	N/A
Number of Establishments	9,232	31,155	9,197	31,131	N/A	N/A
Wages (\$ Millions)	\$ 2,705	\$ 7,413	\$ 2,555	\$ 7,193	N/A	N/A
Total Taxable Sales (\$ Millions)	\$ 833	\$ 3,977	\$ 914	\$ 4,226	\$ 888	\$ 4,096

Source: MERIC and Missouri Department of Revenue

Figure 2 shows the share of employment by industry for each region in second quarter 2008, where the corridor region has a significant share of jobs in education and health care, finance, insurance and real estate, and professional technical services.

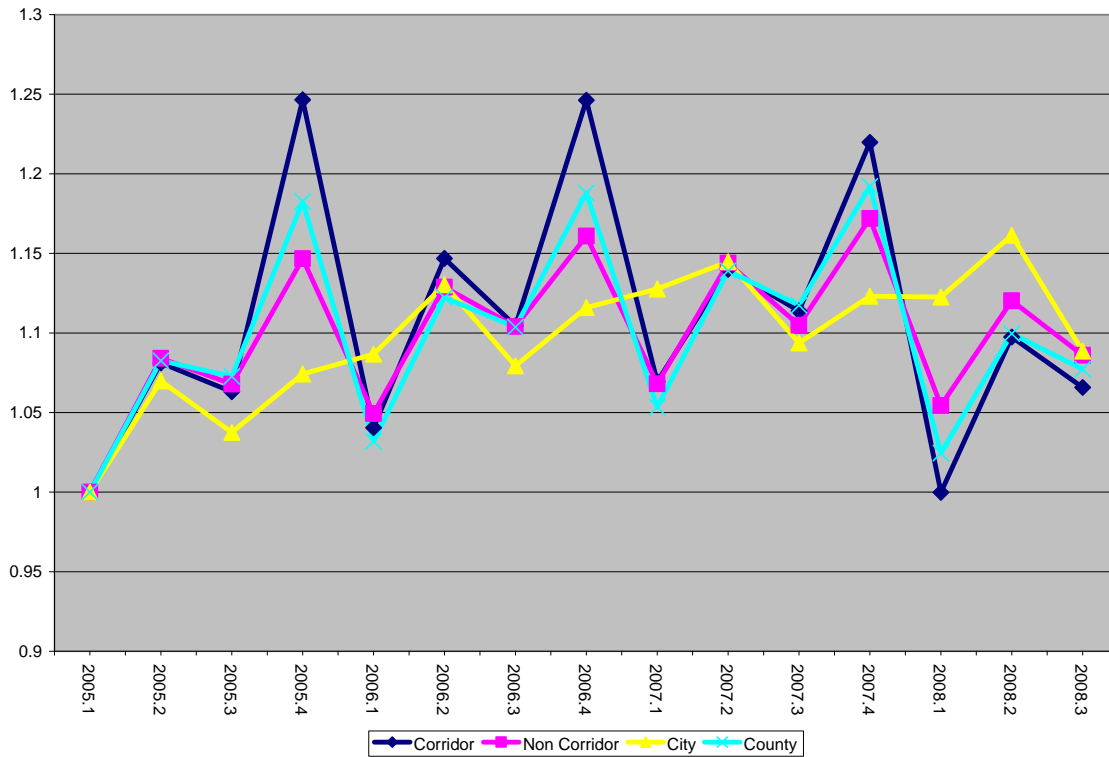
Figure 2 Employment by Industry Share: Corridor and Non-corridor Regions for Second Quarter 2008



Taxable Sales

The graph (Figure 3) below is an index of quarterly taxable sales for: 1) St. Louis County; 2) City of St. Louis; 3) I-64 Corridor region; and 4) Non-corridor areas of the City and County. Taxable sales declined for the first quarter of 2008 for all four geographic areas, but experienced a modest recovery in the second quarter of 2008. As shown in Figure 3, St. Louis City's taxable sales grew steadily from 2005 until the fourth quarter of 2007, with almost no change, or flat growth, between fourth quarter 2007 and first quarter 2008. The trend line for St. Louis County's taxable sales shows it is far more susceptible to seasonal trends, as taxable sales peak during the fourth quarter of each year.

Figure 3 Taxable Sales Index by Region



Comparing the I-64 corridor and non-corridor region, the corridor is more susceptible to seasonal spikes, especially the transition from fourth quarter to first quarter of the following year. For 2008, the corridor region saw a steeper decline in taxable sales (than in previous years) from fourth quarter 2007, but rebounded during second quarter 2008. Table 3 below shows the year-on-year differences from the first and second quarters of 2007 and 2008 for each region. On a year-on-year basis the non-corridor region experiences a significant decline in taxable sales for the second quarter (\$89 million). However, on a percentage-point basis the corridor is experiencing a more dramatic decline in sales, down 6.5% for the first quarter of 2008 and down 4.3% for the third quarter of 2008.

Table 3 Year-on-Year Difference Taxable Sales 2008 vs 2007, in millions of dollars

	2008 Vs 2007			Percentage Change		
	1st Quarter	2nd Quarter	3rd Quarter	1st Quarter	2nd Quarter	3rd Quarter
Corridor	\$ (58.01)	\$ (35.44)	\$ (39.95)	-6.5%	-3.7%	-4.3%
Non-corridor	\$ (51.24)	\$ (89.20)	\$ (71.54)	-1.3%	-2.1%	-1.7%

These results demonstrate that overall taxable sales are declining in the study area, and indicate that the corridor region is to some degree impacted by the western closure. However, as there are only three data points, which are subject to revision, it is difficult to completely attribute these impacts to I-64, especially considering the current national economic conditions.

Yet compared on an industry basis certain industries are showing modest growth in taxable sales while the rest are in decline. Comparing detailed taxable sales by industry, first quarter 2008 taxable sales for general merchandise retail stores dropped below their 2006 level in both St. Louis City and St. Louis County, indicating that consumers are purchasing less merchandise and possibly saving more. Similar trends were found in eating and drinking places (restaurants) which saw a steep decline in taxable sales between fourth quarter 2007 and first quarter 2008. Whereas purchases from food and grocery stores for the first and second quarter of 2008 are at their highest seasonal levels since 2005. These results indicate that as consumers are shifting their spending away from eating out at restaurants, and instead purchasing food at groceries stores.

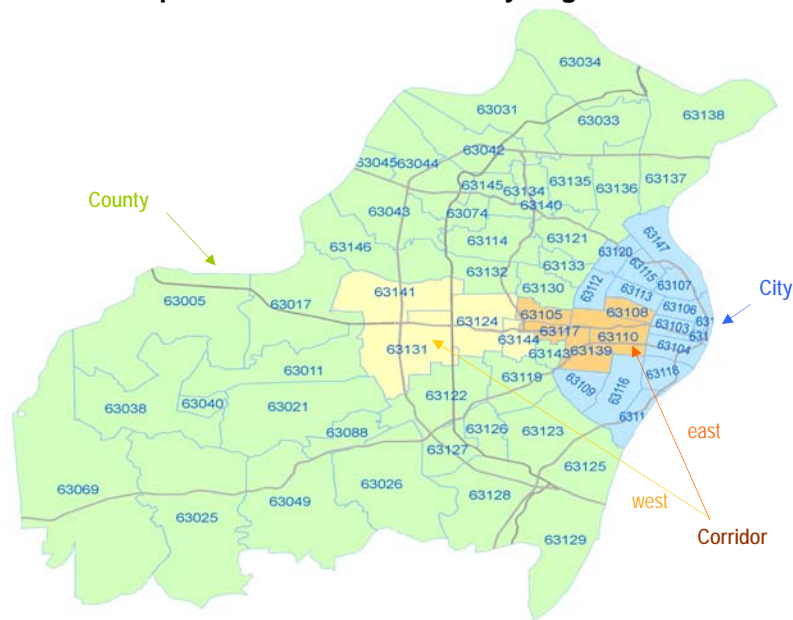
Conclusions and Future Steps

Thus far it is difficult to isolate the impacts of I-64 on the St. Louis economy from the larger national economic conditions. Additional economic and fiscal data will help assess the implications of the western closure and the up coming eastern closure. In addition, responses to the fall 2008 business survey will provide more ‘real time’ information on how businesses are impacted and reacting to the closures.

Future steps will include obtaining real estate data from Torto Wheaton Research (TWR). TWR real estate data was used in the original Preconditions Analysis of I-64 and will cover office occupancy, absorption rates, and residential occupancy on a quarterly basis. Lastly, the assessment of economic cost due to changes in traffic, travel delay, and vehicle miles traveled (VMT) due to the western closure of I-64 will begin.

The map below shows the 9 ZIP code areas impacted by I-64 closures (corridor) and the ZIP codes that makes up the remainder of St. Louis City and St. Louis County (non-corridor).

Zip Code Definitions for Study Regions



Response

I-64 Traffic Response Highlights

Major Goals – I-64 Traffic Response Assessment

- Assess benefit/cost of the current I-64 Traffic Response deployment (arterials)
- Assess value of continuing future arterial highway service patrol efforts
- Develop white paper that provides a sustainable approach to consideration of future arterial

The main highlight for this quarter was the collection of the I-64 Traffic Response surveys. These surveys are provided during each assist performed. This survey is providing information from motorists receiving these services, including information on location, response/wait time, services provided, the professionalism with which services were provided, and the user opinion on the value of the services. Additional questions on the I-64

project were also included to help gauge users' opinions on the I-64 project and to connect these services with the I-64 project. The survey form identifies the sponsors, and provides information on the regional traveler information systems (511 and Gateway Guide). 755 surveys have been completed and received during the first eleven months for the I-64 Traffic Response with 2616 from Motorist Assist. This source of survey input represents 55% of total information received on the I-64 study. In the next quarter, the study team plans to conduct interviews with staff involved with this operation and complete study evaluation the I-64 Traffic Response team.

I-64 Traffic Response Objectives and Methods

This assessment will utilize information collected from transportation users, I-64 Traffic Response staff, previous research/study efforts, and the mobility assessment of arterial corridors to establish the benefit/cost of the program. This information will then be used to forecast the future value of continuing regional arterial highway service patrol efforts. The assessment will explore the following potential expanded arterial highway service patrol alternatives:

- Expanded services only during major or roadway closure construction activities
- Continuous services along major regional arterial corridors
- Limited-response services along major arterial corridors by expanding the region's Motorist Assist Program and the utilization of the region's integrated management and operation system

A draft white paper will be delivered by January 19, 2009 with the final white paper delivered by February 1, 2009 that will outline a sustainable approach to regional arterial highway patrol services. This deliverable will provide the region the time necessary to evaluate, determine potential funding sources and implement desired recommendations.

I-64 Traffic Response Results

MoDOT performs service patrol activities where operators travel busy highways and provide assistance at incident sites for stranded motorists and crashes. By quickly helping to resolve problems, this program increases the safety and mobility of all motorists in the area. MoDOT's Motorist Assist program concentrates on the interstates, and I-64 Traffic Response sponsored by St. Louis County covers major arterial roads such as Manchester Road and Olive Boulevard. Starting on January 2, 2008 – the day of the closure – these programs' operators began distributing surveys to those they assisted to obtain feedback about operator performance, and as another method to learn how the closure is impacting motorists.

Responses indicate that motorists are very satisfied with operator performance, and their responses related to the closure are higher than experienced in the web surveys, mail surveys and interviews. The table below summarizes some of these satisfaction measures. While limited two questions, they reflect important questions on the I-64 closure on the project delivery method and regional mobility impacts. The distribution and receipt of surveys will continue throughout the study period, with quarterly updates being made.

Percent Respondents Expressing Satisfied or Very Satisfied
 Motorist Assist (MA) and I-64 Traffic Response (TR) Surveys

Ability to move around St. Louis area Decision to close for 2 years vs. 6 to 8 years

	1 st	2 nd	3 rd	4 th	1 st	2 nd	3 rd	4 th
MA	89%	91%	88%	90%	89%	94%	94%	94%
I-64 TR	90%	93%	93%	95%	89%	95%	93%	96%

Appendix A: Communications Data
 – Zoo Interview Report Data

Appendix B: Mobility Data

Appendix C: Economic Data

Appendix D: Traffic Response Data