

The New I-64 Economic and Regional Mobility Study

Quarterly Report # 2

March – May 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.

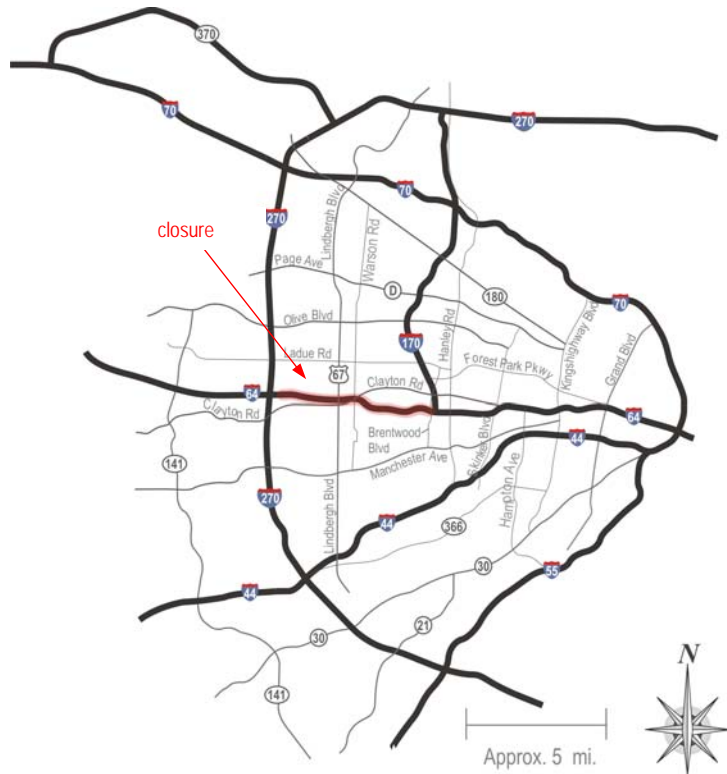
	Has not changed or is shorter	Went from 10 to 15 minutes	Went from 15 to 20 minutes	Went from 20 to 30 minutes	Went from 30 to 45 minutes	Went from 45 to 60 minutes	More than 60 minutes
Education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Workplaces of work or school	<input type="checkbox"/>	<input type="checkbox"/>	<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"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shopping, recreation, and entertainment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Traveling throughout the Louisville Region	<input type="checkbox"/>	<input type="checkbox"/>	<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 end of 2008, at which time a section to the east will be closed for construction for the bulk of 2009. Construction is proceeding well in the west closure section.

This quarterly report assesses the period March through May 2008 that includes the 3rd, 4th and 5th 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 five months old, findings are beginning to emerge that will be of interest to MoDOT and the general public. To date, the research team has found:



Communications (pp. 2-10)	Mobility (pp. 11-21)	Economics (pp. 22-24)
<p>Over 2,950 members of the public have given feedback through web surveys, mail surveys, personal interviews, and surveys administered by Motorist Assist.</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 nearly 3/4 indicating their travel frequency has changed for certain trips and earlier morning commute times.</p> <p>People’s reported travel times are lengthening (travel times greater than 15 minutes was approximately 29%), although many trip times are relatively unchanged.</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.</p> <p>The RideFinders rideshare program experienced a 37 percent jump in comparison to the last year and during the month of May, 500 new participants signed up. Gas prices have probably contributed to the demand for these services.</p> <p>Arterial traffic volumes generally have increased between 3 and 50 percent (see page 16) except Lindbergh Boulevard, where traffic patterns have changed because of the closure.</p>	<p>A draft major findings report was developed on the first regional business survey. 369 respondents provided information for inclusion to this report.</p> <p>MERIC supplied special ZIP-code-level data for the first quarter of 2006 and all four quarters of 2007. This information along with the previous completed economic study for serve as baseline data.</p> <p>Specific transportation-dependent local firms and organizations were identified for detailed follow-up interviews. These firms include catering, parcel shippers, utilities, hospitals, hotels and lodging, agricultural research and museums. To date, 12 firms and organizations have been interviewed.</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 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 large portion of the general population does not obtain their information via the internet and other methods should continue to be used to reach them.
- **Alternative Routes.** I-44 was the most recommended alternative route. Two nearby parallel arterials, Ladue Road and Clayton Road, received more negative recommendations than positive (with Ladue receiving over 1.6 times as many negatives as positives).
- **Travel Time.** The majority of respondents are indicating that their travel time for basic trips has increased; although many have indicated no change or even an improvement in travel times.
- **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 and eating out. Overall, almost three quarters 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 (with the exception of some of the interview results as can be seen in the travel-time responses presented later). 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	1,040
Mail	700
In-person	100
Motorist Assist	
MoDOT	749
I-64 Traffic Response	362
TOTAL	2951

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

- A detailed online survey was developed; participants had the option to complete a brief, medium, or detailed survey. Surprisingly, 61 percent of the respondents were interested enough in sharing their opinion that they elected to complete the detailed survey. Links to the survey were placed 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 in the 3rd quarter (June 1, 2008), enhancements were made to the online survey instrument to gain additional information and insight on the I-64 project. A copy of the enhanced online survey is contained in Appendix A.
- 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. This survey will be administered again early in 2009 and 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). These interviews were conducted late in the 1st quarter and are summarized in this report, with the final summary report contained in 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 second quarter period, 650 - Motorist Assist and 324 - I-64 Traffic Response were received. This significant increase in survey information received is a direct result of operators’ encouragement to those they serve to complete the survey, to help strengthen both programs with public input received.

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. The entire five months of online survey data is included in this report to give a more complete picture of perceptions regarding the roadway closure to-date for readers of this report.

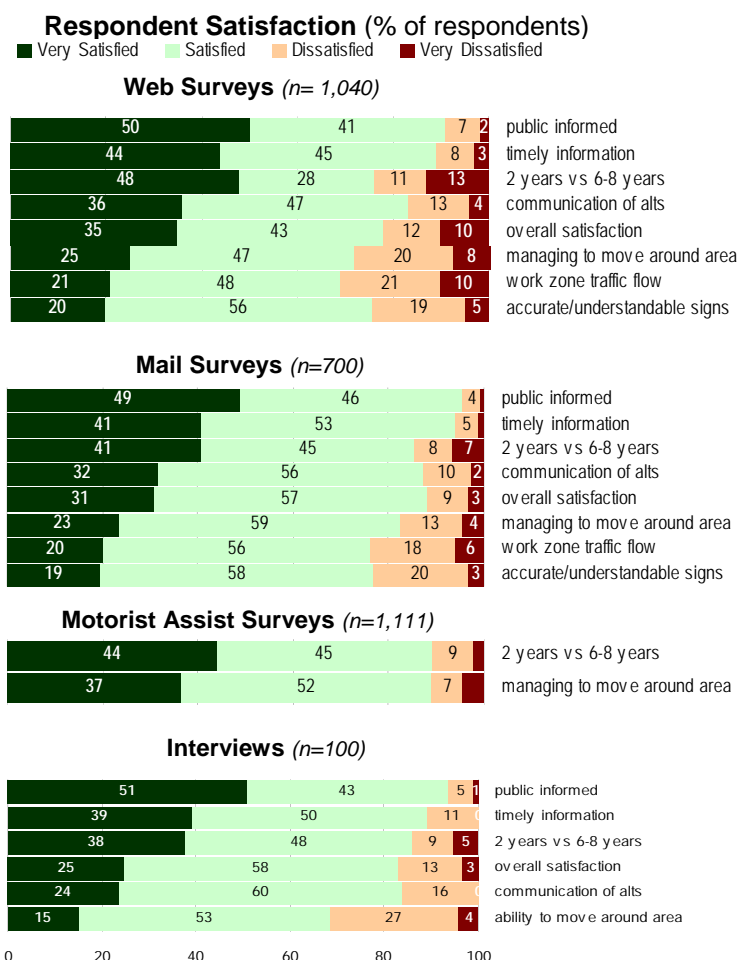
Usage of I-64 before Closure (Web Only)		Knowledge of Closure (Web Only)	
Almost every day	32%	Aware of closure before survey:	98 %
Very rarely	20%	Learned about closure:	
Two to three times a week	16%	Before Dec '07	94 %
Once a week	15%	Dec '07	4 %
Most weekdays	14%	Jan '08	2 %
Never	3%		

Satisfaction

The charts at right summarize survey respondents' opinions in the area of satisfaction. As the graphs indicate, 69 to 95 percent of the respondents expressed satisfaction in response to each question in each forum, and responses were fairly consistent across the different survey types.

Satisfaction was highest with "how well the public has been kept informed" (91 to 95 percent) and "the timeliness of information" (89 to 94 percent). The least amount of satisfaction was expressed for "how traffic is flowing in work zones" (69 to 76 percent) and "accuracy and understandability of construction zone signs" (76 to 77 percent).

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.



Note: written and verbal responses to the surveys are still being processed, but one notable item is that respondents have expressed satisfaction regarding the regional collaboration on signal timing that has facilitated arterial flow during construction; the public has also expressed a desire to see these timing improvements continued after the project is complete.

Personal Impact of the Closure

As the graphs at right indicate, respondents much more often modified their frequency of travel to certain areas than the location of their basic trip destinations. The most affected destination types were shopping (29 to 39 percent) and eating out (21 to 37 percent).

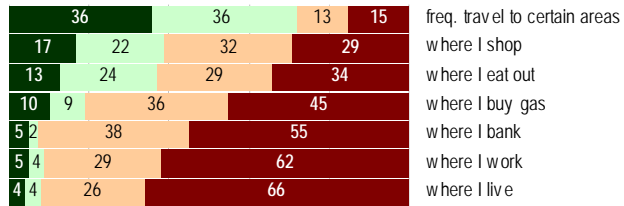
Most respondents indicated that they have continued to work the same hours in the same locations since the closure. The online respondents, including residents more distant from the closure than the mailed survey, were much more likely to have shifted hours in response to the closure compared to those who completed the mailed survey.

The web survey revealed a stated shift to earlier morning commute/travel hours (192 before to 277 after), but no significant shift in the evening hours. It should be noted that anecdotal information, and other observations, indicate that this shift was high initially, but has lessened over time as conditions have begun to stabilize. The high number of web survey responses in the early weeks of the closure may therefore skew this data; future reports will further examine time trends to explore this effect.

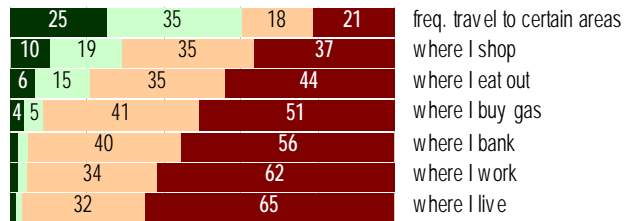
The Closure Has Changed... (% of respondents)

Strongly Agree Agree Disagree Strongly Disagree

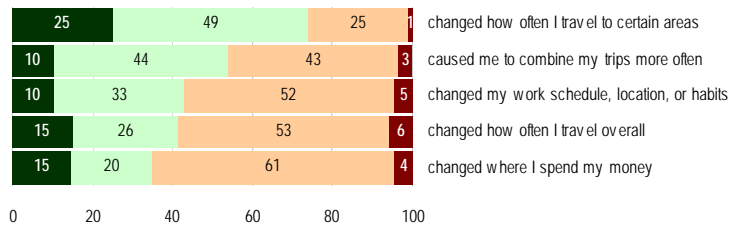
Web Surveys (n= 1,040)



Interviews (n=100)



Mail Surveys (n=700)



Spatial/Temporal Effect on Job

	Mail	Web
Same hours, same location	87 %	69 %
Shifted hours	8 %	22 %
Shift location more often	4 %	6 %
Quit job	1 %	3 %

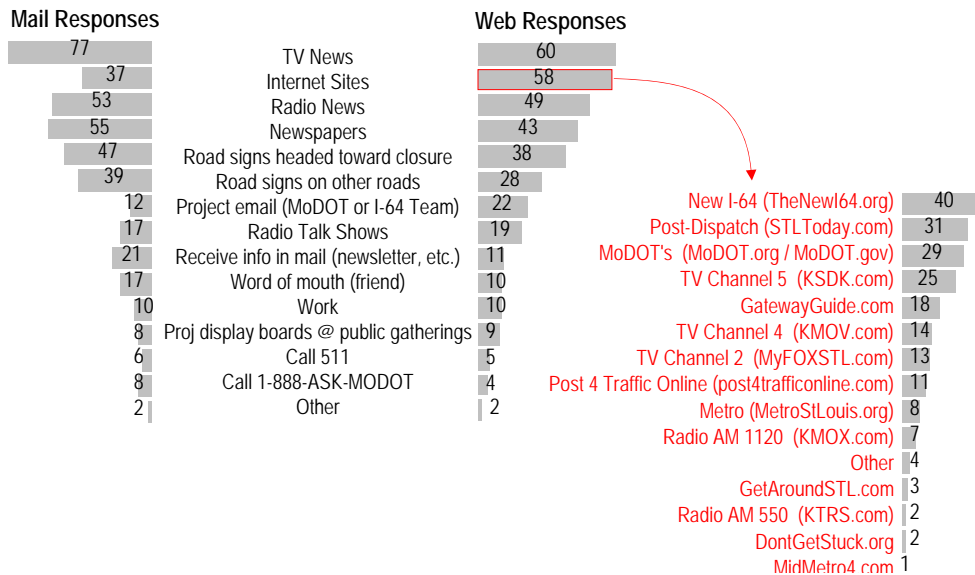
Commute or Other Travel Period Demonstrates Shift

	Web only	
	before	after
before 7 am	192	277
7 - 9 am	419	334
9 am - 3 pm	93	103
3 - 6 pm	370	376
after 6 pm	125	145

Information Sources and Communication Methods

TV News was considered to be the best method for MoDOT to distribute information to the public by the respondents of both the online and physical surveys. As expected, there was much variance in the perceived effectiveness of internet communications between the two survey types. Online respondents, who had to have access to the internet to even complete the survey, thought the internet was the second best way for MoDOT to provide information to them. However, those who returned the physical surveys were not as likely to use the internet to obtain their information (only 37 percent of these respondents thought the internet was a good way for MoDOT to provide them with information). Radio news and newspapers were also considered very good methods of communication, followed by road signs.

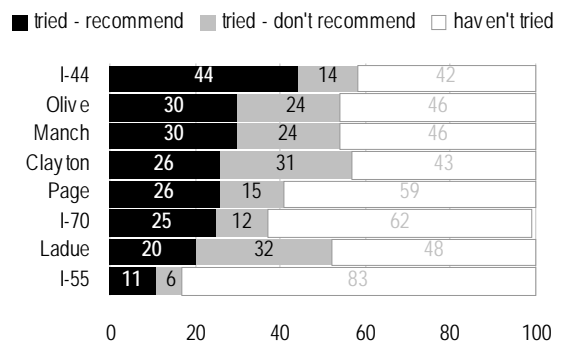
Best Way for MoDOT to Distribute Information (% responses; multiple choices allowed)



Alternative Routes

Respondents were also asked to provide input about eight alternative routes. I-44 was the most recommended route, with 44 percent of the respondents recommending it (just over three-fourths of those who had tried the route). Clayton Road and Ladue Road were the least recommended routes, in the sense that more respondents recommended against their usage than for them.

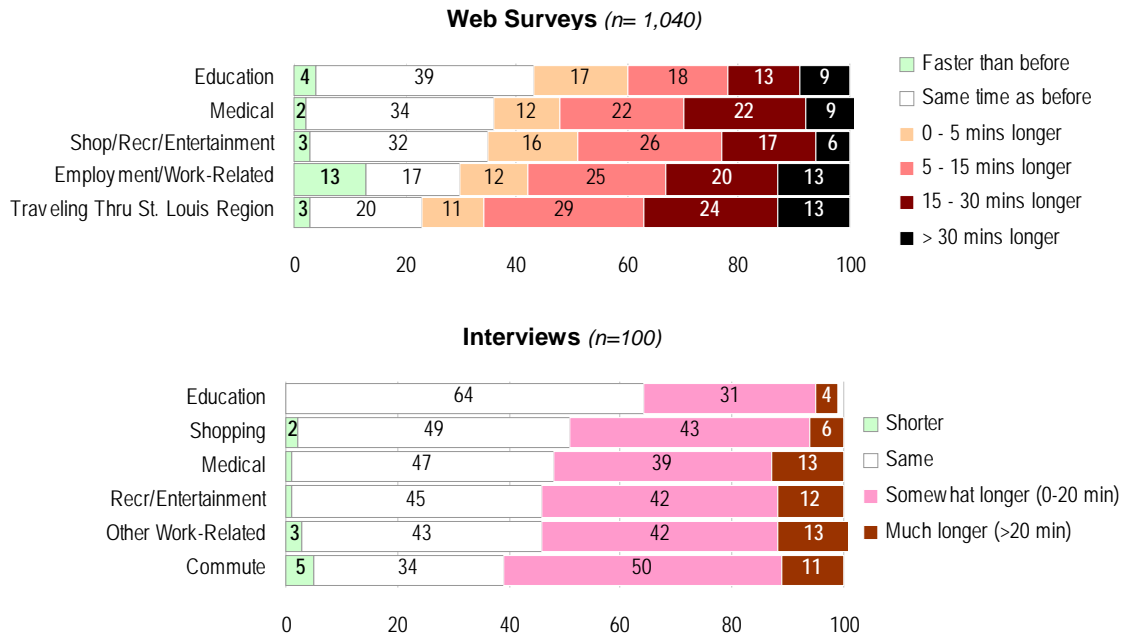
Alternate Routes (% responses)



Travel Time

As indicated by the graph below, the majority of Web survey respondents (57 to 77 percent) and Interview survey respondents (36 to 61 percent) indicated that various trips had gotten longer since the closure. A total of 9 to 13 percent of respondents (web survey) stated that their trips had increased by 30 minutes or more, and 4 to 13 percent of respondents (interviews) stated that their trip had increased by 20 minutes or more. Notably, when asked specifically about work trips, 13 percent of web respondents (and 8 percent of interviewees) indicated that their work trips were actually faster than before.

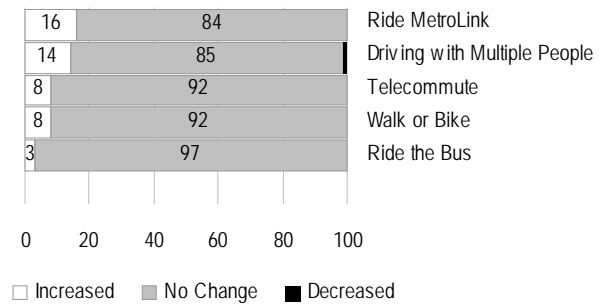
Travel Time Difference by Purpose (% responses)



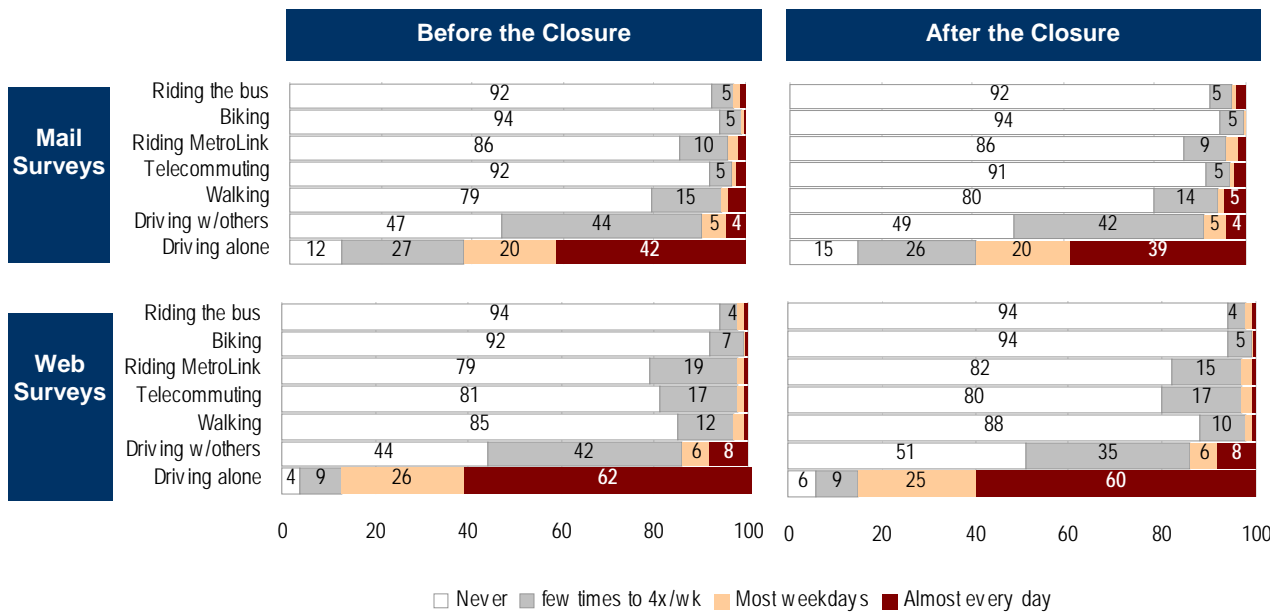
Travel Modes

To date, the surveys have revealed only slight changes in reported travel mode since the closure, as illustrated below and at right. Single-occupant driving has apparently slightly decreased by 2 to 3 percent, and carpooling also appears to have decreased. For other modes, the fluctuations are not stark, but there appears to have been some increase in each. Further study of these results, in comparison with mobility results, may shed additional light on commute options. The interview survey travel mode question was more direct in nature regarding travel mode shift; however, the sample size of 100 respondents and sample location near the closure may require correlating this information with future interviews along the corridor. Also, the increased carpooling shown in the figures below appears to correlate to the increasing matches reported by RideFinders.

Change in Travel Mode
(% of respondents, interview)



Travel Mode (% of respondents, mail and Web)



Demographics

The table below summarizes the responses to demographic questions from the respective surveys. One of the purposes of supplementing the Web survey with a mail survey was to reach populations without internet access, in order to ensure the research considered the input of as many groups as possible – a representative sample. By targeting the mail survey at many of the zip codes near the closure, the research team succeeded in its objective of reaching a more diverse population, especially in reaching more minorities and more females.

Demographics of Survey Respondents

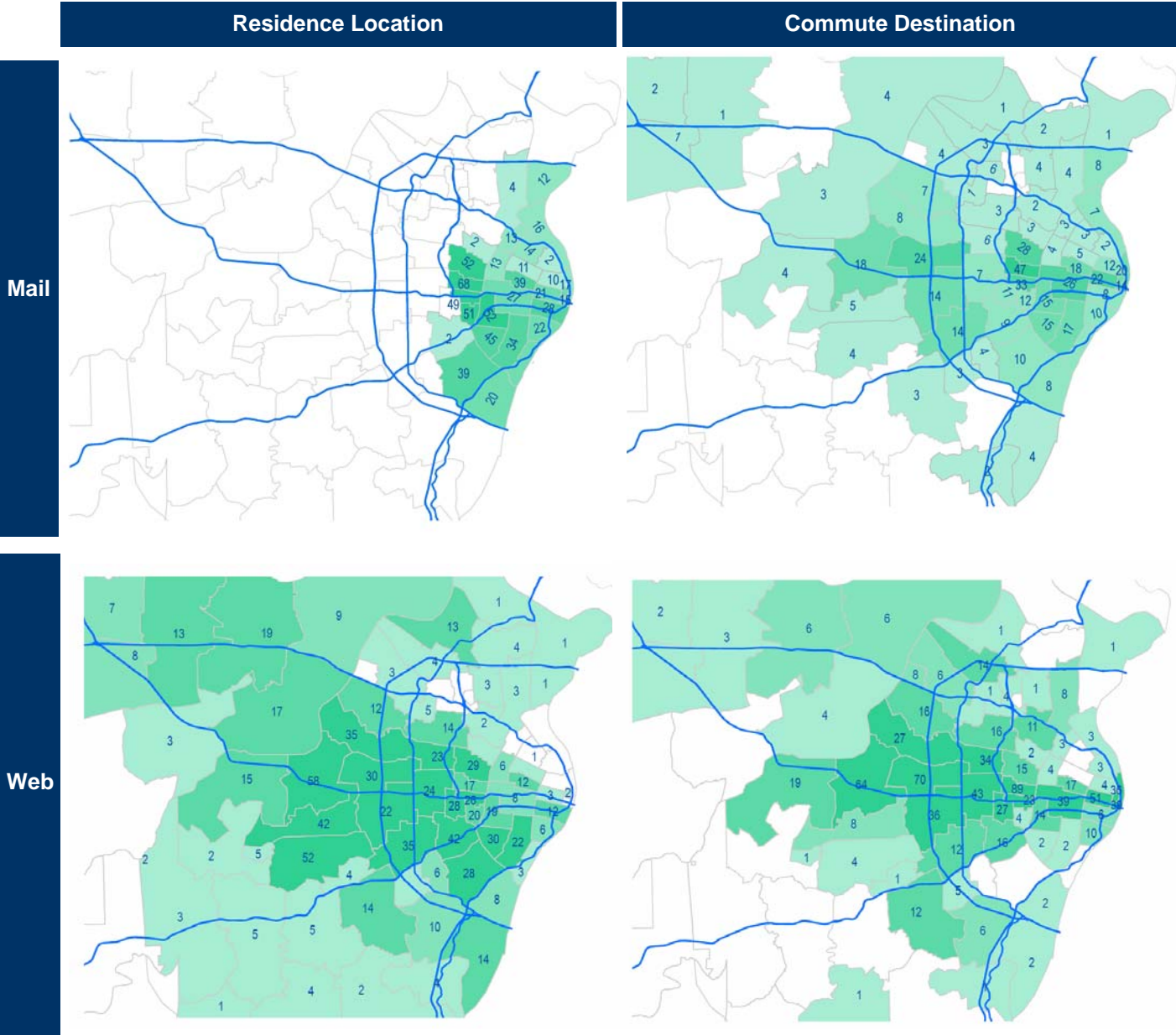
Age				Gender			
	Mail	Web	Interview		Mail	Web	Interview
under 25	5 %	11 %	7%	Male	41 %	55 %	34%
26 to 40	20 %	37 %	41%	Female	59 %	45 %	66%
41 to 65	57 %	50 %	32%				
Over 65	19 %	2 %	20%	Income			
				Less than \$20,000	*	2 %	*
				\$20,000 to \$40,000	*	11 %	*
				\$40,001 to \$60,000	*	17 %	*
				\$60,001 to \$90,000	*	21 %	*
				\$90,001 to \$120,000	*	23 %	*
				\$120,001 to \$150,000	*	9 %	*
				\$150,001 to \$200,000	*	9 %	*
				More than \$200,000	*	8 %	*

Race			
	Mail	Web	Interview
American Indian	1 %	1 %	0%
Asian	1 %	2 %	1%
Black/African-American	15 %	2 %	12%
Hispanic/Latino	1 %	1 %	1%
White/Caucasian	79 %	92 %	86%
Other	2 %	2 %	0%

* Based on the sensitivity of question, it was not asked in these surveys

The maps on the following page illustrate the zip codes of survey respondents within Missouri (a small portion of the responses – around 2 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, Commute Destination (by zip code)



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 is on 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. More data will be available next quarter, when year-old archive data from some of these facilities first comes on-line.
- Initial analysis of Traffic.com travel-time data has not indicated a significant variation in peak-hour travel times on key freeways in the region; however, additional study is needed before any conclusions can be reached.
- Transit usage is up by 9 percent over a year ago; however, this trend is not far out of alignment with the growth of the past two years.
- The RideFinders Rideshare program continued to experience increasing growth rates, with a 37-percent jump in monthly rides in the year between April 2007 and April 2008; this increase, plus smaller but noteworthy increases over the past six months appears to have been in response to (and anticipation of) the I-64 closure.

Mobility Assessment Objectives and Methods

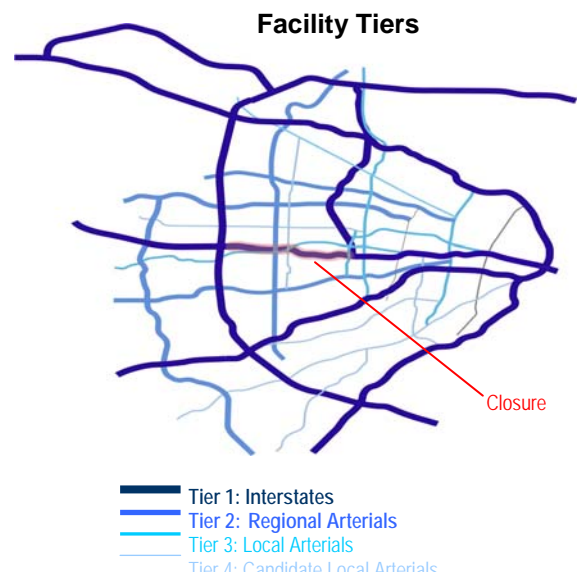
This assessment uses a variety of tools to measure the region's mobility before, during, and after the closure period. The assessment examines traveler shifts and their effects, using a

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. Finally, MoDOT has produced a series of e-mail updates (initially daily, now weekly) that provide area residents (and the study team) with important mobility information.
- Traffic.com is a commercial Web site that provides, for highways in metropolitan areas across the U.S., real-time traffic congestion, travel-time, and incident data. These data are based primarily on sensors placed throughout the area. Traffic.com archives traffic volume, travel speed, and incident data – in 1-minute intervals – 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.
- 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.
- 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.

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 in recent months.

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

Key Improvements to Regional Highways/Roadways

I-70 Restripe from I-170 to I-270 (add lane in each direction)

I-44 Restripe from I-270 to I-55/I-70 (add lane in each direction)

I-270/I-64 ~~Restripe interchange ramps to improve traffic flow~~ now returned to original configuration

I-270/I-44 Restripe interchange ramps to improve traffic flow

Clayton Road Restripe 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 Parkway

incorporated into future reports.

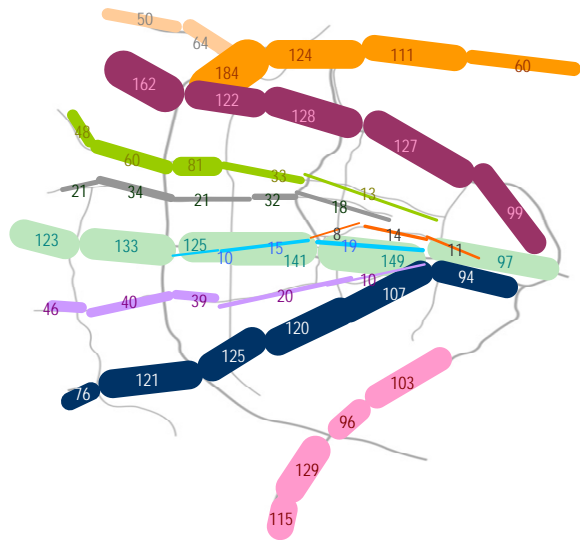
Traffic Volumes

Freeways

Prior to the closure, in baseline 2006, I-64 carried approximately 107,000 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 March-May 2008 volumes with the March-May 2007 volumes. (Weekend volumes are also being assessed.)

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

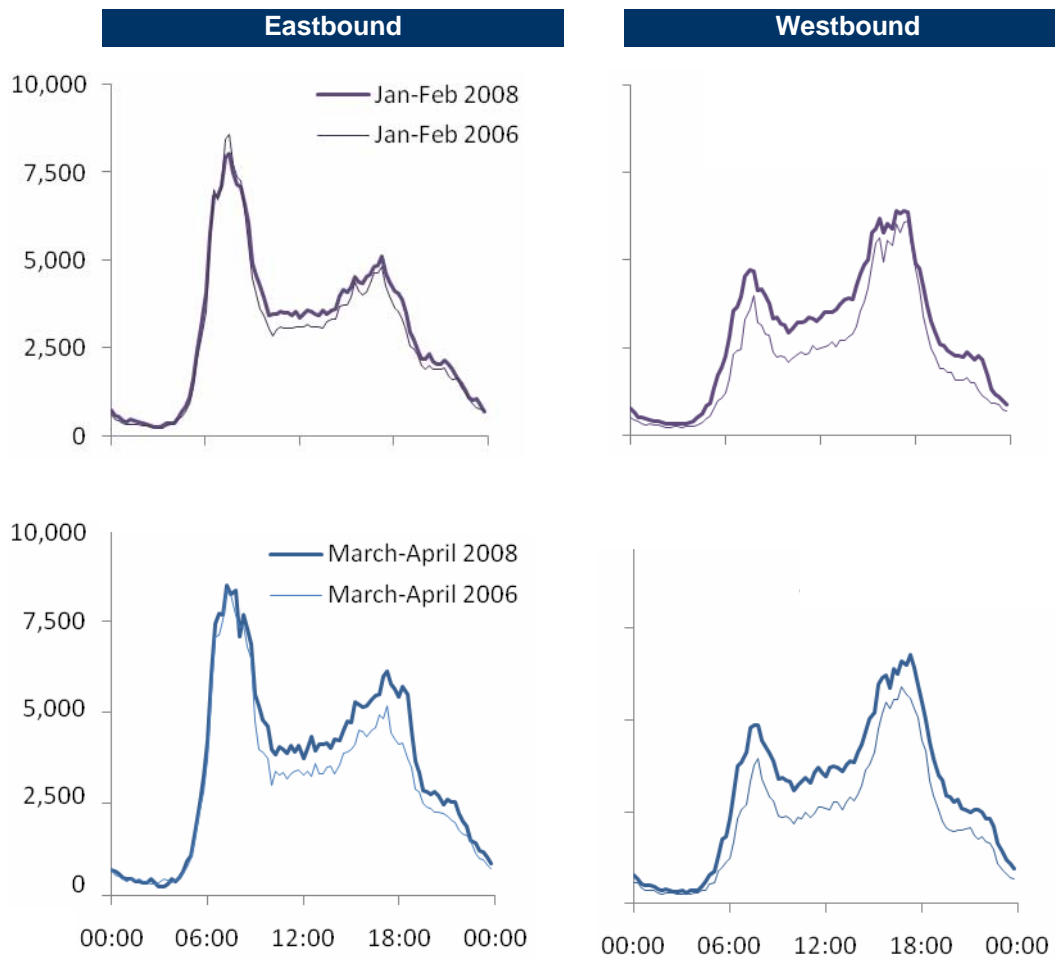
- Daily traffic volumes on I-64 immediately east of the closure have decreased by approximately 15,000 vpd.
- Daily volumes on I-44 and I-55 appear to be roughly equivalent to those before the closure.
- Volumes on I-170 between I-64 and I-270 have increased by approximately 12,000 to 16,000 vpd compared to the previous year.

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



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. Further analysis of this spread will be undertaken in subsequent reports.

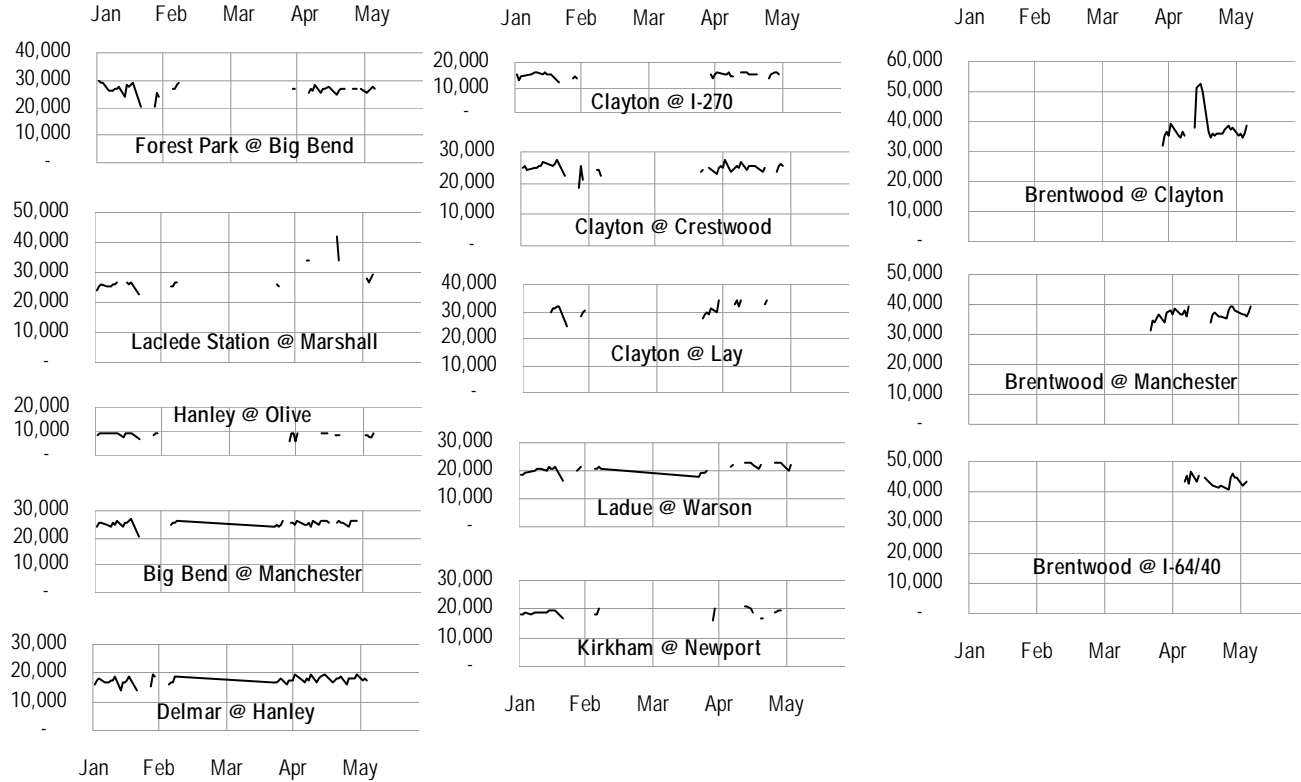
Example 15-Minute Traffic Volume Profiles I-44 at Elm Avenue



Arterials

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.

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 system tied into signalized intersections. 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. The table below summarizes the data. 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.

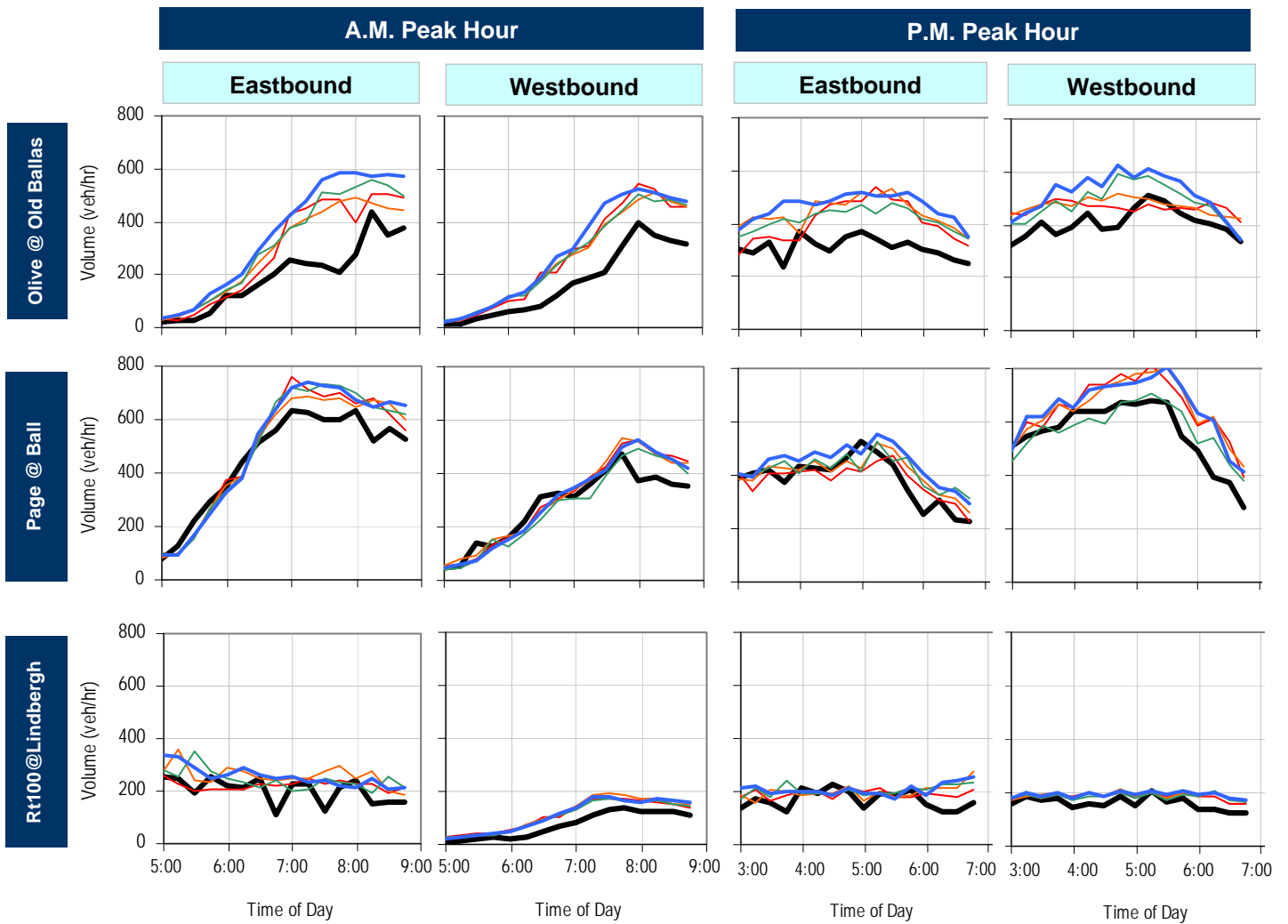
In spite of these limitations, the data reveals some anticipated patterns, such as volume increases on Page and Olive, which run parallel to the closure. Archiving and studying these data beyond the closure will help in understanding the closure's effects.

Summary of ACTRA Volume Reporting Since Closure, Key Arterials

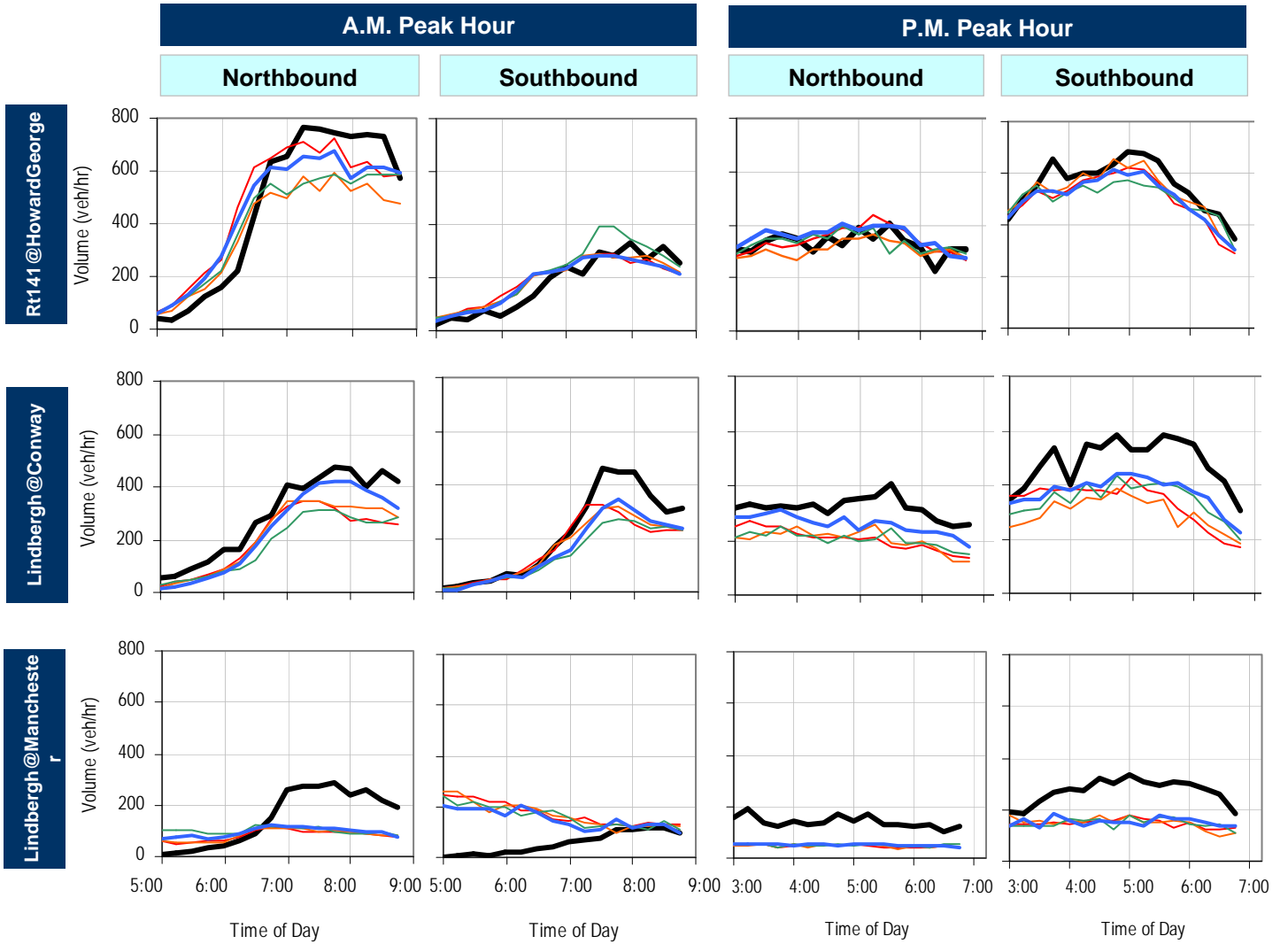
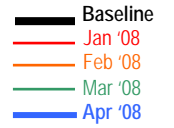
	A.M. Peak Period	P.M. Peak Period
Olive	Eastbound and Westbound: 50% to 80% increase at Old Ballas	Eastbound: 30% to 50% increase Westbound: 14% to 27% increase. (p.m. volumes higher than a.m.)
Page	Eastbound: 7% to 11% increase. Westbound: up to 10% increase (a.m. volumes higher than p.m.)	Eastbound: 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

Arterial Trends, 15-minute Volumes during Peak Periods – MoDOT Actra System, 2008 East – West Routes

— Baseline
— Jan '08
— Feb '08
— Mar '08
— Apr '08



Arterial Trends, 15-minute Volumes during Peak Periods – MoDOT Actra System, 2008 North - South Routes



**Travel Times (min),
Selected Freeway Segments
(Preliminary)**

Travel Times

The research team has begun 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 three months of 2007. In the next quarterly report, a more direct comparison of identical periods from 2007 and 2008 will be possible because Traffic.com data is available after June 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.

	Miles	Travel Time (min), P.M. Peak Hour	
		Aug-Dec '07	Mar-May '08
I-70 from I-270 to I-170			
EB	3.7	5.6	5.6
WB	3.6	6.3	5.8
I-170 from I-270 to I-64/US 40			
NB	3.7	7.9	7.8
SB	3.8	7.9	7.8
I-270 from I-70 to I-64			
NB	3.5	9.2	8.1
SB	3.5	9.8	8.9
I-270 from I-64 to I-44			
NB	6.5	7.3	6.8
SB	6.6	12.7	10.6
I-44 from Rte 141 to Kingshighway			
EB	3.0	13.6	13.0
WB	3.0	12.0	11.9
I-64 from Rte 141 to I-270			
EB	3.3	3.5	3.5
WB	3.3	2.9	2.9

Park-and-Ride

The table below summarizes one year's worth of quarterly parking counts at MoDOT's Park-and-Ride lots in St. Louis County and neighboring counties. Updates to this table will be made as information becomes available.

MoDOT Park-and-Ride Volumes

County	Lots	Total spaces	Vehicles Parked in Lot				
			Feb07	May07	Aug07	Nov07	Feb08
Franklin	6	413	295	205	189	175	168
Jefferson	11	962	321	337	379	386	367
St. Charles	12	1110	427	403	283	315	301
St. Louis	6	792	519	540	582	451	493
Total	35	3277	1562	1485	1433	1327	1329

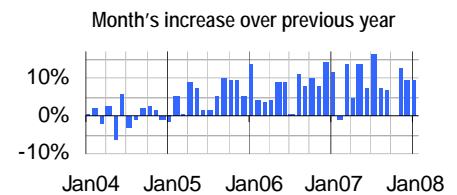
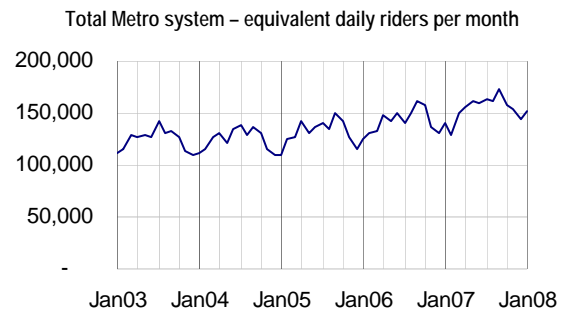
Transit

At the time of this report, Metro statistics are only available through January 2008. The table and graphs at right summarize some key statistics regarding Metro usage. Ridership on the total Metro system in January 2008 (the first month of the I-64 closure) was over 9 percent higher than ridership in January 2007. However, as the graphs indicate, Metro ridership has been steadily increasing since at least mid-2005, and the increase seen in comparing January 2008/2007 data does not appear to substantially deviate from this trend.

Anticipated statistics from Metro will shed additional light on any closure-related transit trends. Future quarterly reports will examine more specifics regarding individual routes affected by the closure.

Key Transit Statistics

	Jan '08 ridership	Increase over Jan '07
MetroBus (fixed route)	2,723,970	9.1%
MetroLink (passenger rail)	1,944,205	9.4%
Call-a-Ride (paratransit)	60,167	8.4%
Total Metro system (includes services not listed)	4,733,423	9.3%

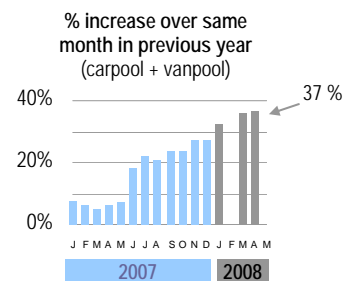
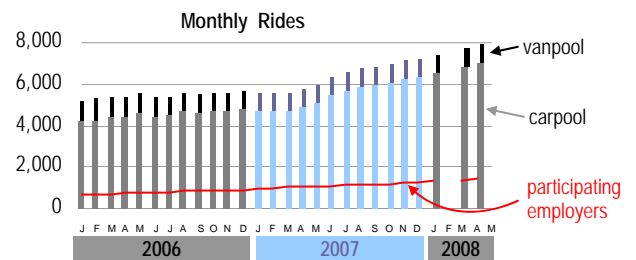


Rideshare

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 the second half of 2007. The lower portion of the figure further illustrates this jump in ridership by indicating, for each month, the percentage increase over the previous year. As the graph indicates, one-year increases in 2008 have been over 30 percent, much higher than in 2007. Obviously, some portion of these increases can be attributed to rising fuel costs, but the I-64 closure also has been a likely contributor.

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

Ridefinders Statistics



4. Economics

Economics Highlights

Major Components of Economic Analysis

Analysis of pre-closure and current conditions

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 economic vitality based on special data tabulations, survey results, and individual

The primary highlight for this quarter is the analysis of the first business survey's results. Three hundred sixty-nine survey responses from St. Louis businesses were collected during the period from February 18th through March 13th, 2008. The collection of published economic data is ongoing, and the analysis of the first package of custom ZIP code level data from the Missouri Economic Research and Information Center (MERIC) has begun. To date, MERIC has provided HDR with economic data for first quarter 2006 and all four quarters of 2007. Given the time lag in available

economic data indicators, this quarterly report will only focus on preliminary economic conditions from before the I-64 closure, while future reports will include analysis of economic conditions and impacts after and related to the I-64 closure.

Economic Analysis Progress

Current activities to date include:

- Presented to the MoDOT Connections Committee regarding the approach for the economic assessment, the draft business survey, and data collection plan.
- Inventoried and collected available published economic, demographic, and fiscal data.
- Received from MERIC special ZIP-code-level data for the first quarter of 2006 and all four quarters of 2007. The economic data included: industry employment, wage, and establishment data tabulations.
- Created and distributed the online Business Survey. Feedback was provided from MoDOT prior to distribution. The survey was distributed with help from local and regional economic development/business organizations. The results of the business survey have been submitted to MoDOT for review and will be available shortly.
- Specific transportation-dependent local firms and organizations were identified for detailed follow-up interviews. To date, 12 firms and organizations have been interviewed.

Business Survey

The first business survey results were collected and analyzed resulting in a Major Findings document (Appendix C) that has been submitted to MoDOT for comments. The survey's combined distribution list included 6,000 contacts from the five economic development organizations that included 3,600 different businesses; for this round of business surveys, 369 separate responses were received. The three distinct focus areas of the first business survey were commuting, transportation/shipping costs, and sales/visitation. The survey's questions were directed at the conditions just prior to the closure and the changes following the closure of the Western portion of I-64. The survey has provided insight regarding how business performance is being impacted based

Business Survey – Selected Preliminary Results

Total Distributed	6,000+
Total Responses	369
Respondent location (based on zip code, reported by 73%)	
Immediate I-64 region	23%
Satisfaction w/ MoDOT execution of project	
Very satisfied	46%
Satisfied	40%
Dissatisfied	3%
Very dissatisfied	1%

on the business type, size, and proximity to western closure of I-64. Some of the business performance indicators included retail spending patterns, visitation, and transportation costs.

Major Findings:

- **Satisfaction:** 86 percent were satisfied or very satisfied with MoDOT's delivery and execution of the I-64 Project, and 91 percent were satisfied with the performance of alternative routes.
- **Proximity:** 86 percent of the businesses that completed the survey are located within 10 miles of the I-64 Reconstruction Project.
- **Future Planning:** 13 percent of total survey respondents said future decisions on expansion, new investment, or location of facilities will be impacted by I-64's closure.
- **Commuting:** To help manage during I-64's reconstruction, 38 percent of respondents noted the use of flex time programs while 16 percent encouraged car/van pools and 21 percent allowed increased telecommuting.
- **Transportation Costs:** 94 percent of businesses located within the impacted areas of the I-64 corridor have experienced a significant or minor change in cost due to travel time delays.
- **Sales and Visitation:** 12 percent of all businesses surveyed confirm a lower volume of visitors and customers each week¹.

Interviews

As a supplement to the business survey, HDR has conducted follow-up, in-depth interviews with transportation-dependent businesses in and near the I-64 corridor. The interview process is nearly complete for this stage of the evaluation as representatives from 12 separate businesses and organizations have been interviewed via telephone. Different industry groups were targeted, with significant help from the St. Louis Regional Chamber and Growth Association (RCGA), to provide a detailed and in-depth understanding of how a range of private sector businesses are being impacted adversely by the I-64 closure and the steps businesses are taking to cope with the closure. Representatives from the following local businesses and organizations have been interviewed: catering, parcel shippers, utilities, network hospitals, hotels and lodging, agricultural research firm, and museums. The overall consensus is that businesses expected the worst before the closure, but the conditions for the first quarter have not been nearly as bad as they anticipated. To cope, some businesses have offered new flex hours and telecommuting options, and all have encouraged carpooling or public transit. These interview findings have been consistent with the results of the business survey.

¹ Please note the survey questions were worded "For this time of year" to account for seasonal customer, visitor, and sales swings.

Economic and Fiscal Data Analysis

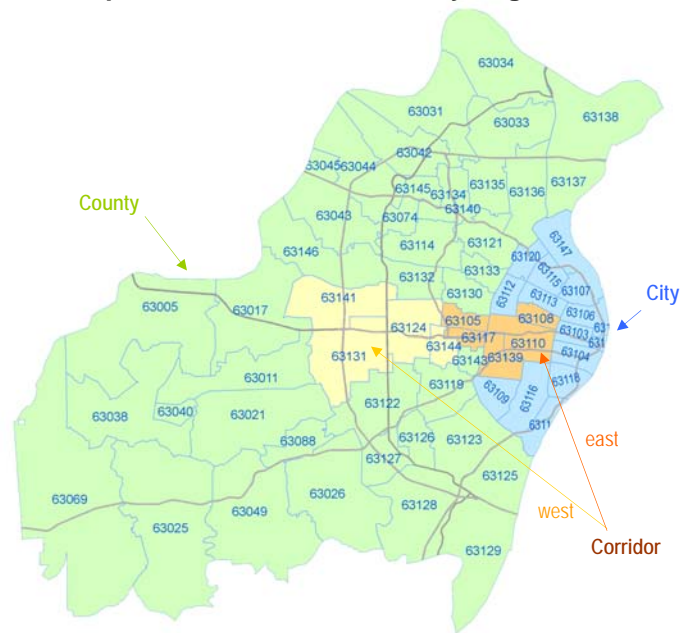
Preliminary analysis of the first custom economic dataset from MERIC was initiated this month. The first dataset included economic information for the first quarter of 2006 and all four quarters of 2007. The preconditions analysis of I-64 began with MERIC’s Pre-Construction² analysis, which focused on the period from 2003 through the first Quarter of 2005. Our analysis will extend the precondition analysis forward through the fourth quarter of 2007, which will complete the preconditions portion of the analysis and establish a baseline for conditions before construction. It is anticipated that the first quarter of 2008 will be available in the third quarter of 2008, providing the most comprehensive dataset on economic impacts from I-64’s January 2008 closure. The published data is at the ZIP code level for both St. Louis County and St. Louis City. The data has been sorted by geography (corridor or non-corridor) to be consistent with the geographic units used in the Business Survey analysis. In addition, quarterly ZIP code level data from Missouri Department of Revenue for Taxable Sales is being processed to gauge local consumer sales trends and impacts. The data by ZIP code includes industry detail at the two-digit NAICS level for the number of establishments, total wages, and the number of jobs. The table at right displays the aggregate economic information for the 9 ZIP code areas impacted by I-64 closures (corridor) and the ZIP codes that make up the remainder of St. Louis City and St. Louis County (non-corridor).

**St. Louis I-64
Corridor and Non-Corridor Economic Profile
(3rd Quarter 2007)**

	Corridor	Non-Corridor
Jobs	201,200	628,100
Number of Establishments	9,405	31,445
Wages (\$ Millions)	\$ 2,471	\$ 6,753
Total Taxable Sales (\$ Millions)	\$ 927	\$ 4,167

Source: MERIC and Missouri Department of Revenue

Zip Code Definitions for Study Regions



Conclusions and Future Steps

The Business survey was successful in soliciting responses from the local business community and results verify that a majority of businesses are satisfied with MoDOT’s initial performance during the I-64 closure. Upon final review by MoDOT, documents will be publicly available regarding the business survey analysis and the summary of interview findings. A meeting with the region’s lead economic development agencies and local developers has been set for June 17 to be hosted by the RCGA. The purpose is to present the business survey and interview results for discussion and feedback, as well as to obtain feedback from local experts regarding I-64’s impact on economic development conditions. Further analysis of the published data will be conducted and compared in greater detail to the “Interstate 64 Business Climate Report: Pre-Construction Analysis” performed by MERIC, focusing on the seasonal trends of the region.

² “Interstate 64 Business Climate Report Pre-Construction Analysis”, 2006

5. I-64 Traffic 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). 362 surveys have been completed and received during the first five months for the I-64 Traffic Response with 749 from Motorist Assist. In the third quarter, the study team plans to conduct interviews with staff involved with this operation and start the evaluation of responses made by 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/Motorist Assist staff, previous research/study efforts, and the mobility assessment component 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 white paper will be developed by June 2009 that will outline a sustainable approach regarding when regional arterial highway patrol services should be considered. This deliverable will provide the region the time necessary to fund 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 closure responses were similar to those obtained in the web and mail studies. The table at right summarizes some of these satisfaction measures. The 2nd quarter showed an increase in satisfaction compared to the first quarter, and represented input from 974 (650 - Motorist Assist and 328 - I-64 Traffic Response) respondents. The total of 1,111 surveys (compared to 1,040 online surveys) received indicates that this could be considered the most effective survey method to-date for gaining public input. The distribution and receipt of surveys will continue throughout the study period, with quarterly updates being made.

Percent Repondents Expressing Satisfaction
Motorist Assist and I-64 Traffic Response Surveys

	Decision to close for 2 years vs. 6-8		Ability to move around the St. Louis area	
	1 st Quarter	2 nd Quarter	1 st Quarter	2 nd Quarter
Motorist Assist survey respondents	59 %	67 %	56 %	67 %
I-64 Traffic Response survey respondents	63 %	74 %	67 %	64 %

Appendix A: Communications Data – “Final 1st Quarter Interview Report” and Revision Online Survey

Appendix B: Mobility Data

Appendix C: Economic Data – “Major Findings of First Business Survey”

Appendix D: Traffic Response Data