



## KENTUCKY TRANSPORTATION CENTER

### **EVALUATION PLAN FOR THE TICKETING AGGRESSIVE CARS AND TRUCKS (TACT) PROGRAM IN KENTUCKY**



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In all that we do.

**Research Report  
KTC-10-02/KSP1-10-1F**

**Evaluation Plan for the Ticketing Aggressive Cars and Trucks (TACT) Program in Kentucky**

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## Executive Summary

Kentucky State Police Division of Commercial Vehicle Enforcement in cooperation with Federal Motor Carrier Safety Administration (FMCSA) has started a concentrated education and enforcement campaign in an effort to increase the safety and awareness of drivers around commercial vehicles. The University of Kentucky Transportation Center has evaluated this campaign and reported the effectiveness of this effort.

This study is a follow-up to a 2007 study that focused on two high volume, high crash interstate areas: one in northern Kentucky on I-75, and one in the Louisville area on I-65. This study's focus was moved to I-75 around Fayette County (Lexington) and I-65 around Hardin County (Elizabethtown). Several blitzes (including a media and enforcement component) were conducted throughout the year. This evaluation measured the success of the campaign by analysis of before and after surveys, traffic speed, headway measurements (distance between moving vehicles) and crash data. The blitzes focused on public awareness, driver behavior and roadway safety.

Public awareness was measured using phone surveys. The data show that the media (and in some ways law enforcement efforts) helped to inform motorists about the campaign as more respondents indicated that they changed their behavior around trucks compared to the data from the pre-evaluation survey. The traffic headway measurements show that larger vehicles leave more space around trucks than smaller vehicles. There were observed decreases in crashes in the TACT corridors, in particular, the original TACT corridors that had two-years of TACT exposure.

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## Introduction

Kentucky State Police Commercial Vehicle Enforcement Division (CVE), in cooperation with the Federal Motor Carrier Safety Administration, was involved in a follow-up to the 2007 TACT program to reduce the number of commercial motor vehicle (CMV) related crashes in Kentucky. The study was conducted in two areas: I-65 in Hardin and Hart Counties and I-75 in Madison, Scott and Fayette Counties. Preliminary data was collected at these locations instead of taking data in control areas in an effort to monitor the change in these study areas. The campaign is called Ticketing Aggressive Cars and Trucks (TACT).

## Objective

The objective of this program is to alter driver behavior around large commercial vehicles through education and enforcement. The key components of TACT are communications/media coupled with enforcement and evaluation. The program consisted of two media campaigns (earned and paid), signage and three enforcement blitzes. These efforts were focused in two areas in Kentucky. The evaluation will determine if there is a significant change in public awareness and driver behavior in the vicinity of large commercial vehicles and roadway safety.

## Methodology

The evaluation measures the effectiveness of the TACT program in creating public awareness, altering driver behavior and improving roadway safety. In addition, this evaluation documented the results achieved through the enforcement blitzes and the cost of the media phases. It is expected that the targeted enforcement and the public awareness campaign will lead to a change in driver behavior around large commercial vehicles, which will lead to a reduction in truck crashes. Three types of measurements were used to assess the impacts of the program on public awareness, driver behavior and roadway safety. These included a telephone survey, observations of driver behavior around large commercial vehicles and a crash analysis.

## Study Areas

The two study areas chosen were I-75 in central Kentucky from Madison to Scott counties (exits 76 and 129) and I-65 in Hart and Hardin Counties (exits 58 and 94). These corridors were selected as to not overlap with the previous corridors. Maps of these are shown in Appendix A.

The TACT campaign was conducted in three phases, each involving a media and enforcement blitz. The enforcement schedule is as follows (with the media phase leading up to the blitz):

- Phase 1 October 6 through 17, 2008
- Phase 2 February 2 through 13, 2009
- Phase 3 September 2009

## Telephone Surveys

Telephone surveys were conducted by the University of Kentucky Survey Research Center. Respondents were contacted using a modified, list-assisted Waksberg Random-Digit Dialing method giving every household with a telephone in the study area an equal probability of being contacted. Several attempts

were made to contact each number and call-backs were scheduled if necessary. The questionnaire was modeled after the survey used in the pilot program in Washington State. The survey is shown in Appendix B-1. In an effort to reach the intended audience the respondents were limited to those who indicated that they travel the Interstate system within the study area. The study areas were limited to the Lexington area (I-75) and the Elizabethtown area (I-65). A screening question was used to focus on the study areas: "Do you drive on either of the following interstate systems regularly (more than once a month): I-65 between Horse Cave and Elizabethtown OR I-75 between the Berea and the Toyota exit?"

The first surveys were conducted before any awareness initiatives had been carried out (PRE-SURVEY). The data was collected from September 2 to September 22 of 2008. A total of 570 surveys were completed. The margin of error for this sample size is  $\pm 4.1\%$  at the 95% confidence interval.

The second set of surveys was conducted during the first media and enforcement blitz of the study (PHASE1). The data was collected from October 18 to November 11 of 2008. A total of 598 surveys were completed. The margin of error for this sample size is  $\pm 4\%$  at the 95% confidence interval.

The third set of surveys was conducted during the second media and enforcement blitz of the study (PHASE2). The data was collected from March 16 to April 9 of 2009. A total of 586 surveys were completed. The margin of error for this sample size is  $\pm 4.1\%$  at the 95% confidence interval.

The fourth set of surveys was conducted during the third media and enforcement blitz of the study (PHASE3). The data was collected from September 18 to October 12 of 2009. A total of 554 surveys were completed. The margin of error for this sample size is  $\pm 4.2\%$  at the 95% confidence interval.

The phone survey data from the PRE and the three media/enforcement phases are compared in Appendix B-2. A t-test for Independent Samples analysis was used to determine if changes in the responses for the pre- and phase-surveys were statistically significant. Questions that had a p-value of less than or equal to 0.05 were considered as showing a statistically significant change. Those showing a statistically significant change are shown in boxes in B-2. These responses were (the phase is shown in parenthesis):

- In the past two months drivers have changed their driving behavior around trucks
  - The number that said yes went from 8% to about 13% (PHASE3)
  - Fewer responded with an 'other' response, perhaps implying that the respondents were being more specific (PHASE 1, 2 and 3)
- Have you read, seen or heard anything about leaving more space for trucks?
  - The number that said yes went from 15% to about 30% (PHASE1)
  - The number that said yes went from 15% to 30% (PHASE2)
  - The number that said yes went from 15% to about 47% (PHASE3)
- More respondents reported seeing or hearing about giving semis more space
  - Radio (PHASE1 and PHASE3)
  - TV (PHASE1 and PHASE2)
  - Road Signs (PHASE3)
- No one reported hearing of TACT until PHASE3 (4.9%)
- Fewer respondents reported an excellent understanding of the survey, more reported a good understanding (PHASE2)

It was expected that all of the above responses would increase. It is possible that fewer drivers would have reported getting a ticket or warning because of tailgating or cutting-off vehicles because they are more cautious of this behavior.

It should be noted that questions that are indented are a subset of the previous question. See the survey in Appendix B-1 to see how they are related. Also, some questions (particularly those where the percentages add up to more than 100%) allowed for multiple responses.

### Traffic Data

A different approach was used to measure the change in drivers' behavior as compared to the previous study. In the previous study, video footage was used to measure the following distance of vehicles. In this study several Nu-Metric's NC-200 portable traffic analyzers were used. These devices use Vehicle Magnetic Imaging technology to detect vehicle count, speed and classification. The devices were able to differentiate between commercial vehicles and passenger cars and trucks as well as calculate following distance between vehicles.

The NC-200's were placed in the center of multiple lanes of I-65 and I-75. The locations were chosen based on areas that could be easily controlled to allow the research team to put the NC-200's in place. Traffic was completely stopped in one direction by the Lexington Police Department and the Kentucky State Police in Elizabethtown. A total of 676,892 vehicles were collected in all 4 phases. The following table shows a summary of the data collected.

<b>Study</b>	<b>Location</b>	<b>Date Placed</b>	<b>Date Extracted</b>	<b>Count</b>
PRE	LEX	9/1/2008	9/8/2008	37,684
PRE	ETOWN	9/8/2008	9/15/2008	64,085
Phase1	LEX	10/14/2008	10/16/2008	39,157
Phase1	ETOWN	10/17/2008	10/22/2008	48,374
Phase2	LEX	2/2/2009	2/6/2009	140,268
Phase2	ETOWN	2/9/2009	2/13/2009	78,144
Phase3	LEX	9/14/2009	9/21/2009	148,360
Phase3	ETOWN	9/14/2009	9/21/2009	120,816

Several vehicles were excluded from the above table, such as vehicles with a length of zero and vehicles with speeds of zero (erroneous data or traffic jams). There were also a few vehicles with speeds of 254 mph which was clearly erroneous. Headways were only considered for values less than 320 feet. Also, blank values for headway were excluded. The headway value of 320 feet was based on the '3-second rule' for following distance:

$$70\text{mph} * 3\text{s} * \frac{5280\text{ft}}{1\text{mile}} * \frac{1\text{hr}}{3600\text{s}} = 308\text{ft}$$

This value was rounded up to account for the driver's approximation. Anyone following a vehicle more than this distance was not considered to be tailgating.

The traffic counts were summarized by location (referred to as Lexington for I-75 corridor and Elizabethtown for I-65 corridor) and by vehicle type. The vehicle types are defined as:

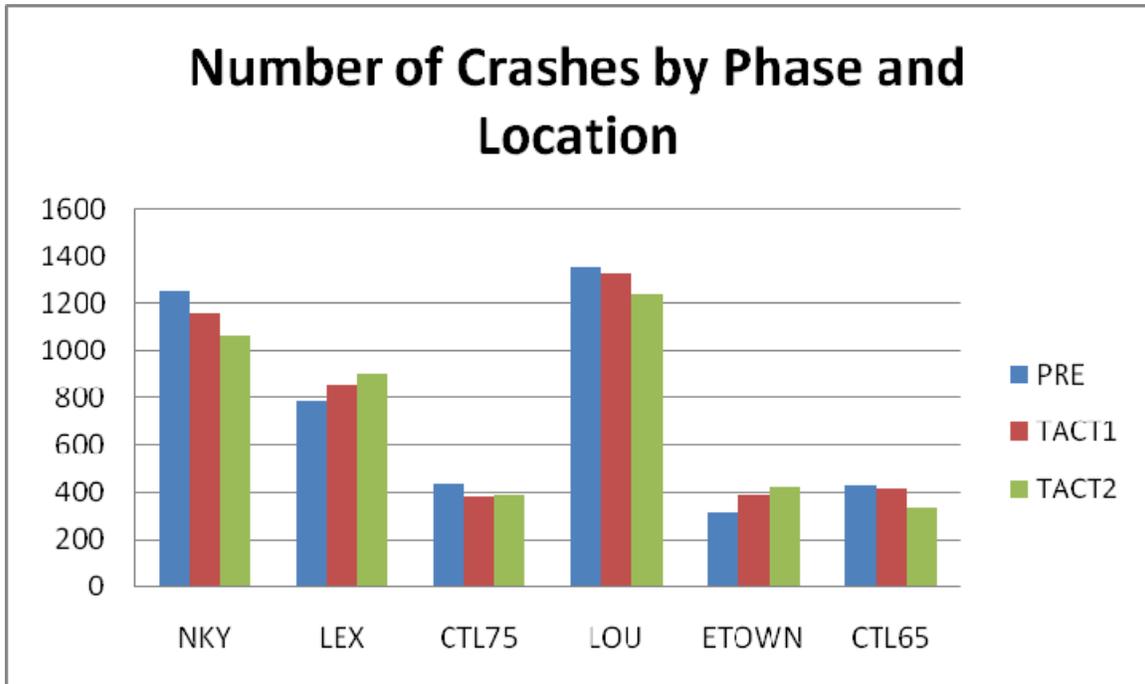
<u>Vehicle Classes</u>	<u>Length of Vehicle (feet)</u>
Unclassified	0
Passenger Vehicle	1 - 25
Small Truck	25 - 50
Large Truck	Over 50

The following table compares the percentage of vehicles found to be tailgating with location and vehicle type for each phase.

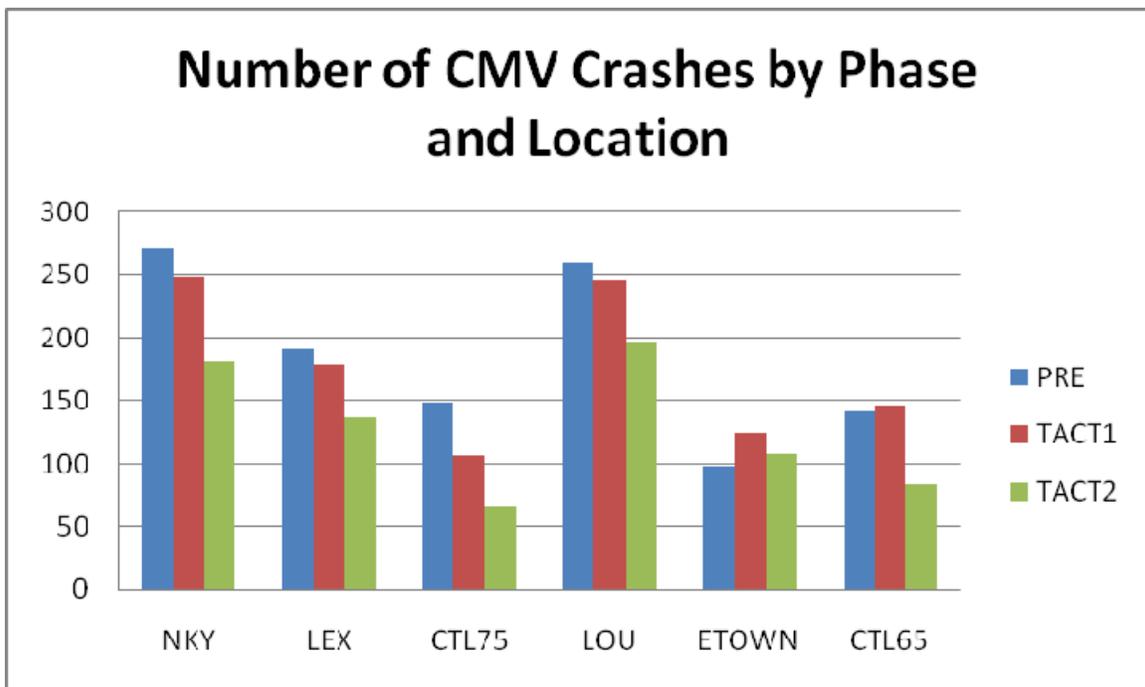
<b>Traffic Counter Data Comparison</b>		<b>PERCENT TAILGATING</b>			
<u>Location</u>	<u>Vehicle Type</u>	<u>PRE</u>	<u>PHASE1</u>	<u>PHASE2</u>	<u>PHASE3</u>
Lexington	Passenger Vehicle	24.2	43.7	37.1	44.1
	Small Truck	15.8	35.2	28.5	28.8
	Large Truck	9.7	34.7	25.6	22.6
Elizabethtown	Passenger Vehicle	32.6	26.4	27.2	32.1
	Small Truck	25.2	27.1	23.0	22.7
	Large Truck	21.5	25.1	20.0	21.3
Lexington	All	22.2	41.7	34.6	40.4
Elizabethtown	All	28.3	26.4	25.1	28.4
Both	All	26.1	33.2	31.2	35.0

### Crash Analysis

The CRASH database was queried to identify all crashes that occurred during three time periods: The year before TACT was implemented in Kentucky (September 2006 to August 2007), the original TACT campaign (September 2007 to August 2008), and the most recent TACT campaign (September 2008 to August 2009). These are referred to as PRE, TACT1 and TACT2, respectively. Data is shown for 6 locations, 3 on I-75 and 3 on I-65. In the following graphs, the three groups of bars to the right represent the number of crashes in the three time periods on I-75 in their respective study areas (queried by county). The three groups of bars to the left represent the number of crashes in the three time periods on I-65 in their respective study areas (queried by county). Also, NKY and LOU represent the focus areas for the first TACT campaign and LEX and ETOWN represent the focus for the second campaign. Two control locations (CTL75 and CTL65) show the number of crashes on I-75 in Rockcastle, Laurel and Whitley counties and on I-65 in Barren, Warren and Simpson counties, respectively.



The following graph shows the data for crashes only involving commercial vehicles.



Media

Awareness of the TACT campaign was achieved through advertising. Two radio commercials, a 30-second and a 60-second version, were aired in the study areas during each phase. Roadway signs were placed in the study corridors as well. Delayed approval resulted in the signs being installed after the first phase. The following is a picture of the sign used.



Brochures and gas topper advertisements, as well as various promotional items were distributed (coffee mugs, key chains, etc.). The following table shows the media dollars spent for this campaign.

Item	Cost (\$)
Advertising Services-1099 Report	393,640.89
Other Professional Services-1099 Report	364.27
Printing	3,030.00
Services – Framing etc.	22,749.02
Supplies	487.50
Other Supplies and Parts	4,500.00

TACT Enforcement Activity

Enforcement activity was monitored using individual activity logs. Four agencies, KSP, LMPD (Louisville), Lexington Police, and BCSO (Boone County Sheriff), recorded a total of 10,043 hours of enforcement. The major violations of the TACT focus are shown below. The remainder is some miscellaneous moving violations and license, registration, and insurance violations. The following table is a summary of these activities.

**TACT Enforcement Activity Summary 10/1/2008 to 9/30/2009**

	Combined	I-65	I-75
Total State Violations	18,789	5754	13028
Speeding Violations	12,989	4333	8656
FTC Violations	596	329	267
Lane Violations	204	62	142
DUI	20	3	17
Failure to Signal	111	16	95
Careless/Reckless	111	61	50
Seat Belt Violation	813	191	620
State Violations to CMVs	960	360	600
CMV Safety Inspections	439	192	247

Results and Conclusions

The success of the TACT program was measured by the change in behavior around trucks; in the form of public awareness, driver behavior and roadway safety.

Public awareness was measured by the phone survey results. A statistical difference was seen in the number of respondents indicating that they changed their behavior around trucks. Also, a significantly higher number of respondents reported seeing or hearing about leaving more space for trucks on the radio and on roadway signs. Statistically significant increases were seen in radio, TV and road signs. The TACT slogan itself wasn't reported until PHASE3; however, other slogans with TACT messages were reported. These results show that the TACT message was noticed by drivers in the study area.

Traffic counts were used to evaluate the change in driver behavior around trucks. In general, larger trucks leave more space than other vehicle types. In addition, all vehicle types leave more space when following large trucks than when following other vehicles. This data is further reinforced by last year's TACT study. Additionally, trucks tailgate less than other vehicles. The count data did not show conclusive evidence that that drivers' behavior had been changed in the year-long program. However, the data collection technique was predominately measuring changes in tailgating. It is possible that there was a larger change in the frequency of cut-offs. Furthermore, different weather conditions and slower driving speeds (due to the presence of police) tend to change driving habits. This could have had an adverse affect on the tailgating distances.

It is historically difficult to change drivers' behavior. In particular, it is even harder to change behavior without an enforcement consequence. Drivers seemed to admit seeing and hearing about the TACT campaign; however, less than 1% of respondents reported receiving a ticket for tailgating or cutting off a truck.

The crash data showed a very consistent drop in crashes in the original TACT corridors (northern Kentucky and Louisville area) for all vehicles. Conversely, there was a small increase in crashes in this year's TACT corridors. The I-75 control corridor had a similar number of crashes all three years; however, the I-65 control corridor had a small drop in crashes (particularly in the last year).

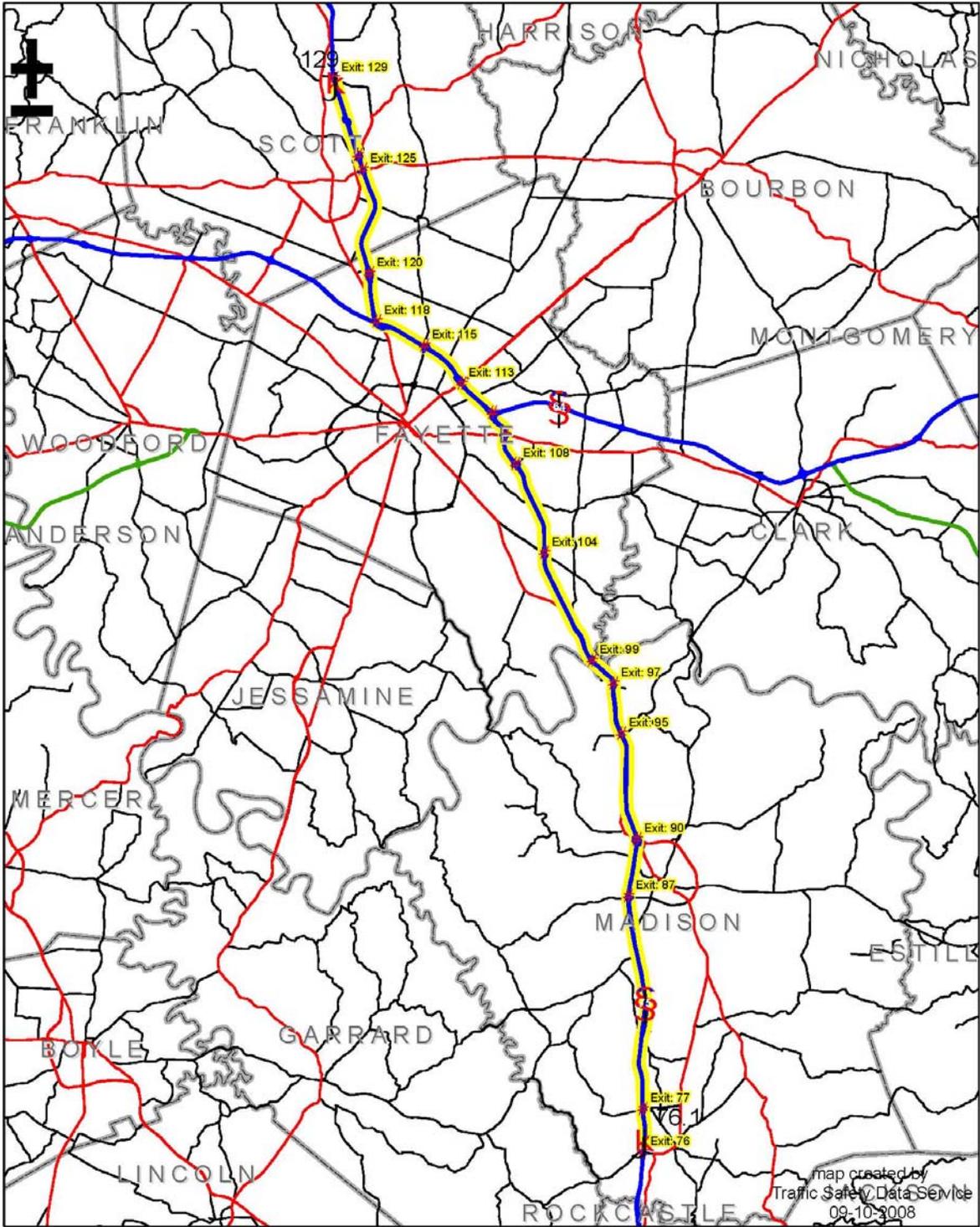
When looking at only truck-related crashes, there was a significant drop in crashes in the original TACT corridors. Additionally, there was a decrease in truck-related crashes in the Lexington corridor and a small decrease in crashes in the Elizabethtown corridor in the last year. Interestingly, there was also a significant drop in the control corridors, particularly the I-75 control. This could be attributed to the fact that truck driver's routinely drive the same corridor and may have been exposed to the media and enforcement campaigns in both years.

In summary, driver safety has been improved, particularly for truck-related crashes and most predominately in the original TACT corridors with extended exposure to the TACT campaign.

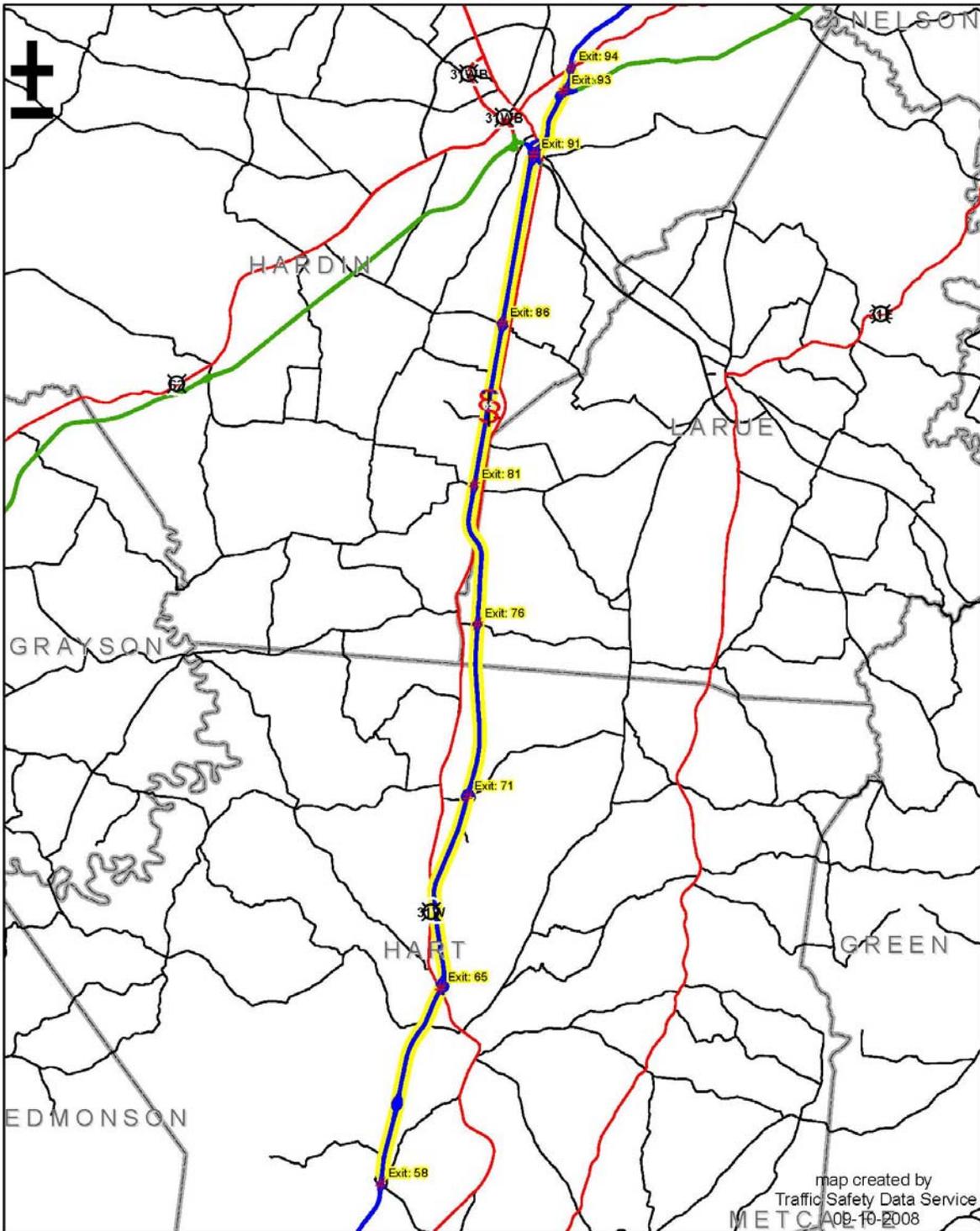
**APPENDIX A**

**Corridor Maps**

Appendix A-1. I-75 Corridor



Appendix A-2. I-65 Corridor



**APPENDIX B-1**

**Phone Survey**

## Appendix B-1. Phone Survey

The Kentucky Transportation Center and the University of Kentucky are involved in a study about highway safety in Kentucky. Your answers to the following questions are voluntary and anonymous. Please complete the survey and then return it to your supervisor. In all questions the word truck refers to a semi-truck.

**1. Do you drive on the either of the following interstate systems regularly (more than once a month)?:**

I-65 between Horse Cave and Elizabethtown OR I-75 between the Berea and the Toyota Exit

Yes  No

**2. Your sex:**  Male  Female

**3. Your Zip Code:** \_\_\_\_\_

**4. Your age:**  Under 21  21-25  26-39  40-49  50-59  60 Plus

**5. Your race:**  White  Black  Asian  Native American  Other

**6. Are you of Spanish/Hispanic origin?**  Yes  No

**7. About how many miles did you drive last year?**

Less than 5,000  5,000 to 10,000  10,001 to 15,000  More than 15,000

**8. What type of vehicle do you drive most often?**

Passenger car  Pickup truck  Semi truck  Sport utility vehicle  Mini-van  Full-van  Other

**9. How often do you use seat belts when you drive or ride in a car, van, sport utility vehicle or pick up?**

Always  Nearly always  Sometimes  Seldom  Never

**10. Have you ever driven a truck?**

Never  A few times total  Used to drive a truck regularly  Drive trucks now

**11. In the past two months, have you changed your driving behavior around trucks?**

Yes

If **yes**, what did you change? (Check **all** that apply):

I leave more space when passing  I don't follow as closely  I stay out of the truck driver's blind spots

Other \_\_\_\_\_

No

**12. How strictly do you think the Kentucky Police enforce unsafe driving acts around trucks?**

Very strictly  Somewhat strictly  Not very strictly  Rarely  Not at all

**13. Have you ever been stopped by the police for tailgating or cutting off a semi truck?**

Yes, I got a ticket  Yes, I got a warning  No

*For the next two questions, please answer in either feet or car lengths but not both*

**14. When I pass a car on an interstate highway, I leave \_\_\_feet or \_\_\_ car lengths before I pull back in.**

**15. When I pass a semi truck on an interstate highway, I leave \_\_\_feet or \_\_\_ car lengths before I pull back in.**

**16. Have you recently read, seen or heard anything about giving semi trucks more space when you pass them?**

Yes

If **yes**, where did you see or hear about it? (Check **all** that apply):

Newspaper  Radio  TV  Road sign  Brochure  Police  Billboard  Poster  Banner

If **yes**, what did it say? \_\_\_\_\_

If you said road sign, did you understand its meaning?  Yes  No

If no, why not? \_\_\_\_\_

No

**17. Do you know the name of any programs related to safety around semi trucks in Kentucky? (check all that apply):**

Share the Road  Click It or Ticket  TACT  Give Big Rigs Big Space  Leave Room When Passing

**APPENDIX B-2**  
**Phone Survey Results**

**APPENDIX B-2. RESULTS OF TELEPHONE SURVEY COMPARING PRE TO DURING SURVEYS**

Question	Choices	Percent			
		Pre	Phase1	Phase2	Phase3
Gender	Male	45.3	45.8	45.4	44.0
	Female	54.7	54.2	54.6	56.0
How many miles did you drive last year?	Less than 5,000	20.7	18.6	17.4	17.5
	5,000 to 9,999	14.2	15.7	17.2	17.3
	10,000 to 14,999	23.3	26.6	23.4	20.2
	15,000 or more	38.6	37.5	38.2	41.2
	Don't Know	3.2	1.7	3.8	3.8
Type of vehicle driven most often	Passenger car	56.5	57.5	53.7	57.2
	Pickup truck	13.5	13.2	13.7	13.2
	Semi truck	0.2	0.8	1.5	0.9
	Sport utility vehicle	16.8	17.7	22.9	16.6
	Mini-van	9.1	8.0	6.7	8.1
	Full-van	2.1	1.5	1.2	2.3
	Other	1.8	1.2	0.3	1.6
Seat belts when you drive or ride	Always	88.6	89.8	88.6	91.3
	Nearly Always	7.9	6.0	6.0	5.1
	Sometimes	1.6	2.2	3.2	2.2
	Seldom	0.7	0.8	1.0	0.7
	Never	1.1	1.2	1.2	0.7
	Don't Know	0.2	0.0	0.0	0.0
Driven a semi truck?	Never	89.8	88.6	89.9	91.2
	A few times total	5.6	6.0	4.4	3.8
	Used to drive a truck regularly	4.0	3.7	4.3	4.2
	Drive trucks now	0.5	1.7	1.4	0.9
In the past 2 months have, have you changed your driving behavior around trucks?	Yes	8.1	8.0	8.0	12.8
	No	91.6	91.8	91.8	87.0
	Don't Know	0.4	0.2	0.2	0.2
Behavior change	Leave more space when passing	37.0	41.7	48.9	43.7
	Don't follow as closely	30.4	22.9	31.9	38.0
	Stay out of the truck driver's blind spots	15.2	6.3	17.0	21.1
	Other	56.5	29.2	21.3	36.6
Other Change: Driving Behavior***	Don't ride beside them	0.2	0.5	0.0	0.0
	Stay away from them	0.9	1.2	44.4	16.0
	Increase speed	0.2	0.3	0.0	0.0
	Decrease speed	1.1	0.5	0.0	16.0
	Increase caution	1.2	2.3	44.4	56.0
	Change speed	0.4	0.0	0.0	0.0
	Drive when there are less trucks-night	0.0	0.3	0.0	0.0
	Don't pass them	0.2	0.5	0.0	0.0
	Miscellaneous	0.7	0.8	11.1	16.0
	None	0.0	0.0	0.0	4.0
	Have you been stopped by police for tailgating or cutting off?	Yes, I got a ticket	0.0	0.0	0.0
Yes, I got a warning		0.4	0.2	0.7	0.2
No		99.6	99.8	99.3	99.8
Do KY police strictly enforce unsafe driving?	Very strictly	14.9	13.5	13.7	12.3
	Somewhat strictly	36.5	36.5	35.0	38.3
	Not very strictly	22.6	24.7	22.5	22.7
	Not strictly at all	12.1	12.7	13.3	13.4
	Don't Know	13.5	12.2	15.5	13.0
	Refused	0.4	0.3	0.0	0.4

**APPENDIX B-2. RESULTS OF TELEPHONE SURVEY COMPARING PRE TO DURING SURVEYS**

Question	Choices	Percent				
		Pre	Phase1	Phase2	Phase3	
How much distance do you leave before you pull back in when passing a car?*,***	Feet	127	123	108	171	
	Car Lengths	3	4	3	3	
How much distance do you leave before you pull back in when passing a truck?*,***	Feet	145	160	107	187	
	Car Lengths	14	24	24	7	
Have you read, seen or heard anything about giving semis more space?	Yes	15.4	29.4	30.0	46.9	
	No	84.2	70.6	69.8	53.1	
	Don't Know	0.4	0.0	0.2	0.0	
What did you read, see or hear about giving semis more space?***	Sign - Leave more space when passing	11.4	3.4	8.5	16.9	
	Visible in rear-view mirror	5.7	7.4	9.1	11.5	
	Be careful	5.7	5.1	2.8	6.2	
	CB-Radio	0.0	0.0	0.0	0.0	
	Accidents happen if too close	0.0	3.4	0.0	1.2	
	Blind spots	2.3	1.1	0.6	2.7	
	Truck driver	1.1	1.1	1.1	0.8	
	Sign - no description	9.1	3.4	5.1	11.5	
	TV show	1.1	9.1	9.1	10.8	
	News Program	0.0	0.6	1.7	1.9	
	Leave more space	37.5	44.3	35.2	40.0	
	Regular radio	1.1	12.5	5.1	13.5	
	Poster on truck	4.5	2.8	5.7	1.2	
Miscellaneous	12.5	8.0	19.9	15.8		
Where did you see or hear about giving semis more space?	Newspaper	13.6	12.5	20.5	10.4	
	Radio	11.4	35.2	19.9	32.3	
	TV	20.5	40.3	35.2	25.0	
	Road sign	26.1	11.4	21.0	38.1	
	Brochure	9.1	2.8	0.6	1.5	
	Police	0.0	0.0	0.0	0.4	
	Billboard	5.7	1.1	1.7	5.0	
	Poster	5.7	2.8	0.0	1.5	
	Banner	14.8	3.4	9.1	3.5	
	Driver's Training	9.1	4.0	2.8	1.5	
	Don't know	4.5	4.5	6.3	3.8	
	Did you understand the meaning of the road sign?	Yes			97.3	96.0
		No			2.7	4.0
Programs, slogans: Safety around semis in KY	Click It Or Ticket	0.4	0.2	0.7	1.8	
	Leave room when passing**	0.5	0.0	0.3	1.1	
	TACT	0.0	0.0	0.0	4.9	
	Share the Road	0.0	0.3	0.2	0.4	
	Give Big Rigs Big Space	0.2	0.2	0.2	0.5	
	Other	4.7	8.4	3.1	4.0	
	No, don't know of any	93.2	85.6	95.7	97.8	
	Don't Know	0.9	5.4	0.0	2.0	
	Refused	0.2		0.0	0.2	
Respondent's Age	Under 21	1.4	1.3	1.5	1.3	
	21-25	3.0	2.5	3.4	2.3	
	26-39	17.9	17.1	16.7	16.4	
	40-49	18.6	20.2	20.5	18.4	
	50-59	25.8	26.8	26.5	28.3	
	60 or older	32.5	31.6	30.2	32.5	
	Refused	0.9	0.5	0.9	0.7	

**APPENDIX B-2. RESULTS OF TELEPHONE SURVEY COMPARING PRE TO DURING SURVEYS**

Question	Choices	Percent			
		Pre	Phase1	Phase2	Phase3
Racial categories that describe you	White	87.4	88.6	86.2	87.2
	Black or African American	6.8	5.2	8.2	7.9
	Asian	0.7	1.3	0.9	0.5
	American Indian or Alaskan Native	0.9	1.2	1.0	0.0
	Other	3.3	2.3	2.6	3.6
	Don't know	0.0	0.3	0.3	0.0
	Refused	0.9	1.0	0.9	0.7
Spanish, Hispanic origin	Yes	2.6	1.0	1.9	1.3
	No	96.1	98.0	97.3	98.0
	Don't know	0.0	0.2	0.2	0.4
	Refused	1.2	0.8	0.7	0.4
Location (based on zip code)	ADAIR	0.2	0.2	0.0	0.0
	BOURBON	0.2	0.2	0.0	0.0
	CLARK	0.4	0.0	0.2	0.2
	EDMONSON	0.2	0.2	0.0	0.2
	FAYETTE	51.2	51.3	51.7	52.7
	FRANKLIN	0.2	0.2	0.2	0.0
	GARRAD	0.2	0.2	0.2	0.0
	GRANT	0.2	0.2	0.2	0.0
	GRAYSON	0.2	0.2	0.0	0.2
	GREEN	0.4	0.2	0.0	0.0
	HARDIN	13.2	12.5	16.4	16.2
	HART	4.7	4.0	5.6	5.2
	JEFFERSON	0.2	0.3	0.3	0.2
	JESSAMINE	1.4	1.3	1.5	0.5
	LARUE	2.6	2.8	2.0	4.9
	LESLIE	0.2	0.0	0.0	0.0
	MADISON	12.6	12.7	5.5	10.8
	MONROE	0.0	0.0	0.0	0.2
	NELSON	0.2	0.2	0.0	0.0
	NICHOLAS	0.0	0.2	0.0	0.0
	OWEN	0.2	0.0	0.0	0.0
	PERRY	0.2	0.2	0.0	0.0
	PIKE	0.2	0.0	0.0	0.0
	SCOTT	8.2	9.9	10.2	7.0
	FT KNOX	0.0	0.0	0.5	0.0
	ROCKCASTLE	0.0	0.0	0.2	0.0
	JOHNSON	0.0	0.0	0.2	0.0
Don't Know	1.4	1.8	0.9	1.1	
Refused	1.6	1.3	0.7	0.5	
Respondent understanding	Excellent	76.8	70.1	74.4	80.5
	Good	22.8	29.4	24.6	17.3
	Fair	0.2	0.5	1.0	2.2
	Poor	0.2	0.0	0.0	0.0

\*These answers are shown as average response not percentages.

\*\*Statistically significant but not substantially meaningful (data compared to no responses in post)

\*\*\*Statistical significance test not performed

Those in boxes showed show a statistically significant change as compared to the PRE survey

**APPENDIX C**  
**Traffic Count Summary**

**Appendix C-1.**

**Traffic Counter Summary for Pre-Evaluation (September 2008)**

Location	Vehicle Type	Count	Tailgaters	Headway (Feet)*		Gap (seconds)*		Speed (mph)	
				Average	15 <sup>th</sup> Percentile	Average	15 <sup>th</sup> Percentile	Average	85 <sup>th</sup> Percentile
				Lexington	Passenger Vehicle	31,181	7,558	158	97
	Small Truck	2,833	448	180	94	2.09	0.15	66.4	65.8
	Large Truck	3,667	357	199	108	2.25	0.15	65.9	64.7
Elizabethtown	Passenger Vehicle	36,132	11,775	180	94	2.24	0.16	66.1	71.0
	Small Truck	10,010	2,519	206	102	2.23	0.15	64.4	63.3
	Large Truck	17,943	3,861	213	140	2.30	1.01	65.5	64.4
Lexington	All	37,684	8,366	161	97	2.02	0.16	70.0	74.3
Elizabethtown	All	64,085	18,155	191	97	2.25	0.15	65.7	68.4
Both	All	101,770	26,522	181	97	2.18	0.15	67.3	71.2

**Traffic Counter Summary for Phase #1-Evaluation (October 2008)**

Location	Vehicle Type	Count	Tailgaters	Headway (Feet)*		Gap (seconds)*		Speed (mph)	
				Average	15 <sup>th</sup> Percentile	Average	15 <sup>th</sup> Percentile	Average	85 <sup>th</sup> Percentile
				Lexington	Passenger Vehicle	30,490	13,319	170	94
	Small Truck	3,778	1,330	199	100	2.25	0.15	62.3	60.6
	Large Truck	4,889	1,698	205	140	2.28	1.01	62.0	60.2
Elizabethtown	Passenger Vehicle	41,236	10,897	180	105	1.70	0.15	74.2	72.9
	Small Truck	3,056	829	195	102	1.96	0.15	70.0	66.5
	Large Truck	4,082	1,023	208	103	2.11	0.15	68.7	67.3
Lexington	All	39,157	16,347	176	96	1.87	0.15	66.7	68.3
Elizabethtown	All	48,374	12,749	183	105	1.75	0.15	73.4	72.3
Both	All	87,532	29,097	179	99	1.82	0.15	70.4	69.7

\*Excludes distances over 320 feet

**Appendix C-2.**

**Traffic Counter Summary for Phase #2-Evaluation (March 2008)**

Location	Vehicle Type	Count	Tailgaters	Headway (Feet)*		Gap (seconds)*		Speed (mph)	
				Average	15 <sup>th</sup> Percentile	Average	15 <sup>th</sup> Percentile	Average	85 <sup>th</sup> Percentile
				Lexington	Passenger Vehicle	105,708	39,196	180	96
	Small Truck	15,818	4,501	205	102	2.20	0.15	64.4	62.7
	Large Truck	18,741	4,791	213	157	2.33	1.03	63.7	61.6
Elizabethtown	Passenger Vehicle	50,493	13,737	183	99	1.87	0.15	69.4	70.4
	Small Truck	10,915	2,508	208	103	2.23	0.15	64.2	63.0
	Large Truck	16,735	3,351	214	154	2.34	1.02	63.9	63.2
Lexington	All	140,268	48,489	185	97	1.90	0.15	68.9	67.5
Elizabethtown	All	78,144	19,597	191	100	2.00	0.15	67.5	68.5
Both	All	218,413	68,087	187	97	1.93	0.15	68.4	68.0

**Traffic Counter Summary for Phase #3-Evaluation (September 2009)**

Location	Vehicle Type	Count	Tailgaters	Headway (Feet)*		Gap (seconds)*		Speed (mph)	
				Average	15 <sup>th</sup> Percentile	Average	15 <sup>th</sup> Percentile	Average	85 <sup>th</sup> Percentile
				Lexington	Passenger Vehicle	117,158	51,634	164	90
	Small Truck	20,585	5,938	193	100	2.22	0.15	61.0	59.6
	Large Truck	10,617	2,400	205	149	2.40	1.04	60.6	58.8
Elizabethtown	Passenger Vehicle	75,760	24,316	179	94	2.24	0.15	66.8	69.9
	Small Truck	29,557	6,713	206	103	2.36	0.15	63.7	63.8
	Large Truck	15,493	3,293	215	154	2.33	1.01	63.9	63.3
Lexington	All	148,360	59,972	168	91	1.80	0.15	65.3	65.1
Elizabethtown	All	120,816	34,328	188	96	2.27	0.15	65.6	68.2
Both	All	269,177	94,301	175	93	1.97	0.15	65.5	67.1

\*Excludes distances over 320 feet

*For more information or a complete publication list, contact us at:*

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