



KENTUCKY TRANSPORTATION CENTER

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



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**Research Report
KTC-09-03/KSP1-09-1F**

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

by

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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.

The campaign was focused in two high volume, high crash interstate areas: one in northern Kentucky on I-75, and one in the Louisville area on I-65. 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, video observations 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 the enforcement) 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 video observations show that larger vehicles leave more space around trucks than smaller vehicles. There was twice the difference in the crash data before and after the TACT campaign as compared to the control sections during the same time periods.

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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 an 18-month pilot program to reduce the number of commercial motor vehicle (CMV) related crashes in Kentucky. The study was conducted in two areas: I-65 in Jefferson and Bullitt Counties and I-75 in Covington/northern Kentucky. 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), informational 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 truck crash analysis.

Study Areas

The two study areas chosen were in I-75/71 in northern Kentucky between Louisville and Elizabethtown (mile posts 172 and 191) and on I-65 between the Ohio River and the I-71 Split (mile posts 110 and 130). These corridors were selected due to their high numbers of crashes involving trucks.

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 A-1. In an effort to reach the intended audience the respondents were limited to those who indicate that they travel the Interstate system within the study area. The study areas were limited to northern Kentucky (I-75) and the Louisville area (I-65).

The first surveys were conducted before any awareness initiatives had been carried out (PRE-SURVEY). The data was collected from July 26th to August 14th of 2007. A total of 642 surveys were completed. The margin of error for this sample size is $\pm 3.9\%$ at the 95% confidence interval.

The second set of surveys was conducted after the media phase and the first enforcement blitz of the study (DURING-SURVEY). The data was collected from September 28th to October 17th of 2007. A total of 673 surveys were completed. The margin of error for this sample size is $\pm 4\%$ at the 95% confidence interval. A separate set of surveys for the media phase and the first enforcement blitz was not able to be conducted due to financial constraints.

The phone survey data from the PRE and DURING surveys are compared in Appendix A-2. A t-test for Independent Samples analysis was used to determine if changes in the responses for the pre- and during-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 bold. These responses were:

- In the past 2 months drivers have changed their driving behavior around trucks
 - More don't follow as closely
 - Fewer stay out of truck's blind spots
- Fewer respondents reported getting tickets or warnings for tailgating or cutting-off vehicles
- A lot more respondents reported seeing or hearing about giving semis more space
 - Radio
 - Road Signs
- Fewer respondents reported an excellent understanding of the survey, more reported a good understanding

It was expected that all of the above responses would have increased. 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.

A third phone survey was planned for September 2008 after the last enforcement blitz, but the survey research center was unable to conduct it due to scheduling conflicts. Instead, a survey will be conducted in September of 2009 in an effort to evaluate the residual effects of the campaign. These results will be outlined in the 2008 TACT grant report.

Video Surveys

Videos of vehicles driving on the interstates in the study area were used to evaluate the change in behavior of vehicles around commercial vehicles. Cameras already in place were used for this study with the assistance ARTIMIS (Advanced Regional Traffic Interactive Management and Information System) and TRIMARC (managed by Northrop Grumman) in northern Kentucky and Louisville, respectively. Video was taken from several cameras throughout the I-65 and I-75 corridors at 2 to 4 hour intervals. Time intervals were chosen in order to achieve a well-lit, free flow speed of traffic, therefore different times were chosen in each area. Not all video data was used, but it was kept in the event of traffic backups due to congestion or traffic crashes. The same time period and camera were

used in each phase when possible. Videos were only taken on weekdays; however video from Fridays was limited due to different driving patterns.

The video was watched projected onto a dry-erase board or on a PC with a transparency taped to the screen. Each camera view was stationary. Lines were drawn at 40 foot intervals, using the lanelines as guides, parallel to the vehicles' bumpers. These lines were used to assign distances into several categories as shown below.



Vehicles were observed in only one travel direction. The type of vehicle and lane were recorded for each vehicle seen until 500 of each vehicle type were recorded. The data were recorded in a manner shown in Appendix B. Three vehicle types were used: C – passenger car, S – small truck/van, T-semi or large truck (a very small number of motorcycles (M) were observed). See Appendix C for a more detailed explanation of each vehicle type. It takes longer to collect 500 T's than the other two vehicle types, therefore, once 500 C's and 500 S's were observed; only truck events were recorded. Vehicle counts were made for the "Truck Only" data since not all vehicles were recorded (this was done in order to calculate the traffic flow rates).

If the recorded vehicle is tailgating another vehicle (as defined as being 8 or fewer intervals behind another vehicle) then that tailgated vehicle type (labeled VIC for victim) is recorded as well as the number of intervals between vehicles (1-8). Vehicles not tailgating or 9 or more intervals behind another vehicle were recorded as a level of 'B' to indicate the field is blank.

If a vehicle cuts off another vehicle then this event is recorded instead of any tailgating offence. This was done as cut off events were very rare. Similar to tailgating, cut offs were recorded including the VIC type and level. In addition, the time of the cut off is recorded. The time was recorded for any especially shocking tailgates or cut offs in the STR column.

The track times were recorded at the midpoint (after 45 vehicles were observed) and the endtime (after 90 vehicles were observed). These were used to approximate traffic flow rates.

Data were taken in five phases: Pre-evaluation (PRE), during the first media blitz (MED), during the first enforcement blitz (ENF1) and during two more enforcement blitzes (ENF2 and ENF3). Appendix D shows the location and phase as well as time and date for each video that was used in the analysis. Videos

were only reviewed until 500 units of each vehicle type were observed. There is no data for MED-ART (media phase in northern Kentucky at ARTIMIS). This was due to a video glitch and the videos were not recoverable. The times for "Truck Only" data are also shown. Vehicle counts were used to calculate average flow rates for each data entry sheet. Additional information includes camera number, site location and direction of travel for observed vehicles.

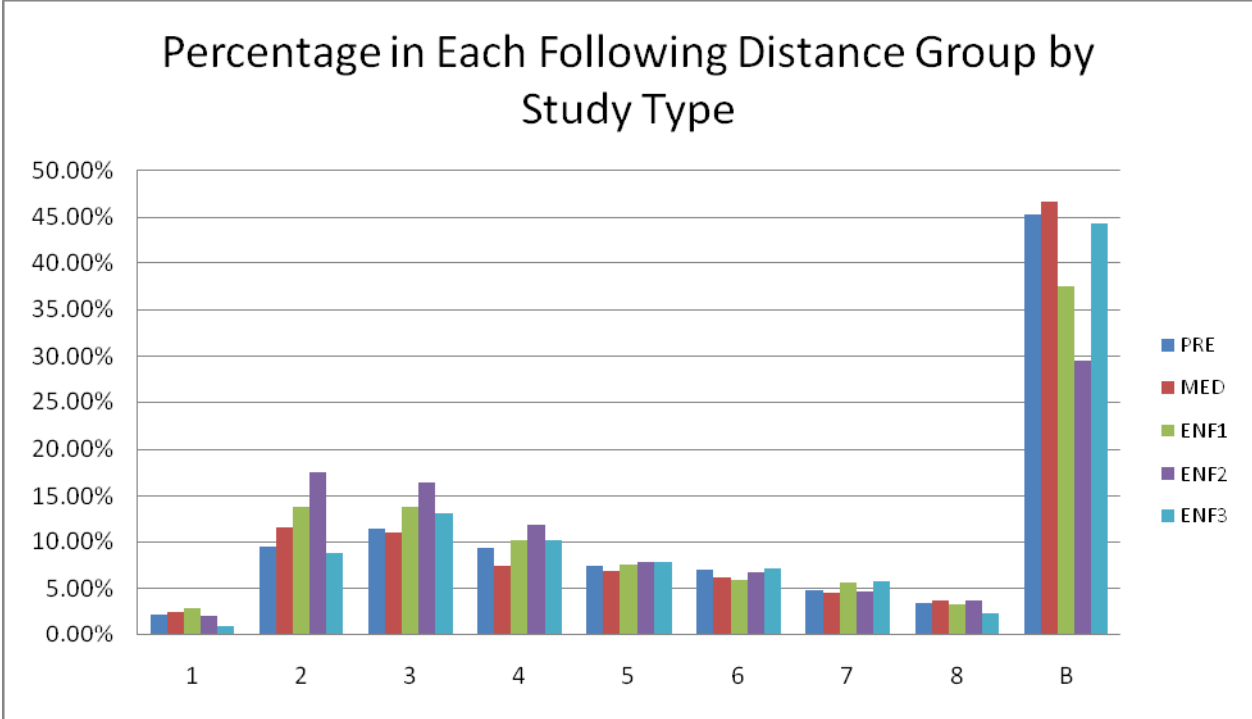
There were a total of 17,021 vehicles observed in the 15 hours of reviewed data. Of these, 10,021 were tailgating events and 44 were cut-off events. There were about 11 tailgating events a minute. The average level of tailgating was 164 feet.

As discussed earlier, tailgating was measured in 9 levels. The following table shows these levels.

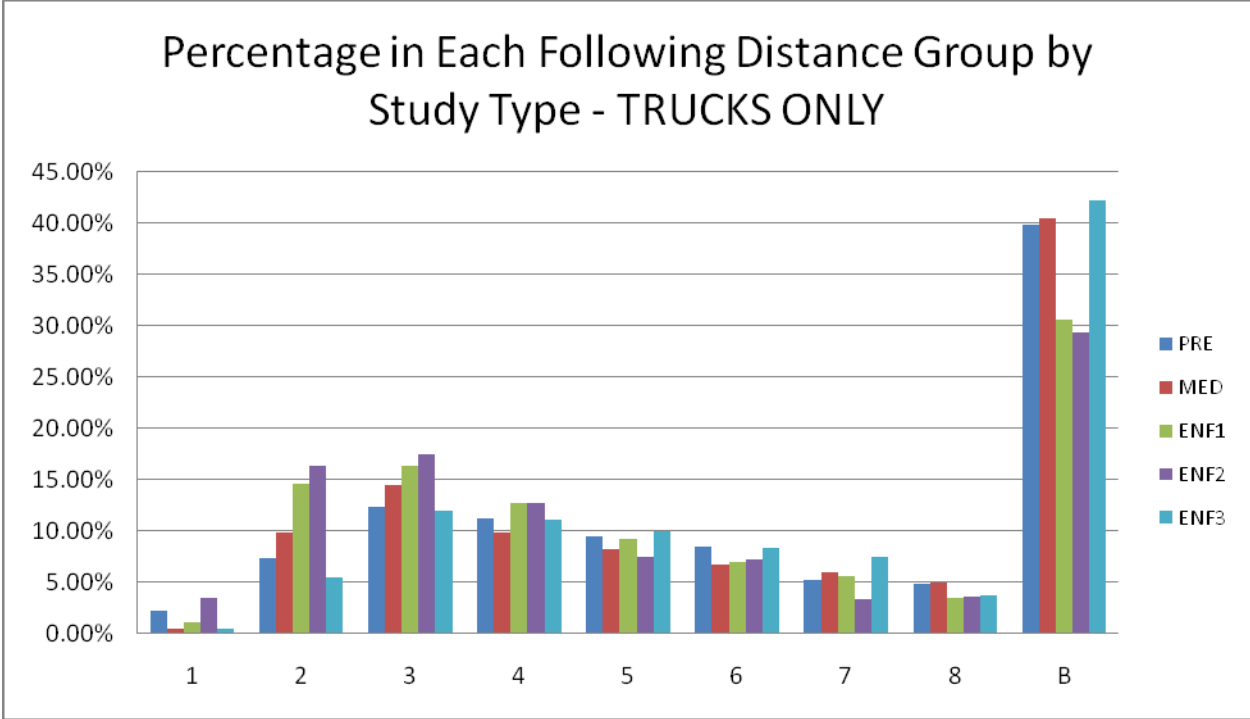
Level	Distance (feet)
1	0 to 40
2	40 to 80
3	80 to 120
4	120 to 160
5	160 to 200
6	200 to 240
7	240 to 280
8	280 to 320
B (Blank)	Over 320 (Not Tailgating)

Levels over 320 feet were not considered tailgating since this satisfies the 3 second rule under speeds of about 75 mph. The interval sizes were chosen based on the lane lines spacing (40 feet).

The following graph shows the percentage in each level for each study.



A small decrease was seen in the percentage of level 1 tailgating. Unexpected spikes were seen in the percentages of levels 2, 3 and 4; particularly for the ENF2 study. It is likely that inclement weather and changes in driving habits during winter months may have affected the following distances. The following graph shows the same proportions but for data only involving trucks. That is; the 'trucks only' records which means only records involving a truck. This includes trucks as tailgaters and trucks being tailgated.



A reduction in the percentages of levels 1 and 2's can be seen from the PRE study to the ENF3. Again, a spike is seen in the colder months.

The following is a matrix of the average following distance (in feet) for each vehicle type while following another vehicle type. This is based on all data. The follower is on the left, the one being followed is on the top.

	C	S	T	Any
C	154	159	162	158
S	158	160	161	160
T	181	179	177	179
Any	162	164	166	164

It is clear that trucks leave more space than other vehicles. Also, all vehicle types leave more space around trucks than other vehicles.

Percentile ranking was used in an effort to identify the outlying tailgating and cutting-off events. The process used is similar to the 85th percentile speed criteria. In this case, the lower the event, the worse the event; therefore the 15th percentile was used as the threshold for the worst offences. The level of offence (rankings 1 through 9) was converted to feet (each level equals 40 feet). Non-tailgaters (blanks) were treated as a level 9 so that they could be included in the rankings. Although, most of the blanks were actually longer than 360 feet, the percentiles under level 8 are unaffected. That is, even if every blank was treated as 1000 feet, the rankings for 1 through 8 would still be the same. The cumulative distributions were used to calculate the 15th and 50th percentile tailgate distances for each study.

Cut-off events had a much lower sample size than tailgating events. In addition, since cut-off events are a momentary event they can be much harder to witness; whereas tailgating events can occur over longer distances and time. For tailgating the 15th percentile ranged from 70 to 96 feet throughout the study period. The 50th percentile ranged from 173 to 270 feet. The following table shows these percentiles for each study as well as the percent change from the previous study.

Study Type	Tailgating Distance (in feet)		Percent Change	
	15th	50th	15th	50th
<i>Pre-Evaluation</i>	92	270		
<i>Media</i>	84	283	-9.8	4.7
Enforcement #1	77	218	-9.8	-30.0
Enforcement #2	70	173	-9.1	-25.8
Enforcement #3	96	256	27.0	32.4

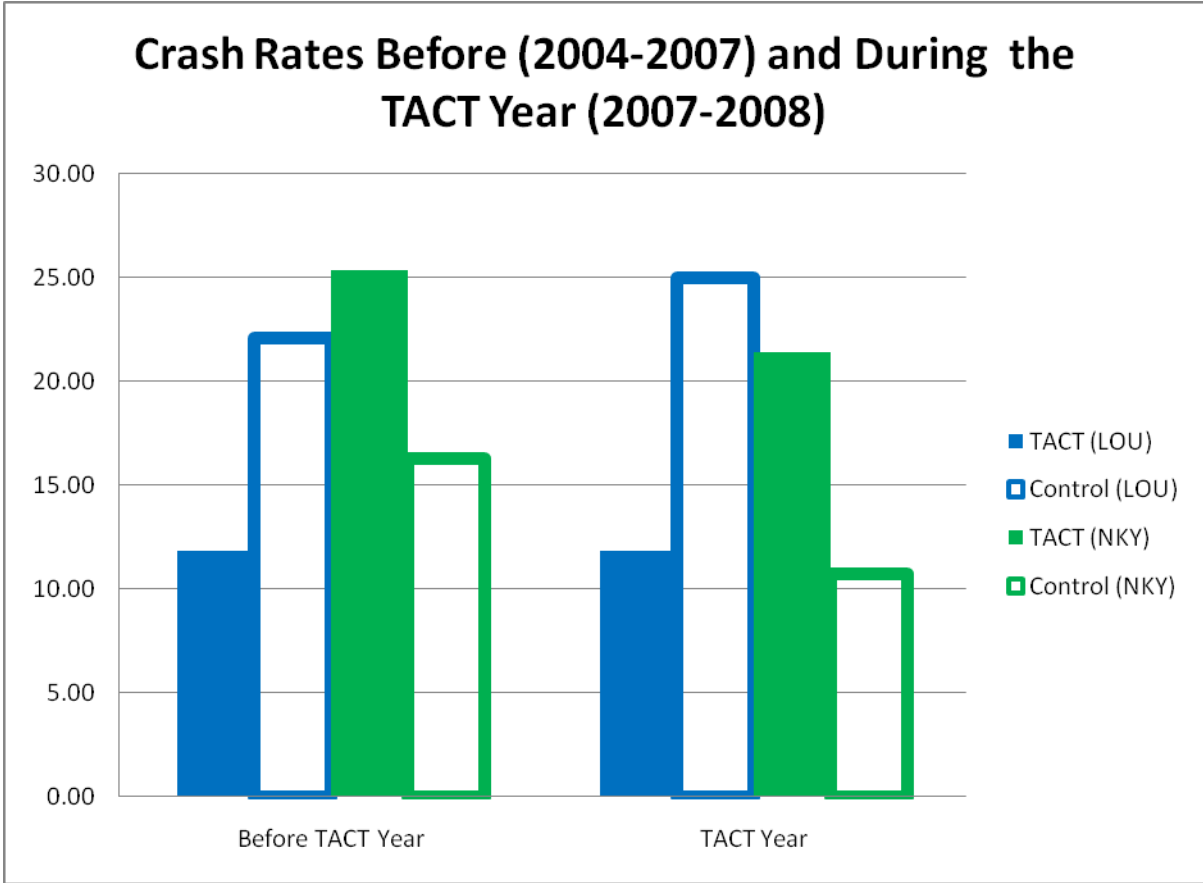
A similar trend was seen when looking at only events where a truck was being tailgated.

The following table has been developed in order to help officers enforce tailgating offences. The above 15th percentile distances have been converted to time based on speed. This measurement is consistent with the measurements provided by LIDAR used by Commercial Vehicle Enforcement (CVE) officers.

Speed (MPH)	Seconds				
	PRE	MED	ENF1	ENF2	ENF3
50	1.26	1.15	1.05	0.96	1.31
55	1.15	1.04	0.95	0.87	1.19
60	1.05	0.96	0.87	0.80	1.09
65	0.97	0.88	0.80	0.74	1.01
70	0.90	0.82	0.75	0.68	0.94
75	0.84	0.77	0.70	0.64	0.87
80	0.79	0.72	0.65	0.60	0.82
85	0.74	0.68	0.62	0.56	0.77
90	0.70	0.64	0.58	0.53	0.73

Crash Analysis

The CRASH database was queried to identify all crashes involving commercial vehicles that occurred with the TACT corridors during the TACT study (September 2007 to October 2008). This data was compared to preliminary data, before the TACT campaign began (January 2004 to August 2007). Crash rates were calculated using the latest AADT information from the Highway Information System. It was assumed that traffic volumes grew proportionally in these regions. The following bar graph shows these crash rates.



Overall there was an 11.83 percent reduction in the crash rates from the time before the TACT campaign as compared to during the TACT campaign as opposed to a 5.52 percent reduction in the control sections.

Sign Evaluation

An evaluation of the TACT sign was required by FHWA for use in this study. The following is a picture of the sign used.



Five participants unfamiliar with the TACT study were used to measure the recognition distance of the TACT sign. Participants representing various age groups and genders were chosen. The “Don’t Get a

Ticket” plaque was used to gauge the distance at which the participants could read the lettering. The distance ranged from 350 to 570 feet with an average of 432. The participants were then shown the full sign from the distance at which they could read the supplemental plaque and they were asked to report when they understood the sign. They were also asked to explain the sign as they understood it. The time it took them to understand was recorded if they correctly explained the sign. All five participants understood the sign correctly. The time to understand the sign ranged from 2 to 10 seconds with the average being about 6 seconds. While travelling 70 miles per hour, a driver would have 4.21 seconds to see a sign at 432 feet away.

This is 1.8 seconds less than average time to understand the sign. Therefore, there should be more than 432 feet of unobstructed view for the driver to see (about 184 ft more or 616 ft total). The font size of the supplemental plaque is smaller than the ‘Leave More Space’ message meaning that the driver should be able to read the latter message farther back than reported. Additionally, drivers will likely be able understand the picture represented before they are able to read the message, further shortening the recognition distance. Commuters will likely see the sign several times and will hence have more opportunities to understand the sign especially considering that congested driving will make the sign, at times, difficult to see. All of these factors show that an adequate recognition distance can be achieved with the existing sign.

TACT Enforcement Activity

Enforcement activity was monitored using individual activity logs. Four agencies (KSP, CVE, LMPD, and BCSO) recorded a total of 5,546 hours of enforcement. The major categories of violations are shown below. The remainder is some miscellaneous moving violations and license, registration, and insurance violations.

TACT Enforcement Activity Summary 9/1/2007 to 9/30/2008

	Combined	I-65	I-75
Total State Violations	13,075	5,996	7,067
Speeding Violations	8,256	3,914	4,334
FTC Violations	820	547	273
Lane Violations	259	141	116
DUI	11	8	3
Fail to Signal	168	14	154
Careless/Reckless	118	47	71
Seat Belt	821	181	640
State Violations to CMVs	1,325	567	758
CMV Safety Inspections	829	364	465

Combined totals may include a few I264 or I275 violations not included on the I-65 or I75 columns

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 measure by the phone survey results. A statistical difference was seen in the number of respondents indicating that they changed their behavior around trucks. Particularly, more drivers reported leaving more space for 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.

Video data was 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 for other vehicles. The video data did not show conclusive evidence that that drivers' behavior had been changed in the year-long program. However, the video 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 (due to the presence of police) speeds tend to change driving habits. This could have had an adverse affect on the tailgating distances. A more advance technique is being used in a follow-up study in an effort to better monitor the change in driving behavior.

There was twice the difference in the crash data before and after the TACT campaign as compared to the control sections during the same time periods. This indicates a correlation between the enforcement and awareness efforts of the TACT campaign to crash data.

The evaluation of the TACT sign showed that, given enough unobstructed space, the sign could be understood by passing drivers. An official sign study is being proposed by the Federal Highway Administration (FHWA).

APPENDIX A-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 Louisville and Elizabethtown OR I-75/71 between the Ohio River and the I-71 Split

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 A-2
Phone Survey Results

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

Question	Choices	Percent	
		PRE	DURING
Gender	Male	44.9	42.5
	Female	55.1	57.5
How many miles did you drive last year?	Less than 5,000	21.0	18.1
	5,000 to 9,999	14.5	13.4
	10,000 to 14,999	21.5	25.6
	15,000 or more	39.6	41.5
Type of vehicle driven most often	Passenger car	57.3	58.8
	Pickup truck	12.8	13.1
	Semi truck	0.9	0.9
	Sport utility vehicle	16.4	15.5
	Mini-van	7.8	9.5
	Full-van	2.5	1.2
	Other	2.2	0.9
Seat belts when you drive or ride	Always	90.0	88.4
	Nearly Always	5.9	5.6
	Sometimes	1.7	1.9
	Seldom	1.1	1.8
	Never	1.2	2.2
Driven a semi truck?	Never	89.6	89.2
	A few times total	5.6	5.5
	Used to drive a truck regularly	3.1	3.9
	Drive trucks now	1.6	1.5
In the past 2 months have, have you changed your driving behavior around trucks?	Yes	13.7	17.7
	No	86.1	82.0
Behavior change	Leave more space when passing	31.8	36.1
	Don't follow as closely	30.7	47.9
	Stay out of the truck driver's blind spots	28.4	15.1
	Other	52.3	31.1
Other Change: Driving Behavior	Don't ride beside them	0.5	0.4
	Stay away from them	2.8	1.0
	Increase speed	0.8	0.3
	Decrease speed	0.3	0.4
	Increase caution	1.6	2.1
	Change speed	0.2	0.0
	Drive when there are less trucks-night	0.2	0.3
	Don't pass them	1.1	0.4
	Miscellaneous	0.6	0.7
Have you been stopped by police for tailgating or cutting off?	Yes, I got a ticket	0.5	0.3
	Yes, I got a warning	1.7	0.1
	No	97.8	99.6
Do KY police strictly enforce unsafe driving?	Very strictly	12.1	11.3
	Somewhat strictly	36.4	39.8
	Not very strictly	23.8	21.5
	Not strictly at all	15.0	15.9

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

Question	Choices	Percent	
		PRE	DURING
How much distance do you leave before you pull back in when passing a car?*	Feet	73	86
	Car Lengths	3	3
How much distance do you leave before you pull back in when passing a truck?*	Feet	107	111
	Car Lengths	13	13
Have you read, seen or heard anything about giving semis more space?	Yes	12.1	41.6
	No	87.5	58.1
What did you read, see or hear about giving semis more space?	Sign - Leave more space when passing	7.7	15.7
	Visible in rear-view mirror	2.6	4.3
	Be careful	2.6	4.3
	CB-Radio	1.3	0.0
	Accidents happen if too close	3.8	0.7
	Blind spots	9.0	1.8
	Truck driver	2.6	0.0
	Sign - no description	5.1	6.4
	TV show	5.1	17.9
	News Program	0.0	0.7
	Leave more space	32.1	48.2
	Regular radio	1.3	7.5
	Poster on truck	1.3	3.9
Micellaneous	19.2	12.5	
Where did you see or hear about giving semis more space?	Newspaper	24.4	18.9
	Radio	11.5	17.9
	TV	29.5	26.4
	Road sign	14.1	21.4
	Brochure	2.6	1.4
	Billboard	5.1	7.5
	Poster	3.8	1.4
	Banner	5.1	1.8
	Driver's Training	5.1	1.8
	Don't know	7.7	6.4
	Programs, slogans: Safety around semis in KY	Click It Or Ticket	0.3
Leave room when passing		0.8	0.9
Share the Road		0.0	0.3
Give Big Rigs Big Space		0.0	0.9
Other		6.5	5.1
	No, don't know of any	91.6	92.6
Respondent's Age	Under 21	1.7	1.3
	21-25	2.5	2.1
	26-39	19.5	15.0
	40-49	20.2	23.8
	50-59	24.6	27.5
	60 or older	31.2	29.4
	Refused	0.3	0.7

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

Question	Choices	Percent	
		PRE	DURING
Racial categories that describe you	White	88.2	90.6
	Black or African American	6.4	4.8
	Asian	0.8	1.5
	American Indian or Alaskan Native	0.6	0.4
	Other	2.3	0.9
	Don't know	0.2	0.3
	Refused	1.6	1.8
Spanish, Hispanic origin	Yes	1.7	1.3
	No	97.0	97.5
	Don't know	0.2	0.1
	Refused	1.1	1.0
Location (based on zip code)	Boone	9.0	11.3
	Bracken	0.2	0.1
	Bullitt	4.2	3.4
	Campbell	6.4	8.3
	Carroll	0.3	1.0
	Fayette	0.3	0.0
	Gallatin	0.8	0.1
	Garrard	1.6	0.0
	Grant	0.0	2.4
	Hardin	7.6	7.9
	Hart	0.0	0.1
	Jefferson	42.4	41.9
	Kenton	14.2	14.6
	Larue	1.6	0.9
	Livingston	0.2	0.1
	Marion	0.0	0.1
	Meade	0.2	0.0
	Nelson	3.9	2.7
	Oldham	0.2	1.3
	Owen	0.0	0.4
Pendleton	0.6	1.2	
Spencer	0.3	0.3	
Taylor	0.2	0.0	
Trimble	0.5	0.0	
Woodford	0.0	0.1	
Don't Know	0.8	0.3	
Refused	1.2	0.6	
Respondent understanding	Excellent	76.3	63.6
	Good	23.2	35.5
	Fair	0.5	0.9

*These answers are shown as average response not percentages.

Those in bold showed show a statistically significant change

APPENDIX B

Video Data Entry Form – Sample

APPENDIX C

Vehicle Type Classifications for Video Data

Appendix C. Video Data Vehicle Types

C Passenger Cars

M Motorcycles

S Small Trucks
:Pickup Trucks, SUV's, Van's, Bread/Utility Trucks, RVs,
Semi Trucks without Trailer, Small Buses

T Large Trucks
:Tractor Trailers, Dump Trucks, Garbage Trucks, Buses,
U-Hauls, Armored Trucks

APPENDIX D
Video Data Summary

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

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Appendix D. Summary of Video Data Used in Analysis

Phase	Location	DISC	Date	Day of Week	All Vehicles	Trucks Only	AVG Q	Cam	Site	Dir
PRE	TRI	001	7/10/2007	Tuesday	4:00-4:29 PM	4:30-6:00 PM	40.8	#10	I-65 @ 264	NB
PRE	TRI	001	7/11/2007	Wednesday		7:00-8:24 AM	40.8	#10	I-65 @ 264	NB
MED	TRI	102	8/28/2007	Tuesday	5:13-5:46 pm	4:00-5:13 pm	39.0	#10	I-65 @ 264	NB
ENF1	TRI	201	9/17/2007	Monday	4:00-4:17 pm	4:17-6:00pm,7:00-7:13pm	37.8	#10	I-65 @ 264	NB
ENF1	TRI	202	9/18/2007	Tuesday	4:00-4:13pm, 4:55-5:11pm	5:17-5:49pm	37.0	#10	I-65 @ 264	NB
ENF2	TRI	307	2/14/2008	Thursday	7:15-7:35 am	7:35-8:58 am	57.0	#1	I-65 N of 264	SB
ENF3	TRI	401	9/23/2008	Tuesday	4:00pm-4:52pm	4:52-5:56pm	38.8	#10	I-65 @ 264	NB
.....										
PRE	ART	007	7/16/2007	Monday	9:00-9:23 am	9:23-10:27 am	52.0	#24	I-75 @ btrmlk pike	SB
ENF1	ART	209	9/20/2007	Thursday	9:00-9:21 am	9:21-9:57 am	56.2	#29	I-75 @ 12th st	NB
ENF2	ART	308	2/13/2008	Wednesday	10:17-10:45am, 11:15-11:19am	11:21-11:28 am	49.5	#29	I-75 @ 12th st	NB
ENF3	ART	405	9/22/2008	Monday	11:45-12:47pm	11:37-11:45am,12:04-12:47pm	55.8	#29	I-75 @ 12th st	NB