

2022 Safety Belt Usage Survey in Kentucky



Kentucky Transportation Center
Research Report

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A special thanks to
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Chapter 1 Introduction and Background

The use of safety belts is a proven means of reducing injuries to motor vehicle occupants involved in traffic crashes. Promoting and supporting safety belt usage is a top priority for transportation safety officials across the country. For years, there have been various methods used in efforts to increase safety belt usage. Past efforts have included public information campaigns, local and statewide legislation, and enforcement of the legislation.

In order to evaluate the effectiveness of these efforts, statewide observational surveys are conducted. The first observational surveys were conducted in Kentucky in 1982 in tandem with a law that was passed by the 1982 Kentucky General Assembly that mandated a “restraint system” for children 40 inches or less in height. Annual surveys have been conducted ever since. In the first several years of the survey, seatbelt usage increased quickly, from four percent in 1982 to 42 percent in 1993. In 1994, Kentucky included mandatory seatbelt usage as a secondary enforcement law, meaning that law enforcement officials may penalize a vehicle occupant for not wearing a seatbelt if the driver is already being penalized for a separate infraction. In 2006, the seatbelt law became mandatory via primary enforcement, in which law enforcement officials may conduct traffic stops and write citations for lack of seatbelt usage without other infractions. Primary enforcement also coincided with a continuing increase in seatbelt usage. Examples of the increasing rates are 60 percent in 2000, 66 percent in 2004, 73 percent in 2008, and 86 percent in 2014. Usage rates have leveled off in more recent years, staying just under 90 percent. Still, collecting and understanding the safety belt data is a critical part of pursuing progress within the realm of transportation safety.

Historically, this survey has included child safety seat presence, motorcycle helmet usage, and bicycle helmet usage as well as safety belt usage. Due to a variety of reasons, including relatively steady rates and difficulty collecting data, those aspects have since been removed from the study.

This study involved collecting and evaluating data from across the state to establish the safety belt usage rate in Kentucky for 2022. The survey began immediately after completion of the annual “Click It or Ticket” (CIOT) campaigns, lasted for ten weeks, and involved collecting data at 150 sites across 15 counties. Data from the individual sites was weighted and summarized into a statewide percentage. The resulting usage rate is presented in a variety of ways, considering attributes such as roadway functional classification, county, motor vehicle type, and amount of traffic. To statistically analyze the data and draw valid conclusions, the research team was comprised of transportation engineers with decades of experience in seatbelt studies as well as a licensed statistician. Kentucky’s rate from 2022 is valuable knowledge in itself but becomes more useful when compared to those determined from previous surveys, which are included in the report. The 2022 survey and subsequent report represent continued documentation of the effect associated with safety belt legislation, related education campaigns, and general public attitude.

Chapter 2 Survey Methodology

2.1 Selection of Counties and Number of Sites in Each County

A complex multistage sampling design was used to select counties and sites for the survey. The following steps detail that process.

- The number of highway fatalities was summarized for each of Kentucky's 120 counties for the five-year period of 2010 through 2014. The source of the data was Kentucky's crash database (Collision Report Analysis for Safer Highways (CRASH)). The fatality totals were sorted, and those counties with fatality rates in the lowest 15th percentile were identified and excluded from consideration. The result was a sample of 77 counties that were considered as potential survey counties.
- Prior to 2013, researchers compiled data from 160 sites in 18 counties. The past data collection has resulted in a standard error of approximately one percent. Based on past experience, the decision was made to sample 20 percent of the 77 counties, which required the identification of 15 counties at 150 sites for data collection. This change was enacted with the 2013 survey and continues with the 2022 survey.
- The method selected to ensure a geographically representative sample of counties across Kentucky was to randomly select a county in each of the 12 Transportation Cabinet highway districts. The districts have similar numbers of counties and provide a good distribution across the state. Three of the districts include the major urban areas in the state. Two counties were selected in each of these three urban districts, which resulted in the selection of a total of 15 counties.
- One county from each rural highway district and two counties from the three urban highway districts were randomly selected. The only exception to the random selection was the automatic selection of Jefferson and Fayette Counties (in two of the urban districts). This was done because these counties (which contain Louisville and Lexington) have much higher vehicle miles traveled than any other county. Any meaningful statewide sample must include these counties because they are the largest urban centers in Kentucky.
- The objective was to identify 150 data collection sites in the 15 selected counties. Based on the results from past data collection, this number of sites would easily meet the 2.5 percentage point standard error criterion. Additional data would be collected if the standard error exceeded 2.5 percent.
- Past experience has shown that the number of vehicles observed varies dramatically by the site (depending on the average daily traffic [ADT] at the site). It is expected that there will be at least 50 observations made at every site. There would be no sites with zero observations based on previous surveys, and the total statewide sample size should be over 50,000.
- The number of sites selected in each county was based on the vehicle miles traveled (VMT) in each county. Seven categories of VMT were determined, divided at intuitive cutoff points. The number of sites in a county varies from six to 20 and is proportional to that county's VMT. The counties with the most sites are Jefferson (20 sites) and Fayette (16 sites), as they have a much higher VMT than other counties.
- Table 2.1 lists the counties selected. The numbers of fatalities and VMT are given for each county. The six groupings of counties (based on VMT) are shown, and the number of sites in each county is noted.

Table 2.1 Selected Counties

County	Number of Fatalities (2010-2014)	Percent of Statewide Fatalities	Highway District	VMT (x1,000)	Population	VMT Group	Number of Sites
Spencer	20	0.6	5	136,875	17,061	1	6
Harrison	27	0.7	6	143,445	18,846	1	6
Powell	20	0.6	10	172,280	12,613	1	6
Bath	17	0.5	9	182,135	11,591	1	6
Boyle	26	0.7	7	266,450	28,432	2	8
Calloway	42	1.2	1	325,580	37,191	2	8
Floyd	49	1.4	12	438,365	39,451	2	8
Nelson	42	1.2	4	495,670	43,437	2	8
Henderson	28	0.8	2	510,270	46,250	3	10
Barren	59	1.6	3	574,510	42,173	3	10
Pulaski	48	1.3	8	704,085	63,063	4	12
Laurel	67	1.9	11	938,780	58,849	4	12
Kenton	43	1.2	6	1,507,085	159,720	5	14
Fayette	127	3.5	7	3,038,625	295,803	6	16
Jefferson	365	10.1	6	7,313,505	741,096	7	20

- The following list sorts selected counties by highway district. The three urban districts have two counties each and the other nine districts have one county each.

<u>District Number</u>	<u>County</u>	<u>Number of Sites</u>
1	Calloway	8
2	Henderson	10
3	Barren	10
4	Nelson	8
5	Jefferson	20
	Spencer	6
6	Harrison	6
	Kenton	14
7	Boyle	8
	Fayette	16
8	Pulaski	12
9	Bath	6
10	Powell	6
11	Laurel	12
12	Floyd	8

- The following map shows the location of the districts and counties across the state.

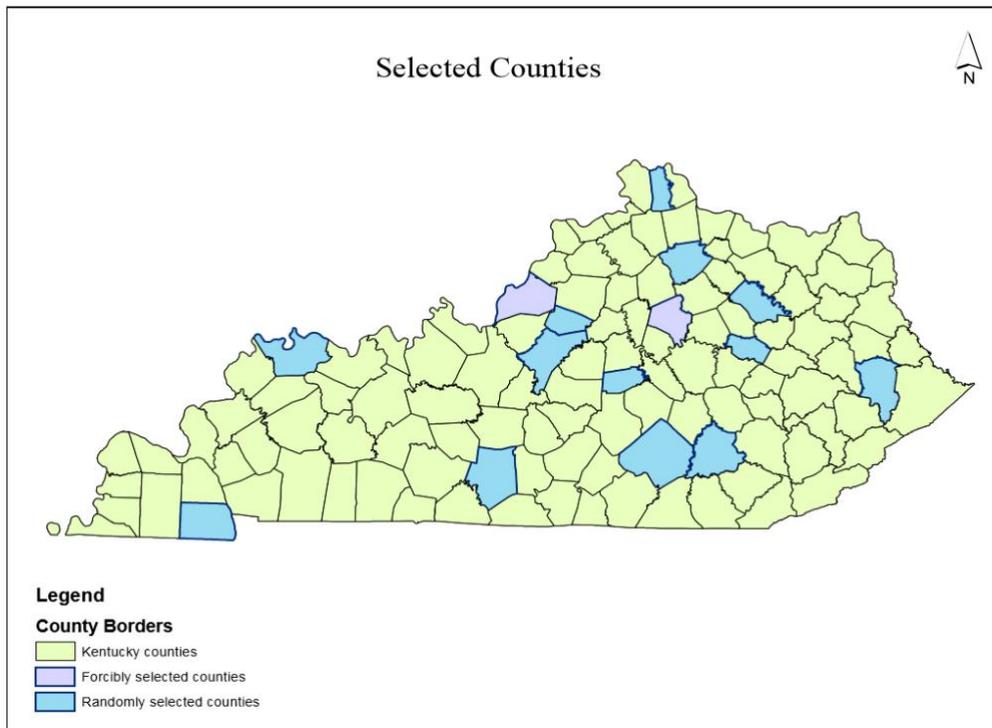


Figure 2.1 Map of Selected Counties in Kentucky

2.2 Assign Sites by Highway Type

- After the counties and the total numbers of data collection sites in each county were determined, the next step was to assign the number of sites by highway type (in each county). The following three roadway types (road class stratum) were used:
 1. limited access; primary
 2. arterials; secondary
 3. local

The survey sites in each county were partitioned among the three highway types based on the VMT for each highway type in that county. In five of the 15 counties, there were no roads in the “limited access” category. Therefore, since there was no VMT and no chance of selection, no road segments for this category were included for these five counties.

- The numbers of sites were adjusted to ensure data were collected on at least one road in each road stratum class — as long as the county had a road in each class.
- Using the criteria as noted, the following data (Table 2.2) presents the number of sites by county and highway type. Of the 150 sites, there are 46 sites on limited-access roadways, 66 sites on arterials, and 38 sites on local roads.

The number of sites in each of the three road classes was determined based on the vehicle miles traveled in each road class. The adjusted number was derived based on the distribution using vehicle miles traveled to ensure that the proper number of sites was provided in each county.

Table 2.2 Number of Sites in Each County by Road Class

County	Sites Allocated	County VMT	Road Class Stratum	Road Class VMT	Number of Sites if Allocated by VMT	Adjusted Number of Sites	Adjusted Total
Barren	10	1,295,546.57	1	477,600.58	3.68	4	10
			2	421,277.70	3.25	3	
			3	396,904.46	3.06	3	
Bath	6	419,571.82	1	251,211.38	3.59	3	6
			2	35,489.11	0.51	1	
			3	132,871.31	1.9	2	
Boyle	8	634,025.67	1	0	0	0	8
			2	476,737.48	6.02	6	
			3	157,288.20	1.98	2	
Calloway	8	685,686.76	1	0	0	0	8
			2	380,819.83	4.44	4	
			3	304,866.92	3.56	4	
Fayette	16	6,953,205.55	1	2,801,260.56	6.44	7	16
			2	2,753,762.22	6.34	7	
			3	1,039,477.26	2.39	2	
Floyd	8	1,088,469.03	1	0	0	0	8
			2	683,760.42	5.02	5	
			3	404,708.60	2.97	3	
Harrison	6	282,009.08	1	0	0	0	6
			2	199,062.20	4.24	4	
			3	111,386.80	2.37	2	
Henderson	10	1,215,962.69	1	357,914.74	2.94	3	10
			2	635,720.17	5.23	5	
			3	222,327.76	1.83	2	
Jefferson	20	17,144,887.20	1	8,654,640.06	10.1	10	20
			2	6,831,426.52	7.97	8	
			3	1,658,820.60	1.94	2	

County	Sites Allocated	County VMT	Road Class Stratum	Road Class VMT	Number of Sites if Allocated by VMT	Adjusted Number of Sites	Adjusted Total
Kenton	14	3,813,647.07	1	2,192,346.29	8.05	8	14
			2	788,788.57	2.9	3	
			3	756,715.49	2.78	3	
Laurel	12	2,234,033.34	1	996,953.21	5.36	5	12
			2	691,206.99	3.71	4	
			3	602,346.08	3.23	3	
Nelson	8	1,149,251.58	1	328,794.65	2.29	2	8
			2	529,677.87	3.69	4	
			3	290,779.04	2.02	2	
Powell	6	400,626.72	1	229,383.74	3.43	3	6
			2	60,491.68	0.91	1	
			3	110,751.28	1.66	2	
Pulaski	12	1,610,216.16	1	107,180.14	0.79	1	12
			2	965,178.51	7.19	7	
			3	537,857.49	4	4	
Spencer	6	289,857.02	1	0	0	0	6
			2	171,667.31	3.55	4	
			3	118,189.70	2.45	2	
Totals	150	39,216,996.26	1	16,397,285.35	46.67	46	150
			2	15,625,066.58	64.97	66	
			3	6,845,290.22	38.14	38	
			-	38,867,642.15	149.78	150	

2.3 Selection of Data Collection Sites

- After the counties and number of sites (by roadway type) in each county were selected, the next portion of the methodology involved: a) randomly selecting roadway segments in each roadway type and b) selecting specific sites within each segment. A file containing all roads in the state (including both state maintained and locally maintained) was used to randomly select roadway segments. The source of the road segment data was a Kentucky Transportation Cabinet (KYTC) file. This file is updated annually and contains data for all public roadways. No exclusions were made.
- The segments were divided into the three highway type categories, as previously noted. Segments were randomly selected (by highway type). The segment length (in terms of VMT) was factored into the selection process, with longer sections having a higher probability of selection than shorter sections. The number of randomly selected segments for each highway type category in each county was more than required (see Table 2.2) to compensate for segments where there were no appropriate data collection sites.
- The randomly selected segments were inspected either remotely, using online imagery, or through a site visit. The necessary numbers of data collection sites (shown in Table 2.2) were identified for each county and highway type (using the randomly selected segments). Site selection ensured that the observers could obtain data safely and effectively.
- Appendix A (Table A1) contains a list of the 150 data collection sites. The county and road name or number are given along with a reference to locate the observation site. The highway where the data is to be collected is identified. Each site's VMT and the county VMT are given. The probability of selection for each site is provided.
- At least one alternative site was identified for each highway type in each county in the event data could not be obtained at one of the identified sites. If a site was unavailable for a substantial period of time (i.e. construction work), the alternative site was used. To remain consistent, the alternate site would replace the discarded site in future surveys. This has occurred with one location, site 111, throughout the past five years of using these sites. Potential alternative sites are listed in Table A2 of Appendix A.
- Appendix B provides a map of site locations by highway type.
- The number of approaches (by direction of travel) and lanes on the approaches on the specified road were identified at each site. The approach and lane used to collect data were randomly selected.
- Data collectors were positioned at a location to ensure their safety while collecting data.

2.4 Data Collection Procedure

- Observation times for the 150 sites were randomly assigned, with consideration of grouping sites in counties. Sites in relatively close proximity to one another were designated data collection clusters. The first site within each cluster was assigned a random day and time for completion. Next, all other sites within a cluster were assigned a random time on the same day to maximize efficiency (and minimize time and travel costs).
- Data were collected for one hour at each site with either one or two data collectors (depending on the number of directions of travel included). One hour was required if the data were gathered by one data collector in one direction of travel, whereas one half hour was needed if there were two data collectors in separate directions of travel. There is a reasonable assumption that, for sites where one observer is used, the observed vehicles in one direction on a specific route in one hour will equal the number of vehicles on both directions on that route in a half hour. Sites requiring only one observer are low-volume roads or T-intersections. On roads with higher traffic volumes, an equal distribution of traffic flow in each direction cannot be assumed; therefore, two observers were used, with one observing each direction. The use of a variable observation period (as described) does not affect the probability of selection.

- Data collection was scheduled to occur between June 1 and August 12. Data collection guidelines stated that data would be collected between 7 am and 6 pm on weekdays. The schedule included rush hour and non-rush hour observations. Start times were staggered to ensure the surveys captured a representative number of sites for each day of the week and time of day.
- Data were collected through direct observation. Appendix C contains the form used to collect and record data. Data were collected using paper forms. The form allows data collectors to record information such as the site number and the date and time of data collection. For drivers and front seat passengers, the categories are:
 1. safety belt used (shoulder belt is in front of shoulder),
 2. safety belt not used (shoulder belt not in front of shoulder), and
 3. unknown (cannot be determined if belt is used).

The presence or absence of a passenger in the right front seat is shown by comparing the total number of drivers and passengers in the sample size. Observation for any right seat passenger was obtained for all vehicles. The number of vehicles at a site with only a driver can be calculated by subtracting the total number of front seat passengers from the total number of vehicles observed. The ratio of the total number of recorded unknown values of belt use to the total number of drivers and passengers observed must not exceed 10 percent. Additional data were collected if the nonresponse threshold was surpassed.

- The following vehicle types (both in-state and out-of-state vehicles) were included in the data collection:
 1. Passenger car (PC)
 2. Pickup (PU)
 3. Van
 4. Sport utility vehicle (SUV)
- Before starting data collection, data collectors were provided training on the data collection procedure. The classroom training included:
 1. An overview of the project
 2. Description of the data collection form and procedure
 3. Scheduling procedures
 4. Identification of survey sites (and alternatives)
 5. Data input

After the classroom portion of the training, the data collectors conducted trial surveys at locations representative of the three roadway types included in the survey. The project manager was present during these trial surveys to provide guidance. The trial survey results were evaluated to ensure that the data collectors provided consistent and accurate data.

- Times and locations were assigned, with data collected using the previously described form. Drivers received no indication that the data collectors were conducting a safety belt survey. For high volume locations, randomized selection was achieved by recording data for the next vehicle in view after recording the previous data. At low volume locations, data for the driver and outboard front seat passenger were obtained for all vehicles so there was no need for a random selection. For each vehicle, the usage for the driver and any outboard front seat passenger was noted. At intersections, data were collected for vehicles either stopped or moving slowly. At overpasses on limited access highways, an observation position was chosen to allow for an unobstructed view of the vehicle's front seat.

- A quality control monitor conducted random, unannounced visits to collect data at ten of the data collection sites. There were four data collectors and one quality control monitor. The objective was that data were compared for at least two sites for each data collector.

2.5 Usage Rate Calculations

The following paragraphs summarize the calculation used to estimate the statewide seat belt usage rate. Seat belt usage rates were calculated using formulas based on the proportion of the state's total vehicle miles traveled (VMT) represented by the site. The seat belt usage rate calculations followed a four-step process.

- First, estimated rates were calculated for each of the road strata within each county. Observed usage rates for all of the sites within each stratum-county combination were combined through simple averaging, as shown in the following formula (1). (Since the sites' original probability of being included in the sample was proportional to their VMT, averaging their usage rates makes use of that sampling probability to reflect their different VMTs).

$$p_{i(j)k} = \sum_{l=1}^{n_{i(j)k}} p_{i(j)kl} / n_{i(j)k} \quad (\text{Eq.1})$$

where $i(j)$ = county i within category j (category 1 = one randomly selected county, category 2 = the two districts in which one county was random and one county was forced, and category 3 = two randomly selected counties); k = road functional class stratum; l = site within stratum and county; $n_{i(j)k}$ = number of sites within the stratum-county combination; and $p_{i(j)kl}$ = the observed seat belt use rate at site $i(j)kl$ = $B_{i(j)kl} / O_{i(j)kl}$ (where $B_{i(j)kl}$ = total number of belted occupants (drivers and outboard front-seat passengers) observed at the site and $O_{i(j)kl}$ = total number of occupants (excluding unknown usage) whose belt use was observed at the site).

- Second, a county-by-county seat belt use rate, $p_{i(j)}$, was obtained by combining county-stratum seat belt use rates across strata within counties. These were weighted by the class's relative contribution to total county VMT:

$$p_{i(j)} = \frac{\sum_k VMT_{i(j)k} p_{i(j)k}}{\sum_k VMT_{i(j)k}} \quad (\text{Eq. 2})$$

where $VMT_{i(j)k}$ = VMT of all roads in stratum k in county $i(j)$, and $p_{i(j)k}$ = seat belt use rate for stratum k in county $i(j)$.

- In the third step, category-weighted seat belt use rates were obtained by combining and weighting the rates from the sampled counties in each category by their VMT values and probabilities of being selected:

$$p_{i(j)} = \frac{\sum_i VMT_{i(j)} W_{i(j)} p_{i(j)}}{\sum_k VMT_{i(j)} W_{i(j)}} \quad (\text{Eq. 3})$$

where $VMT_{i(j)}$ = total VMT for county i in category j and $W_{i(j)}$ = the inverse of the probability of the county's selection: where j is one of the three following categories:

One county randomly selected from district (j = 1)

Highway Districts 1,2,3,4,8,9,10,11, and 12

$$W_{i(1)} = \frac{\sum_{L=1}^{x_m} VMT_{L(1)}}{VMT_{i(1)}} \quad (\text{Eq. 4})$$

where m = county i 's district, x_m = the number of counties in District m , L is the L^{th} county in District m , $VMT_{L(1)}$ = the VMT in county L , $VMT_{i(1)}$ = the VMT in county i .

One county randomly selected from district and one county certainly selected (j = 2)

Highway Districts 5 and 7

$$W_{i(2)} = \frac{\sum_{L=1}^{y_m} VMT_{L(2)}}{VMT_{i(2)}} \quad (\text{Eq. 5})$$

where m = county i 's district, y_m = the number of counties in district m excluding the certain county, L is the L^{th} county in district m , $VMT_{L(2)}$ = the VMT in county L , $VMT_{i(2)}$ = the VMT in county i .

Or for certainty counties:

$$W_{i(2)} = 1$$

Two counties randomly selected from district ($j = 3$)

Highway District 6 only

$$W_{i(3)} = \frac{\sum_{L=1}^{11} VMT_{L(3)}}{2 \times VMT_{i(3)}} \quad (\text{Eq. 6})$$

where L is the L^{th} county in District 6, $VMT_{L(3)}$ = the VMT in county L , $VMT_{i(3)}$ = the VMT in county i .

Finally, the statewide belt use proportion was calculated by combining the category proportions weighted by their proportion of statewide VMT:

$$p = \frac{\sum_{j=1}^3 VMT_j p_j}{\sum_{j=1}^3 VMT_j} \quad (\text{Eq. 7})$$

The result is a combination of the individual site seat belt usage rates weighted to reflect each site's importance in the total state VMT.

Estimates of subgroups of occupants, such as drivers or passengers and vehicle type (passenger car, pickup, etc.) were calculated using the same procedure.

2.6 Nonresponsive Judgement

- Based on data collection protocol and past experience, including the provision for using alternate observation sites, road segments with non-zero eligible volume and zero observations conducted should not occur. Nevertheless, if eligible vehicles passed an eligible site or an alternate eligible site during the observation time, but no usable data were collected for some reason, this site would be considered a non-responding site. The weight for a non-responding site was distributed over other sites in the same road type in the same primary sampling unit (PSU).

Let:

$$\pi_{gchi} = \pi_{gc} \pi_{hi|gc}$$

be the road segment selection probability, and

$$w_{gchi} = \frac{1}{\pi_{gchi}}$$

be the road segment weight.

The non-responding site nonresponse adjustment factor:

$$f_{gch} = \frac{\sum_{all\ i} W_{gchi}}{\sum_{responding\ i} W_{gchi}}$$

would be multiplied to all weights of non-missing road segments in the same road type of the same county, and the missing road segments would be dropped from the analysis file. However, if there were no vehicles passing the site during the selected observation time (60 minutes) this was treated as an empty block at this site. Accordingly, the site would not be considered as a non-responding site and would not require non-response adjustment.

2.7 Imputation

No imputation was done on missing data.

2.8 Standard Error Calculation

- The standard error of the overall seat belt use rate was calculated using the following procedure. Standard error of estimate values was estimated through a delete-1 jackknife approach, based on the general formula:

$$\hat{\sigma}_{\hat{p}} = \left[\frac{n-1}{n} \sum_{(i)=1}^n (\hat{p}_{(i)} - \hat{p})^2 \right]^{1/2} \quad (\text{Eq. 8})$$

where $\hat{\sigma}_{\hat{p}}$ = standard deviation (standard error) of the estimated statewide seat belt use proportion \hat{p} (equivalent to p in the notation of formulas 1-3; n = the number of sites (i.e., 150); and $\hat{p}_{(i)}$ = the estimated statewide belt use proportion with site i excluded from the calculation.

The relative error rate, i.e., $\hat{\sigma}_{\hat{p}}/\hat{p}$, was also calculated, as well as the approximate 95% confidence interval, i.e., $\hat{p} \pm 1.96\hat{\sigma}_{\hat{p}}$. These values were reported for the overall statewide seatbelt usage rate.

Chapter 3 Survey Results

- Table 3.1 summarizes usage rates for all front seat occupants (drivers and passengers) for the various types of highways and road classifications. The overall statewide usage rate in 2022, using the data collected at 150 sites and the described weighting procedure, was 86.72 percent.
- The true overall safety belt usage rate in Kentucky for 2022 is between 85.74 percent and 87.70 percent, with 95 percent confidence. This includes a standard error of 0.5 percent and a margin of error of 0.98 percent.
- This year’s data reflects a 3.06 percent decrease compared to 89.78 percent last year.
- The sample size of all front seat occupants was 66,023. This is about the same as last year’s sample size, but still much lower than pre-pandemic traffic levels. (For reference, the 2021 sample size was a third smaller than 2019’s sample size.)
- The statewide rate for drivers was 86.3 percent while the rate for front seat passenger was 89.2 percent.

Table 3.1 Usage Rate for Front-Seat Occupants (By Road Class)

ROAD CLASSIFICATION	PERCENT USAGE BY TYPE		
	DRIVERS	PASSENGERS	ALL
Limited Access	90.6	93.7	91.2
Arterials	85.1	87.3	85.4
Locals	83.2	87.0	83.7
All	86.3	89.2	86.7

- Appendices D and E provide summaries of the data collected (by site). For each site, the usage rate and sample size are given for all front seat occupants, drivers, and front seat passengers. The relative error and confidence interval are given for the “all front seat occupants” category. The percent unknown is given for each site. Also, the site type (original or alternate), date observed, and site sample weight are provided.
- Usage rates ranged from 61.5 percent at a rural, local location in Boyle County to 97.6 percent on a limited access interstate in Barren County. (This range is much wider than in past years.) There were 40 sites that had a usage rate of 90 percent or more, with 29 on a limited access road, 7 on an arterial, and 4 on a local road.
- The highest unknown rate at any site was 10 percent. Of the 150 sites, 28 sites had unknown usage rates exceeding five percent. The average unknown rate from all sites is 3.2 percent.
- A substantial difference in usage rate (for all front seat occupants) was noted when vehicle type and road class were considered (see Table 3.2 on the following page). The rate varied by vehicle type— from a low of 73.2 percent for pickup trucks on local roads to a high of 94.2 percent for SUVs on limited access roads.
- Examining usage rates according to road class revealed that rates ranged from 83.7 percent on local roads to 91.2 percent on limited access highways.
- Passenger cars and pickups followed the usual trend of exhibiting the lowest usage rate on local roads and the highest rate on limited access highways. Meanwhile, vans and SUVs displayed slightly higher use on local roads than arterials, although unsurprisingly the highest usage rates were still seen on limited access highways.

- For each road classification, the lowest usage rate was for pickups. On limited access roads, pickup trucks were the only vehicle type to have an average usage rate less than 90 percent.

Table 3.2 Usage Rate for Front-Seat Occupants (By Road Class and Vehicle Type)

ROAD CLASSIFICATION	PERCENT USAGE BY VEHICLE TYPE				
	PC	PU	VAN	SUV	ALL
Limited Access	91.2	83.8	91.4	94.2	91.2
Arterials	85.9	77.5	87.2	88.5	85.4
Locals	85.8	73.2	88.8	88.7	83.7
All	87.6	78.3	88.9	90.3	86.7

PC – Passenger Car; PU – Pickup; VAN – Van; SUV – Sport Utility Vehicle

- Table 3.3 summarizes usage rate by county. The rate varied from a high of 91.5 percent in Kenton County to a low of 78.9 percent in Boyle County.
- The rate exceeded 90 percent in two counties: Kenton and Fayette. The third county containing an urban center, Jefferson County, did not reach 90 percent this year.
- The three lowest usage rates were seen in Boyle County (78.9 percent), Bath County (79.4 percent), and Floyd County (80.4 percent.) Last time this survey was performed, the three lowest performers were Harrison, Boyle, and Pulaski counties. The 2022 survey reflects the first time in four years that any county has had a usage rate less than 80 percent.
- Fourteen out of fifteen counties had a lower usage rate this year than last year. The two largest decreases were Bath County (8 percent) and Floyd County (7.1 percent.) The only county that increased its usage rate was Calloway by 0.4 percent.
- Of 150 individual sites, 112 sites exhibited a lower usage rate this year compared to last year while 38 exhibited a higher usage rate this year.
- The largest individual site usage rate decrease was 22 percent at an interstate in Bath county (93.3 percent in 2021 compared to 71.6 percent in 2022.) Notably, the sample size at this site also decreased by a large amount (a sample size of 496 in 2021 compared to a sample size of 197 in 2022.)
- The largest individual site usage rate increase was 11 percent at a local road in Harrison county (74.0 percent in 2021 compared to 84.6 percent in 2022.) Here the sample size between the two years was equivalent.

Table 3.3 Usage Rate for Front-Seat Occupants (By County)

COUNTY	PERCENT USAGE BY TYPE		
	DRIVERS	PASSENGERS	ALL
BARREN	83.1	89.3	84.4
BATH	78.8	81.2	79.4
POWELL	81.3	79.0	81.1
SPENCER	82.0	88.3	82.9
FAYETTE	89.5	93.8	90.2
JEFFERSON	87.6	89.8	87.9
KENTON	91.5	92.2	91.5
LAUREL	87.0	90.5	87.9
PULASKI	81.4	84.7	82.0
BOYLE	78.7	80.3	78.9
CALLOWAY	87.2	90.9	87.7
FLOYD	80.0	84.5	80.4
HARRISON	82.8	85.4	83.4
HENDERSON	86.7	92.0	87.6
NELSON	83.0	87.1	83.5
All	86.3	89.2	86.7

- Usage rates by county and vehicle type are presented in Table 3.4. These rates ranged from a high of 97.3 percent for vans in Harrison County to a low of 67.9 percent for pickup trucks in Powell County.
- Historically, SUVs have the highest usage rate and pickup trucks have the lowest usage rate. The usage rate for pickup trucks was less than 80 percent in nine counties.

Table 3.4 Usage Rate For Front-Seat Occupants (By County And Vehicle Type)

COUNTY	PERCENT USAGE BY VEHICLE TYPE				
	PC	PU	VAN	SUV	ALL
BARREN	87.2	73.9	90.3	91.6	84.4
BATH	80.0	69.3	81.6	87.1	79.4
POWELL	86.0	67.9	84.3	85.2	81.1
SPENCER	89.0	72.6	82.2	84.3	82.9
FAYETTE	89.9	81.0	93.1	92.9	90.2
JEFFERSON	87.3	80.9	88.1	91.1	87.9
KENTON	92.9	84.0	91.0	93.5	91.5
LAUREL	88.9	80.2	90.1	90.9	87.9
PULASKI	86.1	70.1	84.6	88.4	82.0
BOYLE	79.1	69.9	86.4	84.3	78.9
CALLOWAY	92.0	80.4	89.5	89.9	87.7
FLOYD	81.6	72.3	87.7	84.6	80.4
HARRISON	90.1	70.4	97.3	89.5	83.4
HENDERSON	89.7	82.2	92.0	89.3	87.6
NELSON	87.2	70.7	85.6	89.7	83.5
All	87.6	78.3	88.9	90.3	86.7

- While the data collection procedure has changed several times, 2022 usage rates can still be judiciously compared to the statewide rates from past years, which are shown in Table 3.5. Statewide rates have dramatically increased from four percent in 1982 to just under 90 percent in 2021. The 2022 usage rates present a startling shift that includes an overall decrease of about 3 percent and a decrease in drivers' usage by about 4 percent. This marks the first significant decrease (greater than 1 percent) in usage since 1996-1997 and the largest decrease since 1994-1995.

Table 3.5 Trend In Statewide Usage Rates

PERCENT USING SAFETY BELTS			
YEAR	ALL FRONT SEAT OCCUPANTS	DRIVERS	CHILDREN UNDER FOUR YEARS OF AGE*
1982	**	4	15
1983	**	6	24
1984	**	7	30
1985	9	9	29
1986	13	13	30
1988	20	21	48
1989	25	26	49
1990	33	32	57
1991	39	39	57
1992	40	41	62
1993	42	42	61
1994	58	58	72
1995	54	54	66
1996	55	55	79
1997	54	54	82
1998	54	54	80
1999	59	59	89
2000	60	60	87
2001	62	62	89
2002	62	62	93
2003	66	65	95
2004	66	66	96
2005	67	67	94
2006	67	68	94
2007	72	72	98
2008	73	74	98
2009	80	80	99
2010	80	81	96
2011	82	83	97
2012	84	84	98
2013	85	85	**
2014	86	87	**
2015	87	87	**
2016	87	87	**
2017	87	87	**
2018	90	90	**
2019	90	90	**
2020	90	90	**
2021	90	90	**
2022	87	86	**

*Children using either safety seat or safety belt. Children seated in front or rear seat.

**Data not obtained.

- Survey locations have often changed due to modifications of the data collection procedure (in 1990, 1999, 2009, 2013, and 2018). In order to provide a consistent baseline by which to evaluate the data, mini-surveys have been performed in tandem with the main one. For the past several years, mini-surveys have collected data at 21 sites (selected from the 200 sites for the survey first used prior to the change in sites made in 2009). The 21 sites represented seven road functional classifications and three regions of the state.

This mini-survey was conducted in 2022 to enable a comparison of identical sites over an extended number of years. Appendix F contains the results for the mini-survey sites for the last ten years since 2012.

The usage rate at the mini-survey locations in 2022 was 87.8 percent. This is a 2.6 percent decrease from 90.4 percent in 2021, which shows consistency with the official survey results. Usage rates increased at two locations, stayed the same at three locations, and decreased at sixteen locations.

Chapter 4 Conclusions and Recommendations

- The data show that the level of safety belt usage in 2022 (86.72 percent) decreased by 3.06 percent from 2021 (89.78 percent).
 - The highest usage rate since the surveys began was 89.99 percent in 2018, but seatbelt usage is now declining.
 - The 2020 coronavirus pandemic, along with related social shifts, has influenced many changes in traffic and driver behavior.¹ Researchers believe that seatbelt usage may be one such driver behavior that has been negatively affected.
 - Alternatively, the result of the 2022 survey may be an outlier or a demonstration of regression toward the mean. However, the decrease is substantial and the “mini” control sites also exhibited a large decrease compared to last year (-2.6 percent), which give credence to the survey results being an accurate reflection of statewide usage rates.
- A change in approach is needed if a continued rise in seatbelt usage is the state’s objective. Such changes may be focused on stronger enforcement of safety belt laws and/or increased education in targeted areas.
 - Safety belt usage varies by county and vehicle type. Focusing on this variability indicates locations where more emphasis would be beneficial.
 - Data shows that the lowest usage rates are for pickups. The exemption for safety belt use for occupants of farm vehicles should be changed. Education campaigns focused on pickup drivers in rural areas should be considered.
 - Modifying the driver point system so that a driver receives points when they are cited for failure to use a safety belt should be considered. This could aid enforcement.
 - Consideration should be given to increasing the dollar amount drivers are fined when cited for failure to wear a safety belt.

¹ Office of Behavioral Safety Research. (2021, October). Continuation of research on traffic safety during the COVID19 public health emergency: January – June 2021. (Report No. DOT HS 813 210). National Highway Traffic Safety Administration.

Appendix A Data Collection Sites

Table A1 Data Collection Sites

Site	County	Road Type	Road Surveyed	Reference	VMT	County VMT	Probability of Selection
1	Barren	Primary	I-65	KY-1339	38857	477600.6	0.081359
2	Barren	Primary	I-65	KY-70	146182.7	477600.6	0.306077
3	Barren	Primary	Louie B Nunn Pkwy	US-68	18850.49	477600.6	0.039469
4	Barren	Primary	Louie B Nunn Pkwy	KY-1519	33654.7	477600.6	0.070466
5	Barren	Secondary	US-31 E	US-31 E	2945.846	421277.7	0.006993
6	Barren	Secondary	US-31 E	U-Haul Dealer	2724.208	421277.7	0.006467
7	Barren	Secondary	US-31 E	Horton Rigdon Rd	3632.248	421277.7	0.008622
8	Barren	Local Road	Roseville Rd	Smith Cemetery Rd	707.8448	396904.5	0.001783
9	Barren	Local Road	S Dixie Hwy	Whitney Woods Dr	523.5719	396904.5	0.001319
10	Barren	Local Road	N Dixie Hwy	Caldwell St	1341.091	396904.5	0.003379
11	Bath	Primary	I-64	US 60 (Overpass)	57444.12	251211.4	0.228668
12	Bath	Primary	I-64	KY 36 (Overpass)	6152.065	251211.4	0.02449
13	Bath	Primary	I-64	Exit 123 (Ramp)	22634.75	251211.4	0.090102
14	Bath	Local Road	KY 11	Old Hwy 11	381.2956	35489.11	0.010744
15	Bath	Local Road	KY 36	KY 36	1892.102	132871.3	0.01424
16	Bath	Local Road	US-60	Wyoming Rd	521.6197	132871.3	0.003926
17	Boyle	Secondary	KY 34	Old Bridge Rd	5954.96	476737.5	0.012491
18	Boyle	Secondary	US-127	Lisa Ave	2842.602	476737.5	0.005963
19	Boyle	Secondary	US-127	Baughman Ave	1868.244	476737.5	0.003919
20	Boyle	Secondary	US-150 Bypass	N Stewarts Ln	4352.291	476737.5	0.009129
21	Boyle	Secondary	US-150	Beech St	5425.55	476737.5	0.011381
22	Boyle	Secondary	US-150 Bypass	Commerce St	1939.328	476737.5	0.004068
23	Boyle	Local Road	Simpson Ln	Old US 127	696.2081	157288.2	0.004426
24	Boyle	Local Road	W Shelby St	S Lucas St	1022.232	157288.2	0.006499
25	Calloway	Secondary	KY 80 E	KY 80	881.5246	380819.8	0.002315
26	Calloway	Secondary	KY 80 E	KY 80	844.1597	380819.8	0.002217
27	Calloway	Secondary	N 12 th St	Lowes Dr	8958.889	380819.8	0.023525

Site	County	Road Type	Road Surveyed	Reference	VMT	County VMT	Probability of Selection
28	Calloway	Secondary	US 641 N	Wild Rose Salon	8018.754	380819.8	0.021057
29	Calloway	Local Road	Sycamore St	S 11 th St	553.4066	304866.9	0.001815
30	Calloway	Local Road	KY 94 W	J W Williams Ln	713.2595	304866.9	0.00234
31	Calloway	Local Road	KY-121	Cook Store Trail	959.1452	304866.9	0.003146
32	Calloway	Local Road	Chestnut St	N Cherry St	533.9933	304866.9	0.001752
33	Fayette	Primary	I-64	KY-859 (Overpass)	184822.6	2801261	0.065978
34	Fayette	Primary	I-75	US-25 (Overpass)	295045.9	2801261	0.105326
35	Fayette	Primary	I-75	KY-353 (Overpass)	152458.1	2801261	0.054425
36	Fayette	Primary	I-75	US-25 (Overpass)	72503.3	2801261	0.025882
37	Fayette	Primary	I-75	KY-1973 (Overpass)	20751.79	2801261	0.007408
38	Fayette	Primary	KY-4	Development Dr (Overpass)	45217.08	2801261	0.016142
39	Fayette	Primary	KY-4	Alumni Dr (Overpass)	15101.73	2801261	0.005391
40	Fayette	Secondary	N Limestone	Rand Ave	636.2219	2753762	0.000231
41	Fayette	Secondary	Clays Mill Rd	Beth Ln	1504.999	2753762	0.000547
42	Fayette	Secondary	Man O' War Blvd	Lyon Dr	6489.488	2753762	0.002357
43	Fayette	Secondary	Mason Headley Rd	Tazewell Dr	835.5706	2753762	0.000303
44	Fayette	Secondary	KY-1974	Lansdowne Dr	1508.923	2753762	0.000548
45	Fayette	Secondary	KY-1974	Albany Rd	1988.996	2753762	0.000722
46	Fayette	Secondary	US-68	KY-3367	10162.61	2753762	0.00369
47	Fayette	Local Road	Greendale Rd	US-421	3279.075	1039477	0.003155
48	Fayette	Local Road	Armstrong Mill Rd	Kenesaw Dr	2690.47	1039477	0.002588
49	Floyd	Secondary	KY-80	Judge Dr	4185.767	683760.4	0.006122
50	Floyd	Secondary	KY-80	CR 1224	5679.145	683760.4	0.008306
51	Floyd	Secondary	KY-23	School St	3715.89	683760.4	0.005434
52	Floyd	Secondary	KY-23	Branhams Ct	3909.545	683760.4	0.005718
53	Floyd	Secondary	KY-23	KY-1428	14347.53	683760.4	0.020983
54	Floyd	Local Road	KY-680	Tackett Branch Rd	217.2425	404708.6	0.000537
55	Floyd	Local Road	KY-680	KY-979	2328.031	404708.6	0.005752

Site	County	Road Type	Road Surveyed	Reference	VMT	County VMT	Probability of Selection
56	Floyd	Local Road	KY-1428	Old Abbott Mountain Rd	1307.28	404708.6	0.00323
57	Harrison	Secondary	KY 36 E	Culpepper Dr	2035.088	199062.2	0.010223
58	Harrison	Secondary	KY 36 W	Hendricks Ln	3361.698	199062.2	0.016888
59	Harrison	Secondary	US 62 W	Grays Run Pike	1895.136	199062.2	0.00952
60	Harrison	Secondary	US 62 W	Wornall Ln	7878.791	199062.2	0.03958
61	Harrison	Local Road	N Church St	Reynolds Ave	185.1159	111386.8	0.001662
62	Harrison	Local Road	KY 32 W	Lowery Ln	551.3195	111386.8	0.00495
63	Henderson	Primary	Audubon Pkwy	KY-812 (Overpass)	33451.1	357914.7	0.093461
64	Henderson	Primary	Audubon Pkwy	Alves Ferry Rd (Overpass)	17474.66	357914.7	0.048824
65	Henderson	Primary	I-69	KY-425 (Overpass)	7824.502	357914.7	0.021861
66	Henderson	Secondary	KY-812	Sam Ball Way	2326.645	635720.2	0.00366
67	Henderson	Secondary	US-41 N	Race Track Rd	3856.102	635720.2	0.006066
68	Henderson	Secondary	US-60 W	6 th St	851.616	635720.2	0.00134
69	Henderson	Secondary	US-60 W	Corydon Geneva Rd	6896.596	635720.2	0.010848
70	Henderson	Secondary	US-60 E	KY-414	1847.159	635720.2	0.002906
71	Henderson	Local Road	South Water St	Dixon St	37.64173	222327.8	0.000169
72	Henderson	Local Road	KY-136 W	KY-266	1328.322	222327.8	0.005975
73	Jefferson	Primary	I-265	Greyling Dr (Overpass)	151548.4	8654640	0.01751
74	Jefferson	Primary	I-64	Payne St (Overpass)	37213.4	8654640	0.0043
75	Jefferson	Primary	I-64	Oxmoor Ave (Overpass)	88248.92	8654640	0.010197
76	Jefferson	Primary	I-64	Gilliland Rd (Overpass)	251990.6	8654640	0.029116
77	Jefferson	Primary	I-65	South Park Rd (Overpass)	220316.3	8654640	0.025456
78	Jefferson	Primary	I-65	Hindman Richardson Connector(Overpass)	51133.08	8654640	0.005908
79	Jefferson	Primary	I-264	KY-1703 (Overpass)	88238.47	8654640	0.010196
80	Jefferson	Primary	I-264	KY-1932 (Overpass)	64826.25	8654640	0.00749
81	Jefferson	Primary	I-264	US 42 (Overpass)	13745.03	8654640	0.001588
82	Jefferson	Primary	I-265	Old Heady Rd (Overpass)	182342.9	8654640	0.021069

Site	County	Road Type	Road Surveyed	Reference	VMT	County VMT	Probability of Selection
83	Jefferson	Secondary	Lower Hunters Trace	Upper Hunters Trace	2054.958	6831427	0.000301
84	Jefferson	Secondary	Six Mile Ln	KY-1747	1796.249	6831427	0.000263
85	Jefferson	Secondary	KY-1703	Tartan Way	4800.577	6831427	0.000703
86	Jefferson	Secondary	KY-1819	Mary Dell Ln	3609.67	6831427	0.000528
87	Jefferson	Secondary	KY-2052	Rangeland Rd	10117	6831427	0.001481
88	Jefferson	Secondary	US-31 W	KY-44	9369.713	6831427	0.001372
89	Jefferson	Secondary	US-60	Ten Pin Ln	3530.199	6831427	0.000517
90	Jefferson	Secondary	US-150	KY-61	2075.091	6831427	0.000304
91	Jefferson	Local Road	St Matthews Ave	Westport Rd	1260.388	1658821	0.00076
92	Jefferson	Local Road	Furman Blvd	Hikes Ln	567.0951	1658821	0.000342
93	Kenton	Primary	I-75	Eads Rd (Overpass)	164573.8	2192346	0.075067
94	Kenton	Primary	I-75	KY 18 (Overpass)	87747.62	2192346	0.040025
95	Kenton	Primary	I-75	KY-1072 (Overpass)	135206	2192346	0.061672
96	Kenton	Primary	I-75	KY-371 (Overpass)	51533.66	2192346	0.023506
97	Kenton	Primary	I-75	US-25 (Overpass)	50514.12	2192346	0.023041
98	Kenton	Primary	I-275	Taylor Mill Rd (Overpass)	69352.61	2192346	0.031634
99	Kenton	Primary	I-275	KY-1303 (Overpass)	117457.1	2192346	0.053576
100	Kenton	Primary	I-275	Hulbert Ave (Overpass)	59111.16	2192346	0.0269
101	Kenton	Secondary	KY-16	Mills Rd	1150.857	788788.6	0.001459
102	Kenton	Secondary	US-25	Highland Ave	625.4784	788788.6	0.000793
103	Kenton	Secondary	US-25	KY-1072	2819.103	788788.6	0.003574
104	Kenton	Local Road	Fowler Creek Rd	Cox Rd	559.5268	756715.5	0.000739
105	Kenton	Local Road	Chancellor Dr	Thomas More Pkwy	185.4616	756715.5	0.000245
106	Kenton	Local Road	Madison Pike	Spinning Wheel Tavern	3715.925	756715.5	0.004911
107	Laurel	Primary	I-75	Keavy Rd	30390.94	996953.2	0.030484
108	Laurel	Primary	I-75	E State Hwy 552	107019.1	996953.2	0.107346
109	Laurel	Primary	I-75	KY-192	194457.1	996953.2	0.195051
110	Laurel	Primary	I-75	West Hal Rogers Pkwy	107576.6	996953.2	0.107905

Site	County	Road Type	Road Surveyed	Reference	VMT	County VMT	Probability of Selection
111	Laurel	Primary	I-75	N Laurel Rd	151318.8	996953.2	0.151781
112	Laurel	Secondary	Hal Rogers Pkwy	KY-192	1360.117	691207	0.001968
113	Laurel	Secondary	Russell Dyche Memorial Hwy	Warren Grove Rd	6930.687	691207	0.010027
114	Laurel	Secondary	S US Highway 25	Victory Community Church of Corbin	2537.49	691207	0.003671
115	Laurel	Secondary	S US Highway 25	Fariston Rd	4188.784	691207	0.00606
116	Laurel	Local Road	W Laurel Rd	Dogwood Trail	3835.293	602346.1	0.006367
117	Laurel	Local Road	Keavy Rd	Maple Grove School Rd	1805.773	602346.1	0.002998
118	Laurel	Local Road	Cherry Ave	Super Car Wash Center	758.6308	602346.1	0.001259
119	Nelson	Primary	Martha Layne Collins-Bluegrass Pkwy	KY-55	18157.02	328794.7	0.055223
120	Nelson	Primary	Martha Layne Collins-Bluegrass Pkwy	Old Tunnel Mill Rd	7256.396	328794.7	0.02207
121	Nelson	Secondary	John Rowan Blvd	Ben Frye Ave	17263.3	529677.9	0.032592
122	Nelson	Secondary	New Shepherdsville Rd	Samuels Loop	13839.07	529677.9	0.026127
123	Nelson	Secondary	New Haven Rd	Culverton Schoolhouse Rd	4899.541	529677.9	0.00925
124	Nelson	Secondary	North Third St	E Stephen Foster Ave (Roundabout)	859.8554	529677.9	0.001623
125	Nelson	Local Road	Stonehouse Rd	Stonefield Way	194.1612	290779	0.000668
126	Nelson	Local Road	Woodlawn Rd	CR-1522	382.3636	290779	0.001315
127	Powell	Primary	Bert T Combs-Mountain Pkwy	KY 15 (Overpass)	25115.68	229383.7	0.109492
128	Powell	Primary	Bert T Combs-Mountain Pkwy	Campton Rd	19471.23	229383.7	0.084885
129	Powell	Primary	Bert T Combs-Mountain Pkwy	Campton Rd	8309.661	229383.7	0.036226
130	Powell	Secondary	Stanton Rd	Hatton Creek Rd	5381.654	60491.68	0.088965
131	Powell	Local Road	E College Ave	Ewen St	1097.355	110751.3	0.009908
132	Powell	Local Road	Irvine Rd	Powell Rd	630.0167	110751.3	0.005689
133	Pulaski	Primary	Louie B Nunn Pkwy	KY-914	25871.91	107180.1	0.241387

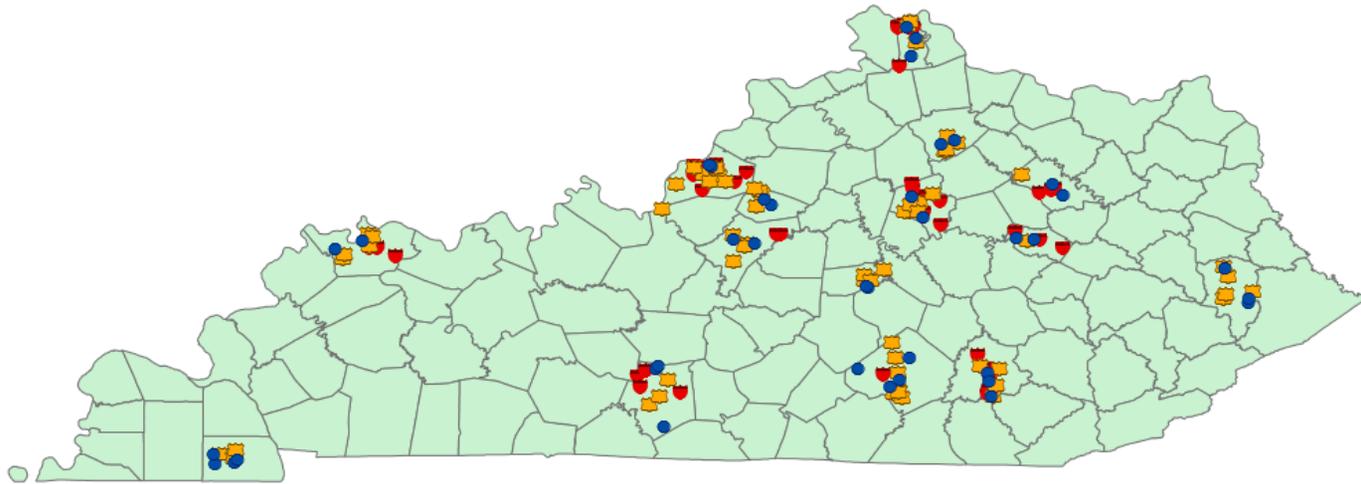
Site	County	Road Type	Road Surveyed	Reference	VMT	County VMT	Probability of Selection
134	Pulaski	Secondary	KY-80	N Main St	2310.472	965178.5	0.002394
135	Pulaski	Secondary	KY-90	Old Hwy 90 Loop 2 Rd	1069.956	965178.5	0.001109
136	Pulaski	Secondary	KY-1247	George Harrison Rd	1815.616	965178.5	0.001881
137	Pulaski	Secondary	US-27	CR-1281J	1677.529	965178.5	0.001738
138	Pulaski	Secondary	US-27	KY-1247	5074.869	965178.5	0.005258
139	Pulaski	Secondary	US-27	W Langdon Rd	2531.783	965178.5	0.002623
140	Pulaski	Secondary	US-27	Rosemill Ln	1869.944	965178.5	0.001937
141	Pulaski	Local Road	McKee Rd	US-27	215.2236	537857.5	0.0004
142	Pulaski	Local Road	E. Washington Dr	US-27	544.8866	537857.5	0.001013
143	Pulaski	Local Road	KY-39	KY-635	1288.44	537857.5	0.002396
144	Pulaski	Local Road	KY-80	Cains Store Cemetery Road	1405.139	537857.5	0.002612
145	Spencer	Secondary	Mt. Washington Rd	Hardesty Ridge Rd	1398.627	171667.3	0.008147
146	Spencer	Secondary	Taylorsville Rd	Ashland Meadows Dr	4734.463	171667.3	0.027579
147	Spencer	Secondary	Taylorsville Rd	Goebel Rd	540.6374	171667.3	0.003149
148	Spencer	Secondary	Taylorsville Rd	Hochstrasser Ln	10644.4	171667.3	0.062006
149	Spencer	Local Road	Little Mount Rd	KY-3200	1446.822	118189.7	0.012242
150	Spencer	Local Road	Elk Creek Rd	Essex Way	198.7898	118189.7	0.001682

Table A2 Alternate Data Collection Sites

Site	Road Class	County	Road Surveyed	Reference
151	Primary	Barren	Cumberland Pkwy	E Main St (Overpass)
152	Secondary	Barren	Scottsville Rd	W Mathews Mill Rd
153	Local Road	Barren	Mammoth Cave Rd	Harper's Ridgetop Market
154	Primary	Bath	I-64	Break in Hwy
155	Secondary	Bath	KY-11	KY-1198
156	Local Road	Bath	KY-1198	KY-11
157	Secondary	Boyle	E Lexington Ave	Bowlarama Lanes
158	Local Road	Boyle	Shakertown Rd	Coffee Tree Dr
159	Secondary	Calloway	Main St	N 13 th St
160	Local Road	Calloway	Pottertown Rd	KY-94
161	Primary	Fayette	W New Circle Rd	Old Frankfort Pike (Overpass)
162	Secondary	Fayette	Clays Mill Rd	Fairfield Dr
163	Local Road	Fayette	Greendale Rd	Buck Ln
164	Secondary	Floyd	US-23	Rose Dr
165	Local Road	Floyd	KY-122	Rite Aid
166	Secondary	Harrison	KY Highway 36 W	US-27 C
167	Local Road	Harrison	E Bridge St	Webster Ave
168	Primary	Henderson	I-69	KY-416
169	Secondary	Henderson	US-41 North	Thorntons Gas
170	Local Road	Henderson	KY-416 W	2 nd St
171	Primary	Jefferson	Gene Snyder Freeway	Greyling Dr
172	Secondary	Jefferson	Blue Lick Rd	Ripple Creek Dr
173	Local Road	Jefferson	Central Ave	Lindbergh Dr
174	Primary	Kenton	I-75	Kyles Ln
175	Secondary	Kenton	Commonwealth Ave	Elm St
176	Local Road	Kenton	Fowler Creek Rd	Cox Rd
177	Primary	Laurel	I-75	KY-909 (Overpass)
178	Secondary	Laurel	N Main St	W 5 th St
179	Local Road	Laurel	N Laurel Rd	KY-3434
180	Primary	Nelson	Bluegrass Pkwy	US-31 E (Overpass)
181	Secondary	Nelson	New Shepherdsville Rd	KY-221
182	Local Road	Nelson	Solitude Rd	US-31 E
183	Primary	Powell	Bert Combs Mtn Pkwy	KY-1184 (Overpass)
184	Secondary	Powell	W College Ave	CR-1264
185	Local Road	Powell	11 th St	10 th Ave
186	Primary	Pulaski	Cumberland Pkwy	KY-80 (Overpass)
187	Secondary	Pulaski	Main St	E French Ave
188	Local Road	Pulaski	KY-192	Grundy Rd
189	Secondary	Spencer	Taylorsville Rd	Little Mt Rd
190	Local Road	Spencer	Bloomfield Rd	KY-1066

Appendix B Data Collection Site Map

Sites by Road Class



Seatbelt Sites

Road Class

-  Primary
-  Secondary
-  Local



Appendix C Data Collection Form

SAFETY BELT DATA COLLECTION FORM

Date: _____ Starting Time: _____ Ending Time: _____ Int #: _____

Location: _____ Sheet #: _____

Observer: _____ Comment: _____

DRIVER USAGE

Vehicle	Safety Belt	None	Unknown
PC			
PU			
VAN			
SUV			

FRONT-SEAT OCCUPANT USAGE (OVER 3 YEARS OF AGE)

Vehicle	Safety Belt	None	Unknown
PC			
PU			
VAN			
SUV			

Yes:

Total:

Percent usage:

Appendix D Summary of Data (by Site)

Table D1 Summary of Data

Location Number	ALL FRONT SEAT OCCUPANTS					CATEGORY			
	Sample	Percent Usage	Relative Error*	Margin of Error*	Percent Unknown	DRIVERS		FRONT SEAT PASSENGERS	
						Sample	Percent Usage	Sample	Percent Usage
1	558	89.2	1.5	2.6	3.1	489	88.5	69	94.2
2	663	97.6	0.6	1.2	2.1	465	96.8	198	99.5
3	239	88.3	2.4	4.1	5.9	211	87.2	28	96.4
4	223	90.1	2.2	3.9	3.5	168	91.7	55	85.5
5	320	82.5	2.6	4.2	5	250	80.4	70	90
6	319	81.5	2.7	4.3	3.3	292	82.2	27	74.1
7	268	81	3	4.7	6	209	77.5	59	93.2
8	51	72.5	8.6	12.2	8.9	39	69.2	12	83.3
9	248	81.9	3	4.8	4.6	216	81.5	32	84.4
10	200	83	3.2	5.2	2.9	160	80	40	95
11	408	89.7	1.7	2.9	2.9	308	89.6	100	90
12	439	89.1	1.7	2.9	1.8	336	87.8	103	93.2
13	197	71.6	4.5	6.3	6.6	163	71.2	34	73.5
14	150	76.7	4.5	6.8	2	120	75.8	30	80
15	98	79.6	5.1	8	6.7	79	79.7	19	78.9
16	146	65.1	6.1	7.7	3.9	115	64.3	31	67.7
17	303	87.5	2.2	3.7	5.6	252	86.9	51	90.2
18	503	79.7	2.2	3.5	1.6	439	79	64	84.4
19	559	81	2	3.2	2.6	460	80.9	99	81.8
20	456	85.5	1.9	3.2	2.4	372	85.5	84	85.7
21	285	85.6	2.4	4.1	3.4	234	85.5	51	86.3
22	453	85.2	2	3.3	3.4	364	84.1	89	89.9
23	105	64.8	7.2	9.1	9.5	81	66.7	24	58.3
24	148	61.5	6.5	7.8	2	125	60.8	23	65.2
25	158	82.9	3.6	5.9	3.1	140	82.9	18	83.3

Location Number	ALL FRONT SEAT OCCUPANTS					CATEGORY			
	Sample	Percent Usage	Relative Error*	Margin of Error*	Percent Unknown	DRIVERS		FRONT SEAT PASSENGERS	
						Sample	Percent Usage	Sample	Percent Usage
26	142	89.4	2.9	5.1	5.3	124	88.7	18	94.4
27	516	90.1	1.5	2.6	2.3	451	89.6	65	93.8
28	267	86.9	2.4	4	4	234	86.3	33	90.9
29	289	86.2	2.4	4	3	258	85.7	31	90.3
30	92	89.1	3.6	6.4	3.2	76	88.2	16	93.8
31	129	91.5	2.7	4.8	6.5	100	91	29	93.1
32	346	86.1	2.2	3.6	2.5	290	85.9	56	87.5
33	615	92.8	1.1	2	2.1	480	91	135	99.3
34	909	93.1	0.9	1.7	1.1	760	92	149	98.7
35	1031	92.9	0.9	1.6	1.3	869	92.2	162	96.9
36	1297	93.1	0.8	1.4	1.2	1073	92.1	224	97.8
37	981	94.8	0.7	1.4	1.3	673	93.5	308	97.7
38	764	90.2	1.2	2.1	2.2	715	89.9	49	93.9
39	740	89.7	1.2	2.2	1.7	638	88.7	102	96.1
40	239	80.3	3.2	5	2	210	81.4	29	72.4
41	710	88.9	1.3	2.3	1.8	622	89.1	88	87.5
42	319	87.8	2.1	3.6	0.9	294	87.1	25	96
43	266	89.1	2.1	3.7	1.5	224	88.4	42	92.9
44	516	89.7	1.5	2.6	0.8	489	89.2	27	100
45	525	91.6	1.3	2.4	1.7	489	92	36	86.1
46	335	90.7	1.7	3.1	8.7	278	89.9	57	94.7
47	288	85.4	2.4	4.1	3.4	262	84.7	26	92.3
48	302	92.7	1.6	2.9	4.7	262	92	40	97.5
49	238	78.2	3.4	5.2	10.2	219	76.7	19	94.7
50	287	76.7	3.3	4.9	4	233	75.5	54	81.5
51	654	87.9	1.4	2.5	0	572	87.8	82	89

Location Number	ALL FRONT SEAT OCCUPANTS					CATEGORY			
	Sample	Percent Usage	Relative Error*	Margin of Error*	Percent Unknown	DRIVERS		FRONT SEAT PASSENGERS	
						Sample	Percent Usage	Sample	Percent Usage
52	490	87.3	1.7	2.9	0	452	87.8	38	81.6
53	388	82.2	2.4	3.8	5.8	358	82.7	30	76.7
54	99	78.8	5.2	8.1	3.9	78	79.5	21	76.2
55	125	73.6	5.4	7.7	3.1	100	73	25	76
56	127	78.7	4.6	7.1	5.9	116	76.7	11	100
57	115	78.3	4.9	7.5	3.4	104	79.8	11	63.6
58	99	83.8	4.4	7.3	6.6	86	81.4	13	100
59	341	84.2	2.3	3.9	4.2	273	84.6	68	82.4
60	343	85.7	2.2	3.7	4.7	264	83.7	79	92.4
61	61	83.6	5.7	9.3	1.6	48	83.3	13	84.6
62	65	84.6	5.3	8.8	4.4	56	83.9	9	88.9
63	176	89.8	2.5	4.5	7.9	144	88.9	32	93.8
64	186	88.7	2.6	4.5	5.1	154	88.3	32	90.6
65	293	90.1	1.9	3.4	2.3	239	89.5	54	92.6
66	268	90.7	2	3.5	2.2	226	90.3	42	92.9
67	582	92.1	1.2	2.2	1.5	507	91.7	75	94.7
68	213	83.1	3.1	5	5.3	157	82.2	56	85.7
69	171	88.9	2.7	4.7	3.9	149	87.2	22	100
70	334	86.5	2.2	3.7	4.8	282	85.8	52	90.4
71	115	85.2	3.9	6.5	3.4	87	83.9	28	89.3
72	56	80.4	6.6	10.4	1.8	46	78.3	10	90
73	808	86.6	1.4	2.3	1.1	647	85.6	161	90.7
74	1270	89.3	1	1.7	0.6	1138	89	132	91.7
75	882	92.9	0.9	1.7	0.6	783	92.1	99	99
76	1223	91.3	0.9	1.6	1.3	1043	91	180	93.3
77	1324	94.4	0.7	1.2	0.2	1028	93.8	296	96.6

Location Number	ALL FRONT SEAT OCCUPANTS					CATEGORY			
	Sample	Percent Usage	Relative Error*	Margin of Error*	Percent Unknown	DRIVERS		FRONT SEAT PASSENGERS	
						Sample	Percent Usage	Sample	Percent Usage
78	1568	91.6	0.8	1.4	0.4	1278	90.6	290	95.9
79	1161	88.8	1	1.8	0.5	1073	88.5	88	92
80	836	90	1.2	2	1.9	721	89.3	115	93.9
81	492	91.1	1.4	2.5	2.6	408	91.7	84	88.1
82	830	89	1.2	2.1	1.3	742	89.4	88	86.4
83	449	75.7	2.7	4	2.2	397	75.6	52	76.9
84	314	87.6	2.1	3.6	3.1	276	86.2	38	97.4
85	345	88.4	1.9	3.4	2	330	88.2	15	93.3
86	322	84.2	2.4	4	3.9	298	83.9	24	87.5
87	426	82.9	2.2	3.6	3.4	391	83.9	35	71.4
88	500	88	1.7	2.8	1.6	445	88.8	55	81.8
89	688	91.6	1.2	2.1	1.4	635	91.3	53	94.3
90	492	78.7	2.3	3.6	2.6	430	78.1	62	82.3
91	385	89.9	1.7	3	1.8	321	89.1	64	93.8
92	180	85.6	3.1	5.1	4.3	153	85	27	88.9
93	942	89.9	1.1	1.9	2.1	908	89.8	34	94.1
94	1133	92.9	0.8	1.5	0.5	950	92.3	183	95.6
95	1196	93.7	0.7	1.4	0.7	873	93.1	323	95.4
96	1255	93.1	0.8	1.4	0.4	1019	92.1	236	97.5
97	1450	93.9	0.7	1.2	0.2	1068	93.1	382	96.3
98	1218	93.6	0.7	1.4	1.1	997	93.8	221	92.8
99	1091	92.5	0.9	1.6	0.6	942	92.7	149	91.3
100	964	94	0.8	1.5	0.6	783	93.7	181	95
101	313	85.3	2.3	3.9	6.6	273	84.2	40	92.5
102	532	91.4	1.3	2.4	1.5	481	91.1	51	94.1
103	621	89.5	1.4	2.4	1.3	557	89.2	64	92.2

Location Number	ALL FRONT SEAT OCCUPANTS					CATEGORY			
	Sample	Percent Usage	Relative Error*	Margin of Error*	Percent Unknown	DRIVERS		FRONT SEAT PASSENGERS	
						Sample	Percent Usage	Sample	Percent Usage
104	64	85.9	5.1	8.5	1.5	51	90.2	13	69.2
105	271	92.3	1.8	3.2	3.6	228	93	43	88.4
106	167	92.2	2.2	4.1	5.6	132	91.7	35	94.3
107	950	92.5	0.9	1.7	1.8	790	92.8	160	91.3
108	950	96.5	0.6	1.2	0.3	625	96	325	97.5
109	870	93.1	0.9	1.7	0.7	640	91.6	230	97.4
110	1096	94	0.8	1.4	1.2	693	92.8	403	96
111	685	93.6	1	1.8	0.3	503	92.6	182	96.2
112	236	89.4	2.2	3.9	4.1	184	87	52	98.1
113	293	84.3	2.5	4.2	2.7	260	83.8	33	87.9
114	352	82.1	2.5	4	1.9	280	81.1	72	86.1
115	173	83.8	3.3	5.5	3.4	155	85.2	18	72.2
116	219	83.6	3	4.9	4.8	171	84.8	48	79.2
117	64	85.9	5.1	8.5	5.9	50	82	14	100
118	173	74.6	4.4	6.5	3.4	151	73.5	22	81.8
119	328	91.2	1.7	3.1	2.7	237	90.7	91	92.3
120	244	88.5	2.3	4	4.7	187	87.7	57	91.2
121	646	84.8	1.7	2.8	1.2	580	84.5	66	87.9
122	287	87.8	2.2	3.8	4.3	246	87	41	92.7
123	135	80	4.3	6.7	4.3	125	78.4	10	100
124	394	81.7	2.4	3.8	3	323	80.8	71	85.9
125	70	72.9	7.3	10.4	1.4	63	74.6	7	57.1
126	177	79.1	3.9	6	3.3	167	78.4	10	90
127	264	86	2.5	4.2	3.3	199	84.9	65	89.2
128	337	86.9	2.1	3.6	4.5	255	85.9	82	90.2
129	205	85.4	2.9	4.8	5.5	182	86.3	23	78.3

Location Number	ALL FRONT SEAT OCCUPANTS					CATEGORY			
	Sample	Percent Usage	Relative Error*	Margin of Error*	Percent Unknown	DRIVERS		FRONT SEAT PASSENGERS	
						Sample	Percent Usage	Sample	Percent Usage
130	120	75	5.3	7.7	4.8	99	76.8	21	66.7
131	221	72.4	4.2	5.9	4.3	176	72.7	45	71.1
132	92	76.1	5.8	8.7	7.1	85	76.5	7	71.4
133	170	89.4	2.6	4.6	2.9	128	91.4	42	83.3
134	384	83.3	2.3	3.7	2.5	317	82.3	67	88.1
135	396	82.8	2.3	3.7	2.2	309	81.2	87	88.5
136	294	88.1	2.1	3.7	3	229	88.6	65	86.2
137	284	84.5	2.5	4.2	4.4	232	83.6	52	88.5
138	397	84.9	2.1	3.5	0.5	285	84.6	112	85.7
139	268	82.5	2.8	4.6	7.6	229	83	39	79.5
140	208	83.2	3.1	5.1	5	173	82.1	35	88.6
141	360	79.7	2.7	4.2	5.8	309	78.3	51	88.2
142	144	76.4	4.6	6.9	4	119	73.9	25	88
143	73	78.1	6.2	9.5	2.7	56	78.6	17	76.5
144	78	71.8	7.1	10	4.9	62	71	16	75
145	90	80	5.3	8.3	4.3	72	81.9	18	72.2
146	218	84.9	2.9	4.8	5.6	200	84	18	94.4
147	332	87.3	2.1	3.6	7.3	278	87.4	54	87
148	379	85.5	2.1	3.5	4.3	357	84.9	22	95.5
149	201	83.6	3.1	5.1	3.8	162	80.9	39	94.9
150	50	78	7.5	11.5	0	37	75.7	13	84.6

Appendix E Summary of Data (With Sample Weights)

Table E1 Summary of Data (With Sample Weights)

Site ID	Site Type	Date Observed	Site Sample Weight	Number of Drivers	Number of Front Passengers	Number of Occupants Belted	Number of Occupants Unbelted	Number of Occupants with Unknown Belt Use
1	Original	6/29/22	0.14	507	69	498	60	18
2	Original	7/20/22	0.14	479	198	647	16	14
3	Original	6/29/22	0.14	226	28	211	28	15
4	Original	7/20/22	0.14	176	55	201	22	8
5	Original	7/26/22	0.07	266	71	264	56	17
6	Original	6/29/22	0.07	303	27	260	59	11
7	Original	7/26/22	0.07	226	59	217	51	17
8	Original	7/26/22	0	43	13	37	14	5
9	Original	6/8/22	0	228	32	203	45	12
10	Original	6/15/22	0	166	40	166	34	6
11	Original	6/9/22	0.05	320	100	366	42	12
12	Original	6/9/22	0.05	344	103	391	48	8
13	Original	7/15/22	0.05	177	34	141	56	14
14	Original	7/15/22	0.01	123	30	115	35	3
15	Original	6/3/22	0	85	20	78	20	7
16	Original	7/15/22	0	121	31	95	51	6
17	Original	7/28/22	0.02	270	51	265	38	18
18	Original	6/28/22	0.02	447	64	401	102	8
19	Original	7/14/22	0.02	474	100	453	106	15
20	Original	6/28/22	0.02	383	84	390	66	11
21	Original	7/14/22	0.02	243	52	244	41	10
22	Original	7/14/22	0.02	380	89	386	67	16
23	Original	7/8/22	0	92	24	68	37	11
24	Original	7/8/22	0	128	23	91	57	3
25	Original	7/6/22	0.03	145	18	131	27	5

Site ID	Site Type	Date Observed	Site Sample Weight	Number of Drivers	Number of Front Passengers	Number of Occupants Belted	Number of Occupants Unbelted	Number of Occupants with Unknown Belt Use
26	Original	6/15/22	0.03	132	18	127	15	8
27	Original	7/26/22	0.03	463	65	465	51	12
28	Original	7/6/22	0.03	245	33	232	35	11
29	Original	6/15/22	0	267	31	249	40	9
30	Original	7/26/22	0	79	16	82	10	3
31	Original	7/19/22	0	108	30	118	11	9
32	Original	7/19/22	0	298	57	298	48	9
33	Original	7/25/22	1.45	493	135	571	44	13
34	Original	7/12/22	1.45	770	149	846	63	10
35	Original	6/1/22	1.45	883	162	958	73	14
36	Original	7/5/22	1.45	1089	224	1207	90	16
37	Original	7/25/22	1.45	685	309	930	51	13
38	Original	6/1/22	1.45	732	49	689	75	17
39	Original	7/25/22	1.45	651	102	664	76	13
40	Original	6/28/22	0.63	215	29	192	47	5
41	Original	8/8/22	0.63	635	88	631	79	13
42	Original	7/12/22	0.63	297	25	280	39	3
43	Original	6/28/22	0.63	228	42	237	29	4
44	Original	7/12/22	0.63	493	27	463	53	4
45	Original	7/25/22	0.63	498	36	481	44	9
46	Original	6/1/22	0.63	306	61	304	31	32
47	Original	6/28/22	0	272	26	246	42	10
48	Original	8/8/22	0	275	42	280	22	15
49	Original	6/17/22	0.07	246	19	186	52	27
50	Original	7/14/22	0.07	245	54	220	67	12
51	Original	6/22/22	0.07	572	82	575	79	0

Site ID	Site Type	Date Observed	Site Sample Weight	Number of Drivers	Number of Front Passengers	Number of Occupants Belted	Number of Occupants Unbelted	Number of Occupants with Unknown Belt Use
52	Original	6/22/22	0.07	452	38	428	62	0
53	Original	6/17/22	0.07	382	30	319	69	24
54	Original	7/7/22	0	82	21	78	21	4
55	Original	7/14/22	0	104	25	92	33	4
56	Original	7/7/22	0	124	11	100	27	8
57	Original	8/3/22	0.01	108	11	90	25	4
58	Original	7/22/22	0.01	93	13	83	16	7
59	Original	8/9/22	0.01	287	69	287	54	15
60	Original	8/9/22	0.01	280	80	294	49	17
61	Original	7/22/22	0	49	13	51	10	1
62	Original	7/22/22	0	59	9	55	10	3
63	Original	7/12/22	0.13	158	33	158	18	15
64	Original	7/12/22	0.13	163	33	165	21	10
65	Original	7/27/22	0.13	246	54	264	29	7
66	Original	7/6/22	0.06	232	42	243	25	6
67	Original	6/13/22	0.06	516	75	536	46	9
68	Original	7/12/22	0.06	169	56	177	36	12
69	Original	6/22/22	0.06	156	22	152	19	7
70	Original	7/27/22	0.06	298	53	289	45	17
71	Original	7/6/22	0	91	28	98	17	4
72	Original	6/22/22	0	47	10	45	11	1
73	Original	7/1/22	6.52	656	161	700	108	9
74	Original	7/20/22	6.52	1146	132	1134	136	8
75	Original	6/14/22	6.52	788	99	819	63	5
76	Original	7/20/22	6.52	1059	180	1117	106	16
77	Original	7/1/22	6.52	1031	296	1250	74	3

Site ID	Site Type	Date Observed	Site Sample Weight	Number of Drivers	Number of Front Passengers	Number of Occupants Belted	Number of Occupants Unbelted	Number of Occupants with Unknown Belt Use
78	Original	7/13/22	6.52	1285	290	1436	132	7
79	Original	7/20/22	6.52	1079	88	1031	130	6
80	Original	6/14/22	6.52	737	115	752	84	16
81	Original	6/14/22	6.52	421	84	448	44	13
82	Original	7/21/22	6.52	753	88	739	91	11
83	Original	7/1/22	2.86	407	52	340	109	10
84	Original	7/13/22	2.86	286	38	275	39	10
85	Original	6/14/22	2.86	337	15	305	40	7
86	Original	7/21/22	2.86	311	24	271	51	13
87	Original	7/21/22	2.86	406	35	353	73	15
88	Original	7/1/22	2.86	453	55	440	60	8
89	Original	6/14/22	2.86	645	53	630	58	10
90	Original	7/20/22	2.86	443	62	387	105	13
91	Original	7/13/22	0	328	64	346	39	7
92	Original	7/13/22	0	161	27	154	26	8
93	Original	6/14/22	0.64	928	34	847	95	20
94	Original	6/7/22	0.64	956	183	1052	81	6
95	Original	6/29/22	0.64	882	323	1121	75	9
96	Original	6/7/22	0.64	1024	236	1169	86	5
97	Original	7/21/22	0.64	1071	382	1362	88	3
98	Original	7/21/22	0.64	1011	221	1140	78	14
99	Original	6/29/22	0.64	949	149	1009	82	7
100	Original	7/21/22	0.64	789	181	906	58	6
101	Original	6/14/22	0.27	295	40	267	46	22
102	Original	6/29/22	0.27	489	51	486	46	8
103	Original	6/29/22	0.27	565	64	556	65	8

Site ID	Site Type	Date Observed	Site Sample Weight	Number of Drivers	Number of Front Passengers	Number of Occupants Belted	Number of Occupants Unbelted	Number of Occupants with Unknown Belt Use
104	Original	6/14/22	0	52	13	55	9	1
105	Original	7/11/22	0	237	44	250	21	10
106	Original	7/11/22	0	140	37	154	13	10
107	Original	6/10/22	0.33	806	161	879	71	17
108	Original	7/8/22	0.33	628	325	917	33	3
109	Original	7/11/22	0.33	646	230	810	60	6
110	Original	7/22/22	0.33	703	406	1030	66	13
111	Alternate	7/11/22	0.33	505	182	641	44	2
112	Original	7/22/22	0.13	194	52	211	25	10
113	Original	7/8/22	0.13	268	33	247	46	8
114	Original	7/8/22	0.13	287	72	289	63	7
115	Original	7/13/22	0.13	161	18	145	28	6
116	Original	8/2/22	0	182	48	183	36	11
117	Original	6/24/22	0	54	14	55	9	4
118	Original	7/13/22	0	157	22	129	44	6
119	Original	6/23/22	0.21	246	91	299	29	9
120	Original	6/8/22	0.21	199	57	216	28	12
121	Original	6/23/22	0.07	588	66	548	98	8
122	Original	6/8/22	0.07	259	41	252	35	13
123	Original	8/1/22	0.07	131	10	108	27	6
124	Original	6/23/22	0.07	335	71	322	72	12
125	Original	8/11/22	0	64	7	51	19	1
126	Original	8/1/22	0	173	10	140	37	6
127	Original	6/27/22	0.04	208	65	227	37	9
128	Original	6/9/22	0.04	271	82	293	44	16
129	Original	6/9/22	0.04	194	23	175	30	12

Site ID	Site Type	Date Observed	Site Sample Weight	Number of Drivers	Number of Front Passengers	Number of Occupants Belted	Number of Occupants Unbelted	Number of Occupants with Unknown Belt Use
130	Original	7/28/22	0.02	105	21	90	30	6
131	Original	7/28/22	0	186	45	160	61	10
132	Original	7/28/22	0	92	7	70	22	7
133	Original	8/8/22	0.13	133	42	152	18	5
134	Original	6/24/22	0.07	327	67	320	64	10
135	Original	6/27/22	0.07	318	87	328	68	9
136	Original	6/24/22	0.07	238	65	259	35	9
137	Original	6/24/22	0.07	244	53	240	44	13
138	Original	6/27/22	0.07	287	112	337	60	2
139	Original	6/20/22	0.07	251	39	221	47	22
140	Original	7/15/22	0.07	183	36	173	35	11
141	Original	7/1/22	0	331	51	287	73	22
142	Original	8/8/22	0	125	25	110	34	6
143	Original	8/2/22	0	58	17	57	16	2
144	Original	7/15/22	0	66	16	56	22	4
145	Original	7/19/22	0.01	75	19	72	18	4
146	Original	8/2/22	0.01	213	18	185	33	13
147	Original	7/28/22	0.01	304	54	290	42	26
148	Original	6/3/22	0.01	373	23	324	55	17
149	Original	6/28/22	0	170	39	168	33	8
150	Original	7/19/22	0	37	13	39	11	0
Totals				55120	10903	57260	7300	1463

Appendix F Mini-Survey Data

Table F1 Data from Mini Survey

County	Town	Intersection Description	2012	2013	2014	2015	2016	2017	2018	2019	2021	2022
Barren	Cave City	I-65 at Exit 53	91	91	89	91	90	88	96	91	96	95
Meade	Muldraugh	US 31W at KY 1638	85	88	88	89	88	88	91	88	90	86
Grayson	Leitchfield	KY 259 at US 62	81	84	85	85	79	85	85	87	85	82
Logan	Russellville	US 68 at US 79	79	84	83	82	86	83	83	87	88	77
Hopkins	Madisonville	Pennyrile Pkwy at Exit 44	87	87	91	91	95	91	93	91	94	87
Henderson	Henderson	Us 41A at 5th St.	84	85	85	88	80	88	90	90	90	87
Calloway	Murray	KY 1637 at 16th	82	82	85	88	88	85	90	89	91	91
Shelby	Simpsonville	I-64 at Exit 28	89	88	93	95	94	93	97	93	95	92
Woodford	Versailles	US 60 at US 62	84	94	93	89	93	88	94	90	87	91
Oldham	La Grange	KY 146 at KY 329B	89	88	90	92	92	94	91	91	94	92
Franklin	Frankfort	KY 2820 at US 127	80	87	87	79	73	84	74	83	86	86
Kenton	Crescent Springs	I-75 at Exit 186	88	91	92	92	93	93	95	89	94	94
Jefferson	Louisville	US 31W at KY 841	78	85	87	87	84	88	86	86	86	82
Boone	Walton	US 42 at US 25	87	86	87	88	91	88	88	89	94	92
Boyd	Ashland	I-64 at Exit 185	86	84	90	91	85	88	91	91	87	89
Lincoln	Stanford	US 27 at US 150	80	86	86	82	87	82	88	86	87	83
Carter	Grayson	US 60 at KY 7	78	80	81	81	80	83	84	87	88	85
Floyd	Drift	KY 680 at KY 122	60	70	71	68	63	66	66	74	85	76
Rowan	Morehead	I-64 at Exit 137	86	84	89	89	83	92	95	90	93	87
Laurel	Corbin	US 25E at US 25	79	79	81	85	82	83	83	92	92	85
Pulaski	Somerset	KY 80 at KY 2296	84	79	81	85	88	84	90	84	89	84
Statewide Usage			83.4	85.8	87.4	87.6	87.2	87.5	89.4	88.3	90.4	87.8