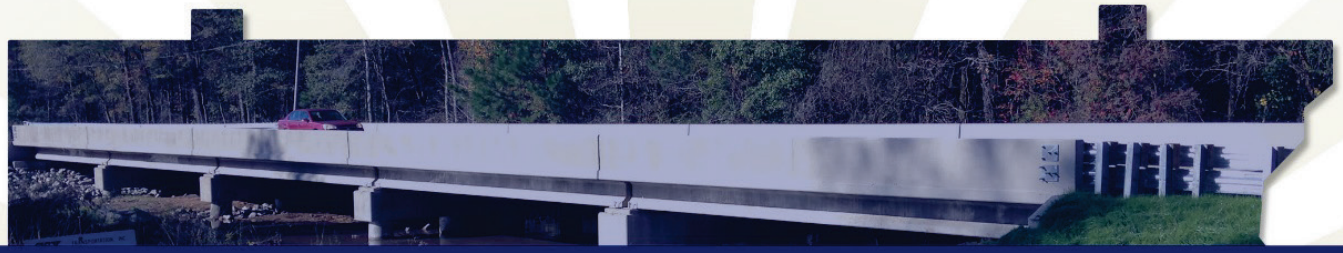

ELMORE COUNTY
LOCAL ROAD SAFETY PLAN

Elmore County
Local Road Safety Plan

2019

CAMBRIDGE SYSTEMATICS

Elmore County Commission

April 8, 2019

Elected Officials, Stakeholders, and Citizens,

From 2012 to 2016, 4,481 people died in motor vehicle crashes in the State of Alabama. During that same period, 86 fatalities occurred on roadways in Elmore County. No matter how large or small the number, even one fatality is too many. Elmore County is committed to a high standard of health and care for our residents, including a transportation system that safely and efficiently moves people and goods.

The Alabama Department of Transportation (ALDOT) is dedicated to a ***Toward Zero Deaths*** vision for all transportation system users and has adopted an immediate goal to reduce fatalities and serious injuries by 50 percent by 2035. The 2017 Alabama Strategic Highway Safety Plan (SHSP) provides a strategic roadmap to achieve this goal. One of the primary objectives in Elmore County is to support the State's vision of zero deaths.

While reaching a goal of zero deaths and serious injuries seems impossible, it is the same goal we set for ourselves, our families, and our friends each time we drive, walk, or bike. Achieving this reality will require the commitment of state, regional, and local agencies across the state of Alabama.

The Elmore County Local Road Safety Plan is a data-driven plan that identifies strategies and actions to provide a safe transportation system for the residents of Elmore County. This plan is the result of a diverse group of stakeholders providing their ideas on how we can reduce the likelihood of traffic deaths and injuries.

Ultimately, this plan provides a strategic approach all of our traffic safety stakeholders can support aimed at reducing fatalities and serious injuries on Elmore County roadways. Thank you for your support and efforts to ensure Elmore County continues to be a great place to live and work.

Troy Stubbs, Chairman

Richie Beyer, CEOO

100 East Commerce Street, Suite 200, Wetumpka, Alabama 36092 Phone (334) 514-5841 Fax (334) 567-1109
www.elmoreco.org

Additional Letters of Support included in Appendix

Stakeholders List:

- City of Millbrook
- City of Wetumpka
- City of Tallassee
- Coosada Police Department
- Elmore County Highway Department
- Elmore County Board of Education (BOE), Transportation
- Elmore County Sheriff's Office
- Elmore County Emergency Management Agency (EMA)
- Elmore County Firefighters Association
- Alabama Department of Transportation (ALDOT) Southeast Region
- ALDOT Traffic and Safety Operations Section, Design Bureau
- ALDOT Safety Planning Section, Design Bureau
- Federal Highway Administration (FHWA) Alabama Division

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Executive Summary

Introduction

The Elmore County Local Road Safety Plan (LRSP) is contributing to national and statewide goals by identifying the data-driven safety issues in the county and a corresponding strategy to improve safety performance and reduce fatal and serious crashes. The Plan is primarily focused on infrastructure components, but recognizes behavioral components are also key to eliminating fatalities and serious injuries. Entities that address these components were included in the development of this plan.

To proactively address safety concerns, Elmore County relied on data analysis to understand the current contributing factors to crashes that could be addressed to reduce fatalities and serious injuries. The results were discussed with other transportation and safety stakeholders in the region to brainstorm potential solutions and identify other opportunities to collaborate on safety needs. The Plan shows the need for additional funding to address safety improvements.

Crash Trends and Emphasis Areas

For Elmore County's LRSP, crash data from 2012 to 2016 were analyzed. The crash data were retrieved from the Alabama Critical Analysis Reporting Environment (CARE), a data analysis software that houses Alabama's crash data. All crashes in Elmore County occurring during the analyzed time period were included in the analysis.

Total fatalities in Elmore County increased 100 percent (10 to 20) and total crashes resulting in an injury have increased 15 percent (442 to 510). This has occurred while overall crashes in Elmore County between 2012 and 2016 have increased 11 percent (1,821 to 2,019), and county population has increased by 1.27 percent (80,220 to 81,240) during that same period.

Additionally, looking at fatal and serious injury crashes solely along the county-maintained roadways can be particularly useful since county officials and stakeholders can directly address these routes through projects and programs. When comparing Elmore County crashes occurring on county-maintained roads, many fatal crashes are related to a higher percentage of certain emphasis areas. For example, 83 percent of fatal crashes on county-maintained roadways involve a roadway departure compared to 60 percent of the entire county (including state and locally maintained roadways). This is also similar for serious injury crashes, with roadway departure, speeding, aggressive, and unrestrained related crashes occurring at a higher rate along county-maintained roads. In fact, nearly all of the more common emphasis areas occur at a higher percentage along county-maintained roads, implying a specific focus for projects and programs involving these roadways.

Analysis Process and Results

Network screening is a type of analysis used to identify locations with lower safety performance based on a series of measures. The network screening process can be summarized in three overarching steps:

1. Prepare Roadway and Crash Data: The crash data must be gathered and associated with a roadway segment and, subsequently, roadway data.

2. Apply Performance Metrics: Select a series of measures to assess crash and roadway data against.

3. Identify Segments for Potential Safety Improvements: After applying the performance metrics, rank each segment to determine an overall safety performance. This identifies specific locations and common roadway characteristics as potential candidates for infrastructure improvements and/or additional enforcement activities.

Safety Action Plan

The Elmore County LRSP summarizes action steps identified during the plan development process. This framework will allow Elmore County and its stakeholders to strategically focus on plan implementation.

Emphasis Area #1 – Infrastructure and Operations

While the goal of the Plan is to identify the most critical emphasis areas in the County, the role of the Elmore County Highway Department is best suited to address infrastructure-related issues. The strategies listed in this emphasis area focus on lowering fatalities and serious injuries related to speed, roadway departures, and intersections, based on data-driven analysis.

Emphasis Area #2 – Education, Awareness, and Coordination

Based on data analysis and feedback from key stakeholders, Elmore County has identified three additional areas for addressing safety: Education, Awareness, and Coordination. These three areas represent the opportunities Elmore County officials and stakeholders have to coordinate on the behavioral-related issue areas such as impaired driving, young drivers, and occupant protection, that can potentially decrease crashes, fatalities, and injuries on the roadway system.

Future Transportation Safety Opportunities

Elmore County may explore potential improvements in collecting, managing, and analyzing safety-related information that can be incorporated in future funding and resource allocations with the goal to eliminate fatalities and severe injuries on local streets and roads. Data-driven safety analysis requires having accurate, complete, and comprehensive data inputs, which may not currently be collected by the County. This effort to collect additional data can contribute to the understanding of how both engineering and behavioral countermeasures affect safety.

Changes to population, commercial and residential development, and other factors over time, could impact where and why crashes are occurring. Fatalities have historically correlated fairly strongly with economic cycles.

Recognizing the demographic changes occurring within Elmore County, the County would benefit by establishing a regular interval for updating and modifying the safety plan.

A critical component of safety planning is to understand how fatalities and serious injuries are trending over time and what prevention strategies are effective so investments are directed appropriately. The County can conduct an annual assessment of overall safety performance (i.e., fatalities, serious injuries) to gain insights on successes as well as the extent to which safety challenges still exist. Evaluation can also be more specific, tracking changes to fatalities and serious injuries by focus facilities, by crash type, or by a program of improvements (i.e., implementation of rumble strips). This evaluation process will allow for the County to definitively assess the safety performance of its safety programs and the safety plan overall.

1 Introduction

Elmore County lies in the east-central portion of Alabama, to the north of the State Capitol City of Montgomery. As of the 2010 Census, it is home to over 79,303 residents and spans 622 square miles. The county seat, Wetumpka, had a population of 7,654 and other population centers in the county include Millbrook, Eclectic, Coosada, Tallassee, Elmore, Prattville, and Deatsville. Elmore County has over 1,000 miles of roadway. Many of these roadways were built decades ago, when the county was more rural, and in the following years residential and commercial development has caused additional traffic volumes at locations for which they were not originally designed.

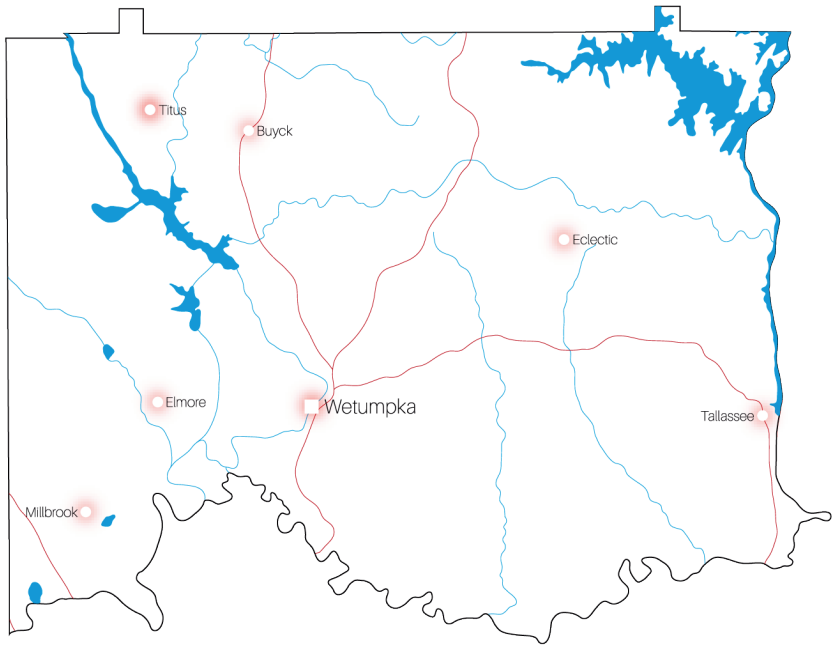


FIGURE 1 MAP OF ELMORE COUNTY

Overview and Purpose of the Plan

The Elmore County Local Road Safety Plan is contributing to national and statewide goals by identifying the data-driven safety issues in the county and a corresponding strategy to improve safety performance and reduce fatal and serious crashes. The potential opportunities for safety improvements in this Plan will allow Elmore County to make the case for the funding and resources needed to support safety improvements.

The Plan is primarily focused on infrastructure components because the Highway Department does not have specific funding or resources to implement enforcement, education, or emergency response efforts. However, this plan recognizes these as key components to eliminating fatalities and serious injuries, and the entities that address these components were included in the development of this plan.

National, State, and Local Context

Nationally, in 2018 traffic fatalities were projected to trend downward after increasing for the two previous years. However, sadly 37,133 people lost their lives in motor vehicle crashes in 2017. In addition to economic factors such

as employment gains affecting national fatality numbers, drivers are still undertaking risky behaviors such as speeding, texting while driving, not using safety belts, and driving after they've had too much to drink.

To mitigate these factors, a national strategy called Toward Zero Deaths (TZD), which is driven and supported by transportation, enforcement, local government, and emergency response associations, concludes that even if it's unclear when fatalities will reach zero, even one death on the transportation network is unacceptable.

Safety is a top priority in Alabama. The Alabama Department of Transportation (ALDOT) has adopted this TZD strategy and identified partners, priorities and investments to ensure every road user, whether driving, walking, or bicycling, arrives safely at their destination. The Alabama Strategic Highway Safety Plan (SHSP) identifies statewide priorities and solutions. It provides regional and local agencies, like Elmore County, with a set of common goals and strategies to coordinate on safety initiatives. However, no one agency can do it alone. The causes of fatalities and serious injuries in Alabama are a combination of many factors, from infrastructure-related to behavioral. They know no boundaries, occurring on every facility from state routes to local roads. One of the primary objectives in Elmore County is to support the State's vision of zero deaths.

A safe and efficient transportation system is key to a vital community that supports established neighborhoods and provides an attractive location for businesses. Looking ahead, a number of factors could impact transportation safety performance in the future. Elmore County has a history of being a predominantly agricultural area, but in recent years, it has started to make the transformation to the one of the fastest-growing counties in the state. According to the Census, from 1990 to 2000, the county population grew by 34 percent and from 2000 to 2010, the population grew by 20 percent. Continued growth in Elmore County is expected to occur in the future. In addition, the Montgomery Study Area 2040 Long Range Transportation Plan (LRTP) estimates that from 2010 to 2040 non-retail employment in Elmore County will grow nearly 27 percent. The Montgomery Area Metropolitan Planning Organization (MPO) transportation planning staff developed its 2012 Bicycle and Pedestrian Plan to address the growing interest and use of bike and pedestrian modes. This plan includes areas of Elmore County. While these modes shift people from their cars, it also has implications for safety if roads and sidewalks are not designed for all users. Elmore County is also home to some of the most visited recreational areas in the state. These trends could translate into the potential for more crashes on the roadways.

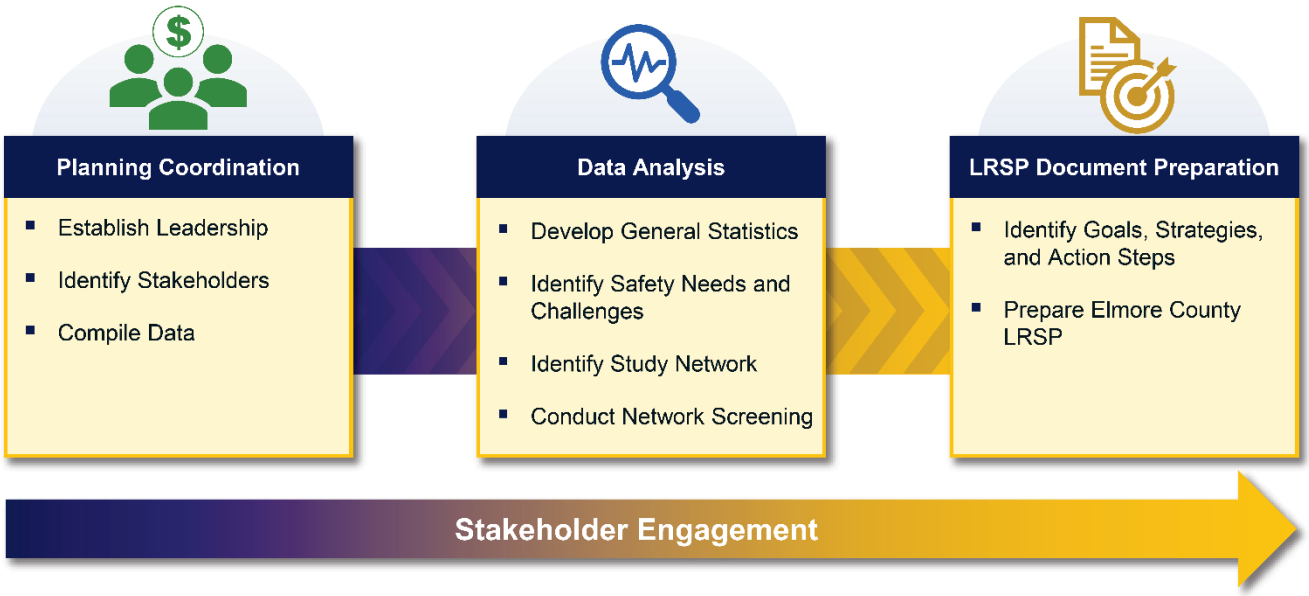
Process to Develop Plan

The rationale for safety planning at the county level is to provide a more customized approach both from the standpoint of problem analysis and strategy development. The crash issue at a county level is often somewhat different than at the state level and a customized analysis of the safety issues at a county level will improve how to target local concerns.

The goal of this LRSP is to identify transportation safety initiatives (projects) and partnerships to continue lowering fatalities and serious injuries in Elmore County. To proactively address safety concerns, Elmore County relied on data analysis to understand the current contributing factors to crashes that could be addressed to reduce fatalities and serious injuries. The results were discussed with other transportation and safety stakeholders in the region to brainstorm potential solutions and identify other opportunities to collaborate on safety needs.

The process to develop the plan is shown in Figure 2.

FIGURE 2. ELMORE COUNTY LRSP DEVELOPMENT PROCESS



Source: Cambridge Systematics, Inc.

The first phase of the plan development process was planning coordination. Crashes often have many causes, which cannot be solved through independent roadway, vehicle, or behavioral programs and projects. As a result, no one agency can plan, program, and implement safety solutions and expect to achieve Elmore County's safety vision. The Elmore County Highway Department worked in close coordination with the ALDOT Traffic and Safety Operations Section of the Design Bureau to establish a leadership team for the plan, identify stakeholders to include in the process, and compile the data needed to investigate the county's transportation safety challenges.

In the second phase of the process, data analysis was conducted to understand the general extent of safety challenges in Elmore County, identify various needs and challenges, determine the study network to be investigated further, and conduct a network analysis to identify locations with the greatest potential for safety improvements. For every crash, more specific data on where it occurred, specific crash characteristics, and roadway characteristics provides additional data to streamline investments and enforcement throughout the county. One method of identifying which areas to provide additional resources is through network screening, a type of analysis that helps identify locations with lower safety performance.

In the final phase of the process, this Plan was developed based on the goals, strategies and action steps identified by stakeholders.

To move closer to zero, the information that follows is meant to provide a comprehensive picture of the state of transportation safety within Elmore County, as well as provide insight into opportunities for further reducing serious injuries and fatalities.

2 Crash Trends and Emphasis Areas

Reducing and completely eliminating fatal and serious crashes is a priority for Elmore County and its stakeholders. To move toward this goal, crash trends were analyzed to understand the magnitude of the issue, including reviewing where crashes occurred and the most common types of crashes. This analysis reveals where road improvements could take place and the types of programs which can potentially prevent fatalities, serious injuries, and other crashes.

Crash Data Sets

For Elmore County's LRSP, crash data from 2012 to 2016 were analyzed. The crash data were retrieved from the Alabama Critical Analysis Reporting Environment (CARE), a data analysis software that houses Alabama's crash data. All crashes in Elmore County were included in the analysis. Crash data can be described in terms of the number of various crash types or in terms of the resulting outcomes for occupants (i.e. fatality, serious injury, minor injury, or no injury). A fatal crash resulting in three deaths is counted as a single fatal crash, however, that same crash results in three fatalities. The same is true for serious injuries.

All crashes were included in the analysis and then broken down into the following categories:

- All roadways in Elmore County including State, County, and Locally-maintained roads.
- Elmore County-maintained roadways.
- Locally-maintained roadways.

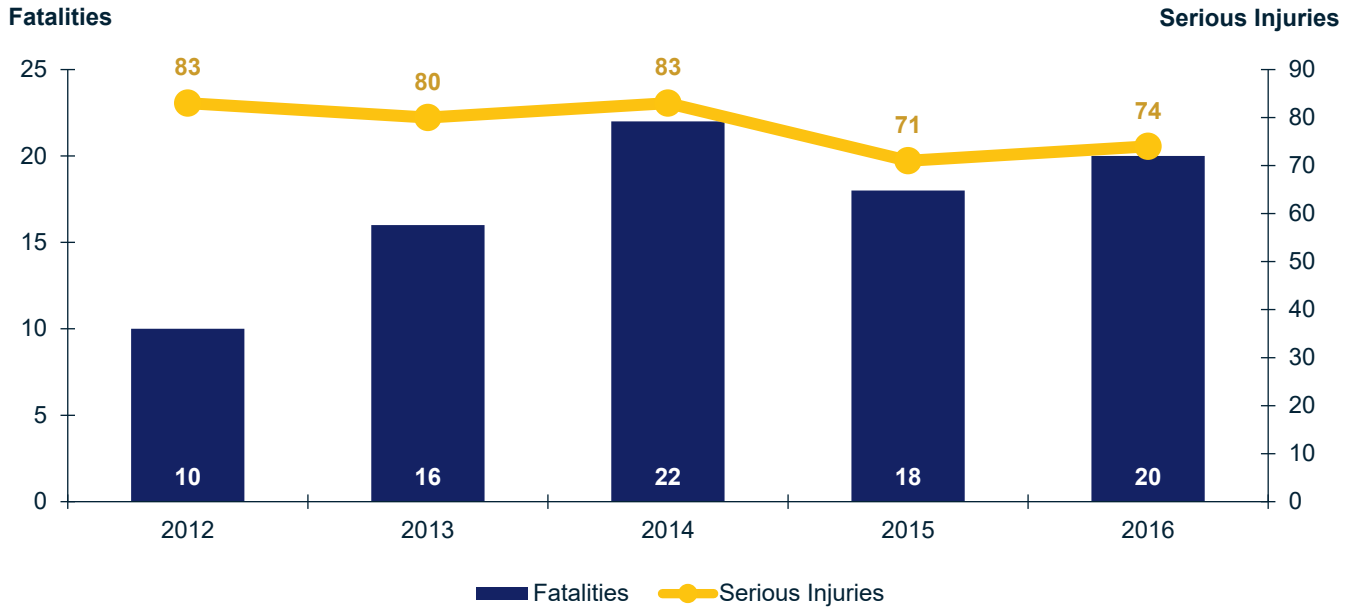
Fatalities and Serious Injuries

Figure 3 shows that between 2012 and 2016, traffic fatalities within Elmore County have overall increased, while serious injuries have slightly decreased. Table 1 shows crash statistics, occupant statistics (fatalities, serious injuries, etc.), and safety metrics. Safety metrics include other ways to measure safety such as the injury rate (percent of crashes resulting in an injury), equivalent property damage only (EPDO)* measure, and fatalities and serious injuries per 100,000 population.

In Table 1, total fatalities increased 100 percent (10 to 20) and total crashes resulting in an injury have increased 15 percent (442 to 510). This has occurred while overall crashes in Elmore County between 2012 and 2016 have increased 11 percent (1,821 to 2,019), and county population has increased by 1.27 percent (80,220 to 81,240) during that same period. In addition, the percent change of specific crash severities has increased at a higher rate.

This trend is similar to the total crashes, fatalities, and serious injuries trend for all of Alabama, as shown in Table 2. Between 2012 and 2016, total state-wide crashes increased by 21 percent (128,512 to 155,851) while total fatalities increased by 26 percent (874 to 1,101). Similar to Elmore County, the state saw a fairly steady decrease of 12 percent (9.265 to 8,152) in total serious injuries.

FIGURE 3. ELMORE COUNTY FATALITIES AND SERIOUS INJURIES (2012–2016)



Source: Critical Analysis Reporting Environment (CARE).

TABLE 1. CRASH TRENDS BY YEAR (2012–2016)

Year	Crash Statistics				Occupant Statistics					Safety Metrics		
	Fatal Crashes	Injury Crashes	Property Damage Crashes	Total Crashes	Fatalities	Serious Injuries	Minor Injuries	No Injuries	Total People Involved	Injury Rate	EPDO*	Fatalities & Serious Injuries per 100,000 population
2012	10	442	1,369	1,821	10	83	543	4,045	4,681	24.8%	4.42	1.17
2013	15	452	1,376	1,843	16	80	557	4,169	4,822	25.3%	4.41	1.20
2014	18	440	1,343	1,801	22	83	560	3,840	4,505	25.4%	4.37	1.31
2015	16	476	1,482	1,974	18	71	617	4,229	4,935	24.9%	4.22	1.10
2016	18	510	1,491	2,019	20	74	646	4,189	4,929	26.2%	4.21	1.16
5-Year Total	77	2,320	7,061	9,458	86	391	2,923	20,472	23,872			
Annual Average	15	464	1,412	1,892	17	78	585	4,094	4,774	25.3%	4.32	1.19
Percent Change, 2012-2016	80%	15%	9%	11%	100%	-11%	19%	4%	5%	5%	-5%	-1%

Source: Critical Analysis Reporting Environment (CARE), American Community Survey 5-Year Estimates.

** The Equivalent Property Damage Only (EPDO) index formula is explained in the Appendix.*

TABLE 2. CRASH TRENDS FOR ELMORE COUNTY AND ALABAMA (2012–2016)

Year	Total Crashes		Total Fatalities		Total Serious Injuries	
	Elmore County	Alabama	Elmore County	Alabama	Elmore County	Alabama
2012	1,821	128,512	10	874	83	9,265
2013	1,844	127,484	16	842	80	8,564
2014	1,804	133,333	22	819	83	7,968
2015	1,974	149,553	18	868	71	8,781
2016	2,020	155,851	20	1,101	74	8,152
5-Year Total	9,463	694,733	86	4,504	391	42,730
Annual Average	1,893	138,947	17	901	78	8,546
Percent Change, 2012-2016	11%	21%	100%	26%	-11%	-12%

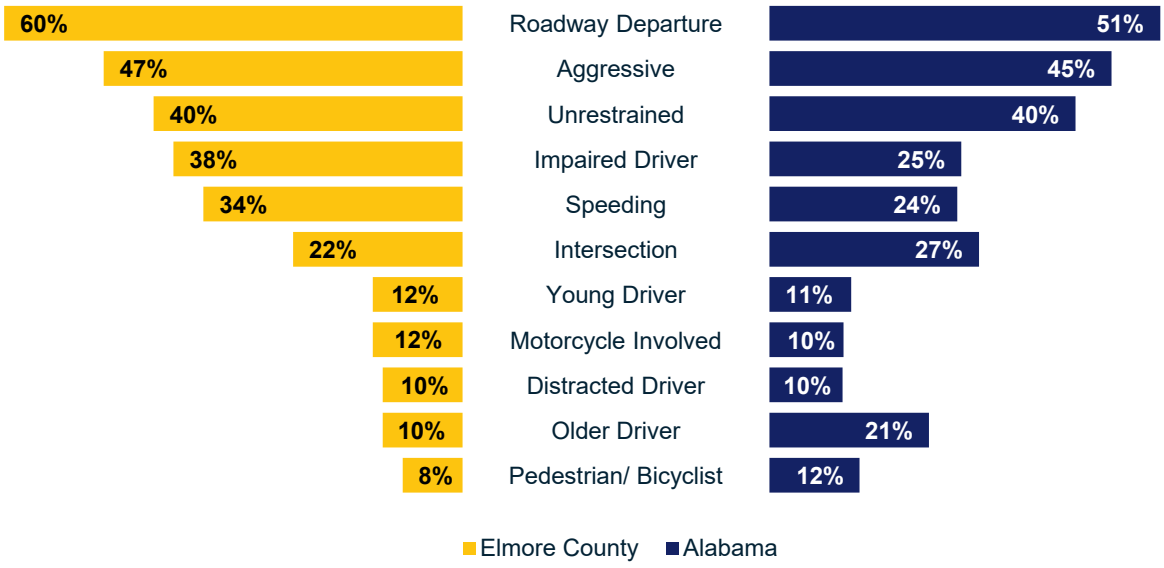
Source: Critical Analysis Reporting Environment (CARE), American Community Survey 5-Year Estimates.

Emphasis Areas

Various factors can contribute to a vehicular crash. These contributing factors are defined as emphasis areas, describing the type of vehicles or drivers involved in the crash, how the driver was driving, and/or where the crash occurred. The emphasis areas described in this plan are defined based on the Alabama Strategic Highway Safety Plan (SHSP). Definitions for each emphasis area are included in the appendix.

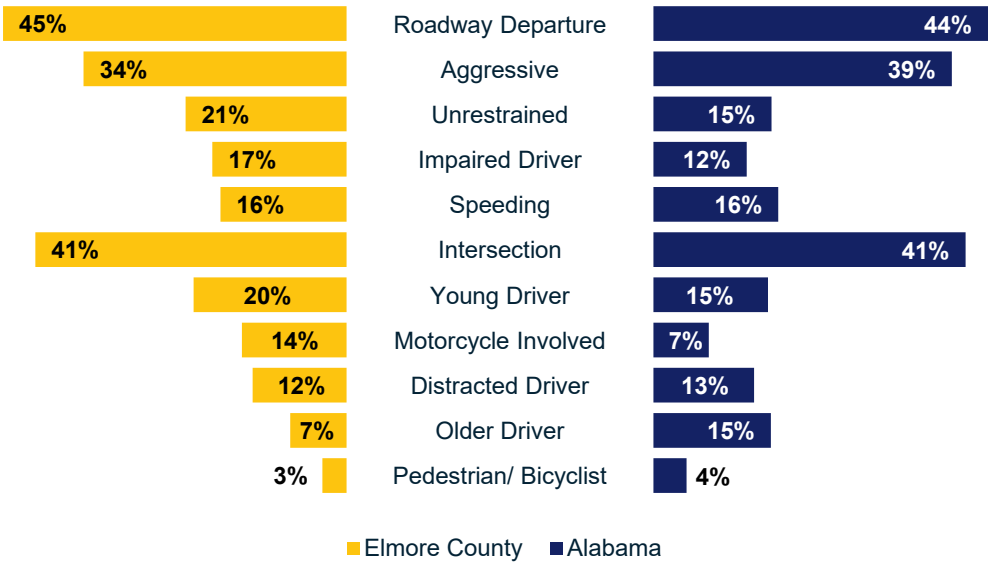
A variety of crash types in Elmore County have been investigated and identified as emphasis areas in Elmore County. The County has data that suggests these crashes occur at a higher rate along county-maintained roadways. In particular, when comparing the percentage of emphasis areas resulting in a fatality between Elmore County and Alabama (Figure 4), roadway departure, speeding, and impaired driving occurred at higher percentages while older drivers, intersection, and pedestrian/bicyclist crashes occurred at lower percentages. This is potentially due to the rural nature of the county. Serious injury crashes are slightly different (Figure 5), with a higher percentage of unrestrained, motorcycle involved, young driver, and impaired related crashes in Elmore County resulting in a serious injury when compared to the state.

FIGURE 4. ELMORE COUNTY AND ALABAMA PERCENTAGE OF FATAL CRASHES BY EMPHASIS AREA (2012–2016)



Source: Critical Analysis Reporting Environment (CARE).

FIGURE 5. ELMORE COUNTY AND ALABAMA PERCENTAGE OF SERIOUS INJURY CRASHES BY EMPHASIS AREA (2012–2016)

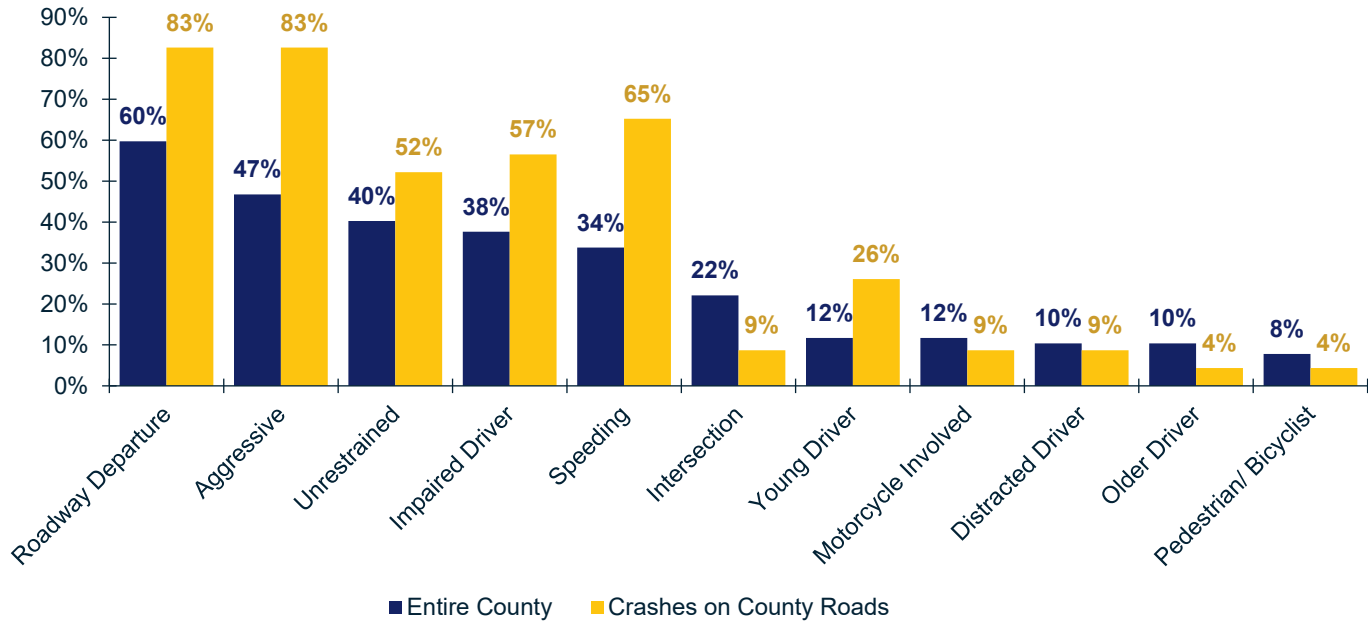


Source: Critical Analysis Reporting Environment (CARE).

County System Data

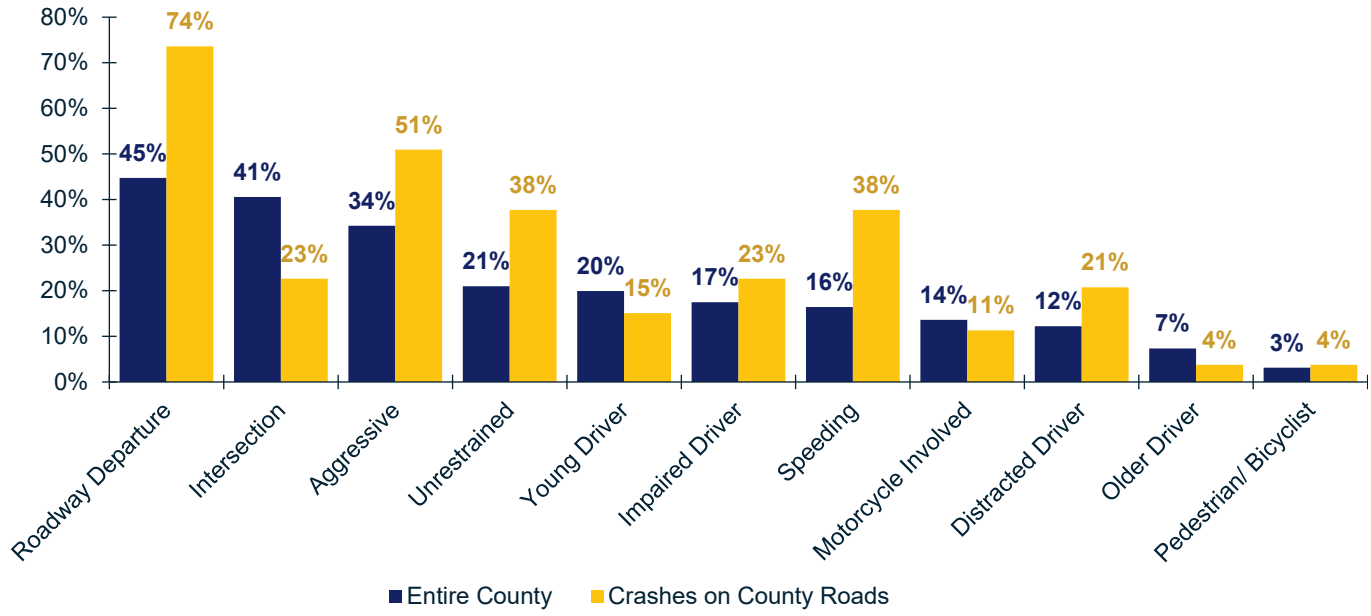
Additionally, looking at fatal and serious injury crashes solely along the county-maintained roadways (Figures 6 and 7) can be particularly useful since county officials and stakeholders can directly address these routes through projects and programs. When comparing Elmore County crashes occurring on county-maintained roads, many fatal crashes are related to a higher percentage of certain emphasis areas. For example, 83 percent of fatal crashes on county-maintained roadways involve a roadway departure compared to 60 percent of the combined state, county, and city-maintained roadways within the county. This is also similar for serious injury crashes, with roadway departure, speeding, aggressive, and unrestrained related crashes occurring at a higher rate along county-maintained roads. In fact, nearly all of the more common emphasis areas occur at a higher percentage along county-maintained roads, implying a specific focus for projects and programs involving these roadways.

FIGURE 6. PERCENTAGE OF EMPHASIS AREA CRASHES RESULTING IN A FATALITY FOR ELMORE COUNTY AND COUNTY-MAINTAINED ROAD CRASHES (2012–2016)



Source: *Critical Analysis Reporting Environment (CARE).*

FIGURE 7. PERCENTAGE OF EMPHASIS AREA CRASHES RESULTING IN A SERIOUS INJURY FOR ELMORE COUNTY AND COUNTY-MAINTAINED ROAD CRASHES (2012–2016)



Source: *Critical Analysis Reporting Environment (CARE).*

3 Analysis Process and Results

The initial data analysis in the previous section investigated overall trends and emphasis areas for crashes within Elmore County. For every crash, more specific data on where it occurred, specific crash characteristics, and roadway characteristics provides additional data to streamline investments and enforcement throughout the county. One method of identifying which areas to provide additional resources is through network screening, a type of analysis that helps identify locations with lower safety performance. This analysis considers not only the total number of crashes in a location but other factors such as annual average daily traffic (AADT), crash severity, and other crash factors such as emphasis areas. This allows all crash locations to be comparable and allows the analysis to be customizable to address specific emphasis areas.

Overview of Network Screening Process Used in Elmore County

As previously noted, network screening is a type of analysis used to identify locations with lower safety performance based on a series of performance metrics. The network screening process can be summarized in three overarching steps:

1. **Prepare Roadway and Crash Data:** The crash data must be associated with a roadway segment and, subsequently, roadway data.

2. **Apply Performance Metrics:** Select a series of performance metrics to measure the crash and roadway data against. For Elmore County, three different performance metrics were selected for the network screening process. The metrics are:

   a. Equivalent Property Damage Only (EPDO) Crash Rate: EPDO is a method of weighting crashes by severity using the equivalent number of property damage only (PDO) crash costs to develop the weights. The EPDO crash rate normalizes all crashes based on crash severity.

   b. Crash Frequency: Crash frequency is the number of crashes occurring on a road segment. All crash types were analyzed equally and identified the average number of crashes over the five-year period for the segment.

   c. No Alcohol Involved Crash Rate: These are crashes where the use of alcohol is not noted as a contributing factor. Crashes related to impaired driving were not included.

PERFORMANCE METRICS

Measures used to assess and rank the potential to reduce crashes on a roadway segment or at an intersection based on various factors such as roadway volume, severity of crashes, frequency of crashes, etc.

3. **Identify Segments for Potential Safety Improvements:** After applying the performance metrics, a composite score ranks roadway segments based on safety performance. The composite score was calculated by averaging the ranking for each segment based on each performance metric, to determine an overall composite ranking. This identifies specific locations and common roadway characteristics as potential candidates for infrastructure improvements and/or additional enforcement activities.

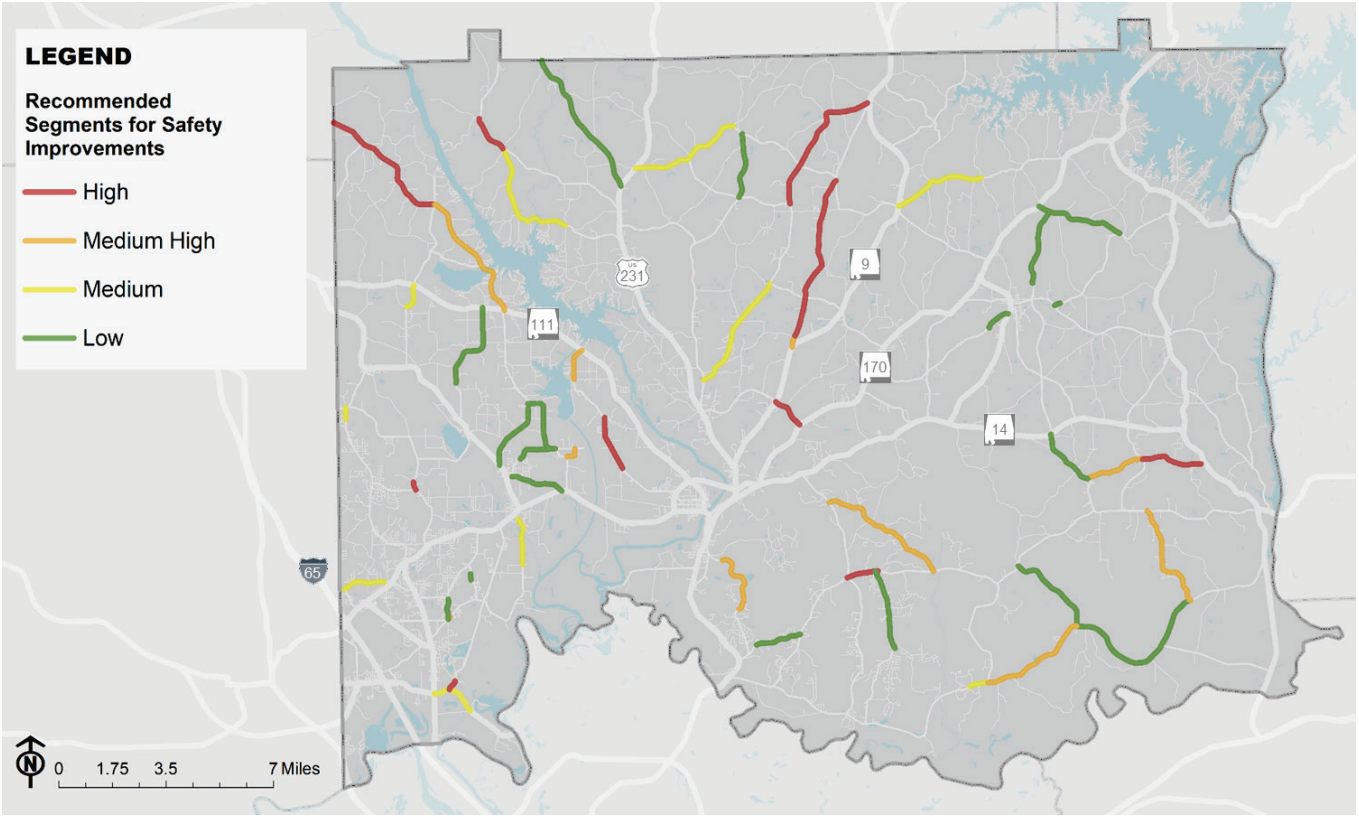
Additional details regarding the analysis process is available in the Appendix.

After the crash rates and frequency were calculated for each roadway segment, each segment was ranked and scored within the particular performance metric category. These three ranked scores were then averaged, calculating a composite score used to finalize the network screening. Equal weights were applied to each performance metric due to a series of pros and cons within each metric. Combining all three crash metrics into one score, prevents no single overarching metric from dominating the analysis.

Results of Network Screening

Figure 8 shows the results of the network screening. The segments with the highest composite rank score are highlighted in red and the lowest score highlighted in green.

FIGURE 8. COUNTY-MAINTAINED ROADWAY NETWORK SCREENING RESULTS



Source: Critical Analysis Reporting Environment (CARE), Cambridge Systematics, Inc. Analysis.

Table 3 shows additional information such as the road name, segment start and end, and risk factors for the ten segments with the highest potential for safety improvements. Risk factors were determined by the number and types of crashes occurring along the segments during the 5-year study period. Additional information on the medium-high, medium, and low risk segments are included in the appendix. The top twenty local roadway segments (maintained by local municipalities) is also included in the appendix.

TABLE 3 SEGMENTS WITH HIGHEST COMPOSITE RANK SCORE (RED MAP SEGMENTS)

Road Name	Segment Start	Segment End	Risk Factors
COOSADA PARKWAY	Alabama River Parkway	Lake Shore Drive	Aggressive driving[1] Intersection crashes
CHAPEL ROAD	Crenshaw Road	McCain Road	Aggressive driving
WILLIAMS ROAD	Central Plank Road	Georgia Road	Aggressive driving Roadway departure
TITUS ROAD	Blueberry Hill Road	Grays Ferry Road	Aggressive driving
BALM ROAD	Bradley Road	Trace Road	Aggressive driving Intersection crashes
INGRAM ROAD	Myrick Road	Skyler Road	Aggressive driving Intersection crashes
REDLAND ROAD	Fire tower Road	Price Road	Aggressive driving Intersection crashes
GRIER ROAD	Antioch Road	Balm Road	Unrestrained occupants Intersection crashes
LIGHTWOOD ROAD	Chilton County Line	Cossa River Road	Aggressive driving Roadway departure
BURT MILL ROAD	Cherokee Trail	Gilmer Ave	Roadway departure

[1] *The risk factors are defined based on the AL SHSP emphasis area definitions included in the Appendix.*

Many of the highest composite rank score locations are in rural portions of the county, in particular Lightwood Road, Balm Road, and Grier Road. Infrastructure improvements at these and other location have the potential to reduce crashes and/or decrease the severity of crashes. Programs focused on behavioral-related crash causes such as driver feedback signs or additional driver education at local high schools could assist in addressing the safety performance of these roadways.

The listing of roadway segments resulting from this analysis is the initial step in determining the funding needed to address some of the critical locations with lower safety performance. The Appendix contains more comprehensive lists of locations for county-maintained roadway segments and locally-maintained roadway segments that could be considered for future funding of safety improvements.

4 Safety Action Plan

A Call to Action

One important result of the stakeholder involvement conducted during the plan development process was the opportunity to gather input on specific actionable steps to be taken to implement the plan. The purpose of this section is to summarize the action steps identified during the plan development process. This framework will allow Elmore County and its stakeholders to strategically focus on plan implementation.

Emphasis Area #1 – Infrastructure and Operations

While the goal of the Plan is to identify the most critical emphasis areas in the County, the role of the Elmore County Highway Department is best suited to address infrastructure-related issues. The strategies listed in this emphasis area focus on lowering fatalities and serious injuries related to speed, roadway departures, and intersections.

Strategy 1: Implement proven safety countermeasures to keep vehicles from leaving the roadway (e.g., rumble strips, edge line rumble strips, skid resistant surfaces, enhanced signing and marking, etc.).

Strategy 2: Implement proven safety countermeasures to minimize the likelihood of crashing into an object or overturning if the vehicle travels off the shoulder.

Strategy 3: Implement proven safety countermeasures to reduce the severity of roadway departure crashes.

Segments for Potential Safety Improvements

Based on the segments identified in Chapter 3 (Figure 8), the following steps should be considered:

Determine recent, current, and future projects programmed for each segment

- If improvements were made in the last 2-3 years, segment should go on “watch” list to determine if more recent data shows the same safety performance issues.
- Conduct internal site visits to gauge potential improvements needed.
- Identify additional information available on each segment.
  - » Speed data

  - » Sight distance data
  - » Feedback from school bus drivers, local business owners, etc.
- Determine if any potential improvements can be integrated in the county's existing programs.
- Provide information on relevant sites to law enforcement agencies for additional perspectives and increased enforcement efforts.
- Identify sites that warrant road safety reviews.
- Share locally-owned and maintained segments for potential improvement with local agency partners.
- Coordinate with ALDOT on state-maintained roadways with segments for potential improvements.

Emphasis Area #2 – Education, Awareness, and Coordination

Based on data analysis and feedback from key stakeholders, Elmore County has identified three additional areas for addressing safety: Education, Awareness, and Coordination. These three areas represent the opportunities Elmore County officials and stakeholders have to coordinate on the behavioral-related issue areas such as impaired driving, young drivers, and occupant protection, that can potentially decrease crashes, fatalities, and injuries on the roadway system.

Education relates to educating drivers, specifically on behavioral-related crashes such as speeding, impaired driving, and distracted driving, especially related to young drivers. Awareness presents real-time educational opportunities, such as driver feedback signs letting drivers know if they're speeding or specific infrastructure improvements, such as rumble strips for preventing roadway departures. Finally, coordination between all stakeholders can further improve driver education and awareness, especially coordination of data between agencies including volunteer firefighter responders, police officers, dispatch, and the department of transportation. Enhanced coordination can ensure all crashes are reported and can also signal any damage to infrastructure needing repair. Stakeholders also identified coordination opportunities with schools, such as driver education topics and feedback from school bus drivers on locations with unsafe conditions such as poor sight distance.

Strategy 1: Conduct public education and outreach programs to increase awareness of young driver issues, including alcohol and illicit and prescription drugs.

Strategy 2: Increase public awareness of speeding and aggressive driving issues through media and outreach.

Strategy 3: Increase high-visibility enforcement to reduce the frequency of crashes associated with speeding and aggressive driving.

Strategy 4: Increase public awareness of distracted/drowsy driving issues through media and outreach.

Strategy 5: Increase distracted driving enforcement by providing law enforcement strategies to effectively enforce distracted driving.

Strategy 6: Sustain seatbelt and DUI public information and outreach campaigns to reduce impaired driving.

Strategy 7: Support coordination between all stakeholders regarding driver education and data sharing between agencies including emergency responders, law enforcement, and ALDOT.

Opportunities for Action

- Share Elmore County LRSP with local organizations conducting traffic safety outreach programs.
- Use driver feedback speeding signs to make drivers aware of their speed on roadways or in communities with traffic safety challenges.
- Work with local emergency management agencies, such as volunteer firefighters, to collect additional information on unreported crashes, damages to roadway infrastructure, and responses to crashes that do not involve serious injuries.
- Gather information and feedback from local school district transportation staff and bus drivers on safety challenges.
- Coordinate with local jurisdictions to share information on traffic safety challenges and opportunities to leverage existing education and awareness programs.
- Share data on segments with most potential for safety improvements with local law enforcement agencies to inform enforcement activities and help reduce impaired driving, young driver crashes, and increase seat belt usage.

5 Future Transportation Safety Opportunities

Data

Elmore County may explore potential improvements in collecting, managing, and analyzing safety-related information that can be incorporated in future funding and resource allocations with the goal to eliminate fatalities and severe injuries on local streets and roads. Data-driven safety analysis requires having accurate, complete, and comprehensive data inputs, which may not currently be collected by the County. This effort to collect additional data can contribute to the understanding of how both engineering and behavioral countermeasures affect safety. According to the FHWA Roadway Safety Data Program:

The effectiveness of safety programs is directly linked to the availability of sound data analysis for informed decisions. Improving data involves identifying and improving data quality, quantity, types, storage, maintenance, accessibility, and use. Enhanced analytical processes use procedures to better identify safety problems and select countermeasures to achieve optimal returns on safety investments. The knowledge base created by these processes and procedures also improves the ability to learn from trends in the data and to recognize the relationships between safety and other issues such as highway design, roadway operation, and system planning.

In addition, the County may utilize resources such as the Model Inventory of Roadway Elements (MIRE) guidebook, to inventory current data elements needed by engineering, planning, and project management staff. By reviewing the MIRE guidebook, County staff may be able to develop a standardized and comprehensive list of the most important crash-related data elements, identify a comprehensive listing of roadway inventory data elements that may be necessary for various safety management activities, and prioritize roadway elements for future collection.

Funding

This Plan will allow the Elmore County Highway Department to show the need for additional funding for safety improvements. The strategies and action steps in the Plan provide a strategic set of priorities that will help the County reduce fatalities and serious injuries. Elmore County's Highway Department will use this document to inform decision makers and stakeholders of the opportunities to reduce fatalities and serious injuries and resources needed. The priorities and action steps in the Plan will be the impetus for Highway Safety Improvement Program (HSIP) and High Risk Rural Roads Program (HRRRP) funding applications.

Population and Business Growth

The Elmore County Safety Plan details specific road types and characteristics that currently represent the most safety risk. However, changes to population, commercial and residential development, and other factors over time, could impact where and why crashes are occurring.

According to the 2010 Census, U.S. population growth will be in the South and West. Recent projections completed by the Center for Business and Economics (CBER) at the University of Alabama show Elmore County's population from 2010 to 2018 will grow by 18.4 percent. Also, the Census information suggests that increased concentration of the population in urban areas will force people to move farther away from core cities in order to find affordable housing, making commuting distances longer. This shift in population location will increase driving distances which increases exposure and will lead to a higher risk of crash. More travel may occur on high-speed roads in non-urban areas, further increasing crash exposure.

Fatalities have historically correlated fairly strongly with economic cycles. When the economy is strong and growing, people tend to increase their recreational driving. With this increased exposure, highway fatalities increase.

With increased population and economic growth in Elmore County, the types of crashes being observed today may change over time. Potentially there may be more fatal crashes involving only one vehicle, more fatal crashes on divided highways, more fatal crashes at entrance and exit ramps on freeways, more fatal crashes at intersections, and more fatal crashes involving vulnerable road users because increased population leads to increased vehicle miles traveled, changes in system configurations, and thus leading to an increased potential of more vehicle conflicts on the roadways. With these changes in crash types coupled with enhancements to safety data collection, Elmore County could proactively work toward a systemic safety analyses of intersections, curves, bicycle, and pedestrian crashes.

In addition, recognizing the demographic changes occurring within Elmore County, the County would benefit by establishing a regular interval, perhaps five years, for updating and modifying the safety plan.

Evaluation

A critical component of safety planning is to understand how fatalities and serious injuries are trending over time and what is effective so investments are directed appropriately. Evaluation can take two forms – one is an annual assessment of overall safety performance (i.e., fatalities, serious injuries). This high level crash trend tracking could be completed annually by the County to gain insights on successes as well as the extent to which safety challenges still exist. Evaluation can also be more specific, tracking changes to fatalities and serious injuries by focus facilities, by crash type, or by a program of improvements (i.e., implementation of rumble strips). This type of evaluation takes time as "after" crash data – typically three years' worth – is necessary to understand the extent of safety improvements. Finally, this evaluation process allows for the County to definitively assess the safety performance of their safety programs and the safety plan overall.

6 Appendix

Additional Letters of Support

TOWN OF COOSADA
5800 COOSADA ROAD
PO BOX 96
COOSADA, ALABAMA 36020

May 9, 2019

Elected Officials, Stakeholders, and Citizens,

From 2012 to 2016, 4,481 people died in motor vehicle crashes in the State of Alabama. During that same period, 86 fatalities occurred on roadways in Elmore County. No matter how large or small the number, even one fatality is too many. Elmore County is committed to a high standard of health and care for our residents, including a transportation system that safely and efficiently moves people and goods.

I am aware that Elmore County has been working to create a Local Road Safety Plan to support our state's vision of zero death for all transportation users. The Elmore County Local Road Safety Plan is a data-driven plan that identifies strategies and actions to provide a safe transportation system for the residents of Elmore County. This plan is the result of a diverse group of stakeholders providing their ideas on how we can reduce the likelihood of traffic deaths and injuries.

This plan aims to reduce fatalities and serious injuries on all Elmore County Roadways. Thank you for the efforts and please know that I fully support the Elmore County Local Road Safety Plan.

Anthony Powell, Mayor
Town of Coosada

Elected Officials, Stakeholders, and Citizens,

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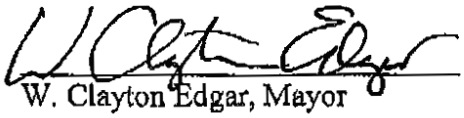

W. Clayton Edgar, Mayor
Town of Deatsville

Gary W. Davenport
Mayor

Town of Eclectic
P.O. Box 240430
145 Main Street
Eclectic, Alabama 36024
Telephone: (334) 541-4429
Fax: (334) 541-2854

COUNCIL
Linda Reed
Mayor Pro Tem
Charlie Powell
Carmen Winslett
Jackie Stearns
David Goodwin

May 2, 2019

Elected Officials, Stakeholders, and Citizens,

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Gary Davenport
Mayor, Town of Eclectic

Town of Elmore

Post Office Box 204
485 Jackson Street
Elmore, Alabama 36025
(334)514-5988 (334)514-5778-Fax
www.townofelmore.com

Margaret White, ***Mayor***
Council
David Foster
John Glasscock
Scott Schodorf
Heather Fitzgerald
Chris Sisson

May 3, 2019

Elected Officials, Stakeholders, and Citizens,

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Margaret T. White
Mayor

City of Millbrook Alabama

COMFORT • CONVENIENCE • COMMUNITY

Elected Officials, Stakeholders, and Citizens,

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Al Kelley, Mayor

P.O. Box 630 • 3390 Main Street • Millbrook, Alabama 36054
Phone (334) 285-6428 • Fax (334) 285-6460 • www.cityofmillbrook.org

EST. 1839
PRATTVILLE
Alabama

BILL GILLESPIE, JR.
MAYOR

May 31, 2019

Elected Officials, Stakeholders, and Citizens,

From 2012 to 2016, 4,481 people died in motor vehicle crashes in the State of Alabama. During that same period, 86 fatalities occurred on roadways in Elmore County. No matter how large or small the number, even one fatality is too many. Elmore County is committed to a high standard of health and care for our residents, including a transportation system that safely and efficiently moves people and goods.

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Bill Gillespie Jr.
Mayor, City of Prattville

OFFICE OF THE MAYOR
101 West Main Street \ Prattville, AL 36067 \ 334.595.0100 \ prattvilleal.gov

The City of Tallassee, Alabama

3 Freeman Avenue Tallassee, AL 36078
Phone (334) 283-6571 ▪ Fax (334) 283-3335

Elected Officials, Stakeholders, and Citizens,

From 2012 to 2016, 4,481 people died in motor vehicle crashes in the State of Alabama. During the same period, 86 fatalities occurred on roadways in Elmore County. No matter how large or small the number, even one fatality is too many. Elmore County is committed to a high standard of health and care for our residents, including a transportation system that safely and efficiently moves people and goods.

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Mayor, Town/City of Tallassee

City of Wetumpka

Elected Officials, Stakeholders, and Citizens,

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Mayor, City of Wetumpka

AL SHSP Emphasis Area Definitions

Aggressive Driving – The definition for aggressive driving is broad. It includes crashes that identify the two aforementioned factors or one of 14 others noted as a primary contributing circumstance, such as aggressive operation, running a traffic signal, running a stop sign, disregarding a traffic sign other than a stop sign, making an improper turn, using an improper or no signal, traveling the wrong way, following too closely, improper passing, improper lane change or use, failure to yield right-of-way, failure to yield, traveling on the wrong side of the road, or driver not in control of the vehicle.

Distracted Driving – Defined as an activity that diverts attention from driving, usually an electronic device, but passengers and other in- and out-of-vehicle distractions also contribute to the problem. Drowsy or fatigued driving also is included in the definition.

Impaired Driving – Driving under the influence (DUI) of alcohol (.04 and higher blood alcohol content (BAC) for commercial motor vehicles and .08 BAC and higher for passengers).

Intersection-Related – Crashes occurring at or near a point on a road where multiple paths converge (e.g., signaled, unsignaled, highway-railway crossing).

Motorcycle-Involved – Crashes involving a motorcycle operator or its passengers.

Older Drivers – Crashes involving drivers 65 years of age or older.

Pedestrian/Bicyclists-Related – Crashes involving pedestrians and/or bicyclists or other non-motorized vehicles.

Roadway Departure – Defined by FHWA as crashes which occur after a vehicle crosses an edge line or a center line, or otherwise leaves the traveled way.

Speed-Related – Narrowly defined as driving over the speed limit or too fast for conditions.

Unrestrained – Driving or riding in a vehicle as a passenger without using proper seat belt restraints for adults or child passenger restraints for children.

Young Drivers – Crashes involving drivers aged 16 to 20.

Analysis Process

As noted in this document, network screening is a type of analysis that identifies locations with reduced safety performance. This analysis considers not only the total number of crashes in a location but other factors such as annual average daily traffic (AADT), crash severity, and other crash factors such as emphasis areas. This allows all crash locations to be comparable and allows the analysis to be customizable to address specific emphasis areas. To illustrate this, two roadway segments could each have 20 crashes but one is located on the interstate while another is located on a local street. These locations have varying AADT and the 20 crashes could greatly differ between the two locations, with differences in total fatalities and serious injuries. Investigating the details of

crashes, including crash characteristics and where it took place, all assists in identifying locations to make transportation investments.

For more detailed information about the LRSP development process and available resources, please refer to the Alabama LRSP Guidance developed by ALDOT.

Roadway Data Set

For Elmore County's network screening, underlying roadway network data was utilized, specifically information relating to AADT and route length to calculate vehicle miles traveled (VMT). A spatial analysis was required to link the individual crashes to specific route segments, allowing roadway information to be pulled for each crash. While the route length can be calculated using ArcGIS, the latest AADT for specific segments is required, with counts or estimates originating from either Elmore County or ALDOT. The availability of AADT determined whether a specific segment, and therefore crashes, would be part of the analysis. Since volume was a central component of the network screening process, if the data was unavailable, it was automatically not included in the analysis. Elmore County also verified which routes were maintained by the county and which were used in the network screening. Isolating the analysis to just county-maintained roads allows county officials to directly address these routes through projects and programs.

Overview of Network Screening Process Used in Elmore County

As previously explained, network screening is a type of analysis to identify locations with lower safety performance based on a series of performance metrics. The Highway Safety Manual (HSM) Chapter 4 provides a detailed description of the networking screening process. The network screening process can be summarized in three overarching steps:

1. **Prepare Roadway and Crash Data:** The crash data must be associated with a roadway segment and, subsequently, roadway data. Any crashes that cannot be geolocated and/or roadway segments without sufficient data are automatically removed from the analysis.

2. **Apply Performance Metrics:** Select a series of performance metrics to measure the crash and roadway data against. Performance metrics can include data such as specific emphasis areas, crash rates, and/or crash severity. Metrics should be comparable across the county and could be normalized based on AADT, segment links, or facility types. For more information on various performance metrics refer to the HSM Part B Section 4.2.3 (HSM p. 4-6).

3. **Identify Segments for Potential Safety Improvements:** After applying the performance metrics, a composite score ranks roadway segments based on safety performance. This identifies specific locations and common roadway characteristics as potential candidates for infrastructure improvements and/or additional enforcement activities.

For Elmore County, three different performance metrics were selected for the network screening process. The metrics identified a variety of crash types and varying ideologies on how to conduct the analysis.

- **Equivalent Property Damage Only (EPDO) Crash Rate:** Equivalent Property Damage Only is a method of weighting crashes by severity using the equivalent number of property damage only (PDO) crash costs to develop the weights. The EPDO crash rate normalizes all crashes based on crash severity, with a higher weight (21.3) given to fatal, serious injury, and non-serious injury crashes, medium weight (6) to all possible injury crashes, and no weight (1) for property damage only (PDO) and unknown crash severity crashes. In addition to normalizing by crash severity, segments were normalized by VMT. This metric analyzes all crash segments on an equal level, normalizing by both crash severity and VMT; however, it does not consider specific crash characteristics nor crash frequency. Consequently, locations with 20 PDO crashes may be ranked higher than a location with a single fatal crash.
    - Equivalent Property Damage Only (EPDO) index formula: The Equivalent Property Damage Only (EPDO) index is calculated by the following formula: [(21.32 x (Fatal Crashes + Serious Injury Crashes + Non-Serious Injury Crashes) + (6.05 x Possible Injury Crashes) + Property Damage Only Crashes + Unknown Injury Crashes] / Total Crashes.

- **Crash Frequency:** These are crashes where the use of alcohol is not noted as a contributing factor. All crash types were analyzed equally and identified the average number of crashes over the five-year period for the segment. No normalization was applied to this metric, only representing the average number of crashes. This metric concentrates on locations where crashes occur most often, allowing targeted improvements impacting many crashes; however, this metric does not consider crash severity or VMT, potentially creating a bias for locations with high traffic volumes.

- **No Alcohol Involved Crash Rate:** Crashes related to impaired driving were not included in this performance metric, isolating crashes not related to alcohol. These non-alcohol involved crashes were then normalized based on VMT, representing the total non-alcohol involved crashes per million VMT. This metric concentrates on a specific crash type, allowing stakeholders to implement more infrastructure based improvements and also considers VMT, normalizing crashes based on volume; however, it does not consider crash severity nor overall crash frequency.

After the crash rates and frequency were calculated for each roadway segment, each segment was ranked within the particular performance metric category. For example, the roadway segment with the highest crash frequency was given the rank of 1 and the segment with the lowest EPDO was given the last rank. This represents how each segment scored relative to each other. These three ranked scores were then averaged, calculating a composite score used to finalize the network screening. Equal weights were applied to each performance measure due to a series of pros and cons within each metric. Combining all three crash metrics into one score, prevents no single overarching ideology from dominating the analysis.

Network Screening Results

Tables 4, 5, and 6 show additional information on the medium-high, medium, and low segments with potential for safety improvements, as graphically displayed in Figure 8. Table 7 provides a list of the top twenty local roadway segments with potential for safety improvements. These roadways are maintained by cities within the county.

TABLE 4. SEGMENTS WITH HIGHEST COMPOSITE RANK SCORE (MEDIUM-HIGH, ORANGE MAP SEGMENTS)

Road Name	Segment Start	Segment End	Risk Factors
DARK CORNERS RD	Friendship Rd	Rise Range Rd	Young driver Roadway departure
CRENSHAW RD	Holtville Rd	Cain Rd	Aggressive driving Distracted/Drowsy driving
MARSHALL RD	Firetower Rd	Redland Rd	Aggressive driving Roadway departure
FLATWOOD CUR	Flatwood Rd	Mehearg Rd	Aggressive driving
LIGHTWOOD RD	Cosa River Rd	Holtville Rd	Aggressive driving Intersection crashes
BURT MILL RD	Flat Rock Rd	Cherokee Trl	Young driver Unrestrained
BALM RD	AL HWY 9	Race Rd	Aggressive driving Roadway departure
COOSADA RD	Sandtown Rd	City Limits	Aggressive driving Intersection crashes
JASMINE HILL RD	City Limits	Jasmine Hollow Rd	Aggressive driving
RIFLE RANGE RD	Wase Rd	Rock Springs Rd	Aggressive driving/speed related, Young drivers

TABLE 5. SEGMENTS WITH HIGHEST COMPOSITE RANK SCORE (MEDIUM, YELLOW MAP SEGMENTS)

Road Name	Segment Start	Segment End	Risk Factors
GRIER LN	Weoka Rd	Dexter Rd	Young drivers
COOSA RIVER RD	Foreman Rd	Holtville Rd	Aggressive/Distracted Roadway departure
MT HEBRON RD	Central Plank Rd	Lake Point Rd	Aggressive driving Roadway departure
OLD PRATTVILLE RD	Camp Grandview Rd	Joy Ger Dr	Aggressive driving Intersection crashes
BELLINGRATH RD	City Limits	Lafayette Dr	Speed-related Alcohol-related
RIFLE RANGE RD	Laprade Rd	Ware Rd	Aggressive driving Roadway departure
DEATSVILLE HWY	Foxwood Rd	City Limits	Aggressive driving
TITUS RD	Sewell Rd	Spigener Rd	Aggressive driving Roadway departure
BOWDEN RD	US 231	Little Weoka Creek Rd	Aggressive/Distracted Roadway departure
JACKSON LAKE RD	Main St	Jackson Lake Rd	Intersection crashes Aggressive driving

TABLE 6. SEGMENTS WITH HIGHEST COMPOSITE RANK SCORE (LOW, GREEN MAP SEGMENTS)

Road Name	Segment Start	Segment End	Risk Factors
WEOKA RD	Antioch Rd	Bradley Rd	Aggressive driving Unrestrained
FLATWOOD RD	Ceasarville Rd	Shady Ln	Young driver Roadway departure
E COTTON RD	Kowaliga Rd	Double Bridge Ferry Rd	Speed-related
DOUBLE BRIDGE FERRY RD	Main St	City Limits	Young driver Roadway departure
CEASARVILLE RD	Autumn Trl	AL HWY 143	Aggressive Roadway departure
N ANN ST	E Cotton Rd	City Limits	Aggressive Intersection crashes
OLD SALEM RD	City Limits	Claud Rd	Roadway departure
RIFLE RANGE RD	Rock Springs Rd	Dark Corners Rd	Aggressive Intersection crashes
FLATWOOD RD	Hickory Dr	Mehearg Rd	Aggressive Intersection crashes
JACKSON RD	Redland Rd	Mitchell Creek Rd	Aggressive Roadway departure
ROCK SPRINGS DR	Redland Rd	Rifle Range Rd	Aggressive/Distracted driving, Roadway departure
GOOD HOPE RD	Tallassee Hwy	Burt Mill Rd	Distracted/Drowsy
FITZPATRICK RD	City Limits	Elmore Rd	Aggressive Roadway departure
BUYCK RD	County Line	US Highway 231	Young driver
BALTZER RD	Spring Dr	Flatwood Rd	Aggressive driving
KENNEDY AVE	Coosada City Limit	Millbrook City Limit	Aggressive driving Speed-related
AIRPORT RD	Chapman Rd	Coosada Rd	Intersection crashes
WILLOW SPRINGS RD	Azaleawood Dr	Redland Rd	Intersection crashes
HOGAN RD	Holtville Rd	Willow Oak Dr	Intersection crashes Young driver
FITZPATRICK RD	City Limits	City Limits	Roadway departure

TABLE 7. LOCAL SEGMENTS WITH HIGHEST COMPOSITE RANK SCORE

Road Name	Segment Start	Segment End	Risk Factors
ROSS RD	Deatsville Hwy	Gunnells Rd	Intersection crashes
MIDDLE RD	Mt Hebron Rd	Madix Dr	Aggressive driving
SPIGENER RD	Sewell Rd	US 231	Aggressive driving
SUNNY LN	Central Rd	Georgia Rd	Young driver
SANDTOWN RD	Davis Dr	0.25 Miles South of Coosada Rd	Intersection crashes Aggressive driving
OLD US HWY 231	US 231	US 231	Intersection crashes Aggressive driving
ROBINSON RD	E Cotton Rd	Chana Creek Rd	Roadway departure Unrestrained
LIBERTY RD	Redland Rd	Friendship Rd	Aggressive driving
PRICE RD	Redland Rd	Redland Rd	Aggressive driving
GOSSOM SWITCH RD	McCain Rd	0.25 Miles South on Queen Ann Rd	Unrestrained
CHALK HILL RD	Luke Paschal Rd	Flat Rock Rd	Intersection crashes Roadway departure
RIDGEFIELD DR	Redland Rd	Redland Rd	Intersection crashes
BLACKBERRY RD	Lightwood Rd	Dead Ends	Young driver
WELDON RD	Chana Creek Rd	Upper River Rd	Aggressive Young driver
OAK TREE RD	Dismukes Rd	Oak Tree Loop	Intersection crashes Aggressive driving
INDIAN CAMPGROUND RD	Mt Hebron Rd	Dead Ends	Intersection crashes
PECAN GROVE RD	Rucker Rd	Johnson Dr	Intersection crashes Aggressive driving
PINE LEAF ST	Baltzer Rd	Fitzpatrick Rd	Distracted/Drowsy driving Young driver Intersection crashes
UNION RD	Mt Hebron Rd	Central Rd	Distracted/Drowsy driving Young driver Roadway departure
LAW RD	Fieldcrest Rd	Elmore County Titus Rd	Distracted/Drowsy driving Unrestrained Roadway departure

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