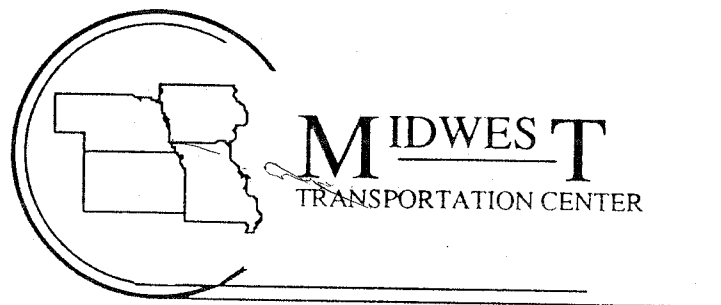


***Interacting Vehicles and Roadways
with Elderly Drivers
on Missouri Highways***



September 1993

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***Interacting Vehicles and Roadways
with Elderly Drivers on Missouri Highways***

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PREFACE

This report is the product of a cooperative funded research project in the University Transportation Center's Program. The Program was created by Congress in 1987, to "contribute to the solution of important regional and national transportation problems." A university-based center was established in each of the ten federal regions following a national competition in 1988. Each center has a unique theme and research purpose, although all are interdisciplinary and also have educational missions.

The Midwest Transportation Center is one of the ten centers. It is a consortium that includes Iowa State University (lead institution) and The University of Iowa. The Center serves Federal Region 7 which includes Iowa, Kansas, Missouri, and Nebraska. Its theme is "transportation actions and strategies in a region undergoing major social and economic transition." Research projects conducted through the Center bring together the collective talents of faculty, staff, and students within the region to address issues related to this important theme.

This particular project was carried out by an interdisciplinary research team at Central Missouri State University's Missouri Safety Center. This nationally known safety center was established in 1967, by the Governor's Task Force, the Coordinating Board for Higher Education, and the Missouri legislature. The Center has served, not only the people of Missouri, but 49 other states and 40 foreign countries in the field of traffic and transportation safety. The Missouri Safety Center, was authorized to conduct programs of research, instruction, publication and public service.

The project is central to the Midwest Transportation Center's theme in that it examines the relationship between investment in roads and highways, and the accidents on Missouri roadways involving a specified population. An additional component to this study was a survey of vehicle buying habits among this age group. The principal investigator for this project was Glenn A. Carriker, Ed.S., Missouri Safety Center. Co-investigators were: Dr. John J. Prince, Chair, Department of Safety Science and Technology, Central Missouri State University; Dr. Leanna Depue, Director, Missouri Safety Center, Central Missouri State University; Dr. Robert L. Baldwin, Executive Director, Veterans of Safety. Additional assistance was provided by Ms. Christine Hessman and Ms. Gina Geloso, who were graduate assistants assigned to the project.

Acknowledgements

A project as wide in scope and diversity as this, could not be done without the assistance of many additional people. Special thanks goes to the Missouri Highway and Transportation Department for additional financial assistance, as well as, the technical assistance of roadway improvements, both in process and in the master plan for the years 1993 through 2000. In particular, a special thanks goes Mr. Wayne Muri, Chief Engineer of the Missouri Highway and Transportation Department and to Mr. Jim Radmacher, Mr. Bob O'Brien, Mr. Bill Link and Mr. Dave Snider of the Highway Department staff.

In addition, the project staff would like to extend a special thanks to the Missouri State Highway Patrol's SAC (Statistical Analysis Center) staff and specifically, Mr. Marti Carso, who provided the summary of the accident data for the target population area. Special thanks also is given to Mrs. Diane Gaines and the computer staff of the Missouri Department of Revenue, who designed and ran the computer program to obtain our sample population study group. We also want to extend our thanks to the Missouri Automobile Dealers Association for their support in providing mailing information for the new car dealers in the study area.

We also want to express our sincere thanks to the Instrument Review Committee, which assisted the principals in the design and testing of the survey instruments used in the study. Mr. Jack Sigler (Ret), Director of Research and Grants, Central Missouri State University; Dr. Robert L. Baldwin (Ret), Executive Director, Veterans of Safety; Dr. Don Nimmer, Director of Research and Testing, Central Missouri State University; Dr. Novella Perrin, Director, Gerontology Institute, Central Missouri State University. Without this group's vast knowledge base, the significance of the study would certainly have been impaired.

Finally, a special thanks to all the staff of the Missouri Safety Center who through assistance and support provided the opportunity for the project principals to participate in this research study.

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Executive Summary

This study reported on the interaction of vehicles and roadways with drivers sixty years of age and older in a twenty county area of southern Missouri. The study sought to address the question of the level of older driver acceptance of highway improvements and especially improvements involving technologies of smart car and intelligent highway systems.

Data were analyzed on:

- (1) the number of miles driven by persons sixty years of age and older in the developing area,
- (2) the type and acceptance level of high technology equipment as new cars purchased, and
- (3) the areas within the twenty counties where drivers perceive a need exits for improvements to the roadways.

Comparisons were also made between the self-reported accident experiences of the older drivers and their suggested improvement areas with the areas identified in the Missouri Highway Department Work Plan and the Missouri State Highway accident statistics.

Study data permitted inferences concerning:

- (1) types of vehicles and equipment more likely to be purchased,
- (2) types of roadways most apt to be driven,
- (3) perception of highway hazards to be corrected, and
- (4) present accident experience of drivers aged sixty or older.

Chapter 1

Introduction to Study

Since the late 1980s, the southwestern portion of Missouri has experienced substantial growth in population of persons age sixty and above. This growth is not only in establishing permanent residency, but also in seasonal residency. The primary areas of the state where this change has occurred are the Springfield and Branson areas. Assumptions can be made that the climate is conducive to living year round, as well as seasonal. This fact combined with the large influx of entertainers in the Branson area has aided the popularity of this area of the state. While the Ozarks have been a major recreational area of the state for many years, during the past ten years the number of music shows and entertainment activities have experienced rapid growth. Prior to the mid to late eighties, the roadways serving this area of the state were limited to the technology of the sixties and seventies, and were not designed for the growth capacity experienced in the region. In the 1980's, the Missouri Highway and Transportation Department began upgrading many of the roadways to handle the increasing traffic flow but due to the physical environment, improvements are limited.

Based upon the perceived needs of the Highway Department, the Division of Tourism, and the Division of Highway Safety, the Missouri Safety Center submitted to the Midwest Transportation Center a proposal to study the needs of the region. The study was four-fold. First and foremost, the research was designed to survey older resident drivers to obtain their input on the needs of the area. Second, the research team wanted to capture data on accidents involving the older driver that were occurring in the study area and to determine the validity of the data being used to figure Missouri's accident rates among older drivers. Third, the study team wanted to look at the long-range plans developed by the Missouri Highway and Transportation Department for the area to determine if the needs perceived by the older driver were being addressed and also if suggestions from the survey respondents could be added to the state's long-range plans. The fourth area from which the team wanted to collect data was on the purchasing habits of drivers in the survey area to determine the feasibility of incorporation of the intelligent highway system (smart cars) into the roadway improvements.

Chapter 2

The Study Design

Submission of the project proposal to the Midwest Transportation Center, required the Project Design Team to indicate specific questions to be answered. These included, first, the profile and driving habits of the sixty year old plus population currently residing in the southern part of the state. Second, what are the perceptions of the surveyed population concerning changes and technology that could be included in the roadways and automobiles that would aid in accident reduction and guidance.

The study was designed with a four-tier approach for data collection. Drivers who fell into the sixty plus age group were identified. Second, a survey of new car dealers in the study area to determine buying habits of this age group was made. Third, data were analyzed from the state's computer system to limit the study to accidents within the study area and drivers in the appropriate age group. Fourth, a review of the Missouri Highway and Transportation Department's recent and future Roadway Construction and Maintenance Plan for the area was made.

The following text covers the process used in the conduct of each of phase of the study.

Driver Survey Instrument Development

In constructing the design of the first phase of our study, the instrument design team was assembled to assist the research team with the development of a specific instrument to capture data on older drivers. This task involved two phases: (1) determining the survey population; and (2) developing and testing an instrument. In response to the diversity of a population base, the research team elected to limit the study to drivers who were at least sixty years of age or older, who had renewed their driver's license within the past two years, and who resided in a twenty county region in the southwest to south central portion of the state. This study area included both the Springfield and Branson areas (see Appendix D, map of the study area). The Missouri Department of Revenue's computer center provided data to identify all person's meeting the established criteria. Utilizing the 1990 Census data, a computer program selected 2,000 drivers (age sixty or older) from the twenty counties, proportionally to the population of each county. One additional variable was used during this screening process. That was to match the ratio of male and female to the county population ratio. Finally, the computer program processed this data base with a final screening designed to randomly select 2,000 names from the data base. These names were printed out in label format for the research team.

Simultaneously, the task of instrument design was being addressed by the instrument design team. This team was selected to consist of persons with gerontology experience, survey expertise, safety experts and driver trainer/evaluation experts. Their task was to develop a series of questions to capture the appropriate data for the study.

Several key factors were determined by the Committee to be significant for capture as a basis for comparisons with data collected from other sources. The primary data capture areas were:

- (A) Demographic and profile information--key elements were classification of area residents, length at that residence, driving habits, roadways used, model/year of their car(s), and if they are still employed. These data were important to ensure adequate survey sample by sex and by rural vs urban, as well as, the computation of miles driven. Missouri, like other states, bases the accident experiences of an age group on the miles driven. Understanding both the difficulties expressed by the respondees of a specific age group and obtaining specific accident experience was felt to be of importance as further discussions on accident experience of older drivers is conducted for purposes such as public information programming and/or highway engineering improvements.
- (B) Specifics about the car the respondents drive--key data captured in this study area were related to equipment that the respondents actually had on their present vehicles. These data can be used in combination with a survey of new car dealers to provide insight into the potential buying and using of smart car/intelligent highway systems. Also in this part of the survey, questions were asked regarding the type(s) of vehicle(s) they drive (i.e., oversized vehicle, such as recreational vehicles or if they towed boats).
- (C) The roads driven. This area targeted respondents' feedback concerning how they felt about the current status of existing roadways, as well as, capturing their responses to some typical upgrades made on highway sections in their area of the state. Specifically, questions were asked concerning the respondents' attitude toward changes in signage, roadway markings, and roadway vehicle interactions.
- (D) The fourth and last area the design team placed into the survey instrument, was an open comments section which provided the respondents with a means to indicate their concerns, suggestions, and comments about Missouri highways, traffic, and dangerous intersections.

Once developed, the primary instrument was pilot tested for face validity. Upon completion of the first test, modifications were made to clarify several questions. Also, the instrument was modified to group the questions for ease of response. The reviewed survey instrument was subsequently administered to a test group of thirty persons ranging in age from fifty to eighty-two. Based upon the pilot test results, the team accepted the instrument and final approval was given to proceed. In all, 2,000 surveys were disseminated. Of these, twenty were returned because the person had moved or was deceased. This reduced the survey sample to 1,980. Of the remaining, 1,284 were completed. This provided a sixty-five percent return rate. The study team agreed that the return was adequate for data and subsequent inferences from these data.

Dealer Survey Instrument:

At the initial meeting, the instrument design team decided it would be advantageous to capture data from new car dealers regarding the buying habits of person sixty years and older. The intent was to determine the types of new car buyers, their preferences and willingness to purchase higher technology which could lead to acceptance by this group of smart car technology. An instrument was designed to capture data regarding the purchase of size, class of vehicle, equipment, sex of buyer, and percentage of sales to older persons at each dealership. The new car dealer survey was developed and pilot tested. Approval was given to conduct a limited test in a non-survey area. The instrument was tested on four persons. Three of these were new car dealers in the Warrensburg area and one was a Missouri Safety Center staff person. The intent was to ascertain the level of acceptability of technology equipment being purchased in new cars by the study group. The Missouri Automobile Dealers Association in Jefferson City was contacted and a list of all new car dealers who had dealerships in the twenty county study area was obtained. That list covered sixty dealers. Each dealer was mailed a survey instrument along with an introduction letter to explain the reason for the survey, and a postage paid return envelop. Of the sixty dealers who were sent information, thirty-two responded. This provided a fifty-three percent return rate. The summary of the data collected is covered in Chapter 4 of this report.

Accident Data Analysis:

Accident data were collected for the survey. The purpose of exploring these data was two-fold. First, was to look at the accidents occurring in the total area, and subsequently make inferences about the sixty and over age drivers. Second, was to find the accident involvement compared to the miles driven by persons in this age group.

The Project staff contacted Mr. Marty Carso, of the Missouri State Highway Patrol's Statistical Analysis Center (SAC) in Jefferson City for access to the accident involvement of drivers in the study area by Fatal/Personal Injury/Property Damage. Also, the analysis provided by SAC included age, sex, location by type of roadway, weather, time of day, day of week, and month. Also collected were contributing factors to accidents involving the study group's area by drivers sixty and older. This data included seventeen categories with the highest percentage of accidents occurring in "inattention" and "failure to yield" categories. Also included in the data base, were date or classification of vehicles and the age of vehicles being driven in accidents (see Chapter 3 and Appendix E).

Highway Department Roadway Improvement Program:

The research team recognized the need for accurate data concerning improvements in the highways of the study area. Therefore, they contacted the Missouri Highway and Transportation Department to obtain the detailed "Highway Right-of-Way and Construction Program for 1993-2007." Since the driver survey instrument allowed for input from the respondents regarding their perception of specific dangerous locations throughout the study area, the research team felt there existed a need to conduct a comparison between those locations and improvements the Missouri Highway and Transportation Department had in their planning or construction process. It should also be noted that the Highway Department Plan did cover over seventy percent of the concerns

and locations that were identified in the data collected from the respondents. The survey of the data is included in Chapter 5 and Appendix F of the report.

In all, the study was designed to enable data gathering from a specific population (60+) in a concentrated geographic area (southwest/central Missouri). Those data focused on vehicles (types), time of day, roadways, miles driven, frequency of trips, and difficulties with vehicles and/or roadways.

Finally, it should be noted that this study design enabled the study team to make inferences concerning the state's population of drivers age sixty and above for purposes of projecting highway improvements using future technology, as well as, for the conduct of specific public information programs to improve highway safety.

Chapter 3

Summary of Driver Survey

This chapter contains the data obtained from the administration of the survey to the older drivers in the selected counties in southern Missouri.

Data Analysis

Demographics Information Pertaining to the Respondents were obtained through a series of responses designed for that purpose. Table 3.1 indicates that the respondents were divided almost equally with forty-nine percent of respondents being male and fifty-one percent being female.

Table 3.1
Demographics of the Respondents

| Demographic | Frequency | Percent |
|----------------------------------|-----------|---------|
| <u>Gender</u> | | |
| Male | 620 | 49.0 |
| Female | 644 | 51.0 |
| | N = 1264 | |
| <u>At Current Address</u> | | |
| 1 year or less | 13 | 1.0 |
| 1 to 3 years | 84 | 6.6 |
| 4 to 6 years | 149 | 11.7 |
| 7 to 10 years | 169 | 13.3 |
| over 10 years | 857 | 67.4 |
| | N = 1272 | |
| <u>Community</u> | | |
| Large +50,000 | 324 | 25.6 |
| Small -50,000 | 305 | 24.1 |
| Rural | 634 | 50.3 |
| | N = 1263 | |
| <u>Employment Status</u> | | |
| Employed | 212 | 16.7 |
| Not Employed | 44 | 3.5 |
| Retired | 1013 | 79.8 |
| | N = 1269 | |
| <u>Years Driving</u> | | |
| 0-5 | 0 | 0. |
| 6-15 | 15 | 1.2 |
| 16-25 | 30 | 2.4 |
| 26-35 | 61 | 4.8 |
| 35-up | 1168 | 91.6 |
| | N = 1274 | |
| <u>Glasses Required to Drive</u> | | |
| Yes | 737 | 58.4 |
| No | 524 | 41.6 |
| | N = 1261 | |

Sixty-seven percent had lived at their current address for over ten years. Thirteen percent had lived there for seven to ten years, and eleven percent had been there from four to six years. Of those responding, fifty percent described themselves as living in a rural area. Those living in (self-described) small cities and large cities were evenly divided with twenty-five percent in each category. Not surprisingly, seventy-nine percent of the respondents indicated they were retired, while sixteen percent were still employed. Ninety-one percent responded that they had been driving for over thirty-five years. Four percent indicated they had been driving for twenty-six to thirty-five years. Interestingly only two per cent had been driving from sixteen to twenty-five years. Of the respondents, fifty-eight percent reported that they were required to wear glasses when they drive.

The Roads You Drive On was a series of items that allowed the respondents to examine several roadway factors that they might find important to their driving experience. Those items were directed toward the respondent's local area. They were asked to respond regarding specific roadway factors. Table 3.2, depicts respondents' replies about roadway improvements they perceived as needed. Percentages reported in the narrative have been rounded to improve readability.

Seventy-four percent of the respondents indicated that pavement edge markings are a needed roadway improvement in their local area. Thirty-three percent indicated pavement edge markings were not needed. Center line reflectors were indicated as a needed improvement to the roadway by sixty-six percent of the respondents, while thirty-three percent reported they were not needed.

Interestingly, eighty-one percent indicated that center line reflectors would be helpful, while eighteen percent indicated they would not.

Clearly marked pedestrian crossings were needed local area improvements according to sixty-five percent of the respondents. Thirty-four percent indicated that clearly marked pedestrian crossings were not needed improvement in their area.

Well maintained shoulders for emergency stops were needed improvements in their local area according to seventy-four percent of those responding. Only twenty-five percent did not indicate well maintained shoulders as a needed local improvement.

The elimination of narrow and one-lane bridges was selected as a needed improvement by eighty percent of those responding. Nineteen percent responded that narrow and one-lane bridges were not a needed improvements in their area.

Of the respondents, fifty-nine percent indicated that the elimination of roadside obstructions that restrict a driver's field of vision were needed in their local area. In responding to this item, forty percent indicated field of vision improvements were not needed in their area.

Better sign maintenance was indicated as helpful by fifty-eight percent of those responding to the survey. On the other hand, forty-one percent reported better sign maintenance would not be helpful.

More than eighty-four percent noted that the placement of advanced warning signs would be a helpful improvement to the roadway in their area. Fifteen percent indicated that advance warning signs would not be helpful in their area.

Table 3.2
Respondents' Perceptions
of Needed Roadway Improvements

| Improvements | % Yes | % No | f |
|---|--------------|-------------|----------|
| Road Edge Markings | 74 | 26 | 1200 |
| Center Line Reflectors Needed | 66.7 | 33.7 | 1178 |
| Center Line Reflectors Helpful | 81.4 | 18.6 | 1173 |
| Marked Pedestrian Crossings | 65.2 | 34.8 | 1173 |
| Shoulders for Stopping | 74.7 | 25.3 | 1205 |
| Eliminate Narrow/One- Lane Bridges | 80.2 | 19.8 | 1200 |
| Remove Obstructions to View | 59.1 | 40.9 | 1146 |
| Dangerous Intersections | 73.6 | 26.4 | 1146 |
| Easier Reading Signs | 53.9 | 46.1 | 1157 |
| Larger Sign Lettering Helpful | 69.7 | 30.1 | 1187 |
| Better Sign Maintenance Helpful | 58.2 | 41.7 | 1157 |
| Advance Warning Signs Helpful | 84.9 | 15.0 | 1189 |
| More Left-Turn Lanes | 53.2 | 46.6 | 1184 |
| More Left-Turn Signals | 62.8 | 37.2 | 1186 |
| International Sign Symbols Understandable | 83.6 | 16.4 | 1211 |
| Missouri Signs Complicated | 11.1 | 88.9 | 1202 |
| Missouri Signs Clear in Directions | 83.4 | 16.5 | 1226 |
| Missouri Signs in Disrepair | 12.9 | 87.1 | 1161 |

Of the respondents, fifty-nine percent indicated that the elimination of roadside obstructions that restrict a drivers field of vision were needed in their local area. In responding to this item, forty percent indicated field of vision improvement were not needed their area.

Seventy-three percent reported that the correction of dangerous intersections was a needed roadway improvement in their area, while twenty-six percent responded that correction of dangerous intersections were not needed.

Easier to read traffic signs were indicated as a needed improvements by fifty-three percent of those responding. Improvement in the readability of signs was reported as not needed by forty-six percent of the respondents.

When asked if larger lettering on highway and street signs would be helpful, sixty-nine percent indicated it would. On the other hand, thirty percent reported it would not be helpful.

Better sign maintenance was indicated as helpful by fifty-eight percent of those responding to the survey. One the other hand, forty-one percent reported better sign maintenance would not be helpful.

More than eighty-four percent noted that the placement of advanced warning signs would be a helpful improvement to the roadway in their area. Fifteen percent indicated that advance warning signs would not be helpful in their area.

When the respondents were asked if there should be more left-turn lanes in the area where they live, fifty-three percent reported there should be more, while forty-six percent of them reported that there should not be more left-turn lanes.

Sixty-two percent of those responding indicated that there should be more left-turn signals in their area. Thirty-seven percent reported that there should not be more left-turn signals.

When asked if they understand the international symbols which appear on highway signs, eighty-three percent indicated that they did understand, and sixteen percent said they did not understand the symbols.

According to eighty-eight percent of those responding, Missouri highway signs are not complicated, while eleven percent indicated they were.

Eighty-three percent reported that Missouri highway signs give clear directions, and 16 percent indicated they did not give clear directions.

Missouri highway signs are not in disrepair according to eighty-seven percent of the respondents. On the other hand, twelve percent thought Missouri signs were in disrepair.

Tell Us About Your Driving Experiences was a series of response items that were designed to elicit responses regarding the driving experiences of elderly drivers that responded to the survey. Table 3.3 indicates the percentage response to items dealing with driving experiences as they relate to the roadway.

Table 3.3
 Respondents' Driving
 Experience Relating to the Roadway

| Driving Experience | Frequency | Percent |
|--|-----------|---------|
| Streets in Town | 565 | 45.1 |
| 2-Lane Rural | 576 | 45.9 |
| 4-Lane | 56 | 4.5 |
| 4-Lane Interstate | 57 | 4.5 |
| <u>How Often Drive on Interstate</u> | | |
| Often | 275 | 21.9 |
| Sometimes | 663 | 52.7 |
| Seldom | 278 | 22.1 |
| Never | 41 | 3.3 |
| <u>Mind Driving With Big Trucks on 2-Lane Roadways</u> | | |
| Yes | 818 | 65.2 |
| No | 436 | 34.8 |
| <u>Mind Driving with Big Trucks on 4-Lane Roadways</u> | | |
| Yes | 256 | 20.5 |
| No | 994 | 79.5 |
| <u>Difficult To Pass On Interstate</u> | | |
| Yes | 79 | 6.5 |
| No | 1142 | 93.5 |
| <u>Difficult To Pass 2-Lane Road</u> | | |
| Yes | 754 | 61.8 |
| No | 465 | 38.2 |

The first item dealing with the roadway asked which type of road the respondents drove on most frequently. Forty-five percent said they drove most frequently on streets in town, and forty-five percent said they drove most frequently on two-lane rural roads. Four percent drove on four-lane, and four percent drove on interstate roads.

Those surveyed were asked how often they drove on interstate highways. Fifty-two percent responded that they sometimes drove on interstates, which was the largest selection. Of those responding, twenty-two percent indicated they seldom drove on interstates, while twenty-one

percent reported they often drove on interstates. Only three percent never drove on interstate highways.

When asked if they minded driving along with big trucks on two-lane roads, sixty-five percent responded that they did mind driving with big trucks. On the other hand, seventy-nine percent of the respondents did not mind driving with big trucks on four-lane roads.

Those surveyed were asked if they found it difficult to pass on an interstate highway. Ninety-three percent did not find it difficult to pass on an interstate, while six percent did find it difficult to pass. Sixty-one percent of those responding found it difficult to pass on a two-lane road while thirty-eight did not find it difficult to pass.

The Respondents' Driving Exposure was determined by items asking for them to indicate miles driven per week and the number of times they drive in a week. Table 3.4 indicates the respondents' driving exposure.

Table 3.4
Respondents' Driving Exposure

| Exposure | Frequency | Percent |
|------------------------------|-----------|---------|
| <u>Miles Driven Per Week</u> | | |
| 0-10 | 40 | 3.2 |
| 10-50 | 387 | 30.9 |
| 51-100 | 456 | 36.4 |
| 100-Up | 369 | 29.5 |
| <u>Times Driven Per Week</u> | | |
| 0-7 | 406 | 32.5 |
| 8-14 | 593 | 47.4 |
| 14-up | 249 | 19.9 |

Thirty-six percent of the respondents reported they drive from 51 to 99 miles per week. Thirty-one percent indicated they drive from ten to fifty miles per week. Thirty percent replied they drive 100 plus miles per week.

Forty-seven percent drive between eight and fourteen times per week. Thirty-two percent drive zero to seven times per week. While nineteen percent drive fourteen or more times per week.

The Driving Skills of the Respondents were described by a series of items on the survey. Table 3.5 shows a variety of skills as reported by the respondents. Ninety-two percent of the respondents were able to keep their speed within the posted limits, while eight percent were unable to keep their speed within the limits.

The respondents indicated that eighty-nine percent of the time they wore their seat-belt as a driver, and ten percent did not. Conversely, eighty-seven percent responded that they wear their seat-belts as a passenger.

When asked if they towed a boat or trailer, eight-three percent replied they did not, and sixteen percent replied they did.

Table 3.5
Driving Skills of Respondents

| Skill | % Yes | % No | f |
|------------------------------------|-------|------|------|
| Speed Within Posted Limits | 92.5 | 7.4 | 1259 |
| Wear Seat-belt | 89.7 | 10.3 | 1251 |
| Wear Passenger Seat-belt | 87.5 | 12.5 | 1245 |
| Tow Boat or Trailer | 16.6 | 83.4 | 1257 |
| Mind Driving in Heavy Traffic | 46.0 | 54.0 | 1251 |
| Comfortable Driving at 55 MPH | 85.0 | 15.0 | 1253 |
| Comfortable Driving at 65 MPH | 78.7 | 21.3 | 1222 |
| Difficulty Judging Distance | 2.9 | 97.0 | 1236 |
| Headlight Glare Bother You | 59.4 | 40.5 | 1206 |
| Sufficient Traffic Law Enforcement | 58.4 | 41.4 | 1188 |
| Difficult to Drive in City Traffic | 32.6 | 67.3 | 1228 |
| Signs Difficult to Read After Dark | 37.5 | 62.1 | 1186 |

Fifty-four percent responded that they did not mind driving in heavy traffic, while forty-six percent did mind driving in heavy traffic.

Eighty-five percent of the respondents were comfortable driving at 55 miles per hour, and fifteen percent were not.

Seventy-eight percent of the respondents were comfortable driving at 65 miles per hour, while twenty-one percent were not.

Of the respondents, ninety-seven percent had no difficulty judging distance while driving, and two percent did.

Fifty-nine percent indicated that headlight glare bothered them, while forty percent reported glare did not bother them.

There is sufficient traffic law enforcement according to fifty-eight percent of the respondents. Forty-one did not think there was sufficient traffic law enforcement.

Sixty-seven percent of those responding did not find it difficult to drive in city traffic. On the other hand, thirty-two percent did find it difficult to drive in city traffic.

Sixty-two percent indicated that highway signs were difficult to read after dark, while thirty-seven percent reported signs were difficult to read after dark.

The Vehicle(s) You Drive was a section of the survey that asked the elderly driver to respond to items about what type of car was driven, how that vehicle was equipped, and if some of the optional items were easy to operate. In addition, items were addressed to determine the communications equipment installed in the vehicles driven by the elderly. Table 3.6 relates the responses to the items dealing with vehicle(s) driven and vehicles driven most often. The vehicle(s) driven section of the survey allowed for multiple selections by the respondents.

Table 3.6
Responses Relating to Vehicle(s) Driven

| Type of Vehicle | Vehicle(s) Driven | | Vehicle Driven Most Often | |
|------------------|-------------------|---------|---------------------------|---------|
| | f | Percent | f | Percent |
| Compact Car | 153 | 8 | 99 | 8 |
| Small Pickup | 135 | 7 | 76 | 6 |
| Mini Van | 51 | 3 | 41 | 3 |
| Station Wagon | 73 | 4 | 45 | 3 |
| Med Sized Car | 450 | 22 | 353 | 27 |
| Full Size Pickup | 405 | 20 | 162 | 13 |
| Full Size Van | 84 | 4 | 47 | 4 |
| Full Size Car | 596 | 30 | 445 | 34 |
| Sport/Utility | 56 | 2 | 24 | 2 |
| Motorcycle | 6 | <1 | 2 | <1 |

Full-sized car was the most selected item with thirty-four percent of the respondents selecting this response. The medium-sized car was selected by twenty-seven percent of the respondents. The third most selected vehicle was the full-sized pickup with thirteen percent responding to that choice. The compact car came next with eight percent making that selection. This was followed by the small pickup with six percent reporting that choice. The full-sized van was chosen by four percent of the respondents. The mini van and station wagon were reported by three percent each. Only two percent chose the sports/utility vehicle, and less than one percent selected the motorcycle as the most often driven.

Table 3.7 deals with the equipment found on vehicles driven most often by the respondents to the survey.

Table 3.7
Responses Relating to Equipment on Primary Vehicle

| Equipment | % Yes | % No | f |
|------------------------|--------------|-------------|----------|
| Power Steering | 95.8 | 4.2 | 1268 |
| Anti-lock Brakes | 47.1 | 52.9 | 1105 |
| Automatic Transmission | 92.8 | 7.2 | 1266 |
| Electric Driver's Seat | 44.0 | 56.0 | 1155 |
| Electric Windows | 58.8 | 41.2 | 1188 |
| Driver Air Bag | 19.0 | 81.0 | 1117 |
| Passenger Air Bag | 3.5 | 96.5 | 1096 |
| Cruise Control | 78.6 | 21.4 | 1238 |

Ninety-five percent of the respondents indicated they had power steering as equipment on their primary vehicle. On the other hand, four percent reported they did not have power steering on their primary vehicle.

Anti-lock brakes were reported by forty-seven percent of the respondents, while fifty-two percent did not have anti-lock brakes.

Ninety-two percent of the respondents indicated their primary vehicle was equipped with an automatic transmission. While seven percent reported they did not have an automatic transmission in their primary vehicle.

Fifty-six percent of the respondents indicated they had an electric driver's seat while fifty-six percent did not have an electric driver's seat.

Electric windows were equipment on fifty-eight percent of the respondent's vehicles, and were not equipment on forty-one percent of the respondents vehicles.

Only nineteen percent of the respondents indicated they had driver side air bags while eighty-one percent did not. Passenger side air bags were reported as being on as few as three percent of the respondents vehicles. On the other hand ninety-six percent did not report having passenger air bags.

Interestingly, cruise control was reported on seventy-eight percent of the vehicles, and was not indicated as being on twenty-one percent of the respondents vehicles.

Table 3.8 depicts ease-of-operation responses pertaining to selected vehicle equipment that relates to the safe operation of a vehicle.

Table 3.8
Responses Relating to Ease-of-Operation
of Selected Equipment

| Equipment | % Yes | % No | f |
|---|-------|------|------|
| Difficulty Fastening and Unfastening the Safety Belts | 11.2 | 88.8 | 1227 |
| Dashboard Gauges Easy to Read | 95.6 | 4.4 | 1157 |
| Outside Mirrors are Easy to Adjust | 93.8 | 5.9 | 1250 |

The majority of respondents, eighty-eight percent, had no difficulty fastening and unfastening the safety belts on their primary vehicle. However, eleven percent did have difficulty fastening and unfastening their safety belts.

While ninety-five percent of the respondents indicated the dashboard gauges were easy to read, four percent reported they were not easy to read.

Ninety-three percent indicated the outside mirrors on their vehicles were easy to adjust and five percent indicated they were not easy to adjust.

Several items on the survey were included to determine if the elderly drivers are using any of the communications means and devices available for vehicles. Table 3.9 depicts the responses to items relating to communications devices used by the elderly drivers that responded to this survey.

Twelve percent of the respondents currently have a citizen band radio in their vehicle, one percent have a mobile radio phone, two percent have a cellular phone, and eighty-four percent have none of these.

Two percent of those responding to the survey plan to purchase a cellular phone in the near future, while ninety-four percent have no plans to purchase a cellular phone.

Of the respondents, twenty-three percent were aware they could contact the Missouri State Highway Patrol by dialing *55 on a cellular phone, while seventy-six percent responded they were not aware they could contact the Highway Patrol by these means.

Only six percent had ever contacted law enforcement by use of a citizens band radio. Less than one percent used a mobile radio phone or cellular phone to make contact with law enforcement, while ninety-two percent had never made contact with law enforcement by any of these means.

Table 3.9
Responses to Items Pertaining to Communications
Related to Driving

| Communication Item | Frequency | Percent |
|--|-----------|---------|
| <u>Currently Have in Vehicle</u> | | |
| CB Radio | 148 | 12.0 |
| Mobile Radio Phone | 16 | 1.3 |
| Cellular Phone | 25 | 2.0 |
| None | 1042 | 84.6 |
| <u>Plan to Purchase a Cellular Phone</u> | | |
| Yes | 33 | 2.6 |
| No | 1187 | 94.7 |
| Already Own | 34 | 2.7 |
| <u>Aware *55 on Cellular Phone Contacts Highway Patrol</u> | | |
| Yes | 275 | 23.1 |
| No | 912 | 76.5 |
| <u>Have Contacted Law Enforcement By:</u> | | |
| CB Radio | 76 | 6.1 |
| Mobile Radio Phone | 11 | <1 |
| Cellular Phone | 10 | <1 |
| None | 1143 | 92.2 |

A Summary of the Data Analysis that examines the responses by category would probably prove informative. The respondents were almost equally divided along gender lines with fifty-one percent female and forty-nine percent male. Over sixty-seven percent have lived at their current address for over ten years. Beyond that fifty-percent of those reporting lived in a rural area and another twenty-four percent lived in a small community (under 50,000). A little over seventy-nine percent indicated they were retired while sixteen percent were still employed. The vast majority of respondents, ninety-one percent, have been driving for thirty-five years and longer. Fifty-eight percent are required to wear glasses when they drive.

Those who were mailed survey forms were asked to respond to several items that asked for their opinion of needed roadway improvements in their area. Among the notable responses, eighty-one percent indicated that center line reflectors would be helpful to their driving. Seventy-four percent indicated the shoulders for stopping were needed. A little over eight-percent reported that the elimination of one-lane and narrow bridges was a needed roadway improvement in their area. Seventy-three percent reported that the correction of dangerous intersections in their area was a needed improvement. In an interesting response, eighty-four percent indicated that advance warning signs were helpful. While on the other hand eighty-eight percent indicated that Missouri signs were not complicated, and eighty-three percent reported Missouri signs were clear in direction. Further, eighty-seven percent responded that Missouri signs were not in disrepair.

As far as driving experiences were concerned, forty-five percent responded that they mostly drove on streets in town, and forty-five percent responded they mostly drove on two-lane rural roads. This divided the respondents into two major nearly equal categories of driving experience. Fifty-two percent of the respondents reported they sometimes drove on interstate highways. When asked if they minded driving with big trucks on a two-lane highway, sixty-five percent replied that they did mind driving with big trucks on two-lane highways. On the other hand, seventy-nine percent did not mind driving with big trucks on four-lane highways. Sixty-one percent of the respondents indicated that they found it difficult to pass other vehicles on two-lane highways.

The driving exposure of the respondents was fairly equally divided as to miles-per-week driven. Thirty-six percent reported driving between fifty-one and one hundred miles-per-week. Thirty percent drove between ten and fifty miles-per-week, while twenty-nine percent reported driving one hundred and more miles-per-week.

In the number of times driven-per-week category, the highest category of respondents was eight to fourteen times which was selected by forty-seven percent of those responding. Thirty-two percent indicated they drove between zero and seven times per-week, and nineteen percent drove fourteen times and more per-week.

Some of the items on the survey instrument were written so as to obtain responses about the self evaluated driving skills of the respondents. Of the respondents, ninety-two percent were able to keep their vehicle speed within the posted limits. A self-reported eighty-nine percent wear their seat belt as a driver, while eighty-seven percent wear their seat belt as a passenger. The majority of those reporting, eighty-three percent, did not tow a boat or other trailer. Eighty-five percent of those responding indicated they were comfortable driving at 55-MPH and seventy-eight percent were also comfortable driving at 65-MPH. An overwhelming ninety-seven percent had no

difficulty judging distance. Further, sixty-seven percent had no difficulty driving in city traffic, and sixty-two percent indicated that they had no difficulty reading signs after dark.

The type of vehicle driven most often was also asked of the respondents. In the highest response category, thirty-four percent drove a full size car most often. Next came the medium size car with twenty-seven percent and third was the full size pickup with thirteen percent of the responses. Ninety-five percent of these vehicles had power steering as equipment, ninety-two had automatic transmissions, and seventy-eight percent had cruise control. Otherwise, eighty-one percent of the respondents reported they did not have driver side air bags as equipment on their most driven vehicle, and ninety-six percent did not have passenger side air bags. Over eighty-eight percent of the respondents indicated they had no difficulty fastening and unfastening the vehicle safety belts. Ninety-five percent indicated the dashboard gauges were easy to read and ninety-three percent reported the outside mirrors were easy to adjust.

A little over eighty-four percent of the respondents had no type of communication equipment in their vehicle. Further, ninety-four percent had no plans to purchase a cellular phone. Seventy-six percent of the respondents were not aware that the highway patrol could be contacted by cellular phone by dialing *55. It is not surprising that ninety-two percent of those responding had never contacted law enforcement by using communications equipment in their vehicle.

Chapter 4

New Car Dealer Survey

This chapter contains the results of the survey by the study team of new car dealers in the study designated area of southern Missouri.

As indicated previously, one aspect of the survey was to determine the types of vehicles driven by the respondents. As a means of cross checking their responses, a separate survey instrument was administered to the new car dealers. These instruments were sent to fifty-nine dealers within the residence counties of the survey respondents. Thirty-two dealerships from fifteen of the twenty counties responded. Those counties had a population of 122,326 persons sixty years of age or older.

The second survey, entitled "Missouri New Car Dealers Survey," was developed to provide another source of information about the types of vehicles and equipment being used by the older drivers within the target areas, as well as, to furnish additional information on the probability of future vehicle and vehicle equipment likely to be purchased by the older driver.

The following material was developed as a result of replies by the 32 new car dealers who responded. The survey instrument can be found in Appendix A.

Table 4.1
Dealership's New Car Sales to Older Drivers
(N=32)

| Percent of Annual Sales | N | Percent of N |
|-------------------------|-----------|--------------|
| 10 or less | 3 | 9.4 |
| 10 - 25 | 13 | 40.6 |
| 25 - 50 | 13 | 40.6 |
| 50 - 100 | <u>3</u> | <u>9.4</u> |
| TOTAL | 32 | 100.0 |

From Table 4.1, above, it may be seen that six new car dealers (19%) reported either ten percent (or less) or fifty percent (or more) of their total annual sales to older drivers. The remaining eighty-one percent reported a range of annual sales of ten to fifty percent to the older driver.

The range of ten to fifty percent clearly indicates that the older driver plays an important economic role in the total annual new vehicle sales within the selected counties. Added to that, the indication of fifty to one-hundred percent of total sales further reinforces the older driver's purchasing impact.

It seems readily apparent that new car dealers are in a position to provide accurate information on vehicles and/or vehicle equipment valued by older drivers.

A further indication of new car dealerships' familiarity with buyers is reported in Table 4.2 below.

Table 4.2
Dealerships' Sales to Older Drivers Residing in the County
N=31

| Percent of Annual Sales | N | Percent of N |
|-------------------------|-----------|--------------|
| 20 or less | 3 | 9.7 |
| 20 - 40 | 6 | 19.3 |
| 40 - 60 | 8 | 25.8 |
| 60 - 100 | <u>14</u> | <u>45.2</u> |
| TOTAL | 31 | 100.0 |

It may be seen that only 9.7 percent of the dealers reported a low volume of local resident trade (20% or less). The remainder clearly indicated a more significant portion of their sales were to local residents.

Tables 4.1 and 4.2 help establish the significance of the dealer's further response since it has been clearly shown that local new car dealers' annual sales depend largely on local residents, many of whom are age sixty or over.

With the dealers' sales to older drivers as background, it was then necessary to obtain data on such items as vehicle types and vehicle equipment purchased.

Table 4.3
New Car Dealer Responses to Types of Vehicles
Purchased by the Older Driver
N=32

| Type of Vehicle | Dealership Frequency |
|------------------------------|----------------------|
| Basic Small Car | 1 |
| Basic Medium Size Car | 9 |
| Basic Full Size Car | 10 |
| Basic Sport Utility Vehicle | 2 |
| Mini Van | 8 |
| Full Size Van | 1 |
| Luxury Small Car | 2 |
| Luxury Medium Size Car | 10 |
| Luxury Full Size Car | 18 |
| Luxury Sport Utility Vehicle | 7 |
| Basic Pickup Truck | 12 |
| Luxury Pickup Truck | <u>12</u> |
| TOTAL | 92 |

Thirty-two dealers had a choice of twelve types of vehicles to report for sales to older drivers. Of those twelve choices, dealers selected ninety-two responses as representative of their sales to older drivers.

New car dealers' responses relating to type of vehicle(s) most often purchased by the older driver is shown in the table above. The responses indicate a clear preference. Luxury full size and medium size luxury cars, along with full size cars, were among the most frequently selected choices with 18, 10 and 10 respectively. Actually basic and luxury pickup trucks were equally selected as second most popular with twelve each. The basic medium size car and mini van type vehicle came next in order of selection with nine and eight responses. Seven selected luxury sport utility vehicle. Basic small cars were only selected once. The basic sport utility vehicle was selected twice, as was the luxury small car.

Survey respondents next were asked to indicate older drivers' selections of options on new car purchases. The survey offered choices from the categories of not purchased, select at no cost, or select at extra cost and from the selected options of anti lock brakes, electronic dash, dual air bags, and finally electric windows. Table 4.4 below shows responses to those items.

Table 4.4
New Car Dealer Responses to Selected New Car Option Purchases
N=32

| Options | Not Purchased | Select at No Cost | Select at Extra Cost |
|------------------|----------------------|--------------------------|-----------------------------|
| Anti Lock Brakes | 1 | 22 | 9 |
| Electronic Dash | 19 | 11 | 2 |
| Air Bags (Dual) | 6 | 13 | 13 |
| Electric Windows | 0 | 18 | 14 |

It should be noted that all thirty-two responded to each item. The option most selected by the dealers as not to be purchased by the older driver as an electronic dash with nineteen responses. The electronic dash was also picked by the dealers, with two responses, to be least likely to be selected at extra cost. Electric windows with fourteen responses, and dual air bags with thirteen responses were the most likely to be purchased at extra cost. Those options selected at no cost include; anti lock brakes with twenty-two responses, electric windows with eighteen responses, dual air bags with thirteen responses and electronic dash with eleven responses.

New car dealers were asked to respond if they thought older drivers, as new car buyers, might select some potential new optional devices (some of these options may be available now). The table below shows a selection of options that dealers were asked to indicate those options that might be selected by the older driver.

Table 4.5
Dealer Responses to Potential New Car Option Purchases
N=32

| Options | Not Purchased | Select at No Cost | Select at Extra Cost | N |
|-----------------------------|---------------|-------------------|----------------------|----|
| Night Vision Display | 17 | 12 | 2 | 31 |
| Collision Avoidance Warning | 13 | 14 | 5 | 32 |
| Nearby Obstacle Warning | 13 | 15 | 3 | 31 |
| Heads Up Dash Displays | 17 | 12 | 2 | 31 |

It may be seen that only two dealers selected night vision display, and heads up dash displays as potential extra option purchases. Other extra cost options that would be selected, according to the dealers, were collision avoidance warning with five choices, and nearby obstacle warning with three selections. Twelve dealers reported that a night vision display would be chosen if it were at no cost. Also at no cost, fourteen indicated they would sell collision avoidance warning, fifteen indicated older drivers would accept nearby obstacle warning and twelve responded a heads up dash display would be an option. Seventeen dealers indicated that older drivers as new car buyers would not purchase night vision displays at all. Thirteen dealers indicated that older drivers would not purchase collision avoidance warning options and they would not purchase nearby obstacle warning. Seventeen dealers stated that the older driver would not purchase heads up displays on their new cars.

These decisions by older drivers may be assumed to have impact on at least two aspects of future highway safety efforts. These include, public education and highway engineering.

If roads (and vehicles) are to be engineered toward intelligent vehicle/intelligent highways, then vehicles must be engineered to operate at optimum levels on newly engineered roadways. These must be considered as public education programs are defined to assist target audiences in making appropriate changes. The older population will be one of those target audiences and with the present perception of their state-of-mind, much will need to be accomplished.

Table 4.6, on the right, shows purchasing motivation of older drivers. Twenty-eight new car dealers indicated the older driver as a new car purchaser, was interested in value for the dollar spent. Only nine of the dealers indicated the older driver would be motivated to purchase safety equipment. Only one dealer thought they would be motivated to purchase gadgets and extras.

In summary, new car dealers in selected counties of Missouri were asked to indicate their opinion about the buying habits of older drivers (those over sixty years of age).

Twenty-eight of the responding thirty-two new car dealers reported that between ten and fifty percent of their sales are to older drivers. Twenty-eight of the responding 32 new car dealers reported that between twenty to one-hundred percent of their new car sales to older drivers were to local county residents.

According to the responding dealers, older drivers prefer luxury or full size cars with a good number of pickup trucks selected, both

basic models and luxury models. Most older drivers would select an option if it was at no extra cost. Some would opt for safety options at extra cost. However, most would not purchase an electronic dash as an option. Again, those options that would aid in navigation of the vehicle would most likely not be purchased. On the other hand, most buyers would accept them if there was no cost involved. Although a few would buy at an extra cost, most dealers indicated that older drivers as purchasers were interested in value for the dollar spent, with a few choosing safety equipment as a motivating factor. Gadgets and extras are not likely to motivate the older driver to purchase.

Table 4.6
Dealer Responses to
Purchasing Motivation of Older Drivers
N=28

| <u>Motive</u> | <u>N</u> |
|----------------------------|----------|
| Value for the Dollar Spent | 28 |
| Safety Equipment | 9 |
| Gadgets and Extras | 1 |

Chapter 5

Review of Traffic Accidents

In this chapter, the data on accidents involving the study area with drivers age sixty and older is reviewed. Along with the accident data, is the data obtained from the Missouri Highway and Transportation Department on current and future roadway improvements for the study area in southern Missouri.

In looking at accidents involving older drivers (age sixty and over) in the twenty county study area, during the time frame of calendar year 1990 through 1992, the following data are observable.

In the study area older drivers account for the following:

- 22 percent of all fatalities in accidents
- 20.6 percent of all personal injuries
- 21.9 percent of all accident

Table 5.1

| 1990 - 1992 TRAFFIC ACCIDENTS - 19 MISSOURI COUNTIES OLDER DRIVER INVOLVEMENT | | | | | | | | | | | | |
|--|-------|-------|-----------------|-------|-----------------|-------|--------|-------|-------------------------------------|--------------------------------------|--------------------------------------|---------------------------------------|
| | Fatal | % | Personal Injury | % | Property Damage | % | Total | % | Total Number ¹ Killed | Total Number ¹ Injured | Older Drivers ² Killed | Older Drivers ² Injured |
| Older Driver Involved | 99 | 22.2 | 3,112 | 20.6 | 6,885 | 22.5 | 10,096 | 21.9 | 117 | 5,242 | 69 | 1,867 |
| No Older Driver Involved | 348 | 77.8 | 11,965 | 79.4 | 23,675 | 77.5 | 35,988 | 78.1 | 403 | 18,925 | -- | -- |
| Unknown ³ | 4 | -- | 429 | -- | 2,029 | -- | 2,462 | -- | 4 | 583 | -- | -- |
| TOTAL | 451 | 100.0 | 15,506 | 100.0 | 32,589 | 100.0 | 524 | 100.0 | 524 | 24,750 | 69 | 1,867 |

¹This statistic indicates the total number of persons killed and injured in an accident where one or more drivers 60 years of age and older were involved.

²This statistic indicates the number of older drivers killed and injured.

³Accidents were classified as unknown if the following conditions exist: none of the known drivers involved in the accident was 60 years of age and older and the ages of one or more drivers involved in the accident was not known.

In looking at the type of roadway where accidents involving older drivers are occurring the following is observable.

- 28.4% occur on city streets
- 24.5% occur on state numbered highways
- 22.5% occur on US highways

Table 5.2

| Highway Classification by Age of Driver | | | | | | | | | | |
|--|---------------------------|--------------|------------------|--------------|---------------------|--------------|--------------|------------|---------------|--------------|
| | 24 Years & Under | % | 25 - 59 Years | % | 60 Years & Above | % | Unknown | % | Total | % |
| Interstate | 582 | 2.2 | 1,627 | 3.8 | 350 | 3.2 | 82 | --- | 2,641 | 3.2 |
| US Highway | 4,493 | 16.6 | 9,023 | 21.0 | 2,486 | 22.5 | 386 | --- | 16,388 | 19.7 |
| State Number | 5,660 | 20.9 | 9,609 | 22.4 | 2,756 | 24.9 | 429 | --- | 18,454 | 22.2 |
| Single State Letter | 1,889 | 7.0 | 3,097 | 7.2 | 591 | 5.3 | 115 | --- | 5,692 | 6.9 |
| Double State Letter | 906 | 3.4 | 1,280 | 3.0 | 217 | 2.0 | 53 | --- | 2,456 | 3.0 |
| Outer Road | 79 | 0.3 | 151 | 0.4 | 26 | 0.2 | 2 | --- | 258 | 0.3 |
| Country Road | 2,285 | 8.4 | 2,540 | 5.9 | 395 | 3.6 | 138 | --- | 5,358 | 6.4 |
| City Street | 8,569 | 31.7 | 11,520 | 26.8 | 3,145 | 28.4 | 1,232 | --- | 24,466 | 28.7 |
| Interstate Loop | 1,169 | 4.3 | 2,172 | 5.1 | 480 | 4.3 | 119 | --- | 3,940 | 4.7 |
| Other¹ | 1,442 | 5.3 | 1,943 | 4.5 | 616 | 5.6 | 151 | --- | 4,152 | 4.9 |
| TOTAL | 27,074 | 100.0 | 42,962 | 100.0 | 11,062 | 100.0 | 2,707 | --- | 83,805 | 100.0 |

¹"Other" includes types of roads that are maintained by the state as well as by local jurisdictions.

In looking at the highest accident frequency by month, the following data are observable.

- October is the highest 10.8%
- May is the second highest 9.8%

Table 5.3

| Month of Year by Age of Driver | | | | | | | | | | |
|--------------------------------|---------------------|-------|------------------|-------|---------------------|-------|--------------|-----|--------|-------|
| | 24 Years & Under | % | 25 - 59 Years | % | 60 Years & Above | % | Un- known | % | Total | % |
| January | 1,850 | 6.8 | 3,103 | 7.2 | 693 | 6.3 | 231 | --- | 5,877 | 7.0 |
| February | 1,662 | 6.1 | 2,759 | 6.4 | 658 | 6.0 | 168 | --- | 5,247 | 6.3 |
| March | 2,000 | 7.4 | 2,959 | 6.9 | 807 | 7.3 | 217 | --- | 5,983 | 7.1 |
| April | 2,237 | 8.3 | 3,347 | 7.8 | 926 | 8.4 | 218 | --- | 6,728 | 8.0 |
| May | 2,613 | 9.7 | 3,945 | 9.2 | 1,078 | 9.8 | 247 | --- | 7,883 | 9.4 |
| June | 2,481 | 9.2 | 3,833 | 8.9 | 993 | 9.0 | 236 | --- | 7,543 | 9.0 |
| July | 2,535 | 9.4 | 4,048 | 9.4 | 941 | 8.5 | 255 | --- | 7,779 | 9.3 |
| August | 2,513 | 9.3 | 3,997 | 9.3 | 997 | 9.0 | 238 | --- | 7,745 | 9.3 |
| September | 2,332 | 8.6 | 3,694 | 8.6 | 981 | 8.9 | 217 | --- | 7,224 | 8.6 |
| October | 2,458 | 9.1 | 3,951 | 9.2 | 1,197 | 10.8 | 249 | --- | 7,855 | 9.4 |
| November | 2,197 | 8.1 | 3,506 | 8.2 | 907 | 8.2 | 204 | --- | 6,814 | 8.2 |
| December | 2,196 | 8.1 | 3,820 | 8.9 | 884 | 8.0 | 227 | --- | 7,127 | 8.5 |
| TOTAL | 27,074 | 100.0 | 42,962 | 100.0 | 11,062 | 100.0 | 2,707 | --- | 83,805 | 100.0 |

In looking at the day of the week data, the following data are observable.

- Friday is the highest 18.3%
- Sunday is the lowest 8.0%

Table 5.4

| Day of the Week by Age of Driver | | | | | | | | | | |
|----------------------------------|---------------------|-------|------------------|-------|---------------------|-------|---------|-----|--------|-------|
| | 24 Years & Under | % | 25 - 59 Years | % | 60 Years & Above | % | Unknown | % | Total | % |
| Sunday | 2,846 | 10.5 | 3,614 | 8.4 | 880 | 8.0 | 287 | --- | 7,627 | 9.1 |
| Monday | 3,570 | 13.2 | 6,259 | 14.6 | 1,701 | 15.4 | 324 | --- | 11,854 | 14.2 |
| Tuesday | 3,422 | 12.6 | 5,999 | 14.0 | 1,632 | 14.8 | 320 | --- | 11,373 | 13.6 |
| Wednesday | 3,827 | 14.1 | 6,385 | 14.9 | 1,740 | 15.7 | 338 | --- | 12,290 | 14.7 |
| Thursday | 3,867 | 14.3 | 6,544 | 15.2 | 1,702 | 15.4 | 383 | --- | 12,496 | 14.9 |
| Friday | 5,270 | 19.5 | 8,135 | 18.9 | 2,024 | 18.3 | 537 | --- | 15,966 | 19.0 |
| Saturday | 4,270 | 15.8 | 6,014 | 14.0 | 1,377 | 12.5 | 511 | --- | 12,172 | 14.4 |
| Unknown | 2 | --- | 12 | --- | 6 | --- | 7 | --- | 27 | --- |
| TOTAL | 27,074 | 100.0 | 42,962 | 100.0 | 11,062 | 100.0 | 2,707 | --- | 83,805 | 100.0 |

In looking at time of day where all accidents are occurring which involve drivers 60 years of age and older, the following data are observed.

Table 5.5

| Hour of Day by Age of Driver | | | | | | | | | | |
|------------------------------|---------------------|--------------|------------------|--------------|---------------------|--------------|--------------|--------------|---------------|--------------|
| | 24 Years & Under | % | 25 - 59 Years | % | 60 Years & Above | % | Unknown | % | Total | % |
| 12:01A - 12:59A | 632 | 2.3 | 547 | 1.3 | 33 | 0.3 | 114 | --- | 1,326 | 1.5 |
| 01:00A - 01:59A | 699 | 2.6 | 635 | 1.5 | 17 | 0.2 | 144 | --- | 1,495 | 1.7 |
| 02:00A - 02:59A | 354 | 1.3 | 313 | 0.7 | 15 | 0.1 | 66 | --- | 748 | 0.8 |
| 03:00A - 03:59A | 195 | 0.6 | 205 | 0.5 | 10 | 0.1 | 41 | --- | 451 | 0.5 |
| 04:00A - 04:59A | 160 | 0.6 | 193 | 0.5 | 14 | 0.1 | 24 | --- | 391 | 0.5 |
| 05:00A - 05:59A | 150 | 0.6 | 321 | 0.8 | 23 | 0.2 | 20 | --- | 514 | 0.6 |
| 06:00A - 06:59A | 275 | 1.0 | 811 | 1.9 | 95 | 0.9 | 52 | --- | 1,233 | 1.5 |
| 07:00A - 07:59A | 1,003 | 3.7 | 1,970 | 4.6 | 303 | 2.8 | 73 | --- | 3,349 | 4.1 |
| 08:00A - 08:59A | 1,123 | 4.2 | 2,010 | 4.7 | 517 | 4.7 | 79 | --- | 3,729 | 4.5 |
| 09:00A - 09:59A | 734 | 2.7 | 1,763 | 4.1 | 746 | 6.8 | 64 | --- | 3,307 | 4.0 |
| 10:00A - 10:59A | 975 | 3.6 | 2,147 | 5.0 | 1,008 | 9.2 | 94 | --- | 4,224 | 5.1 |
| 11:00A - 11:59A | 1,238 | 4.6 | 2,758 | 6.4 | 1,086 | 9.9 | 89 | --- | 5,171 | 6.3 |
| NOON - 12:59P | 1,683 | 6.2 | 3,287 | 7.7 | 1,072 | 9.7 | 129 | --- | 6,171 | 7.5 |
| 01:00P - 01:59P | 1,529 | 5.7 | 2,872 | 6.7 | 1,028 | 9.3 | 89 | --- | 5,518 | 6.7 |
| 02:00P - 02:59P | 1,741 | 6.5 | 2,888 | 6.7 | 1,036 | 9.4 | 127 | --- | 5,792 | 7.0 |
| 03:00P - 03:59P | 2,914 | 10.8 | 4,130 | 9.6 | 1,181 | 10.7 | 156 | --- | 8,381 | 10.2 |
| 04:00P - 04:59P | 2,421 | 9.0 | 3,950 | 9.2 | 942 | 8.6 | 168 | --- | 7,481 | 9.1 |
| 05:00P - 05:59P | 2,226 | 8.3 | 3,925 | 9.2 | 712 | 6.5 | 162 | --- | 7,025 | 8.5 |
| 06:00P - 06:59P | 1,554 | 5.8 | 2,303 | 5.4 | 414 | 3.8 | 139 | --- | 4,410 | 5.3 |
| 07:00P - 07:59P | 1,213 | 4.5 | 1,576 | 3.7 | 272 | 2.5 | 133 | --- | 3,194 | 3.8 |
| 08:00P - 08:59P | 1,114 | 4.1 | 1,234 | 2.9 | 202 | 1.8 | 136 | --- | 2,686 | 3.2 |
| 09:00P - 09:59P | 1,132 | 4.2 | 1,174 | 2.7 | 134 | 1.2 | 160 | --- | 2,600 | 3.0 |
| 10:00P - 10:59P | 1,021 | 3.8 | 1,016 | 2.4 | 87 | 0.8 | 151 | --- | 2,275 | 2.6 |
| 11:00P - Midnight | 876 | 3.3 | 813 | 1.9 | 64 | 0.6 | 142 | --- | 1,895 | 2.2 |
| Unknown | 112 | --- | 121 | --- | 51 | --- | 155 | --- | 439 | --- |
| TOTAL | 27,074 | 100.0 | 42,962 | 100.0 | 11,062 | 100.0 | 2,707 | 100.0 | 83,805 | 100.0 |

In looking at causation for accidents in drivers age 60 and older from the study area, the following data are observed.

- 29.2 involved inattention
- 26.3 involved failure to yield

Drivers of Motorized Vehicles Involved in 1990-1992 Traffic Accidents - 19 Missouri Counties
Type of Circumstances Involved by Accident Severity and Person Classification

TABLE 5.6

| TOTAL FATAL ACCIDENTS = 99 | | | | TOTAL OLDER DRIVER ACCIDENTS = 10,096 | | |
|---|--------------------------|--------------------------|----------------|---------------------------------------|--------------------------|--------------------|
| | Older Driver/ Vehicle | Other Driver/ Vehicle | Total Fatal | Older Driver/ Vehicle | Other Driver/ Vehicle | Total Accidents |
| Exceeding Speed Limit/ Too Fast for Conditions | 10.1 | 5.1 | 15.2 | 4.3 | 3.8 | 8.0 |
| Improper Passing | 2.0 | 3.0 | 5.1 | 1.4 | 1.4 | 2.8 |
| Violation of Stop Sign | 3.0 | 1.0 | 3.0 | 3.8 | 2.1 | 5.8 |
| Wrong Side Not Passing | 14.1 | 7.1 | 21.2 | 2.4 | 1.9 | 4.2 |
| Following Too Close | 1.0 | 4.0 | 5.1 | 6.6 | 8.2 | 14.5 |
| Improper Signal | 1.0 | 0.0 | 1.0 | 2.3 | 1.0 | 3.2 |
| Improper Turn | 4.0 | 0.0 | 4.0 | 3.2 | 1.1 | 4.2 |
| Wrong Way One-Way Street | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 |
| Improper Start From Park | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 0.4 |
| Improperly Parked | 0.0 | 1.0 | 1.0 | 0.1 | 0.4 | 0.5 |
| Vehicle Defects | 5.1 | 1.0 | 6.1 | 1.5 | 1.2 | 2.7 |
| Failed to Yield | 23.2 | 6.1 | 29.3 | 26.3 | 9.8 | 36.0 |
| Drinking | 4.0 | 4.0 | 8.1 | 1.3 | 0.9 | 2.2 |
| Drugs | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Physical Impairment | 8.1 | 1.0 | 9.1 | 1.8 | 0.2 | 2.0 |
| Inattention | 38.4 | 12.1 | 49.5 | 29.2 | 15.8 | 42.0 |

¹This table identifies the percentage of older driver accidents having a specific type of circumstance which contributed to the cause of the accident. This table further defines the percentage of accidents where the contributing circumstance was associated with the older driver or his vehicle as well as those attributed to other persons and vehicles in the accident. For instance, when examining speed involvement in 1990-1992 Missouri fatal older driver accidents, it was found that an older driver was speeding in 10.1% of the accidents. In 5.1% of the accidents another driver was speeding. In 15.2% of the accidents either an older driver, another driver, or both drivers were speeding.

In reviewing the data regarding sex of drivers involved in accidents in the study area the following is observed.

- 64.8 male - 35.2 female

Table 5.7

| Sex of Driver by Age of Driver | | | | | | | | | | |
|--------------------------------|---------------------|--------------|------------------|--------------|---------------------|--------------|--------------|--------------|---------------|--------------|
| | 24 Years & Under | % | 25 - 59 Years | % | 60 Years & Above | % | Unknown | % | Total | % |
| Male | 14,009 | 61.5 | 22,192 | 61.5 | 5,978 | 64.8 | 292 | --- | 42,471 | 61.9 |
| Female | 8,780 | 38.5 | 13,895 | 38.5 | 3,253 | 35.2 | 146 | --- | 26,074 | 38.1 |
| Unknown | 4,285 | --- | 6,875 | --- | 1,831 | --- | 2,269 | --- | 15,260 | --- |
| TOTAL | 27,074 | 100.0 | 42,962 | 100.0 | 11,062 | 100.0 | 2,707 | 100.0 | 83,805 | 100.0 |

In reviewing the data regarding the type of vehicle driven by older drivers involved in accidents in the study area the following is observed.

- 66.2% automobile
- 22.1% truck
- 5.8% station wagon
- 4.3% van

It should be noted this is based upon type of license plate displayed on the vehicle at the time of the accident. In Missouri, the majority of vehicles (cars, vans, sport utility vehicle, etc.) may be licensed as passenger cars.

In reviewing the accidents involving personal injury (serious) by age of driver in the study area, the following is observable.

Senior drivers were involved in 13.1% of all accidents including:

- 19.7% of all fatal accidents
- 11.9% of personal injury accidents
- 13.9% of all other accidents

In reviewing the data involving age of vehicle being driven by senior drivers in accidents in the study area, the following is observable.

- 8.8% 16 to 25 year old vehicle
- 8.2% 2 year old vehicle
- 7.7% 3 year old vehicle
- 7.6% 1 year old vehicle

Chapter 6

Conclusion

Recommendations & Conclusions

The data from the research study, provided several excellent pieces of information. First the surveys (driver and dealer) had a statistically significant return rate which indicates a high degree of interest (Driver Survey, 65% return rate, Dealer Survey 54% return rate) in the issue of Missouri roadways. It should be noted that the survey instrument allowed for direct input in two areas. These were question number thirty-three and the open comment section. Sixty-six percent of the respondents did provide some type of direct feedback in one or both of these areas. The data provided insight regarding hazardous roadways and assisted in identifying specific locations regarding highways, intersections, and bridges etc., that the respondents felt needed improvement. When these suggested improvements were cross-checked with existing data on highway improvements in the Missouri Highway and Transportation Department's 1993 Work Plan, over seventy percent were already either under construction, or were listed in the long range plan.

Another significant piece of information reported was the annual mileage driven by persons sixty years of age and older. These drivers reside in a twenty county area of southern Missouri, reported the average mileage driven per year as approximately 5,000 miles. Some statistics in Missouri covering older drivers have indicated an annual mileage of 12,000 to 15,000 per year. While further study work is needed to draw any inferences on a statewide test, it would appear from the data provided that the formula used in figuring accidents involving persons sixty years of age and older may be grossly inadequate and that the older age population's accident rate would be more in keeping with the national rates as published.

In the area of specific changes to roadways in Missouri, the following is a composite of the most frequent suggestions provided by the respondents in the survey.

List of Concerns Derived From Comment Section

- * Establish a standard for cross street markings (street signs--larger letters).
- * Increase speed enforcement on secondary roads in southern Missouri.
- * Add signs to "No Passing Zones" like other states have done.
- * Add shoulders to roads so drivers have a place to pull off in case of a problem or to yield to emergency vehicles.
- * Stripe all roads with center line and road edge markings--can not see with existing painting in dark or rain.
- * Add center line reflective markers to aid night time driving of older people.
- * Work to provide right-of-way clearance for line of sight locations at intersections in the state.
- * Locate and correct bright lights on outdoor advertisements that blind drivers who pass by.
- * Paint center line on all hard surface roadways in the state.
- * Place warning signs in advance of blind intersections and in advance of all major intersections--rural and urban.

- * Continue and expand efforts to widen two lanes to four lanes on all major routes in the state.
- * Add as many left turn lanes as possible to reduce backups and accidents at major intersections.
- * Provide greater enforcement in:
 - Speeding on secondary roadways
 - Commercial Vehicle Operators
 - Alcohol Impaired Drivers
 - Passing in "No Passing" zones

In the area of "Smart Cars," it appears from both the Dealer Survey and the questions on the Driver Survey that persons in the sixty years of age and above group, will be less receptive to changes in vehicles to integrate into a highway system. Since those buyers are not purchasing the higher technology equipment such as heads up displays, and the high tech electronic packages. It was evident from the comments provided that these options have limited appeal to older buyers. Based upon the feedback from the Driver Survey responses it appears their wishes are to concentrate on highway design and marking improvements in rural Missouri.

In the area of intelligent highways, many of the current and projected future driver aids appear to be acceptable to the majority of survey respondents. Items such as electronic information signs, electronic traffic warning signs, and special routing information appear to generate some interest in the survey respondents. While many of the highways in southern Missouri would not be candidates for such upgrades and modifications, it does appear that in selected areas it would be beneficial to install such devices. Specifically in the Branson area and perhaps on some selected roadways in the Springfield area. Electronic message feedback/guidance signs require no action by the driver, but the information can be used by all drivers to aid in getting to their desired destination in the minimum amount of time.

In the area of accidents involving drivers from the study region, seven areas seem to be contributing causes of at least some of the accidents in the eyes of the respondents. It is recommended that more attention be given to those items (below) in all Missouri communities.

- * Blind intersections (caused by placement of bushes, trees, and now highway types of signs).
- * Unmarked roadway edges (especially at night, with impaired vision of many senior citizens).
- * Narrow bridges and the mix of traffic size and volume during day and night travel.
- * Bright lights on non-highway type signs that are improperly adjusted or just plain too bright.
- * Lack of advanced warning signs on many rural intersections that are blind or hidden intersections.
- * Greater enforcement of DWI and traffic laws by local and state law enforcement on rural roadways.
- * Paint center lines on all roadways and place reflective inserts in center lines that are on curving, hilly roadways and in high accident locations.

In conclusion, the study data has produced a unique view of the older driving population in this area of the state.

The data has revealed a new view of the annual mileage driven, the type of equipment purchased on new cars, types of equipment likely to replace present vehicles, kinds of driving problems with equipment, roads and other drivers as well as their perception of changes needed to improve highway safety.

Also important to planning for change and/or for public information programming, the respondents' self-reporting on problems (highways, accidents, enforcement) clearly indicated the need to study the older driver's accident rate, that highway improvement planning was clearly on-target, and that enforcement efforts were needed in specific areas.

APPENDIX A

Missouri Driver Response Survey

MISSOURI DRIVER RESPONSE SURVEY

The purpose of this survey is to collect information that can be used to make Missouri's roadways safer and more user friendly. All responses will remain anonymous, your participation is voluntary. Please **DO NOT** write your name, or any form of identification on the material you send back. We have enclosed a postage paid envelop for you to return the survey form. The survey itself will only take you about 10 minutes to complete. There are no right or wrong answers. We appreciate your assistance in making Missouri's roadways a safer place for all drivers.

Tell Us About the Vehicle(s) You Drive

- (1) What kind of vehicle(s) do you currently drive? (Check All That Apply)

| | | |
|--|--|---|
| <input type="checkbox"/> Compact Car | <input type="checkbox"/> Medium-Sized Car | <input type="checkbox"/> Full-Sized Car |
| <input type="checkbox"/> Small Pickup | <input type="checkbox"/> Full-Sized Pickup | <input type="checkbox"/> Sports/Utility Vehicle |
| <input type="checkbox"/> Mini Van | <input type="checkbox"/> Full-Sized Van | <input type="checkbox"/> Motorcycle |
| <input type="checkbox"/> Station Wagon | | |
- (2) Which vehicle do you drive most often? (Check Only One)

| | | |
|--|--|---|
| <input type="checkbox"/> Compact Car | <input type="checkbox"/> Medium-Sized Car | <input type="checkbox"/> Full-Sized Car |
| <input type="checkbox"/> Small Pickup | <input type="checkbox"/> Full-Sized Pickup | <input type="checkbox"/> Sports/Utility Vehicle |
| <input type="checkbox"/> Mini Van | <input type="checkbox"/> Full-Sized Van | <input type="checkbox"/> Motorcycle |
| <input type="checkbox"/> Station Wagon | | |
- (3) What model year is your newest vehicle? 19_____
- (4) What is your primary vehicle used for? (Check Only One)

| | | | |
|-------------------------------|--|-----------------------------------|----------------------------------|
| <input type="checkbox"/> Work | <input type="checkbox"/> Work/Pleasure | <input type="checkbox"/> Pleasure | <input type="checkbox"/> Errands |
|-------------------------------|--|-----------------------------------|----------------------------------|
- (5) In your primary vehicle, do you have difficulty fastening/unfastening the safety belts?
☐ Yes ☐ No
- (6) Does your primary vehicle have:

| | | |
|----------------------------|------------------------------|-----------------------------|
| A. Power Steering | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| B. Anti-lock Brakes | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| C. Automatic Transmission | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| D. Electric Driver's Seat | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| E. Electric Windows | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| F. Driver Side Air Bags | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| G. Passenger Side Air Bags | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| H. Cruise Control | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
- (7) In your primary vehicle are the dashboard gauges easy to read? ☐ Yes ☐ No
- (8) Do you feel your vehicle's outside mirrors are easy to adjust? ☐ Yes ☐ No
- (9) Do you currently have any of the following in your primary vehicle?

| | | | |
|-----------------------------------|---|---|-------------------------------|
| <input type="checkbox"/> CB Radio | <input type="checkbox"/> Mobile Radio Phone | <input type="checkbox"/> Cellular Phone | <input type="checkbox"/> None |
|-----------------------------------|---|---|-------------------------------|
- (10) Do you plan to purchase a cellular telephone for your primary vehicle in the next three years?

| | | |
|------------------------------|-----------------------------|--|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Already own/use one |
|------------------------------|-----------------------------|--|
- (11) Are you aware that you can contact the Missouri State Highway Patrol's Emergency Help Line by pressing *55 on a cellular phone?

| | |
|------------------------------|-----------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No |
|------------------------------|-----------------------------|
- (12) Have you ever contacted state or local law enforcement by:

| | | | |
|-----------------------------------|---|---|-------------------------------|
| <input type="checkbox"/> CB Radio | <input type="checkbox"/> Mobile Radio Phone | <input type="checkbox"/> Cellular Phone | <input type="checkbox"/> None |
|-----------------------------------|---|---|-------------------------------|

Tell Us About Your Driving Experiences

- (13) About how many miles do you drive in a week? (Check One)
☐ Under 10 miles ☐ 10 to 50 miles ☐ 51 to 100 miles ☐ Over 100 miles
- (14) About how many times do you drive during an average week?
☐ Less Than 7 times ☐ 8 to 14 times ☐ Over 14 times
- (15) On an average, which type of roadway do you most frequently drive on? (Check One)
☐ Streets in Town ☐ 2 Lane Rural Roads
☐ 4 Lane Non-Interstate ☐ Interstate Highways
- (16) How often do you drive on an interstate highway?
☐ Often ☐ Sometimes ☐ Seldom ☐ Never
- (17) Are you able to keep your speed within the posted limits?
☐ Yes ☐ No
- (18) Do you wear your seat belt as a driver?
☐ Yes ☐ No
- (19) Do you wear your seat belt as a passenger?
☐ Yes ☐ No
- (20) Do you tow a boat or trailer? ☐ Yes ☐ No
- (21) Do you mind driving in heavy traffic? ☐ Yes ☐ No
- (22) Do you mind driving with big trucks on two lane roadways? ☐ Yes ☐ No
- (23) Do you mind driving with big trucks on four lane/interstate highways?
☐ Yes ☐ No
- (24) Are you comfortable driving at 55 mph? ☐ Yes ☐ No
- (25) Are you comfortable driving at 65 mph? ☐ Yes ☐ No
- (26) Do you have difficulty judging distance between you and the car in front of you?
☐ Yes ☐ No
- (27) Do you find it difficult to pass other vehicles on interstate highways?
☐ Yes ☐ No
- (28) Do you find it difficult to pass other vehicles on two lane roads? ☐ Yes ☐ No
- (29) When you drive at night, does headlight glare bother you? ☐ Yes ☐ No
- (30) Do you feel there is sufficient traffic law enforcement on the highways?
☐ Yes ☐ No
- (31) Do you find it difficult to drive in city traffic in the area you live?
☐ Yes ☐ No ☐ Sometimes
- (32) Are highway signs difficult to read after dark? ☐ Yes ☐ No

Tell Us About the Roads You Drive On

- (33) Do the roadways in your local area need the following improvements?
- | | | |
|--|------------------------------|-----------------------------|
| A. White lines marking the edge of the road? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| B. Pavement reflectors marking the center line? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| (1) Do you feel that center line reflectors would help? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| D. Well maintained shoulders for emergency stops? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| E. Elimination of narrow and/or one-lane bridges? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| F. Elimination of roadside obstructions that limit or restrict a driver's field of vision? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

G. Correction of dangerous intersections? ☐ Yes ☐ No

H. Easier to read traffic signs? ☐ Yes ☐ No

I. Would larger lettering on highway and street signs help? ☐ Yes ☐ No

J. Would better maintenance on signs help?
☐ Yes ☐ No ☐ -

K. Would placement of advanced warning signs help? ☐ Yes ☐ No

In the area where you live:

A. Should there be more left-turn lanes? ☐ Yes ☐ No

B. Should there be more left-turn signals? ☐ Yes ☐ No

Do you understand the international symbols which appear on highway signs?
☐ Yes ☐ No

A. What is your opinion of Missouri's signs in general?

(1) Are Missouri highway signs complicated? ☐ Yes ☐ No

(2) Do Missouri highway signs have clear directions? ☐ Yes ☐ No

(3) Are Missouri highway signs in disrepair? ☐ Yes ☐ No

(36) Are you? ☐ Male ☐ Female

(37) How long have you lived at your current address?
☐ 1 year or less ☐ 1 to 3 years ☐ 4 to 6 years
☐ 7 to 10 years ☐ over 10 years

(38) How would you describe the area in which you reside?
☐ Large city, 50,000+ ☐ Small city, under 50,000
☐ Rural

(39) What is your current employment status?
☐ Employed ☐ Not Employed ☐ Retired

(40) How many years have you been driving?
☐ 5 or less ☐ 6 to 15 years ☐ 16 to 25 years
☐ 26 to 35 years ☐ over 35 years

(41) Are you required to wear glasses to drive? ☐ Yes ☐ No

Additional Comments You Want To Make

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APPENDIX B

Comments From Driver Response Survey

TELL US ABOUT THE ROADS YOU DRIVE ON

(33) Do the roadways in your local area need the following improvements?

(F) Elimination of roadside obstructions that limit or restrict a driver's field or vision? If yes, please identify the location(s).

- * In Springfield.
- * Aurora to Stockton, Highway 39.
- * 160 in Barton County.
- * Highway 5 North from Camdenton, Missouri to Gravois Mills, Missouri.
- * Exit of Gerbes in Camdenton--Dan Stone Insurance.
- * Greene--Christian--all south western Missouri Counties.
- * Taney County.
- * Tall grass on right of way.
- * Oakmont or Red Oak development sign north of Reed Springs on Highway 13.
- * Weeds, trees, under brush at many rural intersections.
- * Camdenton, Missouri.
- * Traffic entering highways.
- * US 65 at CC & J.
- * Camden and Laclede counties.
- * Highway 5 North--between Camdenton and Sunrise Beach.
- * Camden County--Highway 54 and side roads.
- * State roads.
- * Trees, signs, shrubs.
- * Southern Barry county, especially secondary roads.
- * Highway 39 and 248 near Jenkins, Missouri. Bluff owned by the Missouri Highway Department.
- * Most two-lane highways near Taney County.
- * Unmowed shoulders at curves and intersections--Tall brush in some locations.
- * One mile north Wheatland, Highway B.
- * 17 Highway between Crocker and Waynesville.
- * H Highway south of I-44 near Mt. Vernon.
- * Highway signs at Route 13 and 32 intersections.
- * Old 37 Highway at Purdy.
- * Corner of Sunshine and Ingram Mill Street, Springfield, Missouri--Not Missouri roadway.
- * Highway 13 and T Bolivar--Highway T angles too much.

- * Need larger radius or roundings at intersections so traffic can negotiate turns in their respective lane. Mail boxes set too close to pavement on Farm roads in Greene Co., in some areas.
- * All along the road to Branson.
- * Some signs in our area are hard to see around some hills on our roads are bad.
- * Highway 65.
- * Roadside brush--sometime's Highway plantings when they are large trees or shrubs.
- * On KK entering Highway 13.
- * On country highways (2 cars can be parked--talking) you wait till they get through--137.
- * Route 2, H Highway--Halfway, Missouri.
- * City streets with high brush or trees obstructing sight (Intersections in Pleasant Hope at MFA building).
- * 165 and Zoo Road--Branson.
- * U.S. Highway 65 and Mo. 165.
- * 54 Highway--West.
- * 248 Highway from Cassville to Shell Knob; 39 Highway from Aurora to Shell Knob.
- * Portable advertising signs too close to road.
- * All of 63 Highway.
- * Junction 160 - 76, Kisse Mill Jct., signs in front of PXG & Station.
- * East 32 from Lebanon, MO.
- * 32 Highway between Buffalo and Lebanon, Mo.
- * Wheatland, Mo.
- * Competition, Mo.
- * By my home (driveway) intersection 32 & 73 Buffalo.
- * Highway 165 and 265 Junction, south of Tablerock Dam.
- * Lake roads.
- * Various places we have gone corners are blocked by bushes, parked vehicles.
- * 76 & Highway 63; Highway 137 & High Street in Willow Springs.
- * Highway F--Woman has fence on right, way grown up with large brush.
- * Local roads need to be maintained and kept clear along roads.
- * Shrubs, brush or high banks at corners of side streets or roads.
- * Highway 123, 4 miles outside of Humansville.
- * Highway 63--CC, no reflectors to see CC at night for left turn.
- * Country lanes brush grows on curves.
- * Sunset and Ingram Mills.

- * Second bend in road north of "Cliquot" on "O" highway has a blind spot when trying to turn west in gravel road.
- * U.S. 65 South of Springfield. Business 65 between Branson/Hollister.
- * At intersections and cross roads.
- * We live in a small town, grass grows high at some intersections.
- * I'm thinking about very bright (security) lights on signs and property that blind drivers.
- * On country roads.
- * Large advertising billboards that are placed close to roads where entry to highways and also large parking objects where you can't see up the highways to see if anything coming or not, when trying to enter at side roads.
- * Narrow bridge on 54--down by Camdenton on 54--very narrow--no shoulders on road to get off of traffic when you are in trouble on 13, 60, 54 and 65.
- * Highway 5 and 7.
- * Bridge on 133 over Gasconade river.
- * Highways are all right, country roads need more brush removal.
- * Junction 39 and 248.
- * Brushes at intersections.
- * Intersections in town.
- * Sign boards.
- * Highway P south of Republic, MO.
- * All corners where entering major road from a side road.
- * 54 and 79.
- * Highway 160 between Springfield and Branson has almost no middle mark nor edge of road.
- * West and south of Willard.
- * Rural roads of Ozark.
- * Line on 635 no shoulders, and road sides not mowed.
- * I-44, Springfield, Missouri area.
- * On curves that have trees blocking view to turn on a side road like Highway K and 7 Highway.
- * Trees and shrubs over growing.
- * Bushes at curves--unmarked (with a yellow line) left turn lanes curbing.
- * All of Branson and Springfield.
- * Highway H.
- * 3.7 miles north of 96 on 97 & YY--Lawrence County.
- * Several in city--bushes.
- * State #17, U.S. 60 too many curves and hills.

- * Lake of Ozarks--Osage Beach.
- * A, B, C, F--Generally Speaking, No specifics--"E" Bridge on 54 between Camdenton and Macks Creek.
- * Various intersections have too many signs.
- * Highway D and Highway 83 north of Bolivar. Highway T and Mo. 13 in Polk County at Bolivar.
- * Springfield, Highway 60 and 62.
- * City of Springfield, over-grown hedges, bushes.
- * Flatten the Ozark Hills? Nah!
- * Porter Wagner and Main Street, West Plains, MO.
- * Mail box protrusions on two lane roads.
- * Several residential corners in Springfield have hedges, trees, fences, etc. which restrict vision.
- * 17 Highway, 137 Highway, 60 Highway, and 63 Highway.
- * Intersections, curves and turn-offs.
- * Downtown intersections.
- * In several locations in town bushes or undergrowth are too close to intersections.
- * Mainly on the small country roads the weeds and brush need cutting on corner and cross roads.
- * Bushes at corners, also FF & M Highway.
- * A highway south to Diggins.
- * Brush or trees in Branson area.
- * Ozark south.
- * Weeds at corners and intersections.
- * Highway 21--Hillsboro to Highway 60--very bad for seniors pull off.
- * Mostly lettered roads.
- * In the lake area.
- * Corner lots in Ava, some in western Douglas County.
- * Rural roads.
- * 83 Highway--small towns.
- * 125 and 65 just a dangerous intersection--vision poor.
- * Southwest Missouri.
- * South Missouri.
- * B & W, 54 & B.
- * Kearney at Fremont. Springfield, Mo., auto sales cars parked on sidewalk.
- * Highway 7 in to Richland and I-44 to Waynesville, they have been working on the roads around here, I-44.

- * 32 Highway between Salem, Missouri and Licking, Missouri on hills.
- * Route 64 and 64B.
- * Lady Bird Johnson's trees need trimming on some I-44 passes.
- * Highway W, north off of Highway 14.
- * Highway 13 at M.
- * Around curves.
- * Curb parking on College Street and St. Louis Street in Springfield, Mo.
- * Route 54 bridge south of Camdenton-crossing, Lake of the Ozarks.
- * Brush and trees, occasional signs throughout Hickory County.
- * Highway signs, N Highway and 63/ U Highway and 60.
- * Street corners in Aurora, trees, bushes, large trucks parked on street corners.
- * M highway bridge west of FF over Wilson Creek.
- * Old building at intersection of 86 & 112, old liquor store on corner at Hilltop near Cassville.
- * FF & 65, finish four lane highway to Branson (Route 65).
- * Direction sign to other main highways placed wrong, causes confusion.
- * 54 & 71.
- * Tall grass in summer on RA - Barry County.
- * In Viola, Mo. a square corner, the building has been hit so has the church south of Shell Knob, Mo.
- * Blind curves with weeds on right-away.
- * Heavily wooded on curves - poorly aligned quartz lites or other on billboards or industrial lots.
- * All curves on Mo. 32 Highway.
- * Highway J, 32, 39 in Cedar County.
- * Near intersections.
- * Shrubs that are overgrown.
- * Parts of Highway 60 and Highway 65.
- * Many - Branson area.
- * Buckhorn overpass.
- * State highway #5 - Highway 64 Laclede County roads.
- * Billboards and very bright lights (security lights).
- * Harlin Drive and Preacher Roe Blvd. in West Plains, Mo.
- * Hwys 17 7K Junction west of Summersville and 17 & 60 between Summersville and Mountain View.
- * The height of stop signs. Grasses not being mowed very often - gets too tall sometimes.
- * Row of trees planted in front of Bank of Mountain View drive up.
- * City streets in Bolivar, Mo. - Highway 83.

- * Shrubbery, vehicles parked at corners.
- * They are letting the cedar trees grow along the highway (they used to cut) in Cape Fair area.
- * Stone county.
- * City streets intersections - shrubs block view some places.
- * Advertisement signs in Pittsburg, Mo. area.
- * On rural highways in southwest Missouri.
- * At night - bill board lights that shine under the sign and shine in drivers eyes.
- * Mostly in Buffalo at stop sign where trees are too close and you have to be in road to see ok.
- * Along Ozark country roads such as tree limbs, rocks, etc. at curves especially.
- * Ball & Prier Tire Co., Golden, Mo.
- * Highway 76 East, Highway 160, F Highway, Taney Co.
- * Southwest Missouri.
- * 2.5 miles south of Highlandville on Highway 160 (remove trees on curves).
- * A - Interstate 44 to St. Louis, E - Beaver Creed, 3 miles south of Rolla on Highway 63.
- * Stone County near Branson, Mo.
- * Corner of 165 and Safari Road. There is a restaurant sign blocking view.
- * On 54 Highway.
- * Coming off side streets and cars that are allowed to park along side - this is more in small towns.
- * At D & C traffic signs, and young people try to run you off highway, it happened to me.
- * North Christian County, south Greene County.
- * Highway 32 - East of Buffalo.
- * The small bridge west of Ash Grove on Highway 160.
- * Greene Co.
- * 308 E. Mt. Vernon/Nixa, Mo. portable sign placed in yard.
- * CC between 32 and E west of 71.
- * Camden Co.
- * Lines need to be painted more often as they are difficult to see when raining, especially when dark.
- * Trees on curves Tecumseh to Gainesville.
- * Route 245 and Route 215.
- * Greene Co.
- * I-44 east Mt. Vernon City limits.
- * Sometimes trees and bushes at intersections - some places - signs.
- * B & D - In general - Our area is pretty good.
- * Rural roads with brush growing in fence rows on corners.

- * Stop light at 73 and 32 in Buffalo, Mo.
- * 65 Highway to Branson from Springfield "Signs".
- * Have no reflectors in West Springfield, Mo.
- * Almost all of the service and secondary roads in Greene and Christian Counties (intersections).
- * Lebanon - close to city Highways 5 - North and South, 64 and 32 East and West.
- * Any location that restricts vision should be cleared.
- * Within city limits - poor paving.
- * Branson side roads.
- * Branson, Mo.
- * Tree at intersection of Highway 83 and Summit Street (NE Corner) Bolivar, Mo.
- * Intersection K & KK - Howell County all other roads and driveway without a clear view of oncoming traffic Ozarks full of them.
- * Don't feel the right of way have been cared for enough.
- * Various shrubs and trees.
- * Street intersections.
- * Street or highway intersections.
- * Highway 60 - From Marionville to Monett.
- * Left turn lane painted on highway 63 at E highway north of Houston without any warning signs indicating turn lane.
- * Bridges on highway 32.
- * Around our square to pull out on a street if there is a van or a large truck.
- * Branson.
- * Rural right-of-way need mowing more often.
- * Any where trees as brush are in the way.
- * Trees at intersections: Lynn Street and Highway 17, south side.
- * Certain tree limitations.
- * Stone county
- * Weeds and high grass obstruct my view when entering (at times) highway 86 from rural road half mile south of Eagle Rock. A very dangerous place at crest of hill. We need a caution light at this place.
- * Walnut Lawn and Kinbrough southwest corner.
- * Highway 248--Taney Como Bridge between Branson and Hollister. Too narrow for RV's. Put pedestrian walkway on outside of bridge then widen bridge for 40 tourist.
- * Tall grass on corners and along highways.
- * Highway T--straighten out some of the curves.

- * Glenstone and James Rutt Freeway.
- * Corner of Farrien and Riverside in Springfield, tree needs trimming. North Cox Hospital parking lot and Booneville.
- * On 32 Highway and 39.
- * Weeds and brush on intersections.
- * Signs and trees.
- * Glenstone Avenue in Springfield, Mo. and several other main streets.
- * Highway 5 between I-70 and I-44, Niangua bridge Highway 5.
- * Some large trees growing in roadway area: Highway 5--Sunrise Beach and Laurie Area.
- * Shrubs at corners near schools.
- * U.S. Highway 65.
- * We need police to monitor school and college 20 mph speed limit in areas.
- * Near Branson, Mo.
- * K Highway needs to be wider to 174 Highway, too crooked, too narrow, too many curves.
- * Corner of Roberson and Sherokee Street here in Springfield and others.
- * Shrubs and tall grass.
- * Branson.
- * Junction 5 & 76; Junction 5 & Y.
- * Secondary roads southeast of Springfield.
- * All over Southwest Missouri.
- * Trees and bushes on the corners--can't remember locations.
- * Tall vegetation at intersections; sign boards at or near intersections.
- * Ozark county.
- * El Dorado Springs, Mo.; Highway 54 to Nevada, Mo.
- * Highway 13 & T & 83.
- * 5/7/54 Highways and 17 Highway.
- * J Road between Highway 54 and Highway 7, Camden County.
- * Numerous streets in town where vegetation has been allowed to grow too large.
- * There are a lot of roads that don't have the things on them.
- * Between Laurie and Camdenton, Mo.
- * About 4.5 miles east 14 from Ava, Mo. at narrow bridge on curve.
- * Highway 63.
- * Main Street, Fair Grove and 125 Highway--parked cars block vision.
- * From Springfield, Mo. to the Arkansas border.

- * Highway 13 Kimberling City to Galena.
- * FR 169 and Evans Road--At the stop sign, I have to pull into intersection to see last traffic when I am traveling north.
- * Highway 133 and 42.
- * Local--Walnut Lawn and Kansas Streets.
- * Highway 5 between I-44 and I-70 especially through Lake of the Ozarks.
- * Driveways on ramps to Interstates, grass.
- * Texas County.
- * Southwest Missouri.
- * Junction 278 and 39, Jenkins.
- * Side roads and curves.
- * Junction at 13 and DD, also a stop and go sign is needed at Highway 13 and Joe Bald Road.
- * YY Highway, 125 Highway, county roads.
- * 1.5 miles west on AA from 160 in Christian County.
- * On all county and rural roads around Strafford, Marshfield and Springfield.
- * On some corners.
- * US 160 Sac River bridge between Ash Grove and Everton needs shoulder.
- * 64 Highway--from Hermitage, Mo. to Bolivar, Mo.--also 83 Highway from Wheatland Mo., to Bolivar, Mo.
- * J Junction D Highway, Hickory County.
- * Tall trees on curves in Ozark, Mo.; Highway PP between Clever and Republic, Mo.--All one-lane bridges.
- * Route 76 and 160.
- * Vehicles parked on roadways.
- * Failure to remove bushes and tall weeds at entrance onto Highway. Parked vehicles near crossings.
- * Highway 5--Camdenton to Versailles.
- * Resort sign at Junction of 39 Highway and 248, blocks view.
- * 60 Highway, Willow Springs south to West Plains.
- * D Highway and 64 on TT south of Pittsburg, Mo. the Nemo Bridge is horrible on 64 & D across Lindley Creek.
- * Brush on right of ways in Christian County.
- * Highway 39 south and 86 west.
- * Barry, Stone, Lawrence, Christian, and Taney counties.
- * Intersection UU and Highway 90.
- * 54 - 79 - Sunny Slope Drive, Tree needs trimming or better of cut down.

- * Trees by intersections and stop signs that block view.
- * Tall grass, weeds, brush, bridges not marked that need repair.
- * Too many to answer. Trees, vehicles, signs, etc., block visibility of traffic at intersections.
- * Junction 63 and 32.
- * D Road in Camdenton, Mo.
- * East end Main Street on 126 and 160.
- * McMicken bridge about 2 miles south of Dixon; Bridge at Jerome, Mo.
- * Need more caution lights and stop lights in Forsyth area.
- * Trees.
- * Corners in town.
- * Tall grasses, farm roads 53--160 highway.
- * Around conservation area.
- * Brush at intersections.
- * At intersection 86 and 76 one mile south of Wheaton--Brush around a corner.
- * Highway 5 north of Lebanon after the improvements; i.e. Camden County.
- * Intersections obstructed by trees and rock cliffs.
- * Reed Spring Crane areas.
- * Highway F and 65, Taney County most dangerous in our area.
- * Growth of weeds and trees on my right of way restricts drivers view in many cases all of southwest Missouri.
- * Highway M--Republic Road is much too narrow and has no left turn. It is getting very dangerous as is.
- * Heavy traffic in a vacation area.
- * H highway, Camden, Co.
- * Highway 5, Camden County.
- * To many curves on Highway 5.
- * Secondary roads in Camden County.
- * Sign near Kunz Lawn and Gardenstore, North 5, Camdenton. Sign obstructs drivers view when leaving the store.
- * Bill boards.
- * On Highway 17 and Highway W needs white lines and on river hill on Highway 17 need guard rails! Bad!!
- * Need crossroads.
- * Highway DD off Highway 13.
- * On any 18' road where most people drive down the middle.

- * Laclede County--Highway 5 South and Highway C Junction. No visibility when entering Highway 5 from C or when turning left off Highway 5 onto Highway C.
- * Side roads coming on to 32 Highway.
- * Highway 63 and 137.
- * Cabool, MO.
- * D Highway 7 from 65--5 there is no shoulder.
- * Tree and bushes at intersection that are not kept trimmed.
- * 3 Bolivar, Mo. exits.
- * In southwest Mo.
- * Around Cassville area.
- * Bridges on Highway 65 north of Branson--no shoulders on Highways 160--176 most 2 lane highways in southern Mo.
- * Mr. Vernon, Mo.
- * Dip in Highway east of Intersection of J Highway and Highway 60 east.
- * Many four way stop signs.
- * Some streets the shrubs and trees block the vision.
- * DD Highway and most farm roads.
- * Shrubs on corners.
- * D Highway 14 no good places to pull off in emergencies. Highway 14 and 153 farm road due to parked cars and trucks on the east vision is blocked for people coming from the north.
- * All signs need to stay clear of road, none in our area now that are problem.
- * Bushes or trees around crossings.
- * Between Springfield and Branson, also Highway 13.
- * Anywhere near an intersection.
- * Continual construction on Highway 160.
- * Greene County.
- * Need stop light at second entrance of Wal-Mart, take sign from Radio Shack on Jefferson Street.
- * Springfield, Mo.
- * Branson, Mo.
- * Blind corners, where trees and shrubbery have grown out of proportion.
- * Polk County.
- * Road 5-940.
- * 64 & 65.
- * Highway M (Republic road) and National.
- * Mo. Highway 97, BB.

- * Highway 86 West and Route JJ.
- * Highways 125--96--97--160--14.
- * Areas where bushes and trees, etc. block cross traffic vision.
- * Trees need to be trimmed back on curves; keeping right of ways moved.
- * West Plains, Pomona north to White Church. Close dirt road crossing highway half way down hill. Killed two teenagers in April, 1 man last spring.
- * Corner of Z and 76 Highway, can't see to the left.
- * Advertising lights at junction 13 and 86 at Pine Tree Junction.
- * Cars parked on side streets make it difficult to see if any vehicle is coming.
- * Bennett and Oak Grove, Springfield.
- * Mo. 13 and 265.
- * Rural areas brush in fence, town big shrubs on corners.
- * Signs along roadways.
- * Bill boards on curves.
- * Tall trees whose branches in late summer obscure oncoming traffic.
- * 1.5 miles west on 65 on 86, south of Branson.
- * Along south 5 on Jefferson.
- * Trees at cross roads.
- * Signs too close together.
- * Signs, junk yard fences.
- * Highway 5 & 7.
- * Throughout Polk County.
- * 83 Highway going north approximately 40 miles.
- * Greene County.
- * Corner Blackman Road and East Sunset. Corner Blackman Rd and East Battlefield (Springfield, Mo.)
- * On corner of A Road and Highway 54 by Dragon Oil Truck Stop.
- * Steep hills at intersections on 1 Highway in Howell County.
- * Highway 17 and Road M, 2 miles south of Success.
- * Bakersfield area.
- * Bill board advertising on heavily traveled roads.
- * Intersections of Ozark County, PP & Highway 160.
- * Some people coming off northbound #65 at Battlefield have thought they had right of way over eastbound Battlefield. I can't recall any particular site--Oh yes! Off ramp from southbound 65 at Battlefield, the bridge rail obstructs view.

- * Within city of Springfield.
- * Signs, bushes, and trees.
- * Highway 13--north of Warrensburg.
- * One mile south and one mile west of old Sylvania Store (Black top).
- * Only mowing 2 feet from pavement at side roads, can't see on coming traffic for tall grass.
- * Highway 160.
- * West Plains--some stop signs are not too visible.
- * 65 south, 160 south, 65 north.
- * Resort areas (Lake of Ozarks, Branson, MO.) Most lake areas.
- * Freemont and Republic--vehicle parked in corner of Bar lot--Freemont and Holiday.
- * (B) State and Farm roads, (C) City streets, (E) some state and all farm roads, (F) some city streets.
- * Glenstone St.; Battlefield St.; Campbell St.; Sunshine Avenue--All in Springfield.
- * Should not allow right turns on red off the blind corner at Walnut and National.
- * City business signs, mailboxes, phone booths; fence, row trees; city home bushes, untrimmed trees.
- * County roads.
- * Walnut Lawn, Republic Road, in spots.
- * It would be helpful to have white lines marking most roads, reflector marking more center lines of roads. Also, more marked pedestrian crossings.
- * Highway 17 between Waynesville and Crocker.
- * Outlying roads leading to and out of Springfield.
- * You have to pull up too far at lots of stop signs. Because of brush, fences, and used car lots, etc.
- * Rural areas in southwest Missouri.
- * Highway 254 and Highway 83.
- * Barry County.
- * About anywhere in Lake of the Ozarks; don't need any more bill boards in this county, Camden.
- * Highway 17 between Mt. View and West Plains.
- * Highway 65.
- * Filling stations have obstructions so seeing is difficult.
- * Between Aroura and the drive in theater.
- * Fremont and Kearney, fences and trees block vision.
- * Bushes at Grant Moore (Springfield); Bushes at Orchard Crest and Mt. Vernon (Springfield).

ADDITIONAL COMMENTS YOU WANT TO MAKE

- * I have gotten sleepy at times trying to drive 55 mph on the highway.
- * I am widow by death 13 years. We Stockton senior citizens do not drive in difficult places, have relatives to drive if we need to go there, or grandkids. We use cars for church, grocery's, visiting, etc. Otherwise, we are very careful as it should be.
- * We live around Branson, Mo. area and traffic is bad.
- * There are areas in Kansas City and St. Louis and a few other intersections in Missouri that do not let you know soon enough which way your highway turn off is, to the left or right. This shows improvement. There are some areas with light problems that reflectors would help but for the greatest area they are not needed.
- * Highway 13 and Highway 160 in the Reeds Spring--Kimberling City, Galena, Forysth area are the "PITS"!! Why doesn't the Highway Patrol do something about the dump trucks with out covers? I'm tired of having my car "sand blasted" by all the junk from these vehicles, few seem to give way to emergency vehicles.
- * Highway 5 is dangerous highway with no shoulders and no way of granting right of way to emergency vehicles. As a highway--it is a disaster!!!
- * (1) Keep right on four lane roads except to pass (when traffic is light to medium). When traffic is heavy maintain the speed of the lane your in. Don't tailgate. (2) When passing--don't hang on the side of vehicle being passed or cut short in front of vehicle. Use speed necessary to accomplish this. It may be necessary to exceed posted speed limit briefly. It would be better to get a ticket then to cause an accident.
- * While I think the traffic enforcement is good, I think there should be more watchfulness at some city traffic lights. Too many are running red lights and speeding as they do it. I would like to see Highways North 13, 65 and 63 widened into good two lanes with passing areas or 4 lanes. Seems our gas taxes were for better roads.
- * Most helpful--advance information on name of street at next light (intersection). This information occurs too rarely for drivers to be in correct turn lanes.
- * "K" in Lawrence county needs shoulder improvements.
- * Make people get fences off of highway right-of-ways so drivers have a better view ahead.
- * On most of the roads around Humansville and Osceola there are no center lines (yellow lines) on the roads, there are no shoulders for emergency stops.
- * NEEDED!!! Driver Education (all drivers) for:
(1) Using headlights on cloudy, rainy days and during low light soon after dawn and at dusk to be seen, not just to see. (2) Keep to the right on multi-lane streets and highways instead of running far below the speed limit in the inner, fast lanes.

- * Missouri auto inspection is a farce and imposition on the public. Add inspection fees to license and give us a break. The old system worked well.
- * Too many narrow, crooked two lane roads.
- * More yield signs instead of stop signs.
- * There are too many roads, you can't see traffic coming because the hills haven't been cut down enough. Example--Road F going onto Highway 54 east of Preston. Also at Hermitage--the road turning to the left to Hermitage Park Care Center. You can't even see the road as you make the turn. It was built up too high when it was changed few years ago. Also, there are too many difficult turns off highways onto county roads. Example, the right turn off Highway 65 onto CC in Hickory county.
- * Please make Highway 5 from Versailles to Interstate 44 a safe road, it is the worst road around. Make laws that when an area collects money to black top a road that everyone must pay their fare share.
- * Some questions I couldn't answer as I didn't want to use just yes or no, I seldom drive over 20 miles from home. I live around 8 miles from Lebanon, Mo. that is convenient for me.
- * Entering Highway KK off 13.
- * Better thinking about clear directions on highway signs. For one thing, they need to be placed far enough from the action point that the driver will be ready, and large enough.
- * No shoulder, at all for flat's or car trouble.
- * I only use my car to drive to and from the grocery store and to the doctors office here in town.
- * Highway 142 has to many low water bridges. We have four low water bridges within 15 miles, Highway 17 has too much heavy traffic for the surface.
- * When roads are being repaired, would like for repair work to be smoother.
- * Highway right-of-ways in some areas are not kept mowed, this gives a very bad impression to tourist.
- * Too many cars pass me on double yellow lines or single lines going up a hill. Very upsetting! Aiming headlights should be part of your car inspections each year, many of the cars blind you at night. This is dangerous!
- * I am 77 years old. I don't go out driving at night or on Interstate highways. Sorry I was late with the survey.
- * I think it would be of help if all four-lane highways would be 65 mph, just not interstates.
- * Need more four-lanes at Branson area.
- * Our bridges are in need of repair also, or replaced.

- * I do wear glasses, although have had eyes corrected--visible great. Just too many curves and hills in this area, perhaps can't be helped.
- * I wish there could be more patrolmen to enforce posted speed limits, perhaps a stiffer fine for the offenders.
- * When right turn lane (arrows) are painted they do not keep those in fresh bright clean color--should not be left too long of time so that they cannot be seen. Paint more often. Shrubs--bushes and trees should not be left too close to corners and curbs of street intersections.
- * I wear glasses not needed for driving.
- * Too many people drive with high beam headlights on. Parking areas = van driver's should have a designated parking area. When van driver's park on either side or both sides of a regular car, they block the car driver's vision, creating a safety hazard.
- * I live at Eagle Rock, Mo. When I go to Cassville as I leave Roaring River State Park on 112 going to Cassville the on coming cars down the hill turning left into the park can't hardly be seen until it's too late as it's on a curve and a 10 foot solid rock wall.
- * We are proud that our roads are as good as they are. With all the rain it has been more work and taken more money for the Highway Department to keep roads repaired.
- * In my opinion, Highway 5 from Camdenton, MO to Gravois Mills, MO is the most dangerous highway in our area. I believe it certainly have some attention before Branson. It's simply a "killer."
- * Our highways are better than Arkansas and Oklahoma. I think our highways are as good or better than surrounding states.
- * Billboard signs are too distracting and ugly, also too many of them. They are starting to make the Ozarks look like Honky Tonk. There should be laws to keep them under control.
- * We need more speed limit enforcement. Most signs are good but there should be more advance signs especially in cities.
- * On Highway 76 (Country Music Blvd.) the trolleys line up traffic around every curve beyond sight. Trolleys need separate pavements to run on and loading zones. No matter what the cost, which is cheaper now than 15 years later, a monorail seems to be the only solution to moving people from Branson down the "strip". Can four-lanes 65 Highway and 160 Highway be adequate to move 12-15 million people into and out of the Branson area?
- * Arkansas is improving all types of their highways and bridges. I wish Missouri would do the same. Our roads and highways have gone to pot in the last twelve years.
- * Camdenton traffic is heavy and getting heavier. There are no sidewalks to walk on. It's dangerous walking on the streets.
- * I don't drive far enough to be very qualified to answer your questions.
- * We need more four-lane roads in our county.

- * Slower speed limits at school crossings and intersections.
- * I drive about 10 miles on a paved country road to work. Nearly everyday someone passes on a yellow line--a hill or a curve endangering their life and mine. Wish it could be stopped.
- * White lines, indicating where to turn off, Highway 65 North of Springfield, onto farm roads would help. . . The white lines and yellow lines are often in need of repainting before it is done in my area.
- * The new interchange of Highway 65--60--Republic Road and James River Freeway in Springfield in my opinion is the very "worst" of design and a "masterpiece" of confusion. I have been lucky and have driven way over a million miles (without an accident) and I'm not a trucker, but Chicago, Dallas, St. Louis, Kansas City, Florida or anywhere else is there such a bad design of interchange!
- * Provide sufficient highways to handle traffic for new developments and recreational facilities.
- * We have a great need to enforce existing laws on truckers. Truck drivers disregard speed limits and common sense during adverse conditions.
- * Highway 5 between Laurie and Camdenton needs guard rails on drop-offs and also needs to be four lane divided highway.
- * Thank you for making the roadway a safer place for all, from highway signs to clean rest areas.
- * Vehicles parked on Interstate highway shoulders are a potential death trap. A good law would remove obviously abandoned and wrecked cars immediately. All others four hour notice? 6 hour notice? before removal. Towing fee to be paid by vehicle claimant.
- * Camden County is improving the city intersections but South 5 needs shoulder space in case of flat, etc. to park for repairs.
- * Highway 5 north between Camdenton and Sunrise Beach needs to be widened. There has been a lot of bad accidents on this highway and the big Niangua bridge, should be widened. Also, it is much too narrow and there should be a sign at each end of the bridge (No Passing On Bridge) because a lot of people do, and its very dangerous.
- * I live in Osage Beach and we need a second bridge. There is great improvement on Highway 54 and more to come that will help the tremendous periodic traffic flow, however Grand Glaize Bridge is still a two lane bottleneck and the traffic can only flow as fast as it can come out of that bottleneck. It has been suggested it be made three-lane with possible 2 and 1 lane alternating traffic during rush hours, but I doubt it would be safe for two--18 wheelers and 1 car on 3 lanes to pass if even possible. Soon there will have to be a by-pass through the park--why not buy adjoining land now while it's less expensive, before the "news" gets out. We need more signal lights in the heavier traffic areas. About the highway signs--the Lake road signs such as LK RD 54-21 are to small, often obstructed and placed to close to the 54 exits with no identifying sign actually on the street itself and we need street NAMES--addresses like RT 3, Box 7777 or LK RD - 25 doesn't make it. There are no shoulders on many rural roads and some of the speed limits on these are to high at 55 mph.
- * At 14 Highway and 153 Farm Road, at times there are large trucks or trucks with campers also car's parked on the east side of the road where the old grocery store is, it blocks the view of drivers coming from the north.

- * There should be signs warning of the double curves on Highway 97 at the Lawrence/Dade county line--from both north and south approach. White lines on edge VERY important for night driving. Center reflectors--WONDERFUL!
- * Enforce 55 speed limit.
- * (1) Slow drivers cause more wrecks on two lane highways like Springfield to Kansas City where there isn't many passing places and they will not move over to the side to let you by. (2) Speed limit should be raised at least to 65 miles per hour on four lanes at least 70 to 75 miles per hour. (3) Going slow people get sleepy and look around and don't pay attention.
- * Drivers over 80 years old should be required to take driving test yearly and license (driving) be restricted if necessary.
- * The city in which I live, in my opinion could greatly improve the flow of traffic with left turn signals. There are several streets with heavy traffic without left turn signals.
- * Recent construction at intersection of 65 Highway and Battlefield has added traffic problems, two lights to the west have helped, but I see in the near future the need for lights at the off and on ramps at that intersection.
- * We need rest rooms at rest stops there's one between Sedalia and Kansas City that don't have one.
- * All advertisement signs be removed at intersections and driveways. The indicator light turn signals on vehicle dashboards be red--green and blue doesn't show up. Indicator high beam and low beam lights should be in red not blue.
- * I believe wearing of seat belts should be a decision made by each individual, being forced to do so, infringes on our individual rights. Sometimes they can cause greater injury in accidents. Air bags are a greater safety measure.
- * By pass 63 and K Highways should have a stop light. Dangerous intersection.
- * Almost a total disregard for speed limits, including both for 55 mph and 65 mph. 75% to 80% of passenger cars are seriously exceeding mph, with over the road trucks and buses even a greater problem. No authority appears interested in correcting.
- * In general our Missouri roads are in very good condition, although the big transport trucks are very hard on the roads.
- * I am concerned about the number of fatal one car accidents we are having on our two lane secondary roads due only to excessive speed.
- * Highway 112 going into the Roaring River State Park area is narrow and dangerous and no white side lines--18 wheelers, pontoon boats, campers/RV vehicles are a constant threat to drivers--emergency vehicles are frustrated when on an emergency call and cannot pass cars because there is no place for a car to pull over--please check local ambulance service for confirmation.

- * I've enjoyed driving ever since I was taught by a wonderful husband who cared and wanted me to be a safe and careful driver, no matter where we lived, as we moved from Michigan 17 years ago and love it dearly. In fact, I was born up in Moberly, Mo. in 1925, will be 68 in September. Been driving now 38 years.
- * I feel that the intersections at Willard, Missouri and 160 Highway are real dangerous.
- * Sometimes on interstates we approach an intersection. I don't know if it is a clover leaf or cross traffic, if it is the later I need to be in left lane or if it is a clover leaf I need to be in right hand lane. Sometimes I see a sign to help me decide but not always. Thank you.
- * In my opinion the most important improvement to the roads in my area would be to provide shoulders on two lane rural roads. I'd also like to keep the big tractor trailers off the two lane rural roads if they are just passing through.
- * Improve Highway 63 to four-lanes.
- * In my opinion Missouri traffic is about average except in Metro Areas where people can't go fast enough and completely ignore speed limits by as much as 20 miles per hour above posted speed limits.
- * I do most of my traveling between Stockton and El Dorado Springs and Bolivar. There is a lot of semi truck travel on 32 Highway and it should be widened or at least good shoulders. Seems to be a lot of unnecessary black topping done that the time and money could be spent on taking care of this problem.
- * I think our highways need to have stricter enforcement of speed limits. Speeding drivers put all the other drivers at risk. Also drunk drivers are making our highways unsafe. DWI offenders need to be taken off the roads and lose their driving privileges.
- * Widen all 18 foot roadways and then put markers in the center lines. A real good questionnaire, thanks.
- * Particularly dislike "men working" signs left overnight/over weekends, big trucks tailgating, truckers who totally ignore driving hours limitations 2/3/4 logbooks are common, require everyone over 65 to have an annual complete drivers test--physical/sight/driving test, etc.
- * We have lived just off Highway W at Summerville for nine years and have done everything we can to get a white stripe painted on Highway W. It is so hard to see when it is wet at night and lots of accidents have happened on it. And also, on River Hill Road, Highway 17 going toward Summerville from Mountain View needs guard rails so bad! Lots of people have died on that part of the highway. Please do something.
- * Many two-lane highways in central Missouri need wider shoulders--with the increase in N-S traffic Highway 5 from Laclede County line to Morgan County in the past five years, shoulder maintenance is a major problem.
- * Missouri needs more driver training and/or enforcement to stop drivers from crossing the center line. Everyday someone is killed from a driver crossing over the center line, this includes trucks as well as cars. Young/old--male/female. Thanks.

- * Some of the questions I have answered no to could be answered sometimes.
- * I am well pleased and satisfied with the streets and roads in my area and also in the State wide area of Missouri.
- * Highway 5 needs shoulders on it. There were 7 deaths on Highway 5 last year from Lebanon to Versailles. We need the Niangua bridge widen, very bad. If you drop off the concrete you have no shoulder to rely on. Thank you.
- * I live in resort area with some gravel roads to well traffic roads and seasonal traffic.
- * The patch work on I-44 approaching 65 from the north is a sad job in both lanes. Overall I believe the Highway Department does a very good job.
- * I firmly believe the condition of right-of-ways is deplorable--trees in many areas are quite large.
- * Other place's where I have lived the road's are more dangerous than here, too narrow and crooked, 67, A, 34, and 21. These road's I have also traveled. Interstate 44 is rough, seems to me like 60 is good, part of it. 39 is fair.
- * I would like to see a four lane highway all the way to Kansas City.
- * I lose my patience quite often with people and the way they do other drivers. Very inconsiderate.
- * I think the speed limit should be enforced on the big trucks.
- * So many of our highways--such as 160 are too curvy, narrow, and desperately need shoulders for repair work--slow drivers to pull over. I think all single lane roads should have white paint on edge to help stay off shoulder.
- * I have traveled over 50,000 miles in other states during the past 10 years. I feel that it is easier and more comfortable driving in Missouri as compared to most other states.
- * Enforce speed zones for highway personnel on job sites. 1,000 yard warning of work sites before and after--use patrol--on highway--city police within city.
- * I would like to see a bridge across the lake (Pomme de Terre) at J from Pittsburg, Mo. as it would tie into 83 Highway and help many people, the rescue squad the most. As it takes one hour to get to the hospital in Bolivar now and it would cut time in half if there was a bridge across the lake. Thank you, Windfield S. Kincaid.
- * Some questions cannot be answered by a flat "yes" or "no". On these I have picked the option closest to the correct answer.
- * The new vehicle lights are much too bright. They blind when meeting on road, or, people don't dim to help on coming vehicles. Street addresses cannot be seen well due to corner placement. Better to have centered, or, pre name B-4 arrival at corner.
- * Highways should by-pass towns in tourist areas.

- * Since I'm 85 years of age and do little distance driving I do not believe that my opinions will be helpful.
- * Having lived in a very congested area in the past, the traffic, signs, road repairs here all seem to be good. There are some drainage problems on several streets that I think should have high priority.
- * We live in a high tourist area and getting around in the summer is almost impossible. It was not that way when we moved to this area eight years ago. Stop lights could be a major help to even get on the main roads.
- * I would appreciate more advanced notice of possible lane changes when highways intersect.
- * We need more four lane roads.
- * The two most needed areas in our location is: Shoulders--most of our rural highways have little or no shoulders, the uneven surface. The surface of the highway are in some places so bouncy they will cause the car to weave and dart. This creates a very dangerous situation.
- * I think Missouri has good highways.
- * In general, I think Missouri has easier to understand traffic signs than some states (esp. Illinois). I think having more advanced warning signs in one of the biggest improvements made.
- * I am 74 years old, husband cannot drive anymore due to illness--mostly drive to doctors, grocery store, etc. I don't like to drive at night and I HATE motorists who use bright headlights, following me, or meeting me and should use low beams it seems to me. Signs on Interstate, State, main highways, etc. should have signs requesting that, in fog, darkness, rain, etc. Thanks.
- * I am 87 years old so do very little driving at night.
- * Need better shoulders and more emergency turn outs on two lane rural roads.
- * Please, please help the rural county roads. We pay taxes too. Only to have our vehicles beat up with rocks they call gravel and windshields chipped by flying rocks and car rattle from large chuck holes. Please help us. Thank you.
- * For the most part, Missouri highways are good. City streets need the most repairs.
- * I've noticed the independent truckers are not courteous to other traffic the way the company truckers are. And they very seldom observe speed limits. I definitely feel they need more regulation to make the roads safer for the rest of us!!
- * I think our roads are being pretty well taken care of. Every where you go they are working on the roads. Winifred A. Evans.
- * The big trucks are a real problem and a safety hazard on the Interstate and the highway very desperately needs new markings--If it is raining it is very, very difficult to meet other cars. The traffic increase between Springfield and Branson makes it more and more dangerous.
- * Rural roads should have a center line.

- * The most helpful safety aids on any road are the center lines and side of road lines. The second best aids are the curve and advance warning signs. Good shoulders are the most important improvement that can be made on many roads today.
- * Needs road work done on Highway 32, too narrow--Also need shoulders wider and repaired, in bad condition.
- * I live near Branson: Highway 76 through Branson could easily be made into four lanes. This would only require 6 feet on either side. For the most part there already is the 6 feet on each side now used as a sidewalk as sorts. Make a deal with the shows, etc. to use their property as walkways. Have fixed crosswalks every so often on 76 in Branson. The Junction at 248 and 13 at the railroad crossing in Reeds Spring needs patrolling. Every day I have to stop on 13 for someone running the stop sign. Someone is going to be killed there.
- * Highway curves don't design roads like they did 47 years ago, spend all of the driving up and down highway.
- * When you are in a line of traffic and the only lady driver why should the patrol pull you over and tell you are going to fast out of the whole line of traffic if you are going to fast why aren't the rest of traffic going too fast if you are the back driver in line.
- * I live in Branson, Mo. area the roads outside of Branson are very dangerous, there are no shoulders and the roads are narrow. The traffic is pathetic and people drive like there is no tomorrow. Our roads here are way behind time for the growth and safety of human lives. Sorry but we are about 20 years behind time in this area.
- * Tailgating at high speed. More uniform light of headlights. In cities a uniform street name signs system.
- * 96 Highway and 39 Highway Junction dangerous, needs to be squared with the world.
- * Highway 39 & 96 intersection needs signal lights and caution lights showing the approach to the signal lights--there has been the average of a traffic fatality a year in the 18 years we've been in this area--Lawrence Co. Please do something!
- * The best safety device known is, a careful person.
- * Take out sharp corner's and widen shoulders.
- * The Lake of the Ozarks is badly in need of traffic relief.
- * I am a retired Heavy Equipment Operator and I have worked on Highways all over Missouri. I worked for the Highway Department about 8 years then for contractors 42 years. I will be 85 years old in August 93 and I still have a drivers license but I don't drive much any more, I have pulled a travel trailer on most of the U.S. never had an accident or a traffic ticket. F.T. Rolufs.
- * Interstate, and four lane highways--the right hand lanes are very rough riding. Pot holes, in the towns, on many streets.
- * I live in a resort area, this is the reason I drive as little as possible.

- * I would like to see more improvements made on the two lane highways. At least make shoulders. So many lives are being lost on them. Also, be more strict on drunk (and drinking) drivers.
- * Slow down out of state vehicles.
- * I hate to stop when driving on interstate, at 65 mph for approaching cars, at clover leaf intersections, or any other intersection.
- * We don't need more traffic laws enacted until we have the commitment to enforce those already on the books! A law unenforced is worse than no law at all! It just be little's the law violations.
- * Would like to see that all highways have the 65 mph or over for there are lot of people driving faster then that in places. You have to drive faster to keep out of lot of people try to run you over if you don't drive faster than they do.
- * Most of Highway 5 is narrow and crooked--one bridge is narrow.
- * E & W, 14 Highway is a much traveled road, it has no shoulders and several narrow bridges on dangerous curves. Needs some left turn lanes.
- * Roads in our area are excellent.
- * Enforce truck speed limits on interstates. Most truckers are experienced, some are a menace on the highways.
- * Seems we could have better roads for the amount of road taxes that are being paid. Most of our state roads are rough and need repair.
- * I feel more should be done to discourage illegal passing in all of southwest Missouri. I have almost never driven between Reeds Spring and Galena without seeing someone pass on a double yellow line. I am not a slow driver and I see them pass others as well as myself. This also happens on Highway 76 west of Branson and on 160 between Reeds Spring junction and Springfield.
- * For over 45 mph travel, there should always be two lanes for same direction travel. Businesses should be required to have large street numbers. Seat belts should be optional in city 35 mph traffic or less. There should be a standard two lane each direction for a standard traffic high density average traffic. Four lane interstate highways should have 65 to 70 speed limits. If off ramps are adequate.
- * Speed limits should be enforced and a minimum speed set for all roads, and vehicles being operated on public roads.
- * I would like to see the ditches an right of ways mowed and clean!
- * I don't drive on highways at night. I drive only to Columbia, Mo.
- * Big transport trucks are traveling too fast.
- * I think that there should be restrictions on the things that RV's can toe, I mean like both cars and boats. I hate to meet these boats on the two lane road. On highway 65 south in peak traffic they will pass on the shoulder.

- * In recent years it is noted a decline and lack in State Highway Planning and engineering relative to safety; that is, the approval of location of drive ways as to the safe entry and leaving the property from highway traffic. The location and alignment of blinding lighting (lights) on sign board advertising signs, business establishments that are particularly blinding when topping a hill and/or rounding a curve. Apparently the state highway planners never drive at night and notes such blinding lights that are very common on most of Missouri's state two lane highways. The lack of adequate space (shoulders) such as along State Route 5 is not in the interest of safety; also bridges such as the Highway 5 and Highway 54 Bridges across the Niangua arms of Lake of the Ozarks. In summary, I believe that more attention should be placed on safety in highway construction and approvals for items as mentioned above. Thank You -
- * Every, maybe 5 years, drivers should have refresher courses. Explain the use of left turn lanes, signals, and speed limits.
- * U.S. Highway 36 from Cameron east is in terrible repair. Highway 5 from Versailles to Camdenton and South cannot safely handle the volume of traffic. Highway 54 through Osage Beach is unable to handle the traffic.
- * Highway 5 (Camdenton to Versailles) is very narrow, with no shoulders, and curvy. Very dangerous to drive and has cost a number of lives. Our area is growing and very busy roads in tourist season. We need improvements here. Also need control on village "speed trap" areas.
- * I believe there could be more signs marking speed of approaching curves in southern Stone and Barry counties.
- * My comments, I find auto or truck fail to yield right away in any areas, especially around St. Robert, Mo. and Ft. Leonardwood, Mo. Not one auto or truck ever yields when approaching to enter highways on I-44 West of East traveling.
- * Add more limits for both city and highway for quicker response.
- * They have improved some on the white lines. Most of the roads could use some work done in some areas or locations. Some locations could use more caution lights and stop lights. Most highways are not ready for high speed even though people do it, I find that between 55 and 65 is plenty fast and you get the best gas mileage and it's safer.
- * I was born and raised in Illinois, and when I retired we moved to Missouri and I think that Missouri has the best roads in the country.
- * Wish drivers would not pull out in front of other people while driving in town. And wait till their turn to pull across the highway or street, or follow to close--drive 70 mph in a 55 mph zone or highway. I believe that highway workers should keep the fence rows sprayed when the right way was given to them. We are on Highway TT on Polk County line, they let Johnson grass and brush grow up in the fence rows, I wish gas wasn't so high. Thank you.
- * I feel the 55 mph speed limits should be raised to 60 on some of the better state highways, i.e. 13 Highway to Kansas City and 65 Highway to Branson. It is almost impossible to drive 55 mph on these highways and really unnecessary as far as safety is concerned. These are two I'm most aware of. There are also others.

- * We have very good highway maintenance in our part of the state. If its as good every place as it is here, there is not much more that can be done. On Highway 39 south of Mt. Vernon there are no complaints all the way to Arkansas line.
- * The most dangerous time to drive is on a rainy night when the pavement appears coal black and the yellow lines don't show. On a dry road the yellow-lines are easily seen. Even the outside white lines are hard to see on a rainy night.
- * All street signs should be larger, more visible and standardized.
- * The bridge on Highway 54 crossing Niangua arm over Lake of the Ozarks needs to be replaced. It is dangerously narrow and in a poor state of repair.
- * 18 Wheelers seldom obey the speed limits, they make driving a chore for the average driver. Unless bright lights on all vehicles dim automatically on approaching other vehicles, they are a hazard. Also, drivers braking their vehicles while descending a steep grade are a traffic hazard.
- * I would like to see all street marker's made plainer in all towns. There could be more patrol on duty on the interstate roads especially over holidays.
- * The graveled roads need black top bridges need to be replaced badly on rural roads, areas that have heavy traffic need four lanes badly. Some truckers need to be more courteous and not try to run you over.
- * Has nothing to do with roads except for energy tax in future. If taxes are added, folks like myself on fixed or low income will have to do without some essentials like, food, medicine, etc.
- * Lower speed limits on rural roads.
- * Bridges east and north of Golden City need to be much wider.
- * Question 28--I don't try to pass unless there is a good straight-a-way. Our area due to the hills has few of them! I have no trouble passing on straight-a-ways. Question 29--Headlight glare bothers me a little at night--I seldom drive at night because my husband does most of the driving day or night.
- * I believe on some highways where there are intersections and traffic is heavy there should be left turn signals instead of having to pull into the intersection on the green light and wait for traffic before turning left.
- * We live in Branson, Missouri area where seasonal traffic is heavy.
- * In every automobile--air bags. Eliminate these auto inspections. I have to go pay them \$7.50 for something I already know. (Big rip off!)
- * Missouri bridges, state and federal both are very poor. Greene county has much better bridges. State of Missouri bridges are a disgrace. Check highway 160 and 65.
- * White lines should be on all highway edges.

- * The railroad tracks in Exeter of 86 - 76 are so rough--they have never been in good shape the 45 years I have used this road. Makes it hard to keep tires lined up. Also, I wish that you could afford to keep the right-of-way cut more often. Most part you do a good job. Thank you very much.
- * Signs not visible on several roads too much brush on right-of-way roads not in good repair. County roads in bad shape too much speed on interstate.
- * Highway 44 needs repairs, more than is being done, Lebanon to Stoutland is dangerous. Highway 5 from Camden County line north to Camden dangerous--appreciate the widening of 5 south and the new road on 7 between Richland and Camdenton around the fish farm.
- * Highway #60 and 63 and 137 need over passes due to too many accidents occurring at this intersection.
- * When building or improving roads, try to flatten and straighten them. It would lead to safer and easier driving.
- * We need a warning sign or stop light of a dangerous intersection at Highway 37 - 112 in Seligman, Mo. Since the new highway has opened through this area, there has been about eight accidents. I hate to think someone has to be killed before something will be done at this area. This highway has been opened less than a year.
- * I reside in a rural area in Ozark County. Our road #544 is poorly maintained. In order to get it graded we have to call and tell them. We cross the creek three times to get to 160 highway. On low water bridges. 544 is a mail route and school bus. We surely would like to have better service.
- * It should be illegal to cross a double yellow line or any yellow line in your lane. Route 65 from Springfield to Arkansas should be four lane all the way with protected intersections. Missouri highways are well maintained.
- * Especially in larger cities watching traffic--I'm looking for a certain sign, I must see the sign (even if I can locate it, it is above). When I see the correct sign I must signal and exit. I then, haven't time to signal or exit. So I have to go on another block and circle back. In Springfield, Mo. the city street signs need to be larger so they can be read further back and placed at a lower point.
- * More money should be spent on highways. We have many roads that need resurfacing.
- * I like the "Do Not Pass" and "Pass with Care" signs that are used in some states (on left side of the road). Just returned from New Orleans and the worst light and hardest to read signs that we encountered was in Springfield, Mo. The Glenstone and Highway 60, Business 65, intersection from the south.
- * Some of the "over the road" truck drivers are a menace on the highways. They speed--pass you on hills--crowd you off the road, and never stop to see what damage they have caused or is any occupants in your car need any assistance. I am hopeful that this survey will help all of us. Thank you.
- * U.S. 160 Highway needs shoulders wide enough to pull off for emergency purposes. The intersections at 160 and M coming west needs a stop sign, the intersection is on a slight hill and traffic (oncoming) is unsecured.

- * Sometimes signs do not appear soon enough to allow you to prepare for exit, this is true in most states I've been in.
- * I have trouble seeing white on pale green signs.
- * I protest dash board instruments and highway signs being labelled with moronic pictures. Let's get back to english words, quit playing to the foreign element.
- * If the intent here is to make Missouri safer for all who use our roads and highways I would suggest harsher restrictions for drivers caught under the influence of any kind of drug or alcohol. I am more concerned about this than any question or answers of this response survey! I don't mind signing my name. If this is the only form sent to this area you probably know who I am anyway!!
- * Need four lane highway and clover leaf intersection. Can't get on highway sometimes for at least twenty minutes, this is every day from April to December 20th, every year.
- * I believe changing lane enforcement would eliminate many accidents. Motorists change lanes at will, do not realize what danger they put themselves in and also the other driver.
- * High needs at intersections, YY and 125 at times. Some farm roads in area between YY and old Route 66--now called OO.
- * Automatic brake release (emergency) on all cars. Completely automatic turn signal on lights on all cars. Rear window wipers, on all new cars.
- * The only other comment I would make is that the growth in my area has greatly increased in the last two years that the relief signs that I mentioned in this questionnaire are so badly needed. Also, a standard placement of signs would help a lot, example, all placed on side of traffic your in.
- * Some state highways leading into fast growing areas are not keeping up with the need to make traveling on them safe. Example--Highway 5 north of Camdenton, Mo.--increased fatal accidents and property damage will support this thinking. Serious consideration should be given to these locations.
- * In Barry County highway C, BB, and B all need shoulders if you have car trouble. It is very dangerous to get out of the car, there is no place to fix a tire or work.
- * On two lane highways or interstates we need more turn arounds so you don't have to drive to the next town to turn around, should you miss your turn. Mtn. Grove needs stop and go lights on the highway where Wal-Mart is.
- * I wish I were thirty years younger.
- * 35--A--1--2 Most times. Keep shoulder of road in good repair.
- * I don't like three lanes in town, they only benefit the people coming and going on the main highway. It makes it almost impossible at noon hour to get out on the main highway. There's been more accidents in town since it's been three lanes instead of two lanes.
- * In our area, we need to have wider shoulders on our rural roads. In most instances shoulders are non-existent.

- * Exceed posted speed limit, follow too close (tail gate), pass across double yellow lines, drive with high beams, follow with high beams blinding driver or car ahead, refuse to yield to oncoming traffic, pass on hills/curves. Missouri has some of the worst drivers compared to other states. Most are young ladies.
- * Have lived in present area since 1932. Have had driver's license since 1926. Have driven transport trucks.
- * Larger street signs for name of streets would be very helpful.
- * Mostly need the roads striped.
- * In general the roadways in this area are well maintained. All primary roads are blacktop and kept in good shape by resurfacing as required. The Highway Department does a good job in this area.
- * One of the biggest problems on state maintained roads, highways, and Interstates is the lack of visible lines down the sides and center lanes. The paint used wears away almost immediately and on black top roads with vision limited by rain it makes safe driving very difficult.
- * In general roads in this area need to be straightened. Bad curves.
- * I drive a minimum of 600 miles a month on two and four lane highways. My cruise control is set on the posted speed limit. Without exception all cars including large trucks pass me.
- * Law enforcement in Taney County, Stone County, Christian County and Greene County as far as traffic control is very lax, too much passing and speeding is allowed due to lack of enough officers patrolling. Branson, Mo. is the worst due to a look the other way attitude so as not to make tourists mad.
- * Do something about access to Highway 65 off side roads such as F Highway near Branson, Mo. Sometimes it takes 30 minutes to get on to 65. We need a light there.
- * Bad area for head on collision and running off roads and curves mostly caused by people driving too fast and passing on roads with no passing which they do not obey. This is the cause of most accidents in our area. Could be avoided by Patrol cars that are unmarked.
- * Highway M in Springfield needs to be improved.
- * The terrible human toll of unemployment--Neighborhoods where few work are categorized as death zones. When unemployment hits the main bread winner its felt within days. "So we aren't going any where." Everyone will be so sick, or "lit up" (with this I will drive less). I don't see where anyone would be worrying about improvement, no money, no jobs. Every sense we've been on wheels it's go "faster, faster" no schools. Sounds like checking on me instead of improvement roads, didn't like the questions.
- * Highways that have additional work on them makes bumpy driving. Thank you for my opinion.
- * What highway signs that is up has clear directions? Better than some of the states. Highway signs is easy for me to read but maybe larger letters would help others.

- * Mo. #76 Highway between Branson West and Branson--Make outer lane for slower traffic using inner lane for faster traffic. There appears to be adequate width and the present "so called" shoulder has adequate bearing capacities as in some places it exceeds four feet in asphaltic thickness. (Over design specification resulting in waste of taxpayers money which this survey probably is.)
- * Most roads are way behind times, need to be updated. Too many slow drivers--unqualified to move with the flow. Farmers pull out on busy highways.
- * I do not think the trucking industry does its part to insist on better training for the people who drive these huge trucks. On the two lane state highway where I live they scare people to death with their speed and impatience to pass.
- * Rural highways should be maintained better than they are. Better highway markings on black asphalt, especially at night when raining, maybe a center line reflective paint or reflective material.
- * I live on a dirt road, when it rains there are chug holes in the road if you want my say so, Do something about the dirt roads. Black top them and keep the dust down and wear on tires I've lived here 40 years and just now get part of the road is blacktop in spots, some have lived here longer than me and we all pay taxes for roads and gave the state part of our land for the roads, sorry to be so blunt. Thank you.
- * In comparison with neighboring states, Missouri roads are in very good condition.
- * Put the freight back on the railroads instead of on the roads, trucks are too long. More drivers should be made aware there are other drivers on the roads.
- * Large trucks obstruct vision of other drivers. Large trucks generally do not observe posted speed limit for automobiles, they also follow too closely or "tail gate" automobiles on two lane highways. Truck head lights are located much higher than auto head lights, about on level with our windshields and causes strong glare to auto drivers.
- * I believe seat belt laws are unconstitutional and violate our rights as a citizen of this country. I also believe there are too many islands built on city streets which restrict entry into certain businesses.
- * When installing new roads "bank the curves" mowing the sides of the roads more often increases speed limit to 60 mph.
- * Most all of Missouri highways are too black and too hard to see in the rain at night. Most of the two lane highways are too narrow.
- * I drove a school bus 19 years and they never fined them for running a flashing light and stop sign out to let kids off they just told them not to do it again. You had to watch and not let kids off because they would not stop.
- * Missouri highways signs are good and most of the roads are well maintained.
- * I am not out on our major highways very often but I think that most of the area is in good shape.
- * More visible white lines on the edge of all roads.

- * Half mile south of Eagle Rock post office is a very hazardous entrance to highway 86 from rural blacktop road. There is a lot of traffic on this highway and by the entrance being on top of a hill has caused many accidents and several deaths by being not able to see oncoming traffic. Even if grass and weeds are cut it is a very dangerous entrance. P.S. And there is a lot of traffic on this rural road.
- * Wonder why trucks are never stopped for speeding? Sign giving information on trying to get in right quick enough.
- * I feel the right of right-of-way should be given to the driver on interstate rather than off-ramp driver. Thank you.
- * Highway 76 needs more traffic lights, i.e. Forsyth Road! Shepherd of the Hills and Highway 248 needs a traffic light now! Low water bridge on Shepherd of the Hills Expressway need to be rebuilt now!
- * There are two to four sharp curves on Highway T that could be straightened out--that the road I travel often.
- * I work evenings from 2 in the afternoon to 11 o'clock at night. I like to feel there are police men out there on the streets. Springfield has increased in crime, when you see a police man you feel safer. Thanks, Viela L. Huber.
- * The bridge between Dedrick and El Dorado Springs was very unsafe with a large drop off and too narrow!! (During construction)
- * How can Highway 76 be a highway and at the same time be an area of entertainment/sightseeing, etc. without any pedestrian walkways??? How do you safely cross that street?
- * They need a new chief engineer, one that the men can work for and with. I have talked to quite a few of the men and I have never found one that speaks well of Wayne Murry as their leader. Too much politics in the job.
- * We need an iron rail at Viola, on highway 39. It's a very dangerous corner. 39 runs from Shell Knob to Berryville, Arkansas. The church there is over 100 years old and cars and trucks keep hitting the building there.
- * Need many more guard rails on deep fill roads. Need rest and toilet facilities on interstate and secondary highways.
- * Some square corners on 32 Highway west of Bolivar need improvement. Extra dangerous near Bear Creek.
- * The driver do not know how to use the Diener, or how to stop at four way stops. (My husband is a retired truck driver) and I don't mind driving with big trucks. All four lane should be 65 mph like on Mo. 71 and 13.
- * I think the worst thing you have on Highways is no yield signs on off ramps, the people on off ramps do not yield for through traffic most of the time there is times when you can't get over in the passing lane and they just keep coming. So I think yield signs should be at the end of all ramps.

- * I feel the insurance law should be enforced to the limit. I have to carry uninsured motorist insurance because lots of people don't. If you don't have insurance then you don't drive. Also drunk drivers should never be allowed near a car.
- * 18 wheelers should be slowed down during heavy rain, regardless of type of highway. They spray too much water on other traffic. We need more patrolmen working in and out of cities. Traffic laws should be enforced more than they are now.
- * We need three lanes for trucks on Interstate 44, some have become more aggressive on the highways, with the increasing number of trucks and tourists, this interstate has become a great risk to accidents.
- * My husband doesn't wear a seat belt. He doesn't have to because of an injury. We feel it is a person's own opinion as to whether a seat belt is worn.
- * Why you do not foresee the amount of traffic using a new road and put traffic lights from the beginning, instead of later, you will save lots of money. Example--165 Highway and Thousand Hills Intersection--in Branson. Another light needed--Branson Heights shopping center to Stanley--lots of retired people cannot cross Highway 76--to get groceries.
- * We need improvements badly on 125 Highway and overpass in Stratford to Highway 44 Interstate. This is a very dangerous traffic problem which needs correction badly, I thought it was to be started in December 1992.
- * I wish those making a left turn would stay in the lane closest to their turning lane so those who could merge with a right turn in the far right lane (one closest to them) can do so.
- * Because we live near the Branson area--we realize something must be done to help move the traffic. There are people working on the problem but it's going to be a while before things will get done. Motor homes and large trucks are certainly problems in this area.
- * Although I live on a good (blacktop) two lane road lights on intersections to state highways would be helpful.
- * These young men with new cars to run over one. They put me in two Easter Sunday. Trying to be big shots as they just picked two girls up at the church. They were showing off. But I thought they were going to kill me as I was on a rural road. A big truck came over and sided the yellow line and cause me into an accident. Hurt two of us in that go around. We both had seat belts on. She told me to get out and only got one leg out, couldn't move. He got a ticket, I never as waiting big truck to get out of the way so I could turn on Z Highway. They need a stop light put in. There is a lot of accidents at Z and 65 Highway.
- * We have very busy two lane state highways which the federal monies have already been received to four lane but contracts will not even be considered till 1994 late in the year--these four lanes are needed now. As for the highway patrol, we realize they are needed but they sure aren't doing the job they were designed to do. To protect. For that part they might as well stay home.
- * In small towns many drivers do not make a stop at the stop signs. They just go on or do a rolling stop. If it says stop, they should stop! Many people do not use hand signals or their turn signals which would help a great deal.

- * Need four lane road from Springfield, Mo. to Kansas City. Contractors should clean up mud and gravel tracked onto pavement instead of letting cars wear it off. After a wreck broken glass is sometimes left in road for several days.
- * I don't like to see State Troopers driving unmarked patrol cars! I don't like concrete highways, most are too wash-boardy.
- * All two lane highways in my area need improvement. The last 22 years I have averaged driving 3,000 miles a month or more. I have been in law enforcement on County level.
- * The only complaint I have is that too many people on curves want to get over the double line.
- * I would like to see a crack down on cars driving at night with one headlight out. In our area, southwest Missouri, you can not drive after dark without seeing a half dozen cars with defective head lamps. If I see them, then I would think the local police or highway patrol would also see them and ticket or warn them.
- * We are both old. We no longer drive at night and seldom leave town. We average about three or four trips a month to a larger city about 50 miles away on the Interstate. This is all the knowledge I have of Missouri roads and highways at this time. The ones I do see are very good.
- * All the country roads gravel could use more grading and the road sides needs trimming bad. We live on north 631 also lots of my driving is going to the Veteran Hospital in Columbia once and twice a month. Really, I guess it all could stand improvement. But with caution and common sense I haven't had any trouble yet.
- * We need the center lines to be kept in better repair on secondary state roads and in the winter with rain and snow, white lines marking the edge would really help. At present we have no edge lines on secondary roads.
- * Poor quality of pavement striping paint borders on criminal, (striping disappears in wet road conditions) due to lack of reflective material in the striping paint. See U.S. Highway 65 south from Springfield.
- * I feel sure seat belts saves lives and also just as sure they take some. I feel too much of our freedom is being taken away from us. I think an adult should have the right to choose to wear the seat belt or not. Whichever they feel the most comfortable and without breaking the law. I try not to break laws. In my younger years I drove 8 to 10,000 miles a year.
- * Branson doesn't have wide enough roads to take care of tourists on Highway 76. this is the main road to everything and that's where they drive not hardly at all on streets provided off of it. Very unfair to locals too.
- * Large trucks should be kept off narrow roads. They are a menace. All trucks should be equipped with guards to prohibit dowsing motorists' windshields with showers of water when it is raining. Motorists are often completely blinded by the sprays from oncoming traffic. Rural roads maintained by the state need to have center lines to mark the lanes. Some do not and accidents result from this omission. Thanks for listening.

- * Mo. needs to use a better grade of paint to line the highways with. Something that lasts better and is brighter. This is a real problem on two lane highways.
- * I sure would like to see more lights synchronized especially widely used along long stretches of city streets that have a light every block or two.
- * Speed of vehicles pulling boats. Semi's following too close on rural roads and too fast.
- * Need to arrest people who pass in double line area and at top of hill--intersecting roads, etc. 45 mph, they pass if you obey speed limit--on curves too. Put drugged people and liquor persons in jail and not driving.
- * A lot of our two lane highways need a shoulder in case of trouble there's no place to go.
- * Signs at intersections sometimes give names of small towns I can't identify. Sometimes when several highways interchange I get confused about the roads and it is too far up the road before a sign tells which highway I am on and which direction I am going. Exit information on interstate could be better. Is better in some other states.
- * I would like to know if it is proper to cross a white line to make a right turn.
- * As a "senior" driver, I try to find the least hazardous routes and do not drive if I have any doubts that I can do so safely.
- * Get the speeding truck drivers off the road.
- * Most of Missouri's are in fair condition and signs are okay, but all need improvement.
- * I am 85 years old and will shortly sell my car.
- * Resort type--heavy traffic.
- * Sit on seat cushion while driving as wear glasses now all the time. Would be required to wear while driving.
- * I feel that the "rough" chug holes around Waynesville and St. Roberts should be repaired. Mow roadside.
- * Some of our local highways do not have shoulders to pull on to in case of an emergency, such as flat tires, etc. Need more signal lights in certain areas.
- * County roads need black top.
- * Most people exceed the posted speed limit. Very few drivers use their turn signals. Do not dim their high beams (night). I think it would help a lot, if people had to drive during the day with their lights on!
- * Highway repair needed in some locations, some signs and intersections need better markings. Missouri has better markings than a lot of states I travel in.

- * Many state highway left turn signals in towns say, "Left turn on green arrow only." I've seen traffic held up needlessly by this, the sign should read, "Left turn yield on green."
- * There should be white line marking the edge and center line markings on JJ highway north of Summerville. In fact, I think every highway should have good markings in center and edge.
- * I have driven 35 to 40 states and Canada and Missouri roads are as well or better marked than any.
- * I don't drive at night much because several don't dim their lights anymore. Why can't we have cars that dim automatically when bright light hits them? No shoulders on so many roads in Missouri. Bridges are in bad repair.
- * Make the social security number the same as our drivers license number. The ability to get information from all states concerning driving info and accidents. Closer speed control on big trucks.
- * Many of these answers are yes and no, not entirely one or the other. The worst and most dangerous in our area is the road between Willow Springs and West Plains--the road leading to Memphis and south. It is highway 63 south. Farm to Market supplementary roads, need frequent mowing along sides to enhance visibility better.
- * The two lane highway between Clinton, Mo. and Bolivar, Mo. should be a four lane road or interstate. This is also true for Highway 65 between Sedalia, Mo. and Springfield, Mo.
- * Where I drive seems to be fine. I can't think of anyway to improve them. We should just be alert to our own driving, cut down on driving in or on unfamiliar highways and roads at night.
- * Hope to see highway 13 completed, soon!!!
- * Need four lane highway on 63 from Willow Springs to past West Plains, Mo. Junction 60-63 east of Willow Springs, very dangerous. Needs four lane by-passing West Plains without stop signs for through traffic, should conform to national interstate standards.
- * Mark center line (paint) all black top roads (i.e. TT Highway, Hickory County--Polk County line). Wider shoulders on rural blacktop roads.
- * Enforce truck speeds. Arrest drivers that follow too close--keep center and edge lines painted.
- * Lights need to be installed at business loop and Highway 39 intersection (north Miller exit--very dark at night and no light--very dangerous) City of Mt. Vernon.
- * Highway 37 south needs to be widened to four lanes to accommodate the heavy traffic from Highway 60 intersection at Monett, Mo. to the Arkansas border south bound. All industries in the Missouri-Arkansas area need four lanes to relieve the congestion as well as the residents.
- * Highway 63 from Rolla to Arkansas needs to be four lane, it carries a lot of heavy traffic, both trucks and cars.
- * Better control of large trucks on our highways, especially on our two lane roads. Some of these tanker trucks on "M" highway in Greene county really scare us. Truckers have no respect for speed limits.

- * Enforce speed limits.
- * Our rural roads aren't kept up like they should be, they need resurfacing badly. The weeds and grass on sides of the road aren't cut often enough. When it snows, we are the last to get snow and ice cleared off. We pay taxes to have this done so please do better in the future.
- * The rural roads need center markings. Don't like our low water bridges.
- * Some drivers fail to stop at stop signs. Pass when I am driving 55, and pull out too close in front of the stop signs.
- * I see this survey as a waste of grant money.
- * 80,000 pound loads on I-44 seem to be tearing up the surface faster than it can be maintained.
- * Better maintenance of rural highway right of ways (mowing and brush control).
- * I like the 55 mph speed limit, over all I think that the Missouri Highways and signs are good.
- * Fix the pot holes quicker.
- * The two lane rural road--63--between Willow Springs and West Plains has lots of traffic and tourists do not observe yellow lines, speed and traffic passing is dangerous. Also farmers with trailers or on tractors have a bad time making left turns from West Plains too.
- * Cracks and pot holes in highways should be repaired as needed. My biggest fault is with drivers, they tail gate, do not signal when turning, make sudden stops, speed. People who do not obey traffic laws should not be allowed to drive in my opinion. Most highways are in good condition. Most city streets need repairs often.
- * Stricter laws on use of turn signals--better education on what the "yellow" traffic light really means--stricter enforcement of right turn on red light. A lot of people think they have equal right away with no stop necessary.
- * Missouri has many wonderful roads. Special needs are to complete four lane roads--Springfield to Branson, Rt. 65 and Springfield to Kansas City, Rt. 13 north.
- * White lines along edge of roads. Additional wildlife signs. Congested area signs in Lake areas.
- * Four lane is badly needed from Y at 60--63 highway to West Plains--from Willow Springs on 63--hill before UU--turn off needs--Advance left turn warning on Highway 60--the U sign--needs moved, obstructs view of on coming traffic.
- * Most Mo. two lane paved roads are adequate for two lane traffic but very dangerous because there is no way to pull off the highway--often a ditch or embankment is two feet from the edge of the highway. In the event of a flat tire or auto breakdown there is no way to get off the road.
- * Rural roads have not been maintained--one lane--water running down middle, no ditch.

- * The roads in Missouri are much better than a large number of surrounding/adjoining states, also, better maintained. We are in need of more by-pass roads around our larger cities.
- * Traffic is increasing everyday and speed limits ignored through Shell Knob and right of ways are becoming very littered and adopted areas are being neglected. We also need more lake patrol during July, August and September.
- * We don't need the high road around Branson, what we need is route 65 to be four lane from Springfield to Branson.
- * I think the speed limit on interstates are a little slow, they should be around 70 for people traveling state to state. But just on interstates. Thank you.
- * It is unsafe driving 55 when large trucks are running 70-80 mph on interstates (inside Springfield). They try to intimidate by running up and staying too close behind (20 feet or less, by my experience). When at an approach ramp they move into the passing lane and force unsafe conditions, rather than slow up. Generally the attitude is that it's their highway and they will do as they damn well please.
- * Lack of control or policing of traffic on two lane roads--there are more deaths from speeding on two lane, hilly state and county roads than on interstate highways.
- * State lettered routes--more machine hot mix on county routes, wide shoulders on county routes.
- * In general, the roads I drive in Missouri have fairly good passing areas. One of the worst is highway 54 between Collins and Nevada.
- * I've been involved in three minor accidents, but never at fault.
- * Rural blacktop roads are extremely dangerous. The edge of the blacktop drops off directly into the ditch. No shoulder--no way of easing back onto the road once you slip off. Loss of control is almost inevitable.
- * Our highways are becoming so cluttered with large and smaller signs, more then farther away from highways. They detract driving.
- * Need four lane highway from Springfield to Kansas City.
- * Interstate off ramps should have exit "right" or "left" lane sufficiently for in advance so driver can get in correct lane for exit.
- * No one pays any attention to speed limits two lane roads limit should be 65, interstate 76 change limits then add more patrol to give tickets.
- * When looking for a house number--they are hard to see on the house as you drive along--when you come to an intersection you think--maybe I can at least see which block I'm in. But the name of the streets are in great big letters--but never a street number?? It's a mystery to me and very confusing.
- * I lived in Kansas City for 50 years, and drove in heavy traffic. So when I go to Springfield or Joplin it doesn't bother me. I like 55 mph because I feel that I have better control of my car.

- * We have many poor drivers here in Missouri.
- * Interstate truck speeds should be considerably more controlled--80,000 lb. load of trucks on highway system does 90% of the roadway damage--believe they should be required to pay more to operate on a public tax supported road.
- * Highway north of Buffalo (65) is bumpy and awful ruff. It needs a new top real bad.
- * Interstate at West By-pass and Sunshine is a mess why did they not repair this section when they resurfaced the West By-pass? More traffic here than you can imagine. People using 60 highway to the west and going to work to the east.
- * On interstate highways the signs should not be bunched up together that tell you where roads go and intersect. You don't have enough time to select the right lane to take to catch your road. Leaving St. Louis to I-44 south is another place. Out of state travelers is the ones that suffer this sign dilemma, it's all ready killed lots of people. Is dangerous as the dickens.
- * Eliminate one way streets.
- * Need better roads to Kansas City, Mo. from Springfield. #13 is bad in summer traffic. Glad to see some improvement between Springfield and Jefferson City through Lebanon on #5.
- * You can not get a bus stop sign for children, but you have thousands of adopt a highway signs. It's hard to believe, children are not as important as adopt a highway.
- * "Go with the flow" and first thing you know--you're way beyond the speed limit!
- * On highway 32 east of Buffalo, traffic is quite heavy at times. People drive down the middle of the road, especially up hills and around curves. The road is curvy between Buffalo and Lebanon. On 9 out of 10 curves, the cars you meet are two feet in your lane. We are passed many times on these curves by speeding cars where there are double yellow lines.
- * Some interchanges are poorly designed--like Gladstone (65 Business) and James River (60) freeway in Springfield. This is Missouri's most confusing and poorly signed crossing. What works on paper is confusing in reality. I particularly dislike on-ramps that conflict with off-ramps. Truck drivers almost uniformly ignore yield signs.
- * Put distance on State Park signs.
- * I think all these two lane roads with no shoulders should be replaced. Also, the bumps, dips, and curves taken out, they are nothing but death traps.
- * Missouri drivers follow too close and tend to ride the middle line. Very few county roads have any shoulders and many have sharp drop offs into ditches. Believe many fatal one-car accidents result when driver over swings steering to stay on road. Many young mothers allow small children to stand on seats or ride without restraints. Too many young "macho's" modify exhaust system to produce race car noise--or turn up radios excessively loud. All drivers should be required to take the safe driver course as part of driver license qualification or renewal. Use of "stop" signs is over kill since "yield" signs would serve better. Enforcing "stop" in rural areas not particable therefore useless--drivers respect for all stop signs is lessened!

- * In my opinion, drivers in the State of Missouri (this area) should be educated to the fact that they should not pull out on highway in front of on coming traffic. Which they do quite often in this area.
- * The highway employees are doing a good job.
- * When driving the speed limit on highways, big trucks get too close to rear of car if they can't pass at that time. Going up hill, trucks get side by side, thereby slowing traffic. Slower drivers need to drive in right lane. Need strict and enforced laws to keep drunks off the roads.
- * There are times when a pot hole is filled and two days later right back and especially in heavy rains when it is impossible to tell it is there that I wonder how much of a kickback is received by officials from tire companies or auto repair or parts suppliers.
- * To put tax dollars to better use, too many employee's don't put in a good days work.
- * I do not drive on interstate highways very often, but when I do, I'm so thankful that we have good highways like we do.
- * I live in the third largest city in Missouri and the speeding on our city streets is very bad--drivers speed over the speed limit is very bad--I can be driving the speed limit and they pass me, I very seldom see a driver pulled over by the police. This needs improvement.
- * Highway signs in Missouri are much better than some other states.
- * Pet peeve: People who use turning lanes to speed past other traffic and people who use turning lanes as driving lanes.
- * Our two lane highways do not have shoulders to pull off onto in case of emergency. Large trucks are now using highway 14 and the road surface deteriorates faster and making htem more dangerous. Some you can't pass and some you can't get away from.
- * I live in a small town--population of around 2,500 people. Therefore some of the questions do not apply.
- * Any improvement you can do on 54 and 13 highway would be good, please try to finish 13 up to highway 70 from Springfield and 54 from Collins to Nevada, Mo. BAD. Like what you are doing on 54 going to Jeff City up to Mexico, need more. I think narrow bridges and no pull off on side of roads in State of Missouri is bad. We had a flat on 13 up by Lowry City and Clinton and no pull off to fix it. Hurry and fix James River Freeway from Kansas Expressway over 60 please, M is too dangerous to use right now.
- * We live at Osage Beach, Mo. with a lot of road work being done.
- * By pass Camdenton and Osage Beach with new highway.
- * Some interstate signs are not placed far enough ahead of their exit. The sign and the exit are too close together. Also more stop lights with left turns are needed at Lake of the Ozarks!
- * I would like to see a four lane highway from Springfield to Kansas City and Springfield to Branson.

- * I don't understand why older people are all put in the same category on insurance. Our insurer went up a lot. We are required to have insurance, all I have is liability. My insurance up from \$79 every six months to \$127. I have never put a scratch on a car, never been arrested, never called down, never a ticket. I have been driving for 65 years.
- * Springfield has many busy intersections where a clear view is obstructed. Springfield and Greene Co. was once a relatively peaceful place. It no longer is. The police and sheriff's office provides inadequate monitoring/patrols. Drivers need encouragement to use turn signals.
- * We need better bridges in our area, the bridges are low water, also one lane and the school buses can't cross, also it interferes with mail delivery. The lake roads are all up to par, but the county roads are terrible some are very narrow and they grade them high in the middle. Without side ditches and when it rains the water runs down the roads and cuts ditches that are almost impossible to cross and the roads also have out cropping of boulders until you really hate to travel them. Those low water bridges are for horse and buggy days not this day and time. Also, 65 highway through this area is terrible. So rough and pot holes. No place to pull off the road.
- * Drivers ed is important for young drivers and should be required in the schools. New interchange at Bus. Highway 65 and James River Road badly engineered.
- * The intersection of Glenstone, Highway 65, James River Freeway and Republic Road in southeast Springfield is a total and absolute monstrosity of mass confusion!
- * Large trucks do not observe 60 mph speed on interstate highways and seldom do you see troopers enforcing the speed limit on trucks. Most trucks are driving at 65-70 or even faster.
- * All two lane highways should keep center line painted more often.
- * There is too much speeding. I live in a residential area where there is no problem in this regard.
- * I feel the new Glenstone and Republic and James River Freeway is very confusing--I thought the computerized lights were great--now that the city is trying to synchronize the lights--the computer pads don't seem to work well. I don't see how we can have both.
- * I think it would be helpful if the state have some ads on television showing people proper turns, stopping at lights on yellow, passing in traffic and other safety things.
- * My number one complaint is unpainted roadways that become dangerous after dark, during periods of inclement weather.
- * A rather dangerous section of highway in my area, is the north exit over I-44 on 39 highway off the overpass. A left turn lane would help.
- * Better enforcement of slowing traffic at road work areas. Also trucks and cars staying in left lane to drive, big trucks driving too close to your back bumper. And blinking there lights for you to go on and you are already driving the speed limit.
- * Most semi-trucks tend to tailgate.

- * Many improvements have been made the past few (5) years. The main complaint I have is that people don't know how to use a center turning lane that extends through the towns I-44 business route.
- * Tailgating and illegal passing are the two most common things that happen that I see when I am driving.
- * Do something about highway 13 from Bolivar to Clinton. Willard's intersections are bad.
- * Many of the paved roads do not have any right-of-ways which make it dangerous. Also, too many hills and curves.
- * We need a by-pass four lane highway around West Plains instead of what is planned--with two or more stop lights as we have now.
- * I cannot wear a seat belt because I have a pace maker and the belt does over it. I have a card showing my problem and have permission not to use them.
- * It seems that curve signs are set to far back from the curve. My house is on a curve and in three years there were two accidents. There is one curve sign at least a quarter mile before the curve, by the time a car gets to the curve the driver has forgotten about the sign. I have noticed this throughout Missouri.
- * Is it true that federal highway signs will be bilingual (english/spanish)? Hickory county does a good job maintaining their roads except Highway 65 from Urbana south to the Polk County line.
- * Most of the highways I travel on are well marked. I don't have any trouble seeing signs on highways.
- * I am planning to purchase a newer car in the near future. I do believe the state highway department is working on most narrow and one lane bridges to improve safety.
- * Highway 37 between Pierce City and Monett, Mo is too narrow. That black top should be widened two feet on each side of the road. You meet a big truck and he is running his wheel on the center line and that does not leave enough room.
- * The road in Missouri it is bad to drive in Republic. The road it should be two feet wider to stay on the road and the stop sign it is covered up with tree branches and bushes. The road is worn down on the corner it is hard to make turns.
- * Over 12 tons trucks are continually operating at 65 to 75 mph in 60 mph zones--why? No outside mirror should be allowed that does not reflect the true distance otherwise passing motorist cut in too soon, then slow up, causing an interruption in the flow behind them. There is a need for some two lane highway intersections to be illuminated, even if the rate of usage does not indicate it to be so! Rebuild all shoulders to at least keep vehicle 80% level on shoulders for emergencies!
- * My principle concern is the excessive number of narrow and/or one-lane bridges.
- * We spend winters in Tucson, AZ and we are very fond of the "lagging left turn" lights that they have at most major intersections. They also have many more "U turn lanes" on major roadways which I like a lot. Traffic seems to be more congested each time we return to our Missouri town.

- * Sometimes route signs do not give clear direction when it turns especially in cities. Cities have put larger street names on major streets but they need to add the block number to the signs large enough so you can read it.
- * Highway 5 & 7 need widening, shoulders wider. Bridges need repair and widening.
- * We need a lot of new roads and four lane roads.
- * Item (30) I occasionally take trips of 400 miles round trip. My wife and I use cruise control and drive at--the 65 mph speed limit on interstate highways should be enforced.
- * Our state tries to keep our roads in good shape and I appreciate our well kept rest stops and clean restrooms. The giving of new maps. I am now a woman traveling alone and dread those fast big trucks, most are nice but some sure make you up tight right on your tail!
- * I drive on 17 Highway three days a week, most drivers don't know what curve signs mean also, the double yellow lines, they pass no matter what, I think there should be more highway patrol on Highway 17 around 3:30 pm thank you in Ruby area in Texas Co.
- * People drive too slow in four lane traffic in left hand lane should be ticketed for impeding traffic if not within 5 miles of speed limit.
- * Big trucks should obey all laws, they pull out in front of you, and go faster than they should. Also drivers need to come to a full stop before making a right turn.
- * I wish the state would put up no parking signs from the east and the west out by the theater as they park the turn off roads and it's a mess.
- * Need 4 lanes from Springfield to Kansas City.
- * I'm 93 years old and don't drive out on major highways and Interstates, only drive in small town and rural area.
- * It would be nice to have Highway 13 into Kansas City four lanes.
- * Basically, I think the highway department does an excellent job. Our main problem is heavy traffic in the Branson area at the present time. Thank you for your opinion.
- * I try to observe all laws. I have never had an accident. I have lived in city for 43 years and drive some each week. I give most credit to our law officers and good maintenance of our roads and highways. I am grateful to all of you.
- * White lines on edge of roads, should be on all rural roads. Also keep vegetation growth cut down around all traffic signs and highway signs.
- * I thought this questionnaire was suppose to pertain to the repair of our roads and highways. I don't any bases for this for any reason except to use tax payers money and make a easy job for someone who someone owes a favor too, this is my phone number if you would like to call about what I think (417) 588-2119.

- * Traffic arrows often too dim, street signs should be clearer--larger.
- * U.S. 160 highway should be wider and straighter.
- * Proper markings and stripping is one of the most important improvements and seems to be overlooked so much.
- * Teach people how to make left and right hand turns on to four lanes. Left hand close to center--right hand close to curb.
- * About the seat belt law. . . They are taking people's rights away from them. I think if they want to wear them okay, and if they don't okay.
- * On blacktop E Hill, side road at bottom, dangerous. A wreck there last fall.
- * Missouri needs at least two north/south interstate highways. Other major highways need upgraded to four lane.
- * I feel the Missouri Highway Department are doing an excellent job in maintaining our highways. However, most rural highways and farm roads need better shoulder maintenance.
- * No shoulder on rural blacktop roads--Blacktop and hot mix built up in some places where there is a 6 inch drop-off. If you are forced off can cause loss of control.
- * White border and center markings are big improvements but need constant freshening. State and federal routes are usually better in Missouri than other states. The general conditions are miraculously better than in 1952 when I moved to Missouri. Unfortunately, surface conditions do not make safe, courteous drivers.
- * I feel the 1/10 mile markers are a total waste of tax payers money. They have to be maintained--mowed and trimmed around and serve little to no purpose. I don't care if it is a federal regulation that doesn't make it right.
- * Enforce truck speed limits on both interstate and non-interstate highways.
- * Drive approximately 40,000 miles per year due to employment--drive out of state and have found Missouri roadways much better than most states I visit.
- * Wish the city would widen a few streets there is one in my neighborhood sure needs it, there is no side walk on either side, and it is very much traffic on it, and one highway going west of city.
- * I-44 from Springfield east--Westbound lane is very rough!
- * I see a trend among young girls to drive too fast, passing on hill tops and passing when yellow line is in their lane, putting on make-up and combing hair while they drive. Other people do some of these things too, but the young girls are the worst offenders.
- * 18-wheeler's consistently disregard speed limits, running 70-75 miles per hour. Heavier policing required on interstates.

- * Suggested improvements would be acted upon ONLY if existing budget allocated for highways be sufficient. In other words our highways are in better shape "as is" than my pocketbook!
- * Get the drunks off the road. Twice recently a drunk pulled out of the Eagle Club parking lot at Houston, Missouri and I had to take evasive action to miss him. He drives a 1987 Chev 4x4, color is white.
- * Regarding highway signs: most drivers would be better if warning signs such as "stop or yield ahead."
- * To go from our city north to Kansas City area--without driving 70 miles to the west, we must use Mo. 13. It is a very heavily traveled road, including large commercial vehicles, and is only two lanes--with the exception on the south end, it is four lanes from Bolivar south to Springfield. If ever one of our highways could be made safer and expedite traffic, it is highway 13. Thanks!
- * Entrances and exits to and from highway 65 are poorly designed. Entering vehicles and exiting vehicles have to use the same lane. (The driver who is exiting must pull over right in front of the driver who has just entered.)
- * On Greene Co. Highway D if one stops to make left turn--traffic continues passing on the shoulder.
- * Clarify directional signs in large cities on interstate highways crossing metropolitan areas, i.e., Dallas, Houston, San Antonio, Chicago.
- * I think intersecting highways and directional information should be posted earlier approaching said intersection or put up another set of signs. This is especially true entering large cities and multiple highway crossings.
- * I do not drive very much, "age", so can't answer all questions. Just drive to church and grocery store not there much. Sorry, I can't help more.
- * Birthdate, 7/24/15. Gave up car, keep drivers license for identifying.
- * The maze of signs going south on Bus. 65 from Springfield. They are as confusing as the roads themselves. People in Springfield try to avoid this "mess" if possible. Confused drivers are a hinderance to other drivers.
- * We do not travel much anymore, due to our age.
- * Make all drivers produce proof of insurance at time of purchase or when drivers license expires if can't produce, don't issue license. If you have an accident (with insurance) the insurance company issues the check to a reliable shop (of your choice). Then you give proof the car has been fixed. There's too many cars on the road with several damages on them, looks like they have collected insurance and paid their rent.
- * Need interstate Springfield to Kansas City, parts of I-44 in bad shape, many places farm roads in our area are badly marked.

- * Increase safety by spreading the traffic coming into Branson, Mo. Join Highway 39 and #248--6 miles south of Aurora, to enter Highway 76 from the west. Someway join highway 71 with #86, just above the Arkansas state line.
- * Entrance at I-44 and 39 Highway, there is two truck-stops across the street and approximately one block apart. There is also two fast food places across the street in same area all this causes a lot of street congestion at times. It also causes road repair on bridge ramps from the heavy truck traffic. This is only a comment and not a complaint!
- * I think 65 mph is fine on interstate highways, there doesn't seem to be enough law enforcement on highways to enforce speed limit good enough.
- * Car lights are too bright. Some companies boast of 20% brighter lights. They are 20% too bright for on-coming traffic.
- * I never drive at night because of the lights. I drive to Springfield, Mo. every 6 months for doctor's appointment and three and four trucks running together at a high speed some with trailers pass you, about blows you off the road.
- * The first car I owned was a 1920 T-Model Ford. I have been driving for about 65 years now. Never had a serious wreck. Only got three tickets and that was in very low zone, one 15 miles, one 25 miles, and one coming off interstate 65 and coming down to a 55 mph, I would like to see the same mph on all highways.
- * Too many drinking drivers. To many fast drivers for the area.
- * All roads and streets would be safer if it wasn't for the younger generation driving. They drive too fast and have no respect for themselves or anyone else, the boom boxes they have they can't hear any sirens or anything else.
- * Cover all rock, gravel and dirt hauling trucks. We replaced two windshields. License plates should be on the rear of trucks. Most locals do not use turn signals and they ride your bumper, pass in no passing zones, straddle yellow lines on curves and ride white sidelines. Can't read stop signs. Pull out right in front of you.
- * Need to catch up with a lot of speeders everywhere. Laws are enacted. Why? No one seems to have any desire to enforce them.
- * I think the center line should have bump type markers on each curve on all rural two lane roads. More than 85% of the people who drive in this area drive on the wrong side of the road on left hand curves.
- * As a whole I think Missouri roads are better than most states I have been in. Would like to see US 60 four lanes across the state.
- * It would be very helpful if the signs telling rest stops two miles ahead, would also say next stop (x) miles. Other states have this, and its very helpful.

- * As retired military, I have considerable experience with overseas driving, especially in Germany. Interstate speeds are only regulated in urban areas, but the left lane is for passing only. Driving in the left lane if not passing is a moving violation. In three years driving there, I saw only one interstate accident. I travel interstates here monthly, and see at least one each time; normally caused by left lane obstruction by slow traffic causing unnecessary lane changes.
- * I think the speed limit should be raised on all highways. The slower traffic does not stop accidents. The narrow bridges are a very dangerous thing.
- * I think the highway signs are hard to understand for strangers in the area. The signs should be further apart instead of grouped in large bunches. By the time you observe traffic lights you can easily miss a turn.
- * The question are you comfortable at 55 mph, I think it was a big mistake to change the 55 mph and would like to see it put back into law.
- * I do not think a driver should use a cellular phone or headset while driving. I do believe the white line markings at the edge of the road is a GREAT safety feature. I appreciate the state for this.
- * Need more left turn lanes and stop signs at Blue Eye Junction of 13 & 86 highways and 13 & 86 at Pine Tree Junction needs left turn lane.
- * It seems that in the State of Missouri the highway engineers cannot design a direct straight approach to a bridge. New bridges have been built in Polk County (example) and they have been designed over the same "wagon" roads of the past??? It seems that major accidents have to tally-up to bring this to their attention.
- * I understand that many elderly drivers in Missouri have never taken a driving test--that it wasn't required years ago. I feel that after a certain age (65-70 perhaps) everyone should be required to take a driving test. I notice many elderly drivers driving as though they were the only one on the street and seemingly don't know the rules of the road!
- * We live on a two lane roadway with no shoulders you can pull off on, we have a lot of big truck traffic to and from the two factories in our small town, this creates a lot of accidents on this very narrow road, this is "P" highway out of Verona.
- * If you build a road to Branson do it from 60 Highway, go down through or near Crane.
- * There are far too many sharp corners on our roads. Highway 13 & 65 should be four lane all the way. Branson theaters should help pay for the roads in Branson, because of them there is a traffic problem.
- * I am in Real Estate business and on the road a lot with clients; sometimes on rural roads and sometimes in the city. Our county has only 7,400 residents but has a lake so we have a lot of tourist and lake cabins. We need more blacktop on our county roads.
- * Make left turn lanes instead of median islands.
- * Some roads need repairing. From 35 East to MM is awful.

- * Need more turn left on green instead of just the turn signal in town.
- * The 55 mph speed limit on route 63 bypass is much too high in and around West Plains. It is unsafe when entering or exiting route 63 at intersections with "K" highway, route 160, south Broadway, route 17 and others. A 45 mph speed limit makes more sense.
- * 3231 South National, Springfield, Missouri has a dangerous left turn. Older patients (many of them) cause near accidents by going North out of medical clinic.
- * I would like to see more enforcement on the large trucks on the highways. Thank you.
- * I didn't receive this two weeks ago as the card suggested and of the 63 or so questions 46 were personal and only 17 pertained to making our highways safer and easier to use. Maybe this grant money could be spent more wisely.
- * Place highway exit signs before roads not after.
- * In regards to intersections, my belief would prohibit parking 100 ft from a corner of intersections, so a driver could see on coming traffic, without having to pull out far enough to see.
- * We are a couple over 80 years old. We need a four way road in our area badly. This two way 63 Highway between Willow Springs and West Plains is poor and overloaded with traffic. It's hazardous to drive on it. The time is now.
- * For the most part, Missouri has done a very good job in building new and maintain old roads. There are a few state and a lot of county roads in my area where there are no shoulders at all. This creates a highly dangerous condition, especially in winter with icy or snowy conditions.
- * More trooper's try to control careless driving, hot roader's, burning rubber at intersections, drag racing on highways. Thank you.
- * We travel frequently to Illinois and Michigan on Highway 44, 270/255, 70, 57, 74, 41, 94 and 69 and suspect that a car phone might be wise in the event of car problems. That would be our only reason for considering purchase of one. We have experienced a lot of pushy, fast traveling trucks who bully those of us who wish to travel at 55-60 even around cities where 55 mph is posted. Eastbound traffic on Battlefield wishing to exit onto northbound #65 turn their left turn signal--then have to often wait for westbound Battlefield, somehow think they have the right-of-way over the car on Battlefield. Even without this hazard, it is still what I consider a dangerous situation--traffic is often backed up there and people get impatient. Visibility is not good just to the east of these off and on ramps on Battlefield. Eastbound traffic is often traveling too fast after going through traffic light at McDonald's. There is no specific left turn lane for eastbound Battlefield and through--eastbound has to veer right then back into the single eastbound lane to continue east on Battlefield. If you understand this you have my admiration.

APPENDIX C

New Car Dealer Survey

Missouri New Car Dealers Survey

The Missouri Safety Center and Central Missouri State University in conjunction with the United States Department of Transportation, is conducting a special survey of new car dealers in the southern Missouri area. The purpose of the survey is to support a study we are conducting on older drivers on Missouri roadways. The survey below is designed to capture data which the project staff will use to compare with the data captured from actual driver survey responses. On behalf of the project team, we appreciate your response and help in getting a true picture of what can and needs to be done to make Missouri Highways a better place for all.

1. What county does your dealership reside? _____
2. What percentage of the cars/trucks that you sell are purchased by people above the age of 60.
 ___ 10% or less ___ 10% to 25% ___ 26% to 50% ___ over 50%
3. What percentage of the 60 years of age or older buyers are local residents of your county?
 ___ 20% or less ___ 20% to 40% ___ 41% to 60% ___ over 61%
4. In your dealership's operation, what type of vehicle(s) does the average 60 years of age or older consumer most often purchase?
 ___ Basic Small Car ___ Luxury Small Car
 ___ Basic Medium Sized Car ___ Luxury Medium Sized Car
 ___ Basic Full Sized Car ___ Luxury Full Sized Car
 ___ Basic Sport Utility Vehicle ___ Luxury Sport Utility Vehicle
 ___ Mini Van Type Vehicle ___ Basic Pick Up Truck
 ___ Full Sized Van ___ Luxury Pick Up Truck
5. Based upon your experience, do persons 60 years of age and older buy the following items on a new car?

| Item | Generally Do Not Buy | Buy, if no additional cost | Want & pay to have it |
|--------------------|----------------------|----------------------------|-----------------------|
| Anti Lock Brakes | | | |
| Electronic Dash | | | |
| Air Bags (Duel) | | | |
| Electronic Windows | | | |

6. Based upon your experience, do you think persons 60 years of age and older would be interested in purchasing the following items, if our highway system were modified to support the usage?

| Item | Would not buy | Buy, if no additional cost | Want/pay to have it |
|-----------------------------|---------------|----------------------------|---------------------|
| Night Vision Display | | | |
| Collision Avoidance Warning | | | |
| Near Obstacle Detection | | | |
| Heads Up Dash Display | | | |

7. Based upon your experience would the average 60 years of age and older customer be interested in the following vehicle options if they were available today?

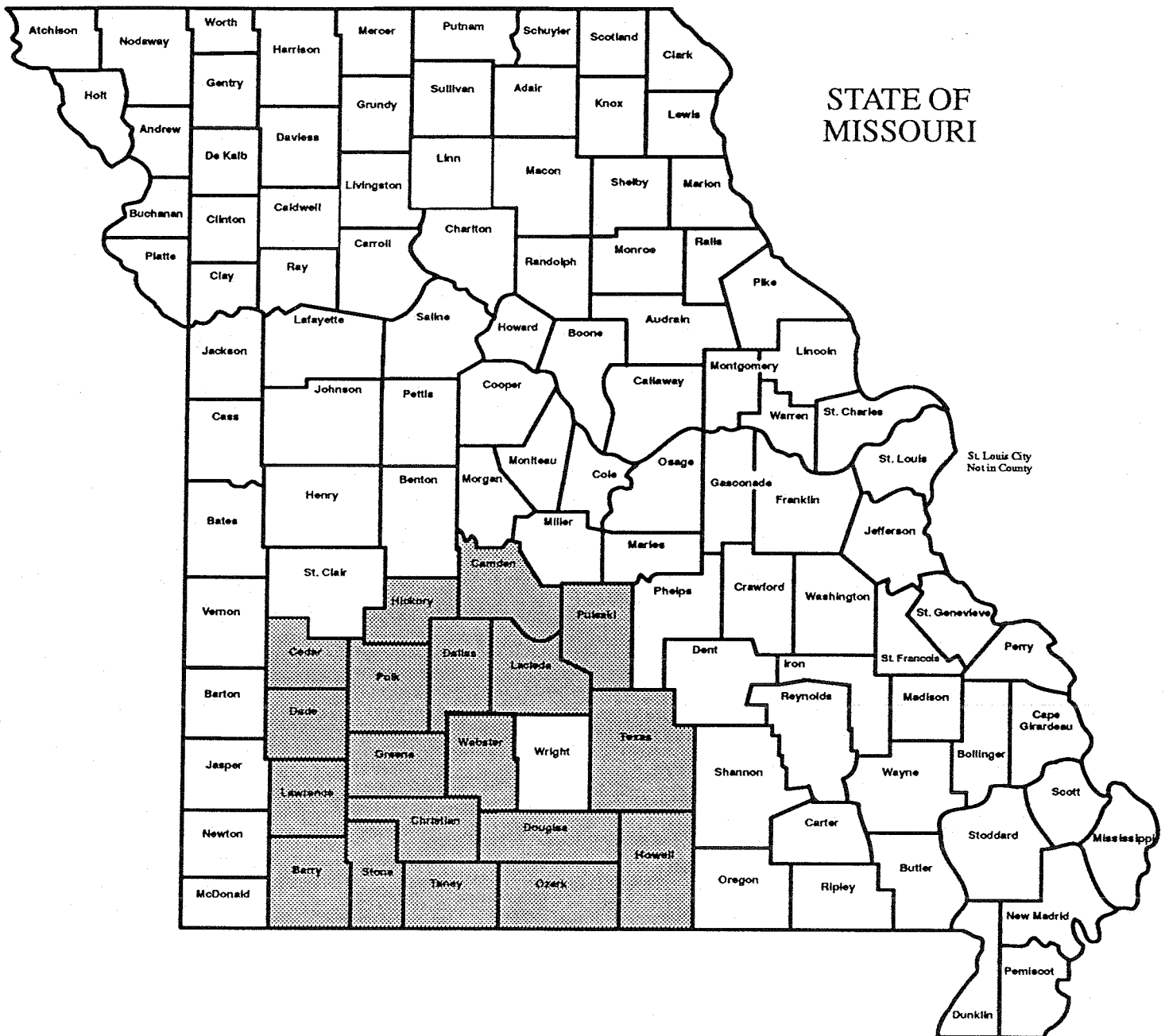
| Item | Most would be willing to buy | Would buy, but not use | Would not buy or want |
|---|------------------------------|------------------------|-----------------------|
| Automatic Braking System to put on brakes if car in front of you stops & you don't brake in time. | | | |
| Electronic guidance System to obtain feedback from road side data stations and tell the driver about congestion ahead in the roadway. | | | |
| Automatic Guidance System to keep the car centered in the roadway lane. | | | |
| Electronic Road Map System to guide you as a traveler around the area. | | | |

8. In your opinion, does the average 60 years of age and older buyer place greater importance on:
 Value for the dollar spent ____ Safety Equipment ____
 Gadgets & Extras ____

We appreciate your time spent and information you have provided us in the questions above. Your information and information from other dealers in the southern Missouri area, will allow us to have a unique perspective in reviewing the data provided us by the 2,000 plus senior drivers currently being surveyed in our state. Again, thanks for your time.

APPENDIX D

Twenty County
Survey Coverage Map
of Southwest Missouri



APPENDIX E

Accident Analysis
from
MSHP SAC

**OLDER DRIVERS OF MOTORIZED VEHICLES INVOLVED IN
1990 - 1992 TRAFFIC ACCIDENTS - 19 MISSOURI COUNTIES
(60 YEARS OF AGE AND OLDER)**

**BARRY
CAMDEN
CEDAR
CHRISTIAN
DADE
DALLAS
DOUGLAS
GREENE
HICKORY
HOWELL
LACLEDE
LAWRENCE
OZARK
POLK
PULASKI
STONE
TANEY
TEXAS
WEBSTER**

Prepared By:

**Missouri State Highway Patrol
Statistical Analysis Center**

March 2, 1993

1990 - 1992 TRAFFIC ACCIDENTS - 19 MISSOURI COUNTIES

OLDER DRIVER INVOLVEMENT

| | FATAL | % | PERSONAL INJURY | % | PROPERTY DAMAGE | % | TOTAL | % | TOTAL NUMBER ¹ KILLED INJURED | OLDER DRIVERS ¹ KILLED INJURED |
|--------------------------|-------|-------|-----------------|-------|-----------------|-------|--------|-------|---|--|
| OLDER DRIVER INVOLVED | 99 | 22.2 | 3,112 | 20.6 | 6,885 | 22.5 | 10,096 | 21.9 | 117 | 69 |
| NO OLDER DRIVER INVOLVED | 348 | 77.8 | 11,965 | 79.4 | 23,675 | 77.5 | 35,988 | 78.1 | 403 | - |
| UNKNOWN ² | 4 | - | 429 | - | 2,029 | - | 2,462 | - | 4 | - |
| TOTAL | 451 | 100.0 | 15,506 | 100.0 | 32,589 | 100.0 | 48,546 | 100.0 | 524 | 69 |

¹This statistic indicates the total number of persons killed and injured in an accident where one or more drivers 60 years of age and older were involved.

²This statistic indicates the number of older drivers killed and injured.

³Accidents were classified as unknown if the following conditions exist: none of the known drivers involved in the accident was 60 years of age and older and the ages of one or more drivers involved in the accident was not known.

DRIVERS OF MOTORIZED VEHICLES INVOLVED IN 1990 - 1992 TRAFFIC ACCIDENTS - 19 MISSOURI COUNTIES

AREA CLASSIFICATION BY AGE OF DRIVER

| | 24 YEARS & UNDER | % | 25 - 59 YEARS | % | 60 YEARS & ABOVE | % | UNKNOWN | % | TOTAL | % |
|--------------|---------------------|--------------|------------------|--------------|---------------------|--------------|--------------|-----------|---------------|--------------|
| URBAN | 14,138 | 52.2 | 21,783 | 50.7 | 5,561 | 50.3 | 1,738 | -- | 43,220 | 51.2 |
| RURAL | 12,936 | 47.8 | 21,179 | 49.3 | 5,501 | 49.7 | 969 | -- | 40,585 | 48.8 |
| TOTAL | 27,074 | 100.0 | 42,962 | 100.0 | 11,062 | 100.0 | 2,707 | -- | 83,805 | 100.0 |

DRIVERS OF MOTORIZED VEHICLES INVOLVED IN 1990 - 1992 TRAFFIC ACCIDENTS - 19 MISSOURI COUNTIES

ROAD CURVATURE BY AGE OF DRIVER

| | 24 YEARS & UNDER | % | 25 - 59 YEARS | % | 60 YEARS & ABOVE | % | UNKNOWN | % | TOTAL | % |
|--------------|---------------------|--------------|------------------|--------------|---------------------|--------------|--------------|-----------|---------------|--------------|
| STRAIGHT | 18,614 | 82.6 | 30,109 | 84.1 | 8,021 | 87.5 | 2,229 | -- | 58,973 | 84.1 |
| CURVE | 3,934 | 17.4 | 5,677 | 15.9 | 1,148 | 12.5 | 300 | -- | 11,059 | 15.9 |
| UNKNOWN | 4,526 | -- | 7,176 | -- | 1,893 | -- | 178 | -- | 13,773 | -- |
| TOTAL | 27,074 | 100.0 | 42,962 | 100.0 | 11,062 | 100.0 | 2,707 | -- | 83,805 | 100.0 |

DRIVERS OF MOTORIZED VEHICLES INVOLVED IN 1990 - 1992 TRAFFIC ACCIDENTS - 19 MISSOURI COUNTIES

ROAD INCLINE BY AGE OF DRIVER

| | 24 YEARS & UNDER | % | 25 - 59 YEARS | % | 60 YEARS & ABOVE | % | UNKNOWN | % | TOTAL | % |
|--------------|---------------------|--------------|------------------|--------------|---------------------|--------------|--------------|-----------|---------------|--------------|
| LEVEL | 15,579 | 69.8 | 24,915 | 70.3 | 6,565 | 72.6 | 1,995 | -- | 49,054 | 70.4 |
| HILL | 5,778 | 25.9 | 9,056 | 25.5 | 2,070 | 22.9 | 424 | -- | 17,328 | 25.3 |
| CREST | 952 | 4.3 | 1,484 | 4.2 | 411 | 4.5 | 68 | -- | 2,915 | 4.3 |
| UNKNOWN | 4,765 | -- | 7,507 | -- | 2,016 | -- | 220 | -- | 14,508 | -- |
| TOTAL | 27,074 | 100.0 | 42,962 | 100.0 | 11,062 | 100.0 | 2,707 | -- | 83,805 | 100.0 |

DRIVERS OF MOTORIZED VEHICLES INVOLVED IN 1990 - 1992 TRAFFIC ACCIDENTS - 19 MISSOURI COUNTIES

ROAD CONDITIONS BY AGE OF DRIVER

| | 24 YEARS & UNDER | % | 25 - 59 YEARS | % | 60 YEARS & ABOVE | % | UNKNOWN | % | TOTAL | % |
|--------------|---------------------|--------------|------------------|--------------|---------------------|--------------|--------------|-----------|---------------|--------------|
| DRY | 20,232 | 74.9 | 32,118 | 75.0 | 8,754 | 79.4 | 2,096 | -- | 63,200 | 75.5 |
| WET | 5,884 | 21.8 | 9,020 | 21.1 | 2,073 | 18.8 | 472 | -- | 17,449 | 21.0 |
| SNOW | 180 | 0.7 | 352 | 0.8 | 51 | 0.5 | 25 | -- | 608 | 0.7 |
| ICE | 705 | 2.6 | 1,350 | 3.2 | 145 | 1.3 | 72 | -- | 2,272 | 2.7 |
| MUD | 9 | 0.0 | 14 | 0.0 | 3 | 0.0 | 2 | -- | 28 | 0.0 |
| UNKNOWN | 64 | -- | 108 | -- | 36 | -- | 40 | -- | 248 | -- |
| TOTAL | 27,074 | 100.0 | 42,962 | 100.0 | 11,062 | 100.0 | 2,707 | -- | 83,805 | 100.0 |

DRIVERS OF MOTORIZED VEHICLES INVOLVED IN 1990 - 1992 TRAFFIC ACCIDENTS - 19 MISSOURI COUNTIES

HIGHWAY CLASSIFICATION BY AGE OF DRIVER

| | 24 YEARS & UNDER | % | 25 - 59 YEARS | % | 60 YEARS & ABOVE | % | UNKNOWN | % | TOTAL | % |
|------------------------|---------------------|--------------|------------------|--------------|---------------------|--------------|--------------|-----------|---------------|--------------|
| INTERSTATE | 582 | 2.2 | 1,627 | 3.8 | 350 | 3.2 | 82 | -- | 2,641 | 3.2 |
| U.S. HIGHWAY | 4,493 | 16.6 | 9,023 | 21.0 | 2,486 | 22.5 | 386 | -- | 16,388 | 19.7 |
| STATE NUMBER | 5,660 | 20.9 | 9,609 | 22.4 | 2,756 | 24.9 | 429 | -- | 18,454 | 22.2 |
| SINGLE STATE LETTER | 1,889 | 7.0 | 3,097 | 7.2 | 591 | 5.3 | 115 | -- | 5,692 | 6.9 |
| DOUBLE STATE LETTER | 906 | 3.4 | 1,280 | 3.0 | 217 | 2.0 | 53 | -- | 2,456 | 3.0 |
| OUTER ROAD | 79 | 0.3 | 151 | 0.4 | 26 | 0.2 | 2 | -- | 258 | 0.3 |
| COUNTY ROAD | 2,285 | 8.4 | 2,540 | 5.9 | 395 | 3.6 | 138 | -- | 5,358 | 6.4 |
| CITY STREET | 8,569 | 31.7 | 11,520 | 26.8 | 3,145 | 28.4 | 1,232 | -- | 24,466 | 28.7 |
| INTERSTATE LOOP | 1,169 | 4.3 | 2,172 | 5.1 | 480 | 4.3 | 119 | -- | 3,940 | 4.7 |
| OTHER ¹ | 1,442 | 5.3 | 1,943 | 4.5 | 616 | 5.6 | 151 | -- | 4,152 | 4.9 |
| TOTAL | 27,074 | 100.0 | 42,962 | 100.0 | 11,062 | 100.0 | 2,707 | -- | 83,805 | 100.0 |

¹"Other" includes types of roads that are maintained by the State as well as by local jurisdictions.

DRIVERS OF MOTORIZED VEHICLES INVOLVED IN 1990 - 1992 TRAFFIC ACCIDENTS - 19 MISSOURI COUNTIES

AT / NOT AT INTERSECTION BY AGE OF DRIVER

| | 24 YEARS & UNDER | % | 25 - 59 YEARS | % | 60 YEARS & ABOVE | % | UNKNOWN | % | TOTAL | % |
|--------------|---------------------|--------------|------------------|--------------|---------------------|--------------|--------------|-----------|---------------|--------------|
| AT INT. | 6,633 | 24.5 | 10,180 | 23.7 | 3,515 | 31.8 | 333 | -- | 20,661 | 25.1 |
| NOT AT INT. | 20,441 | 75.5 | 32,782 | 76.3 | 7,547 | 68.2 | 2,374 | -- | 63,144 | 74.9 |
| TOTAL | 27,074 | 100.0 | 42,962 | 100.0 | 11,062 | 100.0 | 2,707 | -- | 83,805 | 100.0 |

DRIVERS OF MOTORIZED VEHICLES INVOLVED IN 1990 - 1992 TRAFFIC ACCIDENTS - 19 MISSOURI COUNTIES

WEATHER CONDITIONS BY AGE OF DRIVER

| | 24 YEARS & UNDER | % | 25 - 59 YEARS | % | 60 YEARS & ABOVE | % | UNKNOWN | % | TOTAL | % |
|--------------|---------------------|--------------|------------------|--------------|---------------------|--------------|--------------|-----------|---------------|--------------|
| CLEAR | 12,362 | 54.5 | 19,463 | 54.0 | 5,296 | 57.4 | 1,455 | -- | 38,576 | 54.6 |
| CLOUDY | 6,044 | 26.6 | 9,737 | 27.0 | 2,455 | 26.6 | 664 | -- | 18,900 | 26.8 |
| RAIN | 3,266 | 14.4 | 5,058 | 14.0 | 1,175 | 12.7 | 276 | -- | 9,775 | 14.0 |
| SNOW | 249 | 1.1 | 478 | 1.3 | 79 | 0.9 | 25 | -- | 831 | 1.2 |
| SLEET | 63 | 0.3 | 129 | 0.4 | 13 | 0.1 | 7 | -- | 212 | 0.3 |
| FREEZING | 215 | 1.0 | 390 | 1.1 | 51 | 0.6 | 37 | -- | 693 | 1.0 |
| FOG / MIST | 496 | 2.2 | 795 | 2.2 | 162 | 1.8 | 58 | -- | 1,511 | 2.1 |
| UNKNOWN | 4,379 | -- | 6,912 | -- | 1,831 | -- | 185 | -- | 13,307 | -- |
| TOTAL | 27,074 | 100.0 | 42,962 | 100.0 | 11,062 | 100.0 | 2,707 | -- | 83,805 | 100.0 |

DRIVERS OF MOTORIZED VEHICLES INVOLVED IN 1990 - 1992 TRAFFIC ACCIDENTS - 19 MISSOURI COUNTIES

MONTH OF YEAR BY AGE OF DRIVER

| | 24 YEARS & UNDER | % | 25 - 59 YEARS | % | 60 YEARS & ABOVE | % | UNKNOWN | % | TOTAL | % |
|--------------|---------------------------------|--------------|--------------------------|--------------|---------------------------------|--------------|----------------|-----------|---------------|--------------|
| JANUARY | 1,850 | 6.8 | 3,103 | 7.2 | 693 | 6.3 | 231 | -- | 5,877 | 7.0 |
| FEBRUARY | 1,662 | 6.1 | 2,759 | 6.4 | 658 | 6.0 | 168 | -- | 5,247 | 6.3 |
| MARCH | 2,000 | 7.4 | 2,959 | 6.9 | 807 | 7.3 | 217 | -- | 5,983 | 7.1 |
| APRIL | 2,237 | 8.3 | 3,347 | 7.8 | 926 | 8.4 | 218 | -- | 6,728 | 8.0 |
| MAY | 2,613 | 9.7 | 3,945 | 9.2 | 1,078 | 9.8 | 247 | -- | 7,883 | 9.4 |
| JUNE | 2,481 | 9.2 | 3,833 | 8.9 | 993 | 9.0 | 236 | -- | 7,543 | 9.0 |
| JULY | 2,535 | 9.4 | 4,048 | 9.4 | 941 | 8.5 | 255 | -- | 7,779 | 9.3 |
| AUGUST | 2,513 | 9.3 | 3,997 | 9.3 | 997 | 9.0 | 238 | -- | 7,745 | 9.3 |
| SEPTEMBER | 2,332 | 8.6 | 3,694 | 8.6 | 981 | 8.9 | 217 | -- | 7,224 | 8.6 |
| OCTOBER | 2,458 | 9.1 | 3,951 | 9.2 | 1,197 | 10.8 | 249 | -- | 7,855 | 9.4 |
| NOVEMBER | 2,197 | 8.1 | 3,506 | 8.2 | 907 | 8.2 | 204 | -- | 6,814 | 8.2 |
| DECEMBER | 2,196 | 8.1 | 3,820 | 8.9 | 884 | 8.0 | 227 | -- | 7,127 | 8.5 |
| TOTAL | 27,074 | 100.0 | 42,962 | 100.0 | 11,062 | 100.0 | 2,707 | -- | 83,805 | 100.0 |

DRIVERS OF MOTORIZED VEHICLES INVOLVED IN 1990 - 1992 TRAFFIC ACCIDENTS - 19 MISSOURI COUNTIES

DAY OF WEEK BY AGE OF DRIVER

| | 24 YEARS & UNDER | % | 25 - 59 YEARS | % | 60 YEARS & ABOVE | % | UNKNOWN | % | TOTAL | % |
|--------------|---------------------------------|--------------|--------------------------|--------------|---------------------------------|--------------|----------------|-----------|---------------|--------------|
| SUNDAY | 2,846 | 10.5 | 3,614 | 8.4 | 880 | 8.0 | 287 | -- | 7,627 | 9.1 |
| MONDAY | 3,570 | 13.2 | 6,259 | 14.6 | 1,701 | 15.4 | 324 | -- | 11,854 | 14.2 |
| TUESDAY | 3,422 | 12.6 | 5,999 | 14.0 | 1,632 | 14.8 | 320 | -- | 11,373 | 13.6 |
| WEDNESDAY | 3,827 | 14.1 | 6,385 | 14.9 | 1,740 | 15.7 | 338 | -- | 12,290 | 14.7 |
| THURSDAY | 3,867 | 14.3 | 6,544 | 15.2 | 1,702 | 15.4 | 383 | -- | 12,496 | 14.9 |
| FRIDAY | 5,270 | 19.5 | 8,135 | 18.9 | 2,024 | 18.3 | 537 | -- | 15,966 | 19.0 |
| SATURDAY | 4,270 | 15.8 | 6,014 | 14.0 | 1,377 | 12.5 | 511 | -- | 12,172 | 14.4 |
| UNKNOWN | 2 | -- | 12 | -- | 6 | -- | 7 | -- | 27 | -- |
| TOTAL | 27,074 | 100.0 | 42,962 | 100.0 | 11,062 | 100.0 | 2,707 | -- | 83,805 | 100.0 |

DRIVERS OF MOTORIZED VEHICLES INVOLVED IN 1990 - 1992 TRAFFIC ACCIDENTS - 19 MISSOURI COUNTIES

HOUR OF DAY BY AGE OF DRIVER

| | 24 YEARS & UNDER | | 25 - 59 YEARS | | 60 YEARS & ABOVE | | UNKNOWN | | TOTAL | |
|-----------------|---------------------|-------|------------------|-------|---------------------|-------|---------|----|--------|-------|
| | | % | | % | | % | | % | | % |
| 12:01A - 12:59A | 632 | 2.3 | 547 | 1.3 | 33 | 0.3 | 114 | -- | 1,326 | 1.5 |
| 01:00A - 01:59A | 699 | 2.6 | 635 | 1.5 | 17 | 0.2 | 144 | -- | 1,495 | 1.7 |
| 02:00A - 02:29A | 354 | 1.3 | 313 | 0.7 | 15 | 0.1 | 66 | -- | 748 | 0.8 |
| 03:00A - 03:59A | 195 | 0.7 | 205 | 0.5 | 10 | 0.1 | 41 | -- | 451 | 0.5 |
| 04:00A - 04:59A | 160 | 0.6 | 193 | 0.5 | 14 | 0.1 | 24 | -- | 391 | 0.5 |
| 05:00A - 05:59A | 150 | 0.6 | 321 | 0.8 | 23 | 0.2 | 20 | -- | 514 | 0.6 |
| 06:00A - 06:59A | 275 | 1.0 | 811 | 1.9 | 95 | 0.9 | 52 | -- | 1,233 | 1.5 |
| 07:00A - 07:59A | 1,003 | 3.7 | 1,970 | 4.6 | 303 | 2.8 | 73 | -- | 3,349 | 4.1 |
| 08:00A - 08:29A | 1,123 | 4.2 | 2,010 | 4.7 | 517 | 4.7 | 79 | -- | 3,729 | 4.5 |
| 09:00A - 09:59A | 734 | 2.7 | 1,763 | 4.1 | 746 | 6.8 | 64 | -- | 3,307 | 4.0 |
| 10:00A - 10:59A | 975 | 3.6 | 2,147 | 5.0 | 1,008 | 9.2 | 94 | -- | 4,224 | 5.1 |
| 11:00A - 11:59A | 1,238 | 4.6 | 2,758 | 6.4 | 1,086 | 9.9 | 89 | -- | 5,171 | 6.3 |
| NOON - 12:59P | 1,683 | 6.2 | 3,287 | 7.7 | 1,072 | 9.7 | 129 | -- | 6,171 | 7.5 |
| 01:00P - 01:59P | 1,529 | 5.7 | 2,872 | 6.7 | 1,028 | 9.3 | 89 | -- | 5,518 | 6.7 |
| 02:00P - 02:29P | 1,741 | 6.5 | 2,888 | 6.7 | 1,036 | 9.4 | 127 | -- | 5,792 | 7.0 |
| 03:00P - 03:59P | 2,914 | 10.8 | 4,130 | 9.6 | 1,181 | 10.7 | 156 | -- | 8,381 | 10.2 |
| 04:00P - 04:59P | 2,421 | 9.0 | 3,950 | 9.2 | 942 | 8.6 | 168 | -- | 7,481 | 9.1 |
| 05:00P - 05:59P | 2,226 | 8.3 | 3,925 | 9.2 | 712 | 6.5 | 162 | -- | 7,025 | 8.5 |
| 06:00P - 06:59P | 1,554 | 5.8 | 2,303 | 5.4 | 414 | 3.8 | 139 | -- | 4,410 | 5.3 |
| 07:00P - 07:59P | 1,213 | 4.5 | 1,576 | 3.7 | 272 | 2.5 | 133 | -- | 3,194 | 3.8 |
| 08:00P - 08:29P | 1,114 | 4.1 | 1,234 | 2.9 | 202 | 1.8 | 136 | -- | 2,686 | 3.2 |
| 09:00P - 09:59P | 1,132 | 4.2 | 1,174 | 2.7 | 134 | 1.2 | 160 | -- | 2,600 | 3.0 |
| 10:00P - 10:59P | 1,021 | 3.8 | 1,016 | 2.4 | 87 | 0.8 | 151 | -- | 2,275 | 2.6 |
| 11:00P - MIDNGT | 876 | 3.3 | 813 | 1.9 | 64 | 0.6 | 142 | -- | 1,895 | 2.2 |
| UNKNOWN | 112 | -- | 121 | -- | 51 | -- | 155 | -- | 439 | -- |
| TOTAL | 27,074 | 100.0 | 42,962 | 100.0 | 11,062 | 100.0 | 2,707 | -- | 83,805 | 100.0 |

DRIVERS OF MOTORIZED VEHICLES INVOLVED IN 1990 - 1992 TRAFFIC ACCIDENTS - 19 MISSOURI COUNTIES

TYPE OF CIRCUMSTANCE INVOLVED BY ACCIDENT SEVERITY AND PERSON CLASSIFICATION¹

| TOTAL FATAL ACCIDENTS = 99 | | | | TOTAL OLDER DRIVER ACCIDENTS = 10,096 | | |
|---|--------------------------|--------------------------|----------------|---------------------------------------|--------------------------|--------------------|
| | OLDER DRIVER/ VEHICLE | OTHER DRIVER/ VEHICLE | TOTAL FATAL | OLDER DRIVER/ VEHICLE | OTHER DRIVER/ VEHICLE | TOTAL ACCIDENTS |
| EXCEEDING SPEED LIMIT/ TOO FAST FOR CONDITIONS | 10.1 | 5.1 | 15.2 | 4.3 | 3.8 | 8.0 |
| IMPROPER PASSING | 2.0 | 3.0 | 5.1 | 1.4 | 1.4 | 2.8 |
| VIOLATION OF STOP SIGN | 3.0 | 1.0 | 3.0 | 3.8 | 2.1 | 5.8 |
| WRONG SIDE NOT PASSING | 14.1 | 7.1 | 21.2 | 2.4 | 1.9 | 4.2 |
| FOLLOWING TOO CLOSE | 1.0 | 4.0 | 5.1 | 6.6 | 8.2 | 14.5 |
| IMPROPER SIGNAL | 1.0 | 0.0 | 1.0 | 0.4 | 0.1 | 0.5 |
| IMPROPER BACKING | 1.0 | 0.0 | 1.0 | 2.3 | 1.0 | 3.2 |
| IMPROPER TURN | 4.0 | 0.0 | 4.0 | 3.2 | 1.1 | 4.2 |
| WRONG WAY ONE-WAY STREET | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 |
| IMPROPER START FROM PARK | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 0.4 |
| IMPROPERLY PARKED | 0.0 | 1.0 | 1.0 | 0.1 | 0.4 | 0.5 |
| VEHICLE DEFECTS | 5.1 | 1.0 | 6.1 | 1.5 | 1.2 | 2.7 |
| FAILED TO YIELD | 23.2 | 6.1 | 29.3 | 26.3 | 9.8 | 36.0 |
| DRINKING | 4.0 | 4.0 | 8.1 | 1.3 | 0.9 | 2.2 |
| DRUGS | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| PHYSICAL IMPAIRMENT | 8.1 | 1.0 | 9.1 | 1.8 | 0.2 | 2.0 |
| INATTENTION | 38.4 | 12.1 | 49.5 | 29.2 | 15.8 | 42.0 |

¹This table identifies the percentage of older driver accidents having a specific type of circumstance which contributed to the cause of the accident. This table further defines the percentage of accidents where the contributing circumstance was associated with the older driver or his vehicle as well as those attributed to other persons and vehicles in the accident. For instance, when examining speed involvement in 1990 - 1992 Missouri fatal older driver accidents, it was found that an older driver was speeding in 10.1% of the accidents. In 5.1% of the accidents another driver was speeding. In 15.2% of the accidents either an older driver, another driver, or both drivers were speeding.

DRIVERS OF MOTORIZED VEHICLES INVOLVED IN 1990 - 1992 TRAFFIC ACCIDENTS - 19 MISSOURI COUNTIES

SEX OF DRIVER BY AGE OF DRIVER

| | 24 YEARS & UNDER | % | 25 - 59 YEARS | % | 60 YEARS & ABOVE | % | UNKNOWN | % | TOTAL | % |
|--------------|---------------------|--------------|------------------|--------------|---------------------|--------------|--------------|-----------|---------------|--------------|
| MALE | 14,009 | 61.5 | 22,192 | 61.5 | 5,978 | 64.8 | 292 | -- | 42,471 | 61.9 |
| FEMALE | 8,780 | 38.5 | 13,895 | 38.5 | 3,253 | 35.2 | 146 | -- | 26,074 | 38.1 |
| UNKNOWN | 4,285 | -- | 6,875 | -- | 1,831 | -- | 2,269 | -- | 15,260 | -- |
| TOTAL | 27,074 | 100.0 | 42,962 | 100.0 | 11,062 | 100.0 | 2,707 | -- | 83,805 | 100.0 |

DRIVERS OF MOTORIZED VEHICLES INVOLVED IN 1990 - 1992 TRAFFIC ACCIDENTS - 19 MISSOURI COUNTIES

DRIVER'S LICENSE STATE AND TYPE BY AGE OF DRIVER

| | 24 YEARS & UNDER | % | 25 - 59 YEARS | % | 60 YEARS & ABOVE | % | UNKNOWN | % | TOTAL | % |
|-----------------------|---------------------|--------------|------------------|--------------|---------------------|--------------|--------------|-----------|---------------|--------------|
| TRAFFIC | | | | | | | | | | |
| LEARNER'S PERMIT | 181 | 0.8 | 85 | 0.3 | 33 | 0.4 | 5 | -- | 304 | 0.5 |
| CHAUFFER'S LICENSE | 765 | 3.6 | 5,612 | 16.4 | 543 | 6.2 | 34 | -- | 6,954 | 10.7 |
| OPERATOR'S LICENSE | 18,329 | 85.1 | 23,413 | 68.5 | 7,061 | 80.5 | 217 | -- | 49,020 | 75.7 |
| MOTORCYCLE ONLY | 3 | 0.0 | 8 | 0.0 | 3 | 0.0 | 0 | -- | 14 | 0.0 |
| SUB-TOTAL | 19,278 | 89.5 | 29,118 | 85.1 | 7,640 | 87.1 | 256 | -- | 56,292 | 87.3 |
| OUT STATE | | | | | | | | | | |
| LEARNER'S PERMIT | 10 | 0.1 | 12 | 0.0 | 3 | 0.0 | 0 | -- | 25 | 0.0 |
| CHAUFFER'S LICENSE | 86 | 0.4 | 1,082 | 3.2 | 91 | 1.0 | 3 | -- | 1,262 | 2.0 |
| OPERATOR'S LICENSE | 1,677 | 7.8 | 3,485 | 10.2 | 1,002 | 11.4 | 26 | -- | 6,190 | 9.6 |
| MOTORCYCLE ONLY | 2 | 0.0 | 2 | 0.0 | 0 | 0.0 | 0 | -- | 4 | 0.0 |
| SUB-TOTAL | 1,775 | 8.2 | 4,581 | 13.4 | 1,096 | 12.5 | 29 | -- | 7,481 | 11.6 |
| UNLICENSED | 479 | 2.2 | 504 | 1.5 | 38 | 0.4 | 7 | -- | 1,028 | 1.6 |
| UNKNOWN | 5,542 | -- | 8,759 | -- | 2,288 | -- | 2,415 | -- | 19,004 | -- |
| TOTAL | 27,074 | 100.0 | 42,962 | 100.0 | 11,062 | 100.0 | 2,707 | 00 | 83,805 | 100.0 |

DRIVERS OF MOTORIZED VEHICLES INVOLVED IN 1990 - 1992 TRAFFIC ACCIDENTS - 19 MISSOURI COUNTIES

TYPE OF VEHICLE DRIVEN BY AGE OF DRIVER

| | 24 YEARS & UNDER | % | 25 - 59 YEARS | % | 60 YEARS & ABOVE | % | UNKNOWN | % | TOTAL | % |
|---------------------------|---------------------|--------------|------------------|--------------|---------------------|--------------|--------------|-----------|---------------|--------------|
| AUTOMOBILE | 18,931 | 70.0 | 23,127 | 53.9 | 7,312 | 66.2 | 1,250 | -- | 50,620 | 61.0 |
| STATION WAGON | 991 | 3.7 | 2,790 | 6.5 | 641 | 5.8 | 100 | -- | 4,522 | 5.5 |
| VAN | 439 | 1.6 | 2,906 | 6.8 | 477 | 4.3 | 85 | -- | 3,907 | 4.7 |
| BUS | 12 | 0.0 | 93 | 0.2 | 8 | 0.1 | 6 | -- | 119 | 0.1 |
| SCHOOL BUS | 6 | 0.0 | 186 | 0.4 | 39 | 0.4 | 5 | -- | 236 | 0.3 |
| MOTORCYCLE | 267 | 1.0 | 335 | 0.8 | 16 | 0.1 | 16 | -- | 634 | 0.8 |
| MOPED | 10 | 0.0 | 8 | 0.0 | 1 | 0.0 | 0 | -- | 19 | 0.0 |
| MOTORHOME/ CAMPER | 4 | 0.0 | 54 | 0.1 | 91 | 0.8 | 3 | -- | 152 | 0.2 |
| FARM EQUIPMENT | 13 | 0.1 | 31 | 0.1 | 14 | 0.1 | 0 | -- | 58 | 0.1 |
| CONSTRUCTION EQUIPMENT | 4 | 0.0 | 45 | 0.1 | 2 | 0.0 | 0 | -- | 51 | 0.1 |
| OTHER TRANSPORT DEVICE | 7 | 0.0 | 56 | 0.1 | 5 | 0.1 | 3 | -- | 71 | 0.1 |
| TRUCK | 6,339 | 23.4 | 13,267 | 30.9 | 2,442 | 22.1 | 803 | -- | 22,851 | 27.2 |
| ALL TERRAIN VEHICLE | 19 | 0.1 | 5 | 0.0 | 0 | 0.0 | 0 | -- | 24 | 0.0 |
| UNKNOWN | 32 | -- | 59 | -- | 14 | -- | 436 | -- | 541 | -- |
| TOTAL | 27,074 | 100.0 | 42,962 | 100.0 | 11,062 | 100.0 | 2,707 | -- | 83,805 | 100.0 |

DRIVERS OF MOTORIZED VEHICLES INVOLVED IN 1990 - 1992 TRAFFIC ACCIDENTS - 19 MISSOURI COUNTIES

PERSONAL INJURY SEVERITY BY AGE OF DRIVER

| | 24 YEARS & UNDER | % | 25 - 59 YEARS | % | 60 YEARS & ABOVE | % | UNKNOWN | % | TOTAL | % |
|--------------|---------------------|--------------|------------------|--------------|---------------------|--------------|--------------|-----------|---------------|--------------|
| KILLED | 113 | 0.4 | 167 | 0.4 | 69 | 0.6 | 0 | -- | 349 | 0.4 |
| INJURED | 5,659 | 21.0 | 8,098 | 18.9 | 1,867 | 16.9 | 62 | -- | 15,686 | 19.3 |
| NOT INJURED | 21,223 | 78.6 | 34,550 | 80.7 | 9,090 | 82.4 | 456 | -- | 65,319 | 80.2 |
| UNKNOWN | 79 | -- | 147 | -- | 36 | -- | 2,189 | -- | 2,451 | -- |
| TOTAL | 27,074 | 100.0 | 42,962 | 100.0 | 11,062 | 100.0 | 2,707 | -- | 83,805 | 100.0 |

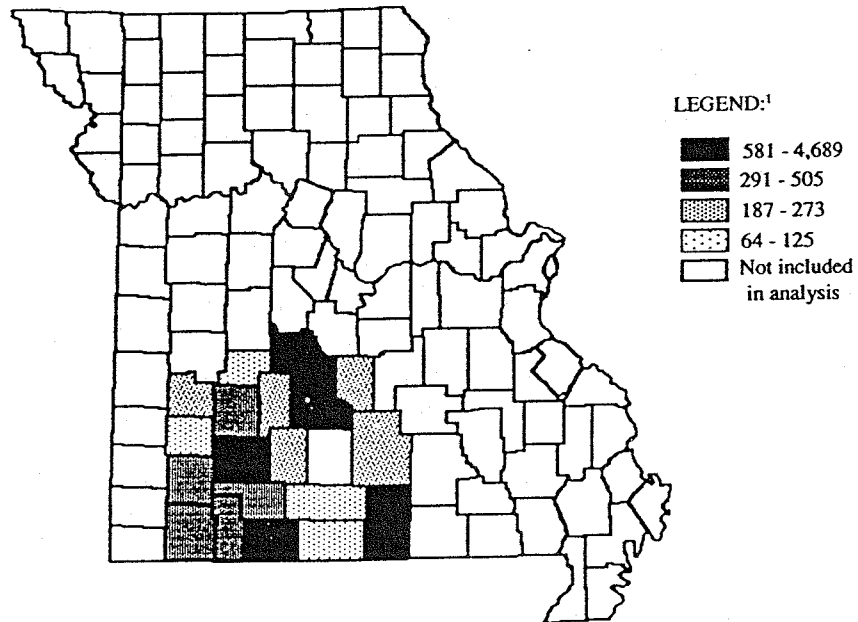
DRIVERS OF MOTORIZED VEHICLES INVOLVED IN 1990 - 1992 TRAFFIC ACCIDENTS - 19 MISSOURI COUNTIES

AGE OF VEHICLE DRIVEN BY AGE OF DRIVER

| | 24 YEARS & UNDER | % | 25 - 59 YEARS | % | 60 YEARS & ABOVE | % | UNKNOWN | % | TOTAL | % |
|-----------------|---------------------|--------------|------------------|--------------|---------------------|--------------|--------------|-----------|---------------|--------------|
| 0 YEARS | 921 | 4.1 | 1,845 | 5.2 | 470 | 5.1 | 35 | -- | 3,271 | 4.8 |
| 1 YEAR | 1,326 | 5.9 | 3,001 | 8.4 | 698 | 7.6 | 47 | -- | 5,072 | 7.5 |
| 2 YEARS | 1,365 | 6.1 | 3,176 | 8.9 | 749 | 8.2 | 48 | -- | 5,338 | 7.9 |
| 3 YEARS | 1,505 | 6.7 | 2,961 | 8.3 | 704 | 7.7 | 36 | -- | 5,206 | 7.7 |
| 4 YEARS | 1,689 | 7.5 | 2,849 | 8.0 | 760 | 8.3 | 43 | -- | 5,341 | 7.9 |
| 5 YEARS | 1,669 | 7.4 | 2,620 | 7.4 | 680 | 7.4 | 42 | -- | 5,011 | 7.4 |
| 6 YEARS | 1,796 | 8.0 | 2,600 | 7.3 | 661 | 7.2 | 70 | -- | 5,127 | 7.5 |
| 7 YEARS | 1,593 | 7.1 | 2,230 | 6.3 | 651 | 7.1 | 51 | -- | 4,525 | 6.7 |
| 8 YEARS | 1,316 | 5.9 | 1,820 | 5.1 | 472 | 5.2 | 45 | -- | 3,653 | 5.4 |
| 9 YEARS | 1,180 | 5.3 | 1,470 | 4.1 | 405 | 4.4 | 37 | -- | 3,092 | 4.5 |
| 10 YEARS | 1,179 | 5.2 | 1,416 | 4.0 | 348 | 3.8 | 60 | -- | 3,003 | 4.4 |
| 11 YEARS | 1,210 | 5.4 | 1,541 | 4.3 | 375 | 4.1 | 66 | -- | 3,192 | 4.7 |
| 12 YEARS | 1,137 | 5.1 | 1,539 | 4.3 | 399 | 4.4 | 63 | -- | 3,138 | 4.6 |
| 13 YEARS | 956 | 4.3 | 1,426 | 4.0 | 388 | 4.2 | 70 | -- | 2,840 | 4.1 |
| 14 YEARS | 806 | 3.6 | 1,157 | 3.3 | 300 | 3.3 | 75 | -- | 2,338 | 3.4 |
| 15 YEARS | 514 | 2.3 | 792 | 2.2 | 205 | 2.2 | 38 | -- | 1,549 | 2.3 |
| 16 - 25 YEARS | 2,143 | 9.5 | 2,884 | 8.1 | 802 | 8.8 | 211 | -- | 6,040 | 8.7 |
| 26 - 35 YEARS | 176 | 0.8 | 282 | 0.8 | 70 | 0.8 | 23 | -- | 551 | 0.8 |
| 36 - 45 YEARS | 13 | 0.1 | 25 | 0.1 | 6 | 0.1 | 1 | -- | 45 | 0.1 |
| 46 YEARS & OVER | 2 | 0.0 | 9 | 0.0 | 1 | 0.0 | 0 | -- | 12 | 0.0 |
| UNKNOWN | 4,578 | -- | 7,319 | -- | 1,918 | -- | 1,646 | -- | 15,461 | -- |
| TOTAL | 27,074 | 100.0 | 42,962 | 100.0 | 11,062 | 100.0 | 2,707 | -- | 83,805 | 100.0 |

DRIVERS OF MOTORIZED VEHICLES INVOLVED IN 1990 - 1992 TRAFFIC ACCIDENTS - 19 MISSOURI COUNTIES

COUNTY QUARTILE ANALYSIS



¹ LEGEND CATEGORIES ARE BASED ON QUARTILES OF COUNTIES.

| RANK | COUNTY | FREQUENCY | PERCENT | RANK | COUNTY | FREQUENCY | PERCENT |
|-------|-----------|-----------|-----------------|-------|---------|-----------|----------------|
| 1.0 | GREENE | 4,689 | 42.4 | | | | |
| 2.0 | TANEY | 953 | 8.6 | 11.0 | PULASKI | 273 | 2.5 |
| 3.0 | HOWELL | 736 | 6.7 | 12.0 | TEXAS | 263 | 2.4 |
| 4.0 | CAMDEN | 595 | 5.4 | 13.0 | WEBSTER | 253 | 2.3 |
| 5.0 | LACLEDE | 581 | 5.3 | 14.0 | DALLAS | 195 | 1.8 |
| | | | First Quartile | 15.0 | CEDAR | 187 | 1.7 |
| ----- | | | | ----- | | | |
| | | | Second Quartile | | | | Third Quartile |
| 6.0 | BARRY | 505 | 4.6 | | | | |
| 7.0 | LAWRENCE | 461 | 4.2 | 16.0 | DOUGLAS | 125 | 1.1 |
| 8.0 | POLK | 377 | 3.4 | 17.0 | HICKORY | 82 | 0.7 |
| 9.0 | CHRISTIAN | 352 | 3.2 | 18.0 | OZARK | 80 | 0.7 |
| 10.0 | STONE | 291 | 2.6 | 19.0 | DADE | 64 | 0.6 |
| | | | Second Quartile | | | | |

APPENDIX F

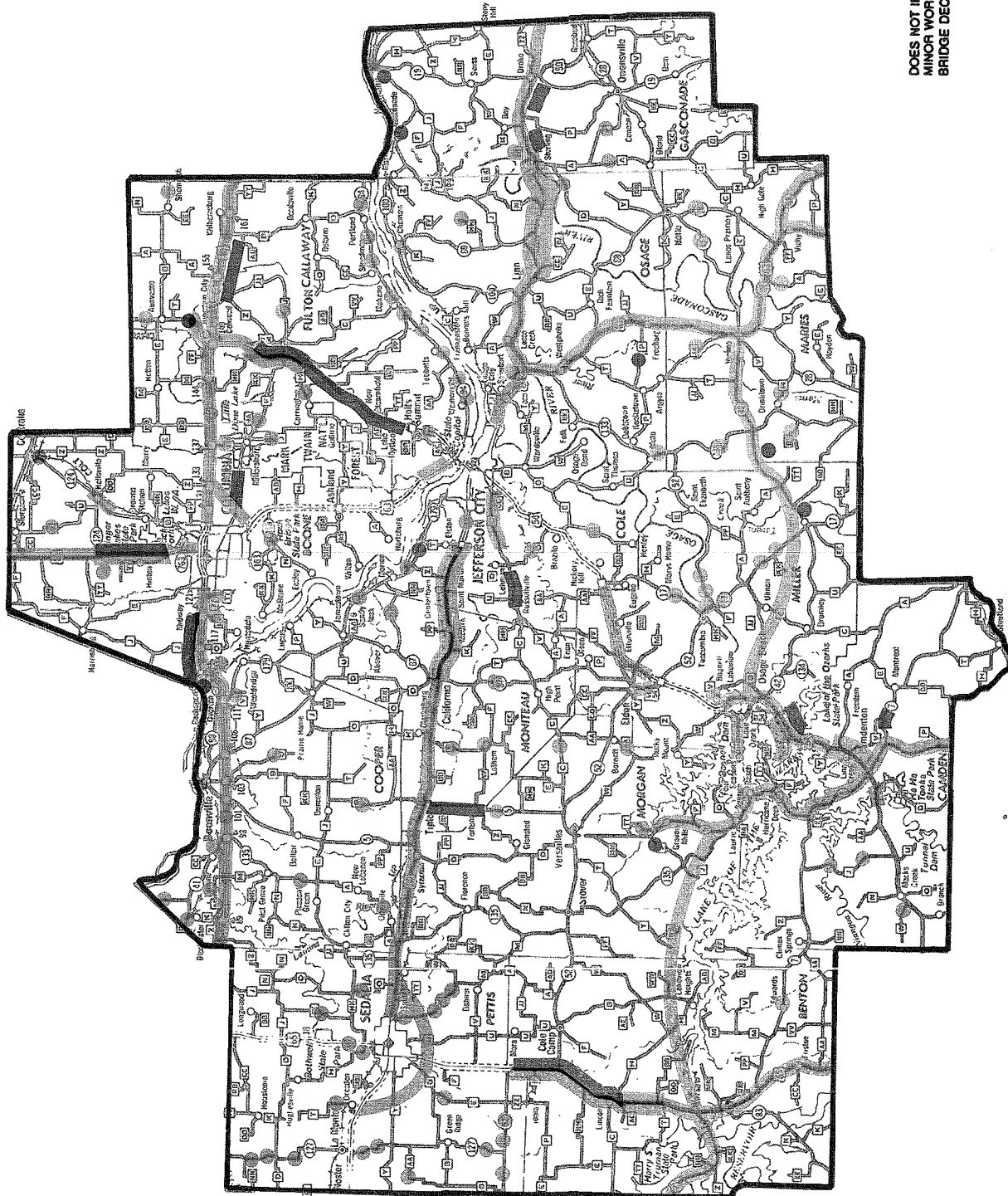
Missouri Department of Highway & Transportation
1993-2006 Work Plan
for Southwest Missouri Study Area

Corridor Reconnaissance Surveys

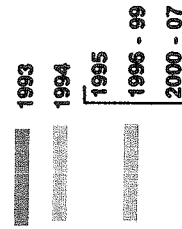
The following corridors have been programmed for reconnaissance surveys beginning in either 1993, 1994, or 1995 in order to develop the necessary information to insure an orderly progression of the projects between now and 2007. If a segment of a corridor is not listed it already has advanced beyond this stage of development and is in preliminary engineering or design.

| Corridor Route | Reconnaissance Location |
|------------------------|--|
| 5 | North of Gravois Mills to Laclede County |
| 7 | I-435 to Route 71 (Kansas City) |
| 7 | Clinton to Warsaw |
| 7 | Warsaw to Route 5 |
| 8 | St. James to Potosi |
| 13 | Richmond to Lexington |
| 13 | Lexington to Warrensburg |
| 13 | Warrensburg to Clinton |
| 34 | East of Van Buren to West of Jackson |
| 36 | Macon to Hannibal |
| 50 | Route 63 to west of Union |
| 50 | East of Sedalia to Cole County |
| 54 & 19 | Mexico to Bowling Green & Mexico to New London |
| 60 | East of Willow Springs to West of Poplar Bluff |
| 65 | Bethany to Trenton |
| 65 | Carrollton to Marshall |
| 65 | Warsaw to Buffalo |
| 72 | Fredericktown to Jackson |
| 136 | I-29 to Maryville |
| 136 | Maryville to I-35 |
| Jackson County Roadway | I-35 to I-435 |
| Jackson County Roadway | I-435 to I-470 |
| Chouteau Trafficway | At the Chouteau Bridge |

NORTH



LEGEND



DOES NOT INCLUDE LOCATIONS ON OUTER ROADS OR FOR MINOR WORK SUCH AS GUARD RAIL SLIDE CORRECTIONS, BRIDGE DECK WORK, INTERSECTIONS, SIGNING, LIGHTING, ETC.

1993

R/W AND CONSTRUCTION PROGRAM

DISTRICT 5

Corridor Reconnaissance Surveys

The following corridors have been programmed for reconnaissance surveys beginning in either 1993, 1994, or 1995 in order to develop the necessary information to insure an orderly progression of the projects between now and 2007. If a segment of a corridor is not listed it already has advanced beyond this stage of development and is in preliminary engineering or design.

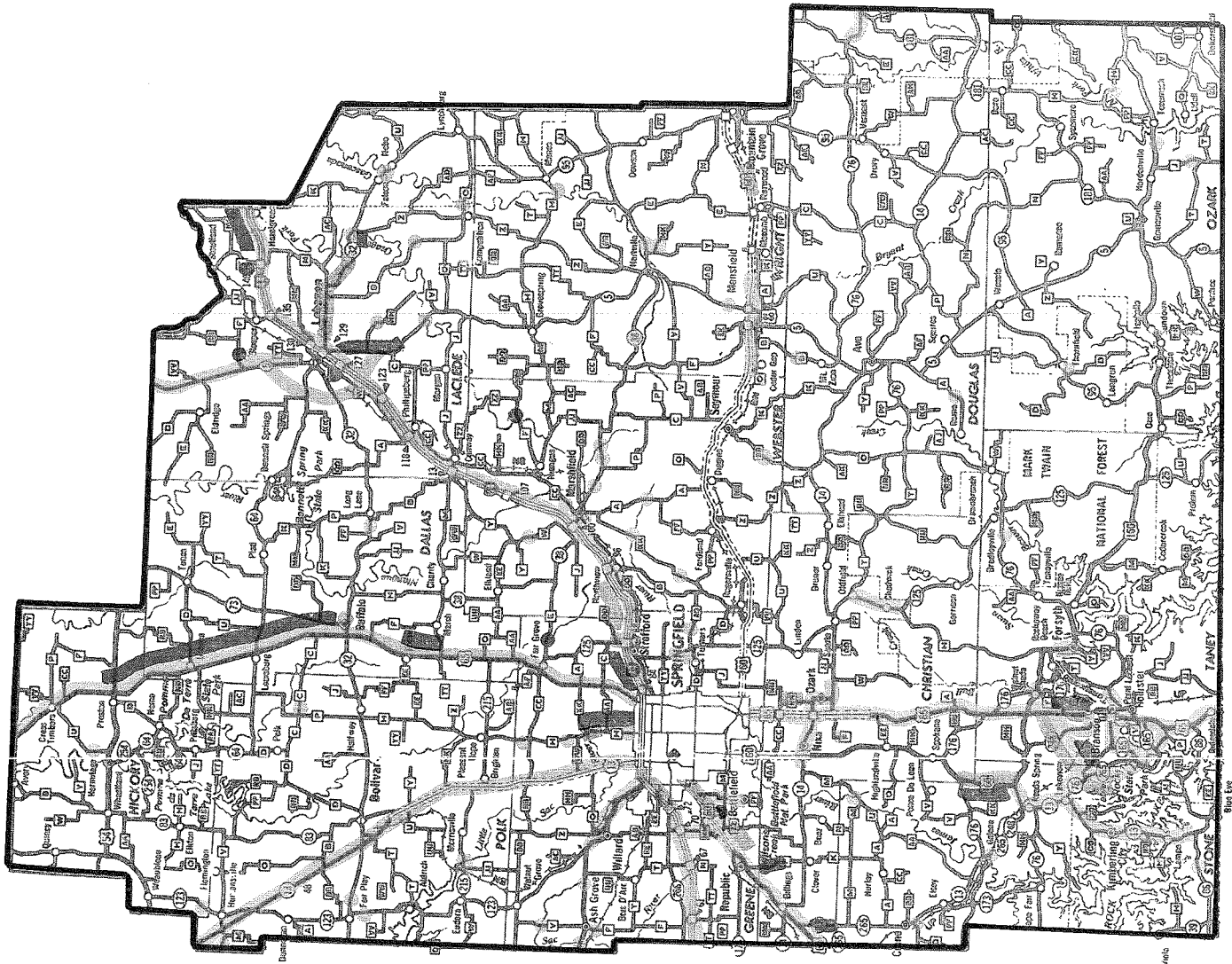
| Corridor Route | Reconnaissance Location |
|------------------------|--|
| 5 | North of Gravols Mills to Laclede County |
| 7 | I-435 to Route 71 (Kansas City) |
| 7 | Clinton to Warsaw |
| 7 | Warsaw to Route 5 |
| 8 | St. James to Potosi |
| 13 | Richmond to Lexington |
| 13 | Lexington to Warrensburg |
| 13 | Warrensburg to Clinton |
| 34 | East of Van Buren to West of Jackson |
| 36 | Macon to Hannibal |
| 50 | Route 63 to west of Union |
| 50 | East of Sedalia to Cole County |
| 54 & 19 | Mexico to Bowling Green & Mexico to New London |
| 60 | East of Willow Springs to West of Poplar Bluff |
| 65 | Bethany to Trenton |
| 65 | Carrollton to Marshall |
| 65 | Warsaw to Buffalo |
| 72 | Fredericktown to Jackson |
| 136 | I-29 to Maryville |
| 136 | Maryville to I-35 |
| Jackson County Roadway | I-35 to I-435 |
| Jackson County Roadway | I-435 to I-470 |
| Chouteau Traifloway | At the Chouteau Bridge |

Corridor Reconnaissance Surveys

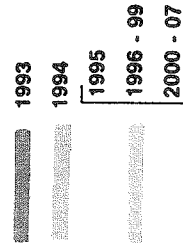
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| Corridor Route | Reconnaissance Location |
|------------------------|--|
| 5 | North of Gravois Mills to Laclede County |
| 7 | I-435 to Route 71 (Kansas City) |
| 7 | Clinton to Warsaw |
| 7 | Warsaw to Route 5 |
| 8 | St. James to Potosi |
| 13 | Richmond to Lexington |
| 13 | Lexington to Warrensburg |
| 13 | Warrensburg to Clinton |
| 34 | East of Van Buren to West of Jackson |
| 36 | Macon to Hannibal |
| 50 | Route 63 to west of Union |
| 50 | East of Sedalia to Cole County |
| 54 & 19 | Mexico to Bowling Green & Mexico to New London |
| 60 | East of Willow Springs to West of Poplar Bluff |
| 65 | Bethany to Trenton |
| 65 | Carrollton to Marshall |
| 65 | Warsaw to Buffalo |
| 72 | Fredericktown to Jackson |
| 136 | I-29 to Maryville |
| 136 | Maryville to I-35 |
| Jackson County Roadway | I-35 to I-435 |
| Jackson County Roadway | I-435 to I-470 |
| Chouteau Trafficway | At the Chouteau Bridge |

NORTH



LEGEND



DOES NOT INCLUDE LOCATIONS ON OUTER ROADS OR FOR MINOR WORK SUCH AS GUARD RAIL SLIDE CORRECTIONS, BRIDGE DECK WORK, INTERSECTIONS, SIGNING, LIGHTING, ETC.

1993

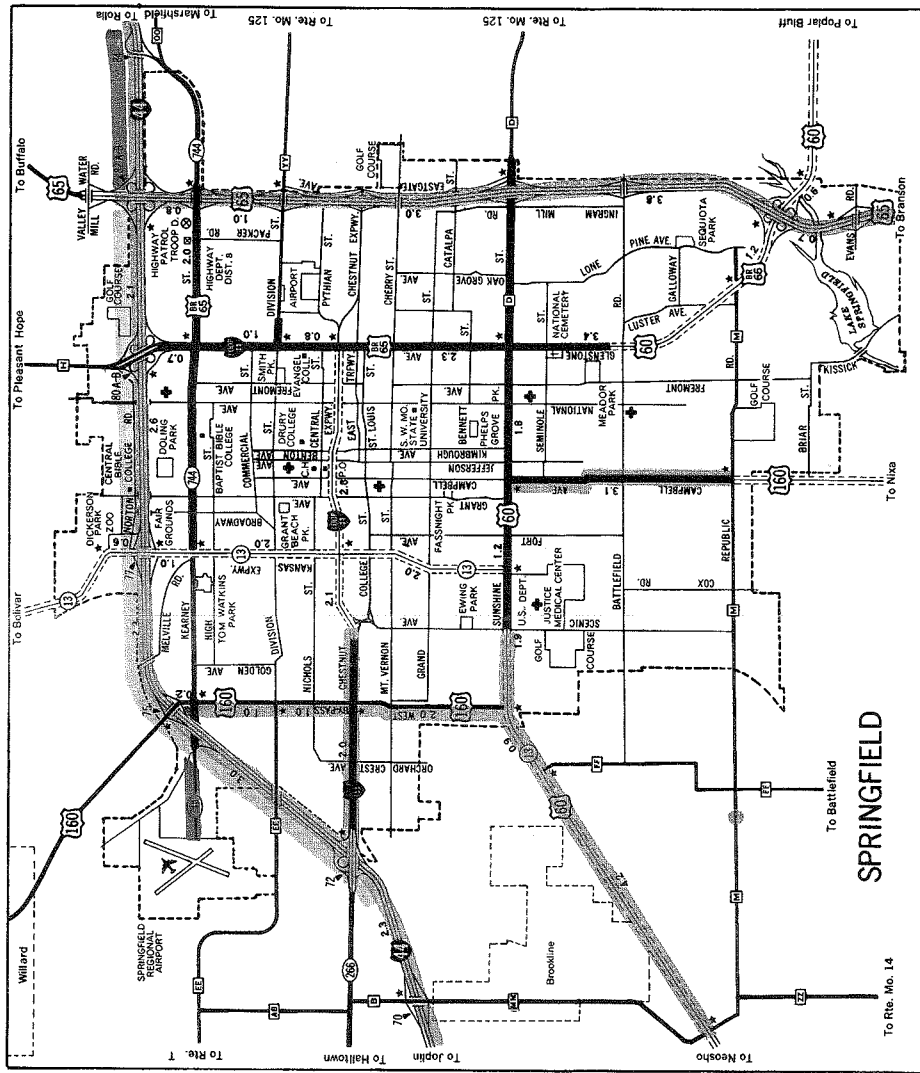
R/W AND CONSTRUCTION PROGRAM

DISTRICT 8

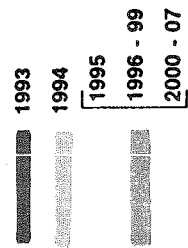
Corridor Reconnaissance Surveys

The following corridors have been programmed for reconnaissance surveys beginning in either 1993, 1994, or 1995 in order to develop the necessary information to insure an orderly progression of the projects between now and 2007. If a segment of a corridor is not listed it already has advanced beyond this stage of development and is in preliminary engineering or design.

| Corridor Route | Reconnaissance Location |
|------------------------|--|
| 5 | North of Gravois Mills to Laclede County |
| 7 | I-435 to Route 71 (Kansas City) |
| 7 | Clinton to Warsaw |
| 7 | Warsaw to Route 5 |
| 8 | St. James to Potosi |
| 13 | Richmond to Lexington |
| 13 | Lexington to Warrensburg |
| 13 | Warrensburg to Clinton |
| 34 | East of Van Buren to West of Jackson |
| 36 | Macon to Hannibal |
| 50 | Route 63 to west of Union |
| 50 | East of Sedalia to Cole County |
| 54 & 19 | Mexico to Bowling Green & Mexico to New London |
| 60 | East of Willow Springs to West of Poplar Bluff |
| 65 | Bethany to Trenton |
| 65 | Carrollton to Marshall |
| 65 | Warsaw to Buffalo |
| 72 | Fredericktown to Jackson |
| 136 | I-29 to Maryville |
| 136 | Maryville to I-35 |
| Jackson County Roadway | I-35 to I-435 |
| Jackson County Roadway | I-435 to I-470 |
| Chouteau Trailway | At the Chouteau Bridge |



LEGEND



DOES NOT INCLUDE LOCATIONS ON OUTER ROADS OR FOR
MINOR WORK SUCH AS GULF/HD RAIL SLIDE CORRECTIONS,
BRIDGE DECK WORK, INTERSECTIONS, SIGNING, LIGHTING, ETC.

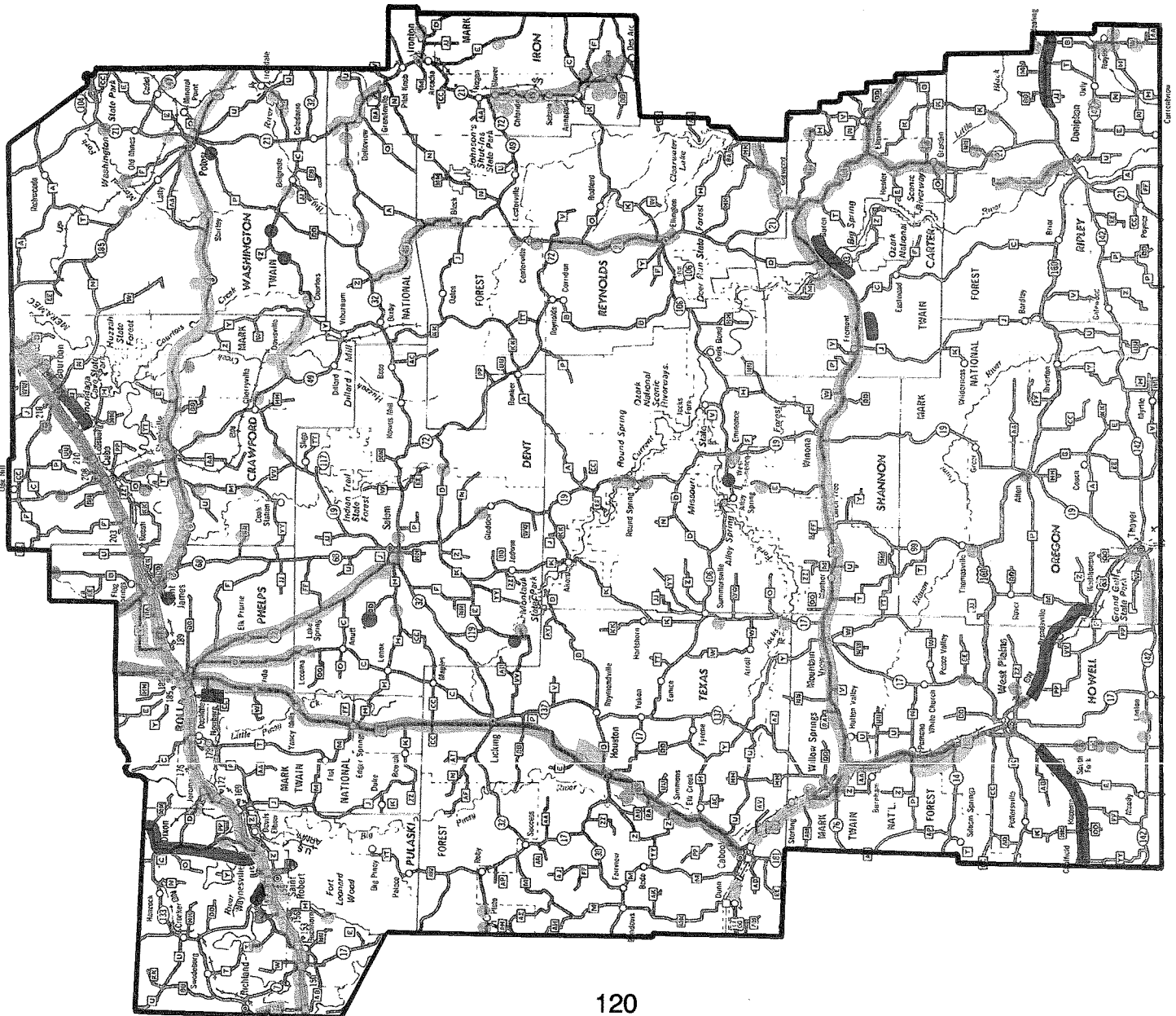
1993 R/W AND CONSTRUCTION PROGRAM DISTRICT 8

Corridor Reconnaissance Surveys

The following corridors have been programmed for reconnaissance surveys beginning in either 1993, 1994, or 1995 in order to develop the necessary information to insure an orderly progression of the projects between now and 2007. If a segment of a corridor is not listed it already has advanced beyond this stage of development and is in preliminary engineering or design.

| Corridor Route | Reconnaissance Location |
|------------------------|--|
| 5 | North of Gravois Mills to Laclede County |
| 7 | I-435 to Route 71 (Kansas City) |
| 7 | Clinton to Warsaw |
| 7 | Warsaw to Route 5 |
| 8 | St. James to Potosi |
| 13 | Richmond to Lexington |
| 13 | Lexington to Warrensburg |
| 13 | Warrensburg to Clinton |
| 34 | East of Van Buren to West of Jackson |
| 36 | Macon to Hannibal |
| 50 | Route 63 to west of Union |
| 50 | East of Sedalia to Cole County |
| 54 & 19 | Mexico to Bowling Green & Mexico to New London |
| 60 | East of Willow Springs to West of Poplar Bluff |
| 65 | Bethany to Trenton |
| 65 | Carrollton to Marshall |
| 65 | Warsaw to Buffalo |
| 72 | Fredericktown to Jackson |
| 136 | I-29 to Maryville |
| 136 | Maryville to I-35 |
| Jackson County Roadway | I-35 to I-435 |
| Jackson County Roadway | I-435 to I-470 |
| Chouteau Trailfloway | At the Chouteau Bridge |

NORTH



LEGEND

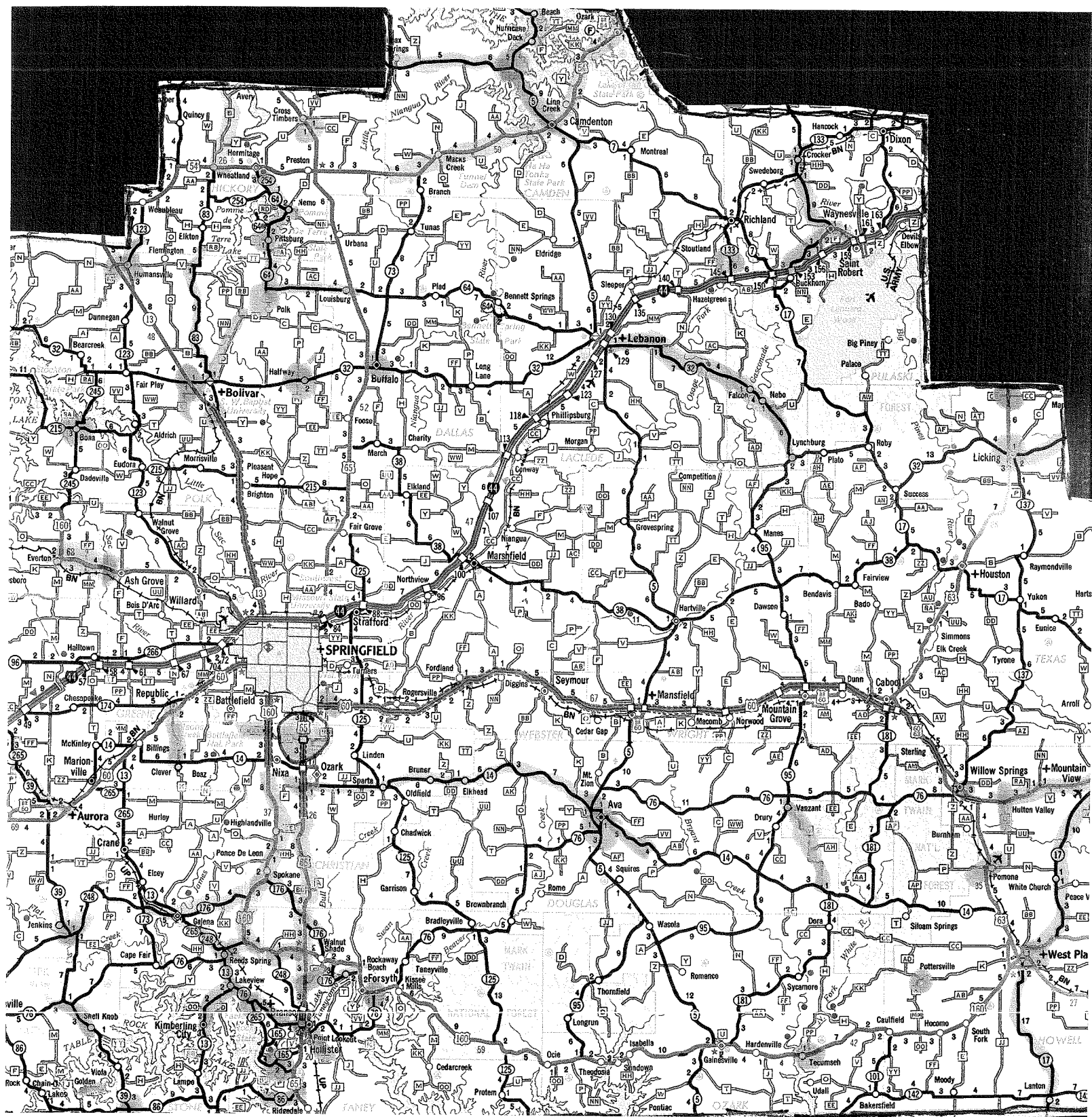
- 1993
- 1994
- 1995
- 1996 - 99
- 2000 - 07

DOES NOT INCLUDE LOCATIONS ON OUTER ROADS OR FOR MINOR WORK SUCH AS GUARD RAIL SLIDE CORRECTIONS, BRIDGE DECK WORK, INTERSECTIONS, SIGNING, LIGHTING, ETC.

1993
R/W AND CONSTRUCTION PROGRAM
DISTRICT 9

In reviewing the survey responses to question 33, regarding identification of roadways that need improvement, the survey revealed a total of 410 responses to this question. In reviewing the data, the staff were able to isolate 123 specific locations or sections of Missouri roadways. Those suggestions were then plotted on a Missouri Highway Map, and compared to the Missouri Highway Transportation's highway right-of-way and construction program for FY '93. (This program illustrates improvements from 1993 - 2006.) By comparing the two maps and the changes recommended to the Highway Plans Design it was determined that Missouri Highway and Transportation Department had addressed 76.75 percent of the suggested changes as defined from the survey group.

Additionally, the survey data provided thirty-nine suggestions for the city of Springfield, as well as, those listed as an attachment to the survey data.



APPENDIX G

Comparison Between
Missouri Driver Response Survey
Data Suggestions and
Missouri Department of Highway Work Plans

Summary

DISTRICT 5

Camden County

70% of the changes requested are addressed in the 1996 program. Additional changes requested: Highway 54 (Camdenton to Macks Creek) bridges, shoulders striping.

DISTRICT 7

Cedar County

80% of the changes requested are addressed in the 1996 program. Additional changes needed: Highway 39 (Stockton to County Line) shoulders and striping.

Dade County

60% of the changes requested are addressed in the 1996 program. Additional changes needed are: (1) Highway 39 (Arcola to South County Line) shoulders and striping; (2) Highway 160 (Ash Grove to Everton) shoulders and striping.

Lawrence County

60% of the changes requested are addressed in the 1996 plan; 20% in the 1993 plan. Additional changes requested are: Highway 39 (from I-44 to North County Line) shoulders, striping and bridges.

Barry County

90% of the changes requested are addressed in the 1996 plan. Additional changes requested are: Highways 39 and 76 (between Shell Knob and Cassville) shoulders, bridges and striping.

DISTRICT 9

Howell County

80% of the changes requested are addressed in the 1994 and 1996 plans. Additional changes requested are: Highway 17 (Lawton to Mountain View) shoulders, bridges and striping.

Texas County

90% of the suggested changes are addressed in the 1996 plan. They include: Highway 32 (Licking to Salem) shoulders, bridges and striping.

Pulaski County

100% of the suggested changes are addressed in the 1993 and 1996 plans.

DISTRICT 8

Ozark County

85% of the suggested changes are addressed in the 1996 Highway Plan. Additional changes that were requested: Highway 160 through Tecuhseh, road markings, traffic congestion, speed and lane markings.

Douglas County

20% of the suggested changes are addressed in the 1996 plan. Additional changes that were requested are: (1) Highway 14 to 17 miles east of Ava; (2) Highway 5, south of Ava; (3) Highways 76 and 5, south of Ava. All need shoulder work, traffic signal control, sight line adjustment striping and better signage. Also, Highway W, south of VanZant to Highway 14, needs shoulder work, striping and sight line markings. ???

Wright County

100% of the suggested changes are addressed in the 1996 plan.

Laclede County

85% of the suggested changes are addressed in the 1993 and 1996 plans. Additional suggestions include: (1) Highway 32 (Lebanon to Lynchburg) shoulders, striping, bridges and speed at Lynchburg; (2) Highway 133 (Richland south to I-44) shoulders and striping.

Dallas County

100% of the suggested changes are addressed in the 1993 and 1996 plans.

Hickory County

50% of the suggested changes are addressed in the 1996 plan. Additional changes are: (1) Highway B from North County Line to Wheatland, shoulders and striping; (2) Highway 254, south of Wheatland to Highway 64, shoulders and striping; (3) Highway 5 (Elkton to South County Line) shoulders, striping and bridges; (4) Highway 64 (from Highway 254 to South County Line) shoulders and striping; (5) Highway 5 at Cross Timbers, visibility, shoulders and turn lanes.

Polk County

40% of the suggested changes are addressed in the 1996 plan. Additional suggested changes are: (1) the intersection of Highways 13, 123, V, and M needs signage, shoulders, traffic control, striping and basic design; (2) Highway

APPENDIX H

Bibliography of Literature Review

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