Louisiana Transportation Research Technical Assistance Report

Report No. 9

Speed Limit Study for the State of Louisiana

Special Studies Planning Group
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LOUISIANA TRANSPORTATION RESEARCH CENTER

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EXECUTIVE SUMMARY

Introduction

On November 28, 1995 the National Maximum Speed Limit (NMSL) which regulated speed limits on public highways in the United States was repealed. Authority was returned to states to set their own speed limits. In Senate Concurrent Resolution Number 4 of 1996, the Louisiana Senate requested the Department of Transportation and Development to evaluate the roads of the state with a view to recommending which roads could accommodate higher speed limits than currently exist.

The investigation has included an inventory of current road and traffic speed conditions in Louisiana, a review of practice in neighboring states, a literature review of findings in other states and other countries, a survey of District Traffic Operations Engineers of the Department of Transportation and Development, and interviews with representatives of local organizations associated with highway safety in the state.

Current conditions in Louisiana

Louisiana has 907 miles of controlled access freeway and 1,345 miles of divided multilane highway. The remaining 59,769 miles of public road in the state are undivided, predominantly two-lane, roads. Of the total of 60,021 miles of public road in the state, 16,649 miles are under state control. Under the Transportation Infrastructure Model for Economic Development program, approximately 500 miles of state-controlled highway is scheduled to be upgraded to four-lane divided highway.

The condition of Louisiana's freeways are comparable with those of other states. The arterials, and particularly the collector roads in the state, however, are generally in poorer condition than those in the rest of the nation. However, road conditions are not expected to influence choice of a statutory speed limit in the state.

Most Louisiana rural freeways were designed for speeds of 70 miles per hour while other rural highways were designed for 60 miles per hour. Current speed limits of 65 miles per hour on rural freeways and 55 miles per hour elsewhere are, therefore, generally below design speeds. Such conditions are known to encourage violation of speed limits. In Louisiana, 75% of the vehicles traveling on urban Interstates exceed the speed limit. On rural Interstates the corresponding figure is 44% while on non-Interstate highways 38% of the vehicles exceed the speed limit of 55 miles per hour.

Accident rates are slightly higher in Louisiana than in the rest of the nation although they are comparable with neighboring states. In keeping with trends across the developed world, accident rates in the U.S. and in Louisiana are declining with time, mainly, it is suspected, due to improved vehicle safety, driver education, greater use of safety devices, more effective and more prompt

emergency services and improved road conditions. In Louisiana, speeding is associated with 20 percent of urban road fatalities and 31 percent of rural road fatalities.

The District Traffic Operations Engineers with the Department of Transportation and Development overwhelmingly support an increase in current speed limits. A survey conducted among 1,100 drivers in Louisiana in 1980 revealed that only one-third of the respondents were in favor of increasing the 55 mile per hour NMSL on highways that existed at that time. However, surveys of this nature generally tend to obtain conservative estimates of public opinion regarding speeding and the general increase in speed on highways since then suggests that current opinion may be more in favor of change.

Practice in other states and other countries

Since repeal of the NMSL in 1995, thirty-two states have changed their speed limits (Atkinson, 1996a). Those states that have not changed are concentrated in the Northeast and Midwest. The sparsely populated southwestern and plain states have adopted 75 miles per hour speed limits although Montana has no daytime speed limit for cars. Most southern states have selected 70 miles per hour as their maximum speed limit. Only Louisiana and South Carolina among the southernmost states still have 65 miles per hour as their maximum speed limit. Differential speed limits between cars and trucks are in effect in eight states while differential speed limits between day and night travel are in use in four states.

In those states which have measured speeds on their highways since changing their speed limits in 1996, speed has increased between two and three miles per hour. In Montana, daytime speeds have reportedly only increased by 2 miles per hour. However, reports that state police there are trying to classify speeds in excess of 90 miles per hour as being "imprudent" indicates that some high speed travel may be occurring.

European and Scandinavian countries tend to have maximum speed limits of approximately 70 miles per hour on freeways and 55 miles per hour on other highways. Several use photo speed measurement as an enforcement device. In those countries where legislation has been changed to allow the owner of the vehicle to be responsible for speeding infractions (in contrast to the driver), photo speed measurement has proved an effective and labor-saving approach to speed enforcement. In Australia, speed enforcement is applied as part of an overall Safety Management Program where attention is also given to engineering and education aspects of road safety. Engineering improvement measures include providing a safe operating environment, setting realistic speed limits and providing visual stimulus to limiting speed such as thickly painted medians and sidestriping to create the impression of a narrow lane (FHWA, 1996). Education includes publicity campaigns on television and at schools to make speeding socially unacceptable. The program in the state of Victoria has halved fatalities, reduced injuries by 38% and all accidents by 22% in five years.

The impact of speed limits on speed

Speed limits have been found to have little impact on speed when design speed, surrounding land use and other conditions suggest to the motorist that they can travel faster without significant risk. This lack of responsiveness of speed behavior to posted speed limits has been observed to occur whether speed limits are raised or lowered. It is also widespread; having been observed in numerous studies in the U.S. and other countries. Enforcement is found to have only a temporary impact on improving compliance.

The impact of speed on safety

There are physical reasons to expect that speed reduces safety; stopping distances are increased, distance traveled during driver reaction time is longer, side thrust forces around corners is increased and the kinetic energy of occupant and vehicle are in relation to the square of the speed. Research has found that speed increases the severity of an accident but the relationship between speed and the incidence of accidents has not been conclusively verified.

Speed has an effect on several other factors which affect safety. Among these is the dispersion of speeds in the traffic stream. Increased speed dispersion increases accident rate as it creates greater opportunity for conflict among vehicles with those traveling at different speeds. The greatest risk is incurred when vehicles travel in excess of 15 miles per hour above or below the average speed in the traffic stream. Design speed has been observed to increase speed dispersion when speed limits are more than 10 miles per hour above or below the design speed.

A significant factor affecting the impact of speed on safety is the type of road on which travel occurs. Freeways are, on average, three times safer than regular two-lane highways. The increased safety is achieved in spite of higher speeds on freeways than other roads.

Another factor is the age of the driver. Statistics show that in Louisiana, younger drivers are almost four times more likely to be in a fatal accident in which speed was a factor than other drivers. Thus, younger drivers, and particularly young male drivers, are more susceptible to the dangers that increased speed can produce than the rest of the driver population.

Impact of speed on travel time

Travel time savings from increased speeds consist of small increments of time which most motorists will find difficult to utilize productively. A study conducted by the National Research Council in 1984 found that the 55 mile per hour National Maximum Speed Limit incurred additional travel time from what would have occurred in the absence of the NMSL of less than 3 minutes among more than half of the trips made. Considering that most prior speed limits were 65 and 70 miles per hour, this suggests that if speed limits were now increased to similar levels, it would lead to relatively small travel time improvements.

Commercial truckers are expected to benefit more from travel time savings than the regular motorist since they would be improving the productivity of their production unit. However, operating costs of the truck are likely to increase with increased speed and offset some of the gains.

If speed results in more accidents or accidents of greater severity, then delay is incurred as vehicles are held up by the congestion caused by the accident. In addition, those that are injured lose time while they recover or they continue to lose productive time if they are permanently disabled. Those that are killed are justifiably considered to have lost the time that would have made up the rest of their life. Some research suggests that the total time lost is equal to the total time gained (Miller, 1989). However, an equity issue arises in arriving at the balance; all motorists benefit from the time savings but those that are injured and killed incur the time cost alone.

Impact of speed on fuel consumption

An increase in the speed limit on freeways to 70 miles per hour and that on divided multilane highways to 60 miles per hour, is expected to increase average speeds by 2 and 1.5 miles per hour, respectively. This will result in an estimated increase in fuel consumption in the state of approximately one percent. This assumes that approximately half of the travel on urban Interstates experiences an increase in average speed of two miles per hour due to increased speed limits while the remainder remains unaffected because speed limits are controlled by congestion or speed zones that remain in force.

Cost to change speed limits

If speed limits in Louisiana are altered on freeways and multilane divided highways only, leaving speed limits on undivided roads unchanged, the total cost of changing all necessary signs is estimated at $112,150. No other costs are expected to be incurred in changing the speed limits in the state.

Evaluation of costs and benefits of increased speed limits

The pros and cons of increasing speed limits on freeways and divided multilane highways in Louisiana are summarized below. It is expected that accident severity will be increased as a result of an increase in speed but it is not known whether this will also be accompanied by an increase in number of accidents. It is possible that accident incidence may be reduced since traffic may be diverted off slower, more dangerous routes to travel on the faster, safer facilities. In this case, fewer accidents will occur. On the other hand, increased speed may lead to more accidents because higher speeds mean shorter periods in which a driver has to react and less opportunity to stop, swerve or anticipate a potential accident situation sufficiently to avoid it. Given that increases in speed limits on rural freeways in the past have led to both increases and decreases in accident rates at the state level, we conclude that it is not possible to accurately estimate the

impact of increasing the speed limit on Louisiana's high order roads. Subsequently, we do not consider accident incidence as either a pro or con in the evaluation below.

Pro	Con
1. Current speed limits are below design speeds.	1. Accident severity is expected to increase.
2. Current speed limits are below current 85th percentile speeds.	2. Youth are the most vulnerable to speed-related accidents.
3. High violation rate of current speed limits.	3. $112,150 implementation costs.
4. Credibility of current speed limits.	4. Fuel consumption increased by 1%.
5. Public and official opinion in favor of increases.	5. Travel time savings are small and inequitable.
6. Road safety is improving all the time.	
7. Neighboring states have increased their speed limits.	
8. Actual speed increases are expected to be small.	
9. Difficulty of enforcement under current conditions.	
10. In line with overseas practice.	

Conclusions

Speeds on highways in Louisiana are constantly rising. This demonstrates that motorists believe they are acceptably safe at increasingly higher speeds. This is most noticeable on freeways where observed speeds are the highest and the trend in speed increase is also the greatest. Thus, there is public pressure to increase current speed limits on higher order roads. Enforcement is only effective if the speed limits are seen as reasonable.

Freeways are typically three times safer than regular undivided highways. Divided multilane highways are approximately twice as safe as regular undivided highways. If speed limits are increased on freeways and on divided multilane highways while retaining existing speed limits on undivided roads, any added risk associated with higher speeds will take place on the safer facilities. Thus, the expressed need for higher speeds from the public will be provided on those facilities where the need is evidently the greatest and where it can be most safely accommodated. This may also provide the opportunity to justify more stringent enforcement of safe driving behavior on the undivided highways which have the worst safety record. Unsafe driving behavior could include excessive speeding but should also include reckless driving, tailgating, drunken driving and running red lights.

Recommendations

It is recommended that the following changes be made to speed limits in the state:

(i) the new statutory speed limit on urban and rural controlled access highways in Louisiana be 70 miles per hour,

(ii) however, wherever the design speed, road geometry, surrounding land use or accident history suggest that portions of a highway warrant a lower speed limit, speed zones, established by the Department of Transportation and Development through an engineering study, should be used to reduce speed limits on those sections of the highway that warrant them,

(iii) the new statutory speed limit on divided multilane highways (i.e. highways with two or more lanes divided by a median), having partial or no control of access, be 60 miles per hour,

(iv) the statutory speed limit on all other highways (i.e. all highways not having a median) remain at the current statutory speed limit of 55 miles per hour,

(v) there be no differential speed limit between trucks and automobiles and day and night travel in Louisiana.

1. INTRODUCTION

In November 1973 the Organization of Oil Producing and Exporting Countries (OPEC) limited export of oil from its member countries. The resulting shortage of petroleum prompted Congress, in January 1974, to pass a law setting a National Maximum Speed Limit (NMSL) of 55 miles per hour to conserve fuel. By March 1974, all states had implemented the 55 mile per hour speed limit.

Nationwide, motor vehicle fuel consumption dropped 3.8 percent from 1973 to 1974 (USDOT, 1993). Part of this fuel saving was due to 2.5 percent less travel but improved fuel consumption was also achieved. Serendipitously though, the effort to conserve fuel resulted in dramatic improvements in road safety. In 1972, road fatalities reached their highest number in the history of the United States with 54,549 fatalities. The oil crisis in late 1973 had a small impact on the number of fatalities recorded in 1973 (54,052), but they dropped 8,856 (16 percent) between 1973 and 1974 (TRB, 1984). Such a dramatic decrease in road fatalities in a single year had only been achieved once before - during the Second World War when speed limits of 35 miles per hour were imposed as a fuel-saving measure (Warren, 1982). The consequence of the dramatic decrease in fatalities in 1974 and the generally sustained lower numbers following that, was that even after fuel was no longer in short supply, the National Maximum Speed Limit (NMSL) was retained for safety reasons (USDOT, 1979).

With the passage of time, the speed of vehicles on facilities governed by the 55 mile per hour NMSL began to rise. In an effort to limit speed increases, Congress included within the Surface Transportation Assistance Act of 1978, legislation which would allow the withholding of federal highway funds from states where more than half of the motorists exceeded the 55 mile per hour speed limit. States were required to submit quarterly speed monitoring reports to the federal government. However, highway speeds continued to increase and states generally found it difficult to meet the speed compliance criteria. No states were ever penalized for non-compliance (USDOT, 1996).

Several investigations were launched in the mid 1980's into increasing the NMSL (TRB, 1984). These led to a provision in the Surface Transportation and Uniform Relocation Assistance Act of 1987 to permit an increase in speed limit on rural Interstates to 65 miles per hour while retaining the speed limit of 55 miles per hour on all other highways. However, speeds on all highways continued to increase and on November 28, 1995, the National Maximum Speed Limit was finally repealed and states were granted the authority to set their own speed limits. In December 1995, the Governor of Louisiana requested, and was granted, an extension of the National Maximum Speed Limit until 60 days after the convening of the 1997 regular session of the state legislature.

At the First Extraordinary Session of the Senate of the State of Louisiana in April, 1996, Senator Cain sponsored Concurrent Resolution No. 4 in which the Department of Transportation and Development was requested to "...evaluate the roads of the state, taking into consideration road conditions, traffic counts, and safety factors of respective roads to determine the advisability of

increasing maximum speed limits on the roads of the state". It was also resolved that "..the department shall present to the legislature recommendations as to which roads in the state can accommodate higher speed limits and on which sections of the roads speed limits can be raised to sixty, sixty-five, or seventy miles per hour". This report addresses those requests.

In preparing this report, a literature review of national and international practice, interviews with officials from neighboring states who have implemented new speed limits, a survey among District Traffic Operations Engineers of the Department of Transportation and Development and an inventory of current practice in Louisiana has been conducted. Interviews were also conducted with organizations closely associated with highway safety in the state such as the Louisiana State Police, Louisiana Highway Safety Commission, Louisiana Motor Trucking Association and the local chapter of the American Automobile Association. The information gathered from all these sources is summarized in this document and used to generate the recommendations listed at the end of the report.

2. CURRENT CONDITIONS IN LOUISIANA

2.1 The Road Network

The main arterial road system in Louisiana is shown in figure 1. It consists of 907 miles of freeway and 1,345 miles of divided multilane highway with partial or no control of access (FHWA, 1995b, table HM-55). The remainder consists of two- or more-lane undivided arterial highway. Approximately 500 miles of divided multilane highway with partial or no control of access is scheduled to be added to the Louisiana network under the Transportation Infrastructure Model for Economic Development (TIMED)[1] program. In total, there are 60,021 miles of public road in Louisiana of which 16,649 miles are under state control (FHWA, 1995b, table HM-10).

Traffic volumes on the main arterial routes in the state are relatively light, particularly outside urban areas. In 1990, volume-to-capacity (v/c) ratios on major rural routes in the state were 0.7 and below while urban routes generally varied between 0.4 and 1.0 (LDOTD, 1996a). Under the Trend Growth Scenario in the Louisiana Statewide Intermodal Transportation Plan, virtually all urban routes were predicted to operate at capacity by the year 2020, but, with the exception of some portions of the rural Interstate system, most rural routes were predicted to still operate at v/c ratios well below one (LDOTD, 1996a, p. 89). Thus, congestion is not expected to be a factor affecting the need for speed limits on rural routes in the state in the near future.

The design speed used on Louisiana's freeways is 70 miles per hour and that used to design other roads outside urban areas is 60 miles per hour. Some exceptions do exist. Design speeds of 60 miles per hour on freeways, or lower speeds on other roads, have been used for short sections of road. Where lower design speeds have been used, speed zones have usually been established.

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[1] The TIMED fund was established by state legislation in 1990 and is financed by a special 4 cent per gallon fuel tax on all gasoline and special fuels sold in Louisiana.

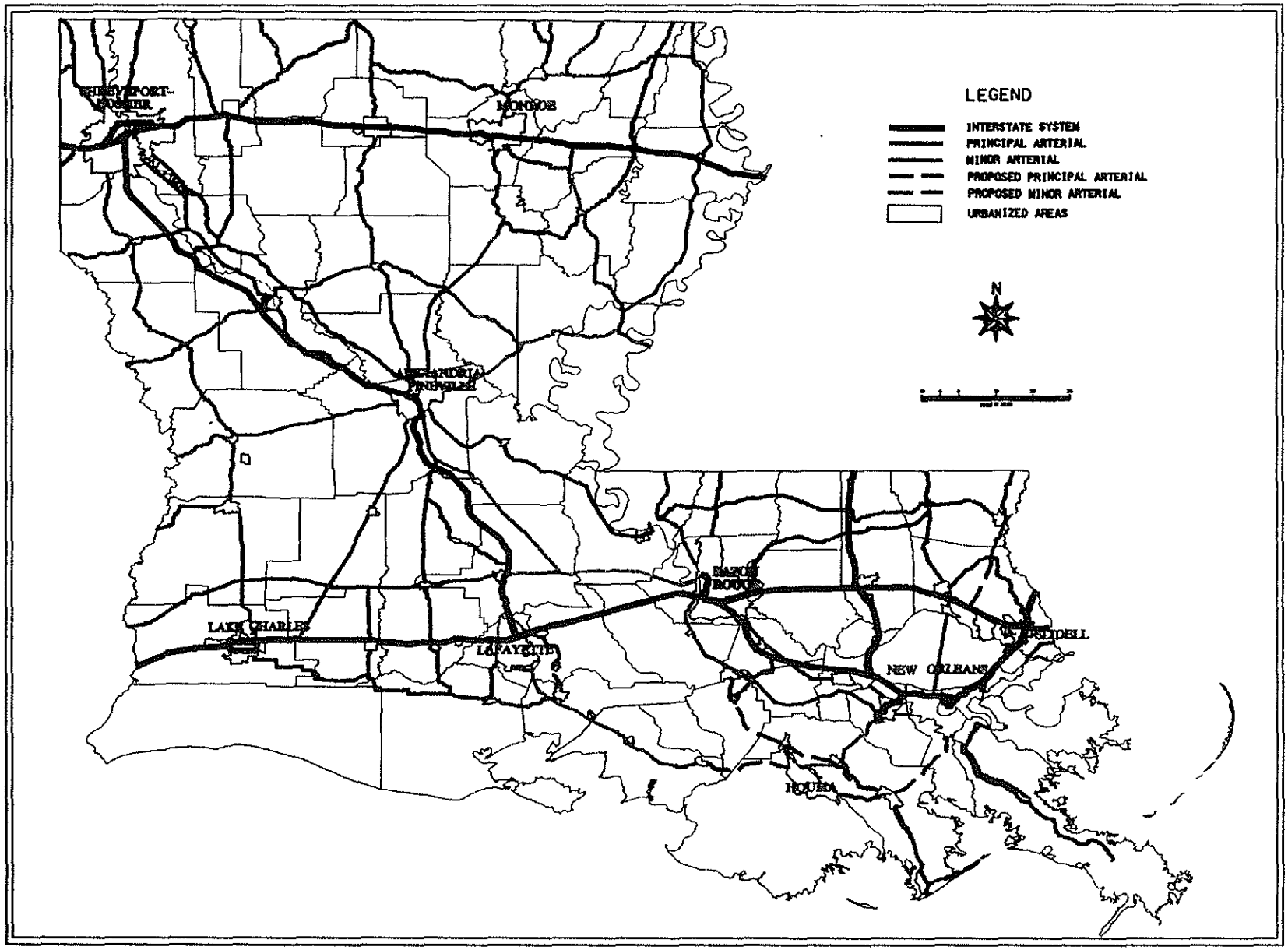

Figure 1
Arterial Highway System in Louisiana

The condition of Louisiana's roads are monitored annually and the number of miles in categories ranging from "poor" to "very good" are recorded for each class of road (FHWA, 1995b, table HM-63). In 1994, the percentage of each type of road in poor condition was as shown in figure 2. Comparison with the national average shows that Louisiana's Interstates are in similar condition to those in the rest of the nation while the lower order roads, such as urban and rural collectors, have higher proportions of their mileage in poor condition than the national average. However, poor road condition is usually apparent to the driver and, in most cases, drivers will adapt their speed to the conditions prevailing at that time. Road conditions are constantly changing as roads are repaired and others fall into disrepair and, therefore, it seems quite inappropriate for a general speed limit to be affected by conditions of portions of a network. Warning signs can be used to draw attention to the condition of the pavement and provide advisory speeds.

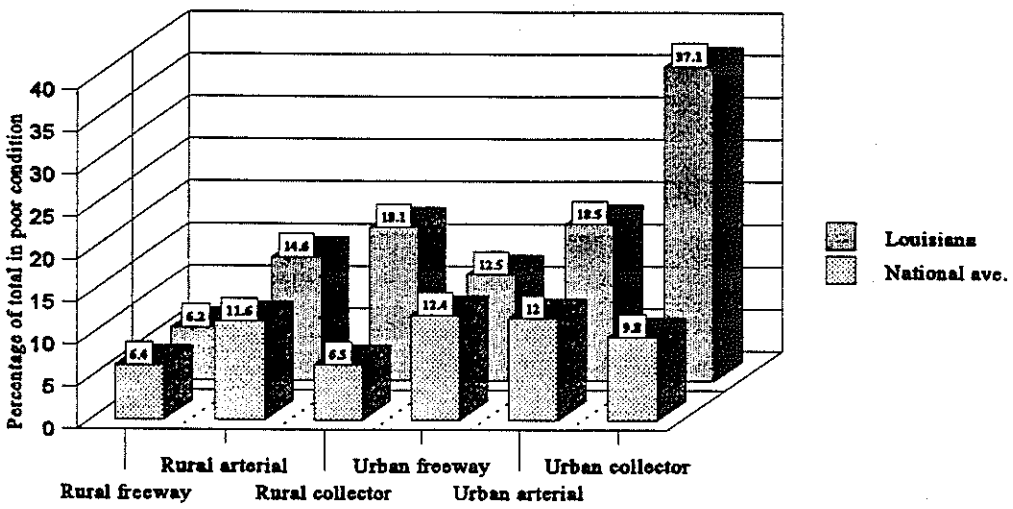

FIGURE 2
CONDITION OF LOUISIANA'S ROADS, 1994

2.2 Existing Speed Limits

Existing speed limits on Louisiana's Interstate system include separate urban and rural speed limits and speed zones where engineering studies have determined that conditions warrant lower speed limits. Existing speed limits on the freeway system in Louisiana are shown in figure 3. Speed zones are usually relatively short sections of roadway within urban areas (for example, note the speed zones shown in New Orleans, Baton Rouge and Lake Charles in figure 3) although speed zones also exist within rural areas. The Department of Transportation and Development has established over 2,700 speed zones throughout the state since 1974. Speed zones are established following a procedure set out in an Engineering Directives and Standards Manual prepared by the Department of Transportation and Development. Speed zones are expected to remain in effect even if statutory speed limits are altered.

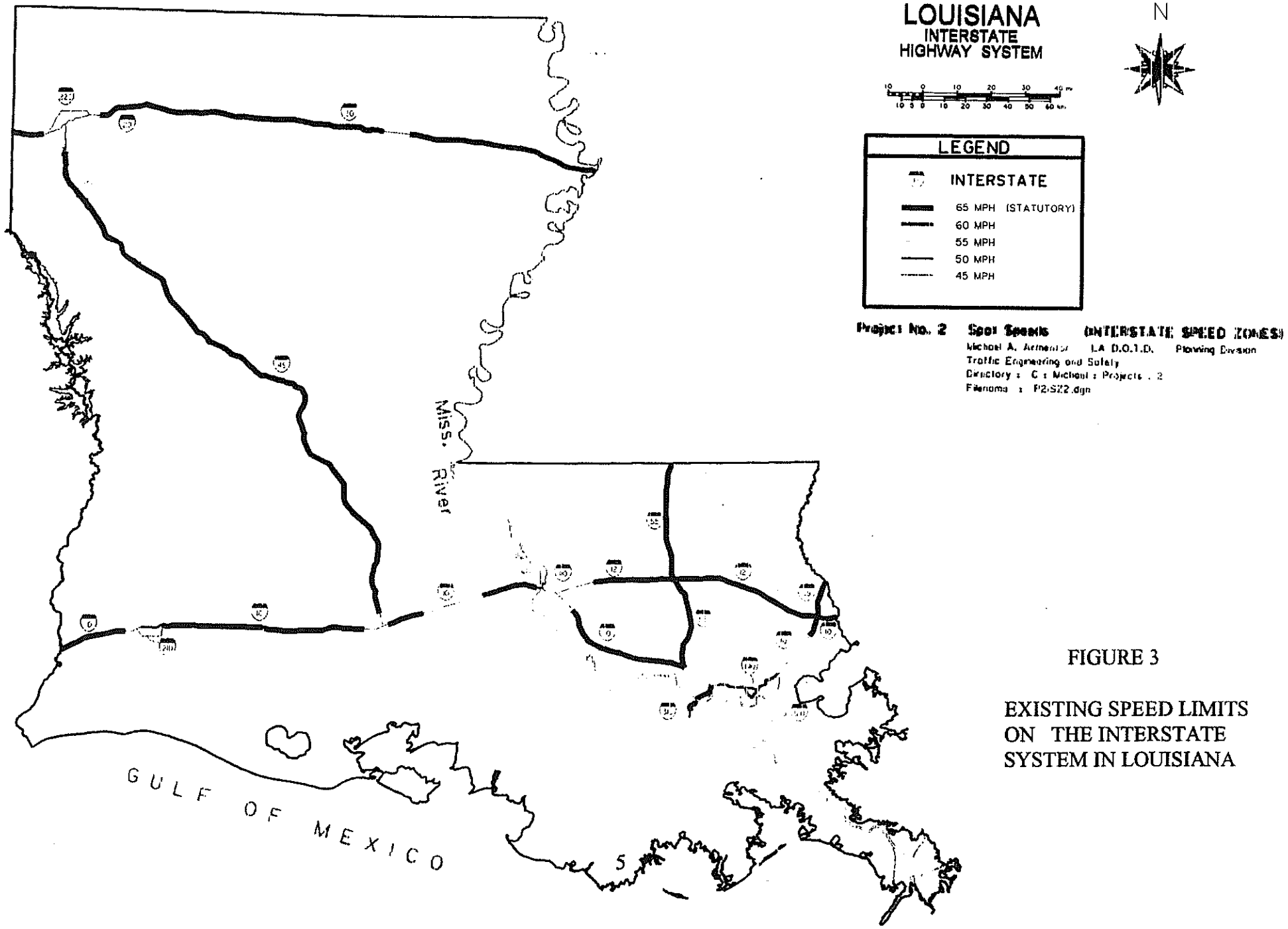

FIGURE 3

EXISTING SPEED LIMITS ON THE INTERSTATE SYSTEM IN LOUISIANA

2.3 Observed Speeds on Louisiana's Road Network

Speeds have been monitored at a sample of sites on highways in Louisiana since 1978 as part of the speed monitoring requirements of the Surface Transportation and Assistance Act of 1978. Figure 4 shows the average of these observations on Interstate freeways for each year during the period 1985-1991 (LDOTD, 1996b). More recent observations (1992-1995) are not included because construction prevented observation at several of the observation sites, thus altering the sample from that used in the earlier period.

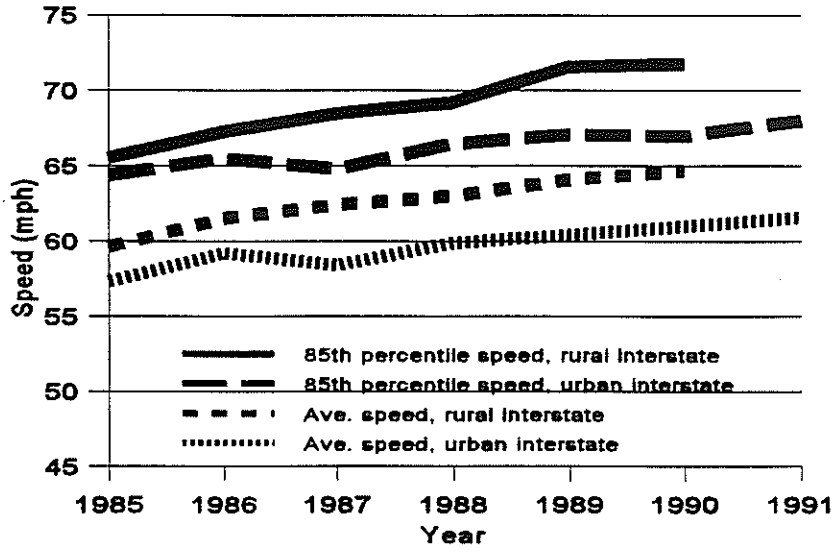

FIGURE 4
SPEED TRENDS ON LOUISIANA FREEWAYS 1985-1991

Figure 4 shows that speeds on both urban and rural Interstates have increased steadily during the observed period. Average speed on urban Interstates increased approximately 4 miles per hour and average speed on rural Interstates by 5 miles per hour in the six years observed. Interestingly, although the speed limit on rural Interstates was raised from 55 miles per hour to 65 miles per hour in 1987, no discernible speed change followed that event. The increase in average speed on urban Interstates was only marginally lower than those on rural Interstates. On the other hand, the 85th percentile speeds on rural Interstates seems to have increased more rapidly than those on urban freeways. This may be due to urban speed limits inhibiting faster travel on urban freeways or congestion on urban freeways preventing higher speeds.

The extent to which motorists currently exceed speed limits on the different types of highways in Louisiana can be read from figure 5. This shows a high violation rate for freeways posted at 55 miles per hour (75%) but considerably lower degree of violation on non-Interstate 55 mile per hour highways (38%). Non-Interstate median speed in 1994/95 was 54 miles per hour. High

violation rates create problems for those motorists who choose to comply with posted speed limits but thereby expose themselves to greater risk by traveling slower than other traffic.

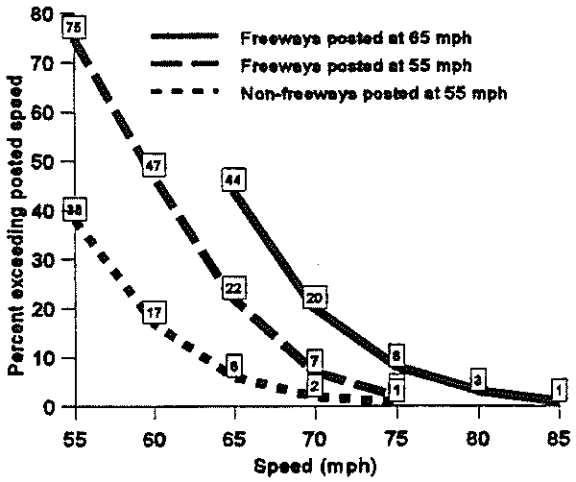

FIGURE 5
PERCENT EXCEEDING POSTED SPEED LIMIT IN LOUISIANA, 1994/95

2.4 Road Accidents in Louisiana

In 1994, the latest year for which accident statistics are available, there were 748 fatal and 50,776 injury crashes in the State of Louisiana (Schneider and Watson, 1994). The 748 fatal crashes resulted in 844 fatalities. For comparison with national statistics, using data from the National Highway Traffic Safety Administration (NHTSA, 1994), Louisiana ranked 10th, 12th, and 18th in the Union in fatalities per hundred thousand licensed drivers, registered vehicles, and people, respectively. Table 1 shows fatality rates based on various factors for Louisiana in relation to the corresponding figures for the U.S.

	Fatality rates per:			
	100,000 population	100,000 licensed drivers	100,000 registered vehs.	100,000,000 vehicle miles
Louisiana	19.42	32.16	25.85	2.2
U.S.	15.62	23.23	21.15	1.7

TABLE 1
FATALITY RATES IN LOUISIANA AND U.S. ON ALL PUBLIC ROADS

The statistics show that fatalities in Louisiana are higher than the national average. As alcohol and speeding are considered to be primary contributors to crashes, it might be useful to look at a breakdown of crashes by alcohol and speeding as contributory factors. Presented below in figure 6 is such a breakdown by rural and urban crashes (Schneider and Watson, 1994). It can be seen that speed is a contributing factor in a total of 31 percent of all rural fatal crashes, and in 13 percent of the injury crashes. For urban areas these percentages are 20 and 5 percent respectively.

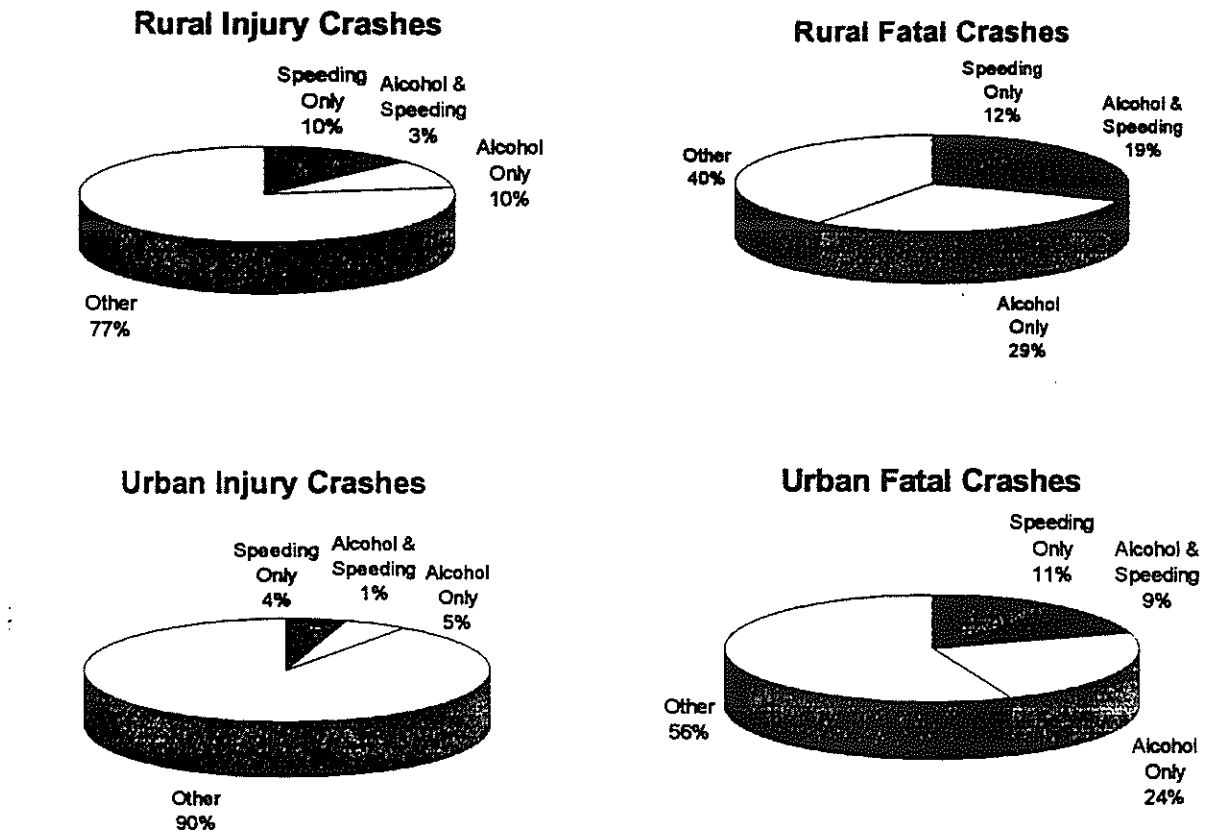

FIGURE 6
SPEED AS A CONTRIBUTORY FACTOR IN ACCIDENTS IN LOUISIANA, 1994

The accident record in Louisiana shows that in terms of both injuries and fatalities, Louisiana has tended to be above the national average. Looking at the record of fatalities on all public roads in the state over the last decade and comparing them to national figures, produces the relationship shown in figure 7. Both display the customary decline in fatality rate and the rate of decline appears to be similar in both cases.

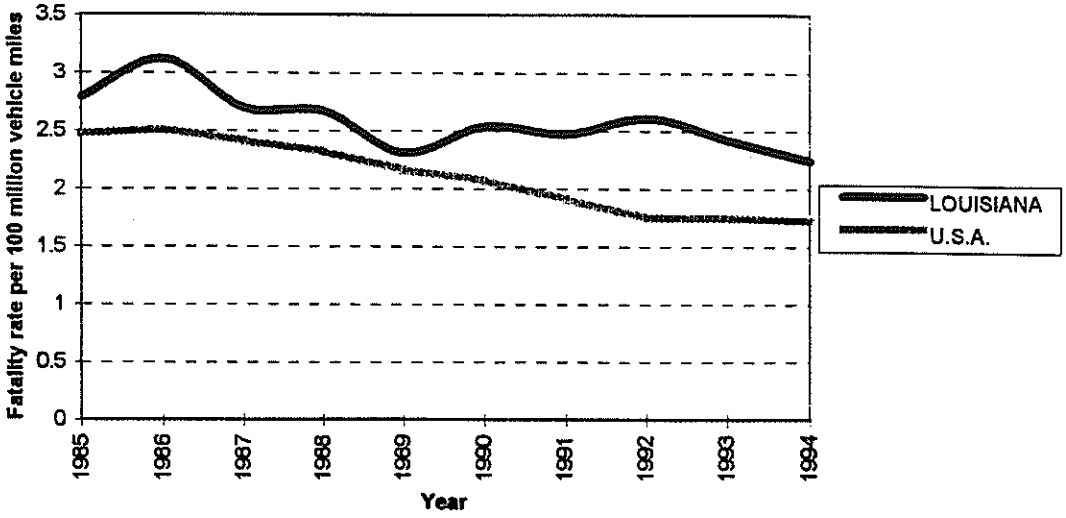

FIGURE 7
FATALITY RATES FOR ALL PUBLIC ROADS IN LOUISIANA AND U.S., 1985-1994

2.5 Opinions and attitudes on speed limits in Louisiana

2.5.1 Attitudes of Drivers to Speed Limits

A survey of 1,100 drivers from Louisiana regarding their characteristics, attitudes and opinions towards speed limits and other highway issues was conducted by the Sunbelt Research Corporation in 1980 for the Department of Public Safety (SRC, 1980). Though the survey is more than 15 years old, some useful insights about the driving public's attitudes, perceptions, and opinions about speed limits can be obtained from that survey.

Approximately 54% of the respondents admitted to usually driving in excess of the speed limit on the interstate system. On other highways, approximately 30% reported habitually exceeding the speed limit. Considering that people do not tend to realize the extent and frequency of their speeding, it is likely that the actual number of speeders were greater than those reported above.

In a related question, respondents were asked to estimate the degree of speeding among motorists at that time. Approximately 69% of the respondents were of the opinion that the majority of motorists exceeded the speed limit during their normal travel. Of those that did not think the majority of motorists were speeding, about 62% were not traveling more than 60 miles per hour themselves. Among those that thought speeding was prevalent, a majority (60.5%) traveled at speeds in excess of 60 miles per hour. Thus, speeders were more likely to ascribe speeding behavior to others than non-speeders were.

As regards the speed at which tickets should start to be issued, 41.4% of the respondents felt that tolerances of less than 5 miles per hour should apply on interstate highways and 56.9% felt that tolerances of less than 5 miles per hour should apply to other highways. Thus, a majority of the drivers appeared to have a tolerance limit of more than 5 miles per hour over the speed limit for the interstate system. A further breakdown of the response to the question showed that only about 30% of the drivers who regularly exceeded 60 miles per hour on the freeway felt that tickets should be issued for speed limit violation of 5 miles per hour or less above the speed limit. Among those that did not regularly exceed 60 miles per hour on freeways, this figure was about 51%. Not unexpectedly, non-speeders want a stricter enforcement of the speed limit law.

On the question about whether the 55 miles per hour speed limit should be changed, almost 67% of the respondents in 1980 did not want the speed limit to be changed. Of those desiring change, about 48% favored 60 miles per hour and about 37% favored 65 miles per hour. Broken into speeders and non-speeders, about 79% of the non-speeders did not want the law to be changed while the corresponding figure for the speeders was only 53%. Interestingly, a majority of even the speeders did not want the speed limit to be changed. The message "speed limit saves lives and gas" seems to have had a significant influence on drivers in Louisiana at that time.

On the question about the medium through which they received the message on the 55 miles per hour speed limit, 63.5% cited television as the source of that message, 13.5 % radio, 9.9% billboards, 5.7% bumper stickers, 4.2% newspapers, and only 3.0% as road signs. Magazines and other sources made up the remainder. Thus, television was by far the most powerful medium of that time.

Age was an important determinant of speeding. Seventy five percent of the speeders were less than 40 years old. Among non-speeders that figure was only about 41%. In the 30-39 age category, about 61% were found to be speeders. On the other hand, in the 40-49 age category only about 41% were found to be speeders. The proportion of speeders declined consistently with age.

2.5.2 Survey among District Traffic Operations Engineers

In anticipation of legislative changes to the existing speed limit laws in Louisiana after the repeal of the National Maximum Speed Limit law, the Planning Division of the Department of Transportation and Development of the State of Louisiana surveyed its nine District Traffic Operations Engineers about raising speed limits. Three questions were asked. The first was whether the 55 miles per hour speed limit on two lane roadways should be raised, and if the answer was in the affirmative, what the new limit should be. The second was whether the 65 miles per hour speed limit on Interstates should be raised, and if so, what it should be raised to. The last question was whether lower limit should be imposed for trucks. The answers obtained from the traffic engineers are shown in table 2.

DISTRICT	Raise 55 mph speed limit on two lane roadways?		Raise 65 mph speed limit on Interstates?		Have lower speed limit for trucks?
	Yes/No	Raise to?	Yes/No	Raise to?	
02	Yes	60 mph	Yes	70 mph	No
03	Yes	60 mph	Yes	70 mph	No
04	Yes	60 mph	Yes	70 mph	No
05	Yes	60-65 mph	Yes	75 mph	No
58	Yes	60 mph	Yes	70 Rural 55 Urban	No
08	Yes	60 mph	Yes	75 Rural 55 Urban	No
61	No	-	No	-	No
62	No	-	Yes	70 mph	No
07	Yes	65 mph	Yes	70 mph	No

TABLE 2
OPINIONS OF DISTRICT TRAFFIC OPERATIONS ENGINEERS

Thus, the survey response shows that most of the traffic engineers support the raising of the speed limits. For two-lane roads their suggestion is to raise the speed limit to between 60 and 65 miles per hour, while for the Interstates the recommendation is for speed limits between 70 to 75 miles per hour. None of the traffic engineers want a separate speed limit for trucks. Also, several of the respondents encouraged the use of engineering studies to reduce speed limits where lower design speeds, road conditions, or severe accident histories warrant them.

3. PRACTICE IN OTHER STATES AND OTHER COUNTRIES

3.1 General practice

Since repeal of the National Maximum Speed Limit on November 28, 1995, thirty-two states have changed their speed limits (Atkinson, 1996a). The majority have adopted 70 miles per hour as the maximum speed limit on controlled access highways although several of the more sparsely populated states chose 75 miles per hour. Montana has elected to have no daytime speed limit for automobiles but has a daytime truck speed limit of 65 miles per hour and a maximum nighttime speed limit of 65 miles per hour for all vehicles.

Figure 8 shows current speed limits in the country. A degree of consistency has developed among states in different regions. The plain and southwestern states have generally adopted higher speed limits. Interestingly, Nevada that had no maximum speed limit prior to imposition of the National Maximum Speed Limit in 1973, has elected to impose a maximum speed limit of 75 miles per hour in the new dispensation. The Midwest and Northeast regions have generally retained 65 miles per hour as their maximum speed limit. Louisiana and South Carolina are alone in the southern region in maintaining a 65 miles per hour speed limit on their rural freeways.

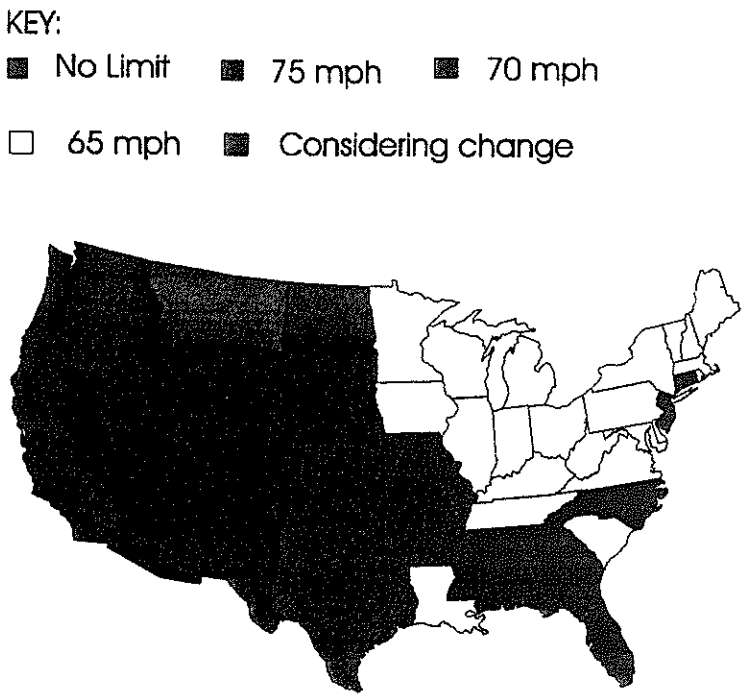

FIGURE 8
DAYTIME SPEED LIMITS ON RURAL FREEWAYS, 1996

3.2 Practice in neighboring states

All three of Louisiana's neighboring states have adopted new speed limits since the NMSL was repealed. Texas passed legislation, prior to repeal of the NMSL, which automatically reinstated earlier speed limits when existing federal legislation was repealed. Arkansas and Mississippi conducted studies before deciding on new speed limits.

The new speed limits in Louisiana's neighboring states are shown in table 3. The speed limits shown apply to rural roads. Speed limits within urban areas are usually set by means of engineering studies although Mississippi has set a statutory urban freeway speed limit of 60 miles per hour

State	Statutory Speed Limit (mph)		
	Controlled access highways	4-lane highways	2-lane highways
Arkansas	autos: 70 trucks: 65	55	55
Mississippi	70	divided: 65 undivided: 55	55
Texas	autos: 70 (day) 65 (night) trucks: 60 (day) 55 (night)	autos: 70 (day) 65 (night) trucks: 60 (day) 55 (night)	autos: 70 (day) 65 (night) trucks: 60 (day) 55 (night)

TABLE 3
CURRENT SPEED LIMITS IN NEIGHBORING STATES

The question of differential speed limits between cars and trucks or between travel during the day or night, is an issue that is addressed in the section 5.3. As can be seen in table 3, differential speed limits are applied in two of Louisiana's neighboring states with Texas having both a day/night and car/truck speed differential.

Accident trends in neighboring states are shown in figure 9. Louisiana is included in the diagram for comparison purposes. Generally, Louisiana has a similar fatality record to its neighbors. The general decline in fatality rate among all states is attributed to safer vehicles, increased use of safety devices, improved roads and emergency services and improved awareness of safety issues among motorists.

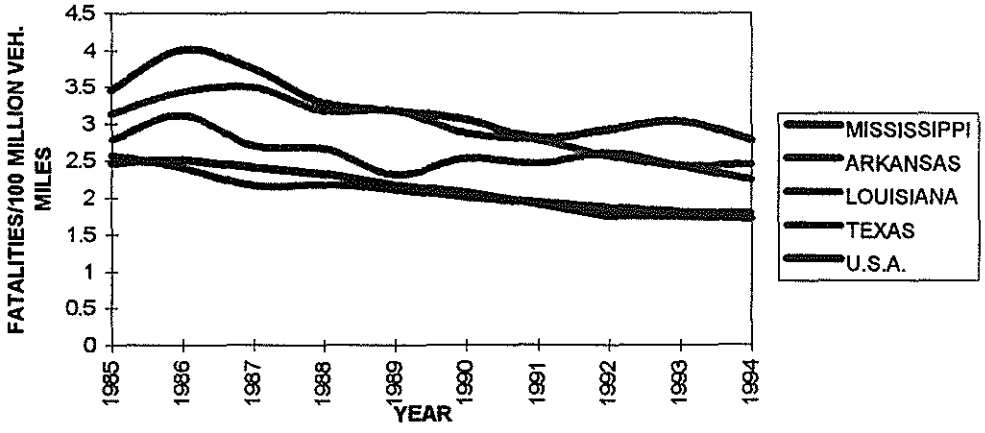

FIGURE 9
FATALITY RATE ON ALL PUBLIC ROADS IN SOUTHERN STATES, 1985-1994

3.3 Practice in other states

Where increased speed limits have recently been introduced, and where measurements before and after introduction of the new speed limit have been made, speed has increased only marginally. In Montana, where daytime speed limits for cars on rural Interstates were totally withdrawn on December 8, 1995, speeds have reportedly increased by only 2 miles per hour (Atkinson, 1996b). South Dakota and Nevada report the speed changes on rural Interstates shown in table 4 (NMA, 1996 and Kiser, 1996). As can be seen, increases in average speed are typically two to three miles per hour for a ten mile per hour increase in speed limit.

State	Speed Limit (mph)		Ave. or Median Speed (mph)		85th Percentile Speed (mph)	
	before (1995)	after (1996)	before (1995)	after (1996)	before (1995)	after (1996)
Nevada	65	75	68.2*	70.6*	75.1	77.1
S. Dakota	65	75	66.0**	68.3**	72.8	76.0

* Median speed
** Average speed

TABLE 4
SPEED CHANGE FOLLOWING CHANGE IN SPEED LIMIT

3.4 International Practice

The existing speed limits in a number of foreign countries are shown in table 5 (Cameron, 1992, FHWA, 1996, p. 20). Many of these countries use the metric system and therefore measure their speed in kilometers per hour. The speed limits in kilometers per hour are shown in parentheses in the table. A list of maximum speed limits for cars in a variety of foreign countries is shown in APPENDIX A.

Among the countries listed in table 5, the highway speed limits average approximately 54 miles per hour while the average speed limit on freeways is approximately 68 miles per hour. While not shown in table 5, it is interesting to note that although there is no general speed limit on autobahns in Germany, posted speed limits of 80, 100 and 120 kilometers per hour regulate the speed on approximately one third of the autobahn network (FHWA, 1996).

Road accident rates in foreign countries are generally higher than those in the U.S. One reason for this is that proportionally more travel occurs on freeways in the U.S. than in other countries and freeways are safer than other types of roads. Fatality rates for some member states of the thirteen-nation European Community in 1991 are shown in table 6 (Nilsson, 1993). Figures for the United States for the year 1990 are included in the table for comparison.

Country	Speed Limit, mph (kph)		
	Urban area	Highway	Freeway
Belgium	31 (50)	56 (90)	75 (120)
Denmark	31 (50)	50 (80)	69 (110)
Finland	31 (50)	50 (80)	63 (100) - 75 (120)
France	31 (50)	.56 (90)	69 (110) - 75 (120)
Great Britain	30 (48)	60 (96)	70 (112)
Greece	31 (50)	50 (80)	63 (100)
Holland	31 (50)	50 (80)	63 (100) - 75 (120)
Italy	31 (50)	56 (90)	69 (110)
Spain	31 (50)	56 (90)	69 (110) - 75 (120)
Norway	31 (50)	50 (80)	56 (90)
Germany	31 (50)	63 (100)	unlimited.
Sweden	31 (50)	50 (80)	56 (90) - 69 (110)

TABLE 5
SPEED LIMITS IN SELECTED FOREIGN COUNTRIES, 1996

Fatalities, rather than injuries or accidents, are shown in table 6 because statistics for fatalities are more reliable than statistics of other forms of accident data.

Australia began a Safety Management Program in 1989 which has proved very successful. It consists of a coordinated program addressing road safety in term of engineering, enforcement and education. In engineering they strive to provide a safe operating environment, set realistic speed limits and provide visual stimulus to support the speed limit with devices such as painted medians to narrow traffic lanes or physical devices on residential streets such as speed humps, roundabouts or physical barriers. In enforcement they have used photo speed measurement to increase the enforcement level without having to increase their personnel. In the state of Victoria, over 500,000 citations are issued annually (approximately 1 in 6 drivers in the state) while in New South Wales a more conciliatory approach has been adopted and only 50,000 have been issued per year (FHWA, 1996). In education, they strive to make speeding socially unacceptable by coordinated publicity campaigns on television, by disseminating information on road safety and by instructional campaigns in schools. Their campaign has been an unprecedented success; from a situation where road fatalities and injuries were increasing annually prior to 1989, in a period of

five years Victoria has more than halved it's fatalities, reduced injuries by 38% and all accidents by 22%. New South Wales has had similar success.

Country	Million vehicle miles traveled	Fatalities	Fatalities per 100 million vehicle miles
Belgium	34,125	1,967	5.76
Denmark	21,882	713	3.26
France	249,375	11,497	4.61
Germany	267,125	8,213	3.07
Greece	15,000	1,738	11.59
Ireland	13,717	463	3.38
Italy	180,000	7,494	4.16
Netherlands	58,806	1,366	2.32
Portugal	19,500	3,294	16.89
Spain	61,974	8,252	13.32
United Kingdom	226,939	5,052	2.23
United States	2,147,501	44,529	2.07

TABLE 6
FATALITY RATES ON ALL PUBLIC ROADS IN EUROPEAN COMMUNITY COUNTRIES, 1990

Holland has conducted research into the use of visual and physical stimuli to reduce speeds. Widening centerline markings, replacing roadside markings with tactile strips and using different roadside marking posts, reduced speed 5 to 10 kilometers per hour and accidents by 36% (FHWA, 1996).

The effectiveness of photo speed measurement relies on being able to hold the owner of the vehicle liable for the speeding infraction, rather than the driver, because of the difficulty of identifying the driver on a photograph. Such legislation has been established in Australia and Holland. Sweden has been unable to pass such legislation and, subsequently, they are required to positively identify the driver; a task which is sometimes difficult to accomplish (FHWA, 1996, p. 34). When legislation has been passed to hold the owner of the vehicle responsible, photo speed

measurement has approved effective in court. In Victoria, Australia, only five cases involving photo speed measurement have been lost in litigation in four years while in Holland 80-90% of the violators detected by speed camera pay fines without going to court.

From observations in Holland, the manpower requirements to conduct speed checking in the normal manner (i.e. speed measurement by radar, stopping of the vehicle and issuing a citation to the driver) took a total of 0.91 person-hours per citation. To achieve the same results using photo speed measurement took only 0.02 person-hours (FHWA, 1996). However, Swedish officials express some concern with photo speed measurement, particularly the time between the offence and the serving of the citation, the difficulty of positively identifying the driver from the picture and high maintenance and repair costs of the equipment. German traffic officials favor laser-video installed in the police vehicle.

Variable message signing allows different speed limits or advisory speeds to be set in response to changing road or weather conditions. In Holland, a Motorway Signaling System which extends over 200 kilometers of motorway allows different advisory speeds to be communicated to the driver in response to impaired visibility, accidents or congestion. In Australia, a fog warning and speed advisory system installed in Sydney uses visibility and the speed of the preceding vehicle to provide speed recommendations to drivers. The systems typically consist of gantries across the freeway at approximately one-half kilometer intervals and costs in the order of $1m/km.

4. IMPACT OF SPEED LIMITS ON SPEED

The purpose of speed limits is, as stated in the Uniform Vehicle Code of 1926, to establish speeds that are "reasonable and safe for a given section of roadway". From a recent survey conducted by the Institute of Transportation Engineers among traffic officials, the two main functions of imposing speed restrictions were seen as "...increasing safety and informing motorists of the reasonable speed for a particular segment of road." (ITE, 1993). However, in making this connection between speed and safety, the assumption is being made that, firstly, speed limits reduce speed and, secondly, reduced speeds lead to improved safety. The first of these assumptions, that speed limits reduce speed, is reviewed below while the second is reviewed in section 5.

The speed a motorist chooses depends on a number of factors besides the posted speed limit. Typically, these factors include road type, road geometry, surrounding land use, weather, visibility, vehicle characteristics, level of enforcement and the attitude of the driver. One of the best ways to identify the impact of speed limits on speed while all other factors are held constant, is to observe speeds immediately before and after a change in speed limit on the same section of roadway. Several such studies have been conducted both locally and internationally.

The Federal Highway Administration commissioned a review of studies in the U.S. in which speeds before and after a speed limit change were observed (FHWA, 1992). Twelve studies, in which a total of 183 road sections in urban and rural settings were observed, showed that

observed speeds change very little with either an increase or a decrease in posted speed limit. Among the observations most appropriate to this study, namely observations at rural sites in which the initial speed limit was between 50 and 60 miles per hour, observations at 21 individual sites showed that speed limit changes up to 10 miles per hour above and 15 miles per hour below the initial speed limit, produced changes in the 85th percentile speed no greater than 4 miles per hour.

Nevada increased the speed limit on it's freeways to 75 miles per hour in the first half of 1996. Using the same observation sites used to monitor and report speeds on 55 mile per hour highways since 1978, the difference in measurements between the first and second quarter of 1996 produced the results shown in figure 10 (Kiser, 1996). The diagram shows that an increase in speed limit of as much as 15 miles per hour resulted in an increase in average speed of no more than 5 miles per hour and an increase in the 85th percentile speed of approximately 2 miles per hour. The fact that the 85th percentile speed increased less than the average speed suggests that speed dispersion on these highways may have also decreased.

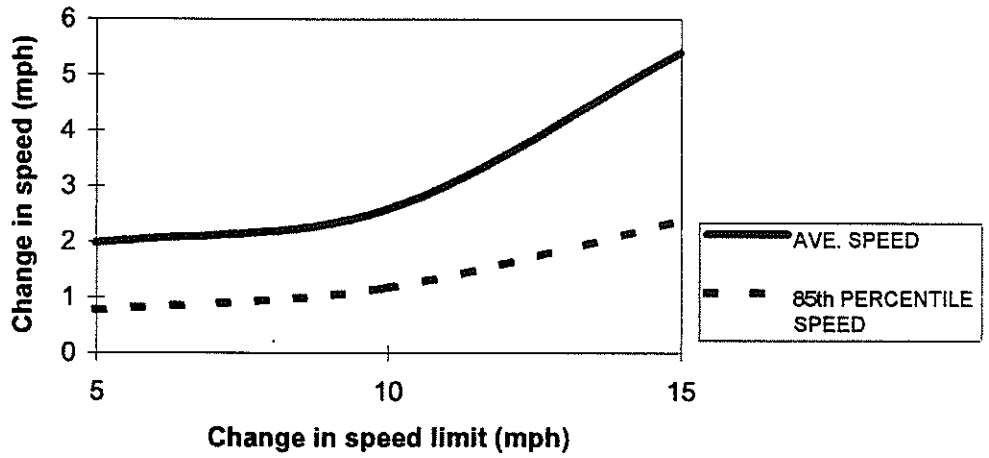

FIGURE 10
INCREASE IN SPEED FOLLOWING AN INCREASE IN SPEED LIMIT, NEVADA, 1996

International experience is similar; when the speed limit on motorways in Sweden were decreased from 130 kilometers per hour (81 mph) to 110 kilometers per hour (69 mph) in the 1970's, observed mean speed decreased between 6 and 8 kilometers per hour (4 and 5 mph) at the observation sites (FHWA, 1996). In Holland, after increasing speed limits on freeways from 100 kilometers per hour (63 mph) to 120 kilometers per hour (75 mph) in 1988, both the average and 85th percentile speeds remained unaltered when measured one and two years later (Roszback and Blokpoel, 1991).

The impact of speed limits on speed is also observable from observations of speed immediately before and after imposition of nationwide speed limits in the U.S. Figure 11 shows the average speed on all U.S. highways (i.e. freeways, arterials and major collectors) during the last 50 years. Following the U.S's entry into the Second World War in December, 1941, a 35 mile per hour speed limit was imposed as a fuel conservation measure. Similarly, the Arab Oil Embargo in 1973 created a situation in which a nationwide 55 mile per hour speed limit was imposed in 1974. Both these cases reduced speed considerably as can be seen from the average speeds in figure 11. In contrast, the increase in speed limit on rural Interstates in 1987 had only a marginal impact on the observed average speed on highways in the country (± ½ mph). However, only 11.7% of total travel took place on rural Interstates at that time, which dilutes the observed change in speed on all highways (FHWA, 1988, table VM-2).

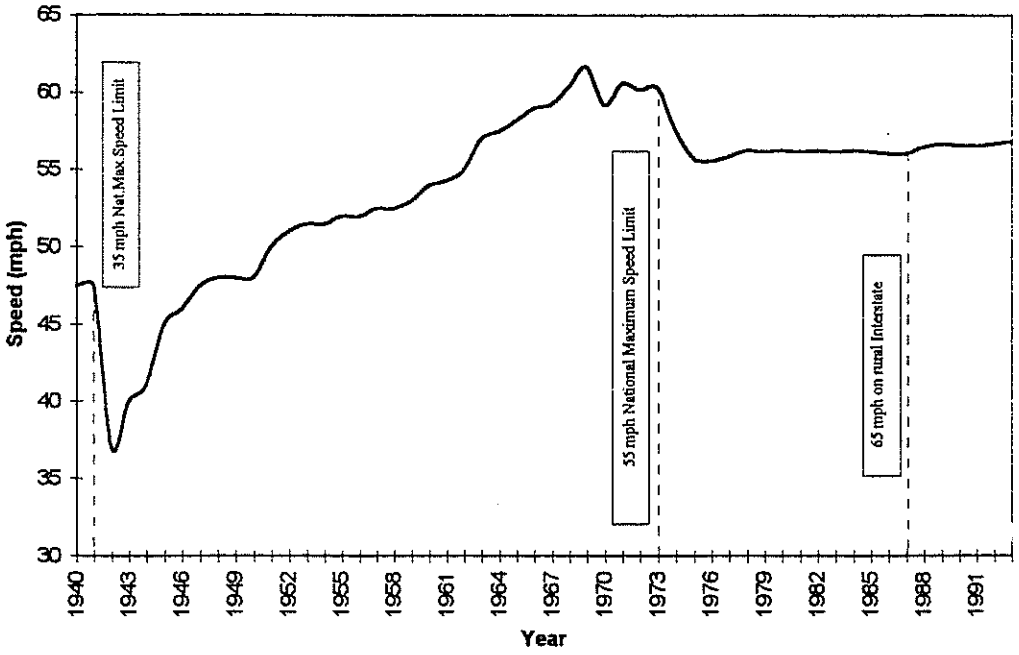

FIGURE 11
AVERAGE SPEED ON ALL HIGHWAYS IN U.S., 1940-1992

5. IMPACT OF SPEED ON SAFETY

5.1 Fundamental relationships

There are physical reasons to expect that speed reduces safety on roads. At high speeds, stopping distances are longer, the distance traveled during the reaction time of the driver is greater, the

opportunity for skidding while taking evasive action or negotiating a curve is increased and the energy embodied in the moving vehicle and its occupants (kinetic energy) is in direct relation to the square of the speed. Many early researchers investigated the relationship between speed and safety and concluded that increased speed reduced safety (Solomon, 1964, Nilsson, 1981, p.7). However, more recent research shows that the relationship is complicated; other factors that affect safety are also influenced by speed which, subsequently, affects the observed relationship. For example, speed dispersion (the variability of speeds of individual vehicles in the traffic stream) has a demonstrated negative impact on safety, and speed affects speed dispersion. As an illustration, raising a speed limit which was unrealistically low will probably reduce speed dispersion while increasing average speed. A possible scenario that could emerge from such a situation is that safety is improved because the beneficial impact of reduced speed dispersion outweighs the negative impact of an increase in speed. Another example where speed increases can produce improved safety is the case where an increased speed limit on a freeway diverts traffic from less safe highways to produce a system-wide reduction in the total number of accidents (Lave, 1995).

Researchers have found it useful to distinguish between the likelihood of being involved in an accident and the consequences of the accident given that the accident occurs (Fildes and Lee, 1993). This distinction is made because countermeasures for each are largely different and evidence suggests that speed affects each of the events differently. To prevent an accident from occurring, attention is given to safe driving practices such as defensive and attentive driving, and to improved vehicle performance such as anti-lock braking systems or improved tire technology. For accident severity, on the other hand, attention is given to reduced speeds and to safety devices that protect the occupant such as safety belts, airbags and vehicle design that absorbs energy by crushing the hood and trunk portions of the vehicle while retaining the integrity of the passenger compartment.

Research appears to support quite conclusively that the severity of an accident is related to speed (Solomon, 1964, Munden, 1967, Bohlin, 1967, Nilsson, 1981). However, the findings are less conclusive regarding the impact of speed on the occurrence of accidents (Fildes and Lee, 1995).

5.2 Impact of speed dispersion on safety

Speed dispersion is the variability of individual vehicle speeds in a traffic stream. Speed dispersion increases the number of potential conflicts among vehicles as they adjust their speed to vehicles impeding their movement or as they attempt to pass them. Research has confirmed that speed dispersion increases the risk of accidents on all types of roads (Solomon, 1964, Cerillo, 1968). Early research showed a dramatic difference in accident risk for vehicles traveling below or above the average speed but more recent, and more carefully controlled research, shows that big differences in accident involvement occur only when vehicle speeds deviate more than 15 miles per hour above or below average speed (Fildes and Lee, 1993). Research conducted by the Research Triangle Institute (RTI) involved relatively accurate measurement of vehicle speeds prior to an accident in contrast to the earlier research which relied on subjective assessments from

accident reports. The RTI research omitted turning vehicle accidents from the analysis because the lower speed at which turning vehicles move is a function of the movement they are negotiating and not the speed at which they choose to travel within the traffic stream (West and Dunn, 1971). The results of the RTI research are summarized in figure 12.

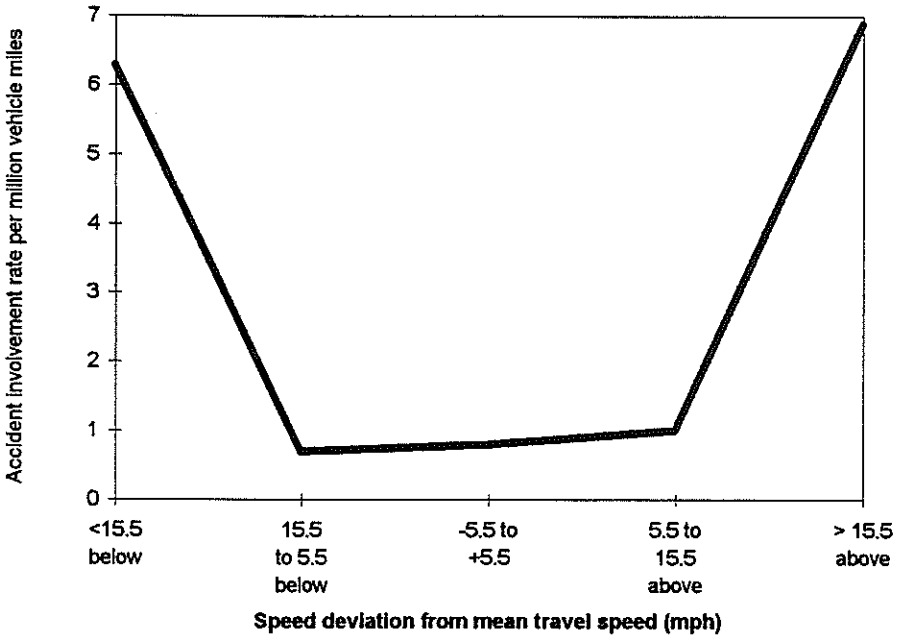

FIGURE 12
IMPACT OF SPEED DISPERSION ON ACCIDENT RATE

The impact of speed limits on speed dispersion is mixed. When the 55 mile per hour National Maximum Speed Limit was introduced in 1974, the standard deviation of speed on Interstates reduced from 9 to 5 miles per hour (TRB, 1984). However, it began to rise again in the 1980's and was approximately 6 miles per hour in 1983 (TRB, 1984). It is not clear what the likely consequences to speed dispersion would be of raising the speed limit on existing highways. From a study conducted in Arizona, only a slight increase in speed dispersion was observed when the speed limit on rural Interstates was raised to 65 miles per hour in that state (Upchurch and Rahman, 1989). On the other hand, in another study, nationwide data of observed average speed and speed variance on all types of highways in 1981 and 1982 showed a negative correlation between average speed and speed variance (TRB, 1984, Appendix A). Thus, increased speed was observed to be associated with reduced speed variance.

In Louisiana, the standard deviation of speeds on urban Interstates has remained stable at approximately 7 miles per hour since 1985 (LDOTD, 1996) even though average speed has risen approximately 4 miles per hour during that period.

5.3 Impact of differential speed limits on safety

Differential speed limits have been used to set different speed limits for trucks versus cars, night travel versus day travel and urban versus rural traffic movement. Eight states (Arkansas, Illinois, Michigan, Montana, Ohio, Oklahoma, South Dakota and Texas) have differential speed limits for cars and trucks and four (Montana, North Dakota, Oklahoma and Texas) have differential speeds for night and day (Atkinson, 1996a). Differential speed limits are used because it is believed that they promote safety by reducing truck-induced accidents or the risk of accidents in general at times or in locations where the risk is the greatest (for example at night or in urban environments).

Night travel is considered more hazardous than day travel due to reduced visibility, greater likelihood of encountering drunken driving, greater incidence of animals on the road and increased likelihood of fatigue among drivers. However, the reduced amount of driving at night tends to counteract the influence of these factors. In Louisiana, accidents that occur at night tend to be more serious but almost double the number of accidents involving injury occur during the day (Schneider and Watson, 1996). The number of road injuries and fatalities that occurred between 6 a.m. and 6 p.m. and between 6 p.m. and 6 a.m. in Louisiana in 1994 are shown in table 7.

Type of accident	Day (6 a.m. - 6 p.m.)	Night (6 p.m. - 6 a.m.)
Fatal crash	309 (41%)	439 (59%)
Injury accident	34,591 (67%)	16,914 (33%)

TABLE 7
ACCIDENTS IN LOUISIANA DURING DAY AND NIGHT, 1994

The introduction of differential speed limits between cars and trucks is usually motivated by the belief that they promote road safety. However, research has been unable to link a significant change in road safety with differential speed limits (Jernigan, Lynn and Garber, 1988, Garber and Gadiraju, 1991). In a recent study, data was drawn from 12 states in which car/truck speed limits of 65/55, 65/60 and 65/65 miles per hour speed limits were in force and accident data was available. No significant difference in injury or fatality rates could be observed between the states with differential or uniform speed limits (Harkey and Mera, 1994). Neither accident incidence nor accident severity appeared to be affected by the presence, or absence, of differential speed limits.

The study by Harkey and Mera (1994) did identify a difference in the type of accidents that occurred at the different sites although the differences were not statistically significant at the 95 percent confidence level. Where differential speed limits were in force, cars appeared more likely

to rear-end trucks than vice versa. With uniform speed limits, trucks appeared more likely to be the vehicle colliding with another vehicle, however, as mentioned earlier, these relationships were not significant at the 95% significance level (Harkey and Mera, 1994).

Differential speed limits promote speed dispersion when the difference between the car and truck speed limit is greater than 5 miles per hour (Harkey and Mera, 1994). Research conducted by the University of Maryland showed that enforced differential speed limits increase speed dispersion within the traffic stream (1974). Increased speed dispersion increases the likelihood of certain types of accidents as discussed in section 5.2.

5.4 Impact of design speed

Road geometry is dictated by the speed for which the road is designed. Greater design speeds allow for greater stopping sight distances and less side thrust when traveling around turns. It has been shown that, holding all else equal, increased design speed improves road safety (Kalivoda, 1995). However, of more significance to this study is the relationship that exists between driver behavior and the difference between the speed limit and design speed. Garber and Gadiraju (1992) found that when speed limits deviated more than 10 miles per hour from the design speed, speed dispersion increases. Intuitively, speed limits well below design speed result in some drivers exceeding the speed limit because they feel it is safe to travel faster while the more law-abiding drivers restrain their speed resulting in increased speed dispersion. Conversely, as speed limits exceed the design speed an increasing proportion of the drivers will begin to feel uncomfortable with the increased speed and speed dispersion will increase. A balance between the perceived safe speed and the posted speed limit will provide the greatest homogeneity of vehicle speeds in the traffic stream.

The design speeds used in road design are based on conservative standards. Tire friction coefficients that apply to wet pavements are used and vehicle performance is based on vehicle characteristics of several decades ago (Krammes *et al.*, 1996). Thus, a design speed can be comfortably exceeded by most modern vehicles under normal conditions.

5.5 Impact of improved vehicle design, road standard and emergency services

The impact that improved vehicle design, road standard and emergency services has had on improved road safety is difficult to determine. Other factors, such as increased awareness of road safety as an important issue or less tolerance for drunk driving may also contribute to the overall level of safety observed in society. Tracking motor vehicle fatalities over the last 50 years shows that while total motor travel has increased severalfold in that period, the annual number of road fatalities has remained virtually constant. Figure 13 shows the relationship. The fatality rate per 100 million vehicle miles was 10.6 fatalities in 1940 and 1.75 in 1992; a sixfold decrease. The highest number of fatalities reached in this century was 54,589 in 1972 while in 1992 it was 39,235 with a consistent and continuing decline in total numbers since 1988.

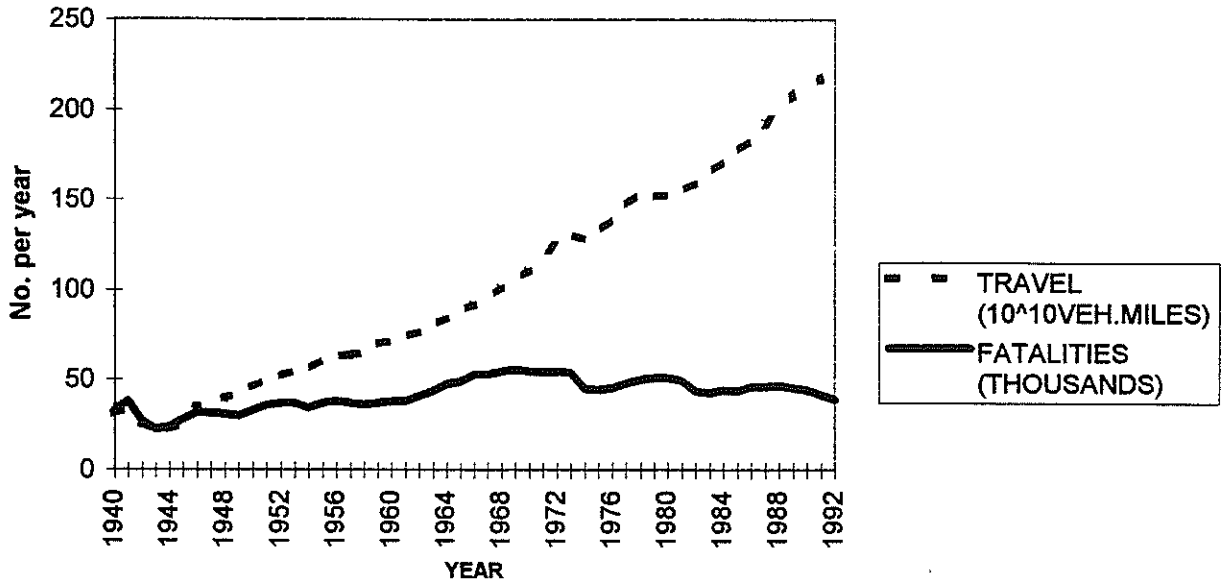

FIGURE 13
MOTOR VEHICLE TRAVEL AND FATALITIES IN THE U.S., 1940-1992

The decline in road fatalities above is the net result of all the factors which affect road safety. Some factors, such as speed or total travel tend to increase the number of fatalities but others such as vehicle design, the introduction of safety devices, improved emergency services and the upgrading of roads all reduce fatalities.

Construction on the Interstate system was begun in the late 1950's and almost 90 percent of the originally planned system was complete by 1970. Approximately 23 percent of all road travel currently takes place on Interstate highways in the nation; 26 percent in Louisiana (FHWA, 1994, table VM-2). Fatality rates are much lower on Interstate highways, and in general, on higher-order roads. As highways are improved and upgraded, safety is promoted.

Fatality rates on different road types (FHWA, 1994, table F1-1) are shown in table 8 below. Generally, the lowest-order roads (local street or road) have the highest fatality rates even although they usually have the lowest speed limits. The highest-order roads have the lowest fatality rate even with the highest speeds because the features of the roads make them tolerant to speed and the conditions which lead to accidents and their severity.

Road Type	Urban	Rural
Local Street	1.59	3.91
Collector Road	1.05	3.30
Minor Arterial	1.25	2.78
Principal Arterial	1.34	2.53
Interstate	0.64	1.17

TABLE 8
FATALITY RATES ON DIFFERENT TYPES OF ROAD

5.6 Impact of driver age on road safety

Accident rates are much higher among young drivers than among older drivers (USDOT, 1979, p. 9). Figure 14 shows the relationship between the observed incidence of road fatalities and the age of the person killed. Clearly, young drivers are much more at risk than most other drivers. Nationwide, the fatal crash involvement rate for females is one-third that for males (USDOT, 1995, p. 10). In Louisiana in 1994, drivers 24 years of age and younger were almost four times as likely to be involved in a fatal accident in which speed was a factor than older drivers (Schneider and Watson, 1996). The general conclusion is that speed-related accidents affect the young, and particularly young males, disproportionately to the rest of the population.

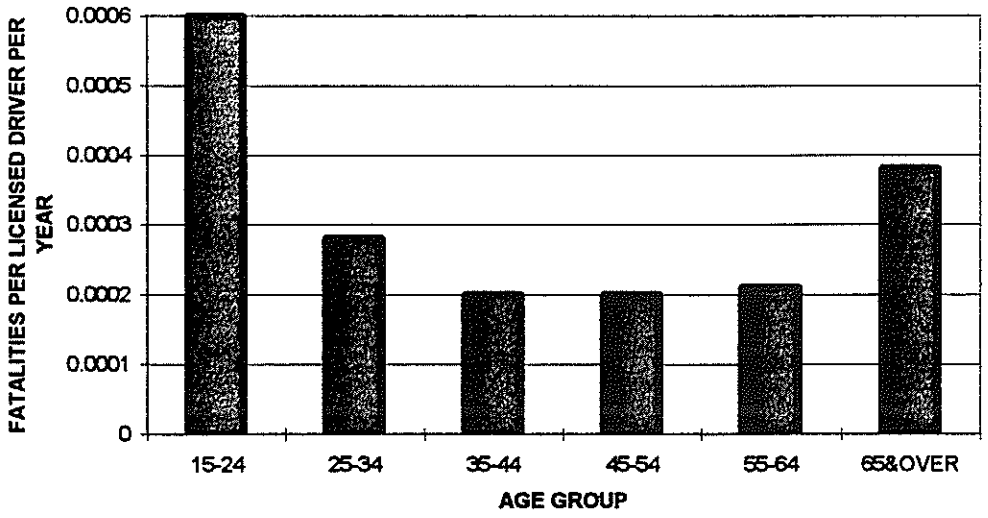

FIGURE 14
FATALITIES RATE BY AGE GROUP

5.7 Impact of law enforcement on safety

The impact that law enforcement has on compliance with speed limits appears, from the research, to be limited and transitory (Cerillo, 1968, USGAO, 1988). Typically, while speed checking is in progress, speeds will adjust downward but will revert to previous levels soon after measurement is terminated (TRB, 1984, p. 147). Motorists get to know likely sites for speed measurement and are watchful when approaching these locations. In addition, each law enforcement officer can only issue a limited number of citations per hour because of the requirement that the citation must be issued to the offending motorist and, subsequently, must be made at the roadside.

Speed limits must be credible if compliance is to be achieved (TRB, 1984, p.136, Fildes and Lee, 1993, p.21). If motorists believe that exceeding the speed limit will not lead to increased risk to themselves or others, they will resent being fined. If discontent becomes widespread, pressure may develop to change the law or influence the application of the law (TRB, 1984, ch. 9).

The perception of motorists to what is an acceptable and safe speed is sometimes affected by what has been called 'speed adaptation'. Speed adaptation is the phenomenon where prolonged exposure to high speed causes a motorist to underestimate slower speeds. Bower (1990) describes speed adaptation as a subjective feeling of a change in speed being greatly enhanced by its contrast to the speed to which the person has adapted. Research in California indicates that "adapted" drivers travel between 1 and 3 miles per hour faster than "unadapted" drivers (Casey and Lund, 1992).

6. IMPACT OF SPEED ON TRAVEL TIME

One of the main benefits of raising the speed limit is seen as the travel time that can be saved. However, travel time savings that can be achieved by raising the speed limit are usually small increments of time to each traveler which they may find difficult to utilize productively. For example, in an analysis conducted by the National Research Council in 1984 it was estimated that the 55 mile per hour National Maximum Speed Limit was incurring additional passenger travel time of less than 3 minutes of travel time in more than half of the person trips made (TRB, 1984, p. 115). Commercial truckers with their longer trips would make larger incremental savings in travel time but, more importantly, they would be getting greater utilization out of their vehicles because they would be able to transport goods further within the regulated time that they could be driving. Those drivers who are paid by distance traveled will be able to earn more. However, operating costs are likely to increase with increased speed and this may offset some of the gains.

Raising the speed limit on Interstate highways in Louisiana from 65 miles per hour to, say, 70 miles per hour will make very little difference to total travel times for most motorists. The average increase in speed that could be expected to follow such an increase in speed limit is approximately 2 miles per hour (based on past experience of the impact of increases in speed limits on speed), which means that over a journey of 100 miles, less than 3 minutes will be saved.

If an increase in speed leads to an increase in the number and severity of accidents, then travel time will also be affected by the delay caused by accidents to other vehicles on the highway. The severity of the accident will affect delay to the extent that serious accidents cause greater delay than minor ones. Miller (1989) estimates that on rural freeways, property-damage-only (PDO) accidents result in about 45 vehicle-hours of delay, injury crashes 70 vehicle-hours of delay and fatal accidents 130 vehicle-hours. In assessing the time benefits of raising the speed limit from 55 to 65 miles per hour on rural Interstate freeways in 1987, Miller (1989) found that the saving in travel time by all motorists balanced out the time lost by those injured or killed in the increased number of injuries and fatalities. Time lost by those injured included recuperation time and time lost due to retained disfunctionalism. Time lost due to death was estimated from the difference between the average age of victims and expected lifespan. He points out that while time savings and costs may balance out, crash victims pay the time costs while road users reap the time benefits, raising an equity issue. However, road users benefitting from the time savings do so in small increments, so it is questionable whether total time savings can be equated with the total time costs of victims.

7. IMPACT OF SPEED ON FUEL CONSUMPTION

Increased vehicle speed results in higher fuel consumption. According to the National Research Council study conducted prior to the increase in rural freeway speed limits in 1987, passenger car fuel consumption is 14 to 31 percent greater at 70 miles per hour than it is at 55 miles per hour (TRB, 1984, p.107). For trucks, a U.S. Department of Transportation study published in 1974 found that fuel consumption rate rose between 9.2 and 12.5 percent when the operating speed increased from 60 to 65 miles per hour (USDOT, 1974, table 4). The vehicle fleet has changed since those studies and engines have become more efficient; between 1970 and 1993, fuel consumption per mile traveled improved by an average of 28 percent for all vehicles on U.S. roads (FHWA, 1995a, p.29). However, the percentage increase in fuel consumption with an increase in speed is not expected to be affected dramatically by these changes and, therefore, we have used the figures above in estimating the increase in fuel consumption in Louisiana resulting from the proposed speed changes.

It is estimated that average speeds on rural Interstates will increase from 65 to 67 miles per hour under the proposed increase in speed limit. This 2 miles per hour increase in average speed is expected to lead to a corresponding increase of 1.9 to 4.1 percent in fuel consumption for cars and 3.7 to 5.0 percent for trucks. Of the 14 percent of all travel that occurs on rural Interstates in Louisiana (FHWA, 1995b, table VM-2), 81 percent are assumed to be by cars or light trucks and the remaining 19 percent by trucks (FHWA, 1995b, table VM-1). These numbers translate to an estimated increase in fuel consumption of 0.21 to 0.45 percent for cars and between 0.11 and 0.15 percent for trucks. Combined they represent an estimated increase in fuel consumption ranging between 0.3 and 0.6 percent.

Most urban Interstates in Louisiana have speed zones established by engineering studies which limit speeds to lower than 70 miles per hour. It is assumed that one-half of the approximately 12

percent of all travel that occurs on urban Interstates will experience a speed increase of 2 miles per hour. On urban Interstates 92 percent of all travel is by cars and light trucks and the remainder is by trucks (FHWA, 1995b, table VM-1). Using these numbers, fuel consumption is expected to increase by between approximately 0.1 and 0.3 percent as a result of an increase in speed on the urban Interstate system.

If the speed limit is increased on multilane divided highways from 55 to 60 miles per hour, average speeds are likely to increase approximately 1.5 miles per hour. Approximately 12 percent of all travel in Louisiana occurs on multilane divided highways. At the national level, approximately 90 percent of all travel on multilane divided highways is by car or light truck while trucks make up the majority of the remainder (FHWA, 1995b, table VM-1). Using the same fuel consumption figures for cars and trucks used before, it is estimated that fuel consumption will increase by between approximately 0.3 and 0.5 percent as a result of the speed limit increase on multilane divided highways.

The total estimated increase in fuel consumption resulting from an increase in speed limits from 65 to 70 miles per hour on freeways and 55 to 60 miles per hour on multilane divided highways is between 0.7 and 1.4. An average value of approximately 1 percent is assumed as being roughly representative of the expected increase in fuel consumption.

8. COST TO CHANGE SPEED LIMITS

The proposed changes in speed limit on Louisiana highways will have a cost impact because, among other things, changes are required to the existing signs that display speed limits. More broadly, a speed limit change can potentially also require the resigning and restriping of no passing zones, redesign of crash cushions or impact attenuators, and redesign of exit and entry ramps from or to the freeway. The impact of the proposed change in speed limits for Louisiana on each of the above items is discussed below.

The proposed change in statutory speed limits for the interstate system will only be applied on sections of the freeways where design speeds permit. On these sections, it is expected that the design of on- and off-ramps will be able to safely handle the speed of entering or leaving vehicles. Where design speed is below the statutory speed limit, it is expected that speed zones will be imposed based on engineering studies. The geometry of ramps in those areas is expected to be sufficient to handle the movement of vehicles to and from streams of traffic that will be traveling at speeds imposed for the speed zones. Thus no redesign of ramps is anticipated as a result of the proposed change in speed limit.

As regards restriping and change of location of warning signs for no passing zones on two lane roads as a result of change of speed limits, no change will be required due to the proposed changes because the speed limit is not changing for this type of facility. Similarly, no changes are anticipated for impact attenuators because it is believed that the design of such elements conform to the design speed of the roadway. Since the speed limit that will be in effect for various

segments of the road system will be in accordance with the design speed, it is not anticipated that any changes will be required for impact attenuators.

The only item that will need to be changed if the speed limit is changed on roads other than two-lane roads, is the speed limit signs. The Department estimates that there are approximately 530 speed signs on the Interstate system in the state. The cost of a new sign is $103 and the cost to overlay an existing sign with new numerals is $39. Labor to replace or overlay a sign is equal at approximately $22 per sign. If we assume that each sign is replaced, the resulting estimated cost to change the speed limits signs on the Interstate system would be $54,590 for material and $11,660 for labor for a total of $66,250.

It is estimated that there are approximately 540 speed limit signs on the 1,345 miles of divided multilane highway in use in Louisiana at the moment. The cost of a new speed limit sign for a divided multilane highway is, because of its smaller size, $63. Installation costs are estimated at $22 per sign. The resulting total cost to replace the speed limit signs on divided multilane highways in Louisiana is $45,900.

If no speed limit change is made on all undivided highways in Louisiana, the total estimated cost of changing the speed limits in the state would be $66,250 plus $45,900 or, $112,150. It is interesting to note that Mississippi estimated the cost of their recent change in speed limits at $100,000.

9. EVALUATION OF COSTS AND BENEFITS OF INCREASED SPEED LIMITS

The costs of increasing speed limits in Louisiana include the cost of changing speed limit signs, an estimated increase of approximately 1% in fuel consumption if speed limits are increased on freeways and multilaned divided highways only and an unknown change in road accidents that can be expected to accompany an increase in speed. The cost to change speed limit signs in Louisiana was estimated at $112,150 above.

The amount that speeds will increase as a result of an increase in the speed limit is difficult to estimate. From numerous studies both nationally and internationally, the increase in average speed for a 5 mile per hour increase in the speed limit is likely to be one to two miles per hour over that which would be observed if no increase were made in the speed limit. This will translate into a marginal increase in the severity of accidents but it is not certain that it would affect the incidence of accidents, if at all.

The benefits of raising the speed limit would be an improvement in the credibility of speed limits, more manageable enforcement and the establishment of a uniform maximum speed limit amongst neighboring states. Time saving benefits are considered negligible because they occur in relatively small increments for most personal trips and some researchers have suggested that time savings are canceled out by the time costs incurred by those motorists who are involved in the increased severity accidents.

10. CONCLUSIONS

The process of driving is an intrinsically dangerous activity. Motorists depend on the judgement, skill and attentiveness of other drivers for their safety and, therefore, accidents will always occur. However, the total cost that road accidents incur on society is enormous[2] and it is important that accidents be kept as low as possible. Statistics show that the young, and particularly young males, are most at risk with respect to road accidents where speed is a factor (Schneider and Watson, 1996, p. 10). Decisions which affect speed should be made carefully.

The records show that speeds on highways are gradually increasing. At the same time, road safety is improving as vehicles improve, more safety devices are brought into use, better emergency services are developed and roads are improved. It is also seen that the motoring public do not, generally, adhere to speed limits. Enforcement has only transitory effects in reducing speed and if enforcement is increased beyond a level that the public consider reasonable, resistance begins to develop which is directed through political channels and the effects are felt in terms of new legislation or lenient treatment in courts. Thus, speed limits must follow public behavior but need to fulfill the role of inhibiting excessive speeding. Surveys suggest that the public support this role of speed limits.

Speed has a demonstrated negative effect on safety in that it increases the severity of accidents. While it is suspected that speed may also contribute toward the incidence of accidents, there are so many other factors that are affected by speed, which simultaneously affect safety, that it is difficult to distinguish the effect of speed on the occurrence of an accident. Thus, the likelihood of an accident occurring may be increased by an increase in speed or, conversely, it may be decreased if, for example, the speed increase takes place on a safer facility and traffic is diverted to it in sufficient numbers. For the scenario of raising speed limits on freeways and divided multilane highways (the safer roads) while other highways are left at a speed limit of 55 miles per hour, there is insufficient evidence to draw clear conclusions of the consequence on safety.

The opinion of District Traffic Operations Engineers in the Department of Transportation and Development regarding an increase in current speed limits is positive. Among the public, in a survey conducted in 1980, only one-third of those surveyed supported an increase in speed limit. However, sentiment has changed as evidenced by the increase in speed observed on the highways since 1980. Neighboring states have all increased their speed limits and increasing the speed limit to 70 miles per hour on freeways in Louisiana would bring it in line with other states in the region.

The costs of increasing the speed limits on freeways and divided multilane highways in Louisiana is the estimated cost of changing signs ($112,150) and an estimated 1% increase in fuel use.

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[2] In 1994, for example, 40,676 persons were killed in road accidents; almost as many Americans as died in action during the entire Vietnam conflict (±55,000). Road accidents in 1990 were estimated to cost $137 billion (USDOT, 1995) and, today, speed-related accidents alone are estimated to cost $23 billion dollars annually (USDOT, 1996).

The benefits of increasing the speed limits are an increase in the credibility of posted values, more manageable enforcement and a consistency in the region. Travel time savings are considered negligible for private motorists and may be offset for truckers by increased operating costs.

International experience suggests that road safety can be improved considerably by coordinated and committed action. In Victoria, Australia, fatalities have been halved and injuries reduced by approximately 40% in five years using a coordinated safety program. Photo speed measurement has allowed them to measure speeds in a much more concentrated manner than before without increasing their personnel. Road safety is promoted on television and in schools and speeding has been made less socially acceptable. Several overseas countries report positively on the use of variable message signs which are used to alter traffic speeds in times of poor visibility, adverse weather conditions or congestion.

The evidence collected in this study suggests that road safety is a very serious social issue and any decision made relating to road safety should be made cautiously. Freeways, and to a lesser extent divided multilane highways, are much safer facilities to travel on than undivided highways. Higher speeds can be negotiated on these high-order facilities with a greater sense of comfort and security. It is possible that, if speed limits are increased on these high-order facilities while leaving the speed limits unaltered on the other roads, that some traffic may be diverted to the higher speed roads. Raising speed limits selectively in this manner would satisfy the greatest need for an increased speed limit, as demonstrated by increased speeds of the traveling public, and yet maintain low speed limits on the most dangerous roads. It is possible that enforcement resources could then be redirected to other safety-promoting issues. Raising the speed limits in Louisiana may provide the opportunity to gain greater acceptance from the public for speed limits on undivided highways. The increased speed limits on freeways and divided multilane highways can be used in publicity campaigns to argue for safer driving behavior from motorists generally and greater adherence to speed limits in areas where speed control is important.

Differential speed limits among cars and trucks have not been shown to promote road safety. When applied to day and night travel or to distinguish general speed limits in urban versus rural areas, they present a problem of being able to determine exactly when each differential speed limit applies. Day and night are not clearly distinguishable at dawn and dusk. While urban boundaries can be posted, it is difficult to maintain meaningful boundaries when urban areas are growing rapidly.

Given that differential speed limits have not been shown to provide a statistically significant improvement in road safety, the cost of their imposition (in extra signs), added enforcement requirements and loss of simplicity for the traveling public, differential speed limits do not appear justified. Speed zones can be used to control speeds in urban areas and warning or regulatory signs can be used to control truck speeds in those areas where it is justified.

11. RECOMMENDATIONS

Following review of the material presented in this report and upon evaluation of the factors having a bearing on speed limits in Louisiana, it is recommended that the following changes to the speed limits in the state be adopted:

(i) the new statutory speed limit on urban and rural controlled access highways in Louisiana be 70 miles per hour,

(ii) however, wherever the design speed, road geometry, surrounding land use or accident history suggest that portions of a highway warrant a lower speed limit, speed zones, established by the Department of Transportation and Development through an engineering study, should be used to reduce speed limits on those sections of the highway that warrant it,

(iii) the new statutory speed limit on divided multilane highways (i.e. highways with two or more lanes divided by a median), having partial or no control of access, be 60 miles per hour,

(iv) the statutory speed limit on all other highways (i.e. all highways not having a median) remain at the current statutory speed limit of 55 miles per hour,

(v) there be no differential speed limit between trucks and automobiles and day and night travel in Louisiana.

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Glossary of Terms

85th percentile speed[3] - the speed at or below which 85 percent of the sample of free-flowing vehicles are traveling.
Advisory Speed - the speed at which a specific feature along the street or highway can be safely traversed.
Arterial Road - a highway primarily for through traffic, usually on a continuous route (Highway Capacity Manual, 1965, p. 8).
Average Speed - The arithmetic average of observed vehicle speeds.
Basic speed law - no person shall operate a motor vehicle at a speed greater than is reasonable and proper for the prevailing conditions.
Collector Road - a road that serves as the major route of access and egress to local streets.
Controlled Access Highway - a highway to which access is gained only at such points and in such manner as determined by the public authority having jurisdiction over the highway.
Design Speed - the maximum safe speed that can be maintained over a specified section of highway when conditions are so favorable that the design features of the highway govern (AASHTO definition).
Divided Highway - a highway divided into roadways by a median, physical barrier, or clearly indicated dividing section so constructed as to impede vehicular traffic (Louisiana Revised Statutes 32:1, Definitions).
Freeway - a multilane divided highway with full control of access.
Median Speed - if observed speeds of vehicles are arranged in ascending or descending order of magnitude, the median speed of the observed sample is the speed of that vehicle for which as many vehicles were observed to travel faster than it as there were those that were observed traveling slower. In the case of an equal-numbered sample, the average speed of the two vehicles in the middle of the range are taken.
Multiple-lane highway - a highway with two or more clearly marked lanes for traffic in each direction (Louisiana Revised Statutes 32:1, Definitions).
Pace - the 10 miles per hour speed range which contains the largest number of observed vehicles.
Photo Speed Measurement - vehicle speed measurement in which the vehicle is identified by means of a photograph of the vehicle.
Speed limit - the maximum (or minimum) speed permitted on a section of street or highway. This

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[3] The 85th percentile speed is widely used among traffic engineers as the maximum speed most prudent drivers choose to travel. Warren L. Kessler wrote in 1959, "the 85-percentile speed is based upon the theory that the majority of motorists traveling upon a city street or highway are competent drivers and possess the ability to determine and judge the speed at which they operate safely; further, that motorists are responsible and prudent persons who do not want to become involved in an accident and desire to reach their destination in the shortest possible time".

limit might be statutory or it might be established within a speed zone on the basis of an engineering study.

Speed zone - a section of street or highway where a speed limit different from the statutory speed limit has been established.

Speed adaptation - the sensory perception of underestimating speed when emerging from a high-speed environment. A phenomenon commonly experienced by drivers immediately upon changing from a high-speed to a lower-speed facility.

Tolerance - the numerical difference between the speed limit and the minimum speed at which enforcement action is taken.

Volume-to-Capacity Ratio (V/C) - the ratio of traffic volume on a highway in a given period of time to the maximum traffic volume that highway can carry during the same period of time.

APPENDIX A

MAXIMUM LEGAL ROAD SPEEDS FOR PASSENGER CARS IN FOREIGN COUNTRIES

International Speed Limits

1992

Maximun Legal Road Speeds for Passenger Cars:

Barbados	37 mph	60 kph	
Monaco	37 mph	60 kph	
Bahamas	40 mph	65 kph	
Malta	40 mph	65 kph	
Iceland	43 mph	70 kph	
Sri Lanka	45 mph	72 kph	
Costa Rica	50 mph	80 kph	
Dominican Republic	50 mph	80 kph	
Egypy	50 mph	80 kph	
Fiji	50 mph	80 kph	
Singapore	50 mph	80 kph	
Tanzania	50 mph	80 kph	
Venezuela	50 mph	80 kph	
Jamaica	50 mph	81 kph	
Irish Republic	55 mph	89 kph	
Andorra	56 mph	90 kph	
Israel	56 mph	90 kph	
Norway	56 mph	90 kph	
Romania	56 mph	90 kph	
Turkey	56 mph	90 kph	
Argentina	62 mph	100 kph	
Cyprus	62 mph	100 kph	
Denmark	62 mph	100 kph	[1]
Greece	62 mph	100 kph	
Japan	62 mph	100 kph	
Kenya	62 mph	100 kph	
South Korea	62 mph	100 kph	
Morocco	62 mph	100 kph	
New Zealand	62 mph	100 kph	
Thailand	62 mph	100 kph	
Tunisia	62 mph	100 kph	
Australia	68 mph	110 kph	[2]
Canada	68 mph	110 kph	[3]
Czechoslovakia	68 mph	110 kph	
Mexico	68 mph	110 kph	
Poland	68 mph	110 kph	
Sweden	68 mph	110 kph	[4]
United Kindom	70 mph	113 kph	[5]
Belgium	75 mph	120 kph	
Bulgaria	75 mph	120 kph	
Finland	75 mph	120 kph	
Hungary	75 mph	120 kph	
Luxembourg	75 mph	120 kph	
Netherlands	75 mph	120 kph	
Portugal	75 mph	120 kph	
Spain	75 mph	120 kph	
South Africa	75 mph	120 kph	
Switzerland	74 mph	120 kph	
Austria	81 mph	130 kph	
France	81 mph	130 kph	[6]
Italy	81 mph	130 kph	[7]
Germany	Unlimited		[8]
India	Unlimited		
Philippines	Unlimited		[9]

Notes:
Prior to their disintehration, the Soviet Union allowed a maximum speed of
80 kph (56mph) and Yugoslavia allowed a maximum speed of 120 kph (75mph)
[1] 80 kph (50mph) in the Faroe Islands
[2] Allowed in Tasmania, South Australia and Western Australia;
100 kph (62mph) in Victoria, New South Wales, Queensland and the Northern Territory
[3] Allowed in Alberta; 100 kph (62mph) in the other provinces
[4] Reduced to 90 kph (56 mph) from mid-June until mid-August
[5] Allowed in England, Scotlamd, Wales and Northern Ireland;
60 mph in Hong Kong, 50 kph (31mph) in Gibraltar
30 mph in the Virgin Islands and 20 mph in Bermuda
[6] Reduced to 110 kph (68mph) in rain, snow, etc.
[7] Reduced to 110 kph (68mph) on weekends and during certain holiday periods and at all times for passenger cars under 1100 cc engine capacity
[8] 100 kph (62mph) in eastern Germany
[9] 60 mph according to the posted signes, however, enforcement is nonexistent

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Data gatherd by NMA Member Alan Saeger
Source: May/June 1992 NMA News

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- States' Attitudes Toward Speed Limits

Related Pages

- Speed Limits

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APPENDIX B

DRAFT LEGISLATION TO RAISE THE STATUTORY SPEED LIMIT IN LOUISIANA

AN ACT

To amend and reenact R.S. 32:61 and R.S. 32:62, relative to maximum speed limits; to increase the maximum speed limits on the Interstate and controlled access highways, multi-lane highways and all other highways; and to provide for related matters.

Be it enacted by the Legislature of Louisiana:

Section 1. R. S. 32:61 and 32:62 are hereby amended and reenacted to read as follows:

§61. Maximum speed limit

~~A. No person shall operate or drive a vehicle on any highway of this~~

~~state, excluding Interstate highways, in excess of fifty-five miles per hour; however, if national speed limits are increased to an amount in excess of fifty-five miles per hour, the secretary is authorized to increase the maximum speed limit provided in this Section to a speed limit not in excess of such national speed limit.~~

~~B. No person shall operate or drive a vehicle on any Interstate highways of this state in excess of sixty-five miles per hour.~~

A. No person shall operate or drive a vehicle in excess of seventy miles per hour on the Interstate and controlled access highways of this state.

B. No person shall operate or drive a vehicle in excess of sixty miles per hour on multi-lane divided highways, other than the Interstate or controlled access highways.

C. No person shall operate or drive a vehicle in excess of fifty-five miles per hour on highways of this state, other than those affected in Sections A and B above.

§62. Maximum speed limit; certain vehicles

~~A. (1) No person shall operate any freight carrying vehicle upon the highways of this state, excluding Interstate highways, at a speed in excess of fifty-five miles per hour; however, if national speed limits are increased to an amount in excess of fifty-five miles per hour, the secretary is authorized to increase the maximum speed limit provided in this Section to a speed limit not in excess of such national speed limit.~~

~~(2) No person shall operate any freight carrying vehicle upon the Interstate highways of this state at a speed in excess of sixty miles per hour.~~

A.~~B.~~ Forty-five miles per hour shall be the maximum speed at which a person shall be permitted to drive a vehicle which is towing a mobile home; however, when any such mobile home is not less than fifteen feet or more than thirty-two feet in length and is equipped with brakes or when such a mobile home is less than fifteen feet in length and is not equipped with brakes, a person may drive a vehicle towing any such mobile home at a speed not in excess of fifty-five miles per hour at any time between sunrise and sunset and not in excess of fifty miles per hour at any time between sunset and sunrise. ~~however, if national speed limits are increased to an amount in excess of fifty five miles per hour, the secretary is authorized to increase the maximum speed limit provided in this Subsection to a speed limit not in excess of such national speed limit.~~

B.~~C.~~ No person pulling or towing upon any highway of this state, with another vehicle, any vehicle designed, equipped or intended to operate under its own power shall operate the towing vehicle at a speed in excess of forty-five miles per hour; except that a person operating a tow truck meeting the requirements of R.S. 32:1711 et seq. may operate at the posted speed limit.

C.~~D.~~ No person shall operate a school bus at a speed in excess of 55 miles per hour when transporting children, provided however, that the driver of a school bus transporting children under conditions which require frequent stops to receive and discharge such children shall not operate such school bus at a speed in excess of 35 miles per hour.

Section 2. All laws or parts of laws are hereby repealed.

Section 3. This Act shall become effective upon signature of the Governor.