

Police Traffic Services in the 21st Century

Proceedings of a seminar sponsored by the
National Highway Traffic Safety Administration

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“The road to quality in the 21st century is paved by the innovative people and technologies of the 20th century.”

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Marilena Amoni	Director, NHTSA Office of Traffic Injury Control Programs
Brian Traynor	Division Chief, NHTSA Police Traffic Services Division
Jim Fell	Division Chief, NHTSA Research and Evaluation Division

Police Traffic Services: A Vital Function Prepares for the Future

Traffic enforcement has long been a mainstay of the police profession. Almost as soon as there were cars, a mechanized police service began enforcing traffic laws. Recently, however, increasing community demands on law enforcement agencies, rising crime rates, and shifting priorities have begun to direct resources away from traffic enforcement.

That trend is risky. Why? One of the most effective tools in a law enforcement agency's repertoire is the alert patrol officer. Consider the following:

- The Oklahoma City bombing was solved as a direct result of a routine traffic stop.
- One of the largest marijuana seizures ever in Los Angeles resulted from a routine traffic stop for expired tags.

Besides solving crimes, traffic enforcement works to reduce the huge human and financial cost of automobile crashes. More people are killed each year in traffic crashes (a fatality every 13 minutes) than by murder (one every 21 minutes). In 1994, America's law enforcement officers arrested an estimated 1,384,600 drivers for DUI/DWI. How many vehicular homicides were prevented by taking those drivers off the road? In addition, traffic crashes in 1995 cost more than \$150 billion—about \$580 for every man, woman, and child in the United States. ***De-emphasizing traffic enforcement would seriously hamper the ability of the police to detect and solve crimes, apprehend criminals, prevent crashes, and save lives.***

Seat belts, air bags, other restraint systems, and anti-lock brakes have significantly contributed to reducing injuries and deaths from traffic crashes. But these technological advances are only a step in the process. Continued improvements in vehicle design are necessary to protect occupants, along with education and behavior modification.

The public needs to understand that traffic crashes, injuries, and fatalities are not some necessary by-products of motor vehicle transportation. The public should also learn to view traffic enforcement not primarily as a revenue generator, but rather as an important part of community policing.

Effective and ongoing traffic enforcement is a key factor in improving or maintaining a community's quality of life. In fact, as crime increases and more demands are placed on law enforcement agencies, the importance of effective traffic enforcement rises.

As Dr. Noel Bufe, director of the Northwestern University Traffic Institute, noted in his opening remarks at "Police Traffic Services in the 21st Century," the United States has passed through agricultural and industrial phases and now inhabits an information age. The country has traded horsepower for brain power.

Like the rest of society, traffic enforcement has come to rely less on the physical and more on information. By the end of 1995, the FBI's National Crime Information Center system was receiving 1,613,000 queries a day (1,120 per minute), about 90 percent of them from patrol officers. Technology has allowed the officer on the street to identify wanted persons and stolen vehicles with increasing speed. By mid 1996, greater use of mobile data terminals had increased daily inquiries by 120,000.

Technology will have an even greater impact on the quality of police traffic services in the 21st century. By supporting officers' basic detection skills, technology will improve their ability to catch criminals and enforce the law.

However, to realize those benefits, law enforcement agencies will have to deal with two vital issues: finding ways to obtain state-of-the-art technology, and training veteran officers in the use of that technology.

Other factors, too, will raise challenges and opportunities for police traffic services. Among them are funding issues, shifting demands for police services, and projected increases in registered drivers and traffic fatalities.

Law enforcement organizations will have to refocus traffic enforcement to respond to the coming changes. This report is meant to help agency administrators, public safety advocates, and others with an interest in traffic enforcement develop strategies to maintain and improve traffic services as we move into the 21st century.

September 1996 Seminar

Background

In fall 1995, the Police Executive Research Forum of Washington, D.C., organized for the National Highway Traffic Safety Administration (NHTSA) a national seminar to discuss the factors that would affect the delivery of police traffic services in the 21st century.

The seminar brought together traffic safety experts and law enforcement administrators (from various types and sizes of state and local law enforcement agencies) to discuss the delivery of police traffic services in the next century.

The seminar was held September 28-30, 1996, in Reno, Nevada, with 31 persons in attendance. (Biographies are presented in Appendix A.)

Prior to the seminar, those who would attend were given a list of potential issues developed from NHTSA materials and asked to prioritize them. The responses to that survey helped define the topics for the sessions. (Survey responses are tallied in Appendix B.)

The participants also wrote issue papers on (a) the present status of police traffic services and (b) goals and objectives for the 21st century. (Issue papers are attached as Appendix C.)

Overview

The seminar began with opening remarks by Major Dan Hammack of the Nevada Highway Patrol and Marilena Amoni and Brian Traynor of NHTSA. Next came overview presentations designed to frame the major issues for discussion. Dr. Bufo gave the keynote address, "Benchmarking and the Futurist's View." Fred Small of the Federal Highway Administration (FHWA) presented an overview of the federal highway system, describing how it evolved to its present form and summarizing its objectives. Finally, Jim Fell of

"In the early '80s, almost 60 percent of our traffic fatalities were alcohol-related. About 25,000 people were killed. That's now down to 40 percent and 17,000 alcohol-related deaths. That's tremendous progress."

**Jim Fell, Chief
Research and Evaluation Division
Traffic Safety Programs
NHTSA**

NHTSA described current traffic safety enforcement-related research and the status of several research projects.

A general discussion period followed. The first topic was the present status of police traffic services in the United States. Discussion centered on the priority given to traffic efforts in the overall delivery of law enforcement services. The participants generally agreed that many people underestimate traffic enforcement's potential impact on crime reduction and its importance in evolving community policing strategies.

Some law enforcement executives and others may need to be educated on traffic enforcement's importance. In addition, participants felt those patrol supervisors (typically sergeants) need to be better trained about the central importance of traffic enforcement and its role in crime reduction. Too often, patrol supervisors view traffic enforcement as filler, something to do when calls for service are slow, rather than a valuable function in its own right.

The next topic was traffic enforcement's reputation, between many government leaders and citizens, as primarily a revenue generator. That reputation must be changed. Police are not stopping drivers just to raise money. However, current monies budgeted or dedicated to support traffic-related law enforcement activities are lacking.

Also, discussed was the public's lack of compliance with traffic laws. The prevailing view is that driving beyond the speed limit is not dangerous. That view must be changed. People have come to understand that driving under the influence of alcohol is dangerous and wrong. They need to develop the same understanding about driving too fast.

After this introductory exchange, participants identified a wide range of issues affecting the delivery of police traffic services. They also discussed ways of generating revenue, cutting costs, and securing federal assistance.

Once general issues had been identified, participants undertook to develop a mission statement and a vision statement for police traffic services in the next century. Once those statements were developed, participants outlined the goals and objectives that would be needed to accomplish the mission.

The final step was to take the issues that had been identified and, with the mission, vision, and goals in mind, make practical recommendations that law enforcement executives could use to improve their delivery of police traffic services.

NOTE: Throughout this document the term's law enforcement agency and police traffic services are used to refer to all police and sheriff agencies and other enforcement agencies that are or should be conducting traffic enforcement.

Participants

Listed below are the persons who participated in this seminar. Those persons who were invited but unable to attend are listed in **Appendix D**.

Ms. Marilena Amoni, Director
Office of Traffic Injury Control Programs
National Highway Traffic Safety Administration

Captain Alvin Bishop
Wisconsin State Police
(representing the National Organization
of Black Law Enforcement Executives)

Dr. Noel C. Bufe, Director
Northwestern University Traffic Institute

Mr. Joseph Cindrlich, Administrator
Region IX - National Highway Traffic Safety Administration
San Francisco, California

Captain Bob Collins
Independence (Missouri) Police Department

Sgt. David Combs
Traffic Law Enforcement Division
National Highway Traffic Safety Administration
(Washington State Patrol)

Mr. Paul Corbin
Highway Safety Administrator
Nevada Department of Motor Vehicles and Public Safety

Chief J. Stephen Cox
Leawood (Kansas) Police Department

Col. Lawrence Drager
Deputy Director, Operations
Illinois State Police

Lt. Col. Raymond G. Dutcher
New York State Police

Mr. Jim Fell, Chief
Research and Evaluation Division
Traffic Safety Programs
National Highway Traffic Safety Administration

Chief George M. Ferris
Ft. Meade (Florida) Police Department

Assistant Chief William Georges
Albany (New York) Police Department

Major Dan Hammack
Nevada Highway Patrol

Chief Michael J. Heidingsfield
Scottsdale (Arizona) Police Department

Assistant Chief Maurice King
Washington State Patrol

Mr. Harlin McEwen
Deputy Assistant Director
Criminal Justice Information Services
Federal Bureau of Investigation

Sgt. Deb Meisinger
Traffic Law Enforcement Division
National Highway Traffic Safety Administration
(Illinois State Police)

Mr. Garrett Morford

Special Assistant to the Director
Office of Traffic Injury Control Programs
National Highway Traffic Safety Administration

Chief Dennis Nowicki

Charlotte- Mecklenburg (North Carolina) Police Department

Chief Daniel E. Robinson

Lincoln Township (Michigan) Police Department

Assistant Chief Charles San Marco

St. Petersburg (Florida) Police Department

Chief Annette M. Sandberg

Washington State Patrol

Mr. Fred Small, Team Leader

Systems and Safety Applications
Federal Highway Administration

Major Arthur R. Smith

Baltimore (Maryland) Police Department

Commander Gary Smith

Temple (Texas) Police Department

Commander John Sturner

St. Paul (Minnesota) Police Department

Mr. Earl Sweeney, Director

New Hampshire Police Standards and Training Council

Mr. Brian Traynor, Chief

Traffic Law Enforcement Division
National Highway Traffic Safety Administration

Mr. Donald Uelmen

Region IX - National Highway Traffic Safety Administration
San Francisco, California

Col. Lonnie J. Westphal, Chief

Colorado State Patrol

Project Administrators:

Mr. Clifford L. Karchmer, Associate Director

Sgt. Jeffrey L. Pauley, Consultant

Police Executive Research Forum

Washington, D.C.

Seminar Findings

Seminar participants took on the ambitious task of setting a direction for police traffic services in the 21st century. That task required developing a mission, setting objectives, and recommending strategies. The mission development process consisted of two tasks: (1) formulating a *vision* of where participants wanted to be, and (2) articulating a *mission* that would help focus efforts to realize the vision.

This section identifies the

- vision,
- mission,
- goals and objectives,
- issues,
- recommendations

that seminar participants developed for traffic enforcement as it enters the 21st century. Interested individuals and groups can use these findings to develop strategies for success.

Vision Statement

A key component of this direction setting effort was the development of a vision statement. That vision was to represent the fundamental purpose and aim of police traffic services in the next century. After much discussion, the statement below was agreeing too as a basic guiding principle:

Police traffic services in the 21st century will maintain and improve its status as an essential element of the policing function in order to contribute to the overall quality of life in our communities.

Mission Statement

Next, participants developed a mission statement, which is a declaration of how the vision should be attained. The following is what they determined:

The mission of police traffic services in the United States is to reduce the number and severity of traffic crashes, deter and detect crime, and increase the efficient use of roadways.

Goals and Objectives

A valuable outcome of this seminar was the establishment of four major goals to be advanced by police in the course of delivering improved traffic services. For each major goal, several objectives were identified as essential for achieving it. The goals and objectives are presented below in the order discussed. All were deemed to have equal weight.

1. *To improve quality-of-life issues through police traffic services.*

This goal is best accomplished through the following efforts:

- Crash reduction
- Criminal interdiction as a by-product of efficient traffic enforcement

2. *To improve the public and official perception of the advantages of police traffic services in crime control, crash, and injury management.*

For success in this goal, it is essential to employ a variety of approaches, including the following:

- Public outreach
- Proactive approach to enforcement
- Traffic related performance measures for enforcement personnel
- Partnership development
- Improvement of public perception
- Better use of local data to measure quality-of-life issues and link them to crash and injury management issues

3. *To utilize state-of-the-art management and training techniques, technology, research, innovation, information, and evaluation to enhance the quality of police traffic services.*

This goal is to be achieved through several means:

- Increasing management and leadership training for police executives and mid-level managers.
- Improving law enforcement's traffic-safety relationship with the media
- Sharing information internally and externally at all levels
- Exploring and securing alternative funding sources
- Acquiring and sharing resources

“We need to have police traffic services not just for highway safety but for criminal interdiction. That to me is the key.”

Chief Lonnie Westphal
Colorado State Patrol

4. *To be proactive in identifying and adjusting to traffic safety issues and their relationship to other policing issues.*

Here are the objectives for this goal:

- Data management
- Community involvement
- Interagency cooperation and information sharing
- Internal and external education and training

Issues

Listed below are the six issues that seminar participants determined would affect the delivery of police traffic services in the next century.

1. *Continued demand for the further diversion of police personnel from traffic services to crime-fighting activities.*

The demand for police services is likely to rise because of improvements in enforcement technology, which can create an impression of police omnipresence. It is time for agency administrators to reevaluate how and what services are provided to the public.

- 2. Less federal funding for crime and traffic safety programs, a greatly reduced federal role in those areas, and an increased drain on state and local resources.*

The lack of a formidable traffic enforcement presence with Congress and in many state legislatures has resulted in the weakening of many laws and the redirection of funds away from law enforcement. Law enforcement administrators must seek out alternative funding sources and partners and develop creative strategies to carry out programs. This issue has also resulted in a need for better management of law enforcement agencies in order to do more with less.

- 3. Increasing availability of new technology applicable to law enforcement, such as in-car video, computerized off-site training, and notebook and clipboard computer systems.*

New technology, though useful, can raise new challenges: administrators' and politicians' inflated expectations of technology; lack of radio frequencies for technological applications; the need to train officers in new technologies; the cost of new technology; and the low-bid syndrome, which often fails to provide the best equipment.

- 4. Static levels of police personnel with static or reduced police budgets.*

Agencies need to sensitize legislators at all levels to the implications of static funding. It will become necessary to form public-private and other partnerships and develop new leadership strategies to address this issue. Law enforcement administrators will likely be forced to examine several issues: the level and method of service delivery, innovative management techniques, and consolidation and privatization of services.

- 5. A potential increase in the number of traffic fatalities and injuries, although the fatality rate per vehicle mile traveled will remain constant or decrease slightly.*

Several factors are likely to raise the number of traffic fatalities and injuries: increasing life expectancy, increasingly aggressive drivers, and the divergence between younger and older drivers and vehicle types.

6. *Continued increases in the driver and registered vehicle populations.*

An increasing life span will contribute to a rise in the number of drivers and vehicles. On the other hand, several factors will tend to decrease the number of drivers and vehicles: telecommuting, flex time, home industry, and mass transportation.

Additionally, participants identified some lesser issues that may affect the overall ability of police agencies to provide traffic services:

- Many roads and bridges continue to deteriorate.
- The mix of vehicles is becoming increasingly diverse.
- The population is changing and shifting in various ways.
- The number of fraud cases related to traffic crash is growing.
- Traffic fines are not always used to support traffic enforcement but should be.
- Administrative hearings often increase police court costs.
- Many localities are not appropriately dealing with chronic offenders.
- Long processing time has contributed to a reduction in DUI arrests.

“Americans seem to accept 40,000 traffic deaths a year as inevitable but are outraged that we cannot prevent the fewer than 20,000 homicides yearly. Is dying in a motor vehicle ‘less dead’ than being murdered, or do we have a perception problem?”

Capt. Bob Collins
Independence (Missouri) Police
Department

- Safety management systems at all levels should be more sympathetic to law enforcement agencies' needs, involving them in policy development and priority setting. There should be maximum involvement from law enforcement in the development of Intelligent Transportation Systems.
- Traffic signs and markings are not consistent across the country.
- The 911 system is often misused.

Recommendations

Participants discussed each issue in depth and identified possible solutions, which are grouped below in six major topic areas. These are recommendations for mitigating problems and increasing the effectiveness of the delivery of police traffic services. Law enforcement administrators at every level, and other persons with an influence on the delivery of enforcement services, are encouraged to

- *use the recommendations* that apply to their own situations,
- *develop their own strategies* to improve the delivery of traffic services,
- *support and encourage those recommendations* at higher levels.

Note: The recommendations are not presented in a priority order; each is important and must be addressed.

Technology

- *NHTSA and the National Institute of Justice should work together to develop and implement traffic law enforcement technology.*
- *Law enforcement must be invited to play a larger role in the development of ITS to ensure that it meets enforcement's needs and desires.*
- *Agencies should explore greater use of automated enforcement methods for*

“We must make more efficient use of our resources by improving the officer’s work area and reducing the time spent on traffic stops and the time required to transfer data between the police and the courts and licensing authorities.”

**Chief Daniel Robinson
Lincoln Township (Michigan)
Police Dept.**

such problems as speeding, running red lights, and DUI/DWI. Such methods include photo radar and laser equipment that detects alcohol in vehicles.

- *Federal and state criminal justice information system (CJIS) agencies should establish standards for data information systems to ensure system connectivity. With the monumental increase in automated processes, it is more important than ever that different systems are able to communicate with each other.*
- *There should be an increase in federal funding for enforcement and deterrence technology.*
- *Technology must be used to find ways to control or eliminate police pursuits and make emergency runs safer.*
- *Agency administrators should initiate or increase technology training for users and managers. In this era of rapidly changing technology, there are still many employees who have little or no computer ability.*
- *All appropriate stakeholders should continue to improve vehicle safety technology.*
- *All appropriate stakeholders should increase the use of technology for enforcing vehicle weight regulations.*
- *All appropriate stakeholders should work to reduce or eliminate misuse of the 911/E-911 systems.*

Demographic and Other Emerging Trends

Law enforcement administrators and other appropriate stakeholders should:

- *Encourage state motor vehicle agencies to initiate mandatory testing for older drivers (i.e., vision, hearing, reactions).*

- *Encourage state motor vehicle agencies to implement a graduated driver’s license process for new drivers.*
- *Educate the medical community about the potential hazards associated with older drivers.*
- *Encourage the adoption of alternative work schedules to help relieve traffic congestion.*
- *Support programs that educate pre-driving youth about the responsibility of driving and the serious consequences of not obeying traffic laws.*
- *Support the strengthening of school curricula that address traffic safety. Encourage innovative methods for teaching youth about the need to drive responsibly.*
- *Work for laws or regulations to revoke the license or driving privilege of any person convicted of stealing a vehicle, given the rising number of stolen vehicles.*

“Traffic law enforcement often leads to the discovery of a wide range of criminal activity, from drug violations to murder.”

**Chief J. Stephen Cox
Leawood (Kansas)
Police Department**

Civilian Behavior

All appropriate stakeholders should:

- *Increase commercial driver education and training.*
- *Strengthen the secondary school traffic safety curriculum.*
- *Increase driver education and awareness to help combat aggressive driving.*
- *Focus on better and more effective sanctions for violators to help reduce recidivism.*

Physical and Traffic Changes

All appropriate stakeholders should:

- *Encourage the Federal Highway Administration to modify roadway construction standards to coincide with vehicle weight standards.*

Resources/Demands on Law Enforcement

- *Law enforcement administrators and appropriate officials should increase the role of consortium purchasing for greater purchase power and flexibility.*
- *All appropriate stakeholders should promote the enforcement of vehicle weight laws by all law enforcement agencies.*
- *Law enforcement administrators should recognize that traffic enforcement is a critical component of crime control and therefore a total agency responsibility.*

Leadership and National Focus

Law enforcement administrators should:

- Find a way to sensitize public officials, the media, and the public to the crime-deterrent effects of traffic enforcement.
- Develop a public information campaign to increase awareness of the other benefits of traffic enforcement.
- Use local data to show the crime deterrent benefits of traffic enforcement. Data can be presented in the form of a crime/crash clock to demonstrate the relationship between those occurrences.
- Begin or increase traffic services instruction at the recruit and in-service levels of training.
- Along with the appropriate political representatives, support the ability of all law enforcement agencies to enforce traffic laws within their jurisdictions. This would include such specialized agencies as park, housing authority, school, transit, and airport

police agencies that may have only limited enforcement ability or, in some cases, none at all.

- Take advantage of federal programs, such as the Defense Reutilization Management Office, to increase their materiel resources.
- Seek alternative funding sources to counteract decreasing tax bases.
- Define police traffic services in terms of cost reduction and protection of quality of life.
- Use employee performance measures that counteract the perception that traffic enforcement is not essential to the effective delivery of police services.

Federal and state agencies, especially when working on similar or related issues, should:

- Work together more closely to ensure thoroughness and eliminate duplications of effort.
- Allow more flexibility in the use of highway safety funds.
- Require states to use better problem identification techniques to increase the impact of allocated highway safety funds.
- Be more proactive in serving state and local law enforcement agencies and related public safety providers (by providing or assisting with research, technical assistance, and educational information to a greater extent).
- Become more flexible in how they fund state and local agencies.
- Assure that a reasonable portion of federal and state highway trust funds continue to go toward enforcement.
- Require performance measures and oversight of all funding given to agencies so that they are not abused or merely treated as supplemental revenue sources.

For other groups, seminar participants had these recommendations:

- *National law enforcement organizations should increase their presence with Congress and work toward greater recognition of the benefits of police traffic services on quality-of-life issues.*
- *NHTSA should develop more effective methods of distributing publications, program materials, and other documents to local law enforcement agencies.*
- *All public safety agencies should support the standardization of maximum vehicle weight laws.*
- *State highway safety offices should be more involved with problem identification at the local level. Local agencies should be more involved in their state's highway system issues.*
- *NHTSA and FHWA should develop a training program to educate law enforcement practitioners about the traffic enforcement issues associated with the North American Free Trade Agreement.*

Police traffic services are also an essential component of community-oriented policing.

**Sheriff Johnny Mack
Brown
Greenville County
South Carolina**

Stakeholders

Any individual or group within or outside an organization with an interest or stake in the organization's performance should be considered when developing and implementing new programs. Many different stakeholders could be involved in implementing the preceding recommendations. If they are to be followed successfully, some leaders will have to break free of the traditional mold and reach out to persons or groups that they have not previously engaged. Leaders who have already done so will understand the benefit of developing additional friendships or partnerships.

Below is a list of stakeholders who could be involved in implementing the recommendations. Readers may know of still others. Many

stakeholders will be eager to join in, while others may need convincing. All can ultimately be of benefit. Like the recommendations, these are not presented in a particular order.

- Elected officials
- Criminal justice system officials
- Media
- Other public safety providers, such as fire and EMS personnel
- Other federal agencies, state, and local agencies
- Corporations
- Private sector training and executive development programs
- The public
- Local, state, and national legislative committees and staffs
- National and state law enforcement organizations
- Insurance providers
- Technology vendors
- Research and development community
- Colleges and universities
- Intelligent Transportation Systems (ITS) community
- Communications industry
- Legal community
- Law enforcement line personnel
- Advocacy groups
- Health care providers
- Licensing authorities
- Commercial vehicle associations
- Private sector employers
- Motor vehicle administrators
- Zoning officials

The Future

So now the question is, what will police traffic services look like in the 21st century? The seminar process and issue papers have identified issues that will likely affect the delivery of police traffic services into the next century and made recommendations for solutions. It is clear that this is a complex issue and that there is no single answer. Each agency must select those recommendations that best meet its needs.

Whatever approach is taken, we know that, to be effective, agencies must demonstrate a strong commitment to traffic safety and enforcement by making it a focal point rather than an afterthought. They can do so through the use of effective enforcement methods and proactive, high-visibility community programs, such as sobriety checkpoints, school education programs, and child safety seat clinics. The benefit to society through lives saved and injuries reduced or eliminated, and the associated cost savings, is of paramount importance. Everyone must continue efforts to raise public awareness of, and improve compliance with, traffic safety laws on such matters as seat belt and child safety seat use, speeding, and aggressive driving.

The future will bring new ways of solving current problems. We have learned that law enforcement cannot solve all of society's problems single-handedly. There will be an increased emphasis on interagency cooperation, multi agency efforts, and problem solving partnerships with stakeholders. There will be a greater correlation between enforcement locations and problem spots such as high crash areas so that valuable and limited enforcement resources are not wasted. There will be a greater use of civilian employees and volunteers to complement agency activities, and some activities traditionally handled by law enforcement agencies will be privatized.

Consistent guidelines and minimum standards at the state or national level will gain in popularity for broad based issues such as officer training and pursuits. Training at all levels will become a higher priority. Law enforcement officers, supervisors, and administrators will better understand their respective roles in traffic safety and enforcement. New drivers will better understand the consequences of aggressive driving habits, and experienced drivers will understand the changes that will occur as they age and how those changes affect other drivers.

There will be continued advancements in the development and use of technology. The conversion of high-tech companies from supporting the defense infrastructure to solving other problems will continue into the next century. The use of technologies such as photo enforcement of speed and red-light violations and automatic vehicle disabling devices will become widespread. Many agencies will use the Internet or a similar system to communicate with the public. Federal agencies will establish web pages to highlight innovative programs so that enforcement agencies can readily see what is being used elsewhere.

Federal agencies, such as NHTSA, will become facilitators rather than directors, establishing a cooperative atmosphere between the federal government and local and state agencies. Funding processes will give the states and receiving agencies more latitude in where and how funds are applied. The focus will be on results rather than process. More federal grants will focus on research and experimentation.

Federal and state agencies will also champion legislation, technology, and construction advances that will improve the transportation infrastructure. This will include furthering mass transportation programs that reduce the demand for motor vehicle travel, continuing the implementation of urban intelligent transportation systems, developing improved construction technology to reduce maintenance demands and costs, and fully developing advanced safety technology for collision avoidance and occupant protection.

This is our vision of police traffic services in the 21st century. Only time will tell if it is correct.

Appendix A:

Attendees' Biographical Sketches

The following are biographical sketches of conference participants:

Marilena Amoni is director of the Office of Traffic Injury Control Programs, Traffic Safety Programs, National Highway Traffic Safety Administration, U.S. Department of Transportation. She is responsible for the development of traffic safety behavioral programs relating to impaired driving; occupant protection; traffic law enforcement; speed; pedestrian, bicycle, motorcycle and school bus safety; and emergency medical services. Ms. Amoni has 17 years of experience in highway safety programs in both the behavioral and vehicle programs. Previously, she served as the director of the Office of Enforcement and Emergency Services; policy advisor to the associate administrator for traffic safety programs; chief of the National Organizations Division, Office of Occupant Protection; and program analyst and presidential management intern for the U.S. Department of Transportation. Ms. Amoni is also a member of IACP and the American Public Health Association.

Alvin L. Bishop is a 24-year veteran of the Wisconsin State Patrol. He holds the rank of captain and commands the State Patrol's District 1, which covers an eight-county area in southwest Wisconsin. Captain Bishop, a quality improvement facilitator, teaches quality improvement courses and the Seven-Step Problem Solving Process at the State Patrol Academy. His numerous community activities include serving as a board member and treasurer of the North/Eastside Coalition of Older Adults in Madison. He received additional law enforcement training through the Northwestern University Traffic Institute's Police Administration Training Program. Captain Bishop is also a member of the National Organization of Black Law Enforcement Executives (NOBLE).

Noel C. Bufe has served, since 1978, as director of the Northwestern University Traffic Institute and professor at Northwestern University's Kellogg Graduate School of Management. Dr. Bufe has extensive experience in traffic safety, and his previous positions include working as

an administrator in the Office of Criminal Justice Programs for the Michigan Department of Management and Budget; deputy administrator, National Highway Traffic Safety Administration; executive director, Office of Highway Safety Planning, Michigan governor's highway safety representative; and management consultant, International Association of Chiefs of Police, Highway Safety Division. Dr. Bufe has also served as a lieutenant and air police officer with the U.S. Air Force. He is currently a member of the boards of the Governor's Council on Workplace Safety and Health, Project Safety Illinois, Inc., and the Illinois Secretary of State's License Plate Task Force. He has contributed to such publications as Traffic Safety Magazine, Encyclopedia of Police Science, Family Safety Magazine, and Police Product News. He is the recipient of the National Safety Council's Distinguished Service to Safety Award, the highest honor bestowed on an individual by the NSC for outstanding service in the field of highway safety.

Dr. Joseph Cindrach is the administrator for NHTSA's Region IX, which includes Arizona, California, Nevada, Hawaii, Guam, American Samoa, and the Northern Mariana Islands. Before joining NHTSA in 1987, Dr. Cindrach served as associate administrator for congressional and public affairs at the Social Security Administration in Baltimore and special assistant to the secretary of agriculture for health and safety in Washington, D.C. Earlier, he served as ground safety manager at Andrews Air Force Base in Maryland. Dr. Cindrach also served for 10 years on the faculties of Western Illinois University, San Diego State University, and the University of Maryland. He has 25 years of professional and educational experience in traffic and occupational safety and public health and has received numerous honors and awards for his professional achievements.

Robert F. Collins has been a captain with the Independence (Missouri) Police Department since 1978. While captain, he has served as patrol shift commander, criminal investigation's commander, traffic safety unit commander, and administration commander. Captain Collins has also received specialized traffic education, including traffic management and traffic administration courses taken at Central Missouri State University.

David Combs holds the position of sergeant with the Washington State Patrol. He began his law enforcement career there in 1978 as a commercial vehicle enforcement officer/cadet. He graduated from the

WSP Academy in 1979 and was assigned traffic duties in Vancouver, where he was also trained in advanced and technical collision investigation. In 1990, Sergeant Combs transferred to research and development, where his duties included policy and procedure writing, accreditation, strategic planning, and staff duties. He was promoted to sergeant in 1994 and assigned to Tacoma as a traffic supervisor. In 1996, Combs worked with the Budget and Fiscal Services Grant Section before being detailed to NHTSA for a one-year assignment in the Traffic Law Enforcement Division.

Paul Corbin is the highway safety administrator for the Nevada Office of Traffic Safety. Mr. Corbin has more than 30 years of public service with a focus on highway safety. He has served with distinction in two different state highway patrol organizations, retiring as a senior staff officer in the Missouri State Highway Patrol to assume command of the Nevada Highway Patrol. In 1996, he left traffic law enforcement to continue work in highway safety in his current position. Mr. Corbin concurrently completed 24 years of military service, combining four years of active duty in the Marine Corps with 20 years of reserve duty in the Army National Guard as a military police officer. He has taught as an adjunct instructor at Central Missouri State University, the Northwestern University Traffic Institute, and several community colleges.

J. Stephen Cox has served, since 1981, as chief of police in Leawood, Kansas, a suburb of Kansas City. Chief Cox has more than 25 years of experience in law enforcement. Under his leadership, the department has built a reputation for delivering excellent police services to the community with a high degree of customer satisfaction. Among the agency's progressive accomplishments was the establishment of the Citizen's Police Academy, a 12-week course in which members of the public gain insight into the depth and complexity of modern law enforcement. Cox has taught courses for the Basic Police Academy and Johnson County Community College, and he is committed to receiving ongoing professional education and development training. He is past president of the Johnson County Police Chiefs Association and the Metropolitan Chiefs and Sheriffs Association and is active in many other professional and community organizations.

Lawrence D. Drager has served the Illinois State Police for more than 25 years and has been deputy director of the Division of Operations since

1995. He began his law enforcement career in 1970 as a cadet in the Illinois State Police Academy. Upon graduation, he was assigned to District 9 patrol duties in Morgan and Scott counties. Colonel Drager has served in every line position in the operations division, holding the permanent rank of major. For seven years he was responsible for a state police district headquartered in LaSalle, and in the fall of 1989 he was selected as the assistant deputy director of operations. In 1990, Colonel Drager transferred to the field operations commander position, and in 1994 he was promoted to the position of deputy director of the Division of Forensic Services and Identification. During his career with the Illinois State Police, Colonel Drager has served in three of the four divisions of the department: administration, forensic services and identification, and operations.

Raymond G. Dutcher is a lieutenant colonel and assistant deputy superintendent of the New York State Police. A 28-year veteran of the force, he has worked in traffic safety for more than 12 years. Colonel Dutcher has served in a number of highway safety organizations and committees statewide, nationally, and internationally, including the International Association of Motor Vehicle Administrators; the executive committee of Operation C.A.R.E., a national crash-reduction program; the Governor's Alcohol and Highway Safety Task Force; and the New York State Chiefs of Police Highway Safety Committee (as vice chairman). He participated in the National Traffic Safety Summit for enforcement as an advisor in 1990 and in the National Safety Summit II for judges and prosecutors in 1991. Colonel Dutcher currently serves on the Criminal Justice Information Systems Advisory Policy Board; the executive staff of the New York State Police; the Northeast CJIS Working Group; and the APB subcommittee on uniform crime reporting. He is the 1992 recipient of the International Association of Chiefs of Police J. Stannard Baker Award for outstanding achievements in highway safety.

James C. Fell is chief, Research and Evaluation Division, Traffic Safety Programs, NHTSA. His duties include strategic planning for traffic safety research; advising on scientific reports and evaluations of various traffic safety countermeasures; managing research demonstration and evaluation projects; providing expert testimony on traffic safety legislation; and working with national safety organizations in educating the public on key issues of traffic safety research. Mr. Fell has been at NHTSA for 26 years and has 28 years of traffic safety experience. He was formerly

program manager of NHTSA's Fatal Accident Reporting System (FARS) and chief of scientific and technical affairs in the Office of Alcohol and State Programs. He has authored more than 60 scientific publications on highway safety and human factors research. Mr. Fell is past president of the Association for the Advancement of Automotive Medicine (AAAM) and the 1992 recipient of the A. R. Lauer Award for outstanding contributions to human factors aspects of highway traffic safety from the Human Factors and Ergonomics Society. He is listed in Who's Who in America in Science and Engineering, 1994-1995.

George M. Ferris is chief of the Fort Meade (Florida) Police Department. He has more than 35 years of law enforcement experience, including 19 years as a police chief. Ferris has served in a variety of traffic-related positions during his career: traffic unit commander, Linn County (Iowa) Sheriff's Office; project director, Linn County Alcohol Action Safety Program (ASAP); member, Police Traffic Services Advisory Council, Missouri Division of Highway Safety; chairman, Polk County (Florida) Community Traffic Safety Program (CTSP); project director, Polk County Automated Enforcement Evaluation Project; project director, Polk County Red Light Running Program; and a member, Highway Safety Committee, Florida Police Chiefs Association. In addition, Chief Ferris has lectured on traffic safety matters for the Federal Highway Administration (FHWA), NHTSA, and several colleges and universities.

William P. Georges is a 22-year member of the Albany (New York) Police Department. He holds the rank of assistant chief of police and serves as chief of patrol and special operations. Georges has served in a variety of assignments within the department, specializing in traffic safety. In 1989, he was requested by the U.S. Department of Transportation for special assignment at its headquarters in Washington, D.C. During that 18-month assignment, he was involved in the development, implementation, and coordination of national traffic safety programs. He also authored a public information manual for law enforcement agencies throughout the United States. Georges has received numerous awards and is often requested as a consultant for highway safety projects and crowd management issues. He is currently a member of the International Association of Chiefs of Police, serving as a member of its Highway Safety Committee, and is also a member of the New York State Association of Chiefs of Police.

Daniel G. Hammack has 25 years of law enforcement experience in Nevada. He has been with the Nevada Highway Patrol for 23 years, serving in a variety of operational and administrative assignments. He currently holds the rank of major and is the operational commander for the northern half of the state. Major Hammack has been instrumental in the development of community policing strategies and applications to a state highway patrol environment, and the Nevada Highway Patrol has received letters of recognition from Nevada community leaders in response to these projects. Major Hammack has served on the Governor's DUI Task Force and numerous other committees. He currently chairs the Nevada Criminal Justice Information System Advisory Committee and the Uniform Crime Reporting Advisory Committee. He is also a graduate of the Northwestern University Police Staff and Command School. Major Hammack is engaged in traffic safety research involving aggressive driver behavior. He and his staff are examining detection and enforcement tactics to proactively address this emerging traffic safety issue.

Michael J. Heidingsfield has been police chief and director of public safety for Scottsdale, Arizona, since 1991. He has also served as a U.S. Air Force lieutenant and was a police sergeant with the University of Texas System Police from 1975 to 1978. From 1978 to 1991, Heidingsfield held the ranks of police officer/field training officer, sergeant, lieutenant, captain, and deputy chief of police in the Arlington (Texas) Police Department. In 1993, he received the Bill Donaldson City Manager's Award of Excellence from the city of Scottsdale, and he also received a governor's appointment to the Arizona Criminal Justice Commission. Chief Heidingsfield is a member of several law enforcement organizations and an associate faculty member of Scottsdale Community College, and he has authored articles on law enforcement for national publications.

Maurice C. King has been with the Washington State Patrol for 18 years and is commander of the field operations bureau. He has served in various positions with the state patrol, including assistant district commander; affirmative action officer, motorcycle detachment supervisor, and line detachment supervisor. He has also been a member of the department's SWAT team, honor guard and motorcycle drill team. As an adjunct instructor for the Northwestern University Traffic Institute, King taught courses on traffic management statistics, job analysis, and personnel performance ratings. Commander King also served for eight

years on active duty in the U.S. Army and earned a bronze star in Vietnam. During Desert Storm he served worldwide on General Colin Powell's Protective Services Team and was one of only three officers to receive the Army's Commendation Award.

Harlin R. McEwen has been deputy assistant director of the FBI's Criminal Justice Information Services (CJIS) Division since February 20, 1996. Before that, he served in law enforcement in New York State for more than 38 years, starting his career as a police officer in 1957. He served the Waverly Police Department, Tioga County Sheriff's Department, Cayuga Heights Police Department, and Ithaca Police Department, where he was chief for seven years. From 1985 to 1988, Mr. McEwen served as deputy commissioner of the New York State Division of Criminal Justice Services and director of the Bureau for Municipal Police. In that role, he was responsible for overseeing the training and registration of all police and peace officers in New York State and for developing and implementing the New York State Law Enforcement Agency Accreditation Program. Mr. McEwen holds numerous law enforcement-related leadership posts and memberships.

Deborah Meisinger is a sergeant with the Illinois State Police. She entered the Illinois State Police Academy in 1986 and then served three years as a road trooper in Illinois's District 11. She was next assigned to the D.A.R.E. Bureau at the State Police Academy, where she held the positions of D.A.R.E. officer and mentor officer on the Midwest Regional Training Team. In 1993 Sergeant Meisinger became the staff assistant to the District 18 Commander, and in 1996 she was selected as the first Illinois State Police officer to be detailed to NHTSA for a one-year assignment to the Traffic Law Enforcement Division. Sergeant Meisinger prepared a crime and traffic study for NHTSA that focuses on "looking beyond the ticket." The project highlights anecdotal examples of traffic stops that result in criminal arrests. These examples come from all levels of law enforcement across the country.

Garrett Morford joined NHTSA as a Highway Safety Specialist in 1990. Since 1996, Morford has been special assistant to the director of NHTSA's Office of Traffic Injury Control Programs. He aids in providing national leadership for traffic safety initiatives in the United States through technical assistance, technology, research and development, and other programs. He also has 17 years of experience as a commissioned

law enforcement officer. His assignments have included traffic enforcement, research and planning, and the criminal intelligence unit. He retired as deputy commander of the Louisiana State Police Planning Unit.

Dennis E. Nowicki was appointed chief of the Charlotte-Mecklenburg (North Carolina) Police Department in 1994. He had previously spent more than 25 years with the Chicago Police Department, rising to the rank of deputy superintendent. His career in Chicago included such assignments as beat patrol, area task force, district tactical officer, burglary detective, patrol sergeant, robbery unit sergeant, property crime's unit lieutenant, and administrative aide to deputy superintendents in three bureaus. He also served as commander of the Youth Division and as deputy superintendent for the Bureau of Administrative Services. Chief Nowicki then served as chief of the Joliet (Illinois) Police Department for three years. A proponent of community problem-oriented policing, he developed innovative ways to implement that concept throughout the department. In early 1992, Chief Nowicki was appointed executive director of the Illinois Criminal Justice Information Authority by Governor Jim Edgar. Throughout his career, Chief Nowicki has been a supporter of and an active participant in criminal justice research.

Daniel E. Robinson has served as chief of the Lincoln Charter Township Police Department in Stevensville, Michigan, since the agency's inception in 1987. He previously served as deputy sheriff in Van Buren County in 1978 and deputy sheriff and assistant shift commander from 1978 to 1987 in the Cass County Sheriff's Department in Cassopolis. Chief Robinson's noteworthy career accomplishments include helping to establish the first licensed police medical first responder program in Berrien County, a traffic accident investigation unit at the Cass County Sheriff's Department, a computerized traffic citation program, and the Lincoln Charter Township Police Department. He also helped to develop a D.A.R.E. program in Berrien County. The Lincoln Charter Township Police Department was founded in 1987 to supplement existing police coverage in the Lincoln Township area. Chief Robinson has also been an instructor in police management and administration at Kalamazoo Valley Community College since 1989. He possesses numerous professional certifications and is an active member of many community and law enforcement organizations.

Charles S. ("Buddy") San Marco has worked in the St. Petersburg Police Department since 1970. He began with patrol-related duties in District I and has since served as detective in the Criminal Investigations Division; sergeant, lieutenant, and major in the Patrol Division; and deputy chief of the newly created Community Policing Division. In 1991 he led a research team to 10 cities in the United States that were practicing community policing, beginning the model of community problem-solving policing that the St. Petersburg Police Department enjoys today. He was promoted to assistant chief of the Investigative Services Bureau in 1993, where he is currently commanding officer of the Criminal Investigations Section, Career Criminal Unit, Vice and Narcotics Section, Intelligence Section, and Youth Resources Section. Assistant Chief San Marco has participated in many in-service professional training classes and seminars, and he teaches courses at Pinellas Police Academy and St. Petersburg Junior College.

Annette M. Sandberg was appointed as the sixteenth chief of the Washington State Patrol (WSP) on April 5, 1995, by Governor Mike Lowry. She is the first woman in the country to head a state police agency. Chief Sandberg's original appointment to the Washington State Patrol was in July 1982, and she was commissioned as a trooper in December 1984. She was promoted to the rank of lieutenant in February 1993. During her tenure with the WSP, Chief Sandberg has been in charge of the Internal Affairs Section, Research and Development Section, and Administrative Services Section and has served as a line sergeant and operations sergeant. She has served as the vice president and an executive board officer of the WSP Troopers Association, and was appointed by Governor Booth Gardner as a member of the Washington State Employees Benefits Board. Chief Sandberg is also a member of the Washington and Alaska Bar Associations.

Fred F. Small is currently a team leader for the Highway/Rail Grade Crossing Safety Team and the Highway Safety Management Team of the Office of Highway Safety, Federal Highway Administration. Before joining FHWA in 1991 he held various positions in design, construction, traffic engineering and highway safety with the departments of transportation in Virginia and Florida. Mr. Small has served on numerous committees on traffic engineering and safety with TRB and the National Safety Council. He is also a member of the Institute of Transportation Engineers.

Arthur R. Smith is a 22-year veteran of the Baltimore Police Department and holds the rank of major. His prior assignments there include the office of the police commissioner, homicide, personnel, and various patrol duties at the ranks of police officer, sergeant, and lieutenant. He currently commands the Tactical Division, where his duties include police traffic services. Major Smith has also attended professional development courses such as Northwestern University's School of Police Staff and Command and the Senior Management Institute for Police.

Gary O. Smith is commander of the Temple (Texas) Police Department. His law enforcement experience began in 1978 and included serving as a police cadet, police dispatcher, and officer assigned to the Patrol Division. In 1986, he was promoted to sergeant and served as a Patrol Division field supervisor, with a two-month special assignment in the Criminal Investigations Division. Smith became a police lieutenant in 1991, and he served as a Patrol Division watch commander and then commander of the Special Services (narcotics) Unit. He was the interim chief of police in 1995 before beginning his current position as commander of the department. Commander Smith has received several awards and certificates, including Master Peace Officer and Instructor (TCLEOSE), Officer of the Year (1986 and 1988), and a mayor's proclamation for outstanding service. He is a graduate of the FBI National Academy.

John Sturner has served the St. Paul (Minnesota) Police Department since he began patrol duties there in 1963. He is presently commander of the Central District. Previously, he held various leadership positions, including serving as commander in the Office of the Chief in charge of line operations and deputy chief in charge of the Detective Division, Patrol Division, and Support Services Division. Commander Sturner's supervisory experience includes temporary special assignments as director of the City Council staff, acting director of citywide data processing, and interim director for the St. Paul-Ramsey County Criminal Justice Coordinating Council. Sturner's professional activities include serving as director (and formerly as president) of the Northwest Chapter of the FBI National Academy Associates and as chairperson of the Committee for Police Support Services of the International Association of Chiefs of Police. Commander Sturner has also done consulting work and has extensive experience with the U.S. Army National Guard.

Earl M. Sweeney is director of the New Hampshire Police Standards and Training Council. Previously, he served as deputy commissioner of safety, assistant to the director of motor vehicles, acting director of the State Police, and chairman of the State Board of Parole. He also spent 13 years as chief of police in Belmont. Sweeney earlier served as president of the International Association of Directors of Law Enforcement Standards and Training (IADLEST) and now serves as chairman of the IACP Highway Safety Advisory Committee. He is a life member and Executive Board member of the New Hampshire Association of Chiefs of Police and is chairman of its Training Committee. He is also a life member of the New Hampshire Police Association. Sweeney has been an adjunct professor at the New Hampshire Technical Institute and at St. Anselm, Franklin Pierce, and Nathaniel Hawthorne colleges.

Brian G. Traynor is currently chief of the Traffic Law Enforcement Division. Previously, he served in the Police Traffic Services Division of NHTSA as a senior highway safety specialist. Brian joined the Police Traffic Services staff in 1980. His duties include the management of statewide police traffic services assessments, the development and revision of training courses related to speed measurement devices, and the management of law enforcement driver training program development and revision. Before 1980, Mr. Traynor was a member of the Metropolitan Police Department in Washington, D.C., where he retired at the rank of an inspector after 20 years service. While a captain, commanding Traffic Operations, Traynor revamped the department's DWI enforcement and chemical testing programs. In response to his initiatives, the department witnessed an immediate increase in arrests from approximately 890 per year to 5,000 and an increase in the conviction rate from less than 30 percent to almost 90 percent.

Donald E. Uelmen became a regional program manager for NHTSA's Region IX, in April 1996. He retired as a lieutenant from the California Highway Patrol in 1993 with 34 years of law enforcement experience, including 27 years with CHP and seven with the Los Angeles County Sheriff's Office. His background includes program management at CHP headquarters in commercial vehicle enforcement, hazardous material's transportation, and emergency incident planning, as well as participation in a NHTSA Officer Leadership Program. During the NHTSA assignment, he wrote Commercial Vehicle Enforcement: A Guide for Police Traffic Personnel, published in January 1991. In 1993 and 1994, Uelmen was a

team leader for local highway safety assessments, serving as a consultant with the International Association of Chiefs of Police.

Colonel Lonnie J. Westphal joined the Colorado State Patrol in 1974. He served as a trooper in Elizabeth and Castle Rock and was transferred to State Patrol headquarters in 1978. Westphal was promoted to sergeant in 1978, lieutenant in 1981, captain in 1983, major in 1991, and lieutenant colonel in 1992. He has served as colonel and chief of the Colorado State Patrol since October 1995. Westphal is a former board member of the State Patrol Protective Association, a former member of the board of officers of the Colorado Council of Law Enforcement Associations, an active member of the International Association of Chiefs of Police, and former international chair of the Police Traffic Services Committee of the American Association of Motor Vehicle Administrators.

Appendix B: **Questionnaire**

Questionnaire Document

Before the NHTSA seminar took place, the following questionnaire was administered to those who said they planned to attend:

To be effective, police traffic service programs must be responsive to the traffic problems and needs of an ever changing society. Rapidly changing conditions and events in the next century will force changes in the scope and delivery of police traffic services. The following is a list of changes to be expected in the 2000s and the years beyond. Please rate the level of importance for each issue by circling a scale score of "1" to "5" in the space provided before each item (**with 1 = "not important" and 5 = "very important"**). Please include comments in the spaces provided. **Estimated completion time: 10 minutes.**

Name:

Agency:

Level of Importance:

Not Very

1 2 3 4 5 1) Less federal funding assistance for both crime and traffic safety programs, a greatly reduced federal role in both areas, and an increased demand on state and local resources.

Specific examples or issues:

1 2 3 4 5 2) Continued increases in the driver and registered vehicle populations.

Specific examples or issues:

1 2 3 4 5 3) Static levels of police personnel with similarly static or reduced law enforcement budgets.

Specific examples or issues:

1 2 3 4 5 4) A continued or more rapid deterioration of our streets, highways, and bridges.

Specific examples or issues: _____

1 2 3 4 5 5) Higher gasoline prices.

Specific examples or issues: _____

1 2 3 4 5 6) Increasing emphasis on fuel efficiency and alternative fuels.

Specific examples or issues: _____

1 2 3 4 5 7) Continued population shifts: to the Sunbelt, rural too urban, and in some areas, urban too rural.

Specific examples or issues: _____

1 2 3 4 5 8) Continued changes in the proportions of ethnic diversity in the population.

Specific examples or issues: _____

1 2 3 4 5 9) An increasing mix of vehicles including very light alternative fuel vehicles, bicycles, mopeds, and motorcycles.

Specific examples or issues: _____

1 2 3 4 5 10) A potential increase in the number of traffic fatalities and injuries, although the fatality rate per VMT will remain constant or decrease slightly.

Specific examples or issues: _____

1 2 3 4 5 11) Continued public demand for the further diversion of police manpower from police traffic services to crime-fighting activity.

Specific examples or issues: _____

1 2 3 4 5 12) Increasing availability of new technology applicable to law enforcement, such as in-car video, computerized off-site training, notebook and clipboard computer systems.

Specific examples or issues: _____

Please identify and discuss 3 other examples of changes to be expected in the next century:

- 1)
- 2)
- 3)

Please fax responses to Veh Bezdikian at (202) 466-7826 by August 26.

Questionnaire Results

To be effective, police traffic service programs must respond to the traffic problems and needs of an ever changing society. Rapidly changing conditions and events in the next century will force changes in the scope and delivery of police traffic services. The following is a list of changes to be expected in the 2000s and the years beyond. The issues are ranked in descending order of "importance" according to the answers given by questionnaire respondents. (24 respondents; maximum

score = 120). A score of 1 = "not important" and 5 = "very important."

Numeric Scores

Issue 11: Continued public demand for the further diversion of police manpower from police traffic services to crime-fighting activity.

Score = **108**; Average = **4.50**

Issue 1: *Less federal funding assistance for both crime and traffic safety programs, a greatly reduced federal role in both areas, and an increased demand on state and local resources.*

Score = **107**; Average = **4.46**

Issue 12: *Increasing availability of new technology applicable to law enforcement, such as in-car video, computerized off-site training, notebook and clipboard computer systems.*

Score = **107**; Average = **4.46**

Issue 3: *Static levels of police personnel with similarly static or reduced law enforcement budgets.*

Score = **104**; Average = **4.33**

Issue 10: *A potential increase in the number of traffic fatalities and injuries, although the fatality rate per VMT will remain constant or decrease slightly.*

Score = **96**; Average = **4.00**

Issue 2: *Continued increases in the driver and registered vehicle populations.*

Score = **93**; Average = **3.88**

Issue 4: A continued or more rapid deterioration of our streets, highways, and bridges.

Score = **91**; Average = **3.79**

Issue 9: An increasing mix of vehicles including very light alternative fuel vehicles, bicycles, mopeds, and motorcycles.

Score = **90**; Average = 3.75

- Issue 7:** Continued population shifts: to the Sunbelt, rural too urban, and in some areas, urban too rural.
Score = **84**; Average = **3.50**
- Issue 6:** Increasing emphasis on fuel efficiency and alternative fuels.
Score = **68**; Average = **2.83**
- Issue 8:** Continued changes in the proportions of ethnic diversity in the population.
Score = **63**; Average = **2.63**
- Issue 5:** Higher gasoline prices.
Score = **62**; Average = **2.58**

Questionnaire Respondents' Comments

Technology

- *Increased use of technology for enforcement (such as photo radar technology)*
- *Increased costs to law enforcement for technology and equipment*
- *Improvements in technology will provide data for directed patrols and enhance safety*
- *Increased technology available to citizens resulting in demand for changed policing*
- *Smaller patrol car environments with increased need for space due to new technology*

Demographic Trends

- *Increase in the number of elderly drivers*
- *Increase in the age groups requiring most enforcement and investigative resources*
- *Shift of tax base from urban too suburban*
- *Increase in the number of young drivers*

Civilian Behavior

- More civilians in traffic services
- Increase in incidents due to aggressive driving and freeway violence
- Increase in illegal substance abuse by truckers
- More drug trafficking on highways
- Increase in juvenile crime
- Safety concerns in dealing with far-right political groups

Physical and Traffic Changes

- *Increase/decrease in freeway miles*
- *Deterioration of the Interstate Highway System*
- *Increase in the number of large trucks on highways*
- *Mass transit and diversity of modes of travel*
- *Changes in vehicle traffic due to changes in work requirements and lifestyles*
- *NAFTA will allow heavier trucks in U.S., some with safety defects*

Resources/Demands on Law Enforcement

- *Budget constraints*
- *Consolidation of state and local agency resources*
- *Manpower shortages on some highways causing increased reliance on local authorities*
- *Increase in demand for police services and redefining of roles*
- *Modern management techniques*
- *Adjusting to recruiting/ethnic mix in agencies to reflect U.S. population*

- *Lack of prosecution of traffic offenses and suspended/revoked drivers*
- *Enforcement of occupant protection laws (e.g., child safety seats)*
- *Need to foster partnerships at city, county, state, and federal levels*

Appendix C: **Issue Papers**

Each participant was asked to write a paper describing the issues thought to be important to the seminar's subject matter. Attached as reference material are those papers.

NOTE: Since this publication is provided as a research service for its readers, the points of view or opinions expressed here are those of the authors and do not necessarily represent the official policies or positions of the United States Department of Transportation or the National Highway Traffic Safety Administration. The United States Department of Transportation reserves the right to reproduce, publish, translate, or otherwise use, and to authorize others to publish and use, all or any part of this publication.

Captain Alvin L. Bishop, Wisconsin State Patrol

Present Status of Police Traffic Services

The delivery of police traffic services nationwide, like many other governmental services, is faced with dwindling resources, affecting how agencies respond to certain traffic-related events. Over the past few years, agencies have had to cut back on such services as traffic accident investigation, traffic direction at public events, and other nonessentials. The present view of police traffic services is that we are cutting back while calls for services have increased. In some areas it appears our successes have caused more requests than we can handle; an example would be the Little Convincer Program that the Wisconsin State Patrol sponsors. This program has generated requests from elementary school administrators all over the state. Our problem is keeping enough troopers on the road in the winter months when our demand for service is high. Like us, some other agencies are running out of resources to handle all primary duties and ancillary functions.

Limited law enforcement resources will continue to be an issue as we move into the 21st century. Our goal and objective should remain highway safety. Some agencies have de-emphasized traffic patrol units because of shrinking

budgets, but traffic enforcement needs to be *emphasized*. To succeed in traffic safety, our nation's police agencies responsible for traffic safety must examine their current efforts and look for ways to improve.

Goals and Objectives for the 21st Century

Some goals and objectives for the future are speed enforcement; crash investigation (including crash reconstructions); commercial vehicle and hazardous material regulation; salvage vehicle inspection; hazardous material response teams (fully funded); emergency operation response plans; occupant protection (safety belts, child safety seats, and motor cycle safety helmets); driver's license systems; registration systems; pedestrian and bicycle safety; and a host of federal programs under the auspices of NHTSA and FHWA. Today's law enforcement agencies are facing the same problems that other government agencies and private industry face in meeting the needs of their customers. To identify and solve problems and be able to compete for limited resources, an agency will have to develop its mission, vision, goals and objectives, and values. An agency will also have to develop short and long-range plans.

Some agencies have successfully responded to problems by developing strategic plans. An example of this is my own agency. We wanted to know what to plan for in the future, so we took our time and took a good look at ourselves. We looked at Total Quality Management, Total Quality Service, and Quality-based Leadership. Our managers began to develop the trainers and facilitators who would formulate our policies, goals, and values. Our administrator began to develop our mission, vision, and values with our top managers. We developed a TQM course for all our personnel. We also solicited ideas from all our personnel, creating what later became the "Idea Book," and then formed a project action team to work on various ideas. We developed partnerships with various agencies to accomplish our goals and objectives. In short, we began to lay the groundwork for the future.

We moved into one area of technology by initiating the development of a more efficient mobile radio and microwave system. We invited a number of agencies to use our frequencies (at a cost). An infrastructure is now in place for the communication system to take us into the next century. We have begun with mobile data terminals (MDTs) and will eventually move into mobile data computers (MDCs). A number of agencies are buying into our systems, and some of the local sheriffs' agencies are doing the same.

We have had a good relationship with the Wisconsin National Guard in securing some of their radio frequencies. We have abandoned 800 MHz and moved into VHFT trunking. We have forged a number of partnerships, both intrastate and interstate, to look at ITS and an experimental system with the State of Minnesota called MOOSE (Minnesota Out Of Service). Technological advancements need to continue. Research and development initiatives need to be emphasized.

None of the issues facing police traffic services will be brought to the forefront or be solved if agencies do not have adequate ways of defining them. We recently had a presentation from one of our project action teams on "Determining Law Enforcement Services." The task of the PAT was to define which services we should be doing with our limited financial and personnel resources. We looked at the increase in miles of the state trunk highway systems, the increase in the number of licensed drivers and registered vehicles, and the increase in requests for service that would take our personnel away from the road.

Role of NHTSA and Federal, State, and Local Governments

The role of NHTSA, FHWA, and other federal agencies involved in traffic safety should remain the same. NHTSA and other federal agencies need to study this issue at the macro level and provide police agencies with the data necessary to make changes at the state and local levels. Research results and statistics related to this discipline are always helpful and much appreciated. The role of NHTSA and others should be to lead us in the direction where we have the most problems, and it will be up to the states and local governments to take us there.

Conclusion

In short, our police traffic agencies are in the midst of challenging and dynamic times. The problems we face are in funding, personnel, and increases in requests for service. Agencies must develop their missions, values, goals and objectives, and visions. We must look at education, training, recruitment, and selection. Police must also implement new technologies and examine what the future holds as it relates to our highways and the costs of building and repairing them. We must look at police traffic services as a way of apprehending criminals, and we should also study how international crime may affect our police traffic services in the future.

Sheriff Johnny Mack Brown, Greenville County, South Carolina

Our world is changing rapidly, often outpacing our ability to keep up. This is especially true in law enforcement, where internal change comes slowly and generally meets stiff resistance. We in the law enforcement profession must position ourselves to change with the times, in a well-prepared, controlled, and a confident manner, if we are to be successful. The alternative is to merely react to events long after we have been overtaken.

Present Status of Police Traffic Services

Police traffic services are delivered in a grossly uneven manner across the country. Some agencies maintain programs that are quite sophisticated and comprehensive, while other agencies ignore traffic completely. A fundamental traffic safety problem results when law enforcement professionals and other public officials fail to understand the importance of police traffic services.

Right sizing and downsizing is placing a severe strain on law enforcement agencies and other government services. Forced to do more with less, they often find it difficult to maintain essential services at an acceptable level, and traffic programs are not generally viewed as high-priority areas.

The increase in violent street crime has caused many agencies to adopt problem-oriented strategies that place additional demands on already overburdened law enforcement personnel. For many, this further erodes support for traffic programs.

Explosive growth in many Sunbelt states is placing a greater strain on already congested roads and highways. Road construction projects worsen congestion in project areas, leading to even higher accident rates until construction is complete. This population growth causes an increased demand for general law enforcement services, again sometimes pushing traffic programs aside.

Demographic changes bring change to traffic safety problems. Aging drivers will become a significant problem in the 21st century as the baby boomers reach their later years. And a new generation of young drivers, with their often aggressive driving habits, will be a problem. When they mix on the roadways with aging drivers, the potential for more accidents will be enormous.

Technology and information are available to help make our work easier, but funding to bring high-tech equipment to the officer on the street is often out of reach. We must pursue new ways to bring high-tech solutions to general law enforcement services and traffic safety problems.

Our past and current problems with impaired drivers, occupant restraint, speed, and other matters will remain with us in the future, but police pursuits will be the hottest topic in law enforcement in the near future. Police pursuits will be the focus of media and public attention as it relates to police traffic services.

Goals and Objectives for the 21st Century

All law enforcement agencies throughout the United States should be delivering police traffic services. While not all have the same level of resources, every local agency with uniformed officers can, and should, work traffic enforcement. Regional or statewide efforts can help increase public awareness, raise public support, and coordinate other educational efforts and media interaction. But every law enforcement agency in the country must be recruited into the effort. Necessary steps:

- Educate law enforcement professionals about the importance of traffic services and recruit them into the effort.
- Educate public officials and the public about the importance of traffic services and gain their support.
- Coordinate regional and statewide efforts into a comprehensive national strategy for the delivery of police traffic services.
- Police traffic services are also an essential component of community-oriented policing. Rather than being pushed aside in efforts to curb violent crime, traffic enforcement can make a significant contribution to crime control efforts. Necessary steps:
 - Educate law enforcement administrators and public officials about how traffic enforcement can be used for crime control.
 - Train traffic officers and other uniformed officers in traffic criminal enforcement programs such as ACE (Aggressive Criminal Enforcement).

- We must develop a strategy to make technology and information help us do more with less. The technology to deliver this information to planners and street officers already exists, but most law enforcement agencies are unable to use it to full advantage. Finding high-tech solutions will be our most significant challenge in the future. Necessary steps:
- Fund high-tech solutions to get information to the street enforcement level in order to focus on specifically targeted areas, making better use of limited resources.
- Fund high-tech answers to the problem of lack of ready access to driver's license information in order to target repeat offenders.
- Further develop automated enforcement tools (such as speed cameras), and develop strategies to use them to their fullest advantage.
- Use electronic monitoring in house arrest programs to help ease jail overcrowding. These programs can offer a meaningful alternative to incarceration of traffic offenders.
- Develop funding sources for high-tech equipment. Equipment could be funded in part by dedicating a portion of traffic fines to that purpose.
- We must develop effective strategies to deal with the growing population of aging drivers. Necessary steps:
- Educate older drivers about physical limitations they may face in driving.
- Develop fair and comprehensive retesting protocols for aging drivers.
- If driving privileges are to be reduced, restricted, or revoked, develop plans to furnish alternative transportation.

We must develop a comprehensive national strategy for managing the problems associated with police pursuits. Pursuit is a tool that will be legislating away from us unless the law enforcement community takes the initiative and gains control of these problems. Pursuit will never be safe, but until a workable high-tech alternative is developed, it remains a necessary evil for the apprehension of some dangerous offenders. Necessary steps:

- Manage the risks associated with police pursuits through good policy, good training, and good supervision. More must be done nationally to promote these solutions.
- Fund continued research into high-tech alternatives to pursuit. Workable answers have not yet been developed but are within reach.

Role of NHTSA and Federal, State, and Local Governments

National efforts should focus on development of policies, strategies, and training for police traffic services. This can be accomplished by bringing together the best minds from all levels of government, as well as researchers, academics, and other interested parties. We should come together to share experiences about what works and what does not and to encourage imitation of successful programs among our peers. This, of course, is not a new idea, but it works, and we should continue along this path.

State governments should promote and coordinate the implementation strategies and programs between county and municipal governments. It should remain the responsibility of state and local governments to provide police traffic services. In many instances, local agencies can band together to share their resources for public education, media campaigns, or enforcement efforts.

Grant funding from the federal level is another important component of strategy implementation. Grants provide seed money to buy equipment and hire or train personnel. Without grant money, many traffic programs would never get off the ground. Grants encourage innovative programs and field-test new ideas and technology.

The State and Community Highway Safety Grant Program was enacted by the Highway Safety Act of 1966 as Section 402 of Title 23, the United States Code, for the specific purpose of improved highway safety. These grant funds are provided to the states, Indian nations, and territories each year according to a statutory formula based on population and road mileage. These funds support state planning efforts, provide seed money for new programs, and give new direction to existing programs.

Sheriffs would also like to see better lines of communication with NHTSA, federal agencies, and police chiefs regarding highway safety efforts. We would like officials from NHTSA and other federal agencies to attend police

chiefs' and sheriffs' conferences and listen to our problems and concerns. We can all help each other with ideas and information, but we must be able to talk to each other first.

Conclusion

The 21st century will bring many problems, challenges, and opportunities, and we in the law enforcement community have an obligation to meet these new demands. We will not have a fair opportunity, however, without planning and preparation. To plan and prepare, we must have access to good information. The effort by NHTSA and PERF to identify issues and answers for police traffic services in the 21st century is commendable, and we should all look forward to further sharing of ideas and information.

Dr. Noel C. Bufe, Director, Northwestern University Traffic Institute

Introduction

You don't have to be a university professor to realize that our world is changing and moving forward at a rate that is sometimes faster than our ability to keep up. This is often true because of our own occasional inability to predict upcoming trends, and also because of our lack of the proper resources that would enable us to react appropriately.

Reacting appropriately clearly involves being able to acquire and properly interpret information. But isn't that what we are all about now, or soon will be? Price Pritchett, in his recent publication "The Employee Handbook of New Work Habits for a Radically Changing World," speaks with some authority about where we are going and says we will get there through information. Mr. Pritchett observes the following:

- "The Department of Labor estimates that by the year 2000 at least 44 percent of all workers will be in data services...gathering, processing, retrieving, or analyzing information."
- "In 1991, for the first time ever, companies spent more money on computing and communications gear than the combined monies spent on industrial, mining, farm, and construction equipment. This spending pattern offers hard proof that we have entered a new era. The Industrial Age has given way to the Information Age."
- "In 1950, 75 percent of U.S. employees worked in manufacturing. Now less than 15 percent do."
- And in the September 16, 1996, issue of *Time*, Microsoft CEO Bill Gates said, "Microsoft is betting that the Internet will continue to grow in popularity until it is as mainstream as the telephone is today." Mr. Gates is talking about and predicting the importance of information, but what he is also talking about is change.

The Industrial Age is beginning to fade in the shadow of the Information Age, and we resist this change at our own peril. As with other fields

and industries, those of us in policing and highway traffic safety think we understand the situation, but what we don't always understand is that the situation just changed. We don't necessarily need to be all seeing predictors, but we do need to anticipate change, monitor emerging trends, and prepare for the various eventualities change will bring.

Like most other fields, police traffic services and highway safety are influenced by rapid change and will require information, anticipation, and adaptation. We can expect, and are already experiencing, numerous changes:

- suburban expansion and new highway systems

- declining resources (the need to do more with less)

- alternative service delivery systems

- mixed modes using same roadways and increased speed differentials

- more aggressive driving habits by youthful drivers mixed with aging drivers of decreased capabilities

- the need to adapt to developmental "smart" highways and even smarter vehicles

- higher speeds, mixed with the age-old problem of drunk and drugged drivers

- finding new ways to maintain highway systems that historically have deteriorated as fast as they were built

Goals and Objectives for the 21st Century

The potential problems caused by this rapid change must be addressed comprehensively; there's no single cure. The cure or at least the medicine will require information, and by its very nature the exchange of information is cooperative. Knowledge and expertise must be shared.

Based upon some things we have learned at the Northwestern University Traffic Institute (NUTI), I suggest some system and information priorities that will be useful as highway safety catches up to the Information Age:

1. Ensure that local policies fit into more comprehensive regional plans.
2. Standardize state, local and federal systems dealing with data collection, crash investigation, statistical databases, and their analysis and distribution.
3. Standardize driver licensing.
4. Properly register all vehicles.
5. Centralize all traffic court records.
6. Ensure that this centralized traffic records system contains the following classes of routinely collected information:
 - a. Data pertaining to drivers, licensing, violation records, and financial responsibility
 - b. Vehicle data such as owner, make, model, and VIN
 - c. Highway data regarding specific location of bridges, structures, tangents, curves, intersections, and traffic control devices
 - d. Crash data linked to involved drivers, vehicles, and locations
7. Put all this data to work. Uniform, complete, and accurate traffic records, stored in one center in every jurisdiction, subject to rapid retrieval and analysis, and compatible with a national record system, can reveal not only the number of accidents but also what kind of crashes they are; where and when they occur; the physical circumstances and the people, injuries, death, and damage they involve; which emergency services and enforcement agencies responded; and how and what judicial actions resulted—to mention only the most basic possibilities.

Present Status of Police Traffic Services

This change phenomenon applies to police traffic services and the attempt by police agencies today to keep our streets and highways

safe and our traffic moving. I would describe the state of police traffic services today as traditional transition with innovation. Local and state police agencies continue to patrol and enforce traffic laws using many of the same methods they have for decades. They have, however, learned to be innovative in response to new challenges in an age of declining resources. Rising population and the increasing urban sprawl have accelerated the need for larger and more complex highway systems, which are costly to develop and build and require regular maintenance.

The population is growing, and the profile and conduct of the American driver is changing. We are clearly witnessing a higher proportion of both elderly and youthful drivers on our streets and highways. The challenges raised by this demographic revolution are varied. With respect to the older drivers, they are at times less capable mentally and physically to operate a vehicle safely. This decreased ability can obviously create serious traffic safety consequences, but it also carries some serious social consequences as well, depending on the enforcement or regulatory action taken. The police and other government agencies are obliged to take enforcement action when drivers create hazards or cause crashes resulting in property damage and personal injury. The other consequence, of course, is a social one, arising when people with freedom, independence, and ability to travel are suddenly faced with having their driving privileges taken away. The responsible action taken against the first problem clearly creates another one for individuals, friends, families, and the community. The issues relating to youthful drivers appear to be much different, but the bottom line is the same: safety concerns, property damage, injury, and death. Of course, these issues relating to our youngest and oldest drivers don't apply to all members of those groups, but the issues are real and must be addressed.

Many police officers, sociologists, and others who observe human behavior feel that the safety problems caused by some young drivers reflect society in general. Youth crime statistics and casual social observation indicate that some of today's young people are more aggressive, less respectful, less controlled, and less cautious. For the (hopefully) small group of youths that these facts apply to, traffic safety is an issue. Even though statistics reveal that the overall traffic death rate is declining compared to previous decades, drivers aged 15 to 24 are still being hurt or killed at an alarming rate. The National Safety Council (NSC) states that in 1994 those drivers accounted for only 14 percent of the American population but were responsible for 25 percent

of motor vehicle deaths. Of course, one needs only to drive, experience, and observe to see that aggressive and dangerous driving is not limited to our youth. It is clearly reflective of a more competitive, frustrated, stressed society whose method of conflict resolution has changed and produced some shocking results. The police response to these threats to public safety must be innovative, varied, and coordinated.

To response to the aggressive youthful offender, enforcement is one answer, is not the only one. The other answer is information and education. Programs like NSC's "DDC: Alive at 25" specifically target young traffic offenders and speak to them in their own language. At NUTI's Traffic Safety School, we are proud to report that focused education and information can and does change driving behavior. The "Alive at 25" program also provides valuable research data that will help us plan, predict, and react to the future. But shouldn't we attempt to create our own safe future rather than react to the events consistent with an unsafe one? NSC has planted that seed through its campaign called "Focus on the Future." This initiative helps to coordinate public education and research projects, but we must create a comprehensive, cooperative program that involves the community, businesses, schools, law enforcement agencies, and the courts. The Traffic Institute is honored to be part of this partnership, but we cannot emphasize enough the need for a nationally coordinated effort with the ability and resources to be sustained for the long term.

Role of NHTSA and Federal, State, and Local Governments

The role of helping to sustain ongoing, focused projects and fund new ones is a role that can and hopefully will be filled by NHTSA. Coordinating education, research, and law enforcement is vital, and we welcome the opportunity to work with NHTSA on that task. Of course, part and parcel with this effort is accurate and timely data collection, the analysis of that data, and the distribution of the information so we can target problem areas before they become critical. The product of the Information Age and the innovative delivery of that product will become the lifeblood of traffic safety planning and strategy.

Conclusion

With all this talk about information, technology, data collection, and focused projects, one might think there is no more room for traditional

traffic patrol. If the current state of police traffic services is one of “traditional transition with innovation,” then traffic patrol is even more important than ever. What we must do, however, is emphasize and reemphasize the value of aggressive traffic patrol—that is, traffic patrol that does not focus on activity, but rather places priority on results and impact. This is traffic patrol that can really make a difference. If we listen to what Director Earl Sweeney of the New Hampshire Police Standards and Training Council says, we should be using traffic patrol to make a difference in other areas. We need, however, to convince police administrators and some judges of the multiple benefits of aggressive traffic patrol.

Director Sweeney reminds us that “savvy police administrators have rediscovered the value of traffic enforcement. They see it not as simply an end in itself, but also as a valuable tool—a means to an end and an integral part of both criminal interdiction and community policing.” In states like Illinois, Texas, New Jersey, and Florida, high-visibility highway drug interdiction programs have yielded thousands of pounds of illegal narcotics, illegal weapons, and many wanted felons. These and other successful programs are grounded in aggressive traffic patrol, which fights crime and contributes to safer, well-patrolled streets and highways.

Director Sweeney also advocates, as do many others, the formation of regional task forces to take advantage of the multiplier effect. This causes a more efficient use of depleted resources through cooperation and coordination and also yields regional benefits. Let’s not forget that it was Oklahoma State Trooper Charles Hanger’s “looking beyond the traffic ticket” that led to the arrest of the alleged bomber in the Oklahoma City terrorism incident. Focused, directed, coordinated traffic patrol produces benefits beyond the obvious. It only takes initiative, imagination, coordinated effort, training, and—let’s not ever forget—information.

Captain Bob Collins, Independence (Missouri) Police Department

Introduction

Police traffic services nationwide are probably more professional than at any other time in history. Police officers are generally better educated and better trained than they have been in the past. While the quality of police traffic services has improved significantly, the public perception of their efforts has not. A large percentage of the public still views police traffic services as a revenue-producing tool for the government instead of a public safety tool. Too many officers involved in traffic services perceive their positions as secure because of their revenue-producing abilities.

Enforcement, engineering, and education are the cornerstones of police traffic services. Enforcement and engineering have received much of the emphasis in the 20th century, but education to change public perceptions should be given a chance in the 21st century.

Present Status of Police Traffic Services

Lack of Public Support. A *60 Minutes* story about Macks Creek, a small town in southern Missouri, did more to damage the perception of police traffic services than the combined efforts of all police traffic services did to improve their image. The story described Macks Creek as a small-town speed trap on a rural highway leading to the Ozarks. Macks Creek has just one police officer. When *60 Minutes* learned that 95 percent of the operating revenue for the town came from traffic fines, it became a leading story. There is no evidence of a traffic accident ever occurring on the small stretch of highway going through Macks Creek.

Stories like that contribute to many Americans' underestimation of the importance of traffic enforcement. Violating traffic laws is viewed by too many citizens as part of their birthright. Many citizens own radar detectors and use them as tools to make exercising this birthright safer and less costly. Americans seem to accept 40,000 traffic deaths a year as inevitable, but they are outraged at officials for not taking more action to prevent the fewer than 20,000 homicides that occurred last year. Is dying in an automobile less dead than being murdered, or do we have a perception problem? Why will law-abiding citizens flash their lights at

speeding motorists approaching a radar unit, yet call the police when they see young people walking down the street in baggy shorts and Raiders jackets?

Driver Education. Another problem facing police traffic services today involves driver education. Formal driver training is becoming a symbol of the past. Young people today are unlikely to have more than a few trips around the block with Dad and a one-hour cramming session with a driver's manual before they are set free to drive on their own. It takes time for young people to become competent defensive drivers. Most will only learn they are driving poorly when they are involved in an accident or receive a ticket. Even then, young drivers rationalize that they were not wrong and argue that the cop who corrected them was just trying to reach his quota.

Goals and Objectives for the 21st Century

Changes must be made through education to increase traffic safety in the 21st century. Officers involved in traffic services need to learn to think of themselves in the more noble sense of traffic safety officers. The public needs to learn that compliance is a safety issue rather than one of police control. Alternatives to assembly line fines for tickets need to be sought to help change public perception and improve compliance.

Streets and highways are more congested with faster traffic than at any time in history, yet we have given up on educating the youth of our country in driving skills before allowing them to participate in the single most dangerous undertaking of their lives. Even in our changing technological society, can computer familiarization really be more important than driving safety? While drivers may not always adhere to them, safety rules learned in driver education classes are rarely forgotten. Driver safety education should be mandatory for pre-driving age youth.

Educational efforts and increased enforcement against drunk driving in the past decade are showing very positive results. The public perception of drunk driving is also changing drastically. We must continue these efforts to raise public awareness of the problem and improve compliance. While drivers may not always use them, what teens, and adults for that

matter, have not heard the term “designated driver”? That slogan was a seed well-planted.

Conclusion

Police traffic services of the 20th century have to become police traffic *safety* services in the 21st century. For this shift to take place, we need to emphasize education: for those involved in police traffic safety services, for better public compliance and perception, and for our pre-driving age youth.

Paul Corbin, Highway Safety Administrator, Nevada Office of Traffic Safety

Present Status of Police Traffic Services

Speed Enforcement. The present status of police traffic services within the police profession nationwide is in transition. One reason is the recent demise of the National Maximum Speed Limit (NMSL). In 1974, with the imposition of the NMSL, police traffic services, especially state highway patrols, were compelled to concentrate a large part of their enforcement efforts on the 55 mile per hour speed limit.

The citizen reaction to the limit was generally negative. Drivers voiced their concerns and frustrations when stopped for exceeding the 55 MPH speed limit, particularly on the interstate systems. Citizen complaints increased proportionally with the enforcement level of the NMSL. Public opinion of the traffic law enforcement officer fell dramatically. The CB radio blight of the 1970s was a direct result of drivers, especially commercial drivers, attempting to avoid the "bears," "county mounties," and "local yokels" as the scofflaws exceeded the "double nickel" speed limit. The negative image of traffic police was also ingrained by the movie and music industry of the time. Such movies as *Smokey and the Bandit* and trucker songs about who had the "Front Door/Back Door" of a "Convoy" reflected the general public's disdain for traffic officers and speed limits.

Even though traffic officers did not pass the law, they had to enforce it and bear the brunt of the public's disfavor. It was not a popular law from the citizen's or the enforcement officer's perspective. Unfortunately, police supervisors tended to use the number of speeding tickets an officer wrote to judge that officer's promotability. Even when that criterion was not used, it was often the perception of many street officers who were passed over for promotion. Careers were affected by how well traffic officers used their "speed guns" or speed detection devices (instruments every officer soon had available due to an influx of federal 402 Highway Safety Funds). The opinion was and remains, "It doesn't take much of an officer to write speeding tickets. A monkey could be trained to use a speed gun." Officers assigned to traffic enforcement became known as "nothing but speed cops," both inside and outside the profession.

To write more speeding tickets to comply with the dictates of police administrators, traffic officers would go to the "cherry patches" where speeders were numerous. However, there was little correlation between where there was easy picking of drivers exceeding the posted speed limit and where the crashes were occurring. This raised citizens' frustration level and added to the continued negative public image of traffic enforcement.

Before the NMSL, traffic officers enforced speed limits imposed by state or local ordinances. Those limits were often set with political considerations in mind rather than by any articulated relation to a safe and prudent speed or highway design. The hard fact is that speeding or driving too fast for road conditions is a major factor in fatal crashes. Physics dictates that the faster a vehicle travels, the more force the occupants are subject to upon sudden impact, and the more likely they are to be killed. As many as 30 percent of fatal crashes involve speed, according to the Fatal Accident Record System (FARS).

Lack of Public Support. The public has no widespread awareness of the societal cost of traffic crashes or the consequence of violating traffic laws. Traffic officers are continually asked by violators they stop, "Why aren't you out catching a bad guy, like a bank robber or murderer?" The public is not aware that traffic crashes cost a total of \$150 billion last year in 1995, which amounts to approximately \$580 for every man, woman and child in the United States. More people are killed each year in traffic crashes than by murder. More money is lost in car crashes each year than in armed robberies. Almost the same number of people are killed each year on the nation's highways as in 10 years of the Vietnam War. Where is the public concern?

Need to Combine Education, Enforcement, and Engineering. The three E's (education, enforcement, and engineering) of traffic safety have been touted since the 1950s. However, there has been very little concerted effort in those areas. Traffic engineers do a superior job at building modern highways. Traffic officers are getting very good at enforcing traffic laws and will get even better with the new technologies available. Public information officers and the public media entities are at their peak

in providing public service announcements. Yet where are the combined efforts of the three?

Goals and Objectives for the 21st Century

The goals and objectives of police traffic services for the 21st century should be as follows:

1. Promote the concept of, and work in harmony with, safety management systems (SMSs) and community traffic safety programs (CTSPs).
 - a) Executive officers of police departments must demonstrate their commitment to traffic services to the community and the department by actively participating in the SMS and CTSP meetings.
 - b) Police must make the appropriate budget requests to the governing bodies to allow participation in and support of SMS and CTSP.
 - c) Police should also link police traffic crash reports with a central repository for police traffic records on both the state and local levels.
2. Make police traffic services a focal point in the department, rather than an afterthought.
 - a) Police traffic services will have an equal status in the department with criminal investigation services. (No more, "I'll bust you back to traffic if you don't....")
 - b) Personnel assigned to traffic services will be given appropriate recognition for the work they do, with an emphasis on crash reduction in a particular area or innovative crash reduction techniques applied, rather than on the number of speeding tickets issued.

- c) Departments should attract the best and brightest officers to traffic services by showing appreciation for the job they do with appropriate recognition, pay, benefits, and allowances.

Additional Predictions and Objectives. The nature, scope, and focus of police traffic services for the 21st century will be dynamic. It will not grow at the same incomprehensible rate as it did in the early 20th century, but traffic problems will increase in proportion to the increase in the numbers of drivers and registered vehicles. The advent of cheap transportation made possible by the Ford Motor Company's commencement of mass production of the automobile and America's cheap fuel costs will not be replicated. Vehicle and fuel costs are getting higher, not lower, and will continue to do so in the immediate future. This trend may cause the United States to get serious about seeking alternate modes of travel and fuel.

Criminals will continue to use the automobile as their primary means of transportation. Police departments will need to concentrate on proactive traffic enforcement. It is a proven method to deter or catch criminals as they go to or from the scene of a crime as well as to prevent traffic crashes. Drug eradication will continue to be a police concern. All communities in the United States have illegal drugs, and most drugs enter via the highway in a car or truck.

Public awareness and concern must be raised if citizens are going to be willing to pay for and support an increased level of police traffic services in their communities. Once the concept of community traffic safety programs becomes an integral part of police traffic services, the effort will be sustained rather than sporadic. Once the community has an interest in providing its citizens with a crash-free environment and can see the value of reducing other forms of crime in its community via proactive traffic enforcement, the efforts will be bolstered.

Speed limits on most roadways should be set in accordance with the 85th percentile of vehicle speeds in that location. Violators should then be given little tolerance before being cited. Departments, through their public information officers, should educate the public, their traffic enforcement officers, prosecutors, and judges on how the limits are set. They should emphasize the relation between speed and crashes for the

specific locations where limits are set using the 85th percentile method.

Concerted traffic safety efforts will do more than anything else on the horizon to reduce the number and severity of traffic crashes on public highways. Using computer-aided data links from driver's licenses, motor vehicle registrations, crash reports, and emergency medical and hospital reports, police, engineers, and public information officers can identify specific areas where crashes occur and make the application of the three E's more effective. It is not a new concept, but it is not being done with a concerted effort on a nationwide basis. The enhancement of SMSs and CTSPs needs more action and less talk.

Role of NHTSA and Federal, State, and Local Governments

The federal role should be one of facilitator. It should not promote traffic safety through coercion (by threatening to withdraw federal funds), for people respond better to a helping hand rather than a fist. There seems to be a renewed awareness of states' rights, particularly in the western states. NHTSA recently implemented a new 402 funding process that will give the states more latitude in where and how their shares of federal funds are applied. The new process is focused on results rather than process and seems to be creating a more cooperative atmosphere between the NHTSA regions and the state highway traffic safety offices. NHTSA should also help the states keep abreast of the latest technologies in highway safety. The American genius will continue to proliferate in the upcoming century. Traffic safety needs to take advantage of space-age, computer-age intelligence to help reduce the number and severity of traffic crashes on tomorrow's highways.

Chief J. Stephen Cox, Leawood (Kansas) Police Department

Introduction

Although not something we often stop to ponder, the movement of traffic is a major quality-of-life issue in the United States. Among the factors that routinely affect us are the stress of the daily commute; environmental pollution; taxes paid to support construction and maintenance of roadways; leisure and recreational use of motor vehicles; and the economic and personal costs of accidents. This situation is not likely to change in the 21st century.

Present Status of Police Traffic Services

Time-Consuming Duty. With some exceptions, traffic services are the stepchildren of law enforcement. The vast majority of agencies are too small to have specialized traffic service components, so those duties fall upon patrol officers with many conflicting demands on their time. On the other hand, dealing with traffic problems may be the most time-consuming duty of the typical small-town department. Even in agencies with specialized traffic units, staffing shortages often dictate that those units be tapped to provide patrol manpower.

Lack of Public Support. Another current problem is that the public often underestimates the importance of traffic enforcement. Law enforcement either fails to recognize or cannot get the public to accept the fact that, in many communities and in many circumstances, the economic and human costs of traffic accidents far exceed those caused by crime. Further, traffic law enforcement often leads to the discovery of a wide range of criminal activity, from drug violations to murders. Crime exacts an emotional toll from nearly everyone and creates a general sense of fear and insecurity, while traffic-related losses usually affect only those directly involved. As a society, we go to great lengths to reduce the opportunity to become crime victims because fear of crime is pervasive. Few people spend much time, energy, or money worrying about how to avoid being involved in an auto accident.

Even when citizens recognize the importance of traffic enforcement, they are often unwilling to obey the laws themselves. We want traffic on our residential streets to be minimal and sedate, we want our children to be

safe walking to school, and we want vigorous enforcement against scofflaws who threaten our safety when we drive. However, we don't want to be ticketed ourselves, and we rarely accept a ticket graciously. We always have a reason—or excuse—for our speed, tailgating, and the like, but the other guy doesn't. This negative public reaction is exacerbated by the fact that enforcement efforts are sporadic. They are not always directed where and how they will be most effective, and they are unable to catch every violator. This leaves the public with an inherent sense of unfairness.

Goals and Objectives for the 21st Century

In determining goals and objectives for police traffic services in the future, it is necessary to make certain assumptions about wider societal issues that have a direct impact on law enforcement. First, it does not appear that crime will decrease significantly in the foreseeable future. Therefore, demands on police resources for crime control will increase, and resources available for traffic control will decrease. Second, tax dollars will become scarcer, and government at all levels will become leaner as a result. Thus, the quick answer of more traffic police is not a realistic one, and it will be necessary to question certain basic assumptions about the role of the police in traffic services.

Reduce Police Involvement in Traffic Management. The primary goal for police traffic services in the 21st century, then, should be to reduce police involvement in traffic management to the greatest possible degree, freeing resources for other duties. Law enforcement must not ignore or evade its role and responsibility but must learn to be more efficient so that less time is needed to manage traffic problems.

A first step toward reaching that goal is to maximize the use of technology, thereby reducing the time devoted to traffic services. Pen-based computers, "black box" data recorders, and the like can be used to streamline the accident investigation process. The enforcement process must also be made more efficient and less labor-intensive. For example, it may be beneficial, though controversial, to use unmanned photo radar, as is done in parts of Europe.

Another possible step toward reducing police involvement is to consider the civilianization of certain traffic services. Many enforcement and accident investigation activities do not require the presence of a police

officer, except by tradition; non-sworn personnel, at a lower cost, can be given the power to issue citations and the training to investigate accidents. However, if society continues to become more violent, that may not be a viable option.

It may be necessary to question *any* police intervention in certain aspects of traffic management. While investigating many traffic accidents, one wonders whether any purpose is served other than providing a free service to auto insurance companies; perhaps a user fee is in order. Although considerable information is collected and forwarded to transportation officials, the data are not always used to improve safety through infrastructure or other improvements. Should the number of traffic accidents continue to escalate, law enforcement agencies may need to adopt practices similar to investigative case management policies in widespread use, wherein very basic information is collected for reporting purposes but no follow-up or any other resource expenditure is devoted to a minor case; resources are reserved for more serious cases.

Conversely, emergency response and incident management, a vital traffic service that includes assisting drivers in need, is likely to remain a function of the police. In some locales law enforcement will be aided by advanced technology such as the Intelligent Transportation System (ITS) and auxiliary services such as "motorist assist" patrols.

Increase Traffic Safety Education. A second objective is to increase public traffic safety education. We believe we can make a difference in crime rates by involving the public in prevention measures, and we should try to do the same with traffic safety. Law enforcement should take a leadership role in educating the community on the real costs of traffic accidents, at the same time encouraging safe driving behavior and striving for a greater degree of voluntary compliance with traffic laws.

Prepare for Future Demands. Given constraints on police resources, which can only be anticipated to worsen in the next century, and given the ever-increasing number of vehicles and drivers, it seems the primary response will be to rely less on people (drivers and police) and more on engineering and technology. Obviously, the human factor cannot be engineered into oblivion, but hazards can be reduced and the severity of accidents can be mitigated by the use of these two resources.

Another response to consider is the strengthening of licensing standards with a view toward reducing the number of drivers. Such a change will need to be balanced by an increase in alternative transportation options like mass transit.

The hazards presented by impaired drivers will continue. The attitude of American society toward drinking and driving has unquestionably changed, but the problem will never disappear. Devices like ignition interlocks can have an impact on those under the influence of alcohol, and methods should be developed to detect drug impairment as simply and reliably as alcohol impairment.

Whether or not we realize it, the issue of traffic safety touches almost every facet of our lives. Anyone who purchases auto insurance pays for property damage claims, health care costs, and litigation. Gas purchases fund road construction and maintenance, and state and local taxes fund police traffic services. All these factors and many more will insure that progress is ongoing toward the improvement of traffic safety.

Role of NHTSA and Federal, State, and Local Governments

As demands increase and resources decrease, technology may provide some of the best answers to traffic safety problems in the near-term and long-term future. NHTSA and other federal agencies can take a leadership role and perhaps offer the best overall coordination of diverse efforts to harness technology in the quest to improve traffic safety.

Those efforts include the following:

- furthering mass transit programs to reduce the demand for motor vehicle travel

- continuing the implementation of urban ITSs

- developing improved construction technology to reduce maintenance demands and costs

- pioneering advanced safety technology for collision avoidance, occupant protection, and the like to reduce the severity of crashes.

State and local governments will play a vital role in these measures:

promoting mass transit

streamlining accident investigation and traffic enforcement

questioning old methods and seeking new ones for delivering police traffic services

implementing engineering and other enhancements to reduce hazards

educating the motoring public on the importance of traffic safety and the true costs of accidents

adopting technology to improve traffic safety

Lt. Colonel Raymond G. Dutcher, New York State Police

Introduction

The New York State Police is a full-service police agency of approximately 4,000 members with statewide jurisdiction. Highway safety is a major component of this broad police mission. The agency provides police services on all major highways in the state and is the sole police presence on most major interstate highways, including the New York State Thruway, which connects the major urban areas of New York State.

Various challenges confront the New York State Police as it plans to meet the needs of the 21st century with resources that will likely fail to keep pace with the growing traffic volume and its associated demand for services. These challenges require foresight to meet the projected needs. Several of the more important challenges are discussed below.

Goals and Objectives for the 21st Century

Interagency Cooperation. Interagency cooperation is foremost in planning for the delivery of police services in the next century. Highway traffic volumes are expected to continue to rise in the foreseeable future, while agency budgets and manpower are expected to continue in relative retrenchment. To meet the growing demand for police services, a higher level of interagency cooperation will be required of all public agencies (including police agencies) across local, state, and federal divisions.

Quality public service requires agencies to work together for a common clientele. Police agencies are increasingly required to focus more on accomplishing the mission and less on territorialism and elitism. In addition, public agency missions are often interrelated, and fulfillment of those missions requires that all public agencies focus on the public. For example, in New York State, the Department of Motor Vehicles is charged with licensing, vehicle registration, accident report records, and traffic ticket records, and it is essential that our agencies work in close cooperation. Similar cooperative relationships with federal, state and local departments of transportation are necessary to fulfill other missions, including commercial vehicle inspections. These cooperative relationships will be integral to the development of interagency communications networks and computer-based systems in the future.

Use of Modern Technology. The increasing demand for service under austere public budgeting requires that public service agencies accomplish more without similarly increasing the number of personnel. Modern technology is one way to do so. Contemporary policing has become a paper-based occupation, where every action a police officer takes must be recorded, endorsed, copied, reviewed, cosigned, and filed. In addition to paper, each of these functions requires countless hours of manpower. The application of computer and communications technology will enable agencies to become more efficient.

Computerization has the potential to improve not only the efficiency of service delivery but also the effectiveness of police services. Because of the greater ability to manipulate electronic data, more information can be obtained from the data. This additional information can be used to allocate police resources more effectively to reduce a particular problem, such as a location with a high crash rate.

The Division of State Police is currently piloting systems that, in the future, will enable troopers to access motor vehicle data and complete and file reports and traffic tickets from the patrol vehicle. These reports will be electronically transferred and can be remotely accessed. In addition to eliminating manual report manipulation, these electronic reporting systems will enable supervisors to capture report information to better manage police personnel. Electronic data can then be compiled into databases, which can be analyzed to provide additional information concerning crime patterns, high accident locations, frequent violators, and other information that is largely unavailable under traditional paper systems.

Traffic Management. The volume of traffic on America's highways is expected to continue to rise throughout the next century. The increasing traffic volume will require traffic management systems to maintain transportation efficiency and to avert degradation of highway safety. Various surveillance strategies for high-volume highways are available to accomplish these ends. Electronic road sensors, meteorological instrumentation, video monitoring, and variable message signage can divert traffic patterns around existing or potential hazards, as well as provide prompt mitigation of road hazards by police and public works officials.

Highway monitoring systems are currently in use on major arterial highways to the New York City area. These systems deploy variable message signage to route traffic patterns to optimize transportation effectiveness. In addition, the New York State Police and New York State Department of Transportation have been exploring joint strategies to improve transportation on high-volume

interstate highways statewide. As traffic volumes continue to rise, these intelligent highway systems are increasingly important, particularly near upstate urban centers.

Commercial Vehicle Issues. In addition to the expected nationwide increase in highway traffic, New York State will likely experience significantly higher commercial traffic due to international trade between the United States and Canada as a result of the North American Free Trade Agreement and other commerce incentives. This greater concentration of commercial traffic poses additional challenges to police traffic services in the future.

At a recent National Truck/Bus Safety Summit, driver fatigue was cited as the industry's greatest safety concern. The threat of drowsy driving will increase proportionally with the increase in commercial traffic. In response, the New York State Police has implemented a driver fatigue detection and enforcement curriculum, which is taught at the New York State Police Academy. In addition, the agency is a member of the New York State Drowsy Driver Task Force, which was created to develop solutions to the problem of drowsy and fatigued driving.

In addition, as commercial traffic volumes rise, increased diligence will be required of enforcement personnel responsible for ensuring the roadworthiness of commercial vehicles. To meet the demand for commercial inspection services, the New York State Police, in conjunction with the New York State Department of Transportation and the U.S. Department of Transportation, are computerizing the process for reporting commercial vehicle safety inspections. Wireless technologies, including cellular switched servers, cellular packet data servers, terrestrial wireless networks, and satellite servers, will transfer data from remote locations to control points contemporaneously. This information will allow commercial safety personnel to identify and closely track problem carriers. A recent analysis of commercial accident locations statewide identified high crash corridors. Accident mitigation details conducted at those locations significantly reduced the number of commercial accidents. Computerization and wireless communications will improve the quality of data in the future, resulting in more effective mitigation of hazards.

Conclusion

The challenges to police traffic services in the future are the result of compounded, rather than new, highway safety threats. As public service budgets shrink relative to the increasing traffic volumes, police traffic service delivery will increasingly depend upon technological aids and solutions. Although technology will allow police agencies to cope and in some cases

provide superior service (do more with less), technology itself comes at a price. Therein lies the “catch 22” of future public service. However, government does not create the technology it uses. Outside the military, few technological applications have been developed by government. Technological advancement is, to a large degree, driven by the technological society we serve. As society continues to advance technologically, it is incumbent on government to serve that society, and public budgets must reflect that cost.

Chief George M. Ferris, Fort Meade (Florida) Police Department

Introduction

Like most things in this world, police traffic services have always been in an evolutionary process. Due to increased travel after World War II, coupled with vehicles capable of higher speeds, the death rate per miles driven rose dramatically. In the 1950s and 1960s, traffic law enforcement was targeted at reducing crashes. The typical officer effecting a traffic stop did so to enforce traffic laws. A secondary purpose was to intercept criminal activity and apprehend wanted persons.

The focus of police traffic services began to change in the 1970s with the advent of increased crime, highway congestion, and drug activity. Law enforcement executives were forced to reallocate traffic personnel to patrol and crime prevention activities. In some communities this change of priorities led to a lack of official interest in traffic. Many agencies devoted significant personnel resources to drug interdiction. Traffic enforcement in numerous situations was tied to uncovering drugs in motor vehicles. While this is an important aspect of law enforcement, the total resources available to supervise traffic generally were diminished.

Present Status of Police Traffic Services

The challenges to police traffic services today reflect these gradual changes. Increased congestion has produced additional crashes, which have decreased the time available for routine patrol and enforcement. Heavy congestion on commuter routes has made enforcement difficult. In addition, congestion often dictates that enforcement be deferred, since a vehicle stopped by police produces additional backups.

Vehicle registrations and licensed drivers have increased more than police traffic resources. That means traffic personnel must monitor more vehicles. Many drivers are operating their vehicles longer due to the high price of new vehicles. For the same reason, there is an expanding market for used vehicles. Both factors have produced greater numbers of unsafe vehicles on the highways. This has occurred during the same time that many states have eliminated vehicle safety inspection programs.

Larger and heavier trucks have been allowed to operate on the nation's roadways. With the adoption of the North American Free Trade Agreement, more commercial vehicles are driving on the highways. Some of them are in an unsafe condition due to less stringent safety requirements in the originating country. Supervision of commercial vehicles remains, in most jurisdictions, the purview of specialized law enforcement units. Many police officers are intimidated by large trucks since they do not understand licensing, equipment regulations, or other requirements.

The proportion of older drivers is increasing steadily in the United States due to advances in health care. This group of drivers as a whole is at a greater risk of becoming involved in crashes due to physiological changes involved in the aging process.

Persons are entering the United States from other countries in record numbers. They include both legal and undocumented aliens. Many of them come from countries where traffic law enforcement is lax and driver education is minimal. A language barrier often prevents such persons from benefiting from regular traffic safety messages produced in the English-language media.

There is a growing indifference to voluntary compliance with traffic laws in our society. This is evidenced by increased disregard for speed limits, running of red lights, driving under suspension, and failure to pay traffic citations. Today's society lives in a fast-paced environment, which is reflected in driving habits. Television commercials constantly showcase fast-moving cars. It is difficult to sustain a "Speed Shatters Life" campaign when state agencies keep increasing the maximum speed on roadways. What is preached to be an unsafe speed one week becomes safe the following week after speed limit signs are changed. This is a trend which appears to have considerable momentum across the country. While the initial thrust involved controlled access highways, limits on other types of highways are now being raised.

Each of those trends will continue as America moves into the 21st century. Innovative programs, including increased use of technology and greater focus on specific populations, will be necessary to effect change. In addition, traffic law enforcement agencies will need to adopt community policing strategies.

Goals and Objectives for the 21st Century

Funding, legislative action, technology, and public support are the key elements to establishing effective law enforcement services. Each component needs to be analyzed as we look toward the next century. The basic goals and objectives of

police traffic services should remain the same, but the way services are delivered must change.

Funding. Traffic law enforcement is often the first service to be cut when law enforcement agencies downsize or redirect their operations. Roadways need to be viewed as systems, and funds should be allocated to build, maintain, and police those systems. This idea is an expansion of the toll road concept, where traffic law enforcement is funded as an operational cost of the system.

Legislative Action. Effective interaction with the various state legislatures needs to be undertaken as part of a concerted national effort by law enforcement and the highway safety community to insure effective traffic safety legislation. The Uniform Vehicle Code should be updated to reflect the needs of the next century and adopted by each state legislature.

Technology. Personnel resources will continue to be at a premium. Law enforcement will need to turn increasingly to technology to remain effective. A variety of functions may be automated. Automated speed and red light enforcement are emerging as supplements to traditional methods. Automated enforcement can do more for less and can be expanded to other areas. The same cameras that record a driver running a red light could be used for secondary enforcement, such as safety belt violations or expired registrations. These and other violations are currently observable by viewing the automated enforcement photographs.

The question remains as to who will operate the equipment. In a few jurisdictions, traffic engineering departments are operating the systems and handling the violations. In other jurisdictions, that function is being privatized. Safety is enhanced through the use of the cameras since the officer does not have to overtake and stop the violator. Officers will be able to spend additional time on violations that are not enforceable by automation.

The Neighborhood Watch concept should be expanded to a Highway Watch to capitalize on the increased use of cellular phones. Standardized phone numbers for reporting highway violations should also be considered (like the 911 concept). Law enforcement needs to work with the cellular industry to route calls to the right jurisdiction for quick response. Additional participation from the public will help direct traffic officers to locations where they are needed.

Technology needs to be in place in each traffic patrol vehicle to speed the enforcement process. Drivers' licenses and vehicle registrations should be bar-coded or manufactured with magnetic strips that could be read by an on-board

computer. By decreasing the time for each enforcement action, officers will be able to generate additional motorist contacts.

Technology needs to be built into roadways and vehicles. Vehicles could operate on magnetic fields, installed in the roadway, which could regulate speed. All vehicles in a platoon would move at the same speed, thereby increasing roadway capacity and preventing speeding violations and rear-end collisions. Similar strips could alert drowsy drivers who are drifting off the road. Interactive ignition systems could reduce the number of persons driving under the influence of drugs or alcohol. Because education will not work for all individuals, the answer may lie in technologically preventing violations in the first place.

Technology also needs to be in place for automated DUI enforcement. Outdated motor and coordination tests need to be eliminated. Suspected violators should be required to submit to portable breath testing equipment, and every traffic officer should be equipped with it. An effective field drug testing unit would allow officers to screen those driving under the influence of narcotics. Reduced turnaround time for processing those driving under the influence would allow officers time for additional field contacts.

Public Support. Increased investment in prevention and education for specific groups of drivers will pay big dividends. Examples are classes that show the elderly how they can compensate for reduced physical abilities while operating motor vehicles, and bilingual education, such as the "El Protector" Hispanic outreach traffic safety effort.

The public must be convinced that traffic crashes, injuries, and fatalities are not the necessary by-product of the motor vehicle transportation system. The public finds that one or two air crashes in a short time frame are unacceptable, but many more people die traffic crashes. Traffic safety messages should hammer away at this point: they are not accidents but preventable crashes.

Traffic safety programs need to be sustained over long periods to change behavior. The focus of traffic safety efforts often changes, either throughout the year or from one year to the next. When that occurs, law enforcement responds and a new emphasis is announced. Subsequently, the first program goal is de-emphasized and another program takes its place. Naturally, less attention is paid to the former goal by all concerned: the media, law enforcement, and the public. This is not to minimize the importance of demonstration projects or seed money, but once federal money is withdrawn, in time, programs are discontinued or diminished.

The problem remains: how should law enforcement provide for program continuity? Take, for example, a program on the criminal side: the 911 system. That sophisticated system has remained in place because funding has been provided through a monthly assessment on each subscriber's phone bill. Similar types of dedicated dollars need to be available to each agency operating traffic units to insure that adequate funds are available to achieve effective traffic management. An example on the traffic side might be that a portion of each vehicle registration could be distributed to the local or county agency where the vehicle is registered for traffic law enforcement purposes.

Role of NHTSA and Federal, State, and Local Governments

NHTSA, FHWA, and other federal agencies will find their roles changing as we move into the 21st century. With the mood of Congress at the current time, it would appear that federal mandates for highway safety will be less in the foreseeable future. More emphasis will need to be placed on finding ways to reach key personnel in state governments to have them embrace highway safety enhancements. The goal should be to convince the states that the adoption of new technology, concepts, and legislation is good business for the state. More NHTSA dollars should be directed for that purpose as opposed to funding additional officers on Selective Traffic Enforcement Programs (STEPs), which have a short-term value. Additional dollars may be productively used to showcase emerging technology. Also, as noted earlier, FHWA should consider highways as systems, providing construction, reconstruction, maintenance, and police service dollars for each mile of roadway. While that may be impractical for every federally aided road, the idea could be tried on portions of the interstate system.

Increased technology may be beyond the financial availability of many local law enforcement agencies. Funding formulas must be put in place that dedicate adequate dollars for police traffic services.

Terrance W. Gainer, Director, Illinois State Police

Present Status of Police Traffic Services

Issues and problems shaping traffic services today will continue to influence policing well into the 21st century. Balancing the demands of effective traffic enforcement with those of crime fighting presents difficult challenges to police agencies nationwide. That is especially true in light of increased police accountability and the advent of police/community partnerships.

Increased demands, coupled with limited resources, have also intensified the need for effective planning and resource deployment. Improved performance, quality of service measurements, and more sophisticated planning methods are continually being sought to identify weaknesses and build on strengths. Some police services have already changed. Community policing has become more than a string of agency programs. Successful community policing necessitates the implementation of civilian programs, multi-agency partnerships, and strategic planning. Community policing under fiscal constraints has influenced the mobilization of civilians through volunteer programs, civilian police academies, and civilian patrols.

The rapid advancement of technology has also made a tremendous impact on policing. Technology is improving communications and enabling officers to use their vehicles as offices, providing time for them to leave their vehicles and interact with the public more frequently. New technologies are also enabling increased and more timely data gathering and dissemination. Technology, however, carries additional financial support and training challenges. Purchasing equipment, developing infrastructures, and maintaining an increased technology staff is expensive.

Goals and Objectives for the 21st Century

The 21st century brings new challenges to policing. Reduced federal funding will create a need to pool resources to eliminate the duplication of services and increase efficiency. Examples of resource pooling include combining community-based policing initiatives, major crime units, and crime violence reduction units, as well as coordinating traffic crash reduction programs. Successful interagency efforts such as metropolitan enforcement groups, drug task forces, and roadside safety checks will continue.

If lower federal funding reduces hire-back programs, police presence and police response will suffer. Federal funding should be used for agencies to focus traffic safety efforts on directed patrols, identifying problem areas, and responding to those areas in force. That will result in a more efficient use of police traffic resources. Increased public demand for services and reduced funding will force police agencies to reduce their responses to incidents not requiring police intervention or an emergency response. Agencies will need to reevaluate and prioritize services the public needs or expects based on what the agency can deliver. Public information efforts will be used to educate the public about the changing emphasis in police services.

Shifts in the population's ethnic diversity will increase the need for cultural diversity training within law enforcement agencies, particularly in regard to language. In Illinois, the Hispanic population has more than doubled since 1970. Education and training will need to continue if police are to address this issue effectively.

An increase in driver and registered vehicle populations will lead to more crashes and a need for more traffic services. This will raise manpower demands, resulting in reduced resources available for proactive traffic enforcement.

Law enforcement agencies must address special needs created by an increasing number of senior citizens. With the baby boom generation becoming older and improvements in medical care increasing life expectancy, the senior citizen population can be expected to increase. Senior citizens present special traffic safety needs. They may have reduced vision and slower reflexes and at times be inattentive. When compared to the fatality rate for drivers 30 to 59 years old, fatality rates for drivers over 80 is six times as great, increasing to 10 times as great by the time people reach 85 years of age. Possible reductions in these rates may be made by increasing driver education opportunities for senior citizens, creating clearer and larger highway signs, adding multiple postings of traffic information, and making other improvements to offset diminished capabilities.

Increased use of technology will improve communications and computer networks. Officers will be able to work from their vehicles, residences, and neighborhood police offices. Training information, traffic law updates, and supervisory correspondence can be communicated by computer. New communication technologies will make it more practical to transmit a variety of computer data, video images, and automated vehicle location information to the field. The expanded use of radio-transmitted technologies will increase the

demand for radio frequencies. New computer technology will also allow for better and faster intelligence gathering and dissemination.

Technologies to control traffic flow and decrease accident rates will be developed for major population centers and other high traffic areas. The use of such technology will also help defray the cost of additional road construction.

Methods to Resolve Present Problems in Police Traffic Services

Addressing current issues in preparation for future demands requires comprehensive, innovative approaches. No easy answer exists. However, innovation does. A successful tomorrow depends on collaborative efforts. Problems must be identified and resolved, and solutions may come from several sources: education, technology, and legislation.

Education

A national ad campaign should be undertaken to highlight the financial impact of traffic crashes, which is approximately \$150 billion per year nationwide. In comparison, the annual cost of all crime is estimated to be \$19 billion. These facts should be reinforced in citizen police academies and community policing programs across the country. The public cannot escape the cost.

Repeat traffic offenders (moving violations) and people in repeated accidents should participate in mandatory remedial driver education. Fines should be used to pay for the programs. Following mandatory education, drivers who continue as repeat offenders or who are habitually involved in accidents should have reduced license privileges, similar to graduated licensing for young drivers.

Education must be developed for the judiciary on the importance of traffic safety laws. Seat belt and other safety violations must not be routinely dismissed. Dismissals reduce public compliance and worsen traffic injury and fatality rates. Courts should be discouraged from offering supervision to traffic offenders.

Technology

In terms of police operations, in-car computers that interpret driver's license information via computer chips or bar codes will provide more timely and accurate information. Computer-generated and -printed reports for motorists will increase crash reporting efficiency. An example of the use of new technology to prepare for future demands is the pen-based mobile field

reporting project that the Illinois State Police is pursuing in cooperation with local agencies. That technology will allow in-car computers to capture crash reports and transfer them electronically from the officer in the car to the district headquarters via mobile data radio frequency networks.

Traffic enforcement should use less manpower. Laser speed units and high speed photo recording equipment that captures the license plate and driver on film will augment police traffic services. Citations should be automatically mailed to violators, and fines should be used to subsidize the placing of unmanned speed units and photo recording equipment. This facet of traffic monitoring and citations should be privatized.

Traffic and all police services will be improved with a diminution of separate radio/ communication centers for each individual police agency. Federal resources or proceeds from fines must be applied to build and maintain the infrastructure necessary to support wide-area data and voice communications networks.

Auto manufacturers should be mandated to install "non-choice" safety belts. Unless the belt is used, the vehicle gear may not be engaged (just as in some cars the driver must step on the brake when engaging a gear).

Legislation

The most important legislative initiative for saving lives and reducing injuries is a national mandatory seat belt law. Those who are not wearing seat belts when involved in crashes should have driving privileges suspended or be subject to graduated licensing.

Other traffic safety issues are helmet laws for motorcyclists and lowering the blood alcohol content level to .08 percent.

Role of NHTSA and Federal, State, and Local Governments

NHTSA's mission is "to reduce deaths, injuries and economic losses from motor vehicle crashes." By collecting nationwide data, producing statistics, and demonstrating trends in traffic safety, NHTSA provides state and local agencies with the big picture. That helps agencies identify areas of concern and compare their problems to those of other agencies. However, to help police target problem traffic areas, the data must be provided on a real-time basis.

Federal, state, and local agencies will have to cooperate to achieve common goals in traffic safety. Achieving those goals will require increased coordination, appropriate planning, and a more effective allocation of limited resources.

As we enter the 21st century, the demands for traffic law enforcement will continue to increase. How we anticipate those demands and prepare for them now will determine the severity of the problems we face in the future.

Assistant Chief William P. Georges, Albany (New York) Police Department

Present Status of Police Traffic Services

Growing Emphasis on Traffic Enforcement. Police traffic services are in a state of flux. In the late 1970s, escalated highway fatality rates, poor perception of risk by the public, severe alcohol-related driving offenses, other hazardous violations, and non-use of occupant restraints finally led to a public outcry. In concert with organizations such as MADD and RID, the government shifted its efforts to respond to the problems. Federal and state funding became available for highway safety grants. The three E's of traffic safety (enforcement, education, and engineering) became watchwords for potential strategies to attack the problem.

Although the mission at that time was awesome, the task at hand was almost simple. The motoring public was a monster. People drove vehicles erratically, many of them operating under the influence of alcohol or other drugs. DWI-related offenses were not taken seriously. Speeding was commonplace. Law enforcement was not focused on highway safety issues. When the change in attitude began, enforcement campaigns were easy to implement.

Traffic safety enforcement personnel quickly became important. They were "dragon slayers," hunting to decrease the risk of death on our highways. Many agencies started special traffic squads, which primarily enforced vehicle and traffic laws. Larger agencies bolstered their traffic divisions. Medium-sized agencies started or bolstered their traffic efforts. Even smaller agencies started special units or at least designated personnel responsible for special traffic functions. To accompany enforcement, traffic personnel also journeyed into schools, preaching the traffic safety message whenever possible.

Slowly but surely, positive results developed. The fatality rate decreased. The laws changed to better reflect public opinion. There was a greater perception of risk by the motoring public. This perception of risk was actually two-pronged. There was a perception that if drivers violated the laws there was a good chance they would be seriously injured or killed. Additionally, there was a perception that they stood a good chance of being arrested or ticketed. Public/private partnerships assisted law enforcement with highway safety issues. Over time, the state of traffic safety improved to reach the condition that exists today.

Slowing of Progress. Even with all these positive efforts, our nation remains indifferent to death and injury by motor vehicle. Death by firearms, stabbing, etc. enjoys a much greater scare factor than death by motor vehicle. This is apparent any holiday weekend. Our industry floods the media with estimates of the number of people that will be killed in traffic crashes, and it seems to have little effect. The scare of a fuel crisis has long subsided. As a result, there are more people using the highways. Speed is fashionable again. Take a look at this year's new car commercials; most contain a speed theme. Most states have abandoned the 55 mph speed limit, and some have raised the limit dramatically. Federal and state funding levels for highway safety projects have dropped. At times it might appear that positive results in the traffic safety arena have been dramatic. All of a sudden, the pendulum may be swinging away from such progress.

Currently, traffic safety must compete with serious contenders on the issue agenda. Crime receives top billing. The illegal use of drugs monopolizes the media every day. To the general public, the need for traffic safety programs may seem small in comparison. The result is cuts for traffic safety programs.

Many law enforcement organizations are conducting management studies to evaluate their operations and determine the need for change. More often than not, those studies indicate that specialized traffic safety units are either not necessary or could be severely reduced to save money. The recommendations go on to say that traffic enforcement and related tasks could be performed by regular patrol officers. Experience has shown that although patrol support is critical, it is not enough to accomplish the traffic safety mission. Calls for service have increased everywhere. As a result, the luxury of traffic-related proactive work often goes out the window. In a short time, the risk of a reversal of progress has become very real.

Goals and Objectives for the 21st Century

Police officers must carry the torch of continued progress in traffic safety enforcement. The task before us is to ensure that highway safety remains a priority. Traffic safety professionals must unite and present a unified stance. We should concentrate on the following:

- repositioning highway safety as an important issue
- the "looking beyond the ticket" concept
- the relationship between community policing and traffic safety
- available technology

- available training (including command-level traffic safety planning)
- government support and funding
- public/private partnerships

These issues represent the future. If we fail to address them, we risk facing severe cuts in commitment and funding, and thus an overall reduction in the traffic services mission. If its progress is cyclical, traffic safety may be in a downward trend. A concentration on these issues will help maintain acceptable levels of service.

We have known for years that traffic enforcement has a great potential to produce criminal arrests. Our society is highly mobile. Criminals often commit traffic offenses as they operate motor vehicles. We must actively pursue these arrests and must better document them to demonstrate the importance of traffic enforcement. A comprehensive "looking beyond the ticket" program will do both.

Ironically, any agency with an active community policing program realizes that traffic safety still has great importance to the public. It simply presents itself in a slightly different form. Many of the "quality of life" concerns voiced at community meetings are traffic-related. Erratic driving, failure to yield to pedestrians, and loud car stereos are examples of such complaints. A comprehensive traffic program addresses those concerns and often enters a "looking beyond the ticket" situation.

The 21st century will yield much in the area of technology. Currently, many products can enhance the task of providing traffic safety programs. Law enforcement organizations should communicate their needs and work together to pursue the best possible technology to meet those needs. However, technology should not be overemphasized. Nothing can replace knowledge. Technology should enhance and assist our talented work force.

An emphasis on traffic-related training must continue. The talents of our workforce must be cultivated to their fullest potential. We must train our personnel in all facets of highway safety and integrate this training into other areas of instruction. There must be no possibility of traffic safety slipping into a secondary mode. A training course for command-level personnel should be developed. Too often, traffic commanders are thrust into such a position with no prior experience. Many times they must learn as they go. Additionally, training for mid-level supervisors and field training officers should be enhanced. Training is needed to instruct all personnel in the various components of highway safety.

NHTSA and state governors' representatives must respond to those needs. Subjects such as funding, training, and planning should be revisited. Additional summits throughout the country should concentrate on whatever will enable traffic safety providers to accomplish their goals and objectives.

An enhanced relationship will be required between public and private organizations within the traffic safety family. Allied agencies, insurance companies, and media sources must enjoy a better understanding of each other's functions. Many issues could be better handled with such relationships in place.

Conclusion

We have made great strides in highway safety in the past 20 years, and we are able to see the fruits of our labor. We face a challenging time ahead. Many issues have the ability to add or detract from our mission. We must plan and execute the next chapter by carefully molding the present. Our country's lives depend on it!

Chief Michael J. Heidingsfield, Scottsdale (Arizona) Police Department

What follows is an executive summary of the Scottsdale Police Department Traffic Safety Initiative (TSI).

Problem

In 1995, the Scottsdale Police Department completed 4,918 traffic collision reports, compared to 3,445 in 1991, a 42 percent increase. The police department spent 7,377 work hours or \$175,573 investigating the 1995 collisions, not counting the work required to control the collision scene during the investigation. Based on the first quarter of 1996, we anticipate 5,400 collisions this year. The rural Metro Fire Department has responded to approximately 1,890 collision scenes in the last year requiring at least one fire engine and one ambulance for over 30 minutes. Fifteen percent of the time, two ambulances are required. In 1995, over 2,500 people were injured in our city in a total of 4,400 traffic collisions.

Considering that our goal is to move traffic and people as quickly and safely as possible, what causes the collision and congestion that we experience on a daily basis? Traffic signals are timed to permit motorists to travel the speed limit through the city. Many collisions occur when motorists speed between intersections and stop abruptly. This continual acceleration and abrupt stopping causes rear-end collisions, reduces gas mileage, slows traffic flow, and increases pollution.

Speed

One principal cause of traffic collisions is speed. The faster a vehicle travels, the more likely the vehicle will become involved in a collision and the more serious will be the resulting injuries. In 1995 the Scottsdale Police Department issued 9,900 speeding citations. We have had 69 fatal collisions in the last five years. Speed was a factor in 21, or 31 percent, of the fatal collisions. Speed was also a factor in 35 percent of *all* collisions reported in the last five years. Often the at-fault drivers were not driving over the posted speed limit, but their failure to control the vehicle was due to speed. If a driver is traveling too fast or is inattentive, the ability to slow or stop the vehicle when necessary is impeded.

Most speed enforcement requests we receive involve rush-hour traffic speeding through residential streets during the peak hours of our local schools.

Intersection Collisions

Many motor vehicle collisions occur in intersections, especially in urban areas. (For our purposes, an intersection is defined as the area actually within the intersection and 100 feet in all directions. This definition is based on traffic engineering data related to collision reports that are "intersection related.") A study of non-freeway motor vehicle collisions in four urban areas of the United States found that 56 percent of the collisions occurred at intersections. National research indicates that the principal contributing factor in urban motor vehicle collisions is the failure of drivers to obey traffic control devices, followed by failure to yield to other roadway users at intersections. It is important to remember that the approaches to an intersection are just as hazardous as the intersection itself. Enforcement must occur mid-block in addition to within the intersection. Over the last five years, Scottsdale police officers have issued an average of 3,480 citations annually for disregarding signals and stop signs. In 1995, there were 300 collisions from disregarding a signal or a stop sign. Rear-end collisions are the most frequent type of collision.

Current Police Traffic Deployment

The Scottsdale Police Department traffic enforcement unit consists of 10 sworn police officers and two sergeants, divided into one daytime and one nighttime squad. Additionally, three detectives are assigned to the unit for investigation of hit-and-run collisions, serious injuries, and fatal collisions but are not routinely involved in proactive traffic enforcement. Duties of the traffic unit include collision investigations, report writing, and court and attorney interviews. Additionally, the units are involved in DUI saturation patrols, public education and awareness functions, sobriety checkpoints, and commercial vehicle inspections.

The following information is provided as a general discussion to demonstrate how a comprehensive photo enforcement program could be integrated into a complete TSI. The intent of such an initiative is to provide the tools necessary to reduce a growing public safety problem related to vehicular traffic. Speeding vehicles and their associated quick stops and starts to defeat the timing of traffic signals contribute to traffic congestion, collisions, pollution, and wasted fuel. *All our traffic safety efforts are designed to move traffic and people to their destinations as quickly and safely as possible.*

Our efforts to reduce hazardous violations and collisions include the following:

- addition of a night traffic enforcement unit
- participation in DUI task forces at sobriety checkpoints
- training and participation in commercial vehicle inspections
- increased internal training of officers in traffic enforcement
- training and certification of drug recognition experts
- public education strategies (MADD/SADD)
- timing signals to reduce stop-and-go traffic
- addressing community traffic concerns through community policing
- partnership with traffic engineering and the adjusted speed limit

One major innovation, photo enforcement technology, has the potential to reduce significantly the number of traffic violations and collisions in our community while placing the initiative's costs on the violator rather than the taxpayer. The success of such a program depends on support from the citizens we serve, reasonable application of speed limits, public awareness and education, and commitment to all aspects of the program.

Photo Technology Assistance

We will begin with a discussion of the two types of photo enforcement technology currently available: speed cameras and red light cameras. Both are available from vendors with varying degrees of vendor support. A comprehensive TSI involves a partnership between the department, the vendor, and the community. Aspects of that initiative will be discussed later.

Photo enforcement technology is an automated system of identifying and documenting speed violations through the integrated use of vehicle detection (radar for speed and traffic sensors for red lights) and photography. Photo-radar enforcement has been used in over 75 countries around the world, including the United States, during the past 20 years. The concept couples sophisticated radar technology with high-resolution photographic imaging. It produces clear photographs of vehicles, along with the license plate and driver, exceeding speed limits or committing red light violations at a documented location and time. The vendor receives a fee for only those citations paid by the

violator. The amount of that fee is based on contractual obligations and services provided by the vendor.

Speed Cameras

Speed cameras consists of a computer-based, narrow-beam Doppler radar unit tied into a camera system through a central processing unit. The entire unit can be mounted within a vehicle. In areas where the speed camera vehicle cannot safely be parked parallel to the roadway, a tripod system can be deployed. The tripod contains the cameras, strobe, and radar antenna. A cable then runs to the vehicle, parked in a safe location. The operator monitors the system and traffic from inside the vehicle.

The units are equipped with two cameras. One camera photographs the front of the violator vehicle. A second camera is timed to photograph the rear of the vehicle when it passes. The computer generates violator data on the photos, including the date, time, speed, etc. The descriptive information is ascertained and verified by the unit's operator. All data is then processed by the vendor, who reviews quality control, and a citation is generated and mailed to the violator. The central processing unit determines the speed of the vehicle and activates the camera when the vehicle exceeds the pre-set enforcement speed. Enforcement is consistent with current standards.

Red Light Cameras

Red light cameras are effective tools for use at selected intersections to reduce the number of hazardous violations and intersection-related collisions. This system does not use "radar." The wheels of the target vehicle simply pass over the multiple sensors at a known distance, and the computer determines the speed. That way, a violator may be cited for speeding, a red light violation, or both. A combination of those two violations obviously creates an enhanced hazard.

Photo Enforcement Safeguards

Approximately 25 percent of all recorded violations do not result in a citation being issued, due to quality assurance measures. There are several reasons why a violator may not be cited:

- conflict monitors

- incorrect or unobtainable registration information

registration information that does not match the actual description of the vehicle

camera's inability to photograph a license plate due to obstruction or poor placement

inability to identify the driver's face

lack of match between sex of the registered owner and sex of the driver who was photographed

Development Consequences

Deployment of speed cameras has some consequences. Without personal contact, we can expect to miss some violations and related criminal behavior we would otherwise discover. The system does not hear extenuating circumstances and cannot exercise discretion. All such discussions would have to be within the purview of the city court. Some people perceive that the system is, in some way, a "big brother" interference by the government. Along with that perception is the contention that the technology is deployed to enhance revenues. There is no doubt that the technology is less personal than an officer making a contact on every violation.

The system does provide fair and objective enforcement and removes the officer as a decision maker. Any arguments may be made in court, and no emergency medical situations are delayed by police contact. Use of the technology is also safer for both motorists and officers. The operator can make radio transmissions to police personnel and is available for personal contact when the driver sees the sign and the flash of the camera. We can also expect to experience few pursuits relative to the increased level of enforcement. Photo enforcement is impartial, provides a visible deterrent, produces revenue, and reduces collisions in addition to enhancing our current traffic enforcement efforts.

Staffing of Photo Enforcement

Several options exist for staffing speed cameras. Any of the options can be funded through remuneration received from fines. Staffing with officers on overtime is not currently under consideration because of officer availability issues.

Deploying Speed Cameras

Speed cameras will be deployed proactively to address traffic safety concerns in high collision areas, school zones, and citizen complaint areas. Considering the size of our city, vendors recommend that we deploy at least three speed camera systems to have any significant impact. There is generally a contractual requirement that each unit be deployed at least 160 to 180 hours every month. That does not include the 21 hours of driving and setup time per unit per month. Speed cameras will have little impact on driver behavior if they are not deployed regularly on high-volume roadways where collisions and hazardous driving occur most frequently.

Deploying Red Light Cameras

As proposed, the red light camera program calls for the installation and maintenance of three red light camera systems. This number is simply based on what two major vendors indicated they would provide in a comprehensive program. For every speed camera deployed, vendors appear willing to provide two red light cameras. Because the red light camera systems work so well, they rapidly reduce the number of violations and thus the revenues to the vendor. For this reason, costs associated with this program vary a great deal. Estimated expenses would be specific to the vendor and depend on the number of speed camera and red light camera systems deployed and their projected revenues. It might also include the installation of the poles, housings, and traffic sensors at additional intersections so the cameras could be rotated through the intersections. Intersections with the highest number of collision would be selected.

Citation Process

Speed Camera. Once a confirmed violation occurs, the license plate and driver information is confirmed through quality control measures. The vendor creates a citation, which is sent to the operator for verification. After the review, the citation is sent to the court. The officer verifies the information is correct and then signs the citation or an affidavit attesting to the reasonable grounds. The citations are entered into the court records system and then sent by the vendor via first-class mail to the registered owner or driver of the speeding vehicle. Depending on the vendor, the citations may contain the photo. Individuals have the option of either admitting to the violation and paying the sanction, attending driving class, or contesting the citation and appearing in court. If they were not driving at the time of the violation, they also have the option of identifying the driver by mailing the information back to the court.

Red Light Camera. A vendor would maintain a test log and maintenance log. Assuming that everything is in working order, the violations would go through the same quality assurance process as the speeding citations. Once a citations or notice is prepared, it would be given to a designated officer who has been trained in the program. He would review the citation, ensuring the test and maintenance log indicated a valid citation. He would then sign the citation or an affidavit attesting to the reasonable grounds. The same process for mailing speed violations occurs. If the matter goes to trial, the attesting officer would receive the test and maintain logs in order to testify that the system was working properly.

Community Awareness Program

A vendor evaluation period is being conducted as part of the request for proposal/bid award process. After a vendor is selected, an intensive public education and awareness program will be initiated by the TSI program manager, the Community Affairs Unit, Community and Public Affairs Office, and the selected vendor.

Legal Issues

For this project, City Prosecutor Ann Garriott was consulted about legal issues involving statutory and ordinance requirements and the citation service process. Additionally, we conferred on the potential impact of the program on the prosecutor's workload. At this time, she has no concerns over any legal issues. She has requested one additional prosecutor to handle establishment of case law in the Scottsdale City Court and any appeals. She also believes that one additional legal secretary is necessary to support a comprehensive TSI.

Fiscal Impact

Both the speed camera and red light camera programs are considered turnkey operations with no front-end equipment costs to the City of Scottsdale, and all personnel costs should be paid from citation revenues. All costs to operate the red light camera, including maintenance and processing fees, would be the responsibility of the vendor. Costs for purchasing and fully equipping vehicles suitable for a speed camera program, as well as equipment maintenance and processing fees, would be the responsibility of the vendor.

Fixed hardware costs amount to about \$20,000 for two poles with camera housing and computer interface, etc. A set of two cameras is required, together costing an additional \$100,000. The real costs in equipment and hardware amount to a total of \$120,000 to monitor one approach to one intersection.

Installation of the technology depends on the specifics of the intersection and can cost \$3,000 to \$5,000.

Staffing Budget

These recommendations assume a comprehensive program. The city court anticipates the need for the equivalent of three court service workers and a part-time pro-tem hearing officer. The vendors have indicated that they are capable of providing the court service representatives in a separate operation or location or within the confines of the court. Expenses would be recovered through fees for a nearly complete turnkey program. These positions are based on a projected workload increase, and all costs are recovered through generated revenues.

The legal department anticipates the need for one prosecutor and one legal secretary to handle anticipated legal appeals. The police department will require one program manager. The staffing budget is \$122,000 for city court (three court service reps provided by vendor and one pro-tem hearing officer), \$98,000 for the legal department (one prosecutor and one legal secretary), and \$98,000 for the police program manager. The police program manager will be a police lieutenant, who will be the contract administrator for this program; liaison to the court, the prosecutor, and the vendor; and a point of contact for citizen concerns.

Speed Camera Staffing Options

As previously stated, the most practical option is to require vendor staffing with expenses recovered through fees. Staffing with our own employees would be problematic. We estimate vendor staffing to cost \$266,000, which includes all overhead costs and a civilian technician. Vendor staffing is the ultimate in privatization and would out source the deployment. The vendor would handle all the hiring and scheduling of the employees.

Projected Revenue

Assuming deployment of three speed cameras and three red light camera systems, the projected revenue for one full year would potentially amount to \$2.8 million with expenses amounting to approximately \$1.8 million, leaving an estimated net revenue of \$1 million.

Recommended Program Length

We do not support the concept of a trial period for less than one year from the time of deployment. That would be too short to evaluate the program fairly. As we consider a longer contract, our comparison data becomes more accurate, and startup capital expenses are reduced. Capital expenses and personnel would be part of any RFP package. The longer the initial contract, the more we can spread the initial expenses of the program over time.

This initiative would deploy three speed cameras in areas of high collision, school zones, and areas of neighborhood complaints. Three red light cameras would be rotated through nine high collision intersections. Both technologies would be deployed in close consultation with traffic engineering. Their assistance will help us maximize the desired effect of reducing collisions at intersections and approaches.

Conclusion

The issue at stake is moving people as quickly and safely through this city as we can. This TSI can enhance traffic flow while significantly increasing safety. Part of the initiative is a strong program to provide awareness and education prior to any enforcement activities with this technology. The goal is voluntary compliance. Despite our continuing efforts to date, we still have a problem with unsafe drivers on our roadways. We believe the combination of technology, awareness, and education will encourage motorists to pay far greater attention to their driving habits.

Harlin R. McEwen, Deputy Assistant Director, Criminal Justice Information Services Division, Federal Bureau of Investigation

In my 38 years as a state and local law enforcement officer, I have learned that police traffic services serve as the very foundation of all police services and set the tone for a commitment to combat crime by law enforcement agencies.

On February 20, 1996, I left my position as chief of police for the City of Ithaca, New York, to take my present position with the FBI. One of my primary responsibilities at the FBI is to serve as a liaison to the local, state, and federal law enforcement community as the FBI develops new and improved criminal justice information systems. These systems will provide the opportunity for police agencies to improve their police traffic services and crime-fighting techniques.

The FBI is currently developing an improved National Crime Information Center (NCIC) system known as NCIC 2000. This system, which is expected to be completed in July 1999, will offer significantly improved services to police officers on patrol, particularly as it relates to mobile computer systems. The current NCIC system was implemented by the FBI in 1967 upon the recommendation of the International Association of Chiefs of Police (IACP). It currently consists of over 40 million records containing such information as wanted and missing persons, stolen and lost property, and stolen and missing motor vehicles and license plates. The system is growing rapidly. In 1976, NCIC handled an average of 227,397 transactions a day. In 1986 the daily average was 517,808, and at the end of 1995 the average number of daily transactions was 1,613,699. By September 1, 1996, the average number of daily transactions had grown to 1,727,870, an increase in just 8 months of over 114,000 transactions a day. This increase can be almost entirely attributed to the increasing number of mobile data terminals and computers being installed in police patrol vehicles around the country.

Police traffic services consisting of roving patrols performing related traffic enforcement, targeted traffic enforcement, and crash investigations account for the majority of NCIC transactions. As police managers realize they can increase the efficiency of their police patrols by installing wireless mobile computers in patrol vehicles, the opportunity for improved traffic services is translated into

results. Properly configured, the mobile computers can be used not only as wireless links to the NCIC and state systems, but also to prepare computerized crash investigation reports at the scene. In 1993, there were more motor vehicle crash fatalities (40,115) than murder victims (24,530). The need for police managers to continue emphasizing traffic services does not diminish the related benefits such efforts have on combating crime. There are many examples around the country of how effective traffic enforcement programs can have a positive effect on crime prevention and apprehension. Highway criminal interdiction programs, for example, are based on using traffic enforcement as a tool for catching criminals on our streets and highways.

We need to educate the public as to why police traffic enforcement is an effective crime-fighting tool. We have all heard traffic violators and other members of the public ask, "Why are you worrying about traffic violators when you should be out getting the real criminals?" It is our responsibility as experienced law enforcement professionals to change their perception. That perception has resulted in funding reductions for police traffic services by the Congress, state legislatures, and city councils, whose members believe they are focusing limited police resources on a growing crime problem. As we know, nothing is further from the truth.

The FBI is committed to providing improved criminal justice information services to the law enforcement agencies in the United States and also to linking such systems to other law enforcement agencies throughout the world. I appreciate this opportunity to be able to report on the current status of the development of NCIC 2000 and how it will benefit police traffic services in the future.

Chief Dennis Nowicki, Charlotte-Mecklenburg (North Carolina) Police Department

Present Status of Police Traffic Services

The present status of police traffic services in the Charlotte-Mecklenburg Police Department is a priority concern. The department is aware that when this issue is ignored, a total disregard for traffic laws abounds and responsible driving deteriorates. To avoid that situation, the Highway Interdiction and Traffic Safety (HITS) Unit was formed in October 1994. The HITS Unit is totally dedicated to police and community traffic services and needs. Unit members are constantly working to improve the services they provide, whether through effective traffic enforcement or training.

To illustrate the need for increased police traffic services, a simple comparison can be made between traffic-related incidents and crime-related incidents. In traffic incidents, there are three times as many people killed, five times as many people injured, and 10 times the monetary loss as in crime incidents. In Mecklenburg County alone, personal injury accidents total more than 20,000 per year at an average cost of \$9,500 per accident.

Traffic Accidents and the Need for Strict Enforcement. Research has shown that excessive speed is a major contributing factor in traffic accidents. Approximately 30 percent to 35 percent of all traffic accidents are attributable to excessive speed. As that speed increases, so does the severity of an accident, leading to more-serious injuries and more deaths. Through strict, effective speed enforcement, the number of serious injuries and fatal crashes can be reduced. If this reduction occurs, the results would be less civil litigation and monetary loss, and a decrease in vehicle insurance.

Among all fatal accidents, head injuries account for 85 percent of the deaths. Each year there are more than 630,000 serious facial injuries. More than 276,000 people are injured or killed while sitting in the back seat of a car, half of which incidents could be reduced if seat belts were worn. Seat belt usage needs to be encouraged and enforced, even though it is viewed by the public and by officers as a minor concern. Before seat belt laws were in effect, only a small percentage of drivers and passengers used seat belts. The most recent figure for seat belt usage is 87 percent.

Enforcement of driving while impaired (DWI) laws is another extremely important role of police traffic services. The driver who is impaired by alcohol is major

contributor to traffic accidents. DWI is also a leading cause of death among drivers aged 16 to 20. More than 42 percent of teenage deaths are attributable to DWI.

Alcohol-related traffic fatalities are still prevalent in today's society and will not likely decrease in the near future. The reason is the wide social acceptance of alcoholic beverages. Not only is the intoxicated driver a danger, but so is the person who has just "had a few." The person who just "had a few" may not show signs or symptoms of being drunk, yet may be legally impaired and constitute a hazard on the roadway. These drivers are often the most dangerous because they insist on driving and do not realize the extent of their impairment.

Increased public awareness of this problem is crucial to reducing the numbers of impaired drivers on the roads. In addition, stiffer penalties for DWI convictions are necessary. The biggest deterrent for DWI is the fear of apprehension. But the fear of conviction with stiffer penalties is also needed.

Goals and Objectives for the 21st Century

Police traffic services primarily need increased manpower and equipment, stiffer penalties, more funding, and a higher priority for traffic enforcement in the judicial system. In most law enforcement agencies, the funding for specialized traffic services generally comes from either the state or federal level. This funding usually dwindles after a set number of years, however, and most agencies cannot afford to continue the programs. Traffic safety is a national concern and should be addressed on a nationwide level. Continued funding from the federal level to each state would increase the level of enforcement and improve the effectiveness of such enforcement. Without such funding, these efforts will continue to be sporadic, and startups will occur only when funds can be procured.

Increased training is greatly needed in police traffic services. The demands placed on traffic officers in today's society are much greater than the demands of 20 years ago and will only increase due to technology and increases in the driving population. Consistent training on a national level is needed, including minimum standards. Officers need to be better informed and educated so they can take the initiative in enforcement. At this time, most officers do not realize the number of crimes that can be deterred and the number of criminals that can be caught through traffic enforcement. NHTSA and other federal, state, and local agencies need to combine resources and continually update training and standards to meet the demands placed on the officer.

Conclusion

Overall, more emphasis should be placed on police traffic services. The goal should be to reduce the number of unsafe drivers on the roadways, thereby reducing the number of injuries, deaths, and monetary losses from crashes. This goal, as well as a reduction in other types of crimes, can be realized through effective enforcement, public awareness, and proper and efficient training of officers. Funding from a national level is needed to continue to meet these goals and to be consistent from state to state.

Chief Daniel E. Robinson, Lincoln Township (Michigan) Police Department

Present Status of Police Traffic Services

This paper will first discuss issues affecting law enforcement today and then discuss issues that will impact agencies in the 21st century. Currently, many issues—murder, robbery, shootings, and drug crimes—relegate traffic safety to a secondary status. Emphasis has been placed on community policing from all levels of government to combat these pressing issues. Traffic safety is only an issue if that is your job function, you are receiving federal dollars, or there is nothing else to do. Many agencies have worked hard to promote traffic safety but have had difficulty showing the community that it is an important issue. Many department heads and government officials are missing the importance of what traffic safety can do.

Goals and Objectives for the 21st Century

Increase Education Regarding Traffic Safety. One of the goals for NHTSA and police agencies is to educate the public on the importance of traffic safety and the costs associated with crashes. Only then will the public place political importance on the subject of traffic crashes, making it an important issue in government. Only then will money for traffic safety be increased and not threatened by continual cuts. An increased awareness of traffic safety will also bring legislative issues to the forefront. We need to address hazardous driving by educating our judges on the losses in dollars and lives that traffic accidents cause. We need to push to have safety belts made a priority, so that states don't have to continue to deal with secondary enforcement.

We must emphasize to our officers and administrative heads that traffic enforcement can lead to the discovery of many other violations. Effective patrol can also lead to the apprehension of fugitives, the recovery of stolen property and stolen autos, and drug seizures. Stopping a car for speeding often leads to many more important issues. Even so, many agencies do not emphasize traffic safety because the community is focused on other issues.

Utilize Technology. We in law enforcement must make more efficient use of our resources by improving the work area of police officers and reducing the amount of time it takes to make traffic stops and write citations. We must also reduce

the time required to transfer data between the officer, the courts, and driver's license authorities. We need to install technology to improve the patrol car environment so that officers can use computers in their vehicles, and we should convince driver's license and registration authorities of the need to implement magnetic stripes and bar codes. Those codes would enable officers to slide a driver's license through a reader, do a check on the person and his or her record, write a citation from that information, print it, and send it from the car to the court. This technology would eliminate a large amount of duplicate entry by everyone involved and would allow the officer to get back on the street more quickly to begin patrol again.

Role of NHTSA

NHTSA needs to provide resources that will educate administrators and courts on the importance of these issues and how they relate to other crime problems, as well as on how they impact the community. NHTSA could also provide programs that would train officers on the importance of the traffic stop and teach them to look beyond that stop for other criminal activity. NHTSA should encourage states to develop record systems that help officers improve their efficiency in patrol vehicles. NHTSA must also continue to educate the public on the economic ramifications of safety belts use and anti-drunk driving programs.

Conclusion

The problems of police traffic services in the 20th century will not disappear within the next three years, and we should anticipate additional problems. As funding levels to reconstruct and improve the interstate system shrink, more problems will develop. Bridges are deteriorating now and their conditions will most likely worsen. Rural and suburban highway systems are expanding as people continue their flight from the cities. NHTSA must continue its work on fuels and their relationship to clean air and the economy, along with various alternative methods of transportation. NHTSA must continue to support safety from all levels, including automobile manufacturing safety, enforcement, legislative issues, and training. We must look at additional methods of funding, for the trend of government is toward reducing both taxes and government involvement.

We need to develop a national strategy to deal with the problems of the 21st century with the input of all the players involved. Priorities will always remain different for each community. By bringing people together from various parts of the country in meetings such as this, I think it is possible to develop a national strategy for the next century. NHTSA needs to be the leader in this effort so

that we can bring together all communities across the country to work for a better and safer tomorrow. The problems of today will only worsen if we don't work together to improve our quality of life, and traffic safety is just one of those issues.

Chief Annette Sandberg, Washington State Patrol

Present Status of Police Traffic Services

Lack of Public Support. A very significant problem facing law enforcement with regard to traffic services is the lack of importance the public gives to these types of services. There has been increasing criticism of traffic enforcement and its overall importance as a public safety service.

With the perception of a significant increase in violent crime, the public often has an expectation that tax dollars spent in the area of police services should be directed only toward violent crime issues. It is often stated that with shrinking budgets and a greater public cry to spend tax dollars more wisely, police traffic services should be relegated to the back burner or even eliminated.

The challenge is to educate the public about the importance of traffic law enforcement and show how traffic crashes affect a greater majority of the public than violent crime. While violent crime affects a specific group of citizens, traffic-related crimes have a much broader impact on society. Police agencies nationwide need, first, to make the case and, second, to begin giving traffic services a more important role.

Changes in Technology. Another issue is how technology will affect the way traffic services are provided. In light of the growing criticism mentioned above, police agencies nationwide need to further explore how technology can help advance the delivery of traffic services. Methods include using technology to replace many functions traditionally performed by an officer. For example, photo radar frees officers for more-targeted contacts, such as DUI enforcement. However, acceptance of that type of technology solution to basic traffic problems needs to be coupled with educational efforts. Citizens will not accept a "big brother" intervention in their behavior unless they see its importance.

Changing the Focus of Traffic Services. The status of police traffic services within the police profession nationwide has not changed considerably over the last 25 years. We patrol traffic by random means; police pursuits, for the most part, continue to use high-speed chases, but the advent of the spike strip has helped. Officers often do not have adequate information before stopping a violator, and when checks are run on drivers and passengers, the information is often slow, outdated, or incomplete. Police equipment, such as vehicles, weapons, and ballistic vests, has improved over the last two decades, but much work needs to be done to provide a greater level of protection to the officer.

As we enter the 21st century, we must move our focus from random patrol to directed patrol. With the continual increase of motor vehicle traffic on our nation's highways, we must become more organized in how our resources are utilized. Directed patrols based on collision and activity statistics will give us a higher degree of visibility and enforcement outcome. Low-cost equipment that will disable vehicles fleeing the police must be developed and made available to law enforcement. Police pursuits almost always result in injury to innocent victims and tort action for governmental agencies. Computers need to be in patrol vehicles, officers need to be adequately trained, and current and future databases need to be enhanced.

Goals and Objectives for the 21st Century

The goals of police traffic services for the 21st century should be as follows:

- Embrace the use of technology to assist law enforcement efforts.
- Help traffic flow efficiently on our nation's highways.
- Continue to reduce fatality rates nationwide.
- Reduce alcohol- and drug-impaired driving.
- Reduce collisions involving fatigued or sleeping drivers.
- Increase efforts for criminal apprehension during traffic contacts.
- Issue nationwide public safety announcements regarding motor vehicle laws to increase voluntary compliance.
- Make problem-oriented policing (POP)/community-oriented policing (COP) the standard way of doing business.

Not only does the public desire a more professional, efficient police force, but even with reduced revenues and taxation, the public will demand improved service. Citizens want to be secure in their environment and expect law enforcement to help provide that security. The public wants to be involved in deciding how to deliver police services and utilize resources. Problem-oriented policing speaks to this style and level of policing. POP will require training of our officers and managers along with the citizens we serve. Additionally, greater priority should be given to partnering with the communities to make them aware

of traffic-related problems in their areas. Increased involvement and awareness by citizens could have a dramatic impact on driving behavior, in turn affecting the types of services needed from police agencies. The type of policing needed could be a significant departure from simply targeting an area and changing behavior only while present.

Another potential objective is the use of an aggressive traffic program to address other crime problems. I believe the traffic function could be used more aggressively to address crime activity in specific areas. High visibility and random patrols have not worked effectively as a deterrent to crime. Traffic programs could be an additional tool.

Good direction and goals need to be provided by the President, Congress, NHTSA, and IACP to ensure continued success for law enforcement in the 21st century. Grants need to be provided for research and experimentation. Measures need to be developed to depict accurately what law enforcement is accomplishing and show whether goals are being achieved. We need a national strategic plan for law enforcement so we can all work toward common goals.

Additionally, with the current national emphasis on community-oriented policing, some effort should be specifically directed toward traffic-related problems. With the repeal of the 55 mph speed limit and the lifting of other federal mandates, it is increasingly important that local jurisdictions have a strong traffic program that addresses local concerns and issues before they become significant problems.

Role of NHTSA and Federal, State, and Local Governments

The role of NHTSA should be to assist in setting goals and direction and providing program oversight for law enforcement efforts. Changes in federal legislation have shifted much responsibility to local governments. Those changes require a change in the relationship between local government entities and their federal counterparts. NHTSA should allow for greater flexibility in traffic programs, which may vary significantly depending on local concerns.

NHTSA should also provide grants for research and experimentation in various law enforcement programs. State and local governments should provide insight for goal setting, provide program deliverables, and interact with citizens. Additionally, the responsibility for determining what programs need to be delivered rests with the local jurisdictions. NHTSA should provide a broad framework that holds state and local jurisdictions accountable (for example, by collecting data to show the problem and impacts of a specific program) yet also enables them to provide services in the most efficient manner possible.

Assistant Chief Buddy San Marco, St. Petersburg (Florida) Police Department

Introduction

Beginning in the 1950s and 1960s, America began to feel a sense of independence with the evolution of the modern automobile. Over the years, we have grown accustomed and even dependent on the automobile in our daily lives. Other industrial countries have evolved differently, with many relying on mass transportation. Currently, in only a few large cities do residents use mass transportation. That means an ever-increasing demand on police traffic services, for the United States has one of the highest numbers of drivers per capita in the world. As America grew with the automobile, the need for police traffic services grew with it. Police administrators recognized the need to develop a response to an ever-increasing accident rate. Larger cities began developing squads of officers to specifically target traffic crash reduction through enforcement efforts. That is still the practice in many areas. However, community policing has had an adverse impact on traffic enforcement. With the shift of policing philosophy, police traffic services have been largely ignored. We all realize that police resources will continue to be at a premium, but many police administrators have forgotten to include traffic safety.

Present Status of Police Traffic Services

Let's examine some facts:

In the United States, nearly 40,000 people die annually in vehicular crashes, compared to 25,000 annual murders.

Crime accounts for a national cost of \$19 billion annually, while vehicle crashes result in a societal cost of \$137 billion.

In 1995, a group of students conducted a survey at the Institute of Police Technology and Management (IPTM). They surveyed 52 police agencies from all over the nation. Sixty-five percent stated they were involved in community policing. Sixty-two percent also said they had a specialized traffic unit. However, none of them stated they had incorporated police traffic services into their community policing concept.

As we enter the 21st century, it will be important that police administrators incorporate police traffic services into the community policing philosophy. Attitudes of both the public and the police must change. The public generally feels that traffic safety is the responsibility of the police alone. Currently a large portion of federal, state, and local resources are geared toward the implementation or continuation of the community policing philosophy. To receive funding, it may be critical to show how traffic safety and community policing work together to improve the quality of life for every citizen.

Currently, there is an effort under way to form a team concept to address traffic safety issues. These teams are usually formed on a county-wide basis and include law enforcement agencies; city, county, and state engineers; emergency medical personnel; and educational sources. This concept should continue to evolve. City, county, and state agencies will have to share resources in order to be effective.

Technology, continuing to advance at great speed, will affect traffic safety as well. Safer cars, alternative fuel sources, better mass transportation, and better-designed roadways will help. It is clear that increased populations and more licensed drivers are in our immediate future.

Goals and Objectives for the 21st Century

The overall goals and objectives for the 21st century should not be much different than they are today. Simply put, we will continue to try to reduce crashes, save lives, prevent injuries, and save money. Particular objectives and goals will change, however, for police agencies are doing business in new ways. In an effort to be innovative and creative, police will try to accomplish more through non-traditional means, but traditional responses will not be abandoned.

Utilize Improvements in Technology. We will be expected to do more with less. Technology should be an ally, but budget reduction and possible loss of federal dollars will be a burden. Improvements in data collection and processing will help field officers in a traditional sense. They will be able to scan a driver's license, receive a digital photo over a computer, push a button, and then give the violator a citation. That capability will allow a field officer to do more selective enforcement. Other areas of change might be the use of photo radar and cameras mounted at intersections to catch red light violations. Several private companies are already offering that service.

Privatization of Traditional Police Responsibilities. Privatization of some of the responsibilities now given to law enforcement allows an officer to have more free time for other initiatives. Legislators may be forced to accept this non-traditional response as well as many others. We could anticipate a paradigm shift in both the public and police perceptions regarding police traffic services. Police administrators will undoubtedly try to sell new approaches that save resources.

Formation of Partnerships. The major practice that needs to be developed is partnership. Currently, the police rely on citizens to comply with traffic laws and general safety practices voluntarily. A partnership between governmental agencies, business, and the public would help tremendously. Education becomes of utmost importance when trying to encourage compliance. Major issues such as drug and alcohol dependence also play an important part in the solution.

In the last few years, we have seen a surge in private-sector involvement. Special-interest groups such as MADD and SADD, insurance companies, and health-care providers are attempting to be part of the solution. It will be important to keep traffic safety issues foremost in everyone's mind. It will be critical to continue our existing efforts and improve on them. Non-traditional methods will need to be developed and expanded.

Role of NHTSA and Federal, State, and Local Governments

NHTSA was established in 1966. Since its inception, over 243,000 lives have been saved as a result of that agency's programs. We will continue to look to NHTSA and other governmental agencies for guidance and direction. Data collection and analysis will continue to help police administrators make decisions on how to deliver police services.

At the local and state levels, police will attempt to provide solutions to problems based on national trends or anticipated trends. Local police departments should also be used as a clearinghouse for information. Networking with others in the same or similar fields will be necessary to facilitate a change in direction. Standards will be needed to measure the effectiveness of responses. Police should also look at local government from a funding aspect. Grant funding should be delivered through localities for necessary resources and innovative responses to problems.

Conclusion

As we progress into the 21st century, many changes will take place. There will be a need to see what others are doing, learn how they got there, determine whether their efforts are working, and see whether those efforts will work in other locations.

Fred Small, Office of Highway Safety, Federal Highway Administration

Introduction

From a national perspective, traffic enforcement is a vital component of traffic safety. Despite efforts to improve the roadway environment and to communicate those improvements to the public, enforcement continues to be one of the most important components for addressing highway safety. Traffic law enforcement is necessary to ensure that motorists operate their vehicles in a safe manner and that they obey traffic laws.

Present Status of Police Traffic Services

Due to reductions in both fiscal and staffing resources, as well as the need to address high-visibility criminal activities, traffic enforcement does not receive sufficient priority in many jurisdictions. Traffic law enforcement must compete constantly for limited resources. Consequently, motorists continue to disregard traffic laws, a development that has probably contributed to the nationwide increase in fatalities and injuries during the past several years. Motor vehicle fatalities, following years of decline, have increased each year since 1992. Furthermore, traffic crashes cost this nation an estimated \$150 billion per year. This reduction in traffic enforcement is unfortunate since future nationwide trends indicate a need for increased traffic enforcement in the 21st century. Among the likely trends in the 21st century are the following:

It is projected that the number of drivers and registered motor vehicles will continue to increase. These increases will result in more travel and greater traffic congestion, each of which increases the potential for crashes.

In addition to an increase in the number of older drivers, the number of young drivers will also increase in the next five to 10 years. Even with the progress made in improving highway safety with the current population, motor vehicle crashes are still the leading cause of premature death among our nation's youth.

The aging of the nation's roadway system is leading to the rapid deterioration of our streets, highways, and bridges. Increases in the motor vehicle population are causing heavy demands for additional capacity. These factors will contribute to more roadway reconstruction and maintenance. Much of this reconstruction and maintenance will have to

take place while maintaining traffic flow. Work zones will present a serious challenge for both engineers and traffic enforcement personnel because of the potential for serious accidents.

Truck traffic is likely to increase due to increased demand for goods. It will be important to monitor conditions to watch for trends and implement countermeasures.

With the potential for increased motor vehicle crashes, quality accident investigation and reporting becomes even more critical. Accident reports remain a primary tool in determining where a state or community needs to focus its efforts to improve highway safety. However, as a result of reduced levels of accident reporting, as well as inaccurate or incomplete information on reports that are prepared, communities may not be getting the information they need to make the best possible decisions for spending scarce resources.

Goals and Objectives for the 21st Century

With the likely decline in resources and greater need for police traffic services, increased efficiency is imperative. Management systems to identify problems, develop countermeasures, and deploy resources are an essential requirement for the future. In addition, new technology such as automated enforcement, pen-based computers, and intelligent transportation system technology should become more common. New technology offers the potential for police to focus their efforts on enforcement, not paperwork. However, the implementation of new technology should not result in the redeployment of traffic enforcement personnel to other duties.

Role of NHTSA and Federal, State, and Local Governments

Despite the obvious benefits of police traffic services, the federal role will likely be reduced to functions such as technical assistance, research and development, and technology transfer. Furthermore, much of the focus from an engineering perspective will be on the 160,000-mile National Highway System. Thus, states and localities will need to play a greater role.

An investment in enforcement has the potential for producing substantial benefits. For example, Medicaid is already a substantial burden in many states, and injuries resulting from traffic crashes are a contributing factor. An investment in police

traffic enforcement has the potential to reduce traffic crashes, which in turn will lower a state's medical costs.

Traffic enforcement can be an effective tool in addressing other crime problems, too. The benefits of an increased effort in traffic enforcement need to be quantified. Initiatives to heighten awareness of traffic safety benefits and the societal impact of traffic crashes on our citizens will be needed from the national, state, and local levels.

FHWA is promoting a comprehensive highway safety program that goes beyond what many in the past perceived as our role. We have been working with other federal agencies, states, and private organizations to promote a Safety Management System. This system provides a framework for an integrated approach to addressing the specific needs of the roadway, driver, and vehicle. FHWA has also expanded programs that combine enforcement and education with infrastructure improvement. Programs are ongoing in red light running, highway/railroad grade crossing protective devices, education and enforcement, work zone education and enforcement, and many other initiatives that transcend traditional boundaries. The agency is also involved in commercial motor carrier and hazardous material programs.

In cooperation with other federal agencies and with state and private organizations, one of the major roles will be to provide the research, technology sharing, best practices, and expertise needed to assist the law enforcement community in the development of ALERT (Advanced Law Enforcement Response Technology) systems. The system was initiated by the Federal Highway Administration and developed through a cooperative effort of the Transportation Institute and NHTSA. It will enable public safety personnel to work more efficiently by automating the traffic data collection process. The ALERT system uses components such as hand-held computers that link on-board computers with touch-screen displays. The system makes data gathering and entry simply, quicker, and more reliable. The ALERT system will be unveiled at the International Association of Chiefs of Police (IACP) conference in October 1997.

Major Arthur R. Smith, Baltimore Police Department

Present Status of Police Traffic Services

My views on the status of police traffic services are rooted in my experience with the Baltimore Police Department and as such reflect my perspective from a large urban police department. I believe our traffic enforcement efforts must merge with our other major objectives, such as the reduction of violent crime, improvement in quality-of-life issues, and the development of a problem-solving approach to police services. My department's traffic unit has witnessed a steady reduction in personnel for at least two decades. I would estimate that our traffic unit was once 10 times its present size. Resources have gradually been channeled into such units as patrol, homicide, and drug enforcement. However, it is still rare to attend a community meeting in this city at which traffic concerns do not surface as an issue among citizens.

Goals and Objectives for the 21st Century

What form should traffic enforcement take in this environment? The most legitimate rationale for traffic enforcement remains unchanged, and that is the reduction of accidents arising from unsafe behavior on the part of drivers, passengers, and pedestrians. While all of these can be impacted to some extent through enforcement, we must be open to a variety of additional approaches.

Targeted Enforcement Efforts. The issue of reduction of violent crime can be factored into traffic enforcement in numerous ways, most of which are fairly common sense in origin. To begin with, the location of enforcement efforts should, where practicable, correspond to our most violent locations as well as our most unsafe from a traffic perspective. Training should be given to traffic officers in such areas as recognizing the characteristics (body language) of armed persons, drug recognition, search-and-seizure case law, etc.

In terms of quality-of-life issues, one need only consider the theory of how disorder affects a neighborhood. The theory, closely related to the "Broken Windows" theory, holds that when not vigorously enforced, minor nuisance crimes lead to a perception of disorder, which in turn leads to the perception that the area is susceptible to more serious crimes. The best way to reverse that perception of disorder is through traffic enforcement. Traffic enforcement sends the message that if the police have the time to write tickets for red light violations, for example, then they have time to crack down on other violations.

Problem solving in traffic enforcement is probably best handled through decentralization. Our agency has provided patrol units with equipment and training so that patrol commanders will have the flexibility to alleviate citizen concerns without losing their personnel to full-time traffic assignments.

Adjusting Enforcement to Budgetary Realities. In addition, we will have to consider designing our traffic enforcement efforts so as to coexist with budgetary realities and an overloaded court system. Budgetary savings could be realized through reduced downtime resulting from arrests; discontinuing the practice of summoning the police officer to court, thus reducing overtime costs; procedures to avoid intake into the criminal booking system for traffic violations; technological improvements for evidentiary purposes (such as automatic radars with photographic capabilities); and other measures. Court systems already flooded by record numbers of felony arrests need relief from traffic cases. Diversion programs involving community service could be developed to relieve the backlog and to replace the current practice (at least in this state) of judges rewarding some of those who choose to stand trial with reduced penalties.

Another approach worth exploring would be civilianization of at least some traffic enforcement. There is no reason why a \$23,000-a-year community service officer could not replace the sworn member in a variety of traffic enforcement situations. This is already being done on a limited scale by our special traffic enforcement officers and could be expanded as required.

Role of NHTSA and Federal, State, and Local Governments

The main role I envision for NHTSA would be to continue to serve as a clearinghouse for data and innovative ideas. Continued research and funding through grants would remain a major benefit to agencies nationwide.

Commander Gary Smith, Temple (Texas) Police Department

Present Status of Police Traffic Services

Police Services Are Varied. Police traffic services across the United States are as varied as the states themselves. That is not necessarily a negative situation, as any governmental agency should be highly responsive to its citizens and flexible in achieving its mission according to the scope of its functions. The need for variance is found in the fact that traffic services must be performed by agencies employing few officers, as well as municipalities and state police agencies employing thousands of officers.

Still, there is a negative side to the lack of uniformity of police traffic services across the nation. In fact, police traffic services across the United States appear to be rather disorganized when compared to criminal law enforcement. The reason is obvious: no one wants to be a victim of crime, and society will not tolerate criminal behavior. On the other hand, no one wants to be the recipient of a traffic citation, and the vast majority, if not all, of the users of our streets and highways have often violated traffic laws. Criminals are seen as clearly dangerous and predatory, while traffic violators are seen as a less threatening problem. Given the stark differences of perception, the two are often treated as separate issues when discussions of police personnel and deployment are discussed.

Even more important is American society's great mobility, and nothing other than a significant national event will change that trend. In fact, rising fuel prices will only cause people to sacrifice other items in their budgets. Mandated alternative fuels would be seen as an inconvenience, and personal and business travel would adjust to any changes in fuel and its associated costs.

There appear to be no nationally recognized, professional standards regarding police traffic services and the best means to accomplish the management of traffic issues at a state, county, or municipal level. Therefore, individual agencies attempt to manage these issues at their own levels, within the constraints of their own equipment and personnel. Such an approach may be appropriate for each local situation, but it fails to address the highly mobile nature of our society and the general impact of traffic across jurisdictional lines.

There are only a few nationally recognized training sources for traffic management issues, and some law enforcement agencies are not located near any of them. Long-distance travel creates a budgetary concern for many agencies.

Police Services Take Different Approaches. As a result, agencies have widely varied approaches to police traffic services. Even neighboring agencies approach issues differently. While some agencies have dedicated units assigned to traffic services, others have taken a more generalist approach, tasking all patrol-assigned personnel with traffic enforcement as well as the service and criminal functions that are the traditional purview of the police.

The problem associated with the designated traffic unit approach is that other officers feel less inclined to take action on traffic-related matters. It isn't their responsibility, so they choose to concentrate on other issues. Officers assigned to traffic units often take the opposite approach, feeling criminal investigation and other police services are not among their assigned functions.

The generalist approach also has its shortcomings. All officers have a preference as to the type of work they perform. Therefore, some areas of the jurisdiction may receive heavy traffic enforcement, while others receive minimal attention. The generalist approach requires much more interaction with the agency administration, as the direction for the entire agency must be clear.

Problems Common in All Departments. With both of these approaches, a major problem is the lack of analytical capability in most departments. The practice of issuing citations in volume, hoping to make an overall change in negative statistics, is a poor approach to resolving traffic problems. In the future, the focus must be on specific problems, where the emphasis is more on the reduction of accidents and less on the issuance of citations for general violations.

Further, technology is under used as a major tool in police traffic services. Not many agencies are using mobile data capabilities, and fewer still use technology to detect violators, accidents, and other traffic flow problems.

A related issue is engineering. A poorly designed road or intersection can place a serious burden on police resources, but few engineering projects consider the valuable contribution police can make to the planning process. Making matters worse, once a problem area is constructed, it can take years to have the area studied and funded for changes that are needed. Often such changes follow fatal accidents that create an outcry, and again, police agencies shoulder much of this burden for failing to enforce laws at the location.

Another issues is the North American Free Trade Agreement. The increase in highway traffic in areas directly affected was felt almost immediately. Highways that at one time carried moderate traffic loads are now forced to carry heavy loads, including a higher volume of commercial traffic. This situation is worsened in urban areas where commuters use the interstate highway system for local travel.

Goals and Objectives for the 21st Century

An established, nationally recognized authority on traffic issues, which promotes regional opportunities to educate administrators and field personnel and advocates the progressive use of technology for enforcement and traffic management issues, is vitally important to the issue of police traffic services in the 21st century.

Plans also need to be developed to redistribute some of the traffic currently on the highways to lessen the burden on both road repair crews and police traffic services. Whether those plans include newly constructed highways or upgrades to the existing highway system remains a highly politicized debate. The important point is that police agencies must be able to give their input with enough time to allocate responses to respond to whatever plan is implemented.

Police traffic services in the next century must focus on the causes of accidents, with the ultimate goal being the orderly flow of traffic. Reducing the number of accidents and keeping highways clear of abandoned vehicles are valuable objectives toward achieving that goal. In measuring progress, however, the number of vehicle miles traveled by the general populace will not be a factor most police agencies consider important. The number of vehicle miles traveled does not significantly affect police agencies. What is important is the number of accidents and fatalities an agency must investigate. Those statistics will be the driving force behind any decisive changes that must be made in police traffic services.

Also, legislatures must allow local governments to enforce license and weight regulations. Doing so would aid in the prevention of damage to road surfaces by commercial vehicles that exceed load limits. Damaged roadways in areas that are not considered metropolitan have a serious impact on traffic flow, as smaller communities do not have the same alternatives for travel as major cities.

Police traffic services in the 21st century must provide a mixture of technical equipment, such as remote monitoring of heavily traveled roadways for traffic flow problems, automated violation detection, and analytical assistance, in addition to the traditional use of police personnel. Technology issues are in the interest of public safety, but data obtained through technology can also assist in business and economic development and can provide the general public with travel information.

Role of NHTSA and Federal, State, and Local Governments

The role of federal agencies such as NHTSA and the U.S. Department of Transportation should be to establish a foundation of national policy regarding traffic issues, strongly promote education and technology advancements, and assist

in the funding of various facets of police traffic services that may be mandated or urged at the federal level.

Commander John Sturner, St. Paul (Minnesota) Police Department

Present Status of Police Traffic Services

The present status of police traffic services, especially in the area of law enforcement, is ineffective. One needs only to observe the driving behavior of the general public, especially on our interstate system, to realize that we have a national problem: a blatant disregard for the law. Raising speed limits has simply raised the level of the violations. In Minnesota, the State Patrol has been under authorized strengths by as many as 60 troopers for the past several years, and many areas of the state lack 24-hour coverage. County and municipal agencies clearly share responsibilities for traffic services, and the priorities and hard choices those agencies are faced with indicate that traffic issues will continue to remain on the back burner into the next century.

Given the demands on all of law enforcement, I see little hope for meaningful change. The governor of Minnesota recently ordered 15 state troopers into Minneapolis to work shoulder-to-shoulder with the Minneapolis Police Department in a gang crackdown following a weekend of multiple murders. The governor was not wrong, but focusing primarily on traffic often leads to frustration. In short, police departments lack both money and officers, and there are many issues with higher priorities.

Goals and Objectives for the 21st Century

I believe the goals and objectives for police traffic services in the 21st century should be limited in number, should be achievable, and should have a measurable positive impact on specific problem areas. If police traffic services have a primary objective to prevent accidents and injuries, then our efforts should be focused on the primary causes of accidents, such as speeding and driving under the influence. Given the current emphasis on balancing budgets, major new initiatives that are labor-intensive probably will not be possible.

We must therefore look to technology to accomplish our goals and objectives. Compared to what has been done with technology in the military and in our space program, it seems we have not even scratched the surface in applying technology to traffic services. I have no specific technology in mind, but I look forward to brainstorming at this conference about some of the things that may be implemented in the future.

Role of NHTSA

NHTSA should develop a nationwide consensus on the limited number of goals and objectives previously referred to. Once that is accomplished, a sizeable amount of federal funding should be directed to research so that new technologies can be developed or adopted to help accomplish those objectives. A bottom-up national consensus coordinated by NHTSA, combined with the use of new technology, should insure a continuing rather than sporadic enforcement effort in the 21st century. In addition to technology, research should be performed to determine what traffic regulations and other services are acceptable to the American public and at what level general voluntary compliance is possible. Perhaps our current approach is too rigid.

NHTSA is the logical vehicle for commissioning research on human behavior, public opinion, and technology development and can bring together the national traffic services community to reach consensus. Several things can already be predicted: 1) traffic services will not become a burning issue with the general public in the near future; and 2) less funding may be available for traffic enforcement in the future. Therefore, I look forward to being a participant in this conference, which I am certain will produce some very innovative thinking.

Earl M. Sweeney, Director, New Hampshire Police Standards and Training Council

Introduction

Traffic has been a prime function and concern of the police since the world's population first began to congregate in urban areas. One of the reasons Sir Robert Peel's early members of the Metropolitan Police Force of London had to be tall and strong was to stop runaway horses in London's crowded city streets. Traffic responsibility became even more significant with the advent of the horseless carriage and Connecticut's enactment of the first speed statute in 1905.

Over the years, traffic crashes have been the major cause of accidental deaths and injuries and have become the leading cause of death and injury for young people. The death and serious injury toll and societal cost of traffic crashes continues to eclipse that of crime. Most traffic crashes can claim a serious moving traffic law violation as a significant contributing factor, so if the police are truly to live up to the motto emblazoned on so many of their fenders, "To Protect and Serve," traffic law enforcement must continue to occupy a priority in the work plans of law enforcement agencies worldwide.

Even if no deaths or injuries were attributable to traffic crashes, however, the rapid and efficient movement of people and goods from place to place would still require police intervention. The lost productivity, the environmental damage caused by internal combustion engines idling for long periods in traffic jams, and the frustration and stress caused when traffic does not flow smoothly mandate that the regulation and control of traffic be an important component of every police department's mission statement.

Future Status of Police Traffic Services

As we enter the 21st century, how are these issues likely to change?

1. Police departments will continue to juggle diminishing resources to meet service demands. It will be difficult to convince political decision-makers that sufficient resources need to be allocated to traffic enforcement. It will be equally important to ensure that local and state governments do not rely on traffic enforcement as a prime source of revenue for government funding. We must not turn the police into bounty hunters.
2. The movement toward community policing can endanger traffic enforcement unless police administrators come to recognize that true

community policing cannot be effective without a strong traffic component. Public opinion surveys in community after community show that traffic enforcement is a quality-of-life issue with the citizenry and thus cannot be ignored in the community policing philosophy.

3. Traffic and crime will continue to be tied together. Hazardous materials in quantities sufficient to eradicate a small town from the map travel past our doorsteps every day by truck, as do illegal dumpers. Our interstate highways have become major pipelines for drug distribution. There are many drive-by shootings, but few "walk-by's." Carjackings and even murderous quarrels in traffic have become too common in today's society. The aggressive sociopath is also an aggressive driver, frequently violating the rules of the road. Yet the traffic enforcement productivity of police officers is dropping, and the visibility of marked patrol units has lessened in many jurisdictions. This calls for a reeducation of field training officers and supervisors in the importance of traffic enforcement as a crime prevention and suppression tool.

4. A host of safety improvements in vehicles and highways has reduced the death toll on our nation's highways, but many crashes that would have resulted in deaths a few years ago now leave survivors with long-term, handicapping injuries. Continuing to focus on the highway death toll alone lulls people into a false sense of security. We must find new ways to emphasize the impact of traffic crashes on our nation's escalating health care costs.

5. Public opinion is increasingly inflamed by media sensationalism of pursuit-related traffic crashes. With so many criminals using vehicles as an instrument of crime, a total prohibition on police pursuits or restriction to "known felonies only" is unrealistic and unsafe. Modern technology must be brought to bear to find ways to safely terminate pursuits and warn motorists of an approaching emergency vehicle.

Goals and Objectives for the 21st Century.

With the preceding in mind, the goals and objectives of police traffic services as we approach the 21st century should include the following:

1. Incorporate traffic enforcement into the mission statement of each full-service police agency.

2. Make traffic enforcement a required component of every community policing program, using a targeted, problem-solving approach that makes the wisest possible use of police resources, including multi jurisdictional, cooperative approaches.
3. Develop new systems for gathering, storing, and analyzing data about traffic crashes. Such systems should be able to pinpoint the contributing factors and rely less on subjective opinions. Identify more closely the societal and medical costs of traffic crashes.
4. Make sure the importance of traffic enforcement is stressed to basic police recruits, FTOs, supervisors, and administrators. Be sure all officers are accountable for a reasonable level of traffic enforcement.
5. Resist efforts to rely on traffic tickets as a prime revenue source for local governments.
6. Find new ways to use technology to reduce or eliminate high-speed pursuits and make emergency runs safer. Intelligent vehicle highway systems should be designed with strong input from law enforcement.
7. Provide a portion of federal and state highway trust funds for traffic enforcement.
8. Encourage stronger liaisons between traffic enforcement personnel and engineers.

To ensure continuing rather than sporadic attention to traffic safety issues and prepare for future demands, NHTSA and each Governor's Office of Highway Safety need to be assured of continued, adequate funding. Only the strong, continued presence of these single-issue agencies can cast an adequate spotlight on the problem and develop the necessary public support. These efforts should be enhanced at the local level by police departments adding a traffic component to community crime-watch groups.

Role of NHTSA

NHTSA has always been one of the least bureaucratic and most pragmatic federal agencies. It should continue to play a helpful role, with an emphasis on incentive grants and research, and abandon any notion of a punitive approach such as forfeiture of federal highway funds for non-compliance.

At the same time, it is highly unlikely that a total conversion to block grants without performance requirements and grant monitoring will have the needed effect. Just as grants with too many strings attached can be onerous and unworkable, grants devoid of goals, objectives, or performance measures are very likely to be abused or treated as simply an auxiliary revenue source without meaning.

Donald E. Uelmen, Regional Program Manager, NHTSA

Present Status of Police Traffic Services

I believe the primary problem facing police traffic services is organizational leadership. Departmental chief executives who have no background in traffic or have not received training in the importance of traffic safety are not going to devote resources to that function. The importance of traffic safety should become an integral part of law enforcement executive training curricula.

Another problem is the attitude of the judicial system toward traffic-related offenses. Due to case load, criminal (penal code) arrests take precedence over vehicle code violations. In San Francisco, the District Attorney's Office did not have the personnel to prosecute drivers cited for driving after their privileges were suspended or revoked. Officers assigned to the traffic unit formulated and instituted the STOP program. Vehicles driven by persons with their licenses suspended or revoked are impounded, and a \$150 assessment is charged before the vehicle can be released. The funds are put into an account that pays the salary of an assistant district attorney to prosecute those offenses. In one year the program reduced the number of hit-and-run crashes in the city by 25 percent; reduced fatal and injury crashes by 26 percent; generated \$1 million for the city in unpaid fines and unregistered vehicles; recovered 65 stolen vehicles and made 128 other felony arrests; and became self-sufficient after using 402 funds to start the program.

Goals and Objectives for the 21st Century

During the past 20 years, the responsibilities of police traffic services have expanded from enforcement and crash investigation functions to include preventive measures and voluntary compliance through public information programs. The future requires partnership with other public agencies (emergency medical services and health and education agencies) and citizens' groups to achieve a level of safety and protection that makes people feel safe to travel in all areas of their community at any hour of the day. Neighborhood watch programs can be expanded to include elements of traffic safety. In Roswell, New Mexico, the police department trains citizens in the use of radar to conduct speed surveys in their neighborhoods. If the surveys indicate a speed problem, a STEP unit is assigned to that area.

Technological innovations will also have an effect on the level of service requested. The increase in 911 calls with the popularity of cellular telephones has seriously strained communication centers at a number of agencies.

Law enforcement agencies need to recognize that police traffic services are a major component of their organizations. The opportunity to provide safety and service and relieve economic loss in their communities is directly linked to an effective traffic program. Some projects could become self-sufficient through user-funded programs and fees for service.

Role of NHTSA and Federal, State, and Local Governments

NHTSA and other federal agencies should do the following:

- Establish national priorities such as .08 BAC, a primary seat belt law, and zero alcohol tolerance for youth.

- Develop training curricula such as OPUE, SFST, DEC, and LEPIW.

- Provide assistance with the development and testing of new technology, such as speed measuring devices and automated citations.

State and local governments should do as follows:

- Support and pass legislation and ordinances to enhance traffic safety.

- Educate, enforce, and prosecute to achieve compliance and reduce the risk involved in motor vehicle, bicycle, and pedestrian travel.

Colonel Lonnie J. Westphal, Chief, Colorado State Patrol

Present Status of Police Traffic Services

In recent years there has been a new appreciation of the value of traffic services in stemming the carnage on our highways and fighting crime cost-effectively. The International Association of Chiefs of Police (IACP) has publicly acknowledged that value. In particular, IACP's Division of State and Provincial Police has strongly endorsed the enormous value of traffic services in the police profession.

However, many lawmakers continue to see traffic enforcement as a low priority and therefore as the first target of cost-cutting efforts. There is a definite paradox here: most police agencies declare that the majority of their constituent concerns involve traffic issues, and yet traffic services take a back seat to other aspects of policing. The general citizenry constantly complains about speeding in their neighborhoods, failing to stop for stop signs, running red lights, cruising up and down the street, aggressive and inconsiderate driving, driving without a license or motor vehicle insurance, etc.. But the same people are the first to complain about receiving a ticket for a traffic violation, contending that their police officers should spend their time fighting "real crime."

Unfortunately, lawmakers seem to hear mainly the complaints about law enforcement officers spending too much time on "minor traffic violations" and not enough time on "real crime." Experiences in cities like New York have shown that paying attention to the smaller crimes, such as traffic violations, pays dividends in the long term by establishing an environment where no crimes are tolerated. That message, regrettably, is not getting through to lawmakers. In times of financial straits, they are reluctant to put money into traffic services and are, in fact, quick to cut those services to make up for the shortage of funds.

The police profession faces another serious issue as we approach the end of the 20th century. There is a large degree of cynicism among the general public about government services in general and often a downright distrust of police services. The incidents involving Rodney King, Ruby Ridge, Waco, O.J. Simpson, the treatment of illegal aliens in a pursuit in southern California, the corruption in various police agencies around the country, etc., have all led to serious doubts among the general public as to the trustworthiness of law enforcement officers. Knowing that, it is easy to see why lawmakers are less than enthusiastic about supporting some of the "lesser" police services. "Lesser" is obviously an

inaccurate term, but not necessarily so in the minds of those holding the purse strings.

America today is more mobile than ever before, and the automobile continues to be the favored mode of travel. Criminals use the automobile in their business just like the rest of the population. In the great majority of crimes committed, the automobile is used before, during, or after the crime. Criminals, who have little respect for the law in the first place, certainly have no regard for traffic laws; therefore, they often become the target of traffic enforcement officers. In recent years, traffic enforcement agencies have placed considerable emphasis on "looking beyond the ticket." Attempts to discover criminal activity present at the time of the traffic contact have been extremely successful, resulting in thousands of arrests for major crimes. Without traffic enforcement services, many of those criminals would have escaped undetected, and many more crimes would have been committed. Traffic officers are, in fact, the first line of defense when it comes to fighting crime. It behooves us to teach that to the rest of the world. There would be a whole new perspective on the value of traffic enforcement officers if people know that drive-by shooters, homicide suspects, rapists, carjackers, kidnappers, terrorists, domestic abusers, and other criminals were routinely being captured by traffic enforcement officers.

Another phenomenon is the desensitization of the American public to highway deaths. Our love affair with the automobile has been so intense that there is a willingness to "sacrifice" a certain number of lives to ensure the unfettered use of the car on our highways. While 110 people die each day on American highways, there is no public outcry. Were such carnage occurring in the airline industry, the Federal Aviation Administration would be under tremendous pressure to do something about it. The truth concerning the personal suffering brought about by these highway deaths is only thrust upon us when it hits close to home. Even then, many believe the loss of a life in an automobile crash is just a terrible, unpreventable accident. That is not true, we know it is not true, and we must educate those who believe it is true.

Recent experiences in major metropolitan areas indicate that America must now deal with a new breed of aggressive drivers that could lead to total highway anarchy. An increasing number of drivers display surprisingly aggressive behavior on our roads by speeding excessively, weaving in and out of traffic, and failing to use turn signals. They seem to believe the rules of the road are whatever they want them to be. They have little regard for the other motorists on the highway. There is no civility. These drivers are easily irritated by anyone in their way and are encouraged by the fact that there is very little visible police presence on the

highways to deter their behavior. When by some remote chance they are apprehended, they find the judicial system quite friendly, offering plea bargains of all sorts to avoid any court proceedings. The message is obviously that these violations are no big deal. They monitor their radar detectors, warn other motorists of any police presence by flashing their headlights, and generally give their children the message that it is "all of us drivers against all them cops."

Compound that trend with the increases in violence on our highways and the number of handguns being carried in motor vehicles and we have serious problems looming. Each year, especially in Colorado, the population is increasing, resulting in larger numbers of drivers and more vehicle miles traveled, yet there are no additional police traffic resources. The combination of those factors is the formula for 21st century highway anarchy.

Goals and Objectives for the 21st Century

The public is our ally in ensuring that these fears do not come true. In reality, the public supports our efforts to making America's highways safe from both dangerous drivers and criminal activity. The challenge is to activate that support. As concerned law enforcement and highway safety professionals, we must set a course to accomplish that task. We must use our resources to get the attention of our citizens and the media so they will in turn direct our elected officials to address these unfolding issues.

We all know that technological advances will have a tremendous effect on future highway travel, and we cannot lose sight of the continued role of the human being. We also know that the future use of the automobile will be much different with the use of computers, global positioning systems, and smart highways. But the migration of those technologies into the entire transportation system in the United States will not happen in the near future, and we must deal with the present needs of our highway systems. The key objectives are as follows:

1. Place new emphasis on reducing highway deaths, injuries, and property damage and gain public acknowledgement of the importance of that task.
2. Organize a blitz to all facets of our society on the cost-effectiveness and importance of using traffic services to prevent crime, apprehend criminals, and capture fugitives from justice.
3. Develop strategies to deal with the ever-increasing menace of aggressive drivers on America's highways.

4. Seek ways to improve the image of and trust in government employees—in particular, law enforcement officers.
5. Strive to use technology without losing sight of the value of the human factor in both the customer and the traffic services arena.

Appendix D: **Invitees Unable to Attend**

Assistant Chief Larry Ball (retired)
Lexington (Kentucky) Police Department

Sheriff Johnny Mack Brown
Greenville County, South Carolina

Mr. August Burgett, Chief
Light Vehicle Dynamics and Simulation Division
National Highway Traffic Safety Administration

Mr. John Conger, Director
Office of Traffic Safety
Colorado Department of Transportation

Sheriff Clarence Dupnik
Pima County, Arizona

Chief Ralph Evangelous
Temple (Texas) Police Department

Chief William K. Finney
St. Paul (Minnesota) Police Department

Commissioner Thomas Frazier
Baltimore (Maryland) Police Department

Mr. Terrance Gainer, Director
Illinois State Police

Chief Felipe Garza
Kingsville (Texas) Police Department

Sheriff Brad Gates
Orange County, California

Mr. Dennis Judycki
Systems and Safety Applications
Federal Highway Administration

Commissioner Gil Kerlikowske
Buffalo (New York) Police Department

Colonel Michael Hood
Nevada Highway Patrol

Captain John Main
Independence (Missouri) Police Department

Colonel Ronald Griming, Director
Florida Highway Patrol

Mr. Ira Harris, Executive Director
National Organization of Black Law Enforcement Executives (NOBLE)

Chief Beverly Harvard
Atlanta (Georgia) Police Department

Mr. David Hayeslip
Chief of Strategic Planning
Community Oriented Policing (COPS) Office
Department of Justice

Superintendent James McMahon
New York State Police

Sheriff James McMillan
Duval County, Florida

Chief Sharon Papa
Los Angeles County Metro Transit Authority Police Department

Chief Darrell L. Sanders
Frankfort (Illinois) Police Department

Chief Darrel W. Stephens

St. Petersburg (Florida) Police Department

Mr. Fred Taylor, Director

Metro-Dade (Florida) Police Department

Chief Kevin Tuffey

Albany (New York) Police Department

Chief John Whetsel

Choctaw (Oklahoma) Police Department

Appendix E: **Opening Remarks**

MARILENA AMONI (NHTSA)

I want to welcome you on behalf of our agency and Dr. Ricardo Martinez, our administrator. This is important to us. I want to thank you for taking time from your busy schedules this weekend and your families. That was a big commitment, and we really appreciate it.

We need to focus on the critical issue of police traffic services in the 21st century. And I need-- I have a couple of notes.

The purpose of why we're here is to share respective views from various vantage points, and I think it's important from Brian's introduction, as well as Cliff's, that we represent different perspectives. For the record, the Sheriffs are probably not able to come because it's five weeks before an election. They are the only elected law enforcement officials, so it's important that their perspective be represented, and that's something we have to take back, as well.

What we need to do is define what police traffic services should be in the next century, identify effective strategies, new partners and resources, never losing sight of the ultimate goal, which is enhanced public safety.

NHTSA, historically, has convened and facilitated forums like this to get national leaders together like yourselves to attempt to define what the future will look like. More recently, we've done Partners in Progress. Those of you who have seen this, or not seen it, I'll pass it around. And this project was established in 1995 to establish a goal to reduce alcohol-related traffic fatalities to 11,000 by the year 2005. It can't be done without law enforcement.

The EMS Agenda for the Future, another document we just completed, does the same thing for emergency medical services. I'll pass this one this way. The goal for this is to focus community attention on the need to strengthen EMS systems in a changing health care environment. What managed health care is going to do in emergency medical services is critical. These two documents do not solely outline what NHTSA's role is, nor should this forum, but it's to identify the role and strategy for all stakeholders in making sure the future doesn't leave us behind.

I wanted to define the future of NHTSA for you, because I think that's something that will set the stage for the discussion today. NHTSA's reauthorization will be done in 1997. Earl Sweeney on behalf of the ICP gave us some very moving testimony. He was the only safety person to address that issue. An emerging issue that I see (Inaudible) in the federal government is decentralization, more authority being turned over to the states. And I think the repeal of the national speed limit is a good indication of that, and greater flexibility in the management of grant programs. I think we can all attest to that with the 402 program is moving much greater into the area of performance based benchmark programs. This creates a heightened need for performance measures, especially in police traffic services. The states and our regions are clamoring for performance measures to tell them that a PTS in a counter-measure area makes a difference.

What do we use as measures? Citations? No one wants to use that. What do we use as a performance measure?

Redefining the federal role is another emerging area. NHTSA has always served in this capacity, and is at the cutting edge of other federal agencies. But we are a broker of information and technology transfer. We do research, we're an assessor of what works and doesn't work, and what can be transferred to another community.

We communicate these findings and we establish policy, national goals, forums like this, and we try to lead the nation in what needs to be done in the world. As I said that from an authorizing standpoint, let me give you the reality, which is our appropriation. Clearly, we are never given the sort funds we need to carry on our mission. NHTSA's overall budget is approximately 300 million dollars. That's nothing. The dental health research budget is double that. 402 and 403 have been level funded for over ten years, to the tune of about a hundred and twenty-six million dollars. Not enough.

We have received incremental funding. Hopefully it will be ear marked. For example, Jim Fell's office just received last year a one-million-dollar earmark for fatigue, only fatigue. Can't use it for anything else. The only flexibility Congress talks about is only directed to the states and communities, and not the federal government, which puts NHTSA in a bind. So while you're doing your deliberations, thinking about what NHTSA should do, we have to have some semblance of what NHTSA may be able to accomplish.

Emerging issues that I see as an administrator from where I sit is that more and more states and local communities will be laboratories. Applied science will be an important aspect of what we do and continue to do. A greater need for technology and efficient operation will be critical. The Federal Highway Administration and NHTSA have spent a considerable amount of time working on the SMART police vehicle with a common-systems architecture.

An important agenda item for the future-- And for those of you who don't know what the ALERT vehicle is about, I brought some materials to show exactly what that is. Accident reconstruction. (Inaudible) A greater need for data, accurate, reliable, fast and linkable records. The driver, EMS, police accident report, hospital records, all that is critical. A lack of connectivity between traffic arrests and criminal arrest records has been a travesty.

The driver is changing, as well. The driver is aggressive, he or she is also fatigued, and older drivers, and young drivers, we have very changing demographics in this country.

Fatalities, injuries and crashes and the cost of these crashes have been going up. Recently NHTSA estimated a hundred and fifty billion dollars in traffic crashes across the country. Alcohol-related fatal crashes are also on the rise. We will have smart cars, we have automatic collision notification, local physicians-- (Inaudible). We have smart roads, we intelligent transportation systems. We have variable speed limits. We also have congestion.

The role in law enforcement, I don't need to tell you how much that has changed, and will continue to change, but mostly out of necessity, it's mostly reactive. It's forced to change because society was forced to change. Multi-jurisdictional operations, check points, stop programs, have been happening, but mostly out of necessity.

Community policing is something not new to NHTSA. We've been advocating this in (Inaudible), TSPs and most recently the safe community initiative. Expanded use of the COPS program is critical to integrate traffic enforcement into other aspects of policing, which clearly is looking beyond the ticket, and the project that Deb is working on. And most importantly, the public wants law enforcement. There's a complete change from probably 10, 15 years ago.

In closing, I'd like to address a couple of things for a challenge for you all to think about. How to bring all of this together is critical. The Administration of Highway

Safety and law enforcement need to work together. How to show cost effectiveness in fiscal management. The same way all of you have to go back to your fiscal manager and say, "I need a new police vehicle," or "I need a new records system", I have to go within my system and say this is what I need for law enforcement. It's important that these people understand it's not a new toy, not a new gadget, but it's something that will be important to public safety and to taxpayers. Many voices need to be saying the same thing, and talking about the same vision of what the 21st century will look like from traffic enforcement.

Clearly, look around the table and see who's not here, who should be here. We talked about one partner and that's the Sheriffs, and we'll make sure that they're involved in the review of all documents. But there are other people and other federal agencies who should be here. The Justice Department, for example.

I want to thank all of you again for coming, and I really look forward to hearing and I enjoyed reading all the papers that you have.

MR. BRIAN TRAYNOR

I'm Brian Traynor with the PoliceTraffic Services Division in NHTSA, and this is probably all my fault. We have done things similar to this on two other occasions, one in 1984 and one in 1991. That was called the Traffic Safety Summit. It's particularly fortuitous that this meeting is taking place at this time, because when we go back to NHTSA, we will be reorganized as of October 1, all of the people kind of programs, police traffic services, protection, alcohol, path and bike, school buses and EMS will all be under Marilena's leadership. We're looking forward to the change, and we're also looking forward to taking a whole lot back from this meeting about what it is that we're about, and what we're going to be about for the next five or six years.

If you noted, the participation is diverse, geographically, by agency type and size. And we did that intentionally. How you got picked, maybe I knew you, maybe PERF knew you, maybe the ICP recommended you, somebody recommended you, and that's how you got here.

We represent-- our group here is representing small agencies, mid-size municipal agencies, large municipal agencies, state police, state patrols, should have been the Sheriffs, the ICP, PERF, NOBLE, Mr. Corbin is representing the Association of Government Highway Safety Representatives. And the Traffic Institute of Northwestern University. We have the spectrum of folks that are involved in traffic safety, and we're looking forward to a particularly productive meeting.

There's one thing I'd like to say before I turn it over to my boss, and that is I think that the keystone here is flexibility. We will be flexible, whatever it is that we need to do, we'll do, and hopefully, we'll all come away with more information than we walked through the door with.

With that, I'll turn it over to Marilena.

MR. JAMES FELL, NHTSA

I want to thank the organizers, too, of inviting me, giving me an opportunity to talk about some research we're going at NHTSA.

What I would like to do, accomplish a couple of things, give you a brief overview of research that's going on in our area, traffic safety programs, go into a little more detail about some projects that you're going to be interested in, projects on speed, talk a little bit in more detail about those.

What I would like to accomplish, what I'd like to get out of this is your input. This group, you represent a very important constituency to NHTSA. And we will be developing a five-year strategic plan for research very shortly, and I would like your input on where we should go. Are we doing research in the right areas, are we asking the right questions, are we answering the right questions. And where should we go in the distant future, because right now, as Marilena said, and others have said, we're kind of driven by the present right now, with a very limited budget. My budget is five million dollars, we've got to distribute that among a lot of things, so we get stretched a lot. But I do want to ask you that, I want some feedback on this. Are we going in the right direction, what should we do in the future. So keep that in mind as I go through this.

To start out, keep in mind, this is just one part of the research program. Federal Highway Fred Small was talking about some of the things the federal highway does. Basically, they're involved in the highway part of the whole traffic system. NHTSA's responsible for the motor vehicle part and the driver part, keep that in mind. And the research I'm going to talk about is the driver part, driver part or human part, pedestrian part.

There's another whole research department within NHTSA that deals mainly with the motor vehicle part. I'm not going to talk about that. I'm going to talk about the behavioral part. The research we do in traffic safety, basically, what we're studying are people's attitudes, behaviors and failures in terms of crashes. And if you think about it, that's what you try to do in the enforcement community, too. You try to change attitudes, affect behaviors and reduce crashes. So we're all compatible here on what we're trying to do.

In my offices, we take pretty much this approach, we try to, anyway, in our research: We try to identify the problem, what's the attitude of the problem,

develop a program or look at a program that's out there, demonstrate that program or take a look at the program for a period of time, to see if it has any effect, and then evaluate the program. So that's our approach, basic approach, scientific approach to the research.

Here's some of the methods we use to conduct this research. We do a lot of surveys, we actually conduct national telephone surveys of just about every subject now, impaired driving, speed, pedestrian safety, the whole gamut. We do national surveys. We do some testing of equipment, breath testing equipment, other kinds of technology that's coming along that would affect driver behavior. In our evaluations we do a lot of before and after analyses, before countermeasures are implemented and after to see what happened, did attitudes change, did behaviors change, did crashes change.

We also do what we call case control studies. Here's a community that has this countermeasure versus a community that's very similar that doesn't have the countermeasure, so we do both of those things when we do our evaluations. Now, presently, here are the areas--and I apologize to Marilena, right off the bat, because there's one area here that's missing, and I promise it will be added, but these are the eight major areas that we are going into at the present time sans one other area, emergency medical services, which we just recently got in my office, and we have somebody doing research in that area. So I promise it will be added next time you see this slide, Marilena.

Anyway, we are doing research in these areas, and we plan to do research in these areas, plus EMS, over the next couple of years. Again, I'll mention, we are in the process of developing a five-year strategic plan, and we want to know from you, are these the major areas we should be doing research in, are there emerging areas where we should get into some research. These are the areas.

Alcohol and drug-impaired driving, occupant protection, trying to increase belt use, basically, speed and other unsafe driving and I will probably call that other aggressive driving, because that term is becoming very popular, pedestrian and bicycle safety, and then target groups, young driving, older drivers, fatigued and drowsy drivers. Those are the major areas, and I'll go into a little detail about each one.

Impaired driving. Here's where we've been and here's where we're headed. We've made a lot of progress. This is a big success story. You all know this,

that we've made tremendous strides in the impaired driving program area. Back in the early '80s, almost 60 percent of our traffic fatalities were estimated to be alcohol related. About 25,000 people killed. We dropped that down to about 17,000, and we're down to about 40 percent of the crashes being alcohol related. That's tremendous progress. But we have hit some barriers here. We're kind of leveling off here now at 41 percent over the past couple years, and actually had an increase in the number of alcohol-related increases for the first time in many years down here. But we also had an increase in total traffic fatalities.

Let me give you a better picture of this, because it's a divergent picture. This shows traffic fatalities, nonalcohol-related, being the red dot and the blue lines, and the alcohol-related being the purple numbers and the green scares. And they crisscrossed in 1988.

Remember back in '82, about six-- 57 percent of the total traffic fatalities were alcohol related. That's been steadily decreasing, and we're now down to about 17,000. The nonalcohol-related fatalities where the impaired driving programs theoretically don't have any impact on, have been steadily increasing. They've leveled off a little here in the '90s, but now steadily increasing, and they're up to about 24-, 25,000 now. We've gotten alcohol-related down to about 17.

But again, for the first time in a long time, we're now seeing kind of a leveling off in that area, and maybe an upswing. So there is some concern. With the nonalcohol-related, those are the things that should be affected by belt usage and all of our other programs. We're holding our own in that area, it's not that they're increasing at that great of a rate. They would be increasing at about this rate if it hadn't been for increased belt usage and all the other programs going on in the nation, so keep that in mind.

Now, we know certain programs have contributed and have worked in reducing alcohol-related fatalities, and reducing impaired driving. And here are just some of them: Certainly public awareness is up, especially since citizen activist groups and so on have really made people aware that it is a big problem in this country. Legislation followed that awareness, and we got a lot of good legislation passed in the states. Enforcement increased, and I'll show you something on enforcement in a minute. We have prevention programs that have been helping and alcohol availability in terms of minimum drinking ages and that sort of thing have also helped contribute. We've seen declines in

drinking, there has been a steady reduction in per-capita alcohol consumption in this country over the past 15 years or so. But nowhere near explaining this tremendous decrease in impaired driving. So it is the programs that have been implemented. We know that certain legislation works. And these are four pieces of legislation. But we have pretty solid scientific evidence that they reduce alcohol-related fatalities.

Administrative license revocation, two big studies show on the average a six to nine percent decrease in alcohol-related fatalities the year after administrative license revocation is introduced in the state.

.08 percent, only 13 states have lowered their limit for adults to .08, but in the five states that have had it for a while, four of the five showed these kind of decreases. Don't get excited about the 40 and 30 percent, those are small states and probably don't reflect reality. But on average, a recent study shows about a 16 percent decrease the year after .08 goes into effect.

Zero tolerance for youth. We've got several studies now that are showing a pretty big impact on the youth alcohol-related fatalities. And now graduated licensing, which is emerging as a program. We do have some evidence that it will reduce alcohol-related fatalities, merely because restricting nighttime driving for people.

We know legislation works. We also know that high visibility enforcement works. We've got plenty of documentation. But it has to be integrated, it has to be sustainable, it has to be periodic, it has to be newsworthy, it has to be efficient. We know that these things have to happen in order to get the maximum effect out of enforcement. And you all know that in this room, too.

In the past we've had some documentation of sobriety check point blitzes, for example, in various communities, Charlottesville, Virginia; Clearwater; Bergin County; Binghamton, New York, just to name a few, have shown on the order of 10 to 20 percent reductions in alcohol-related fatalities when you do a big blitz, sobriety checkpoint blitz program.

Arrests. Let's look at DWI arrests. We were arresting about 1.3 million drivers in the late '70s, and then, of course, when citizen activists came along, really raised awareness, citizens became outraged, we shot up to about 1.8, to 1.9 million drivers arrested each year, arresting more drivers for DWI than any other crime. And that sustained itself for many, many years. We are seeing now a

sharp decline, from 1.8 down to 1.38 million down in 1994, and I suspect '95 is going to be even lower. In listening to all of you, I believe there are two reasons for this: One, police resources, attention to other crime; and two, actual reduction in the number of drivers out there who are drinking and driving. I would hope that the second one has had that effect. But I think the first one is a big issue, and I think we should talk about that during this forum. I think it is playing a role in this reduction in the number of drivers arrested.

We also know that alcohol is involved in other kinds of trauma, and other kinds of crime. There have been in the literature reports that alcohol has been involved in about three-quarters of stabbings and beatings, in homicides, it's involved in about half of domestic violence and, of course, with documentation about 41 percent of motor vehicle fatalities. So we don't have the biggest problem in alcohol, alcohol is involved in a lot of other things.

There are also a lot of barriers that we have to overcome. If we're going to reach, for example, the Partners in Progress goal that Marilena mentioned, reducing alcohol-related fatalities to 11,000 by the year 2005. We've got limited resources. We know that's a reality. Police attention to other violent crime, because of what society is telling us. Public attention to other social issues. We've got an increase in the youth population, we've got an increase in youth using alcohol and drugs, as you've seen in the papers. We've got waning attention to the problem by the media. We've got a tendency in legislatures toward specific deterrence rather than general deterrence in our legislation.

Most legislation being passed now in the states is aimed at repeat offenders, not that that's not having an effect, but they are not general deterrent pieces of legislation, therefore, we're not affecting the general public with those pieces of legislation.

We've got high-risk populations, chronic offenders that we know we're having trouble reaching and affecting. They're continuing to be a problem. And not to mention the one billion dollars being spent annually in advertising, by the beer industry, which makes drinking beer very glamorous to everybody.

So these are the barriers we have to overcome if we're going reach that goal. At any rate, here's what we're presently doing in the area of alcohol-impaired driving. We have some-- and by the way, our five-million-dollar research program, a good portion of it goes to impaired driving. My estimate is about

two million out of that five million goes to impaired driving; the other three million goes for occupant protection, speed, and some of the other areas, but a good portion is in alcohol-impaired driving.

We're looking at impairment and we're doing some research in that area, because we know that impairment is different for different people, we know it's different for males and females, we know it's different for different age groups, we know it's different for people who have tolerance to alcohol and people who don't. And we're doing some research in that area to see-- get some better information on at what BAC level these people are really impaired.

We're also replicating the Bob Morgenstein study, and once again determining the risk of a crash at various BAC levels. You'll recall the classic Grand Rapids study showed that as you move up in blood alcohol, your risk of being involved in a crash goes up substantially. That study, while a very good study, was done, first of all, in 1964, in one city, Grand Rapids, Michigan. It was a very good study. But we need to replicate it, because we need some better information at the lower blood alcohols. It gave us really good information at .10 or greater, but not good information from .02 to .09, and we really need to know what the risk of crash is at those levels. So we are replicating that at two sites where we collect information. And crashes, we'll be getting breath tests on every driver that we can get involved in a crash, and go back the following week and breath test people on the roadway passing by that crash site at the same time, same locations, to determine the risk.

We're also doing some research on detection, we're looking at different detection devices, doing some research on enforcement, especially trying to streamline the whole DBI arrest process for the police. We're looking at legislation, the effect of various legislation. I mentioned vehicle sanctions and so on. This is one of the areas we're looking at now. We're looking at some prosecuting judication areas what can improve conviction rates. Conviction rates in states vary from 30 percent to 90 percent of drivers arrested. Why are some states-- why do some states have 30 percent conviction rates and others have 90 percent.

As I said, we're looking at various sanctions, especially vehicle sanctions for chronic offenders. Various other countermeasures and preventions, like alternative transportation programs. And we're doing some attitudes and behavior surveys. We do a drinking-and-driving national survey every other

year. We've done one in '91, '93 and '95. We'll do another one in '97 to get people's attitudes about drinking and driving.

I do want to mention something you've probably heard of, it's laser technology to detect alcohol in the cabin of a vehicle. We've done some research on this. It does exist. There is a laser technology that does exist which will detect a minute amount of alcohol fumes within a cabin of a vehicle, even when the windows are open, so if somebody is in the car who has been drinking, and has been breathing, okay, they've got to be breathing, okay, if they're breathing, this laser light will detect alcohol in the cabin. Now, there are some problems with it. One of the problems is the windows can't be up, the windows have to be down in order for this thing to detect. What happens is they shoot a laser light from this device over to a mirror over here, and then it registers whether alcohol is in the cabin. Also, the vehicle has to be moving slowly, it can't be moving quickly.

But it has some potential at checkpoint sites, as you can probably see. If we can set it up at checkpoint sites, it will probably give us a lot better information on what we further look at at checkpoint sites. There are some problems with it, but we're continuing to do research in that area.

On the subject of checkpoints, we recently completed a study in California where we had highly publicized sobriety checkpoints done in four communities. We had a roving patrol done, roving patrol DWI enforcement done in a couple of communities, and then we looked at the effects of these compared to overall in California. In the checkpoint communities, alcohol-related crashes were reduced 28 percent in four checkpoint communities, 17 percent in the roving patrol, and overall eight percent in California. So that's a pretty big effect. The big thing here is in the checkpoint communities, the awareness of the enforcement program was 80 percent in the checkpoint communities, only about 30 percent in the roving patrol. Does that mean the publicity wasn't good enough? Probably, but it also means that the visibility of checkpoints is important. Visibility of checkpoints. Word gets around when you're out there on checkpoints, and I think that's important.

In drug-impaired driving, we're also doing a survey of usage and whether people drive after they use certain drugs. We're looking at various types of impairment due to drugs, we're looking at how to better detect drugs other than alcohol, and we're also doing some research on drug evaluation, the DECK (sic)

program, which I'll go into in a little more detail in a 3-minute. As a matter of fact, right now.

What we're doing in the DECK, are a couple of things: We're looking-- we know that successful DREs are successful in a large part because of their interviewing procedures, and so we're looking at the interview procedures of these successful DREs, and we're trying to develop then a protocol which we can use and adopt for everybody.

We're also looking at what we call program site experience, we're documenting growth and expansion of the DECK program, we're evaluating how different enforcement contexts affects the DECK program, determine necessary levels of support and so on and so forth, so that we can keep the DECK program going.

In the areas of occupant protection, we all know that wearing a safety belt is a very effective way to reduce injury. If you wear a three-point system and you have an air bag in your car, you reduce your chances of being killed by about 53 percent. The belt alone is 45 percent effective, the three-point belt is 45 percent effective to reduce fatalities by 45 percent. If you're in the center and have a lap belt only, by about a third, reduce fatalities by about a 30. Air bag alone, though, will only reduce fatalities by about 14 percent. That's why I wanted to show you this.

This is something we didn't really expect at NHTSA 20 years ago, we thought that the air bag would be a lot more effective by itself, and that's one of the reasons why all of this controversy now about air bags and kids, because we thought air bags were going to be very effective without restraints. They're not. You've got to wear restraints with air bags. And that's just coming out now with these studies, and so I want you to be aware of this. But most cars now--many of them, at least, have-- you have people wearing belts, and you've got an air bag in there, and that will be very effective.

We also know that, depending upon what kind of law you have, what your usage will be. If you have no law in your state, about 45 percent-- you'll see about 45 percent of the public using belts. If you have a secondary law, secondary enforcement law, about 62 percent. If you've got a primary law, and I think about 10 states now have a primary law, you'll see usage at about 75 percent.

In California, who recently went primary, they were hovering around 67, 70 percent belt usage, which is pretty good for secondary enforcement, and they shot up to 83 percent when they went primary. So that's what can happen. You can increase belt usage by passing legislation.

You all know about our Safe and Sober campaign. There are three major components of Safe and Sober, that's to get people to wear belts and to not drink and drive, public information, legislation and enforcement. Those are the three major ingredients to most of our traffic safety programs. You've got to have all three, we know that, we know that. You've got to have good public information, alert the public to what's going on, educate the public. We also have to educate them on the legislation, and on the enforcement programs, and alert them to them.

Good legislation. We've evaluated that. Good legislation is going to affect bottom line, no question. And enforcement, enforcement has to follow. Enforcement is a very, very important ingredient in all of our programs. Safety belt usage now is up around 68 percent, and it follows the number of laws-- number of states that have passed belt usage laws. Back in 1983, less than 20 percent of the people were wearing belts in this country. It's incredible, that's what was going on. And now in 1995, we're up around 68 percent, and we've got almost every state with a belt law. Now I think only one state now that doesn't have.

Talking about beyond the ticket. Here's some data from North Carolina. You probably all heard about the North Carolina program. They have a couple of programs. They have a Click It or Ticket, to try to get people to wear belts, where they're actually stopping people, there's a primary law, and they're ticketing if they're not wearing their belt. They also have what they call Booze It and Lose It, and it's a sobriety checkpoint blitz. In a blitz about a year ago, that North Carolina did over about a six-week period, okay, six-week period throughout the state, lots of checkpoints, in addition to 59,000 restraint use violations tickets, here's what they did at those checkpoint stops: They arrested another 2,000 drivers for driving while intoxicated, this is day and night when we're doing these checkpoints; another almost 2700 driving while license was revoked; they had misdemeanor drug violations, a couple hundred felony drug violations, stolen vehicles recovered, they recovered 46 stolen vehicles during the checkpoints, firearm violations, 61; they arrested 56 fugitives.

So you talk about beyond the ticket. Okay. Here's some really good solid evidence of the effect on other crime that we can have when we do traffic safety enforcement. You're all familiar with this one, too, but keep it in mind, that while there's a murder every 23 minutes, there's a fatality every 13 minutes. So you talk about public safety, we've got to alert the public to the fact that there are actually more traffic fatalities than there are murders, even though they don't think that. And that's very important to try to reduce that, and assaults and so on. And talking about injuries, an injury every 10 seconds and a crash every 5 seconds.

Now, in the area of occupant protection, we're also doing national telephone surveys of peoples' attitudes toward safety belts, attitudes toward child restraints, whether they know how to use them, things like that. We're looking at the effects of legislation, looking at the effects of enforcement.

Looking at the various barriers that we're coming up against trying to get people to wear belts. What are the barriers, why don't people wear belts. Target populations. We know certain target populations tend not to wear belts. And it's the high-risk people. Young people, people who drink and drive. And it's in some communities the minority populations. So we are targeting those people to try to increase belt usage. And coming up with various strategies such as social marketing, using social marketing techniques, which is a technique which says, okay, we've got a population of people, how do we reach them, what magazines do they read, what TV programs do they watch, what kind of messages would be important to them.

We're doing a lot of focus groups on that, and trying to find out how we can change the attitudes and behaviors of these people.

Let's get into speed. As Earl mentioned, we do have some documentation. It's not great, but obviously, speed is involved and a very significant factor in crashes, and especially fatal crashes. We estimate it's involved in about 30, 31 percent of all fatalities. That's what the police report-- that's their data. Whether it's that good or not is another question, but it's certainly a factor. It's costing society several-- 27 million dollars out of a hundred and fifty million that crashes cost us, and it is obviously a big problem.

What are we doing in research in that area? Many number of things. We have an ongoing study, and it's been going for a couple of years, and will last a couple more years. It's a big study, multi million-dollar study. We have Federal

Highway involved. We're trying to determine the role of speed in crashes, the very thing Earl was talking about, okay. It's so difficult to determine the role. We're coming up with some protocols, we're using-- I'll get into more detail. We're surveying the attitudes of the public. We're going to do a survey this year, '96, '97, the attitudes of the public on speed: What do you think of the speed limits, what do you think of the national-- repealing the national maximum speed limits, those kind of things, so we're going to get the attitudes of the public about speed very shortly.

We're looking at various detection, again technology of speeding, and we're looking at various enforcement strategies. Here's the study I wanted to go into in a little more details, the study-- crash study to determine the role of speed and other unsafe driving in crashes. Here's some background. We know speed's factor, at least it's been reported as a factor in 30 to 33 percent of fatal crashes. We also know other unsafe driving actions play a role, and you can name several I'm sure here in this room. But we don't know the situations at in which speeding and other unsafe driving actions really lead to crashes. There are a lot of violations that go on that don't lead to crashes. But under what conditions do they lead to crashes. That's what we're trying to find out in this study.

Current data on the crash risk at various speed differentials is not available. We don't have that. We don't know that. Yeah, everybody in the Washington D.C. beltway goes 65 miles an hour; the speed limit is 55. Is that unsafe? Under what conditions is that unsafe? Is it safe to go 70? Countermeasures to speeding and other unsafe driving acts can't be targeted to situations in which-- can't be targeted, now, in which they're more likely to involve crashes.

We don't have any information. So what are going to do?

Well, we're in the process of conducting independent crash investigations focusing on precrash events. We've added 71 variables to the National Accident Sampling System protocol. That's a crash data system in our research and development office that investigates several thousand crashes a year, mainly collecting information on the vehicle and on the crash-worthiness of the Motor Vehicle Safety Standard aspects.

We're having them collect this information for us now. We will generate crash problem types associated with speeding and other unsafe actions. We will measure travel speeds at crash sites, a week later, same time, same location.

And we'll get speed distribution then, going by that crash site, and compare that to the speed of the crashes, okay, that we investigated. We will then be able to determine the relative crash risk of speed differentials under various conditions. We're using, as I said, the National Accident Sampling System to collect the data. We've trained these investigators on the protocol. We're not conducting a pilot study in four sites of about 400 crashes. And that's okay. We'll collect data that in 12 sites and get about 4,000 crash investigations out of this study. We think that this will be a very important study. We feel that enforcement can then be directed towards speeding and other unsafe behaviors when and where they're the most hazardous. Okay. Right now we don't know that, we're trying to help the enforcement community with that. We feel that we've come out with some educational countermeasures which can be developed and targeted toward certain problem types, certain drivers under certain conditions, try to educate the public when speeding is the most dangerous. And the data can help with improvements to the placement of traffic control devices, the Fred Smalls of the world, and that's why Federal Highway is involved in this. So we feel it's a very important study.

Where are we? We're almost in December of '96. We're completing our pilot study, we'll be analyzing the data, we should have a report by the end of this year. We will then go into phase three, and that will take another year or so to collect the data, and then write the reports. So we're taking maybe March of '98 for the final report of this. But as get interim results, we'll get that out to the community.

Let me wrap up here with some of the other areas, because we're doing research in pedestrian and bicycle safety. We're also doing a national telephone survey, asking a number of questions about pedestrian behavior and pedestrian safety aspects, and bicycle safety. We look at crash typologies in FARS and NAS to try to determine what situations produce these crashes. Alcohol involvement is a big problem in adult pedestrian fatal and injury crashes. It's constantly involved in 40 to 50 percent of adult pedestrian fatalities. It hasn't changed in 15 years. We just have not made any progress at all in that area. We're developing PIE materials, having more partnerships with other organizations, and we're constantly developing countermeasures. But it's a relatively small effort.

Young drivers. Another way to put this is raging hormones. That's a target population we obviously have to pay attention to. They're over-involved in fatal crashes; they are actually over-involved in drinking and driving crashes per mile

driven. Their portion of drivers that are alcohol-involved is lower than other age groups, but on a per-mile-driven basis, they're still very unsafe whether they're drinking or not drinking, so there's still a big problem with that population increasing. We're doing some research on parent participation in the driver education process, and restricting their driving under certain conditions. In driver training, we're looking at various simulation techniques, like using Nintendo technology to teach kids about driving situations. We're combining driver ed with licensing, combining driver ed with graduated licensing. That's the movement now, and we're looking at various other countermeasures.

Older drivers. Or I guess another title for that would be my driving. I constantly change the definition of older drivers. For some reason, it's now a lot older. Anyway, we do have information that there is a higher crash risk for very old drivers, okay, 85 and older. Their risk of being killed in a crash is very, very high. But their crash rate isn't that high, it's just that when they get in a crash, they die, okay, they can't withstand the crash forces like a young person can. So their crash rate is very high at 85 or over for fatal crashes, but not for all crashes. But on a per-mile-driven basis, there are some problems. Everybody knows there is some impairment with older drivers.

We're looking at crash risk under various conditions, barriers to try to get older drivers to restrict their driving, various training, research, licensing, self-regulation is a big deal right now, especially AARP, they're really hot on self-regulation and some other countermeasures. So that's an area we're going into.

And then the last area, and there really is another area, emergency medical services, but the final area I want to talk about is fatigued and drowsy driving. And that's an area that emerged a couple years ago. It is a problem, we all know it's a problem. It's a big problem, of course, in commercial driving and for certain types of drivers. But be that as it may, we've been told by Congress to do research in this area. We are finding out it is a problem for certain populations. We're getting more information on it. I heard from the states at the NAGSR (sic) meeting that it's an emerging problem, and people want to do something about it. And we are doing research, we're looking at the role of fatigued and drowsy driving in crashes. Not commercial drivers, that's Federal Highway. We're talking about all drivers.

We're going to develop some public information and education materials. We will monitor-- actually are going to hook up cars that will monitor people for

about six months, and we'll be able to measure their fatigue, their-- whether their eyelids are drooping, and that sort of thing by monitoring about 10 or 12 drivers and try to find out under what conditions they become drowsy and fatigued. And then we'll be doing an evaluation of our public information campaign.

I want to mention two things about this. I know you probably can't read this, but I want to say one thing is that you'll be seeing these soon, these are going to be one pagers of what we call Research Facts. It's a new product coming out of NHTSA, coming out of my office. This happens to be Number 4, we've done the first four. On subjects that cover topics that are not covered in our Traffic Tech. Most of you are familiar with Traffic Techs. We do Traffic Techs on all our reports, nice two- or three-page summary of the full report. If you can't read the full report, you read the Traffic Tech, which is probably 99 percent of us who do that. Right, Marilena?

Have you ever read the whole one of our reports? I didn't think so. This will be even easier to do, because this will be a one-pager and this is pretty much-- what it is, fatigued and drowsy driving. It's a problem. All right. Recent studies show that in our general estimate system that's involved in about one percent of the crashes, 1.2 to 1.6 percent in police-reported crashes, and FARS it's involved in 3.6, it's reported in 3.6-- Now, there's a huge reporting problem here, huge, it's probably much greater than this, but this is what's been reported to you. Australian research shows maybe 6 to 15 percent.

Anyway, we will be doing an extensive and systematic research program that I just mentioned. It will mainly be focused on how we can educate the public of the problem, and then following that program, we'll determine--following development of the research program, we'll determine the size of the problems and target groups involved, and develop some countermeasures. The most effective countermeasure will be the demonstration program.

So we'll be doing this throughout the following year. We'll have a probably a big public information program ready to implement within a year, and probably do that in several states and see what happens, see if we can reduce the problems.

We mentioned drivers with suspended licenses. I heard that subject come up several times this morning. It is a big problem. This is Fact Sheet Number. Okay. We did Fact Sheet Number 1 on this, and you'll be getting this soon.

Many drivers drive with suspended or revoked licenses. We've got documentation that six percent of all drivers in fatal crashes have suspended or revoked licenses; 14 percent of all intoxicated drivers have suspended or revoke licenses. Most initial license suspensions last only 90 to 180 days; 70 percent of drivers whose licenses are suspended report that they continue to drive. Obviously, it's a big problem. What can be done? We're trying to take it easier to detect special drivers, special license plates, stakeouts, looking at a lot of different things. Increased penalties for driving with suspended or revoked license. For example, in California now, if you're caught driving with suspended or revoked license, they take your vehicle. Vehicle is gone. And we'll be looking at the impact of that. So we are doing some research in that area. And we do understand the problem, and hope we can do some more.

(Question and answer period followed).