TRAINING MODULE: SAFE AND EFFECTIVE TRAFFIC STOPS

PURPOSE: To provide an overview of new developments and research in the field of traffic stops.

TIME: 15 Minutes

OBJECTIVES:

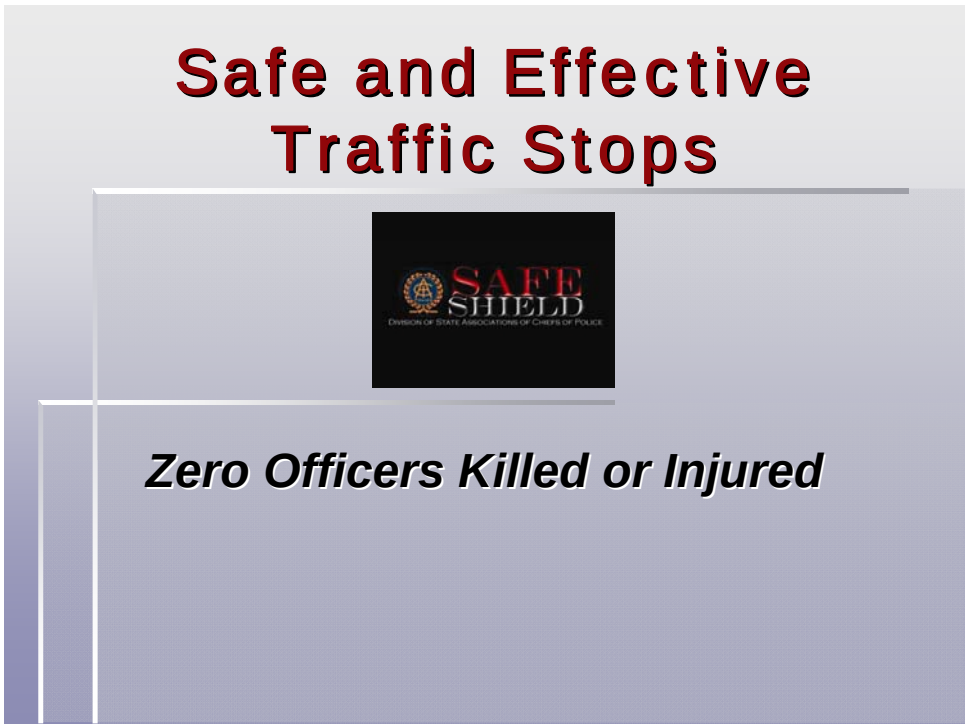
- Learn about the advantages and disadvantages of the in-line and angled positioning of police cruisers during traffic stops.
- Become familiar with the benefits of the passenger side approach during traffic stops.
- Learn about new developments in emergency warning systems and how they benefit officer safety.
- Become familiar with Move-Over laws and what agencies need to do to increase compliance.

PARTICIPANTS MATERIALS:

- Participant Manual

TRAINER MATERIALS:

- Training Manual
- PowerPoint Presentation



Officers struck and killed by motor vehicles is a major cause of law enforcement deaths.

- Historical data indicates that an officer is more likely to be struck by an errant vehicle than shot by an armed motorist.
- An average of 12 law enforcement officers were killed annually in the line of duty as pedestrians in traffic accidents from 1995-2004.
- These stats do not include injuries, “near misses”, or “brush backs.”

Traffic stops can be hazardous to officers as well as other motorists when it involves the use of inadequate locations, poor lighting, high traffic speeds, or improper vehicle placement.

Due to the increase in the number of officers being struck as pedestrians while conducting traffic stops, the Blue Ribbon Panel, examined the “best practices” for the positioning of officers and their vehicles. The panel recommended that stops occur as far away from traffic as possible

- Driveways, parking lots, rest stops
- Offsets beyond the right shoulder when available.

IACP/Law Enforcement Stops and Safety Subcommittee (LESSS) further analyzed the issue.

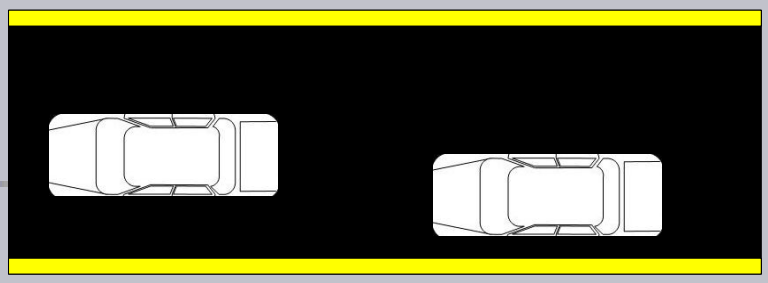
2004 Staff Study

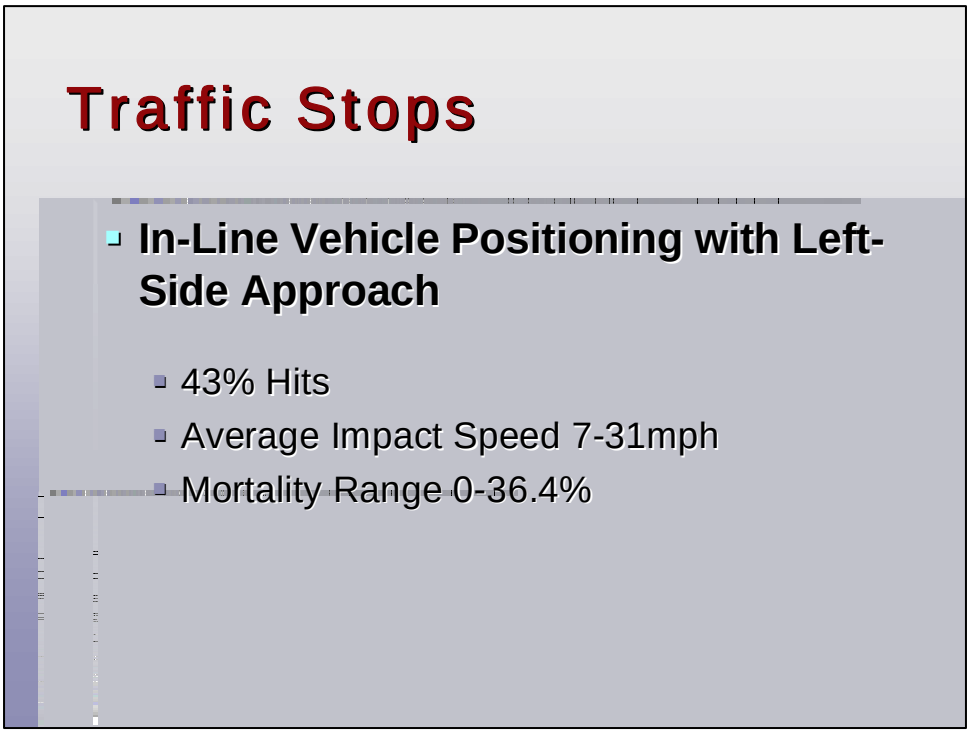
- Reported results of the computer simulations conducted by Ford Motor Company and the New York State Police
- Analyzed the positioning of patrol vehicles and officers as they relate to pedestrian safety while conducting traffic stops.
- Simulation models were compared to an actual collision to test their validity and proved accurate.
- Studied two different vehicle positions and two different officer approach techniques.
    - In-line position vs. angled position
    - Left-side vs. right-side approaches

Reviewing videotaped traffic stops revealed that officers tend to move around within a comparable range. Therefore, the study utilized circular zones, four feet in diameter, to represent the officer. Any intrusion into that zone was considered a “hit”.

Traffic Stops

- In-Line Vehicle Positioning



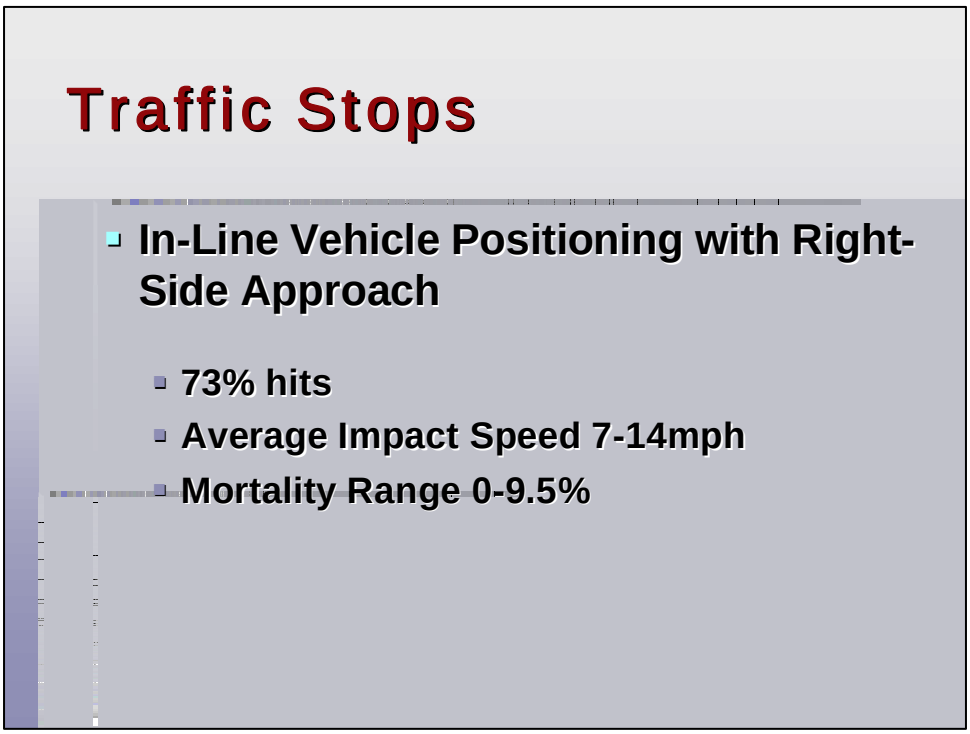


In-Line Vehicle Positioning with Left-Side Approach

- 43% Hits
- 52% misses
- 5% near misses/
- Average speed of the vehicle at the time of Impact was 7-31mph
- Mortality Range 0-36.4%, meaning that 36% of the hits were likely to result in a fatality.

Other factors that influenced the outcome included the introduction of an adjacent barrier to the shoulder. For some reason, this resulted in a decrease in the number of hits.

As with every scenario, there was an increase in the number of hits with the introduction of inclement weather.



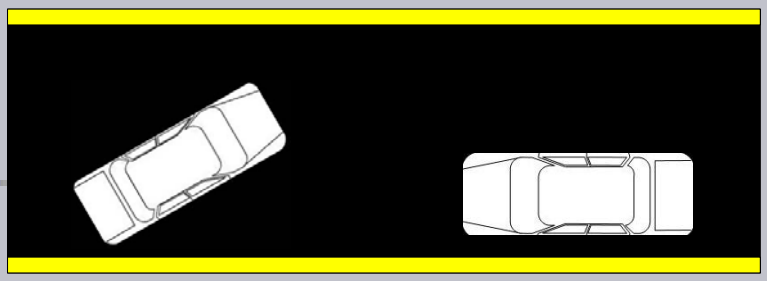
In-Line Vehicle Positioning with Right-Side Approach

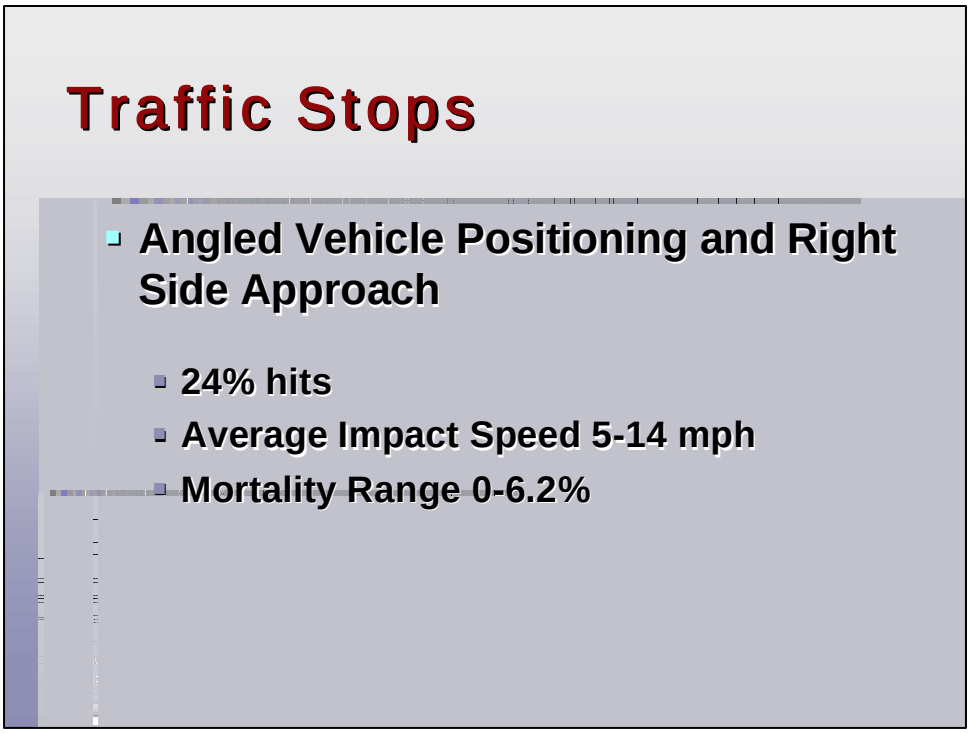
- 73% hits
- 11% misses
- 16% near misses
- Average Impact Speed 7-14mph
- Mortality Range 0-9.5%

As you can see, there was a significant increase in the number of hits utilizing the passenger side approach with the in line vehicle position, but that the mortality rate also dropped to 9%. However, the increased percentage of hits could also translate into an increased number of serious non-fatal injuries.

Traffic Stops

- Angled Vehicle Positioning





Angled Vehicle Positioning and Right-Side Approach

- 24% hits
- 67% misses/
- 9% near misses
- Average Impact Speed 5-14 mph
- Mortality Range 0-6.2%

The angled right side approach was found to be the safest in both dry and inclement weather, resulting in less pedestrian hits, lower impact speeds, and lower mortality rates.

However when analyzing situations where the officer is **sitting inside the vehicle,** angled positioning was shown to be less advantageous. Angling to the left increases the likelihood the vehicle will be struck on the left side, thus exposing the officer to increased injury risks.

NHTSA states that a side impact collision is 4.7 times more likely to involve a fatality than a rear-impact accident on the highway and 8.9 times more likely to involve a fatality on roadways with lower speed limits.

No single patrol vehicle configuration is capable of providing maximum protection in every situation. An officer has two choices:

- Attempt to custom tailor their patrol vehicle configuration to fit each individual situation.
    - Requires that an officer possess a thorough understanding of all of the risk factors associated with traffic stops and how to employ the correct techniques to minimize those risks.
    - Requires significant basic training, practice, and in-service refresher courses to ensure that they continue to make the right decisions and not expose themselves to greater risks.
- Use a single patrol vehicle configuration with a slightly added risk in every situation.
    - Affords a reasonable level of protection in most situations, while requiring only a minimal level of training.
    - Allows officers to devote more attention to the stopped vehicle and its occupants

Multi-Level Training Approach to Vehicle Positioning

- Starts with "one configuration fits all" method for new officers with an overview of the advantages and disadvantages of other approaches
- Foundation training would be reinforced at the next level by the Field Training Officer
- Supervisor monitoring and guidance with emphasis on the fundamentals of traffic stops and the one configuration method.
- After showing proficiency in traffic stops, officers receive in-service training on alternative approaches to employ a situation specific approach.
- Additional in-service training to reinforce training.

During a traffic stop the patrol vehicle must serve two essential yet equally different functions, to protect the officer from being struck by traffic and to provide effective cover for an officer in the event of an attack. While a particular vehicle configuration may reduce the risk of an officer being struck by a vehicle, it may increase the officer's vulnerability to attack. The decision to place more emphasis on the protection from one threat versus another must be based on a realistic assessment of the needs of the police agency making the selection

Vehicle Approach: A passenger side approach is recommended for officer safety and survival

Benefits to a passenger side approach:

- Removes officer from traffic lane
- Provide officer with **element of surprise**, as most motorists are not used to this practice
- **Increased visibility** into the passenger compartment
  - 70-90% of all people are right handed, meaning that you have a greater chance of seeing a weapon if held in the right hand
  - Better ability to see furtive gestures
  - Full view of the glove box and the contents inside if opened
- **Increased cover**: simply falling to the ground provides ample cover in a passenger side approach. In this situation the driver is forced to turn his head, shoulder and body around and reach across the vehicle, a movement far more difficult than simply pointing the weapon out of the driver's window.
  - Case studies have shown that suspect firearm accuracy is diminished in this position, "pulling" shots high, to the left, or hitting the door post.

Florida Highway Patrol Study:

Warning system research led the Florida Highway Patrol to purchase a new state of the art Light Emitting Diode (LED) emergency lighting system to replace the current all blue halogen rotating lamps.

New System:

- Rooftop lightbar consists of two levels of high intensity LED lamps. The segments alternate red and blue and allow for 4 lighting combinations:
    - Solid red, solid blue, combination blue/red and white (created by mixing blue and red)

- Amber traffic direction system was placed in the rear window to separate it from the rooftop lightbar. The light dims when the rooftop lightbar is activated to reduce possible night-blindness to approaching drivers.

- Lighting patterns change with vehicle motion
    - When moving, bursts of red, blue, and white
    - When parked, pattern alternates the front and rear segments with the sides and switches to one color.
    - Color chosen by a photocell of the intensity of the surrounding ambient light.

- Improved takedown lights using a combination of the red and blue lights to create a white light eliminating shadows and increasing visibility for officers and illumination for video recording.

- Supplemental siren that operates on a lower frequency to travel further and better penetrate passenger cabins

Benefits:

- Increased visibility on the side of the road while reducing night blindness of approaching drivers
- Utilizes technology to maximize visibility by selecting light bar color based on ambient light.
- Increased visibility for officers with improved take down lights. Suspect's ability to target the officer is also reduced due to the shadow less light emitted.
- In addition, a study conducted comparing crash rates between the existing vehicles and the newly outfitted vehicles showed a 14% reduction in the crash rate during emergency operations.

Move Over Laws: Require motorists to move over or slow down as they approach a stationary police or emergency vehicle with flashing lights.

- 41 States currently have move over laws
- Fines, jail time, and license suspensions are common penalties
- Ohio State Highway Patrol Study showed that move over related crashes were four times more likely to involve serious injury or death than other patrol car crashes.

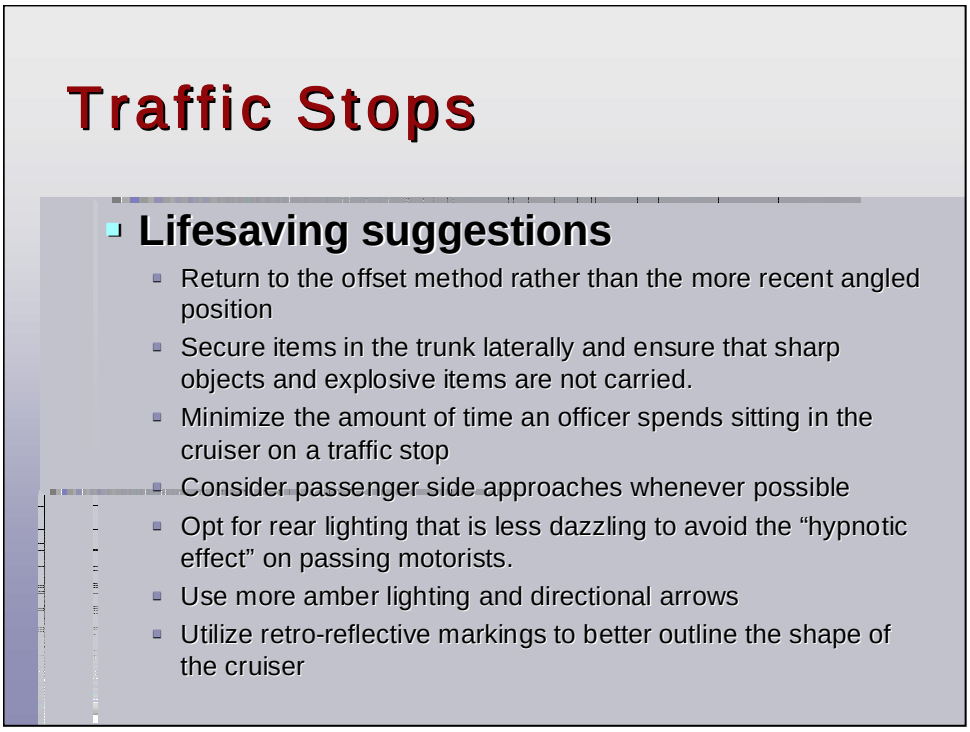
The goal of the program is to improve roadside safety through increased compliance with move-over laws. To accomplish this, agencies must:

Increase driver awareness of move over laws

- Media campaigns
- Increase signage on busy roads to inform motorists of the law and the penalties
- Conduct periodic special enforcement campaigns aimed at educating motorists and affecting subsequent driving behavior through punitive measures.

Increase general move-over enforcement

This is a picture of a Virginia State Trooper's vehicle after it was hit on the side of Rt. 66 in Northern Virginia. The trooper sustained multiple injuries but was still able to exit his vehicle and rescue the driver of the other car in front of him.



Conclusion: Lifesaving suggestions

- Return to the offset method rather than the more recent angled position. This is based largely on the research showing that officers are at an increased risk while sitting in their vehicle parked at an angle.
- Secure items in the trunk laterally and ensure that sharp objects and explosive items are not carried.
- Minimize the amount of time an officer spends sitting in the cruiser on a traffic stop
- Consider passenger side approaches whenever possible
- Opt for rear lighting that is less dazzling to avoid the "hypnotic effect" on passing motorists.
- Use more amber lighting and directional arrows
- Utilize retro-reflective markings to better outline the shape of the cruiser

RESOURCES:

IACP/NHTSA Law Enforcement Stops and Safety Subcommittee 2006 Staff Report

Left isn't Always Right, The Backup Training Corporation, Officer Survival Training Course. IACP Net, Document number 598708, Rogers, Rachel. 2008

IACP Training Key: Motor Vehicle Stops: Part I (422)

Top Ten Trends: Traffic Enforcement, Police Chief Magazine, Vol. 72 (September 2005) pgs.30-34. Sweeney, Earl, M;. 2005. (IACP Net Document number 579443)