

Indiana Law Enforcement Academy

Emergency Vehicle Operations

Environmental Conditions

As police officers, you will find
yourself driving in all types of
environmental conditions

Weather Conditions

- Weather
- Night Driving
- Traffic Density
- Road Conditions

Weather

- Weather SHOULD dictate how you drive:
- Snow, ice, and freezing rain (the most hazardous)
- Steering and stopping distances
- What freezes first? Bridges and shaded areas





Wind Considerations

- Always be alert to windy conditions
- Both hands on the wheel
- Funnel Effect - buildings and other vehicles
- Crosswind - especially in curves and corners
- Intensified if roadway is wet

Reduced Visibility

- Fog, haze, smoke and mist
- Low beam headlights and wipers if needed
- Be alert for stopped/slow moving vehicles
- Reduce Your Speed



Rules of Bad Weather Driving

- 1. Slow down but keep moving
- 2. Lengthen your following distances
- 3. Increase your visibility (L.E.D's. vs. Strobe lights)
- 4. No sudden moves
- 5. Conditions severe, pull over and wait

Night Driving

- Darkness severely limits your ability to see
- Speed and position of other vehicles are more difficult
- Bright lights from oncoming vehicles
- Biggest problem - you must rely on your headlights (Bright vs. Dim) only illuminate short distances in a narrow path
- Law Enforcement Officers Must NOT Get CARELESS IN OPERATION

Rules of Night Driving

- 1. Do Not overdrive your headlights
- 2. Increase your sight distance
- 3. Allow a greater margin of safety - 4 sec.
- 4. Avoid staring at bright lights - human eye takes (7) seconds to recover from night blindness; @ 60 mph, a vehicle travels 616 feet

Traffic Density

- Rural Areas
 - Farm vehicles, trucks, horse buggies
- Urban Areas
 - intersections, alleys, parking lots, driveways
 - Interstate and Highway

Road Conditions

- Blacktop Roadways
 - slick on hot days, washboard effect
- Concrete Roadways
 - more dips/bumps breaks easily, freezes quickly
- Gravel or Dirt Roadways
 - skid control in corners/curves, mud

Reading The Road

- Drive according to what YOU see
- Do Not travel any faster than the visible stopping distance
 - if you can only see 200 ft. ahead, make sure you can stop within 200 ft.

Occupant Protection Devices

- 1 fatality accident every 11 Hours
- 1 injury from an accident every 11 minutes
 - compared to 1 murder every 27 hours
- Law Enforcement Officers 10x more likely to be involved in a crash than the average driver (every 28,000 miles traveled)
- Leading cause of injury and disability

How Safety Belts Protect You

- Active vs. Passive
 - Active: seat belt, body armor, head rest, door locks
 - Passive: air bags, padded dash, recessed knobs
- Redistributes crash force
- Prevents you from striking steering wheel, windshield, interior post or dashboard
- Helps you stay behind the wheel
 - There is room to live inside the vehicle

Limitations of Air Bag

- Will not protect you against secondary collisions
- Cannot protect you from being ejected
- Does not open at side or rear impacts

Vehicle Control Methods

- Speed Control - Difference between losing control and not losing control
- Deceleration and Acceleration
- Braking Techniques
 - Controlled Stop for ample distances
 - Sudden Stop for short distances
 - Threshold braking is maximum braking just before lock-up with conventional braking systems

Cornering Methods

- 3 Critical points of a curve/corner
 - ENTRY
 - APEX
 - EXIT
- Evaluate corner by searching 10-12 seconds ahead

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Anti-Braking System

- Brake pedal will pulsate when braking hard
- Little or no tire screeching
- Warning light on instrument panel when an ABS malfunction occurs

Steps For Braking

- Avoid left foot braking
- Use the upper half of your right foot when rotating from accelerator
- Do Not stare at the front hood of your vehicle

Steering

- 9 - 3 Hand Positioning
- Shuffle Steering
- Backing Techniques

Rules of Steering Input

- SMOOTH
- Concentrate your sight focus on the desired path of travel

Three Types of Curves or Corners

- INCREASING RADIUS
- DECREASING RADIUS
- CONSTANT RADIUS

Skid Control

- BRAKING SKID
 - one or more brakes lock up/braking too late or too hard
- CORNERING SKID
 - vehicle exceeds the limitations of tire adhesion
 - too much steering input or too “hot” in approach
- POWER SKID
 - pushed beyond limitations-spinning tires

Skid Control Cont.

- Front Wheel Skid
- Rear Wheel Skid
- All Wheel Skid

3 Steps to Handle A Skid

- Stay off or get off the accelerator
- Stay off or get off the brake
- Counter-steer in the direction the vehicle is traveling (steering into the skid) and then prepare to counter-steer when tires grab onto the roadway