Emergency Vehicle and Roadway Scene Safety

The International Association of Fire Fighters
Division of Occupational Health, Safety & Medicine
in conjunction with the
U.S. Department of Homeland Security
United States Fire Administration

This project was developed through a Cooperative Agreement (EME-2004-CA-0188) between the Department of Homeland Security, United States Fire Administration and the International Association of Fire Fighters.

Course Objective

After completing this course, the fire fighter should have a greater awareness of the issues affecting fire fighter safety relative to riding on fire apparatus and operating at roadway emergency scenes. The fire fighter will also understand basic strategies for improving safety during vehicle and roadway incident operations.

IAFF Objective

The IAFF believes that all of our members must have a greater awareness of the issues affecting fire fighter safety relative to riding on fire apparatus and operating at roadway emergency scenes. Our members and local leadership must have basic strategies for improving safety during vehicle and roadway incident operations.

Section 1: Introduction

After completing this section, the fire fighter will be able to:

1. Identify the approximate percentage of U.S. fire fighters who die in vehicle-related incidents each year.

2. List the three primary areas that will be covered in this program.

3. Discuss the cultural change that is needed by the fire service to reduce injuries and deaths and discuss some of the basic changes that are needed.

Why Is This Program Needed?

- 20% to 25% of fire fighter fatalities are vehicle-related
- This is the 2nd leading cause of fire fighter deaths
- These are among the most preventable deaths

University of Michigan Study In 1998

- **2,472** fire apparatus collisions per year
- **6** occupants of fire apparatus killed per year
- **413** occupants of fire apparatus injured per year
- **21** civilians killed by fire apparatus per year
- **642** civilians injured by fire apparatus per year

The USFA Focuses On Vehicle and Roadway Scene Safety

- Published the *Emergency Vehicle Safety Initiative* in 2004
- Commissioned the IAFF and other organizations to study the issues more in depth

Emergency Vehicle Safety Initiative

FA-272/February 2004

FEMA

The IAFF Program's Focus

1. Apparatus occupant safety procedures

2. Fire department response policies

3. Roadway scene safety procedures

Fairfax Co., VA Local 2068

A Cultural Change…

- Injuries and deaths are not “part of the business”
- The only acceptable level of injury and death is zero
- Given the hazards we face, this is not realistic, but substantial improvements can be made

What We Need To Do

- Fire departments and unions must develop and enforce applicable SOPs
- Each fire fighter must take responsibility for their own actions
- We must watch out for each other and stop unsafe actions when we see them

Section 2: Apparatus Occupant Safety

After completing this section, the fire fighter will be able to:

1. List the driver/operator's responsibilities towards ensuring apparatus occupant safety.

2. List the company officer's responsibilities towards ensuring apparatus occupant safety.

Section 2: Apparatus Occupant Safety

3. List the fire fighter's responsibilities towards ensuring apparatus occupant safety.

4. List the fire department's responsibilities towards ensuring apparatus occupant safety.

Case Study 1 – Las Vegas (IAFF Local 1285)

- Engine 6's resting location after rolling over on the exit ramp

Case Study 1 – Las Vegas (IAFF Local 1285)

- Engine 6's position relative to the concrete barrier

Case Study 1 – Las Vegas (IAFF Local 1285)

- View of cab and driver's seat

Case Study 1 – Lessons Learned

- All apparatus occupants must wear their seat belts at all times when the vehicle is in motion.
- Operate the apparatus at a safe and prudent speed at all times.

Perform an operational and safety inspection at the beginning of each tour of duty

- Make sure that all systems are operating as designed and that the apparatus is safe
- Correct minor problems, if the department policies allow it
- Refer major problems to the department mechanic

Do not operate an apparatus found to have serious maintenance or safety issues!

Kansas City, MO Local 42

Kansas City, MO Local 42

Wear Your Seatbelts

- NFPA 1500 places responsibility for everyone
- wearing seatbelts on the driver

- >80% of fire fighters killed in collisions are not wearing seatbelts

- Do not move the rig until <u>everyone</u> is seated and belted!

McKinney, TX Local 4017

Driver/Operator Training

- All driver/operators must meet the requirements of NFPA 1002
- Must be a formal training program on the exact types of apparatus that will be driven in the field
- Departments should consider requiring CDLs to ensure at least a minimal level of training

Benefits of Obtaining A CDL

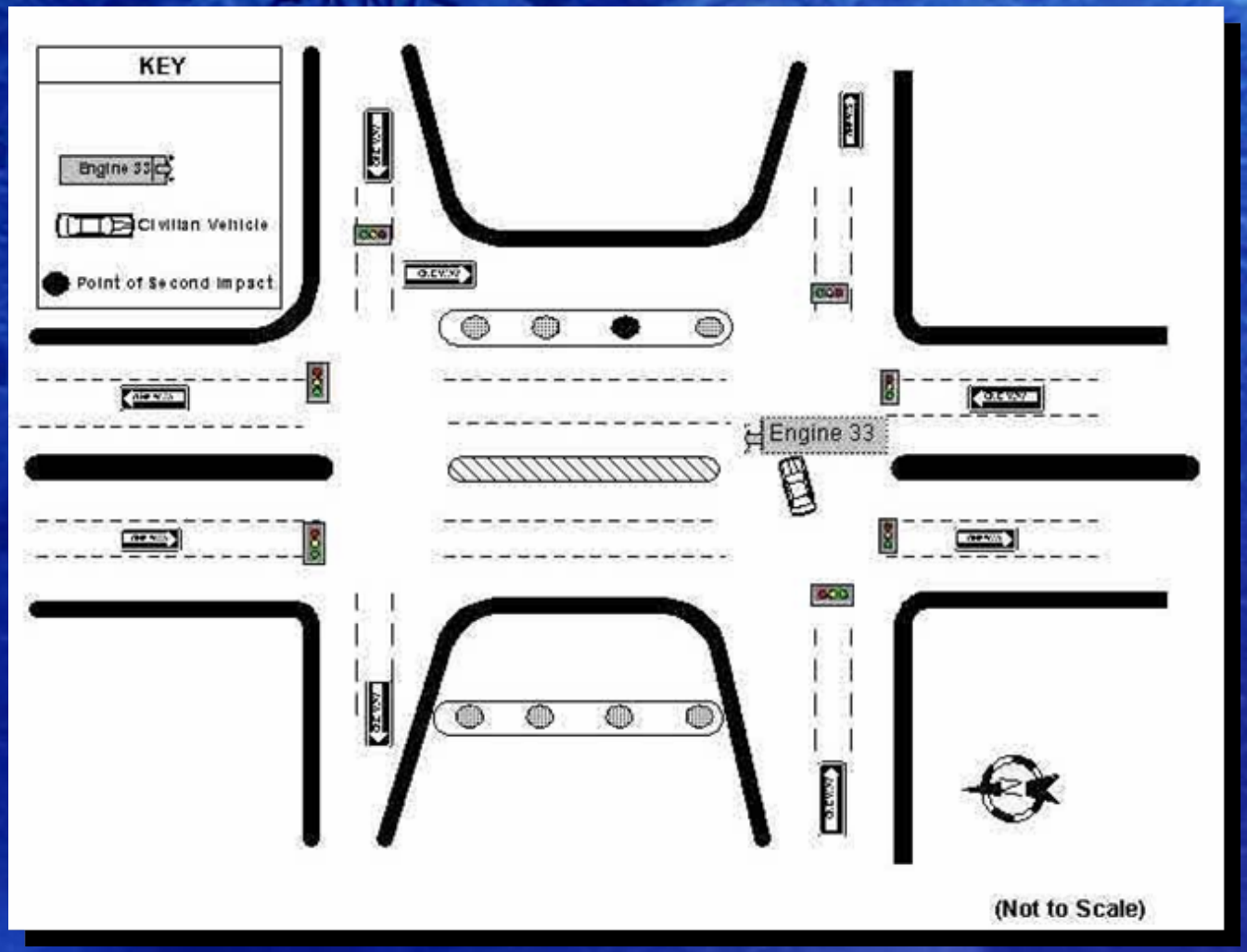
- Requires the driver to pass a written, driving skills, and pre-trip inspection test
- Most fire department driver training programs already cover the info on the CDL test
- Provides additional credibility to fire apparatus drivers
- Ensures drivers get regular physicals and drug testing

Operate The Vehicle Safely!

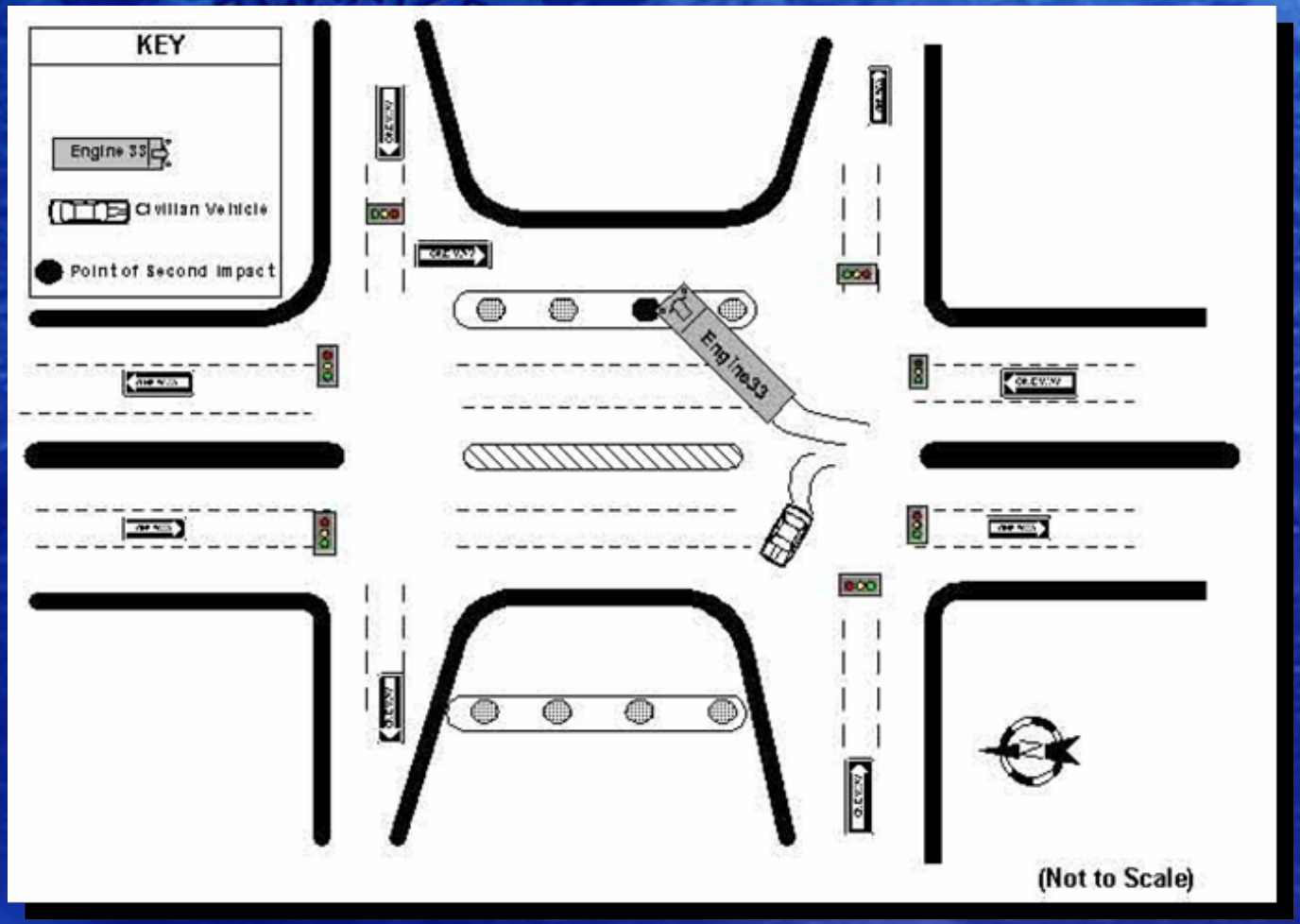
Memphis, TN Local 1784

- Follow applicable traffic laws, departmental standard operating procedures, and rules of common sense.
- It is better to take few extra seconds to arrive at the scene safely than to not arrive at all.

Case Study 2 – Texas City (IAFF Local 1259)



Case Study 2 – Texas City (IAFF Local 1259)



Case Study 2 – Texas City (IAFF Local 1259)

- Damage to Texas City E-33 indicating point of impact
- Note lack of damage to officer's seating area

Case Study 2 – Lessons Learned

- All apparatus occupants must wear their seat belts at all times when the vehicle is in motion.
- Bring the apparatus to a complete stop at all red lights and stop signs.

The Company Officer's Role:

- Supervises the driver/operator and crew
- Acts as a "co-pilot"
- May tell the driver/operator to slow down, <u>but never to speed up</u>
- Ensure all members are seated and belted at all times

Officer's Side Speedometer

Ensuring Seatbelt Safety

Frisco, TX Local 3732

High-Visibility Seat Belts

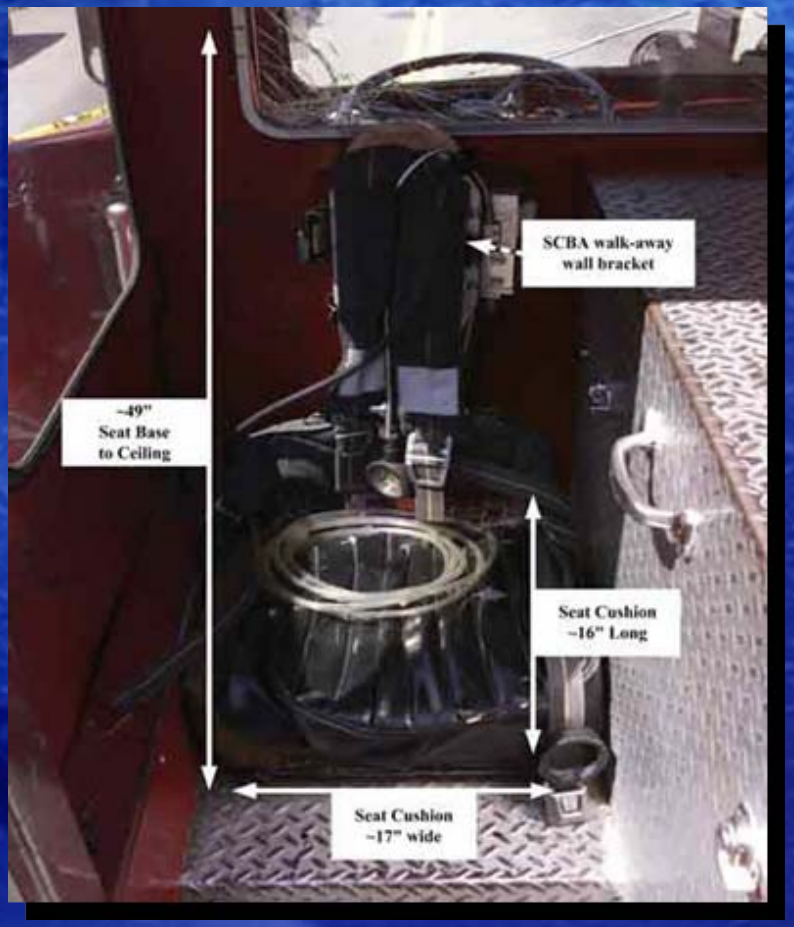
Officer's Side Mirror

Case Study 3- Brookline, MA (IAFF Local 950)

- The engine made a right turn as it pulled from the station
- The fire fighter seated behind the driver fell out the door
- The door latch had previously been noted as defective and sent for repair
- Door hinges attached to cab; latch catch attached to body; cab and body flex differently; door pops open

Case Study 3 – Lessons Learned

- All apparatus occupants must wear their seat belts at all times when the vehicle is in motion.
- Fire departments must implement and enforce safety policies related to apparatus occupant safety.



The Fire Fighter's Role:

- Take responsibility for your own safety and wear the seatbelt
- Do not loosen or remove the seatbelt during the response
- Do not ride an apparatus that doesn't have proper seating and working seatbelts! To do otherwise is an unsafe act!!

NFPA 1500 Exceptions to the Seated and Belted Rule:

1. Hose loading operations
2. Tiller training
3. Giving complex patient care in the back of an ambulance

Frisco, TX Local 3732

Additional Protective Equipment May Be Needed

1. Wear helmet and eye protection when in unenclosed cabs

2. Wear hearing protection if exposed to noise above 90 dB

McKinney, TX Local 4017

Case Study 4 – Columbus, OH (IAFF Local 67)

- A view of the scene from the exterior

Case Study 4 – Columbus, OH (IAFF Local 67)

- The view from inside the tavern

Case Study 4 – Columbus, OH (IAFF Local 67)

- The tillerman received serious injuries

Case Study 4 – Lessons Learned

- Fire departments must maintain apparatus in a safe, operable condition.
- Fire departments should adopt alternative response policies for calls that have a high probability of being non-emergency in nature.

The Fire Department's Responsibility:

- Develop and enforce SOPs for safe response procedures
- Educate all personnel on the SOPs
- Ensure all applicable laws and standards are followed

Apparatus Maintenance

- Develop a program that meets the requirements of NFPA 1915
- Determine defects that warrant repair and removal from service
- Do not allow defective apparatus to remain in service!

Conditions That Warrant Removal From Service:

- Excessive leakage of vehicle fluids
- Braking or steering defects
- Missing or inoperable seatbelts
- Inoperable wiper blades
- Poor tire condition
- Others as determined by the department

Columbus, OH Local 67

Tool Storage In The Passenger Compartment

- Creates a hazard when loose tools become airborne during a collision
- Must minimize tool/equipment storage in the cab
- Must be in a compartment or have positive locking holders

Fort Lauderdale, FL Local 765

This Includes SCBAs!

- Many departments are removing SCBAs from the cab
- Don mask and helmet en route
- Don rest of SCBA from outside compartment once on the scene

Plano, TX Local 2149

Ambulance Occupant Safety

- 45% of EMS Providers in U.S. are fire departments
- 300,000 fire department members in U.S. provide EMS services
- 82 ambulance occupants were killed between 1991 and 2000

Ambulance Occupant Safety

NIOSH Ambulance Body Sled Test
Simulates Crash At 25 MPH

- 58.5% of fatalities occurred in the patient compartment
- Use restraint systems whenever possible
- Always use shoulder straps on litter patients

Section 3: Fire Department Response Policies

After completing this section, the fire fighter will be able to:

1. List the five common areas that account for the majority of fire apparatus collisions.
2. Explain the safety hazards associated with driving through intersections and corrective actions that can be taken to lessen the hazard level.
3. List the nine situations in which NFPA 1500 requires the apparatus to come to a complete stop before proceeding.

Section 3: Fire Department Response Policies

4. Explain the safety hazards associated with backing the apparatus and corrective actions that can be taken to lessen the hazard level.

5. List at least five ways in which excessive speed is manifested during an apparatus response.

6. Explain the hazards that occur when an apparatus' wheels leave the roadway and safe procedures for bring the apparatus back onto the road surface.

Section 3: Fire Department Response Policies

7. Discuss the hazards associated with driving the apparatus on curves in the roadway and how these hazards can be reduced.

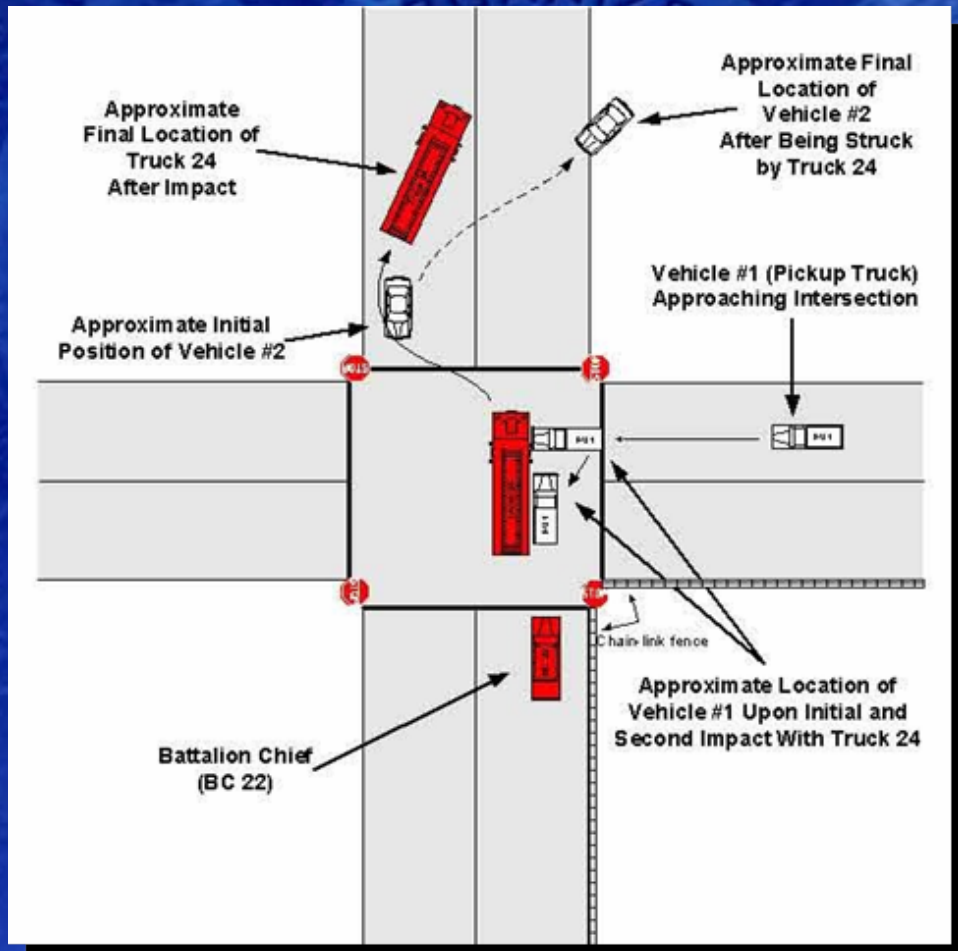
8. Discuss the benefits of fire departments establishing alternative response policies.

9. List at least five types of incidents that may warrant the response of apparatus under non-emergency conditions.

The Five Common Causes of Fire Apparatus Collisions

A. Failure to safely traverse intersections
B. Apparatus backing operations
C. Excessive speed
D. Failure to keep apparatus wheels on the road surface
E. Failure to negotiate curves

Case Study 5 – Chicago, IL (IAFF Local 2)



- Diagram shows the collision point and final resting position of the apparatus

Case Study 5 – Chicago, IL (IAFF Local 2)

- This shows the door through which the lieutenant was ejected

Case Study 5 – Lessons Learned

- Bring the apparatus to a complete stop at all red lights and stop signs.
- Fire departments must maintain apparatus in a safe, operable condition.
- Fire departments should adopt alternative response policies for calls that have a high probability of being non-emergency in nature.

Intersection Hazards

- The most likely location to be involved in a collision

Jersey City, NJ Locals 1064/1066

Safely Negotiating Intersections

- Ensure the apparatus has the right-of-way before entering intersection
- The driver/operator and company officer must work together
- Complete stops add only 2-3 seconds per intersection on the response

Safely Negotiating Intersections

- Do not exceed the posted speed limit, even if you have a green light.
- Remove foot from throttle and place on brake pedal when approaching/negotiating the intersection.

When moving to the opposing lane of traffic…

- Slow the apparatus to a safe speed; no more than 20 mph
- Ensure no oncoming vehicles are in the opposing lane
- Use all available warning devices

Kansas City, MO Local 42

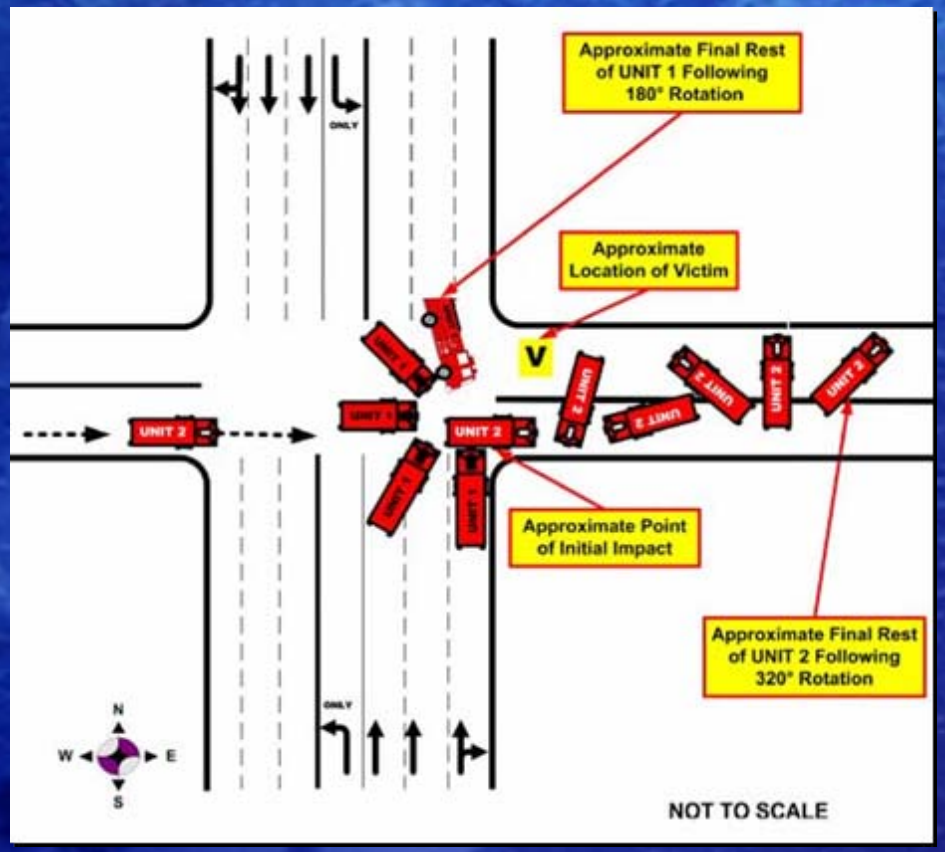
Traffic Control Devices

- May be operated by strobe lights on the apparatus, the apparatus siren, or GPS devices
- Do not guarantee the right-of-way
- If the signal does not change in your direction, apparatus may be approaching from another direction

Controlling Traffic Signals

Case Study 8 – Northlake/Stone Park, IL (Northlake IAFF Local 3863)

- Engines from both departments approached the same intersection.
- Northlake's engine captured the preemption signal
- Stone Park's engine proceeded into the intersection against the red signal (without stopping).



Case Study 8 – Northlake/Stone Park, IL (Northlake IAFF Local 3863)

- Stone Park's engine struck Northlake's engine by the rear tire.
- The right front passenger was ejected from Stone Park's engine and fatally injured.

Case Study 8 – Lessons Learned

- All apparatus occupants must wear their seat belts at all times when the vehicle is in motion.

- Bring the apparatus to a complete stop at all red lights and stop signs.

NFPA 1500 Requires A Complete Stop…

- When directed to stop by a law enforcement officer
- At red traffic signals
- At stop signs

Toledo, OH Local 92

NFPA 1500 Requires A Complete Stop…

- At negative right-of-way intersections
- At blind intersections
- When the driver/operator cannot account for all lanes of traffic in an intersection

NFPA 1500 Requires A Complete Stop…

- When encountering a stopped school bus with activated warning lights
- When any other intersection hazards are present
- Unguarded or activated railroad crossings

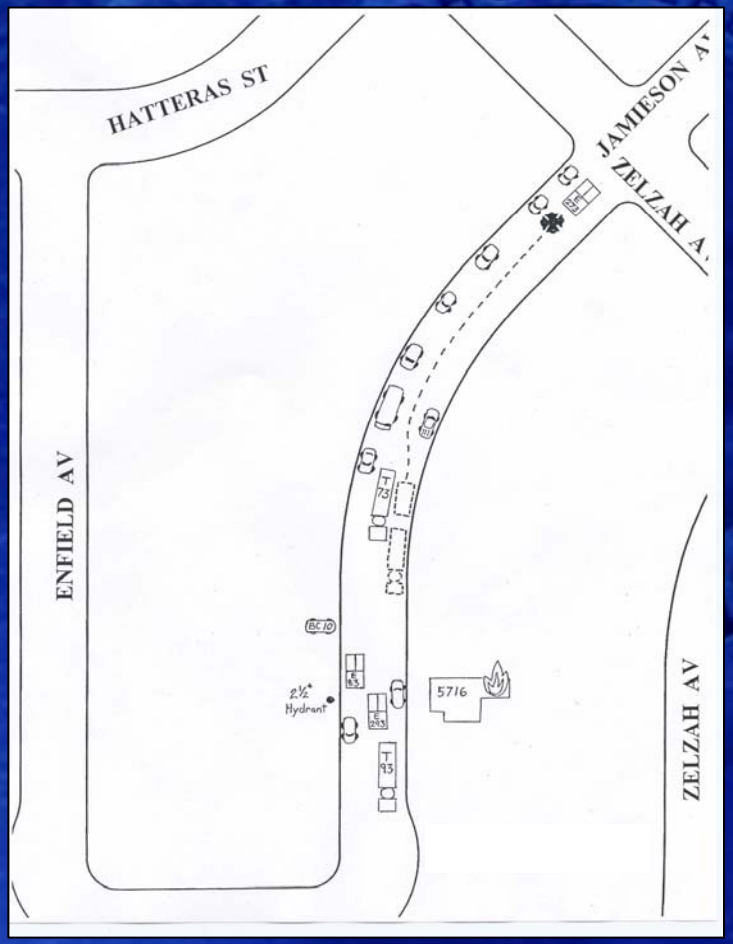
NFPA 1500 Requires A Complete Stop…

- An apparatus incident involves a civilian fatality
- Local unions reiterate official response policy
- The Fire Department complains about increased response times

Case Study 6 – Los Angeles, CA (IAFF Local 112)

- An aerial view of the incident scene
- Note the length of distance the apparatus was required to back up

Case Study 6 – Los Angeles, CA (IAFF Local 112)



- This diagram traces the path of the apparatus and notes the location where the fire fighter was struck

Case Study 6 – Lessons Learned

- Fire departments must adopt and enforce safe procedures for apparatus backing operations.
- Fire fighters must be prohibited from riding on the outside of a moving apparatus.
- Initially, the LAFD refused to change their backing policy after this incident.

Case Study 6 – Lessons Learned

- **Local 112 pushed for and won a change in this policy.**

JUNE 23, 2005

SPECIAL NOTICE

SUBJECT: REVISED LAFD HEAVY APPARATUS BACKING POLICY

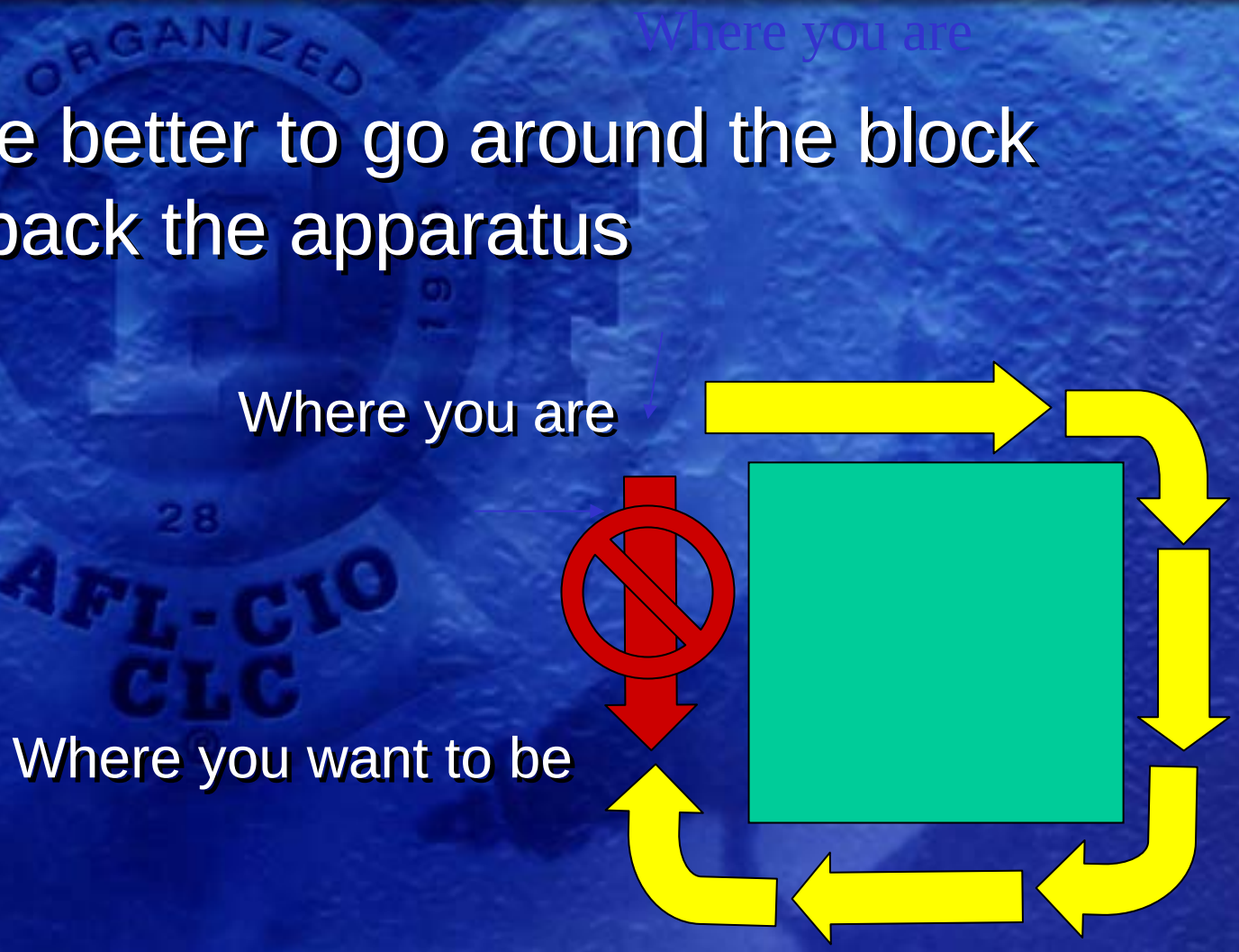
- EFFECTIVE IMMEDIATELY, ALL MEMBERS SHALL ENSURE DEPARTMENTWIDE IMPLEMENTATION AND ADHERENCE TO THE FOLLOWING LAFD HEAVY APPARATUS SAFE BACKING POLICIES:
  - NO MEMBER SHALL RIDE ON THE TAILBOARD OR ANY RUNNING BOARD OF AN APPARATUS WHEN THE APPARATUS IS IN MOTION.

Apparatus Backing Collisions

- The most common type of apparatus crash.
- Typically do not involve injuries and deaths (although some have occurred)
- Responsible for a significant percentage of apparatus damage and dollar losses

A better option…

- It may be better to go around the block than to back the apparatus



NFPA 1500 Backing Guidelines:

- Must have at least one guide whenever backing the apparatus.
- Two is preferable, although only one should communicate with the driver/operator

McKinney, TX Local 4017

NFPA 1500 Backing Guidelines:

Edmond, OK Local 2359

- The communicator must have radio contact with the driver
- May use flashlights at night; use care not to blind the driver/operator

Backing Safety Devices

McKinney, TX Local 4017

Case Study 9 – Phoenix, AZ (IAFF Local 493)

Case Study 9 – Phoenix, AZ (IAFF Local 493)

Case Study 9 – Phoenix, AZ (IAFF Local 493)

- Note the damage to the driver's door that resulted in road rash to the officer

Case Study 9 – Phoenix, AZ (IAFF Local 493)

Case Study 9 – Lessons Learned

- All apparatus occupants must wear their seat belts at all times when the vehicle is in motion.
- Operate the apparatus at a safe and prudent speed at all times.

Hazards of Excessive Speed

- Fail to negotiate a curve
- Fail to stop before hitting another vehicle or stationary object (like a house)
- Fail to stop before entering an intersection or railroad crossing
- Weight shift causes loss of vehicle control

Fairfax Co., VA Local 2068

Hazards of Excessive Speed

- Lose vehicle control after hitting driving surface defect (like a pothole)
- Lose vehicle control because of swaying/rocking
- Lose vehicle control on wet/snowy/icy roads

Case Study 7 – Charlotte, NC (IAFF Local 660)

- The painted orange arrow shows where the vehicle's wheels left the paved surface

Case Study 7 – Charlotte, NC (IAFF Local 660)

Case Study 7 – Charlotte, NC (IAFF Local 660)

The damage to the Charlotte engine

Case Study 7 – Lessons Learned

- Operate the apparatus at a safe and prudent speed at all times.
- Keep all apparatus wheels on the road surface at all times.
- All apparatus occupants must wear their seat belts at all times when the vehicle is in motion.

What Happens When The Right-Side Wheels Leave The Road?

- May sink into soft soil, causing vehicle to be pulled further off the road
- May strike an object or overturn
- Problems as a result of overcorrection may occur when trying to bring the wheels back onto the road surface

Results of Overcorrection

- May cause the vehicle to roll over
- May strike another vehicle head-on
- May exit the roadway on the opposite side of the road and overturn or strike an object

Fairfax Co., VA Local 2068

Tips for Keeping the Entire Vehicle on the Road

Memphis, TN Local 1784

- Operate the vehicle at a safe and reasonable speed.
- Drivers must not operate warning devices, read map books or computer monitors, etc.
- Use extreme caution when passing vehicles on their right side.

Safely Bringing The Wheels Back Onto The Road Surface

- When possible, come to a complete stop and then creep back onto the road surface.
- If a complete stop is not possible/practical, slow to 20 mph or less before bringing the wheels back up on the road surface.

Roadway Curve Collision Factors

- Excessive Speed
- Failure to keep all wheels on the road surface

Posted Speeds for Curves

- Speed is calculated for a passenger vehicle on dry roads
- Too fast for fire apparatus in the best of conditions

Why Consider Alternative Response Policies?

- Apparatus are most likely to be involved in a collision when running “Code 3”
- Realistically, every response is not a true emergency
- By reducing emergency rate responses, we reduce the risk of collision

Low Priority Calls

- Activated fire alarm, without an additional call reporting fire conditions
- Trash fire
- Small brush fire inside the city limits
- Wires down/hanging
- Smoke/gas odor in the vicinity

Low Priority Calls

- Carbon monoxide detector activation without reported patient symptoms
- Basic life support EMS calls
- Company relocations
- Water leaks
- Investigating a controlled burn

Alternative Response Policies

- Respond all units at a nonemergency rate to low priority calls
- Respond the closest unit Code 3 and all other units nonemergency until the first unit determines is a true emergency exists

Modified Code 3 Response

- Needed in congested, urban locations
- Reduces excessive out-of-service times
- Use warning devices to move traffic
- Do not operate the apparatus with the same sense of urgency as you would responding to a working fire

Section 4: Roadway Scene Safety

After completing this section, the fire fighter will be able to:

1. Explain the hazards associated with working on roadway incident scenes.

2. Describe the terms “surface streets” and “highways.”

3. List the three primary concerns when determining where to park the apparatus on a roadway emergency scene.

Section 4: Roadway Scene Safety

4. Describe the safety principles for positioning fire apparatus on surface streets.

5. Describe the safety principles for positioning fire apparatus on highways.

6. Describe the purpose of the MUTCD and how it applies to emergency responders.

7. List the three main goals of emergency traffic control (ETC) as outlined in the MUTCD.

Section 4: Roadway Scene Safety

8. Explain the five main parts of Section 6i of the MUTCD.

9. Explain the MUTCD requirements for performing size-up at a roadway incident scene.

10. Describe the main parts of a traffic incident management area as outlined in the MUTCD.

11. Explain the effective use of emergency vehicle lighting at roadway incident scenes.

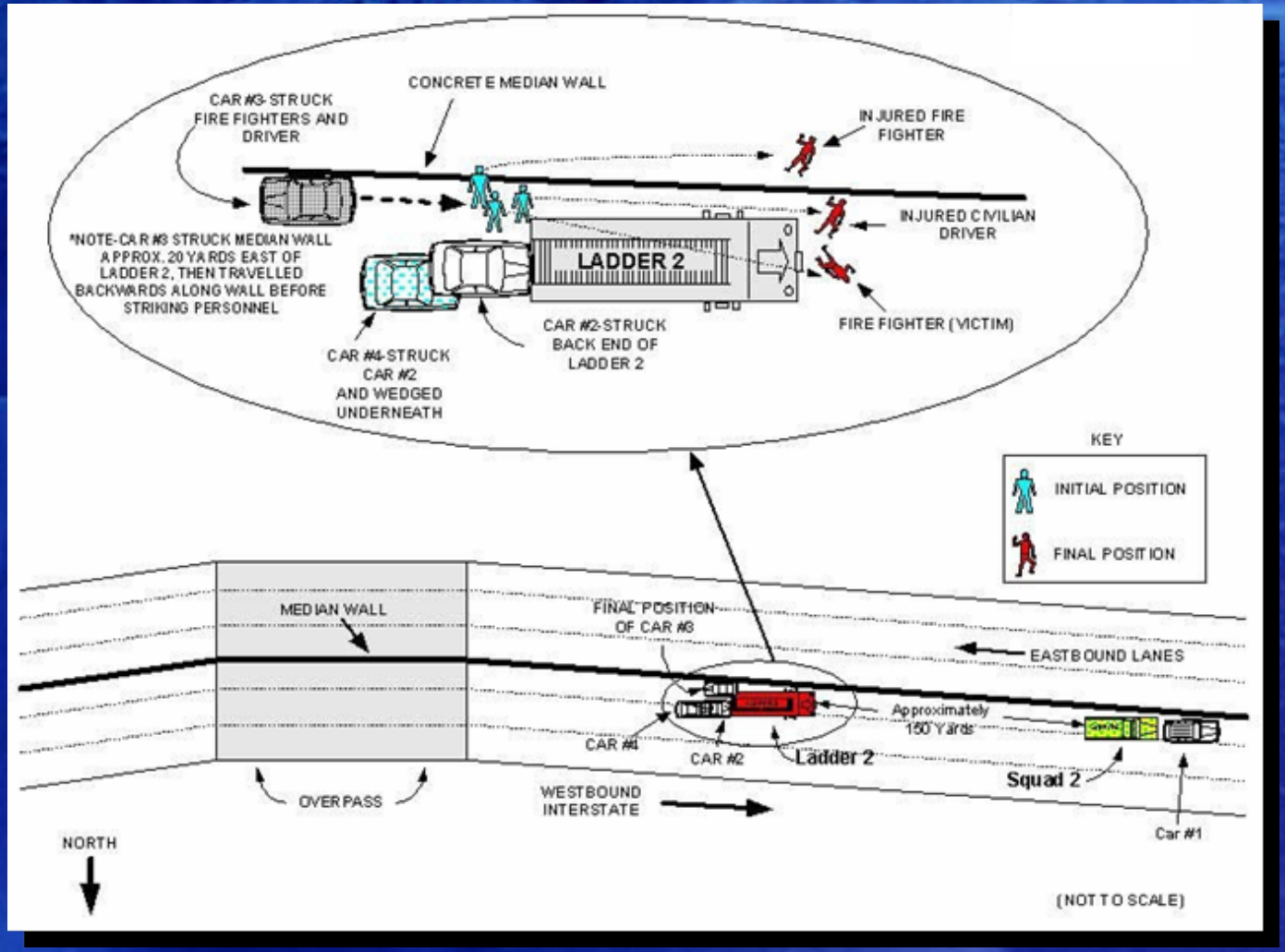
Section 4: Roadway Scene Safety

12. List the requirements for proper protective clothing to be worn at roadway incident scenes.

13. List at least 6 agencies, other than the fire service, that may have official duties at a roadway incident scene.

14. Describe how the various agencies that respond to roadway incidents can work together effectively.

Case Study 10 –Midwest City, OK (IAFF Local 2066)



Case Study 10 – Lessons Learned

- Fire apparatus should be positioned in a manner that makes them highly visible to approaching traffic and which protects the incident scene and personnel from being struck by oncoming vehicles.

- Fire departments must implement and enforce effective policies for operating as safely as possible at roadway emergency scenes.

Roadway Scene Hazards

- Careless or impaired drivers
- Hazardous road conditions
- Large volumes of traffic
- Altered traffic patterns

Midwest City, OK Local 2066

Surface Streets

- Streets
- Roads
- Alleys
- Boulevards

Highways

- Interstates
- Turnpikes

Concerns for Parking Apparatus At Roadway Scenes

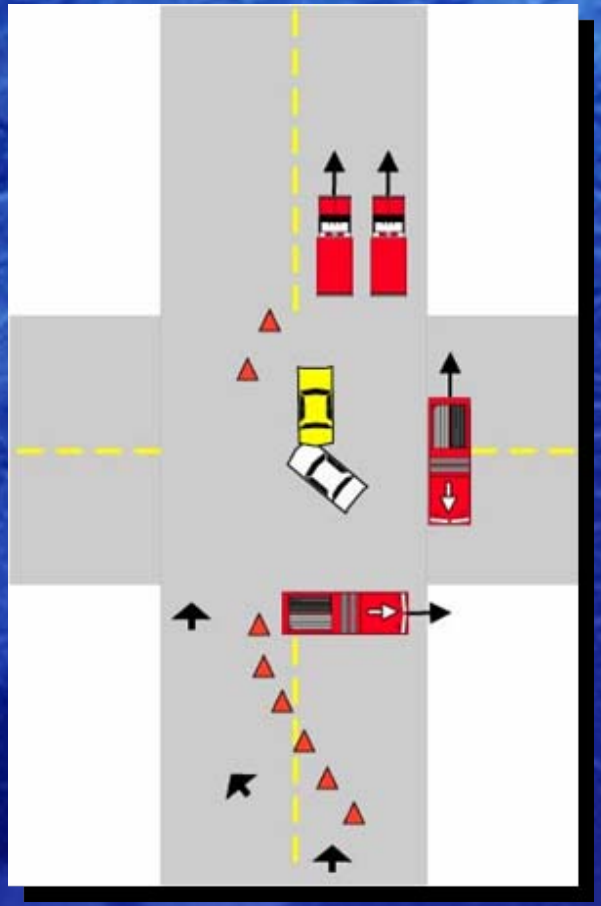
1. Park in a manner that reduces the chance of being struck by oncoming traffic.

2. Park in a manner that shields fire fighters and the work area from oncoming traffic.

3. Park in a location that allows for effective deployment of equipment and resources to handle the incident.

Parking Position Will Vary Depending On:

- The type of incident
- The type of road
- The surroundings at which the emergency scene is located



Basic Surface Street Positioning Principles

- Park off the roadway when possible
- Close the roadway to moving traffic when possible
- Do not block the access for later arriving emergency vehicles

Basic Surface Street Positioning Principles

- Use the apparatus to shield the scene/work area
- Shield the patient loading area on EMS calls
- Do not park on railroad tracks

Plano, TX Local 2149

Case Study 11 – Chicago, IL (IAFF Local 2)

- Truck 27 dispatched for assistance/blocking at an MVC on an expressway
- Two police cars provide additional blocking downstream
- Lieutenant checks left side of apparatus to ensure all tools are stowed at conclusion of original incident

Case Study 11 – Chicago, IL (IAFF Local 2)

- DUI driver attempts to slip by stopped traffic
- Vehicle strikes tractor-trailer and spins out of control
- Lieutenant struck and pinned between vehicle and Truck 27
- Lieutenant is fatally injured

Case Study 11 – Chicago, IL (IAFF Local 2)

Lessons learned:

- Fire fighters operating at roadway incident scenes should not place themselves between apparatus or other barriers and oncoming traffic.

Highway Scene Difficulties

- Stopped traffic
- Long distances between exits or turnarounds

Beavercreek, OH Local 2857

- May need to proceed against the normal flow of traffic

Use of Warning Devices During Highway Responses

- Many departments turn warning devices off when driving on highways
- Apparatus may be slower than the other vehicles
- Lights and sirens may cause other vehicles to slow and impede or endanger the response
- Turn appropriate lights back on once the scene is reached

Close At Least One Lane Next To The Incident

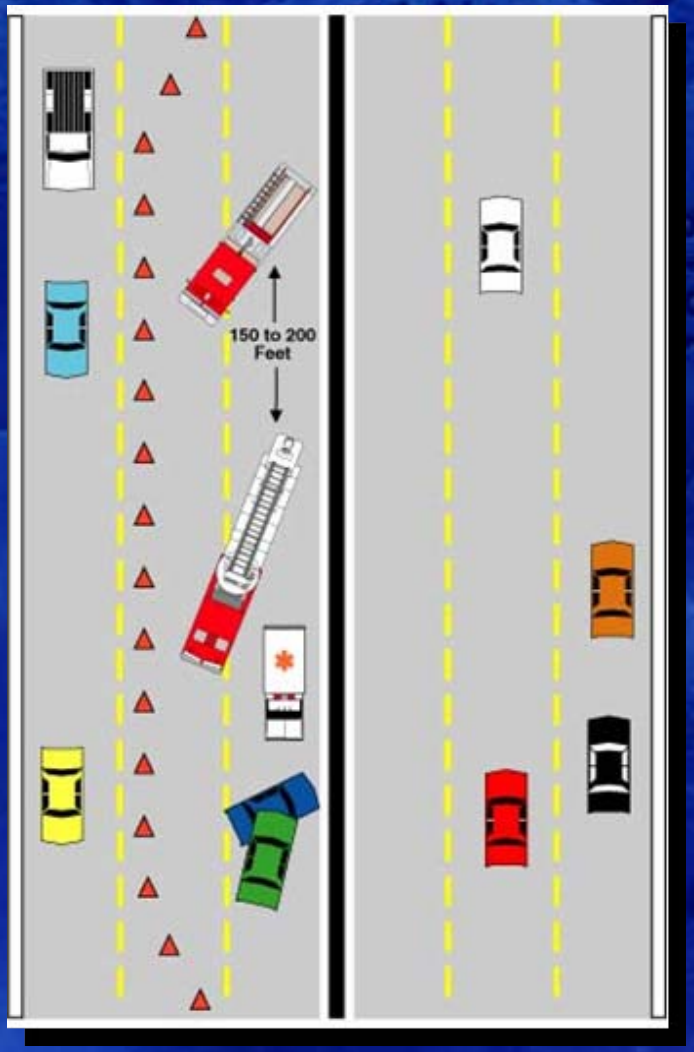
McKinney, TX Local 4017

Shielding With Apparatus

- Place apparatus between traffic and work area
- Park apparatus at a 45º angle, with front wheels turned away from the work area

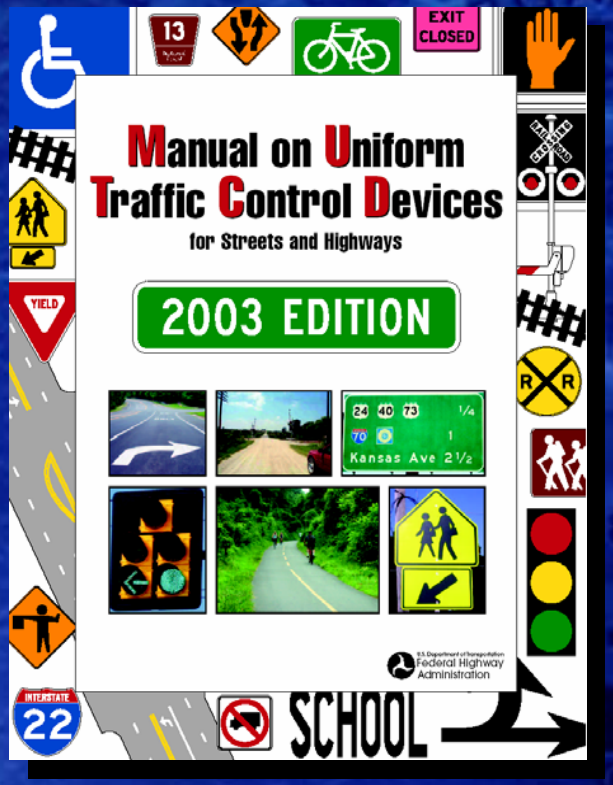
Beavercreek, OH Local 2857

Shielding With Apparatus



- Park additional apparatus at 150 to 200 foot intervals

Manual on Uniform Traffic Control Devices (MUTCD)



- States are required to adopt this by federal law
- Section 6i – *The Control of Traffic Through Incident Management Areas*.
- This applies to <u>all</u> incidents fire fighters encounter on or near the roadway.

The 3 Main Goals Of Emergency Traffic Control

1. Improving responder safety on the incident scene.

2. Keeping traffic flowing as smoothly as possible.

3. Preventing the occurrence of secondary crashes.

Plano, TX Local 2149

MUTCD Section 6I

1. General
2. Major Traffic Incidents
3. Intermediate Traffic Incidents
4. Minor Traffic Incidents
5. Use of Emergency Vehicle Lighting

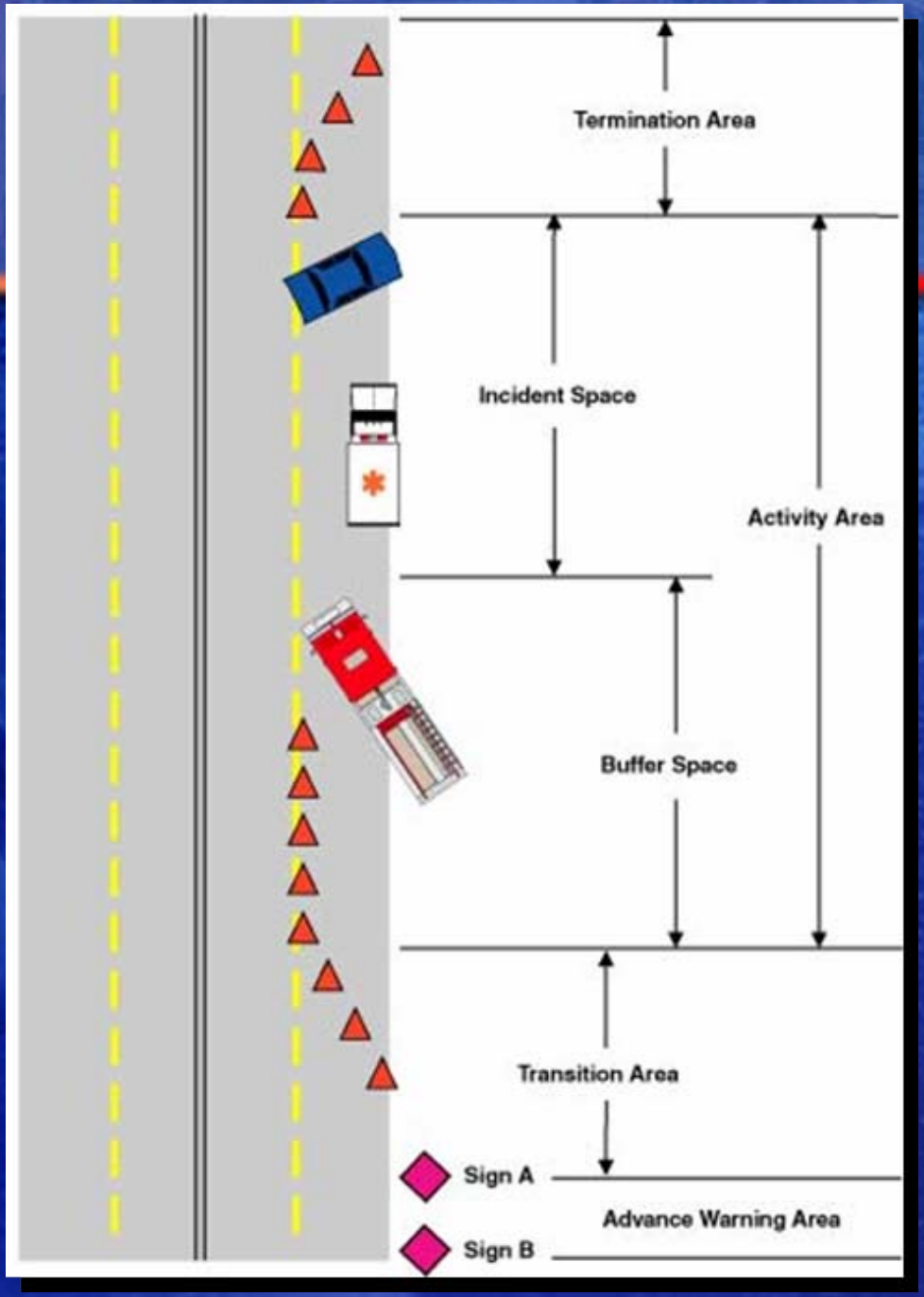
MUTCD Size-Up Requirements

- Must be performed within 15 minutes of arrival of first emergency responder
- Determine the magnitude of the incident
- Determine the estimated time duration that the roadway will be blocked or affected
- Determine the expected length of the vehicle queue (back-up) that will occur

The 4 Parts of a TIMA

1. The *advance warning area* that tells motorists of the situation ahead
2. The *transition area* where lane changes/closures are made
3. The *activity area* where responders are operating
4. The *incident termination area* where normal flow of traffic resumes.

Parts of a Traffic Incident Management Area



Emergency Lighting at Roadway Incidents

McKinney, TX Local 4017

- Intended for the safety of responders and motorists
- Provides only warning, but no traffic control
- May be confusing/blinding to motorists, especially at night

Important!

Is safer to divert traffic with advanced placement of signs and cones rather than relying on warning lights and vehicles.

Roadway Scene Lighting Tips

Plano, TX Local 2149

- Turn off all forward-facing or otherwise blinding lights
- Consider using only amber lighting at night

High Visibility Markings

McKinney, TX Local 4017

Arlington, TX Local 1329

Floodlighting Nighttime Roadway Scenes

- Raise and deploy in a non-blinding manner for motorists.
- Direct them down on the scene.

McKinney, TX Local 4017

Protective Clothing for Roadway Scenes

- Trim on firefighter turnouts is insufficient
- SOPs must require wearing approved protective vests
- Must be both retroreflective and florescent

Plano, TX Local 2149

ANSI-Approved Vests

Class I Vest

Class II Vest

Class III Outfit

Other Agencies At Roadway Incidents

- EMS
- Police
- Highway or transportation officials
- Towing and recovery operators

Kansas City, MO Local 42

Pennsylvania DOT

Pennsylvania State Police

Other Agencies At Roadway Incidents

Kansas City, MO Local 42

- Haz mat clean-up organizations
- Public utility companies
- Medical examiners
- Animal control agencies

Pre-Incident Planning for Roadway Incidents

- Makes incident operations more predictable
- Must include all participating agencies
- May lead to discovering previously unknown resources

Phoenix FD/Arizona DPS Incident

- Engine 41 is dispatched to an injury collision on a freeway shoulder
- Engine 41 blocks shoulder and first lane to protect scene and patient loading area
- DPS officer orders apparatus moved to shoulder
- After refusing the order, Engine 41 Captain is arrested

Phoenix FD/Arizona DPS Incident

- After Engineer refuses to move apparatus, the police officer enters Engine 41 and moves it to the shoulder
- Command officers are requested to the scene
- E-41 Captain is released at the scene
- Officials meet later to resolve differences

DOT Resources

Virginia DOT

- Increase scene safety
- Free emergency responders to handle incident details

DOT Patrol/Initial Response Units

Virginia DOT

Utah DOT

DOT Resources For Long-Term Incidents

Pennsylvania DOT

Program Summary

- Our cultural attitudes relative to response and roadway safety must change
- Every individual is responsible for operating safely and following SOPs
- Make sure apparatus are properly designed and maintained

Program Summary

- Seat belt compliance must be 100%; no excuses!
- Operate apparatus at a safe and responsible speed
- Use caution on curves and keep all wheels on the road surface all of the time

Program Summary

- Adopt alternative response policies for low-risk calls
- Respect roadway scene hazards; act like *everyone* is out to hit you!
- Use proper roadway scene protection and management procedures
- Use all available roadway scene safety resources

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