



**Pilot/Escort  
Certification  
Course**



**Welcome!**

# Course Content

- Student Introductions
- Instructor Introduction
- Course Schedule

# Initial Paperwork

# Required Paperwork

- Registration
- Insurance Verification
- Driving Record
- Course Evaluation

# Required Paperwork

- Documents required by certifying State.



**Course  
Topics and  
Timetable**

# Course Topics and Timetable

8:00 - 8:30

Registration

8:30 - 8:45

Introductions  
Course Outline

8:45 - 9:00

Student Material Contents  
Sources of Information



# Course Topics and Timetable

9:00 -10:00 Modules 1 and 2  
Introduction/Industry Background  
Pilot/Escort Vehicle Operator  
(P/EVO) and Vehicle Requirements

10:00 -10:15 Break

# Course Topics and Timetable

10:15 -11:45 Modules 3 and 4  
Route Planning/Route Surveys  
Pre-trip Activities

11:45 – 1:00 Lunch Break  
Paperwork Issues

# Course Topics and Timetable

1:00-2:15 Module 5  
Trip Operations

2:15-2:30 Break

2:30 -3:30 Modules 6 & 7  
Post-trip Activities and Driver Safety

# Course Topics and Timetable

3:30-3:45 Break

3:45-4:30 Module 8  
Course Review and Exam





# **Course Overview**

# Course Content

This manual includes 7 modules:

## Module 1

Course Introduction & Industry Background.

## Module 2

Pilot Escort Operator & Vehicle Requirements.

# Course Content

## **Module 3**

Route Planning

## **Module 4**

Pre-trip Activities

## **Module 5**

Trip Operations



# Course Content

## **Module 6**

Post-Trip Activities

## **Module 7**

Driver Safety Issues

## **Module 8**

Course Review, Exam, Final Paperwork

# **Module One**

## **Lesson One**

- **P/EVO Industry Safety Efforts**
- **Lack of Uniformity**
- **Purposes and Roles of P/EVOs**

# Course Content

Gaining skill as a P/EVO is similar to most jobs: A person **learns** a job **by doing** that job. People typically improve their skills over time.

## Course Content

It is necessary to learn the laws of the road before doing the job.

In this way, P/EVO certification is similar to the process of getting a driver's license.

# Course Content

- What you Need to know.
- What is Nice to know.
- Where to go.



# Sources of Information

## Where to Go

## Best Practices for Pilot/Escort Operators Federal Highway Administration (**FHWA**)

## Flagging Standards **MUTCD**

(Manual on Uniform Traffic Control Devices)



# Sources

Driver Safety Information

**AAA**

(American Automobile Association)

# Sources

State Agencies  
Websites and Documents  
Laws and Rules

# General Information

Pilot/Escort rules vary from State to State.

Escort drivers must be aware of the rules in any State in which they operate, as it is with all drivers.

## General Information

Pilot/escort operations are administered by various agencies and this, too, varies from State-to-State.

# General Information

FHWA maintains a list of all State permit offices (and Canadian provinces) that includes websites and telephone numbers.

Link:

[http://www.ops.fhwa.dot.gov/freight/sw/permit\\_report/index.htm](http://www.ops.fhwa.dot.gov/freight/sw/permit_report/index.htm)

# Certification Examination

States vary in the type and number of test questions and in the score required to pass the test. There are also differences in the number and type of questions.

# **Module One**

## **Lesson Two**

- **P/EVO Industry  
Background**
- **Regulation of Industry**
- **Purpose of P/EVO  
Certification**

# Purposes of P/EVO Certification

Escorting oversize loads requires skill and awareness similar to that of emergency vehicle operators, tow truck drivers, roadside mechanics, and others who perform dangerous roadside operations.



# Purposes of P/EVO Certification

***"Large trucks are involved in about 1 in 10 highway deaths."***

Insurance Institute for Highway Safety,  
Large Trucks Fatality Facts 2013

## Role of P/EVOs

P/EVOs are in place to assist in reducing injuries and fatalities, and in preventing damage to vehicles and transportation infrastructure.

# Goals of P/EVO Training

Certification training for P/EVOs is designed to prepare individuals for the safe movement of oversize loads, and to standardize the training of P/EVOs.

# Standardization/Harmonization

Efforts at harmonization:

American Association of State Highway and Transportation Associations and regional organizations: Western, Northeast Association of State Highway and Transportation Officials, Southeast and Mid-American Associations of State Highway and Transportation Officials.

- Specialized Carriers & Rigging Association (SC&RA)

# Standardization/Harmonization

Efforts at harmonization:

- Owner Operator Independent Drivers Association. (OOIDA)
- National Pilot Car Association. (NPCA)

# Standardization/Harmonization

See AASHTO, Board of Directors:  
*Actions to Reduce Impediments to InterState  
Commerce, Harmonizing Requirements for  
Truck Permits*

PR-3-12 & PR-3-13 available:

[http://www.aashtojournal.org/Documents/November  
2012/PR-3-12.pdf](http://www.aashtojournal.org/Documents/November2012/PR-3-12.pdf)



# **Review Questions**

# Review Questions

Is P/EVO certification valid in all 50 States?

What are the main reasons for requiring P/EVOs be certified?



# Review Questions

Why do laws pertaining to escort drivers differ from State to State?

Who issues P/EVO certification cards (within the State)?

# Review Questions

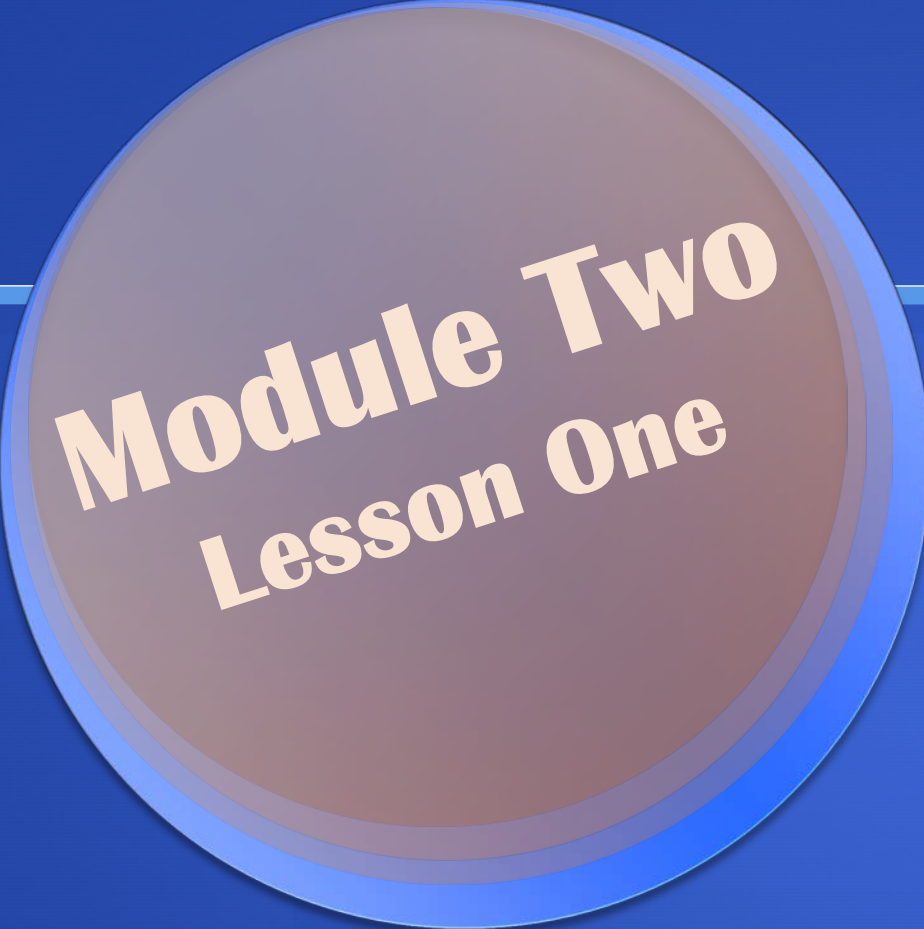
Where are standards for proper flagging procedures found?

Where are best practices for the pilot/escort industry found?

## Review Questions

Are P/EVOs responsible to know the laws in every State in which they work?

Why are P/EVOs required when moving oversize loads?



# **Module Two**

## **Lesson One**

- **Purposes of P/EVOs**
- **P/EVO Requirements**
- **Reciprocity Among States**

# P/EVO Requirements

States that currently have certification or training requirements for P/EVOs are:

Arizona, Colorado, Florida, Georgia, Minnesota, New York, North Carolina, Oklahoma, Utah, Virginia, and Washington.

# Purposes of Certification

## To Enhance Safety

When the job is done right, pilot/escorts provide benefits to the public, the load driver, trucking company, and the escort him/herself.

# Purposes of Certification

## To Reduce Congestion

Prevent or minimize delays to the normal flow of traffic.

## To Harmonize State Certification

Standardize the Pilot/Escort Vehicle Operator Industry.

# Purposes of Certification

## To Protect Lives and Property

Incidents happen when we violate or ignore laws and safe driving practices. These are not accidents, as mentioned.



# Purposes of Certification

To Prevent Damage to  
Transportation Infrastructure

To Prevent Insurance Rate  
Increases and Legal Issues

# P/EVO Requirements

Many of these States have reciprocal agreements in place, similar to driver's licenses and CDLs.

However . . .

# P/EVO Requirements

Not all States accept certification from all other States, and, depending on the State, P/EVO certification lasts anywhere from 3 to 5 years.

States also vary in the type and amount of insurance coverage required for P/EVOs.

## P/EVO Requirements

Many other differences exist among the States.

For example, many States require P/EVOs be 21 years old, while some allow P/EVOs to be certified at 18.

# P/EVO Requirements

Some States require driver safety or flagger training courses in addition to the basic P/EVO certification.

Not all States authorize P/EVOs to control traffic.

## P/EVO Requirements

These are just a few examples of the differences that exist, and it is **the responsibility of the P/EVO** to know the laws and rules in any jurisdiction in which they operate.

## P/EVO Skills

P/EVOs must have excellent communication skills, and be engaged in all aspects of oversize load movement.

# P/EVO Requirements

P/EVOs should never display any badge, shield, emblem, or uniform resembling those used by law enforcement officers.





**Review  
Questions**

# Review Questions

What are the purposes of certification for pilot/escort drivers?

Of these purposes, which is the most important?

# Review Questions

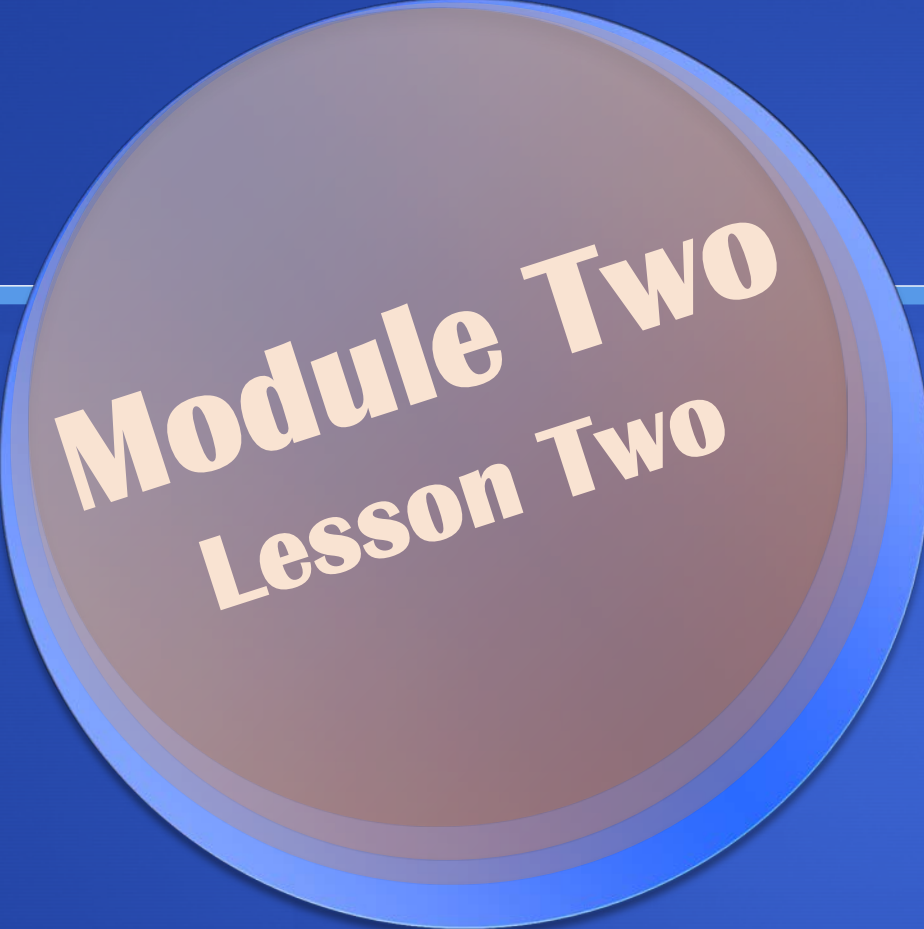
Certification typically lasts how long?

Do all States require the same insurance for P/EVOs?

# Review Questions

How old must P/EVOs be?

When is it appropriate for a P/EVO to wear uniforms similar to those used by law enforcement officers?



# **Module Two**

## **Lesson Two**

- **Escort Vehicle Requirements**

# Escort Vehicles

Some States do not allow cargo vans or panel trucks to be used as escort vehicles because the driver cannot see in all directions (360 degrees) when driving these vehicles.

# Escort Vehicles

Some States require that cars used as escort vehicles weigh at least 2,000 pounds, or have a minimum  $\frac{1}{4}$  ton load capacity for pick up trucks.

# Escort Vehicles-Signs – State Rules

Most States require the escort vehicle provide information about the P/EVO on both sides of the vehicle.

State rules vary, but most require:



# Escort Vehicles-Signs – State Rules

The name of the individual and/or the company name, city, and State.

Other States require the telephone number be included. Logos and slogans are allowed.

# Escort Vehicles-Signs – State Rules

**John & Jane P. Voe**  
***Escorts Extraordinaire***  
**You Name It, ST**  
**000.000.0000**

Smile after mile...

# Escort Vehicles-Signs – State Rules

Typically these signs do not have to be removed when not performing escort duties, but P/EVOs must know the rules.

## Escort Vehicle-Signs – State Rules

States also vary substantially in terms of the equipment that P/EVOs must carry or display on their vehicles. There is one sign that all States require:

**The Oversize Load sign**

## Escort Vehicle-Signs – State Rules

Although all States require the Oversize Load sign, the location of the sign (where on the vehicle it is to be installed), and the size of the sign vary from State-to-State.

## Escort Vehicle-Signs – State Rules

P/EVOs must consider this, when considering where to put the Oversize Load sign: many States allow the sign to be installed on the top of the vehicle. This is recommended for two reasons:

# Escort Vehicle Signs – State Rules

First, the sign is more visible and can be easily seen in both directions when on top of the escort vehicle.

Second, looking to the future, emerging crash avoidance technology uses sensors mounted inside vehicle bumpers.

## Escort Vehicle Equipment

In addition to the signs mentioned, red flags are also required by many States. Some States require 2, others require 4.

Some States require 12" X 12" flags while others require 18" X 18" flags.



# Escort Vehicle Equipment

Other equipment typically required includes:

Warning light (Amber in color; visible from 500 feet; must rotate, oscillate, or flash through 360 degrees).

# Escort Vehicle Equipment

Full-size spare tire(s)/required tools to change tires.

Outside mirrors (on each side of load vehicle).

# Escort Vehicle Equipment

Hardhats and retro-reflective high visibility garments.

STOP/SLOW paddles (18" and/or 24").

Red flag (24" x 24") for controlling traffic (only if paddle not available).

# Escort Vehicle Equipment

Cones and/or triangle reflectors.

Flashlight and traffic wand/cone.

First aid kit (P/EVOs should be certified in CPR and basic first aid).

# Escort Vehicle Equipment

Spare parts/fluids/basic tools.

Fire extinguisher(s).

Height pole.

# Escort Vehicle Equipment

CB radio—CBs remain the best equipment for the load movement team.

Other State specific equipment.



**Review  
Questions**

# Review Questions

What equipment is typically required for P/EVOs?

How do P/EVOs determine the equipment & signage a State requires?



# Review Questions

What sign is required in all States?  
Color? Size? Installed where?

What is the recommended device for  
communicating with the load team?  
Why?

## Review Questions

Are cargo vans or panel trucks appropriate for use as escort vehicles? Why or why not?

## Review Questions

What are the advantages of putting the Oversize Load sign on top of the escort vehicle rather than on/near the bumpers?

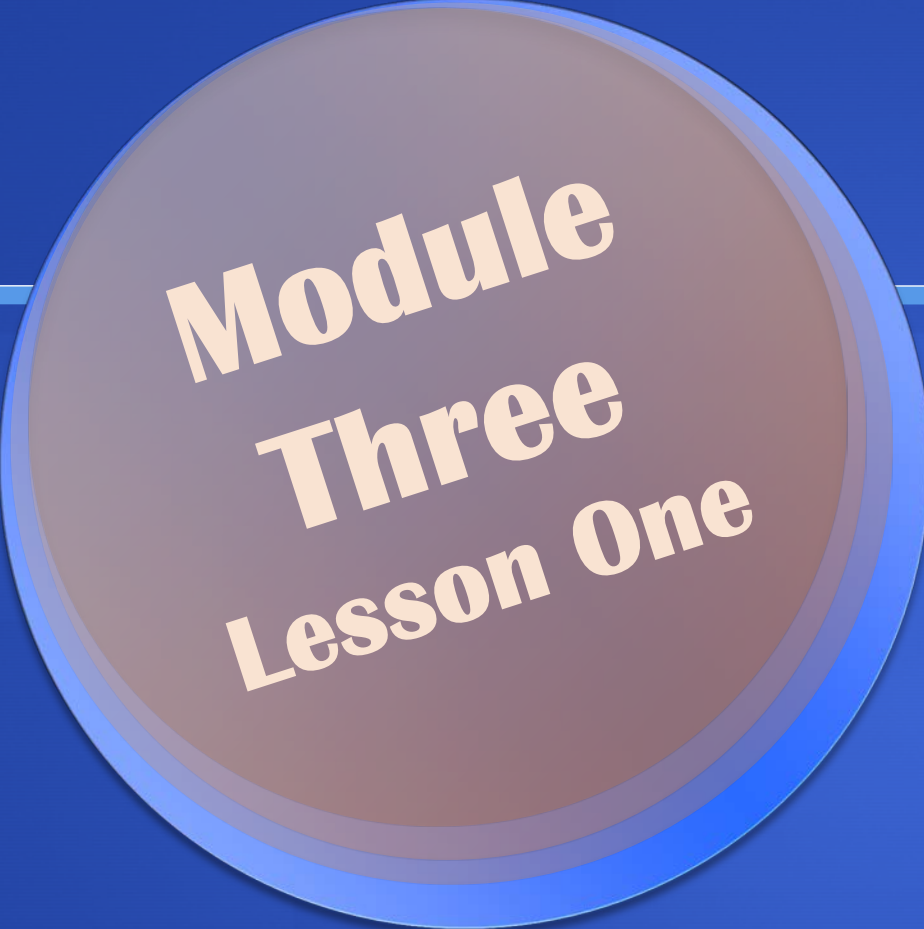
# Review Questions

What is the minimum size for the STOP/SLOW paddle?

What can be used to flag traffic in an emergency (if no paddle is available)?

# Review Questions

Why are CB radios recommended for P/EVOs?



**Module  
Three  
Lesson One**

- Route Planning
- Route Selection

# Route Planning

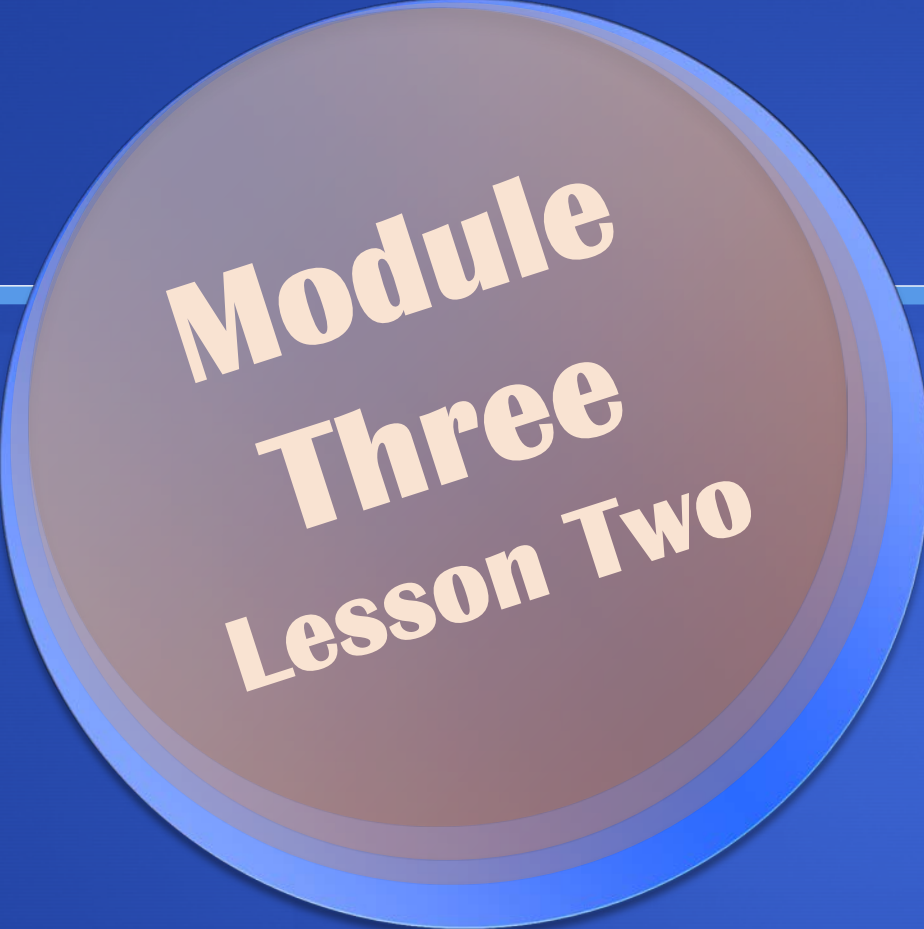
Routes for moving oversize loads are often specified in the permit.

Routes are determined and selected with the safety of highway users as the top priority.

# Route Planning

If a route survey is required, it is often P/EVOs who conduct the route survey.





**Module  
Three  
Lesson Two**

- Route survey procedures
- Contents
- Evaluation of route survey

# Route Surveys

Routes for moving oversize loads are often specified in the permit.

Equipment needed includes hardhat, high visibility garment, and any equipment that makes roadside operations safer.

# Route Surveys

Current maps that show all highways and roads, measuring devices, and a height pole are needed.

A dashboard camera, digital voice recorder, and still camera are strongly recommended.

# Route Surveys

When doing a route survey, warning lights should be used. Consult State and local laws for specific requirements.

# Route Surveys

Before doing the route survey, it is vital to have as much information as possible about the load, including length, height, and width, as well as the vehicle configuration (articulated trailers, for example).

# Route Surveys

Route surveys should include:

- Basic information about the load.
- Point of origin and destination.
- Transportation infrastructure details.
- Stopping/parking locations.

# Route Surveys

Route surveys should include:

- Bridges, overpasses, overhead wires.
- Railroad crossings/elevation changes.
- Emergency contact information.
- Ports-of-entry and inspection stations.

# Route Surveys

Route surveys should include:

- Runaway truck ramps.
- Pot holes.
- Narrow shoulders.
- Mailboxes.





**Review  
Questions**

# Review Questions

What determines the route to be followed, and dates and times of travel?

What are the benefits of the lead P/EVO also conducting the route survey?

# Review Questions

What criteria are important when planning a route for an oversize load?

# Review Questions

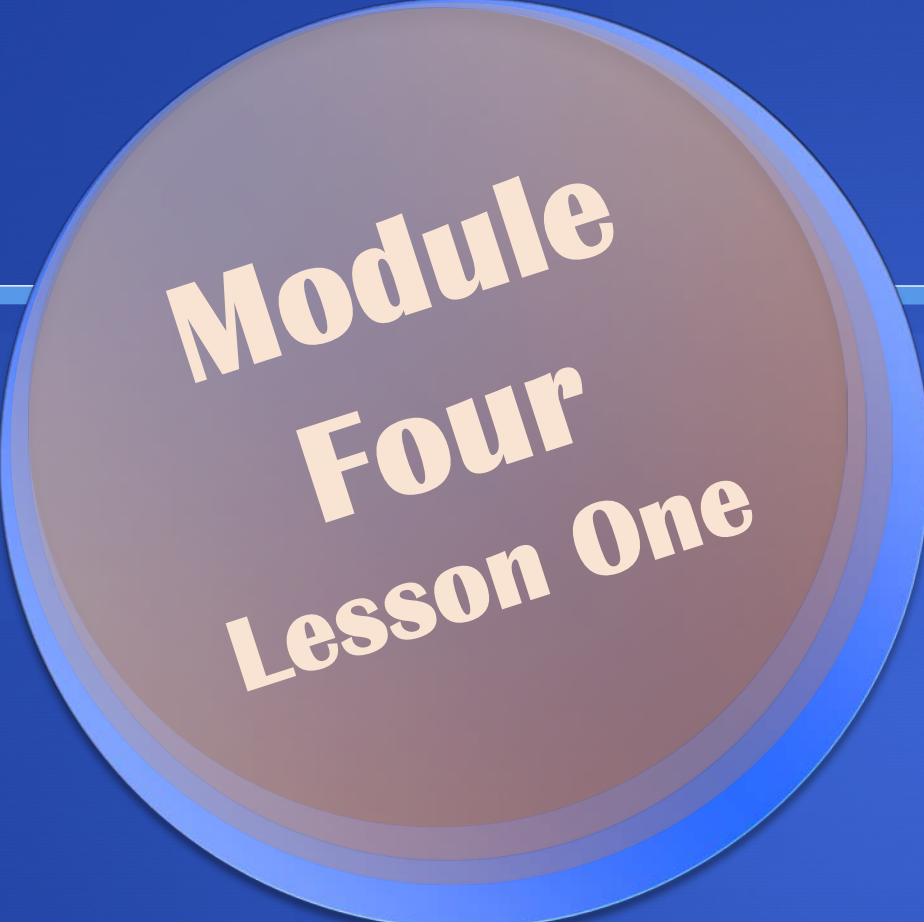
What equipment/materials are needed to conduct a route survey?

What safety equipment should be used when conducting a route survey?

# Review Questions

What should be included in a route survey?

Under what two conditions do railroad crossings become most hazardous?



**Module  
Four  
Lesson One**

- **Pre-trip Planning Procedures**
- **Assignment Confirmation**

# Pre-Trip Activities

The goals of pre-trip planning activities include minimizing risks, informing all load movement team members of hazards, and avoiding delays.

## Pre-Trip Activities

Cultivating an open climate is critical. Every member of the load movement team must be able to raise questions and concerns at any time.



# Contingency Planning

Contingency planning involves preparing for the unexpected. This kind of planning focuses on the question:

“What if ...?”

# Contingency Planning

What if the load vehicle breaks down?  
Or an escort vehicle?

What if the load strikes a bridge? Or  
becomes lodged at a railroad crossing?

# Contingency Planning

What if a vehicle catches fire?

What if the load shifts?

What if the weather deteriorates?

What if a driver gets sick?

# Contingency Planning

Contingency plans have at least four benefits:

1. Identifying risks and potential risks.
2. Identifying measure needed to protect lives and property.

# Contingency Planning

3. Identifying individual roles and responsibilities.

4. Establishing and developing networks among team members and support staff.

## Pre-Trip Activities

It is also critical that the load movement team address potential emergency situations during pre-trip planning.

All pre-trip meetings should be documented and included in the trip log.



# **Review Questions**

## Review Questions

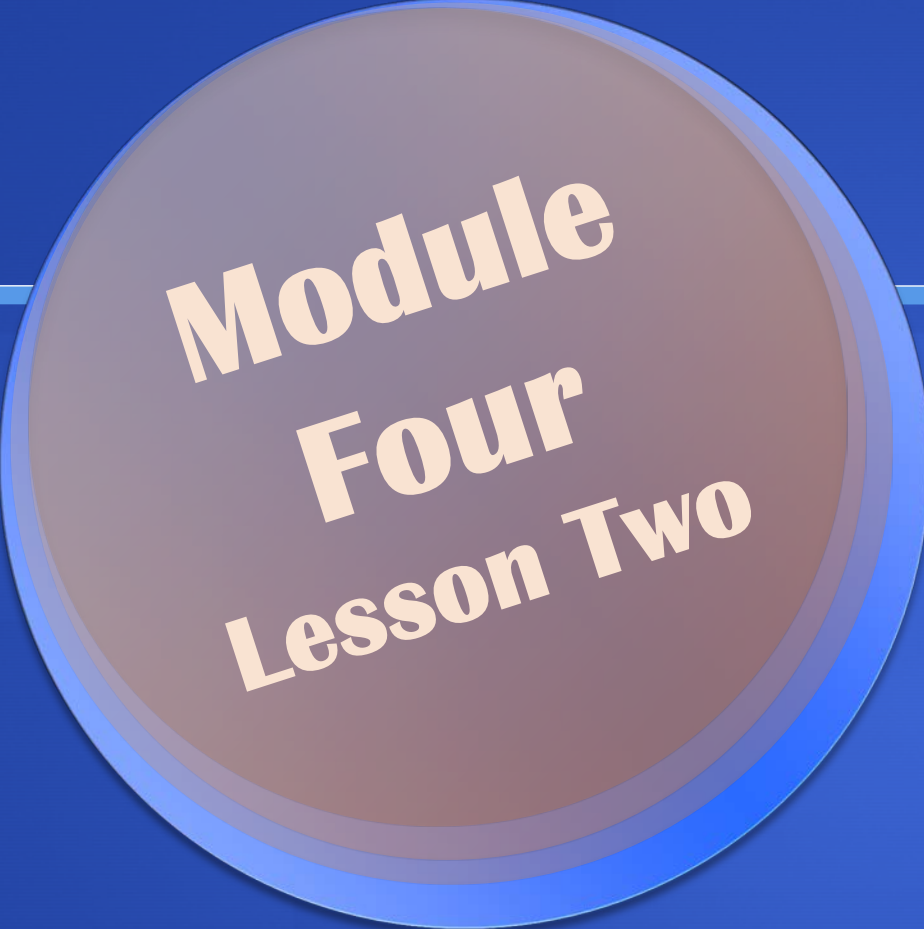
Why is an open climate of cooperation among members of the load team critical to safety?

What question does contingency planning address?



# Review Questions

What are some of the benefits of contingency planning?



**Module  
Four  
Lesson Two**

- **Pre-trip Safety Meeting**

# Pre-Trip Safety Meeting

Many States require a pre-trip safety meeting that involves the load driver as well as P/EVOs.

# Pre-Trip Safety Meeting

Others who may need to be involved include law enforcement escorts, permit officials, public utility personnel, and others.

# Pre-Trip Safety Meeting

During the pre-trip safety meeting, it is important for team members to identify themselves and their role(s).

# Pre-Trip Safety Meeting

Load issues should be discussed in detail, especially loads with very low ground clearance and tall loads (13' 6" or taller).

# Pre-Trip Safety Meeting

The route survey should be reviewed by all team members, and the route should be discussed in detail.

# Pre-Trip Safety Meeting

Hazardous material transportation requires even more meticulous planning and a full understanding of emergency procedures by all load movement team members.



# Modified Pre-Trip Meeting

It is sometimes the case that pre-trip meetings are not possible.

In this situation, a modified pre-trip meeting should (or as required by the States) be conducted.

# Modified Pre-Trip Meeting

This situation is described as a “pick up on the move” or a “non-stationary transfer of responsibility.”

# Modified Pre-Trip Meeting

After the non-stationary transfer, the load movement team should stop at the first safe opportunity to conduct the pre-trip safety meeting.

# Modified Pre-Trip Meeting

It is important to reduce pressure to “get back on the road” and to encourage team members to speak up any time they have questions and concerns.



# **Review Questions**

# Review Questions

What information should be obtained when confirming a P/EVO assignment?

What topics should be covered in a pre-trip safety meeting?

# Review Questions

What determines the number of escorts required for a specific load? What determines the route? Curfews?

What is a “pick up on the move?” What are the two types?

# Review Questions

If communication cannot be established between the P/EVO(s) and the load driver, what should the team members do?



# Review Questions

Explain the Statement:

“For P/EVOs, every job is a proto-type.”

**Module  
Four  
Lesson Three**

- **Vehicle inspections**

# Vehicle Inspections

Explain the Statement:

“Inspection is a process, not an event.”

# Vehicle Inspections

Vehicles should be inspected not only before a trip begins, but also at every opportunity, such as fuel or food breaks.

# Vehicle Inspections

Nearly 55% of trucks that crashed had at least one mechanical violation.

Almost 30% had at least one condition serious enough to have taken the vehicle immediately out of service.



# Vehicle Inspections

The two most common violations involved brakes (36%) and lights (19%).

# Vehicle Inspections

Vehicle inspections are done for safety, but other benefits include:

- Discovering a malfunction before expensive repairs are necessary.

# Vehicle Inspections

- Avoiding delays in load movement related to a breakdown or failing inspection.
- Avoiding fines.



# Vehicle Inspections

Continual monitoring of vehicles, not only on the outside, but also inside the vehicle, including gauges and communication equipment, is vital while on the road.

# Vehicle Inspections

While on the road, drivers must monitor all gauges and continually “look, listen, smell, and feel.”

# Vehicle Inspections

A paperwork inspection—checking licenses, certifications, insurance verifications, etc., to ensure all documents are current and adequate for the States on the route.



# **Review Questions**

# Review Questions

What is the primary purpose of vehicle inspections? What are other benefits?

# Review Questions

In addition to vehicles, what else should be inspected and/or monitored?

Explain the seven-step inspection method. Why is it useful?

# **Module Five**

## **Lesson One**

- **Characteristics of oversize loads**
- **Stopping distances**
- **Load movement**
- **Roles of front & rear P/EVOs**

# Trip Operations

P/EVOs must follow the laws and rules required of all drivers.

P/EVOs are never allowed to run traffic signals or signs, cross the center line, or fail to yield.



# Trip Operations

P/EVOs must never stop a vehicle in a roadway to block traffic.

# Characteristics of Oversize Loads

In order for P/EVOs to understand how to improve safety, they must know the characteristics of typical oversize loads.

# Characteristics of Oversize Loads

For example, oversize loads take longer to stop, change lanes, or pass other vehicles.

# Characteristics of Oversize Loads

Oversize loads have more blind spots and the blind spots are bigger than those of other vehicles.

Oversize loads take longer to get up to speed when entering highways.

# Characteristics of Oversize Loads

Oversize loads, especially long ones, often consume several lanes when making turns. Anytime an oversize load must be moved in reverse, spotters should (or as required by the States) be used.

# Trip Operations

When establishing how far the P/EVOs should be from the load vehicle, stopping distances are the most important criteria to consider.

# Stopping Distance

Typical tractor-trailers often weigh 20 to 30 times as much as passenger vehicles.

Weight is a central determinant of stopping distance.

# Stopping Distance

How fast a vehicle is moving also affects stopping distance.

Stopping distance increases by the square of the amount the speed increases.



# Stopping Distance

**So if speed doubles from 20 to 40 mph, stopping distance increases by 4 times.**

# The Roles of P/EVOs

P/EVOs are in place primarily to enhance safety by warning motorists of the oversize load.

P/EVOs also enhance safety by warning the load driver of hazards.

## Lead P/EVOs

Lead P/EVOs have responsibilities related to navigation, communication, height pole operation, and providing adequate warning to motorists and to the load movement team.

## Lead P/EVOs

In order to meet these responsibilities, it is critical the lead P/EVO maintain an **attentive and proactive visual lead** in order to detect hazards in time to warn motorists including the load movement team.

# Lead P/EVOs

Potential hazards include:

- Foreign objects in the roadway.
- Defective roadway surface.
- Other large vehicles.
- Edge drop off, potholes.

# Lead P/EVOs

- Work zones
- Collisions or disabled vehicles.
- Other large vehicles.
- Signs, overpasses.
- Railroad crossings/elevation changes.

# Rear P/EVOs

Duties of the rear P/EVO include:

- Monitoring the load and load vehicle.
- Watching to the side and rear of the load.
- Monitoring offtracking risks.



# **Review Questions**



# Review Questions

What is the primary skill that lead P/EVOs must develop?

What is the number one cause of injuries and death in construction work zones?

# Review Questions

What are some of the hazards about which P/EVOs need to alert the load movement team?

What are some benefits of standardizing P/EVO rules?

# Review Questions

How is stopping distance affected by speed?

What are the primary duties of P/EVOs?  
The lead P/EVO? Rear?

# Review Questions

What is “offtracking?”

What is a primary hazard for loads with low ground clearance?

# **Module Five**

## **Lesson Two**

- **Equipment use**
- **Flagging Equipment**
- **Emergency Equipment**
- **P/EVO special skill areas**

# Equipment Deployment & Operation

Traffic Control Equipment;  
For flagging traffic, P/EVOs should (or as required by the States) wear a hardhat and retro-reflective high visibility garment as required by the MUTCD Section 6D.03\*.

\* The FHWA has incorporated by reference the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD, pursuant to 23 CFR 655.601(d)(2)).

# Equipment Deployment & Operation

## Traffic Control Equipment

Traffic control requires use of a **STOP/SLOW** paddle and a two-way radio to notify other members of the load movement team.

# Equipment Deployment & Operation

## Traffic Control Equipment

Many States require a flashlight and safety cone. This is highly recommended for all P/EVOs, especially when moving loads at night.



# Equipment Deployment & Operation

Emergency equipment required by many States includes:

- Fire extinguishers.
- Warning devices (flares, cones, reflectors).

# Equipment Deployment & Operation

Deployment and placement of warning devices must be understood by all team members. In an emergency situation, the first obligation of the team is to warn approaching motorists of hazards.



# Special P/EVO Operations

- Height pole operations
- Tillerman duties/requirements

# Specialized P/EVO Skills-Height Pole

Height pole operation:

A height pole is required for overheight loads.

The height pole operator warns the load driver about overhead obstructions.

## Specialized P/EVO Skills-Height Pole

The height pole must be made of non-destructive, non-conductive material.

The height pole should be set 3 to 6 inches above the tallest part of the load.

# Specialized P/EVO Skills-Tillerman

A tillerman or steerman controls articulated trailers, typically involved in moving long loads.

# Specialized P/EVO Skills-Tillerman

Many States require a tillerman to have a Class A CDL.

Many States prohibit P/EVOs from simultaneously serving as the tillerman.  
(See 49 CFR 383.3)



# **Review Questions**



# Review Questions

What size is recommended for controlling traffic in speed zones higher than 60 mph?

How tall should the pole for the STOP/SLOW paddle? Why?

# Review Questions

What equipment must flaggers wear?

What equipment is used to control traffic?

What must flaggers NOT have?

# Review Questions

Where should warning devices be placed in roadside emergency situations?

What is the function of a height pole?

What is a tillerman/steerman?



# **Module Five**

## **Lesson Three**

- P/EVO positions & procedures

# P/EVO Positions and Procedures

## P/EVOs:

- Warn motorists about an oversize load
- Control traffic, when allowed, and
- Assist the load driver to successfully negotiate obstructions and complete challenging maneuvers.

# P/EVO Positions and Procedures

The number of P/EVOs varies from State to State, however, permits typically indicate the number of escorts required for a specific load, and the placement (front or rear) of the P/EVOs.

## P/EVO Positions

Establishing a safe distance between the escort vehicle and the load is dependent on several factors:

- Speed of traffic.
- Traffic volume.

# P/EVO Positions

- Roadway conditions (wet or dry).
- Roadway surface (asphalt, gravel, etc.).
- Features of the terrain (curves and hills)
- Visibility.



# P/EVO Positions

In good conditions, P/EVOs should be approximately 4 seconds ahead or behind the load.

Good conditions: Flat, level, dry pavement in the daytime.

## P/EVO Positions

At least one second should be added for each hazardous condition.

Hazardous conditions: Anything that negatively affects visibility, traction, or braking.

## P/EVO Positions

For example, if it is raining, add 1 second of following distance for the visibility hazard, and 1 second for the reduction in traction from operating on a wet surface. AND . . .

## P/EVO Positions

If it has been raining for several hours, add a **THIRD** second for the standing water hazard that now exists.

# P/EVO Positions

The lead P/EVO must be:

- Far enough ahead of the load to be safe;
- Close enough to warn motorists of the load; and

## P/EVO Positions

- Close enough to remain in radio contact with the load driver and other P/EVOs.
- Distance must be monitored and adjusted as driving conditions change.

# P/EVO Procedures

Basic maneuvers are vastly more challenging when escorting an oversize load. These maneuvers include:

- Passing a slower vehicle.
- Changing lanes.

# P/EVO Procedures

- Merging onto multi-lane highways.
- Operating with restricted visibility.
- Turning long loads.



# P/EVO Procedures

P/EVOs must become familiar with load limitations and ways of minimizing risks when executing these maneuvers.



# **Review Questions**

# Review Questions

What determines the number of escorts and their placement relative to the load?

What should be considered when establishing distance between the P/EVOs and the load vehicle?

# Review Questions

What common traffic maneuvers require extra vigilance on the part of P/EVOs?

Why are many laws and rules governing P/EVOs ambiguous and non-specific?

# **Module Five**

## **Lesson Four**

- **Defensive flagging operations**
- **Equipment and use**
- **Traffic control authority**

# Defensive Flagging

The 2009 MUTCD includes federal standards for flagging operations including equipment and methods.

# Defensive Flagging





**Defensive  
Flagging**



# Defensive Flagging

## Goals:

- To guide traffic safely around obstructions.
- To protect lives and property.
- To avoid unreasonable delays.

# Defensive Flagging

Flaggers must:

- Command attention and respect.
- Convey clear, simple messages.
- Give enough time for motorists to respond.
- Understand the importance of the job.

# Defensive Flagging

Good flaggers are:

- Serious.
- Alert.
- Courteous.
- Patient.

# Defensive Flagging

Good flaggers are:

- In good physical condition.
- Have good eyesight, mobility, and hearing.
- Neat, clean, professional appearance.

# Defensive Flagging

Flaggers need:

- Adequate number of breaks.
- Proper equipment.
- Radio.
- Water.

# Defensive Flagging

Flaggers should not (or as required by the States) have:

- Cell phones.
- Music players.
- Books.
- Food.

# Defensive Flagging

P/EVOs are sometimes needed to flag traffic in **planned** and **unplanned situations**.

State rules vary in whether or not P/EVOs are allowed to flag traffic.

# Defensive Flagging

**Planned** traffic control situations, for example, involve closing narrow bridges to allow the oversize load to cross, or controlling traffic when the load must encroach into oncoming traffic in order to complete a turn.



# Defensive Flagging

**Unplanned** traffic control situations include the unexpected—vehicle breakdowns, the load shifting, tie down failure, weather conditions, or collisions for example.

# Defensive Flagging

Given the possibility of unplanned flagging operations, P/EVOs must be prepared to flag traffic night or day, wet or dry, hot or cold, etc.

# Defensive Flagging

Even if a permit specifies daylight to dark operations, a breakdown may require P/EVOs to flag traffic until the disabled vehicle can be repaired or removed from the roadside.

# Defensive Flagging

P/EVOs should use hard hats (or as required by the States) and shall use retro-reflective high visibility garments as required by the MUTCD Section 6D.03.

P/EVOs should not (or as required by the States) attempt to control traffic from inside a vehicle.

# Defensive Flagging

It is **never** appropriate to attempt to stop traffic by parking a vehicle across lanes of traffic. This is exceedingly dangerous for highway users, the P/EVOs and load driver, and the vehicles.

# Defensive Flagging

Standards for flagging equipment and operations can be found in the Manual on Uniform Traffic Control Devices (MUTCD), Part 6.



**Temporary  
Traffic Control**

# Temporary Traffic Control

Temporary Traffic Control (TTC) is the type of flagging done by P/EVOs.

TTC is particularly dangerous due in part to the fact that P/EVOs do not have the advantage of advance warning signs.



# Temporary Traffic Control

For this reason it is vital that the flagger is visible to traffic and has the ability to move in any direction should it be necessary to avoid being struck by a vehicle.

# Traffic Control Operations

Nothing should be near the flagger, including vehicles and other workers.

The flagger must be vigilant and monitor traffic conditions.

# Traffic Control Operations

Flaggers should have **only** the STOP/SLOW paddle and radio. Flagger should not have cell phones or music players or any other device that may distract the flagger from his/her duties.

# Traffic Control Operations

Flaggers must be given adequate breaks. The hotter, colder, or wetter the weather, the more frequent breaks should be.

# **Review Questions**

# Review Questions

In what situations might P/EVOs be required to control (flag) traffic?

When is it appropriate to control traffic from inside a vehicle?

What does TTC stand for? Why is it dangerous?

# Review Questions

Where are federal standards regarding flagging found?

Who or what should be near a flagger?

When is it appropriate to control traffic by parking a vehicle across lanes of traffic?

# Flagging Equipment



# Flagging Equipment

The STOP/SLOW paddle is the **preferred hand signaling device**—it provides clearer guidance to motorists than the red flag.

P/EVOs should carry a 24" x 24" red flag to control traffic in an emergency, for use when no STOP/SLOW paddle is available.

# Flagging Equipment

Flaggers must use the standard STOP/SLOW paddle, though States differ in the size required (18" or 24").

A 7-foot pole is recommended, as that is the height at which most stop signs are installed.

# Flagging Equipment

Flaggers must be in radio contact with other members of the load movement team, including other flaggers.

A flashlight with safety cone is strongly recommended, especially for nighttime flagging.

# Flagging Equipment

All flagging equipment should have **retroreflective** surfaces, including the STOP/SLOW paddle, high visibility garments, as well as adding reflective tape to poles, gloves, footwear and hardhat.



# Flagging Procedure

# Flagging Procedure

Flaggers must be located on the right side of the road where motorists are accustomed to seeing stop signs.

# Flagging Procedure

Always stop traffic from the side of the road. Once traffic is stopped, (and **ONLY** after traffic is stopped) the flagger may take a position near the center line to be more visible to oncoming traffic.

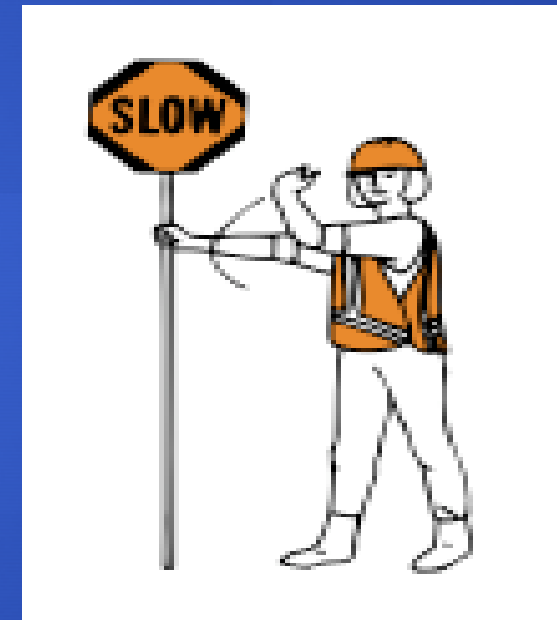
# Flagging Procedure

It is important for flaggers to use standardized hand signals.



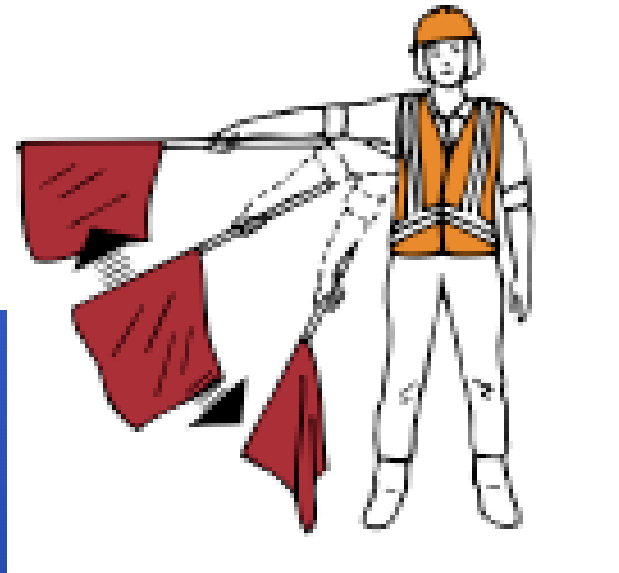
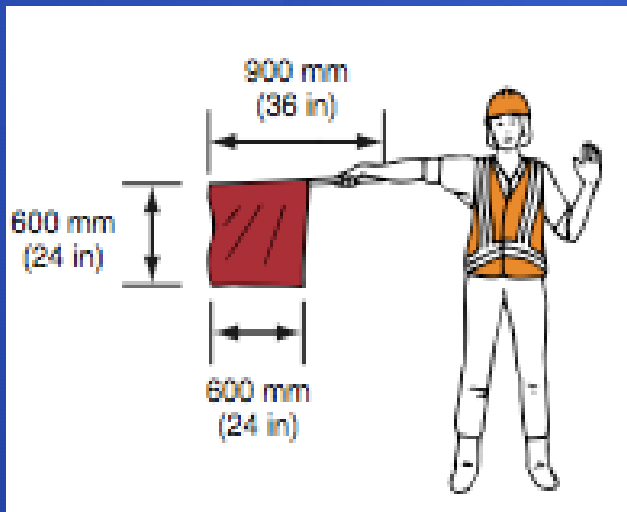
# Flagging with the Stop/Slow Paddle

Use standard hand signals:



# Using a Flag to Control Traffic

Use standard hand signals:



# **Review Questions**

# Review Questions

Why is radio contact important for flaggers? In what situations is it most important?

Are P/EVOs authorized to control traffic in all States?

## Review Questions

With a STOP/SLOW paddle, is it necessary to use standard hand signals?

What equipment should be used when engaged in nighttime flagging?

# Flagger Position

# Traffic Control Plans

Escort should prepare a  
**Traffic Control Plan (TCP)**

The four parts of a TCP are: (*Remember: ATAT*)

1) **Advance** warning area  
2) **Transition** area

3) **Activity** area  
4) **Termination**  
area

# Flagger Position

When deciding the flagger location, consider:

- How fast traffic is moving.
- Features of the terrain.
- Type and condition of roadway surface.



# Flagger Position

Flagger location depends on:

- How fast traffic is moving.
- Hills and curves.
- Type of roadway surface.
- Condition of roadway surface.

# Flagger Position

## Decision Distance (MUTCD)

Speed	Distance
20 mph	115 feet
25 mph	155 feet
30 mph	200 feet
35 mph	250 feet
40 mph	305 feet
45 mph	360 feet
50 mph	425 feet
55 mph	495 feet
60 mph	570 feet
65 mph	645 feet
<b>70 mph</b>	<b>730 feet</b>
75 mph	820 feet

# Flagger Position

Always have an escape route in all directions.

Flagger must be far enough ahead of the problem area so that approaching traffic has time to stop.

# Flagger Position

Flagger must be clearly visible to approaching traffic in all directions.

Never stand near or between vehicles parked on the side of the road.

# Flagger Position

Ways to measure distance:

Skip line method: On highways, painted (as specified in the MUTCD) lines are 10 feet long with a gap of 30 feet, so from beginning of one line to the beginning of the next is 40 feet.

# Flagger Position

Telephone poles are about 100 feet apart.

Count steps (average is about 3 feet),  
or

Use a distance measuring wheel.

# Flagger Position

The most important thing to consider is whether the biggest, heaviest vehicle that may come along can stop given the specific conditions.

# Flagger Position

Stopping distance is related to:

- How much a vehicle weighs.
- How fast it is moving.
- Wet or dry surface, asphalt or gravel.
- Moving uphill or down.
- Condition of the brakes.
- Driver's vigilance and reaction time.



# Flagger Position

And remember,

Stopping distances are  
**DOUBLED** when roadway is wet.



# **Review Questions**

# Review Questions

What should be considered when deciding where to place a flagger?

How big, according to the MUTCD, are typical stop signs on highways with speed limits of 60 mph or more?

# Review Questions

What does “decision distance” refer to?

What methods can be used to measure distances when positioning flaggers?

What factors affect stopping distance?

# Review Questions

How does stopping distance relate to flagger position?

# Traffic Control Authorization

All States *do not* authorize P/EVOs to control traffic, specifically to direct traffic to **stop, slow down, or proceed.**

As stressed throughout, P/EVOs must know the rules in the States in which they operate.



**Flagging  
DOs and DON'TS**

# Flagging DOs and DON'Ts

It is *never* appropriate to control traffic in an intersection where a working traffic light is in place.

Why?



# Flagging DOs and DON'Ts

Under no circumstances should a flagger stop flagging until blocked lane(s) are clear.

This is true regardless of whether the P/EVO is controlling traffic behind the load or controlling oncoming lane(s) of traffic in front.

# Flagging DOs and DON'Ts

- Be alert.
- Remain standing at all times, facing oncoming traffic.
- Park vehicles:
  - off the road.
  - away from the flagger station.
- Never turn or look away from oncoming traffic.

# Flagging DOs and DON'Ts

- Never stand in the path of moving traffic.
- Never stand near or between parked vehicles on the roadside.
- Flaggers must be free from distractions—  
(no music players, smart phones).

# Flagging DOs and DON'Ts

- No person should be near any flagger.
- Never lean on vehicles; be polite but brief.
- Never argue with a motorist.

## Flagging DOs and DON'Ts

If a motorist ignores the flagger's instructions, immediately notify workers in the activity area.

Do not stop flagging. Try to get license number and report incident when possible.



# **Review Questions**

# Review Questions

Why is it important for flaggers to remain standing?

Why is it important for flaggers (and others) to avoid standing near or between vehicles parked on the roadside?

# Review Questions

What three things, in **SOME** States, are P/EVOs authorized to direct traffic to do?

Why should other workers stay away from flaggers?

What should a flagger do if a motorist ignores the flagger's instructions?



# **Module Five**

## **Lesson Five**

- **Railroad crossings**
- **Oversize load issues**
- **Railroad crossing safety issues**

# Railroad Crossings

Railroad crossings and other elevation changes present high risks for oversize loads with low ground clearance.

All railroad crossings should be (or as required by the States) included in the route survey, and this information should be reviewed by the team daily.

# Railroad Crossings

Emergency procedures related to loads becoming lodged at a railroad crossing should be reviewed.

A 150-car freight train takes more than a mile and a half to stop. Passenger trains are similar.

# Railroad Crossings

The first thing to do the load becomes lodged at a railroad crossing is:

Get out of the vehicle and off the tracks.

Notify the railroad and local authorities.

# Railroad Crossings

If a collision is imminent: Move away from the tracks. Move TOWARD an oncoming train, and at the same time, AWAY from the tracks.

Many trains have hundreds of riders during peak travel times.

# Railroad Crossings

The primary problem with oversize loads and railroad crossings is low ground clearance. This problem is sometimes compounded by the length of the load.

# Railroad Crossings

The length of loads also means it takes longer to cross tracks and the load must have enough room to fully clear the tracks plus 6 feet. Nearby stop signs and lights need to be noted on the route survey.

Trains extend 6 feet beyond the tracks.

# Railroad Crossings

Railroad crossings (and any other elevation changes) should be reviewed daily when moving long loads with low ground clearance.

Railroad crossings and emergency numbers from each of them should be included on the route survey.



# Railroad Crossings

Railroad crossings may be active or passive.

Special care must be taken at passive crossings (those *without* gates, lights, or other active warning devices).

# Railroad Crossing Emergency

If the load stalls or hangs up at a crossing:

1. Get out of the vehicle and off the tracks.
2. Move away from the tracks—Toward the oncoming train and away from the tracks at a 45-degree angle.

# Railroad Crossing Emergency

3. Locate the emergency phone number (from the route survey, the P/EVOs own pre-trip information, and/or at the crossing itself).
4. Call for help! In addition to the railroad company, call 911 and local authorities, or request a specific person do it.

# **Review Questions**

# Review Questions

When escorting a load with low ground clearance, what must P/EVOs do *daily*?

How long does it take a train to stop?

Do freight trains and passenger trains differ dramatically in stopping distance?

# Review Questions

What are two types of railroad crossings?

Where should the load stop in relation to the tracks? How does this affect where the P/EVOs should be?

What must be done if a load becomes lodged at a railroad crossing?

# Review Questions

What information about railroad crossings should be included in a route survey?



**Railroad  
Safety  
Reminders**



# Railroad Safety Reminders

Never race a train to a crossing.

Remember some vehicles must come to a complete stop at railroad crossings (School and transit buses, hazmat loads, and tankers, for example).

# Railroad Safety Reminders

Look up and down the tracks.

Don't expect to hear a train with engine and cab sounds present.

# Railroad Safety Reminders

Multiple tracks require multiple checks and much more time to cross.

Beware of obstructions that may block the view of an approaching train (vegetation, buildings, standing railcars or moving trains on other tracks, for example).

# Railroad Safety Reminders

Load must be able to cross all tracks without changing gears, braking, or stopping.

Expect a train on any track at any time.

## A note about notifications

When notifications are required (often specified on permits), it is the carrier/load driver who is required to make those notifications.

# **Module Five**

## **Lesson Six**

- **Emergency procedures**
- **Traffic emergencies**
- **Vehicle emergencies**

# Emergency Procedures

What is an emergency?

An emergency is unexpected.

An emergency threatens a population; the threat may be real or possible.

# Emergency Procedures

Emergencies demand a rapid, sometimes immediate response.

Responses made by the load movement team **will either reduce or enhance** an emergency. Managing risk is a key to reducing emergencies and their impacts.



# Emergency Procedures

The importance of the response to an emergency is the primary reason P/EVOs must **discuss emergency responses and contingency plans** with all members of the load movement team.

# Types of Emergencies

Emergencies that are most common when moving oversize loads can be categorized as:

Traffic Emergencies  
or  
Vehicle Emergencies

# Traffic Emergencies

When faced with a traffic emergency, drivers have two choices:

**Stop** before hitting a vehicle or object,  
or

**Steer** around a vehicle or object.

# Traffic Emergencies

The importance of adequate following distance in an emergency is clear. In fact, adequate following distance is **the most effective strategy a driver can use** to avoid and/or minimize negative effects of both traffic and vehicle emergencies.

# Vehicle Emergencies

Vehicle emergencies include brake failure, tire failure, skids, fire, and other problems.

Always having an escape route in mind, and creating as much space as possible between vehicles reduces the impact of vehicle failures.

# Emergency Roadside Parking

It is vital that P/EVOs give adequate warning to motorists especially when in hilly or curvy terrain or during nighttime operations.

# Emergency Roadside Parking

P/EVOs must assist the load driver in getting the oversize load as far off the roadway as possible when continued movement is too hazardous.

At the same time, the P/EVO (especially the rear) must alert approaching motorists of the hazard.

# Emergency Roadside Parking

All drivers should wear hardhats (as required by the States) and shall wear high visibility garments (as required by the MUTCD Section 6D.03) during roadside operations.

All members of the load movement team should know the location of warning devices and their proper use.



# Emergency Roadside Parking

P/EVOs must assist with the immediate deployment of warning devices (reflectors, flares, cones, etc.)

All vehicles involved with the movement of the load should turn on emergency flashers.

# Emergency Roadside Parking

P/EVOs must control traffic around the disabled load or incident scene when necessary and allowed in the jurisdiction.

# Vehicle Emergencies-Fighting Fire

All P/EVOs must be familiar with the location and operation of fire extinguishers.

Avoiding fires starts with the pre-trip inspection and proper maintenance of electrical, fuel, and exhaust systems.

# Vehicle Emergencies-Fighting Fire

P/EVOs should know basic fire fighting rules, for example, as a matter of personal responsibility if not law.

Never use water on an electrical fire (can produce shock) or on a gasoline fire (water spreads flammable liquids).

# Vehicle Emergencies-Fighting Fire

If a vehicle catches fire, do NOT pull into a service station.

Turn off the engine as soon as possible and do not open the hood. If fire is in cargo area, don't open the doors.

Call 911 immediately.

# Incidents with Injuries or Fatalities

Each State has laws and rules about what motorists are required to do in incidents involving injury and/or property damage.

As we know, it is the responsibility of all drivers to know these laws and rules in each State in which they operate.

## Incidents with Injuries or Fatalities

It is also frequently the case that carriers have set procedures for dealing with emergencies and incidents. These procedures should be available to all members of the load movement team.



# **Review Questions**



# Review Questions

What common characteristics do emergencies have?

What two options do drivers have when confronting an obstacle in the roadway?

# Review Questions

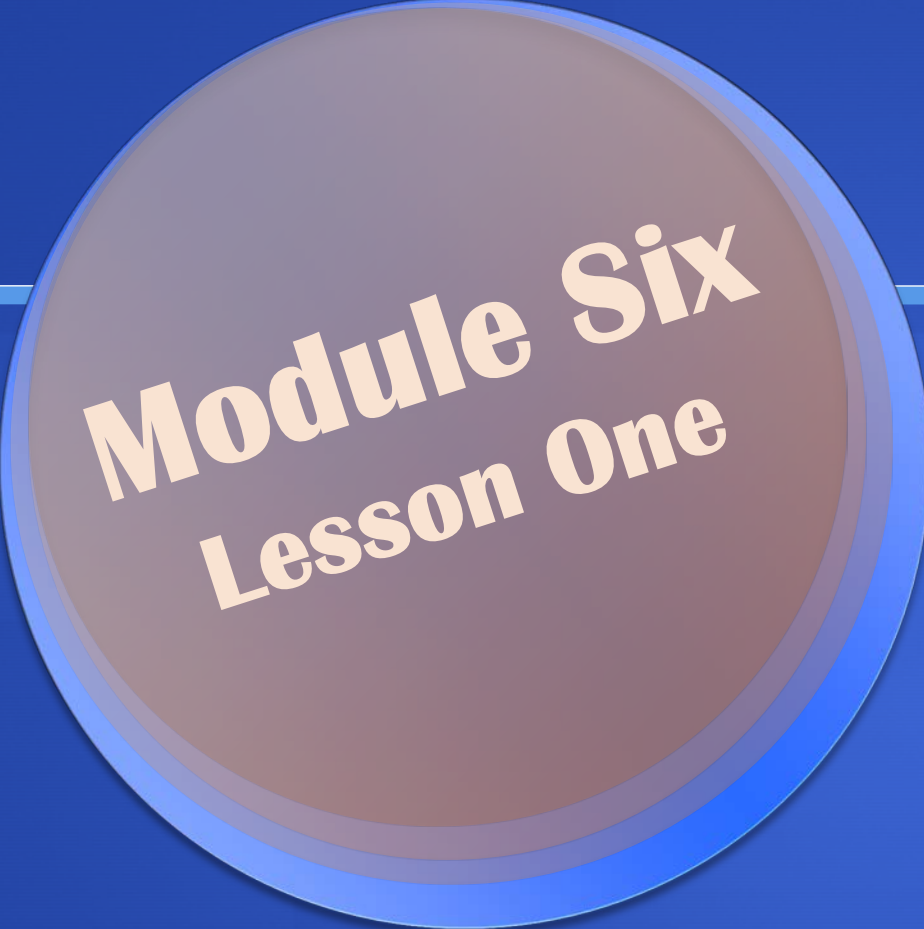
For P/EVOs, what two types of emergencies are most common? Give examples of each.

What must P/EVOs wear during roadside operations?

# Review Questions

How do contingency plans reduce the likelihood and impacts of emergencies?

What is the best overall strategy for drivers to minimize likelihood and impacts of traffic and vehicle emergencies?



# **Module Six**

## **Lesson One**

- **Post-trip responsibilities**

# Post-Trip Responsibilities

Given the idea that P/EVOs projects are prototypical in nature, post-trip review and evaluation are significant learning opportunities.

Of equal importance are post-trip vehicle-related responsibilities, and team-related evaluations of the trip.

## Post-Trip: Vehicle and Equipment

Once the load is delivered, the P/EVOs must remove signs and flags, and turn off and/or cover warning lights.

## Post-Trip: Vehicle and Equipment

When removing equipment, inspect it for any needed cleaning, repairs, or replacement.

## Post-Trip: Documentation & Trip Log

Once vehicle related tasks are complete, record all data for trip logs.

Vehicle mileage, date and time of delivery, names of individuals related to the delivery, exact location of the load when delivered should be recorded.



## Post-Trip: Documentation & Trip Log

Provide all required paperwork to the carrier/load driver upon delivery of the load, or as agreed.

Video and audio logs are recommended. Files should be downloaded or otherwise stored, and clearly labeled, regardless of format.

## Post-Trip: Documentation & Trip Log

Documentation of daily pre-trip meetings should be part of the trip log.

Video and audio logs are recommended. Files should be downloaded or otherwise stored, and clearly labeled, regardless of format.

# **Review Questions**

# Review Questions

What are recommended/required post-trip P/EVO responsibilities related to the escort vehicle and equipment?

What other tasks, in addition to those related to the escort vehicle, must be completed by the P/EVO at the end of the trip?

# **Module Six**

## **Lesson Two**

- **Post-trip evaluation**
- **Route survey evaluation**
- **Communication effectiveness**

# Post-Trip Evaluation

As a reminder, and as a matter of safety, an open climate of information sharing is vital, and this is especially important during post-trip evaluations.

# Post-Trip Evaluation

If team members are to learn from experience, openly discussing mistakes and concerns is crucial.

Learning from the experiences and mistakes of others is also highly effective: Read and share case studies.

# Post-Trip Evaluation

Each team member should be encouraged to discuss risks, hazards, dangerous equipment or behaviors, and potential hazards that need to be addressed and understood.



# Post-Trip Evaluation

For individuals who are unwilling to speak up in a group context, they should be contacted in a one-to-one environment.

# Post-Trip Evaluation

How questions are asked is also important. Rather than “What was wrong with X?” rephrase to “How could X be better?”

# Post-Trip Evaluation

Topics to include in post-trip evaluation:

Go back to the beginning of the assignment.

- Was initial information about the load accurate?
- Was pre-trip planning adequate?
- Were risks addressed?
- Were contingency plans adequate?

# Post-Trip Evaluation

- Was the route survey adequate?
- Accurate?
- Was information provided by the carrier accurate?
- Was information provided by other P/EVOs?

# Post-Trip Evaluation

In summary, how could the assignment confirmation and pre-trip planning processes have been better?

Then turn to aspects of the actual load movement. Were hazards properly described? If an emergency occurred, was the team response adequate?

# Post-Trip Evaluation

Was communication adequate? What would improve future communication among load members?

Were nearby hazards discussed each day before departing? Were estimates of distance-per-day accurate?

# Post-Trip Evaluation

Finally, if an emergency or incident was experienced during the load movement, it is important to work hard to identify causes and contributing factors in order to avoid future incidents. Be thorough and candid in the descriptions.

# Post-Trip Evaluation

Emergencies prompt questions about the adequacy and relevance of the response, and more significantly, should focus on prevention and in communicating the information to all members of the load movement team.



# Post-Trip Evaluation

How could emergencies or problems have been avoided? What will be done differently in the future?

How could the team response be better? What would the team do differently next time? Any preventative measures to be taken?

# Post-Trip Evaluation

Sharing everything learned from incidents and accidents is vital to safe operations.



# **Review Questions**

# Review Questions

What information should, at a minimum, be included in a post-trip evaluation?

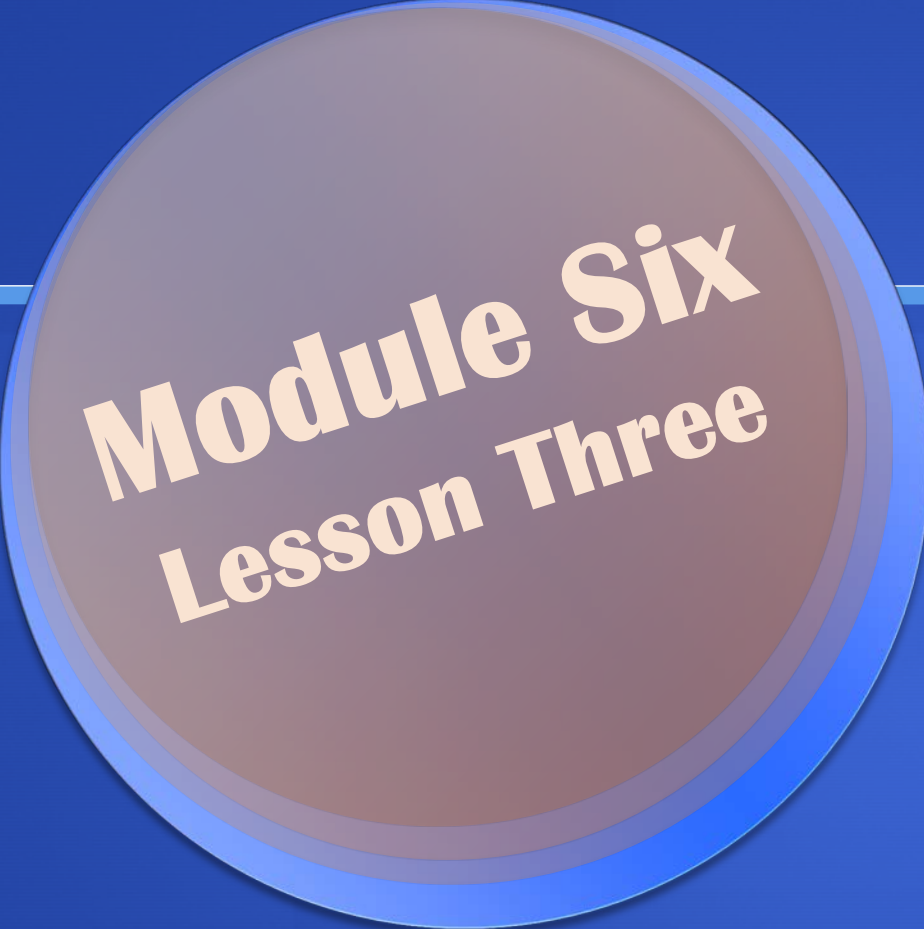
Which aspects of pre-trip activities should be evaluated? During the trip?

Why is the post-trip evaluation so important?

# Review Questions

What aspects of communication should be evaluated?

Why is post-trip evaluation of emergency responses so important?



# **Module Six**

## **Lesson Three**

- Written reports
- Trip logs

# Written Reports and Trip Logs

- When doing reports, agreements should be documented, including those among
- On-the-road *and* support members of the team, and
  - Internal *and* external personnel (utility companies, permitting agencies, for example).

# Written Reports and Trip Logs

Reports must include details about the dates of the trip, origin and destination—information similar to the pre-trip assignment confirmation task,

However ...



# Written Reports and Trip Logs

In the post-trip evaluation, the emphasis is on several aspects:

- How effectively the team responded to information gained in pre-trip planning.

# Written Reports and Trip Logs

- How well the information was communicated to all people involved.
- How well the team responded to hazards and emergency situations.

# Written Reports and Trip Logs

- How well contingency plans were understood, and how well they worked.
- How can things be better next time?

**Better = Safer**



# **Review Questions**

# Review Questions

Why are audio and video logs important to maintain? How might they be used?

What should be included in written reports? Trip logs?



**Module  
Seven  
Driver Safety**

- **Driver distraction**
- **Drowsy driving/fatigue**
- **Aggression**
- **Safety Technologies**



**Driver  
Distractions  
Lesson One**

# Distractions and Driving

Driver distraction is a form of impairment.

Studies show at least 25% of crashes now involve at least one distracted driver.

A large portion of these deaths & injuries are the direct result of cell phone use.



# Distractions and Driving

Three types of distractions contribute significantly to collisions:

Visual—Taking eyes off the road.

Physical—Taking hands off the wheel.

Mental—Taking mind off driving.

# Distractions and Driving

Studies show that whether a device is hands free or handheld, in part due to demonstrable mental distraction, driving abilities deteriorate when drivers use cell phones.

***Driving IS multitasking!***

# Distractions and Driving

*Talking* drivers are **400 %** more likely to be involved in a collision.

And realize that many aspects related to talking are actually **TEXTING** functions (for example, dialing, scrolling and selecting contacts, etc.).

# Distractions and Driving

This distinction is important because:

***Texting*** drivers are **2300%**  
more likely to crash.

# Distractions and Driving

***Texting*** is the most dangerous because it involves all three types of distractions simultaneously:

- Eyes are on the screen,
- Hands are holding and/or touching the screen or keypad, and
- Mind is engaged with reading messages, selecting options, etc.



# **Review Questions**

# Review Questions

What are the three types of distractions?

Are hands free devices safe to use while driving? Are they substantially different than handheld devices? Why or why not?

# Review Questions

How much more likely are talking drivers to crash, when compared to non-talking drivers?

How much more likely are texting drivers to crash?



## Review Questions

Why is texting (or dialing a phone or scanning contacts or checking email, anything that involves interacting with a screen) so much more dangerous than talking on a cell phone?

# Review Questions

What is meant by the Statement,  
“Driving IS multitasking?”

How can drivers avoid becoming  
distracted?

**Module  
Seven  
Lesson Two**

- **Driver fatigue**

## Driver Fatigue (Drowsy Driving)

Studies reveal that drowsy driving is as deadly as drinking and driving.

Truck drivers working for more than 8 hours are twice as likely to crash.

## Driver Fatigue (Drowsy Driving)

Drowsy driving is a major cause of fatal collisions.

Drivers who get 7 to 9 hours of sleep each day are involved in **less than half** as many crashes.

## Driver Fatigue (Drowsy Driving)

Fatigue negatively affects skills vital for driving.

Drowsy drivers are less attentive, have slower reaction times, and are unable to make decisions as quickly as non-fatigued drivers.

## Driver Fatigue (Drowsy Driving)

In addition to lack of sleep overall, driver alertness and performance are also highly related to the time-of-day rather than how long a person has been driving.

## Driver Fatigue (Drowsy Driving)

Studies also show that drivers are not able to assess accurately their own levels of alertness.



## Driver Fatigue (Drowsy Driving)

After about 17 hours of being awake, people begin to experience “micro-sleeps”—brief lapses that can last for several seconds.

At 50 mph, during a 4-second lapse, the vehicle moves 300 feet.

## Driver Fatigue (Drowsy Driving)

Tests show fatigued drivers operate as poorly as those who have been drinking alcohol. After 18 hours of being awake, drivers perform equal to or worse than drivers with a Blood Alcohol Content of .05%

# Avoiding Drowsy Driving

P/EVOs must have the courage to speak up and stop driving when fatigue is present.

Drivers too frequently continue driving when drowsy, and the consequences are very similar to those involving drinking drivers.

# Avoiding Drowsy Driving

Plan for rest just as drivers plan for food and fuel stops.

Take breaks that involve physical activity.

When a driver is sleepy, there is one solution: SLEEP.



# **Review Questions**

## Review Questions

How does getting 7 to 9 hours of sleep each day affect a driver's chance of being in a crash?

How does fatigue (also called “drowsy driving”) affect driving skills?

# Review Questions

How does time of day affect driver alertness?

What are “micro-sleeps?”

What should drivers do to avoid fatigue?

# Review Questions

How do fatigued drivers and drinking drivers compare in terms of driving skill?



**Module  
Seven  
Lesson Three**

- **Aggressive driving**

# Aggression and Driving

Aggressive driving occurs:

When drivers commit a combination of moving traffic offenses so as to endanger other persons or property.

# Aggression and Driving

Road rage, on the other hand, is:

A criminal offense, an assault with a motor vehicle or other dangerous weapon by a driver or passenger(s) often related to an incident that occurred on a roadway.

# Aggression and Driving

If the load movement team encounters an aggressive driver, make every attempt to get out of the way.

Do not challenge or make eye contact with an aggressive driver. Do not attempt to restrict the aggressive driver.

# Aggression and Driving

To reduce frustration, leave with enough lead time to get to destination as planned in spite of traffic congestion or inclement weather, for example.

When possible, travel during non-peak traffic times.



# **Review Questions**

# Review Questions

What are the differences between aggressive driving and road rage?

Describe some behaviors exhibited by aggressive drivers.

## Review Questions

What should P/EVOs do if confronted by an aggressive driver or witnesses an incident of road rage?

What can P/EVOs do to reduce their own frustration?



**Module  
Seven  
Lesson Four**

- **Safe driving practices**

# Driver Safety

One of the most important aspects of safe driving involves drivers responding adequately to roadway and traffic conditions.

For P/EVOs, keeping the oversize vehicle limitations in mind is also of critical importance.

# Driver Safety

The term “good conditions” refers to flat, level, dry, pavement in the daytime. Drivers don’t encounter these conditions very often.

# Driver Safety

“Hazardous conditions” refers to anything that negatively affects visibility, traction, or braking.

Accurately matching conditions with reduced speed and increased following distance enhances safety considerably.

# Driver Safety

Drivers (including P/EVOs) should use headlights at all times. This has particular benefits to individuals with gray, silver, or blue vehicles, as these colors blend into the horizon and/or pavement much more readily.

# Driver Safety

Many States require P/EVOs use headlights at all times while actively escorting loads.

# Driver Safety

When approaching other vehicles at night, from the front or the rear, drivers should not use high beams within 500 feet of other vehicles.

This reduces the condition known as “glare blindness.”

# Driver Safety

Regardless of the challenges drivers face, (darkness, extreme weather, traffic volume, mountains and curves, and other hazardous conditions, **adjusting space to accommodate stopping distances** is a primary way to avoid collisions.



# Driver Safety

As conditions become more challenging, establishing a safe following distance is crucial. This is as important as any other strategy when preventing roadway incidents.

# Driver Safety

Perception distance +  
Reaction distance +  
Braking distance = Stopping Distance

# **Review Questions**

# Review Questions

What is meant by the term “hazardous conditions?” What about “good conditions?”

Drivers should dim lights (from high beam to low beam) within \_\_\_\_\_ feet of oncoming vehicles or when approaching vehicles from behind.

# Review Questions

When should headlights be used?

Stopping Distance is the sum of what three distances?

Why does speed matter?

# Review Questions

How do wet roads affect stopping distance?

**Module  
Seven  
Lesson Five**

- **Safety technologies**

# Safety Technologies

While no technology replaces a vigilant driver, several new developments in vehicle safety have the potential to significantly reduce collisions.



# Safety Technologies

Technologies such as side view assist, forward collision warning/mitigation, lane departure warning systems and electronic stability control are examples.

# Safety Technologies

Other technologies such as adaptive headlights, under-ride guards, and blind spot monitoring and detection are particularly useful for oversize load vehicles.

Electronic logs may reduce driver fatigue.

# Safety Technologies

One drawback about safety technologies is, when a driver has adapted to the technology, and then drives a vehicle that does *not* have the technology, the driver must adapt quickly.



# **Review Questions**

# Review Questions

What are the benefits of crash avoidance technologies? Drawbacks?

Describe other safety technologies.

What are the benefits of electronic log books?

# Module Eight

- Course review
- Certification test
- Course evaluation

## Course and Test Review

Review questions can be compiled here if a comprehensive course review is desired.

Participants should be encouraged to complete and submit a course evaluation.