

## Module 10 – Intersections

An intersection is a point where any two or more roadways intersect or come together. Statistically, intersections are a frequent site of vehicle/vehicle conflicts as well as vehicle/pedestrian conflicts.

Intersections can be very complex and require wide visual scans of rapidly changing situations. As you approach any intersection, you are faced with many decisions. Manage your distractions, predict the actions of other road users, signal your intentions if turning, and focus on maneuvering through the intersection.

This module will discuss how to approach and manage traffic conflicts that are present in intersections. Learning outcomes include:

- Types of intersections;
- Maneuvering techniques;
- Speed and vehicle position;
- Blocked line of sight; and
- Railroad crossings

There are through, or cross-intersections, "T" and "Y" intersections, and roundabouts. Some intersections have traffic controls to regulate traffic flow and some are uncontrolled. As you approach an intersection, quickly assess if the intersection is controlled or uncontrolled.

Controlled intersections have signs, signals, and/or pavement markings to tell drivers and others what to do. The most common controlled intersection is one controlled with a stop sign. Yield signs and traffic signals are also used depending on the traffic flow through that particular intersection.

If a signal is malfunctioning or not functioning at all in a controlled intersection, treat the intersection as you would a four-way stop. Be extra cautious and alert for others not treating the intersection as a four-way stop. If police or traffic control officials are present to "control" traffic through the intersection, obey their directions. It is illegal to disregard the direction of a traffic control official.

Uncontrolled intersections do not have any traffic controls to regulate traffic, i.e., there are no stop signs, yield signs, or traffic signals. Typically uncontrolled intersections are located in rural areas or in residential neighborhoods.

As you near an uncontrolled intersection, advance intersection signs may be in place to warn drivers of the approaching junction. Some advance intersection signs communicate the type of intersection you are approaching.

Roundabouts may be unfamiliar to some drivers but research has shown they are actually safer than regular cross-intersections. In a roundabout, all traffic is going in the same direction. Judging gaps in traffic is easier and crashes that may occur are not as severe.

In a roundabout the number of potential conflict points (potential area of vehicle collisions) for vehicles and pedestrians are substantially less than a cross-intersection. Because of the constantly moving nature of vehicles in roundabouts, they often become cumbersome for pedestrians to negotiate. Remember to be extra vigilant for pedestrians at roundabouts, and yield to those in a cross-walk.

When entering a roundabout, yield to traffic already in the roundabout. Travel in a counter-clockwise direction and signal your intentions prior to exiting.

As you near a controlled intersection, search the entire intersection and surrounding area to identify other road users and potential conflicts.

At the intersection, conduct another thorough search sequence. Repeat the search sequence if you are in a heavy traffic or confusing situation. Exercise situational awareness – notice the speeds, direction, and predict intended maneuvers of the others sharing the intersection.

When approaching a red traffic signal:

- Check your rearview mirror for traffic behind you.
- Tap the brake to communicate to drivers behind.
- Locate the stop line or crosswalk markings. Bring your vehicle to a smooth stop immediately behind the stop bar.

After you stop:

- Wait for the green signal. Delay your start until you are sure the intersection is clear and there are no potential red-light runners.
- Search left, center, right and left again. Repeat these processes if the intersection is not clear enough for you to proceed. During your search, anticipate that others might be entering your intersection after running a yellow light or because they are distracted or inattentive. Always yield to others who are already in the intersection. When turning left or right look for pedestrians in crosswalks.

Drivers may not notice uncontrolled intersections. Some uncontrolled intersections have advance intersection warning signs. Some may be obscured from your line of sight. Continuous scanning is important to pick up clues that you are approaching an uncontrolled intersection. Look for changes in the environment at the edge of the roadway. Lights, mailboxes, fence corners, and parked vehicles are all indications that an intersection might be ahead.

Moving traffic in the intersection has the right of way. As you approach an uncontrolled intersection, adjust your speed and/or position, check for traffic to the rear, be prepared to brake, and plan an evasive maneuver if another driver pulls unexpectedly into the intersection, and into your path.

When scanning for a turn, identify a large gap that gives you time to turn and accelerate to match the speed of traffic in the cross street traffic without interruption. If traffic is going fast, increase your search distance and identify a larger gap to enter. Watch for pedestrians,

bicyclists, and other road users. When waiting for a gap in traffic to turn left, keep your wheels straight ahead. If you are hit from behind you won't be pushed into oncoming traffic.

When you enter traffic from a stopped position, always yield the right of way to vehicles, pedestrians, bicyclists and through traffic already in the intersection or close enough to pose a hazard. Even when preparing for a right turn, check closely for conflicts from the right such as pedestrians and bicyclists in the marked or unmarked crosswalk – or even a vehicle on the crossing street.

Identify your path of travel. Imagine the track or line that you will be driving. Keep your eyes moving and be aware of your entire traffic situation. If your line of sight is obstructed in the intersection or beyond, slow down - there may be hidden hazards. If you are moving in traffic and other vehicles are blocking your view, re-position your vehicle or increase following distance so you can see to react.

When you are stopped at an intersection, before entering the intersection, scan the intersecting roadways for traffic. If your view is obstructed to the left or right or in any direction, your line-of-sight is blocked and risk is increased.

This situation can occur when exiting parking lots with many drivers pulling out and in from all directions. While on the subject of parking lots, be extra vigilant of people stepping out from between cars and being generally distracted by children, shopping carts, etc. SUVs or large vehicles often block your view. Also, trees and hedges are often overgrown and can block your line-of-sight.

Offset left turn lanes are often installed at busy intersections to improve your line-of-sight distance. To reduce conflict at intersections with reduced visibility, proceed assuming that someone is approaching. Stop at the stop bar, crosswalk, or before the intersection. Inch forward very slowly by easing off the brake. Continue to inch forward until you can see past the obstruction and into the intersection. When your path of travel is clear, proceed through the intersection.

Railroad crossings have cross buck signs posted but not all are controlled with signals and gates. Railroad crossings are very hazardous. If a train is entering the railroad crossing, it naturally always has the right-of-way. A train is massive in weight; locomotives weigh anywhere from 120 to 140 tons. Consequently a train has a very long stopping distance. If your vehicle is in its path, it is unlikely that the train will have time to stop and avoid a collision.

Approach a railroad crossing with caution. Search to the left and right even though signals and lights are not flashing or ringing - they can malfunction. Be prepared to stop. Also, roll your windows down so you can hear even if you cannot see the train. Also be prepared to stop if you are traveling behind a school bus, bus, or vehicle transporting hazardous materials, all of which are required to stop at a railroad crossing. Always allow the vehicle ahead of you to clear the tracks to allow enough room for you to clear the tracks before you start to cross.

If signals and bells are flashing and ringing, do not enter the intersection. Never try to beat the train. Never position your vehicle so that it is straddling the railroad crossing or between the gates if you are forced to stop while you are stuck in a traffic jam. Search ahead for brake lights and slowing traffic near a railroad crossing. Never STOP on or near the tracks.

Let's see if we can remember some important points. You will now be asked some review questions based on this CBT. You may select your answer by choosing the corresponding button or by pressing the corresponding letter on your keyboard.

1. Which of the following is a type of intersection?
  - a. T
  - b. Y
  - c. Cross
  - d. All of the answers are correct

The answer is d. All of the answers are correct.

2. As you near a controlled intersection, search the entire intersection and surrounding area to identify other road users and:
  - a. loose animals
  - b. escape routes
  - c. merge points
  - d. potential conflicts

The answer is d. potential conflicts.

3. In an uncontrolled intersection who has the right of way?
  - a. moving traffic
  - b. traffic on the left
  - c. traffic on the right
  - d. no one has the right of way

The answer is a. moving traffic.

And now let's review the lesson.

This module described how to approach and manage traffic conflicts that are present in intersections. We covered:

- Types of intersections;
- Maneuvering techniques;
- Speed and vehicle position;
- Blocked line of sight; and
- Railroad crossings

Searching in all directions is critical as you approach the intersection. Locate traffic controls and begin to follow their direction. Reduce your speed. Yield to anyone that is already in the intersection. At the intersection, search left, center, right, and left again. If your line of sight is

blocked, proceed slowly with caution. Approach a railroad crossing with extreme caution. And NEVER stop your vehicle while over the railroad tracks or between the gates.

The next module presents information on defensive driving techniques you can use to help decrease the consequences of a collision when a crash is imminent. This concludes the module on intersections.