## CHAPTER SEVEN | safe Vehicle operation

Even the most experienced drivers can be distracted while driving. A defensive driver looks out for the actions of other drivers and anticipates potential problems.

## LANE MARKINGS

Lane markings separate traffic and alert drivers when it is permissible to pass other vehicles.

## Yellow Lane Markings

Yellow lane markings separate multiple lanes of traffic going in opposite directions. You may cross a broken yellow line to pass another vehicle when it is safe, but you should not cross a solid yellow line except to turn.


Two-lane road with a solid yellow line


Two-lane road with a broken yellow line for no passing zones in one direction at a time.


Four-lane road with a solid yellow line

## White Lane Markings

White lane markings separate multiple lanes of traffic going in the same direction. Most roads with more than two lanes have broken white lines to separate the lanes. You may cross a broken white line when it is safe to change lanes, but you should not cross a solid white line.


Three lanes of traffic with broken white lines

## CHANGING LANES AND PASSING OTHER VEHICLES

Change only one lane at a time. When changing lanes to prepare for a turn, you must give a proper signal before turning or changing lanes. Do not weave in and out of lanes, which will greatly increase your risk of an accident. On the highway, slower vehicles should use the right lane. Leave the left-hand lane for faster-moving or passing vehicles.

Follow these rules when you are changing lanes:

- Make sure that there is no traffic ahead of you in the lane you would like to enter
- Check your mirrors for any vehicles that are preparing to pass you
- Briefly turn your head toward the lane that you are entering to make sure that there is no vehicle in your blind spot and that there is sufficient room to move into the adjacent lane
- Use your turn signal to alert other drivers of your intention to change lanes
- Smoothly move into the new driving lane


## Passing Other Vehicles

Follow these rules when you are passing other vehicles:

- Make sure the passing lane is clear of traffic, as you must return to the right side of the road no less than 100 feet before any oncoming vehicle
- Check behind and to the left of your vehicle to make sure that another vehicle is not attempting to pass you
- Use your turn signals to alert other drivers of your intention to change lanes
- Move into the passing lane, accelerate, and continue to move forward until you can see the vehicle you are passing in your rearview mirror
- Before returning to the lane in which you were originally driving, use the appropriate turn signal


## Prohibited Passing

It is dangerous and illegal to try to pass other vehicles in the following situations:

- A solid yellow line is marked on the driver's side of the center line of the road
- A yellow, pennant-shaped "No Passing Zone" is posted on the left-hand side of the road, or a white rectangular "Do Not Pass" sign is posted on the right-hand side of the road
- When you are driving on or approaching a curve in the road
- When you are approaching the crest of a hill or grade in the road
- Within 100 feet of an intersection, railroad crossing, bridge, viaduct, or tunnel


## Being Passed

If another vehicle is passing you on the left-hand side of the road, allow the other vehicle to pass safely and do not increase your speed.

## RULES FOR SAFE AND LEGAL TURNING

The first rule for a safe and legal turn is to move into the proper lane well before the turn, using your turn signal. To turn left, be in the far-left lane for your direction of travel. To turn right, be in the farright lane for your direction of travel. Yield the right-of-way to oncoming vehicles and pedestrians.


Turning from a one-way road to a one-way road


Turning from a two-way road to a one-way road


Turning from a one-way road to a two-way road


Turning from a two-way road to a two-way road

## Signaling Intention to Turn

You must give a proper turn signal before turning or changing lanes.
The safest type of signal is using the lighted signals used in most vehicles. If, however, one or more of these signals is malfunctioning, you may use hand signals. You may not use hand signals on a driving skills exam.


Stop or slow


Right turn


Left turn

## Turning Left from Specially-Designated Center Lanes

Busy roads on which there are many places a vehicle may make a left turn often have a center lane designated solely for the left-turning vehicles.

Always be aware that vehicles traveling in the opposite direction may be entering the center lane to turn left in front of your vehicle. Never use this type of center lane for passing other vehicles.

Designated center lanes for left turns can usually be identified by a sign with alternate directional arrows that state "CENTER LANE ONLY" or with pavement arrows, although some center lanes do not have signs or pavement arrows.

## U-Turns

A U-turn is a maneuver in which a driver changes direction by making a 180 -degree turn. It is potentially dangerous and should only be undertaken when not prohibited by law. Follow these rules when making a U-turn:

- Always yield right of way to oncoming vehicles and pedestrians


Center turn lane with pavement arrows


Median U-Turn Intersection

- Never make a U-turn on a curve in the road or when approaching the crest of a hill or grade
- Never make a U-turn on an interstate highway. Instead, proceed to the next exit and re-enter the highway in the opposite direction
One place where U-turns are permitted and necessary is at an intersection in which the leftturn movement is prohibited in the intersection itself, and the left-turn is made after the driver proceeds through the intersection and makes a U-turn at an upcoming median opening. These are known as median U-turn or J-turn intersections and signs are provided to guide drivers.


## All-Way Stops

The rules for an all-way stop are like those for a two-way stop: stop and look for oncoming traffic, then proceed when it is safe to do so. At an all-way stop, the rule is that the first vehicle to stop at the intersection is the first to proceed through the intersection. However, you may occasionally arrive at an all-way stop sign at the same time as another driver. The vehicle on the left shall yield the right-of-way. However, if there is any doubt which driver has the right of
way or if there is the chance of a crash, it is better to yield the right of way to the other driver.

## Roundabouts

A roundabout is a circular intersection in which traffic enters or exits only through right turns and proceeds in a counterclockwise direction.
When approaching a roundabout, incoming traffic always yields to the circulating traffic.

For multi-lane roundabouts where the circular roadway has more than one lane, drivers should know which lane they need to be in prior to entering the roundabout. Drivers should not change lanes in the circulatory roadway.

Signs, pavement markings, or both are provided to guide drivers to the proper lane in advance of the circulatory roadway.

A traffic circle differs from a roundabout in that it may have clockwise and counterclockwise traffic. The approaches to the circulatory roadway of a traffic circle may also be controlled by stop signs instead of yield signs.

Some roundabouts have more than one lane, which can present a traffic hazard when smaller vehicles are driving through the roundabout alongside larger vehicles, such as tractor-trailers and buses.


Two-lane roundabout (does not reflect all roundabout designs)

When approaching or driving through a multi-lane roundabout, drivers must yield the right of way to large vehicles driving through the roundabout at the same time. This includes slowing down or stopping to allow safe passage of the large vehicle through the roundabout.

If two large trucks are approaching or driving through a roundabout at the same time, the driver in the right lane must yield the right of way to the driver in the left lane. This includes slowing down or stopping to allow safe passage of the large truck in the left lane.

## Following Turning Vehicles

When following a driver who has signaled an intention to make a turn, or who has slowed down and may be planning to make a turn, you should slow down and be prepared to stop.

## SPEED LIMITS

Indiana law requires drivers to operate vehicles at the posted speed limit.
Exceeding the posted speed limit reduces the driver's ability to steer safely around curves or objects in the roadway. It also extends the distance required to stop a vehicle in emergency situations. Crash severity increases with the speed of the vehicle at impact. The effectiveness of vehicular construction features, as well as of restraint devices like air bags and safety belts, declines as speed increases.

## Rural Interstate Highway Speed Limits

Rural interstate highways are located outside urban areas with a population of at least 50,000 people. The following speed limit rules apply in these areas:

- Passenger vehicles may not exceed 70 miles per hour or the posted speed limit
- Trucks that have a declared gross vehicle weight greater than 26,000 pounds may not exceed 65 miles per hour or the posted speed limit
On a rural state divided highway, vehicles may not exceed 60 miles per hour or the posted speed limit.


## Urban Speed Limits

Urban areas have a population of at least 50,000 people. The following speed limit rules apply in these areas:

- On an urban interstate highway, vehicles may not exceed 55 miles per hour or the posted speed limit
- On a non-divided state highway, vehicles may not exceed 55 miles per hour or the posted speed limit
- On county roads, vehicles may not exceed 55 miles per hour or the posted speed limit
- In most urban residential areas, vehicles may not exceed 30 miles per hour or the posted speed limit
- In alleys, vehicles may not exceed 15 miles per hour or the posted speed limit


## School Zone Speed Limits

If you are driving near a school, you must slow down to the lower, posted speed limit for the school zone. Common hours for school zone speed limits are 7 a.m. to 4:30 p.m., Monday through Friday or when school speed limit beacons are flashing. However, local authorities may also establish lower speed limits for school zones whenever children are present.

## Reduced Speed Limits in Highway Work Zones

Work site speed limits are always at least 10 miles per hour below the maximum established speed limit for the area. Drivers must adhere to the posted speed limit in a work site. Some work site speed limits are in effect only when flashing and others are in effect at all times.

## School Bus Speed Limits

When not driving on an interstate or state highway, the maximum speed limit for a school bus is 40 miles per hour unless the posted speed limit is lower. The maximum speed limit for a school bus on an interstate or highway is 60 miles per hour or the posted speed limit.

## Reduce Speed in Dangerous Conditions

Excessive speed, even when conditions are ideal, is dangerous and increases the likelihood of an accident. Driving at the posted speed limit or in excess of it during the following roadway conditions is even more dangerous:

## BRAKING AND FOLLOWING DISTANCES

- Bad weather and poor visibility
- Slick or icy roads
- Driving with worn tires
- Unsafe vehicle conditions
- Impaired physical condition
- Hazardous conditions on road surface

The following chart provides an indication of how fast or how far a vehicle travels at 35,55 , and 70 miles per hour.

A good rule for drivers to follow is to stay at least two to three seconds behind the vehicle ahead. When following a vehicle, watch for it to pass a fixed object and estimate how much time elapses before you pass the same object.

Many factors affect a vehicle's ability to stop:

| Speed | 35 mph | $\mathbf{5 5} \mathbf{~ m p h}$ | $\mathbf{7 0} \mathbf{~ m p h}$ |
| :--- | :---: | :---: | :---: |
| Feet traveled in one second | 51.3 | 80.7 | 102.7 |
| Traffic lanes in one second | 2.6 | 4 | 5.1 |
| Seconds to travel a football field | 5.8 | 3.7 | 2.9 |

- Weight of vehicle
- Type and condition of brakes
- Type and condition of tires
- Physical condition of pavement
- Slickness of pavement
- Grade of road


## Skidding

Sudden turns, lane changes, or hard braking can cause a vehicle to skid. The procedure for correcting a skid is the same for both front-wheel-drive vehicles and rear-wheel-drive vehicles.

If your vehicle begins to lose traction or the rear wheels begin sliding sideways, ease off the gas pedal. Do not make a fast turn away from the direction of the skid and do not steer too far, which could cause a spin.

If your vehicle has conventional brakes, turn the steering wheel in a controlled manner in the direction the rear of the car is sliding. When you regain traction, straighten the vehicle and proceed slowly.

If your vehicle has an anti-lock brake system (ABS), keep your foot on the brake pedal, maintaining firm and continuous pressure, while steering normally. Do not pump the brakes. A mechanical sound or noise and vibration or increased resistance in the brake pedal indicates your $A B S$ is working.

## Rollover

Rollover crashes account for nearly one-third of all passenger vehicle
fatalities. You can reduce your risk of a rollover while driving:

- Avoid panicked steering-Many rollovers occur when drivers overcorrect their steering as a panicked reaction to an emergency. At highway speeds, overcorrecting or excessive steering can cause the driver to lose control, which can force the vehicle to slide sideways and roll over.
- Know proper maneuvering-If your vehicle leaves the roadway, do not turn back onto the pavement right away. Ease up on the gas pedal. When it's safe to do so, gradually turn back onto the road.
- Maintain your tires-Improperly inflated and worn tires inhibit your ability to maintain vehicle control, which is the most important factor in reducing the chance of rollover.
- Load vehicles properly-You can find the maximum safe load for your vehicle, as well as proper load distribution, in your vehicle's owner manual.
- Use caution on rural roads-Rollovers are more likely to occur on undivided, twoway roads or divided roads with no barriers. If a vehicle goes off a rural road, the vehicle can roll over if it strikes a ditch or embankment, or is tripped by soft soil.
- Slow down on curves and ramps - Frequently advisory speeds are provided at these locations - these advisory speeds should not be exceeded.
The rollover risk of a 15-passenger van increases dramatically as the number of occupants increases. Other risks include inexperienced drivers, improperly sized and/or inflated tires, and incorrectly loaded cargo and/or passengers that could affect the vehicle's center of gravity.


## FUEL ECONOMY

Fuel consumption increases steadily above 45 miles per hour, with passenger cars and light trucks using approximately 50 percent more fuel traveling at 75 miles per hour than at 55 miles per hour.

How to maximize your fuel economy:

- Drive more efficiently by driving sensibly, observing the speed limit, avoiding hauling cargo on your roof and removing excess weight from your vehicle.
- Avoid rapid acceleration or sudden stops.
- Keep your vehicle in shape by properly maintaining your engine, keeping your tires properly inflated and using the recommended grade of motor oil.
- Plan and combine trips. Your fuel economy is worse when your engine is cold than when it is warmed up. Several short trips taken from a cold start can use twice as much fuel as a longer, multipurpose trip covering the same distance.


## TIRE PRESSURE AND TREAD DEPTH

## Tire Pressure

Tires have been known to lose up to 1 pound per square inch (psi) every month, so check all tires, including your spare, once a month or before a long trip. Here's how:

- Purchase a trusted pressure gauge
- Open your car door and on the inside jamb there should be a sticker with your vehicle's recommended psi.
- Check your tires "cold"-before you've driven or at least three hours after you've driven.
- Insert pressure gauge into the valve stem on your tire
- The gauge will "pop" out and show a measured number
- Compare the measured psi to the psi found on the sticker inside the driver's door of your vehicle or in owner's manual-DO NOT compare to the psi on your tire's sidewall
- If your psi is above the number, let air out until it matches; if below, add air (or have a retailer help you) until it reaches the proper number


## Tread Depth

Once every month, or before you embark upon a long road trip, check your tires for wear and damage. One easy way to check for wear is by using the penny test.

1. Take a penny and hold Abraham Lincoln's body between your thumb and forefinger
2. Select a point on your tire where the tread appears the lowest and place Lincoln's head into one of the grooves
If any part of Lincoln's head is covered by the tread, you're driving with the legal and safe amount of tread. If your tread gets below that (approximately $1 / 16$ of an inch), your car's ability to grip the road in adverse conditions is greatly reduced

## DRIVING IN UNCERTAIN WEATHER CONDITIONS

## Winter Driving

Driving in winter weather presents a number of dangers due to ice, snow, and very cold temperatures. Always clear your windows before driving.

Ice on the roadway is a potentially dangerous condition that can cause a vehicle to lose traction.
Snow, especially when mixed with significant wind, poses a number of problems for drivers. Visibility may be substantially reduced. Watch for drifting snow, particularly in rural areas where only a few inches of snow can cause roads to become impassable. Always watch for icy conditions, too, when there is snowfall on the ground, particularly at intersections, and use your headlights to be seen by other drivers. Be aware that moisture on ramps, bridges, and overpasses may occasionally freeze before other sections of the driving roadway. Stay a safe distance behind snowplows.

Always allow your vehicle's engine plenty of time to warm up before driving in very cold conditions. Drive with a full tank of gas so that if stranded, the heater can remain in use for as long as possible. Brush the snow off your headlights and taillights frequently.

Consider carrying a winter survival kit in your vehicle that includes sand or strips of carpet for traction, booster cables, blankets, shovel, flashlight, extra clothing, candles, matches, nonperishable snack food, and bottled water.

## Rain

Wet roadway surfaces can be dangerously slick, especially immediately following a rainfall. When you are driving on wet roads, your vehicle is actually traveling on a thin layer of oil, dirt, and water which can lead to hydroplaning.

Hydroplaning increases with speed and at any point your tires may be in contact only with the oil, dirt, and water. If this happens, there is no friction to brake, speed up, or turn, and a gust of wind, a change of road level, or a slight turn can cause you to lose control of your vehicle.

Do not drive on bald or badly worn tires. Slow down when there is heavy rain, standing water, or slush on the road. After driving through water puddles, test your brakes by pumping them. Doing so will help to dry them. If the water is deeper than your tire treads, slow down. Use your headlights to be seen by other drivers.

## Fog

Fog can greatly reduce your visibility of other vehicles, pedestrians, and traffic signals. Drive cautiously and at reduced speeds. Do not use high headlight beams. Low headlight beams better illuminate the road and objects ahead. If fog closes in completely, and visibility is reduced to near zero, carefully pull off the road as far as possible and stop. Headlights and flashing emergency signals should be used while driving in fog.

## High Winds

Strong winds have a significant effect on high-profile vehicles (e.g., vans and sport utility vehicles). Be aware of such conditions and take appropriate action for your safety.

## Flash Flooding

Flash flooding causes more deaths than any other roadway weather event each year. Be especially alert at night or when driving on unfamiliar roads. If you are caught in a storm or come upon a hazardous situation, follow these rules:

- Do not drive around traffic barricades or past road closed signs
- Watch for bridges, culverts, and roadbeds that may be washed away or undermined by floodwaters
- Do not drive where water is over the road, because the depth of the water is not always obvious, and the water may hide washouts
- If your car stalls in a flooded area, abandon it as soon as possible, because flood waters can rise rapidly and sweep a car and its occupants away


## DRIVING AT NIGHT

Driving at night presents a number of potential problems which can be made worse if you do not have experience driving at night or in dangerous conditions. Drivers are more likely to be fatigued while driving at night and may have a higher risk of accidents. Be prepared to stop driving if you experience any signs of drowsiness listed on page 45.

## Visibility

Pedestrians, road markings, and other vehicles are more difficult to identify and recognize at night. Under nighttime driving conditions, you should reduce normal speed, especially on unfamiliar roads.

The glare of oncoming headlights may also reduce vision. To avoid glare, do not look directly into the lights of an approaching vehicle, and instead focus on the right side of the road.

## Headlights

Drivers must use headlights between sunset and sunrise as well as at any other time in which visibility is less than 500 feet. When headlights are on, lower headlight beams must be used when approaching within 500 feet of an oncoming vehicle or when following within 200 feet of the rear of another vehicle.

## IMPAIRED AND DANGEROUS DRIVING

## Drowsy Driving

Driving drowsily can increase your risk for accidents. Accidents related to drowsy driving can be very serious, leading to severe injuries or even death. Nationally, an estimated $16.5 \%$ of all fatal motor vehicle crashes involved a fatigued driver. Studies have shown that going 18 hours without sleep leaves a driver equally impaired to a driver with a . 08 Blood Alcohol Content (BAC), which is the legal alcohol limit.

Among the most susceptible to driving while overly exhausted are shift workers, parents, individuals taking sedative medications, and those who have an untreated sleep disorder. Although anyone can make the fatal mistake of driving without adequate rest, young adults age 16-29 are at the highest risk, accounting for 64 percent of fatigue-related accidents.

Be prepared to stop driving if you are unable to stay alert or experience any of the following signs of drowsiness:

- Falling asleep at stop lights
- Yawning, rubbing eyes, watery eyes, or heavy eyelids
- Difficulty remembering the last few miles or minutes driven
- Missing road signs or exits
- Changing lanes unexpectedly
- Head nodding or dropping
- Driving off the road or hitting the rumble strips
- Failing to maintain a constant speed

If you drive while drowsy, you may become slower to respond to road and traffic conditions. You may struggle to process complex information coming from different places at once. You may also become careless when making driving decisions, have trouble paying attention, or actually fall asleep while driving.

## How to Prevent Drowsy Driving

Do not drive if you are tired. The best way to reduce drowsiness is to get more sleep. Pull over to a safe area as soon as you can and take a short nap.

If possible, avoid driving during times you feel sleepy. Let a well-rested person drive. Consider carpooling, using public transportation, calling a taxi, or asking a family member or friend to drive you.

## DISTRACTED DRIVING

Driver distraction is a growing concern in Indiana and a major contributing factor in many crashes. Distracted driving is any activity that takes your eyes off the road, hands off the steering wheel, or your mind off of driving. Distracted driving activities include things like using a cell phone, texting, and eating.

Indiana law specifically prohibits the use of a telecommunications device, while operating a motor vehicle. The only exceptions to this prohibition are when hands-free communication is enabled or if the telecommunications device is being used to contact 911 for a bona fide emergency.

Texting is the most alarming distraction. Sending or reading a text takes your eyes off the road for five seconds. At 55 mph , that's like driving the length of an entire football field with your eyes closed. In Indiana, while driving it is illegal to text, call, or otherwise use telecommunication devices such as cell phones unless they are hands free.

## AGGRESSIVE DRIVING

Approximately one-third of all Indiana traffic fatalities occur due to "dangerous driving." A dangerous driving accident is any collision stemming from a driver taking one or more of the following actions: aggressive driving, disregarding a signal, or speeding.

According to Indiana law, a person engages in aggressive driving if, during one episode of continuous driving of a vehicle, the person does or commits at least three of the following:

- Following a vehicle too closely
- Unsafe operation of a vehicle
- Overtaking another vehicle on the right by driving off the roadway
- Unsafe stopping or slowing a vehicle
- Unnecessary sounding of the horn
- Failure to yield
- Failure to obey a traffic control device
- Driving at an unsafe speed
- Repeatedly flashing the vehicle's headlights


## DRIVING ON RURAL ROADS

Driving on rural roads can be more hazardous than driving on a paved interstate or city street. Rural roads may be narrower in width and consist of paved asphalt, dirt, or gravel surfaces.

Gravel-Stopping and turning is more difficult on loose gravel because your traction is reduced. When traction is reduced, skidding can occur. You must slow down earlier to reduce your risk of skidding through a turn or stop.

Dirt-During dry periods, dirt roads may be very dusty. The dust can reduce your visibility. Use your low beam headlights to make yourself more visible to other drivers.

Narrow Bridges and Roads-Some bridges and roads may be narrow. You should use caution when approaching or passing other vehicles on narrow roads or bridges. Always watch for narrow bridge signs and be prepared to stop for other vehicles.

Steep Hills or Crests-Before approaching the crest of a steep hill, slow down, move to the right side of the road, and watch for oncoming vehicles. Never attempt to pass another vehicle when approaching a steep hill or crest.

Reduced Sightlines-Cultivated crops such as corn may reduce your ability to see vehicles approaching intersections and oncoming vehicles on curvy roads.

## DRIVING ON INTERSTATE HIGHWAYS

Good judgment and timing are needed to merge smoothly with fast-moving traffic on highways. When you enter an interstate on-ramp, stay to the right and increase your speed in the acceleration lane to allow your vehicle to merge with traffic when your path is clear. Drivers already on the interstate should make allowances for those entering. However, drivers entering an interstate must yield the right of way to vehicles on the interstate.

It is unsafe to back up on an interstate highway to reach a missed exit. If you miss an exit, you must drive to the next exit. It is illegal for any vehicle, other than an emergency vehicle or a highway maintenance vehicle, to make a U-turn by crossing the median or crossover of an interstate highway.

Except in the event of an emergency or a disabled vehicle, do not stop or park a vehicle on the shoulder of an interstate highway.

Trucks are restricted to the right lane on sections of interstate with two lanes in one direction and restricted to the right two lanes of interstate with three lanes or more in one direction.

## WORK ZONES

Flashing arrow boards are often used to indicate a lane closure or "crossover." In these cases, lane markings on the road, traffic cones, barrels or barricades will outline the path the vehicle must follow. A flashing arrow board not indicating a direction either way is a signal to use caution but does not require a driver to move to another lane.


## Flagger Signals

At some work sites, one or more flaggers are posted at each end of the work zone to control traffic flow.
You must stop when a flagger extends a fluorescent orange/red flag in a horizontal position into the line of traffic. You may proceed at a reduced speed only when directed to by the flagger.

If a flagger uses a signal paddle, you must stop or proceed slowly according to the "STOP" or "SLOW" message displayed on the sign.

In some cases, Automated Flagger Assistance Devices are used to enable the flaggers to be positioned out of the lane of traffic. These devices display a "STOP" or a "SLOW" sign just like the flagger-held sign paddle or use red and yellow lights.


Automated Flagger Assistance Device

## Work Zone Safety Driving Tips

Work zones pose dangers both for drivers and for the workers. Be respectful of these dangers and exercise caution whenever traveling in a work zone:

- Stay alert. Look for reduced speed limits, narrow driving lanes and highway workers.
- Pay attention. Work zone signs will state exactly what to expect ahead.
- Merge early. If merging at first sight of signs, traffic will generally flow more
smoothly. At some locations traffic is encouraged to merge towards the lane closure, this is known as late or zipper merging, which may be used to reduce the length of a traffic back-up. Signs will be used in these cases.
- Slow down. If you are speeding when you approach a work zone you will encounter slowed or stopped traffic within seconds.
- Don't tailgate. Maintain a safe distance on all sides of your vehicle.
- Minimize distractions.
- Plan ahead and expect delays.
- Consider taking alternate routes, if available.


## RAILROAD CROSSINGS

Special signs, signals, and pavement markings are used to warn and regulate drivers at railroad crossings, although you should not expect to see all of these devices used at every railroad crossing. Some vehicles are required by law to always stop at railroad crossings not closer than 15 feet or farther than 50 feet from the nearest rail. This requirement does not apply to abandoned railroad tracks where appropriate signs have been placed or the tracks crossing the roadway have been removed.

Vehicles that must stop at railroad crossings include:

- All vehicles carrying passengers for hire
- All school buses
- All vehicles carrying explosives or flammable liquids

There are a number of warning signs used to alert drivers of a railroad crossing.


## Crossbucks

Crossbucks at a railroad crossing mark the location of the tracks.
When displayed alone, you should treat a crossbuck as a yield sign and the decision to stop or cross the tracks is yours. You must stop if there is a train approaching.

When a crossbuck is displayed with a stop sign, you must come to a complete stop and proceed over the tracks only after making certain that a train is not approaching. Never assume that a train is not coming simply because there is only a stop sign.

When there are active warning bells, flashing lights, or lights and gates, you must stop and not proceed until the active warning is canceled or you are directed to proceed by a law enforcement officer or railroad flagman.

## Railroad Crossing Safety

- It is illegal to drive around a crossing gate that is down.
- Obey all warning signs and devices. Due to the size of trains, the actual speed of a train can be very deceiving. Under no circumstances should you attempt to race a train to a crossing.

- Avoid stopping or shifting gears while crossing railroad tracks. A driver should never begin to cross railroad tracks unless the tracks can be cleared without stopping. If your vehicle stalls on the tracks, all occupants should immediately leave the vehicle.
- Look for the emergency notification sign at the crossing with contact information to call the railroad about a blocked crossing and contact 911 for assistance.
- Watch for additional trains. Where there is more than one track, a driver waiting for the track to clear must make sure another train is not coming on the other track once the first train has cleared. Be careful that a train is not proceeding in the opposite direction behind the first train.
- Be aware of 'local quiet zones’ where locomotive horns are not sounded by approaching trains at some gated crossings.
- Be aware that some trains operate on tracks in the middle of streets. In those cases, traffic signals flash red in all directions to indicate the presence of an approaching train. Drivers should treat this indication like any other crossing warning.
- Do not pass another vehicle within 100 feet of a railroad crossing.


## SAFETY AT RAILROAD CROSSINGS

If your vehicle becomes disabled at or on a railroad crossing, or if you observe an obstruction on the railroad tracks or at the crossing, when a train is approaching, this may present a lifethreatening challenge for you, other motorists, or operators and passengers on a train. Therefore, you should take immediate action that will help minimize the result of a collision. Here is some general guidance for you to consider if this happens:

- Once the track crossing lights begin to flash and the gate begins to lower, you have approximately 20 seconds to escape from the crossing.
- In the event that you or another motorist are stuck on the railroad tracks or crossing, you should evacuate the area, inform others to do the same, and run at a 45-degree angle away from the tracks in the direction of the oncoming train. After you have cleared the vicinity, call 911 and report the problem.
If you approach a railroad crossing and your vehicle becomes disabled on the crossing, or if you observe an obstruction on the railroad tracks or at the crossing, but no train is approaching or present:
- Immediately call the Emergency Notification System (ENS). The phone number is located on the blue sign attached to


Railroad crossing gate
 the railroad track crossing gate (illustrated to the right; phone number may be different on actual sign). Let them know exactly what obstruction is present and your location.

- After you have notified ENS, call 911 and report the problem.


## SHARING THE ROAD WITH TRACTOR-TRAILERS

To reduce the chance of an accident with a tractor-trailer, be familiar with their braking ability, blind spots, and maneuverability. The maximum width of any vehicle that may be operated without a special permit is eight feet and six inches. The maximum height of any vehicle that may be operated without a special permit is 13 feet, 6 inches. The maximum weight of any vehicle that may be operated without a special permit is $80,000 \mathrm{lbs}$. Before moving a vehicle that exceeds the size and/or weight limits of public highways, you must secure an oversize/overweight permit. For more information on requirements and permits, visit IN.gov/DOR/mcs.htm. All vehicles that are over 80 inches in length must have clearance lamps, markers, or reflectors that make the vehicle observable to other motorists at nighttime.

## Braking

A tractor-trailer will take longer to stop than a car traveling at the same speed, and so you should not make a sudden lane change or stop in front of a tractor-trailer. The average passenger car traveling at 55 miles per hour can stop in approximately 130 to 140 feet, or about half the length of a football field. A fully loaded tractor-trailer with hot brakes may take more than 400 feet to come to a complete stop, or more than the length of a football field.

## Turning

With any turning vehicle, the rear wheels follow a shorter path than the front wheels, and the longer the vehicle is the greater the difference will be. Tractortrailer drivers often swing out as the first step in making a tight turn.

When following a tractor-trailer, watch its turn signals before trying to pass, especially to the right. If the tractor-trailer appears to be moving to the left, wait a moment to check and see which way the driver is signaling and watch for a right turn. When approaching or entering a roundabout, please be mindful of the rules regarding sharing the road with tractor-trailers. You can review those rules in the Roundabout section of this chapter.

## Blind Spots

Many drivers falsely assume that a tractor-trailer driver can see the road better because he or she sits twice as high as the driver of a car. While tractor-trailer drivers do have a better forward view and bigger mirrors, they still have serious blind spots in which a car can completely disappear from view. Blind spots for the tractor-trailer driver will be up to 20 feet in front of the cab, on either side of the trailer, alongside the cab, and up to 200 feet behind the vehicle.

Drivers lingering in the blind spots on the sides and in the rear hamper a tractortrailer driver's ability to take evasive action to avoid a dangerous situation.

## Maneuverability

Tractor-trailers are designed to carry products long distances and are not designed to be as maneuverable as cars. Tractor-trailers weigh more, have longer stopping and accelerating distances and have a wider turning radius. On multi-lane highways, tractortrailers stay in the center lane to help the flow of local traffic on and off the highway.

Staying in the middle lane also increases the tractor-trailer driver's options if he or she has to switch lanes in order to avoid a dangerous situation or an accident.

## Tips for Sharing the Road with Tractor-Trailers

- Do not cut off a tractor-trailer to reach an exit or turn. Cutting into the open space in front of a tractor-trailer removes the tractor-trailer driver's cushion of safety. Trying to beat a tractor-trailer to a single-lane construction zone creates a particularly dangerous situation. Take a moment to slow down and exit behind a tractor-trailer. It will only take you a few extra seconds and will greatly reduce the risk of an accident.
- Do not linger alongside a tractor-trailer when passing. Always pass a tractor-trailer completely and always on the left side. If you linger when passing the tractor-trailer, your position makes it impossible for the tractor- trailer driver to take evasive action if an obstacle appears in the road ahead.
- Do not follow too closely or tailgate. When following behind a tractor- trailer, if you cannot see the driver's rearview mirrors, the driver cannot see you. Tailgating a tractor-trailer is dangerous because you take away your own cushion of safety if the tractor-trailer stops quickly. In addition, if the vehicle you are following hits something in the road, you will have no time to react before it hits the front of your car.
- Never underestimate the size and speed of an approaching truck. Because of its large size, a tractor-trailer often appears to be traveling at a slower speed than it is. A substantial number of collisions involving a car and a tractor-trailer take place at intersections because the driver of the car did not realize how close the tractor-trailer was or how quickly it was approaching.


## SHARING THE ROAD WITH OTHER VEHICLES

## Indiana's Move Over Law

Indiana has a Move Over law (IC 9-21-8-35) that requires motorists to yield the right of way; move over to the right and come to a complete stop; or change lanes when approaching an emergency vehicle with its lights flashing.

## Emergency Vehicles

Motorists who approach an emergency vehicle displaying alternately flashing red, red and white, or red and blue lights are required to change lanes away from the authorized vehicle. If you cannot move over, the motorists shall reduce their speed to 10 mph under the posted limit and proceed with caution. Failure to comply is a Class A Infraction.

Authorized emergency vehicles identified under IC 9-13-2-6 include:

1. Fire department vehicles
2. Police department vehicles
3. Ambulances
4. Emergency vehicles operated by or for hospitals or health and hospital corporations.
5. Vehicles designated as emergency vehicles by the Indiana Department of Transportation.
6. Motor vehicles approved by the Indiana emergency medical services commission that are: (A) ambulances that are owned by persons, firms, limited liability companies, or corporations other than hospitals; or (B) not ambulances and that provide emergency medical services, including extrication and rescue services.
7. Vehicles of the department of correction that are designated as emergency vehicles and are responding to an emergency.

## Authorized Parked Vehicles

Additionally, motorists who approach an authorized parked vehicle with amber flashing lights are required to change lanes away from the authorized vehicle. If you cannot move over, the motorists shall reduce their speed to 10 mph under the posted limit and proceed with caution. Failure to do so is a Class B Infraction.

Authorized vehicles with amber flashing lights include:

1. Recovery Vehicles/Tow Trucks
2. Highway Maintenance Vehicles
3. Utility Service Vehicles
4. Solid Waste Haulers/Trash Trucks
5. Survey/Construction Vehicles

## Disabled Vehicles

Motorists who approach a disabled stationary vehicle with flashing hazard warning signals are required to change lanes away from the disabled vehicle. If you cannot move over, the motorist shall reduce their speed to 10 mph under the posted speed limit and proceed with caution. Failure to do so is a Class B Infraction.

## School Buses

School buses are equipped with both amber and red flashing lights. When the school bus driver activates the amber lights, he or she is warning other drivers that the bus is slowing and is going to load or unload children. Once the bus stops, the red lights and stop arm will be activated.


You must stop when you approach a school bus with flashing red lights activated and stop arm extended. If you are driving on a roadway divided by a barrier or unimproved median, you are required to stop only if you are traveling in the same direction as the school bus.

The biggest threat to children who ride a bus to school is not the bus ride but approaching or leaving the bus. When approaching a bus stop:

- Watch for children playing or congregating near bus stops
- Be aware that children arriving late for the bus may dart into the street without looking

- Be prepared to stop when yellow flashing lights appear on the bus, which warn drivers the bus will be coming to a stop
Disregarding a school bus stop arm can result in a Class A misdemeanor, a Level 6 felony if the offense results in bodily injury, or a Level 5 felony if the offense results in death.

Take note that school buses stop at railroad crossings. Rear-end collisions involving school buses stopped at railroad crossings have increased in recent years.

## Motorcycles and Motor Driven Cycles

Motorcyclists and motor driven cycle (MDC) operators must be provided the same considerations as passenger motor vehicle operators. Always allow all motor vehicle operators the width of a full lane. Although it may seem as though there is enough room in the traffic lane for more than one motor vehicle, it is important to consider that motorcyclists and MDC operators may need the full use of the lane to maneuver safely and avoid potential hazards that are unseen by other motor vehicle operators.

The smaller profile of motorcycles and motor driven cycles can make it more difficult to judge their speed and distance. These vehicles can also stop much more quickly than other motor vehicles. Because of their size, motorcycles and motor driven cycles can be hidden in a vehicle's blind spot or missed in a quick shoulder check. Always check your mirrors and blind spots before entering or leaving a lane of traffic and at intersections. Always signal your intentions before changing lanes or merging with traffic. This allows other vehicle operators to anticipate traffic flow and find a safe lane position.

Do not assume that a flashing turn signal on a motorcycle or motor driven cycle means a turn is coming soon. These vehicles have signals that are usually not selfcanceling, and riders sometimes forget to turn them off. Wait to be sure the motorcyclist or rider of a motor driven cycle is going to take action before you proceed.

Road conditions, which can be only minor annoyances to drivers of larger vehicles, can pose major hazards to motorcyclists. Motorcyclists and riders of motor driven cycles may change speed or adjust their position within a lane suddenly in reaction to road and traffic conditions, such as potholes, gravel, wet or slippery surfaces, pavement seams, railroad crossings, and grooved pavement. Allow at least three or four seconds when following a motorcycle so the motorcyclist has enough time to maneuver or stop in an emergency.

## Bicycles

Drivers must routinely share the roadway with bicyclists. On most roadways, bicyclists have the same rights and responsibilities as other roadway users. Drivers should observe the following guidelines when sharing the roadway with bicyclists:

- Drivers may pass a bicyclist when there is a safe amount of room beside the bicyclist (minimum three feet) and when there is no danger from oncoming traffic
- Drivers must yield the right of way to a bicyclist just as they would to another vehicle
- Bicyclists may not ride more than two (2) abreast except on paths or parts of roadways set aside for the exclusive use of bicycles
- A bicyclist is not required to ride in a designated bike lane because the bicyclist has the right to use either the bike lane or the travel lane
- Avoid turning across the path of a bicyclist
- When a motorist is turning left and there is a bicyclist entering the intersection from the opposite direction, the driver should wait for the bicyclist to pass before making the turn
- If a motorist is sharing the left turn lane with a bicyclist, stay behind the cyclist until he or she has safely completed the left turn
- If a motorist is turning right and a bicyclist is approaching on the right, let the bicyclist go through the intersection first before making a right turn
After parking and before opening vehicle doors, a motorist should first check for bicyclists.


## Bicycle Lanes

Bicycle paths and lanes shall be used exclusively for the operation of bicycles unless:

- Signs specify joint use with pedestrians
- The driver is on official duty, such as delivering mail

Other rules for drivers or operators of any vehicle include:

- Do not drive or park in bicycle paths or lanes, or place the vehicle in a manner that may impede bicycle traffic on such path or lane
- Yield the right of way to an individual operating a bicycle on a designated bicycle path or lane
- Do not move into a bicycle path or lane in preparation for a turn
- Cross a bicycle path or lane only when turning or when entering or leaving an alley, driveway, or private road
- Be careful opening a car door or backing out when using on-street parking


## Sharrows

Sharrow markings are pavement markings of a bike with two arrows above it and are intended to help bicyclists position themselves away from parked cars and to alert other road users to expect bicyclists to occupy travel lanes.


Sharrow Markings

## Bicycle Lane and Bus Lane Markings



Green colored pavement may be used to enhance the visibility of bike lanes. Red colored pavement may be used to enhance the visibility of bus or transit lanes that are designated for buses, taxis, or other modes of public transit.

## Slow-Moving Vehicles

Certain slow-moving farm vehicles, construction equipment, and vehicles drawn by animals may share roadways. You should use care when approaching and passing these vehicles. Be alert for the special emblem that the driver must place on the rear of the slow-moving vehicle.

A rider of a horse or horse-drawn vehicle has the same rights and responsibilities of a motor vehicle driver when riding on a public highway. Approach with caution and be alert for any hand signals used by a horseback rider or the driver of a horse-drawn vehicle.


Slow Moving Vehicle

## Traffic Control Officers and Official Processions

Because of special events, traffic congestion, or other reasons, a law enforcement officer may direct traffic at an intersection. A law enforcement officer's command may
be different from a traffic signal or sign. In such a case, the law enforcement officer's command is the one that must be obeyed. Official processions, such as a funeral procession, have the right of way regardless of a traffic signal that indicates otherwise.

## PARKING AND REVERSING

## Parallel Parking

Follow these procedures to parallel park in an empty space that has vehicles parked in front of it and behind it:

1. Signal your intention to park.
2. Position your vehicle parallel with the vehicle parked in front of the empty space and maintain at least two feet from this vehicle. Align your rear bumper with the rear bumper of the vehicle parked in front of the empty space (Figure A).
3. Reverse slowly until the front of the vehicle is even with the front door of the parallel car. Turn the wheel sharply to the right and reverse slowly until the vehicle is at a 45-degree angle, and reverse (Figure B).
4. When the front of your vehicle passes the rear of the parallel car, turn your steering wheel to the left sharply, then gradually, while backing into the space (Figure C).
5. Straighten your vehicle's wheels and pull forward in the space (Figure D).

When you park facing downhill, turn your vehicle's wheels toward the curb.
When you park facing uphill, turn your vehicle's wheels away from the curb. If there is no curb, turn your vehicle's wheels away from the street.

Use your turn signal when entering traffic from a parking space. Be sure to look in both directions and double-check for cars and pedestrians when backing out of a parking place.


Figure A

## IIlegal Parking Areas

Parking in the following common areas is prohibited:

- Highways (unless indicated otherwise)
- Within intersections or on pedestrian crosswalks
- On sidewalks or in front of any driveway
- Within 15 feet of a fire hydrant or in fire lanes
- Bridges or other elevated structures, such as on a highway or a tunnel
- Adjacent to yellow curbs
- Beside another parked vehicle
- Parking spots reserved for those with disabilities unless in possession of a valid parking placard
- Diagonally striped area next to accessible parking spaces


## Reversing

Reversing is more difficult than driving forward because your field of vision is blocked by the vehicle itself, and it is more difficult to control your speed and direction.

To reverse, turn your body to the right to look through the back window. Never use only the rearview mirror for reversing. Go slowly, watching carefully in all directions. Never back into an intersection in order to turn around.

## Handicap Accessible Parking

Reserved parking spots for those with disabilities are marked with a sign and pavement markings.

Parking in the diagonally striped area next to an accessible parking space is prohibited. This striped space allows a wheelchair user to transfer in and out of his or her vehicle. If the wheelchair user has an accessible vehicle, this space is required to deploy its ramp so the wheelchair user can safely enter and exit the vehicle. Parking in this striped area is prohibited
 even if you are in possession of a valid parking placard.

## PEDESTRIAN SAFETY

Crosswalks or a pedestrian signal indicate that pedestrians are nearby. Follow these rules or guidelines when pedestrians are in the vicinity:

- Always yield the right of way to pedestrians
- Do not make a turn that causes a pedestrian to stop, slow down, or make some other special effort to avoid a collision
- If children are in the vicinity, take special care because children are not fully aware of the dangers of traffic. Children and other pedestrians may cross at unexpected places.
- Be respectful of others who have difficulty crossing streets, such as elderly persons or someone with a visual disability
- Everyone is a pedestrian


## Visually Impaired Pedestrians

Traveling aids for a person who is visually impaired are often a white cane or a trained guide dog. Independent travel for people with visual disabilities involves some risk that can be greatly reduced when drivers are aware of the use and meaning of a white cane or guide dog. Drivers must always yield the right of way to persons who are visually impaired.

## SEAT BELTS AND CHILD SAFETY RESTRAINTS

Seat belts and child safety restraints, such as car seats, save thousands of lives each year and improve the chances of surviving an accident. When worn, seat belts for drivers and front-seat passengers increase the chance of survival by 45 percent and cut the risk of serious injury by 50 percent.

## Seat Belts

Indiana law requires a driver and all passengers to use seat belts at all times when a vehicle is in operation. Operators of buses are also required to use a seat belt.

A seat belt must be used even in a vehicle with one or more air bags. Air bags are designed to work in tandem with seat belts to slow down the vehicle's occupants in the event of a collision. Failure to use a seat belt could result in injury from the air bag.

To maximize safety, follow these tips to ensure that you and your passengers are sitting properly in your vehicle:

- Everyone should wear their seat belts low on the hips and flat across the collar bone.
- Driver should sit at least 12 inches away from the steering wheel.
- Head restraints should be positioned so they are higher than the top and as close as possible to the back of an individual's head.


## Seat Belt Exemptions

The following are examples of when seat belts are not required:

- Drivers or passengers who should not wear a seat belt for medical reasons, provided they have written documentation of the medical reasons from a physician
- A child who is required to be restrained by a child restraint system
- Traveling in a commercial or United States Postal Service vehicle that makes frequent stops for the purpose of pickup or delivery of goods and services
- A rural carrier of the United States Postal Service who is operating a vehicle while serving a rural postal route
- A newspaper motor route carrier or newspaper bundle hauler who stops to make deliveries from a vehicle
- A driver examiner designated and appointed by the BMV who is conducting an examination of an applicant for a learner's permit or driver's license under IC 9-24-10
- An occupant of a farm truck being used on a farm in connection with agricultural pursuits that are usual and normal to the farming operations
- An occupant of a motor vehicle participating in a parade
- An occupant of the living quarters area of a recreational vehicle
- An occupant of the treatment area of an ambulance
- An occupant of the sleeping area of a tractor trailer
- An occupant, other than the operator, of a municipal waste collection and transportation vehicle
- An occupant, other than the operator, of a truck on a construction site
- A passenger, other than the operator, in a cab of a recovery vehicle, who is being transported in the cab because the passenger's vehicle is being towed by the recovery vehicle
- An occupant, other than the operator, of a motor vehicle being used by a public utility in an emergency


## Child Safety Restraints

Passengers younger than eight years of age are required by law to be properly secured in a child restraint system such as a child car seat or booster seat.

## Passenger Air Bags

The explosive power of air bags has killed children and elderly adults less than five feet tall. If a car is equipped with an air bag on the passenger side, the National Safety Council recommends putting children younger than 12 years of age in the back seat.

Your Car Should Have This Equipment


## TRUCK EQUIPMENT REQUIREMENTS

The lighting requirements for any truck or bus are: (2) red tail lamps, one (1) rear white license plate lamp, and at least one (1) red stop-lamp.

Vehicles transporting loads extending farther than four feet beyond the rear of the motor vehicle, or which have tailboards or tailgates extending farther than four feet beyond the vehicle, must have the following projections visible:

- One red lamp must be mounted at the extreme rear end of the vehicle's load between sunset and sunrise. The red lamp must be mounted and visible from both sides and the rear at a distance of 500 feet.
- One red flag must be mounted at the extreme rear end of vehicle's load between sunrise and sunset. The red flag must be mounted, must be not less than 12 square inches, and must be visible from both sides and the rear of the vehicle.


## Vehicular Hazard Warning Flashing Lamps

Every bus, truck, and tractor-trailer must be equipped with a signaling system. In addition to signaling turning movements, these vehicles must have a switch or combination of switches that cause the two front turn signals and the two rear signals to flash simultaneously as a vehicular traffic signal warning. The signal must be capable of flashing simultaneously with the ignition on or off.

## Warning Devices for Stopped Vehicles

If your car becomes disabled, even if you can pull off onto the shoulder, you must be visible to other drivers for their safety and yours. The disabled vehicle's hazard lights, if available, should be turned on.

Whenever headlights are required on a divided highway, such precautions as a lighted fuse, a lighted red electric lantern, or a portable red emergency reflector must be placed 100 feet behind your car and 100 feet in front, in the center of the lane occupied by your vehicle. Additionally, one of these signals must be placed at the traffic side of the vehicle and approximately ten (10) feet from the vehicle in the direction of the nearest approaching traffic.

In the daytime, drivers of disabled cars must display two red flags: one approximately 100 feet in front of the car and the other approximately 100 feet behind it. If your car is stopped within 500 feet of a curve, hilltop, or other obstruction, a warning device must be displayed at least 500 feet from your car.

A driver of a truck, bus, or tractor-trailer that is disabled on a traveled roadway or its shoulder must display three bi-directional emergency reflective triangles which conform to the requirements of Federal Motor Vehicle Safety Standard No. 125, or at least six fuses or three liquid-burning flares.

Place a lighted flare or fuse, lighted red electric lantern, or portable red emergency reflector on the traffic side of the vehicle in the direction of the nearest approaching traffic.

Place one device approximately 100 feet from your vehicle toward approaching traffic. Place one device approximately 100 feet from your vehicle in the opposite direction. Place each device in the center of the traffic lane occupied by the disabled vehicle and one at the traffic side of the vehicle.

If your vehicle is disabled on a divided highway, the device must be 200 feet from your vehicle. If your vehicle is disabled within 500 feet of a curve, hill crest, or other area where a driver's view of your vehicle may be blocked, place the device at least 500 feet from your vehicle.

During times when headlights are not needed, use such warning signals as bi-directional emergency reflective triangles or red flags in place of flares, reflectors, or electric lanterns. Under these conditions, no flare is required on the traffic side of the disabled vehicle.

