

7. Other Types of Vehicles

Cars are not the only means of transportation on the road. It is very likely you will operate some other type of vehicle during your life. It could be a bicycle, motorcycle, truck or bus.

Even though you may never use any other kind of vehicle, you still should know about them. They affect you as a driver and as a pedestrian.

Learn the “rules of the road” for each kind of vehicle and something about their operation. This puts you in a better position to anticipate their movements when you approach them on the highway. This will help you become a better and safer driver.

Snowmobiles and All-Terrain Vehicles

Snowmobiles and all-terrain vehicles (ATVs) can be a lot of fun and useful too, but they can also be extremely dangerous if not ridden carefully and not driven in the proper places.

The rules and regulations vary somewhat for the two vehicles, so be sure you are familiar with the proper laws.

Snowmobiles

You **cannot** drive your snowmobile on the interstate or any other freeway, on the right-of-way of any interstate or freeway, or on a public highway, shoulder, or within five feet of the roadway except when crossing a bridge or culvert or to avoid an obstruction. However, you **can** ride a snowmobile in the following places:

- on city streets that have not been plowed during the snow season, or any street the city has designated for snowmobile use;
- on county roads that have not been plowed during the snow season and are not maintained for use by regular two-wheel drive vehicles;
- on county roads designated by the board of supervisors for snowmobile use;
- on highways during an emergency when the snow makes travel by regular two-wheel drive vehicles impossible;
- on the roadway or shoulder when necessary to cross a bridge or culvert, but you must stop before entering the roadway and must yield to all other traffic; and
- on primary highway rights-of-way at night as long as you stay on the right side and travel in the same direction as the traffic on that side of the road.

All-Terrain Vehicles

Iowa law limits highway access even more for ATVs than it does for snowmobiles. The only time you can drive your ATV on the highway is when you are driving it for agricultural purposes between sunrise and sunset. You must also have a valid driver’s license and drive at a speed of no more than 35 mph. It is against the law to drive an ATV while carrying a passenger.

Registration and Licensing

All snowmobiles and ATVs must be properly registered with your county recorder. All snowmobiles and ATVs must have a headlight and taillight that can be seen for 500 feet, and must display a fluorescent orange pennant or flag at least 60 inches above the ground.

Any person, regardless of age, may be prosecuted for violation of Iowa’s snowmobile and ATV laws and regulations.

If you are 18 years old or older, you do not need a snowmobile or ATV safety certificate if you have a valid driver’s license. If you are 12 to 17 years old, you must obtain a safety certificate. You can get a safety certificate by passing a safety course given by the Iowa Department of Natural Resources. You must also pay the registration fee. Contact the conservation officer in your county if you need additional information.

Trailers

Registration

Like your car, truck, motorcycle or moped, you must also register your trailers except bumper hitch farm trailers.

The registration fee is based on the size and/or class of your trailer. If you have a travel trailer or a fold-down camper, you pay 20 cents per square foot, using the outside dimensions of your trailer.

If you have a utility trailer, you pay a flat fee of \$10.

Motor home registration fees depend on the class of the vehicle. The class is determined by the value of the vehicle. Each class has a set registration fee.

For semitrailers, commercial fertilizer trailers and other commercial trailers, see page 64.

To register your trailer, fill out the proper forms and pay the fees at the county treasurer’s office.

Non-Resident Registration

If you are not an Iowa resident, your trailer must still have valid plates and registration papers from your home state if your home state requires registration for the type of trailer you are towing. You cannot legally tow your trailer in Iowa without them.

Trailer Towing

Driving with a trailer hitched behind you is much different than driving your car or truck alone. The extra weight makes it more difficult to control your vehicle, to stop, and to handle the trailer and the towing vehicle.

Offtrack The wheels of your trailer do not follow the same path as the wheels of the towing vehicle. Trailer wheels follow a path closer to the inside of any curves. This is called “offtrack.” For any turn, you must allow extra turning space.

Speed The faster you go, the less control you have over your trailer. If you have trouble keeping the trailer in line behind you, slow down.

Hitch Load A properly loaded trailer should have about 15 percent of the total trailer weight on the hitch. If you have too much or too little weight on the hitch, the trailer will be more likely to sway back and forth while you are pulling it.



Hitch Location The closer you can get the hitch to the rear axle of the towing vehicle, the better your trailer will ride. Try to keep the hitch up against the bumper. Do not put too much stress on the bumper without bracing it to the frame.

Tire Stiffness Stiffer tires make your trailer sway less. A well inflated six-or eight-ply tire is usually suggested for heavier trailers.

Trailer Size Use the smallest and lightest trailer that will carry your load. Your stopping distance will increase as the weight of your trailer increases.

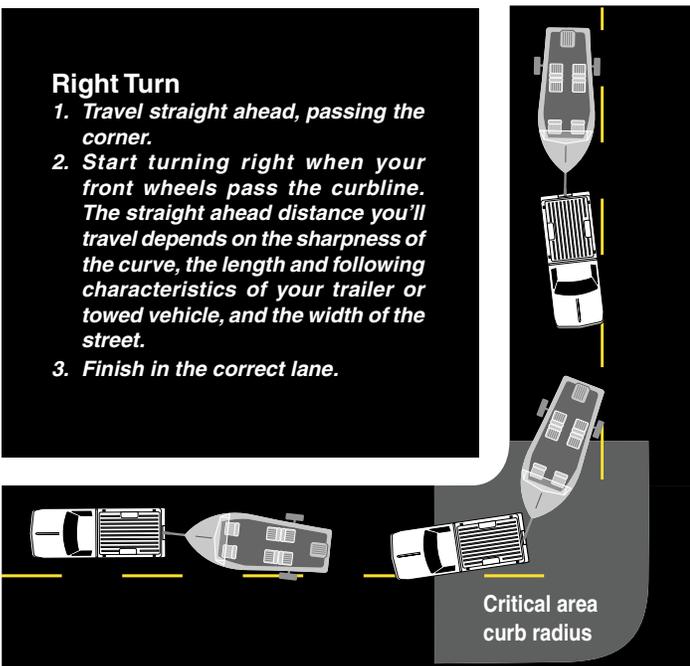
Trailer offtrack makes turning and backing up difficult. Practice your turns to make up for your trailer's load and offtrack.

Right Turns

As you come to the place you want to turn, slow down and signal. As you slow down, line up the vehicle and trailer further to the left than you would if you were only driving your car.

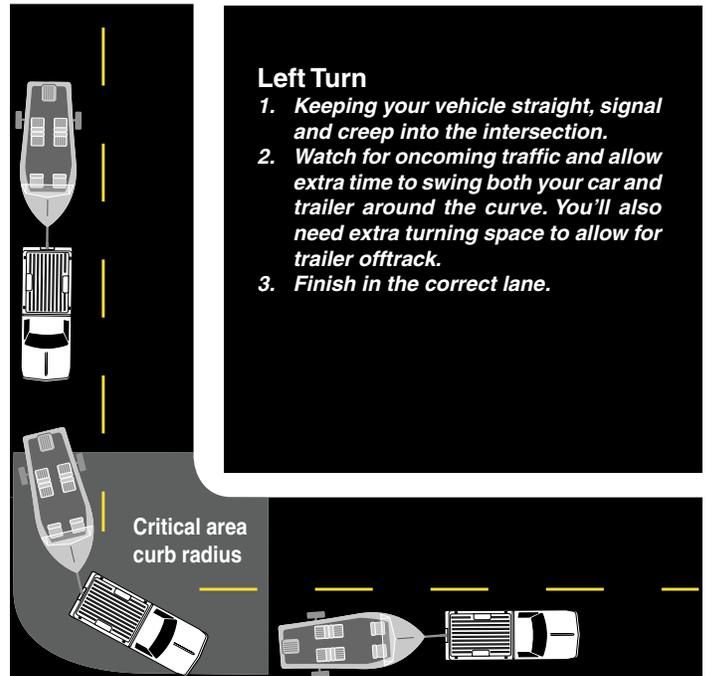
Right Turn

1. Travel straight ahead, passing the corner.
2. Start turning right when your front wheels pass the curbline. The straight ahead distance you'll travel depends on the sharpness of the curve, the length and following characteristics of your trailer or towed vehicle, and the width of the street.
3. Finish in the correct lane.



Left Turns

Left turns are usually easier because they are not as sharp, but you still need to pay close attention to what you are doing.



Left Turn

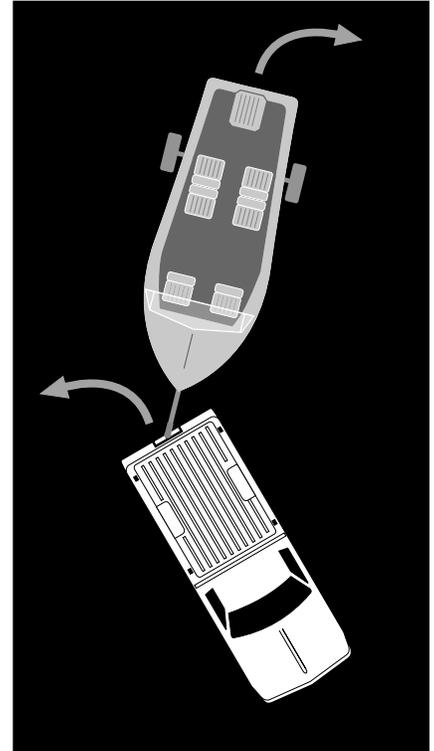
1. Keeping your vehicle straight, signal and creep into the intersection.
2. Watch for oncoming traffic and allow extra time to swing both your car and trailer around the curve. You'll also need extra turning space to allow for trailer offtrack.
3. Finish in the correct lane.

Backing

Backing a trailer is tricky. It is a good idea to think it through before you start moving. Remember, the trailer will move the opposite direction from the back of your car. If you move the back of your car to the right, the trailer will go to the left.

If you want to back to the left, steer right. Then make any adjustments by pulling slightly forward and repeating the move. Creep through the whole maneuver since backing a trailer is a difficult skill to master.

Usually it is easier to back up so the trailer moves to the left side of your car where you can see it better. Steer gradually in a series of slight turning and straightening actions. This will help prevent jackknifing the trailer.

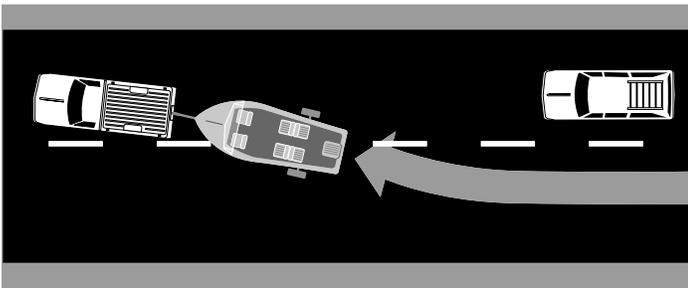




Backing a trailer is a tricky business. Proceed slowly with slight turning and straightening actions.

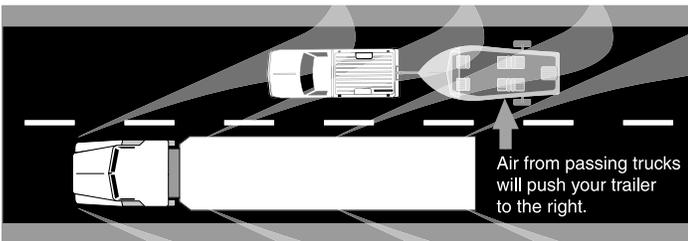
Passing

Your vehicle cannot accelerate quickly when pulling a trailer. If you must pass another vehicle, make sure you have plenty of room. Remember, you must pull your car and trailer far enough ahead to safely move back into the right lane. Avoid sudden swerves; they can send your trailer out of control.



Being Passed

Air from passing trucks will push your trailer to the right. Be ready for the trailer to pull to the right when being passed by another vehicle. Be ready to correct any swaying by steering in the direction of the sway. A quick burst of acceleration may help pull the trailer back in line. Never brake hard -- it may cause the trailer to jackknife or flip over.

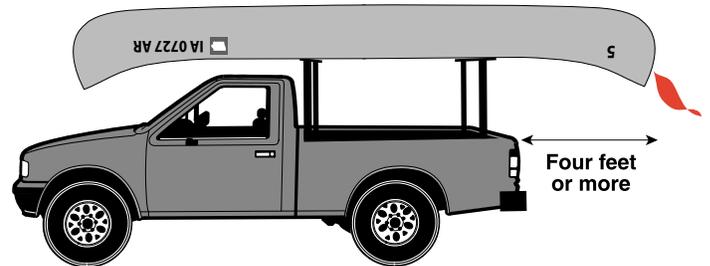


Speed

Follow the same speed limits as for cars, unless posted otherwise. Remember to increase your following distance because you will not be able to stop as fast as you did without the trailer.

Be careful going around large curves or down steep hills. The forces on your trailer can make handling dangerous. If you are going too fast, these forces can take command of your trailer and vehicle.

Projecting Loads



If you have a load that sticks out from the end of your trailer or vehicle four feet or more, it must be marked. Normally, during the day a red flag should be tied on the end. When lights are required, a red light or lantern must be used to mark the end of the load.

Required Equipment

If your trailer and load weighs more than 3,000 pounds (1-1/2 tons), it must have brakes on all axles. They can be self-actuating if the combination is less than 10,001 pounds combined GVWR, or brakes you can apply from the towing vehicle. On certain combinations of over 10,001 pounds combined GVWR, self-actuating surge brakes are allowed depending on the GVWR of the towed unit.

Drawbar and Chain

When towing another vehicle or trailer, the drawbar must be connected to prevent side sway. Safety chains must also be used to connect the trailer to the towing vehicle. They must be strong enough to hold the load in case the hitch breaks.

Lamps and Lights

Clearance lights must be mounted on the widest part of the trailer. You can use white, yellow or amber reflectors in the front. The rear lights must be red. Taillights must also be used. A white light must illuminate the license plate.

Mirrors

When pulling a trailer you must still be able to see 200 feet behind your trailer. If the trailer or its load blocks your rearview mirror, you will need additional side mirrors to see behind the trailer. If your trailer is wider than the towing vehicle, you will need extended side-view mirrors to see to the rear.

Trucks

To determine which class of license is necessary for you to operate a particular vehicle, please refer to the explanation of Iowa's classification plan on page 8. If you decide you need a commercial license, you will need to study the Commercial Driver's License Manual. The commercial manual will help you pass the written tests. The information in this manual will help you pass the knowledge test for a chauffeur's license.

Class D (Chauffeur's) License Requirements

You need a chauffeur's license if you are:

- transporting 15 or fewer persons (including driver) for wages, compensation or hire;
- operating a farm truck-tractor or tractor-trailer within 150 air miles of the farm and while transporting farm products to or from that farm; or
- operating a single vehicle with a gross vehicle weight rating (GVWR) specified by the manufacturer of 16,001 to 26,000 pounds, except when the operation by the owner or operator is occasional and merely incidental to the owner's or operator's principal business.

Persons exempt from Class "D"

(Chauffeur's) license requirements are:

- military personnel while on active duty and while operating military vehicles;
- a farmer or farmer's hired help while operating a farm truck, other than a truck-tractor, controlled by the farmer and used to transport the farmer's own products or property within 150 air miles of that farm;
- a person operating a farm tractor or implement of husbandry to or from the home farm to any adjacent or nearby land;
- a **volunteer** firefighter or **volunteer** ambulance driver while operating a fire, ambulance or rescue vehicle; or
- a Department of Corrections or a Department of Human Services employee transporting persons in an automobile.

A chauffeur's license is required for farmers or their hired help who drive truck-tractors or truck-tractor semitrailer combinations on or for their farms. The requirement does not apply to farmers or their hired help who drive straight trucks only on or for their farm.

A chauffeur's license costs \$16 for two years and \$40 for five years. The license expires on your birthday. If you are 70 years old or older, your license will only be issued for two-year periods. Review chauffeur's licensing procedures on page 8.

Age Requirements

You must be at least 18 years old to get a chauffeur's license.

In most cases, you must be at least 21 years of age to drive across state lines (interstate), to carry hazardous materials in the state, or if any part of your company's operation is involved in interstate transportation of goods. A farmer, operating a farm truck, may operate only 150 miles from the farm, regardless of whether the operation is totally intrastate or across state lines. To operate over 150 miles, a farmer needs a commercial driver's license and must be over 21 years of age if crossing state lines and outside 150 miles.

Registration

If you are an Iowa resident and your vehicles move intrastate (within Iowa), register them with your county treasurer. All other registration questions should be directed to the Iowa Department of Transportation, Office of Motor Carrier Services, PO Box 10382, Des Moines, IA 50306-0382, phone 515-237-3264.

To find out about commercial vehicle registration, authority, fuel permits, trip permits, and over dimensional or overweight permits, contact the Iowa Department of Transportation, Office of Motor Carrier Services, PO Box 10382 Des Moines, IA 50306-0382, phone 515-237-3264. The hours are listed on the inside back cover.

Maximum Size and Weight

1. Weight

A single axle of a vehicle or combination of vehicles shall not exceed 20,000 pounds gross weight if equipped with pneumatic tires, and may not exceed 14,000 pounds gross weight if equipped with solid rubber tires.

Tandem axles may not exceed 34,000 pounds gross weight if equipped with pneumatic tires (tandem axles are any two or more consecutive axles with centers more than 40 inches but not more than 96 inches apart).

2. Length

Single trucks are limited to an overall length of 40 feet. Single buses are limited to an overall length of 45 feet.

Power units designed to carry cargo when used in combination with a trailer or semitrailer are limited to an overall length of 65 feet. However, when transporting automobiles, may have an additional three-foot overhang in the front and a four-foot overhang in the rear.

A combination of three vehicles, one of which is a motor vehicle other than a truck-tractor, is limited to an overall length of 70 feet.

Semitrailers, loaded or unloaded, may not have an overall length in excess of 53 feet.

Trailers or semitrailers operating in a double-bottom combination may not have an overall length in excess of 28-1/2 feet each.

A combination of four vehicles is not allowed on the highways of this state, except for power units saddle-mounted on other power units. These combinations are restricted to a maximum overall length of 97 feet.

Stinger-steered auto transporters are limited to an overall length of 75 feet with an additional three-foot overhang on the front and four-foot overhang on the rear.

3. Width

The total outside width of any vehicle or the load on the vehicle shall not exceed 8 1/2 feet.

Width of these vehicles shall not exceed eight feet six inches, exclusive of safety equipment, and are exempt from the permit requirements for overdimensional loads as long as they or their load do not exceed eight feet six inches.

If an implement of husbandry is used to haul hay or straw and the total width of the load exceeds eight feet, the implement of husbandry is not subject to the permit requirements for overdimensional loads. However, if the hay or straw is loaded on any other vehicle subject to registration, the moves would be subject to the permit requirements for transporting loads exceeding eight feet.

4. Height

The vehicle and load may not exceed 13 feet 6 inches high; 14 feet allowed for vehicles used exclusively for the transportation of vehicles.

Overdimensional Permits

Overdimensional permits can be obtained from the Iowa Department of Transportation, Office of Motor Carrier Services, 6310 SE Convenience Blvd., Ankeny, IA 50021, 515-237-3264.

Safety

Commercial vehicle means a vehicle or combination of vehicles designed to transport passengers or property of any kind if any of the following apply:

- the vehicle or any combination of vehicles has a gross weight or combined gross weight of 10,001 or more pounds;
- the vehicle or any combination of vehicles has a gross weight rating or gross combination weight rating of 10,001 or more pounds;
- the vehicle is designed to transport 16 or more persons, including the driver; or
- the vehicle is used in the transportation of hazardous materials of a type or quantity requiring vehicle placarding.

As a driver, you may be required to follow all federal highway safety and hazardous materials regulations under United States Code, Title 49, and found in 49 CFR, chapters 100 to 180 and chapters 390 to 399, as adopted by Iowa Code sections 321.449 and 321.450, when operating commercial vehicles as defined above.

If you are not certain if you fall under these guidelines, contact Motor Vehicle Enforcement at 800-925-6469 before you operate any vehicle in question.

Medical Proof

Iowa exempts drivers of commercial vehicles from providing proof of physical/medical qualifications who engage exclusively in intrastate (in Iowa) commerce when GVWR is 26,000 pounds or less, unless you are hauling hazardous materials requiring placarding, or operating a passenger vehicle designed to carry 16 or more persons. In most cases, if you operate a commercial motor vehicle with a GVWR of more than 26,000 pounds, you need a medical certificate and you need to log your hours.

Special Equipment

In addition to standard equipment such as brakes, mirrors and tires, which are required on all motor vehicles, your vehicle may need some special equipment, especially if you are subject to federal regulations.

Fire Extinguishers

Every power unit must carry at least one 5 B.C. or two 4 B.C. fire extinguishers. When transporting placarded quantities of hazardous materials, a 10 B.C. extinguisher is required.

Reflective Devices

Every commercial truck and truck-tractor must be equipped with reflective triangles rather than flags and reflectors.

If you have to stop during the night, you must warn other drivers. As soon as possible, place three reflectors around your truck. Put one at least 100 feet ahead of the truck, one at least 100 feet behind the truck and the third on the traffic side by the middle of the truck.

If you carry flammable liquids or explosives, you cannot carry open burning flares or fuses, whether you are loaded or empty.

Seat Belts (Required Use)

Except for motorcycles or motorized bicycles, 1966 model year or newer motor vehicles registered in Iowa must be equipped with seat belts and safety harnesses of a type and installed in a manner approved by rules adopted by the department.

Battery Cover

Every storage battery on a truck, unless it is located in the engine compartment, must be covered by a fixed part of the motor vehicle or protected by a removable cover or enclosure.

Hazardous Material

Any vehicle, including private carriers, must display the correct placards and markings when carrying regulated classes and amounts of a hazardous material.

Rear-End Protection

All trucks and trailers must have some type of rear-end protective device or bumper. It must be within 30 inches of the ground, not more than 24 inches from the rear, and within 18 inches of each side of the vehicle. These devices shall be strongly constructed and firmly attached. Vehicles constructed and maintained so the body chassis or other parts of the vehicle affords the rear-end protection (including rear duals of a vehicle) comply with this requirement.

Spare Fuse

If the electrical circuits on your truck cannot be reset, you need one spare fuse for each kind and size.

Mirrors

All buses, trucks and truck-tractors must have two outside rearview mirrors, one at each side, unless the truck is constructed so you can see to the rear by using the interior rearview mirror. If you can use the inside rearview mirror, you only need an outside rearview mirror on the driver's side of the vehicle.

Lighting

All trucks must have two white headlights, one at each side of the truck. All trucks must also have one reflector on each side at or near the rear, two reflectors on the rear, one at each side. Additional clearance lights and reflectors are needed, depending on the length or weight of your truck.

Color and Mounting

All lamps and reflectors mounted on the front of any truck or trailer, except school buses, must be white, yellow or amber. Rear-mounted lamps and reflectors must be red. Stop lights must be red. Mount clearance lamps on the widest part of the permanent part of your vehicle.

Trucks

80 inches or wider but 30 feet or less in length.

Front: two clearance lamps -- one at each side; three identification lights.

Side: one reflector -- at or near the rear.

Rear: two clearance lamps -- one at each side; two reflectors -- one at each side; three identification lamps; rear lamps; signal stop lamp.

80 inches or wider and longer than 30 feet.

Front: two clearance lamps -- one at each side; three identification lights.

Side: two side marker lamps on each side -- one at or near the front and one at or near the rear.

Rear: two reflectors -- one at each side; two clearance lamps -- one at each side; three identification lights; rear lamp; stop light.

Truck-Tractor or Road Tractor

All truck-tractors or road tractors must have these lights:

Front: two clearance lamps -- one at each side if the tractor cab is as wide or wider than the widest part of the towed object.

Side: one side marker lamp at or near the front on each side.

Rear: one tail lamp.

Trailer or Semitrailer

If the trailer or semitrailer you haul has a gross weight over 3,000 pounds, you must meet these lighting requirements:

Front: two clearance lamps -- one at each side -- if the trailer is at all wider than the cab that pulls it.

Side: one side marker lamp at or near the rear on each side; two reflectors -- one at or near the front and rear.

Rear: two clearance lamps -- one at each side; one tail lamp; one stop light; two reflectors -- one at each side.

Tractor/Trailer Combinations

These requirements apply to tractor/trailer combinations longer than 30 feet or wider than 80 inches and with a trailer gross weight greater than 3,000 pounds.

Front: cab wider than trailer:

two clearance lamps -- one at each side of the cab; three identification lights.

trailer wider than cab:

two clearance lamps -- one at each side at the widest point of the trailer; three identification lights.

Side: one side marker lamp on each side at or near the front; one side marker lamp on each side at or near the rear; two reflectors -- one at or near the front and one at or near the rear.

Rear: two clearance lamps -- one at each side; one stop light; one tail lamp; two reflectors -- one at each side.

Speed

Your driving speed depends on the speed limit, your vehicle and load, road conditions and weather. Generally you should try to drive with the flow of traffic. Remember to stick to the posted limits.



70 mph Rural interstate highways and some designated divided highways.

55 mph Controlled access, divided highways and primary roads.

50 mph All other roads.

Following

The driver of a motor truck or a motor vehicle drawing another vehicle must stay at least 300 feet behind other similar

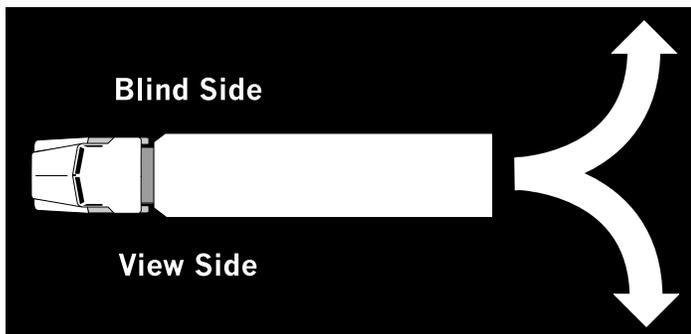
**TRUCKS MUST MAINTAIN
AT LEAST
300 FOOT INTERVAL**

vehicles when traveling outside of business or residential districts. Larger vehicles need added space to come to a complete stop at highway speeds.

Maneuvering

Backing

You are responsible for your vehicle while backing up even if someone is guiding you. If you are driving a large truck or truck-tractor semitrailer rig, backing is difficult, so reduce backing as much as possible. Before you back up, get out of your vehicle and get a good look at the area.



Back out of traffic instead of into it. That way, you will be able to see traffic when you enter the roadway.

Even though you have mirrors, there is a blind side on the right side of your truck. Use a guide if you must back to this side. If no guide is available:

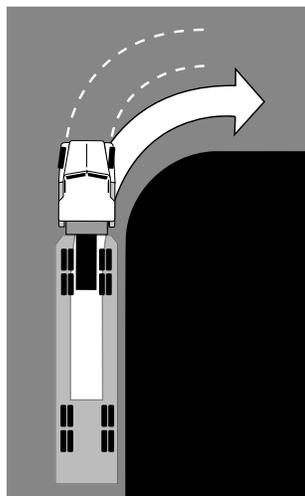
- get out and check out the area;
- sound your horn; and
- use both mirrors while backing slowly.

Periodically blow your horn to warn vehicles or pedestrians who may have entered your path.

Curves

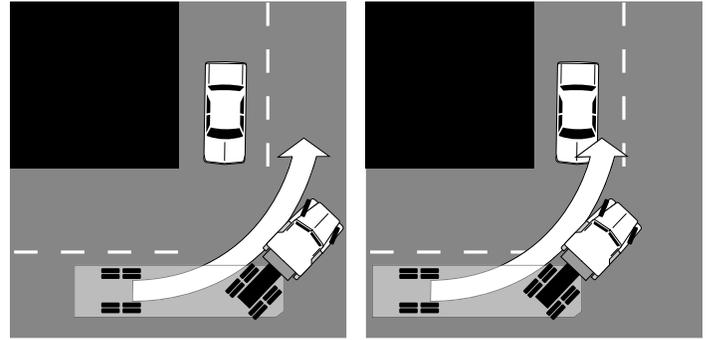
To make it around a tight curve, keep the turning arc of the front wheels in line with the sharpness of the curve. When turning right, keep your front wheels close to the center line. This prevents the rear wheels from dropping off the pavement. Curving left, keep your front wheels close to the right edge to prevent the rear wheels from drifting into the other lane.

Avoid braking in a curve because this can cause you to skid out of control. Slow down before you get into the curve. Accelerate after you have passed the midpoint of the turn.



Left Turns

You must be sure you can complete your turn without your vehicle's rear wheels striking other vehicles due to offtrack. If you need more than one lane, pull into the other lane carefully and continually check traffic in all directions.



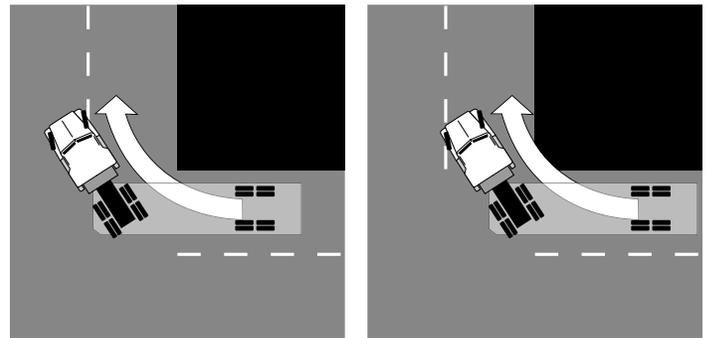
Right

Wrong

Right Turns

Try to stay in your own lane when making a right turn. Because of your trailer's offtrack, that may not be possible. If your rear wheels run over the curb and sidewalks, you risk damage to your tires and create a danger for pedestrians.

Right angle turns are the biggest problem. Narrow streets mean you might have to pull well into the intersection before starting a turn. Be sure to check for smaller vehicles and pedestrians before you move.



Right

Wrong