Chapter 7 - Pavement Marking, Traffic Signs, and Signals

Pavement Markings on the Road

Lines and symbols on the roadway indicate a number of things to drivers: where lanes are divided, where you may pass other vehicles, or change lanes, which lanes to use for turns, where pedestrian walkways are located, and where you must stop for signs and traffic signals.

Meanings of Pavement Markings

Lines — Broken Lines may be crossed in a passing maneuver.

Solid Lines should not be crossed in a passing maneuver.

<u>Colors</u> — Yellow separates traffic traveling in opposite directions.

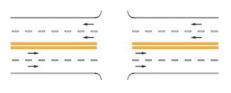
White separates traffic traveling in the same direction.

Direction of Traffic

If the line on the left of you is **yellow**, the traffic on the other side of the line is moving in the **opposite** direction.

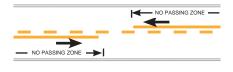
When the line on the left of you is **white**, the traffic is moving in the **same** direction. A solid white line marks the right edge of many roads.

The center marking for roads with four lanes consists of **two solid yellow lines**. The yellow lines tell you the traffic on the other side of the lines is moving in the opposite direction. You should never cross the two solid yellow lines to pass.



No Passing Zones

Two-lane roads may have "no passing zones" marked with a **solid yellow line**. No passing zones are on hills or curves where you cannot see far enough

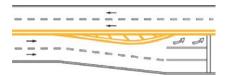


ahead to pass safely. You must complete passing before you enter the no passing zone.

When you see a solid yellow line on your side of the center line, do not try to pass. On any two-lane road, never pass if you cannot see the road is clear for the distance you need to make a pass, even if there is no marking on the roadway.

Left-Turn Lanes

Some roads have marked left-turn lanes. Notice the solid yellow lines and the thick yellow stripes in the illustration below.



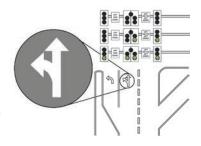
Crosswalks and Stop Lines

When required to stop because of a sign or signal, you must stop before your vehicle reaches the stop line or, if there is one, the crosswalk.

Crosswalks define the area where pedestrians are to cross the roadway. You must yield to pedestrians in or about to enter a crosswalk. Not all crosswalks are marked. Be alert for pedestrians when crossing intersections that do not have defined crosswalks.

Dual-Use Lanes

Dual-use lanes have both a turn arrow and a straight arrow. When both arrows appear on the electric traffic signal, you may either turn or go straight. But if you want to turn, and only the straight arrow is showing, you must wait for the turn arrow.



Shared Center Lanes

Vehicles moving in both directions may use these center lanes for making left turns (or U-turns when they are permitted). On the pavement, left-turn arrows for traffic in one direction alternate with left-turn arrows for traffic coming from the other direction. These lanes are marked on each side by a solid yellow and dashed yellow lines. Turn from this lane as soon as your path is clear.

No Lane Markings

When there are no signs or markings to control the use of lanes, there are rules that indicate which lane is to be used. These rules cover general driving, passing, and turning.

General Driving — In general, never back a vehicle in any travel lane. Drivers do not expect a vehicle to be backing towards them and may not realize it until it is too late. If you miss your turn or exit, do not back up. Go on to where you can safely turn around. Do not stop in travel lanes for any reason (confusion, breakdown, or letting out a passenger). Keep moving until you can safely pull off the road.

On a road with three or more lanes traveling in the same direction, stay in the right lane except to pass. If there is a considerable amount of traffic entering the right travel lane, then use the center travel lane.

Passing — On multi-lane roads, the left-most lane is intended to be used to pass slower vehicles. If you pass on the right, the other driver may have difficulty seeing you and might suddenly change lanes in front of you. Never pass on the shoulder. Other drivers will not expect you to be there and may pull off the road without looking.

Traffic Officers

You must obey traffic officers at all times. If you see a traffic officer giving directions, do what he or she says and ignore any traffic signs or signals. For example, if the officer signals for you to stop at a green light, you must stop.

Traffic Control Signals

Traffic controls include traffic signals, traffic signs and pavement markings. Traffic control also can be provided by law enforcement, highway personnel or school crossing guards. You must obey directions from these persons.

Traffic Signals

Traffic signals are lights that tell you when or where to stop and go.

Flashing Signal All Directions

Flashing traffic signals may occur during emergencies, night time and low traffic volume periods and special events.

Flashing traffic signals have the following meanings:

- A flashing red light means the same thing as a stop sign.
- A flashing yellow light tells you to slow down and proceed with caution.



A **red light** tells you to stop at the stop line, crosswalk, or before the intersection. Unless you are making a right turn, you must wait for the signal to turn green before you proceed. After making a complete stop, you may turn right on a red light if the way is clear of pedestrians and traffic. However, you must not turn right on a red light when there is a "No Right Turn On Red" sign posted.



A **steady yellow light** tells you the traffic signal is changing from green to red. Stop for a steady yellow light unless you are within the intersection or are so close that you cannot safely stop before entering the intersection.



A **green light** tells you that you can go through the intersection. However, you must first yield the right-of-way to traffic and pedestrians who are still in the intersection.



Left Turn Signals

When turning left at a green light, there are three types of left-turn signal phases:

- Permissive Vehicles are given a circular green or a flashing yellow arrow and required to wait for an adequate gap in the opposing traffic prior to making their turn.
- 2. **Protected** Vehicles may turn only when they receive a green arrow while opposing vehicles are stopped by a red light.
- 3. **Protected/Permissive** Vehicles are given a protected phase (green arrow), or a permissive (circular green or flashing yellow arrow) phase, when drivers must choose an adequate gap in opposing traffic.



A **steady red arrow** tells you to stop at the stop line, crosswalk, or before the intersection. You must wait for the signal to turn green or a flashing yellow arrow before you proceed. However, you may need to yield to pedestrians.



A **steady yellow arrow** appears after a green arrow. It tells you the green arrow will be changing to a circular green light, a flashing yellow arrow or a red light. You must be ready to yield the right-of-way to oncoming traffic or to stop.



A **flashing yellow arrow** tells you that you are allowed to drive in the direction the arrow is pointing but are required to wait for an adequate gap in the opposing traffic prior to making your turn. You must yield to pedestrians.



A **green arrow** tells you that you can drive in the direction the arrow is pointing. You must be in the proper lane and the way must be clear of all traffic and pedestrians.



Dark signals, or traffic signals that aren't working operate as a four-way stop.

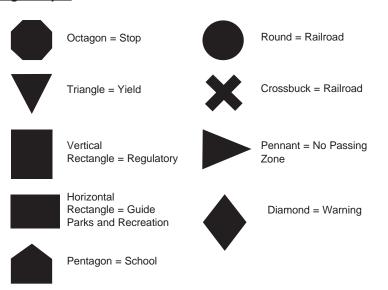
Traffic Signs

Traffic signs tell you traffic rules, hazards, where you are, how to get where you are going, and where services are located. The shape and color of these signs give clues to the type of information they provide.

Sign Colors



Sign Shapes



Warning Signs

These signs are yellow with black lettering or symbols and usually diamond shaped. These signs warn you to slow down and be prepared to stop if necessary because a special situation or a hazard is ahead. Some common warning signs are shown below.

Traffic Control



Stop Ahead

There is a stop sign ahead on the road you are on. Be prepared to stop.



Signal Ahead

There is a traffic light signal ahead on the road you are on. Be prepared to stop.



Pedestrian Crossing

Yield to pedestrians walking in the crosswalk. Slow down.



School Crossing

Slow down. Watch for children crossing the road. Note: This sign is being transitioned to yellow green. This transition will take effect within the next ten years.

Traffic Flow



Exit Speed Advisory

The highway exit ramp has a speed advisory.



Added Lane

Traffic from another road will be entering the road. No merging is necessary because a lane has been added.

Special Road and Traffic



Begin Divided Roadway

The road will soon become two-way traffic divided by a median or barrier.



End Divided Roadway

Two-way traffic will no longer be divided by a median or barrier.



Merge

Traffic from another road will be entering the road. Be prepared for vehicles to move into your lane.



Lane Ends/Merge Left

Two lanes of traffic will soon become one lane of traffic. If you are in the right lane you must merge left, yielding to traffic driving in the left lane.

Turns and Curves In The Road



Curve

A curve sign is used to warn of a curve where the recommended speed is less than the posted speed limit for the highway.



Turn

A turn sign is used to warn of a sharp turn or turn where the recommended maximum speed is 30 mph or less.



Reverse Turn



Speed Advisory

Curve and turn signs have an advisory speed plate that shows the recommended speed for the curve or turn.

Although you may feel comfortable driving at a higher speed in fair weather, you should never do so in rain, snow or icy conditions.

Large Arrow

May be seen on the outside of a turn. Slow down for sharp change



of direction of travel.



Chevron

May be used at curves and turns to add extra emphasis to slow down.

Special Road and Traffic Conditions



Object Marker

Are used to notify drivers of objects in the roadway or very close to the edge of the roadway. This sign emphasizes the need to not strav outside of the marked travel lane.



Soft Shoulder

The shoulder on the side of the road ahead is soft. Do not drive off the pavement.



Slow Moving Vehicle

A reflective orange triangle on the rear of a vehicle means it is traveling less than 25 mph. You may see this sign on construction equipment or farm vehicles.



ROAD

Bicycle - Share the Road

Watch for bicycle riders traveling in the same lane as vehicular traffic



Slippery When Wet

The road ahead becomes unusually slippery in wet weather. Drive carefully in these conditions.



Road Intersections



Side Road Railroad Crossing

A warning of a railway crossing very close to the intersection. Use caution when crossing tracks.



Intersection

Another road crosses the road. Watch carefully for traffic crossing your path.



Side Road Ahead

Another road enters the road from the direction shown on the sign.



T Intersection Ahead

The road you are traveling does not continue. You must turn either right or left.



Roundabout Ahead

A roundabout intersection is ahead. Slow down as required by the speed restriction sign and follow the road rules for roundabouts.

Regulatory Signs

Many regulatory signs are square- or rectangular-shaped and are white, with black or red letters or symbols. They give you information about rules for traffic direction, lane use, turning, speed, parking, and other special situations.

Some regulatory signs have a red circle with a red slash over a symbol. These indicate you cannot do something, for example, no left turn, or no U-turn.

Other common types of regulatory signs are:



No Left Turn



No Right Turn



No U-Turn



No Trucks

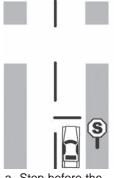


No Bicycles

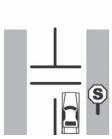
Stop

A stop sign is red with white letters and has eight sides. When you see a stop sign, you must come to a full stop. You must wait until crossing vehicles and pedestrians have cleared the intersection. You must stop at the stop line if one is present even if it is located past the stop sign. If there is no stop line, pull up and stop near the edge of the intersection, look both ways, and then proceed when it is safe.





a. Stop before the stop line.
OR...



b. Stop before the crosswalk.OR...



 If there is no stop line or crosswalk, stop before entering the intersection.

Yield

A yield sign is triangular. It is red and white with red letters. It means you must slow down and yield the right-of-way to traffic in the intersection you are crossing or roadway you are entering.



Wrong Way

You made a wrong turn and have entered a lane of oncoming traffic. As quickly and safely as possible, pull off the road, turn around and go back.



Do Not Enter

When you see this sign at roadway openings, do not enter this road.



One Way

Traffic on some roadways and ramps is allowed in one direction only.



Lane Control

These signs use an arrow symbol to tell you which direction you can go from each lane. The signs are along the road or hanging over the road.



Speed Limit

Speed limit signs indicate the maximum speed allowed by law, and do not mean that all parts of the road can be safely driven at those speeds under all conditions. The speed limit is the maximum allowable speed in ideal conditions. Adjust your speed for hills, curves, slippery roadways, limited sight distance, pedestrians, bicyclists, and slow-moving vehicles. These conditions may make the posted speed limit unsafe. By law, when conditions demand it, you must slow down. Interstate

SPEED LIMIT 70 MINIMUM 40

highways also have minimum speed limits. If this minimum speed is too fast for you, then you should use another route. You may not drive slower than 40 mph on interstate highways under normal roadway conditions.

Keep Right

Some roadway locations require traffic to pass only to the right side of a feature or obstruction.



Use the following guide unless posted speed limits direct otherwise.

Roadway	Maximum Speed
Rural interstates and freeways	70
Rural expressways	65
Interstate highways, freeways or expressways within urbanized areas	60
All other roads and highways not located in an urbanized area	60
Lettered roads	55

The speed limit in any city, town, or village is 25 mph, unless posted otherwise. The Missouri Highway and Transportation Commission has the authority to set speed limits higher or lower than the uniform maximum speed limits for safety reasons or to expedite the flow of traffic. There are more than 1,300 miles of interstate highways in Missouri. Their maximum speed limit is 70 mph. Lower speeds are posted on interstates for safety, usually in urban areas where interchanges and entering and exiting traffic are more frequent.

Railroad Crossing

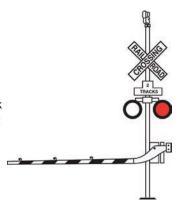
Many railroad crossings have signs or signals to warn drivers. The round advance warning sign tells you that you are nearing a railroad crossing. Never try to beat a train across the tracks. Never start to cross the tracks until there is room for your vehicle on the other side of the tracks. It is not wise to shift gears when crossing railroad



tracks, just in case your vehicle might stall. You may also see a pavement marking before a crossing. Like the round advance warning sign, pavement markings tell you that you are nearing a railroad crossing.

A white, X-shaped sign or "crossbuck" is located at the railroad crossing. This sign has the same meaning as a "yield" sign; therefore, you must yield to trains at crossings. The sign under the crossbuck tells you how many tracks cross the road.

At some crossings, along with the crossbuck sign, you will see side-by-side red lights that flash alternately. At some crossings there is also a crossing gate (some with a bell) that will lower when a train is coming. At both of these signal-equipped crossings, you must stop and you cannot cross the tracks until the train has passed.



When you see any of these signs, SLOW DOWN, look for a train, and be ready to stop. You must STOP if the red lights are flashing or the gate is down. You must stop within 15 to 50 feet before the railroad tracks. DO NOT try to go around the gate.

The red lights may continue to flash after the train has gone by. If there are two or more tracks, look for a second train before you cross.

Work Zone Signs

Work zone signs are fluorescent orange and indicate some type of work is being performed on or alongside the roadway. Obey the work zone signs and be extremely careful when you see these signs. There may be other traffic control devices or flag persons to help direct you safely through the work zone.

If you are caught speeding or passing in a construction zone or work zone on Missouri state roadways, you could be fined a minimum of \$250 for the first offense and a minimum of \$300 for a second or subsequent offense in addition to any other fine authorized by law according to to **Section 304.582,RSMo.**

The following are the most common work zone signs:



Types of Work Zones

There are several types of work zones that take place on Missouri roadways. Knowing the difference between these work zones will help you understand what to expect when driving through them. When driving through work zones, adhere to these precautions:

- Stay Alert! Look for reduced speed limits, narrow driving lanes, and highway workers
- Pay Attention. Do not drive distracted
- Obey the work zone signs
- · Watch for vehicles entering and exiting the work zone

The following are the most common types of work zones a driver on Missouri roadways could encounter.

Shoulder Work Zone

This is work that takes place on the shoulder or beyond the shoulder. You should use caution and perform or be alert of the following:

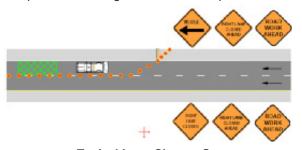
Reduce speed when approaching the work zone

Typical Shoulder Work Setup

Lane Closure

This is work that takes place in the travel lane of a roadway. You should use caution and perform or be alert of the following:

- Merge to the designated lane or a lane that work is not being performed
- Reduce speed to the designated work zone speed limit

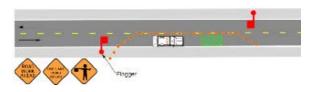


Typical Lane Closure Setup

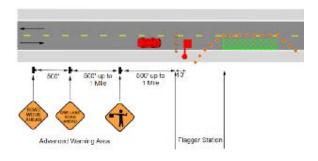
Flagging Operation

This is work that takes place on a two-lane, two-way roadway with one lane closed. A flagger(s) will be present at the beginning and end points of the work zone providing traffic control to oncoming vehicles. You should use caution and perform or be alert of the following:

- Be prepared to stop as you approach the work zone
- · Follow the flagger's instructions



Typical Flagging Operation Setup



Typical Flagging Station Setup

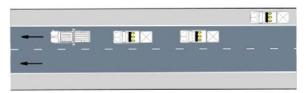
Mobile Work Zone

This is work that takes place in the travel lane of a roadway. Workers may exit their vehicles briefly to conduct work. You should use caution and perform or be alert of the following:

- Multiple slow moving or stopped work vehicles
- Follow the directional guide of the Flashing Arrow Panel
- Workers that may be on or near the roadway

When approaching the mobile work zone, a driver should expect to see a protective vehicle in the lane with a flashing arrow panel designating the correct lane to merge to. It will also be marked with a sign, usually stating "SLOW VEHICLES".





Typical Mobile Work Zone Setup

Authorized Safety Inspection Station Sign



Guide Signs

These signs are square or rectangular, and are green or brown with white lettering. They show direction and distance to various locations such as cities, airports, and state lines, or to special areas such as national parks, historical areas, and museums.

Service Signs

These signs are square or rectangular, and are blue with white letters or symbols. They show the location of various services, such as rest areas and hospitals.



Route Signs

The shape of route signs indicates the type of roadway: interstate, United States, state, or county. When planning a trip, use a highway map to determine your route. During the trip, follow the route signs. This will help you so you will not get lost.

North-south routes are identified by odd numbers. East-west roads are identified by even numbers. Interstate highways that loop around cities are identified by three-digit even numbers. Roadways that direct traffic into a city's road system (called "spurs") are identified by three-digit odd numbers.

Understanding exit numbers is easy when you know interstates traveling west/east are numbered starting from the west and going east. This means exit numbers start at zero and increase as you drive east. Likewise, if you come from the east, the numbers will decrease to the west. Interstates that travel north/south have their exits numbered beginning at the south point and increasing north. If you enter the state from the north

and drive south, then the exit numbers decrease.











Emergency Reference Markers

Emergency reference markers are mile markers placed along the outside shoulder to mark the edge of the roadway and convey information to drivers about their location on the interstate for navigation and emergency situations. The reference markers are located every two-tenths of a mile, so motorists will always be in sight of a sign. They tell the direction of travel and route number.