

## Unit 3 Notes

### Class 7

- 3.1 Motorcycles
- 3.2 Following Distance
- 3.3 Intersections

### Class 8

- 3.4 Parking Manuevers
- 3.5 Responding to Traffic & Timing Signals

### Class 9

- 3.6 Rural Driving
- 3.7 Passing
- 3.8 Drowsy Driving

#### Checklist Items to complete:

Read Washington Driver Guide:  
Sections 3 & 4.

Unit 3 Homework

Behind-the-Wheel Lesson 3

Home driving practice!!

Self-Reflection Questions

## Unit 3: Class 7

### 3.1 Motorcycles *WDG Section: 4-38*

**In 2021, there were 5,932 motorcyclists killed — 14% of all traffic fatalities.** Highest number of motorcyclists killed since at least 1975.

- Most fatal motorcycle crashes involved another motor vehicle turning left while the motorcycle was going straight, passing, or overtaking a vehicle.

#### **Predict they are closer than you think.**

A motorcycle may look farther away than it is because of its small size, and it may be difficult to judge a motorcycle's speed.

- When checking traffic to turn at an intersection or into (or out of) a driveway, predict a motorcycle is closer than it appears.

#### **Hard to see.**

Because of its narrow profile, a motorcycle can be easily hidden in a car's blind spots. Motorcycles can blend into the road and trees, be masked by objects outside a car, or difficult to see as light or weather conditions change.

#### **Increase your following distance.**

Motorcycles have a much quicker stopping distance than cars. You can't stop as quickly as they can. If you rear-end another car, the driver of that car is well protected. Motorcycle riders are completely exposed.

#### **Stay in your lane.**

Motorcycles have use of the complete traffic lane. Do not share lanes with motorcycles. They often adjust their lane position or weave in their lane to be seen more easily and to minimize the effects of road debris.

#### **Wait until their intentions are clear!**

Motorcycles don't have self-cancelling turn signals. Sometimes motorcyclists forget to turn them off after a turn or lane change. **Make sure their signal is for real!**

**No such thing as a fender-bender for a motorcycle rider.** They are completely exposed. Take caution and do everything in your power to prevent motorcycle collisions.

## 3.2 Following Distance *WDG Section: 4-26*

What does a driver lose by keeping less than four seconds of following distance??

- ✓ Blocks your view of important information ahead.
- ✓ Forces you to react to the actions of drivers ahead.
- ✓ Leaves you little or no time to respond.

A habit of giving too little space desensitizes you to the value of adequate space until the unexpected happens.

### **4-second following distance**

A four-second following distance is the minimum safe following distance in normal driving conditions. Be able to recognize different situations and conditions while driving that would require more following distance.

#### **4 or more. Maintain extra space in these situations:**

1. You're a new driver.
2. You have a tailgating driver.
3. Reduced visibility and traction situations.
4. If you are carrying a heavy load or pulling a trailer.
5. The driver ahead seems unsure.
6. You are following a motorcycle.

#### **Advantages of a safe following distance**

- ✓ You get a better view of what is going on ahead.
- ✓ Others can see you better.
- ✓ Better position for safe response options.

#### **How to measure a safe following distance**

Pick a fixed checkpoint. Once the vehicle ahead passes your checkpoint, count. Check to see that your vehicle is short of your fixed checkpoint. Don't let your open front zone turn to a closed front zone!

#### **When you are following others.**

Slow down when you find LOS problems. Be alert in areas where sudden stops are common.

- Intersections where a driver may have to stop for pedestrians.
- Lanes next to parked vehicles.
- High traffic areas: business driveways and parking lots.

**Look beyond the vehicles ahead of you.** Look over, through and around the vehicle you are following. Try to anticipate what the driver ahead is likely to do in response to a changing zone condition. Be alert for changes in traffic ahead.

**Adjust to front closure.** Be sensitive to any closure of space. Don't let your open front zone turn to a closed front zone! Be alert and ready for changes in traffic ahead.

### **Being Followed**

#### **When being followed too closely.**

- ✓ If safe, try to pull over and allow them to pass.
- ✓ If you don't, they may try to pass you in an unsafe location.

**Tailgater... Take Action! IT IS A CLOSED ZONE!** If you must stop fast, you could get rear-ended!

**Control your front zone by getting control of your rear zone. Increase your following distance!!!**

Communicate early.

- Signal early for turns.
- Flash brake lights ahead of time to warn that you are slowing or stopping.
- Slow sooner to make gradual stops.
- Move to lane position 3 to help them see better.

**Total Stopping Distance**

Four seconds of following distance is not the total stopping distance you need to avoid hitting a stationary object! It protects you against the vehicle you are following.

**Three things that must happen when you must stop:**

1. Perceive the hazard ahead.
2. React to the hazard.
3. Brake your vehicle to a stop.

**Perception Distance:** The distance traveled while the driver perceives the need to slow or stop.

- Varies depending on visibility, the hazard, and your ability.

**Reaction Distance:** The time it takes to react and come into the correct braking position.

**Braking Distance:** The distance you travel from the time you start braking until the vehicle stops.

Distance varies depending on conditions:

- Speed
- Weight of the vehicle.
- Roadway/ weather conditions.
- Driver ability

**The faster your vehicle moves, the more energy of motion it has.**

- Energy of motion doubles when the car’s weight doubles. Takes twice as long to stop.
- Energy of motion will change in proportion to the *square* of its change in speed.

**3.3 Intersections** WDG Section: 4-9

**FIND Intersections in the Target Area Range**

**SOLVE & CONTROL in the 15-Second Range**

- Path-of-travel and/or line-of-sight problems.
- Get the best speed, position, and communicate.

**CONTROL the 4-Second Danger Zone**

- Reevaluate with 45° or 90° searches to control problems.
- Make sure your decisions still work before you occupy that space.



**What are some clues that will help you to see that you are approaching an intersection?**

- Signs and signals
- Roadway markings
- Cross traffic

### Which clues might be more visible in the 15-second range or 4-second danger zones?

- Some intersections are difficult to identify in the target area.
- To have great intersection control, the first thing you must do is be alert for intersection clues.
- You can't solve and control problems at intersections if you don't find them.

### 4 – Second Danger Zone Situations

#### Approaching every intersection and any line-of-sight or path of travel problem/hazard:

- A parked vehicle, stopped traffic ahead, curve, hill crest, a vehicle entering traffic crossing the path-of-travel, a pedestrian etc.

#### Every path-of-travel restriction temporarily or permanently blocks your ability to occupy space.

- Traffic controls: Signs, lights & markings, intersection shape, pedestrians.
- Vehicles: Stopped, parked & moving

#### Intersection line-of-sight problems are Danger Zones!

Each blocks your ability to gather information about the condition of your intended path-of-travel.

- Vehicles, Buildings, Fences, Trees, bushes, Elevated terrain, Signs, billboards

#### Use organized searching to FIND, SOLVE & CONTROL every intersection line-of-sight and path-of-travel problem before entering.

Always search the left, front and right zones for open, closed, and unstable zone conditions:

- ✓ Search at 45° where no stop is required.
- ✓ Search deep at 90° when stopped.
- ✓ Search all corners for pedestrians.
- ✓ Be sure your path is OPEN before entering.

Before your foot goes on the brake, check rear zone conditions.

## Unit 3: Class 8

### 3.4 Parking: Rules & Maneuvers. *WDG Section: 3-27-3-29*

Drivers are responsible for making sure their vehicle is not a hazard when it is parked.

No parking zones – There are many areas where you cannot park. Check for signs that may prohibit or limit parking. Some parking restrictions are indicated by colored curb markings.

#### Do not park:

- ✓ In an intersection.
- ✓ On a crosswalk or sidewalk.
- ✓ In a construction area if your vehicle will block traffic.
- ✓ Within **30 feet** of a traffic signal, stop sign, or yield sign.
- ✓ Within **20 feet** of a pedestrian safety zone.
- ✓ Within **15 feet** of a fire hydrant.
- ✓ Within **20 feet** of a fire station driveway on the same side of the street or within 75 feet of the fire station driveway on the other side of the street.

- ✓ Within **50 feet** of a railroad crossing.
- ✓ On a bridge or overpass or in a tunnel or underpass.
- ✓ More than **12 inches** from the curb.
- ✓ On the wrong side of the street.
- ✓ Within **5 feet** of a driveway, alley, private road, or area of the curb removed or lowered for access to the sidewalk.
- ✓ On the shoulder of the freeway unless you have an emergency.

## Angle & Perpendicular Parking

### Found a spot!

- **Use your turn signal.**
- **Be Courteous:** If you see vehicles backing out, stay back and give them room.
- **Get side space (6-8 feet):** The end of the stall line should be no closer than the end of your side view mirror.
- **Begin Turn:** See the end of the side view mirror cover the end of the stall line of the parking space.
- **Control speed:** Turn into the space using your brake to control speed.
- **Target the center of the parking space:** Line up your reference point.

Parking Reference Points	
<p><b>Angle Parking:</b></p> <p><b>Park on the right side:</b> Curb lines up in the front corner of the driver's side window.</p> <p><b>Park on the left side:</b> Line up curb with the middle of the driver side door.</p>	<p><b>Perpendicular Parking:</b></p> <p>See the line under the side view mirror.</p>

### Leaving the parking space

**Communicate:** Emergency flashers!

### Vision & Speed:

- Keep your head on a swivel, look back with glances to the front and sides.
- Control your speed with your brake.

Backing out	
<p><b>Angle Parking</b></p> <p>Back straight slowly until you can see past the bumper of the vehicle in the direction you are backing out.</p>	<p><b>Perpendicular Parking</b></p> <p>Back straight slowly until the side mirror covers the taillight.</p>

### Check front swing:

Before turning the wheel, check the front swing so you don't strike the other car when turning.

### Straighten the car:

Once the car is straight in your lane, stop. Shift to drive. Release brake pressure and straighten the wheel when moving forward.

## 3.5 Responding in Traffic

### Stopping in Traffic

#### First in line:

1. **Legal stop:** Behind lines/ crosswalk/ edge of road
2. **Safety stop:** Creep forward to see.
3. **Staggered Stop:** When stopped first in line, inside lane. See stop line over hood. 15' from intersection.

#### Point of No Return

That point at which you can no longer stop without entering an intersection.

- Two seconds away from the intersection.

Speed affects length of space consumed in 2 seconds.

Faster speed = longer space

- 20 mph = 30 feet per second
- 40 mph = 60 feet per second

### Stopping in a Line of Traffic

#### When stopping in a line of traffic:

1. **Stop to see the tires of the vehicle in front of you and some pavement.**

What are the advantages?

- ✓ If the front car stalls, you can get around it
- ✓ Space creates escape paths.
- ✓ You have empty space to minimize a rear end impact.

2. **Monitor the rear zone until at least 2 cars are stopped behind you.** Vehicles stopped behind your vehicle serve the same purpose as "sand barrels."

#### Sand barrels.

- ✓ Inertial buffers
- ✓ Strategically placed
- ✓ Slows and softens the force of impact.

**You are vulnerable to high impact rear end forces until there are at least 2 cars stopped behind your vehicle.**

The more vehicles stopped to the rear, the less the force of impact will be.

### Managing Space & Stopping in Traffic

#### Try to time arrival into an open zone.

1. See the red light, CLOSED POT, at least 15 seconds away.
2. Check rear zone for traffic following.
  - Communicate with traffic behind. Tap brake lights and begin braking.
3. Control rear zone: adjust speed gradually. Gradual approach to stop location.

### Make smooth stop.

1. See tires of the front vehicle and some pavement.
2. Monitor your rear zone until there are at least 2 cars that are stopped behind you.

### Start with a 2 second delay.

- **When stopped in a line of traffic:**
  - Helps the process of creating a 4-second following distance.
- **When stopped first in line at a traffic signal:**
  - Allows time to search the intersection. Proceed when CLEAR!

### Timing Traffic Lights and Turning Left:

Try to time your arrival to get to the intersection alone. Charging a Closed Zone is a High Risk!

The greatest danger of crash exposure occurs while making a moving left turn.

- ✓ *Oncoming traffic also has the green.*
- ✓ *Will cross most lanes of cross traffic and all oncoming lanes of traffic.*
- ✓ *Must accurately judge for a safe to cross.*
- ✓ *May be necessary to stop, increasing the chance of a rear end impact.*
- ✓ *Opposing traffic may block your view of traffic in oncoming lanes.*
- ✓ *Oncoming traffic may block your view of pedestrians in the crosswalk.*

### While waiting to turn: Wait behind the crosswalk.

- ✓ Some people think yellow means go faster.
- ✓ You may get stuck in the intersection when light turns red.
- ✓ Blocking the box is dangerous and carries heavy fines.
- ✓ While waiting to turn, wheels should be straight.

### Types of Left Turns at Traffic Signals

#### Unprotected Left Turns

When the turn is unprotected, you must yield the right-of-way to oncoming traffic and pedestrians before turning. Drivers should monitor opposing traffic and wait for a space large enough to move through the intersection safely.

#### A Protected Left Turns

Allowed when a special left-turn light, green arrow, or a delayed green lets you turn while oncoming traffic is stopped. Some left turns may be prohibited once the protected left-turn sign ends by a sign or a red arrow. If the turn is allowed, respond to it like you would an unprotected left turn.

1. **Left-turn light:** Provides a protected left turn.
2. **Green arrow:**
  - Turns off the protected turn has ended. Can appear with the normal red, yellow, and green signals.
  - Some are followed with a yellow arrow as a warning.
3. **Delayed green light:** Indicates one side of the intersection has a green light while the light for the oncoming traffic remains red. Allows traffic from one side to turn or go straight.



### Waiting to make a left turn: Four searching areas.

1. **Rear zone for traffic approaching from behind.**
  - Monitor until there are two cars stopped behind your vehicle.
2. **Look ahead, find a gap in traffic to turn.**
3. **Check your path of travel to see if it will be open.**
  - Check for pedestrians that are waiting to cross.
4. **Watch for the traffic signal to change.**
  - When the signal turns yellow, see if oncoming is traffic stopping.
    - If able make the turn. You must be in the intersection before the light turns red.

### Turning right on red

- ✓ Permitted unless a sign prohibits the turn.
- ✓ Must make a complete stop.
- ✓ Yield to all traffic and pedestrians.
- ✓ Time your entry into the intersection – create and keep open space to the side of your vehicle.

### Turning Red on Red. Searching areas.

1. **Rear zone for traffic approaching from behind.**
  - Monitor until there are two cars stopped behind your vehicle.
2. **See an open turning path to left:** Watch front for vehicles with a protected left turn.
3. **See the signal light change:** Know who has the green.

### Lane Changes *WDG Section: 4-11*

#### Why change lanes?

- ✓ Lane is ending – merge.
- ✓ Preparation for a turn.
- ✓ To create open space to the front, rear, sides.
- ✓ Entering or exiting highway or freeway.

#### Common errors when changing lanes.

- Fails to make proper checks for a stable gap.
- Forgetting to cancel signal.
- Slowing for no reason.
- The multi-lane sweep, crossing more than one lane at a time.

#### Changing lanes in heavy traffic

Signal and ask someone to let you in. Someone may create space and let you in.. Others won't. Be patient, keep your signal on and look for space to enter. **Caution! Your front zone is main priority!**

**It is illegal to change lanes if you cannot finish it before reaching the intersection.** Change lanes once you exit the intersection.

### Completing the Lane Change

- Adjust your speed to traffic flow in new lane.
- Cancel your signal.
- Check rearview mirror.
- Create space around your vehicle.

## 3.6 Driving in Rural Areas

**Rural Roadways can have a variety of hazards and can be unpredictable.** *Although 19 percent of the U.S. population lived in rural areas, rural fatalities accounted for 54 percent of all traffic fatalities in 2019.*

### Speed is the Biggest Hazard

- The higher speeds of rural driving greatly increase the dangers of oncoming traffic, blind curves and hills, and people entering the road at lower speeds.
- **To drive safely in the country, your stopping distance is never greater than the distance you can see ahead.**
- Slow down when approaching a curve or hill so you can stop in time if there is an obstacle like an animal or stalled car.

### Animals

Watch for farm animals. You may see “Free Range Area” signs. If you encounter a herd of animals on a highway, stop and let the animals cross. Once they are gone, proceed with caution.

### Deer





#### Avoiding collisions with deer.

- **Watch for signs!** These signs are put in areas that have had many deer/vehicle collisions.
- The high time for these collisions is October - December due to breeding deer and when they travel the most.
- Deer activity is highest at dawn and dusk which is the high time for commuter traffic.
- Deer travel in groups: if you see one, expect more.
- See a deer near the roadside, slow down.
- Using high-beam headlights will help increase your vision and will increase your time to react to a deer hiding on the roadside who decides to jump in front of your car. If a collision with a deer is unavoidable, it is usually best not to swerve to avoid it, brake and hold the wheel straight.

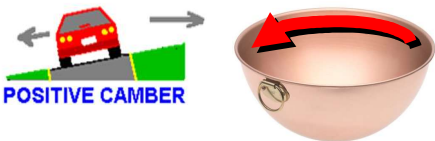
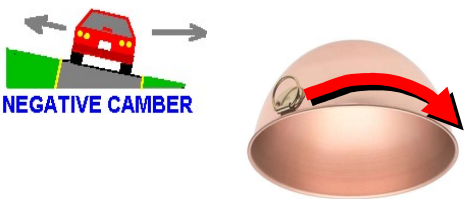
### Roadside Hazards

- Shoulders may be narrow, uneven, and soft.
- Bridges, guardrails, bushes, and trees.
- Entrances to homes, businesses, and farmer’s fields are areas to anticipate last moments stops.

## Curve Types

<p><b>Constant Radius:</b> Every curve follows part of the circumference of one or more circles (an arc), A curve that follows the circumference of just one circle is called a constant-radius curve.</p>	
	<p><b>Decreasing Radius:</b> This type of corner is very deceptive and dangerous. The further the car goes into the curve, the sharper the curve becomes, and more steering is needed.</p>
<p><b>Increasing Radius:</b> This type of curve is sharper as you enter it and requires a reduction in the amount of steering input as you exit.</p>	
	<p><b>Uphill/ Downhill Curves:</b> These curves will naturally make the car gain or lose speed.</p>

## Roadway Camber

<p><b>Positive Camber or Bank:</b> The outside edge of lane is higher than the inside edge of lane.</p> <ul style="list-style-type: none"> <li>Like the inside of the bowl – help to counteract the natural roll forces to the right as the vehicle curves left.</li> </ul>	 <p><b>POSITIVE CAMBER</b></p>
 <p><b>NEGATIVE CAMBER</b></p>	<p><b>Negative Camber or Bank:</b> The outside edge of lane is lower than the inside edge of lane.</p> <ul style="list-style-type: none"> <li>Like the outside of the bowl – increases the roll forces to the right as the vehicle curves left. A further reduction of speed is required!</li> </ul>

### See every curve as a zone change!

#### Best Information

See curve in target area.

- Look for signs that may give advisory for curve.
- Check the rear zone.

#### Tracking Curves

- Look into the curve- turn your head.
- To track accurately through the curve - look through the curve, don't target.

To maintain tracking control and find new problems that might affect your path-of-travel, use your central vision to search to the new target area.



## Approaching Curves *WDG Section: 4-20*

### Best Speed

- See radius of curve, helps to determine safest speed.
- See 4 seconds of visible road.

### Best Lane Position

Check the left and right front zones for traffic and LOS-POT's to determine best lane position for approach.

- Exit in Lane Position 1

## Approaching Hills

- When approaching a hill take LP 1.
- At the hillcrest evaluate your path of travel.
- Search over the hill for open or closed POT.
- Get the best lane position for POT.

## 3.7 Passing & Being Passed *WDG Section: 4-31*

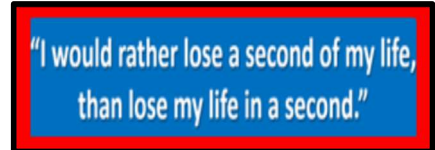
### Is the pass necessary?

#### Can it be done safely and legally?

- Is the car in front of you traveling at or near the speed limit?
- The car you are passing should be traveling both 10 mph slower than both your speed and the speed limit.

#### Are you going to be turning soon?

You should have enough room to complete the pass and put enough distance between you and the car you just passed.



**Find clues ahead that tell you whether it is safe or not to pass. Passing is unsafe and unlawful in areas where LOS-POT Zone Changes are present.** *List locations where it is illegal to pass.*

Curves, Hills, Railroad crossings, Tunnels, Bridges, Double Yellow, No passing zones, oncoming traffic, intersections.

### Can I exceed the speed limit when passing?

- In Washington is it legal to exceed the speed limit when passing, on two lane highway, one lane going in each direction, for a reasonable distance. Once you complete the pass and return to your lane, it is required for you to slow down and maintain the speed limit.

### Passing safely & legally

You will have to judge whether you have enough room to pass safely.

- Do not count on having enough time to pass several vehicles at one time.
- As a rule, only pass one vehicle at time.

## Passing position

### Stay back.

- A common mistake for a driver to make is getting too close to the vehicle ahead.
- Gives you room to accelerate before moving into the passing lane and space to return to the passing lane if the pass is no longer safe.

### Lane position 2

- Best view of the conditions ahead.
- Look for oncoming vehicles and no passing zones.

### Drivers passing a vehicle going in the same direction must be ready to yield in case the other driver suddenly turns, slows down, or stops.

- **Vehicles to the rear.**  
Make sure the vehicle behind you has not already initiated a pass.
- **Vehicles on side roads.**  
Make sure they are not going to pull into the lane you are going to pass in.

### Oncoming vehicles

One way to determine if oncoming traffic is far enough away if the vehicle doesn't appear to be moving. If you can see it moving closer, it is probably too close.

### Passing the other vehicle

- SMOG
- Avoid hesitation: Accelerate quickly and into the passing lane. By going 10 MPH faster than the vehicle you are passing – it will take you about 10 seconds to complete the pass.
- Continue to search for changes that may affect you.

### Returning to your lane

- Check your rear-view mirror for the front of the car you are passing in rearview mirror.
- SMOG
- Change lanes and maintain speed.
- Cancel turn signal.

### Being Passed

A slow-moving vehicle with five or more vehicles following, are required to pull over and stop when safe to let them pass.

- When slow vehicle turnout lanes are available, use them.

### Communicating with passing driver: Look ahead.

- If it is an unsafe location for the vehicle behind you to pass, move your vehicle to lane position 2.
- When it is safe for the other car to pass, move to lane position 3. This will give the other vehicle a better view of traffic.

### Maintain your speed.

It is illegal for you to speed up.

- You could adjust your speed slightly. By slowing down, you let the vehicle pass you in a shorter amount of time.

**Once the vehicle has passed:** Create space to the front.

- The driver that just passed you may slow down suddenly, forcing you to brake.
- The best decision is to reduce your speed until you have a safe following distance.

**Patience and understanding on the part of the passer and the vehicle being passed are the keys to safe passing.**

### **3.8 Drowsy Driving**      *WDG Section: 5-3*

**What is Fatigue?** Describes a physical and/or mental state of being extremely tired and weak.

Causes:

- Results from mental or physical exertion or illness.
- Disruption of Circadian Rhythm: Our biological clock that regulates our sleep patterns. Sun comes up, we wake up. Sun goes down, we lay down.

**Drivers who are at most risk:**

- Sleep deprived, driving long distance driving without breaks.
- Driving at night and on boring or rural roads.
- Driving alone,
- Taking medications that increase drowsiness.
- Traveling frequently.
- Shift workers, people with sleep disorders.

**When law enforcement is investigating a crash, what are some clues that may lead to the conclusion that the driver fell asleep at the wheel?**

- Most happen between midnight – 6:00 am & in the mid-afternoon. (circadian dip)
- The driver is alone and more likely to be male.
- A single vehicle drifts off the road and hits a stationary object.
- There is no evidence of braking or evasive maneuvers.
- Most are rear-end or head-on collisions.
- Many involve serious injuries and/or fatalities.

**Most collisions happen at speeds less than 40 mph and happen within 25 miles of home.**

Why?