chapter 5

MANAGING RISK WITH THE IPDE PROCESS

KEY IDEA

How does learning and using the IPDE Process help you to be a low-risk driver?

YOU'RE THE DRIVER

As a driver, you'll be faced with many situations that present some kind of risk. Are you aware of the driver-contributed risks involved in driving? How can you manage risks posed by other drivers? Learning an organized system for driving helps you to understand how to manage risk in order to be a safe driver.

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BULARY

Drivers who use an organized system will be better equipped to manage risk and thus reduce the possibility of damage or harm. Good searching habits and the ability to manage space on the roadway are basic tools for low-risk driving. The IPDE Process along with the Zone Control System can help you enjoy low-risk and low-stress driving.

Understanding Risk Factors

All activities throughout a person's life involve some degree of risk. When driving a vehicle, the possibility of a crash is always present. The driver, vehicle, roadway, and environment contribute to the **risk factors**, or anything that can increase the possibility of a collision, involved in driving. As you drive, be aware that all of the risk factors—either separately or together—play a major role in the level of risk you face.

Driver-Contributed Factors As a driver, you create risk when you don't give your undivided attention to the driving task. Adjusting the radio, combing your hair, using a cellular phone, and eating or drinking while driving affect your ability to be a low-risk driver.

Driver-contributed risk factors also apply to other drivers on the roadway. Drivers who take unnecessary chances can increase your level of risk and chance of conflict.

Vehicle-Contributed Factors As a driver, it is your responsibility to properly maintain your vehicle. Vehicles with bald tires, a dirty windshield, broken headlights, or worn wiper blades contribute to the possibility of a crash.

Roadway- and Environment-Contributed Factors Conditions such as bright sun, dark shadows, and glare contribute to driving risk. Road construction, a sharp curve in the road, or ice and snow also create risk for drivers. Because some degree of risk is always present, try to make sure nothing about your own condition or the condition of your vehicle further increases your level of risk.

The IPDE Process

Safe driving depends on your ability to see and analyze traffic situations correctly. However, that alone is no guarantee that you will identify all critical clues and make correct driving responses in every situation. Because driving is primarily a thinking task, drivers who develop a system that deals with all traffic possibilities have fewer close calls and fewer crashes than drivers who don't use an organized system.

The IPDE Process is an organized system of seeing, thinking, and responding. IPDE actually represents the four steps for safe driving: identify, predict, decide, and execute.

You begin the IPDE Process by "reading" traffic situations to gather information in order to make your decision and execute them. To process information properly, you must identify hazards and predict points of conflict. You then decide how to avoid the conflict by executing the correct action.

The Zone Control System is an organized method for managing six zones of space surrounding your vehicle. Zone Control allows you to see and respond to changes in the traffic environment at a time when best control can be achieved.

The Zone Control System includes the following steps: 1. See a zone change. 2. Check other zones. 3. Create time and space by getting the best speed control, lane position, and communication.

Using the IPDE Process in conjunction with the Zone Control System will help you develop behaviors that will make you a safe and responsible driver.

FIGURE 1 THE IPDE PROCESS

1 Identify
Use visual search pattern to identify
- open and closed zones
- specific clues
- other users
- roadway features and conditions
- traffic controls

2 Predict
Use knowledge, judgment, and experience to predict
- actions of other users
- change of direction
- points of conflict
- consequences of your actions

3 Decide
Decide to use one or more actions to
- change or maintain speed
- change direction
- communicate

4 Execute
Execute your decisions to
- control speed
- steer
- communicate
- combine actions

review it 5.1

1. Describe three risks posed by drivers, vehicles, and the roadway and environment. What actions could you take to reduce the risks posed by these factors?

Critical Thinking

2. **Relate Cause and Effect** Explain how the IPDE Process helps you reduce the risks involved in driving.

3. **Analyze** What do you think would happen if you tried to use the steps in the IPDE Process in a different order?

IN THE PASSENGER SEAT **Record Risk Factors** For one week, record the number of driver-, vehicle-, roadway-, and environment-contributed risk factors you notice while in the passenger seat. Make a graph to compare the factors. Which one did you notice most often? Explain to the class why you think it occurred most often.

lesson 5.2
IDENTIFY AND PREDICT

OBJECTIVES

- Explain what it means to identify as it relates to the IPDE Process.
- Identify the positions of each of the six zones of the Zone Control System.
- Identify the eight steps of an orderly visual search pattern.
- Explain how knowledge and experience help you make accurate predictions.

VOCABULARY

- identify
- zone
- open zone
- line of sight
- target area
- closed zone
- target-area range
- 12–15-second range
- 4–6-second range
- orderly visual search pattern
- field of vision
- depth perception
- scanning
- ground viewing
- predict

The identify and predict steps of the IPDE Process are critical in every driving environment. These two steps begin your thinking process for every situation you encounter. With practice and experience, these steps will seem like a natural part of driving. As you search your path to identify possible problems, you will be making judgments and predictions about what conflicts may occur.

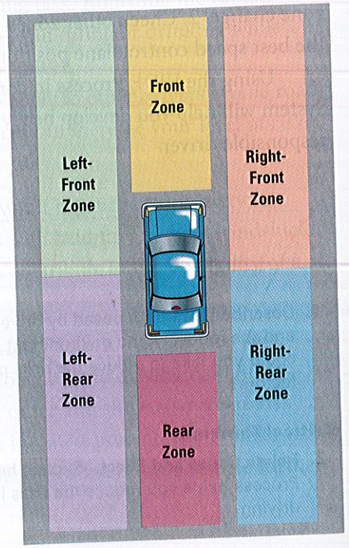
Identify

The first step of the IPDE Process is **identify**. This step involves much more than just seeing. You must know when to look, where to look, how to look, and what to look for.

Any aspect of the Highway Transportation System (HTS) can become a hazardous situation. This includes the roadway, your own vehicle, other vehicles or pedestrians, and traffic controls. Clues you identify may cause you to change direction or speed, signal others, or perform any combination of maneuvers. The sooner you identify a possible hazard, the more time you will have to react safely.

Zones The Zone Control System helps you make quick and accurate use of the IPDE Process by setting a standard of what to identify and what to do when you find it. A **zone** is one of six areas of space around a vehicle that is the width of a lane and extends as far as the driver can see, as shown in FIGURE 2.

FIGURE 2 ZONE LOCATIONS



An **open zone** is space where you can drive without a restriction to your line of sight or to your intended path of travel. Your **line of sight** is the distance you can see ahead in the direction you are looking. Your intended path of travel is the space your vehicle will occupy. Your path of travel is directed toward the target area. The **target area** is the section of the roadway where the target is located in the center of your intended path, and the area to its right and left.

A **closed zone** is a space not open to you because of a restriction in your line of sight or intended path of travel, such as a red traffic light. The sooner you identify a closed zone, the more time you have to respond. With more time, the better chance you have to achieve control of the situation by lowering the degree of risk.

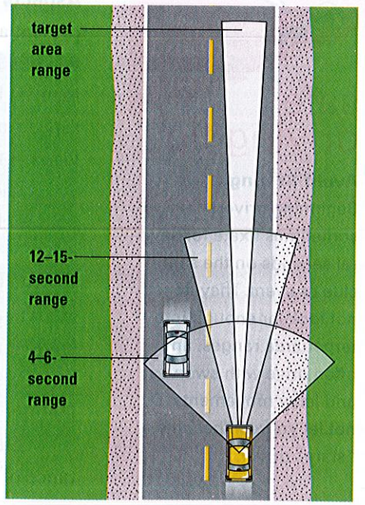
Searching Ranges In order to keep alert to the conditions of your zones, there are three searching ranges that need to be evaluated as shown in FIGURE 3. A searching range is a certain distance ahead of the vehicle where the intended path of travel is systematically evaluated. The first searching range is the **target-area range**, which is the space from your vehicle to the target area. You search this range to detect early any conditions that might affect your intended path of travel.

Next you will search the **12–15-second range**, which is the space you will travel in during the next 12–15 seconds. This range is where you need to identify changes in your line of sight or path of travel to make decisions about controlling your intended path. Try to identify the possibility of closed zones by searching to the left and right.

The **4–6-second range** is the space you will travel in during the next 4–6 seconds. In this range you need to get the final update of how you are controlling your intended path of travel.

Orderly Visual Search Pattern You can use any of several patterns to help develop your own identifying process. An **orderly visual search pattern** is a process of searching critical areas in a regular sequence. To use an orderly visual search pattern, look for clues in and around your intended path of travel in a systematic manner.

FIGURE 3 THREE SEARCHING RANGES



Below is an example of an orderly visual search pattern for straight-ahead driving.

1. Look ahead to your target-area range.
2. Evaluate your left-front, front, and right-front zones in the 12–15-second range. Search driveways and intersections for possible changes in your line of sight and path of travel.
3. Glance in the rearview mirror to check your rear zones.
4. Evaluate your 4–6-second range before entering that space.
5. Look ahead again to evaluate another 12–15-second range.
6. Check your 4–6-second range.
7. Glance in the rearview mirror.
8. Check your speedometer and gauges.

You will repeat this pattern continually as you move forward. Each look or glance should last only an instant as you evaluate your zones and the areas to the left and right. Be careful not to stare as you search. Practice using your orderly visual search pattern as a passenger—in addition to when you are driving—so it will become a safe driving habit. You will then be able to adjust your search pattern for any maneuver or driving environment.

Aspects of Vision Different driving environments and traffic situations present a variety of visual search problems. As you gain driving experience, you will learn what kinds of clues and situations are most important to identify in order to keep an open zone in your path of travel. The primary aspects of vision necessary for driving include central vision, peripheral vision, and depth perception.

The area you can see around you while looking straight ahead is called your **field of vision**. Many of us can see an area of about 90 degrees to each side, for a total picture of 180 degrees. The area you can see clearly and sharply is seen with your central vision. This is a narrow cone of only up to 10 degrees. The area you can see to the left and right of central vision is your side vision, or peripheral vision. As the distance from central vision increases toward the outer edge of peripheral vision, the less clearly you can identify clues and events.

Depth perception, or the ability to judge the relative distance of objects correctly, is especially important for driving.

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You must be able to judge distances correctly in order to pass and follow vehicles, and judge stopping distances.

You should always look ahead 12–15 seconds into your target area as you drive. Looking far ahead with your line of sight will help you identify clues and analyze situations before your zone becomes closed. There are many restrictions to your line of sight such as curves, hills, large vehicles, weather conditions, buildings, trees, or even a dirty windshield.

Scanning Develop the art of **scanning**, glancing continually and quickly with very brief fixations through your orderly visual search pattern. You are looking and seeing as you scan, but not staring at any one event or clue. Staring blocks out side vision, causes lack of attention, and tends to create high-risk driving habits. Keeping your eyes moving helps you stay more alert with your attention at a higher level. You are then more likely to keep up with all the changes in your field of vision.

Selective Seeing

Knowing where and how to look does little good if you do not know what to look for in your target area. Develop the technique of selective seeing in your identifying process. Selective seeing means that you identify and select only those clues and events that restrict your line of sight or can change your intended path of travel.

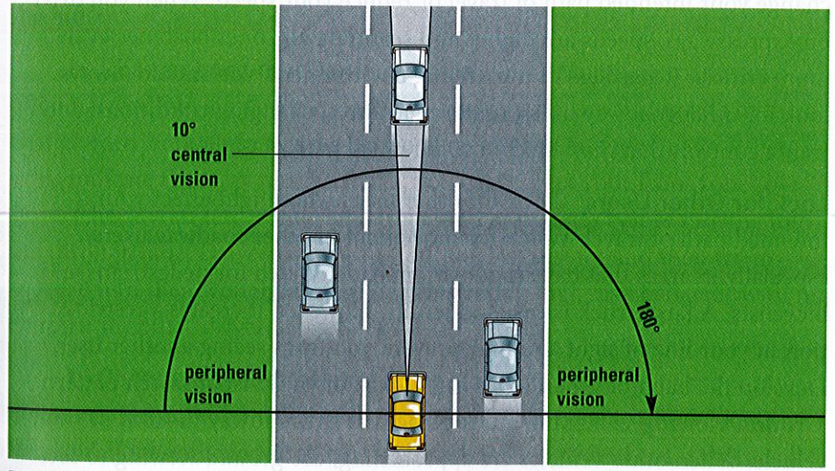

FIGURE 4 You see most clearly in the area of central vision, but peripheral vision is equally important.

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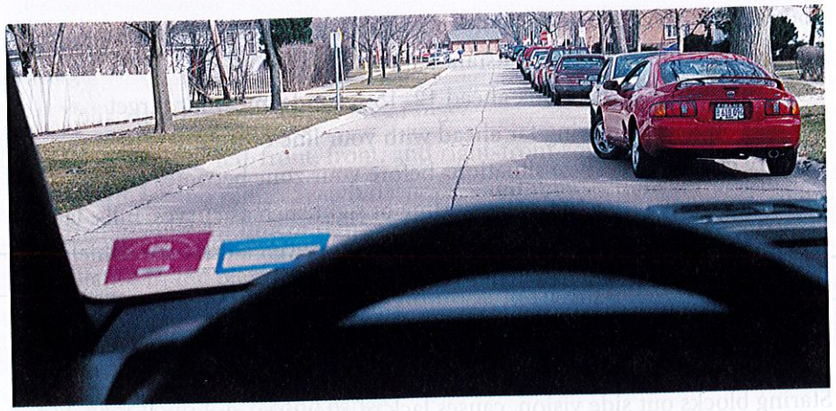


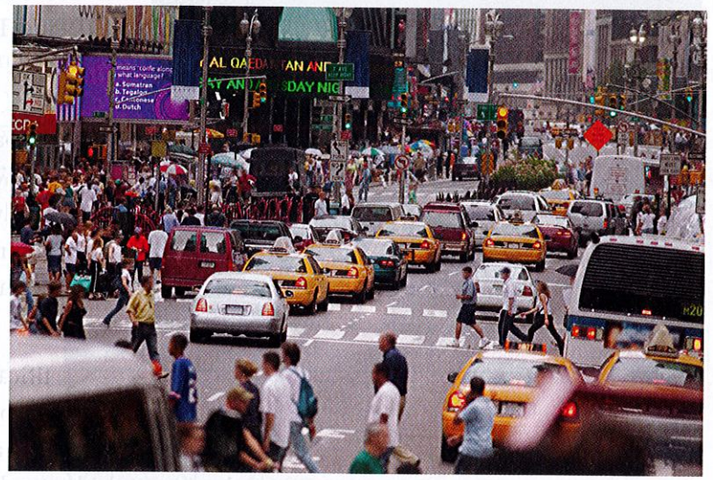
Look for Open Zones Use your visual search pattern to look for specific driving-related clues that might cause an open zone to close. You might identify exhaust coming from a tailpipe or a driver sitting in a car, indicating that a car might be about to enter your path of travel and cause your front zone to close.

The kinds of clues you search for will change as you drive in different environments. When driving in the city, search for intersections, parked cars, pedestrians, and traffic. On open highways, search areas much farther ahead. Look for crossroads, slow-moving vehicles, and animals. Any of these can suddenly cause an open zone to close, resulting in the need to change your intended path of travel or reduce your speed. When you drive on expressways, speeds are higher and scanning all zones becomes even more critical. Regardless of the driving environment, you should always look for other roadway users, roadway features, changing conditions, and traffic controls that may affect your intended path of travel.

Look for Other Users Look for other users who might affect your intended path of travel. Watch for movement of other roadway users, especially in areas that have shadows or shade. Watch for pedestrians and bicyclists. A large truck is easy to identify. However, it creates a restriction in your line of sight and may prevent you from seeing another user. Develop the habit of ground viewing as part of your visual search pattern. **Ground viewing** is making quick glances to the roadway in front of your vehicle. When other vehicles are approaching, use ground viewing to see where they are headed by checking the direction of their front wheels.

Always be on the lookout for problem drivers. Drivers who speed and drivers who pass without enough room or in a no-passing zone are problem drivers. Others frequently change lanes, trying to get ahead of the normal traffic flow, and can cause a sudden change in your open-zone condition.

FIGURE 6
Drivers need to look for many different possible conflicts in close traffic. **Identify** What hazards could challenge a driver in this situation?

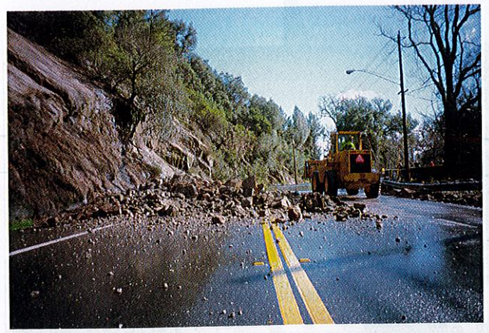


Look for Roadway Features and Conditions The roadway itself is another important area to watch. Identify intersections, hills, and curves early. Be aware ahead of time that the width of your lane might be reduced for road construction or other obstacles. An intersection is a high-risk area where the management of your path of travel needs constant attention. Stopped traffic or entering traffic can cause line-of-sight restrictions or even a closed zone. A hill is a line-of-sight restriction that could hide a closed zone as you go over the hill.

▶ **Change from multilane to single lane** Multilane roadways often narrow into single-lane roadways. Identify signs warning you of this change early enough to avoid a closed zone in your intended path. When signs indicate roadway repairs ahead, you can expect your front zone to close. Check your left-front, right-front, and rear zones before moving into the through lane. Drivers who wait until the last instant and then try to squeeze into the through lane are demonstrating high-risk behavior with no concern for other drivers.

▶ **Change in width of lane** Standing water, patches of snow, potholes, or objects in the roadway can cause an open zone to close. Identify the conditions early and then check your rear zone to find out if there will be a problem if a stop is needed.

FIGURE 7 Is it safe to drive around the object?



▶ **Roadway surface** Identify the roadway surface and condition each time you begin to drive. There will be times when the weather will change while you are driving. Roadway surfaces may be dry when you start out and then become wet and slippery with rain, snow, or ice as you are driving. Be prepared to adjust your driving for changing weather conditions that might affect the roadway surface. A gravel surface can cause sliding or skidding just like a wet or slippery surface.

▶ **Roadside hazards** Your identification process should keep you scanning for bicyclists, pedestrians, parked vehicles, and animals. Watch for shopping center entrances and exits, roadside stands, and restaurants. Other drivers can appear from almost any location and cause your open zone to close. Continual scanning of your target areas will help you identify these other drivers in time to avoid sudden actions or conflict.

Look for Traffic Controls Learn to look in different places for traffic controls. At major intersections, controls can be overhead, in the center of the road or on a corner. Identify traffic controls as early as possible so you are ready to respond appropriately.

Predict

Once you have identified a hazard, predict how this hazard might affect your intended path of travel. When you **predict**, you take the information you have identified and imagine what might happen. You predict where possible points of conflict may occur. Your predictions will be based upon those conditions that could reduce your line of sight or change your intended path of travel.

If you had to face just one hazard at a time, you could more easily predict the possible outcome. However, most of the time you will be faced with more than one possible hazard or conflict, so predicting can become more complex.

How to Predict Predicting involves what is happening in your zones, what could happen, and if it does happen, how the change could affect you. To predict, you must evaluate the situation and make a judgment about the possible consequences. The more complex a situation is, the more difficult it is to identify and predict. As you gain driving experience, you will become more selective about which hazards or possible conflicts are critical.

Scanning your target areas can help you predict hazards that may affect your path of travel. Your ability to predict and make sound judgments will improve as you gain knowledge and experience.

What to Predict Nearly all predictions you make as a driver will be related to predicting changes in zones and looking for an alternative path of travel. Three major elements in the traffic scene that you must make predictions about are the actions of other roadway users, your control of your vehicle, and the consequences of your actions.

FIGURE 8
What might you predict will happen if you were this driver?

Predicting Actions of Others
Do not assume other roadway users will always take the correct action. Instead watch for clues to what they might do to alter zone conditions.

The most important types of predictions to make concerning the actions of others are:

- **Path** Where might the other driver go? What zone might be closed? Will I have an open zone for escape?
- **Action** What action will other users take? Is more than one action possible? Where will I be then?
- **Space** Will I have an open zone?
- **Point of Conflict** If I have no open zone for escape, where might our paths cross and a conflict occur?

d pedestrians make this a situation. **Predict** What ould you be cautious of?

Imagine that you are driving toward the intersection in **FIGURE 9**. The oncoming driver is signaling for a right turn. Assume the worst and predict that the driver will turn left into your front zone. Also predict that the pedestrians will step off the curb and close your right-front zone. By making these predictions, you will be able to slow, swerve, or stop in order to avoid a conflict.

Predicting Control of Your Vehicle Speed is probably the most important factor in maintaining control of your vehicle. Always be prepared to adjust your speed for different zone conditions and situations. Different traffic, roadway, and weather conditions can change the amount of time and space needed for safe reactions.

The basic requirement for vehicle control is traction. Traction is the actual gripping power between the tires and the roadway surface. The more traction there is, the greater the gripping power.

In **FIGURE 10**, the driver knows the roadway is icy and wet and that visibility is restricted by the weather. The driver should predict that stopping will take longer than if the roadway were dry. Based on this prediction, the driver should check the rear zone, and then slow, and brake earlier.

Knowledge One basic part of your driving knowledge comes from the study of traffic laws and driver-education material. Whenever you drive, you also gain knowledge by gathering more information and learning from others.

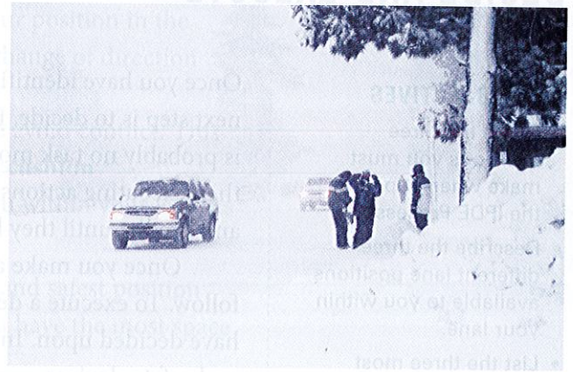
Think of storing driving knowledge as adding to your safe-driving memory bank. The more you drive, the more you add to your memory bank of knowledge. This knowledge will help you identify and predict more quickly and accurately to increase your chances of becoming a low-risk driver.

Judgment Making a judgment about a traffic situation involves measuring, comparing, and evaluating. As you drive, you judge speed, time, space, distance, traction, and visibility. You make judgments about your own driving performance as well as the actions and performance of other roadway users. Make every effort to develop the ability to make sound judgments that lead to accurate predictions.

Experience In addition to knowledge, experience helps you improve your ability to predict accurately. Exposure to a wide variety of driving experiences provides a solid base for making sound judgments later.

In many situations, you may have a choice of actions to predict. Try to judge and compare the possible consequences before deciding on the best action.

FIGURE 10
Identify the risks in this situation and predict how they will affect your path of travel.



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1. Explain selective seeing and why it's important for drivers.
2. Explain how using an orderly search pattern helps you to be a safe driver?
3. Explain how knowing the zones around your car helps support your ability to identify and predict?
4. Why is it important to predict as you drive?

Critical Thinking

5. **Analyze** The first step of the IPDE Process is Identify. As a driver, why is it important for you to identify and not just to see?
6. **Analyze** Why is knowing how and what to predict an important skill for drivers to master?

IN THE PASSENGER SEAT **Changing Paths** As you ride with an adult, licensed driver, record all the roadway features and other driver-created situations that caused you to change your path of travel. Did you find that there were more or fewer of these situations than you expected? Report your findings to the class.

lesson 5.3
DECIDE AND EXECUTE

OBJECTIVES

- Name the three decisions you must make when applying the IPDE Process.
- Describe the three different lane positions available to you within your lane.
- List the three most important actions you can take to avoid conflict.

VOCABULARY

- execute
- space cushion
- minimize a hazard
- compromise space

Once you have identified a situation and predicted a possible conflict, your next step is to decide. Deciding, like predicting, is also a mental task. There is probably no task more important, though, than making wise decisions and then executing actions to avoid conflict. Drivers must continually identify and predict until they have enough information to make correct decisions.

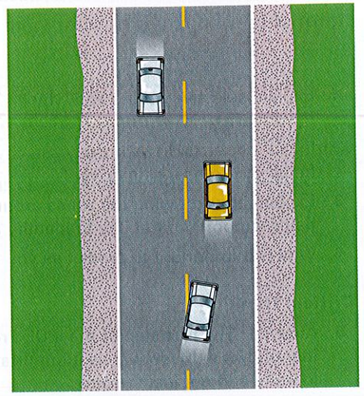
Once you make a decision, the **execute** step of the IPDE Process will follow. To execute a decision means that you carry out the action that you have decided upon. In order to do this, you will use your vehicle's controls and safety devices.

Decide

As you follow your intended path of travel, your decision might be to maintain speed, change speed, change direction, or communicate your plan to others, or you might decide to use a combination of these actions. Be prepared to rethink your decisions as zones close and greater hazards are presented.

Decide to Change Speed Any decision you make will be influenced by the speed of your own vehicle as well as the speed of other vehicles. Many drivers think that slowing down is the only way to avoid a predicted point of conflict. However, in many situations, you will decide to maintain your speed. Your other choices of actions, rather than maintaining your speed, are to decelerate, brake, or accelerate. Base your decision about speed control on your evaluation of the situation as well as the possible consequences of your actions.

FIGURE 11
The driver of the yellow car decided to accelerate to provide space for the passing driver to return to the right lane. **Explain** What might have happened if the driver of the yellow car had decided not to accelerate?



Decide to Change Direction In order to change your position in the roadway, you will steer to the right or left. A greater change of direction might even be a lane change.

You can use an escape path into an open zone to avoid conflict. This area of space all around your vehicle is called a **space cushion**.

Three different lane positions are available to you within your lane, as shown in FIGURE 12.

Lane position 1 This should be your selected and safest position under normal driving conditions. In this position, you have the most space around your vehicle.

Lane position 2 You might decide to use this position when there is a closed right-front zone with an open left-front zone. Just a slight adjustment to the left is necessary.

Lane position 3 Use this position when there is a closed left-front zone with an open right-front zone.

There may be times when the situation requires a greater change in direction than the three lane positions. You may decide that the best position, in some situations, is to straddle a lane line. In these situations, return to lane position 1 as soon as it is safe to do so.

In order to make consistently low-risk decisions, try to detect a changing zone condition at least 15 seconds ahead in your searching area. This gives you ample time to decide on the best action.

Decide to Communicate The decision to communicate with other users of the roadway helps reduce the possibility of conflict. You can decide to communicate with others by using lights, horn, vehicle position, eye contact, and body movement.

FIGURE 12 LANE POSITIONS

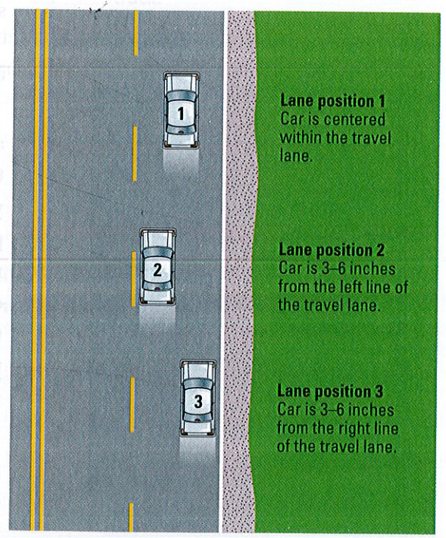


FIGURE 13
Use hand signals to communicate to other drivers.

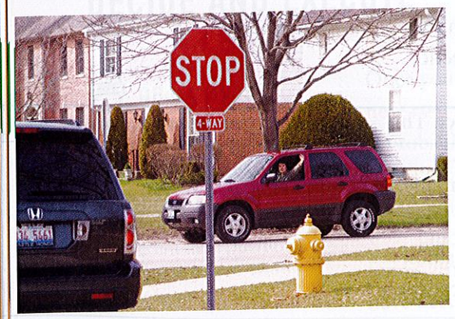
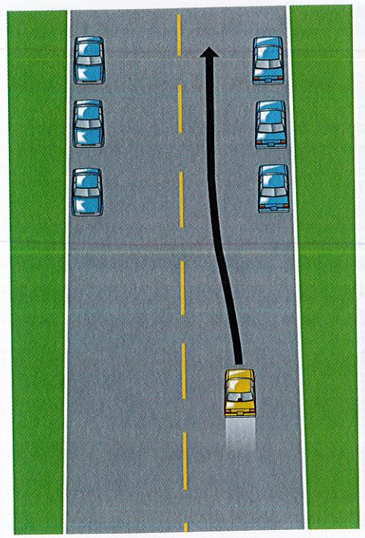


FIGURE 14
Minimize the hazard of the parked cars by moving to lane position 2.



A change in direction or speed can be executed with less risk if you have communicated your intentions to other users. Try to avoid changes in speed or direction without communicating first. Sudden actions can result in high-risk situations.

After deciding the best method of communicating, you will execute that action to inform others of your decision. The driver in **FIGURE 13** is using body movement by waving the driver on the left through the intersection first.

Traffic Flow

The IPDE Process and the Zone Control System will help you make decisions that will enable you to avoid hazards and conflicts in your intended path of travel. The safest position in traffic is the place where the fewest vehicles surround you. Your objective is to keep your vehicle surrounded by space. Continually analyze your left, front, and right zones and make decisions to adjust your speed or direction if one of your zones begins to close. By deciding to adjust your speed or direction, you will avoid unnecessary stops and thus reduce your risk of conflict.

Use the following techniques to manage time, space, and distance in order to maintain your safe path of travel.

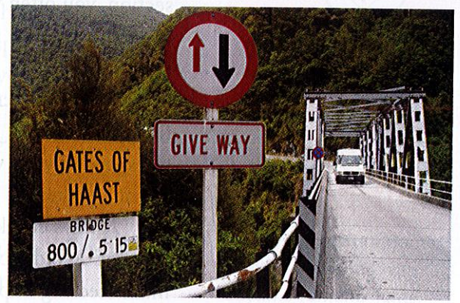
Minimize a Hazard You always want to **minimize a hazard**, or reduce the possibility of conflict, by deciding to put more distance between yourself and the hazard. As you can see in **FIGURE 14**, the yellow car is approaching the parked cars on the right. The driver predicts a car door might open. Since there is no oncoming traffic, the driver decides to steer away from the parked cars into lane position 2. After passing the parked cars, the driver will return to lane position 1. The driver has minimized the hazard by using more space.

Separate Hazards There will be times when you face more than one hazard at the same time. When this occurs, do not try to handle both or all hazards at once.

Instead, decide to adjust your speed to let them separate so you can deal with only one hazard at a time. By following this strategy, you will be more effective in dealing with each hazard separately.

The driver in **FIGURE 15** sees an approaching truck. The driver and the truck are both headed for the same one-lane bridge. If nothing changes, the driver's car and the truck will meet on the bridge at the same time. To avoid trouble, the driver slows to allow the truck to clear and separate from the bridge. The driver can then avoid the truck and center the car while crossing the bridge.

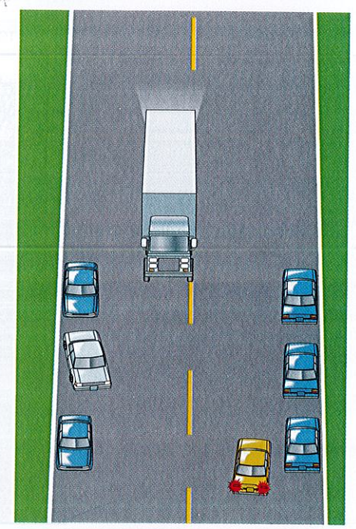
FIGURE 15
In this situation, you decide to slow to allow the hazards of the oncoming truck and bridge to separate.



Compromise Space Sometimes hazards cannot be minimized or separated. When this occurs, you must decide to **compromise space** by giving as much space as possible to the greater hazard.

The truck in **FIGURE 16** might enter the front zone of the yellow car to avoid the parked car that's pulling out on the left. The cars on the right present a lower level of risk. The driver of the yellow car should decide to steer close to the parked cars on the right while braking to reduce speed. This is an example of the yellow car driver making a compromise decision since there is no way to let these hazards separate.

FIGURE 16
The driver of the yellow car is compromising space to give more space to the greater hazard—the truck.



Execute

Carrying out your decision in order to avoid conflict is the execute step in the IPDE Process. This step involves the physical skills used in driving. In most cases, you will execute routine actions and maneuvers. More important actions, however, involve timing and placement of your vehicle to avoid conflict. The important actions you will execute are

- control speed
- steer
- communicate

Control Speed When you decide to control speed, you may have to maintain your speed or you may have to decelerate, such as when you approach a red light. If you merely release the accelerator far enough before the intersection, you often will arrive at the intersection when the light is green. In this situation, you also may use gentle pressure on the brake if more slowing is needed.

When greater deceleration is needed, you will execute the action of firm braking. The amount of braking needed will vary with the situation, the speed of your vehicle, the condition of the roadway, and the condition of your brakes.

Always check your rear zone before decelerating or braking in any manner. Avoid locking the brakes in an emergency stop. Locked brakes make steering impossible because the wheels must be turning to provide traction for steering. Some newer vehicles have an antilock-braking system. Such a system helps prevent loss of steering control. An antilock-braking system, through the use of computers, helps stop your vehicle in an emergency. All you need to do is to apply the brakes firmly and continuously. No pumping action is needed.

As the driver of the car in **FIGURE 17** enters the intersection, the white car from the right makes a right turn and enters the driver's path. The driver avoids locking the brakes so as not to lose steering control. Locking the brakes could have caused the car to slide and result in a conflict.

FIGURE 17 Assume that your vehicle has an antilock-braking system. **Execute** What procedures would you follow to avoid conflict?

Steer When you decide to steer away from a possible conflict, execute just the amount of steering needed. If you turn the steering wheel too much, you can lose control of your vehicle, especially at higher speeds.

Not steering enough can also present a problem. Try to steer just enough to avoid a conflict without making jerky or sudden movements. Drivers who keep space cushions around their vehicles usually have an escape path to steer into, thus reducing risk.

Communicate In many instances, your only action will be to communicate. When you communicate, you must do it early enough so other users know your intentions. Communicate by using the following:

- **Headlights, taillights, and brake lights** Use headlights during periods of reduced visibility. Using headlights during daylight hours, as shown in **FIGURE 18**, is a safety practice that makes your vehicle more visible to other drivers. Some new vehicles are equipped with daytime-running lights—headlights that come on automatically whenever the vehicle is operated. The advantage of these lights is to improve the visibility of the vehicle. Research shows that the use of daytime headlights reduces daytime crashes of all types.
- **Turn-signal lights** Turn them on three to five seconds before making any change in direction.
- **Parking lights and hazard flashers** When you are parked along the roadway but not in an emergency situation, have your parking lights turned on. If your vehicle is disabled, turn on your hazard flashers. Be prepared to change your path of travel when you see the blinking or flashing lights of a stopped delivery truck.
- **Back-up lights** White back-up lights let others know you are backing up. Look for back-up lights on vehicles in parking lots.

safe driving tip

Daytime Lights Some cars are equipped with daytime-running lights. Research shows that your chance of being in a daytime crash is reduced by daytime-running lights or using low beam headlights all the time.

FIGURE 18
Your vehicle can be seen more easily if your headlights are on, even during the day.

to change your path to drive
ped vehicles.

▶ **Horn** A light tap is usually enough for a warning. In an emergency, a loud blast may be necessary.

▶ **Vehicle position** The position of your vehicle in the roadway communicates a message. It indicates to others your intended path of travel. Other drivers may or may not see a light signal, but the position of the vehicle in the lane sends a message.

▶ **Eye contact and body movement** Try to develop eye contact with other roadway users. You can communicate many messages this way. Body movements such as a wave of the hand may tell a driver to proceed.

Combine Actions You often will need to execute a combination of actions. Sometimes you might need to accelerate and steer at the same time.

If you were driving alongside the parked truck in the picture above, you would need to combine several actions. You would first check your rear zone and your left-front zone to see if they were open. Then you would communicate by signaling as you brake and steer around the open car door. The precision and timing with which you execute these actions will determine whether or not a conflict will occur.

iew it 5.3

ain how communication and deciding to
ge speed or direction help you to be a
risk driver.

ribe three situations where you would use
of the three lane positions.

the three actions you can execute to avoid
lict and explain how these actions help you
ent conflicts.

Thinking

sion Making You approach a parked car is about to pull away from the curb. What sequence of actions should you execute to avoid any possible points of conflict?

5. **Evaluate** How does knowing and using the different lane positions help to minimize risk?

IN THE PASSENGER SEAT **Communication** Make a list of the communication strategies listed in this chapter. Then, as you drive with an experienced adult driver for one week, record the number of times and under what circumstances you noticed each strategy used by drivers. How might you have communicated in the same circumstances? Discuss your findings with the class.

lesson 5.4
USING THE IPDE PROCESS

Using the IPDE Process and the Zone Control System helps you plan and execute **maneuvers**, or actions, to reduce hazards. It is up to every driver to manage space, time, and speed in order to further increase safety within the HTS.

You must continually practice using the IPDE Process so that it will become habit. Once you have developed the habit, you will identify open and closed lanes, make accurate predictions and correct decisions, and execute maneuvers more successfully.

OBJECTIVES

- Describe what is meant by selective use of the IPDE Process.
- Explain why the IPDE Process takes time to learn and use.

VOCABULARY

- maneuver

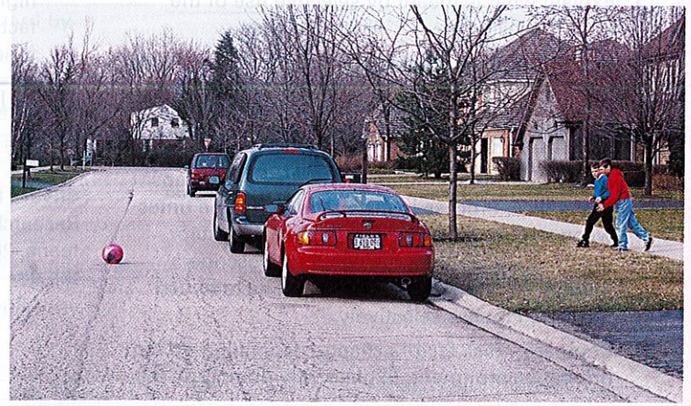
Putting IPDE Into Action

Use the four steps of the IPDE Process in order. Identify the hazards or events, then predict how they might affect your intended path of travel. You then perform the third step, deciding. Finally, you execute your maneuvers based on your decisions.

Selective Use of IPDE There will be times when you do not carry out the complete IPDE Process. Conditions may change in one or more zones so the process need not be completed. You can use the IPDE Process selectively by beginning a new cycle before completing the previous one.

As you become a more experienced driver, you will learn the more important clues and trouble spots in different areas of the HTS. You will then be able to adjust your selective application of the IPDE Process for those specific areas.

FIGURE 20
Can you identify the possible points of conflict in this photograph?
Decide What would you decide to do?



IPDE Takes Time and Practice

Remember that the IPDE Process takes time to put into action. You must have time to identify clues and changing zones. You must have time to predict the actions of others and the possibility of closed zones. The more complex the traffic situation and the more risk factors present, the longer it takes to carry out the IPDE Process.

Practice is necessary for the development and improvement of any skill. As you ride with other drivers, practice the I-P-D steps of the IPDE Process. You can then judge if the actions taken by others were based on correct decisions.

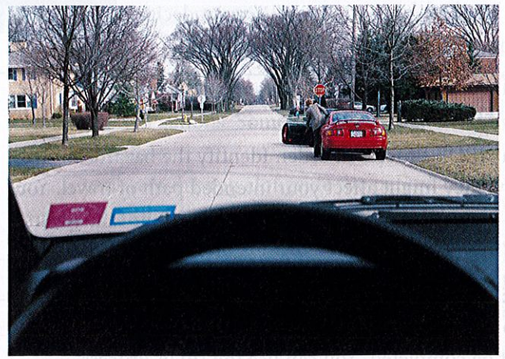


FIGURE 21 Do you know what actions to take to avoid a conflict in this situation?

review it 5.4

1. Explain what is meant by selective use of the IPDE Process.
2. What factors can cause the IPDE Process to take more time?

Critical Thinking

3. **Apply Concepts** Although you learn the steps in the IPDE Process in order, there may be times when you might have to begin the next step before finishing the previous one. Describe a driving situation where you might have to use the IPDE Process selectively.
4. **Compare** Risk factors change depending on the driving environment. Explain why driving on the highway during rush hour presents more risk factors than driving in your neighborhood at any time.

IN YOUR COMMUNITY **Research** Distractions are one of the major causes of traffic crashes for drivers of all ages. Emotions, other drivers, and being in a hurry can cause experienced drivers to temporarily forget their good driving skills. Research the major causes of traffic crashes among teens, 20–39 year olds, 40–59 year olds, and among the 60+ years population. Draw a graph to represent your findings, and share it with the class.

CHAPTER 5 REVIEW

Lesson Summaries

5.1 THE IPDE PROCESS

- The IPDE Process is an organized system that includes the following steps to avoid conflict: identify, predict, decide, and execute as they relate to driving.
- The Zone Control System is designed to help drivers manage the space around their cars.

5.2 IDENTIFY AND PREDICT

- There are eight steps in an orderly visual search pattern: look ahead; evaluate your zones; check the rearview mirror; evaluate and check your 4–6-second and 12–15-second ranges; and check your speedometer and gauges.
- Selective seeing means that you identify and select only those clues and events that restrict your line of sight or can change your intended path of travel.
- In order to predict how hazards might affect your path of travel, you have to evaluate the situation and make a judgment about the consequences.

5.3 DECIDE AND EXECUTE

- When driving, there are three main decisions you can make: minimize the threat of a single hazard by adjusting speed and direction; allow two hazards to separate; or adjust and split what little space there is between the hazards with a compromise decision.
- The three main actions you can execute when driving are speed control, steering, and communicating.

5.4 USING THE IPDE PROCESS

- The IPDE Process takes practice and time.

Chapter Vocabulary

- 4–6-second range
- 12–15-second range
- closed zone
- compromise space
- depth perception
- execute
- field of vision
- ground viewing
- identify
- line of sight
- maneuver
- minimize a hazard
- open zone
- orderly visual search pattern
- predict
- risk factor
- scanning
- space cushion
- target area
- target-area range
- zone

Write the word or phrase from the list above that completes the sentence correctly.

1. The first step in the IPDE Process is _____.
2. When you search critical areas in a regular sequence as you drive, you are using a(n) _____.
3. One of the hardest skills to learn in driving is picking a point or points where you might have a conflict with others. This ability to anticipate is called _____.
4. When there is no line-of-sight or path-of-travel restriction to a zone, that zone can be called a(n) _____.
5. Checking your _____ will let you see hazards in your intended path of travel ahead of time.
6. _____ is the space from your vehicle to the target area.