

Chapter 6

Space Management



Overview

Content Notes &

Background Information

NDRPC 2014

Space Management - Overview

Approximate time required to complete this chapter: Three hours

Classroom Concepts:

- 6.1 Timing Lights and Turns
- 6.2 Precision Lane Changes
- 6.3 Pedestrians and Cyclists
- 6.4 Distracted Driving
- 6.5 Back-in Parking Maneuvers
- 6.6 Attitudes and Emotions

Good Driving Habits - All Are Applied and Practiced for Mastery:











- 1. Driver Vehicle Readiness Skills
- 2. See Clear Path Before Moving
- 3. Keep the Car in Balance
- 4. Use Reference Points
- 5. Zone Control Searching
- 6. Take Zone Control Actions
- 7. Control the Intersection
- 8. Get Rear Zone Control
- 9. Get Control with Vehicle in Front
- 10. Interact Courteously with Others

In-Vehicle Performance:

- 6.1 Timing Lights and Turns
- 6.2 Lane Changes with Precision
- 6.3 Pedestrians and Cyclists
- 6.4 Distractions
- 6.5 Back-in Perpendicular Parking
- 6.6 Attitudes and Emotions

Behaviors:

The student must demonstrate knowledge and successful in-vehicle performance of the following behavioral patterns:

-  See red lights as closed zones
-  Adjust speed to arrive into green lights
-  Search intersection 45 degrees
-  Left turn at green light - check rear, gap, path, light
-  Right turn at a red light - check rear, gap, path, light
-  Use Zone Control effectively
-  Evaluate need for lane changing
-  Move by lane positions (at a shallow angle)
-  Time arrival into open zones
-  Key steps for backing into space
 - Side position
 - Forward position 45-degree target
 - Back into pivot point
 - When car is straight, straighten tires
 - Back to rear reference

Required Equipment, Lesson Resources and Support Materials:

- ♦ NDRPC 2014 DVD Interface, computer, projector, screen, and speakers
- ♦ Chapter 6 Lesson Plans and Activity Directions, and Overview Notes
- ♦ NDRPC 2014 Playbooks
- ♦ Playbook Flash Cards (a & b cards)
- ♦ 6.5 Model Roadway - Back-in Parking
- ♦ Small Model Cars
- ♦ Ticket to Concept 6.4 Key
- ♦ Chapter 6 Exit Exams & Key

Optional Materials:

- ♦ Ten Habits Keep the Monster Caged! Using the Dynamics of Zone Control
- ♦ Partnership for EXPERT Driving 7th ed. IN-CAR Guides

Learner Assignments for this Chapter:

- Read Playbook Chapter 7
- Ticket to Concept 7.3

Methods of Classroom Assessments:

- Learner will complete Ticket to Concept 6.4 and demonstrate accountability for completing chapter reading assignments.
- Learner will answer informal questions, and participate in class discussions, demonstrations, and activities.
- Learner will complete Chapter 6 Exit Exam with a minimum score of 80%.

In-Vehicle Assessments of the Key Behavioral Patterns listed above utilize the following performance codes:

- 1 = Performs well with little or no coaching
- 2 = Performs fair with coaching, needs guided practice
- 3 = Performance requires coaching, considerable guided practice required
- 4 = Unable to perform, required to repeat lesson

On a predetermined route, student will be assessed on his/her ability to perform behavioral patterns as listed.

Classroom Objectives

6.1 Timing Lights and Turns

The learner will be able to demonstrate searching techniques used when approaching and turning at traffic lights, and consistently minimize problems with best lane position and speed control adjustments. In addition, the learner will be able to demonstrate the ability to CONTROL the 4-second danger zone and the point of no return.

6.2 Precision Lane Changes

The learner will be able to explain the sequence of procedures in changing lanes. The learner will be able to list the various situations which call for a lane change and be able to determine when and how a lane change is to be aborted.

6.3 Pedestrians and Cyclists

The learner will be introduced to traffic laws that regulate driver interactions with pedestrians and cyclists. The learner will demonstrate the ability to interact with pedestrians and cyclists in a lawful and courteous manner.

6.4 Distracted Driving

The learner will be able to identify various distractions one may encounter or create, and explain the negative effects of those distractions on the driving task and the need for distraction free driving.

6.5 Back-in Parking Maneuvers

The learner will be introduced to behaviors common to back-in angle parking, parallel parking, and back-in perpendicular parking maneuvers. The learner will be able to demonstrate the key steps for backing into a 90-degree parking space.

6.6 Attitudes and Emotions

The learner will identify effects and influence of attitude and emotions on the ability to operate a vehicle, identify the risks associated with driving, and explain how attitudes and emotions affect the driving task.

In-Car Objectives

6.1 Timing Lights and Turns

The learner will demonstrate the ability to see a red traffic light early enough to be able to reduce their speed gradually for several seconds, giving the red light time to change to green before they need to stop. The learner will also demonstrate a strategy for consistently minimizing problems when approaching and making a turn.

6.2 Lane Changes with Precision

The learner will demonstrate the ability to perform precision lane changes by using lane positions to minimize their exposure to other traffic and to maximize their ability to time an arrival into an open zone. The learner will be able to make quick visual checks of zones to get the best information prior to moving to new lane.

6.3 Pedestrians and Cyclists

The learner will demonstrate the ability to interact with pedestrians and cyclists in a lawful and courteous manner.

6.4 Distractions

The learner will be able to maintain focus on the driving task and refrain from engaging in any type of distraction during this and subsequent lessons.

6.5 Back-in Perpendicular Parking

The learner will demonstrate the ability to back the car into a perpendicular parking space.

6.6 Attitudes and Emotions

The learner will be able to keep emotions in check, recognize signs from other vehicles that may suggest road rage, and recognize aggressive driving in their own actions.

6.1 Timing Lights and Turning – Content Notes

The student will be able to explain systematic techniques for approaching traffic lights and determining actions for timing and/or turning upon approaching an intersection. This will enable the student to develop good habits in the driving task.

Traffic Lights Timing and/or Turning

You have a red traffic light that you are attempting to time. Why is timing a light a good habit to develop?

The red light is a closed front zone. By treating it as a closed front zone rather than a red light, drivers have the opportunity to practice a set of behavioral patterns that can be very valuable in a number of other closed front zone situations.

An example of a related situation is when you are on a highway and all traffic comes to a sudden stop caused by construction or a crash. That becomes a high-risk moment and a very good opportunity to practice.

When you see a red light as a closed front zone, you gain opportunities to apply several principals of the Zone Control System, such as:

- Locate your target area
- Evaluate its condition
- Determine best approach speed and best positioning
- Visualize the space your vehicle will occupy at least 12 seconds ahead
- Adjust speed to arrive at an open zone

Most drivers only learn that a red light means stop. By setting a higher standard (i.e., to arrive in the intersection with a green light rather than a red light), we are able to give ourselves test situations where we can have success or failure. There will be thousands of red traffic lights that you will be approaching in a very short period of your driving career. That will give you thousands of opportunities to have success!

The traffic light just changed from red to green; there are five cars stopped ahead of you. How long will it take for the vehicle in front of you to move? It will take at least five seconds. It takes one second per vehicle before movement can take place. If a driver is not alert, it may take longer. With five cars ahead, it will take five seconds for the vehicle directly in front of us to move. After the vehicle does move, delay your movement for two seconds to build your following time and to avoid a false start by the front vehicle. Have success and avoid stress!

Four Types of Turns

There are four types of turns that a student can make. Listing them from easiest to most difficult to perform, they are:

- Left turns from a stopped position
- Right turns from a stopped position
- Left turns from a moving position
- Right turns from a moving position

Turns from a stopped position usually occur when a vehicle is entering a traffic flow from a side street. Moving turns take place when a vehicle is leaving a traffic flow by turning into a side street. Right turns require twice as much turning of the steering wheel than left turns because the turning radius of a right turn is twice as tight. The greatest danger of crash exposure occurs while making a stopped left turn.

6.2 Precision Lane Changes – Content Notes

A lane change can be a risky maneuver, especially in heavy traffic or at highway speeds. Accurate perception is the key to managing those risks. Lane changes are simply moving left or right into another lane. The key is to FIND open space, communicate, and move smoothly.

Reasons to Change Lanes

Lane is ending/merge; prepare for a turn; create open space to the side, front, or rear; prepare to enter or exit highway or expressway; move in or away from curb; to prepare to perform a turnabout maneuver

Steps in a Lane Change

1. Check front and rear for line-of-sight and path-of-travel blockages - look for a stable gap.

- 🚗 Intersections, slow moving traffic, pedestrians, etc.
- 🚗 Know zone conditions alongside the new lane
- 🚗 Are oncoming cars passing cyclists, pedestrians, or stopped vehicles on the shoulder?
- 🚗 What lane position is oncoming traffic using?
- 🚗 Plan arrival for open zones
- 🚗 Use your mirrors to see the rear zone

2. Signal your intentions and get the best lane position for communication.

- 🚗 Get a commitment – stable rear zone

3. Do a chin-to-shoulder blind spot check.

4. Focus your central vision on the target area to maintain vehicle control and balance. Maintain your speed or increase speed if necessary – do not slow unnecessarily.

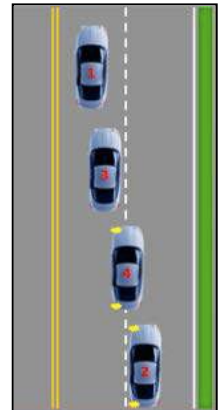
5. Move to new lane at a shallow angle, one lane position at a time.

- 🚗 LP-2, LP-4, LP-3
- 🚗 LP-3, LP-5, LP-2

6. Cancel signal.

7. Evaluate front and rear zone conditions.

8. Get the best lane position.



Lane changes need to be smooth and thought out before they are executed.

Lane changes are the beginning of passing. You need to make a smooth lane change to execute a proper and safe pass.

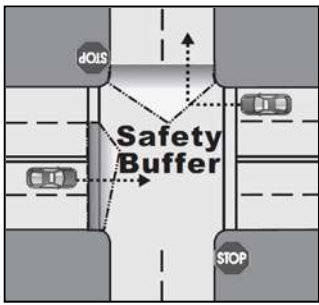
6.3 Pedestrians and Cyclists – Content Notes

Pedestrian Facts

Interacting with other roadway users, such as pedestrians and bicyclists, can sometimes be challenging. You need to be extra alert when they are present.

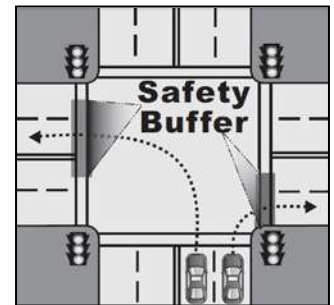
Pedestrians are the most vulnerable of road users and are often not visible to motorists. Many don't tolerate delay and out-of-direction travel, and will often take shortcuts where there is no convenient or direct access.

Remember: There is a crosswalk at every intersection regardless of whether or not it is marked by painted lines.



At an intersection where pedestrians are crossing, you must wait until the pedestrians have cleared your lane and the entire next lane before you may go.

If you are turning at a signal, you must stop and wait until pedestrians clear the lane you are turning into, plus 6 feet of the next lane.



You are not required to stop for a pedestrian in a crosswalk if you are traveling along the half of the roadway that is on the other side of a safety island from the pedestrian.

You **must stop and remain stopped** for pedestrians on the sidewalk when entering or leaving an alley, driveway, or private road.

White Canes and Guide Dogs

Pedestrians who are blind or partially blind may carry a white cane or use the assistance of a guide dog. You must give the right of way to a pedestrian who is carrying a white cane or using a guide dog. **Stop and stay stopped** if the person is attempting to cross or is in the process of crossing the road. At regulated intersections, remain stopped until the pedestrian has crossed the roadway, even if you have a green light.

Cyclist Facts

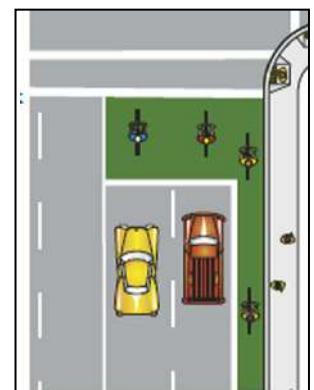
Bicyclists operate a vehicle and are legitimate road users, but they are slower and less visible than motor vehicles; they are also more vulnerable in a crash than motorists. The same traffic rules and regulations apply to both bicyclists and vehicle drivers. A major problem for drivers is the inability to see bicyclists, especially at night. Sometimes they may be in the blind spot of your vehicle. When you approach a bicyclist, keep on the lookout and slow down. To avoid conflict, drivers of motor vehicles need to know the following rules:

- Do not drive in a bicycle lane. You may cross a bicycle lane when turning or when entering or leaving an alley, driveway, or private road. Do not move into a bicycle lane in preparation for a turn.
- You must yield to bicyclists in a bicycle lane or on a sidewalk, before you turn across the lane or sidewalk.
- You must yield to bicyclists at intersections, the same as you do for other types of vehicles.
- When you are traveling at a speed greater than 35 mph, you may only pass a bicyclist by driving to the left when the passing distance is sufficient to prevent contact with the person operating the bicycle if the person were to fall into the driver's lane.
- If you cannot pass safely, you must slow down and remain behind the bicycle until it is safe to pass.
- Operators of motorized wheelchairs, scooters, and personal assistive mobility devices are permitted to use bicycle lanes and paths. These vehicles cannot exceed a speed limit of 15 mph. You must yield to these operators before you turn across the bicycle lane or path.

Bike Boxes

The bike box helps prevent collisions between motorists and bicycles at intersections. It is typically a painted box on the road with a white bicycle symbol inside. Bicycle lanes approaching and leaving the box may also be painted.

As a driver, you must stop for a traffic signal behind the bike box. Do not stop in the box. Bicyclists will move into the box, in front of your vehicle or other traffic, at the intersection. No right turns are allowed at these intersections when the traffic signal is red. If turning right on a green light, you must signal and watch for bicyclists on the right.





A bicycle symbol on the road indicates the lane is shared. Vehicle or bicycle traffic may be in the lane. Although you should always keep on the lookout for bicyclists, this serves as an additional warning to watch for bicycles in the lane.

Follow the link to obtain a copy of North Dakota Bicycle Rules and safety tips:

<http://www.dot.nd.gov/divisions/safety/bicycle-safety.htm>

6.4 Distracted Driving – Content Notes

Distractions come in many forms. They focus your mind on things outside the driving task and put you and others in serious danger. Engaging in an activity that takes your mind off the driving task diminishes your ability to make good decisions and take appropriate actions. Even a distraction of only a few seconds can put you or those around you in harm's way.

39-08-23. Use of a wireless communications device prohibited.

1. The operator of a motor vehicle that is part of traffic may not use a wireless communications device to compose, read, or send an electronic message.
2. Under this section:
 - a. "Electronic message" means a self-contained piece of digital communication that is designed or intended to be transmitted between physical devices. The term includes e-mail, a text message, an instant message, a command or request to access a worldwide web page, or other data that uses a commonly recognized electronic communications protocol. The term does not include:
 - (1) Reading, selecting, or entering a telephone number, an extension number, or voice mail retrieval codes and commands into an electronic device for the purpose of initiating or receiving a telephone or cellular phone call or using voice commands to initiate or receive a telephone or cellular phone call;
 - (2) Inputting, selecting, or reading information on a global positioning system device or other navigation system device;
 - (3) Using a device capable of performing multiple functions, such as fleet management systems, dispatching devices, smartphones, citizen band radios, music players, or similar devices, for a purpose that is not otherwise prohibited;
 - (4) Voice or other data transmitted as a result of making a telephone or cellular phone call; or
 - (5) Data transmitted automatically by a wireless communication device without direct initiation by an individual.
 - b. "Traffic" means operation of a motor vehicle while in motion or for the purposes of travel on any street or highway and includes a temporary stop or halt of motion, such as at an official traffic-control signal or sign. The term does not include a motor vehicle that is lawfully parked.
3. This section does not apply if a wireless communications device is used for obtaining emergency assistance to report a traffic accident, medical emergency, or serious traffic hazard or to prevent a crime about to be committed, in the reasonable belief that an individual's life or safety is in immediate danger, or in an authorized emergency vehicle while in the performance of official duties.

39-08-24. Use of an electronic communication device by minor prohibited.

An individual at least sixteen and under eighteen years of age who has been issued a class D license may not operate an electronic communication device to talk, compose, read, or send an electronic message while operating a motor vehicle that is in motion unless the sole purpose of operating the device is to obtain emergency assistance, to prevent a crime about to be committed, or in the reasonable belief that an individual's life or safety is in danger.

6.5 Back-in Parking Maneuvers – Content Notes

Back-in parking maneuvers are performed in different types of parking spaces - perpendicular, parallel, and angle.

Advantages Gained by Backing into Space

- Can Get into and out of Tight Spaces
- Takes Less Time to Park and Un-park
- Better View while Leaving Space
- Avoids Backing Out into Traffic
- Others Give You Room to Enter Traffic Flow
- Gives You Best Control and Reduces Stress
- Less Risk of Hitting Something or of Being Hit

Back-in Angle Parking

1. Signal, apply the brake, approach slowly, and use a side position 3 feet away.
2. Pull beyond the space, stop, shift to reverse, search, and yield.
3. Target the center of your space; when your pivot point aligns with the edge of your space, turn right. Straighten your wheels, stop smoothly, and secure your car.

Back-in Perpendicular Parking

1. Signal, apply the brake, approach slowly, and use a side position 3 feet away.
2. Stop when your body is aligned with the space.
3. Target 45° left and turn tires fully left to get on target.
4. Shift to reverse, target the center of your space, use the pivot point, and turn fully right. When perpendicular, turn wheel straight, inch to the rear limit, and secure car.

Parallel Parking

Identify 1½ Car Lengths of Available Space

Communication and Preparation are paramount!

1. Signal, apply the brake, approach slowly, and use a side position 3 feet away.
2. Pull beyond the space, stop, shift to reverse, search, and yield.
3. When your pivot point aligns with the bumper of the car you're parking behind, turn fully right, toward the space, and back to a 45° angle.
4. Straighten your wheels to the left and continue backing straight, toward your target. Check for front clearance.
5. As your left pivot point aligns with the car behind you, turn fully left, toward the roadway.

6.6 Attitudes and Emotions – Content Notes

Thoughts, feelings, opinions and character traits will have a positive or negative impact on every roadway user. The people you spend time with play a significant role in shaping your emotions and attitudes. Your outlook on the day will begin before you ever enter a vehicle. One way or another, it will be passed on to others. Every driver is responsible for operating their vehicle in a manner that is cooperative and causes no harm.

