Reference Points
From the driver's seat, you need to identify some part of the vehicle as it relates to some part of the roadway to know where the vehicle is actually located.

Reference Point Usage
Drivers cannot see the actual position of the car in relation to the roadway. The reason for this is that the driver's view of the road is blocked by the dashboard and by the hood of the car. Reference points can be developed to serve as a guide to overcome the vision problems a driver encounters.

The discovery of reference points is intended to challenge you to see accurate relationships of the vehicle to the environment. Begin with the reference point to establish how to see, from the driver's seat, when the right tires of the vehicle are close to a curb or a pavement line. The reference point to tell where the right tires are located is the hood ornament. If the car doesn't have a hood ornament, the curb would appear to be at the center of the hood.

The car shown left has a hood that is visible from the driver's seat, and a hood ornament in the center of the hood where arrow A is pointing. A driver would not be able to see at ground level until vision is 12–15 feet to the front of the car, as shown by arrow B. Arrow C identifies a wood strip placed along the side of the car to represent a curb. The wood strip appears, from the driver's seat, to be in the middle of the hood.

This is the driver's view of the car shown above. Notice how the wood strip (where the arrow is pointing) appears to be in the middle of the hood.
Standard Side Position Reference Points

**Figure 1**
*Where the car is:*
The car is 3–6 inches away from a line to the left.

*How the driver sees it:*
The line appears to run into a point on the hood that is about 1 foot from the left edge of the car.

*Common applications:*
- To tell precisely where the left tires are tracking.
- To tell when the car is in *lane position 2*.  
  - It's the *side position* for preparing to turn left.

**Figure 2**
*Where the car is:*
The car is 3–6 inches away from a line to the right.

*How the driver sees it:*
The line appears to run into a point near the center of the hood.

*Common applications:*
- To tell precisely where the right tires are tracking.
- To tell when the car is in *lane position 3*.
  - To park the car 3–6 inches away from a curb.

**Figure 3**
*Where the car is:*
The car is 3 feet away from a line to the right.

*How the driver sees it:*
The line appears to run through the middle of the right half of the hood.

*Common applications:*
- It's the *side position* for preparing to turn right.
- It's the *side position* for preparing to back into a perpendicular or parallel parking space.
- When there is no lane line to the right edge of the road, it is *lane position 3*.

**Figure 4**
*Where the car is:*
The car is 6 feet away from a line to the right.

*How the driver sees it:*
The line appears to run through the right headlight.

*Common applications:*
- It's the *side position* for preparing to turn right into a driveway or narrow alley.
- It's the minimum *side position* for preparing to pull forward into an angled or perpendicular parking space.
Reference Points *Continued*

**Standard Forward Position Reference Points**

*Figure 5*
Where the car is:
The car is a few feet beyond the curb line.

*How the driver sees it:*
The driver can see the target without his or her vision cutting across the curb line.

*Common applications:*
- It's the *forward position*, for making a left turn, at which the steering wheel should begin to be turned.

*Figure 6*
Where the car is:
The front bumper is even with the curb line.

*How the driver sees it:*
The curb line appears near the passenger's side mirror—even with the dashboard.

*Common applications:*
- To tell where the front bumper of the car is positioned relative to the environment.
- It's the *forward position* for making a right turn, at which the steering wheel should begin to be turned.
- It's the *safety stop position*—if necessary—from which to get a clear view of the intersection before entering it.

**Standard Rear Position Reference Points**

*Figure 7*
Where the car is:
The rear bumper is 3–6 inches away from a line.

*How the driver sees it:*
When the driver turns his or her head over his or her left shoulder, he or she will see the line appear near the middle of the rear left-side window.

*Common applications:*
- To know where the rear bumper is positioned.
- When backing into a perpendicular parking space, the driver can make accurate judgments to prevent entry into the rear parking space.

*Figure 8*
Where the car is:
The rear bumper is 3 feet away from a line.

*How the driver sees it:*
When the driver turns his or her head over his or her right shoulder, he or she will see the line disappear in the rear window corner post.

*Common applications:*
- This is the *pivot point*: i.e., the precise point at which the driver should begin turning the steering wheel when backing around the corner.
Reference Points  

Right Side Position

The photo below left shows an outside view of a car parked 6 inches away from a curb. (See Figure 2 on page 70.) When the hood of a car slopes out of view of the driver, such as this car’s does, then a point on the windshield can be used, as the photo below right illustrates. The curb appears near the middle of the windshield (arrow), at the driver’s wiper blade. However, the car is 6 inches from the curb.

Right Forward Position

When the front of the car is even with a line, the driver will see that line appear near the passenger’s side mirror, as shown by the arrow in the overhead view. If the wood strip is placed to the front of the car to represent a curbline of a street, the photo below left shows the view of the wood strip that the driver would see.
Reference Points *Continued*

The car is stopped. You are looking out the passenger side window. Where is the front bumper of the car in relation to the curbline?

The front bumper is even with the curbline. How did you do? If you clearly knew that the front bumper was even with the curb, you are well on your way to benefiting from the use of reference points. If you did not make sense of this photo, you need more time working with reference points. Re-read the preceding pages on reference points and get into an actual car to see your reference points.

**Standard Reference Points**

The reference points presented on these pages are shown the way most drivers will see them. They are our “standard” reference points. When attempting to discover a reference point, first use the “standard” reference point. If the “standard” reference point was accurate for you, continue to use it. If any reference point varies, then make note of your “personal” reference point. It won’t be more than a few inches away from the “standard” reference point. Once you succeed, remember the correct picture of your personal reference point for future use.

Reference points are the tools necessary for the driver to receive accurate feedback for successful performance. If a driver parks alongside a curb perfectly but didn’t use reference points, there was no learning of what gave the perfect results. It would be difficult to repeat the same actions with the same results.

With the use of reference points, a specific relationship is attempted. If it works, then additional attempts will give the same results. If it doesn’t work, then a slight adjustment can produce correct results. One doesn’t need to learn by a random trial and error process. Reference points give the driver a very specific objective to attempt, which results in accurate feedback on how successful that attempt was.
Reference Points Continued

Advantages of Using Reference Points
1. The first and foremost advantage you will gain from the use of reference points is the ability to be consistently successful.
2. Once the method of reference points is learned for one vehicle, the techniques can be applied to any vehicle. There is rapid transfer of learning to new situations.
3. You can get into a larger vehicle than you are accustomed to, such as a sport utility vehicle, van, truck, or motor home, and within 5 minutes be comfortable and confident maneuvering it in tight spaces and in traffic situations.
4. You can feel very comfortable getting into and out of tight parking spaces with any vehicle. You will also be able to back into parking spaces with confidence.
5. While driving in the right lane, you'll know exactly how far your car is positioned from the parked cars. Knowing that your position is more than six feet away from the parked cars will reduce the frequency of swerves when drivers suddenly open their doors.
6. With the use of reference points, you can make tight right turns into driveways, alleys, and narrow streets, without the need to swerve to the left before turning; nor will you hit the curb with the right rear tire.
7. You can feel comfortable driving in confined areas such as: municipal parking garages with spiral ramps, tunnels with fast moving traffic, a narrow bridge with a bus or truck approaching from the opposite direction, and a highway lane narrowed by concrete construction barriers.
8. You can feel confident and operate efficiently while passing a jogger, bicyclist, or pedestrian on narrow roads. Reference points will aid you in passing a double parked vehicle, or a construction site, with the least amount of movement into oncoming traffic.
9. While going into a curve, you will be able to select the best travel path to minimize the chances of a head-on collision. During slippery roadway conditions, you will be able to get the best drive line to help reduce the chances of going into a skid.
10. You can make the best decisions for using the various lane positions to get maximum control of the zones to either side of the vehicle.
11. You will be able to get reliable feedback to tell exactly where your vehicle is within the lane and increase your awareness for what is an okay or a not okay lane position.
12. If you use reference points to overcome optical illusions, rather than using what "feels right," then you can make accurate decisions when you are not feeling right, such as when you are tired, ill, or after taking medication.