

NEW JERSEY BICYCLING MANUAL

2ND EDITION, 2026

U.S. Department of Transportation

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The New Jersey Department of Transportation supports the use of the bicycle as a means of personal transportation and recreation. Furthering this goal involves:

- Actively promoting the use of bicycles and implementing programs that foster and improve conditions for bicycling
- Designing and maintaining public rights-of-way so they accommodate bicycle traffic
- Encouraging and supporting other state, regional, county and local governmental agencies to adopt policies and implement programs and projects that will enhance the bicycling environment
- Administering grant programs that provide funding for the development of bicycle facilities and programs
- Providing information to the public on bicycling opportunities and safe bicycling practices



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INTRODUCTION

Bicycling is a popular and enjoyable means of recreation and personal transportation for all ages. When people ride bicycles, they contribute to activities and practices that improve their own lives and support environmental goals across New Jersey. Some of the health and economic benefits of people riding bicycles are:

- Bicycling helps you lead an active, healthy lifestyle by improving your fitness and promoting a sense of well-being
- Bicycling is an enjoyable way to experience and appreciate the wide range of settings, scenery and topography found across the state
- Bicycling has many benefits over driving - it requires no non-renewable energy sources, is comparatively inexpensive, and can often be brought with you onto public transportation
- Bicycling supports more compact and connected communities by providing an alternate mode for travel. By reducing reliance on motor vehicle usage, bicycling helps decrease pollution and improve safety for all roadway users

PURPOSE

The New Jersey Bicycling Manual is intended for bicyclists of every experience level (although it does not include instructions on attaining a foundational ability to balance, steer, start, and stop a bicycle), containing the information and tools needed to ride safely, confidently, and predictably in New Jersey.

Bicycling is a practical, healthy, and enjoyable way to travel. Ultimately, the manual should help you to reach more of your destinations, whatever they may be, via bicycle. It contains guidance on how to properly ride on different types of routes, from roads to shared-use paths and trails, while navigating interactions with motorists, pedestrians and other bicyclists. It also provides guidance on owning, maintaining, and protecting your bicycle, along with some practical strategies to handle uncommon situations and unexpected challenges that you may encounter while bicycling in New Jersey.

What's New on New Jersey Roads

Since the first edition of this manual published in 2010, New Jersey streets have changed. Bicyclists are now more likely to encounter a wider range of bicycle facilities and intersection designs, which are intended to make bicycling more predictable, visible, and comfortable for bicyclists. Infrastructure such as buffered bicycle lanes, separated bicycle lanes, bicycle boxes, and bicycle signals can all now be found in New Jersey, and are described in the "*Traffic Basics*" section of this manual. Broadly speaking, there is a desire to separate bicyclists and motor vehicles as much as possible through separated bicycle lanes or shared-use paths; the implementation of this is still in progress, but keep your eyes out for new or improved bicycle lanes and paths in your area!

State guidance and laws have also changed. New Jersey has worked to institutionalize Complete and Green Streets, with new transportation improvements placing greater emphasis on designing roads for all users, including bicyclists, pedestrians, transit riders, and people with disabilities. Among other things, this means that many towns and counties have been and are continuing to implement bicycle infrastructure along their roads.

Additionally, in 2025 New Jersey enacted legislation establishing the Target Zero Commission and setting a statewide goal of eliminating all traffic fatalities and serious injuries. The initiative focuses on safer roadway design, speed management, data-driven strategies, and collaboration among state and local partners to improve safety for all road users. Drivers are also required to follow New Jersey's Safe Passing Law when passing bicyclists and other vulnerable road users, providing them a minimum of four feet of space. Laws regarding e-bikes and other micromobility devices have changed significantly and may continue to evolve; check current NJDOT and NJ MVC guidance for the latest requirements.



HOW TO USE THIS MANUAL

This manual is first and foremost a practical guide to bicycling for all purposes, including recreation, exercise, transportation, and work. It covers:

- General best practices for riding on the road (*Chapter 1: Ride Smart, Ride Safe*)
- A roadmap of proper bicycling preparation (*Chapter 2: Preparing to Ride*)
- An overview of the wide range of unique scenarios and specific considerations a bicyclist can anticipate and should prepare to handle (*Chapter 3: Beyond the Basics*)



Recreational Bicycling

You may be an experienced bicyclist with many years of experience, or you may know how to ride but still feel less comfortable in traffic or in unfamiliar settings. Most readers will fall somewhere in between, so you should not feel as if you are too inexperienced to approach these topics nor too experienced to hone your skills or learn new things. Whatever your experience level, you can use this manual to build and refresh your knowledge and refine your skills.



Bicycle Commuting

Riding a Bicycle for Recreation or Utility

Bicycling is a good way to experience the places you travel through in an enjoyable and energizing way. For this reason, many people first learn to ride bicycles primarily for fun or for exercise, but bicycling can also be practical for your everyday trips.

Daily errands are often more manageable by bicycle than you may think. Bicycling is faster than walking, allowing you to go further without having to worry about parking a car or using fuel. All you need is a bicycle and helmet (and a lock, depending on where you're headed), but you may want to take more things with you; added equipment like racks, baskets, panniers, or trailers can help. See *Chapter 2* for more information on equipment and preparation.

E-Bikes and E-Motos

E-bikes and e-motos (electric motor vehicles comparable to dirt bikes or motorcycles) are a relatively newer mode of travel and have become popular across the country and world, including in New Jersey. In 2026, New Jersey passed its new e-bike law (S4834/A6235) which establishes a wide range of rules, regulations, and guidelines for how people own and operate e-bikes in the state; *these are summarized in the appendix*. This manual is not a comprehensive guide to these regulations; the *NJDOT Bicycle & Pedestrian Resource Center Micromobility page* and the *NJ MVC E-bike and Moped Manual* are valuable resources for guidance on owning and/or operating electric two-wheeled vehicles.

E-bikes may resemble your standard bicycle, but as they become faster and more powerful, the guidance becomes closer to that of mopeds and even motorcycles; it is important to understand that these higher-powered e-motos handle differently and have explicitly different rules and expectations surrounding them than apply to e-bikes, let alone non-motorized bicycles. Pay attention to what you are purchasing – you may unknowingly purchase something you must treat like a motor vehicle in terms of your safety and legal obligations. Notably, New Jersey's 2026 E-Bike Law included a ban on the selling or offering of these specific high-speed electric motorized devices on the internet for one year.

RIDE SMART, RIDE SAFE

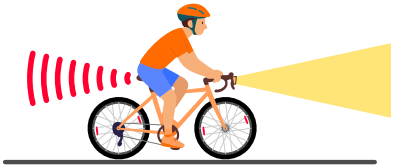
In New Jersey, bicyclists and motorists often share the road and have the same rights and responsibilities. This means riding in the same direction as traffic (except in specific bicycle facilities designed for travel in the opposite direction), following traffic signs and signals, and yielding when required. Motorists are responsible for safely sharing the roadway with bicyclists, who are more vulnerable on the road compared to a person in a motor vehicle.

Not every bicycle trip requires riding in standard traffic lanes. You may be able to use bicycle lanes, low-traffic streets, or shared-use paths and trails where they are available, providing you more comfort on your ride. Sidewalks can sometimes be used where local rules permit; sidewalks may feel more comfortable to some riders, but they are primarily intended for people walking, and bicyclists must watch carefully for pedestrians, driveways, and turning vehicles. Choose routes and facilities that match your skills and comfort level to the extent you can, but when you must ride in vehicular travel lanes, this chapter can serve as your guide to doing so safely and responsibly.



RIDING ON THE ROAD

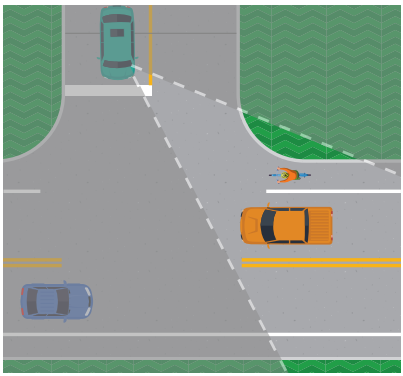
Be Responsible



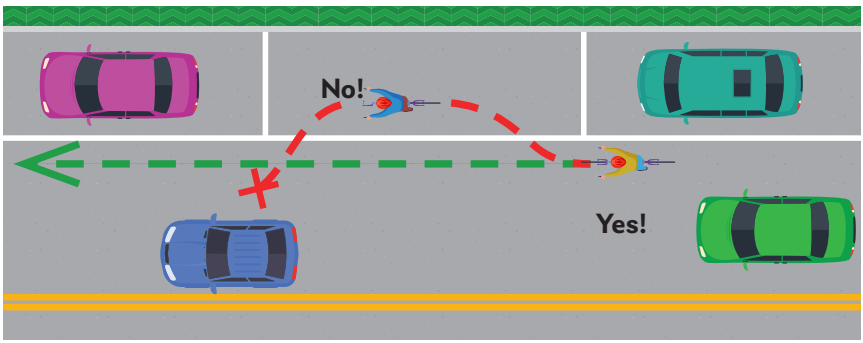
Be Visible

Riding a bicycle requires you to be responsible for your actions, for your safety and for the safety of others. This involves making sure you are familiar with and practiced in what is required to properly handle your bicycle and practice your bicycle riding skills so you can maintain control and execute whatever maneuvers are required in a given situation. As a reminder, this manual is intended for people who are already capable of riding a bicycle; ideally, operations such as pedaling, coasting, signaling, braking, and dismounting should be "second nature", with minimal thought required. If you cannot bicycle yet without swerving, falling, or becoming overwhelmed, it is necessary that you spend some time practicing riding in low-stress settings such as vacant parking lots, paved and relatively level trails, or an athletic field.

Know, understand and comply with the law as it pertains to equipping and operating your bicycle (see "*New Jersey Bicycling Laws and Roadway Restrictions*" in the Appendix). This manual provides the information required to enable you to fulfill your responsibilities.



Ride With Traffic to be Visible



Don't Weave Between Parked Cars

Be Visible and Predictable

Motorists may not be aware of a bicyclist's rights as a user of the road, may not be looking for bicycle traffic, or may be distracted. Therefore, when riding in a public right-of-way, in order to be seen you need to operate in a way that increases the chances that other traffic will notice you. This includes being clearly visible/noticeable and behaving in a way which does not confuse drivers or force them to react suddenly.

Be Visible/Noticeable

A person riding a bicycle is less conspicuous on the road than a motor vehicle (both in terms of being seen and being heard). It is important that you take steps to make yourself as noticeable as possible. Wear bright or reflective clothing when possible. If bright colors are not practical for work or school, use reflective gear or accessories to remain visible. Ensure your bicycle is fitted with front and rear lights and reflectors and use extra caution when riding at night or in adverse weather conditions in which visibility is restricted. Check that your bell is working, and be comfortable talking or shouting whenever necessary to alert those around you.

Be Predictable

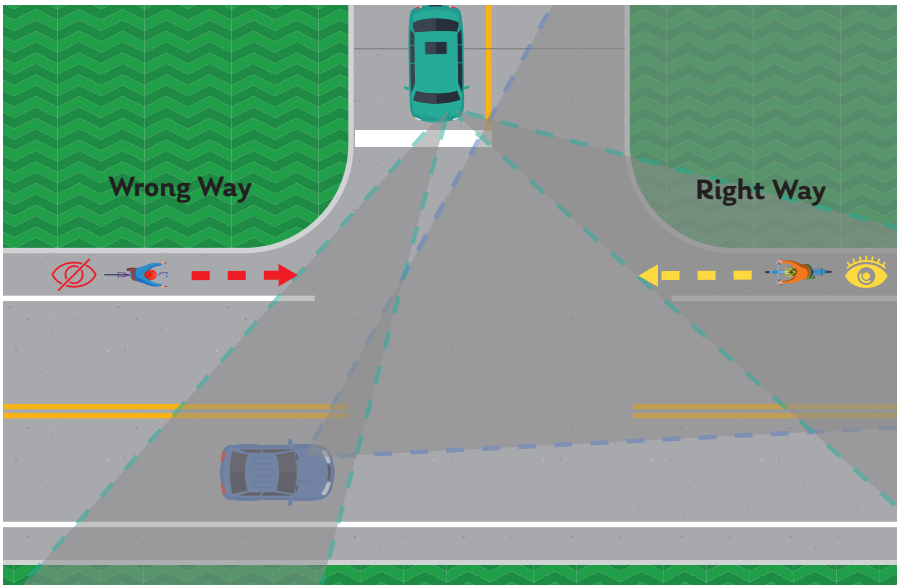
Ride in accordance with the rules of the road, which you are required to do by law. This ensures that you will be positioned where motorists are trained to look for other traffic. In addition, it is not enough to be easily observed; you need to be predictable! The best way to do this is by riding with competence and confidence. This will give motorists the idea that you know what you are doing so that they can anticipate your actions. Use hand signals to visibly announce your intentions when approaching an intersection. For example, a bicyclist riding on the "wrong" side of the road, facing traffic, might not be seen by a driver turning right from a side street, who only looks to see oncoming traffic from the left.

Select Proper Lane Position for the Situation

Choosing Your Lane

When approaching and traversing intersections, determine your lane and position within the lane by the direction you want to go. Position yourself so your intentions are clear. If there is only one lane for travel in your direction, approach the intersection in the part of that lane that corresponds to the direction you are going.

When you have a choice of lanes to use, ride in the right-most lane that serves the direction you want to go. See more details in the "*Intersections and Turns*" section of "Traffic Basics".



Don't Ride the Wrong Way

Ride on the Right

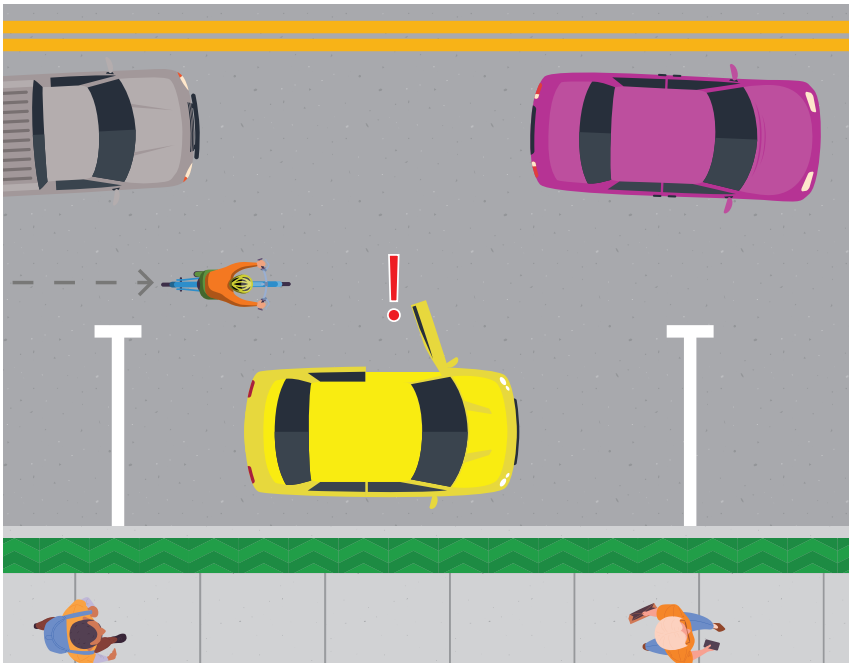
Between intersections, keep as far right as practical. This means riding on the right side of the road or on the shoulder, with traffic, not against it. The law says you must ride as far to the right as practicable (see "*Operating Requirements*" in "New Jersey Bicycling Laws and Roadway Restrictions", Appendix).

This does not mean riding as far to the right as possible; don't "hug the curb" where you may be less visible to motorists and risk hitting the curb and falling. You should also ride far enough from the edge of the roadway to avoid broken up pavement edges, debris, drainage grates, standing water, and trash/recycling bins (all things which tend to accumulate in these areas). Riding immediately adjacent to the curb or edge of pavement can also increase the possibility that a motorist will try to "squeeze" past a bicyclist when there is oncoming traffic; riding a little farther to the left can help encourage a driver to wait for oncoming traffic to pass and then overtake you with more clearance (four feet of clearance, as required by New Jersey law).

Avoid the Door Zone

Travel in a straight line; avoid weaving in and out of gaps between parked cars, as an approaching driver may not expect you to ride into their travel lane. Stay about four feet away from parked cars to avoid the possibility of having a door opened in your travel path (getting "doored" is almost always completely unexpected and has a high risk of causing injury).

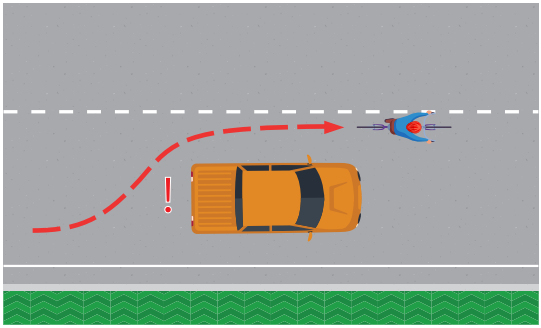
Additional NJDOT Guidance: *Take the Lane: Avoid the Door Zone*



Always Ride Four (4) Feet from Parked Cars to Avoid Open Doors

When to Move Left

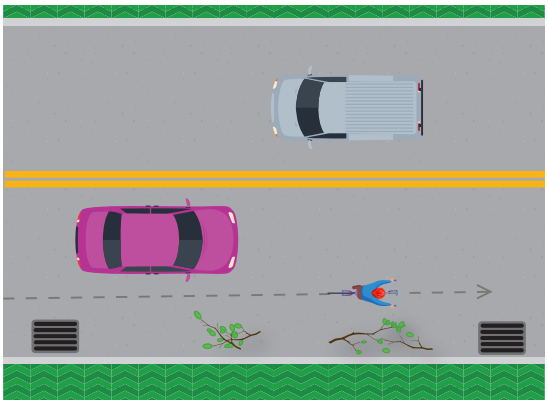
Riding on the right is the standard rule for riding on the road. However, you can/should consider moving to the left in certain situations. Under New Jersey law, a bicyclist may move left under any of the following conditions (N.J.S.A. 39:4):



Bicyclist Moving Left to Pass a Standing Vehicle

1) To pass a standing vehicle
2) To make a left turn from a left turn lane or pocket
3) To avoid debris, drains, or other hazardous conditions on the right
4) To pass a slower moving vehicle
5) To occupy any available lane when traveling at the same speed as other traffic
6) To travel two abreast when traffic is not impeded (but otherwise ride in single file)

In other words, you should move left to pass slow traffic or obstacles, and if the outside lane plus shoulder (if available) is too narrow for side-by-side sharing with motor vehicles, move toward the middle of the lane ("take the lane") to indicate that motorized traffic must change lanes to pass safely. Always check for overtaking traffic in these cases, as drivers may not expect you to leave your position on the right.



Avoid Roadside Hazards

Safe Passing Law



New Jersey's Safe Passing Law establishes how motor vehicle drivers must safely approach and pass pedestrians, bicyclists, e-scooter riders, wheelchair users, and individuals using other lawful personal conveyances[1]. Drivers must approach with due caution and:

- Move into a lane that is not adjacent to the bicyclist when traffic and safety conditions allow
- When a lane change cannot be made, slow down and leave at least four feet while approaching and passing
- When neither option is possible or safe, slow to 25 mph or the lower posted speed, be prepared to stop, and pass only when doing so will not endanger anyone

The law protects bicyclists, but do not assume that every driver knows the law or will follow it. Stay predictable and pay close attention to leave yourself space to respond safely.

The law took effect in 2022 and was amended in 2024. A violation carries a $100 fine when no bodily injury results; a violation causing bodily injury carries a $500 fine and two motor-vehicle penalty points.

See "*Safe Passing Law*" in the Appendix for additional legal details.

NJDOT Safe Passing Law videos (available in English and Spanish)

1 Any device used by a person for transportation, including, but not limited to, low-speed electric bicycles (e-bikes), low-speed electric and motorized scooters, manual and motorized wheelchairs, electric assistive mobility devices, skateboards, and roller skates, as defined by applicable laws and regulations.

Be Attentive and Maintain Control

Bicyclists and motor vehicle drivers can reduce the chances of a collision by knowing and using the collision-prevention formula: be alert, be prepared, and act in time.

1) **Be Alert:** Never think the other drivers will not make a mistake. Do not lose track of the conditions around you, including who else is using the road and what they are doing. Always use visual and audible clues as to the presence, direction, and speed of vehicle traffic around you.

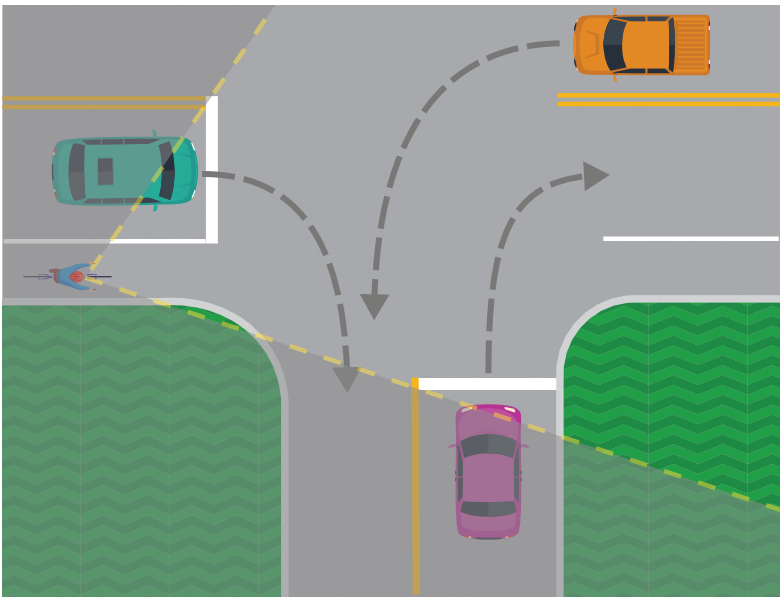
2) **Be Prepared:** Learn what to do in any situation when you need to act fast, and always expect the unexpected (see "*Navigating Difficult Situations*" in Chapter 3: Beyond the Basics; in particular, the "Emergency Maneuvers" subsection).

3) **Act in Time:** Plan ahead and know your route. Anticipate turns, stops, and lane changes, and make your moves to do so with time to spare, with appropriate signals to nearby motorists. Just like driving a car, don't attempt maneuvers at the last second. You need to give the other users of the road time to react to your movements, and sudden movements require sudden reactions.



These habits can help you successfully stick to the formula:

- Scan the roadway ahead for potential road hazards.
- Be alert to the movement of other traffic around you, especially as you approach intersections. Check behind you periodically by briefly glancing over your shoulder, or preferably (and safer), using your handlebar mirror for approaching/overtaking traffic.
- Scan parked cars ahead and be alert to the possibility that a motorist might open their car door. Watch out for cars pulling out of driveways or side streets and for pedestrians at or approaching the curb.
- Be ready to brake or to take other evasive maneuvers.
- Do not ride your bicycle if alcohol, drugs, or medications have impaired your judgment, balance, reaction time, or ability to operate safely.
- Ensure that any headphones, earbuds, hearing-assistance devices, or other technology you use while riding do not distract you or limit your ability to observe and react to traffic and changing road conditions. Maintain focus while riding, and avoid activities such as texting or making phone calls that take away your attention from the road.

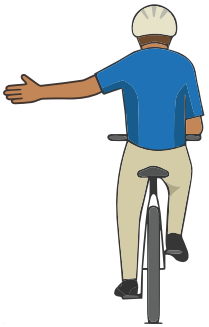


Scan the Road Around You

Signal and Communicate

Use hand signals to make sure that you let other road users know in advance that you are going to change lanes, turn, and, since your bicycle doesn't have brake lights, that you are slowing down or stopping. Just like when operating a motor vehicle, you need to display your signal in advance of the intersection, so other motorists have time to register the signal, understand your intention, and anticipate your movement (such as moving to the left to enter a left turn lane).

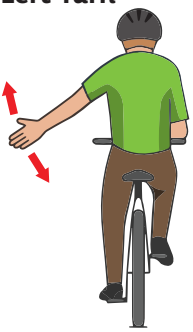
Don't assume that nearby motorists see you. Try to establish eye contact with other drivers, at least for a moment. A good example is a situation in which a motorist on a side street ahead of you approaches the road you are traveling on. It is reasonable to expect they will stop for oncoming vehicle traffic – but if they are distracted, don't have good visibility of you, or misjudge your speed, then there is a risk that they might not stop for your bicycle. If they are clearly not looking at you, you must assume that they don't see you and stay out of their way, slow down, and/or take appropriate evasive action.



Left Turn



Right Turn, Either Hand



Slow Down



Stop

Yielding the Right-of-Way

Since bicyclists have the same rights and responsibilities as drivers of motor vehicles on the road, this includes yielding to other road users. A bicyclist should always be prepared to, and is required by law to, yield to:

- **Emergency vehicles:** when police cars, fire engines and ambulances are giving warning signs (sirens, flashing lights)
- **Buses:** when re-entering the flow of traffic
- **School buses:** when stopped with red lights flashing
- **Frozen dessert trucks:** when stopped with red lights flashing and the stop signal arm extended; after stopping, proceed cautiously at no more than 15 mph, and yield to people walking to and from the truck
- **Postal vehicles:** when vehicle is seeking to re-enter the flow of traffic
- **Pedestrians, including individuals who are blind or visually impaired using a white cane or guide dog:** when in a crosswalk or seeking to cross a road
- **People using motorized or mobility-assistance devices (such as walkers or wheelchairs):** when in a crosswalk or seeking to cross a road
- **Vehicles that are already in an intersection**
    - ◇ If you and another vehicle approach an uncontrolled intersection at the same time, the operator (car or bicycle) on the left yields to the operator on the right. Turning traffic yields to through traffic
- If you are **changing lanes**, you must yield to **traffic in the lane you are entering**

Sidewalks

For children, newer riders, or anyone who does not feel comfortable on a particular road, a sidewalk may sometimes be the most practical option. New Jersey does not have a general statewide prohibition against riding a bicycle on a sidewalk, but some municipalities restrict sidewalk bicycling; follow posted signs and check local rules.

Because sidewalks are primarily pedestrian spaces, keep to a lower speed and always give pedestrians priority. Never assume that someone has seen or heard you; remember to announce yourself before passing and always leave plenty of space. Dismount and walk your bicycle if the sidewalk is crowded or narrow.

Take particular care at driveways and intersections. Drivers entering or leaving the roadway may not expect a bicycle moving along the sidewalk, especially when buildings, parked vehicles, landscaping, or any other common curbside objects block their view. Slow to near walking speed, look carefully for turning or emerging vehicles, and be prepared to stop or walk your bicycle across. See "*Driveways*" for more information.

Adults teaching children to ride should do so in a low-stress environment, and sidewalks are often an adequate option. Where comfortable alternatives designated for bicyclists are available, they may provide more room and fewer pedestrian conflicts.

Single File vs. Side-by-Side Riding

New Jersey law allows bicyclists to travel up to two abreast (but not more than two) when traffic is not impeded. In situations where vehicle traffic is heavy, it's unlikely that you will have room to ride side-by-side, unless the adjacent shoulder is wide enough. Riding side-by-side is best in low-speed or low-traffic situations. In all other cases, you should ride single file, taking care to keep yourself riding in a straight line and to avoid drifting into the path of a motor vehicle.

This helps ensure you are predictable to drivers and that you remain out of harm's way. Even if nobody is driving or riding aggressively, it is important to maintain a safe position and avoid conflicts with motor vehicles. If you are riding two abreast, as soon as you begin to impede the flow of traffic, you must resume riding single file as described above.

TRAFFIC BASICS

Not Every Lane is the Same

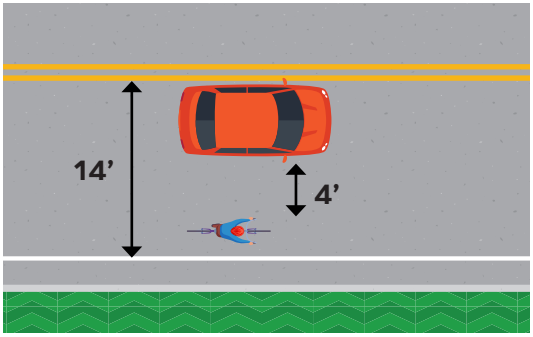
The typical lane is somewhere between 10-13 feet wide. However, in various places, for various reasons, you'll find yourself on a road wider or narrower than that. While you probably won't have a measuring tape on-hand to know how wide your lane is, with experience you'll recognize unusually wide or narrow lanes. You should stay aware of this and change how you ride based on lane width.

"Normal" Width Travel Lanes

In lanes 10-13 feet wide (which is most typical), most vehicles, especially wider ones, will have to move left to comfortably pass a bicyclist, both for their own comfort and to abide by the New Jersey Safe Passing Law (N.J.S.A. 39:4-92.4). As a bicyclist, the best approach is to position yourself a few feet out into the lane, where motorists will see you and understand they must move left to pass you. Unfortunately, riding too close to the right edge of the lane, even if intended as a courtesy to drivers, may lead some motorists to attempt to pass without leaving their lane, making you less able to avoid parked cars, drainage grates, and other road-edge hazards.

Extra-Wide Lanes

Lanes 14 feet wide or more provide enough space for lane sharing. Cars and bicycles can ordinarily travel side by side, and cars can pass bicyclists without having to move over into the next lane. The basic riding position for a bicyclist would be approximately two feet from the edge of the pavement, allowing vehicles sufficient room to drive side-by-side with you in accordance with the Safe Passing Law. Stay aware of cars parked on the side of the road, as drivers may assume they can park on the side of these lanes due to their additional space, even when parking is prohibited.

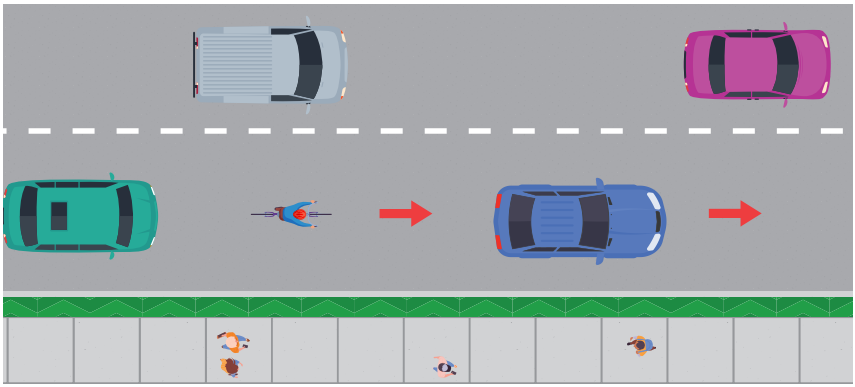


Rider Side-by-Side with Car in a Wide Lane

Riding in a Narrow Lane

On narrower lanes (or lanes which are effectively narrowed by the presence of parked cars) with ten feet or less of space, a bicyclist should take opportunities to "take the lane", by positioning themselves at or near the center of the lane. This enables them to be seen by vehicles approaching from behind and gives the message that an overtaking vehicle must move left to pass when it is safe to do so. While riding "as far to the right as practicable[1]" is still the default, there is a greater chance that drivers will also feel constrained and may choose not to provide the mandated four feet of passing space, creating a dangerous situation.

1 "Practicable" means riding as far right as is safe and reasonable. A bicyclist may move left when encountering situations such as parked cars, debris, drainage grates, narrow lane widths, turning movements, and other hazards in order to ride as far right as practicable.



Occupy more of the Travel Lane if it's Narrow or if Traffic is Moving Slowly

Riding in the Shoulder

Many roadways also provide shoulder areas outside the designated vehicle travel lanes. However, bicyclists should be aware that roadway shoulders in New Jersey are not designed or maintained to the standards required for bicycle travel. In the absence of a marked bicycle lane, many riders move onto the shoulder, assuming it functions as a suitable alternative. However, shoulders are not constructed or inspected with the same expectations for surface quality or continuity that apply to travel lanes.

In 2012, after a bicyclist sustained a fatal head injury while riding on an uneven shoulder surface, the New Jersey Supreme Court ruled in Polzo v. County of Essex that people riding bicycles use road shoulders at their own risk and that the municipality is not responsible for damage or injuries they may sustain while doing so.

As a result, shoulders may not provide a reliable or compliant substitute for a dedicated bicycle lane, and bicyclists may be better served by riding within a travel lane when no designated bicycle facility is present.



Bicycle Lane

Bicycle Lanes

A bicycle lane is a designated lane in the roadway reserved for bicyclists, e-scooters, and wheelchair users. Bicycle lanes are typically identified by signage, lane striping, and pavement markings (such as bicycle symbols and colored paint [typically green or in some cases red]) that clearly distinguish them from motor vehicle travel lanes.

Most bicycle lanes are designed for one-way bicycle travel and are generally provided on both sides of a two-way street or along one side of a one-way street. Sometimes, bicycle lanes are separated between two different streets, meaning one road will only serve one direction of bicycle travel and a parallel road will serve bicycles in the other direction. On some streets, typically busier streets, two-way bicycle lanes are provided on one side of the street; treat these as two individual bicycle lanes which are directly next to each other. Always ride in the direction indicated by the bicycle lane to avoid head-on crashes with other bicyclists and cars and ensure you are predictable for everyone on the road.



Two-Way Bicycle Lane

Bicycle lanes are typically a minimum of four (4) feet wide and can be as wide as seven (7) to eight (8) feet for one direction, but typically they are closer to the minimum width (if bicycle lanes become too wide, motorists may interpret them as travel or parking lanes). While you are not required to stay within the bicycle lane, it is a dedicated facility that will often serve as your safest, most comfortable, and most predictable option. As in other cases, if you need to pass another bicyclist, a parked motor vehicle, or any other obstruction, check for cars approaching behind you before moving into the flow of vehicular traffic and clearly communicate that you are about to pass.

Bicycle lane users should be prepared for obstacles, which could include stopped or parked vehicles, trash/recycling bins, brush/yard waste, and opening vehicle doors. Carefully go around these obstacles, away from the curb, only after checking to make sure you will not conflict with motor vehicle traffic approaching from behind. When a bicycle lane runs alongside parked cars, ride on the far side of the bicycle lane from these cars when space allows and moderate your speed. Watch for signs that a vehicle may be occupied and that someone may be exiting; do not assume a closed door will remain closed, and stay prepared to stop.

There are many kinds of bicycle lanes, designed based on their context, road characteristics, and level of vehicular traffic and speed. Some non-standard but common types of bicycle lanes include:



Buffered Bicycle Lane

Buffered Bicycle Lanes

A "buffered" bicycle lane is separated from the adjacent driving lane by a double line, as opposed to a single line. The buffer is a minimum of one and a half (1.5) feet wide and ideally three (3) feet wide, providing ample separation from traffic. Wider buffers (two to three feet) can also include flexible, vertical posts which provide additional visual cues to the presence of the bicycle lane and help increase bicyclists' comfort when using the lane.

Contraflow Bicycle Lanes

Bicycle lanes are typically arranged the same as driving lanes; cars drive on the right side of the road, and standard bicycle lanes are also on the right. Occasionally, however, for reasons of roadway limitations and network connectivity, bicycle lanes may have to provide travel in the opposite direction of the vehicular traffic in the adjacent driving lane, which is referred to as a counter-flow or contraflow bicycle lane. Often, these are also buffered to account for the increased risk of riding towards oncoming traffic. Take extra care to watch out for cars and keep yourself riding in a straight line within the bicycle lane to prevent a head-on collision. This is a rare configuration, and if a counter-flow bicycle lane is present it will be clearly marked. Usually, but not always, counter-flow bicycle lanes are on the right side of the road from the bicyclist's perspective (left side, from a driver's perspective).

Left Side Bicycle Lanes

Bicycle lanes are sometimes placed on the left side of one-way streets or two-way median-divided streets. This configuration is typically intended to give space for transit use or is used on a road with heavy delivery, frequent parking turnover on the right side, or other potential conflicts. Unlike counter-flow bicycle lanes, you will be riding in the same direction as traffic, but your position relative to cars will be unusual for drivers, and you need to take additional care to stay within the bicycle lane and follow all signage directing you.



Left Side Bicycle Lane

Protected Bicycle Lanes

A protected bicycle lane is a dedicated facility that uses physical barriers to separate bicyclists from moving motor vehicle traffic. Some barriers, such as flexible posts, primarily act as visual cues, while others create genuine protection and will stop or redirect motor vehicles before they enter the bicycle lane. These protective features include raised medians, concrete barriers, guide rails, curb extensions, planters, parking lanes, and more. These are often present on busy roads, and you are likely to see them downtown or in other busy commercial areas.

By creating a distinct, separate space for bicycle travel within the roadway, protected bicycle lanes can enhance rider comfort, improve safety, and reduce interaction between bicyclists and motor vehicles. These hard barriers represent a clear obstacle and provide positive protection for bicyclists on the opposite side. For lesser barrier types, such as flexible posts, it is unfortunately not uncommon to see drivers disregard them, drive over them or even double-park within the bicycle lanes. In these cases, you should report these vehicles to the local parking authority and move left around them as you would on other bicycle lanes, taking the same precautions.



Protected Bicycle Lane

Some other forms of on-road protected bicycle lanes you may encounter include raised bicycle lanes and two-way protected bicycle lanes.

Raised Bicycle Lanes

Raised bicycle lanes are bicycle facilities that are vertically separated from motor vehicle traffic, often at the adjacent sidewalk level. Often, there is a zone between the cycle track and motor vehicle travel lane and/or pedestrian area with benches, trees, or other landscape or streetscape elements to help keep traffic separate and improve the overall experience.



Raised Bicycle Lane

Two-Way Protected Bicycle Lanes

Physically separated bicycle lanes on only one side of the road that allow bicycle movement in both directions. Signage and striping in transition areas between two-way cycle tracks and other types of bicycle facilities, as well as intersections, are important to communicate desired operation to both bicycles and motor vehicle operators.



Two-Way Protected Bicycle Lane

Shared Lanes

A shared lane is a roadway that is officially designated and marked as a bicycle route, but is open to motor vehicle travel and lacks designated bicycle lanes. This is usually indicated by signage and shared lane markings, also known as "sharrows". When using these roads, ride as indicated in "*Riding on the Road*" in this chapter. Shared lanes are typically provided on lower-speed and lower-volume roadways. With the pavement markings and associated signage, drivers are alerted to your presence on the roadway, and you should be particularly comfortable "taking the lane" on this type of facility. Nonetheless, you still need to stay aware of your surroundings, and it is recommended that you still move right if you observe a vehicle approaching from behind.



Sharrow

Passing Other Road Users

You may occasionally need to pass another road user. Before passing, look behind you and ahead to confirm that the space you intend to enter is clear and that you have enough time and distance to complete the maneuver. Signal before moving left when riding on a roadway, pass at a controlled speed, and return to your previous position only after you are safely clear.

Passing Motor Vehicles

New Jersey law allows a bicyclist to move left to pass a slower-moving vehicle. Before doing so, check for potential conflicts like oncoming traffic and driveways. When conditions permit, signal then pass. If the vehicle speeds up or conditions change, slow down and return behind it when it is safe to do so. Generally, you should avoid passing a motor vehicle from the right. Avoid passing near intersections without checking the intersection controls to know if a vehicle is about to suddenly accelerate. Do not ride between a large vehicle and the curb, where it may be difficult for the driver to see and you have little space to escape. Trucks have lately been outfitted with side guards to reduce harm in these instances, but you should do your best to avoid this kind of situation altogether.



Truck Side Guard

Passing Buses

Use particular caution around buses because they make frequent stops, have large blind spots, and may block your view of passengers and other traffic. Do not pass between a bus and the curb. If you pass a stopped transit bus on the left, slow down and watch for pedestrians crossing in front of it and for signs that the bus is preparing to reenter traffic. Yield when required to a bus pulling back into the travel lane.

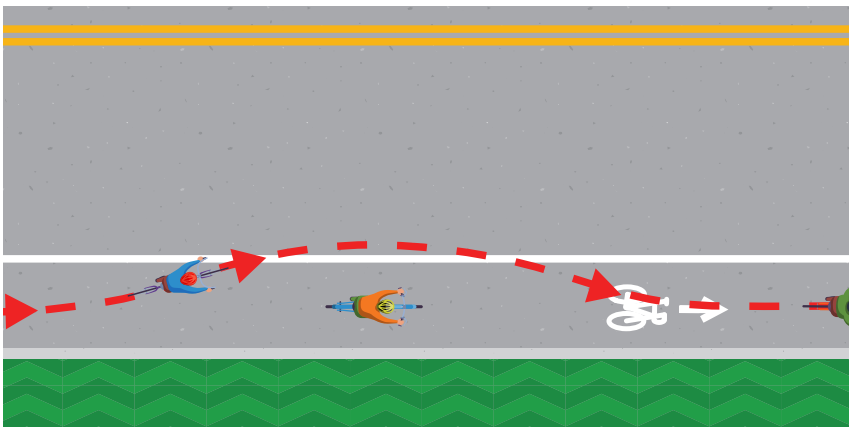
Never pass a school bus displaying flashing red lights. Stop as required and remain stopped until the lights are no longer flashing and it is lawful and safe to proceed.

Passing Bicyclists and Path Users

Riders may travel at different speeds depending on age, ability, experience, bicycle type, and conditions. Always wait for a safe opportunity to pass and provide adequate clearance.

Before passing another bicyclist, pedestrian, or other user, check that the space ahead is clear and announce your approach with a bell or a clear phrase such as “on your left.” Pass on the left at a moderate speed and leave enough room for the other person to move unexpectedly. Do not assume that they have heard you.

On a roadway, check for motor vehicle traffic before moving left to pass another bicyclist. On a shared-use path or trail, do not pass near a blind curve, hill crest, intersection, or other location where you cannot see approaching users. Return to the right only after you are fully clear.



Bicyclist Passing Another Bicyclist

Intersections and Turns

You must be especially vigilant when negotiating intersections for many reasons. Motor vehicles at intersections are moving in many directions which may conflict with your path. Additionally, beyond watching for bicyclists, drivers at intersections are also required to pay attention to signals and other traffic controls and to other vehicles which may be turning, watch for pedestrians, and adjust to a new road. As a bicyclist, you should make sure your behavior is not unpredictable and that you are as visible to drivers as possible to minimize the risk of a crash caused by inattention.

Types of Intersection Control

Controlled Intersections

An intersection is controlled if there are traffic signals or stop/yield signs in any direction. Following the "rules of the road", a bicyclist must obey these traffic controls. At a controlled intersection, a bicyclist must yield under certain conditions.

At a multi-way stop-controlled intersection, a bicyclist must yield to the traffic on the right if both get there at the same time. A bicyclist should also yield to another driver already stopped at the intersection.

At an intersection controlled by a yield sign, a bicyclist must slow down, observe major street traffic, and yield to traffic on the intersecting roadway, and must stop if conflicting traffic is approaching on the uncontrolled street. When making a left turn at an intersection, a bicyclist must yield to oncoming traffic (except with a dedicated left turn signal) and to pedestrians within the crosswalk.

At signal-controlled intersections, it will be clear who can go and who cannot based on the signal indications. With a green light, a bicyclist may proceed with the flow of traffic, staying aware of turning vehicles. With a red light, turning left or proceeding straight through an intersection is always prohibited. While turning right on red is common behavior for motorists, this is still a risky maneuver which requires them to wait for a gap in traffic; as a bicyclist, you must exercise the same level of caution.

Some intersections may have bicycle signal heads with bicycle-specific timing paired with bicycle lanes or separated bicycle lanes. Bicycle signals help simplify bicycle movements at complex intersections, clarify navigation of the intersection for bicyclists, separate motor vehicle and bicycle movements to reduce conflicts, and prioritize bicycle movements.

Additionally, signs at some intersections will clearly state that turning on red is entirely prohibited. When it is not prohibited, it is best that you, as a bicyclist, take great care if attempting to turn right while a red signal is displayed.

Note: Driving on private property to avoid a traffic signal or sign is a motor vehicle violation (N.J.S.A. 39:4-66.2).

Uncontrolled Intersections

An intersection is uncontrolled when two or more roads join and there is no traffic signal or regulatory device. A bicyclist must be very careful when approaching these types of intersections. As a bicyclist nears a crossroad that is not controlled, they must reduce speed and be ready to stop if any traffic is coming from the right or left. As a general rule, the vehicle on the left should yield to the vehicle on the right. When a traffic signal is not illuminated because of a power failure or other malfunction, the intersection is treated as a four-way stop (N.J.S.A. 39:4-81).

A bicyclist coming from a private road or driveway, which often meet roads without a traffic signal or regulatory device, must yield to all traffic on the main road.

Intersections with Obstructed Sightlines

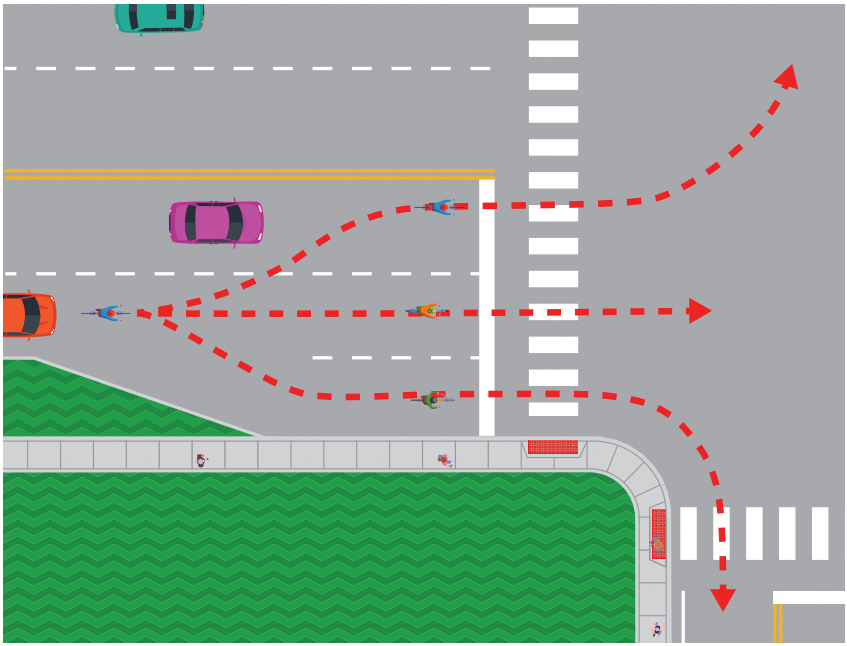
Buildings, parked vehicles or landscaping may obstruct a bicyclist's line of sight. On rural roadways, trees, crops or other vegetation may obstruct a bicyclist's line of sight. If sight lines are obstructed at an intersection, a bicyclist should always slow down or stop completely to make sure there is no cross traffic before proceeding.

Turns

As you approach an intersection, observe and obey any traffic control devices, including law enforcement officers directing traffic, and yield to other traffic when you are required to do so. Select your lane based on the direction you want to travel and position yourself so your intentions are clear. If there is only one lane for travel in your direction, approach the intersection in the part of that lane that corresponds to the direction you are going. When you have a choice of lanes to use (i.e. in situations where multiple lanes go to the same road), ride in the right-most lane that goes in the direction you want to go. Before proceeding into the intersection, remember to check behind you so you are aware of overtaking traffic and what it could be doing.

Going Straight Ahead

When traveling straight ahead at an intersection, approach the intersection in your current lane position, and maneuver into the designated through travel lane (or the rightmost through travel lane if multiple lanes serve that movement). As you enter the intersection, choose a travel path directly to the lane where you will be riding on the other side of the intersection and proceed in a straight line.



Choose the Correct Lane

Right Turns

Select the right-most lane from which you can make a right turn. As you approach the intersection, signal your intention to turn right. Proceed around the corner, and try not to drift left or right from your existing position. Moving left can move you into other turning lanes or oncoming traffic, and moving right may result in your being squeezed toward the curb as you make the turn.

Left Turns

Turning left at an intersection requires more preparation and earlier decision-making than right turns and going straight through. Well before you reach the intersection where you intend to turn, you need to begin to scan behind you to check traffic conditions. If there is overtaking traffic, signal your intention to turn left, look for an acceptable gap in traffic with enough space to allow you to move to the other side of the lane and/or the designated lane for left turns.

Turning Left from One Travel Lane

If there is only one lane in your direction of travel, look for an acceptable gap, signal your intention, and take a position about four feet from the left-most line or curb; picture it as the exact opposite of your usual position on the right. If there is a car stopped at the intersection, pull up behind the vehicle and stop. If cars pull up behind you, this is a good time to make a left turn signal and look behind to make sure the driver behind you understands your intentions. Once you have the right-of-way (signal is green and no oncoming traffic, a green left arrow is displayed, or you have stopped for a stop sign and determined that intersecting traffic in both directions has cleared the intersection), you can begin to move out and negotiate your turn. As you do so, you need to observe oncoming traffic to make sure that there is an acceptable gap before completing your turn.

Turning Left If There Are Two or More Travel Lanes in Your Direction

If there are two or more travel lanes in your direction of travel, and none are designated as a left turn lane, follow the same process outlined above to move into the lane next to the centerline. Then, proceed as described above.

Turning Left If There Are Designated Left Turn Lanes

If there is one designated left turn lane, follow the process described above and move into the left turn lane. If there is more than one left turn lane, move into the right-most designated left turn lane (unless you are going to make two left turns in quick succession, in which case, move into the left-most left turn lane).

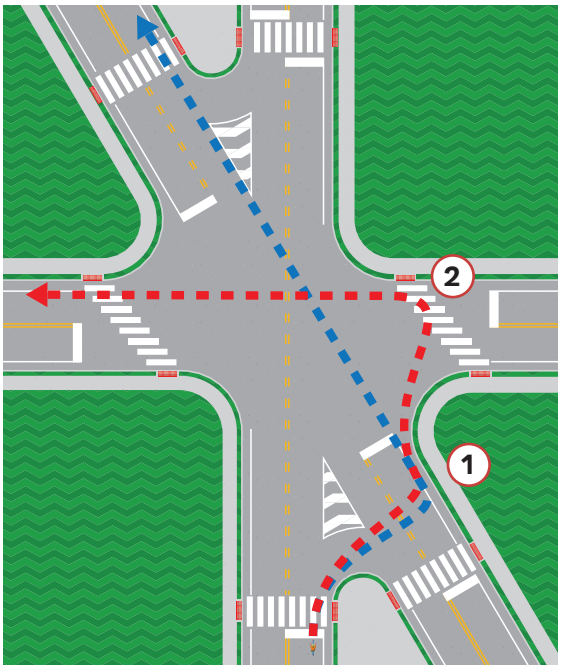
The Box Left Turn

If you want to make a left turn and you sense that conditions are too difficult for your skill level, you may make a "pedestrian" or "box" left-hand turn by riding to the far-right corner of the intersection and repositioning yourself behind the stop bar on the intersecting street, then proceeding when you have the right-of-way to do so. If traffic is queued up and there isn't enough space to get behind the stop bar, then position your bicycle in front of the queued traffic, but make sure not to fully block the crosswalk.

Turning Left at Non-Traditional Intersections

If you encounter an intersection with more than four legs, where you can make either a slight left or a "hard" left, it is best to make a left turn as a vehicle would, if you can.

If you feel you need to resort to a box left turn, do it incrementally, traveling from corner to corner to "work your way around" to eventually position yourself where you can travel straight across the intersection into the desired roadway.



Turning Left at Complex Intersections

Bicycle-Friendly Intersections

A bicycle-friendly intersection is one that incorporates design features to physically separate bicyclists from motor vehicle traffic.

Bicycle Box

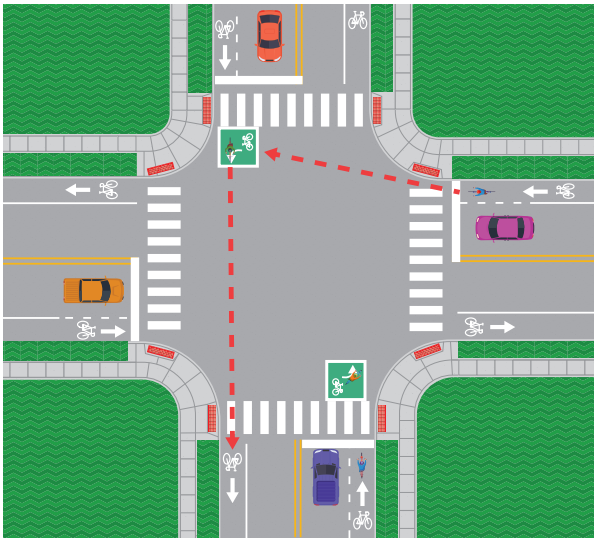


Bicycle Box

This is a designated area on the approach to a signalized intersection between an advance motorist stop line and the crosswalk or intersection. This is intended to provide you with a place to wait in front of stopped motorists during the red signal phase, essentially allowing you to "jump the queue" and place yourself first in line at the signal, so you can clear the intersection while traffic is still moving relatively slowly.

Two-Stage Bicycle Turn Box

This is a designated area at an intersection intended to provide bicyclists a place to wait for traffic to clear before proceeding in a different direction of travel. It creates a designated space to complete a "box" left turn, where drivers are fully aware of what you intend to do because it is clearly marked.



Two-Stage Bicycle Turn Box

Protected Intersection

Protected intersections, like protected bicycle lanes, include vertical elements such as curbs, bollards, or planters to provide more significant separation between bicyclists and traffic. This is often done to keep motor vehicles from encroaching on bicycle lanes when turning. These are usually an element of curb extensions, and as a result, pedestrians wait for a chance to cross further into the road than where your bicycle lane is located. This means that while your comfort should be greater here (or at least the typical safety concerns at busy intersections are reduced), you should still approach with reduced speed as pedestrians are likely to be crossing your bicycle lane.



Protected Intersection

Raised Intersection

A raised intersection is a modern intersection solution where the space between all crosswalks is raised to the same height as the curb. This elevation makes bicyclists and pedestrians easier to see for motorists and acts as a speed hump, helping reduce traffic speeds and improve safety for vulnerable road users. Behave here as you normally would but be aware of the ways the road changes its slope. Additionally, pedestrians may cross outside of the crosswalk here because of its pedestrian comfort level, so keep your speed low and navigate carefully if you encounter this behavior.

Crossbike

An intersection with a bicycle lane passing through it will often include a "crossbike", which resembles a crosswalk but will match the bicycle lane's paint style in some way. This can include being painted green and/or having white stripes on either edge. If these are present, stay within the crossbike and travel through the intersection with your usual level of caution.



Crossbike

Transitions Between Types of Bicycle Infrastructure

Generally, planners and traffic engineers try to design bicycle facilities to be continuous and consistent, but this likely won't be the case for every possible route. A single roadway can have segments with different widths; different sections may require more travel lanes to handle traffic; and segments can differ in volumes or speeds, making more or less separation between bicycles and automobiles necessary. Even if you are traveling along a continuous bicycle-friendly route, the type of bicycle facility you are using may change, and the transition from one facility type to the next may not always feel seamless.

Additionally, in a more robust and interconnected bicycle network, the major routes may be made more bicycle friendly than the "collector" routes, and you may find yourself merging from one form of bicycle infrastructure to another. Some routes may also simply need to be accessed using roads without any bicycle infrastructure at all.

Entering and Exiting Bicycle Lanes

The most significant change you are likely to experience is transitioning between roads with and without dedicated bicycle lanes. Previous sections of this manual have noted a recommended riding position when in a bicycle lane, and when on the road. As always, exercise care and maintain awareness of your surroundings.

Proceeding Straight

In most cases, proceeding straight onto a newly introduced bicycle lane should be seamless, as the bicycle lane should match your existing road position or just require a modest shift to one side or the other. Similarly, if your bicycle lane ends and you want to proceed in the same direction, you should behave as you would at any other intersection and begin bicycling straight on the next block using typical standard behavior.



The Start of a Bicycle Lane

If you are entering a counter-flow or left side bicycle lane or two-way cycle track on the left side of the road you are riding on, you should perform a left turn (or box left turn) to get to the opposite corner of the intersection, then begin riding on that bicycle lane as it is marked. Similarly, when leaving a facility on the left side of the road to return to a standard position on the right (including to standard bicycle lanes), cross the road you are on first to position yourself on the right, then safely proceed straight through the intersection.

Turning

When turning onto a roadway with a bicycle lane, *behave as you would at any other intersection*. Do not travel out of turn or out of the signal phase, watch crosswalks for pedestrians, and stay in a controlled and predictable path as you smoothly enter the bicycle lane. Crossbikes may be available for you to conduct a box left turn. Watch for bicycles using the bicycle lane, and yield to them when entering, communicating vocally that you are merging.

If you are entering an atypically configured bicycle lane (counter-flow bicycle lane, left side bicycle lane, two-way cycle track, etc.), take a moment to identify the path you need to take.

- For counter-flow bicycle lanes and left side bicycle lanes, you should approach the intersection positioned on the left side of the road, just as you would in any other left turn. In the case of counter-flow bicycle lanes, pay close attention to traffic patterns, especially for cars looking to turn across your desired path, since they may not expect a bicyclist from your approach.
- A two-way cycle track could be located on the near side or the far side of the road from you. If it is on the far side, first cross the road as if you are following a crosswalk (and if there is a crosswalk or crossbike, then follow it) no matter your intended direction.

When exiting a bicycle lane and onto an intersecting street, the direction you need to go is a relevant factor.

- If your bicycle facility positions you on the right side of the road, you will be able to turn right directly onto your desired street and will have to cross the road (and any oncoming traffic) to turn left. Behave as you would in a standard intersection, but note that you are at a disadvantage because you may not be able to move left easily to the ideal left turning position on the left side of the lane (this is especially true on contraflow bicycle lanes). If a car has established itself in the typical left turning position, or whenever using a contraflow bicycle lane, you should instead use the box left turn method and turn left in two stages.
- If you are using a bicycle lane configuration which places you on the left side of the road, turning is more complicated. If you need to turn left, follow the crosswalk across the intersection before turning left to position yourself on the right side of the road. Turning right, similarly, will require you to follow the crosswalk on your right to cross the intersection before moving into the travel lane. In both cases, cross the street at the same time other traffic can cross in that direction, and pay close attention to vehicular traffic which may not expect your atypical positioning.

Between Bicycle Lanes and Shared-Use Paths

Shared-use paths are typically very clearly marked and provide ramps where they intersect with the road. Paths connecting to bicycle lanes provide a seamless and comfortable experience, but you need to watch for the other users of the path, especially pedestrians.

When moving from a bicycle lane to a shared-use path from the same side of the road as the entrance to the path, you can usually enter the path comfortably, but ramps are not always provided, and you may need to dismount and walk your bicycle over a curb. Slow down to make sure you negotiate the turn safely and that you and other path users are not in sudden conflict. If you need to cross the road to get to a path, find the nearest intersection or crosswalk (there are often mid-block crossings where a path meets the road) and cross at the same time pedestrians can cross, then proceed into the path.

When exiting a path onto a bicycle lane, watch for bicycle traffic, and only merge when you have a clear gap to make your turn comfortably. Just as mentioned before, if you need to cross the road to reach your desired bicycle lane, find the nearest crosswalk or intersection and cross when you are allowed to do so.



Shared-Use Path Meeting a Bicycle Lane, with a Change in Grade

Ramps

If you bicycle in New Jersey, sooner or later you will encounter "jughandle" ramps, or grade separated intersections or interchanges (where one road passes over the other, with some configuration of connecting ramps). Depending on the configuration, you can encounter on-ramps and off-ramps on either the approach side (near side) or the departure side (far side) of an intersection (or interchange). In either location, vehicles may be exiting, or merging onto, the roadway you are riding on.

Off-ramps are often preceded by a "deceleration lane", a short section of a new lane added to allow vehicles to slow down before turning along the ramp. Similarly, an on-ramp is often followed by an "acceleration lane", a short extension of the on-ramp which allows motorists to accelerate before merging into fast-moving traffic.

Many ramps do not allow bicycle traffic - check for signage when approaching a ramp. Ramps facilitate high-speed traffic and if you intend to use a ramp, stay alert.

On-Ramps

Drivers entering the roadway from a ramp will be speeding up on your right, as speeds are slower on the ramp itself than on the road you are on. Stay in your basic straight ahead lane position, and slow down to allow drivers to merge ahead of you. Hold your position; even if it feels natural to get out of the way quickly, don't swerve over to the right side of the ramp's exit.

If an acceleration lane is provided, do not cross into that lane. When the ramp first intersects the roadway you are riding on, cars will use it to pass you and then enter your lane ahead of you. As you proceed further, traffic will instead merge into the through lane behind you and pass you on the left.

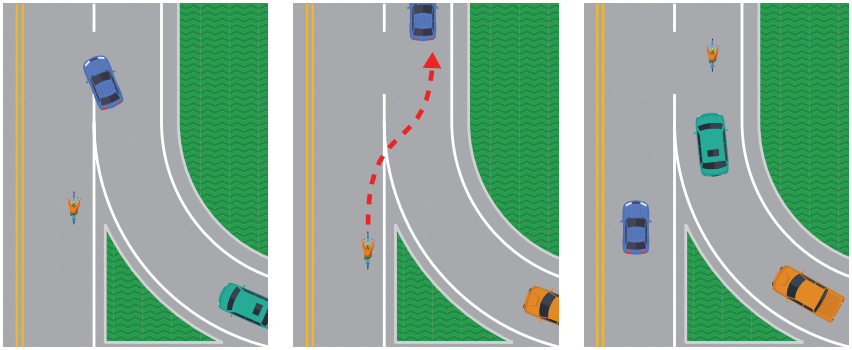
Off-Ramps

If you are going straight past an off-ramp, stay in your basic straight ahead lane position. Traffic should enter the ramp behind you. Be aware of approaching traffic behind you, as traffic may pass you on the left and merge into the deceleration lane (if there is one), then into the off-ramp.

A “jughandle” ramp is a special case of off-ramp, most often featured at a signal-controlled intersection. A jughandle ramp’s function is typically to reconfigure a left turn movement from a major roadway to a straight through movement on a side street approach. (This typically offers operational and/or safety benefits for vehicular movements at high-volume intersections.) A jughandle ramp may leave the roadway before or after an intersection.

Using Ramps

If you are going to turn onto a ramp (jughandle or otherwise), signal your intention and (if there is one) merge over into the right side of the deceleration lane, and proceed to complete your turn, which may require left turn or merging movements to enter the intersecting roadway.



Move Right Over a Ramp as Soon as Possible During a Clear Gap in Traffic; Cars Merge Before or After Bicyclists

Traffic Circles and Roundabouts

New Jersey features many examples of two different classes of traffic circle. The first is the "default" traffic circle, sometimes known as a "rotary" in other regions. Traffic circles (which are not always circular in shape) are generally characterized by wide circle diameters and ramps with wide curves, which facilitate navigation at high speeds. In addition, traffic controls are often placed inconsistently; some ramps may have stop or yield sign controls on entry, while other entry points may be free-flowing, with stop controls on the circulating ("circle") roadway, which often leads to queuing issues.

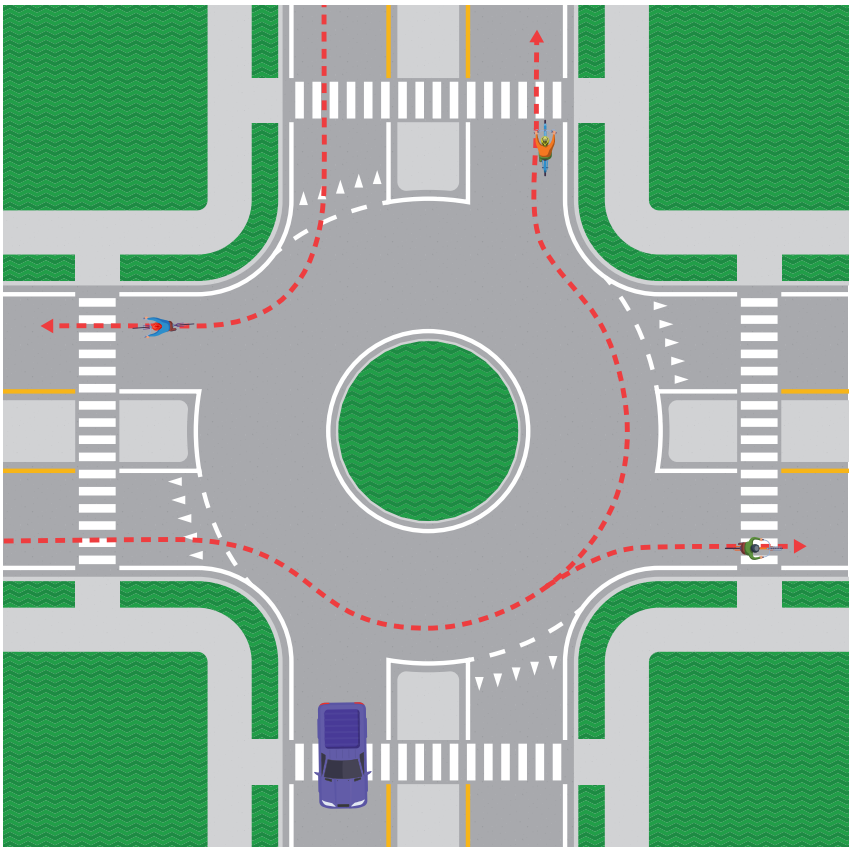
For bicycling in a "traffic circle", common sense and caution are essential. As a bicyclist you need to always be alert to the vehicles around you - this matters everywhere, but especially in a traffic circle. Traffic circles can be unusually difficult as a bicyclist, as many traffic circles may be complicated, accommodate higher speeds, and/or require you as a bicyclist to change lanes and anticipate merges and exits. If you are still getting used to riding on the road, it might be preferable to avoid traffic circles with high speeds and/or volumes. In fact, even some experienced and confident bicyclists avoid riding in these larger, high-speed traffic circles.

Traffic control signs posted at the circle, such as stop or yield signs, govern which motorist has the right-of-way. If a major highway flows through the circle, it usually dominates the traffic flow pattern and commands the right-of-way. Never enter a traffic circle without checking all signs and determining the intentions of the motorists already moving within the circle.

If there is more than one lane entering a traffic circle, a bicyclist should use the right (outside) lane. If you are going to exit the circle at the first opportunity, regardless of the number of lanes in the traffic circle, stay in the outside lane, signal your intention to turn right, and execute a right turn at your exit just as you would at a regular intersection. If you intend to go past the first exit and the circle has more than one lane, signal and negotiate a lane change to the outside portion of the inside lane. As you approach your intended exit, move back to the outside lane, and execute a right turn at your exit as described above.

Roundabouts

Modern roundabouts are a particular type of traffic circle now being constructed in New Jersey. There are important distinctions between "traffic circles" constructed decades ago, and "modern roundabouts" being planned or constructed today. First, modern roundabouts typically involve much smaller-diameter circles with carefully engineered entry and exit ramps which effectively prevent navigation at speeds higher than 15-20 mph. In addition, modern roundabouts standardize traffic controls, with yield signs on each entry. Once you have entered the circulating roadway you have the right-of-way until you leave the circle. Today, modern roundabouts are favored by planners and engineers for safety reasons: due to lower travel speeds, they experience significantly fewer fatal and serious injury crashes than intersections controlled by traffic signals or stop signs.



Negotiating a Roundabout

By virtue of the lower speeds fostered by modern roundabouts, they are typically more comfortable for bicyclists to use, as the differential in speed between cars and bicyclists is much lower than at a traffic circle (or any intersection). A modern roundabout is effectively a series of closely-spaced ramps; you will enter the roundabout on an on-ramp, and you may ride past some number of off-ramps before reaching your desired off-ramp. You may need to negotiate some lane changes or merging movements if the roundabout provides more than one circulating lane. Therefore, a roundabout can be safely negotiated using the directions in the "Ramps" section. Owing to the lower speeds, you may be more comfortable "taking the lane" in a roundabout than in many other roadway/intersection settings, and drivers are more likely to follow your lead through the roundabout because, due to the close ramp spacing, there likely is no opportunity to overtake a bicyclist.

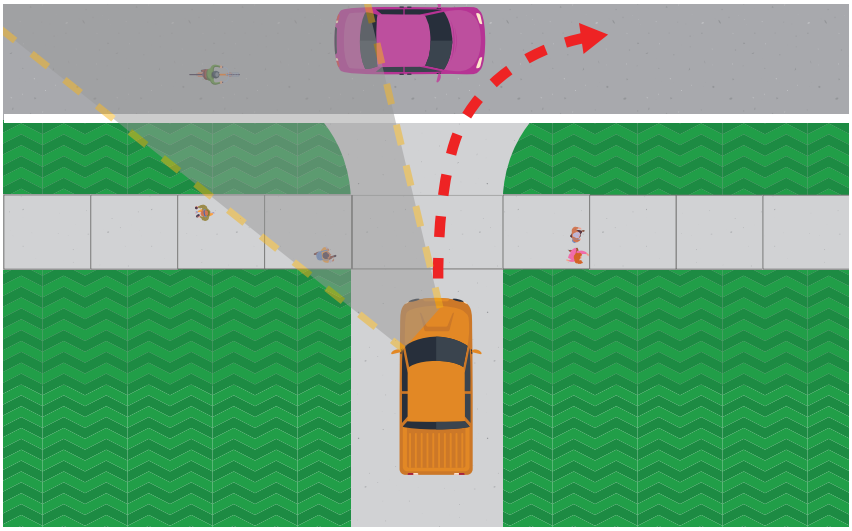
At first glance, the differences between a traffic circle and a modern roundabout are subtle and you may not be able to distinguish them. If you need to pass through a traffic circle or roundabout but feel uncomfortable negotiating it, you can always dismount and walk your bicycle through the crosswalks to get around the circle or roundabout.

Driveways

Driveways function much like small intersections. Drivers entering or leaving a property may cross a sidewalk, shared-use path, shoulder, bicycle lane, or travel lane. Parked vehicles, buildings, signs, and landscaping may also block the view between the driver and the bicyclist. Any time you approach a driveway, check for vehicles exiting the driveway as well as those in the road which may show signs they are about to enter the driveway. Be prepared to slow down or stop.

When you see a car in a driveway, watch for movement, including the wheels turning before the vehicle moves, along with its turn, brake, or reverse lights going on. Don't assume they've seen you; sometimes, cars back out of driveways into the road, making them even less likely to see you. When watching for vehicles that may enter a driveway, they will be slowing down and using their turn indicators, so check the road when you approach a driveway for these signs. This is also an opportunity to make eye contact with any drivers you suspect might be about to turn, as that allows you to confirm this rather than guess.

Use additional caution at wide commercial driveways and parking-lot entrances, as visibility can vary and speeds are often higher than at residential driveways. Proceed only when you can confirm that the crossing is clear.



Driveway Conflict Zone

SAFELY COEXISTING ON THE ROAD

Users of many modes of transportation are entitled to operate within most roads in New Jersey. Along with bicycles, these include:

- Motor vehicles: automobiles, trucks, buses, and motorcycles
- Low-speed electric bicycles and motorized bicycles (mopeds)
- Skateboards and roller blades (inline skates)
- Pedestrians and people using mobility devices, such as wheelchairs (including motorized wheelchairs), mobility scooters, and more
- People using other personal conveyances, such as low-speed electric scooters, skateboards, roller skates, and electric personal assistive mobility devices (EPAMDs)

It is important to keep in mind that you and automobiles are not the only ones using the roadways; sharing the road involves knowing and acknowledging that each of these modes may be operating in the roadway, and that they are permitted to do so. It is your responsibility to know how to safely share the road with all these users; the following section provides information about specific considerations for sharing the road with each road user.

Safety Around Automobiles

Cars, trucks, buses and motorcycles must operate in accordance with N.J.S.A. Title 39. The operating requirements for motor vehicles are presented in the NJ Drivers Manual, which may be viewed or downloaded (in English, Spanish, Chinese, Tagalog, Gujarati and Korean) at: http://www.state.nj.us/mvc/About/manuals.htm.

Sharing the road with automobiles means respecting their right to share the road with you and operating in a focused and predictable manner. Automobiles are the most common users of most roadways, and the recommendations in "Riding on the Road" detail the typical considerations you should make as you use the road with this in mind.

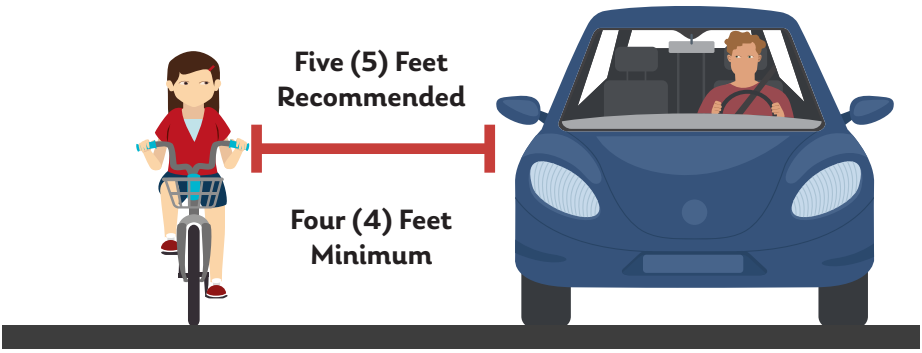
The most significant thing to keep in mind, beyond that automobiles can and will travel much faster than you, is that their drivers usually cannot hear you. To reiterate some key behaviors which are important for sharing with automobiles:

- Choose the proper lane position and ride on the right as practicable.
- Obey all traffic signals, signs and pavement markings.
- Communicate by using an audible signal and hand signals.
- Be as visible as possible at night .
- Yield the right-of-way when appropriate.
- Only ride side-by-side with other bicyclists if you are not impeding automobile traffic.

Motorists' Responsibility for Safety with Bicyclists

On the other hand, motorists should respect your right to operate on the roadway and be aware of the likely and legitimate presence of bicycle traffic. This means that motor vehicle drivers should always follow this guidance:

- Look for bicycle traffic, especially at intersections.
- Yield to bicyclists when changing lanes, turning or pulling out from a driveway. Refrain from blocking or parking in bicycle lanes.
- Refrain from using horns to intimidate bicyclists (a sudden loud blast will likely startle the bicyclist and could cause them to lose control).
- Slow down and provide adequate clearance when passing a bicyclist (by law, four feet minimum at slow speeds, five feet is better; trucks should provide even more).
- Don't follow a bicycle too closely. Give bicycles room to maneuver to avoid road hazards.

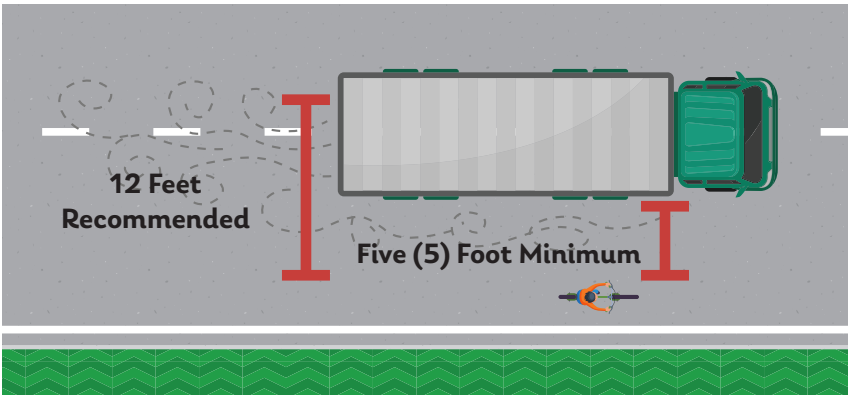


Drivers Lawfully Passing a Bicyclist

- Don't litter. New Jersey law makes the driver of a vehicle responsible for litter by passengers (N.J.S.A. 39:4-64). Roadside litter creates obstacles for bicyclists and can lead to a loss of control and potentially a crash.
- Avoid distractions like headphones and cell phones.
- When passing another vehicle on a two-lane road, be sure to look out for bicycles coming towards you, and if you see them, yield to them, aborting the passing maneuver if need be.
- Motor vehicle occupants have a duty of care not to open a vehicle door without looking for oncoming bicyclists in the area; blindly opening doors into the 'door zone' frequently leads to injury or death for bicyclists who collide with doors.

Safety Around Trucks, Tractor-Trailers, and Other Oversize Vehicles

Use caution when riding alongside trucks. Sharing the road with larger vehicles can be daunting, and there are specific considerations you must keep in mind around these vehicles. They take longer to slow down or come to a complete stop, especially in poor weather, and have reduced maneuverability due to their size. While commercial truck drivers are trained to handle these issues, they will not always be able to account for sudden changes. They also have larger and more limiting blind spots, including no rear-view mirror and a larger blind spot in front of them due to their height. Riding around these vehicles is safe, so long as you understand their limitations.



Trucks Should Give Extra Room When Passing Bicyclists

Safety Around Buses

All non-emergency vehicles, including bicycles, must yield the right-of-way to buses re-entering traffic after dropping off or picking up bus passengers. However, once the bus is back in the normal flow of traffic, you are not required to yield to buses in unique ways you would not yield to any other motor vehicle. Bus operators are required to drive in a safe and responsible manner, like any other motor vehicle driver.

Safety Around Motorcycles

The same laws governing other motor vehicles also govern motorcycles. However, due to the smaller size of motorcycles and their operating characteristics, extra caution should be used when sharing the road with motorcycles.

Don't follow motorcycles too closely. Be aware of slippery, sloped or uneven surfaces and grooves and gratings in the roadway, as well as loose objects. Just like bicycles, these hazards can cause a crash for motorcycles, and even without a crash, a motorcyclist is likely to swerve or move unexpectedly to avoid them. Not only should you give them ample space to account for this, you might also want to pay close attention if they do such a maneuver as you may have to do so as well to avoid the same obstacles.

When being passed by a motorcycle, maintain your speed and position just as you would with other motor vehicles to allow plenty of room for the motorcycle to complete the pass and return to its proper lane position.

Safety Around Mopeds

Motorized bicycles are low-speed, two-wheeled vehicles equipped with pedals, intended for use on public roadways. In New Jersey, motorized bicycles may travel at speeds of up to 28 mph and generally have the same rights and responsibilities as other motor vehicles. Mopeds are a type of motorized bicycle. Because they are smaller than motorcycles and may be harder to see, drivers should remain alert for them.

Safety Around Other Bicyclists

Knowing that other bicyclists should be following the same recommendations as you can allow you to anticipate most of their actions. You ought to follow the same recommended actions in "Riding on the Road" regarding passing and signaling/communicating, with the understanding that you as a bicyclist are quieter than a motor vehicle and should make an attempt not to surprise other bicyclists.

Safety Around Skateboarders, Scooter Riders, and Inline Skaters

The operator of each of these modes has the same rights and responsibilities as other road users but is also recommended to behave like bicyclists in most cases when it comes to behavior when on the road. They may choose to cross intersections using pedestrian infrastructure such as crosswalks and pedestrian signals. In general, respond to skateboarders and inline skaters as you would when you share the road with motor vehicles.

Safety Around Individuals with Mobility-Related Disabilities

State law allows individuals with mobility-assistive disabilities to operate certain motorized scooters on public streets with a posted speed limit below 25 mph, and those between 25 mph and 35 mph only if the street's owner (local, county, state, etc.) has designated that street as suitable via ordinance or resolution. The motorized scooter may only have a maximum speed capability of 15 mph. The motorized scooter must be registered with the municipality in which the operator resides and must be insured. After registering the motorized scooter with the municipality, the owner may apply for a placard or sticker from the state Motor Vehicle Commission.

In general, when encountering these motorized scooters on the road, respond to them as you would to other bicyclists, skateboarders and inline skaters.

Safety Around Persons with Visual Impairment

Bicyclists may encounter pedestrians with visual impairments on sidewalks, shared-use paths, at transit stops, and in crosswalks. Some individuals may use a white cane, travel with a guide dog, or rely on audible and tactile cues to navigate their surroundings. Because bicycles can approach quietly, a pedestrian with a visual impairment may not be aware that a bicyclist is nearby.

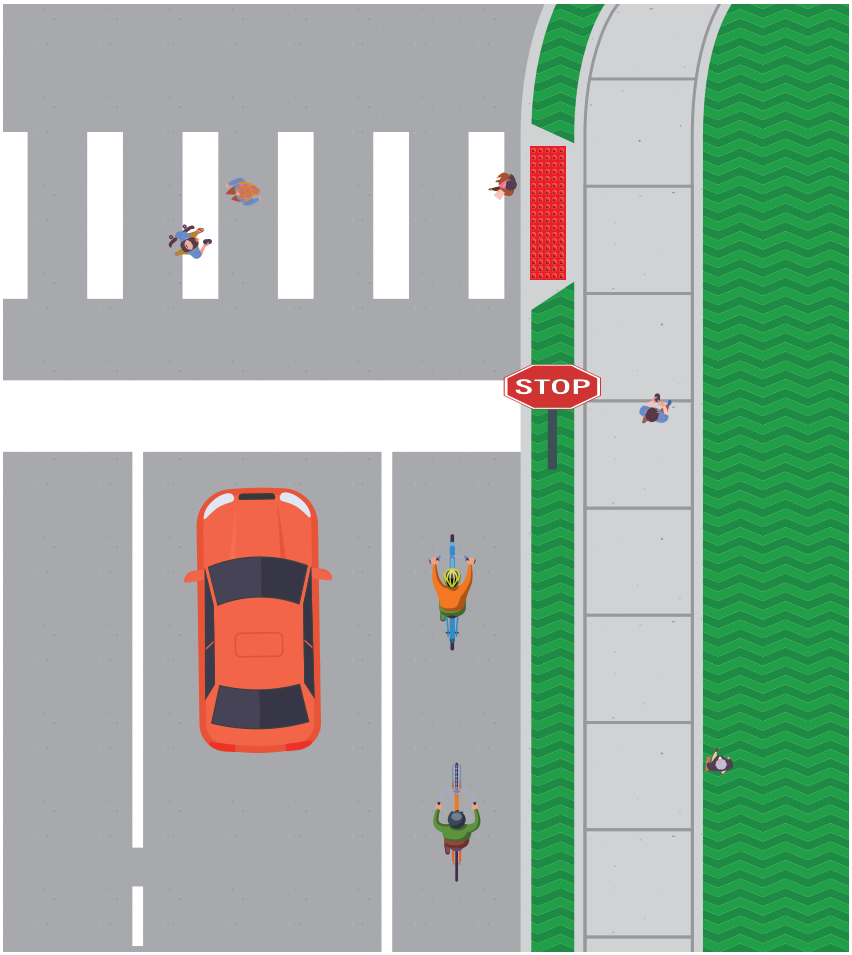
When approaching a pedestrian with a visual impairment, reduce your speed, provide ample passing distance, and use a courteous verbal signal when appropriate to indicate your presence. Avoid sudden movements or close passes that may startle pedestrians. Be especially cautious in areas where pedestrians may be crossing or navigating independently, and always be prepared to yield when necessary.

Safety Around Pedestrians

Pedestrians are consistently at high risk of serious injury or death when walking on the road compared to other road users, and the State of New Jersey is committed to changing this through a wide variety of measures, including Target Zero, a statewide goal of eliminating all traffic fatalities and serious injuries. Pedestrian safety is a collective responsibility that depends on all road users understanding their role. Automobile drivers carry a greater duty of care as the operators of the heaviest, fastest, and most plentiful vehicles on the road, creating the most risk for other users. Still, bicyclists have a role in pedestrian safety by riding predictably, yielding in shared spaces, and slowing down where people walk.

Pedestrian activity is at its greatest in densely developed areas, such as cities and town centers, but it is also significant in neighborhoods and on suburban roadways. In most cases, pedestrians have the right-of-way at all intersections. You must stop and remain stopped for a pedestrian who is crossing while the pedestrian is on, or within one lane of, the lane you are attempting to travel on.

Bicycles and motor vehicles are prohibited from blocking the crosswalk when stopped at a red light or stop sign; ensure you always stop entirely short of the crosswalk, as forcing pedestrians outside of the crosswalk can put them in the path of a vehicle. Never pass a motor vehicle stopped at a crosswalk (N.J.S.A. 39:4-36), as you may not see a pedestrian actively crossing and can hit them.



Slow Down and Look at Crosswalks

Drive cautiously along roadways with on-street parking, as pedestrians may appear from between parked vehicles. Travel at lower speeds to give yourself more time to make a sudden stop or evasive maneuver. At night, stay alert and slow down, since it can be harder to see people in low-light conditions. Watch for signs that mark special areas, such as school zones (where you have a legal duty to exercise due care), bus stops, playgrounds, parks and schools, where children are most likely to play or cross the streets. Small children are hard to see; considerations around parked vehicles are especially relevant in relation to small children and the areas you might encounter them.

In sum, a bicyclist must:

- Yield to pedestrians in crosswalks, both marked and unmarked. N.J.S.A 39:4-36 outlines penalties for Failure to Yield, which are subject to change.
- Be extra careful and watch for pedestrians at intersections, especially when making an allowed right turn on red.
- Obey speed limits.
- Be sure not to block or park in crosswalks.
- Be aware of areas where pedestrians are most likely to appear (near schools, town centers, residential neighborhoods, parks).
- Never pass another vehicle that has stopped to yield to a pedestrian.
- Stop for all pedestrians in a crosswalk and remain stopped until they have cleared the roadway.
- Remember that pedestrians are the most vulnerable roadway users, and like motorists, bicyclists are responsible for maintaining pedestrian safety.
- Be alert for pedestrians when making turns and entering or exiting driveways, parking lots and alleys.



Yield to Pedestrians, Even When Riding in Bicycle Facilities

Safety Around Horseback Riders

Horse-drawn vehicles and horseback riders have the same rights and responsibilities as motor vehicles when using public roadways. Like bicyclists, they may not use certain limited-access highways and must ride with traffic, keeping as far to the right as practicable. You should approach or pass a horse or horse-drawn vehicle with care at a maximum speed of 25 mph and you must observe the request, either by hand signal or otherwise, of a person riding a horse or driving a horse-drawn vehicle in the opposite direction to stop and remain stationary for as long as it takes the horse to pass (N.J.S.A. 39:4-72).

Horses can behave unpredictably, and while the rider should be expected to have considerable control over their horse, you should be aware of and anticipate some of the common ways horses can behave unpredictably. Horses are prey animals which can "spook" easily and without warning, entering a fight-or-flight state which creates a chaotic and dangerous situation where the horse may run erratically, rear up and attempt to kick forward, and/or freeze in place, among other things. While you should assume a horse traveling on the road has experience doing so and will not spook at typical road noises or traffic movement, you should take care not to behave erratically around horses yourself. Horses are also known to kick backwards when they feel threatened or irritated, so you should avoid being any closer than five (5) feet from the rear or side of a horse; when passing, move left early enough to stay clear of kicking range.

With the exception of police horses, horse riders are more likely to be found in rural or very low-density areas, especially where riding stables are present. Consider checking for the locations of riding stables before you ride, as these often correlate with horse traffic. However, there are other cases, such as where people have horses on their personal property, where police horses are in use, and occasionally in unexpected places. You may not be very likely to meet a horse in an urban area, but it is good to be aware of what to do in the off chance you cross paths with one.

RIDING IN GROUPS

One of the reasons people choose to bicycle is because it is fun, and bicycling with others can enhance your enjoyment. Camaraderie, socializing, getting encouragement, learning skills, and achieving a measure of security are all reasons why folks choose to bicycle with others. You might ride with a large group for an event or charity fund-raising ride, a few fellow club cyclists, or one or two riding partners.

However, group riding can place you in closer proximity to other bicyclists than usual, and you run the risk of colliding with your group members. Some common-sense behavior can lessen the potential for bicycle-on-bicycle crashes and other potential problems associated with riding with others. The standard rules for riding single file vs. side-by-side apply even in a larger organized group; read more about *Single File vs. Side-by-Side Riding* earlier in this chapter.

You may also find that groups can begin to operate outside of the typical behavior that is expected of bicyclists on the road. While the idea of "safety in numbers" does apply and is often part of the appeal of a group ride, you are not exempt from the standard responsibilities as a user of the road, and should take care not to endanger other road users while having fun with your group.



Group Riding

Communicating Effectively

Communicate roadway conditions in front of you by calling out to those following and pointing at debris, potholes and other conditions to be avoided.

- Communicate to those ahead of you that there is overtaking traffic by calling out "car back." This warns riders ahead that it is time to return to single file if they are riding two abreast.
- When you plan to pass another bicyclist, first check for overtaking traffic and if it is clear, call out "on your left" as you proceed to pass.

Anticipate that other riders in a group may be passing you, so be careful to ride in a straight and steady manner and don't suddenly veer out of your position.

Make Your Own Decisions

When you ride in a group, you must exercise caution and care and obey the rules of the road. Being part of a group does not suspend the requirements of the law and safe bicycling practices; you still need to observe speed limits and traffic controls, yield the right-of-way when required to do so and signal your intentions before you move out to pass, turn or stop. Just because someone riding ahead of you does something, it doesn't mean it is safe for you to do it as well.

An important element of this is crossing intersections. Riding in a group may make it feel like you can pass through regardless of the phase, simply because your group is large and hard to miss visually, but this is not the case. Don't yell "clear" at intersections. It may be clear for that bicyclist but not for those behind. Bicyclists must develop the habit of checking conditions at intersections for themselves rather than trusting someone else's judgment.

Organizing or Finding a Group

Group riding is a great way to spend quality time with others. Taking the step to form your own group, through friends or family, can help you and those you invite get active and add an active element to social life. You can also find existing groups online, and many shops host weekly social, beginner, or fitness rides.

Once you have a group, you can choose a low-traffic route or a paved multi-use path and establish a clear average pace, so riders know what to expect. A group ride that ends at a local destination is a great way to build community and socialize. Run the ride on the same day and time every week. Even if only one person shows up at first, regularity helps a group organically grow.

Organized Rides

Organized rides may include bicycle club outings, charity events, tours, races, and community rides. Before participating, review the route distance, terrain, expected pace, required equipment, rest stops, and level of support. Find out whether the ride is intended for beginners, whether the group will wait for slower riders, and whether mechanical assistance or transportation is available if you cannot finish.

Attend any pre-ride briefing and follow instructions from ride leaders, marshals, or event staff. Maintain a safe distance from other riders, avoid overlapping wheels, announce when passing, and do not stop where you may block the roadway or trail. Route markings, signs, or digital directions can help you stay on course, but continue to watch traffic controls and make your own decisions at intersections.

Carry identification, emergency contact information, water, and basic repair supplies appropriate for the ride. If you leave the route or separate from the group, notify a ride leader when possible. In an emergency, move to a safe location and call 911.



Organized Ride

SHARED-USE PATHS AND TRAILS

This manual focuses on riding your bicycle on the road, but shared-use paths and trails can offer a more comfortable experience and added scenic value. Be aware that many trails close at dusk and may also shut down during winter weather, limiting access at certain times of year.

There are all kinds of users on these paths, and they may also be traveling for recreation and not be focused on staying in proper position. Shared-use paths should be at least ten (10) feet wide with two feet of clear space on either side; if they are narrower, maneuvering around other path users can be problematic. Trails can be narrower and sometimes busy, with blind corners or uneven sections, and they may not be cleared of debris or other obstacles as regularly.

Keep in mind, multi-use trails do eventually intersect with roadways; treat these crossings and merges with caution. Refer to the "*Intersections and Turns*" subsection of "Traffic Basics" for general considerations in these cases and follow similar logic when entering the road from an off-road path.

Prohibited Users

Shared-use paths are generally intended for people walking, bicycling, using mobility devices, skating, and participating in other low-speed activities. However, permitted uses vary by location. Rules for e-bikes, e-scooters, horseback riding, skateboards, dogs, and other activities may be different from one path to another. Follow posted signs and check the rules of the agency or organization that manages the path.

Motorcycles, mopeds, e-motos, all-terrain vehicles, and other motor vehicles are often prohibited unless specifically authorized. Do not assume that a device is permitted simply because it resembles a bicycle or can physically fit on the path. Emergency, maintenance, utility, and other authorized vehicles may still be present, so remain alert even on a path closed to general motor-vehicle traffic. Mobility devices used by people with disabilities are subject to different access requirements and should not be treated as prohibited recreational motor vehicles.

Etiquette

Be Alert, Courteous, Cautious and Forgiving

Many people, including children, are unsure of how to operate on trails, but view them as low-stress locations where they do not need to be diligent about their behavior. They may wander back and forth across the trail, seemingly unaware that they have obligations to other trail users. Inexperienced bicyclists might first ride here before using the road, and may not know what side of the trail to ride on or how to pass. Don't assume that everyone riding on a shared-use path understands the rules or has the skills to operate effectively. Just like riding on the road, you must be cautious, ride defensively, and show patience and tolerance.

Although others may not always have this in mind, remember that (like on the road) all shared-use path users should travel on the right and pass on the left.

Don't Stop on the Trail

There are many cases when riding on trails you may want to take a break, take in a view, or check where you are. Be sure to pull off the trail when you stop; if you stop on the trail, you become an obstacle to others. You could be struck by other bicyclists or force them to veer around you, which could result in their loss of control, swerving off the trail and crashing or colliding with others.

Safely Share with Other User Types

Share the Trail

When you ride on a multi-use trail you should expect to encounter other types of users: pedestrians (including those in wheelchairs or using other mobility assistive devices), other bicyclists, rollerbladers, skateboarders and possibly, equestrians. You are obliged to yield the right-of-way to equestrians and pedestrians. You shouldn't assume that anyone will yield to you when they should. You should also be aware that you may encounter motor vehicles wherever the trail crosses roadways or driveways, and in some cases, maintenance vehicles may use the trail, and you must yield to these as well.

Communicate with Others When you Pass

Don't pass anyone unless you can see it is clear; a trail or path is likely to include sharper curves, and vegetation closer to the path, than you would encounter on a road and these can restrict sight lines. As you would when riding on the road, check behind you for overtaking traffic and ahead of you for oncoming traffic. Use your bell or audible warning signal and call out "passing on your left" or "on your left," then proceed to pass at a reduced speed; don't assume you have been heard or understood (for example, someone may think you have asked them to move left if they did not hear you clearly) or that people will immediately move over. Give those you are passing adequate clearance and pay close attention to those you're passing to ensure they do not become a sudden obstacle.





Mixed Traffic on a Shared-Use Path

Crossing Intersecting Roads and Trails

When approaching an intersection with a roadway or another trail, obey whatever traffic control devices are present. If there are none, check the road for oncoming traffic and yield to other traffic arriving at the intersection before you. Even if you arrive at the intersection first, be prepared to stop, especially at a road crossing; some motorists may assume they have the right-of-way over trail users, and may simply not see you, especially if you are emerging from the woods or from behind some other visual obstruction.

PREPARING TO RIDE

BICYCLE AND EQUIPMENT SELECTION

Choosing a Bicycle

Bicycles are designed for different purposes, but many can handle more than one kind of trip. Consider where you expect to ride, how far you will travel, what you may need to carry, and the riding position that feels comfortable. A bicycle that fits properly and is in good working condition is more important than choosing a particular style.

- **City** and **hybrid bicycles** are versatile choices for everyday riding. They typically have most standard elements, such as multiple gears and space for accessories such as racks and baskets, while maintaining a light frame for easy riding.
- **Cruiser bicycles** emphasize comfort and simplicity which works well for short, relaxed trips on relatively flat routes. Their weight and lack of gears make them difficult to use on hills and over long distances.
- **Road bicycles** generally use lightweight frames, narrower tires, and a forward-leaning riding position designed for aerodynamics and high speeds.
- **Mountain bicycles** are designed for rough surfaces and off-road trails. They have thick tread on their tires and often have very shock-absorbing suspension, which makes them less ideal (but still acceptable) for bicycling on the road.



Cruiser Bicycle



Road Bicycle

- **Folding bicycles** can be collapsed for storage or carried onto transit where permitted. They can be especially useful for trips that combine bicycling with a train or bus, or for riders with limited storage space.



Mountain Bicycle

- **Recumbent bicycles** and **other specialized cycles** provide alternative riding positions or configurations. These may offer greater comfort or accessibility, but can require additional practice.
- **Tandem bicycles** are a unique form of specialized cycle which seats two riders, both of whom pedal while the rider in front steers the bicycle. These bicycles can be an excellent way to ride socially, and specifically allow a less experienced rider to participate by relieving them of the responsibility of steering. Practice is necessary to get used to the weight, steering, and balance differences between these and single-rider bicycles.
- **E-bikes** are equipped with electric-assist systems. E-bikes can make longer trips, hills, or carrying loads more manageable, but have weight, range, control, and maintenance differences from manually-powered bicycles, and unique laws governing where and how they may be operated. See the *New Jersey Micromobility Guide* and the *NJ MVC E-bike and Moped Manual* for more information.



Tandem Bicycle



Recumbent Bicycle



Tricycle

Affordable Bicycle Ownership

Owning a bicycle does not have to be expensive. Depending on where you live, nonprofit bicycle exchanges, community bicycle shops, bicycle libraries, local programs, and conventional bicycle shops may offer refurbished or lower-cost bicycles. Used bicycles may also be available through secondhand marketplaces, yard sales, and people in your community. Notably, some items are essential for safe operation of your bicycle, such as helmets and e-bike batteries, and should not be purchased secondhand.

Before buying a used bicycle, make sure it is the right size and check that the frame, wheels, brakes, steering, and tires are in safe working condition. When possible, have the bicycle inspected by a qualified mechanic or community bicycle program. Remember to include the cost of any needed repairs, as well as essential equipment such as a properly fitted helmet, lights, and a secure lock.

The New Jersey Bicycle and Pedestrian Resource Center maintains *a list of bicycle donation services in New Jersey*, many of which sell the donated bicycles (or can direct you to where to find used bicycles, if you contact them).

- **A BMX (bicycle motocross) bicycle** is a type of bicycle for sports bicycling, such as racing or freestyle riding. Many people, especially older children, prefer BMX bicycles for their recreational appeal, as they are often used for going off of jumps and on various features at skate parks, but they are still useful for distance riding. BMX bicycles are generally smaller compared to other bicycles, and they are equipped with rear brakes, and thick and fat tires to absorb shocks for better jumping.
- **A tricycle** is a type of cycle with three wheels designed to provide increased stability and balance. Tricycles may be powered by human pedaling alone or equipped with an electric motor and battery. E-trikes may fall under different vehicle classifications depending on their design and power; check current NJ MVC requirements.

Getting a Good Fit

Having a correctly sized and properly fitted bicycle is necessary for your comfort and will better enable you to control your bicycle. Some parts of the bicycle can be adjusted to fit; however, the frame cannot, so it is especially important to get the correct frame size. The staff at the store where you purchase your bicycle should help you choose the correct frame size and properly adjust the seat and other components.

The Right Frame Size

Being able to stand over your bicycle without much difficulty is a useful first check, but it does not determine by itself whether you are using the right-sized bicycle. Wearing the shoes you expect to ride in, straddle the bicycle with both feet flat on the ground. On a frame with a conventional top tube, the tube should not contact your body; approximately one (1) to two (2) inches of clearance is generally appropriate for riding on paved surfaces, with more clearance desirable for off-road riding.



Bicyclist Sitting Correctly

Because frame shapes and sizing systems vary, consult the manufacturer's size chart for the specific bicycle. Make sure you can comfortably reach the handlebars, brakes, and other controls, and that the seat can be adjusted to the correct height. Note that common bicycle frame sizing doesn't apply to BMX bicycles, which are instead measured by top tube length and wheel size.

Adjust Your Seat Height

The seat height should be adjusted so your knee is slightly bent when your foot is at the bottom of the pedal stroke with the ball of your foot centered over the pedal. The "minimum insertion" line you can find on the seat post should be below the top of the seat tube.

Adjust Your Handlebars

Adjust the handlebars so you feel comfortable. Make sure the stem is positioned no higher than the "maximum extension" mark. The bars can be rotated to achieve a more comfortable position. If you feel like you are reaching too far for comfort while in riding position, you may be able to substitute a stem with a shorter neck or you may be able to move the saddle forward a bit. If this doesn't work, you may need a smaller frame or one with different geometry.



Too Far Back **Too Far Forward**

Incorrect Helmet Fit



Correct Helmet Fit

Basic Equipment / Choices

Some equipment is required when bicycling in New Jersey. Other equipment is available, with some strongly recommended to help make bicycling safer and more functional, and others which can make your rides more enjoyable.

Helmet

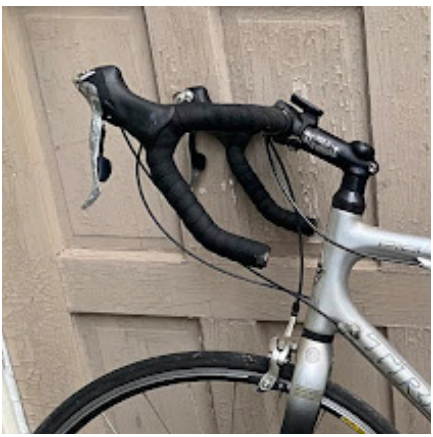
In the event of a crash, a properly fitted helmet can prevent or reduce the severity of head injuries. In New Jersey, anyone under 17 years of age must wear an approved helmet on regular bicycles. However, it is highly recommended that everyone, regardless of age, always wear a helmet while bicycling. Note that your helmet should be replaced if your head hits the ground during a crash.

Your helmet should meet the safety standards of the Consumer Product Safety Commission or the Snell Memorial Foundation (N.J.S.A. 39:4-10.1).

For video instruction, see the video *"How to Fit a Helmet"* by New Jersey Safe Routes to School.

Brakes

Brakes should be easy to reach, comfortable to grasp, and powerful enough to quickly bring your bicycle to a stop. In New Jersey, the brakes must be powerful enough to make the wheels skid while stopping on dry, level, clean pavement (N.J.S.A. 39:4-11.1).



Brakes on Drop Handlebar



Brakes on Flat Handlebar

Bell or Horn

A bell or other warning device is a legal requirement in New Jersey. It will probably not be heard by motor vehicle drivers or those wearing headphones, but it is useful as a warning and as a courtesy to alert other bicyclists and pedestrians of your approach (N.J.S.A. 39:4-11).



Bell on Handlebar

Lights/Reflectors

Bicyclists are practically invisible to motorists at night when they don't use lights and reflective gear. Lights and reflectors work at all times of day, not just at night, to make you and your bicycle visible when you ride.

When in use at nighttime every bicycle must be equipped with:

1) A front headlamp emitting a white light visible from a distance of at least 500 feet to the front
2) A rear lamp emitting a red light visible from a distance of at least 500 feet to the rear (N.J.S.A. 39:4-10)

Reflective material can further increase your visibility and can be used on your helmet, shoes and clothing.



Front Bicycle Light



Rear Light and Reflector

Gears

Gears help you pedal comfortably and efficiently as terrain, wind, and riding conditions change. The "higher" your gear, the more you can make your wheels spin each time you pedal. Use an easier, lower gear when starting, climbing a hill, or riding into a strong wind. Use a harder, higher gear when traveling faster or riding downhill. The goal is to maintain a steady, comfortable pedaling rhythm rather than pushing very hard on the pedals.

Most multi-speed bicycles use one of two systems; in both cases, shifters on the handlebars control the gears, moving you into "higher" or "lower" gears as you need.

- **Derailleur gears** move the chain between different-sized chain rings near the pedals and cogs at the rear wheel. Some bicycles have one front chain ring, while others have two or more.
- **Internal hub gears** are enclosed inside the rear wheel hub. They are protected from weather and dirt and generally require less routine maintenance, although they may offer a narrower range of gears than some derailleur systems.



Derailleur Bicycle Chain Rings

Shift before a hill becomes difficult, and ease pressure on the pedals while changing gears. Avoid forcing the shifter while pedaling heavily. With practice, choosing the right gear will become more natural. A bicycle shop can help you select, adjust, and learn to use the gearing system that best suits your riding.

Handlebars

Handlebars come in many shapes. Their height, width, and angle affect your riding position, comfort, and control of the bicycle. Whatever style you use, you should be able to hold the bars comfortably and reach the brakes, shifters, and other controls without stretching.



Flat Handlebar



Drop Handlebar

- **Flat and riser bars** provide a wide, stable hand position and direct steering control. Riser bars curve upward slightly, placing the hands higher for a somewhat more upright position. These styles are common on mountain, hybrid, and city bicycles.
- **Swept-back or cruiser bars** curve toward the rider so the hands can rest closer to the body for a more upright and relaxed position. They are often used for neighborhood riding, errands, and casual trips.
- **Drop bars** curve forward and downward and provide several possible hand positions. They are commonly used on road, gravel, and touring bicycles and can support either a relatively upright position or a lower position for longer or faster riding.

Handlebar shape is only one part of bicycle fit. The frame, stem, saddle position, and placement of the controls also affect how far you must reach and how comfortably you can steer and brake. Consult a bicycle shop before replacing a handlebar with a substantially different style.

Mirror

A mirror is a valuable safety device. It allows you to observe behind you without turning around, which helps you to maintain control of your bicycle. There are a wide variety of mirrors available which can be attached to helmets, glasses, or handlebars.



Handlebar-Mounted Rear-View Mirror

Bicycling Gloves

Padded bicycling gloves provide cushioning, prevent irritation/rash/numbness, add a degree of protection from wind chill, and protect your hands from scrapes in the event of a crash.



Helmet-Mounted Rear-View Mirror

Toeclips/Clipless Pedals

Toe clips (cages with tightening straps that allow the rider to secure their foot to the pedals) and clipless pedals (which allow cleats on bicycling shoes to snap onto the pedal) improve pedaling control and efficiency. Using toe clips or clipless pedals requires practice to use safely in traffic. It is recommended that riders practice clipping in and out in an area with no traffic and get comfortable using them before riding on public roads.



Padded Bicycling Gloves



Clipless Pedal



Toe Clip

Seats/Saddles

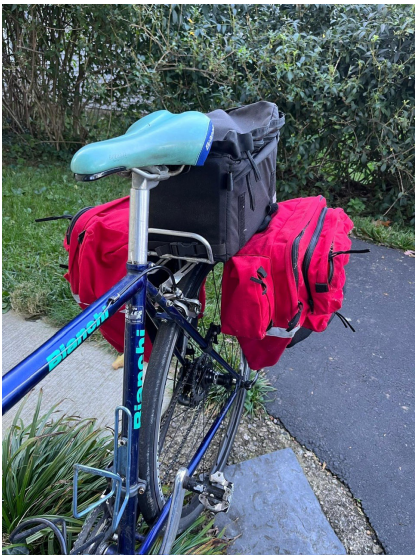
Bicycle seats, also called saddles, come in many shapes, widths, and levels of padding. The best choice depends on your body, riding position, and the type and length of riding you expect to do.



Saddle and Small Bike Bag

A more upright riding position generally places more weight on the seat and may be more comfortable with a wider design. A forward-leaning position usually works better with a narrower seat that allows the legs to move freely. Mountain, road, touring, and city bicycles may use different seat shapes, but the bicycle category alone does not determine what will be comfortable for every rider.

More padding is not always better. A very soft seat may feel comfortable at first but can create pressure or chafing on longer rides. Proper seat height, angle, and position are just as important as the seat itself. Some initial discomfort is common when returning to bicycling, but persistent pain, numbness, or pressure is a sign that the seat or bicycle fit may need adjustment. A bicycle shop can help identify an appropriate seat and adjust it correctly. You can also wear padded bicycle shorts/pants to improve comfort without compromising the preferred structural integrity of your bicycle seat.



Bike Bag and Panniers

Fenders

Fenders keep you dry and clean by blocking any dirt, water, or other material from the road from being sprayed on you by your tires. This includes preventing lights and reflectors from getting dirty and obscured in wet weather.

Bicycle Rack/Bike Bag/Panniers/Handlebar Baskets and Bags

A luggage rack and bike bag or panniers enable you to safely and easily carry food, clothing, a repair kit and shopping purchases. Items can be secured to the bicycle rack with bungee cords. Handlebar baskets and bags are also able to carry items, but should also be supplemented by bungee cords or other coverings as loose items will otherwise fall out easily.

Water Bottle and Bottle Cage



Water Bottle in Bottle Cage / Handlebar Bag

Drinking water during your ride will be necessary to keep you from getting dehydrated, especially on long rides or in hotter weather. Also, pouring water over a flat but partially inflated inner tube can reveal the location of a puncture. Water bottles are best stored in a special bottle cage installed on the frame. Using bottles that do not fit snugly may result in the bottle falling out, and a loose water bottle can rattle during the ride, distracting you and others.

Tools and Pump



Frame-Affixed Pump

When riding more than an easy walking distance from home, and especially for long-distance touring, having the tools and spare parts needed to fix flats and make minor repairs (and knowing how to use them) is essential. Bring a patch kit and spare tube (of the correct size for your tire), a tire pump, tire "irons," and a small assortment of tools or a "multi-tool" that fit the nuts, bolts and screws on your bicycle.

Lock

To prevent your bicycle from being stolen, always lock it when you park it. There are a variety of locking systems. A cable (or chain) and padlock are most common, but generally not as secure as a "U-lock". All locks have tradeoffs; no locking system is theft-proof, and the heavier-duty the lock, the heavier and more cumbersome it tends to be. When you park your bicycle, make sure you lock the frame and one wheel to a bicycle rack or other fixed object (not a tree). If you are concerned about the unsecured wheel being removed, consider using a second lock to lock it to the frame. Securing the frame should always be the priority. Take items with you that can be easily stolen (e.g., helmet, tools, etc.) instead of leaving them with your bicycle.

Read more in this manual's "*Parking Your Bicycle*" section, *NJDOT School Bicycle Parking Guide*, and *Safe Routes Safety Snippets: How to lock your bike* online.

Identification/Medical Information/Cell Phone

Carry identification, emergency medical information and emergency contact information on your person (other copies can be kept in the bike bag, but it is not recommended to keep originals there). Wristband and shoe tag IDs are available. A sticker placed inside your helmet is another option. A cell phone provides a sense of security and a means of communication, especially in an emergency situation.

Glasses

Good quality, non-shattering wrap-around sunglasses protect your eyes from wind, dirt, debris, insects, and the sun while riding.

Pants Clips/Ankle Straps

If you are wearing trousers, use a Velcro strap with reflective material or metal clip to secure your pants close to your leg. A rubber band works, too. This will keep your pants from rubbing against the chain and getting greasy, or worse, getting them caught between the chain and chain rings.



How to Wear an Ankle Strap

Rear-Facing Radar

Some riders use bicycle-mounted radar to receive alerts when vehicles approach from behind. Depending on the system, alerts may appear on a bicycle computer, phone, watch, or separate display and may indicate the number or relative speed of approaching vehicles.

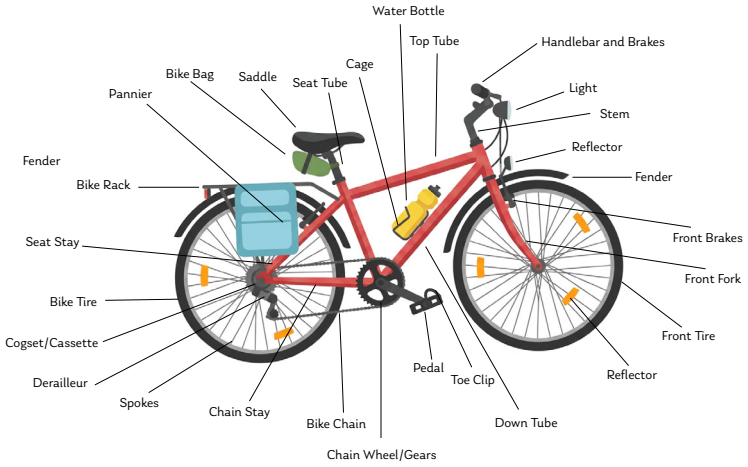
Radar can supplement your awareness, but it cannot tell you whether a driver has seen you or will pass safely. Continue listening, scanning, and looking behind before changing position or turning. Do not rely on a radar alert—or the absence of one—as your only source of information about surrounding traffic.

Front and Rear Cameras

Bicyclists can benefit from using front and rear cameras to record traffic conditions. In the event of a crash, this video evidence is valuable. It clearly shows how the incident unfolded, capturing details such as surrounding traffic conditions, driver behavior, and the cyclist's exact road position. Lawyers value video footage because witness accounts are frequently incomplete, unreliable, or conflicting. Furthermore, cyclists are sometimes unfairly blamed for incidents, and police reports can miscode crash details. On-bicycle cameras help clarify the circumstances.

Other

Other equipment that might come in handy includes a flashlight with a spare battery and a small rag for handling greasy or gritty parts.



Bicycle Parts, Labeled

MAINTENANCE

Pre-Ride Maintenance Checks

Major maintenance can be left to the professionals; at the start of every bicycling season, it is recommended that you get a maintenance check for your bicycle at a bicycle shop. Typically, most riders do this on an annual basis or if a long time has passed between rides.

On a regular basis, though, there are things you should always check before you get on your bicycle and ride off.

The ABC Quick Check

The **ABC Quick Check** covers the most essential items to check before you ride:

1) That your tires have good **A**ir pressure
2) That your **B**rakes work properly
3) That your **C**hain is not stiff or loose
4) That your **Quick** Releases work

This is commonly known as the "ABC Quick Check". Do this before every ride.

See also: *Before You Ride: ABC Quick Check* (NJDOT)

Air Pressure

Check your tire pressure, preferably with a pressure gauge for accuracy. If your tire is not up to the recommended pressure (imprinted on the sidewall of the tire), add air. If you don't have a gauge, squeeze the tire hard or push it against a hard surface or curb. If you can see the tire significantly flattening where it's being pressed, add air.

Brakes

Lift each wheel, spin it and apply the brakes. If you can squeeze the brake handle all the way to the handlebar or if the brake pads don't evenly and firmly contact the rim (and only the rim – not the tire) your brakes need to be adjusted. Similarly, if you engage the brakes and push the bicycle hard against and along the pavement, and you can't make the tires skid, the brakes need to be adjusted.

Chain

Check the chain. If it is dry or links are "frozen," spray the chain using a bicycle chain spray lubricant while rotating the pedal backwards. Then wipe off the excess lubricant by grabbing the bottom of the chain with a rag and rotating the pedal backwards. You can remove grit and grime from your chain the same way.

Quick Release

The Quick Release is a system that allows you to easily fasten and remove the wheels of a bicycle. It is a rod (referred to as the "skewer") which fits within the axle of a bicycle wheel, with a nut on one side and a nut with a lever on the other. Bicycles with a quick release system do not have full holes for the axle to fit into the frame, instead featuring openings (called "dropouts") with a circular impression on the outside. In this system, the axle can freely move in and out of the dropouts when the quick release lever is disengaged, but when it is engaged, the rod is shortened enough that the two nuts fit securely within the circular spaces, meaning the wheel will not fall out from the dropouts. The nut on the opposite end holds the skewer in place and can be adjusted to increase or decrease the effective length of the skewer to fit the bicycle frame.

Some high-performance or high-impact bicycles, such as mountain bicycles, gravel bicycles, and BMX bicycles, are frequently equipped with a thru-axle system which does not have this same quick release function. Instead, the axle is secured firmly in the frame through holes (rather than dropouts) and must be unscrewed to be removed.

Other Checks

Tires

While rotating each wheel slowly, look for cuts or bulges. If you see any, you must replace the tire. If the valve stem is visibly crooked, let out the air and reposition the valve stem so it points straight out (to do this, you may need to remove the tire from the frame). Remove any debris or glass stuck to the tire by spinning the wheel while holding a cloth against it.

Wheels

Slowly spin each wheel to make sure it doesn't wobble or rub against the frame or brake pads. If it does, a simple readjustment may solve the problem. If not, you may need to have your wheel trued by an experienced mechanic.

Gears

Once you begin riding in a safe, traffic-free area, shift through the gears one at a time before entering traffic. The chain should move smoothly without rubbing, skipping, or hesitating, and the shifters should operate freely. If shifting is difficult or unreliable, the gears and/or chain may need cleaning, lubrication, adjustment, or repair.

Seat and Handlebars

You should test how tightly the seat and handlebars are secured. This can be done by holding your front wheel firmly between your legs and trying to rotate the handlebars side to side. While holding the frame firmly between your legs, try to rotate the seat. If either moves, it needs to be tightened more.

Nuts and Bolts

Grasp the neck of the handlebar stem, lift the front of the bicycle off the ground a couple of inches and let it drop to the pavement. If you hear something rattle, tighten it.

Mid-Ride Maintenance

Even if your bicycle passes its pre-ride checks, small mechanical issues can still arise during a ride. Knowing how to address a few common problems can help you get home, continue your trip, or at least move your bicycle to a safer location. Mid-ride maintenance is usually about simple, temporary fixes rather than full repairs. If a problem affects your ability to steer, brake, or control the bicycle safely, stop riding and seek assistance.

Repairing a Flat Tire

Flat tires are one of the most common bicycling problems. If a tire goes flat during a ride, stop riding and find a safe place to inspect it before continuing. Some riders carry a spare inner tube, tire levers, and a pump or CO_2 inflater, while others may also carry a patch kit.

If you are patching an inner tube, remove the wheel, take the inner tube out of the tire, and locate the hole. Lightly roughen the area around the puncture if required by the patch kit instructions, apply the patch, and allow it to seal properly before reinstalling the tube. Before putting the tube back in, carefully check the tire for the object that caused the flat, such as glass, a thorn, or a wire. If it remains in the tire, the tube may quickly get punctured again.

After reinstalling the tube, make sure the tire bead is seated properly and inflate the tire to an appropriate pressure before riding.



Inspecting the Inner Tube

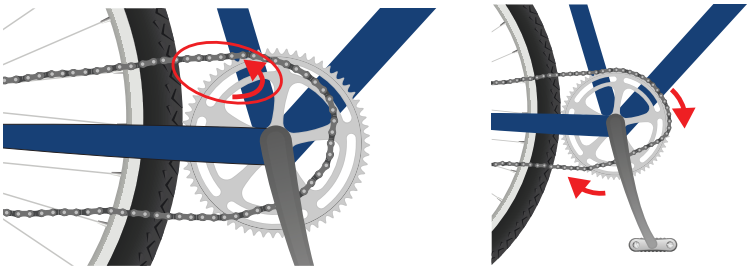
Re-Fitting a Chain

A bicycle chain may come off if the bicycle hits a bump, shifts roughly, or uses a gear combination that places the chain at an extreme angle. If this happens, stop riding and move away from traffic. Turn the bicycle so you can reach the chain easily and place the chain back onto the front chain ring or rear cog. Slowly turn the pedals by hand to guide the chain back into place.

After the chain is re-fitted, check that it moves smoothly. If the chain continues to come off, skips, or will not stay in gear, the bicycle may need adjustment or repair before further riding.



Align the Chain with a Cogset/Cassette (rear) Gear First



Place the Chain on the Teeth at the Top of the Largest Chain Ring (pedal) Gear, then Pedal Forward



After a Full Turn, the Chain will be Re-Fitted

Minor Adjustments

Other small issues may also be manageable during a ride:

Brake Rub

If a brake pad is rubbing lightly against the rim or rotor, stop and check whether the wheel is fully seated and spinning straight. A quick brake adjustment may be possible, but if braking performance is poor, do not continue riding in traffic.

Loose Accessories or Parts

Lights, racks, fenders, or bottle cages can sometimes loosen during a ride. Tighten them if you have the appropriate tool. If something cannot be secured, remove it if possible or stop using the bicycle until it can be fixed.

Shifting Problems

If a shifter or derailleur begins acting unpredictably, try using a different gear combination and avoid forcing the shift. If the bicycle still rides safely, you may be able to continue carefully in a limited range of gears until proper repairs can be made.

Know When to Stop

Some problems should not be treated as roadside fixes. Do not continue riding if the bicycle has a broken frame component, damaged wheel, failing brake, loose handlebar or stem, or any other issue that makes the bicycle unsafe to control. In those situations, walk the bicycle, use transit if available, call for assistance, or seek help from a bicycle shop.

Carrying a few basic tools and supplies, such as a spare tube or patch kit, tire levers, a pump, and a multi-tool, can make many common mid-ride issues easier to handle.

READY TO RIDE

Dress Properly

How you dress for bicycling depends on your trip, the weather, and how you want to arrive. Some riders choose specialized clothes, but many everyday trips are easily done in regular street or work clothes. An ankle strap or band can help keep a loose pant leg away from the chain, while bicycle bags, baskets, panniers, or other bags can carry items you do not want to keep in your pockets.

Whatever you wear, make sure loose clothing, straps, laces, drawstrings, or other items cannot reach the chain, pedals, spokes, or wheels. Secure or adjust anything that could become caught before you begin riding. A helmet is always recommended.



Dress Comfortably, But Not Impractically

Pack Appropriately

The items you bring on a bicycle trip should reflect the distance, weather conditions, and purpose of your ride. Before departing, consider the conditions you may encounter and pack only the items necessary for your journey.

For longer rides, additional water, snacks, weather-appropriate clothing, or personal items may be helpful. If you plan to make stops along the way, be sure to bring anything you may need at your destination. When carrying belongings, secure them properly and maintain comfort, balance, and control throughout your trip.

Health & Safety Considerations

Bicycling is an excellent way to improve your physical health, including improved cardiovascular fitness, stronger muscles, reduced stress, and better overall physical and mental well-being. Still, it can be exhausting, and without proper preparation you can expose yourself to pollution and the elements. Check weather, heat risk, and air quality before riding, carry water, use sun protection, and pace yourself. When conditions are severe or unhealthy, consider postponing, shortening, or choosing a less strenuous option.

For longer or more remote rides, tell someone where you plan to go and when you plan to return, and carry identification and emergency contact information. If you are carrying a smartphone, consider turning on location sharing or real-time location sharing for your close family or friends if this is something you are comfortable with. Use an appropriate insect repellent when riding in brushy or grassy areas, and wear clothing that can limit exposed skin. Afterward, check your body, clothing, equipment, and pets for ticks.

Pay attention to how you feel. Stop, rest, and move to a cooler or safer location if you experience weakness, dizziness, headache, nausea, muscle cramps, unusual shortness of breath, or unusually heavy sweating. Seek medical assistance when symptoms are severe, worsen, or do not improve.

Avoiding Heat Exhaustion

Heat exhaustion is quite common for bicyclists in New Jersey during the summer. It is a condition where your body overheats and cannot cool itself down, which can lead to muscle cramps, fatigue, headaches, dizziness, weakness, nausea and/or vomiting.

When it is hot out and you're going to bicycle, hydrate with intention (not just when you're feeling thirsty) both before and during your bicycle ride, and stick to a moderate pace to keep your body temperature manageable. Wear breathable, moisture-wicking gear (avoid cotton, if you can; synthetic fabric works best). Avoid the extreme midday sun by planning your routes early in the morning or late in the afternoon.

PLANNING YOUR ROUTE

A little planning can make a bicycle trip safer, more comfortable, and more enjoyable. The shortest route is not always the best route for bicycling. A slightly longer route may offer lower traffic speeds, better pavement, fewer difficult intersections, or more comfortable bicycle facilities.

Find Your Route

Review a map before leaving, and test unfamiliar routes when you are not in a hurry. Consider:

- traffic volume and speed
- pavement condition and road hazards
- hills and other terrain
- difficult crossings, intersections, or highway ramps
- truck and bus traffic
- bicycle lanes, shoulders, shared-use paths, and low-traffic streets
- railroad crossings, drainage grates, and other surface hazards
- lighting and visibility
- available places to rest, obtain water, or make repairs
- connections to transit or a backup route

Choose a route that matches your skills, comfort level, bicycle, and reason for traveling. Conditions may also vary by time of day; a route that feels comfortable on a quiet weekend may be different during a weekday rush hour. For an unfamiliar or long trip, identify an alternate route and places where you could use transit or arrange a ride if conditions change.

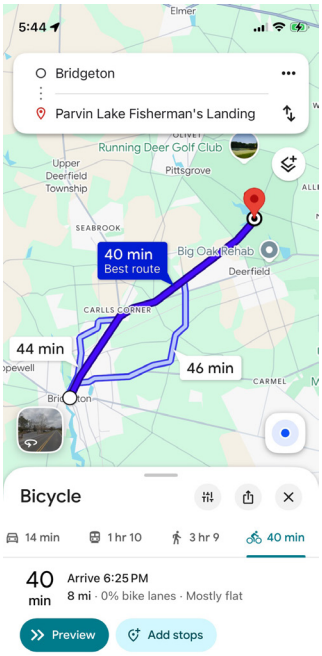
NJ TRANSIT's *Transit to Trails* resource can serve as a useful starting point for finding trails, enabling you to not only plan a nature route but also access it easily without having to drive to it or begin your ride from your home.

Use Digital Maps and Navigation

Map applications and bicycle navigation devices can help you plan your routes with several useful pieces of information. They can estimate travel time, elevation changes, and locations of some bicycle lanes, trails, and bicycle-friendly streets. Usually, they will give you several possible routes; compare the suggestions based on the aforementioned factors, rather than automatically selecting the fastest option. Use satellite or street-level imagery when available to preview intersections, road width, and potential barriers.

Still, this information may be incomplete or outdated. If the app's instructions conflict with real-world conditions, follow the direction of the signage you see in real life. Consider saving an offline map or carrying written directions in case your device loses service or power.

During the ride, use spoken directions or a securely mounted display that you can glance at without losing awareness of the road. Do not hold or operate a phone while riding. Stop in a safe place before getting your phone out to check the map and/or change your route.



Map App Navigation

Check Current Conditions

Before leaving, check the weather and look for construction, road closures, trail restrictions, or major events that may affect the route. For an unfamiliar or longer trip, identify alternate routes and places to stop, use transit, or arrange a ride if conditions change.

Give Yourself Enough Time

Estimate your travel time based on your usual pace and ability to handle the terrain, and include the stops you think you'll make based on these factors. For a new route, allow additional time so that you do not feel pressured to ride faster than is comfortable. Longer rides may also require extra time for rest, water, or minor adjustments.

Wayfinding

Bicycle wayfinding signs can help you follow preferred routes and find connections to parks, trails, transit stations, business districts, and other destinations. Signs may display route names, directions, distances, or estimated travel times. Continue watching for traffic-control signs and pavement markings, which take priority over a mapped or suggested route.



Wayfinding Signage

Bikeshare

Bikeshare systems provide short-term access to bicycles for transportation or recreation. Some use stations where bicycles must be checked out and returned, while others allow bicycles to be located and unlocked through a mobile application.

Before beginning a trip, check the service area you must stay within, along with the fees, time limits, and return or parking requirements. Inspect the bicycle's tires, brakes, seat, lights, and controls before riding. Park only in an approved location, without blocking roads, sidewalks, curb ramps, building entrances, transit stops, or access for people with disabilities.



Bikeshare


NJTRANSIT
HARSIMUS COVE

BEYOND THE BASICS

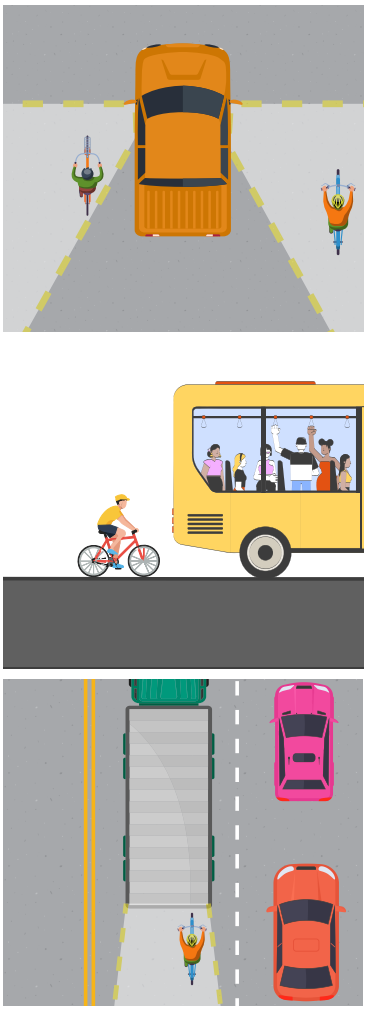
NAVIGATING DIFFICULT SITUATIONS

Riding a bicycle safely isn't just about knowing the rules of the road, it's also about knowing what to do in unexpected situations. This section has information on common roadway hazards and how to handle them safely.

Be Aware of and Avoid Blind Spots

While riding your bicycle, you may be able to clearly observe vehicles traveling in the same direction and coming toward you, but you can't assume that the drivers of those cars can see you. This is because motorists may forget to scan or look for bicycle traffic, and because most vehicles have a natural blind spot to the driver side and passenger side rear quarter where you will not be observed in either the rear-view mirror or side mirror. To avoid this situation:

- Stay far enough behind cars so you avoid being in the blind spot.
- Don't creep up and pass slower cars on the right unless you are traveling in a bicycle lane or the car is slowing down and signaling to make a left turn.
- Move to the left to pass a standing vehicle or one slowing and signaling to make a right turn.



Avoid Riding in Blind Spots

- Keep in mind that there are blind spots behind vans, trucks, and buses traveling toward you. If a larger vehicle is approaching an intersection and signaling to turn left, wait until they turn and you can see that it's clear before you make a left turn.

Road Surface Hazards

Be alert to, and avoid, road surface hazards. They can deflect the travel path of your front wheel which will likely result in a crash. Most can be avoided by slowing down, checking for overtaking traffic and steering around or away from them. Remember, you can always stop and walk your bicycle past these conditions.

For recurring or dangerous maintenance issues, see "*Reporting Poor Conditions*" in the Appendix for information on helping set improvements in motion.

Objects and Debris



Debris on the Road

You will avoid most patches of dirt, gravel, standing water, oil spots, road hardware (drainage grates and utility covers) by assuming the proper lane position and riding several feet out from the curb or edge of pavement. If you are forced to ride through them, travel straight and don't brake. With rocks and debris such as tree branches, steer around them. The jolt from hitting them can damage your tire or other parts of your bicycle, and can throw off your balance.

Metal Surfaces

Sometimes, the road is not just paved with concrete or asphalt, but instead is partially or entirely metal. These features can be especially problematic when wet.

Travel at a slow, steady pace. Avoid turning, braking or accelerating while on a metal surface. If you are not sure you can ride over them, walk your bicycle.

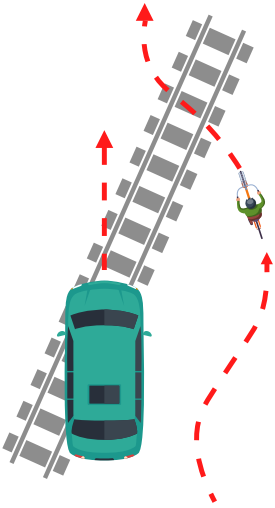
Some metal features also can have grooves or gaps which can "grab" your bicycle wheel and make you fall off. This includes things like storm drains and steel plates which don't fully line up; when you see these, slow down and try to avoid letting your wheel get into the groove.



Stream Flow Grate

Railroad Tracks

Be cautious when encountering railroad tracks crossing the road, especially if they cross the road diagonally. Check behind and if it's clear, steer your bicycle so that you cross the tracks at a right angle. Trolley tracks, raised roadway reflectors, rumble strips - If these potential hazards are on the street you are riding on, stay away from them. If you must cross over them, such as when making a turn at an intersection, maneuver to cross them at a right angle, or as close to one as you can.



Crossing Railroad Tracks

Puddles

You can't always tell how deep a puddle is by looking at it. You might feel like you can ride through one, but you could crash, hurt yourself, and/or damage your bicycle if you hit an unexpectedly deep hole.

Pay Attention in Construction Zones

Construction may temporarily narrow or shift travel lanes, close bicycle facilities or shoulders, and create uneven pavement, debris, changing traffic patterns, and movements by large construction vehicles. When practical, check for closures before your trip and consider an alternate route. If you ride through a work zone, slow down and allow additional space and time to respond.

Follow temporary signs, signals, flaggers' instructions, barriers, and posted detours. Do not ride through areas closed to traffic or between cones and construction equipment. Watch for steel plates, gravel, pavement edges, trenches, hoses, temporary markings, workers, and vehicles entering or leaving the work area.

A closed bicycle lane or shoulder may require you to merge into a travel lane. Check behind you, signal, and move into the lane early and predictably rather than making a sudden maneuver at the obstruction. Avoid squeezing between vehicles and barriers where there is not enough room for you to be passed safely.

Choose a steady path through rough surfaces and avoid abrupt swerving. If a surface or obstruction cannot be ridden safely, stop and dismount only where there is a safe place to do so. If the work zone cannot be navigated safely by bicycle or on foot, follow the posted detour or choose another route.



Do Not Ride Through Active Road Work Areas Unless Clearly Permitted



Construction Zones are Not Always Open

Blind Corners and Hills

Slow down before entering a curve or approaching the crest of a hill where you cannot see what lies ahead. Maintain a predictable position, stay on your side of the roadway or path, and be prepared for an approaching vehicle, bicyclist, pedestrian, or unexpected hazard. Look through the turn toward where you want to go, and avoid sudden braking or steering once you are in the curve.

When leaning through a sharper turn, keep the inside pedal raised and the outside pedal lowered to prevent a pedal from striking the surface. Use extra caution around gravel, wet leaves, pavement markings, and other surfaces that may provide less traction.

On shared-use paths and trails, reduce your speed enough that you could stop within the distance you can see. Ring your bell or call out before entering a blind curve, but do not assume others have heard you. Continue to listen and watch for approaching users, and do not pass others until you have a clear view ahead.



Blind Corner

Animal Encounters

Most advice in this manual is intended to reflect human behavior and how you should anticipate what they do. However, you won't just encounter humans on your bicycle ride every time – there are lots of other animals out there, from urban to rural settings, and you should know how to anticipate certain situations.

Most wild animals you see are unlikely to interact with you while you ride your bicycle. In general, the main thing to keep in mind regarding birds, small mammals, and bugs is to stay aware of them and avoid letting a surprise encounter lead you to lose control of your bicycle. They may dart into the path or road, or in the case of bugs, fly/jump in your face – do your best to remain calm in these cases, slowing down and pulling over. The next section, "Emergency Maneuvers", contains information on how to make several last-second moves to avoid a crash – consider spending some time learning these.

Otherwise, there are a few animals requiring additional preparation, either because they are more likely to be encountered or because there is a need to take greater precaution for a possible encounter. Bears can be found in more forested or otherwise wild areas, and deer can be found anywhere – both can behave dangerously. Dogs, while not wild, are extremely common, and while you may be a dog lover, there is a chance meeting an unfamiliar dog on your bicycle can go poorly if you do not handle it appropriately.

Being Chased by a Dog

Dogs are not all the same – you should not assume a dog is well-behaved or friendly. Even friendly dogs may be inspired to chase you on your bicycle. Being chased by a dog is bad for everyone involved – the dog may get lost, might accidentally harm you or your equipment, and in the worst case, may attack you.

There are several things a bicyclist can try in order to defuse the situation:

Shout

Yell something forceful, such as "GO HOME!" This sometimes calms down the chase and will draw attention to your situation (hopefully including the dog's owner).

Stop

Observe the dog; you might be able to tell if it's just chasing you for fun. Stopping may end the chase, but you should ignore the dog so it loses interest and eventually leaves. If the dog is friendly and you give it attention, it may want to continue following you.

If the dog continues to pursue or tries to attack, get off your bicycle and hold it between you and the dog while you slowly back away. Do not swing your bicycle at the dog. If you have pepper spray, this is an appropriate time to use it, but understand you will also experience some irritation from the spray.

Dog Attacks

If the dog does bite you, seek medical attention as soon as you can and report the attack to the police. Try to identify the owner so you can obtain the dog's vaccination/health information, including if it has communicable diseases.

Bears

Bicyclists may encounter black bears in wooded and rural areas. Because bicycles move quickly and quietly, bears are easy for bicyclists to startle, which is when bear encounters are most dangerous. Avoid using headphones when riding in these areas, and make occasional noise when approaching blind curves or areas with limited visibility.

If you see a bear, do not approach it or attempt to pass nearby. Remain calm, stop, and give the bear a clear way to leave. Do not run or quickly ride away. Avoid direct eye contact and slowly back away while speaking to it in a firm, loud voice. If the bear approaches or does not leave after some time, make yourself look larger (raise your arms, position your bicycle sideways) and make louder noises than before. If this does not dissuade the bear and it attacks, fight back using anything available. Riders who choose to carry bear spray should keep it readily accessible and learn how to use it before their trip.

Deer

Deer are common throughout New Jersey, including in suburban and developed areas. Although they generally avoid people, they may stop, change direction, or suddenly enter a roadway or trail. A collision—or an abrupt attempt to avoid one—can cause a serious fall or place you in the path of other traffic.

If you see a deer, slow down and be prepared to stop. Do not attempt to squeeze past while it is standing in or beside your path; wait for it to leave, or give it a very wide berth if possible and safe to do so. Even if it leaves, watch for additional deer. If a deer moves suddenly into your path, brake firmly while maintaining control rather than making a sudden swerve.

There is a greater chance of finding deer at dusk or dawn. Deer are more common closer to forested areas where they typically take refuge. Still, they can be found anywhere in New Jersey at any time.

Emergency Maneuvers

Looking ahead, controlling your speed, and leaving space to react are the best ways to avoid a crash. Even so, an unexpected vehicle, surface hazard, or obstruction may sometimes require a quick response. The following advanced skills can help you stop or change direction while maintaining control.

Practice these maneuvers in a traffic-free area before attempting them during a ride. Use soft objects like sponges or small cones to represent hazards so you do not crash unnecessarily while practicing. Consider finding hands-on instruction.

Emergency Stop

Use an emergency stop when an obstacle appears ahead and there is not enough room to steer around it.

1) Keep the bicycle pointed straight ahead.
2) Shift your hips backward and lower your upper body.
3) Apply both brakes firmly and smoothly, increasing pressure without grabbing the levers suddenly.

The front brake provides most of your stopping power, while the rear brake helps maintain control. Shifting your weight backwards is necessary to prevent you and your bicycle from pivoting over the front wheel and "taking a header". If the rear wheel begins to skid or lift, ease the brake pressure slightly until the wheel regains contact or traction.

Quick Dodge

A quick dodge (sometimes called a "rock dodge") can help you avoid a small object when there is not enough room for a wide turn.

Just before reaching the object, make a small, quick steering movement around it, then immediately steer back to your original path. Your front wheel must clear the hazard; the rear wheel will follow a narrower path and may pass over a small object without causing the same loss of control.



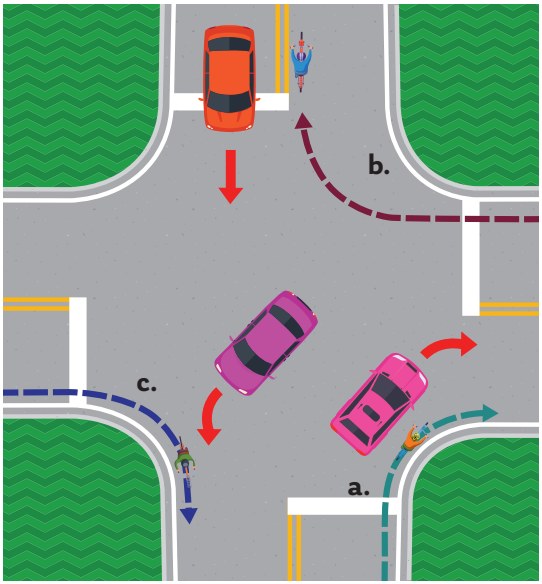
Quick Dodge

Practice by riding toward a sponge or other soft marker and steering around it without allowing your body or bicycle to move far from a straight path.

Quick Turn

A quick turn may help when stopping is no longer possible and you need to follow an escape path around or behind a vehicle or obstacle.

To begin a sharp turn, briefly steer in the opposite direction to make the bicycle lean, then steer into the turn. For example, to turn sharply right, make a brief steering movement to the left, allow the bicycle to lean right, and then steer through the right turn. Reverse these movements for a left turn.



Using a Quick Turn to Avoid:

a. Vehicles Turning Right

b. Vehicles Running a Stop Sign

c. Vehicles Turning Left

This is an advanced maneuver that is difficult to learn from written instructions alone. Practice slowly in a clear area and avoid applying the brakes abruptly while the bicycle is leaning into the turn.

Traffic Lights That Don't Change

As a legal user of public rights-of-way, bicyclists have a right to expect that traffic signals will work for them. Unfortunately, this is not always so. Some signals work on timers; that is, each signal cycle provides a set amount of time in each phase so that all traffic approaching or stopped at the intersection has a set amount of "green" time to pass through the intersection. As a bicyclist on the road, that time is also meant for you, so a signal working this way will be fine for you as well.

Some signals, however, don't operate on timers, and won't turn green unless they receive a signal that "calls" the green phase. This "call" can come from wires buried in the pavement that are sensitive to a metallic mass, or from cameras focused on the approach to the intersection that are calibrated to detect an arriving vehicle. In the case of video detection, if the camera is set up so that it "sees" a bicyclist arriving at the intersection, the signal will be activated. Those which are activated by wires beneath the pavement can detect a bicycle if it's made of the right material, and it's worth briefly dismounting and tipping your bicycle over to cover as much area as possible to try and activate the signal. If your bicycle is made of aluminum, carbon fiber, or some other lightweight material, there's a good chance this won't work, though.

Both systems have flaws. You might not activate the camera, may not be able to find the underground detection system, or it too may simply not detect your bicycle. The system could be faulty for any number of reasons, but in such circumstances, you might not get a green light and should try the following options:

- If there is a handy pedestrian push button, ride or walk your bicycle to the pedestrian push button and activate the signal.
- Wait for a car to arrive that activates the signal.

Harassment and Unsafe Driving

People riding bicycles have the right to use the roadway in accordance with New Jersey law. Most interactions with drivers are routine, but a driver may occasionally shout, pass dangerously close, follow, threaten, or deliberately interfere with a bicyclist's path. You are not responsible for another person's aggressive behavior, and you do not need to argue with them or defend your right to be on the road.

Focus first on reaching a safe location. Avoid engaging with the driver, and do not make gestures, pursue the vehicle, or attempt to confront its occupants. If possible, attempt to leave the area. If a driver follows you, do not continue toward your home; go instead to a busy public place, police or fire station, or another location where help is available.

When to call 911:

- if you are in immediate danger
- if the driver threatens or assaults you
- if a vehicle is being used to endanger you
- if a crash or injury occurs

Once you are safely stopped, record as much information as you can, including the license plate, vehicle description, location, time, direction of travel, and descriptions of the driver or any witnesses. Save relevant photographs or videos. Less urgent incidents may be reported through the local police department's non-emergency number.

The New Jersey Department of Transportation and the Department of Law and Public Safety are committed to seeing that traffic laws are enforced for both bicyclists and motorists, that the traveling public is educated about the rights of bicyclists to use public rights-of-way and the obligations bicyclists have to ride in accordance with the rules of the road.

If You Are Involved in a Crash

- Check for injuries; if you or others are injured, call for help from police and emergency services if you are able.
- If you are injured, don't move until you are sure you will not be exacerbating your injuries.
- Even if you don't think you are injured, get medical attention. Documentation of injuries may be important for insurance purposes. You may not be aware you have been injured. Some injuries aren't apparent immediately.
- Administer first aid to others if you can and are trained to do so.
- Don't discuss fault.
- As soon as you can, write down the following information:
  - Location and time of the crash
  - Descriptions of vehicles involved including license plate numbers
  - Driver's description and driver's license information
  - Driver's insurance information
  - Description of the crash including a diagram, weather and light conditions, road surface conditions
  - Witness information, including name and phone numbers (same for passengers)
- Take photos of any damages you and your property have sustained. If you were riding with a camera, be sure to retain your footage from the crash. Photo and video evidence is clear and unbiased, making it crucial if details are disputed or if they are hard to remember.
- File a police report.

Bicycle Injury: What You Should Know

If you are involved in a crash, acting quickly and being aware of the laws in New Jersey can help you protect your health and rights.

- **Call 911:** Always request a police report to document the official record. If you are able, ask the responding officer for a contact card so you have a direct point of contact and essential information for any follow-up reports or insurance claims.
- **Seek Care:** Adrenaline masks pain and internal trauma, so even if you feel "fine", you should get evaluated by a doctor immediately.
- **Legal Claims:** Do not repair your bicycle or discard your helmet; preserve them as evidence. New Jersey enforces a strict two-year deadline from the date of the crash to file legal claims.
- **Medical Bills:** If a car hits you, and you own a car, your auto insurance (PIP) pays medical bills first, even though you were riding a bicycle. If you do not own a car, the striking driver's insurance covers your medical care.

Most Frequent Types of Car/Bicycle Crashes

(According to the League of American Bicyclists)

Motorist at Fault: Top 3

Crash Type	*Frequency*
Turning/Merging into Bicyclist's Path	34%
Driving Out From a Stop Sign	16%
Exiting Driveway or Alley	10%

Adult Bicyclist at Fault: Top 3

Crash Type	*Frequency*
Turning/Merging into Motorist's Path	6%
Overtaking Motorist	6%
Starting Movement at Signalized Intersection	5%

Stolen Bicycle

If you discover your bicycle has been stolen, file a police report with the department where the theft took place. Calling the police is a first step to create a paper trail, protect your rights, and give you a legal chance at getting your bicycle back.

Collect Details Before Contacting the Police

The serial number is the most critical detail. Check old text messages, your purchase receipt, your bicycle shop account, or photos of the bicycle to find it. Find any clear photos of your bicycle, ideally showing you with it. Contact the police department of the specific town or city where the bicycle was taken. Look up the town's non-emergency police phone number. State your purpose and tell them, "I need to file a report for a stolen bicycle."

Register Your Bicycle as Stolen

Go directly to BikeIndex.org and register your bicycle as stolen. It is a quick process and is completely free. Local bicycle shops and pawn shops scan this database daily; if a thief tries to sell your bicycle to a shop, it will instantly flag it as stolen.

Check Resale Sites

Open Facebook Marketplace and Craigslist, or another person-to-person resale service in your area. Search for your bike's brand and model, then filter the location to a 10-mile radius around the theft zone. If you see it pop up, do not contact the seller yourself. Call the detective assigned to your police report and let them handle the recovery.

RIDING IN POOR WEATHER OR LOW VISIBILITY

Riding in Rain and Snow

It is easier to ride in inclement weather if you have the proper clothing for the situation. Understanding how these conditions affect bicycle riding for you and other bicyclists (and motor vehicle drivers), and riding your bicycle in a way that accounts for the effect of these conditions, are also important considerations.

Dress for Success

You can bicycle in more kinds of weather than you think, but if you are not dressed for it, you will not have a good time. There is a plethora of clothing available that is designed specifically for bicycling in wet and cold weather.



Bicyclist Dressed for Rain

- In wet weather you need a garment to keep from getting soaked, but even when riding casually you will be sweating lightly, which you might not notice when it is drying instantly. In full rain gear, you might find that your sweat collects inside your outer layer, getting you wet anyway and putting you at risk of getting cold quickly. A poncho, which lets air in (and moisture from perspiration out) from the bottom, or a breathable and vented rainproof jacket with a hood will keep your upper body reasonably dry, while rain pants or gaiters will do the same for your legs.
- In cold weather, you need to dress in layers and, depending on the severity of the cold, cover exposed skin.

- Since bicycling requires an expenditure of energy and generates heat, you may not need as much clothing as you might think. By dressing in layers, you can shed layers to prevent overheating. Be sure to have a backpack or panniers so you can put layers away if you must.
- Next to the skin, wear a layer that will wick away moisture. These layers should be made of a synthetic fabric; cotton will not work as this base layer.



Bicyclist Wearing Layers for Cold Weather

- If possible, tighten your hood around your face so as not to block your vision; a loose hood may sit too far forward and create significant blind spots for you. You can also block your vision if you tighten it too tightly; see what works with your specific jacket and proceed with caution.
- Fenders are useful to keep water from being thrown up onto you and anything you might be carrying.
- Everyone is different in terms of: what's comfortable for you, how hot you get when you ride, how cold you get in the elements, and more. Experiment with different combinations to find out what is comfortable under varying temperatures. There are many options, including long-sleeve bicycling shirts, thermal undershirts, long johns, tights, full-fingered gloves of various thicknesses, mittens, scarves, turtlenecks, balaclavas, gaiters, wool socks or socks that wick moisture, shoe covers (booties) and ski masks that can be used to cover exposed skin and keep you warm and dry.
- Try to pick clothes that are brightly colored and have reflective attributes; or, add reflective patches or tape to your outer layer, especially since inclement weather often comes with heavy clouds that make it darker outside.

Wet and Snowy Roads

- Rain and snow can limit visibility or may obscure road conditions, so slow down.
- Debris (especially wet leaves) and street hardware like drainage grates and manhole covers can be especially slippery when wet, so be cautious and avoid them if you can. The same is especially true of metal grate bridges. Walk your bicycle over or around these if you must.
- Don't ride through puddles or standing water. They may be hiding a pothole; if you do ride through one you are likely to crash or damage your bicycle, or both!
- Remember, the road surface may be slippery even if you aren't directly on ice or snow or in a puddle, so don't apply brakes or make fast, sharp turns. Turns should be slower than your already reduced speed and with greater caution than usual. Riding slowly is intended to help you avoid having to make any emergency maneuvers for this exact reason.
- Wet brake pads and rims can drastically reduce your ability to slow down and stop, so ride more slowly and apply brakes earlier than you would under dry conditions.
- Many people commute by bicycle in the snow, but doing so takes skill and caution. If you ride in snowy conditions, stick to plowed streets. Snow can be loose, packed, or slick without warning, and it can easily hide ice that causes your tires to slide. It can also collect within the tread of your tires, especially if you ride in loose snow. It can just as easily stick to the snow on the ground and clear your tire tread; check periodically if you have snow stuck in your tires, and proceed with caution if you do. Riding on firm or dry spots will typically shake it loose with time.



Snow Will Stick to Your Bicycle

- On plowed streets where snow is piled onto the shoulder or edge of pavement, you will have to ride further out towards the center of the lane. While you have the right to do this, it may put you into conflict situations with motorists, who are also likely having difficulties. While this manual encourages you to know and exercise your rights, in these challenging conditions, motorists may be unprepared or unable to make the necessary maneuvers to respect your position on the road, so you should plan to defer to drivers when in doubt to prioritize your safety.
- Wet weather, especially salty water, can cause rust and corrosion. Road and sidewalk salt may take days or weeks to wash away, causing any wet weather following a snowstorm to cover the roads with salty water. When you finish riding, store your bicycle somewhere it can dry out; wipe it dry if possible to remove salt.

Riding in Low Visibility

Fog and other low-visibility conditions can make it difficult for bicyclists and motorists to see one another. When riding in these conditions, make yourself more visible by using front and rear lights and wearing reflective clothing. Reduce your speed to give yourself more time to react to hazards. Be especially cautious at intersections, where drivers may have difficulty seeing cyclists approaching. Low visibility can also make hand signals less noticeable and may obscure potholes, debris, pavement markings, and other roadway elements and hazards.



Reflective Clothing and Gear Works!

Riding at Night

Bicyclists should exercise extra caution when riding at night and ride defensively. Use front and rear lights as required by law and never assume a motorist can see you. You should try to wear light colors or reflective clothing. See the "*Lights/Reflectors*" section of "Basic Equipment/Choices" in Chapter 2 for equipment guidance.

What the Law Requires

When in use at nighttime, every bicycle shall be equipped with:

1) A front headlamp emitting a white light visible from a distance of at least 500 feet to the front;
2) A rear lamp emitting a red light visible from a distance of at least 500 feet to the rear;
3) In addition to the red lamp, a red reflector may be mounted on the rear.

Lights

The main purpose of lights is to help you and other drivers see the road, each other, and any obstacles. Streetlights alone are not always enough, whether they are too dim or too far away, to make drivers aware of you. If you know that you will be riding at night, don't ride on roads that you know have debris or poor surface conditions.

Most generator-powered lights have the disadvantage of going out when you stop. If you intend to use generator-powered lights, get a model that has a battery backup that keeps the light on when you stop (as opposed to those which are only powered by active pedaling). Bright, high-powered, and rechargeable battery-powered lights are the best option. Make sure they are fully charged when you set out as they use up the battery quickly. If you find yourself out riding, having no lights on your bicycle, and it starts to get dark, you might try affixing a flashlight on your handlebars facing oncoming traffic. Carry a spare bulb and battery.

What Else You Can Do to be Seen

- Use a flashing red LED rear facing light; these are more visible than a steady red light
- Wear light colored clothing
- Wear a safety vest or jacket with reflective material
- Wear a pant leg strap with reflective material
- Use spoke reflectors on your bicycle
- Use pedal reflectors on your bicycle
- Wear a strobe light on your arm (affixed by an arm band)
- Use a red reflector facing the rear to supplement the red rear light
- Use a white reflector facing front to supplement the white front facing light. Supplement the front and rear reflectors with an amber reflector
- Choose routes you are familiar with to minimize threats to your personal security
- Ride slower than you would during daylight
- Choose a helmet with a built-in taillight; it can serve as a backup if your primary taillight fails



Child Trailer

RIDING WITH ATTACHED EQUIPMENT

Child seats, trailers, pet carriers, baskets, panniers, and other attachments can make a bicycle useful for carrying passengers and belongings. They can also change the bicycle's weight, width, balance, turning, and stopping distance. Before using any attachment, make sure it is compatible with your bicycle, is installed according to manufacturer instructions, and is within its stated weight and size limits.



Secure passengers and cargo before moving, and keep straps, clothing, and any other loose objects away from the wheels, chain, and brakes. Practice starting, stopping, turning, and parking in a low-traffic area before entering the roadway. Allow more room for turns and braking, particularly when using a trailer or carrying a heavy load, and check the attachment and its fasteners before each ride.



Front and Rear Child Seats

Child Seats and Trailers

Child seats and trailers allow young children to ride as bicycle passengers, but only children who are developmentally ready should be carried. Infants should not be transported by bicycle. A child should be able to sit upright without assistance, hold up their head, and comfortably support a properly fitted helmet before riding in a child seat or trailer. See the "*Young Children*" section of "Children and Bicycling" for more guidance.

Use only equipment designed to carry children, and follow its age, height, weight, installation, and bicycle-compatibility requirements. Secure the child with every harness, belt, foot restraint, and protective feature provided. Seats should prevent hands or feet from reaching the wheels, while trailers should have a secure passenger compartment and the visibility equipment supplied by the manufacturer. Keep children contained safely by using only passenger modules designed for bicycle travel.

Hold the bicycle securely while loading or unloading a child, and never leave a child unattended in a seat attached to a standing bicycle. A trailer makes the bicycle longer and wider, so allow additional clearance around curbs, bollards, vehicles, and other path users. Begin with short rides on comfortable routes, regularly checking that the child stays secure and comfortable.

Riding with Pets

Pets should be carried only in a basket, carrier, or trailer designed for their size and weight. The equipment should be securely attached, ventilated, and designed to prevent the animal from jumping or falling out. Use the restraint system provided, and make sure that paws, fur, collars, harnesses, and straps cannot reach the wheels or other moving parts. Do not carry an unsecured pet in a basket or cargo area.

Allow your pet to acclimate to the carrier before riding. Stop if your pet appears frightened, overheated, or otherwise unable to settle. Always bring water, and consider your pet's usual weather tolerances (do they overheat in hot or humid weather, and can they handle rain or cold weather?). Never leave a pet unattended in a carrier or trailer.

Do not hold a leash in your hand or attach it to the handlebars while riding. This makes you vulnerable to being pulled down by your pet's actions, especially unexpected pulls which can cause you to lose control. Consider your pet's health, temperament, and comfort before bringing it on a ride, and consult a veterinarian if you are unsure.

Purpose-designed baskets and trailers can transport pets, but the animal should be secured and introduced to the equipment gradually.

Riding with Cargo and on Cargo Bicycles

Bicycles can easily haul daily items or heavy cargo if you use the proper gear. Extra weight changes your balance, braking, and steering, so practice riding with a load first. For safety, keep your cargo balanced, tightly secured, and completely clear of all moving parts. You can buy or rent baskets, racks, bags, and trailers at most bicycle shops to upgrade your current ride. For heavy loads or transporting children, specialized cargo bicycles and electric cargo bicycles are ideal options.



Bike Bag and Panniers



Cargo Bicycle

CHILDREN AND BICYCLING

Bicycling can be an enjoyable way for families to travel, spend time together, and build healthy habits. As children grow, bicycling can also help them reach school, parks, friends, and other destinations while gaining independence.

Still, children are not immediately ready to bicycle on the road, and parents, guardians and caretakers should be involved in supervising and assisting them as they gradually become confident bicyclists. Children develop balance, judgment, attention, and traffic awareness at different rates, and as they grow their bicycling experience should be appropriate to their age, size, skill level, and the riding environment.

Young Children

Infants under 12 months should not be carried on a bicycle. Very young children may not have the neck strength needed to support a helmet or tolerate the movement of a bicycle, trailer, or child seat. Once a child is old enough to sit upright unsupported, hold their head up, and wear a properly fitted helmet, they may be ready to ride as a passenger in equipment designed for that purpose.

Graduating to Two Wheels

A child does not have to "graduate" to a standard bicycle to begin riding on these paths and streets, but it is important to understand the limitations of balance bicycles and tricycles, including speed and maneuverability. Balance bicycles are not much faster than walking, and it is rare to find them in larger sizes as they are intended for learning. Tricycles, on the other hand, can be used into adulthood, but are more expensive and take up much more space. Additionally, while tricycles may feel safer because they maintain three points of contact with the ground, they cannot lean into turns the way bicycles do naturally, making them prone to tipping over. For some, these alternatives are the best option to cycle with a disability. Nonetheless, the aforementioned reasons are why the standard bicycle configuration is most common globally, and while it may take some time, learning to handle and balance on a bicycle is a critical milestone for making bicycling a part of daily life.

Common options for carrying young children include rear-mounted child seats, trailers, cargo bicycles, tag-along attachments, and other family bicycling equipment. Each option affects the bicycle's handling, balance, braking distance, and visibility, and you as the bicyclist should refer to "*Riding with Attached Equipment*" for more details on how to operate bicycles which carry more than just you. Before carrying a child, adults should confirm that the equipment is designed for child passengers, follow the manufacturer's age and weight limits, use all required harnesses or restraints, and take a short test ride without the child to practice starting, stopping, turning, and dismounting. Exercise additional caution and limit your speed as a general principle.



Tag-Along Attachment

Children should never be carried in a way that the bicycle is not designed to accommodate. In New Jersey, children under 17 are required to wear a properly fitted and fastened bicycle helmet when riding a bicycle, riding as a passenger, or being towed as a passenger.

Learning to Ride

Many children begin learning bicycle skills with training wheels or on a balance bicycle or tricycle in a car-free setting. Balance bicycles allow children to practice gliding, steering, and stopping before adding pedaling, instead using their feet on the ground (you can also replicate a balance bicycle by having the pedals removed from a small bicycle and lowering the seat so the child's feet can touch the ground). Training wheels allow children to become comfortable sitting on a bicycle and pedaling, but they do not teach balance in the same way. Either option can be appropriate depending on the child and can teach children different skills involved in bicycle riding.



Learning to Ride in a Safe Environment

Early practice should take place in low-stress places such as parks, playgrounds, traffic gardens/safety towns, driveways, empty parking lots, schoolyards, or shared-use paths with low traffic; car-free locations are best. Children should learn to start, stop, look ahead, scan for others, ride predictably, yield to pedestrians, and ride on the right except when passing. Adults should also teach children to watch for driveways, parked cars, loose gravel, storm drains, uneven pavement, and other common hazards along their path. Falls should be expected, so beyond wearing a helmet, it may be a good idea to outfit children with elbow and knee pads. As a reminder, helmets should be replaced after a fall on the head.

Riding with School-Age Children

As children gain confidence, routes with other users that have slower traffic speeds and volumes, easy crossings, limited hills, and comfortable places to stop become an option. For younger children, sidewalk riding may be appropriate where permitted, but children should be reminded often to give way to pedestrians and watch for roadside hazards and places where cars may cross their path. See *Children and Driveway Safety* (NJDOT) for relevant information.

When riding together, adults should model safe behavior by riding lawfully, respectfully, and in a controlled fashion. Teach your children

Safe Routes to School

The Safe Routes to School program helps communities make walking and bicycling to school safer. Programs may include classroom education, safety lessons, walkability or bikeability assessments, community events, bicycle-to-school activities, or infrastructure planning near schools. Families, schools, municipalities, and community organizations can use Safe Routes to School resources to help children build their skills and find safer routes. Local Safe Routes to School coordinators at New Jersey's Transportation Management Associations also provide free support to schools and municipalities. See the *New Jersey Safe Routes Resource Center website* to find out if any school travel plans or case studies have been done for your school, and explore a wide range of other resources!

to watch for vehicles that may turn or back out of driveways. Have them look for a driver in the seat and for backup lights as they pass. Children should not be expected to manage complex traffic situations until they have practiced the necessary skills and shown that they can pay attention, judge gaps, and follow instructions consistently.

Older Children and Independent Riding

Older children and teenagers may be ready to ride to school, activities, transit, jobs, or friends' homes. This not only can give them a place to exercise their autonomy but can also take a load off of their parents or guardians by no longer needing a ride for every trip they take. Before riding independently, they should become familiar with the bicycling rules and best practices found in this manual.

Adults can help by riding the route with the child first, identifying difficult crossings or busy streets, reviewing where to stop or yield, and making a backup plan for bad weather, darkness, mechanical problems, or emergencies. For school travel, families may also consider group riding or bicycle buses if and where available.

BICYCLING AND PUBLIC TRANSPORTATION

Bus Stops

People driving buses often must pull across or into bicycle lanes at bus stops. The bus driver should yield to people in the bicycle lane before pulling over to stop. If a bus is stopped in the bicycle lane, you can move left to pass the bus when there is a gap in traffic. If there is a bus pullout to the right of the bicycle lane, stay in the bicycle lane to pass. When the bus is leaving a stop and turns on its blinker, vehicles (including bicycles) should yield to the bus.



Bus Stops along Bicycle Lanes

Train Stations

Dismount your bicycle and walk whenever you are on train platforms, inside station buildings, or navigating crowded pedestrian plazas. Train stations are high-density pedestrian zones where unexpected movements can lead to dangerous collisions.

Always yield to pedestrians. People walking always have the right-of-way. Expect commuters to be distracted, looking at schedules, or rushing for the train. Cross train or light-rail tracks at a strict 90-degree angle. Crossing at an acute angle can catch your tires in the groove, causing an immediate crash. Bus stops are common at train stations; be aware of buses entering and leaving the property. If trying to get onto the train, look for bicycle-friendly ramps to get on or lock your bicycle on a bicycle rack. Some municipalities offer bicycle lockers you can sign up for on their municipal website.

Bringing Your Bicycle on Board

You can link bicycle trips with transit to go even further! Not only can bicycling be the perfect way to get to your transit stop, but when the end of the transit ride might be just too far from your destination to walk, bicycling is often the perfect way to make the whole trip work.

Taking a Bicycle on a Bus

Many transit buses provide bicycle racks on the front of their buses, and allow you to use the luggage compartment, so you can take your bicycle with you. Keep in mind these racks usually fit two bicycles, so you can't be sure you'll have a space. Additionally, NJ TRANSIT does not allow bicycles on the rack if the bus is entering New York City.



Bus Bicycle Racks

Taking a Bicycle on a Train

Different service providers have different rules. Check their requirements before assuming you can bring your bicycle aboard at any time.



Bringing Your Bicycle on Board

- You can also bring most bicycles on Amtrak trains, but you must indicate on your reservation you will be bringing a bicycle.
- NJ TRANSIT commuter rail allows bicycles, with some exceptions:
  - Rush hour trains (weekday trains to New York, Hoboken, or Newark arriving between 6-10 AM and away from those stations departing between 4-7 PM) do not allow bicycles unless they fully fold. This also applies on weekends for the Northeast Corridor, North Jersey Coast Line, and Morristown Line for 9 AM-12 PM arrivals and 5-8 PM departures. The Atlantic City Line always permits bicycles.
  - Bicycles are fully prohibited on all train lines (except for the Atlantic City Line) on holidays.
  - Folding bicycles are permitted when others are not, as they are to be stored in the overhead luggage rack.
- NJ TRANSIT Light Rail allows bicycles, with some exceptions:
  - The River LINE allows bicycles at all times. The Newark Light Rail and Hudson-Bergen Light Rail allow bicycles at all times on weekends, but only off-peak (as defined by NJ TRANSIT) on weekdays.
- PATH trains always allow bicycles except on weekdays from 6:30 AM to 9:30 AM and from 3:30 PM to 6:30 PM.
- PATCO trains allow bicycles at all times.

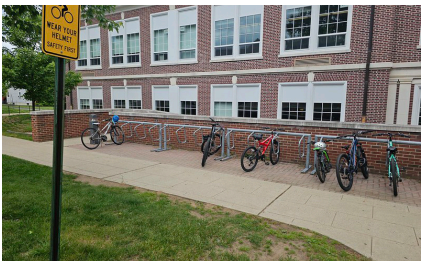
Many transit providers cannot accommodate cargo bicycles, adult tricycles, tandems, or bicycles with trailers on buses and trains. Always check with your local transit provider, as these details are subject to change. Additionally, refer to the *NJ Micromobility Guide* for information on taking e-bikes and e-motos on various transit services.

PARKING YOUR BICYCLE

Always secure your bicycle, even if you only expect to be away from it for a few minutes. If left unlocked, it can only take a bicycle thief a few seconds to take it. Why take the risk?

Bicycle Parking Types

Bicyclists may encounter a variety of bicycle parking facilities depending on the location and demand for bicycle parking. The most common type is the bicycle rack, which is typically located on sidewalks, near building entrances, parks, schools, and commercial areas. Rack designs vary, but inverted U-racks, plaza racks, and wave racks are among the most frequently used. These facilities allow cyclists to secure their bicycle frame and wheels using a lock. Bicycle parking beneath a shelter, if it is available, should be your preference as an added way to protect your bicycle from the elements.



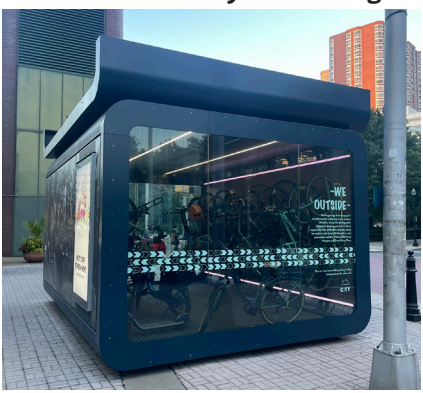
Common Bicycle Parking



Structured Bicycle Parking

Some locations offer bicycle lockers, enclosed spaces that protect bicycles and accessories from weather and theft. Lockers are commonly found near transit facilities and can be available for both short- and long-term parking.

In downtowns, transit hubs, and other high-demand locations, cyclists can find bicycle storage rooms, which can fit large numbers of bicycles and may include amenities like enhanced security and repair stations.



Bicycle Locker

When selecting a parking location, choose a facility that allows your bicycle to be locked securely, is well lit and visible to the public, and does not obstruct pedestrian travel.

See the *NJDOT School Bicycle Parking Guide* for relevant information.

Bicycle Lock Types

The four primary bicycle lock types are u-locks, chain locks, folding locks, and cable locks. They vary greatly in weight, portability, and security. Choosing the right lock depends heavily on your bicycle's value, where you park, and how long it will be left unattended.

U-Locks

Pros: Highly resistant to bolt cutters and prying attacks.

Cons: Rigid shape makes them harder to attach to thick poles or irregular objects.



Bicycle Parked to U-Racks with Cable Lock

Chain Locks

Pros: Can fit into small bags, making them better for urban commutes, and can secure in many configurations to wider street furniture like lampposts or trees.

Cons: Heavy-duty chains required for real security are often cumbersome and very heavy to carry around.

Folding Locks:

Pros: Can fold down into a small case that easily mounts to your bicycle frame.

Cons: Some folding designs can be vulnerable to heavy leverage (prying) attacks.



Bicycle Locked with U-Lock

Cable Locks:

Pros: Lightweight, flexible, and easy to carry.

Cons: Easy to cut, making them better as a secondary lock than as your sole lock.

Parking Dos and Don'ts

Do take your bicycle indoors where you can keep an eye on it if possible. Some parking lots and parking garages set aside a special room or guarded area for bicycle parking. Some stores and workplaces permit bicycles to be brought inside. Even indoors, lock your bicycle. Even if it is at your workstation, for example, there will be times when you are not present.

Do use a "case-hardened" cable and chain and padlock or a "U-lock". These are commonly available. Understand that selecting a locking device will involve tradeoffs. The more massive the device, the more security it is likely to provide, however, at some point it becomes too cumbersome to travel with.

Do lock your bicycle to a permanently fixed object, ideally to a secure bicycle rack or in a bicycle locker that has been provided for that purpose. A secure bicycle rack is one that allows you to put your chain, cable or u-lock through both wheels and the frame. Ideally, the rack is located under a protective shelter to protect it from inclement weather. Other options include a metal fence or utility pole.

Do make sure that you lock your bicycle where it can be easily seen, not hidden away in a secluded area. If given enough time, just about any locking device can be defeated. In a well-observed location, a thief is unlikely to take the time to work on the locking device.

Don't just lock the wheel. This leaves the rest of the bicycle vulnerable, especially if your wheels are attached by "quick release" mechanisms. For extra security use two locks. Lock the frame and front wheel with one and the frame and rear wheel with the other.

Don't lock a bicycle to horizontal or diagonal bars on scaffolding; they can be easily unbolted.

Don't lock your bicycle to a parking meter with a cable or chain and padlock. The bicycle and cable or chain may be able to be lifted right over the meter. The same may be true of a signpost if it is a shorter one. In these cases, a "U-lock" may work if it fits tightly enough so that it can't be lifted over the parking meter or sign.

Don't lock your bicycle only to another bicycle, or to an object that is not massive or permanently fixed, to a post that can be pulled out of the ground or to a flimsy object that can be broken.

Don't lock your bicycle to a tree if there are other options. It can damage the tree.

Do make sure that the locking device is snug. That way it is more difficult for a thief to pry open the "U-lock" or place the padlock against a fixed object or the pavement to smash it open.

Do take removable equipment, such as your helmet, tools, a pump, or even your seat if it is attached by a quick release mechanism.

Do keep a record of your bicycle's serial number or other identifying information and a photograph of it. If there is a bicycle registration program in your community, register it. This will help the police identify you as the owner if they recover your bicycle.

Do call the police and report a stolen bicycle and get a copy of the police report to document your loss for insurance purposes. If you locate or believe you have located your bicycle, and have kept proof of its identity, have the police take action to recover it.



APPENDIX: RESOURCES

NEW JERSEY BICYCLING LAWS AND ROADWAY RESTRICTIONS

Required Equipment

39:4-14.5 Definition.

"Bicycle" means any two wheeled vehicle having a rear drive which is solely human powered and having a seat height of 25 inches or greater when the seat is in the lowest adjustable position.

Note - A non-motorized adult tricycle is a human-powered device not defined in New Jersey's Title 39 statute. It is generally treated like other human-powered mobility devices and allowed on roads unless prohibited locally.

39:4-10 Lights on Bicycles.

When in use at nighttime, every bicycle shall be equipped with: 1) A front headlamp emitting a white light visible from a distance of at least 500 feet to the front; 2) A rear lamp emitting a red light visible from a distance of at least 500 feet to the rear; 3) In addition to the red lamp, a red reflector may be mounted on the rear.

39:4-11 Audible Signal.

A bicycle must be equipped with a bell or other audible device that can be heard at least 100 feet away - NOT a siren or whistle.

39:4-11.1 Brakes.

A bicycle must be equipped with a brake that can make wheels skid while stopping on dry, level, clean pavement.

39:4-92.4 Personal Conveyance

Any device used by a person for transportation, including, but not limited to, low-speed electric bicycles (e-bikes), low-speed electric and motorized scooters, manual and motorized wheelchairs, electric assistive mobility devices, skateboards, and roller skates, as defined by applicable laws and regulations.

Rights and Duties

39:4-14.1 Rights and Duties of Persons on Bicycles.

Every person riding a bicycle on a roadway is granted all the rights and subject to all of the duties of the motor vehicle driver.

On August 1, 1998 this law was extended to include roller and inline skates[1] and skateboards.

Operating Requirements

39:4-12 Feet and Hands on Pedals and Handlebars; Carrying Another Person.

Do not drive the bicycle with feet removed from the pedals, or with both hands removed from the handlebars, nor practice any trick or fancy driving[2] on a street. Limit passengers to only the number the bicycle is designed and equipped to carry, and use approved add-on equipment when you need to safely accommodate additional riders.

39:4-14 Hitching on Vehicle Prohibited.

No person riding a bicycle shall attach themselves to any streetcar or vehicle.

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1 Roller skates are defined as a pair of devices worn on the feet with a set of wheels attached, regardless of the number or placement of those wheels that are used to glide or propel the user over the ground.

2 "Fancy driving" is an older statutory term referring to stunt riding, trick riding, or other exhibition maneuvers.

39:4-14.2, 39:4-10.11 Operating Regulations.

Every person riding a bicycle on a roadway shall ride as near to the right roadside as practicable, exercising due care when passing a standing vehicle or one proceeding in the same direction. A bicyclist may move left under any of the following conditions:

1) To make a left turn from a left turn lane or pocket;
2) To avoid debris, drains, or other hazardous conditions on the right;
3) To pass a slower moving vehicle;
4) To occupy any available lane when traveling at the same speed as other traffic;
5) To travel no more than two abreast when traffic is not impeded, but otherwise ride in single file.

Every person riding a bicycle should ride in the same direction as vehicular traffic.

In New Jersey, the law states that a bicyclist must obey all state and local automobile driving laws. A parent may be held responsible for the child's violation of any traffic law.

New Jersey's Mandatory Helmet Law (Title 39:4-10.1)

In New Jersey, anyone under 17 years of age who rides a bicycle or is a passenger on a bicycle, or is towed as a passenger by a bicycle must wear a safety helmet.

On August 1, 1998 this law was extended to include roller and inline skates and skateboards. Roller skates means a pair of devices worn on the feet with a set of wheels attached, regardless of the number or placement of those wheels that are used to glide or propel the user over the ground.

On January 8, 2000 the helmet legislation was extended further to include requirements for operators of an Electric Personal Assistive Mobility Device (EPAMD).

The definition of bicycle with reference to the helmet legislation is a vehicle with two wheels propelled solely by human power and having pedals, handlebars and a saddle-like seat. The term shall include a bicycle for two or more persons having seats and corresponding pedals arranged in tandem.

All helmets must be properly fastened and fitted. Bicycle helmets must meet the federal standards developed by the Consumer Product Safety Commission (CPSC), effective March 10, 1999, which are intended to ensure the best head protection and strong chin straps to keep the helmet in place during a fall or collision.

Exemptions from the helmet requirement are persons who operate or ride a bicycle (as a driver or a passenger) on a roadway closed to motor traffic; on a trail, route, course, boardwalk, path or area set aside only for the use of bicycles. These exemptions do not apply if the areas of operation are adjacent to a roadway and not separated from motor vehicle traffic by a barrier that prevents the bicycle from entering the roadway. Bicyclists or passengers operating without a helmet legally in an area where helmets are not required who need to cross a road or highway should walk with the bicycle.

Initial violators of the helmet law will receive warnings. For minors, the parent or legal guardian may be fined a maximum of $25 for the first offense and a maximum of $100 for subsequent offense(s), if lack of parental supervision contributed to the offense.



CPSC Certification Sticker

Bicycle salespersons and rental agents must display a sign at least 15 inches long and eight (8) inches wide at the point where the transaction is completed when they sell or rent a bicycle. This sign should read: “STATE LAW REQUIRES A BICYCLE RIDER UNDER 17 YEARS OF AGE TO WEAR A HELMET.” In the case of bicycle rentals, the salesperson/rental agent must provide a helmet, if necessary, for a fee.

Highway Restrictions

Bicycle traffic is restricted by regulations on the following roads. These are the only roadways for which access restrictions for bicycle traffic have been officially publicized.

Roadway	Location
Interstates	Various locations
Garden State Parkway	Entire length
New Jersey Turnpike	Entire length
Atlantic City Expressway	Entire length
Route 1 Freeway	Trenton, Mercer County
Route 18 Freeway	Wall, Ocean County; Neptune City, Tinton Falls, Colts Neck, Freehold, and Marlboro, Monmouth County; Old Bridge, Middlesex County
Route 29 Freeway	Trenton, Mercer County
Route 208 Freeway	Fair Lawn, Glen Rock, Franklin Lakes, Wyckoff and Oakland, Bergen County; Hawthorne Borough, Passaic County
Route 42 Freeway	Washington Township and Deptford, Gloucester County; Runnemede, Gloucester Township and Bellmawr, Camden County

Some restrictions apply differently on bridges and tunnels. Some bridges on otherwise bicycle-permitted highways may restrict bicycle crossing, and some bridges which are part of restricted highways may include a bicycle path. Check the *Bridges and Tunnels* webpage of NJDOT's online "Biking in New Jersey" resource for detailed information.

Safe Passing Law (Title 39:4-92.4)

This law legally requires motor vehicle drivers to slow down and change lanes or leave a wide buffer zone when overtaking "vulnerable road users". This category includes bicyclists and e-bike users.

1) The law protects individuals operating outside of a motor vehicle. The protected groups include:

    a) Pedestrians

    b) Bicyclists

    c) Individuals in wheelchairs

2) When a driver approaches any of these users from behind, they must exercise "due caution" and follow these specific options based on the roadway layout:

    a) On multi-lane roads: If traffic and safety conditions permit, the driver must completely change lanes

    b) On single lane roads: If a lane change is impossible, the driver must leave a minimum safety buffer zone of four (4) feet while passing

    c) If four (4) feet is impossible: If the road is too narrow for four (4) feet minimum, the driver must slow down to 25 mph

    d) No-Passing Zone Waiver: The law grants a special exception allowing drivers to safely cross a double-yellow line to pass a bicyclist or pedestrian in a no passing zone

3) Fines and Driver License Points:

    a) Violating the Safe Passing Law carries financial and legal penalties:

        i) Standard Violation: A standard violation for failure to give space results in a $100 fine.

        ii) Bodily Injury violation results in a $500 fine and two (2) motor vehicle points added to their driver's license.

See NJDOT *Safe Passing Law videos* (in English and Spanish) for more relevant information.

2026 E-Bike Law

New Jersey substantially changed its e-bike requirements through P.L.2025, c.285, approved in January 2026. The familiar Class One (1) and Class Two (2) labels are no longer the legal categories used. Riders must understand how their device is powered and how fast the motor can propel or assist it; that determines its legal classification and requirements. The new licensing and registration requirements took effect in July of 2026, and the *NJ MVC E-bike and Moped Manual* was released the same month and provides additional guidance.

Definitions (Updates to Title 39:1-1)

A vehicle's appearance or the seller's use of the term "e-bike" does not necessarily determine how it is classified under New Jersey law.

Low-speed electric bicycle

A two-wheeled bicycle with fully operable pedals and an electric motor that provides assistance only while the rider is pedaling and stops providing assistance at 20 mph. This generally corresponds to what was previously called a Class One (1) e-bike.

Motorized bicycle or moped

A pedal bicycle equipped with a small gasoline engine or certain electric motors. This category includes:

- Electric bicycles that are operated using a throttle
- Pedal-assist bicycles capable of providing assistance above 20 mph, up to 28 mph
- Throttle-capable bicycles with a maximum motor-powered speed of no more than 28 mph.

Throttle-operated electric bicycles, formerly marketed as Class Two (2) in New Jersey, are now generally regulated as a motorized bicycle, even if its maximum speed is only 20 mph.

Electric motorized bicycle (E-Moto)

A two-wheeled vehicle with operable pedals, an electric motor greater than 750 watts, and the capability to exceed 28 mph is instead treated as a motorcycle, making it subject to motorcycle licensing, registration, insurance, and operating requirements.

Changes (Updates to Title 39:4-14.3 to 39:4-14.16)

Minimum Age and License Requirements

- No one younger than 15 may operate a low-speed electric bicycle or motorized bicycle in New Jersey.
- A person who is 15 or 16 years old must have a valid motorized bicycle license or learner's permit.
- A person who is 17 or older must have a valid basic driver's license, motorized bicycle license, or motorized bicycle permit.

Someone who already holds a valid New Jersey driver's license does not need a separate e-bike license.

Rideshare systems which already require users to be 16 or older are exempt, meaning users do not need a license or permit to use vehicles which are part of these systems.

Registration and Identification

Privately owned low-speed electric bicycles, motorized bicycles, and electric motorized bicycles must be registered with the New Jersey Motor Vehicle Commission (MVC); note that electric motorized bicycles must be registered as motorcycles as opposed to the new registration process used for low-speed electric bicycles and motorized bicycles. *Registrations* must be renewed annually.

Insurance

A motorized bicycle and electric motorized bicycle must have liability insurance. A low-speed electric bicycle must be registered but does not require insurance.

Helmets

For low-speed electric bicycles, New Jersey law requires a properly fitted and fastened helmet for operators and passengers under 17 years of age. Children riding in cargo bicycles must also wear helmets.

For all motorized bicycles and electric motorized bicycles, a properly fitted and fastened helmet is required regardless of the operator's age.

Permitted and Restricted Locations

Low-speed electric bicycles may generally be used on streets, roads, highways, and bicycle paths, but local bans exist. Unless specifically permitted by the responsible agency, these e-bikes may not be used on natural-surface trails.

Motorized bicycles may not be operated on:

- Interstate highways
- Public highways divided by a median
- Roads with speed limits above 50 mph
- Active railroad tracks

Path and trail rules should be checked separately. A motorized bicycle should not be assumed to be permitted even if low-speed e-bikes are allowed.

TRAFFIC SIGNALS, SIGNS, AND ROAD MARKINGS

Traffic signals, signs and road markings are set up to control the flow of traffic, making streets and highways safer for motorists, bicyclists and pedestrians. Bicyclists are required to obey all traffic signals, signs and road markings. During heavy traffic or in an emergency, a police officer may direct traffic. A police officer can overrule traffic signals. Law enforcement orders or directions must always be obeyed.

Traffic Signals

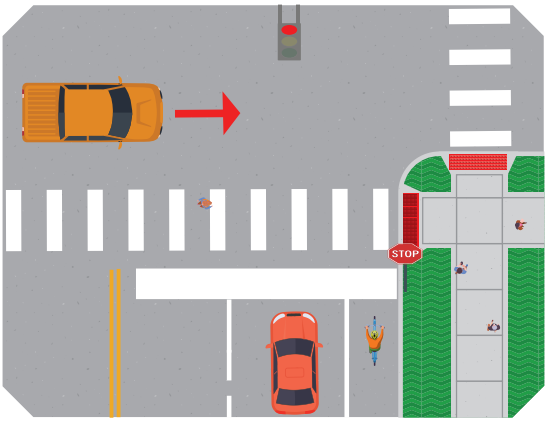
When traffic signals are hung vertically, the red light is always on top. The yellow is in the center. The green light is third in line. If there is a green arrow, it is always on the bottom. When the lights are horizontal, red is always on the left.

Red Light

A bicyclist must stop before the intersection or crosswalk and remain stopped until the light changes to green.

Yellow Light

A bicyclist should stop before entering the intersection or crosswalk, unless their bicycle is so close to the intersection that it cannot be stopped safely. A yellow arrow means the signal is changing from green to red and gives the bicyclist a chance to stop safely.



Always Stop at Red Lights and Stop Signs

Green Light

A bicyclist should proceed through the intersection. Yield to pedestrians and vehicles still in the intersection and when turning left or right. Before making a left turn, yield to approaching vehicles.

Green Arrow

When shown alone or in combination with the red signal, proceed only as shown by the arrow. Be cautious and yield to pedestrians.

Flashing Yellow Light

Slow down and proceed with care.

Flashing Red Light

Functionally the same as a stop sign. Come to a full stop and proceed when it is your turn in the order, while always yielding to pedestrians.

Unlit Signal

Stop if a signal does not have any of its bulbs working and no one is directing traffic. Look left and right. Yield to traffic coming from the right or left. Be careful and go only when safe.

Dedicated Bicycle Signal Lights

Where dedicated bicycle signal lights exist, bicyclists must follow the specific phase (red, yellow, or green) shown on the bicycle signal rather than the general vehicular signals.

Traffic Signs

Signs are divided into three basic categories:

Regulatory

Regulate traffic speed and movement.

Warning

Warn bicyclists of hazards ahead that are difficult to see.

Guidance

Guide bicyclists to a destination by clearly identifying the route.

Regulatory Signs

Regulatory signs are generally rectangular, with the longer vertical dimension, and have black wording and borders on a white background. Some important regulatory signs to know are:

- STOP: Octagonal sign with white wording and border on red background
- YIELD: White inverted triangle with red wording and border with a white border band
- DO NOT ENTER: White square with a red circle that has a white band horizontally across the center of the circle and the words "DO NOT ENTER" in white letters on the upper and lower parts of the circle.

Warning Signs

Warning signs are for road conditions that need caution and for specific hazards that may be encountered during certain road operations. Some of the warning signs alert bicyclists to road conditions, school crossings or curved roadways. The signs are yellow and diamond-shaped with a black symbol or word message.

Road Work Signs

Road work signs on an orange diamond background alert drivers to a variety of temporary roadway conditions. It is important to look for:

- Orange, diamond-shaped signs warning road users of lane closures or shifts, flaggers, uneven pavement, or detours. Road work may close or divert lanes, altering traffic patterns.
- "Reduced speed limit" signs, posted alongside orange work zone signs. In New Jersey, all traffic fines are doubled in work zones.

A bicyclist should react to road work signs by:

- Controlling the distance between their vehicle and the one in front, as well as their reaction time. Always read the signs, follow directions and prepare to slow down or stop.
- Staying alert to the moving construction machinery in the work zone. With patience, a bicyclist will contribute to the overall safety of other road users and workers in the work zone.
- Watching for workers on the road, who risk injury, possibly death. Flaggers may stop and release traffic through the work zone. Note that flaggers have the same authority as a regulatory sign, so a bicyclist may be cited if they disobey their directions.

Guidance Signs

Guidance signs provide information about destinations and routes. These include, for example, U.S., state, county & interstate route markers.

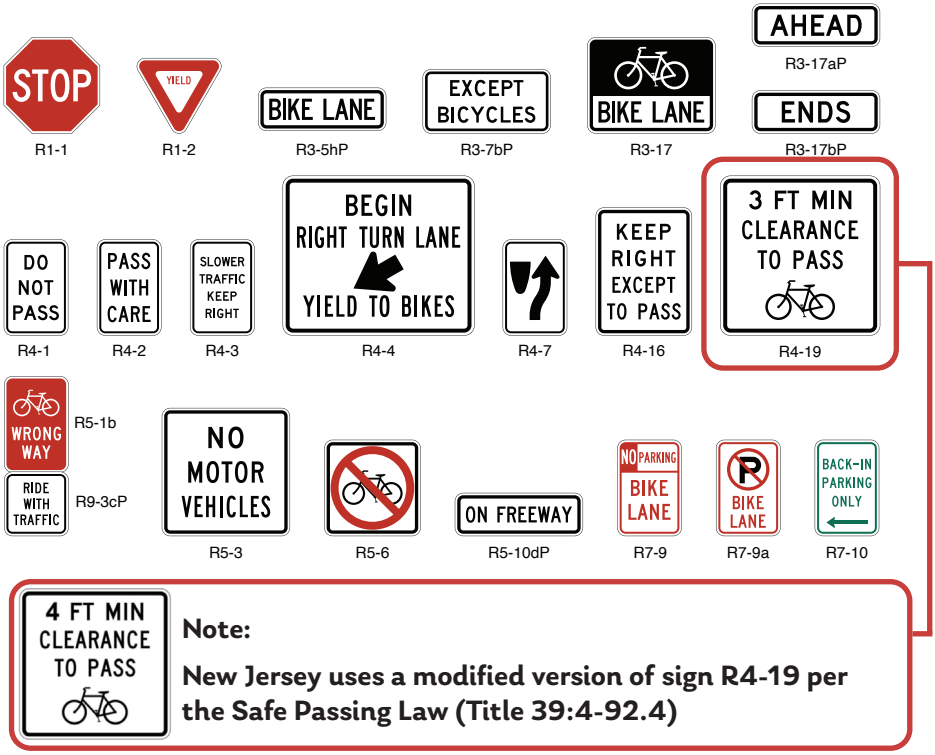
Service Signs

A type of guidance sign, service signs have white letters or symbols on a blue background and provide information about services.

Signage for Bicycle Facilities

The Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD) establishes requirements and guidance for the application of signals, signs, and pavement markings on streets in the public right-of-way, including on bicycle facilities. Under New Jersey law, the MUTCD is incorporated by reference as amended and supplemented, so federal updates to the MUTCD take effect in New Jersey automatically. The 11th Edition, released in 2023 and revised in 2025, added more comprehensive bicycle-related guidance. It includes signs and markings meant to alert motorists and pedestrians to the presence of bicyclists, as well as signs and markings intended to guide bicyclists safely through bicycle facilities. Bicyclists should obey all signs and markings visible from the bicycle facility they are using. Signs intended only for bicyclists and pedestrians often use smaller panels. The following signs and pavement markings are drawn from Part 9 of the MUTCD, which contains additional standards and guidance for their use.

Regulatory Signs for Bicycle Facilities




R9-3



R9-5



R9-6



R9-7


R9-13


R9-14


R9-15


R9-16



R9-20



R9-21



R9-22



R9-23



R9-23a



R9-23b



R9-23c



R9-24



R9-24a



R9-25



R9-25a



R9-25b



R9-26



R9-26a



R9-26b



R9-27



R9-27a



R9-27b



R10-4



R10-12b



R10-22



R10-24



R10-25



R10-26



R10-40



R10-40a



R10-41



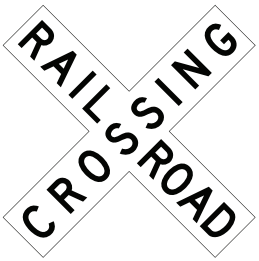
R10-41a



R10-41b



R10-41c



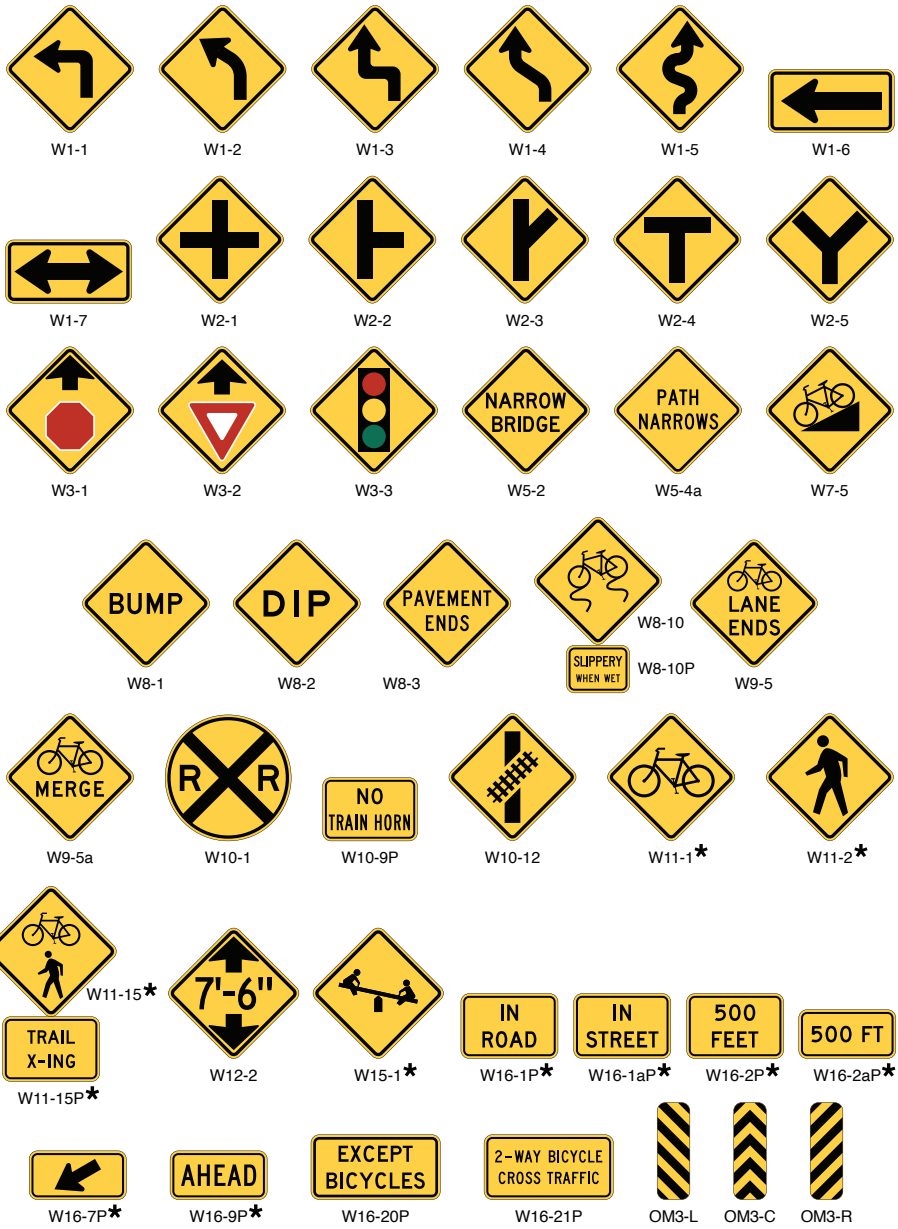
R15-1



R15-2P

R15-8

Warning Signs for Bicycle Facilities



Guide Signs for Bicycle Facilities



D1-1



D1-1a



D1-1b



D1-1c



D1-2



D1-2a



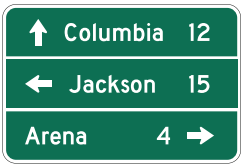
D1-2b



D1-2c



D1-3



D1-3a



D1-3b



D1-3c



D2-1



D2-1a



D2-2



D2-2a



D2-3



D2-3a



D3-1



D4-3



D4-4



D4-4a



D10-1



D10-1a



D10-2



D10-2a



D10-3



D10-3a



D11-1



D11-1bP



D11-1c



D11-10a



D11-10b



D11-10c



D11-10d



D11-10e



D11-10f


D11-11


D11-12


D11-13


D11-14



D11-20



D11-20a



M1-8



M1-8a



M1-8b



M1-8c



M1-9



M2-1P



M3-1P



M3-2P



M3-3P



M3-4P



M4-1P



M4-1aP



M4-2P



M4-3P



M4-5P



M4-6P



M4-7P



M4-7aP



M4-8P



M4-14P


M5-1P


M5-2P


M6-1P


M6-2P


M6-3P


M6-4P


M6-5P


M6-6P


M6-7P

Pavement Markings for Bicycle Facilities

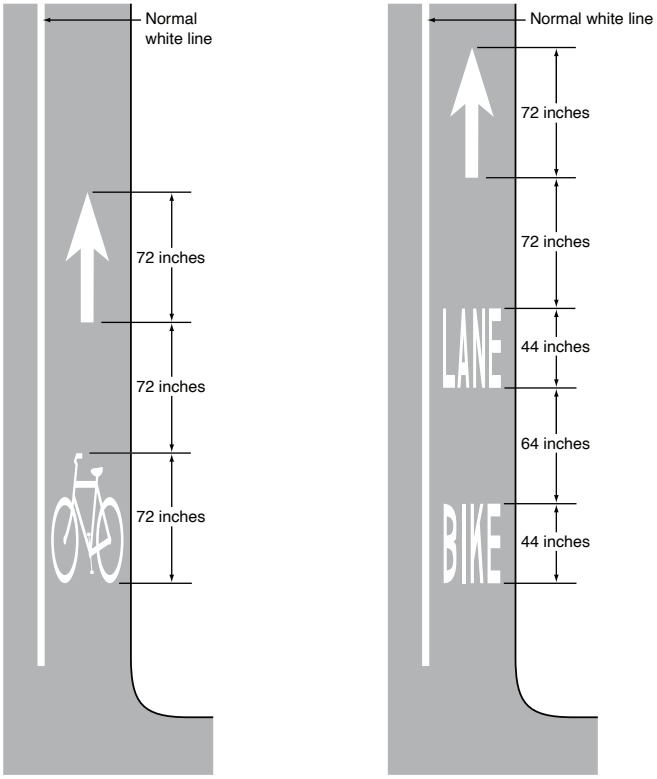
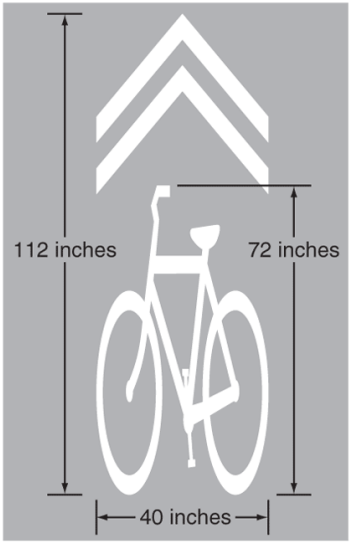


Figure 9C-9. Shared Lane Marking



HOW TO GET INVOLVED

Bicyclists play an important role in shaping safer and more connected bicycle networks. By sharing your experiences, reporting concerns, and participating in local planning efforts, you can help public agencies identify needed improvements and make informed transportation investments. Whether you ride every day or only occasionally, your observations can help create a more bicycle-friendly community.

Participating in the Planning Process

Municipalities, counties, regional planning agencies, and state agencies may invite public input through meetings, surveys, interactive maps, advisory committees, and temporary demonstration projects. Keep an eye out for bicycle/pedestrian, trail, and road safety projects in your community and reach out about participating.

Useful comments are specific. Identify the street, intersection, trail, or route involved; describe the conditions; explain who is affected; and suggest improvements you have in mind. You can also contact local officials, join a bicycle and pedestrian advisory committee, or participate in a community organization.

Reporting Poor Conditions

Report roadway and trail conditions that could endanger bicyclists or make a route difficult to use. Examples include potholes, debris, damaged drainage grates, faded pavement markings, obstructed bicycle facilities, malfunctioning signals, missing signs, overgrown vegetation, flooding, or snow and ice that block a bicycle lane or path.

Send the report to the agency responsible for the location. Municipal streets are generally handled by the municipality, county routes by the county, state highways by NJDOT, and trails by the agency or organization that manages them. NJDOT provides *an online highway-maintenance reporting form* and the ***1-800-POTHOLE*** service for maintenance concerns on state highways.

Provide the exact location and a clear description of the problem. A photograph can help, but take it only after stopping in a safe place. Do not enter traffic or place yourself in danger to document or correct a condition. Call 911 for an immediate emergency, such as a downed electrical line, a major obstruction in active traffic, or another condition presenting an urgent threat.

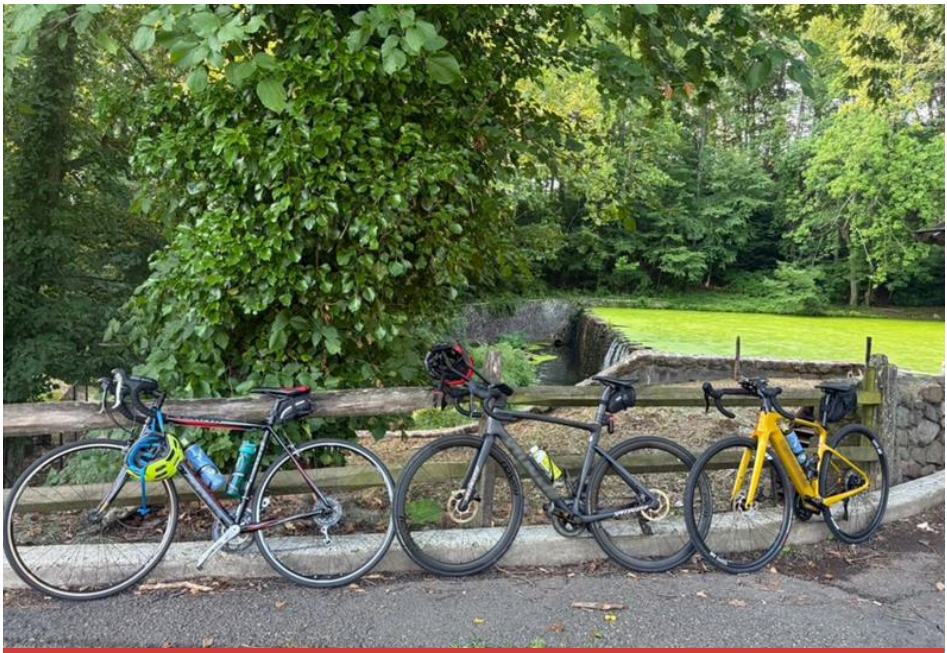
PHOTO CREDITS

Page	Caption	Credit
iii	N/A	NV5
ix	N/A	Avi Steinhardt
x	Recreational Bicycling	NV5
x	Bicycle Commuting	Hannah Younes
1	N/A	Mike Dannemiller
8	N/A	NV5
15	Bicycle Lane	NV5
16	Two-Way Bicycle Lane	NV5
17	Buffered Bicycle lane	NV5
18	Left Side Bicycle Lane	NV5
19	Protected Bicycle Lane	NV5
20	Raised Bicycle Lane	NV5
20	Two-Way Protected Bicycle Lane	NV5
21	Sharrow	NV5
21	Truck Side Guard	NJBPRC
28	Bicycle Box	NV5
29	Protected Intersection	NV5
30	Crossbike	NV5
31	The Start of a Bike Lane	NV5
32	Shared-Use Path Meeting a Bike Lane, with a Change in Grade	NV5
48	Yield to Pedestrians, Even When Riding in Bicycle Facilities	NV5
49	Group Riding	NV5
51	Organized Ride	Mike Dannemiller
54	Mixed Traffic on a Shared Use Path (x2)	(1) goHunterdon (2) Hannah Younes

Page	Caption	Credit
55	Cruiser Bicycle	Mike Dannemiller
55	Road Bicycle	NV5
56	Mountain Bicycle	NV5
56	Tandem Bicycle	NV5
56	Recumbent Bicycle	Avi Steinhardt
56	Tricycle	Mike Dannemiller
58	Bicyclist Sitting Correctly	NV5
59	Correct Helmet Fit (x2)	NJBPRC (x2)
60	Brakes on Drop Handlebar	Mike Dannemiller
60	Brakes on Flat Handlebar	Mike Dannemiller
61	Bell on Handlebar	Mike Dannemiller
61	Front Bicycle Light	NV5
61	Rear Light and Reflector	NV5
62	Derailleur Bicycle Chain Rings	NV5
63	Flat Handlebar	Mike Dannemiller
63	Drop Handlebar	Mike Dannemiller
64	Handlebar-Mounted Rear-View Mirror	NV5
64	Helmet-Mounted Rear-View Mirror	NV5
64	Padded Bicycling Gloves	NV5
64	Clipless Pedal	NV5
64	Toe Clip	NV5
65	Saddle and Small Bike Bag	NV5
65	Bike Bag and Panniers	NV5
66	Water Bottle in Bottle Cage/ Handlebar Bag	NV5
66	Frame-Affixed Pump	NV5
67	How to Wear an Ankle Strap	NV5
72	Inspecting the Inner Tube	NV5

Page	Caption	Credit
75	Dress Comfortably, But Not Impractically	Olivia Dannemiller
79	Wayfinding Signage	NV5
79	Bikeshare	NJBPRC
80	N/A	NV5
82	Debris on the Road	NV5
83	Stream Flow Grate	NV5
84	Do Not Ride Through Active Work Areas Unless Clearly Permitted	NV5
84	Construction Zones are Not Always Open	NV5
85	Blind Corner	NV5
96	Bicyclist Dressed for Rain	NV5
97	Bicyclist Wearing Layers for Cold Weather	NV5
98	Snow Will Stick to Your Bicycle	NV5
99	Reflective Clothing and Gear Works!	Mike Dannemiller
101	Child Trailer	NV5
102	Front and Rear Child Seats (x2)	NV5 (x2)
104	Bike Bag and Panniers	NV5
104	Cargo Bicycle	Mike Dannemiller
106	Tag-Along Attachment	NV5
106	Learning to Ride in a Safe Environment	Mike Dannemiller
108	Bus Stops along Bicycle Lanes	NV5
109	Bus Bicycle Racks	NV5
110	Bringing Your Bicycle on Board	Linda Rapacki
111	Common Bicycle Parking	Hannah Younes
111	Structured Bicycle Parking	Mike Dannemiller

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111	Bicycle Locker	NV5
112	Bicycle Parked to U-Racks with Cable Lock	NJBPRC
112	Bicycle Locked with U-Lock	NJBPRC
114	N/A	NV5
118	CPSC Certification Sticker	NV5
139	N/A	NV5



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