What Every Michigan Bicyclist Must Know A Guide For Bicyclists



Tips for Sharing the Road Legally and Safely



INTRODUCTION

What Every Michigan Bicyclist Must Know is meant to help bicyclists use Michigan's public roads and trails safely and enjoyably. Although it includes information about many Michigan traffic laws, it is not a legal document or a substitute for the Michigan Vehicle Code (MVC), the Michigan Uniform Traffic Code (UTC) or local ordinances. (For the current MVC and UTC, see www.lmb.org/bikelaws.html.)

What Every Michigan Bicyclist Must Know is brought to you by the League of Michigan Bicyclists, which has been promoting bicycling and the safety of bicyclists on the roadways in Michigan since 1981. For more information call 888-642-4537 or visit www.LMB.org.



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WHY RIDE A BICYCLE?

Bicycling Improves Michigan's Public Health



- Bicycling keeps people healthy good news given Michigan's increasing costs of health-care and illness. Sedentary lifestyles drive Michigan's obesity epidemic and record premature-death levels from heart disease, stroke, diabetes, and other weightrelated problems. Cycling three hours a week can cut our risk of heart disease and stroke by 50%.
- Bicycling makes people fit enjoyably and easily without setting aside time specifically for exercise. Just bicycling for routine trips such as to school, work, and shopping can be enough to improve fitness.
- With health care costs rising, regular exercise like bicycling is increasingly important.

Bicycling Improves Michigan's Economy



- In 2007, U.S. consumers bought 18.2 million bikes — 2.6 million more than bought cars and trucks.
- Bicycling is good for Michigan's economy. LMB estimates that people spend over \$200 million in Michigan each year on bicycle-industry purchases, and another substantial amount on cycling-related goods.

- Bicycling saves employers lost productivity from employees' poor health and time stuck in traffic, and can save them costs for subsidized parking.
- Bicycle facilities increase real-estate values (and property-tax revenues), and support nearby businesses. A non-motorized transportation system contributes to communities' economic vitality, bringing residents and visitors to neighborhoods, shops, restaurants, and other businesses, and increasing employment opportunities.

Bicycling Improves Michigan Communities



- Bicycling enhances recreational and social opportunities, especially for children. In just one generation, the number of children who walk or bike to school has dropped 75% and the number of overweight children has tripled startling for a culture that prides itself on investing in today's youth. However, exciting projects such as Michigan Safe Routes to School are providing Michigan children with safe and convenient opportunities to become healthy and active by walking and biking.
- Bicycling builds healthy communities. Bicyclefriendly communities are attractive destinations for new residents, tourists and businesses.

- Cyclists tend to participate socially and economically in their local communities, interacting with neighbors and experiencing their neighborhoods firsthand, increasing "eyes on the street" and enhancing public safety and security.
- Bicycle-friendly communities also enhance public safety by providing more freedom of movement during major public events, emergencies and natural disasters.

Bicycling Improves Michigan's Environment



- Bicycling lowers energy costs making Michigan less vulnerable to energy interruptions and rising oil prices.
- Bike commuting, unlike garage-highway-garage trips that isolate commuters and clog roads, decreases traffic and accidents and cleans the air.
- Bicyclists' most frequent trips under five miles help the environment most. Car trips this short are the least fuel-efficient and produce the most emissions. (Bike commuters note these trips can actually be faster than driving.)

SAFETY EQUIPMENT Essential:

 Wear a properly fitted helmet every time you ride; wearing a helmet can prevent 85% of brain injuries. See Appendix B: "Tips For Fitting a Bike Helmet." (p. 29)



- Wear light-colored and/or reflective clothing to be as visible as possible.
- Carry a tire pump, tire levers, patch kit and spare tube.
- Equip your bike with a white front headlight and red rear reflector and light for riding in twilight and darkness and a bell or horn to warn pedestrians and other cyclists.
- Carry a cell phone in case of a emergency.
- Carry identification and medical information.

Useful:

- Mirror for your handlebar, helmet or glasses (to improve your overall awareness and allow you to see following vehicles and riding companions more easily).
- Water bottle and cage.
- Rack and saddlebags to carry things.

BEFORE YOU RIDE — ABC Quick Check



- Inflate tires to rated pressure listed on sidewall of tire.
- Use a tire gauge to insure proper tire pressure.
- Check for damage to tread and sidewall; replace damaged tire.

Bis for Brakes

- Inspect brake pads for wear; replace if less than 1/4" remains.
- Check pad adjustment; make sure they do not rub tire or "dive" into spokes.
- Check brake-lever "travel"; with brakes applied, you need at least 1" between the lever and handlebar.

Cis for Cranks, Chain and Cassette

- Make sure crank bolts are tight; lube only the threads, nothing else.
- Check chain for wear; 12 links should measure no more than 121/8" long.
- If chain skips on freewheel or cassette, you may need an adjustment or new chain and freewheel/cassette.

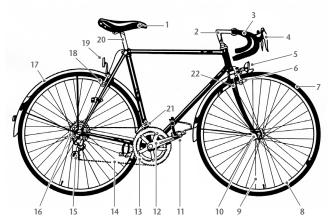
Quick is for Quick Releases

- Wheel hubs need to be tight in the bike frame; your hub quick release should engage at 90°.
- Hub quick releases should point to the back of the bike to ensure they don't catch on anything (releasing the wheel).
- Inspect brake quick releases to ensure that brake cables
 have been re-engaged.

is for "Check it over"

- Take a quick ride to ensure derailleurs and brakes are working properly.
- Inspect the bike for loose or broken parts; tighten, fix, or replace them before you ride.
- Pay extra attention to your bike during the first few miles.

ANATOMY OF A BIKE



1	Saddle	12	Crank Arm
2	Stem	13	Chain Ring
3	Handlebars	14	Chain
4	Brake/Shift Levers	15	Rear Derailleur
5	Headlight	16	Cassette/Freewheel & Rear Hub
6	Front Brake	17	Fender
7	Tire	18	Rear Brake
8	Rim	19	Reflector
9	Spokes	20	Seat Post
10	Front Hub	21	Front Derailleur
11	Pedals	22	Fork

RULES OF THE ROAD Bicyclists' Rights and Responsibilities



THE

ROAD

Bicyclists have all the same rights and responsibilities as the driver of any other vehicle and can be ticketed for violating Michigan traffic laws. We'll all be safer and happier if we show respect and consideration for one another when driving or biking on Michigan's roads or trails. More than half of all urban car-bike crashes are caused by one or more of the following behaviors:

Cyclists:

- Cycling against the direction of traffic
- Failure to yield when required
- Running a stop sign or red light
- Cycling at night without required lighting
- Riding into a street at mid-block

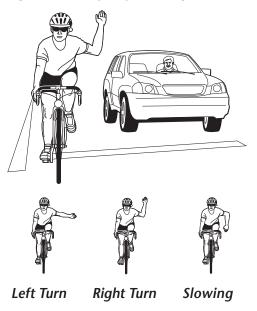
Motorists:

- · Failure to yield to a cyclist when required
- Unsafely passing a cyclist
- Right or left turn immediately in front of a cyclist
- Driving too fast for conditions
- · Opening driver-side door into a cyclist's path

Signs and Signals

Obey all stop signs and signals; cyclists are not exempt from traffic laws. Signal your intentions clearly and in plenty of time.

- Signal left turns by extending your left arm straight out to the left.
- Signal right turns with an upturned left arm.
- Signal stopping or slowing by extending your left arm straight down with your palm facing rearward.

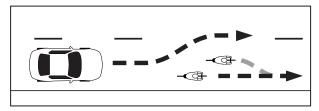


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Road and Lane Placement

Motorists can endanger cyclists. They often don't "see" cyclists, or understand the traffic problems, road conditions and hazards cyclists face. They also misjudge the speed of a bicyclist. Help them learn to share the road with bikes:

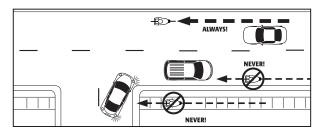
- Ride predictably, consistently and attentively.
- Stay to the right, but don't hug the curb. Ride in the right wheel track of motor vehicles. This not only places you within the motorists' field of vision but also allows you to move away from traffic to avoid obstacles, open car doors, or crowding by another vehicle.



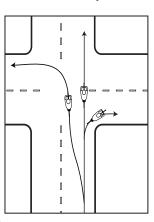
- When riding two abreast, you may not impede normal and reasonable movement by other roadway users. You may never ride more than two abreast.
- When stopping your bike for a rest or emergency, move completely off the road.
- · At intersections make eye contact with drivers.

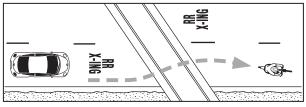
Ride to the right and NEVER against traffic

 Never ride against the direction of traffic (on the left side of the road). Ride in the right lane except when avoiding road hazards, passing another vehicle, or preparing to make a left turn.



- Look behind you first and signal your move to the left.
- Bicyclists may ride in the far left lane on one-way streets.
- Where motor-vehicle speeds exceed 45 MPH, ride in bike lanes or on paved shoulders, except when avoiding road hazards, passing another vehicle or making a left turn.
- Be careful riding over utility covers and other metal in the roadway; they may be slippery, especially when wet.





 Many railroad tracks in Michigan cross roads diagonally. To prevent your bike tire from catching in the track, especially under wet or misty conditions, cross the railroad tracks at a right angle.

Dangers of Sidewalk Riding — Remember that you are "invisible" on sidewalks!

Cycling on sidewalks is VERY dangerous. Motorists are looking in the road; they are not looking for vehicles — like bikes, which may be moving at nearly traffic speed — on the sidewalk. They commonly don't "see" you there, especially at driveways and intersections.

Cyclists are not required to use bike paths or sidewalks. However, If you must ride on a sidewalk (and local ordinance permits):

- Yield to pedestrians and walk bikes in crowded areas.
- Provide an audible approach warning by calling out "Passing on your left," or by ringing your bell.
- Watch for inattentive motorists; don't assume they see you.
- Whenever possible, ride with the direction of traffic (on the right side of the road).

(Children under 10 **should** ride on sidewalks, as if they were on-road. Driveways and intersections are especially hazardous to them.)

Night Riding

You can never be too visible on a bike. In addition to bright lights, bright and reflective clothing make you more visible — and more safe.



- Always wear proper safety gear.
- The law requires you to have a white front light, red rear reflector, and pedal reflectors.
- Add a red rear light and extra lights and wear lightcolored, high-visibility clothing.
- Be extra cautious when riding in the rain (or snow) or up or down steep hills.

Bad-Weather Riding

We all get caught in bad weather at some point. Aside from having the proper clothing, there are some bad weather characteristics that you should be aware of:

- Always wear proper safety gear.
- Bad weather makes your "contact patch" with the road less stable. Be extra careful in making turns.
- Wet weather affects your stopping distance. Lightly apply your brakes to wipe moisture off your rim before applying them fully to stop; this will help.
- Roadways are slickest when it first starts to rain because of the oil dropped from cars mixing with the rain. Be extra cautious.
- Snow and ice create traction problems. Underinflated knobby or studded tires are best for these conditions.
- Be extra cautious when riding in the rain (or snow) or up or down steep hills.

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RULES OF THE PATH — Guidelines for Multi-Use Trails and Paths:

Don't assume you are safe just because you are on a path or trail. Paths are often shared by walkers, joggers, the elderly, children and babies, roller-bladers and pets. The greater variety of types of users and their dif-

fering speeds can make path riding more unpredictable than riding on-road. Be alert for faster path users.

Like Road Cycling:

- Always wear an approved helmet and use safety gear.
- Ride to the right.
- Ride single-file.
- When stopping for a rest or emergency, move completely off the trail.

Like Sidewalk or Trail Cycling:

- Always yield to other, slower path users.
- Control your speed, slow down, and use caution approaching or overtaking other path users.
- Before passing another path user, courteously announce your intentions by saying "Passing on your left" or ringing your bike bell.
- Don't "spook" children or animals; always yield to them.

For more information on cycling on Michigan's paths, see the Michigan Trails & Greenways Alliance web site at: www.michigantrails.org

RULES OF THE TRAIL — Guidelines For Back-Country Trails:

Plan Ahead

Always wear a properly fitted and adjusted helmet and other appropriate safety gear. Know your equipment and abilities. Carry food, water and gear for changing weather conditions.

Ride on Open Trails Only

Respect closures, don't trespass, and obtain authorization if required.

Leave No Trace

Be sensitive to the environment; stay on existing trails and pack out what you take in.

Control Your Bicycle

Pay attention! Anticipate problems and keep your speed under control

Bicyclists Always Yield

Make your approach known; be courteous. Always yield to uphill users. When stopping for a rest or emergency, move completely off the trail.

Never Spook Animals

Animals startle easily and can create danger for you and others. Always yield when approaching a horse and ask the rider how to proceed.

For more information on cycling on Michigan's back-country trails, see the Michigan Mountain Biking Association web site at: www.mmba.org

WHAT IF THERE'S AN ACCIDENT?

Bicycle crashes do happen, but most bicycle crashes don't involve vehicles or other people; typically bicyclists lose control on a bad surface or hit a fixed object. If you are involved in a crash make sure



you don't ignore even a minor injury. Some injuries may be masked until later on because of the adrenalin rush from an accident.

If you are in a crash involving another vehicle or person:

At the Scene:

- If you're not hurt, call 911 for medical help for all parties.
- Apply immediate first aid.
- If you're hurt, don't move unless you're sure you won't hurt yourself more. Don't get mad. Keep a level head so you can ask questions and take notes.
- Get the following information:

Drivers: Name, address, phone, license number, plate number, vehicle make, model and year,

- o insurance company and policy number.
- Witnesses: Names and phone numbers.
- Officers: Names and badge numbers.
 Police report: Number.
- If you have a cell phone with a camera, photograph the scene.

Protecting Your Rights:

- Do not admit anything. Simply state the facts.
- Do not say you're "OK." You may not know until later.
 If asked, simply say something like, "I will know more
 after I visit my doctor."
- If asked about your bicycle, say, "I will have to have a professional check it for damage."
- Insist that the investigating officer records your account of the crash for his/her accident report.

Afterward:

- While it is fresh in your memory, write down exactly what happened.
- Call your own insurance agent. (Michigan is a "no-fault" state.)
- Keep a copy of all medical bills and papers regarding the crash.
- Keep and/or photograph any damaged clothes or equipment. Also keep receipts for replacement and repair costs.
- Have a mechanic make sure your bicycle is in safe working order before you ride it again.
- Contact your attorney, especially if there is any dispute as to who was at fault.

Call LMB at (888) 642-4537 if you need further assistance.

BAD DRIVERS

If a motorist makes you feel threatened or attempts to harm you (including throwing something at you or "buzzing" you):

At the Scene:

- Never assault your assailant, either physically, verbally or with hand gestures. Usually this escalates the situation.
- Note the plate number and, if possible, a description of the driver.
- If you have a camera phone, try to take a picture of the license plate, car and/or driver.
- If the motorist stops and attempts to prolong the "situation," call 911 immediately.

Afterward:

- Report the incident to your local police department.
 If you were not actually injured, police may not be willing or able to file a criminal complaint, but they should file a report and follow up by warning the offending driver.
- If the offender is a commercial driver, inform his or her employer.
- Contact your attorney. Depending on what happened, you may be able to press criminal assault charges or file assault and battery charges.

If you need further assistance, call LMB at (888) 642-4537.

THEFT PREVENTION

Any lock can be broken, given enough time and the right tools, but there are ways to reduce the theft risk.

Precautions:

- If at all possible, take your bike indoors with you; next best is locking it where you can still see it. Otherwise, lock your bike in a highly visible area as close to your destination as possible.
- Always lock your bike, even if you're just going to be gone for a minute or two; stealing an unlocked or improperly locked bike only takes a few seconds.
- Never lock just your bike's front wheel; you'll come back to find just the front wheel.
- Lock your frame and wheels to something solid and permanent; a thief can lift a bike over and off a sign post.
- Take anything removable unlocked wheels, seats, computers, lights, bike bags, etc. — with you; if you can remove it, anyone can.

Locks & Cables:

 "U" locks are the strongest; cable locks are only a minor deterrent to a bike thief. If you can, remove your front wheel and U-lock it to the rear wheel and the frame so that you fill the "U" of your U-lock.



 You can add cables, locking quick-releases, and/or seatpost bolts to secure your wheels and seat.

• Try to lock your bike to:

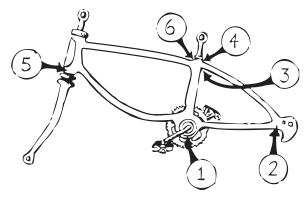
A bike rack, when available. (Inverted-"U" bike racks have two points of contact, making it less likely your bike will fall over.)

Don't lock or cable your bike to:

Fire hydrants or police and fire call boxes, electric traffic-signal poles, poles in bus or loading zones, or "crowding" an intersection, trees, or handicap ramps.

Serial Numbers & Registration:

Even if the police recover your stolen bike, you won't get it back without the serial number; they need proof of ownership. If your bike-shop salesperson doesn't show you your new bike's serial number on the frame and on the sales paperwork, ask for it. Some communities will register the serial number to help you recover your stolen bike.



Look for your bicycle's serial number in these locations.

In Case of Theft:

- File a police report at the local police station, with details of the theft, including your bike's serial number, and request a case number.
- Cite the case and serial numbers whenever you communicate with the police.
- Follow up by phone periodically to see if your bike has been recovered.
- If you have purchased "scheduled item" insurance on your bike, contact your insurance agent. Otherwise, you must weigh the cost versus benefits of filing a homeowners-insurance claim.

DEALING WITH DOGS

Dogs sense fear, so try to remain calm; you'll feel more confident, and the dog will sense this. Dogs are territo-

rial. Once you have left "their" territory, they will usually lose interest. However, if a dog *does* chase you, here are some options; think ahead of time about which are right for you.

 Don't try to outrun the dog unless you are a very strong rider. If you can't completely outrun it, the dog may catch your wheel and knock you down.



- While on the bike, don't try anything beyond your bike-handling skills.
- In a loud, firm voice say, "No!" "Bad dog!" "Go Home!" or other common commands.
- Don't carry or use anything illegal in Michigan.
- Carry an "English Bobby"-style or dog-training whistle; they can often stop charging dogs in their tracks and send them home.
- Carry pepper spray. Practice reaching and using it while riding. Protect your eyes from "blowback" by not aiming it into the wind.
- Just stop. If you do, the dog may also stop, allowing you to walk or ride slowly away.
- Get off your bike quickly; if the dog attacks, use your bike as a barrier.

If a dog is a repeated problem, try to photograph it. Send a polite complaint letter with the photo to the owners, with copies to the police and local animal authority. In the letter say that, if the dog hurts someone, the letter constitutes notice to the homeowners, which may be used in a lawsuit against them.

APPENDIX A — Bikes and the Law

Where do Michigan laws apply to cyclists?

Section 257.656(3) of the Michigan Vehicle Code ("MVC" — Public Act 300 of 1949) states:

"The regulations applicable to bicycles under sections 656 to 662 shall apply when a bicycle is operated upon a highway or upon a path set aside for the exclusive use of bicycles, subject to those exceptions stated in sections 656 to 662."

Does a cyclist have to obey the same traffic laws as a motorist?

Yes. Section 257.657 of the MVC states:

"Each person riding a bicycle... upon a roadway has all of the rights and is subject to all of the duties applicable to the driver of a vehicle by this chapter, except as to special regulations in this article and except as to the provisions of this chapter which by their nature do not have application."

Does that include signaling?

Yes. Section 257.648 of the MVC states:

- (1) "The driver of a...or bicycle upon a highway, before stopping or turning from a direct line, shall first see that the stopping or turning can be made in safety and shall give a signal as required in this section.
- (3) "When a signal is given by means of the hand and arm, the driver shall indicate his or her intention to stop or turn by extending his hand and arm from and beyond the left side of the vehicle and signal as follows:
 - (a) "Left turn hand and arm extended horizontally.
 - (b) "Right turn hand and arm extended upward.
 - (c) "Stop or decrease speed hand and arm extended downward."

Does a cyclist have to ride with the direction of traffic?

Yes! Section 257.660a of the MVC states:

"A person operating a bicycle upon a highway or street at less than the existing speed of traffic shall ride as close as practicable to the right-hand curb or edge of the roadway..."

Does a cyclist always have to ride to the right?

Generally yes, but Section 257.660a of the MVC permits these important exceptions:

- (a) "When **overtaking and passing** another bicycle or any other vehicle proceeding in the same direction.
- (b) "When preparing to turn left.
- (c) "When conditions make the right-hand edge of the roadway unsafe or reasonably unusable by bicycles, including, but not limited to, surface hazards, an uneven roadway surface, drain openings, debris, parked or moving vehicles or bicycles, pedestrians, animals, or other obstacles, or if the lane is too narrow to permit a vehicle to safely overtake and pass a bicycle.
- (d) "When operating a bicycle in a lane in which the traffic is turning right but the individual intends to go straight through the intersection.
- (e) "When operating a bicycle upon a 1-way highway or street that has 2 or more marked traffic lanes, in which case the individual may ride as near the left-hand curb or edge of that roadway as practicable."

Is it legal to ride between lanes?

No. The MVC no longer prohibits "passing between lanes of traffic," but it also does not provide for cyclists passing on the right of other vehicles.

Must a cyclist ride on the sidewalk? Is it legal? What about crosswalks?

The MVC does **not** require bicyclists to ride on the sidewalk and we do **not** recommend it because of safety hazards to the bicyclist and other sidewalk users.

However, Section 257.660c of the MVC says:

- (1) "An individual operating a bicycle upon a sidewalk or a pedestrian crosswalk shall yield the right-of-way to pedestrians and shall give an audible signal before overtaking and passing a pedestrian.
- (2) "An individual shall not operate a bicycle upon a sidewalk or a pedestrian crosswalk if that operation is prohibited by an official traffic control device.
- (3) "An individual lawfully operating a bicycle upon a sidewalk or a pedestrian crosswalk has all of the rights and responsibilities applicable to a pedestrian using that sidewalk or crosswalk."

Must a cyclist ride in a bike lane?

The MVC does not require bicyclists to use bike lanes.

May cyclists ever ride two abreast?

Although riding single-file is safest, cyclists are allowed to ride two-abreast on roads; MVC Section 257.660b states:

"Two or more individuals operating bicycles upon a highway or street shall not ride more than 2 abreast except upon a path or portion of the highway or street set aside for the use of bicycles."

Is it legal to ride on a limited-access highway?

No. Section 257.679a(1) of the MVC says:

"...nor shall a...bicycle, except as provided in this section...be permitted on a limited access highway in this state. Bicycles shall be permitted on paths constructed separately from the roadway and designated for the exclusive use of bicycles."

Does a cyclist have to wear a helmet?

Although the MVC does **not require** a cyclist to wear a helmet, we strongly recommend wearing one, because it can prevent 85% of brain injuries.

Does a cyclist have to use lights?

Yes. MVC Section 257.662 states:

(1) "A bicycle...being operated on a roadway between ½ hour after sunset and ½ hour before sunrise shall be equipped with a lamp on the front which shall emit a white light visible from a distance of at least 500 feet to the front and with a red reflector on the rear which shall be visible from all distances from 100 feet to 600 feet to the rear when directly in front of lawful lower beams of head lamps on a motor vehicle. A lamp emitting a red light visible from a distance of 500 feet to the rear may be used in addition to the red reflector."

The more visible a cyclist is, the safer. Don't just meet the bare minimum required by law.

MVC Section 257.662, sub-sections (4) and (5) also make it illegal to **sell** a bicycle or bike pedal without pedal reflectors, or a bike without "either tires which have reflective sidewalls or with wide-angle prismatic spoke reflectors." The code describes these requirements in detail.

Does the law require brakes on bicycles?

Yes. MVC Section 257.662(2) states:

"A bicycle shall be equipped with a brake which will enable the operator to make the braked wheels skid on dry, level, clean pavement."

Is it legal to park on the street? Where can cyclists park on a sidewalk?

MVC Section 257.660d says:

- (1) "An individual may park a bicycle on a sidewalk except as prohibited by an official traffic control device.
- (2) "An individual shall **not** park a bicycle on a sidewalk in such a manner that the bicycle **impedes the lawful movement of pedestrians or other traffic**.
- (3) "An individual may park a bicycle on a highway or street at any location where parking is allowed for motor vehicles, may park at any angle to the curb or the edge of the highway, and may park abreast of another bicycle.
- (4) "An individual shall **not** park a bicycle on a highway or street in such a manner as to **obstruct the movement of a legally parked motor vehicle**.
- (5) "Except as otherwise provided in this section, an individual parking a bicycle on a highway or street shall do so in compliance with this act and any local ordinance."

Is it legal to use a cell phone while riding a bike?

Although it is **not** safe, it is not illegal in Michigan to talk on a cell phone while cycling. Local ordinances banning or restricting cell phones may or may not cover bicyclists. Check with your local government.

Are there any other restrictions or requirements in Michigan law cyclists need to know about?

Yes. MVC 257.4 defines "bicycle" as:

"...a device propelled by human power upon which a person may ride, having either 2 or 3 wheels in a tandem or tricycle arrangement, all of which are over 14 inches in diameter."

MVC Section 257.656 states:

- (1) "A person who violates any of sections 656 to 661a is responsible for a civil infraction.
- (2) "The parent of a child or the guardian of a ward shall not authorize or knowingly permit the child or ward to violate this chapter."

MVC Section 257.658 says:

- (1) "A person propelling a bicycle or operating a motorcycle or moped shall not ride other than upon and astride a permanent and regular seat attached to that vehicle.
- (2) "A bicycle...shall not be used to carry more persons at 1 time than the number for which it is designed and equipped."

MVC Section 257.659 states:

"A person riding upon a bicycle...shall not attach the same or himself to a streetcar or vehicle upon a roadway."

And, MVC Section 257.661 says:

"A person operating a bicycle...shall not carry any package, bundle, or article that prevents the driver from keeping both hands upon the handlebars of the vehicle."

APPENDIX B — TIPS FOR FITTING A BIKE HELMET



Step 1 - Position:

The helmet should sit level on the person's head and low on his/her forehead—one or two fingerwidths above eyebrow.



Step 2 - Side Straps:

Adjust the slider on both straps to form a "V" shape under, and slightly in front of, the ears. Lock the slider if possible.



Step 3 - Chin Strap:

Buckle the chin strap. Tighten the strap until it is snug, so that no more than one or two fingers fit under the strap.

All helmets sold in the US today must have been tested and meet the uniform safety standard issued by the U.S. Consumer Product Safety Commission (CPSC). There is no difference in safety performance between a \$10 helmet and a \$200 helmet. The difference is in the weight of the helmet and the number of air vents. Replace any helmet that has been involved in a crash, is damaged or outgrown.

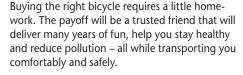


APPENDIX C — GUIDE TO BUYING A BICYCLE

Road



Hybrid



Answer these questions and you'll be ready to



City

Question #1:What type of riding will you do?

start shopping!



Mountain

The major categories of bicycles are mountain bikes, hybrids (subcategories: comfort and city bikes), road bikes, touring bikes, BMX and recumbents. Focus your search for the right bicycle by answering three questions: what types of surfaces do you expect to ride on, what distances do you want to ride and at what speed do you want to travel?



Tricycle



вмх



Recumbent

What surfaces will you ride on?

- Paved roads and bike paths road, touring, hybrids and recumbent bikes work well on hard, smooth surfaces.
- Gravel roads, dirt trails and wilderness terrain –
 The straight handlebars and wide, knobby tires
 of a mountain bike make it easy to navigate
 almost any surface.



Tandem

What distances will you ride?

- Short rides of 2-3 miles City cruisers, comfort bikes, any flathandlebar bike, mountain bikes with knobby tires.
- Moderate distances up to 10 miles Comfort bikes, road and touring bikes, recumbents.
- Longer distances, perhaps 30 or more miles a day

 Road bikes, touring bikes, recumbents.

What speed will you ride?

- Relaxed cruising Cruisers, comfort bikes, hybrids.
- Moving quickly, but not racing Road bikes, touring bikes, mountain bikes with smoother tires, recumbents.
- High speed or racing Road bikes, recumbents.

Question #2:New or Used?

Buying a used bike is a like buying a used car – you can get a good deal or a lemon.

Whether you buy the bike from a store or from a private seller, think about how the bike handles when you ride it. Note how the bike responds when you go around corners, go over obstacles, brake hard, go down or up hill while both in and out of the saddle. Are you too stretched out or too cramped? Is the bike responsive, sluggish or twitchy? Is it heavy? Are the brakes and shifters easy to use?

Everything on the bike should work perfectly. Shifting should not skip, the brakes shouldn't screech and should stop when you want without flinging you over the bars. The wheels should turn evenly and be balanced. All the quick-release levers should be firmly hand-tightened and everything should be clean and well-lubed.

Question #3:

What size bike will you need?

Do you have at least one inch of clearance (for a road bike; twothree inches for a mountain bike or hybrid) when you straddle your bike with both feet flat on the floor? Do you feel cramped or stretched out when you're riding?

Bikes are not T-shirts. If you're buying for a child, don't buy a bike that's too big and expect him or her to be safe while "growing into it." It should fit the rider now, not later. If it is too small or too big, he or she will have trouble controlling it and be much less safe. Quality children's bikes have both great re-sale value and "handme-down" potential. Cheap bikes don't.

Question #4:

Where do you plan to buy your bike?

You can buy bicycles on the internet, via mail-order catalogs, at department stores and in bicycle shops. Your best bet is a bike shop where you feel welcome and comfortable. Bike shops are the best source of ongoing advice, proper equipment, and analysis of **your** particular needs. They are also knowledgeable about local conditions and know the best places to ride in your area.

You may have to visit several shops to find the right shop and the right bike. Ask yourself:

- · Do they answer questions and explain things well?
- Do they ask what kind of riding you want to do?
- Do they spend time with you choosing the right bike "fit"?
- Do they explain the warranties and check-ups you can expect?
- Do they clearly show you how to operate new technology?

Try to find a shop you like within reasonable riding distance, so that it's easy to get there without a car and so you can easily reap the benefits of patronizing that particular shop.

When bike shopping, wear the kind of clothes you're likely to wear when riding. Bring your driver's license and a credit card so you can take various bikes out for test rides.

Plan to include a properly fitted helmet, gloves, a lock, and a water bottle and cage in the cost of the bike. Most bike shops have a wide variety of such equipment and their staffs can help you find the right ones for you.

Bike Fit:

Correct bike fit can be a highly technical process. However, the suggestions listed below are "rules of thumb" that will give the rider a very good fit.

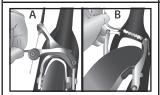
- Frame Size: Stand over the top tube. There should be 1-3" of clearance between the frame and your crotch while standing over the bike.
- Saddle Position: Generally the nose is slightly up for males and slightly down for females.
- Saddle Height: Generally the optimum seat height is when your legs are completely extended at the bottoms of the pedal stroke with your heels on the pedals. Then, when you're actually pedaling, you'll have a slight bend in your knees.
- Saddle Fore/Aft Position: Slide saddle forward or back so that with the crank arms parallel to ground, a plumb line hanging from the bony protrusion just below your forward kneecaps, bisects the axle of the pedal.
- Handlebar Height: Comfort (and perceived comfort) is critical and height should be adjusted for comfort first. Keep in mind that bars too high will result in pain from too much weight on saddle.
- **Handlebar Reach:** Place your elbow on your saddle nose and extend your arm and fingers towards the handlebars. The tips of your fingers should touch your handlebars.
- Handlebar Width: Handlebars should be about the same width as your shoulders.

APPENDIX D — FIXING A FLAT



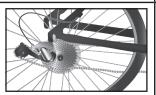
BASIC TOOLS:

- Spare tube
- Tire lever
- Pump or inflator
- 6" crescent wrench (if wheels bolted on)
- Patch kit



RELEASE BRAKES:

- A) On side-pull brakes there is usually a tensionrelease lever on side.
- B) On cantilever brakes remove cable from arm.



REMOVE WHEEL:

Unlock quick-release lever or loosen wheel nuts and remove wheel from frame.



UNSEAT TIRE:

Use tire irons to unseat tire from rim on one side only.



REMOVE TUBE:

Reach in to tire and pull tube out. Generally first pull opposite the valve stem.



CHECK TIRE/TUBE:

Check the tire and tube for embedded objects such as glass, nails, etc.



INSTALL NEW TUBE:

Slightly inflate tube to give it shape. Put valve stem in first.



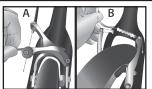
PUT TIRE BACK ON RIM:

Carefully work tire back on rim, making sure not to pinch tube between rim and tire. Start with section by valve stem. Push valve stem upwards to make sure it is not caught between tire and rim.



PUMP TIRE:

Use your pump or inflator to re-inflate the tire.



REPLACE WHEEL:

Put the wheel back into the frame. Remember to close the quick release mechanism or tighten wheel nuts for the wheel. Also remember to reattach your brakes.

ABOUT LMB

The League of Michigan Bicyclists (LMB) is a statewide 501(c)3 non-profit organization. Our mission is to promote bicycling and the safety of bicyclists on the roadways in Michigan.



EDUCATION

Education plays a key role in improving conditions for bicycling. LMB seeks to educate bicyclists, motorists, engineers and lawenforcement personnel.



These efforts including developing materials like this booklet, which are distributed to clubs, shops, police departments, libraries, organizations and anyone interested in promoting safe bicycling.

LMB also develops and distributes training programs for law enforcement, parents, bicycle commuters and those interested in running bike rodeos.

LMB represents bicyclists on the Safe Routes to School program, the Governor's Bike/Pedestrian Safety Task Force and MDOT safety groups.

SHORELINE TOURS

LMB's Shoreline Bicycle Tours – from weekend family rides to week-long fully supported tours – show that



bicycle touring is a healthy, enjoyable, and inexpensive activity.

Shoreline Tour proceeds are a major funding source for LMB's many programs to make Michigan a safe bicycling state.

ADVOCACY

LMB is a key resource for legislators and other policy makers – who largely determine the quality of Michigan Bicycling.

League staff and LMB volunteers regularly represent the interests of Michigan bicyclists in public hearings and committees at all levels of state and local government. LMB is a resource for local and state lawmakers on issues relating to bicycling.



PUBLICATIONS & NEWS

LMB's quarterly publication, *Michigan Bicyclist Magazine*, keeps members abreast of legislation, legal trends and current events, and features bicycle touring, commuting, education and safety and physical conditioning.

The League's annual *Ride Calendar* lists Michigan's many invitational tours and single- and multiple-day rides.



LMB also distributes monthly E-newsletters to keep members abreast of current local, state and national bicycling news.

MEMBERSHIP

Please support our mission by joining and/or donating to the LMB today at: www.LMB.org/membership.htm

League of Michigan Bicyclists

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ADDITIONAL RESOURCES:

Michigan Department of Community Health

3423 North Martin Luther King Jr. Blvd. PO Box 30195 Lansing, MI 48909

www.michigan.gov/MDCH



Michigan Department of Transportation

Bicycle and Pedestrian Coordinator 425 W. Ottawa St. P.O. Box 30050 Lansing, MI 48909 (517) 335-2918



www.michigan.gov/mdot-biking

Governor's Council on Physical Fitness

PO Box 27187 Lansing, MI 48909 800-434-8642 www.michiganfitness.org

