

Why Commute by Bike?

Bicycles are zero-emission vehicles.

FIGHT POLLUTION:

- More than 70 percent of the Bay Area's carbon monoxide comes from motor vehicles. New research correlates exposure to particulate matter, an air pollutant, to a wider range of health issues. (Bay Area Air Quality Management District)
- Health costs of human exposure to outdoor air pollutants range from \$40 to \$50 billion. About 50,000 to 120,000 premature deaths per year from heart attacks and strokes, and close to 5,000 from asthma, are associated with exposure to air pollutants. (Healthy People 2010 report)

STAY HEALTHY:

- Using active transport for commuting to work can reduce weight gain in most adults. (American Journal of Preventive Medicine)
- People who chose to bicycle or walk for transportation had a 24 percent lower risk of hypertension, 31 percent lower risk of diabetes, and lower BMI and waist circumference. (National Health and Nutrition Examination survey, 2012)

SAVE MONEY:

- U.S. drivers burn 2.9 billion gallons of gas per year sitting in traffic, wasting more than \$212 billion in time and fuel because of gridlock. (INRIX Traffic Scorecard 2012)
- The cost to sit in traffic each morning is about 60 cents per mile. That's \$8,946 per year including fuel, insurance, and maintenance. In comparison, a 15-mile bike commute will save a commuter \$6.83 per day, or \$2,493 per year. (American Automobile Association, 2012)

ENJOY YOUR COMMUTE!

- With its extensive network of bicycle paths and the Bay Trail, moderate climate, bike-friendly transit, and a new bike sharing program, the Bay Area is an ideal environment for bicycling to work or for leisure.



SAN MATEO COUNTY
**Transportation
Authority**



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT



ABOUT COMMUTE.ORG

- **BICYCLE PARKING:** Commute.org will pay for 50 percent of the cost of bicycle parking racks and lockers for employers and businesses in San Mateo County (maximum \$500 per unit; dependent upon available funds).
- **SAFETY WORKSHOPS:** Commute.org offers free bicycle safety workshops in San Mateo County.
- **SHUTTLES:** Bicycle carrying racks are available on most shuttles managed by Commute.org.

Want to know more?
Visit www.commute.org
or call 650/588-8170.

Safe Bicycling in San Mateo County

REVISED EDITION



**Riding with & without
bike lanes: page 15**



**Where to park your bike
safely in San Mateo County: page 7**



**How to find & repair
problems: page 3**



**Bikes &
transit: page 26**



**Share the road; know the laws
& your responsibilities: page 11**

How to Use This Booklet

How should you use this booklet? First, look at the subjects listed on the front cover. You'll see what page to turn to for that information.

If you want other information about how to bike safely in San Mateo County, read the Table of Contents. There, we've listed everything this booklet covers. If you can't find what you want, check the list of bicyclists' resources on the inside back cover.

This booklet is intended for bicyclists above 12 years of age. Parents and teachers can use the booklet to teach younger cyclists how to bike safely.

FROM THE PENINSULA TRAFFIC CONGESTION RELIEF ALLIANCE

The Peninsula Traffic Congestion Relief Alliance (www.

commute.org) is San Mateo

County's Transportation

Demand Management agency.

The Alliance works with

employers, commuters and

residents to choose commute

alternatives that will result in better air quality and reduced traffic congestion. The Alliance promotes carpooling, vanpooling, bicycling, walking, and taking public transit including Caltrain, BART, SamTrans, San Francisco Bay Ferry, and local shuttles.



Whether bicycling to work or for a scenic excursion, San Mateo County offers bicyclists easy links to public transit and miles of trails including the beautiful San Francisco Bay Trail. Bicycling is not only a great way to maintain health and well-being, but it is a great way to contribute to a healthier environment and improved air quality.

In addition to providing free bike safety workshops and bicycle parking incentives year-round, our agency coordinates and supplies the public Bike to Work Day energizer stations in San Mateo County.

This booklet has been provided by the Peninsula Traffic Congestion Relief Alliance to give all bicyclists—new and experienced—tips on riding safely and bicycling to transit, options for bicycle parking and storage, and more!

For more information, contact the Alliance at 650/588-8170 or alliance@commute.org, or visit www.commute.org

Peninsula Traffic Congestion Relief Alliance

Working Together to Improve Our San Mateo County Commute

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Bicyclists' Resources

.....inside back cover

1: FITTING & EQUIPPING YOUR BIKE

HOW TO GET A GOOD FIT

Your bike's most important safety feature is you: If you're not comfortable, you're more likely to ride badly and hit something. Getting exactly the right fit depends on many things—including your height, weight, and riding style. You should contact your neighborhood bicycle store to help you find the right fit. Consider these points.

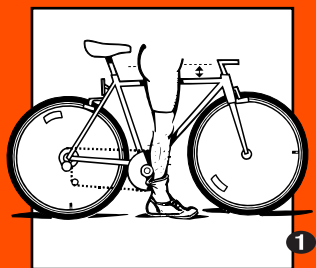
Frame Size: If your bike's frame is too tall, too short, or too long, it's very hard to adjust other things to make you comfortable—so you might need a new bike.

To Check the Height: On a men's bike, stand with the bike between your legs, just in front of the seat. Measure the space between the top tube and your crotch. **1** For road or street riding, a one- to three-inch space is safest. (Off-road riding might require a bigger space.) For bikes with a slanted top tube, ask your bicycle store's staff to size you.

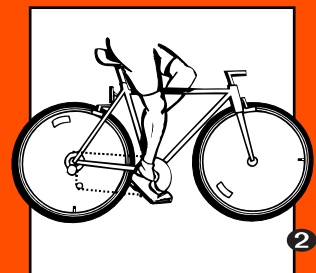
Frame Length: If, when you ride, you feel overly stretched or have pain in your neck, shoulders, or back, your frame might be too long. Try moving the seat and handlebars closer together (see page 3). Also, some people—including many women—have torsos shorter than what most bikes are made for. If you're one of them, look into a shorter handlebar stem extension, a taller stem, different handlebars, or a custom bike made for people with smaller torsos.

Seat Height: A seat that's too low will strain your knees, while a seat that's too high will make it hard for you to pedal and to put your foot onto the ground. Here are some ways to get the right seat height for most riding:

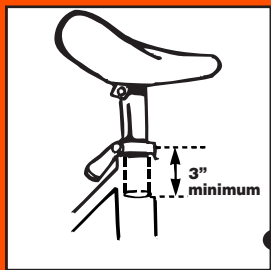
- ▶ Sit on your bike and push one pedal all the way down. **2** Put the ball of your foot on the pedal. If your seat's high enough, your knee should be slightly bent.
- ▶ If your hips rock from side to side when you pedal, your seat's too high.
- ▶ Don't raise your seat so high that less than three inches of your seat post extends into the frame. **3** (Most seat posts have a mark showing how high you can raise them.) If your seat post is a foot long but still too short, look into a new bicycle.



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Handlebars: After you've set your seat height, set your handlebars so you feel comfortable.

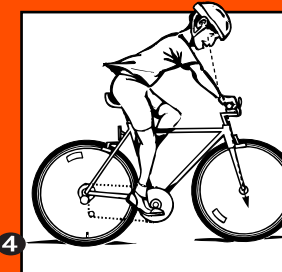
- ▶ Start by raising or lowering your handlebars so they block your view of the front axle when you're sitting on your bike with your hands on the handlebars. **4** In this position, your elbows should be slightly bent (not locked).
- ▶ Lower-back pain often means the handlebars are too far away, while upper-arm or shoulder fatigue often means the handlebars are too close to you. Try raising or lowering the handlebars, or moving your seat forward or backward. **5** You can also change to a shorter or longer handlebar stem.
- ▶ Don't raise your handlebars so high that less than two and a half inches of your handlebar stem extends into the frame. **6** (Most stems have a mark showing how high you can raise them.) If you have to raise your handlebars higher than the safe limit, get a longer stem or stem extender.
- ▶ Rotate your handlebars so that they put even pressure across the palms of your hands without bending your wrists in a strange way. **7** After rotating the handlebars: To prevent wrist discomfort, rotate the brake levers back in line with your forearm.

Seat Tilt: Last, adjust your seat tilt for comfort: Many cyclists keep their seats level. Many women, however, tilt them nose-down, and many men tilt them nose-up. Try different angles until you find a comfortable one.

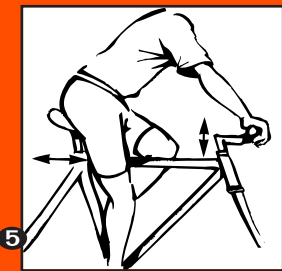
Saddle Soreness: If you haven't bicycled in a while, expect to be sore at first; chafing or soreness should get better with time. If it doesn't, the first thing to check is the seat adjustment; see "Seat Tilt" above, and "Seat Height" on page 2. If adjustment doesn't help, try alternatives: a gel-filled saddle or saddle pad; a wider or differently-shaped saddle; one with springs; or with a groove or cutout down the middle. Many bicycle stores will exchange saddles if they're not damaged, so try alternatives until you're comfortable. Also, many cyclists like padded and/or seamless shorts for long rides.

FOR MORE HELP ON FITTING A BIKE:

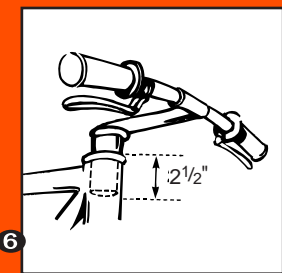
See *Urban Bikers' Tricks & Tips*, by Dave Glowacz (Mr. Bike). Get it by calling 800/888-4741 or on-line at www.mrbike.com.



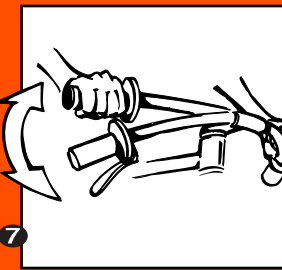
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6



7

BASIC EQUIPMENT

Experienced cyclists suggest you carry this simple equipment to make biking a lot safer—and easier.

Helmet: A must for cycling! See page 9 for details.

Flat Fixer: To prevent flats: ❶ Keep your tires at maximum air pressure; they lose a little air every day. Skinnier tires lose air more quickly. (The recommended air pressure is printed on the tire sidewall.) Many cyclists use puncture-proof tire liners (like Mr. Tuffy), Kevlar-belted tires, or thorn-resistant tubes. Heavy-set or rough-surface riders should try wider tires. **To fix flats:** Always carry a spare inner tube or a patch kit, and tools to get your tube out. Use tire levers (not a screwdriver, which can pierce tubes); a wrench if you don't have quick-release hubs; an old sock or rag to cover your hand when you grab your chain; and a hand pump or quarters to pay for a gas-station pump. (Beware: High-pressure pumps can explode your tire!)

Carrying Rack: Make your bike carry your things! ❷ Use bungee cords to tie things to your carrying rack. Attach a milk crate as a carrying case. If you carry things often you should invest in panniers, or the many varieties of bike bags available.

Instead of a rear rack or front basket, you can use a backpack; it can, though, strain your shoulders and make balancing harder. And carrying stuff in your arm is unsafe; it's harder to steer and brake.

Toe Clips: Toe clips give your pedaling more power. But if they're not adjusted right, the clips can lock your feet to your pedals so you can't put a foot down when you lose your balance. When using toe clips, make sure you can get your feet out of them fast.

Ankle Strap: Getting your pants caught in your chain can make you lose control and ruin your pants. ❸ If your bike doesn't have a chain guard, use a clip or Velcro strap around your pants cuff to keep it from hitting your chain and frame.

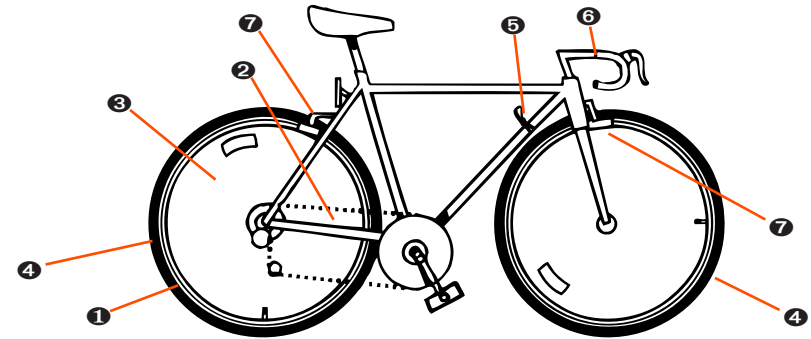
Sunglasses or Goggles: To protect your eyes from bugs and airborne debris, wear sunglasses or clear goggles, especially with contact lenses. Wrap-around glasses are best. If your glasses steam up in cold weather, apply an anti-fogger.

Night and Foul Weather Gear: If you ride at night or in bad weather you need lights, reflectors, and more. See pages 29-32 for details.



2: QUICK MAINTENANCE CHECKS

Safety starts with your bike. Whether you use your bike a lot or you're dusting off an old bike, this page gives you a few simple things to check for a safe ride. While these checks help you find problems, we don't have room to tell you how to fix them all. If you need help, go to your owner's manual, a maintenance book, or a bike shop.



❶ **Air:** Tires lose a little air every day. If your gauge says a tire is more than five pounds under the needed pressure (printed on the side of the tire), add air. No gauge? Push each tire hard against a curb. If you can flatten it, add air.

❷ **Chain:** A dry chain can skip, lock up, or break suddenly. If your chain squeaks or hangs up, lubricate it. Oil will do, but it attracts dirt; a greaseless chain lubricant's best. To lubricate:
a. Grab the bottom of the chain loosely with a lint-free rag. With the other hand turn the pedals backward, sliding the chain through the rag. Pedal the chain around twice to remove grime.
b. With one hand squeeze or spray lubricant onto the chain, and with the other hand pedal the chain backward so it goes completely around once (twice if really rusty).
c. Repeat step (a) to get the excess lubricant off the chain. Extra lube can attract dirt.

❸ **Wheel Spin:** Lift each wheel up and give it a slow spin. (Spin the back wheel forward so the pedals don't move.) Check that it doesn't rub against the brake pads, frame, or something else. If the wheel won't spin freely but it's not rubbing, the axle might have a problem.

❹ **Tires:** Turn each wheel very slowly and look for big cuts, bulges, bubbles, or places you can see the inner casing. If you spot any, replace the tire. Remove glass or other debris. If the valve stem doesn't point straight at the middle of the wheel, the rim might cut it; let the air out and straighten the valve.

❺ **Shifting:** Try all of your gears, shifting each gear lever from high to low. You have a problem if the lever sticks, you can't shift to all gears, the chain rubs the derailleur, or the chain jumps off the gears. These are usually caused by worn or dirty cables, or a derailleur that needs cleaning or adjustment.

❻ **Handlebars:** Hold the front tire between your legs and try to turn the handlebars. If they're loose, tighten the stem bolt or clamp bolts.

❼ **Brakes:** You should have your brakes adjusted or replaced if you have any of these problems: (a) when you apply the brake on each wheel, one or both brake pads don't touch the rim; (b) you can squeeze your brake lever all the way to the handlebars; (c) on each wheel, the brake can't stop the tire from moving on dry, clean pavement.

Loose Parts: Pick up the bike and shake it hard. Check and fix anything that rattles.

SOME GOOD BOOKS ON BIKE REPAIR

Big Blue Book of Bicycle Repair, by C. Calvin Jones

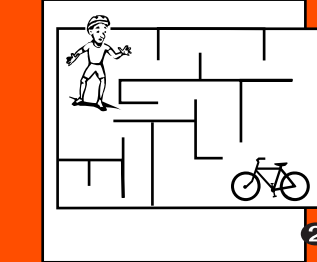
The Cycling Guide to Complete Bicycle Maintenance & Repair, by Todd Downs

Sloane's New Bicycle Maintenance Manual, by Eugene A. Sloane

The Total Bike Maintenance Book: DIY Repairs Made Easy, by Mel Allwood

✓ **Check each time you ride!**

3: WHERE TO PARK YOUR BIKE



PARKING & LOCKING BASICS

The first rule: Always lock it. Never, never leave your bike unlocked—even if you're leaving it for only half a minute. A thief can grab your bike in seconds. Some parking basics:

Security: Lock your bike to something that's permanent and not easy for a thief to take. Lock to a bicycle rack, a parking meter, a metal fence post, or a large tree. Don't lock to another bike, a door handle, or small tree. And if you keep your bike in a garage, basement, or on a porch, lock it.

Visibility: Park in open areas where many people pass by and your bicycle can be seen easily. Thieves usually don't like an audience. 1

Keep It Close By: Put your bike where you can get to it fast. 2 Thieves like to steal bikes whose owners are far away.

WHAT LOCKING HARDWARE SHOULD YOU USE?

U Locks: 3 Some U locks are stronger than others; make sure you buy a strong steel-alloy lock. If the manufacturer offers a warranty or insurance, register the lock and write down the lock's serial number and when you bought it. For added protection, get one or more U-lock cuffs (such as Bad Bones); they can keep thieves from using a lever to pry open your lock. One drawback to U locks: you can't lock up to thick objects such as street lights; for these, carry a thick cable.

Padlocks & Chains: The thicker, the better; chain links and lock clasps should be at least 3/8 of an inch thick. Look for locks and chains that are case-hardened—a process that makes them harder to cut.

Locking Axle Skewers: To prevent wheel theft, get a set of locking skewers that replace the quick-release skewers on your wheels and seat post. 4 Beware of cheap versions; get the kind with hundreds of different key codes.

Ugly Bikes: In busy commercial areas, where thieves have lots of bikes to choose from, your bike is less likely to be stolen if it looks old or just ugly.

HOW TO LOCK UP

A thief with enough time and the right tools can break any lock. But you can discourage many thieves if you follow these tips about locking your bike:

Lock the Whole Bike: If you don't use locking skewers (see page 6), you should put your chain, cable, or U locks through your frame and both wheels—taking the front wheel off if you have a quick-release hub. 5 Never lock through your wheel without locking the frame, because thieves can remove your wheel and steal the rest of the bike.

Cross Locking: A good way to foil thieves is to use more than one kind of lock. 6 For example, put a U lock through your frame and rear tire, and put a cable or chain through your frame and front tire.

Placing the Lock: Thieves may break a lock by putting it against a wall or sidewalk and smashing it with a hammer. If you use a padlock, put it where it's not near the ground or against a wall or another solid surface—leaving little or no slack in your cable or chain. When using a U lock, leave little or no space in the lock's middle to prevent a thief prying it apart with a car jack or other tools.

Removable Items: When you leave your bike, remove any parts you can't lock and a thief could steal easily: a quick-release seat, horn, bike bag, pump, cycle computer, or lights. If removing quick-release parts is a hassle, replace them with permanent ones.

WHERE TO PARK

Parking Meters: Lock your bike to a parking meter if you're using a U lock. 5 Never lock to a meter with only a chain or cable—a thief will slide your bike over the top.

Bike Racks: Look for thick, immovable bike-parking racks installed outside of many buildings. Some building owners and local governments have provided ribbon-shaped racks 7 and inverted-U-shaped racks, 6 which are very secure places to park your bike.

Sign Poles: Sign poles aren't the best places to lock your bike. Before locking to a pole, check whether you can pull it out of the ground. Also check how easily a thief could remove the sign and slide your bike over the top of the pole.

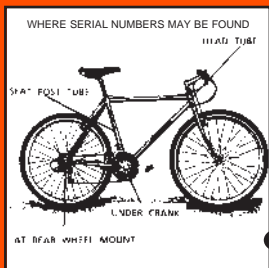


Parking Lots: Some public-parking operators will let you park your bike in their lots. If you forget your lock, look for an attended parking lot.

Indoors: A good way to avoid theft: Park your bike indoors. Some stores and buildings allow bikes inside, if only for a short time. When parking indoors, lock your bike securely.

CUTTING YOUR THEFT LOSSES

What's the first thing to do when you get a new bike? Write down the serial number and keep the number in a safe place. ❶ (Look for the serial number stamped on your bike's head tube, seat post tube, under the crank, or on the frame's rear wheel mount.) Also photograph the bike, capturing any unique identifying details.



❶



❷

Identifying Marks: You can discourage thieves by engraving your name or phone number in an obvious place on your bike frame. ❷ Or put a card with your name and phone number inside the handlebar tube—so if you find your stolen bike at an auction, junk shop, or flea market, you can prove it's yours.

If Your Bike Is Stolen: First, find your bike's serial number if you have it. Then call your local police and tell them where your bike was stolen. Try to get a police report number that you can use for an insurance claim. Also find out how police will contact you if they find your bike.

Spread the word at local bike shops: Leave photos and serial number. And post an ad on Craigslist.

Looking for Your Bike: Sometimes you can find your bicycle at places like pawn shops, auctions, or resale shops that might deal in stolen merchandise. But if you find your stolen bike among other property that someone's selling, remember that they won't just give it to you; you must prove it's yours. Keep your serial number or use identifying marks as described above.

Call your local police to learn whether they auction off recovered, unclaimed property.

4: ALL ABOUT BIKE HELMETS

WHY SHOULD YOU WEAR A HELMET?

It's a fact: About 1,000 American bicyclists die in crashes each year—and around three-fourths die from head injuries. Hundreds more suffer permanent brain damage. Many of these are experienced, careful riders—maybe just like you. And most of these head injuries can be prevented with bike helmets.

You say a helmet's too much of a hassle? It'd make your head sweat? Give you "hat head?" It's too expensive? You'd look like a geek? Think how good these sayings would look on your gravestone. ❸



❸

HELMET BASICS

Helmets consist of a foam core, usually white or black in color, and most have a thin plastic shell (sometimes called a "micro-shell") that covers the core. A plastic shell keeps the helmet's base from getting scratched and nicked. ❹

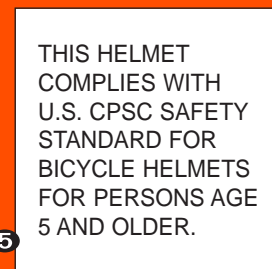
If you have a crash and your helmet takes an impact, replace it right away. An impact usually damages a helmet's foam core, meaning it won't protect you again. You should also replace your helmet at least every five years, because its foam core becomes brittle.



❹

WHY KIDS NEED HELMETS

Kids need helmets as much as adults do. Kids generally aren't as careful, they don't know how to protect themselves, and when riding in a child seat they're especially vulnerable. Make sure kids wear their helmets snugly—and set an example by wearing yours!



❺

HOW TO CHOOSE A HELMET

Rating: Look at the inside of the helmet or the box containing it. It should have a compliance label from the U.S. Consumer Products Safety Commission (CPSC), showing that it meets government standards for safety. ❻ Don't buy a helmet that doesn't have this certification.



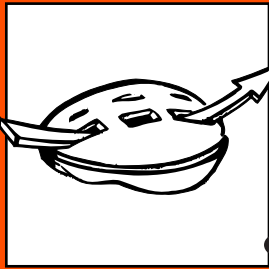
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Size: Helmets come in different sizes. Find yours:

- ▶ Put the helmet on your head.
- ▶ If the helmet seems to sit too high off of your head, or it won't cover half your forehead when it sits level, try a larger size.
- ▶ If you see a gap between the helmet's rim and your head, try a smaller size.
- ▶ Many helmets have rear stabilizers with a dial or sliding adjuster. 1 You can make the helmet more snug by turning or sliding the adjuster.

How To Check For A Good Fit

Eyes: When you look up, you should see the helmet's front rim (not just the visor, if it has one). If you can't see the rim, tilt the helmet forward until you can. 2 **Right** 3 **Wrong**

Ears: Snap the chin buckle closed. On each side of your head, the helmet's two straps should meet under your ear to form a V. If they don't, move the straps up or down through the junctions.

Mouth: With the chin buckle closed, open your mouth wide. You should feel the helmet push down on your head. If it doesn't, take the helmet off and make the chin buckle's strap shorter by sliding the strap through the buckle.

COMFORT AND COST

Cost: You can get a good CPSC-rated bike helmet for about \$25—cheaper than a visit to the emergency room. Hard shells cost a little more than soft. More costly helmets usually aren't much safer, but they have better ventilation, weigh less, and look cool. If you order a helmet from a discount catalog, first find a friend who has it and try it on—because **a good fit is important to protect your head.**

Ventilation: A helmet's ventilation depends on front-to-back air flow. 4 Good air flow comes from long, wide air vents, and air passages (or troughs) between the vents. (Bald, light-skinned cyclists beware: Big vents can cause weird tan lines!)

Look: You can pay lots for style. But even a low-cost helmet can look cool with an elastic helmet cover. And don't be fooled: No matter how aerodynamic a helmet looks, it won't help you go faster unless you're moving at warp speed.

5: TRAFFIC BASICS

RIDING PREDICTABLY

On the street, most motorists follow traffic rules. Traffic flows smoothly because all the drivers can predict what each other will do. A collision usually happens only when someone does something abnormal.

When you ride in traffic, you can maneuver better than the cars around you. You might be tempted to ignore traffic rules—but don't! **This is how most bicyclists get into crashes.** When you break traffic laws you put yourself in danger: Motorists and other cyclists won't know what you'll do next, making it harder to avoid you and prevent a crash. But if you *act like a vehicle operator* 5—signaling turns, turning from the correct lanes, and stopping at red lights—*drivers can predict what you'll do.*

Being predictable is the key to safe bicycling in traffic. And if you follow traffic rules, motorists will come to respect bicyclists as drivers of vehicles— 6 which is how California law says bicyclists should act.

Here are the basic rules for riding predictably:

Get Smart: Know the traffic rules you should follow and when others should yield to you. See "Traffic Rules for Cyclists," below.

Be Confident: Learn riding skills so you don't hesitate in traffic, and always be courteous. See "How to Learn Traffic Skills," page 12.

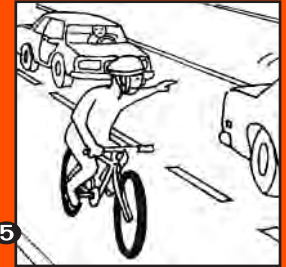
Communicate: Make eye contact, signal your moves, and wave when someone yields. See "Communicating," page 13.

TRAFFIC RULES FOR CYCLISTS

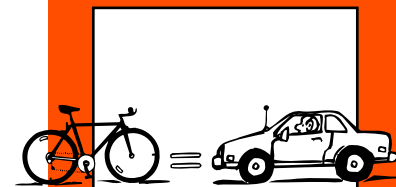
California requires bicyclists to know and obey all traffic signals 7 and pavement markings. To learn about bike safety and sharing roads with motorists, see:

- ▶ dmv.ca.gov/pubs/vctop/vc/vc.htm (alphabetic index)
- ▶ dmv.ca.gov/pubs/vctop/vc/tocd11c1a4.htm (bike sections)
- ▶ dot.ca.gov/hq/LocalPrograms/bike/codes.html
- ▶ leginfo.ca.gov/calaw.html: Choose "Vehicle Code" and look for sections 21200 to 21212 and 39000 to 39011.

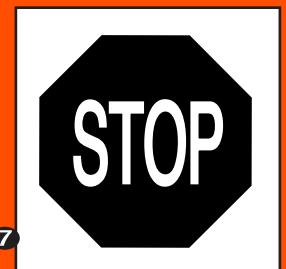
Right of Way: "Right of way" means permission to go ahead of another. As a cyclist, you must give right of way, as motorists do in the same situations.



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Sidewalks: If your city has no laws against sidewalk cycling, ① then it's legal. But it's safer to ride on the street in the direction of traffic.

Roads to Avoid: Bikes are banned on most freeways; know these and stay off of them. ② Also, it's illegal to ride the wrong way on a one-way street, against traffic on a two-way street, and on limited access expressways that don't allow bikes. If you ride on a high-speed highway where bikes are allowed, ride on the shoulder unless bad pavement makes it unsafe.

What Police Will Do: ③ If you break a traffic law, an officer can stop and ticket you. If you don't have an I.D. card, you can end up in a police station.

HOW TO LEARN TRAFFIC SKILLS

Where to Practice: Hone your bike skills in quiet parking lots, in paved school yards, or on side streets. ④ Then practice on busier streets early on weekend mornings. Also, local bike trails are ideal for practicing on a car-free roadway. The Peninsula offers these: Bay Trail (San Mateo, Foster City and Redwood Shores); Sawyer Camp Recreation Trail (Hillsborough/Millbrae); Cañada Road in Belmont (Sundays only); Sweeney Ridge Paved Trail (San Bruno); Half Moon Bay Bike Path; and Dumbarton Bridge Ride (Menlo Park).

Look Behind You! To bike in traffic, you must know how to look back over your shoulder without swerving or slowing down. This helps you move left or right quickly—to avoid hazards, change lanes, or make a turn. And looking over your shoulder helps drivers pay attention to you. Even if you have a mirror, you should always turn your head to look before you move left or right—just as you'd do in a car.

How to Practice Looking Back:

- a. Find a parking lot, school yard, or wide, quiet street with some kind of lane stripe.
- b. Ride along the lane stripe in a straight line.
- c. Keeping your left shoulder steady, turn your head down and around to the left. Try to keep your arms steady so your bike moves straight. Then turn your head forward.

d. Turn your head back again, but this time pick out something to look at. Try to keep moving straight. Then turn your head forward. ⑤

e. If you can't turn your head without turning your handlebars, it should help to drop your left hand to your thigh while you turn your head.

f. Next, practice turning your head right. Then practice turning your head while moving faster.

Where to Look: As you ride, you have to avoid two kinds of things: hazards on the ground right in front of you, and cars and pedestrians ahead and on either side. You should always know how both the ground and the traffic around you look. To do this, get into the habit of looking first at the ground 20 to 30 feet in front of you, then up at traffic, then back down at the ground. ⑥ At first this'll seem hard—maybe even strange—but with practice you'll do it without thinking.

Ready for a Brake: Always keep your hands near or over your brake levers—so you can stop fast in a pinch. When you brake, squeeze the front and back brakes at the same time. (To learn more, see “The Quick Slow-Down” on page 22.)

Shifting Gears: If your bicycle has a gear system, know how to shift without looking down. Always pedal when shifting, no matter how slowly. For more, see “Using Different Gears” on page 27.

COMMUNICATING

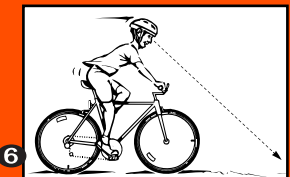
Bikes are slower, quieter, and less visible than most other vehicles. So you should make drivers notice you, and try to communicate with them. Drivers don't always know what you'll do—even if you think it's obvious. Here are some ways to communicate.

Use Hand Signals:

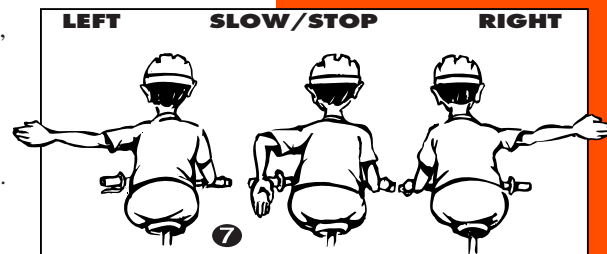
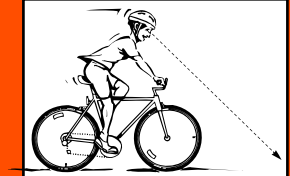
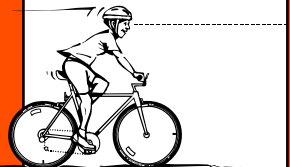
Before you change lanes or turn, signal with your arm. ⑦ If you're about to move in an unexpected way—like around a bunch of glass—point to the part of the road you're moving to. Also signal when slowing down—you don't have brake lights! The law says you must signal 100 feet before a turn, but this isn't required if you need *both* hands to control your bike. Being in the expected position for your turn and checking over your shoulder are both useful signals.



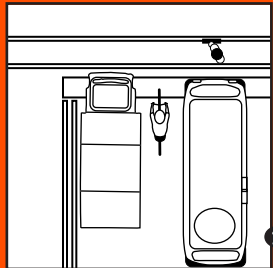
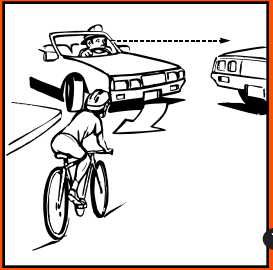
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Yielding: When you're waiting for a car to pass you before you cross an intersection or change lanes, the driver might not realize you're yielding. Wave at the driver to go ahead. Also, when drivers correctly yield the right of way, it's a good idea to thank them by waving or nodding.

Ride to Be Visible: Sometimes, such as when a nearby car might turn in front of you, try to position your bike to be visible—but do *not* assume the driver sees you. And do *not* ride so far from cars that you invite unsafe turns. Plan ahead: e.g., would you slow down or steer out of the way?

How to decide whether a driver sees you:

- ▶ Watch for the car to move slower than it would if you weren't there.
- ▶ Look at where the driver's eyes are. ❶ If they're not looking at you, slow down and be ready to get out of the way.

Make Noise: Just as a car honks its horn when it comes out of an alley, you should make noise when you emerge from places where people can't see you—like when you emerge from between two vehicles to get into an intersection. ❷ Use a horn, bell, or whistle, or yell if you have to.

Headphones: Don't wear them! As a bicyclist in traffic, you can hear more of what's going on around you than motorists can. In fact, people you share the road with expect you to hear their engines, horns, or shouted warnings. If you wear headphones you might not hear something that can help you avoid a crash.

PICKING YOUR ROUTE

Before you ride, decide which streets to take to your destination. Think about road construction and areas that have bad pavement. If a road has lots of traffic or lacks wide shoulders, consider taking a better road—even if it's less direct.

Get a San Mateo County Bicycle Map from one of the organizations listed in "Bicyclists' Resources" at the inside back cover of this booklet, and use the map to pick your route. ❸ Also:

- ▶ The map highlights routes used daily by bicyclists in San Mateo County for commuting, shopping, and exploring the beauty of the Peninsula.
- ▶ Many streets have bike lanes, as the map shows.

6: LANE POSITIONS, TURNING, & PASSING

BASIC LANE POSITIONS

Never Ride Against Traffic: If you think you're safer riding against traffic because you can see cars coming, you're wrong: 20 percent of car-bike collisions result from cyclists going the wrong way. No drivers expect wrong-way traffic. But if they're nearing a street from a cross street or driveway, they *especially* don't expect wrong-way traffic from the right—either on the street or sidewalk. And crashes are more severe head-on than from behind.

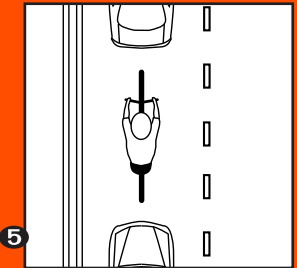
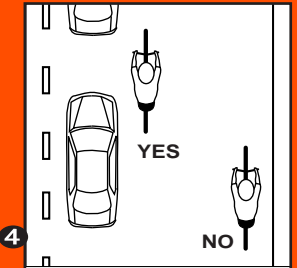
When to Stay Right: Stay right if you're moving more slowly than other traffic, but remember: The farther from the curb you ride, the better motorists can see you—whether they're in your lane, oncoming, or on cross streets. ❹ Ride at least four feet from parked cars to keep handlebars outside the "door zone"—or slow to walking speed.

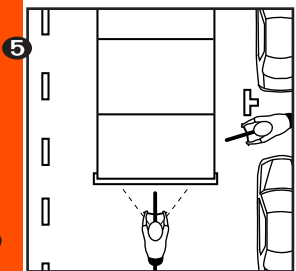
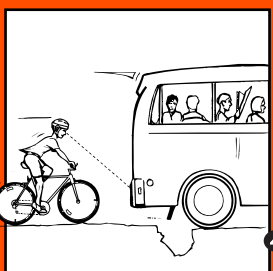
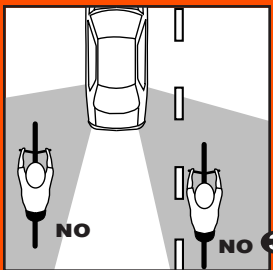
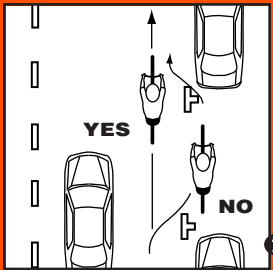
Control Narrow Lanes or Spaces: ❺ When approaching a lane or space that's too narrow for a car to safely pass you, it's safest to ride in the middle of the lane or space—also called "controlling the lane." It shows drivers behind you that you want them to wait or use another lane. This might feel uncomfortable at first, but it's safer than letting others squeeze you aside or cut you off. (Your safety is a higher priority than others' convenience.)

When moving to the middle, you should look behind (see page 12), signal with your hand that you're moving over, then move over.

It's safest to ride in the middle of the lane when: (a) you're moving at the speed of traffic; (b) the lane's too narrow for cars to pass you safely; (c) you're avoiding potholes or the doors of parked cars. If you're riding in the middle and traffic starts to move faster than you can, move toward the curb if there's room. Some special cases:

▶ **Bike Lanes:** You can ride in the middle of marked bike lanes. But in a bike lane along parked cars, keep your handlebars completely out of the door zone (the 3-4 feet next to parked cars), even if this means riding close to the lane stripe. In this photo, ❻ the bicyclist is riding outside the door zone (as indicated by the "extended" parking tee).





► **Underpasses:** Ride in the middle on roads where they pass under other roads or train tracks, where there's no shoulder. **1** If you approach an underpass while riding on the right side of the road, always check traffic behind you before moving to the middle. And if a motorist behind you seems impatient while you're in the middle, use the "slow" arm signal (see page 13) to encourage them to wait till it's safe before passing.

► **Dangerous Areas:** If you come to a dangerous area—like a bend in the road that you can't see beyond—ride in the middle of the lane to be more visible.

► **Parked Cars:** Don't weave towards the curb between parked cars; if you do, you'll have to negotiate with drivers to reclaim your line, and you might surprise someone. **2** Instead, hold a line that keeps you outside the door zone. If you ride close to parked cars, ride very slowly and keep your hands over your brake levers. And if a car door starts to open into you, yell and brake; swerve out of the way only if you have enough room and you know that you won't get hit by traffic from behind.

► **Blind Spots:** To be safe, know where a driver's blind spots are—and stay out of them! **3** Don't follow a vehicle so closely that you can't see potholes or other pavement problems until you're on top of them. **4**

If you're following a large vehicle—like a van, truck, or bus—don't follow so closely that it blocks your field of vision. **5**

When you go over a hill, motorists behind you can't see you. Stay on the shoulder to the far right. If there's no

shoulder, consider walking your bike until you've gotten well past the top of the hill.

Big vehicles coming at you can hide other cars behind them. Slow down or don't proceed until they get out of your line of sight. **6** (page 17)

INTERSECTIONS AND TURNS

Almost half of car-bike collisions in traffic happen at intersections. This section explains how to line up to approach, enter, and continue through an intersection, whether you're turning or going straight.

Things to Remember at Intersections:

- When you're crossing an intersection, don't move right toward, or into, the crosswalk. **7** It's safer to continue straight on a line toward where you want to ride beyond the intersection. Veering toward the crosswalk makes it easy for right-turning cars to cut you off.
- Don't block crosswalks. It's dangerous to make pedestrians cross farther into the intersection.

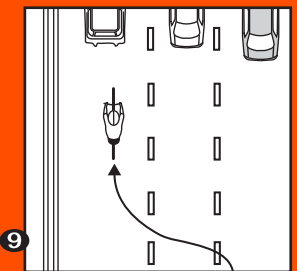
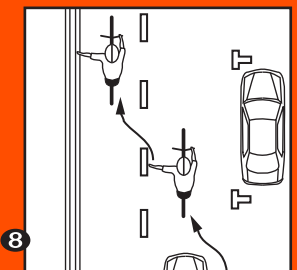
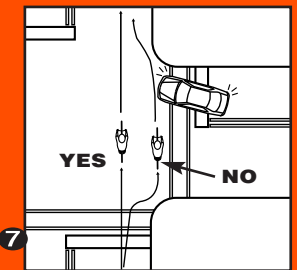
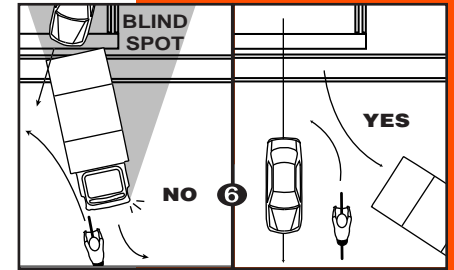
Changing Lanes Before a Turn:

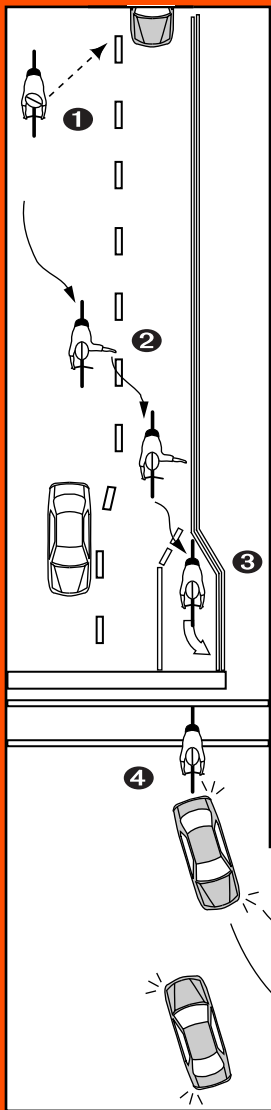
- When you're preparing to turn left on a multi-lane street where traffic isn't much faster than you, merge left one lane at a time. **8**
- Where traffic moves much faster, drivers don't have time to react to you—so it's safest to wait for a gap in traffic and move across all the lanes at once. **9**
- Always signal and check behind you before changing lanes.

Stop Signs and Turns on Red:

At a stop sign or right turn on red, the law says you must stop—not just slow down. Remember to act like a vehicle operator as follows.

- If you're at a stop sign and a vehicle on the cross street got there first, let it go through first.
- If you're turning on red, yield to pedestrians and to vehicles traveling on the cross street.

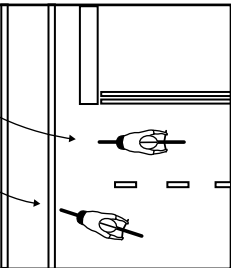




Turning Left from a Left-turn Lane:

Lane: Follow these steps for making left turns just like motorists do.

- ▶ From the right side of the street, look behind you for a gap in traffic. **1** Start looking a half-block or more before the intersection.
- ▶ When traffic allows, signal left and change lanes one lane at a time, unless all lanes are clear. **2** If you can't find a gap and you're sure of your skills, get a driver to let you in by making eye contact and pointing. Don't change lanes until you're sure the driver is yielding!
- ▶ Ride in the middle of the left-turn lane to deter passing. **3** If there's more than one turn lane, use the one farthest to the right—unless you're making a U-turn or another left turn immediately.
- ▶ Once you're in the intersection, if the car ahead is waiting to turn left, get behind it. **4** Don't go around it—there may not be enough space for oncoming left-turners. And never put yourself next to a car in the same turn lane!
- ▶ If there's an oncoming car facing you, waiting to turn left, stay as far from it as you would if you were driving a car.
- ▶ Turn just like a car does. **5** After the turn, move into the right lane—unless you're making another left turn immediately.



Turning Left with No Left-turn Lane:

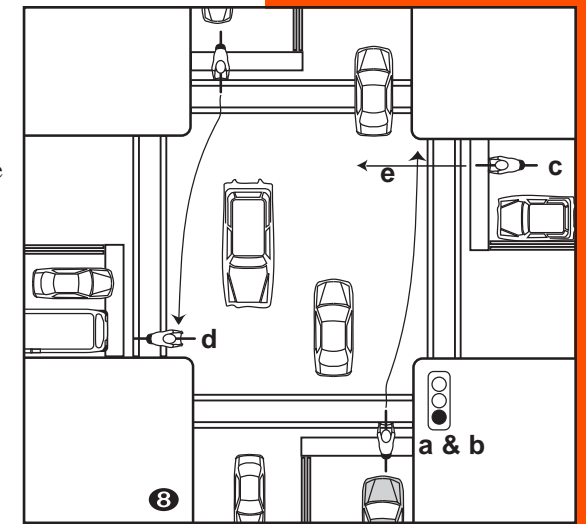
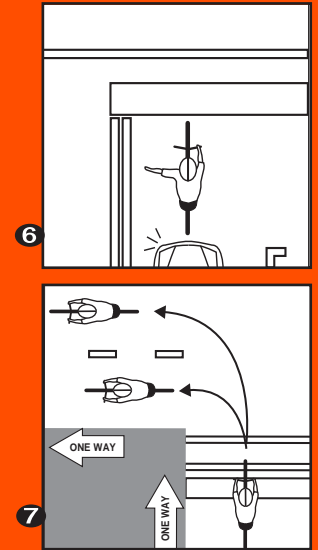
Lane: If there's no turn lane, ride about four feet from the center stripe—far enough out so a left-turning car behind you can't pass until you've finished the turn. **6**

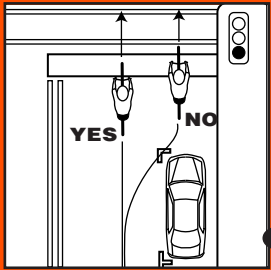
If a car's stopped at the intersection and you can't tell whether it's going to turn left, don't try to pass it on the left. Stay behind it until it gets through the intersection.

When turning left from a one-way street to another one-way street, you may turn into the left or right side of the street if it's safe to do so. **7** Unless prohibited locally, California law allows "left turn on red." You may turn left after stopping at a red light and yielding to pedestrians and vehicles from a one-way to another one-way.

The Box Left Turn: Use the box (or "2-step") left turn if you can't merge left before you reach the intersection. **8** Here's how:

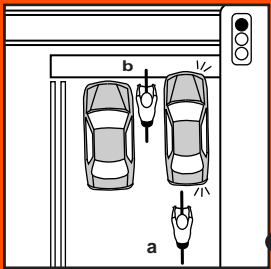
- a.** Stay in the right lane and ride across the intersection on the left side of (not in) the crosswalk.
- b.** Look at the cross street and identify the rightmost lane used by drivers going straight through the intersection. If there's one or more right-turn-only lanes, this is the first lane to their left. If there are no right-turn-only lanes, this is the lane next to the curb.
- c.** Just before the opposite corner, check whether there's room for you in the traffic lane identified in (b), to the right of the crosswalk, behind the stop line. If there is, go there and prepare to proceed through when the light turns green—but beware of right-turners!
- d.** If there's no room behind the stop line, stop on the intersection side of the crosswalk and align yourself with traffic.
- e.** When straight-through traffic gets a green light, proceed through.





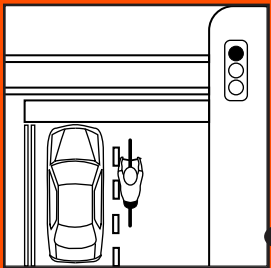
Don't Veer to the Curb: ① Don't veer into the right-turn lane as you go through the intersection unless turning, because:

- ▶ You're easier to see if you stay away from the curb.
- ▶ You'll make it harder for right-turning motorists that come from behind to cut you off.
- ▶ You won't have to move back over when you get across the intersection.



Cars Stopped in Both Lanes: ② When cars are stopped in the left and right lanes, it's safest to stop in the middle of the right lane. (a) But if the right-lane car is turning right and you're sure of your traffic skills, stop on the left side of the right lane. (b) Stop where drivers in both lanes can see you.

Right on Red Allowed: At a red light where right turn on red is allowed, stop on the left side of the right lane—leaving enough room for right-turning cars. ③ If a car's stopped in the left lane, stop where drivers in both lanes can see you.



Three-way Intersection: At a red light in a three-way intersection, don't cross the diagonal street to wait on the next corner. ④ You'll confuse drivers about which street you're really traveling on.

PASSING

In most cases you should pass cars in your lane as you would if driving a car: Look behind you, signal left, get into the left lane, and pass. Other tips:

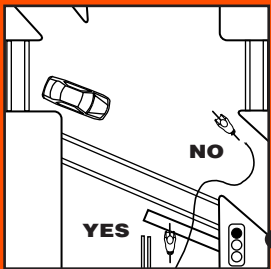
Pass Left: Pass moving cars on the left whenever possible. That's where motorists expect you to pass, so that's where they look.

Don't Pass on Turn Side: If a vehicle is about to turn, don't pass it on the side it's turning toward.

Opening Doors: When you pass a stopped car, watch out for the driver or a passenger opening their door. Pass four feet from the car, or (if the car is stopped in traffic) pass on the side with no passengers.

Cars Speeding Up: If you're passing a car and it speeds up, stay in your lane and slow down. After the car passes you, look back, signal, then merge back behind the car.

Passing Cyclists: Cyclists can swerve faster than cars—so when you pass a bicycle, pass at least three feet away on the bicycle's left (not right). Before passing, shout "Passing on your left."



Squeezing between Cars: ⑤ If you're in a traffic jam with cars backed up for at least a block, it's safest to get in line with the cars and wait it out. But if you do squeeze between the cars to get through, here's what to watch for:

- ▶ A car door can open in front of you, on the left or right, at any time. Look inside cars for passengers who might get out. Slow down and keep your hands on your brake levers.
- ▶ When pedestrians cross the street in the middle of a traffic jam, the last thing they expect is you zooming down on them between the cars. Watch out for pedestrians, especially when passing trucks or buses that you can't see in front of.
- ▶ If a space opens up in the traffic jam—and you're near a driveway or cross street—watch for a car from the opposite direction turning into your path.

Passing Buses:

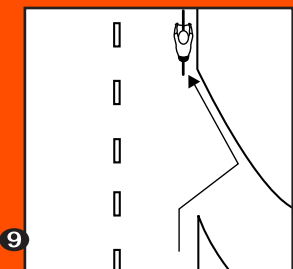
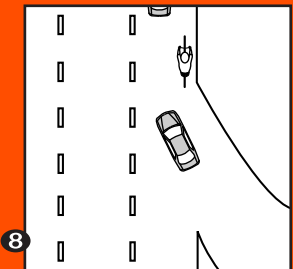
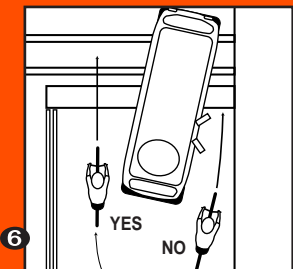
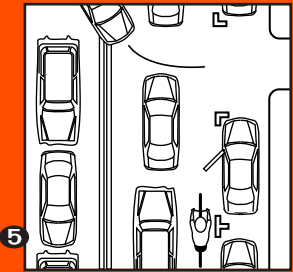
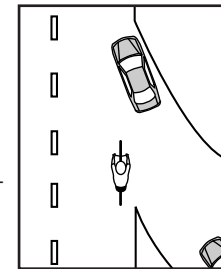
▶ When you come to a bus that's nearing or stopped at a bus stop, don't pass on the right. ⑥ You might get squeezed into the curb or hit a passenger.

▶ When you pass a bus with its rear angled out into traffic, pass on the left and look around carefully. Pass the front of the bus with plenty of room, in case it pulls out suddenly or pedestrians appear.

▶ Don't pass a bus to turn right immediately in front of it. Buses sometimes speed up suddenly or start moving before the traffic light turns green.

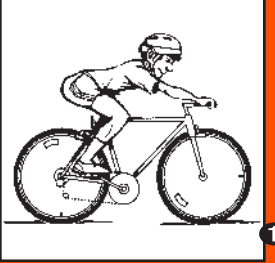
▶ Never pass a bus on the right when entering an intersection. Buses, like long trucks, pull straight forward before starting a right turn. You could be trapped when the bus starts to swing right.

Highway Ramps: When an exit ramp merges from the right, first look back to see what's coming. If a lot of cars are merging, stay straight so they pass before you on the right. ⑦ As you move farther, they'll pass behind you on the left. ⑧ If there's a break in the merging traffic, move to the right as soon as you can. ⑨ If there are too many cars, stop and wait before the ramp.



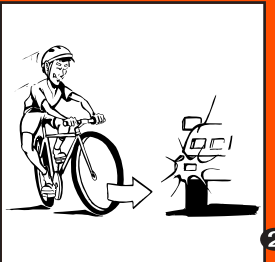


7: TROUBLE SITUATIONS



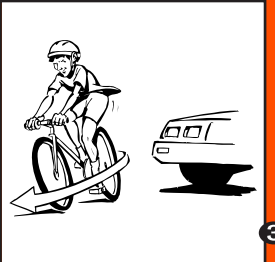
EMERGENCY MOVES

When you're riding quickly and something gets in your way, slamming on the brakes might not be the best reaction. This section describes some emergency moves that you can practice in a quiet parking lot. Start slowly, then work your speed up. Practice—so when you need an emergency move, you make it automatically.



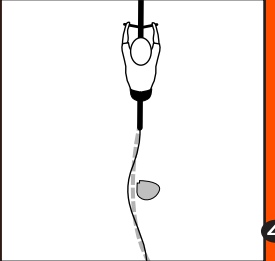
The Quick Slow-Down: When you stop fast, your weight shifts from your back wheel to the front. Even if you use both your front and back brakes your back tire can skid and start to lift. To slow down quickly: ①

- a. Push yourself as far back on the bike as you can. This keeps weight on the back tire.
- b. Put your head and torso as low as you can so you don't flip.
- c. Squeeze both brakes evenly.



The Instant Turn: Use the Instant Turn when a car turns in front of you and you can't brake in time. To make a very sudden right turn, you steer sharply left—toward the car—which makes you lean right. ② Then you turn a hard right, steering into the lean and away from the car. ③

The Rock Dodge: The Rock Dodge is just a quick wiggle of the front wheel—to miss a rock or hole right in front of you. ④ At the last second, turn the front wheel sharply left and back right again. Both your wheels should miss the hazard.



How to Fall: Most serious bicycle injuries involve brain damage, so the best way to protect yourself in a fall is by wearing a helmet. Otherwise, it's not easy to prepare for a fall. But if you have time to think:

- ▶ When you're about to hit a car, don't try to wipe out first; instead, stay upright as long as you can. If you get low, you risk going under the wheels or hitting the sharpest parts of the car.
- ▶ If you go flying, tuck your head, arms, and legs into a tight ball and try to roll when you hit the ground. If you stick your arms out, you're likely to break them, or your collarbone, or both.

DOGS, PEDS, TRUCKS, TRACKS, & ATTACKS

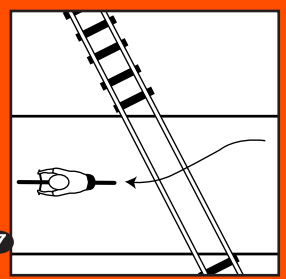
Dogs: ⑤ Here are some of your options when a dog chases you:

- ▶ **Just stop.** The dog might stop if you do. If it does, slowly ride or walk away.
- ▶ **Stop and get off your bike, quick.** If the dog attacks, try to keep the bike between you and it. Shout a command, like "Go home!"
- ▶ **Try to outrun it.** This might be a good idea if there's more than one dog. *Don't* try to outrun it if you're not sure you can; too many cyclists have wiped out when running dogs get caught in their wheels. If you go for it, try a squirt with your water bottle to slow Fido down. *Don't* try to hit the dog; you could lose your balance.
- ▶ **Use a dog-repellent spray.** ⑥ But be careful: Wind could blow the stuff back into your face. If a dog bites you, get to a doctor or hospital right away. Report the attack to police. If you can identify the dog, you might avoid a rabies test.

Pedestrians: The law says you should yield to pedestrians in crosswalks. This can test your patience in busy commercial areas, where hordes of pedestrians cross against the traffic light when they see no cars coming. So what happens when you're zooming down a busy street, come to a green light, and find a pack of people darting across the street?

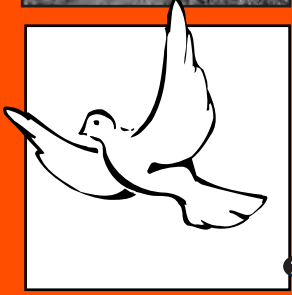
- ▶ Warn them with a horn, bell, whistle, or shout. *Remember:* Pedestrians look for cars, not bicycles.
- ▶ If there are still people in the crosswalk, slow down or stop to avoid a collision. If you go between pedestrians, make sure they see you; pass them slowly and with plenty of clearance. Never go between parents and their kids.

Railroads and Caltrain tracks: Some railroad tracks cross streets diagonally. If you go over these tracks without changing your direction, your tires might get caught between a track and the road—or your front wheel might slide along the rail and dump you. Instead, try to cross tracks at a right angle, ⑦ especially when the street is wet.





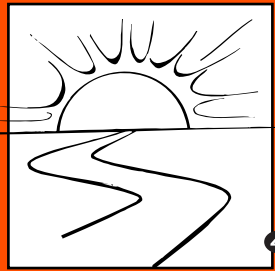
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2



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4

Gravel and Sand: Turning or braking suddenly on gravel or sand can make you slide or wipe out. See “Braking” on page 30 to learn how to brake when it’s slippery.

Ventilation and Drain Grates:

❶ Avoid drain grates with long openings that can catch your tires. Also, avoid turning and stopping on grates in wet weather.

Wind Blast: When a large truck, bus, or RV passes you closely at high speed, the front “wind blast” can push you aside, and the “tail suck” can pull you toward the vehicle. Grip your handlebars firmly, and ride further from the vehicle lane if possible.

Assault: If somebody wants to attack you, they will—whether you’re on foot, bike, or in a car. If you’re afraid to bike in a neighborhood, don’t—or go with friends and stay on busy streets. Other tips:

- ▶ Keep alert. If you see someone who looks like they’ll hurt you, stay away from them.
- ▶ Don’t stop, for any reason, in places where you think you’re about to be attacked.
- ▶ Carry a defensive spray such as pepper spray, if legal in your area. Make sure you can grab it quickly. Be careful: A spray can easily be turned against you by the wind or even your attacker.

If you get mugged, don’t fight; your bike or other property isn’t worth your life. Try to remember the mugger’s features, then call police.

CONFLICTS WITH MOTORISTS

Lots of motorists act rudely toward bicyclists. Some will cut you off or curse at you. Many do this because they don’t understand that you must observe the same traffic rules they do, and you may legally control the lane to prevent unsafe passing and turning. What should you do?

Rule 1: Don’t start a fight—no matter how mad you get. ❷ If you do, the motorist might get back at the next bicyclist they encounter. Or, worse, the motorist might decide to smash you with their two-ton automobile, then speed off.

Rule 2: Report harassment. ❸ Motorists who touch you or endanger you might be guilty of assault. Stop and write down everything you can remember: plate number, type of car, time and place, and witness contact information. Then call police.



WHAT TO DO AFTER A TRAFFIC COLLISION

If you’re hurt in a traffic collision, don’t ride away or shake off what seems like a minor injury—you might find later that it’s worse than you thought. If you’re a victim of, or a witness to, a traffic collision, here are the steps to take:

- ▶ Call the police. If needed, get medical help immediately.
- ▶ Get the following information from every vehicle: driver’s name, address, phone number, driver’s license number, license plate number, make of car, insurance company name and policy number.
- ▶ Get the names and phone numbers of witnesses.
- ▶ Get the police report number from police on the scene. Also get the police officer’s name and badge number.
- ▶ Write down how the crash happened while it’s fresh in your memory.
- ▶ Keep (or photograph) any damaged clothes or equipment.

Also, if you’re a victim:

- ▶ Shock can cloud your judgment. When in doubt, stay put instead of riding off.
- ▶ Don’t get mad at the scene. Keep a level head so you can ask questions and take notes.
- ▶ If you’re injured, don’t move unless you’re sure you won’t injure yourself more.



Rule 3: Take the long view. ❹ If all cyclists follow traffic laws, motorists will see that cyclists belong on the street. You can help! Tell receptive motorists they should share the road. Meanwhile, governments and bike advocates are carrying the bicycling message to people where they learn best: in school and at work.

8: TRANSIT ACCESS & PARKING, AND USING GEARS

BICYCLE ACCESS ON TRANSIT

For the latest on bike access and bicycle storage facilities at Bay Area public transit systems, call 511 from any area code, or visit bicycling.511.org and click on “Infrastructure”.

AC Transit

Each day, hundreds of bicyclists use AC Transit’s 105 bus lines (including 27 transbay lines). All its buses have front-mounted bike racks. Some commuter coaches offer additional bike storage. Folding bikes may be carried on board at any time, as long as they don’t block seats or aisles. Watch a “How to load your bike” video at www.actransit.org/rider-info/rider-guides/bikes-on-buses

Amtrak

All Capitol Corridor trains have bike racks, and Amtrak Thruway connection buses can carry two to three bikes. Details: www.capitolcorridor.org/on_board/bikes_on_board.php

BART ①

More BART riders bike to and from stations every day. Almost all BART stations have bike racks, ② over half of BART stations have bike lockers, and some have Bikestations. BART has strict rules for bike commuters, and it’s the rider’s responsibility to know them. Details: www.bart.gov/guide/bikes

Caltrain

Caltrain’s bicycle boardings are among the most numerous in the U.S. Older trains can carry 80 bikes (on two 40-bike cars). Newer, tri-level Bombardiers hold 48 bikes (on two 24-bike cars), along with smaller spaces for folded bikes. (Folders can go on the rack in the luggage car; look for the green suitcase logo.) And commuter shuttles serving Caltrain stations offer bike racks. Details: www.caltrain.com/riderinfo/Bicycles.html

Bike storage and shared-access parking are available system-wide. Bikestation Palo Alto is Caltrain’s hub for bike commuters, holding 96 bikes. Details: www.home.bikestation.com/bikestation-palo-alto

The Bay Area’s bike-rental program (www.bayareabikeshare.com) offers over 700 bicycles at 70 stations along the Caltrain corridor.



①



②

Ferries: Alameda/Oakland, Blue and Gold, Golden Gate, South San Francisco

Bicycles are welcome aboard ferry lines on a first-come, first-served basis. Boats have varying on-board bike storage capacity; check in advance.

- ▶ www.sanfranciscobayferry.com/terminals
- ▶ www.sanfranciscobayferry.com/route/oakland/ssf
- ▶ www.tiburonshop.com/Ferry_Tiburon_San_Francisco.html

Golden Gate Transit

All buses have bike-carrying racks, making it easy and convenient for bicyclists. And find free bike-parking racks at over 40 bus stops. Details: www.goldengatetransit.org/services/bikes.php

SamTrans

All buses have bike-carrying racks. Also, two more bikes may be allowed inside each bus. Loading and unloading tips: www.samtrans.com/riderinformation/bikesonsamtrans.html

Valley Transportation Authority

All buses have bike-carrying racks, and all light-rail cars have interior bike racks. Details: www.vta.org/services/bikes.html

USING DIFFERENT GEARS FOR HILLS

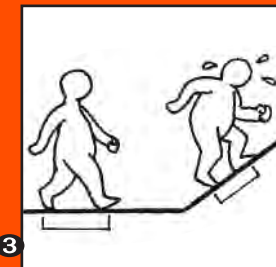
Whenever you want to walk up a hill ③ or go from walking to running, your legs move differently. Your steps become shorter or longer. That’s how your legs adapt to the different kinds of work you want to do. Your bike also can adapt, if it has multiple gears. By changing gears, you can move faster, go uphill, or ride upwind without working so hard.

What Gears to Use

If your bike has two shifters, the left-hand shifter usually controls the front gears; it chooses between two or three ranges of effort. Keep it on “2” for most around-town riding.

The right-hand shifter ④ controls the rear gears. As your “fine adjuster,” you’ll use it the most.

While learning, keep the left shifter (if present) on “2” and use the right (rear) shifter to choose a comfortable effort: not too low (“spinning out”) and not too high ⑤ (“pushing big gears”).



③



④



⑤

How different shifters work

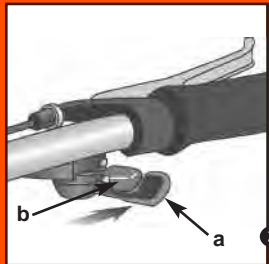
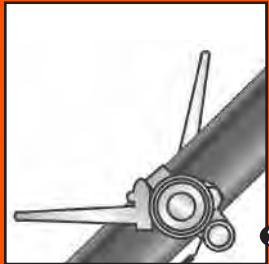
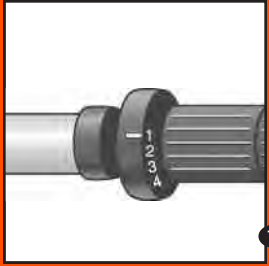
- ▶ **Twist shifters:** ❶ To move the chain to the biggest back gear, twist the right-hand shifter to the lowest number. To move it to the smallest back gear, twist the shifter to the highest number. (Front gears use the left-hand shifter, and work the opposite way.)
- ▶ **Frame levers:** ❷ To move the chain to the biggest back gear, move the right-hand lever all the way down. To move it to the smallest back gear, move the lever all the way up. (Front gears use the left-hand lever, and work the opposite way.)
- ▶ **Trigger levers:** ❸ To move the chain to the biggest back gear while pedaling, hold the right-hand lever (a) all the way in until the chain goes to the biggest gear. To move the chain to the smallest back gear while pedaling, keep clicking lever (b) until it won't click any more. (Front gears use the left-hand lever, and work the opposite way.)

To cause your bike's chain to move to a different gear:

- a. Pedal with very little pressure.
- b. Move the hand shifter. If your hand shifter clicks once for each gear, move the shifter until it clicks. If your shifter doesn't click, move it until your pedaling becomes easier or harder, or you hear the chain move to another gear.
- c. If your chain rattles or rubs after you've shifted, move the hand shifter slightly in one direction or the other until the sound is gone. If the sound remains, have your bike checked.

Shifting internal-hub gears

If on its rear wheel your bike has an internal-hub gear mechanism, ❹ with the gears on the inside (where you can't see them) instead of the outside: Before you shift gears, stop pedaling; move the gear-shift lever; then resume pedaling.



9: RIDING AT NIGHT & IN BAD WEATHER

HOW TO BE SEEN AT NIGHT

Light up! Here's how:

Reflective safety vest:

Good for cycling in dark clothes or if your rear light goes out. Don't wear dark clothes with no other light-colored material.

Reflective tape:

Use white or yellow in front, yellow or red in back.

Strobe light

Rear light:

Effectively supplements your legally-required reflector to help approaching traffic see you. Many cyclists use flashing red lights. May be mounted on either the bike or the cyclist.

Jacket: Bright color, reflective piping in back.

Flashlight:

In a pinch, tie on with rubber bands or a bungee cord.

Headlight:

Battery-powered LED or halogen. Get the most powerful one you can afford. (Use white or amber, not red.) LED lights cost less, last longer. Bright generator lights can free you from batteries.

Rear reflectors:

Biggest are best; get one at least three inches wide, make sure it's pointed straight back and not up or down.

Only red is legal but amber ones can be several times brighter. Reflectors work only if they're clean, so remember to wipe them off!

Reflective ankle strap

Pedal reflectors: Built into front and back.

Reflective tape:

Use white or yellow in front, yellow or red in back.

Spoke reflectors: Not a substitute for a headlight or rear reflector.

Rechargeable batteries:

If you ride at night a lot, you'll save money and throw away fewer toxic batteries.

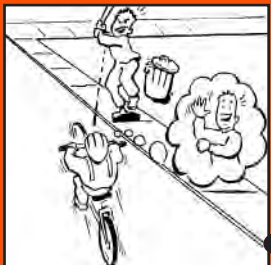
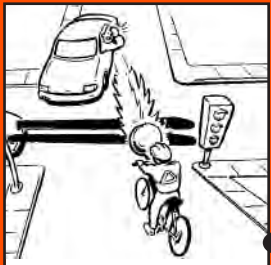
Only three percent of bike rides happen at night—but over half of all cyclists killed get hit while riding at night without lights. At night, California law requires a white front light, and a red back reflector or light. That's not much; you can see a car's headlights from 3,000 feet—and that's what most motorists look for. (Under bright street lights you need bike lights to be seen, not to see, so direct your headlights at drivers' range of vision.) And because your upper body's at eye level, it's important to wear bright stuff at night.

RIDING AT NIGHT

Defensive Riding: At night, it's hard to see road hazards, and to anticipate the moves of others: You can't see where they're looking, and some may be drunk. **Slow down** from your daylight speed. To make sure drivers see you when you're stopped, **flash your lights** by twitching your handlebars back and forth. ❶ And **watch cars closely**; be ready to get out of their way.

Know Your Route: If you're new at night riding, **take streets where you know the potholes and traffic** so you can focus on riding in the dark. Also, if you're not sure about nighttime crime in a neighborhood, ask someone who knows the area—or don't ride alone.

Night Blindness: ❷ Don't bike at night if your visual acuity's worse than 20/40 with glasses or contacts, or you can read a far-away sign or address okay in daylight but not at night. See a doctor to be sure.



RIDING IN RAIN

Wet Streets: Watch out for:

- ▶ **Metal, paint, and leaves.** Metal-grate bridges, ❸ BART vents, sewer and manhole covers, painted pavement, and leaves get slippery when wet. Don't brake or turn suddenly on them. And don't ride across grated vents if you have thin or smooth tires.
- ▶ **Puddles.** Don't ride through a puddle if you can't see the bottom. It could be a deep pothole that could make you crash or dent your wheel.
- ▶ **Start of rain.** Don't race to beat the rain when it starts; it's when streets are slickest, because oil or anti-freeze on the road spreads before it washes away. Turn slower and with less lean.

Slow Down: Remember that motorists and cyclists can't see as well in rain or fog. And it takes longer to stop—so to be safe, go slower than normal.

Braking: When brake pads are wet they take up to ten times longer to work. Dry them by applying your brakes far ahead of where you want to slow down, causing your pads to wipe the rims. To dry them faster, "pump" the brakes by applying them, then letting go, over and over.

DRESSING FOR COLD & WET WEATHER

People who bicycle in the cold and rain aren't nuts; they're just dressed right. But how?

Protection & Venting in Wet Weather:

If your clothes keep out rain, they might also seal in your sweat. Wear a jacket or poncho that lets air in from the bottom, back, or sides. Or get clothes made of a breathable fabric (like Gore-Tex™) that repels moisture but allows sweat to evaporate. Use fenders to keep road grit and water from spraying up onto your feet, legs, and back.

Layers for Cold: ❹ You don't need a whole new set of clothes to bike in the cold. Wear a sweatshirt or jacket and t-shirts, light sweaters, and tights or long johns in layers as weather gets colder. By wearing light layers you can also remove outer clothes if you warm up while cycling. (Overheating can make you sick.) And if you sweat a lot, the layer closest to your skin should be a non-absorbing material (synthetic instead of cotton) that lets sweat evaporate as you ride.

On the rare occasions when it gets very cold, many cyclists don't need much insulation on their torsos and legs where heat builds up. But they do need extra insulation on their ears, hands, and feet, where blood circulates less.

If you wear lots of layers in cold weather, you might feel uncomfortably warm after riding for five to ten minutes. What if you don't want to stop and take off some of your clothing layers? Consider a different way to dress: Learn the minimum amount of clothes you need to feel comfortable after you've warmed up. Then, the next time you bicycle, start out wearing only those clothes. You'll feel cold when you start, but later, when you warm up, you won't have to stop to shed layers.

Try different clothing to find what makes you comfortable at different temperatures and in the rain.

FOR MORE INFORMATION:

See the San Francisco Bicycle Coalition's five-minute video on wet weather and nighttime riding at www.sfbike.org/?wet_weather



EQUIPPING YOU AND YOUR BIKE FOR RAIN

Wear bright colors:

Yellow, orange, fluorescent pink, or neon green.

Legs: When it's cold but dry, wear loose-fitting, average-weight pants like jeans. When it's colder use long underwear or two pairs of tights. In wet weather wear synthetic underwear with one or two pairs of tights.

Feet: Wear heavy wool socks or two pairs of socks. (Wool dries more quickly than cotton.) Knee socks protect shins from cold from below. With socks for warmth and fenders for dryness, wear shoes simply to take road dirt. When it's really cold and wet, wear rubber boots.

Wrists & cuffs: Sleeve-end and ankle closures keep rain from wetting the ends of your pant legs and sleeves.

Leg gaiters: Often made of nylon; keep your pants legs dry.

Tail flaps: A common feature of cyclists' rain jackets.

Head:

Cover it unless you have thick hair. A tight-fitting hood covers your ears and fits under your helmet.

Hood: Push the sides back so it doesn't block peripheral vision.

Neck: High collar or hood keeps water from going down your neck.

Rain gear:

Wear a water-proof jacket. If sweat is a problem, wear a loose or vented jacket, a water-proof poncho that lets in air from below, or a cyclist's rain cape that hooks to your thumbs to keep it from flying up.



Rims: When wet, brake pads grip aluminum rims better than they do steel.

Tires: Fat tires have better traction. Tires less than 1 1/4" wide work better on wet streets when under-inflated. (You don't need deep-tread or knobby tires, as they're made to grip dirt—not asphalt and concrete.)

Brakes: Grime builds up on brake pads, making them squeak or scratch your rims. Run a rag between each pad and the rim, like shining a shoe. Occasionally remove the wheel and check pads for wear.

Bearing damage: After biking in wet weather put your bike indoors so bearings can dry.

Fenders: They beat almost anything to keep you dry on wet pavement. The newest plastic ones are inexpensive and light, but can break if installed wrong.



BICYCLISTS' RESOURCES

Peninsula Traffic Congestion Relief Alliance

www.commute.org

650/588-8170

Offers bicycle parking incentives and free bike-safety workshops to employers, local businesses, and cities. Coordinates annual Bike to Work Day program in San Mateo County.

Bike San Mateo County

www.bikesmc.org

A "virtual e-organization" that advocates for enhanced bicycle and pedestrian facilities in San Mateo County. Its membership of dedicated volunteers serves on various regional and local bike and pedestrian planning boards. Its website is a repository of many bike-related events, programs, city infrastructure, and local ordinances.

City/County Association of Governments of San Mateo County

www.ccag.ca.gov/bpac.html

650/599-1406

C/CAG's Bicycle and Pedestrian Advisory Committee recommends bicycle and pedestrian projects to be funded with Transportation Development Act funds. It also serves as a countywide forum on bicycling issues for local bikeways committees.

Silicon Valley Bicycle Coalition/ Peninsula Committee

www.bikesiliconvalley.org

408/287-7259

Safety and accessibility advocates for utility and recreational cyclists and pedestrians in San Mateo and Santa Clara Counties. Provides information on bicycling clubs, retailers, repair shops, route maps, and more. Hosts events that celebrate bicycling.

511.org

A travel planning Web site for the nine-county region. Provides extensive bicycling information, including 511 BikeMapper on-line tool, trail maps, bike accessibility info for transit, and bicycle organizations in the Bay Area. Funded by the Metropolitan Transportation Commission.

San Mateo County Bike Maps

www.bikesiliconvalley/resources/maps

To get a copy of this booklet

alliance@commute.org

650/588-8170

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