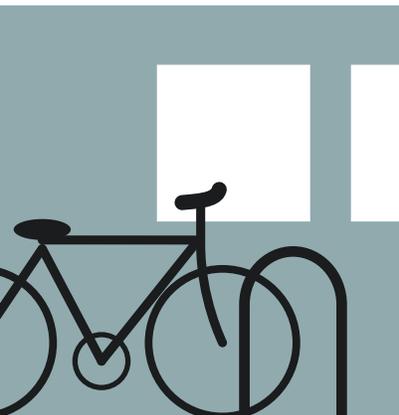


Getting the Wheels Rolling

*A Guide to Using Policy to Create
Bicycle Friendly Communities*



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Written by Sara Zimmerman, JD, and Karen Kramer, JD.

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FOREWORD

Bicycling is a simple solution to many of the complex problems facing our communities today. We know that if more people rode bikes, our nation would be healthier and our quality of life would improve. We all remember the joy and sense of freedom and discovery we experienced riding bikes when we were young. We want to ride more, and we know it would be good for us.

The big question is, how do we do it? Generations of Americans have largely given up riding their bikes and can't imagine riding in the traffic they see driving to work every day. How can we make bicycling safe and fun again?

That's where bicycle friendly policy comes in. ChangeLab Solutions has developed a guide to help communities make the changes that will allow us to enjoy bicycling to work, to school, and around town. This guide feeds directly into the League of American Bicyclists' Bicycle Friendly Community program, which offers a roadmap, or blueprint, of a community where riding a bike is safe, convenient, and FUN. Becoming a Bicycle Friendly Community isn't complicated — especially with the clear thinkers at ChangeLab Solutions explaining what you need to know about the policies it takes to create lasting improvements.

Getting the Wheels Rolling: A Guide to Using Policy to Create Bicycle Friendly Communities lays out the DNA of a Bicycle Friendly Community, making it easy to implement the policies that will make a difference. Together we can get the wheels rolling for millions of Americans who are waiting to be invited back out on the road.

Let's roll!

Andy Clarke
President, League of American Bicyclists

ChangeLab Solutions encourages communities to go through the rigorous Bicycle Friendly Community certification process run by the League of American Bicyclists. We also recognize that for some communities, the first small movements towards supporting bicycling are a significant accomplishment. In this document, when we capitalize the term Bicycle Friendly Community, we are referring to the League's excellent certification program. In contrast, when we use the term without capitalization, we are using it to convey the concept of a community that is taking general steps to support bicycling.

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INTRODUCTION



INTRODUCTION

Bicycling improves our health, benefits the local economy, and helps create more vibrant, sustainable communities. But even as more and more people are getting around by bicycle, there is still tremendous room for growth in the numbers of people who bicycle. One of the most powerful ways to increase the amount of bicycle travel is the adoption of bicycle friendly laws and policies. Policies can remove obstacles to bicycling, create incentives for bicycling infrastructure, and make it easier and safer to bicycle. That means that state and local policymakers have a pivotal role to play in the future of bicycling. But some policymakers aren't sure where to start. Others are daunted by the challenge of how to effectively use policy to promote bicycling, especially in light of the vast array of state and local policy options.

This resource is intended to be a practical guide to using policy to support bicycling. In describing the universe of bicycle-supportive policies, this guide provides a toolkit for decision-makers, government officials, community groups, and others interested in making all types of communities more bicycle friendly.

The experience of Austin, Texas, demonstrates just how much can be accomplished with bicycle friendly policies, dedicated city staff, a clear vision, and community involvement. In 1990, Austin was like many American cities: there were few bike lanes, there was little consideration for bicycling, and the percentage of commuters bicycling to work was a dismal 0.79 percent.

Austin's transformation into one of the best American cities for bicycling started with policy. A series of bicycle plans enabled Austin to spell out the policies and strategies necessary to achieve the community's vision of increasing bicycle use and making bicycling safe. Austin also implemented a "complete streets" policy, which ensures that bikeways are efficiently installed during planned road construction and routine maintenance. Austin hired a bicycle program manager and gradually increased bicycle program staff, creating a team that vets bicycling infrastructure proposals with stakeholders and balances them with other city priorities. The result: some Austin neighborhoods now have a bicycle mode share of over 10 percent, and Austin has more than 200 miles of bikeways, including innovative bikeway designs that protect bicycle riders from traffic.

But Austin didn't stop there. To increase convenience for people bicycling, Austin passed a law requiring bike parking for all new development. Austin installed 3,600 bike racks at existing businesses and requires bicycle parking at all city-sponsored special events. In addition, Austin zoning laws encourage the installation of showers in commercial buildings, mixed-use development near transit, and tree-lined commercial corridors, all of which make it easier and more comfortable to bicycle. Other Austin policies also show the city's dedication to bicycling and support a citywide understanding that bicycling is a normal, socially



“One thing that people say most in regard to how they feel about biking is that they feel this sense of joy. So, when we talk about investments in things, when we invest in something and one of the returns on that investment is joy, I can't think of a better utilization of resources — in addition to how it fits into our transportation system, and the positive effects it can have on our environment, our neighborhoods, and the health of everyday people who partake of the opportunities to cycle to get from one place to another.”

Marc Ott, Austin City Manager¹



beneficial way to get around. Five percent of Austin police officers ride bicycles. Moreover, city employees have access to a city bike fleet, and a city-wide bike share program is underway. Austin also hosts fun city events like bike-to-work-day breakfast stations and happy hours, bicycle commuter challenges, and Viva!Streets, an “open streets” festival in which streets are closed to car traffic. Today, Austin has increased the number of bicycle commuters by 250 percent, doubling the national average. Austin has been awarded Silver Level Bicycle Friendly Community status by the League of American Bicyclists, has attained its target of a 2 percent bicycling rate ahead of schedule, and is well on its way to realizing its goal of a 5 percent bicycling rate by 2020.

Creating a bicycle friendly community is a significant commitment. But as the Austin experience shows, it can be done – even where communities are starting with low bicycling rates and little existing bicycle infrastructure. And the rewards are high. Not only is bicycle use rising in Austin, but crash rates are going down. Using policy to make bicycling an integral part of daily life is a win for everyone, as individuals become active and healthy, neighborhoods grow to be more lively and sustainable, and local economies and the environment benefit.

WHAT'S IN THIS GUIDE?



WHAT'S IN THIS GUIDE?

➔ CHAPTER ONE: BICYCLING – THE BIG PICTURE

Chapter One provides an overview of bicycling, documenting the many ways bicycling benefits each individual's personal health as well as the health and vitality of the community at large. While a bicycling resurgence is underway in many places around the country, the number of trips made by bicycle in the United States is still only a tiny fraction of all trips made, and lags far behind rates achieved in many other countries. This chapter also looks at the many obstacles to bicycling that exist, how to overcome them, and the huge gains that can result from the right set of policies.

➔ CHAPTER TWO: THE ROLE OF POLICY IN INCREASING BICYCLING

Chapter Two explains our focus on policy, describing why policy change provides an effective approach to bringing bicycling out of the margins and into the mainstream of our transportation system. Numerous aspects of governance – from education to planning to taxation – have the potential to support bicycling. This chapter introduces policy makers and stakeholders to the wide array of available policy options, and describes how state and local governments can employ policy to create bicycle friendly communities and increase bicycle ridership.

➔ CHAPTER THREE: THE FOUR REQUIREMENTS – AN ORGANIZATIONAL FRAMEWORK

There are four key requirements that must be in place before people will choose to get around by bicycle:

- **SAFETY:** Travel by bicycle must feel sufficiently safe;
- **CONVENIENCE:** Travel by bicycle must be sufficiently convenient;
- **ACCEPTABILITY:** Travel by bicycle must be viewed as a normal and socially acceptable form of transportation;
- **ACCESS:** People must have access to bicycles when they need them.

This chapter discusses each requirement, and how policies can help establish the conditions to satisfy these requirements in a community. The policies presented in this guide are organized according to the requirements that they help achieve (though some policies may facilitate more than one requirement). This format not only helps readers understand how each policy supports bicycling, but also enables policy makers to determine whether they are taking steps to meet all four necessary conditions.

→ CHAPTERS FOUR—SEVEN: THE POLICIES

Chapters Four through Seven present the policy options for bicycle friendly policies, with one chapter devoted to each of the above-listed four requirements. Since communities around the country are developing and adopting new bicycle friendly policies at an enthusiastic pace, this guide does not purport to cover every possible policy option. It does, however, review many kinds of policies that jurisdictions can consider, whether they are simply interested in tweaking existing codes, laws, and plans, or are looking to adopt new policies altogether.

- **CHAPTER FOUR** describes policies that improve **safety** for people bicycling.
- **CHAPTER FIVE** sets out policies designed to make bicycling **convenient**.
- **CHAPTER SIX** describes policies that help people see bicycling as a normal, **socially acceptable** activity.
- **CHAPTER SEVEN** provides descriptions of policies that are designed to increase **access** to bicycles.

Policy examples are provided from every region of the country and all types of communities, from small towns to mega cities. These chapters provide many resources, including links to existing policies, extensive footnotes, model policies where available, and additional examples and resources.

→ CHAPTER EIGHT: COUNTERPRODUCTIVE POLICIES

Sometimes it is just as important to know what policies to avoid as what policies to adopt. This chapter describes some types of laws and policies that should be avoided because they will likely undermine efforts to increase bicycle ridership.

→ CHAPTER NINE: PUTTING IT ALL TOGETHER – THE ROLE OF BICYCLE PLANS AND OTHER GOVERNMENT PLANS

This chapter brings it all together by describing how to effectively make use of the policy options discussed in Chapters Four through Seven, exploring how jurisdictions can engage their communities in the process of creating a customized bicycle plan. This big picture thinking and planning can allow communities to select which bicycle friendly policies will overcome identified obstacles, tailor approaches to meet the specific needs of the community, and set forth strategies for policy adoption, implementation, and enforcement.

→ CHAPTER TEN: FINDING BICYCLE FRIENDLY POLICY

This chapter provides a brief overview of funding issues, including a general description of how funding can be made available for bicycling infrastructure projects and what innovative sources of funding may exist to support bike friendly policies and approaches.

→ CONCLUSION AND APPENDIX

The appendix includes charts that allow readers to review all the bike friendly policies at a glance.



Communities around the country are developing and adopting new bicycle friendly policies at an enthusiastic pace.

CHAPTER ONE: BICYCLING — THE BIG PICTURE



CHAPTER ONE: BICYCLING — THE BIG PICTURE

WHY SHOULD COMMUNITIES CARE ABOUT BICYCLING?

The average American drives more than 13,000 miles every year.² We use our cars to do just about everything, from picking up milk a few blocks from home, to commuting to work, to visiting friends. Our heavy reliance on cars for transportation is a legacy of extensive public investment in suburbs, highways, and roads designed for cars, and little investment in public transit, bikeways, and walkways. In recent years, the cost of our auto-dependency has become increasingly stark. Motor vehicle emissions pollute the air; increase asthma and respiratory illness, particularly among children and older adults; and contribute to climate change.³ Constant travel by car eliminates many opportunities for routine physical activity, which is one reason why two-thirds of American adults today are overweight or obese, and so at higher risk for heart disease, diabetes, strokes, cancer, and other health problems.⁴ Our car-centered lifestyle has other negative byproducts as well: car crashes are one of the leading causes of death in the country, and dependence on a volatile oil market creates economic uncertainty and foreign policy vulnerability.⁵ In addition, congestion is a serious problem in most urban areas, and each year we waste \$87 billion on lost productivity and fuel while stuck in traffic.⁶

There are also less measurable social impacts. Time lost to daily rush-hour traffic jams is time that could be spent with family or friends. And unlike bicycling or walking, which allows for interaction with passing friends and neighbors, traveling by car can be an isolating experience.

BICYCLING ON THE RISE

Today, bicycling is getting a fresh look as a practical alternative to driving. Bicycling is being welcomed back as part of a movement toward creating lively, sustainable neighborhoods and city centers where streets are designed to be used not just by cars, but also by people bicycling and walking. Americans' insatiable demand for cars is, for the first time, beginning to flag. After decades of steady growth in driving, the number of miles driven by each American per year has dropped for almost 10 years in a row.⁷

At the same time, bicycling rates are once again on the rise. Between 1977 and 2009, the total number of annual bike trips in the United States more than tripled.⁸ Almost twice as many commuters biked to work in 2009 as in 2000.⁹



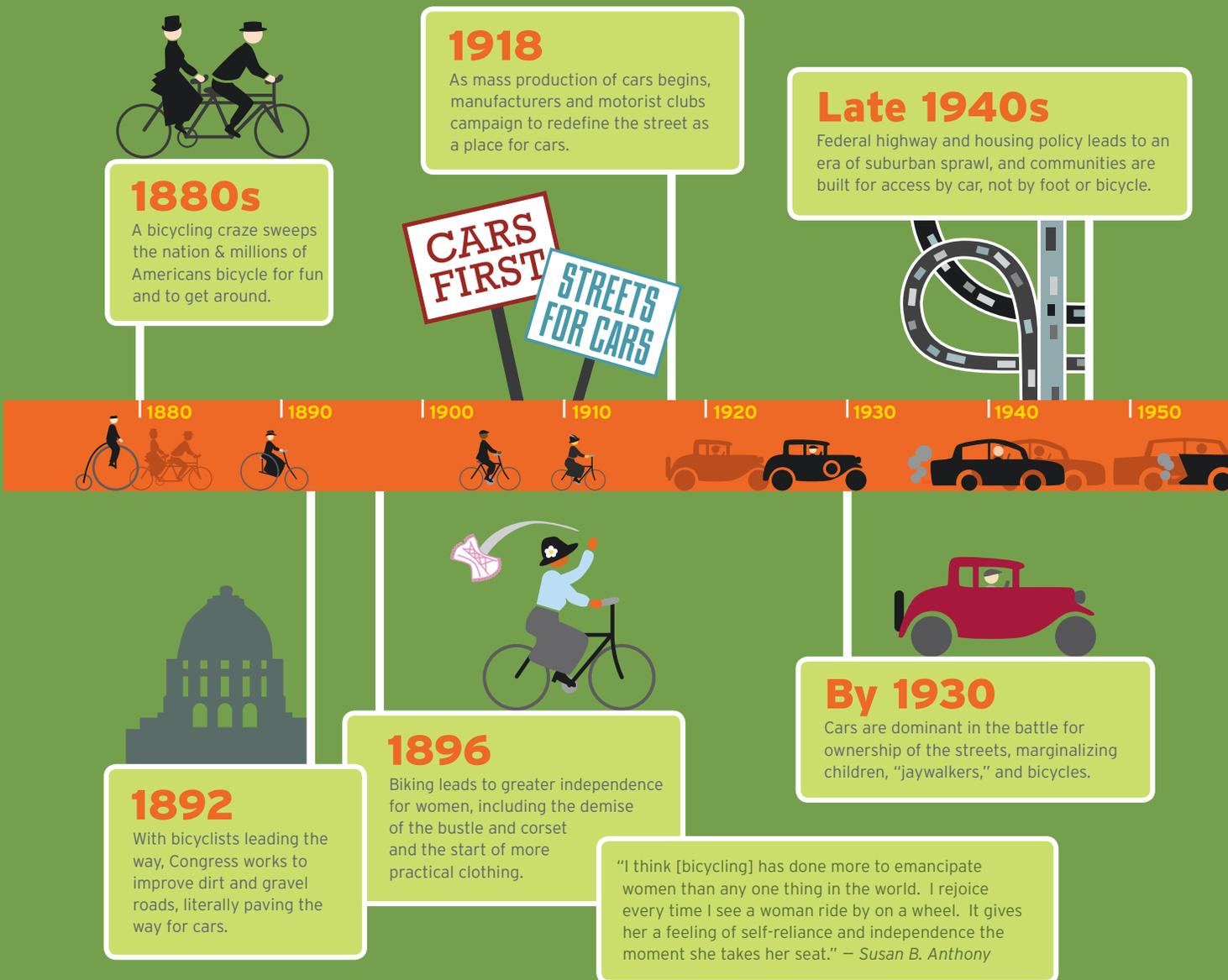
“I have traveled all over this country in the past 14 months, and everywhere I go people want better [transportation] options. Options that offer reduced greenhouse-gas emissions. Options that offer reduced fuel-consumption. Options that offer better health. Options that bring communities together.”

Former US Secretary of Transportation,
Ray LaHood¹⁰

BICYCLING: AN AMERICAN TRADITION

As more and more Americans are rediscovering the benefits of bicycling, it is worth remembering that bicycling has a long history in the United States. More than one hundred years ago, a bicycling craze swept across the country with the advent of the modern bicycle. In the 1880s, millions of Americans exalted in the mobility that affordable bicycles provided.

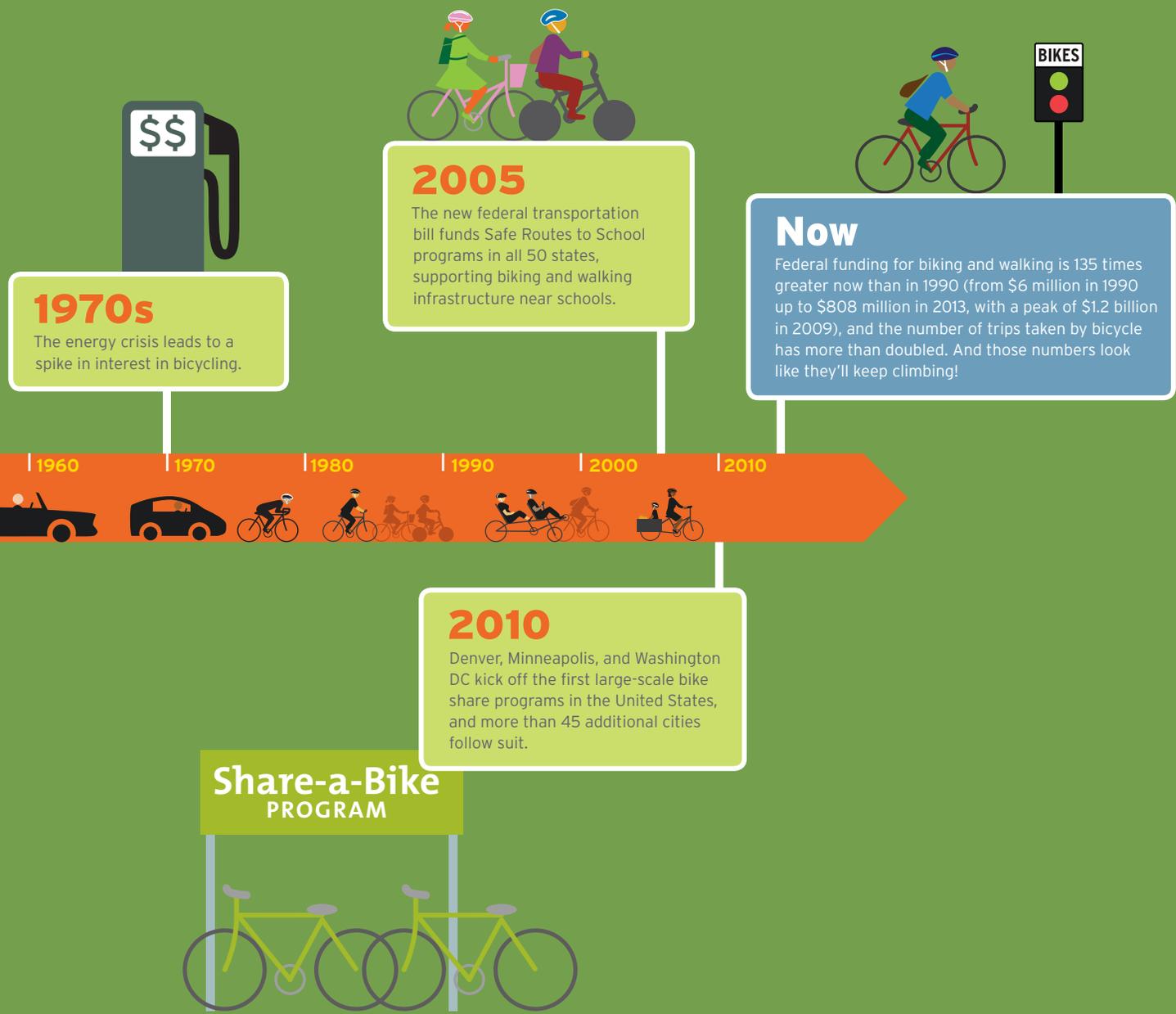
Bicycle social clubs were popular, along with bicycle track racing on oval-shaped cement tracks called velodromes.¹¹ Soon, bicycling organizations started lobbying for the paving of dirt and gravel roads to make bicycling easier, literally paving the way for the automobile.¹² But once cars began to be mass produced, car manufacturers and motorist clubs led



campaigns to redefine the street as a place for cars, not bicycles or pedestrians, and bicycles became relegated to the status of a toy for children.¹³

This trend accelerated following World War II, as the federal highway system, supported by federal housing and urban development policies, created an era of suburban sprawl, and communities were

designed around the automobile, with little regard for people biking or walking. In the early 1970s, the oil crisis ignited renewed interest in bicycling, but in the absence of policy change and investment in infrastructure, interest eventually waned.





“Biking has always been part of my life. However, it wasn’t until I became president [of an advertising agency] that I discovered that biking is also good for the bottom line. During the past few years, our agency has steadily added infrastructure and other ways to make it a cinch to bike, walk or run to work Sure, these changes were the right thing to do. But a funny thing happened along the way: Our employees are healthier, happier and more productive. We’re attracting some of the best talent in the industry. And, most important, we’re attracting new and exciting clients to fuel the bottom line.”

Christine Fruechte, CEO of Colle+McVoy²⁶



“As the number of bicyclists and bicycle trips in Wisconsin increases, so does the impact of bicycling on our state and local economies.... [We now know] what we’ve suspected all along: that our investments in bicycling and transportation in general generate significant returns in the form of public health and safety, economic development and job growth.”

Governor Jim Doyle of Wisconsin (introducing report on economic benefits to Wisconsin related to bicycling, which exceeded \$500 million not including tourism)²⁷

Multiple factors underlie this bicycling renaissance. Many people who bicycle are motivated by an appreciation of how bicycling can improve individual health and quality of life. Local communities are investing in bicycling because they see how bicycling assists local businesses, protects public health and the environment, creates vibrant communities, and strengthens budgets. The benefits of bicycling include the following:

HEALTH: Numerous studies have shown that “active transportation” – travel by bicycle, walking, or similar means – supports better health. Active transportation provides people with a convenient opportunity to engage in aerobic, low-impact exercise while simultaneously accomplishing the tasks of daily living, such as commuting to work or taking care of errands. Physical activity is key to good health, but Americans aren’t getting enough. Adults who bicycle enjoy lower weight and blood pressure, and are less likely to become diabetic.¹⁴ These benefits show up in state-by-state statistics as well, as states with the highest levels of bicycling and walking have the lowest rates of obesity, high blood pressure, and diabetes.¹⁵ Biking supports long-term health too – adolescents who bicycle are 48 percent less likely to be overweight as adults.¹⁶ Bicycling also contributes to health in other ways. Poor air quality causes a range of health problems, from asthma to cancer, and bicycling reduces the vehicle emissions that are prime contributors to air pollution.¹⁷ Moreover, physical activity has benefits beyond just physical health; it is linked to higher cognitive functioning and greater emotional well-being, and can help prevent mental health disorders.¹⁸ In other words, regular physical activity such as bicycling helps people think better and feel better.

LOCAL BUSINESSES: Bicycling is good for local business. Unlike drivers, people bicycling travel at a speed that allows them to slow down and interact with their surroundings, making them more likely to stop, shop, and explore an area. Research concludes that “bicyclists riding through town will stop and spend money.”¹⁹ In fact, multiple studies show that people who visit shopping districts by bicycle spend more on a weekly basis than those who visit such districts by car.²⁰ After New York City installed protected bicycle lanes on 8th and 9th Avenues in Manhattan, retail sales for locally-based businesses on 9th Avenue increased up to 49 percent, compared to a 3 percent average increase in the rest of the borough.²¹ The overall economy in Wisconsin has significantly benefitted from investments in bicycling.²² In Davis, California, shops along major bicycling routes rent at a premium because people bicycling bring in so much business.²³ Employers can also benefit when employees bicycle to work. One employer in Minneapolis, Minnesota, reduced health care costs 4.4 percent after offering incentives to employees to commute by bicycle.²⁴

STATE AND MUNICIPAL BUDGETS: Bicycling can provide two types of benefits for state and municipal budgets: higher revenues and lower costs. On the revenue side, bicycle friendly shopping districts can yield higher sales tax revenue. In Madison, Wisconsin, for example, sales tax revenue increased 3 percent in shopping areas in which new bicycle racks were located.²⁵

Bicycling also enhances transit revenue, because people who would otherwise be deterred from public transit, due to long distances between transit stops and destinations, may find public transit a viable option when combined with a bicycle. As a result, bicycling has the potential to improve the finances of public transit systems. In addition, homes located near bike routes or in bike friendly communities show higher property values, providing communities with a stronger tax base.²⁸ Strong bicycling infrastructure has also been shown to attract new development, businesses, and skilled employees, further contributing to the tax base.²⁹

On the cost side, bicycling reduces expensive street repairs, since bicycles cause virtually no wear and tear on roads.³⁰ Indeed, skyrocketing asphalt costs have become a serious challenge for governments operating with limited resources.³¹ Replacing car trips with bicycling trips can ease congestion for motorists, decreasing the pressure on local governments to build costly new roadways or expand existing roads. Because gas tax revenues do not cover even half of the cost of new roadways, lessening the amount of construction is beneficial for general funds.³²

QUALITY OF LIFE: Because people bicycling travel more slowly than cars and can easily engage with their community, bicycling facilitates more social contact and lively, thriving neighborhoods. Not surprisingly, bicycle ridership is typically associated not only with vibrant neighborhoods, but with a community's livability rating.³³ Where traffic is congested or parking is scarce or expensive, bicycling saves time and money.³⁴ And, for most people, bicycling is fun.

TRANSPORTATION EQUITY: While often overlooked, transportation costs and challenges are a significant aspect of poverty.³⁵ Transportation is necessary for basic life functions, including finding and keeping jobs, accessing medical services, getting to school, obtaining food, and carrying out many other requirements of daily life. The cost of motor vehicle transportation, generally the second largest household expense after housing, can be a significant burden for low-income households. In 2011, the average cost of operating a car (not including the cost of the vehicle itself) was close to \$9,000 per year – almost 20 percent of the median family income, and an even higher percentage of income for low-income families.³⁶ These costs make car ownership prohibitive for many low-income families. While 96 percent of middle or upper middle income families own cars, the rate of car ownership among welfare recipients is under 40 percent, and perhaps as low as 20 percent.³⁷ Similarly, 20 percent of older adults do not own cars.³⁸ Disparate access to cars also falls more heavily on people of color. Nineteen percent of African-Americans and 14 percent of Latinos lack access to cars, compared with only 5 percent of whites.³⁹ Frequently, public transportation is not a practical alternative. Because of long-term underinvestment and sizable budget cuts to public transit, bus and rail service to many destinations is inadequate and regular fare hikes have made public transit increasingly expensive.⁴⁰



“Biking is definitely part of our strategy to attract and retain businesses in order to compete in a mobile world.”

Minneapolis Mayor R.T. Rybak⁴¹



“Cities that want to shine are building... better bike facilities as part of a suite of assets that attract business. And they find that bike infrastructure is cheap compared to new sports stadiums and light rail lines, and can be done much faster.”

Martha Roskowski, Director Green Lane Project, Bikes Belong Foundation⁴²

Because unreliable transportation is a common cause of job loss for low-income families, perpetuating poverty, policies that support bicycling as a form of transportation can advance social justice and economic opportunity. Bicycles are reasonably reliable and far more economical than cars. They can be purchased relatively cheaply, do not require gasoline or insurance to operate, and can be maintained much more affordably.⁴³ A survey in San Francisco found that although only 12 percent of low income women owned cars, 34 percent owned bicycles – but they didn't feel safe riding them without additional bicycle infrastructure.⁴⁴

TRANSPORTATION FOR YOUTH, OLDER ADULTS, AND OTHER NON-DRIVERS:

Bicycling also offers an important transportation alternative for people who don't drive for other reasons. Children and teens too young to obtain a driver's license can use a bicycle to travel to school, jobs, extra-curricular activities, and appointments. Also, many older adults lack cars or no longer feel comfortable driving, but are still able to bicycle. Other adults may not be able to drive because of medical restrictions. Individuals who have suffered a brain injury, for example, may be precluded from driving (or find it uncomfortable), yet be able to bicycle.⁴⁵ Others may have had their licenses suspended or revoked.

Bicycling also provides an alternative for people who choose not to drive. In recent years, more young adults have chosen to drive less for a variety of reasons, including higher fuel prices, additional licensing requirements, more opportunities to socialize via social media networks rather than in person, and changing values.⁴⁶ The number of miles driven by people under 30 has dropped by 23 percent between 1994 and 2009, while the general public's driving increased by 9 percent.⁴⁷

INDIVIDUALS WITH DISABILITIES: Recent advances in the area of "adaptive bicycles" have made bicycling an important source of physical activity and independence for many people with disabilities.⁴⁸ Adaptive bicycles are available for adults and children who face physical challenges such as difficulty balancing or poor lower body strength. Specially designed bikes compensate for challenges with balance and allow people who have lost a foot or limb to bicycle.⁴⁹ Other bicycles are recumbent, allowing a person to recline in a chair-like seat and power the bicycle with hand pedals.⁵⁰ For many individuals with disabilities, bicycling can open up vital new opportunities for physical activity and mobility. As an important source of physical activity, bicycling can also help improve mental health and mood disorders.⁵¹

THE ENVIRONMENT: Gasoline-powered vehicles are one of the largest emitters of greenhouse gases, which are linked to rising global temperatures and climate change. Since bicycles do not emit air pollutants, shifting to bicycle transportation saves nearly one pound of carbon dioxide emissions for every mile.⁵² Gas-powered vehicles also emit nitrogen oxide, a cause of acid rain, which harms fish, pollutes lakes and streams, and damages trees.⁵³ Bicycling is particularly beneficial for air quality because people are most likely to substitute bicycling for driving when traveling short distances



"For some reason not fully understood, some people with Parkinson's disease can ride a bike, but have trouble walking and balancing. A friend couldn't drive anymore and had to move into town, but still had trouble getting around walking. Got her to try a three-wheeler, and soon she was all over town with that thing. It was a great sense of freedom for her and she loved the exercise."

Tim Young, Wyoming Pathways

(less than three miles), and short trips are responsible for a disproportionate share of polluting emissions.⁵⁴ Substituting bikes for cars during congested peak commute hours has a similar impact, since stop-and-start driving is particularly emission-intensive.⁵⁵

LESS DEPENDENCE ON FOSSIL FUELS: Bicycling also reduces dependence on fossil fuels, which creates more stability for the US economy and foreign policy.⁵⁶ Replacing a moderate number of short motor vehicle trips with bicycling and walking could save approximately 2.4 billion gallons of oil each year; a more ambitious number of replaced trips could save as much as five billion gallons.⁵⁷

In short, bicycling provides substantial benefits for individuals, businesses, government budgets, public health, and the environment.⁵⁸ Yet bicycling infrastructure is inexpensive compared to the cost of building new roads and freeways. A look at Portland, Oregon, illustrates this fact. Portland is widely regarded as having one of the best bicycling infrastructure systems in the country, but the total amount spent on its bicycle friendly infrastructure was roughly equivalent to the cost of building just one mile of a four-lane urban freeway.⁵⁹ Bicycling provides enormous benefits for a low cost.

BICYCLING'S TREMENDOUS POTENTIAL FOR GROWTH

While the many benefits of biking have helped inspire a bicycling resurgence over the last 20 years, bike trips still make up only a very small fraction of all trips in the United States – roughly 1 percent nationally (up from 0.6 percent in 1977).⁶⁰ Yet a substantial number of trips currently made by cars are within easy biking distance. Studies show that 28 percent of all car trips are one mile or less, and 40 percent are two miles or under.⁶¹ Moreover, around 40 percent of commuters travel five miles or less to work.⁶²

An international view reveals that much higher bicycling rates are achievable. In Curitiba, Brazil, 5 percent of trips are by bicycle; in Tokyo, 14 percent are; in Beijing, 32 percent are. In Europe, even less bike-oriented countries like Great Britain have rates that are double or triple the American rate. The Netherlands and a few other countries have rates as high as 26 percent, and many are in the mid-range of 7–10 percent, including Sweden, Austria, and Germany.⁶³

Lower bicycling rates in the United States reflect the fact that many obstacles deter would-be bicyclists and hamper local governments seeking to make their communities more bike friendly. These obstacles include the widespread lack of bike friendly infrastructure (such as bikeways and bike parking), which contributes to concerns about traffic safety and bicycle theft. Distance from destinations and sprawling development patterns also discourage bicycling. In addition, existing codes and laws can hinder bike friendly goals. Other barriers include lack of access to bicycles, lack of available funding for bicycle infrastructure and programs, and social and cultural barriers.⁶⁴

THE LEAGUE OF AMERICAN BICYCLISTS' BICYCLE FRIENDLY AMERICA PROGRAM

Recognition can be a key factor in encouraging communities to become more bicycle friendly. The League of American Bicyclists' Bicycle Friendly America Program awards qualifying communities, businesses, and universities with ratings that range from bronze to diamond, to commend them for making significant progress towards creating a safe and welcoming environment for bicycling. Bill Nesper, who directs the Bicycle Friendly America program, explains, "At its core, the BFA program sets a standard and presents a way for communities, businesses, and universities to make bicycling a real option for people of all ages and abilities. This program builds a true partnership between advocates and decision makers to take action on tried and true bicycle friendly policy solutions."

Over the past 10 years, the program has worked with 600 applicant communities and recognized the achievements of 242 different communities throughout the United States. To receive recognition, communities must go through a stringent application process, demonstrating achievement in five different categories. The program not only provides recognition for the strides that communities have made, but also gives applicants a roadmap to further improve bicycling in their communities. For more information, go to www.bikeleague.org.

Countries with high biking rates bring an integrated set of bicycle friendly policies, laws, and infrastructure to bear on these obstacles. This approach works equally well in the United States. In fact, American cities that are taking this approach – cities such as Portland, Oregon; Davis, California; Chicago; New York City; and Washington, DC – have all seen their bicycling rates dramatically rise.⁶⁵ From 2000 to 2008, for the largest American cities, the bicycle commuter share increased by 70 percent in designated Bicycle Friendly Communities cities (see sidebar), but by only 23 percent in comparable cities that had not invested in bicycling – evidence that investment in policy and infrastructure makes a real difference on the ground.⁶⁶

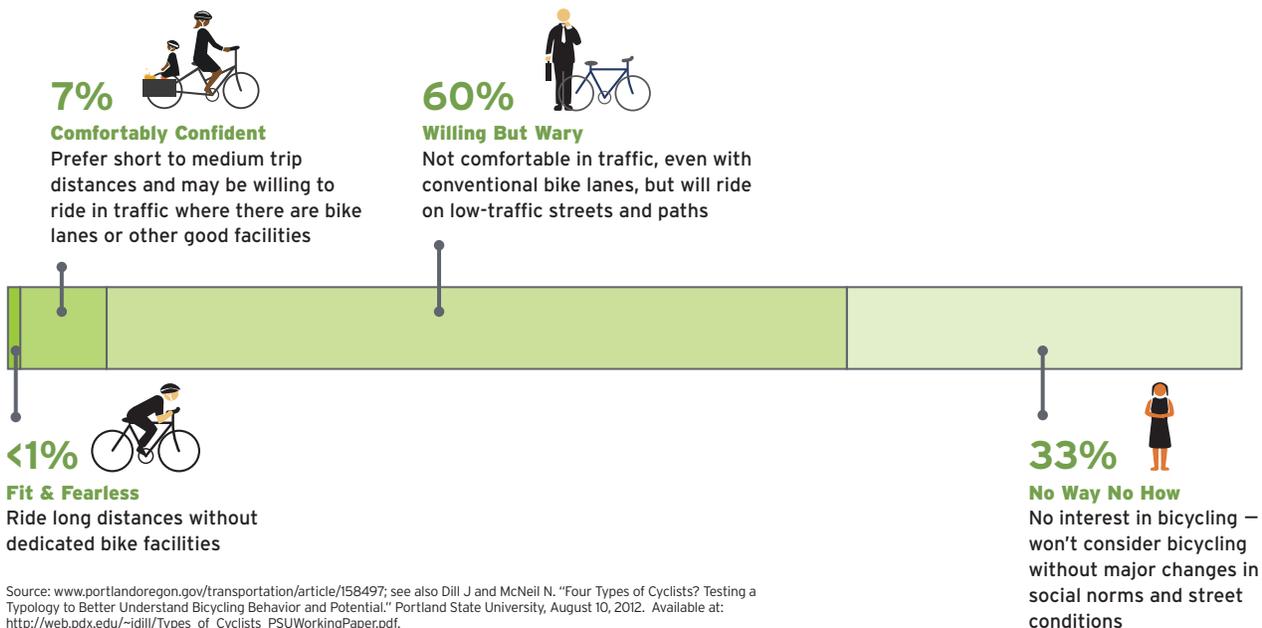
WHO IS BICYCLING AND WHO IS NOT?

To understand how we can increase bicycling rates, we need to understand who is bicycling, who isn't, and why. When it comes to bicycling, people generally fall into one of four categories:

- 1) the “fit and fearless,” who will bicycle under any conditions
- 2) the “comfortably confident,” who are already comfortable traveling by bicycle, but who may increase their amount of riding for transportation if improvements occur in bicycle-oriented facilities and conditions
- 3) those who are unlikely to ever consider riding a bicycle for transport (the “no way, no how” group)
- 4) the “willing but wary,” who are currently hesitant to use a bike for transport due to various obstacles, but for whom bike friendly policies and robust infrastructure can make a substantial difference.⁶⁷

Four Attitudes Toward Transportation Bicycling

Percentages based on data from Portland, Oregon



Source: www.portlandoregon.gov/transportation/article/158497; see also Dill J and McNeil N. "Four Types of Cyclists? Testing a Typology to Better Understand Bicycling Behavior and Potential." Portland State University, August 10, 2012. Available at: http://web.pdx.edu/~jdill/Types_of_Cyclists_PSUWorkingPaper.pdf.

According to a study in Portland, Oregon, a significant majority of residents – 60 percent – fall into the “willing but wary” category, which is heavily weighted toward women, youth, and older adults.⁶⁸ To achieve meaningful increases in bicycling, we need to address the barriers that cause concern among this group.⁶⁹

We also need to better understand how these different categories are composed. Bicycling rates and habits vary significantly among demographic groups in the United States. Women in the United States, for example, only bicycle one-third as much as men, and most of the recent growth in bicycling rates has occurred among male riders.⁷⁰ Given the size of the gender gap, obstacles deterring women from bicycling must be addressed if overall bicycling rates are to substantially increase. Data show that the countries with the highest ridership rates, such as Denmark, the Netherlands, and Germany, have virtually eliminated, or in some cases reversed, the gender gap.⁷¹ The same pattern occurs across cities: where the gender gap decreases, overall ridership rates increase.⁷² This has led some commentators to deem the percentage of women riding as a key indicator of the presence of factors that support bicycling for the general population.

While the cause of the American gender gap has not been definitively studied, and many factors affect women’s bicycling rates, available research indicates that safety issues are a significant impediment to women bicycling. Overall, women show higher levels of concern about safety than men.⁷³ Thus, improving bicycle safety is an important strategy for reducing obstacles that deter women from bicycling.⁷⁴ Surveys also show that, as a whole, women feel less confident bicycling and enjoy bicycling less. Bicycling education and promotion among children and adults may increase confidence and appreciation for bicycling.⁷⁵

In contrast, overall bicycling rates do not appear to vary significantly by racial group.⁷⁶ Some data suggest that recent immigrants, Latinos, and whites have the highest bicycling rates, but bicycling trips make up less than 2 percent of all trips for all racial groups.⁷⁷ Growth in bicycle ridership appears to be occurring most rapidly among African-Americans and Asians, with Latinos and whites following.⁷⁸ In communities of color and low-income communities, bicycling is sometimes negatively viewed, and may be seen as an unfashionable activity, a sport for affluent whites, or a mode of last resort for those who cannot afford a car or who have lost their license for driving under the influence.⁷⁹ Thus, targeted outreach may be an important component of increasing bicycling in communities of color. A number of organizations around the country are already dedicated to this goal.⁸⁰

Police harassment of people of color riding bicycles can also be an issue.⁸¹ In Eastpointe, Michigan, for example, a lawsuit was successfully settled after it was shown that a local police department had a policy of stopping black youth on bicycles.⁸² Ensuring that communities of color do not experience police harassment is an important component of increasing bicycle ridership.



“The Mujeres en Movimiento program came from our core value of inclusiveness. WE realized that many Latina women weren’t being engaged in cycling because the literature wasn’t in Spanish. Furthermore, the majority of literature and photos out there were of white women in spandex, so how do Latina women picture themselves as cyclists if the photos are telling them they are not?”

Liz Jose, Founder, WE Bike NYC⁸³



Improving bicycle safety is an important strategy for increasing the number of women bicycling.

A SAMPLING OF ORGANIZATIONS FOCUSED ON BICYCLE RIDERS OF COLOR

Black Women Bike

CicLAvia SouthEast LA/Southeast Bicycle Alliance

Cycles and Change

East Side Riders

Local Spokes: Lower East Side and Chinatown Bicycling Coalition

Los Ryderz

Major Tyler Bicycling Club of Minnesota

Milwaukee Bicycle Works

Mississippi Low-Income Empowerment Initiative for Livable Communities

Multicultural Communities for Mobility

Ovarian Psycho-Cycles

Red, Bike and Green

Richmond Spokes

Seattle Bike Justice Project

The National Brotherhood of Cyclists

Communities of color also experience higher injury and fatality rates for those bicycling, underscoring the need for equitable availability of safe infrastructure in all communities.⁸⁴

Bicycle mode share remains fairly constant among all income levels. The purpose of trips, however, varies by income, with the percentage of recreational trips rising, and the percentage of utilitarian trips falling, as income increases.⁸⁵

Population density is a major factor. Rural and suburban residents are much less likely to bicycle than urban residents.⁸⁶ Destinations are generally closer in cities, making bicycling more convenient, and bicycle friendly cultures are more likely to exist. However, as demonstrated by the numerous examples provided from around the country, suburban and rural areas can also substantially increase bicycling rates with a carefully tailored and coordinated set of policies.

Finally, bicycling rates vary significantly by region. Western states have the highest bicycling rates while in Southern states, from Texas up to North Carolina, bicycling rates are extremely low.⁸⁷ However, climate is clearly not a material factor in bicycling rates.⁸⁸ Two of the coldest states, Alaska and Montana, have some of the highest commuter bicycling rates.⁸⁹

From this overview of the benefits, obstacles, and demographics of bicycling, we proceed to a discussion of how policy can increase bicycling rates.

CHAPTER TWO: THE ROLE OF POLICY IN INCREASING BICYCLING



CHAPTER TWO: THE ROLE OF POLICY IN INCREASING BICYCLING



Safe and highly visible bike lanes influence people's perception that bicycling is a normal and expected behavior.

Communities around the country are taking up the challenge to become more bicycle friendly and less auto-dependent. In 2010, 64 percent of the largest cities in the United States had formal goals to increase bicycling; by 2012 the percentage had jumped to 90 percent.⁹⁰ Many jurisdictions, however, may not be aware of the multitude of ways that local and state policy can help achieve the goal of increasing bicycling rates. Indeed, policy in areas as diverse as traffic law, zoning, school curriculum, road design, and taxation can have an impact on bicycle ridership.

This guide provides an overview of the many tools jurisdictions can employ to develop a comprehensive and coordinated set of bicycle friendly policies at the state and local level. Together, such policies can play a critical role in overcoming obstacles to bicycling, creating bicycle friendly communities, and increasing bicycle ridership.⁹¹

What do we mean when we say policy? A policy is a written commitment by a governmental entity that has some level of enforceability. The quintessential policy for our purposes is a formal law, but policies can also take other forms. They can be regulations, resolutions, or contracts, which may or may not be as enforceable as laws. Policies can also include internal agency protocols, which can be very effective, even if not enforceable. However, the general “policy statements” found in many transportation and community planning documents generally function as aspirations or goals, rather than specific policy directives.

WHY POLICY?

Why focus on policies related to bicycling, instead of simply promoting educational campaigns to convince people to bicycle? While appeals to change personal behavior can be an important supplement to policy, we focus on laws and policies because they are generally more effective in creating lasting change in people's behavior, and more sustainable from a financial and a practical perspective.

Policy is an effective way to change behavior because of a concept known as social norm change.⁹² People's actions are highly influenced by what they view as normal, expected behavior.⁹³ People understand what is normal according to cues in the physical world and the social expectations of both peers and strangers. Trying to persuade people to make a conscious decision to alter their behavior is an uphill battle. Even when people accept the message and desire to behave differently, it can still be very difficult to actually modify

behavior and sustain that change.⁹⁴ Thus, campaigns exhorting people to eat healthier foods and exercise more are not usually enough, by themselves, to achieve significant changes in behavior.⁹⁵ In contrast, with social norm change, the behavior of a large population of people can be transformed because social and environmental cues and reactions encourage and reward healthy decisions, while discouraging unhealthy ones.

Cigarette smoking rates illustrate how this process works. In the 1970s, smoking was common and accepted behavior throughout the United States. Smokers were welcome everywhere, including restaurants, bars, workplaces, and the like. But over the next 30 years, changes in the law altered the environment so smokers were excluded from many public areas and workplaces. These policy changes, along with other factors, led to a wholesale reversal of the social acceptance of smoking.⁹⁶ Smoking went from being perceived as an acceptable personal choice, widely accommodated by workplaces and public venues, to being viewed as an unhealthy and somewhat repellent activity that could be conducted only in limited locations. Smoking rates fell dramatically and thousands of lives were saved. The state of California, which took forceful action to de-normalize smoking, has saved \$86 billion dollars to date.⁹⁷

The overall lesson is that it is often more effective to change people's behavior by changing the environment around them, rather than just trying to influence their personal beliefs.⁹⁸ As a result, policy can have an enormous impact on bicycling levels. States and local jurisdictions that do not adopt and implement bike friendly policies generally see little or no rise in bicycling, while those that do implement such policies experience substantial increases.⁹⁹ Significantly, many European cities now enjoying high bicycling rates historically had much lower bicycling rates. With a mix of policy and programs, these cities overcame their auto-centrism, achieving bicycling rates now in the double digits.¹⁰⁰

In short, policy plays a critical role for any jurisdiction seeking to increase bicycling, because it creates the conditions that support bicycling. Over time, such policies can establish a new social norm in which not just a daring minority, but the solid majority of residents see bicycling as a practical and appealing way to travel short distances. This is not to say that education designed to affect beliefs plays no role. To the contrary, particularly when institutionalized through policy, education plays a key supplementary role in transforming attitudes and helping to shift social norms.

THE KEY STEPS TO MAKING POLICY WORK

So how do communities go about making policies that successfully create change? A multi-step process is involved.

First, policymakers and stakeholders must identify the types of policies they wish to pursue to make bicycling more safe, convenient, accessible, and socially acceptable in their community. Reviewing this guide will help communities undertake this important first step. The process of developing and adopting a bicycle plan (discussed in Chapter 9) can build community support and help communities identify which policies are most appropriate for local needs and might realistically be adopted.

Second, potential policies must be tailored to local needs. After identifying policies that are of interest, communities can find models (such as those developed by ChangeLab Solutions for bicycle parking, complete streets, and other topics, many of which are referenced in sidebars), or look to communities that have passed such policies.¹⁰¹ This guide includes references to many such examples. Policy language should then be crafted to provide a strong policy that appropriately addresses local needs and conditions, and also covers implementation, enforcement, and evaluation. For example, if public education about a new policy will be needed to ensure effective implementation, the policy should include provisions providing such education.

Third, the policies must actually be adopted. At the state level, the legislature can adopt policies by enacting legislation, and state agencies (e.g. the state department of transportation) can adopt policies through regulations, issuance of formal policies, and so on. Similarly, at the local level, the governing body can pass local ordinances and resolutions, and local agencies or departments can adopt formal policies. For many of the policies discussed in this guide, adoption may take the form of simple amendments to existing laws. Communities will need to consider the form of the policy – whether a law, resolution, internal policy, or other approach – as well as the pros and cons that may accompany each form.

Fourth, the policies must actually be implemented and enforced. Otherwise, even the most carefully crafted policies will not create change. Implementation is most likely to be effective when someone is made responsible for carrying out the needed steps. Setting a timeframe and providing sufficient funding are also key to implementation. In most cases, enforcement is the responsibility of a government agency, in which case it is critical that the agency understand the new requirements. Creating the political will to enforce new policies is also crucial, and may sometimes require ongoing campaigns by local organizations. Some policies provide for citizen enforcement, in which case individuals in the community can set the enforcement process in motion.¹⁰²

Fifth, the policies should be evaluated, assessed, and amended or supplemented as needed. This can be built into a policy itself by including requirements for data collection and follow up reports, such as written staff

TIP

Model implementation and enforcement language for local ordinances is available from ChangeLab Solutions: www.changelabsolutions.org/publications/implementation-enforcement-clauses

reports or presentations to the legislative body. By regularly assessing the real effects of policies and modifying them to make them more successful, we can learn from experience and more effectively use limited resources to make bicycling a safe, practical, and convenient transportation choice. While all laws benefit from this process, reevaluation and amendment are particularly important to bicycle friendly policy, since our knowledge about what works is still developing.



It is critical that policymakers and stakeholders identify the types of policies they wish to pursue to make bicycling more safe, convenient, accessible, and socially acceptable in their community.

**CHAPTER THREE:
THE FOUR REQUIREMENTS — AN
ORGANIZATIONAL FRAMEWORK**



CHAPTER THREE: THE FOUR REQUIREMENTS — AN ORGANIZATIONAL FRAMEWORK

As we described in Chapter One, there are people who will ride bicycles despite all obstacles, and people who will refuse to ride bicycles under any circumstances. And then, there are the vast majority of people: people who will ride bicycles if the barriers to bicycling — lack of safety, convenience, and access — can be overcome. To increase levels of bicycling, communities need to focus bicycle friendly policies on the “willing but wary.” In addition, members of the “comfortably confident” category do currently bicycle for some trips, but are likely to increase their bicycling trips as the barriers diminish.

What prevents people from bicycling? There are four key requirements that must be met for someone to choose to make a trip by bicycle.¹⁰³ If any one of the requirements is not satisfied, a person will choose another mode of transportation, if he or she has a choice. These requirements are all important, and each one is independently necessary. In most communities, significant obstacles exist in all four areas.

REQUIREMENT 1: SAFETY

Travel by bicycle must feel sufficiently safe. Safety concerns, particularly the fear of riding in traffic, are often a primary obstacle for those in the “willing but wary” group, especially women, youth, and older adults.¹⁰⁴ Crime can also be a significant barrier, especially in neighborhoods with gang activity or high crime rates, and this concern may be a particular barrier for women and in communities of color. Addressing the issue of crime in detail, however, is not the focus of this report.

REQUIREMENT 2: CONVENIENCE

Travel by bicycle must be sufficiently convenient. Convenience requires that the trip must not take too long and there must be a secure place to park a bike at the destination. If riding to work makes people sweaty, they need a place to shower. Travel by bicycle must be as, or more, convenient than other travel methods in terms of time, money, and effort.



Fit & Fearless

Ride long distances without dedicated bike facilities



Comfortably Confident

Prefer short to medium trip distances and may be willing to ride in traffic where there are bike lanes or other good facilities



Willing But Wary

Not comfortable in traffic, even with conventional bike lanes, but will ride on low traffic streets and paths



No Way No How

No interest in bicycling — won't consider bicycling without major changes in social norms and street conditions

WHAT PEOPLE NEED TO BICYCLE – THE FOUR REQUIREMENTS

To create a bicycle friendly community – one that encourages people to take up bicycling and supports those who currently bicycle – there are four requirements:¹⁰⁵



SAFETY

Travel by bicycle is sufficiently safe



CONVENIENCE

Travel by bicycle is sufficiently convenient



SOCIAL ACCEPTABILITY

Travel by bicycle feels socially acceptable and worthwhile



ACCESS

Bicycles are available



REQUIREMENT 3: SOCIAL ACCEPTABILITY

Bicycling for transportation must be viewed as a normal, legitimate, worthwhile activity. If this belief is lacking, most people will not even consider bicycling to their destination. People are most likely to view bicycling as a legitimate transportation option if their built environment encourages bicycling, there is community support for bicycling, and they see peers (friends, neighbors, and coworkers) bicycling to destinations. Some communities and demographic groups already have active bicycle friendly cultures that embrace bicycling as a transportation option, whereas acceptance of bicycling as a form of transportation may be almost nonexistent in other communities.



REQUIREMENT 4: ACCESS

Finally, people must have access to bicycles. If no bicycle is available, a person cannot even consider bicycling. Access issues may be most acute in areas that are low-income or lack bicycle shops. Access issues can also arise, however, when individuals do not have a bicycle with them at their point of origin or when trying to combine bicycle travel with other forms of transit, such as trains, buses, and subways.

The policies in this guide are organized around these four requirements. This framework allows the guide to illustrate how each policy affects the decision to bicycle and demonstrate how different policy tools can work together to encourage bicycling. Policies that primarily affect one requirement may also help to achieve another, of course. A bicycle parking law, for example, is chiefly designed to make bicycling more convenient; it also, however, indirectly helps to normalize bicycling, because bicycle racks in front of businesses signal that bicycling is a legitimate and welcomed form of transportation.

By presenting the policies in light of their ability to address the four requirements, the guide helps policymakers and stakeholders ensure that they are removing obstacles that exist in their community with respect to *each* of the four requirements.

The experience of Austin, Texas, highlighted in the introduction, illustrates this point. In Austin, it wasn't enough just to make bicycling safer by passing a complete streets policy and installing bicycle infrastructure, such as bike lanes and paths. While safe bicycle infrastructure was critical, people also needed shops and workplaces within easy biking distance, and places to safely park a bike upon arrival; amended zoning laws and a comprehensive bicycle parking ordinance achieved these goals. People also needed to know that bicycling was a socially accepted transportation option and they needed

access to bicycles. So Austin established a broad swath of institutions and events to affect these outcomes. By taking this comprehensive approach, Austin created the conditions that allowed bicycling to flourish.

In sum, achieving a successful bicycle friendly community involves creating a set of conditions that make bicycling safe, convenient, acceptable, and accessible enough that people will choose to travel by bicycle. Not surprisingly, studies show that a coordinated package of policies and programs that support and reinforce each other is “the trademark of every city that has succeeded at significantly raising cycling levels and improving safety.”¹⁰⁶



A bicycle friendly community requires all four requirements to be met. When bicycling is safe, convenient, acceptable, and accessible, more people will choose to make a trip by bicycle.

Let's Ride!



Safety

Travel by bicycle is sufficiently safe

APPROACHES INCLUDE



BIKE-FRIENDLY TRAFFIC CONTROL & STREET DESIGN Special bike signals, lanes, and other features keep bicyclists safe



COMPLETE STREETS New and renovated streets are required to accommodate everyone, including bikes, cars, and pedestrians



TRAFFIC CALMING Streets include features like median islands, speed bumps, and roundabouts to reduce speed and other hazards



Convenience

Travel by bicycle is convenient

APPROACHES INCLUDE



BIKE PARKING New housing and commercial developments must have bicycle parking



BICYCLES ON BOARD Bikes can be brought on public transit, and vehicles include storage racks



20 MINUTE NEIGHBORHOOD Plans and zoning codes ensure that everyday destinations (work, school, stores, services) are within convenient biking distance



Access

People have access to bicycles

APPROACHES INCLUDE



BIKE SHARE Affordable programs make bicycles available to people for short trips around town, especially to and from transit



BIKE FLEETS FOR GOVERNMENT Local government agencies provide employees with bikes for short-distance work travel

4 Requirements for a Bikeable Community

To decide to bicycle, people need biking to be safe and convenient. They need access to a bicycle, and they won't bike unless it seems like something normal and worthwhile. Here are a few of the many approaches that can help get people bicycling around town.



Social Acceptability

Travel by bicycle is seen as socially acceptable and worthwhile

APPROACHES INCLUDE



OPEN STREETS Communities designate certain roadways as "car-free" on select days

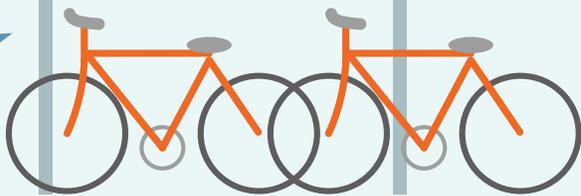


SAFE ROUTES TO SCHOOLS Kids are encouraged to bike and walk to school through education and infrastructure improvements



DRIVERS' ED Bike safety principles and rights are included in traffic school, drivers' manuals, and written license tests

Share-a-Bike
PROGRAM



STREET
CLOSED
TO CARS
EVERY
SAT
& SUN



CHAPTER FOUR: POLICIES THAT MAKE TRAVEL BY BICYCLE SAFER



SAFETY

SAFER BIKEWAYS

Complete Streets

State Bikeway Laws

Road Design Guidelines

Bicycle Friendly Traffic Control Devices (Bicycle Signals, Bike Boxes, and Bicycle Detectors)

Traffic Calming

Road Diets: Retrofitting Existing Roads with Bike Lanes

Multi-Modal Level of Service Standards

ENCOURAGING SAFER DRIVING

Require Safe Passing of Bicyclists

Anti-Harassment Ordinances

Anti-Dooring Protection

Right Hook Turn Protection

Prohibit Obstruction of Bicycle Lanes

Police Training on Bicycle Safety



CHAPTER FOUR: POLICIES THAT MAKE TRAVEL BY BICYCLE SAFER

INTRODUCTION

For most people, the biggest deterrent to choosing a bicycle over a car is concern for personal safety – specifically, fear of motor vehicle traffic.¹⁰⁷ Indeed, the prospect of riding a bicycle in close proximity to fast-moving vehicles weighing 4,000 pounds keeps many of the “willing but wary” population off their bikes. As a recent study found, where bike lanes don’t exist, “traffic play[s] a major role in discouraging bike riders.”¹⁰⁸ Other studies confirm that real and perceived traffic dangers are the main reason that people who bicycle infrequently do not bicycle more often.¹⁰⁹ Although studies show that the health benefits of bicycling exceed the risks, the dangers are nonetheless real.¹¹⁰

Traffic-related safety concerns are a particular deterrent for women, older adults, youth, and people of color, who are more likely to fall within the segment of the population that is “willing but wary” with regard to bicycling.¹¹¹ In a national survey, 26 percent of respondents of color said they would like to bicycle more but worry about safety, compared to 19 percent of white respondents.¹¹² In a survey conducted in Portland, OR, 52 percent of women reported that “too much traffic” was a deterrent, compared to only 34 percent of the men.¹¹³ Safety concerns likely explain, at least in part, the major gender gap in bicycle ridership in the United States.¹¹⁴ Countries where bicycling is safer don’t have a gender gap in bicycling rates.¹¹⁵

What makes bicycling safer? Separation from medium- and high-speed motor vehicle traffic significantly increases safety for people bicycling, and creates a far more comfortable environment for bicycling for people of all ages and skill levels.¹¹⁶ A study in Los Angeles found that the percentage of women riding was twice as high at locations with bicycle infrastructure as those without bicycle infrastructure.¹¹⁷ Investing in better infrastructure can increase bicycling safety and numbers, as shown in four American pilot communities, where bicycling numbers rose in response to significant investments in bicycling infrastructure, while injuries and collisions held steady or decreased.¹¹⁸ Also, slow traffic creates a safer environment for bicycling and walking, and can be achieved through traffic calming measures or by creating bike routes on streets with very low and slow traffic.

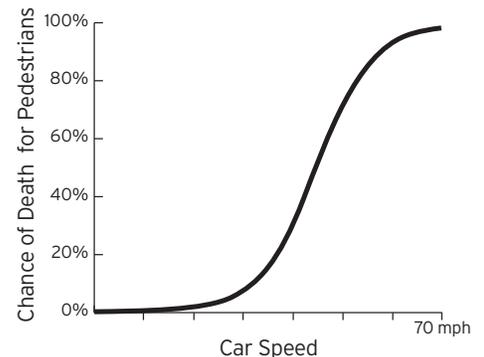


“Survey after survey and poll after poll has found again and again that the number one reason people do not ride bicycles is because they are afraid to be in the roadway on a bicycle. They are generally not afraid of other cyclists, or pedestrians, or of injuring themselves in a bicycle-only crash. When they say they are ‘afraid’ it is a fear of people driving automobiles.”

Robert Geller, Portland Bicycle Coordinator¹¹⁹

Slower Car Traffic Is Safer for Pedestrians Too

As vehicle speed increases, a pedestrian’s chance of surviving a collision decreases.



Source: Richards, D.C., 2010. “Relationship between Speed and Risk of Fatal Injury: Pedestrians and Car Occupants.” Transportation Research Laboratory, Road Safety Web Publication No. 16. Department for Transport: London, UK. <http://assets.dft.gov.uk/publications/pgr-roadsafety-research-rsrr-theme5-researchreport16-pdf/rswp116.pdf>

There are many policies that specifically aim at making streets safer and more comfortable for people on bicycles. These policies fall into two general categories: policies that create safer bikeways, and policies that change drivers' behavior.

STRATEGY: SAFER BIKEWAYS

Just as drivers rely on streets designed for cars to get around safely, people on bikes need streets designed for safe bicycling. State and local governments can encourage biking by creating a network of routes designed to help people bicycle around safely. Providing such routes – bikeways – is the fundamental building block of creating a safe bicycling environment.¹²⁰

Before setting out the policies that support safe bikeways, it is worth describing the different types of bikeways. Currently, bikeways fall into five different categories (with new options emerging as improvements and innovations occur):

- Bike paths
- Basic bike lanes
- Enhanced bike lanes
- Protected bike lanes
- Shared roads

The type of bikeway appropriate in any given location depends on street conditions. Some bikeways are best for streets with little traffic and low speeds, while others are crucial for providing a safer experience where speed limits and traffic volume are high. Additional factors influencing which type of bikeway is better for a given route include whether the street is narrow or wide, whether parallel parking is allowed, and the surrounding landscape.

Bike Paths

Bike paths are off-road, paved pathways. They may be located in parks, along old rail right-of-ways, or adjacent to waterways. They provide people bicycling with the greatest separation from traffic and parked cars, although if not well designed, they can present hazards when people biking emerge from the separated path onto a street with cars. A genuine bike path is limited to people bicycling. In many cases, however, such paths are actually multi-modal paths that are shared with pedestrians, joggers, skaters, and other users, which can significantly reduce the speed at which a bicycle can safely travel.¹²¹

Basic Bike Lanes

A bike lane is a portion of the roadway that is designated, by a stripe of paint and other markings, for exclusive use by bicycles. Bike lanes are generally used on roadways with posted traffic speed limits of 25 mph or higher and a traffic volume of 3,000 or more cars per day.¹²²



A network of routes designed to help people bicycle around safely encourages bicycling.



Bicycle paths allow people to bicycle without contending with the stress of car traffic.

Basic bike lanes are created by using a single solid stripe to set aside a portion of the road solely for the use of bicycles. Studies show that a basic bike lane is superior to no bikeway at all, and can substantially boost ridership.¹²³ Bike lanes, however, still place people bicycling in close proximity to vehicular traffic, leaving many who are willing but wary about bicycling feeling unsafe, particularly on main arterials where traffic is fast moving and cars or buses frequently move in and out of the bike lane. Unless properly designed, bike lanes on streets with parallel parking also subject people bicycling to the risk of “dooring,” which occurs when the door of a parked car is opened immediately in front of a person bicycling, causing a collision.

Enhanced Bike Lanes

The weaknesses of basic bike lanes have led to the emergence of enhanced bike lanes, which employ more paint to provide the bike lane with a bit more visibility and prominence.

Green bike lanes

Green bike lanes are basic bike lanes that are filled in with green paint. They are particularly useful in intersections or conflict zones. The green lanes increase the visibility of the bike lane and make it clearer that bicycles have priority in these zones. Studies have shown that green lanes encourage people bicycling to position themselves in the right place, and both people bicycling and those driving are positive about the effectiveness of green lanes in ensuring awareness of bicycles.¹²⁴ While a relatively new development in the US, green bike lanes are increasingly common around the country.

Buffered bike lanes

Like green bike lanes, buffered bike lanes are an enhanced version of the basic bike lane. They include an additional painted striped area immediately adjacent to the basic bike lane that buffers people bicycling from traffic. They can be one-way or bi-directional. A buffer zone may be placed between the bike lane and traffic, or may be placed between the bike lane and parked cars to provide a door-zone buffer. Buffered bike lanes are in use in at least 15 cities around the country.¹²⁵



Enhanced bike lanes are more visible and prominent.



Protected bike lanes (above) provide a physical barrier between the bicycle lane and traffic and therefore a substantially more comfortable bicycling experience than conventional bike lanes. Shared roads (below) are streets in which bicycles and cars share the traffic lane.

Protected Bike Lanes (Cycle Tracks)

Like other bike lanes, protected bike lanes provide an exclusive space for people bicycling on the roadway. They are fundamentally different, however, because they also provide a physical barrier between the bicycle lane and traffic. This barrier can involve elevating the protected bike lane slightly above the roadway, typically at the level of an adjacent sidewalk (sometimes known as a vertical cycle track), or physically separating the protected bike lane from the car traffic lane with posts, bollards, or parked cars (a horizontal cycle track).¹²⁶ Protected bike lanes can be one-way or bi-directional. Roadways with high speeds, high volume, frequent double parking, or parking lanes with high turnover are particularly good candidates for protected bike lanes.

Protected bike lanes provide a substantially more comfortable bicycling experience than conventional bike lanes.¹²⁷ Studies also indicate that protected bicycle lanes may be dramatically safer than basic bike lanes, with only one-ninth the risk of comparable streets.¹²⁸ Protected bike lanes, along with buffered bike lanes, are the predominant bikeways used in cities in the Netherlands and Denmark, with their high levels of bicycling.¹²⁹ Protected bike lanes are currently in use in at least 15 cities in the United States, including New York City, Austin, Long Beach, San Francisco, Seattle, Chicago, Missoula, Minneapolis, and Portland, Oregon.

Shared Roads

Shared roads are streets in which bicycles and cars share the traffic lane and there is no exclusive space set aside for bikes. Most roads in the United States currently operate as shared roads. There are two types of shared roads, however, in which the streets are given special treatments to make a safer and more comfortable environment for people bicycling.

Bike Boulevards/Neighborhood Greenways

Bike boulevards are low-traffic, low-speed residential streets that have been optimized to make bicycling comfortable via relatively minor modifications that increase bicycle safety and convenience and discourage car traffic. Infrastructure modifications to reduce traffic include roundabouts, bulb-outs, traffic diverters, landscaping, and other traffic calming features. Bicycle boulevard intersections are often optimized for continuous bicycle movement by moving stop signs from the bicycle boulevard onto cross-streets. Finally, bike boulevards include special signage and pavement markings, such as sharrows (see below), that clearly notify drivers and bicyclists that the route is a bike boulevard.¹³⁰ Jurisdictions can use bike boulevards to create a network of routes and to connect to other bikeways, such as conventional and protected bike lanes. One study comparing bicycle boulevards with nearby arterials in Berkeley, California, showed that bicycle-car collision rates were two to eight times lower on bicycle boulevards than on parallel, adjacent arterials.¹³¹

Portland, Oregon, has taken bicycle boulevards to a new level. Portland has redesigned bike boulevards to also address the needs of pedestrians and stormwater drainage, adding landscaping and pocket parks, and dubbing them neighborhood greenways. The new name is intended to expand the program's appeal and emphasize the greenways' broader use and benefits.¹³² Portland anticipates that by 2015, 80 percent of households will be within half a mile of a neighborhood greenway.¹³³ San Francisco and Seattle have also embraced neighborhood greenways.

Bike boulevards and neighborhood greenways tend to be very comfortable environments for those who are comfortably confident and willing but wary about bicycling. However, two caveats are in order. First, as a general matter, creating a useful network of bike boulevards will require some crossing of large arterials. Good intersection treatments are particularly important at these locations to provide safe and comfortable crossings. Second, despite the general utility of bike boulevards, they may not be a good approach for high-crime areas or areas with significant gang activity. In these neighborhoods, people may be safer from crime and better able to bicycle to their destinations if they stay on main arterials, where there are more people keeping an eye on things. Ensuring that arterials have adequate bicycling infrastructure, such as enhanced and protected bike lanes, may be a better way to support bicycling in these environments.

Sharrows

Sharrows (a combination of the terms "share the road" and "arrow"), or shared lane markings, are road markings that consist of a bicycle stencil and double chevron (a double inverted V).¹³⁴ Their preferred placement is in the center of the traffic lane. Greenbacked sharrows are sharrows that are placed on a painted green background, which significantly increases their visibility. The purpose of sharrows is to alert drivers that bicycles may be present and remind them of the need to share the road. Sharrows have been shown to improve interactions between bicycles and cars by decreasing aggressive behavior by motorists and increasing passing distance and following distance.¹³⁵ They are also intended to identify where on the road people bicycling should position themselves so as to avoid the door zone.¹³⁶

Because sharrows are relatively new, and many drivers and bicyclists are not familiar with them, explanatory signage may help ensure that they achieve their intended purpose. Useful applications of the sharrow include:

- 1) pavement markings for bicycle boulevards
- 2) filling short gaps in an otherwise continuous bike path
- 3) providing legitimacy for bicycling on streets that cannot accommodate a bike lane.¹³⁷



"In our neighborhood greenway system to date, we have about 45 miles completed. We're averaging about \$141,000 a mile. To give you a sense of that, \$250,000 buys one traffic signal. Building this network is a great value — that's why people continue to support it."

Greg Raisman, Traffic Safety Specialist,
Portland Bureau of Transportation¹³⁸



Sharrows alert drivers that bicycles may be present and remind them of the need to share the road, while providing information about where bicycles should ride.

BICYCLES AND PEDESTRIANS

“[B]icyclists and pedestrians [are] an integral element of the transportation system. In support of this commitment, transportation agencies and local communities should go beyond minimum design standards and requirements to create safe, attractive, sustainable, accessible, and convenient bicycling and walking networks....”

Because of the benefits they provide, transportation agencies should give the same priority to walking and bicycling as is given to other transportation modes. Walking and bicycling should not be an afterthought in roadway design.”

US DOT Policy Statement on Bicycles and Pedestrian Accommodation (March 11, 2010)¹⁴⁶

Sharrows should not be used as a cheap substitute for bike lanes or bike boulevards, and are generally not advised for streets that have speed limits above 35 mph.¹³⁹

State and local policies designed to encourage or require a safe network of bikeways are a critical component of any plan to increase bicycle mode share.¹⁴⁰ State and local jurisdictions can play a key role in improving bicycle safety, and the US Department of Transportation (“DOT”) has strongly encouraged jurisdictions to do so.

POLICY: COMPLETE STREETS

Complete streets policies are one of the most basic, and yet one of the most important, types of policies that communities can adopt to create more bikeways. Complete streets policies set out a fundamental governmental commitment to the principle that streets are meant for everyone, not just cars.¹⁴¹ Because these policies function as a general commitment, they don’t get sidetracked by the details of which streets need bikeways or what technical requirements must change for better street design. Complete streets policies usually have language stating that all new or renovated streets will be designed to provide safe, comfortable, and convenient travel for all categories of users, including pedestrians, bicyclists, people with disabilities, transit users, and motorists.¹⁴²

Complete streets policies provide a key first step for communities that want their streets to become more supportive for people bicycling and walking. More than 450 jurisdictions have adopted complete streets policies in the United States to date.¹⁴³ Complete streets policies are appealing because they present a vision that allows small steps. They move the community in a new direction without requiring that every long-term change be identified at the onset. Nor do they require a major up-front financial investment. What they do require is a shift, looking forward, to incorporating bicycle and pedestrian needs whenever streets are built or work is done on existing streets.

These policies can be adopted at all jurisdictional levels. When adopted by local jurisdictions, complete streets policies focus on changing how roads are built or rebuilt, requiring incorporation of bicycle and pedestrian facilities as part of these projects. For example, in 2008 New Haven adopted a complete streets policy, which led different departments to work together to create a larger vision for a sustainable, reliable roadway system for everyone.¹⁴⁴ When complete streets policies are adopted by states or regional transportation agencies, they not only affect these agencies’ own road-building practices, but also usually change their standards for selecting and funding local projects. One of the earliest complete streets policies was Oregon’s “Bike Bill,” enacted in 1971, which requires local governments to include walkways and bikeways whenever a road, street, or highway is built or rebuilt.¹⁴⁵ More recently, in 2012, the Metropolitan Transportation Commission (the regional transportation

agency for the nine-county San Francisco Bay Area) required all local jurisdictions to pass a complete streets policy to be eligible for transportation funding, which led to the enactment of more than 50 new policies.¹⁴⁷

Communities must think through local needs in drafting a complete streets policy. While a strong commitment to complete streets is crucial, it is also necessary to allow some exceptions to provide flexibility and accommodate other important values, such as historic preservation or environmental concerns. Communities should design a flexible approach to exceptions that ensures accountability by being specific about when exceptions will be granted and provides a process that requires documentation and written approval of a senior official.



Model Complete Streets Policies: ChangeLab Solutions has developed models to help communities adopt strong complete streets policies. Models include local and state laws and resolutions, as well as comprehensive plan language.¹⁵⁴ www.changelabsolutions.org/publications/laws-resolutions-cs

POLICY: STATE BIKEWAY LAWS

States can use their legislative powers to enact a state bicycle program that carries out state-level bicycle planning or that supports local bike planning. Illinois takes the first approach, with the state taking the lead for the development of new bikeways. Emphasizing the “urgent need for safe bikeways” for transportation, the Illinois Bikeway Act makes the state Department of Transportation responsible for developing and coordinating a statewide bikeways program and designating bikeways throughout the state.¹⁴⁸ The agency is authorized and instructed to acquire land and construct bikeways, and also oversees an interagency task force to coordinate efforts.

An alternative approach for states is to facilitate local bike policy. California’s Bicycle Transportation Act of 2009 provided state funding to incentivize local bicycle planning.¹⁴⁹ The Act established as state policy the goal of creating a bicycle transportation system serving the bicycling commuting needs of students, employees, shoppers, and others of all ages. The Act also set up a Bicycle Transportation Account that local jurisdictions could tap to fund bikeways, bicycle parking, and so on. To be eligible for this funding, however, local jurisdictions were required to adopt a bicycle plan complying with specific requirements.¹⁵⁰ Hundreds of California cities have adopted bike plans complying with the California Bicycle Transportation Act.¹⁵¹

North Carolina’s Bicycle and Bikeway Act represents a combined approach.¹⁵² The Act established a state bicycle program to undertake comprehensive bicycle planning and programming for the state. The program takes an active role in developing state bikeways, and also assists with local planning.¹⁵³

BIKEWAYS, GENTRIFICATION, AND COMMUNITY ENGAGEMENT

While providing bicycle infrastructure in communities of color or low-income communities may deliver an important and long-needed service, such projects should be approached with a full understanding of the perspective of neighborhood residents. Oftentimes, these communities have seen their neighborhoods neglected and their efforts to improve transportation infrastructure largely ignored for decades.

At the same time, bikeway projects in urban areas have become associated with gentrification because they are often sited in neighborhoods with growing concentrations of young professionals and artisans — groups who may be enthusiastic about bicycling, but may also be seen as causing higher rents and displacement of long-time residents.¹⁵⁵ As a result, community residents may view new bike lanes suspiciously, as an unwelcome harbinger of gentrification that is designed for the enjoyment of outsiders, not a positive community benefit for long-time inhabitants.¹⁵⁶

Recent projects to build new bikeways in low-income communities of color in Chicago and in Portland, Oregon, illustrate this potential dynamic, underscoring the critical importance of substantial outreach from the earliest planning stages, as well as the successes that can take place with full neighborhood involvement.¹⁵⁷

ANTI-DOORING ROAD DESIGN

Dooring occurs when a driver or passenger swings a car door open directly in front of a person bicycling. (See pages 52–53 for a more complete discussion of dooring.) State and local jurisdictions can use road design to substantially reduce or eliminate the hazard of dooring. Some bikeways (e.g. protected and buffered bike lanes) are inherently designed to avoid the danger of dooring by separating people biking from parked cars and vehicle traffic. For all other bikeway designs, jurisdictions can adopt road design policies that require that

- 1) bike lanes be wide enough to allow people bicycling to comfortably avoid the door zone without riding on the very left edge of the bike lane;¹⁵⁸

- 2) pavement markings indicate the area of the bike lane that falls outside of the door zone;¹⁵⁹ and

- 3) parking lanes be wide enough that car doors can open without intruding onto the bike lane.

The NACTO Bike Guide provides guidance on these issues, recommending that bicycles lanes be a minimum of 6 feet wide and that parking lanes be 8.5 feet wide.

Another way to reduce the danger of dooring is through route choice, by encouraging bicycle traffic to use roads that minimize the danger of dooring – roads with light traffic, no parallel parking, or little turnover of parking.



THE NITTY GRITTY ON ROAD DESIGN STANDARDS

What are the rules that control jurisdictions' ability to adopt bicycle friendly road design guidelines? While federal law requires road designs to comply with a uniform national standard for roads that are part of the National Highway System (which includes the interstate highway system and designated principal roads), states may select their own set of road design guidelines for building and improving other roads.¹⁶⁰ However, federally funded projects are also often required to comply with national standards.¹⁶¹ Many states grant local jurisdictions autonomy over their local roads, so cities and towns are often authorized to adopt local road design guidelines as well.

Standard Road Design: The Green Book

Most states use the same set of road design guidelines (or a variation thereof), entitled "A Policy on Geometric Design of Highways and Streets," which is prepared and periodically updated by the American Association of State Highway and Transportation Officials (AASHTO).¹⁶² These guidelines, nicknamed "The Green Book" (after the color of the cover), traditionally have focused on designing roads to maximize fast auto travel, with little regard for the impact on bicycle or pedestrian travel. For example, the Green Book historically has favored wide street widths to accommodate high-speed traffic, at the expense of people bicycling and walking.¹⁶³ However, more recent editions of the Green Book incorporate more bicycle- and pedestrian-supportive aspects.¹⁶⁴

AASHTO also has a companion guide, the Guide for the Development of Bicycle Facilities, newly updated in 2012 ("2012 Bike Guide").¹⁶⁵ This 2012 edition is more bike friendly than its predecessor, including more information and support for bike lanes (including buffered bike lanes), bike parking, and bike boulevards. This edition still does not discuss road designs that provide physical separation of people bicycling from traffic, such as protected bike lanes, which are common in Europe, with its better bicycling safety record.

However, the AASHTO Green Book and 2012 Bike Guide do not prohibit engineers from adopting bicycle

treatments that are not addressed by the books. As the Green Book explains, it is "not intended to be a detailed design manual that could supersede the need for the application of sound principles by the knowledgeable design professional."¹⁶⁶ Thus, where engineers can demonstrate that a particular situation justifies use of a different or new bikeway design, they can proceed in a manner consistent with the Green Book even if the design is not specifically discussed. Nonetheless, many engineers are reluctant to use a design that is not addressed by engineering guidelines for the jurisdiction.

The NACTO Urban Bikeway Design Guide

The National Association of City Transportation Officials (NACTO) developed an Urban Bikeway Design Guide in 2011 to provide cities with bike designs not yet addressed by AASHTO.¹⁶⁷ The guide supplies similar engineering guidance to that provided by AASHTO, but also covers many bike friendly road designs and traffic control devices, including protected bike lanes (cycle tracks), other bike lanes, bike boxes, bike-only traffic signals, and sharrows. The NACTO Bike Guide, which is deemed by some to be a major turning point for American bicycling, focuses specifically on urban areas and is intended for adoption by individual cities, counties, or states.¹⁶⁸ It can be adopted either as a stand-alone document or as a supplement to the AASHTO Green Book or 2012 Bike Guide.¹⁶⁹ Significantly, the Federal Department of Transportation has announced that it intends to develop its own walking and biking friendly road design standards, rather than continue to use the AASHTO guide, and will likely draw significantly on the work of the NACTO Bike Guide.¹⁷⁰

As noted, many road design engineers will not use a bikeway design unless it is specifically addressed by the pertinent road design guidelines. Thus, state and local policy regarding approved road design guidelines can make a major difference in the types of bikeway designs that will be used in any given community. A policy implementing the NACTO Bike Guide is a powerful way to expand the available menu of innovative, safe bikeway designs for urban communities.

POLICY: ROAD DESIGN GUIDELINES

State and local jurisdictions can set policy that encourages or requires transportation engineers to use road designs that maximize bicycle safety and convenience. Road design guidelines have a major impact on what kinds of bike friendly bikeways and infrastructure can be built. Road design guidelines cover everything from street width, grade, and curvature to overpasses, roundabouts, bikeways, and sidewalks. Jurisdictions often revise road design guidelines as a first crucial step in implementing complete streets policies.

Traditionally, the national standards for road design have been very car-oriented, and have not recognized many types of bikeway design and infrastructure. Although these standards are improving, there remain significant deficits in their approach to bicycle supportive infrastructure. While jurisdictions must follow national standards for many roads that are part of the National Highway System or are federally funded, for other roads, states may use their own road design guidelines. Many states authorize localities to do the same.

Consequently, states and local jurisdictions can, where permitted, adopt road design guidelines that improve safety, comfort, and convenience for bicycles. The National Association of City Transportation Officials (NACTO) has developed an Urban Bikeway Design Guide to serve this purpose, with a focus on bikeway design for urban areas.¹⁷¹ (See insert, page 44, “The Nitty Gritty on Road Design Standards,” for details.) The NACTO Bike Guide can be formally adopted as a supplement to existing road design guidelines by states seeking to promote bicycling. States should work with cities and counties to implement these guidelines. Where permitted, local jurisdictions in urban areas can also adopt the NACTO Bike Guide.¹⁷² States and local jurisdictions can also develop their own street design guidelines that are supportive of bicycling and other uses, and many have begun this process.¹⁷³

A number of cities around the country have adopted the NACTO Bike Guide (e.g., Austin, Atlanta, Portland, Oregon, Salt Lake City, Syracuse, and Moses Lake, WA), and 39 cities have endorsed the guidelines.¹⁷⁴ In some jurisdictions, the city council has adopted NACTO guidelines via an ordinance or resolution;¹⁷⁵ in others, the department of public works or planning has put them into place.¹⁷⁶ The NACTO Bike Guide can be adopted as part of a comprehensive review of transportation policy or on a standalone basis.

State and local jurisdictions may recommend use of the NACTO Bike Guide or other bicycle friendly street design revisions when adopting complete streets policies or bicycle plans, or when revising comprehensive plans. Georgia’s Complete Streets policy, for example, expressly recommends use of the NACTO Bike Guide, as does the Bicycle and Pedestrian Master Plan for La Crosse, Wisconsin.¹⁷⁷

NORTH CAROLINA’S BICYCLE AND BIKEWAY ACT

“The Department [of Transportation] will: Assist and cooperate with local government and other agencies in the development and construction of local and regional bikeway projects.... Develop and construct a state bikeway system.”

N.C. Gen. Stat. §136-71.10

AUSTIN’S RESOLUTION RECOGNIZING THE NACTO BIKE GUIDELINES

In Austin, the adoption of a resolution recognizing the NACTO guidelines was instrumental in facilitating an upgrade of previously approved basic bicycle lanes to protected bike lanes in a public-private development agreement.¹⁷⁸

POLICY: BICYCLE FRIENDLY TRAFFIC CONTROL DEVICES (BICYCLE SIGNALS, BIKE BOXES, AND BICYCLE DETECTORS)



There are several policy options for states and local jurisdictions that want to endorse safety-promoting bicycle traffic control devices.

While the design of the road itself is governed by road design guides (discussed above), a separate set of national requirements controls all “traffic control devices,” such as traffic signals, signs, markings, and anything else that controls the flow of traffic. These requirements are contained in the Federal Highway Administration’s Manual of Uniform Traffic Control Devices (“MUTCD”), which imposes a largely mandatory uniform national standard. This uniformity ensures that people traveling around the country are not surprised or confused by variations in traffic signs.

However, traffic control at intersections is a very important area for bicycle safety, and the current MUTCD restricts some types of bicycle signals and markings that have been shown to improve safety. For example, countries in Europe have had noted success in reducing injuries by installing separate bike signal lights at intersections, which use signal lights to control right turn traffic and through traffic.¹⁷⁹ Another traffic marking that can mitigate safety challenges at signal intersections is the “bike box” (or advance stop line), which positions people bicycling ahead of other traffic at an intersection in a striped or shaded box-shaped area.¹⁸⁰ Bike boxes provide a designated, visible place for people bicycling to wait prior to proceeding straight, turning right, or in some cases, left. This priority wait area allows bicycles to avoid conflicts, particularly the dangerous conflicts that can occur between bicycles proceeding straight through an intersection and right-turning vehicles. Bicycle boxes are not just beneficial for people bicycling. People walking benefit because the advance stop line also provides an extra safety buffer for them. In addition, bike boxes remove uncertainty for drivers about where bicycles may be, reducing risk of collisions.

While neither of these types of bicycle traffic control devices is approved as of date of publication by the MUTCD, the Federal Highway Administration has granted both “experimental” status (see below),¹⁸¹ and is considering draft language that would permit bicycle-specific signals in the next edition of the MUTCD.¹⁸²

There are several policy options for states and local jurisdictions that want to endorse safety-promoting bicycle traffic control devices that are not permitted in the MUTCD. First, although states must be in “substantial conformance” with the MUTCD to receive federal highway funds, this standard provides states with a certain amount of freedom to deviate from the federal model.¹⁸³ Both Oregon and California have taken advantage of this flexibility, and allow bicycle signals on their state lists of approved traffic control signals.¹⁸⁴ The NACTO Bike Guide provides detailed design guidance on both bike signals and bike boxes. Local jurisdictions that adopt the NACTO Bike Guide will be in a position to pursue innovative bike infrastructure. Local

jurisdictions will also want to develop effective working relationships with their state departments of transportation to avoid conflicts between state and local standards.

In addition, the Federal Highway Administration (FHWA) has a procedure to allow jurisdictions to conduct pilot projects with unapproved traffic control devices. Such projects, referred to as “experimentations,” can provide a powerful tool for jurisdictions to try new bicycle friendly traffic control devices.¹⁸⁵ Currently, bicycle signal experimentations are underway in at least 16 cities around the country, and bike boxes are also being tried out in various locations pursuant to this process.¹⁸⁶ Local jurisdictions can use this experimentation process to be on the forefront of promoting bicycle friendly intersection design and control.

Another bicycle friendly traffic control device that helps bicycles get safely through intersections – and is fully approved by the MUTCD – is signal detection for bicycles. Some intersections are controlled by “demand-actuated signals.” These types of signals are particularly common in rural or lightly trafficked suburban areas, but are also common at many urban intersections. These types of signals only turn green when traffic is detected, usually by a sensor installed in the pavement that detects metal. The problem is that the traditional old-style sensors only detect cars and trucks. Bicycle riders are left with the unfortunate choice of crossing against the signal, which can be unsafe (in addition to being illegal), or waiting indefinitely for a car to trigger the signal change, which is highly inconvenient.¹⁸⁷ A number of options exist for addressing this problem, including loops that detect bicycles, video camera detectors, and the newest technology – radar detectors.¹⁸⁸ If there is a pedestrian crosswalk with a signal, a bicycle push button (which allows a person bicycling to press a button from a normal bicycling position to trigger the signal) is also an option. State or local jurisdictions can adopt policies to ensure that demand-actuated intersections are safe and convenient for people riding bicycles. California and Washington both have laws requiring that all new and upgraded demand-actuated signals be designed to detect bicycles (and motorcycles).¹⁸⁹ LaCross, Wisconsin, requires the installation of video detection systems at all new fully actuated traffic signals.¹⁹⁰

POLICY: TRAFFIC CALMING

Local jurisdictions can also enact policies supporting traffic calming designs that reduce vehicle speed, decreasing the dangers posed by fast cars to bicycles and pedestrians. At its core, traffic calming simply involves designing streets to encourage vehicles to travel safely, without speeding or engaging in dangerous maneuvers. The key to traffic calming is that it decreases traffic dangers through a self-enforcing approach, by creating physical and visual cues that lead motorists to drive more slowly.¹⁹¹ Studies show that traffic calming treatments are very effective in reducing speed, increasing comfort for people bicycling and walking, and decreasing motor vehicle collisions.¹⁹²



Studies show that traffic calming treatments are very effective in reducing speed, increasing comfort for people bicycling and walking, and decreasing motor vehicle collisions.

TRAFFIC CALMING IN SAN ANTONIO, TEXAS

“The city hereby finds and determines that long blocks, wide street cross sections and uninterrupted traffic flows can encourage speeding on local streets. Accordingly... design standards will slow traffic on local streets while allowing flexibility in design.... [These standards include] bulb outs, roundabouts, speed humps, median islands, t-intersections.”

Unified Development Code, San Antonio, TX.²⁰¹

Traffic calming approaches can involve simple and familiar design features, such as narrower streets and speed humps. Street trees, pedestrian-scale lighting, and landscaping also encourage slower speeds and can play a role in traffic calming. In addition, there are a wide array of other traffic calming features, some of which are less familiar, including bulb-outs, traffic diverters, roundabouts, and chicanes.

Traffic calming can improve bikeability on any street, and is essential for bike boulevards. Traffic calming can evoke strong positive and negative reactions from local residents and drivers, and so community involvement may be especially important in designing policies or implementation plans.¹⁹³ Traffic calming policies must also account for emergency responders' street design needs.¹⁹⁴

Policy approaches to traffic calming may involve amending local codes and street design guidelines to permit and require specific traffic calming features, or may set forth a general policy commitment to traffic calming and plan for implementation.¹⁹⁵ San Antonio, Texas, for example, has a policy for new development that identifies a wide array of traffic calming approaches for implementation in the interests of public health and safety.

POLICY: ROAD DIETS: RETROFITTING EXISTING ROADS WITH BIKE LANES

A common road configuration is the undivided four-lane street with no turning lanes and no bike lanes. These roadways have a poor safety record, primarily because motorists drive rapidly and frequently switch lanes so they can go faster and move around cars stopped for left turns. These roads are also dangerous for pedestrians because at intersections lacking signals, a driver in one lane may stop for a crossing pedestrian while drivers in the adjacent lane do not.¹⁹⁶

A “road diet” involves the conversion of these four-lane streets into three lanes, with a lane going in each direction and one central two-way left turn lane. The space created by eliminating the fourth lane is used to make the street much safer for people bicycling and walking by installing bikeways, refuge islands, or wider sidewalks for pedestrians.¹⁹⁷ Other types of roads can also be put on a “diet” to create room for bikeways.¹⁹⁸ For example, wide traffic lanes can be narrowed to provide room for a basic, enhanced, or protected bike lane.

Studies have shown that removing a traffic lane generally does not sacrifice travel time for drivers, because motor vehicles making left-hand turns are removed from the flow of traffic (instead of blocking it).¹⁹⁹ Additionally, the road diet design provides major safety benefits for motorists (by reducing rear-end and sideswipe crashes, and decreasing crash severity when crashes occur). Road diets also increase compliance with speed limits, which makes the street safer for everyone.²⁰⁰ After Austin used a road diet approach on

an arterial roadway, a traffic study showed increased compliance with speed limits, and comparable 24-hour motor vehicle counts and traffic back-up at major intersections.²⁰² At the same time, bicycle and pedestrian use rose significantly.²⁰³ The case for road diets is so compelling that the Federal Highway Association (FHWA) has now adopted this approach as one of its nine “Proven Safety Countermeasures” recommended for implementation by road managers.²⁰⁴

Because a road diet mostly consists of restriping, it is a relatively low-cost way to retrofit existing arterial roadways with bikeways in both directions, particularly if the road diet can be planned in conjunction with reconstruction or simple overlay projects.²⁰⁵ In addition, road diets may be less controversial than other approaches to finding space in the right of way for bikeways, such as removing parking spaces for cars. The FHWA provides guidance on which roads may be good candidates for a road diet, based on traffic volume.²⁰⁶ Jurisdictions may want to consider other relevant factors as well.

Local jurisdictions can use policy to make road diets a priority. They can adopt stand-alone resolutions or ordinances designed to encourage road diets (e.g. directing a review of city streets to determine candidates for road diets) or they can encourage road diets as part of a complete streets policy, a bicycle or transportation plan, or amendment of road design guidelines.²⁰⁷

For example, in 2009, the city of Pasadena, California, adopted a strategic plan that required, among other things, that the city adopt a speed management program to improve safety. This policy led to a study of best practices in speed management, which found that road diets and providing speed feedback to motorists were the two best ways to manage speed on major streets. As a result, the Pasadena Department of Transportation included a speed management program in its Capital Improvement Program that requires installing speed feedback signs and implementing road diets on appropriate street segments as part of the annual pavement maintenance program.²⁰⁸

POLICY: MULTI-MODAL LEVEL OF SERVICE STANDARDS

An often overlooked but significant obstacle to bicycle friendly road design is found in the policies governing level of service (LOS) standards. LOS refers to the “level of service” that the road or street provides. Traditionally, LOS has been measured solely by how well the road serves automobile drivers based on how fast traffic can flow. Thus, a road in which motor vehicle traffic flows freely would be rated an LOS “A,” while a road that suffers constant congestion is rated LOS “F.” Comprehensive plans or other planning documents will often commit communities to maintaining a given level of service for cars on local roads, and this commitment may then dominate decisions about transportation investments.²⁰⁹ LOS standards are often used to evaluate proposed road design in new developments or to identify existing problem roads and prioritize improvements. If local transportation plans or

other policies require that roads be evaluated for car LOS only, then roads are likely to be designed with only cars in mind and existing roads will not be assessed for bicycle needs.²¹⁰ Additionally, LOS requirements can potentially block the development of bikeways if they only require consideration of how the bikeway affects LOS for motor vehicles (which may decrease) and not how well the road with a bikeway will serve people bicycling (which may dramatically increase).

In recent years, there have been efforts to develop multi-modal level-of-service (“MMLOS”) systems that can be used to assess whether roads serve everyone’s needs – people bicycling, walking, and using transit – not just drivers. The National Cooperative Highway Research Program, for example, developed MMLOS standards, which the 2010 edition of the Highway Capacity Manual (“HCM”) incorporated into an integrated MMLOS tool for use by planners and engineers in assessing the needs of all users of the road.²¹¹ However, that MMLOS is still in the early stages of development, and establishing the best method for measuring LOS for bicycling is an ongoing process. Other performance measurement strategies are also worth exploring, such as pilot implementation followed by real-time analysis.

State and local jurisdictions that are still using traditional LOS standard can adopt policies to require a shift to MMLOS standards. Some cities have already taken this step. Jacksonville, Florida, for example, adopted a “2030 Mobility Plan” that requires the city to “adopt a city-wide multi-modal mobility score to measure mobility and establish the acceptable levels of service based on roadways, transit, and bicycle and pedestrian facilities.”²¹² In Chico and Berkeley, California, the general plans explicitly call for adoption of an MMLOS standard to improve street design for people bicycling, walking, and using transit.²¹³

STRATEGY: ENCOURAGING SAFER DRIVING

In addition to creating safe bikeways, policy can be used to target specific safety hazards caused by motorist conduct. Hazardous motorist conduct includes

- not giving sufficient clearance to bicycles when passing;
- harassment of people bicycling by drivers;
- dooring (when a driver (or passenger) swings a car door open directly in front of a person bicycling);
- “right hook turns” (when a motorist turns right directly in front of a person bicycling); and
- obstructing bicycle lanes.

Policy can help reduce these hazards through traffic laws and also, as discussed above, through road design and traffic control policies.

CIRCULATION ELEMENT — CHICO, CA

“The Circulation Element seeks to enhance bicycle travel by providing bicycle facilities on new roadways, enhancing connectivity within the existing bicycle system, and establishing policies to incorporate the consideration of bicycle transportation in a Multimodal Level of Service (MMLOS) assessment.”

Chico General Plan²¹⁴

The power to regulate traffic through traffic law is left to each individual state. To encourage some degree of uniformity across the country, however, a nongovernmental National Committee on Uniform Traffic Laws and Ordinances provides states with a model set of policies called the Uniform Vehicle Code (“UVC”).²¹⁵ States typically borrow liberally from these model policies when adopting their own state traffic laws, usually contained in a state vehicle code, but they also modify or reject some of the model laws and can add their own.

The UVC, and virtually all state traffic laws, contains a general provision stating that bicycle riders have the same legal rights and responsibilities as motor vehicle drivers.²¹⁶ Little attention, however, is given to the particulars of bicycle safety. The National Highway Traffic Safety Administration (NHTSA) maintains an online resource guide that can be used to identify state traffic laws that enhance bicycle safety and to assess a state’s position relative to other states with respect to bike safety laws.²¹⁷ In addition to state traffic laws, many local jurisdictions are authorized by their state to adopt local traffic laws (so long as they are not inconsistent with state law).²¹⁸ Many states and local jurisdictions have adopted bicycle safety traffic laws outside of the UVC since the UVC fails to address important safety issues for people bicycling.

POLICY: REQUIRE SAFE PASSING OF BICYCLISTS

The UVC does not specifically address the issue of motor vehicle drivers passing bicycles. Rather, it only addresses one vehicle passing another by requiring that drivers must “pass at a safe distance to the left of the vehicle being overtaken and shall not again drive to the right side of the roadway until safely clear of the overtaken vehicle.”²¹⁹ Most states have adopted either this exact provision or a very similar version.

In most states a bicycle is considered a vehicle for purposes of traffic law, so the requirement that people pass at a safe distance from vehicles does include bicycles.²²⁰ However, while motorists learn during driver training what a safe distance is for passing cars, they do not get such training with respect to passing people bicycling. Even when collisions do not occur, passing too close at full speed leaves people on bicycles feeling vulnerable and unsafe.²²¹ Establishing a specific safe distance for passing bicycles eliminates confusion over what constitutes a “safe distance,” educates motorists about the importance of sharing the road, and helps prevent not only brushes and near misses, but also injuries and fatalities from collisions.

More than 20 states have enacted traffic laws that establish a minimum of three feet as the safe distance for a motor vehicle passing a bicycle, and Pennsylvania has set the distance at four feet.²²² Cities can also adopt their own safe passing laws. At least nine cities in Texas (which does not have a state law) have adopted safe passing laws.²²³ Other cities with such laws include Boise, Idaho, and Denver, Colorado.²²⁴

NEW HAMPSHIRE SAFE PASSING LAW

“Every driver of a vehicle, when approaching a bicyclist, shall insure the safety and protection of the bicyclist and shall exercise due care by leaving a reasonable and prudent distance between the vehicle and the bicycle. The distance shall be presumed to be reasonable and prudent if it is at least 3 feet when the vehicle is traveling at 30 miles per hour or less, with one additional foot of clearance required for every 10 miles per hour above 30 miles per hour.”

N.H. Rev. Stat. Ann. §265:143-a.

PUBLIC EDUCATION REQUIREMENTS OF LOUISIANA SAFE PASSING LAW

“[The Office of Motor Vehicles] is directed to include a summary of this Section [requiring 3 feet passing buffer] in any instructional publication for drivers ... The Louisiana Highway Safety Commission is directed to engage in a public awareness campaign to notify motorists and bicyclists of the provisions of this Section.”

La. Rev. Stat. § 32:76.1.

Safe passing laws can also include important public education requirements. Louisiana’s law, for example, requires the state Office of Motor Vehicles to include a summary of the safe passing law in all driver education materials, and requires the state Highway Safety Commission to initiate a public awareness campaign on safe bicycle passing.²²⁵

POLICY: ANTI-HARASSMENT ORDINANCES

A new trend involves local jurisdictions adopting ordinances designed to protect people bicycling from harassment by motorists. The City of Los Angeles enacted the first ordinance of this kind in 2011.²²⁶ While there are already laws prohibiting assault and battery, the Los Angeles ordinance is ground-breaking because it allows people bicycling to sue drivers in civil court for harassment that would not meet the strict standards for assault and battery – for example, if a driver intentionally distracts someone who is bicycling.²²⁷ The Los Angeles ordinance also gives more protection to people who bike than traditional assault and battery laws because it does not require proof of actual damages; if the court finds harassment, the bicyclist is entitled to recover either a minimum \$1000 in presumed damages or triple the amount of actual damages proved, whichever is greater. The ordinance also allows for punitive damages, where appropriate, and for recovery of attorney’s fees and court costs if the person who was bicycling prevails. St. Louis, Missouri; Washington, DC; and Berkeley, Sunnyvale, Sebastopol, and Sonoma County, California, have passed similar ordinances.²²⁸

POLICY: ANTI-DOORING PROTECTION

As noted earlier in this chapter in our discussion of road design, people bicycling on streets with parallel parking face the potentially serious hazard of dooring.²²⁹ Dooring generally occurs when a parked motorist or departing passenger opens a car door directly in front of a person bicycling, causing a collision. The risk of dooring is highest in commercial areas with high parking turnover, in cities with high taxi use, and on streets where the bike lane is improperly sited within the “door zone,” the area three feet to the left of a parked car.²³⁰

While good road design policy is the most direct way to reduce the risk of dooring, state and local jurisdictions can also address this hazard through traffic law. The UVC has a general provision on “opening and closing vehicle doors,” which prohibits the opening of any car door “until it is reasonably safe to do so and can be done without interfering with the movement of other traffic.”²³¹ While most states have adopted some variation of this, the provision does not specifically highlight the risk of dooring bicycles and is generally viewed as ineffective in addressing the problem.

Traffic laws can be amended to

- require exiting drivers and passengers to look for oncoming bicycles prior to opening car doors;
- allow people bicycling to ride outside the door zone, even if that requires riding outside a bike lane; and
- add a specific enforcement feature.

Massachusetts' Bicycle Safety Bill, for example, provides that motorists and passengers can be ticketed and fined up to \$100 for opening a door into the path of traffic, including bicycle or pedestrian traffic.²³² The City of Chicago's 2013 Bicycle Safety Act imposes a \$300 fine on a driver who opens a door in the path of a bicycle when there is no collision, and a \$1,000 fine when there is a collision.²³³ Chicago also has an administrative policy mandating that all taxi drivers affix a bright red and white sticker on each side window that warns passengers to look for bicycles before they exit.²³⁴

POLICY: RIGHT HOOK TURN PROTECTION

Another common source of collisions between cars and bicycles is the "right hook turn."²³⁵ This occurs when a motorist turning right at an intersection cuts directly in front of a person bicycling who is going straight through the intersection. Such collisions may take place when both the car and bicycle are traveling toward an intersection in close proximity. Sometimes the driver will assume that the person bicycling will turn right too, or will believe that it is the responsibility of the bicycle to wait while the car turns right. These collisions also can follow a stop at an intersection for a red light or stop sign, when a bicycle is waiting to the right of the car; the car may hit the bicycle if the motorist has limited visibility or does not look for a bicycle on the right before turning. While the UVC requires both people driving and bicycling to signal an intention to turn, it does not address the potential conflict for bicycles inherent in car right turns. Indeed, many drivers and people on bicycles are unsure how to handle these types of interactions.²³⁶

As discussed above, bike boxes and bike signals can help tackle this hazard. In addition, traffic laws should be clarified to delineate clear rights and obligations in right-turn situations. At a minimum, traffic laws should specify that, regardless of the presence or absence of a bike lane, drivers should yield to people bicycling and only turn when they can do so safely. In this vein, Massachusetts has a traffic law that permits right turns only when they can be made at a "safe distance" from bicycles and occur at a "speed that is reasonable and proper."²³⁷ Oregon traffic law makes it illegal to turn right on a red light without "yield[ing] the right of way to traffic lawfully within the intersection or approaching so close as to constitute an immediate hazard."²³⁸ The California Vehicle Code requires cars to merge into the dashed section of a bicycle lane 200 feet prior to an intersection in order to make a right turn, but the law is insufficiently clear with regard to when cars must yield.²³⁹



Requiring a warning sticker on taxi passenger windows can reduce dooring injuries to people bicycling.

MASSACHUSETTS STATE CODE

“Precautions for safety of other travelers: No person operating a vehicle that overtakes and passes a bicyclist proceeding in the same direction shall make a right turn at an intersection or driveway unless the turn can be made at a safe distance from the bicyclist at a speed that is reasonable and proper.”

Mass. Gen. Laws., ch. 90, § 14. (2013).²⁴⁸

CALIFORNIA VEHICLE CODE

“No person may place or park any bicycle, vehicle, or any other object upon any bikeway or bicycle path or trail, as specified in subdivision (a), which impedes or blocks the normal and reasonable movement of any bicyclist unless the placement or parking is necessary for safe operation or is otherwise in compliance with the law.”

Cal. Veh. Code § 21211(b).²⁴⁹

POLICY: PROHIBIT OBSTRUCTION OF BICYCLE LANES

Motorists, including taxi drivers and delivery trucks, create a significant safety hazard for bicycles when they stop or park in bicycle lanes. Such obstructions can easily cause a collision, either because the person bicycling collides with the obstruction or swerves suddenly into traffic to avoid it. This hazard was highlighted by a YouTube video gone viral, which showed various obstacles in bicycle lanes in New York City, including a parked police car.²⁴⁰ Obstructions in bike lanes can also create safety hazards for motorists if they are forced to suddenly move into another lane to avoid a swerving bicycle. While the UVC does not address the issue, some state and local jurisdictions have adopted their own traffic laws.

New York City, for example, has regulations that both prohibit stopping or parking in bike lanes and allow delivery trucks that are otherwise lawfully double-parking to park outside the bike lane to avoid blocking it.²⁴¹ It has also created more dedicated loading zones and encouraged off-peak deliveries. However, enforcement remains a challenge.

Another example is Long Beach, Mississippi. On the urging of middle school students, the city passed an ordinance finding that “the general health, safety and welfare and best interest of the community justify and require that the City prohibit parking in spaces or areas designated as bicycle lanes.”²⁴²

At the state level, California has adopted a vehicle code section that prohibits not only obstruction of bike lanes by vehicles, but also by “any other object.”²⁴³

In jurisdictions where double parking is illegal but common, policymakers can also consider adopting a traffic law that substantially increases the fine for double parking if the driver has also blocked a bicycle lane. For example, double parking in the bike lane could cost the driver \$100, while double parking outside the bike lane would cost only \$50.

POLICY: POLICE TRAINING ON BICYCLE SAFETY

Most law enforcement officers have never been specifically trained in bicycle safety.²⁴⁴ If police officers understand what causes bicycle collisions and which traffic laws promote bicycle safety, however, they can better protect people bicycling and help avoid future injuries. Local jurisdictions can help police officers create a safer environment for people bicycling by adopting a policy to provide such training. The National Highway Traffic Safety Administration (“NHTSA”) guidelines encourage training of law enforcement on bicycle safety and NHTSA has developed training materials (videos and written materials) specifically for law enforcement.²⁴⁵ These materials are designed to educate police officers regarding bicycle safety issues and their role in making streets safer for people bicycling.²⁴⁶ Information on overcoming barriers to establishing such trainings, as well as additional training resources, is available on the Federal Highway Administration Pedestrian and Bicycle Information Center website.²⁴⁷

States or localities can also adopt policy in this area. Massachusetts, for example, enacted a bicycle safety bill that requires, among other things, that all police recruits be trained in bicycle safety.²⁵⁰ Fort Collins, Colorado, has adopted a Safety Education Plan that calls for the training of police officers on issues relating to bicycling and bicycle safety.²⁵¹

As the strategies and policies set forth in this chapter show, there are many options available to jurisdictions that want to increase safety for people bicycling. By implementing such policies, jurisdictions can reduce one of the most significant hurdles for the willing but wary.

MASSACHUSETTS LAW ON BICYCLE SAFETY TRAINING FOR POLICE OFFICERS

“The course in bicycle safety enforcement shall include, but not be limited to, instruction in...

- (1) the rights and duties of bicyclists set forth in chapter 85;**
- (2) patterns and sources of injuries to bicyclists, both those involving and those not involving motor vehicles and the percentage of crashes involving cyclists riding against traffic, riding at night and riding on sidewalks;**
- (3) the most dangerous actions by bicyclists and procedures for citing bicyclists, including minors;**
- (4) common motorist actions causing bicycle crashes;**
- (5) reporting bicyclist crashes; and**
- (6) motorists intentionally endangering bicyclists.**

All law enforcement recruits shall receive the course in bicycle safety enforcement as part of their required training program.”

Mass. Gen. Laws Ann. ch. 6, § 116E (b, c).

CHAPTER FIVE: POLICIES THAT MAKE TRAVEL BY BICYCLE MORE CONVENIENT



CONVENIENCE

BICYCLE PARKING

- Require Bike Parking in New Development and Major Remodels
- Require Parking Lots and Garages to Provide Bicycle Parking
- Commuter Bicycle Parking in Office Buildings
- Require Large Civic Events to Provide Bicycle Parking
- Local Government Installation of Bike Parking
- Support Bicycle Parking through Requiring LEED Certification
- Tax Incentives for Bike Parking

BICYCLING AND PUBLIC TRANSIT

- Bicycles on Board
- Transit-Focused Bicycle Parking
- Bikeways to and from Transit

BICYCLE FLOW AT INTERSECTIONS

- Stop as Yield
- Adjusting Signage to Support Bicycle Flow
- Adjusting Enforcement Priorities

FINANCIAL INCENTIVES FOR BICYCLING

- Bicycle Commuter Reimbursement
- Matching Bicycle/Transit Subsidy
- Parking Cash-Out Law
- Reimbursement for Work Travel by Bicycle

REFLECTING THE TRUE COSTS OF DRIVING

MAKING EVERYDAY DESTINATIONS BIKEABLE



CHAPTER FIVE: POLICIES THAT MAKE TRAVEL BY BICYCLE MORE CONVENIENT

INTRODUCTION

A decision to make a trip by bicycle also depends on convenience. If traveling by bicycle requires an unacceptable level of effort, time, or cost compared to driving, people who have a choice will make the trip by car instead. Currently, many people on bikes face hassles that make bicycling inconvenient. For example, bicycle theft is a serious problem in many cities. Bicycling to work is highly inconvenient if there is no safe place to park a bike. In other cases, common destinations may be located far from residential areas, making distances too far for bicycling to be convenient. This problem can be compounded if there is no easy way to combine bicycling with public transit options, making bicycle-transit travel difficult or impossible. Fortunately, there are many available approaches that can make bicycling substantially more convenient.

STRATEGY: BICYCLE PARKING

When there is ample and secure car parking at a destination, it is far more convenient to drive than otherwise. The same is true for bicycling. While policy planners have traditionally devoted enormous resources to the parking needs of drivers, little attention has been paid to the parking needs of those traveling by bicycle. It is clear, however, that arriving at a destination with no safe place to park a bicycle makes biking inconvenient and deters would-be bicyclists; in fact, it is one of the primary reasons commuters cite for not bicycling to work.²⁵² Conversely, quality bicycle parking can greatly enhance the convenience of bicycling. Bike parking ensures an easy transition to one's destination, and can be crucial for integrating bicycling with public transportation. In addition, bicycle parking amenities such as showers and lockers can make commuting by bicycle far more convenient and increase bicycle commuting rates.²⁵³

In areas in which car parking is scarce or expensive, bicycle parking can also save time and money. Bicycle parking also provides a visible way to let the community know that bikes belong and are welcomed, and creative bicycle racks can serve as public art. Moreover, bike parking can boost local businesses and tourism. Studies show that people who travel to shopping areas by bicycle spend more per capita in any given week than those who arrive by car.²⁵⁴ In Madison, sales tax revenue increased 3 percent in shopping areas with new bicycle racks.²⁵⁵ Durango, Colorado, boasts on its website



Bicycle parking provides a visible way to let the community know that bikes belong and are welcomed. In addition, there are many benefits to community members and local businesses when bicycle parking is ample and secure.

GUIDELINES AND MODEL POLICIES FOR BICYCLE PARKING

Bike Parking Guidelines 2nd Ed.
(2010)

The Association of Pedestrian and Bicycle Professionals (APBP) has developed specific standards for most aspects of bicycle parking. Available for purchase from APBP website: https://apbp.site-ym.com/store/view_product.asp?id=502098

Model Bicycle Parking Ordinance

ChangeLab Solutions has developed model bicycle parking ordinances for

- 1) new development and major renovations;
- 2) parking facilities; and
- 3) large civic events involving street closures.

These ordinances draw from the APBP guidelines and are available online at: www.changelabsolutions.org/publications/bike-parking.

changelabsolutions.org | nplan.org September 2012

Making a Place for Bicycles Using Bicycle Parking Laws to Support Health, Business, and the Environment

Local laws can encourage bicycling by making bike parking more readily available. Our model bicycle parking ordinance helps our bicyclists' fears about finding a secure place to lock up.

Bicycling creates healthier communities, supports local business, and leads to less pollution and congestion. But people are reluctant to bike when they worry they won't find a good place to lock their bicycles. Bicycle parking ordinances provide an easy way to ensure plentiful bicycle parking and make it clear that bicycles are welcome.

Bicycle parking promotes health. Cities across the country are looking for ways to address the growing obesity epidemic. Today, more than two-thirds of American adults and one-third of children are overweight or obese, which puts them at higher risk for heart disease, diabetes, cancer, stroke, and other serious illnesses. One way that cities can make a difference is by encouraging bicycling.

Biking is a great way to get around, and adults and children who are physically active are less likely to become overweight or obese. Many people use their cars to run errands and travel to destinations just one or two miles from home. For these short trips, bicycling can be a practical alternative.

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that tourists can take a two-wheeled tour of local breweries and shop by bike because “no matter where you go in downtown, you’ll find a place to park your bike nearby.”²⁵⁶

Policy measures are critical to providing an adequate supply of bicycle parking. Many cities are enthusiastically embracing new and innovative bicycle parking solutions, including “bike corrals,” which turn one or two on-street car parking spots into parking for 8–20 bicycles, and bicycle parking requirements for new development.²⁵⁷ Bicycle parking ordinances can ensure that new development and major remodels include adequate bicycle parking, that secure places to park bicycles are maximized in existing development, and that there is bicycle parking at large events.

POLICY: REQUIRE BIKE PARKING IN NEW DEVELOPMENT AND MAJOR REMODELS

More than 150 local governments have already adopted laws requiring bicycle parking in new development and major remodels.²⁵⁸ These laws typically require that new commercial and multifamily developments include a specified quantity of short-term and long-term bicycle parking; such laws may include major renovations as well.²⁵⁹ Developers often benefit from these laws since they can be structured to provide incentives, such as reductions in the number of expensive car parking spaces required, in exchange for bicycle parking. Bicycle parking ordinances may also require or incentivize showers and lockers in new developments over a certain size. ChangeLab Solutions has a model bicycle parking ordinance requiring bicycle parking in new development and major remodels. The model provides detailed guidance, and can be customized to the needs of individual communities.²⁶⁰

POLICY: REQUIRE PARKING LOTS AND GARAGES TO PROVIDE BICYCLE PARKING

Since car parking lots and garages are already in the business of providing parking, it is appropriate and relatively easy for them to add bicycle parking. Doing so significantly expands bicycle parking options in locations already identified as desirable destinations. Bicycling parking in garages can be achieved through requiring existing parking lots and garages to provide bicycle racks as a condition of renewing their business licenses. Cleveland, Ohio, requires bicycle parking in parking facilities as a condition of the issuance or renewal of an annual license.²⁶¹ Jurisdictions can give parking lots and garages flexibility to choose the specific type of bicycle racks or lockers they will provide, as long as they meet certain minimum requirements for convenience and security. ChangeLab Solutions has a model ordinance requiring bicycle parking in parking lots and garages that covers these and other relevant issues, including types of bicycle parking, quantity of bicycle parking spaces, location of spaces, and signage.²⁶²

POLICY: COMMUTER BICYCLE PARKING IN OFFICE BUILDINGS

Fewer than 1 percent of Americans bicycle to work, although roughly 40 percent work no more than five miles from home.²⁶³ As noted above, a primary deterrent is a lack of safe and convenient bicycle parking. No one wants to end their work day by finding that their way home has been stolen. Yet many office buildings neither provide bicycle parking nor allow employees to bring their bicycles into the building. New York City and San Francisco have both adopted laws designed to mitigate this problem by requiring building owners to permit employees to bring their bicycles into office buildings. New York City's "Bicycle Access to Office Buildings Law," requires commercial office buildings with at least one freight elevator to allow commuters to bring bicycles into their offices by freight elevator, upon request.²⁶⁴

Under San Francisco's "Employee Bicycle Access Bill," commercial building owners must either provide secure bicycle parking in their buildings or allow their commercial tenants to permit employees to bring bicycles into their offices.²⁶⁵

POLICY: REQUIRE LARGE CIVIC EVENTS TO PROVIDE BICYCLE PARKING

Monitored bicycle parking (sometimes called "valet bicycle parking") at large civic and sporting events is becoming increasingly popular around the country as local jurisdictions and event organizers recognize its benefits. In addition to encouraging use of a healthy, non-polluting form of transport, it can increase attendance by drawing people who otherwise might not come at all because of the hassle of car parking or lack of secure bicycle parking. Monitored bicycle parking can also help reduce congestion caused by street closures and crowds. ChangeLab Solutions has a model ordinance that requires monitored bicycle parking at large civic events involving street closures.²⁶⁶

POLICY: LOCAL GOVERNMENT INSTALLATION OF BIKE PARKING

Local jurisdictions can adopt policies to install bicycle racks in existing areas where there is likely demand for bicycle parking, such as shopping and entertainment districts and near government buildings, libraries, and recreational areas. School districts and state college systems can take similar steps to ensure adequate provision of bicycle parking. Chicago, IL for example, set a goal of installing 400 to 500 bike racks per year on public streets, and has installed 10,000 racks on public property so far.²⁶⁷ Washington, DC adopted a law requiring installation of bicycle racks at City Hall and development of a strategic plan to provide bicycle parking at other buildings occupied by District of Columbia agencies, public schools, libraries, and parks.²⁶⁸



"Bicycling in from New Jersey and other suburbs took off after the city passed a law requiring landlords to accommodate bikes in buildings."

Rob Kotch, Bicycle Commuter, on New York City's "Bicycle Access to Office Buildings Law"²⁶⁹



Policy measures are critical to ensuring an adequate supply of bicycle parking. Bicycle parking can provide a secure place to lock a bicycle while also serving as public art.

POLICY: SUPPORT BICYCLE PARKING THROUGH REQUIRING LEED CERTIFICATION

The US Green Building Council has developed a system for rating buildings on how well they reduce pollution and waste and increase energy efficiency. Under this system, called “Leadership in Energy and Environmental Design” (LEED) certification, developers earn points based on the number of environmentally friendly features they include in a building or development. LEED provides some support for bicycle parking because one of the ways that developers can earn points is by providing bicycle parking in commercial developments or institutional buildings. To earn the bicycle parking credit, developers must provide secure bicycle storage with convenient changing/shower facilities within 200 yards of a non-residential building for 5 percent or more of regular building occupants. Residential buildings must include covered bicycle storage facilities for 15 percent or more of building occupants.²⁷⁰ To date, many jurisdictions and states have adopted policies requiring developers to demonstrate that public buildings meet designated LEED certification standards,²⁷¹ and some cities have also amended their building or zoning codes to require that certain private developments achieve LEED certification.²⁷²

Though local jurisdictions can adopt LEED certification standards for public and private development to encourage bicycle parking, they would do better not to rely on LEED certification alone to meet bicycle parking needs. Bicycle parking is just one of many options developers can choose to earn points toward LEED certification; thus, there is no guarantee that a LEED certified building will include bicycle parking. Also, LEED bicycle parking requirements include few standards regarding the type, quality, location, and so on for bicycle parking. LEED certification requirements work best in conjunction with a local bicycle parking ordinance that sets forth such standards.²⁷³

POLICY: TAX INCENTIVES FOR BIKE PARKING

States can also use tax policy to encourage bicycle parking in existing development. In Virginia, for example, legislation was introduced (but not enacted) that would have provided a tax credit to employers for the cost of installing bicycle racks and showers for employees, up to a ceiling of \$5,000.²⁷⁴

STRATEGY: BICYCLING AND PUBLIC TRANSIT

Traveling or commuting by bicycle for longer distances (more than 3 to 5 miles) is considered impractical by many people because of the time and effort required. Longer trips are also more likely to contain segments that are inaccessible to bicycles, such as bridges, tunnels, and freeways. But if bicycling can be seamlessly integrated with trains, subways, buses, and other public transit options, then traveling by bicycle for longer distances suddenly becomes a far more convenient option. As a result, policies that coordinate

bicycling and public transit systems may increase bike ridership by enabling residents to use bicycles to travel partway to many further locations. In effect, bicycle-transit integration extends the range of destinations for bicycles from a few miles distant to dozens of miles away.

Bicycle-transit integration also makes public transit a more convenient option. People are often dissuaded from using public transit when the distance between the point of origin and public transit, or between public transit and the final destination, is more than a quarter or half a mile. This is because many people do not consider distances over a quarter or half mile to be walkable.²⁷⁵ This obstacle – commonly known as public transit’s “first and last mile” problem – is ameliorated by policies that link bicycling with public transit, since bicycles can potentially provide an easy way to cover the first and last miles.²⁷⁶

Transit agencies around the country have adopted policies to mitigate the “first and last mile” obstacle, and they are increasingly seeing bicycling as an important component of such policies. For example, the Los Angeles County Metropolitan Transportation Authority adopted a Bicycle Transportation Strategic Plan in 2006 that prioritized providing access to transit for people bicycling.²⁷⁷ The federal government is providing new support for such projects as well.²⁷⁸

Integrating bicycles and transit also has the benefit of mitigating traffic congestion and air pollution near transit stops caused by those who would otherwise drive to transit.²⁷⁹ It also lessens costs associated with car park-and-ride facilities, and can increase ridership among those who are dissuaded from using transit because of limited car parking. Bicycle-transit integration typically requires less space and fewer resources than car parking.

Bicycle-transit integration policies generally fall into three categories:

- 1) policies that allow riders to keep their bicycles with them on board public transit;
- 2) policies that allow riders to safely leave their bicycles at their transit entry point or pick up a bicycle at their transit exit point (bicycle parking policies); and
- 3) policies that provide convenient bikeways to transit stations. A fourth approach that also addresses bicycle-transit integration is the provision of bike share facilities near transit, discussed in the section on bike share programs in Chapter 7.

POLICY: BICYCLES ON BOARD



Bicycles-on-bus policies are a common type of policy that transit agencies currently use to accommodate people who bicycle and use public transit. Buses can easily be outfitted to carry two to three bicycles at a time.

OPENING UP COMMUTE OPTIONS FOR PEOPLE ON BIKES

“We heard from countless bike riders on both sides of Bay that the August pilot [allowing bicycles on BART during Friday commute hours] opened up regional commuting by bike for both experienced bike riders and those wanting to give it a try for the first time.”

Leah Shahum, Executive Director of the San Francisco Bicycle Coalition.²⁸⁷

Bicycles-on-board policies allow people to take their bicycles with them when they use public transit. Local transportation agencies often have unnecessarily restrictive rules about bicycling. Agencies are finding that they can pass policies that expand the time periods during which bicycles are allowed, or permit more types of bicycles on transit, without any real inconvenience.²⁸⁰

Bicycles-on-bus policies are a common type of policy that transit agencies currently use to accommodate people who bicycle and use public transit. One benefit of these policies is low implementation cost. Buses can easily be outfitted to carry two to three bicycles. However, the limited number of spaces per bus makes access unreliable, since people cannot be sure if there will be room for their bicycle until the bus arrives. While some policies allow bikes inside the bus, this option may be restricted to certain hours of the day to avoid crowding. Bus drivers are also usually given discretion in whether to allow passengers onboard with their bikes, which also injects uncertainty for people bicycling.²⁸¹

Commuter rail and subway systems can also have policies that allow passengers to bring bicycles onto train cars. Some rail systems designate certain rail cars for people bicycling; rail systems may require passengers to remain with their bikes for the duration of their rides.²⁸² Rail systems have space constraints, and therefore many agencies prohibit people from bringing bikes onto train cars during peak travel times, to reduce crowding on the train, as well as congestion when people board and exit the train.²⁸³ Clearly, restricting bicycles at peak travel time creates a substantial barrier to bicycle-transit integration for many people. One potential solution is to expand the number of cars to accommodate people bicycling. The San Francisco Bay Area Rapid Transit (BART) rail system has successfully experimented with allowing bicycles on board during commute hours on certain trains on Fridays, and is exploring providing bicycle access at all times, seven days a week.²⁸⁴

Another challenge for some is the difficulty of physically maneuvering bicycles onto bus bicycle racks, as well as managing train stairs with bikes for boarding and exiting. Subway, rail, and bus services should consider policies that provide for bike-accessible gates and platform-level boarding, allow bicycles on escalators, and generally facilitate bicycle use.²⁸⁵

Other transit systems that accommodate bikes on board include bicycle-on-ferry, bicycle-on-vanpool, and bicycle accommodation by on-demand transit services (such as taxis and car services).²⁸⁶ As with the bike-on-bus and bike-on-rail programs, limited space on transit vehicles and restrictive timetables can hinder widespread access to these accommodations.

Increasing bicycle access can improve farebox returns and significantly increase ridership, so many agencies find it worth their while to overcome the hurdles associated with allowing bikes on board.

POLICY: TRANSIT-FOCUSED BICYCLE PARKING

The second category of bicycle-transit integration policies focuses on making it convenient for residents to complete the pre- or post-transit legs of their trip by bicycle – without having to take a bicycle on board with them.²⁸⁸ These policies typically involve providing bicycle parking at or near major transit points. Such facilities allow people bicycling to complete the “first and last mile” by bicycle without having to physically bring bikes on board. Such policies also eliminate the obstacles presented by transit vehicle space constraints and time restrictions.

Many people, however, will not leave their bicycles parked for any length of time if their bicycle is not well protected from theft. Thus, to maximize the effectiveness of this type of policy, short-term bicycle parking should be paired with more secure bicycle parking, such as bicycle lockers or bike stations.²⁸⁹ Bike stations are full-service facilities, typically located at major transit centers. They provide secure, long-term bicycle parking either through valet service, smart card access, or both. Bike stations can also include other amenities designed to conveniently integrate bicycling with public transit (such as lockers, restrooms, showers, changing rooms, seating areas, bike repair services, bike rentals or bike share, bike retail shops, maps and information, and transit ticket machines).²⁹⁰ Cities with one or more bike stations include Chicago, St. Louis, Washington, DC, Long Beach, Santa Barbara, San Francisco, Oakland, Berkeley, Claremont, Covina, and Palo Alto.

People bicycling must be able to count on a space to park their bike, since they cannot risk arriving at their starting transit point with no safe place to leave their bike. Thus, a successful policy must provide for sufficient bicycle parking spaces to ensure that a number of parking spaces are always available. Some transit agencies – such as Denver’s Regional Transportation District and the Central Ohio Transit Authority – have made it a point to collect data on bike rack and parking usage so they can accurately address demand.²⁹¹ Transit agencies in congested areas may find it necessary to provide commuters with incentives to leave their bikes at stations instead of bringing them on board, and should provide free or almost-free bicycle parking in excess of the anticipated demand. However, secure bicycle parking is not required at every stop. Secure lockers or bike stations can be provided just every mile or so, because people on bicycles are generally willing to pedal a little extra distance to reach the nearest secure parking area.

Neither parking at stations nor a bikes-on-board policy is sufficient by itself to maximize bicycle-transit integration; both are necessary. Some commuters need to use their bicycles on both ends of the trip, if both the origin and destination are distant from transit. Other people may take the step of having two bicycles, one for each leg of the trip. Others may be unwilling to bother with a bicycle on board transit. The combination of available parking at stations and bikes-on-board gives people the flexibility to contend with the different types of trips and circumstances that arise.

BIKE STATIONS: THREE OPTIONS FOR MANAGEMENT

St. Louis, MO

www.trailnet.org/downtown-bicycle-station

- Managed by non-profit
- Initial funding: US Dep’t of Energy

Chicago, IL

www.chicagobikestation.com

- Managed by city
- Initial Funding: Federal Congestion Mitigation and Air Quality Program.²⁹² Currently funded by private sponsor.

Long Beach, CA, Washington DC, and more

www.bikestation.com

- Managed by Bikestation.com, a registered B Corporation
- Funding: Funding sources vary, but usually involve federal, state and/or local government funding



POLICY: BIKEWAYS TO AND FROM TRANSIT

Even if bicycles are otherwise integrated with transit, it may achieve little unless people feel comfortable getting to the transit station or stop that is their starting point. As a result, some transit agencies have policies directing them to collaborate with local jurisdictions to facilitate bicycle access to public transit. Likewise, local jurisdictions can prioritize transit access in their bicycle planning. Such collaborative planning efforts can include development of new bicycle lanes, bike routes, and shared-use pedestrian and bike paths that are designed to improve access to key transit stations.²⁹³ The Regional Transportation District (RTD) in Denver, Colorado, for example, has explicitly made it a priority to make it more convenient for people bicycling to access transit.²⁹⁴ Pursuant to this policy, the Denver RTD recently invested jointly in a number of pedestrian/bicycle bridges to facilitate access to transit stations from neighboring communities and existing bike paths.²⁹⁵ The Bay Area Rapid Transit (BART), which provides rail transit in four Northern California counties, has also acknowledged the importance of creating safe and convenient bicycle routes to each station.²⁹⁶ As part of its 2012 BART Bicycle Plan, BART has prioritized working with local jurisdictions to develop improved bikeways to BART stations, and is also planning to create station area maps with recommended bike routes.²⁹⁷

STRATEGY: BICYCLE FLOW AT INTERSECTIONS

Since stopping and starting on a bicycle requires considerable effort, coming to a complete stop at every stop sign can make traveling by bicycling inconvenient, particularly since stop signs tend to populate the less trafficked streets that make for better bicycle routes. Policies to address this challenge can take different forms.

POLICY: STOP AS YIELD

Traffic laws generally require people bicycling to come to a complete stop at stop signs. However, some jurisdictions have passed “stop as yield” laws, which allow people bicycling to treat stop signs as if they were yield signs. This approach allows people bicycling to slow down as they approach a stop sign and, if no other traffic is present and it is safe, to continue through the intersection without coming to a complete stop. However, a complete stop is required if another vehicle or person has the right of way, or if other safety considerations require it. Most people bicycling instinctively follow a “stop as yield” approach, because it requires far more exertion and time to stop completely and then start back up again on a bicycle than in a car.²⁹⁸ Treating stop signs as yield signs also makes sense from a safety perspective. Bicycles, unlike cars, pose a low safety risk to other travelers. On bicycles, visibility is not restricted by a car frame, and speed approaching a stop sign is generally low enough that a person bicycling can readily assess whether it is safe to proceed without coming to a complete stop.



“If you talk to bicycle advocates, they think the rule should reflect what is practiced. We crafted street rules for motor vehicles, but now we’re adding bicyclists to it — and it makes sense that we have laws that reflect bicycling in ways that promote ridership and help people ride safely.”

Ryan McCann, Policy and Outreach Manager, BikeDenver²⁹⁹

At the state level, only Idaho has adopted such a law to date.³⁰⁰ Idaho's law has been in place since 1982; there has been no increase in bicycle injuries or fatalities since this time, and studies have found evidence consistent with improved safety.³⁰¹ In 2005, Idaho expanded its law to also allow people on bicycles to treat red lights as stop signs.³⁰² A number of local jurisdictions have similar laws, including Summit County and the towns of Dillon and Breckenridge in Colorado.³⁰³ However, some efforts to adopt a "stop as yield" approach have not been successful, and have even engendered a backlash against bicycling.

POLICY: ADJUSTING SIGNAGE TO SUPPORT BICYCLE FLOW

Local jurisdictions can also address flow at intersections by altering the traffic signage along traffic-calmed bike routes, particularly on bicycle boulevards. Where safe to do so, stop signs at four-way stops can be removed or replaced with yield signs. With appropriate traffic calming, removing stop signs can create a more efficient free-flow environment for people bicycling, while reducing the amount and speed of vehicle traffic.

On streets with stop lights, jurisdictions can assist bicycle flow by timing lights to permit steady bicycle traffic, an approach that can create a safer environment for people walking as well. Such an approach is particularly appropriate for commercial corridors, where studies show it may even speed up motor vehicle traffic.³⁰⁴ San Francisco has implemented this approach in the Mission neighborhood.³⁰⁵

POLICY: ADJUSTING ENFORCEMENT PRIORITIES

Local jurisdictions can also instruct law enforcement departments to deprioritize enforcement efforts against people on bicycles who do not stop at stop signs, so long as they are riding safely, without danger to themselves or others, and in a manner that respects the right of way of other road users. Although many departments have a de facto general practice of not ticketing this type of minor traffic violation when no safety danger is present, establishing such a policy can decrease the danger of capricious enforcement. Such a policy should be combined with prioritizing the enforcement of violations by people bicycling or driving that do pose safety risks.

STRATEGY: FINANCIAL INCENTIVES FOR BICYCLING

Bicycling becomes more convenient when the cost of bicycling decreases. While bicycling is generally far less costly than driving, state and local governments can provide financial benefits for using bicycles, providing an additional incentive. Such policies are generally focused on commuters.



“[O]ne of the benefits of a stop as yield law is that it actually increases cyclist safety. Currently, cyclists must choose between routes that are more efficient but less safe due to higher traffic volumes, and routes that are more safe, but less efficient due to the presence of numerous stop signs. Ironically, while stop signs make lesser-traveled streets safer by encouraging automobile traffic to use the less-restricted arterials, they also function as infrastructure barriers to cycling. Allowing cyclists to treat stop signs as yield signs empowers them to legally make the safer routes more efficient.”

Bob Mionske, JD, Bicycle Law³⁰⁶

POLICY: BICYCLE COMMUTER REIMBURSEMENT

The federal government makes bicycle commuters eligible for a “Qualified Bicycle Commuting Reimbursement.”³⁰⁷ Under this program, employers may offer employees who bike to work a \$20 per month tax-free reimbursement for bicycle-related expenses.³⁰⁸ Employers, in turn, are able to deduct the expense from their federal taxes.³⁰⁹ Currently, reimbursement appears to be unavailable for commuters who bicycle to work using bikes from a bike share program.³¹⁰ In addition, not all states offer the same tax deductions that the federal government offers.³¹¹ Thus, an employer’s bicycle reimbursement might be deductible for federal tax purposes, but not for state tax purposes.

States can incentivize participation in the federal bicycle commuting reimbursement program by providing state tax credits to employers that offer bicycle-related transit benefits. Such tax credits should also apply to bicycle share program expenses. States can also provide additional incentives to employers. In 2006, the state of Washington passed the Commute Trip Reduction Efficiency Act, which requires local governments in urban areas with traffic congestion to develop programs that reduce car use.³¹² Through this program, the state Department of Transportation and local governments provide financial support and tax benefits to employers who develop and manage programs to reduce vehicle trips.³¹³ In adopting such laws, states should provide specific benefits for employers who support or promote increased bicycle use.

POLICY: MATCHING BICYCLE/TRANSIT SUBSIDY

State and local jurisdictions that provide a public transit subsidy can provide an equivalent benefit to bicycle commuters. In Portland, Oregon, city employees can earn an additional \$38 each month if they bicycle to work 80 percent of the time, which matches Portland’s transit subsidy.³¹⁴

POLICY: PARKING CASH-OUT LAW

The provision of free car parking at work is associated with a reduced likelihood of bike commuting.³¹⁵ One policy that can remove this incentive to drive is a “parking cash-out” law, such as California’s.³¹⁶ Parking cash-out laws require employers who provide free or subsidized parking for their employees to also provide employees with the option of a cash allowance in lieu of a car parking space. A study showed that at businesses that implemented California’s cash out program, single occupant driving fell by 17 percent and walking and biking increased by 39 percent.³¹⁷ Following a successful pilot program, Austin is in the process of developing a permanent parking cash-out policy for city buildings surrounded by managed parking.³¹⁸

In the absence of a mandate, states can also use policy to encourage private employers to implement parking cash-out laws. Maryland's tax law, for example, provides a 50 percent tax credit (up to \$30 per employee per month) to cover employer costs associated with providing employees a parking cash out program.³¹⁹

POLICY: REIMBURSEMENT FOR WORK TRAVEL BY BICYCLE

While it is common practice for governmental agencies to reimburse their employees for the job-related use of their own cars, few reimburse employees for the use of a bicycle. When they do, they often reimburse at the estimated cost of wear-and-tear on the bike, which is negligible. For example, Caltrans reimburses its employees for bike use on the job at the rate of four cents per mile, and this is deemed taxable income; car use is reimbursed at the rate of 56.5 cents per mile, and this reimbursement is exempt from taxation.³²⁰ The effect of this practice is to create an incentive for employees to use more costly transportation, even when a bike would be just as convenient or better and would also potentially decrease employee health costs. For trips that can be easily made by bicycle, governmental reimbursement policies should reimburse bicycle travel at a rate close to the reimbursement level for car use.

STRATEGY: REFLECTING THE TRUE COSTS OF DRIVING

In the United States, many of the actual costs of driving are not paid by individual drivers.³²¹ Many of these costs are subsidized by the government (such as building and maintaining roads) or borne by the public at large (such as environmental damage, adverse health effects from pollution, and poor conditions for walking and biking).³²² A number of cities in Europe and Japan have adopted policies that better reflect the true costs of driving. These policies make bicycling more convenient relative to driving, by making driving more expensive or slower. A wide array of different policies can shift the costs of driving back to drivers. Such policies include car-free streets or zones in the city center, traffic calming, speed restrictions, reduced car parking requirements for new development, higher sales taxes on cars and gasoline, higher registration costs, congestion pricing, and higher pricing for car parking. A number of American cities have found support for this type of policy, including traffic calming, speed restrictions, reduced car parking requirements, and congestion pricing on certain roads. Such policies, however, are probably best framed in terms of their benefits for health, safety, and the environment.

STRATEGY: MAKING EVERYDAY DESTINATIONS BIKEABLE

For bikes to be used more often for transportation, everyday destinations – work, school, stores, medical and professional offices, restaurants, transit centers, and so on – must be within a convenient biking distance. Although ensuring convenient destinations is crucial for bicycling, this need goes far beyond the simple consideration of bicycle friendly policy. Rather, it involves larger land-use planning issues that go to heart of how cities and towns are physically structured. Decades of suburban sprawl and auto-centric design have created communities in which residents often live too far from their destinations to make bicycling (or walking) feasible. There is, however, a growing movement to reverse this trend. People are moving back to cities, with their inherent walkability. Communities are adopting smart growth policies that support alternative forms of transportation and create more sustainable communities.

For local jurisdictions interested in taking up this challenge, many policy tools have emerged.³²³ Below is a brief overview of some of the innovative approaches being implemented around the country. Since communities control growth and development within their borders primarily through zoning and land use laws, these policies typically focus on using these tools to support alternative transportation, develop a mix of land uses, and create sufficient density. Taken together, these policies can support an array of destinations in relatively close proximity to residents.³²⁴

Zoning for Mixed Use and for Density: Traditionally, zoning codes have created separate zones for residential and commercial uses, which makes it more challenging to walk or bike to run errands. But zoning codes can allow mixed uses. Portland, Oregon, uses neighborhood commercial zones to create mixed use development. Some codes go even further and require mixed use. For example, the zoning code for St. Lucie County, Florida requires that “each neighborhood contain a mixture of lot types to provide a variety of uses and diverse housing options.” The code also requires that each neighborhood contain at least one mixed-use or retail building lot and three civic building lots.³²⁵

Zoning laws can also be amended to set minimum or average density requirements, which are important for creating more compact and walkable development. In Aurora, CO, the zoning code sets a range of minimum densities that decrease with distance from the transit station, and sets no density ceiling in the core area immediately around the transit station.³²⁶ San Diego requires an average density, rather than a minimum density.³²⁷ Another important trend involves local jurisdictions eliminating or reducing car parking minimums in zoning laws.

Form-Based Zoning: One approach to smart growth zoning is form-based zoning. Form-based codes focus on the physical forms of buildings and developments, in contrast to conventional zoning codes, which separate areas by type of use and density.³²⁸ Form-based zoning codes can be used to encourage compact, walkable urban development that is mixed-use. Jurisdictions that have taken a form-based zoning approach include Leander, Texas; Fitchburg, Wisconsin; Montgomery, Alabama; and Arlington County, Virginia.³²⁹

Transit-Oriented Development (“TOD”) Zoning Overlay Districts: A transit-oriented development (TOD) zoning ordinance is designed to encourage moderate- and high-density mixed use development near transit and to create an environment conducive to walking, bicycling, and transit use.³³⁰ Jurisdictions that have adopted TOD zoning districts include Phoenix, Louisville, Austin, Atlanta, and Arlington County, Virginia.³³¹

Developer Incentives: Local jurisdictions can also use policy to create financial and non-financial incentives for developers to invest in mixed-use, higher-density development. Common financial incentives, which lower the developer’s out-of-pocket costs, include property tax abatement programs, decreased impact fees, and loans with below-market-rate interest. Atlanta, for example, gives developers a 50 percent reduction in impact fees if a development is within 1,000 feet of a rail transit station.³³² Jacksonville, FL’s innovative

transportation plan (designed to reduce vehicle miles traveled and support alternative transportation modes) includes a mobility fee on developers that is reduced based on proximity to the city core.³³³ Jurisdictions can use revenue policies to finance developer incentives, including tax increment financing programs, sales taxes, revenues from road and parking pricing programs, and vehicle registration fees.

Another category of incentives are those that are non-financial. Non-financial incentives require no upfront costs for the jurisdiction, beyond modest administrative costs, but may be very valuable for the developer. Common non-financial incentives include expedited permitting and density bonuses. Expedited permitting can provide a strong financial benefit to developers. Similarly, density bonuses provide the ability to build more units than would otherwise be allowed, enabling developers to increase a project's profit margin.

There are many examples of communities providing such incentives. Arlington County, Virginia's zoning code offers developers density and height bonuses in conjunction with transit-oriented development, and provides an expedited approval process for developers using its form-based code process.³³⁴ San Diego offers developers a density bonus for projects planned in the proximity of existing or planned transit stations. Vancouver, Washington's TOD zoning ordinance includes an opportunity for developers to earn density bonuses if they provide specified services in the TOD zone (including bike lockers and walkways or bikeways to the nearest commercial or retail center of business).³³⁵ Other jurisdictions that offer density bonuses as an incentive for the provision of bikeway infrastructure include West Jordan, Utah;³³⁶ Marysville, Washington;³³⁷ Front Royal, Virginia;³³⁸ and Walton County, Florida.³³⁹

THE 20 MINUTE NEIGHBORHOOD

There is growing support for the concept of "20 minute neighborhoods," which are designed to encourage residents to walk or bicycle instead of drive.³⁴⁰ In a 20 minute neighborhood there is a mix of land uses — residential, commercial, government — that makes most destinations reachable in a 20 minute walk or bike ride. People bicycling, of course, can travel much farther in 20 minutes than people walking (roughly 3.3 miles for someone bicycling, versus one mile for someone walking), making implementation of a 20 minute bikeable neighborhood very practical.³⁴¹ Portland, Oregon, embraced the vision of a 20 minute bikeable neighborhood in its Portland Bicycle Plan for 2030.³⁴²

CHAPTER SIX: POLICIES THAT PROMOTE BICYCLING AS SOCIALLY ACCEPTABLE



SOCIAL ACCEPTABILITY

DRIVERS AND BICYCLE SAFETY

Incorporate Bicycling Safety into Driver Education and Training courses

Incorporate Bicycle Safety into Driver Licensing Requirements

Require Bicycle Safety Training for Professional Drivers

Incorporate Bicycle Safety into Traffic School Curriculum

BIKE EDUCATION IN SCHOOLS

Requiring Bicycle Education in Elementary Schools

Requiring Bicycle Skills and Vocational Training in High Schools, Adult Schools, and Community Colleges

ENCOURAGEMENT ACTIVITIES

Establishing Open Streets

Bicycle Friendly Business Districts

Support Safe Routes to Schools

State and Local Government Sponsorship of "Bike to Work Day/Week/Month"

Police Bicycle Patrols



CHAPTER SIX: POLICIES THAT PROMOTE BICYCLING AS SOCIALLY ACCEPTABLE

INTRODUCTION

When people do not see neighbors or friends bicycling for transportation and there is no support for bicycling from their local government, it may not even occur to them to consider traveling by bicycle. Instead, they may view bicycling as a curious or abnormal activity. It is no surprise, then, that people who are willing but wary about bicycling are less likely to live or work with people who use bicycles for transportation, and may not see people who look like them bicycling on city streets.³⁴³

In Cleveland, Ohio, where using a bicycle for transport is still relatively rare, bicycling groups have recognized that “the biggest goal is to get people to realize that biking, whether for transportation, exercise or fun, is perfectly normal.”³⁴⁴ Many individuals are simply uninformed about bicycling and its benefits. Santa Clara County, California’s bicycle plan explains, “Before bicycling will be considered as a potential commute alternative by the potential cyclist, its feasibility and benefits must be made known. Many people are unaware of the many benefits that bicycle commuting can provide.”³⁴⁵

Promoting awareness is important for the willing but wary group, but it is also important to communicate the benefits and normalcy of bicycling to those who are unlikely to ever bicycle. Their views may affect the perceptions of people who may be interested, and their behavior on the road will influence the safety of people bicycling.

Promoting awareness in communities of color is particularly important. Negative stereotypes of bicycling (as a leisure activity for the well-to-do or a mode of last resort for the poor) may be more prevalent in communities of color, as is the fear of racial profiling through heightened visibility to police of bicycles. Campaigns to normalize bicycling must be tailored to meet the concerns of different communities.



“A lot of people out there still view cycling as a fringe activity.”

Jacob VanSickel, Executive Director, Bike Cleveland³⁴⁶



“We’re creating visibility, representing an image of what bike riding can look like within the black community. The more people see it, the more it becomes commonplace and less intimidating.... Some of our cyclists come on a bike ride for the first time in their lives or since they were nine years old. After that first bike ride, it becomes easier and easier to form a lifestyle around bike riding.”³⁴⁷

Jenna Burton, Founder of Red, Bike and Green, which promotes bicycling in the African-American community and has chapters in Chicago, Atlanta, Brooklyn, and Oakland



“Regardless of roadblocks, groups like Black Women Bike: DC are trying to raise the profile of bike riding in minority communities. And as the number of black, Latino and Asian cyclists in this country grows, more riders will be able to see themselves reflected as they pedal around town.”

Lauren Ober, “How a Minority Biking Group Raises the Profile of Cycling”³⁵¹

There is often a strong programmatic focus to the goal of changing people’s perceptions of bicycling. Indeed, these campaigns are frequently carried out by nonprofit or community groups, rather than by government.³⁴⁸ But governmental policy can also support cultural and educational components of creating bicycle friendly communities. State and local jurisdictions can adopt policies designed to raise awareness about bicycling (including topics like the benefits of bicycling, how to ride, rules of the road, bicycle safety, and maintenance), encourage bicycling, and raise the profile of bicycling.

STRATEGY: DRIVERS AND BICYCLE SAFETY

For most American teenagers, getting a driver’s license is a rite of passage. Adults must also regularly renew their licenses, and may need to attend traffic school if they have traffic violations. As a result, driver training, licensing, and enforcement present an opportunity to expose most Americans to bicycle safety information.

Rules governing driver training, testing, and traffic school are typically controlled by state statutes. Including bicycle safety materials in driver training and providing for bicycle “rules of the road” questions on driving license tests establishes bicycling as a normal, sanctioned activity. Part of this message is that drivers can also be bicyclists. And, since poor driving poses the biggest threat to the safety of people bicycling, increasing awareness of how to drive safely around bicycles also can help decrease bicycling injuries. For example, as discussed in Chapter 4, drivers are often confused as to how to handle right turns when a person bicycling is nearby, and don’t understand that people bicycle three to four feet to the left of parked cars to avoid the “door zone.” Driver training and licensing can highlight these and other share-the-road safety issues.

POLICY: INCORPORATE BICYCLING SAFETY INTO DRIVER EDUCATION AND TRAINING COURSES

States can require public and private driver training courses to include bicycle and pedestrian traffic safety lessons. Florida has developed a strong curriculum for such courses, in order to “increase awareness among motorists about laws regarding bicyclists and pedestrians” and ensure that “motorists will learn how to properly share the road with both bicyclists and pedestrians.”³⁴⁹ Minnesota, New Hampshire, and Washington state laws also contain such requirements.³⁵⁰

TIP

Educating Drivers about Dooring: In the Netherlands, drivers are taught to reach across their body to open the car door with their right hand. As a result, they routinely glance over their left shoulder before exiting, ensuring that they will see any oncoming bicycles.³⁵²

WASHINGTON LAW ON DRIVER TRAINING

“[I]t is the policy of the state of Washington to encourage the safe and efficient use of the roads by all citizens, regardless of mode of transportation. In furtherance of this policy, the legislature further finds and declares that driver training programs should enhance the driver training curriculum in order to emphasize the importance of safely sharing the road with bicyclists and pedestrians....”

[The minimum required curriculum for driver training shall include]: Bicycle safety, to ensure that operators of motor vehicles have been instructed in the importance of safely sharing the road with bicyclists....”

Washington H.B. 2564.³⁵³

POLICY: INCORPORATE BICYCLE SAFETY INTO DRIVER LICENSING REQUIREMENTS

The state department of motor vehicles can test first-time and renewal license applicants on how to share the road safely with people bicycling, emphasizing these rules in the drivers’ manuals provided to test-takers.³⁵⁴ At least 20 states include such questions on their tests, and more than 30 cover the topic in drivers’ manuals.³⁵⁵ However, many of these states only touch on bicycle safety, and should expand their coverage. Since many currently licensed drivers learned to drive at a time when few bicycles were on the road, this type of educational opportunity is particularly important for both people bicycling and those driving. State legislatures can pass laws that direct additional emphasis on bicycles in driver licensing, and state agencies that regulate driving (departments of licensing or departments of motor vehicles) can revise their administrative rules and policies.

Sample California Driving Test Question³⁵⁶

When can you drive in a bike lane?

- During rush hour traffic if there are no bicyclists in the bike lane.
- When you are within 200 feet of a cross street where you plan to turn right.
- When you want to pass a driver ahead of you who is turning right.

POLICY: REQUIRE BICYCLE SAFETY TRAINING FOR PROFESSIONAL DRIVERS

People bicycling may particularly benefit from policies that require additional bicycle safety training for professional drivers – taxi drivers, bus drivers, truck drivers, and others. Professional drivers spend more time on the road, frequently under stressful conditions. They often drive larger vehicles

EVIDENCE-BASED SAFETY RECOMMENDATIONS

Safety practices are a common and important component of driver and bicycle educational materials. A recent study took a look at whether common safety recommendations in these materials are supported by scientific evidence.

The authors found that while many are, others are not.³⁵⁷ Also, some strategies supported by the evidence were not included in trainings, such as the importance of choosing safer routes. The study also found that one commonly recommended practice – riding a meter from the curb – may be detrimental to safety, because evidence shows that drivers tend to leave less passing room when bicycles are further from the curb.³⁵⁸

Clearly, making sure that bicycle safety recommendations incorporate the latest scientific evidence is important to accomplishing the goal of greater safety. Policy can address this need by providing for state curricula and allocating funding to regularly update materials in accordance with new research.

that take up more lane space, have poor visibility, and may be more prone to startling or crowding bicycles. In fact, studies show that heavy vehicles increase the risk and severity of bicycling injuries, and often provide bicycles with less passing distance than lighter-weight vehicles.³⁵⁹ Agencies that employ or regulate professional drivers, such as school districts and transit agencies, can institute policies that require ongoing bicycle and pedestrian safety training. For example, the San Francisco Taxi Commission tests medallion holders on bicycling safety issues.³⁶⁰ Such trainings can also be required for use of government vehicle fleets. In Austin, Texas, for example, city staff must annually take a driving class that includes instruction on how to share the road with bicycles.



“The Bicycle Program partnered with the Municipal Court to offer a Defensive Cycling course as a ticket dismissal option for bicyclists who have been cited. More than 60 cyclists attended the course in 2010. The course is very popular and is now provided twice a month to accommodate demand. Participants have reported a change in attitude upon completion of the class, as well as a deeper understanding of the laws as they pertain to cyclists.”

Howard Lazarus, Director, City of Austin Public Works Department³⁶⁷

POLICY: INCORPORATE BICYCLE SAFETY INTO TRAFFIC SCHOOL CURRICULUM

Requiring that traffic schools incorporate bicycle safety into their curriculum is another way to normalize bicycling. The state of Washington enacted a law that requires public and private traffic schools to incorporate at least 30 minutes of “a curriculum for driving safely among bicyclists and pedestrians.”³⁶¹ In Santa Cruz and Marin Counties, California;³⁶² Austin;³⁶³ Tucson;³⁶⁴ and Pima County, Arizona,³⁶⁵ bicyclists who get traffic tickets can choose a traffic school that teaches bicycle safety skills and pay either no fine or a lower fine. San Francisco is starting a similar program.³⁶⁶

STRATEGY: BIKE EDUCATION IN SCHOOLS

Public schools, adult schools, and community colleges all provide important opportunities to educate students and the public about bicycling and bicycle safety, while at the same time establishing bicycling as a social norm. Indeed, including bicycle education as part of standard curriculum sends a strong signal that bicycles belong and that bicycling is a socially acceptable activity. Incorporating bicycling into the school curriculum also brings the added benefit of helping schools tackle the serious problem of childhood obesity. Schools may be most receptive to including bicycling safety and skills trainings in the curriculum when they are framed as health issues.

Curriculum policy may be set at the state level (e.g. by the state board of education) or at the local level (e.g. by the school board or community college board). Schools can also offer bicycle training and education through programs or partnerships with non-profits.

POLICY: REQUIRING BICYCLE EDUCATION IN ELEMENTARY SCHOOLS

In elementary schools, health and safety or physical education curricula can be expanded to teach children about the benefits of bicycling, bicycle safety, and how to bicycle. In contrast to the United States, bicycling education is

standard practice in other countries, including Germany (where bike training is integrated into third or fourth grade school curriculum), Denmark, and the Netherlands (with nationally mandated safe bicycling courses for all schoolchildren).³⁶⁸

Several states do include some aspect of bicycling safety in their school curriculum requirements. For example, North Carolina requires that bicycling safety be included in school health education that must be taught to students in kindergarten through ninth grade.³⁶⁹ California's health education content standards include some bicycle safety topics, providing support for strong bicycle skills and safety programs in local curricula.³⁷⁰

However, integrating bicycling into school curricula is still a relatively unusual practice in the United States, and state standards are not particularly demanding. Instead, where bicycling is taught in schools, it is usually provided by a non-profit bicycle organization or by health or transportation government agencies, often through Safe Routes to School programs (see below).³⁷¹ States and school districts, however, can potentially play a larger role. Boulder, Colorado integrates bicycling (and bicycle safety education) into its physical education program for fifth and sixth grade students.³⁷² Several school districts are taking the same approach in Olmsted County, Minnesota.³⁷³ Fort Collins, Colorado has established a Bicycle Safety Education Plan that calls for each school to have at least one staff member who is qualified to teach bicycle safety education classes. This plan has a goal of teaching bicycle safety to 11,000 schoolchildren.³⁷⁴ Many strong bicycling education curricula have been developed. Establishing more rigorous state and local standards would ensure that bicycle skills and education trainings are incorporated into schools.³⁷⁵

POLICY: REQUIRING BICYCLE SKILLS AND VOCATIONAL TRAINING IN HIGH SCHOOLS, ADULT SCHOOLS, AND COMMUNITY COLLEGES

High schools, adult schools, and community colleges can broaden their industrial technology or vocational curriculum to incorporate bicycle mechanics and maintenance.³⁷⁶ "Learn to ride" classes for adults can also be helpful for the willing but wary who lack confidence regarding their bicycling skills or never learned to ride. Such classes are currently offered almost exclusively by non-profit bicycle organizations. But there is a role for government in further promoting and providing these opportunities. Adult schools, for example, can expand their offerings to provide such classes, thus further normalizing bicycling in their communities. In Portland, Oregon, the city has developed, and administers, annual bike trainings that are specifically targeted at novice riders, women, and older adults, the three subpopulations most likely to be in the "willing but wary" category.³⁷⁷

NORTH CAROLINA STATE BICYCLE SAFETY CURRICULUM REQUIREMENT

"A comprehensive school health education program shall be developed and taught to pupils of the public schools of this State from kindergarten through ninth grade. This program includes age-appropriate instruction in ... bicycle safety."

N.C. Gen. Stat. Ann. § 115C-81(e)(1)

MODEL SCHOOL DISTRICT POLICY LANGUAGE REQUIRING BICYCLE EDUCATION

The Safe Routes to School Policy Workbook for School Districts, developed by the Safe Routes to School National Partnership and ChangeLab Solutions, contains model language for requiring bicycle education in schools:

District requires individual schools to provide traffic safety education and active transportation skills trainings for all students and teachers. District further requires that pedestrian skills and safety workshops occur in [kindergarten/1st grade] and bicycle skills and safety workshops occur in [4th/5th] grade.

See www.changelabsolutions.org/SRTS-policy-workbook

TIP

To ensure that bicycling instruction is provided by competent and knowledgeable individuals, some programs require that instructors have certification. The League of American Bicyclists has a training program that provides League Certified Instructors (LCIs). LCIs teach classes for children and adults on street skills and bicycling safety.³⁷⁸

STRATEGY: ENCOURAGEMENT ACTIVITIES

While all the policies in this guide have the effect of encouraging bicycling, jurisdictions can also adopt policies with the express goal of promoting bicycling and raising its profile.

POLICY: ESTABLISH “OPEN STREETS”

Local jurisdictions can establish a policy of closing particular streets to motor vehicle traffic on certain days. These events, which originated in Bogota, Colombia, with the name “ciclovía” (“bike path” in Spanish), have now spread to other countries, including the United States, Australia, Mexico, Ecuador, and France. In the United States, ciclovías (also known by various other names, including “Open Streets” and “Sunday Streets”) have become increasingly popular, and at least 21 of the largest 51 US cities have hosted such events.³⁷⁹ Kentucky has even established an annual “Second Sunday” event in which street closures are held in every county in the state.³⁸⁰

Some communities close the same streets each time, while others rotate the closures to different neighborhoods. These events build community while celebrating the use of non-motorized transit and providing safe opportunities to try bicycling without fear of traffic. Some communities have also started “better blocks” events, in which a street is temporarily transformed into a more bicycle, pedestrian, and transit friendly street, mixed with pop-up businesses and temporary installations of public art.³⁸¹

POLICY: BICYCLE FRIENDLY BUSINESS DISTRICTS

Jurisdictions can promote bicycling as a form of transportation by helping to create bicycle friendly business districts.³⁸² Such districts encourage bicycling through a campaign that highlights the ample availability of bicycle parking, special discounts or promotions for customers who arrive by bicycle, and other bike friendly features. Employers in the district can also adopt measures to encourage their employees to commute by bike (freeing up more car parking for customers). Businesses typically support such districts, since studies show that customers who arrive by bicycle spend more money over time than those who arrive by car. Also, every customer who arrives by bicycle instead of car frees up a parking space for someone who cannot bicycle. Jurisdictions can pass resolutions establishing bicycle friendly business districts, and can use policy to help facilitate such districts through bicycle parking policies and employer incentives.

In 2010, Long Beach, California piloted the nation’s first bicycle friendly business district program in four districts.³⁸³ The program, funded by a \$72,000 grant from the county’s health department, established a wide array of bike friendly features.³⁸⁴ Regular and cargo-carrying bicycles were provided for merchant deliveries, errands, and commutes, and new bike racks were integrated into existing infrastructure. Bicycling was incorporated into



In bicycle friendly business districts, merchants make deliveries by bicycle, and consumers are encouraged to arrive by bike.

community events through free bike repair clinics, community rides, and bike valets. In addition, the nation's largest citywide discount program for people bicycling was created, along with community education about the economic benefits of bicycling. The program created a strong business support base for bicycling infrastructure and programs.³⁸⁵ Long Beach's successes inspired the launch of similar programs in San Diego,³⁸⁶ New York City,³⁸⁷ and Oakville, Canada.³⁸⁸

POLICY: SUPPORT SAFE ROUTES TO SCHOOLS

Many students live within bicycling distance to school, but their families do not consider bicycling to school a realistic option because of safety concerns and a lack of community support. Over the last 40 years there has been a dramatic decline in the number of students walking or biking to school, from 42 percent in 1969 to 13 percent in 2009.³⁸⁹ Safe Routes to School (SRTS) programs aim to reverse this trend by supporting biking and walking to school, through education, encouragement, and new safe infrastructure.³⁹⁰ More than 12,000 schools have adopted SRTS programs since Congress enacted a law funding such programs in 2005,³⁹¹ and these programs have been very effective both in getting children to enjoy biking and in increasing bicycling rates.³⁹² Moreover, recent studies show that children who walk or bike to school also show improved concentration in school.³⁹³

Both school districts and cities have a role to play in supporting Safe Routes to School. School districts have considerable influence over how children get to and from school, and they generally control where schools are located and whether bicycle parking is available for children. But cities control the safety of the streets themselves, and without their involvement, busy intersections and speeding cars may make it too dangerous for most children to bike to school.

What policy steps can school districts take? School districts can pass a Safe Routes to School policy that sets the tone for how the district approaches active transportation. In addition to expressing support for bicycling and walking, a district Safe Routes to School policy can spell out specific commitments, such as developing bicycle and walking route maps. For example, the heart of a Safe Routes to School program is usually a "bike train" or "walking school bus," with groups of students bicycling or walking to school together under adult supervision. Safe Routes to School programs generally include a variety of initiatives to encourage kids to bike and walk, including educational bike rodeos, walk-and-bike-to-school days, and the like. Safe Routes to School policies can provide support for such encouragement programs or spell out how they will work. Policies may also change the district's transportation program from one that focuses exclusively on busing to one in which busing is just one important element of a healthy transportation program. District policies can also ensure adequate bicycle parking at schools, including parking for bike trailers that parents may use to transport smaller children. Another important issue is school siting. To make



By passing a Safe Routes to School policy, a school district sets the tone for how the district supports active transportation for its students and their families.



"When I first started here, bicycling was almost a problem because there wasn't a safe place for kids to lock their bikes. Kids were getting to school on a bike and trying to stash it somewhere. Neighbors were always complaining that a bike was thrown in their back yard or hidden behind their car. But, really, the kids were just trying to keep their possessions safe. Frequently that one bicycle was the main mode of transportation for that entire family. So it was incredibly important to the parents that that bike made it back home."

Peter Van Tassel, Assistant Principal,
Westlake Middle School, Oakland, CA

TIP

Safe Routes to School Policy Workbook for School Districts: One useful tool for putting together a SRTS district policy is an online workbook, developed by the Safe Routes to School National Partnership and ChangeLab Solutions, that assists school districts and community members in creating a Safe Routes to School policy that is tailored to local needs.

This workbook provides a comprehensive overview of the many types of policy provisions that a SRTS district policy can include.

www.changelabsolutions.org/SRTS-policy-workbook

TIP

The League of American Bicyclists has a step-by-step guide — National Bike Month Guide⁴⁰¹ — to putting on a successful bike month, which includes sample proclamations for local and state governments.

www.bikeleague.org/sites/bikeleague.org/files/bikeleague/bikeleague.org/programs/bikemonth/pdf/guide_redesign_2013.pdf



If people feel that bicycling is normal and fun, they are likely to ride more often.

active transportation more feasible and convenient, districts can adopt policies that commit them to minimizing the distance between students' homes and their schools (while also balancing many other factors pertaining to school siting).³⁹⁴

Cities, towns, and counties also have an important role to play to support children walking and biking to school, and they can adopt Safe Routes to School policies that spell out that role. Because school districts have no control over the streets that children travel, many aspects of ensuring that children can safely walk and bicycle are out of the hands of schools. Local jurisdictions can prioritize creating safe street conditions for children on the way to school. They can also discourage speeding and traffic violations near schools. It is also important for local jurisdictions to commit to working closely with schools to coordinate short- and long-term planning goals.

POLICY: STATE AND LOCAL GOVERNMENT SPONSORSHIP OF "BIKE TO WORK DAY/WEEK/MONTH"

Bike to School Day, Bike to Work Week, and Bike Month are all perfect examples of promotional programs that can benefit from the institutionalization and legitimization that official policy provides. These programs can be very successful in encouraging people to give bicycling a try. One study showed that one in five people who participated in Bike to Work Day for the first time became regular bike commuters.³⁹⁵ Many state and local governments adopt a resolution or other legislation proclaiming an annual "bike to work day/week/month." For example, Missouri passed a resolution establishing Bike Month and Bike to Work Week, since "millions of Missourians will experience the joys of bicycling during the month of May through educational programs, races, commuting events, trail work days, helmet promotion, charity events, or just getting out and going for a ride."³⁹⁶ Such policies are most effective if combined with the personal involvement of mayors and other public officials,³⁹⁷ and incentives, such as those offered by New Jersey's Transportation Management Associations.³⁹⁸ Local jurisdictions can also coordinate with local businesses and bicycle organizations to create additional incentives. In Boulder, CO, for example, some restaurants and bakeries offer bicycle commuters a free continental breakfast, and volunteer mechanics provide discounted tune-ups and bike safety checks.³⁹⁹ In Austin, a local bicycle group organizes morning breakfast and evening happy-hour stations with live music.⁴⁰⁰

POLICY: POLICE BICYCLE PATROLS

Police departments are increasingly putting policies in place to deploy bicycle patrols as well as car patrols.⁴⁰² Bicycle patrols not only provide officers with more opportunities for positive contact with the community (and the ability to quickly reach areas not accessible by car), but also send a clear signal that bicycles are a legitimate and socially sanctioned form of transportation. As the International Police Mountain Bike Association points out, there is another advantage of police bike patrols: “Relatively few police officers are familiar with the traffic laws governing bicycling, and they typically are neither trained nor encouraged to enforce those laws. Bike officers are the exception.”⁴⁰³ Bicycle patrols can be seen in communities as diverse as Collierville, Tennessee;⁴⁰⁴ El Cerrito, California;⁴⁰⁵ and Anacortes, Washington.⁴⁰⁶ In Tucson, Arizona, the police department’s bicycle patrol has 42 officers and averages 4,500 miles annually.⁴⁰⁷



SUPPORTING RECREATIONAL BICYCLING

While the policies in this guide focus on supporting bicycling for transportation, recreational bicycling can be a helpful complement in creating a bicycle friendly community. Many people start bicycling recreationally and transition to bicycling for transportation. Policies and programs that promote recreational bicycling can help to establish bicycling as a normal and desirable activity, providing support for the overall objectives of increasing bicycling rates and acceptance of bicycling.

For example, Rock Hill, South Carolina has developed a world class velodrome (bicycle racing track) and a mountain biking park in tandem with a new mixed-use housing development. These bicycling venues make Rock Hill a destination for amateur and professional sports and family recreation, providing critical support to Rock Hill’s dual goal of improving children’s health while creating economic growth through tourism.⁴⁰⁸



CHAPTER SEVEN: POLICIES THAT INCREASE ACCESS TO BICYCLES



ACCESS

INCREASED ACCESS TO BICYCLES

Bike Share

Bike Fleets for Government Employees

Encourage Private Employers to Provide Bike Fleets

Bike Distribution and Maintenance



CHAPTER SEVEN: POLICIES THAT INCREASE ACCESS TO BICYCLES

INTRODUCTION

As the League of American Bicyclists says, “There are two basic requirements for bicycle riding: a bicycle and you.” If you don’t have access to a bicycle, you can’t bike, no matter how favorably inclined toward bicycling you may be.

Lack of access to bicycles can arise in different ways. First, a person may own a bicycle but not have it with them when they need to get somewhere. This may occur, for example, when a person is at work and needs to travel a short distance to run errands or attend a meeting or appointment. Second, public transit sometimes only gets people partway to their destination; without access to a bicycle to complete the final leg, a person may have little choice but to make the entire trip by car instead. Third, a person may lack access to a bicycle because it is unaffordable. Local jurisdictions can mitigate these obstacles through the following policies.

POLICY: BIKE SHARE

Bike share programs increase bicycle access by providing residents with bicycles at strategic locations around town. In a typical program, people pick up a bike at a bike share station or kiosk within a network and return it to another station near their destination. In Minneapolis, Michigan, one of the earliest American experiments with bike sharing led to 100,000 bicycle trips in just the first season, almost one quarter of which would have otherwise been taken by car.

Bike share programs focus on encouraging bicycle travel for short trips (usually half a mile to three miles), and so the first 30 to 60 minutes of every ride is typically free, although annual membership fees are generally required. Bike share programs are generally self-service. People use smartcards, cell phones, or similar methods to locate, reserve, check out, and return bikes. The bikes are usually designed for safe, easy use, with pedal-powered lights, fenders, chain guards, and, in some cases, a locking mechanism attached to the bicycle’s frame. Bright colors and logos increase bicycle visibility and deter theft. In most bike share programs, bicycles come equipped with a GPS unit and radio frequency identification tag that can be used to locate lost or stolen bikes and perform utilization analysis.

Bike share programs increase bicycle access by providing residents with bicycles at strategic locations around town.



THREE BIKE SHARE BUSINESS MODELS

Bike Share programs can be owned and managed by

Local government

- **Capital Bike Share** (Washington DC)

Non-Profit

- **B-Boulder** (Denver, CO)
- **Nice Ride Minnesota** (Minneapolis and St. Paul, MN)

For-Profit

- **Deco Bike** (Miami Beach, FL)

Local governments have played important roles in bike share programs in the United States, initiating, funding, administering, or operating the programs.⁴⁰⁹ Some jurisdictions own and manage the program; others work with a non-profit or for-profit company that plays the central role.⁴¹⁰ Jurisdictions that are just beginning to think about bike share programs can make starting a bike share program a policy goal in their local bike plan or comprehensive plan.⁴¹¹ Various policy steps are necessary to support a bike share program, whether it is run by the jurisdiction or privately. For example, most jurisdictions need to revise their standards or system for encroachment permits to allow the use of the street or sidewalk for bike share stations.

Bike share programs are flourishing in the United States. They are benefiting from the growing popularity of bicycling along with modern technologies that effectively protect against theft and vandalism, allow self-service operation, and enable easy data collection. In the few years since Denver, Minneapolis, and Washington, DC implemented the first large-scale US bike share programs in 2010, close to 50 municipalities have initiated bike share programs.⁴¹² The DC bike share program grew to more than 22,000 members in its first three years of operation, and continues to expand.⁴¹³ New York City introduced the largest bike sharing system in North America in 2013, with 5,000 bikes and 300 docking stations, with a planned volume of 10,000 bikes.⁴¹⁴

Bike share programs are ideal for people who do not commute by bicycle and are unlikely to bring a bike to work just to use for transport during the day. Providing access to bicycles near workplaces gives people the opportunity to make short weekday trips by bicycle instead of by car. Bike share programs also directly improve bicycle access for all residents living in close proximity to a bike share station. And, as discussed in Chapter 5, if bike share stations are well integrated with public transit, individuals will have access to a bicycle to complete the “first or last leg” of their trip, significantly expanding the reach of public transit. In Washington, DC, more than half of bike share riders use the program to get to or from a transit station and almost a quarter use it to access a bus.⁴¹⁵



CREATING BIKE SHARE PROGRAMS THAT BENEFIT THE WHOLE COMMUNITY

The issue of bicycle access is particularly acute for low-income people. These individuals are the least likely to own a car; face the highest barriers to purchasing, storing, and maintaining bicycles; and are most dependent on alternative modes of transportation.⁴¹⁶ Bike share programs have the potential to really help low income communities by improving transportation equity and increasing bicycling rates. In addition, the health benefits for these communities may be significant, since low-income communities and communities of color are disproportionately likely to lack adequate facilities for physical activity and generally suffer higher rates of obesity, diabetes, and the like.

However, many bike share programs are not living up to their promise for low-income communities. In a study of four bike share programs in the United States and Canada, researchers found that 60 percent of people using the bike share systems were under 34 years old, 80 percent were white, and 85 percent were college graduates, in marked contrast to the demographics of the general population of these communities.⁴¹⁷



“My number-one priority is getting a [bike share] membership that reflects the diversity of the city.... Since we’re using public dollars, it’s important that the folks who are using the service reflect everybody in the community. It’s a challenge but we’re going to crack it.”

Chicago Department of Transportation Deputy Commissioner Scott Kubly⁴¹⁸

Why this discrepancy? Low-income residents typically face specific barriers to using bike share programs, including financial impediments, few bike share stations and little bicycle infrastructure in their neighborhoods, and negative images of bicycling. If these barriers are not thoughtfully addressed, bike share programs will not fulfill their potential. Instead of addressing bicycle access problems, they may exacerbate inequities, creating additional resentment and a backlash against bicycling in underserved communities.

Many communities are taking measures to lower barriers in the following areas:

Financial impediments: The cost of a bike share membership can be a barrier for some individuals. Some cities extend free bike share memberships to housing authority residents, subsidize memberships for low-income residents, or offer installment payment plans.⁴¹⁹

Another key barrier involves bike share programs’ credit card or bank account requirements, intended to ensure that bicycles are returned. These requirements prevent many low-income people from participating. To address this barrier, jurisdictions can offer an easy-to-obtain alternative to a credit card requirement, and make sure that the availability of the alternative is widely publicized. The Bank on DC program, in Washington, DC, makes it somewhat easier for low-income residents to obtain a credit or debit card and get bike share membership.⁴²⁰ Some cities are exploring whether payment can be integrated with existing transit card systems.⁴²¹

Another financial barrier can be the temporary “hold” that many bike share systems place on the user’s credit or debit limit, during the time a bicycle is in use and for some time thereafter, to ensure that the bike is returned. For some people, having a hold on the full replacement fee for the bicycle means that they cannot access enough funds to pay for necessities. A number of communities (Chattanooga, Tennessee; Arlington County, Virginia; Minneapolis, Minnesota; and Miami, Florida) either do not impose a hold for the full cost of the bicycle or are investigating other ways to secure the rental.⁴²²

Station locations: Although siting bike share stations in higher income areas is financially easier, communities need to ensure that stations serve all their residents. In Minneapolis, for example, 20 percent of the system (30 stations) was located in less affluent areas that were specifically identified by the community as crucial to establishing an equitable system.⁴²³

Bicycle infrastructure: Low-income communities may face physical obstacles if they are geographically isolated from other parts of town by highways, rivers, or industrial areas. They may also lack the bicycle infrastructure that is provided in other parts of the community. In such cases, targeted policies to create or improve bikeways may be necessary to optimize use of the bike share program.⁴²⁴ However, bicycle infrastructure strategies that work well in many areas, such as prioritizing side streets and residential streets for bike routes and bike boulevards, may be unsuccessful in some higher crime areas where people count on the larger numbers of people on arterials to protect them from muggings or attacks.⁴²⁵

Community-specific outreach and marketing:

Additional obstacles may include negative perceptions of bicycling and limited bicycling experience. These impediments can be mitigated through targeted outreach and education policies, including ensuring that information is available in Spanish or other languages if necessary.⁴²⁶ Outreach efforts should begin early, during the planning phases, rather than waiting until after the bike share program is in place. In particular, soliciting input on station locations and best approaches for mitigating obstacles can help build community support and ensure that the program reaches its full potential.



In addition to directly improving access, bike share programs provide innumerable other benefits. First, they promote awareness that bicycling is socially acceptable, which encourages people to take part in the activity. The mere fact that bike share stations are sited around town helps normalize bicycling as a mainstream form of transportation. Because bike share bicycles are usually designed with bold colors and logos, they are a particularly visible symbol of bike usage. Second, bike share programs allow the “willing but wary” population to try out bicycling without having to purchase a bike.

Some jurisdictions are also experimenting with including electric bikes (“e-bikes”) in bike share programs, which may encourage residents who are older or less fit to try bicycling, particularly if the local terrain is hilly.⁴²⁷ Third, bike share users can provide a constituency that supports and creates demand for improved bikeway infrastructure. Fourth, by creating more awareness of people bicycling, bike share programs may also improve safety. Notably, Minneapolis’ bike share program provided more than 100,000 rides its first season, without a single reported crash.⁴²⁸ Finally, bike share programs help create a vital environment that is desirable to live in and attracts investment.

POLICY: BIKE FLEETS FOR GOVERNMENT EMPLOYEES

Many jurisdictions have traditionally maintained car fleets for employees whose duties require travel to attend meetings or provide client services. A bike fleet can serve the same purpose for short-distance trips, at much less expense. One leader in this area is the National Park Service, which operates bike fleets such as the Red Bike Program in Glacier National Park.⁴²⁹ Bike fleets allow employees to use bicycles to travel to meetings, monitor projects, patrol visitor areas, and otherwise get around during the work day.

Some programs provide a bicycle safety class for employees as a prerequisite for bike fleet participation, which can be beneficial, especially for employees who are not regular bike users. However, keeping requirements minimal is important for the success of these programs. The Knox County Health Department in Tennessee has been very successful in getting new riders on the road with its employee bike fleet.⁴³⁰ Capital Metro, the public transportation system in Austin, Texas, has a bicycle fleet that employees can use to cover the distance between the train station and office.⁴³¹ Other government bicycle fleets are found in locations as diverse as Tucson, Arizona; Berkeley, California; and the Department of Energy’s Argonne National Laboratory in Illinois.⁴³²



“A basic goal of Nice Ride is that it introduced cycling as transportation as mainstream. You didn’t used to think of using a bike to go to a meeting. If you have a meeting a mile away, I can guarantee, you can get there faster on a bike than you can if you have to get your car out of a garage and put it in another garage.”

Bill Dossett, Executive Director, Nice Ride Minnesota (Minneapolis/St. Paul’s bike sharing program)⁴³³



“Bike-share programs... are critically important to attract and retain the talent that we have here.... To have that cool, young, vibrant, hip city that young investors want requires projects like this.”

Mayor Luke Ravenstahl of Pittsburgh, PA (discussing Pittsburgh’s planned bike share program for 2014)⁴³⁴



“Our bike fleet program has been really successful. In nice weather, many people are using the bikes who would never be able to ride their bikes to work. People who would be going to meetings in their own cars or company cars are picking up a bike and riding a mile or so.”

Ben Epperson, Program Manager, Knox County Health Department, Knoxville, Tennessee⁴³⁵

POLICY: ENCOURAGE PRIVATE EMPLOYERS TO PROVIDE BIKE FLEETS

A few private employers (including Good Samaritan Hospital in Los Angeles and Mozilla Firefox, in San Francisco) have created bike fleets for employees.⁴³⁶ Local jurisdictions can use tax credits or incentives to encourage more private employers to create bike fleets or to subsidize bicycle purchases for employees who want to commute to work by bicycle.⁴³⁷ In communities where bike share programs exist, employers can subsidize employees' use of bike share. Jurisdictions can also sweeten these incentives by offering free public acknowledgement and publicity for employers who participate.

POLICY: BIKE DISTRIBUTION AND MAINTENANCE

Local jurisdictions can also increase access to bicycles by sponsoring bike redistribution programs. Such programs can enable people to become regular bicycle users even if they lack the funds to purchase a bicycle. Local jurisdictions can play a key role in facilitating the transfer of abandoned or donated (used or new) bicycles to low-income residents. Municipalities can either operate the program themselves, like the "Adopt-a-Bike" program administered by the Islip Town Board in New York, or can work with a local non-profit organization.⁴³⁸ Some programs work with youth, who learn to fix bicycles and then earn a bicycle in the process.⁴³⁹ Because the cost of maintenance can be prohibitive for some very low-income individuals, bicycle co-ops that teach people the skills to do their own repairs can also help remove barriers to bicycling.⁴⁴⁰

CHAPTER EIGHT: COUNTERPRODUCTIVE POLICIES



CHAPTER EIGHT: COUNTERPRODUCTIVE POLICIES



To create bicycle friendly environments, jurisdictions should avoid adopting policies that introduce unnecessary obstacles to bicycling.

As this guide demonstrates, strong policies that eliminate impediments to bicycling can increase bicycling rates. But some policies related to bicycling have the opposite effect. Policies are counterproductive when they introduce unnecessary obstacles to bicycling or when they contribute to the perception of bicycling as an abnormal or fringe activity. Jurisdictions should avoid adopting these types of policies and should consider modifying or eliminating these laws if they are already on the books.

MANDATORY BIKE LICENSING OR REGISTRATION

Some jurisdictions have policies that require bicycles to be registered with a city agency. The goal of such policies has traditionally been to assist police in recovering bicycles. As bicycling has increased over the past few decades, many jurisdictions have done away with such requirements. For example, Long Beach, California eliminated its bicycle registration law in 2011, recognizing that ticketing people for failure to comply with a little-known law simply served to discourage bicycling.⁴⁴¹ Cleveland, Ohio; Iola, Kansas; and numerous other cities have also eliminated bike registration requirements.⁴⁴²

However, in some areas, a backlash against bicycling has prompted people to propose new bicycle licensing or registration requirements. Some of these proposals go beyond just requiring registration, imposing new testing requirements as well. By and large these proposals have fared poorly.⁴⁴³

Bicycle licensing and registration requirements are generally seen as ill advised.⁴⁴⁴ Local registration requirements are not an effective mechanism for recovery of stolen bicycles, given the ease of moving bicycles across jurisdictional boundaries, routine removal of bicycle serial numbers by bike thieves, and the low levels of compliance with local registries. In addition, free or low-cost national online registries perform this service more efficiently and effectively.⁴⁴⁵

Not only are such requirements ineffective, they run the risk of actively discouraging bicycling. People frequently bicycle across jurisdictional lines, and so may be subject to a wide variety of disparate requirements without sufficient notice. In practice, bicycle registration requirements are often used to penalize unwitting bicyclists. Bicycle registries usually cost more for jurisdictions to run than they bring in. Moreover, increased fees on bicycles pose an additional barrier to bicycling.

BIKE BANS

Some jurisdictions and school districts restrict bicycling. Although rare, such policies discriminate against people bicycling and are poor policy. Limitations on bicycling take different forms, depending on whether they are policies of school districts or of municipalities.

Most school districts around the nation recognize that whether children are allowed to bike to school or not is a family choice. But occasionally, school officials decide that allowing students to bike to school just seems too dangerous. School officials typically mention concern for student safety and a fear of liability when explaining these policies. However, such policies may actually increase districts' risk of liability, and may overstep their authority over students.⁴⁴⁶

A very negative (and fortunately, very rare) type of bicycle policy was enacted in 2010 by Black Hawk, Colorado, banning bicycles from most of its streets.⁴⁴⁷ The ban was a response to an increase in motor vehicle traffic that occurred as local casinos became more popular. The ban resulted in a national boycott of the town,⁴⁴⁸ and was struck down by a successful lawsuit.⁴⁴⁹ Black Hawk is believed to be the only city in the nation to have passed such a law.⁴⁵⁰

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Backing Off Bike Bans The Legal Risks of Banning Bicycling to School

Why Avoid Bike Bans?

Legally Speaking

- Bike bans can increase the risk of liability for school districts.
- Districts may be oversteering their authority when they try to control how students travel to school.
- Districts may be interfering with parents' constitutional rights to make decisions about how to raise their children when they can biking.

Practically Speaking

- Biking helps support healthy kids.
- It's not as simple as just... automatically and this footer clip is added.
- How children get to school is a family decision, not an educational decision.

Most school districts around the nation recognize that whether children are allowed to bike to school is a family choice. But in a few districts, school officials take one look at morning traffic and decide that allowing students to bike to school is just too dangerous. For a small percentage of families – around seven percent – restrictive school policies such as bike bans act as a barrier to children walking and biking to school.

When students get regular physical activity, their health and academic performance are likely to improve, and active commutes to and from school can help children meet the recommended levels of daily activity despite busy schedules.⁴ That means that bike bans can be detrimental to kids' health and can undermine student achievement. Bike bans can also be bad for schools, because they increase liability and raise other legal issues.

Schools are under tremendous pressure to achieve their core purpose – educating children – in the face of limited resources and risks at every turn. A school's central educational mission offers reasons for schools to invest in programs that encourage children to walk or bike to school.

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You can download ChangeLab Solutions' Backing Off Bike Bans from www.changelabsolutions.org/publications/bicycling-to-school

**CHAPTER NINE:
PUTTING IT ALL TOGETHER —
THE ROLE OF BICYCLE PLANS
AND OTHER GOVERNMENT PLANS**



CHAPTER NINE: PUTTING IT ALL TOGETHER – THE ROLE OF BICYCLE PLANS AND OTHER GOVERNMENT PLANS

INTRODUCTION

The many policies and strategies reviewed in this guide set out a wide array of choices for jurisdictions that want to support bicycling. But, as described in Chapter 3, communities are most successful in increasing bicycling rates when they implement a coordinated set of policies that support and reinforce each other. Policies that promote bicycling have a synergistic effect when implemented alongside policies that create safer bikeways and make bicycling more convenient. Thus, jurisdictions should consider adopting a set of policies that support all four of the requirements necessary for wide adoption of bicycling as a means of transportation, as discussed in the previous chapters. One way to approach this task is by developing an overarching plan that lays out the jurisdiction's vision with respect to bicycling, and describes how it intends to reach its goals. Such plans can be developed at the local, regional, and state levels, either as stand-alone bicycle plans, or through including bicycle friendly policy within larger plans.

STRATEGY: BICYCLE AND MULTIMODAL PLANS

In the past, state and local jurisdictions engaged in little bicycle and pedestrian planning. But this situation is starting to change. Communities are increasingly recognizing not only the benefits of bicycling, but also the gains that can be achieved through a coordinated approach to bicycle friendly policy.⁴⁵¹ Thus, more and more communities are finding it helpful to create an overarching policy document, referred to as a bicycle plan. Such a plan allows for a dedicated planning process, with meaningful community engagement, in which the community can carefully evaluate its overall bicycle policy needs, identify which bicycle strategies and policies will help address those needs, tailor the policies to local conditions, and plan for the formal adoption, implementation, and enforcement of these policies.



Communities are most successful in increasing bicycling rates when they implement a coordinated set of policies that create safer bikeways and make bicycling more convenient.

THE IMPORTANCE OF COUNTING

Measuring the impact of bicycling policies requires collecting data on demand and usage. While this data is traditionally collected for cars, strategies and support for acquiring bicycle data are just starting to emerge.



"If you can't count it, it doesn't count."

Bruce Landis, Transportation Engineer

Data collection is an important tool for assessing the benefits of bicycle friendly policies and justifying future investments.⁴⁵⁸

Available resources include

- Bicycling and Walking in the United States: 2012 Benchmarking Report www.peoplepoweredmovement.org/site/index.php/site/memberservices/2012_benchmarking_report
- National Bicycle and Pedestrian Documentation Project <http://bikepeddocumentation.org>
- Guidance on Traffic Monitoring for Non-Motorized Traffic US Dep't of Transportation, Federal Highway Administration (2012) http://fhwatmgupdate.camsys.com/images/TMG_Ch4_aug20.pdf⁴⁵⁹

Depending on a given community's needs and resources, these plans can vary considerably in complexity and scope. However, they typically include the following components:

- 1) an assessment of existing conditions and policies in the community that affect bicycling (e.g. the current state of bicycling and bicycle infrastructure);⁴⁵²
- 2) a statement of goals, particularly infrastructure and lane mileage goals (e.g. to install "x" miles of bikeways, double the percentage of bicycle mode trips, or to reduce the number of bicycle-related crashes or injuries by 10 percent by a certain date);
- 3) identification of priority policies, projects, and programs, and the creation of maps showing where bicycling routes and infrastructure are needed;
- 4) funding strategies;
- 5) guidance on plan implementation, including adoption of the plan as a formal policy of the jurisdiction and physical design guidelines to encourage bike-friendliness even on projects not specifically called out in the plan;
- 6) a process for evaluating the effectiveness of the policies on ridership levels, including data collection; and
- 7) a discussion of enforcement strategies.

In short, the bicycle plan becomes the foundational policy through which specific bicycle friendly policies can be adopted and implemented. Such plans can stand alone or they can be incorporated into a broader transportation plan or comprehensive plan.

A multi-modal plan follows the same general approach as a bicycle plan, but also incorporates other alternative transit modes, such as walking and public transit.

Recently, many local governments have developed bicycle and multi-modal plans that cover the next five to thirty years. For communities interested in taking this step, a number of informational resources are available from non-profit organizations and state departments of transportation.⁴⁵³ Some consulting companies also specialize in assisting communities to develop a bicycle plan.⁴⁵⁴ For some local jurisdictions, funding to produce a bicycle plan has come from grants provided by their state department of transportation, federal sources such as the Community Development Block Grant Program, or foundations.⁴⁵⁵ In other cases, local jurisdictions may be able to obtain technical assistance to develop a bicycle plan, such as that provided by New Jersey's Department of Transportation.⁴⁵⁶ Informational resources are also available to assist jurisdictions interested in developing a multi-modal plan.⁴⁵⁷

BICYCLE PLANS OUTSIDE BIG CITIES

Not to be outdone by metropolitan areas, non-urban communities are making big strides with bicycling. Bicycle plans allow these communities to figure out how to increase the safety and popularity of bicycling in light of local culture, development patterns, geography, and street types. Two communities in Wisconsin – one a small town, and the other a rural county – illustrate how bicycle plans can facilitate tremendous progress in non-urban settings.

Bicycle Plan for a Small Town

La Crosse, Wisconsin is a small town of 51,818 that lies along the Mississippi River.⁴⁶⁰ The town is relatively compact, making bicycling to many destinations a viable option. Since La Crosse adopted its first bicycle plan in 1994, it has enacted a number of bicycle friendly policies, including a Green Complete Streets ordinance, bicycle parking requirements for commercial developments, a Safe Routes to Schools program, and a traffic calming policy. In 2011, the League of American Bicyclists recognized La Crosse as a Silver Level Bicycle Friendly Community.

La Crosse has further aspirations, however, in its quest to make travel by bicycle safer and easier and get more people riding. The city's 2012 Bicycle and Pedestrian Master Plan builds on past progress, outlining a variety of new recommendations addressing different obstacles to bicycling. Although La Crosse is a small town, it suffers from congested, high-traffic corridors that are unfriendly to bicycling. To improve safety and convenience, the plan recommends bikeways on arterial roadways, a network of bike boulevards, a road diet on a bridge across the Mississippi River, a "bicycle level of service" model to evaluate city streets, and use of the NACTO Urban Bike Guide for road design. Encouragement and education also play a key role, and recommendations include incorporating bicycle safety into school curricula, drivers' education, and traffic school; providing bicycling as an optional physical education class in high school; increasing participation in the Safe Routes to School program; and establishing a pedestrian bicycle

coordinator position. As it implements these approaches, La Crosse is hoping to achieve its ambition of becoming a Gold Level Bicycle Friendly Community.

Bicycle Plan for a Rural Community

Sheboygan County, Wisconsin is a rural county, with a population of 115,507 spread over 15 townships, ten villages, and three cities. Although there are grid-patterned streets conducive to bicycling, and many of the municipalities are short distances apart, the county had no tradition of bicycling for transportation. Back in 2005, the county had less than two miles of bike lanes and 35 miles of shared-use paths, used primarily for recreation. Recognizing the enormous potential for bicycling growth, in 2007 the county dedicated a federal grant to developing a countywide pedestrian and bicycle comprehensive plan.⁴⁶¹

Because of the county's almost nonexistent biking infrastructure, the plan focused on creating bikeways. It called for adoption of road design guidelines, incorporation of bicycle needs in every transportation project in the county, implementation of a complete streets policy, and bicycle parking. Given the rural environment, key strategies included getting road shoulders paved (and specifying width requirements to accommodate bicycles); providing bikeways to connect communities; and converting an old railroad corridor to a multi-use path. Each village and city had the opportunity to identify specific priority projects. The plan also emphasized the importance of education and outreach to encourage bicycling. Extensive community involvement in developing the plan created significant momentum toward building a bicycle friendly community. In just three years, bicycling increased 23 percent in Sheboygan, and the county was awarded Bronze Level Bicycle Friendly Community status by the League of American Bicyclists.

BIKE PLANS FOR ALL TYPES OF COMMUNITIES

Bicycle plans can help all types of communities to create bicycle friendly environments. From megalopolises to rural communities, this flexible tool allows for public participation in determining how to use policy and planning to support bicycling.

MEGA CITY

CHICAGO, IL (pop. 2,700,000)
Chicago Bike 2015 Plan
(10-year plan, adopted 2005)
www.bike2015plan.org

NEW YORK CITY, NY (pop. 8,250,000)
New York City Bicycle Master Plan (adopted 1997)
www.nyc.gov/html/dcp/html/bike/mp.shtml

LARGE CITY

AUSTIN, TX (pop. 820,611)
Austin 2020 Bicycle Plan Update
(10-year plan, adopted 2009)
http://austintexas.gov/sites/default/files/files/Public_Works/2009_bicyclemasterplan.pdf

PORTLAND, OR (pop. 593,820)
Portland Bicycle Plan for 2030
(20-year plan, adopted 2010)
www.portlandoregon.gov/transportation/article/71843?&y=0&x=0

MEDIUM CITY

EUGENE, OR (pop. 156,929)
Eugene Pedestrian and Bicycle Master Plan
(20-year plan, adopted 2012)
(This plan also serves as the pedestrian and bicycle chapter of the city's Transportation System Plan.)
www.centallanertsp.org/EugeneTSP/PedBikePlan/Home

SCOTTSDALE, AZ (pop. 217,385)
Bicycle Element — Scottsdale Transportation Master Plan (20-year plan, adopted 2008)
www.scottsdaleaz.gov/AssetFactory.aspx?did=19425

SMALL CITY

LA CROSSE, WI (pop. 51,818)
Bicycle and Pedestrian Master Plan (adopted 2012)
www.cityoflacrosse.org/DocumentCenter/View/7152

PALO ALTO, CA (pop. 65,412)
Bicycle + Pedestrian Transportation Plan
(5-year plan, adopted 2012)
(This plan is also part of Palo Alto's Comprehensive Transportation Plan)
www.cityofpaloalto.org/civicax/filebank/documents/31928

SUBURBAN CITY

ALEXANDRIA, VA (pop. 140,024)
City of Alexandria Pedestrian and Bicycle Mobility Plan (adopted 2008)
http://alexandriava.gov/uploadedFiles/localmotion/info/gettingaround/FINAL_FULLPLAN_060108.pdf

WEST DES MOINES, IA (pop. 56,609)
West Des Moines Bicycle Master Plan (adopted 2011)
<ftp://ftp.wdm-ia.com/Park%20%26%20Rec/Bicycle%20Master%20Plan.pdf>

RURAL COMMUNITY

ALTAMONT, NY (pop. 1,716)
Village of Altamont Bicycle and Pedestrian Master Plan (adopted 2009)
www.altaprojects.net/altamont

SHEBOYGAN COUNTY, WI (pop. 115,149)
Sheboygan County Pedestrian and Bicycle Comprehensive Plan 2035
(28-year plan, adopted 2007; update underway)
www.sheboygancounty.com/home/showdocument?id=466

SUBURBAN/RURAL COMMUNITY

FORSYTH COUNTY, GA (pop. 181,840)
Bicycle Transportation and Pedestrian Walkways 2025 Plan (25-year plan, adopted 2002; updated 2008)
www.forsythco.com/DeptPage.asp?DeptID=4&PageID=1140

STRATEGY: COMPREHENSIVE PLAN

Most local jurisdictions have a comprehensive plan, which governs a community's overall growth, and is updated periodically (e.g. every 5 or 10 years). Comprehensive plans can address everything from economic development and historic preservation to growth patterns and transportation. Since local policies and projects should (and in some states, must) be consistent with the comprehensive plan, it is important to ensure that, at a minimum, the comprehensive plan contains provisions that are consistent with sustaining and increasing bicycle mode share. Comprehensive plan updates provide an excellent opportunity to add language supportive of bicycle friendly communities as well as specific references to a bicycle plan or development of a bicycle plan.

Many local jurisdictions also fall under a regional Metropolitan Planning Organization ("MPO") or similar transportation planning agency. MPOs typically coordinate transportation planning among municipalities within a geographic area, provide technical assistance and funding, and develop regional long-term transportation plans that can include bicycle projects. Again, it is important that any governing regional transportation plan contains, at a minimum, provisions consistent with increasing bicycle mode share.

STRATEGY: STATE LEVEL TRANSPORTATION PLANS

States develop various types of transportation plans. Integrating bicycling into these state plans is crucial to meaningfully increasing investments in bicycling infrastructure. As part of their basic transportation planning, states typically develop long-range statewide transportation plans (STPs), as well as state transportation improvement programs (STIPs) that identify short- and long-term transportation projects for funding. The Massachusetts Department of Transportation has adopted a GreenDOT Implementation Plan as part of a comprehensive environmental sustainability initiative designed to make the state transportation system environmentally responsible.⁴⁶² One of the GreenDOT Implementation Plan's many goals is to triple bicycle mode share.⁴⁶³ It is also the first state DOT plan to adopt specific targets to reduce climate change emissions.⁴⁶⁴

Some states have developed stand-alone state bicycle or multi-modal plans, including New Jersey, Idaho, Arizona, North Carolina, and Virginia.⁴⁶⁵ While state bicycle plans vary in scope and detail, they should, at a minimum, discuss

- 1) the state's goals with respect to bicycling;
- 2) existing state-wide conditions for bicycling;
- 3) state and federal laws that affect bicycling;
- 4) strategies for achieving state goals, including Complete Streets policies, bicycle friendly road design standards, and standards for local bicycle plans; and
- 5) funding sources for local jurisdictions to implement bicycle friendly policies.

TIP

Maximizing the public health benefits of a bike plan: Some communities are using health impact assessments (HIAs) to evaluate the effects of transportation plans, including bike plans, on public health. For communities interested in prioritizing strategies and policies that maximize public health, an HIA can provide an evidence-based approach for ensuring that bicycle plans and other policies meet this goal. An overview of HIAs, how they can be used to evaluate bicycle plans, and how to maximize public health benefits from such plans is available from the Pedestrian and Bicycle Information Center.⁴⁶⁶



"In June 2012, Austin TX updated its comprehensive plan, which identified multiple bicycle specific and bicycle friendly priority goals. Thus far the plan has been extremely helpful in guiding transportation decision-making towards a more 'compact and connected' bicycle friendly city."

Annick Beaudet, Bicycle Program Manager, City of Austin, TX⁴⁶⁷

CHAPTER TEN: FUNDING BICYCLE FRIENDLY POLICY



CHAPTER TEN: FUNDING BICYCLE FRIENDLY POLICY

While some bicycle friendly policies can be implemented for little or no cost, others require substantial investments. Finding funding sources can be challenging; however, as interest in bicycling expands and more communities embrace sustainable development, interest in developing additional or innovative funding strategies is increasing. Given government fiscal constraints and the fact that transportation demands have been outstripping capacity and investment, considerable attention has been focused lately on developing additional revenue sources for transportation in general.⁴⁶⁸

Transportation infrastructure funding is very complex, and it is beyond the scope of this guide to comprehensively discuss existing and potential funding sources. What follows is a brief overview of this subject, including funding strategies that can serve a dual purpose of raising monies and promoting bicycle friendly communities.

FEDERAL TRANSPORTATION FUNDING

The federal government is an important, albeit inconsistent, source of funding for bicycle friendly policies. Since the early 1990s, Congress has provided transportation funding to state and local governments through a series of federal transportation bills. The bills typically allocate a set amount specifically for bicycle and pedestrian transportation projects, with the amount subject to change with each reauthorization.⁴⁶⁹

Since 2005, this authorization has also included funds, under the federal Safe Routes to School program, for school-oriented bicycle friendly infrastructure improvements and encouragement programs.⁴⁷⁰ Participating communities can use Safe Routes to School funds to create or improve bikeways to school, make intersections safer, install bicycle parking, provide bicycling education, and the like. However, the 2012 federal transportation bill (referred to as MAP-21), covering fiscal years 2013–2014, combines funding for pedestrian and bicycle projects, Safe Routes to School, and other programs into one program called “Transportation Alternatives.”⁴⁷¹ Funds under this program are competitively awarded.⁴⁷²

In addition to the Transportation Alternatives program, there are numerous other federal funding sources that may potentially be applied to bicycle projects. Some of these sources are part of the federal transportation bill, while others are separate.



Developing innovative funding strategies is increasing as interest in bicycling expands and more communities embrace sustainable development.

Federal Surface Transportation Program

One of the largest federal funding sources, the surface transportation program provides monies for projects to preserve and improve the transportation system. This program is one of the most flexible sources for federal money and can be used to fund bicycle-related projects, including bikeways and bicycle parking.⁴⁷³

TIP

Find It Fund It: The Alliance for Walking and Biking and the League of American Bicyclists have partnered to create Advocacy Advance, which helps jurisdictions maximize federal funding opportunities for biking and walking projects.⁴⁸¹ It offers extensive written resources, as well as workshops, to help navigate this challenging area. One of its resources is a “Find It Fund It” chart that identifies all of the different federal funding sources and the types of bicycle projects they can potentially fund.⁴⁸²

Highway Safety Improvement Program (“HSIP”)

The National Highway System contains not only the interstate highway system, but also other designated highways and major arterials that are important for the economy, defense, or mobility. While states have not traditionally used the Highway Safety Improvement Program to fund bicycle and pedestrian safety-related projects, some argue that “there is a strong argument for doing so because 15 percent of all traffic fatalities nationally are bicyclists and pedestrians, with that percentage ranging much higher in many states.”⁴⁷⁴ This often overlooked resource can potentially fund bikeways and bike parking.⁴⁷⁵

Congestion Mitigation and Air Quality (CMAQ) Improvement Program

All 50 states receive CMAQ funds, which can be used for transportation-related projects designed to reduce traffic congestion and improve air quality, including pedestrian and bicycle projects. These funds must be used in areas where air pollution exceeds acceptable levels, as measured by the federal government. Such projects can include bicycle infrastructure, bicycle parking, “share the road” educational programs for motorists, and promotional initiatives.⁴⁷⁶

STATE AND LOCAL FUNDING

While all states raise money for transportation from taxes or fees on gasoline sales and motor vehicle registration and transfers, they vary widely in their spending on bicycle-related policies and projects. Some jurisdictions may direct little or no funds to this area, while others have adopted policies designed to ensure funds are available. Oregon, for example, provides a reliable funding stream through a law requiring that 1 percent of state highway funds be spent on projects benefitting bicycling and walking.⁴⁷⁷ Illinois reserves \$3.25 out of its motor vehicle transfer tax for trail and bicycle/pedestrian projects,⁴⁷⁸ and New Jersey’s Bikeway Grant Program (funded by state gas taxes and highway tolls) helps local jurisdictions build bikeways in support of the state’s goal of building one thousand new miles of dedicated bike paths.⁴⁷⁹ California has its own state level funding for Safe Routes to School programs.⁴⁸⁰

Local jurisdictions also vary widely with respect to bicycle-related spending – with localities ranging from providing virtually no spending to having dedicated revenue streams based on local taxes or special bond

issues. San Francisco, for example, adopted a ½-cent local sales tax dedicated to supporting alternative transit modes.⁴⁸³ Austin successfully leveraged local and state bond funds (along with federal transportation funds) to fund a bicycle and pedestrian bridge project to close a major gap in their bicycle network.⁴⁸⁴ There is no shortage of policies that state and local governments can adopt to provide or enhance funding for the implementation of bicycle friendly policies.⁴⁸⁵ Some examples include the following:

POLICY: VEHICLE REGISTRATION FEES

States can fund bicycle improvements through modest increases in vehicle registration fees. California, for example, enacted the Transportation Fund for Clear Air program, which increased vehicle registration fees in the San Jose-San Francisco-Oakland Bay Area by \$4 to fund projects and programs that help reduce vehicle emissions. Among others, projects funded include

- 1) ridesharing;
- 2) clean-fuel vehicles;
- 3) signal synchronization;
- 4) regional transit information systems;
- 5) congestion pricing; and
- 6) bicycle facilities.⁴⁸⁶

Oregon also raised its vehicle registration fees as part of a transportation funding package dedicated to road repairs, state highway construction projects, and alternative transportation; this funding stream supports transit, Amtrak station improvements, and bicycle and pedestrian projects.⁴⁸⁷

POLICY: TRAFFIC FINES

Traffic fines can serve the dual purpose of funding bicycle friendly policies and improving bicycle safety by deterring conduct hazardous to people bicycling. Jurisdictions can, for example, adopt bicycle safety traffic laws (e.g. regulating speeding, dooring, right hook turns, and obstruction of bike lanes) and then dedicate the proceeds to implementing bicycle-safety related policies and constructing bicycle infrastructure.

One example of this type of approach is a Washington law that doubles the fine for speeding through playground zones and school crosswalks. The law allocates half of the fine to school safety enhancement programs, which can include pedestrian and bicycle safety programs. Similarly, Portland, Oregon passed a law increasing traffic fines for certain violations, including running red lights and stop signs. A portion of the increased fine revenues were dedicated to Safe Routes to School pilot programs at 25 elementary schools, and in the first two years, \$1.2 million was raised for the program.⁴⁸⁸

Jurisdictions that have already exploited traffic fines for revenue-raising purposes, however, may want to avoid additional increases, particularly in light of the burden these can place on lower-income residents.

POLICY: STATE AND LOCAL TAXATION

State and local governments can use their taxation authority to raise revenues for bicycle friendly projects. Thirty-three states have authorized local transportation sales taxes. As noted above, San Francisco used this option to pass a ½-cent local sales tax dedicated to supporting alternative transit modes.⁴⁸⁹ Some jurisdictions have also employed excise taxes. Colorado Springs, for example, adopted a \$4 excise tax on any bicycle or bicycle frame sold within the Colorado Springs city limits.⁴⁹⁰ This tax, which generates \$100,000 annually, is used to fund bike infrastructure.⁴⁹¹

POLICY: CONGESTION PRICING

A recent development in the United States, congestion pricing is attracting attention as a tool that has enormous potential to generate revenue.⁴⁹² In addition to raising funds for alternative transportation, which in and of itself reduces congestion, congestion pricing can also reduce congestion directly.⁴⁹³ Congestion pricing refers to any scheme that charges motorists a premium for driving on certain lanes, roads, or bridges during peak periods of heavy use. Variants include

- 1) high occupancy toll (“HOT”) lanes, in which a toll is paid by single occupancy drivers who use either an existing high occupancy vehicle lane or a newly added HOT lane;
- 2) increased tolling of an entire bridge or tunnel at peak congestion times; and
- 3) priced zones or cordon fees, where drivers pay a surcharge for entering a designated highly congested area such as a city center.

Minnesota, California, and Colorado have all imposed HOT congestion pricing on certain highways.⁴⁹⁴ Cordon fees have reduced congestion and raised revenues for alternative transit in Singapore, London, Sweden, and Norway.⁴⁹⁵

POLICY: DEVELOPMENT IMPACT FEES AND CHARGES

Development impact fees are a one-time charge state or local jurisdictions assess on developers to cover off-site costs of growth-related public services, including transportation infrastructure. Such costs should be evaluated and assessed to include not just increased public services for drivers but for bicycles as well.

Jacksonville, FL has adopted a strategy, “Funding Mobility,” which is intended to “create a funding mechanism that integrates multimodal transportation planning with land use strategies to combat unsustainable sprawl.”⁴⁹⁶ Under this strategy, developers incur charges based on the distance of their developments from the city center.⁴⁹⁷

POLICY: DEVELOPER INCENTIVES FOR BIKE FRIENDLY INFRASTRUCTURE

As noted in Chapter 5, jurisdictions can use incentives to encourage developers to pay for new bicycle infrastructure. Such incentives are a common ingredient of bicycle parking ordinances, and may be used to encourage showers and clothing lockers as well. In addition, incentives may be offered for developers who provide bikeways.⁴⁹⁸ Density bonuses and partial waivers of car parking requirements are common forms of incentive. Jurisdictions can also offer reduced inspection fees or expedited review.

POLICY: LEVERAGING EXISTING FUNDING SOURCES

Jurisdictions can “piggyback” funding for bicycle friendly policies onto existing programs. Complete streets policies work in this way. A number of local jurisdictions link the development of bikeways onto planned repaving or street improvement projects. Austin, for example, has been able to add roughly 30 linear miles of new and improved bicycle lanes each year since 2008 by coordinating implementation of its Bicycle Plan and Complete Streets policies with street maintenance (resurfacing).⁴⁹⁹ Similarly, jurisdictions can adopt a policy that explicitly requires that bicycling needs be considered whenever they undertake transportation improvement studies.

TIP

Successfully Leveraging Street Maintenance into Bike Lanes: One key to the success of bicycle investments is having an effective policy for balancing the creation of new bikeways with the maintenance of on-street parking. Austin’s internal “On-Street Parking Modification Guidelines” provide a transparent, consistent process for promoting compatibility between on-street parking and bicycle facilities.⁵⁰¹

As communities increasingly prioritize bicycling, basic transportation funding will become more available for bicycling infrastructure, and additional innovative sources of funding will emerge. At present, communities must be creative and persistent, combining funds from private foundations and public sources as necessary to support bicycling initiatives.⁵⁰⁰

CONCLUSION



CONCLUSION

Bicycling in the United States is at an exciting stage. After decades of languishing bicycling rates, recent years have seen a dramatic increase in bicycling. Will interest and enthusiasm for bicycling continue to grow? Will bicycling achieve its potential to serve as a healthy, nonpolluting way to get around for a meaningful number of people? Or will we fail to overcome the obstacles that discourage many people from bicycling? Choices that are made today will determine whether bicycling rates stall – or whether they continue to soar.

Local and state governments have a unique ability and opportunity to use policy to create bicycle friendly communities. This guide presents a wide selection of the most promising policy approaches that can support bicycling. We encourage communities to pursue an array of policies. While initial evidence indicates that these policies can effectively increase bicycling rates, the coming years will provide us with far more ability to assess them. As communities continue to pioneer new initiatives that support bicycling in novel ways, we look forward as a nation to ongoing exploration of how best to use policy to create an environment that lets everyone enjoy the many benefits of bicycling.



Implementing effective policies is critical to create bicycle friendly communities.

APPENDIX



APPENDIX

The following charts highlight policies that support the four requirements for a bikeable community – safety, convenience, social acceptability, and access.

SAFETY

Chapter 4

Strategy	Policy	Goal/Description	Also Supports	Who Adopts?	Examples
Safer Bikeways	Complete Streets	Require all new or renovated streets to provide safe, comfortable, and convenient travel for all everyone, including pedestrians, bicyclists, people with disabilities, and motorists.	Convenience	Local jurisdiction, State, Federal	New Haven Complete Streets Policy; Oregon "Bike Bill"; San Francisco Bay Area Metropolitan Transportation Commission
Safer Bikeways	State Bikeway Laws	Encourage or require statewide bicycling planning and the implementation of bikeways as part of road projects.	Convenience	State	California Bicycle Transportation Act; Illinois Bikeway Act; North Carolina's Bicycle and Bikeway Act
Safer Bikeways	Road Design Guidelines	Permit and encourage transportation engineers to use designs that maximize bicycle safety and convenience.	Convenience	State, Local jurisdiction	Adoption of NACTO Bike Guide by Austin, TX; Atlanta, GA; Portland, OR; Salt Lake City, UT; Syracuse, NY; Moses Lake, WA
Safer Bikeways	Bicycle Friendly Traffic Control Devices (Bicycle Signals, Bike Boxes, and Bicycle Detectors)	Permit and encourage use of traffic control devices that limit confusion and risk among people bicycling and drivers at intersections.	Convenience	Local jurisdiction, State, Federal	Oregon and California place bicycle signals on their list of approved traffic signals; California and Wisconsin require demand-actuated signals detect bicycles.
Safer Bikeways	Traffic Calming	Reduce vehicle speed and decrease dangers posed by fast cars to those walking and bicycling by encouraging use of traffic control infrastructure such as roundabouts, speed bumps, median islands, t-intersections, and bulb outs.		Local jurisdiction	San Antonio, TX
Safer Bikeways	Road Diets: Retrofitting Existing Roads with Bike Lanes	Encourage conversion of four-lane streets into three lanes, with a lane going in each direction, one central two-way left turn lane, and bikeways in both directions.		Local jurisdiction	Pasadena, CA, Department of Transportation
Safer Bikeways	Multi-Modal Level of Service Standards	Measure how well roads serve the needs of all users, not only drivers, but also people bicycling, walking, and using transit.	Convenience	Local jurisdiction	Jacksonville, FL; Chico, CA; Berkeley, CA
Encouraging Safer Driving	Require Safe Passing of Bicyclists	Establish a specific safe distance for vehicles passing bicyclists (usually three or four feet).		State, Local jurisdiction	Pennsylvania; Louisiana; New Hampshire; Boise, ID; Denver, CO

SAFETY

Chapter 4

Strategy	Policy	Goal/Description	Also Supports	Who Adopts?	Examples
Encouraging Safer Driving	Anti-Harassment Ordinances	Provide a private right of action, allowing victims of harassment to sue offending motorists in court.		State, Local jurisdiction	Los Angeles, CA; St. Louis, MO; Washington, DC; Berkeley, CA; Sunnyvale, CA; Sebastopol, CA; Sonoma County, CA
Encouraging Safer Driving	Anti-Dooring Protection	Approaches include requiring safe design of bike lanes adjacent to parallel parking; requiring that exiting drivers and passengers look for oncoming bicycles prior to opening car doors; and allowing people on bikes to ride outside the door zone.		Local jurisdiction, State	San Francisco Municipal Transportation Innovative Bicycle Treatment Toolbox; Massachusetts; Chicago, IL
Encouraging Safer Driving	Right Hook Turn Protection	Provide for separate bike signal lights at intersections; redesign roads to include a "bike box"; clarify traffic laws to delineate clear rights and obligations in right turn situations.		State, Local jurisdiction	Oregon; California; Massachusetts
Encouraging Safer Driving	Prohibit Obstruction of Bicycle Lanes	Prohibit stopping or parking in bike lanes; allow delivery trucks that are otherwise lawfully double-parking to park outside the bike lane to avoid blocking it.		State, Local jurisdiction	New York, NY; Long Beach, MS; California
Encouraging Safer Driving	Police Training on Bicycle Safety	Require that all police recruits be trained in bicycle safety.		State	Massachusetts



CONVENIENCE

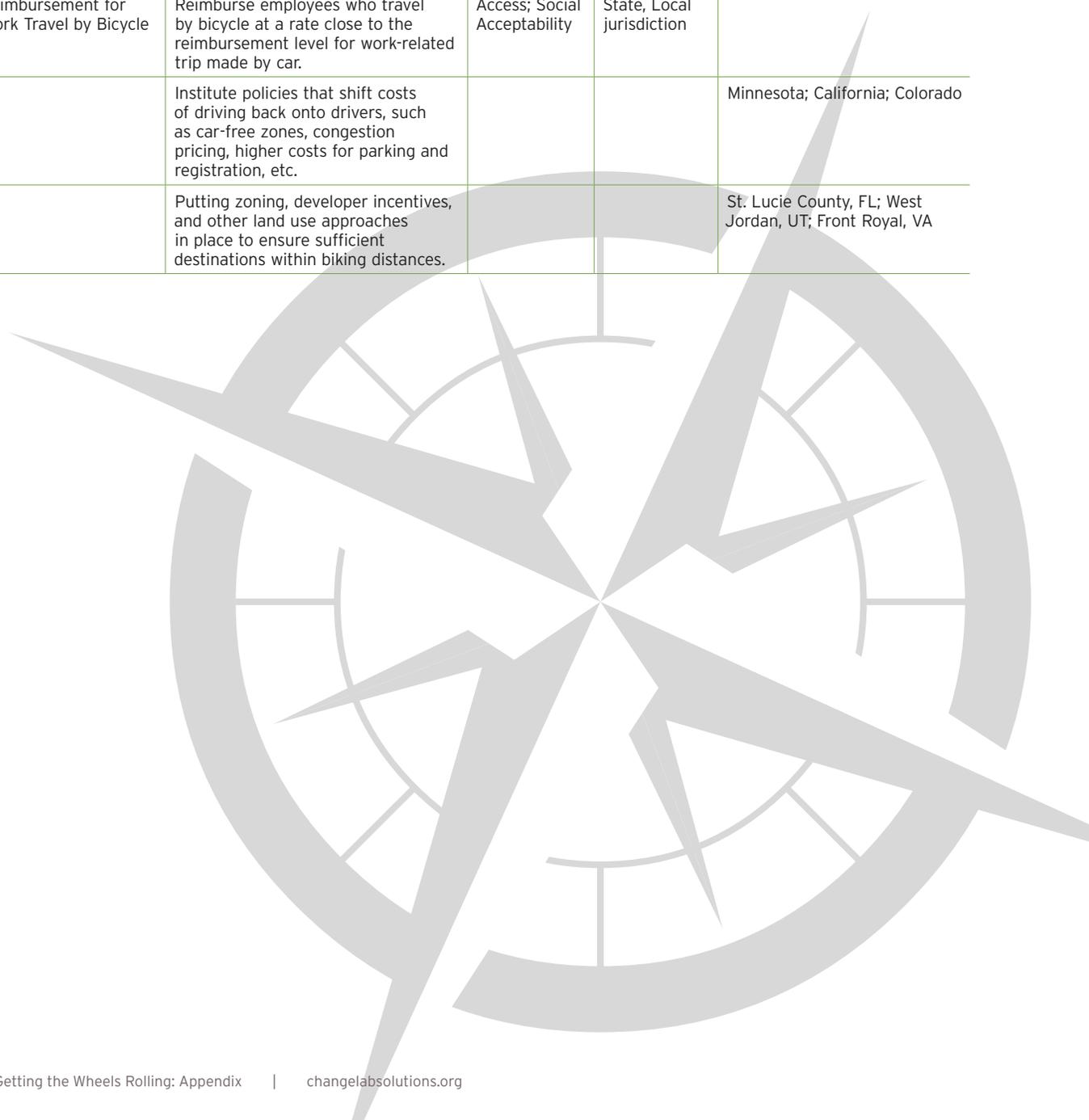
Chapter 5

Strategy	Policy	Goal/Description	Also Supports	Who Adopts?	Examples
Bicycle Parking	Require Bike Parking in New Development and Major Remodels	Require that new commercial and multifamily developments include a specified quantity of short- and long-term bicycle parking.		Local jurisdiction	More than 150 local governments including Washington, DC
Bicycle Parking	Require Parking Lots and Garages to Provide Bicycle Parking	Require existing bicycle parking lots and garages to provide bicycle racks as a condition of renewing their business license.		Local jurisdiction	Cleveland, OH; Cincinnati, OH; San Francisco, CA
Bicycle Parking	Commuter Bicycle Parking in Office Buildings	Require building owners to permit employees to bring their bicycles into office buildings.		Local jurisdiction	New York, NY; San Francisco, CA
Bicycle Parking	Require Large Civic Events to Provide Bicycle Parking	Require monitored bicycle parking at large civic and sporting events.		Local jurisdiction	Alameda, CA; San Francisco, CA
Bicycle Parking	Local Government Installation of Bike Parking	Install bicycle parking racks in existing areas where there is likely demand for bicycle parking, such as shopping and entertainment districts and near government buildings, libraries, and recreational areas.		Local jurisdiction	Washington, DC
Bicycle Parking	Support Bicycle Parking through Requiring LEED Certification	Require developers to demonstrate that public buildings earn a sufficient number of points to meet designated LEED certification standards.		Local jurisdiction, State, Federal	Kansas City, MO; Indiana; Department of Health and Human Services
Bicycle Parking	Tax Incentives for Bike Parking	Use tax policy to encourage provision of bicycle parking in existing development.		State	Virginia
Bicycling and Public Transit	Bicycles on Board	Allow people to take their bicycles with them when they board public transit.		Local jurisdiction	San Francisco, CA
Bicycling and Public Transit	Transit-Focused Bicycle Parking	Provide bicycle parking at or near major transit stops and stations.		Local jurisdiction	Chicago, IL; Long Beach, Santa Barbara, Oakland, Berkeley, Claremont, Covina, CA; St. Louis, MO; Washington, DC
Bicycling and Public Transit	Bikeways to and from Transit	Collaborate with local jurisdictions to ensure safe bicycle access routes to public transit.		Local jurisdiction	Regional Transportation District (RTD), Denver, CO; Bay Area Rapid Transit (BART), CA
Bicycle Flow at Intersections	Stop as Yield	Allow people on bicycles to treat stop signs as yield signs so long as no other traffic is present and it is safe.		State, Local jurisdiction	State of Idaho; Summit County, CO; Dillon, CO; Breckenridge, CO
Bicycle Flow at Intersections	Adjusting Signage to Support Bicycle Flow	Adjust which streets have stop signs at intersections on bicycle routes to support free flow of bicycles.	Safety	Local jurisdiction	San Francisco, CA
Bicycle Flow at Intersections	Adjusting Enforcement Priorities	Instruct law enforcement departments to deprioritize enforcement efforts against people on bicycles who do not stop at stop signs, so long as they are riding safely, without danger to themselves or others, and in a manner that respects the right of way of other road users.	Safety	Local jurisdiction	

CONVENIENCE

Chapter 5

Strategy	Policy	Goal/Description	Also Supports	Who Adopts?	Examples
Financial Incentives for Bicycling	Bicycle Commuter Reimbursement	Provide a non-taxable reimbursement to employees who commute to work by bicycle.	Access; Social Acceptability	State, Federal	State of Washington
Financial Incentives for Bicycling	Matching Bicycle/Transit Subsidy	Provide a public transit subsidy to bicycle commuters that is equal to the subsidy offered to public transit users.	Access; Social Acceptability	State, Local jurisdiction	Portland, OR
Financial Incentives for Bicycling	Parking Cash-Out Law	Require employers who provide free or subsidized parking for their employees to provide employees with the option of a cash allowance in lieu of a car parking space.	Access; Social Acceptability	State, Local jurisdiction	California; Austin, TX
Financial Incentives for Bicycling	Reimbursement for Work Travel by Bicycle	Reimburse employees who travel by bicycle at a rate close to the reimbursement level for work-related trip made by car.	Access; Social Acceptability	State, Local jurisdiction	
Reflecting the True Costs of Driving		Institute policies that shift costs of driving back onto drivers, such as car-free zones, congestion pricing, higher costs for parking and registration, etc.			Minnesota; California; Colorado
Making Everyday Destinations Bikeable		Putting zoning, developer incentives, and other land use approaches in place to ensure sufficient destinations within biking distances.			St. Lucie County, FL; West Jordan, UT; Front Royal, VA



SOCIAL ACCEPTABILITY

Chapter 6

Strategy	Policy	Goal/Description	Also Supports	Who Adopts?	Examples
Drivers and Bicycle Safety	Incorporate Cycling Safety into Driver Education and Training Courses	Require driver training, testing, and traffic schools to include bicycle safety material, provide for bicycle "rules of the road" questions on written driver's license tests, and require public and private driver training courses to include bicycle and pedestrian traffic safety lesson.	Safety	State	Minnesota; New Hampshire; Washington
Drivers and Bicycle Safety	Incorporate Bicycle Safety into Driver Licensing Requirements	Require drivers' manuals and license tests to include rules on sharing the road safely with bicycles.	Safety	State	California
Drivers and Bicycle Safety	Require Bicycle Safety Training for Professional Drivers	Require ongoing training focused on bicycle and pedestrian safety for professional drivers.	Safety	Local jurisdiction	San Francisco, CA
Drivers and Bicycle Safety	Incorporate Bicycle Safety into Traffic School Curriculum	Require traffic school curricula to include bicycle safety and road sharing.	Safety	State, Local jurisdiction	Washington State; Santa Cruz, CA; Marin County, CA
Bike Education in Schools	Requiring Bicycle Education in Elementary Schools	Require elementary schools to expand health and safety or physical education curriculum to teach children about the benefits of bicycling, bicycle safety, and how to bicycle.		State, Local jurisdiction, School district	Olmstead County, MN; Portland, OR; Alameda County, CA
Bike Education in Schools	Requiring Bicycle Skills and Vocational Training in High Schools, Adult Schools, and Community Colleges	Encourage high schools, adult schools, and community colleges to develop and administer bike trainings targeted for "interested but concerned" riders who lack confidence in their bicycling skills.	Safety	Local jurisdiction	Portland, OR
Encouragement Activities	Establish Open Streets	Require local or state jurisdictions to establish a policy of closing certain streets to motor vehicle traffic on select days.		Local jurisdiction, State	Wichita, KS; Kentucky
Encouragement Activities	Bicycle Friendly Business Districts	Require local jurisdictions to validate bicycling as a form of transportation by creating bicycle friendly business districts. Such districts encourage bicycling through a coordinated campaign that highlights ample, convenient bicycle parking, special discounts or promotions for customers who arrive by bicycle, and other bike-friendly features.	Convenience	Local jurisdiction	Long Beach, CA, San Diego, CA, New York, NY
Encouragement Activities	Safe Routes to Schools	Support biking and walking to school through education, encouragement, and new safe infrastructure.	Safety	Local jurisdiction, School district	More than 12,000 schools, including Chula Vista Elementary School District, CA; Fairfax County Public Schools, VA; Cincinnati Public Schools, OH
Encouragement Activities	State and Local Government Sponsorship of "Bike to Work Day/Week/Month"	Establish an annual bike to work day/week/month and provide incentives for participation, such as prizes and food.		Local jurisdiction, State	New Jersey Department of Transportation
Encouragement Activities	Police Bicycle Patrols	Require police departments to use bicycle patrols as well as car patrols in their patrol units.		Local jurisdiction	Tucson, AZ

INCREASED ACCESS

Chapter 7

Strategy	Policy	Goal/Description	Also Supports	Who Adopts?	Examples
Increased Access to Bicycles	Bike Share	Provide bicycles for short trips at strategic locations around town.	Convenience	Local jurisdiction	Capital Bike Share, Washington, DC; B-Boulder, Denver, CO; Deco Bike, Miami Beach, FL
Increased Access to Bicycles	Bike Fleets for Government Employees	Require local agencies to provide bike fleets for employees whose duties require short distance travel.	Convenience	Federal, State, Local jurisdiction	National Park Service Red Bike Program, Glacier National Park; B-Cycle Employee Bicycle, Washington, DC; Department of Energy Argonne National Laboratory Bike Share program, IL; City of Berkeley, CA
Increased Access to Bicycles	Encourage Private Employers to Provide Bike Fleets	Use tax credits or other incentives to encourage private employers to create bike fleets or to subsidize bicycle purchases for employees who want to use bicycles for work trips.	Convenience	Local jurisdiction	Chicago, IL; Long Beach, Santa Barbara, Oakland, Berkeley, Claremont, Covina, CA; St. Louis, MO; Washington, DC
Increased Access to Bicycles	Bike Distribution and Maintenance	Sponsor bike redistribution programs that facilitate the transfer of abandoned or donated bicycles to residents, especially youth, who lack funds to purchase a bicycle.		Local jurisdiction	Adopt-a-Bike, Islip Town Board, NY; San Francisco, CA



ENDNOTES



ENDNOTES

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