



**COMPLETE
STREETS
POLICIES +
BICYCLE
+ PEDESTRIAN
PLANS**



Key Tools for Supporting Healthy, Active Communities

ACKNOWLEDGEMENTS

This publication was made possible through funding from Kaiser Permanente National Community Benefit.

Author:

Michelle Lieberman

Contributors:

Margo Pedroso

Sara Zimmerman

November 2018

TABLE OF CONTENTS

Introduction 2

SECTION 1

Benefits of Walking + Bicycling 4

SECTION 2

What are Complete Streets Policies + Bicycle + Pedestrian Plans?..... 5

SECTION 3

Why Complete Streets Policies + Bicycle + Pedestrian Plans are Key Tools for Local Change 6

SECTION 4

How Complete Streets Policies + Bicycle + Pedestrian Plans Work 8

SECTION 5

Essential Elements for Strong Complete Streets Policies + Bicycle + Pedestrian Plans12

SECTION 6

Getting Involved: Key Roles for Health..... 16

SECTION 7

Conclusion.....18

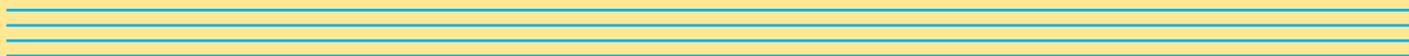
Endnotes 19

Increasing walking and bicycling

**IMPROVES HEALTH
+ LIVABILITY**

for community members.

But how do cities and counties go about making these improvements? How do we make sure these improvements are well-thought out, community-supported, and effective? Complete Streets policies, together with bicycle and pedestrian plans, are two key tools used by cities and counties to support community visions and goals for walking and bicycling and health. Health stakeholders have a crucial role to play in advancing strong Complete Streets policies and bicycle and pedestrian plans in their communities. This report will help healthcare and public health professionals understand and support healthy, active communities.





This report will provide an introduction to Complete Streets policies and bicycle and pedestrian plans, outlining key information about processes and reasons why health-focused stakeholders should engage in the development and implementation of these tools.

Section 1 provides a brief summary of the benefits of walking and bicycling, also known as active transportation. **Section 2** provides an overview of what Complete Streets policies and bicycle and pedestrian (or active transportation) plans are. **Section 3** describes why Complete Streets policies and bicycle and pedestrian plans are key tools for creating healthy active communities, setting out research that supports

this. **Section 4** summarizes how Complete Streets policies and bicycle and pedestrian plans work, including the processes by which they are adopted and implemented, and describes promising policy directions and considerations to ensure Complete Streets policies and bicycle and pedestrian plans are effective. In **Section 5**, the report describes key ways for health stakeholders to be involved in Complete Streets policies and bicycle and pedestrian planning. The report concludes with **Section 6**, which reflects on important considerations and future growth in weaving together health with Complete Streets policies and bicycle and pedestrian plans.

With this report in hand, health stakeholders can support Complete Streets policies and bicycle and pedestrian plans, and use these policies and plans to create the framework for developing and implementing change. These efforts can provide both short-term and long-term objectives and strategies that lay out a local jurisdiction's direction towards supporting active transportation. By supporting and influencing Complete Streets policies and bicycle and pedestrian plans, health stakeholders can play a central role in advancing health at the local level.

SECTION 1

BENEFITS OF WALKING + BICYCLING

Walking and bicycling, also known as active transportation, have broad community benefits, health benefits, and other benefits as well.

Research and studies have shown that walking and bicycling are key ways for community members to get sufficient physical activity as part of their daily lives, helping combat the eight percent of deaths in the U.S. associated with inadequate levels of physical activity¹ and leading to reduced risks of stroke, high blood pressure, diabetes, some cancers, premature death, and depression.² Among people who walk on a regular basis, about 60 percent meet the national physical activity guidelines (whether through walking alone or in combination with other forms of physical activity), compared with 30 percent of those who do not walk regularly.³ Almost one-third of transit users get their entire recommended amount of physical activity just by walking to and from transit stops.⁴ Conversely, people who travel by car are more sedentary, which is associated with chronic disease and premature death.⁵ Studies show that walking or bicycling to school is related to higher overall physical activity for youth.⁶



WHAT IS ACTIVE TRANSPORTATION?

Active transportation is any means of getting around that is powered by human energy, usually involving walking and bicycling, but also including other non-motorized forms of transportation, such as the use of wheelchairs, roller skates, or skateboards.

Other benefits of more walking and bicycling may include an increased sense of community, less social isolation, higher cognitive functioning, lower rates of depression, less air pollution, fewer climate-changing emissions, and many more.^{7,8}

People in low-income communities and communities of color may especially benefit from increased focus on active transportation and greater investments in safety improvements. People in low-income communities and communities of color are more likely to walk and bike to everyday destinations and are

often walking and biking out of need, rather than for recreation.⁹ People in low-income communities and communities of color also have considerably higher injury and fatality rates from traffic crashes. African Americans, Latinos, and low-income people are twice as likely to be killed while walking—and these communities also have higher rates of chronic diseases.¹⁰ These inequities emerge in significant part from the differences in availability and quality of sidewalks, bike lanes, and other neighborhood features that support safe walking and bicycling.

SECTION 2

WHAT ARE COMPLETE STREETS POLICIES + BICYCLE + PEDESTRIAN PLANS?

Most of our current street design in the U.S. is car-centric, leaving people walking, bicycling, and taking transit as an afterthought.

Complete Streets policies and bicycle and pedestrian plans guide decisions about street design and improvements, shifting the priority from moving cars to ensuring people can get around safely and easily by any method—on foot, by bike, riding transit, or in a vehicle.

A **Complete Streets policy** sets out a jurisdiction's commitment to routinely design, build, and operate all streets to enable safe use by everyone, regardless of age, ability, or mode of transportation.¹¹ An effective Complete Streets policy ensures the jurisdiction will address conditions for everyone, no matter if they are walking, biking, or driving, when a new street is built or an existing street is reconstructed. A Complete Streets policy can take many forms; it can be an ordinance or resolution, an executive order, or a policy of a jurisdiction's department of transportation. Policies vary widely in strength: how binding their language is, the degree to which

they address the need for equitable streets, and their requirements regarding implementation. Complete Streets policies are meant to guide all future decisions regarding streets, including the design of new streets, changes to existing streets, and decisions around funding. Complete Streets policies can be adopted at the local, regional, or state level. This report focuses on those adopted at the local (city or county) level. To date, more than 1,400 Complete Streets policies have been passed in the United States. The National Complete Streets Coalition maintains an inventory of Complete Streets policies.

A **bicycle and pedestrian plan** (sometimes called an active transportation plan) is an adopted document that lays out a community's vision for future pedestrian and bicycle activity, defines goals and objectives aligned with that vision, and identifies actions required to achieve the goals. Jurisdictions sometimes develop separate plans to address bicycling and walking individually, or may combine the two into one planning effort and document. In addition, jurisdictions sometimes create a Safe Routes to School plan that focuses specifically on safety and access around one or more schools and identifies

infrastructure improvements along with education, encouragement, and enforcement programs. An effective bicycle and pedestrian plan guides the local jurisdiction's future investments in both changes to existing streets as well as new facilities that support walking and bicycling. In contrast to Complete Streets policies, bicycle and pedestrian plans are more implementation-oriented and spell out more detail regarding specific streets and routes where infrastructure improvements will occur, prioritization of improvements, funding sources, responsible parties, and action steps and timelines. Bicycle and pedestrian plans are often viewed as guiding documents for a specific length of time (often 5 to 20 years), and need to be updated periodically to remain relevant to the community's vision and needs.

While a Complete Streets policy sets out a jurisdiction's intent create a street network that balances needs of all users, a bicycle and pedestrian plan delves into more specific changes needed to support walking and bicycling. Because they serve complementary but different purposes, local jurisdictions may adopt a Complete Streets policy or a bicycle and pedestrian plan, and do best by adopting both.



SECTION 3

WHY COMPLETE STREETS POLICIES + BICYCLE + PEDESTRIAN PLANS ARE KEY TOOLS FOR LOCAL CHANGE

Complete Streets policies and bicycle and pedestrian plans are tools for making changes to street design, improving environments for walking and bicycling, and ensuring communities get the overall benefits of active transportation.

There has been little research as to whether adopting Complete Streets policies or bicycle and pedestrian plans in and of themselves affect rates of walking and bicycling or

safety of people walking and biking. One study showed that having a local pedestrian plan was associated with lower rates of pedestrian injuries and fatalities.¹² Informational outreach activities such as community engagement conducted as part of bicycle plans, combined with infrastructure improvements, have been shown to increase bicycling.¹³ However, Complete Streets policies and bicycle and pedestrian plans are the primary ways to set the stage for changes to street design. Research shows that the changes that are implemented as a result of these types of policies and plans (i.e. more sidewalks, crosswalks, and bike lanes) have great benefits.

As studies demonstrate, street design is one significant factor that influences whether people choose to walk or bicycle instead of driving. The way our streets are designed can support or hinder active transportation. Providing sidewalks, pathways, dedicated bike lanes, and supportive features such as shade, pedestrian scale lighting, and traffic calming encourages walking and bicycling and improves safety. According to numerous research studies, people with access to more and better

quality sidewalks are more likely to walk and meet physical activity recommendations.¹⁴ Similarly, research is clear that people with access to bicycle lanes and paths are more likely to bicycle and meet physical activity recommendations.¹⁵ Improved street crossings and traffic calming measures have been shown to reduce traffic speed and increase safety for people walking and bicycling.¹⁶ People who live in more multimodal communities (places that support getting around by a variety of modes—walking, bicycling, and public transportation) exercise more and are less likely to be overweight than those who live in automobile-oriented communities.¹⁷ Research shows that the most walkable neighborhoods have lower rates of obesity than less walkable neighborhoods, and residents in more walkable cities have lower blood pressure and hypertension risks.^{18,19} Streetscape improvements may also increase green space and sense of community, and reduce crime and stress.²⁰ The health benefits of walkability are more pronounced in low-income neighborhoods, which suggests that quality, pedestrian-friendly design in low-income neighborhoods could reduce health inequities.²¹



INVESTING IN WALKING, BIKING, + SAFE ROUTES TO SCHOOL

For more information about the cost savings and economic benefits of investments in active transportation, refer to the Safe Routes to School National Partnership's [Investing in Walking, Biking, and Safe Routes to School: A Win for the Bottom Line](#).



EXAMINING THE HEALTH + ECONOMIC BENEFITS OF ACTIVE TRANSPORTATION

In addition to increased walking and bicycling that supports increased physical activity and better health, studies have shown walkable and bikeable infrastructure investments result in economic benefits. Investments in active transportation have been linked to increased foot traffic, retail sales, and tourism revenue, as well as cost savings in health care and fuel. For example, active transportation-related infrastructure, businesses, and events added \$497 million and 4,108 jobs to New Jersey's economy in 2011—eight times greater than the \$63 million invested in bicycle and pedestrian infrastructure that year.²² A study of commercial properties such as office, retail, and apartment buildings found that a ten-point increase in WalkScore (a measure of walkability) increased the property value by one to nine percent.²³ Two studies in Sarasota County, Florida and Asheville, North Carolina found that the property taxes generated by walkable, denser downtowns far outstripped those generated by sprawling big box stores—so much so that a downtown 17-story building on one acre would generate as much property tax revenue as 145 acres of big box stores.²⁴ An analysis of Portland, Oregon's investments in bicycling infrastructure showed great cost savings. By 2040 investments in the range of \$138 to \$605 million will result in health care cost savings of \$388 to \$594 million, fuel savings of \$143 to \$218 million, and \$7 to \$12 billion in the value of lives saved.²⁵

The Nashville Area Metropolitan Planning Organization (Nashville MPO) incorporated health impacts into their transportation modeling, and found that a moderate increase in levels of walking and biking would prevent 70 deaths each year from chronic conditions and save approximately \$30 million each year in medical costs.²⁶ As a result, the Nashville MPO prioritizes active transportation, and now more than 75 percent of projects in their long-range transportation plan include active transportation.²⁷

Colorado dedicates approximately 2.5 percent of its budget to active transportation. The state garners approximately \$1.6 billion each year in economic benefits from active transportation, generated from household spending, tourism, retail, and manufacturing. In addition, more than 300 deaths are prevented each year due to the state's levels of people walking and biking, creating health savings of \$3.2 billion per year.²⁸

The Southern California Association of Governments (SCAG) performed a health and economic impact study of active transportation, finding that the current rate of active transportation in the region saves \$6 billion in transportation costs, prevents tens of thousands of cases of diabetes, heart disease, and hypertension, and saves nearly \$200 million in medical costs. Every dollar spent on active transportation adds \$5.20 in value to the region. By quadrupling the investment in active transportation, \$70 billion would be generated from construction costs, labor productivity increases, medical cost savings, and household transportation savings, and 11,500 jobs would be created every year.²⁹

SECTION 4

HOW COMPLETE STREETS POLICIES + BICYCLE + PEDESTRIAN PLANS WORK

Complete Streets policies and bicycle and pedestrian plans are locally driven and should be responsive to local needs, context, and vision.

However, some common elements and processes typically occur as jurisdictions develop, adopt, and implement these policy tools. This section describes how Complete Streets policies and bicycle and pedestrian plans typically work, common elements, and considerations that make the policies and plans stronger and especially effective in promoting health and health equity.

A. Complete Streets Policies: Contents and Process

Complete Streets policies can take many forms. A policy can be standalone or integrated into a larger guiding document such as a comprehensive plan. The most common forms of Complete Streets policies include:

- **Ordinance.** Ordinances are adopted by a jurisdiction's governing body and incorporate Complete Streets into the municipal code, creating requirements that are binding and enforceable by law.
- **Resolution.** Resolutions are adopted by a jurisdiction's governing body. In many states, resolutions function like ordinances for the purpose of mandating governmental action, while in other states they are non-binding. By adopting a Complete Streets resolution, the city or county's governing body provides official support for Complete Streets and may set out clear implementation steps and monitoring to ensure implementation is occurring is important.
- **Plan.** Policies can be included in broader comprehensive plans or transportation plans. These policies are often part of the community's goals for future. In order to be effective, the policy must incorporate strong language and also inform the other aspects of the plan, including identified improvements, prioritization, and implementation actions.
- **Departmental policy.** Departmental policies are in-house guidance on specific topics, usually issued by the department head. A Complete Streets policy could be developed by a planning or transportation department, and guide procedure changes. Because there is no public process for departmental policies, they can be easier to change over time and rely on the commitment of department leadership, for better or worse.
- **Executive order.** A city or county's chief executive can issue an executive order committing support and directing staff to implement Complete Streets principles. Such orders can be an effective way to quickly introduce new requirements, but can be easily overturned when the executive office holder turns over.

As noted above, the core way that a Complete Streets policy works is by changing how local streets are constructed and renovated so that as any street is newly built or reconstructed, it results in the creation of a Complete Street that is safe and convenient for use by everyone, regardless of whether people are on foot, biking, in a bus, or in a car. This means that Complete Streets policies don't require any particular infusion of funding — they do not go back and immediately fix dangerous streets that already exist, but they do ensure that going forward, the street network becomes steadily safer and better for everyone over time.



So what makes a strong Complete Streets policy? There are four key provisions that make the difference between a weak policy that establishes some aspirational goals versus a strong policy that has significant and lasting effects on the walkability and bikeability of the street network:

- **Strong Core Complete Streets Requirement:** Some policies simply have a vague statement about support for Complete Streets. Strong policies contain a binding provision requiring that all street projects create a street that is safe, comfortable, and convenient for all users to travel along and across. Language that street projects “shall,” “must” or “will” create Complete Streets is more likely to create a binding requirement. Language that street projects “may” or “shall aim to” or “can work toward” Complete Streets is far weaker. Without a strong core requirement, Complete Streets in your community are entirely dependent upon the whims of decision makers.
- **Clear + Limited Exceptions Process:** Communities do need flexibility in implementing Complete Streets – and that flexibility should be provided through a clear and limited exceptions process. Exceptions should be provided for specific limited circumstances, such as geological impediments or vastly increased costs, and a separate showing should be required to be exempted from compliance with providing street infrastructure for each mode of travel. The exception process should provide the public with an opportunity to comment, and should require clear, supportive documentation justifying the exception.
- **Provisions Ensuring Equitable Implementation:** Because low-income neighborhoods have historically received fewer transportation investments and may be less likely to experience street renovations that trigger Complete Streets improvements, Complete Streets policies run the risk of exacerbating inequities unless they include provisions aimed at supporting equitable outcomes. Complete Streets policies can prioritize projects in high-needs communities; require meaningful equity-oriented community engagement; train staff; report on equity-related performance measures; and include community members in Complete Streets committees and other public input and oversight opportunities.
- **Strong Implementation Provisions:** Policies that do not spell out implementation requirements are generally less effective. Practitioners identify a variety of specific provisions that increase the likelihood of meaningful implementation of Complete Streets policies: establishing a Complete Streets committee with staff and community membership; identifying key performance measures that regularly provide Complete Streets implementation statistics by neighborhood and demographic group; requiring yearly reports on Complete Streets implementation publicly posted online; as well as revising internal policies and materials and training staff.

NATIONAL COMPLETE STREET COALITION'S 10 ELEMENTS OF AN IDEAL COMPLETE STREETS POLICY

No matter the type of policy, the National Complete Street Coalition identifies 10 elements of an ideal Complete Streets policy:

1. Vision + Intent

Includes an equitable vision for how and why the community wants to complete its streets. Specifies need to create complete, connected network and specifies at least four modes, two of which must be biking or walking.

2. Diverse Users

Benefits all users equitably, particularly vulnerable users and the most underinvested and underserved communities.

3. Commitment in all Projects + Phases

Applies to new, retrofit/reconstruction, maintenance, and ongoing projects.

4. Clear, Accountable Expectations

Makes any exceptions specific and sets a clear procedure that requires high-level approval and public notice prior to exceptions being granted.

5. Jurisdiction

Requires interagency coordination between government departments and partner agencies on Complete Streets.

6. Design

Directs the use of the latest and best design criteria and guidelines and sets a time frame for their implementation.

7. Land Use + Context Sensitivity

Considers the surrounding community's current and expected land use and transportation needs.

8. Performance Measures

Establishes performance standards that are specific, equitable, and available to the public.

9. Project Selection Criteria

Provides specific criteria to encourage funding prioritization for Complete Streets implementation.

10. Implementation Steps

Includes specific next steps for implementation of the policy.³⁰

B. Bicycle + Pedestrian Plans: Contents + Process

Bicycle and pedestrian plans can be stand-alone plans, combined (sometimes called active transportation plans) or sections within a larger transportation plan. The contents of a bicycle and pedestrian plan vary. Some states, such as California, provide guidance on the contents and process of developing a plan and require specific elements be included in a plan in order to be eligible for state funding.

The contents of a bicycle and pedestrian plan typically includes these sections or elements:



- **Background** including a community vision statement, goals, policies, and objectives, and a description of the planning process including community engagement.
- **Existing conditions + needs assessment** including inventories, maps, and descriptions of existing facilities for walking and bicycling (bike lanes, sidewalks, pathways, multi-use trails); inventories, maps, and descriptions of supportive facilities (bike parking, bike repair stations, etc.); descriptions of existing education, encouragement, and enforcement programs; assessment of conditions, such as injuries, fatalities, and walking and biking counts; assessment of existing related plans and policies; and assessment and maps of land uses and major origins and destinations for people walking and biking.
- **Recommendations** for new and improved facilities for walking and bicycling (including maps for the locations of these recommendations); new supportive facilities; education, encouragement, and enforcement programs; and policy changes.
- **Design guidelines** that guide city or county staff in developing new facilities and improving existing facilities. Design guidelines typically include guidance on the width of bike lanes, sidewalks, paths and trails, signage and wayfinding, addressing street crossings, design and placement of bike parking, and other supportive amenities. Design guidelines can reference other model guidance such as the National Association of City Transportation Officials' [Urban Street Design Guide](#) or [Urban Bikeway Design Guide](#).
- **Cost, funding, + implementation** including planning-level cost estimates, potential funding sources, prioritization and phasing (timelines) for implementation, implementation responsibilities, evaluation processes, and how updates to the plan will occur.



Some jurisdictions prepare (or are required to prepare) additional documents or analyses that support the plan. These could include a Health Impact Assessment (HIA), which helps evaluate the potential health effects of a plan or policy before it is implemented, as was prepared for the [Clark County \(Washington\) Bicycle and Pedestrian Master Plan](#), environmental analysis (required in California and other states), or project feasibility studies that look in more detail at specific infrastructure projects proposed in the plan.

Bicycle and pedestrian plans typically follow a planning, adoption, and implementation process that includes the following steps:

- **Defining the scope of the plan.** This includes deciding if the plan will be a combined bicycle and pedestrian plan or standalone or component of the plan. Often times this is dictated by previous work in the community. For example, a comprehensive plan might identify developing a standalone active transportation plan as an action.
- **Collecting/documenting existing conditions.** This step includes conducting walking and biking counts, walk and bike audits, inventorying and mapping current infrastructure, and gathering data such as health data and injury/fatality data to inform recommendations.
- **Assessing needs.** Based on the data and information gathered in the previous step, and incorporating qualitative data from community engagement activities, this step assesses the gaps and needs to fully support walking and biking. This may include physical gaps in the network, or needs for supportive policies and programs.
- **Developing recommendations.** Based on the needs assessment, recommended improvements are identified.
- **Prioritizing.** A key component of a bicycle and pedestrian planning process is prioritizing the improvements. Because changes to infrastructure can require significant resources and funding, prioritizing implementation is key. A process of defining the prioritization criteria (which should include some form of community input) and then applying the criteria is typically followed.
- **Developing the plan.** This step includes pulling together the information from all of the previous steps into the document.
- **Adopting the plan.** This step is the formal process by which the local government's governing body adopts the plan.
- **Implementing.** After the plan is adopted, work does not stop. Implementing the plan is needed to make change.
- **Evaluating.** This includes defining performance measures, reporting, and correcting course if needed. Performance measures and reporting are discussed in more detail below.

Community engagement should be included in every step of the plan development, from defining the scope of the plan through adoption, and beyond into implementation and evaluation.



ADDITIONAL RESOURCES

The [Pedestrian and Bicycle Information Center](#) provides additional information about developing a bicycle or pedestrian plan as well as links to example plans from across the country.

The National Complete Streets Coalition's [Complete Streets Local Policy Workbook](#) includes information about developing a local Complete Streets policy, including considerations for choosing a type of policy.

ChangeLab Solutions has developed a [model Complete Streets resolution](#) for local governments with example language and relevant findings.

SECTION 5

ESSENTIAL ELEMENTS FOR STRONG COMPLETE STREETS POLICIES + BICYCLE + PEDESTRIAN PLANS

Complete Streets policies and bicycle and pedestrian plans demonstrate local commitment; however, successful change and benefits to community health depend on the strength of the commitment and effective implementation.

The sections below describe five key things to include or consider to help ensure a Complete Streets policy or bicycle and pedestrian plan is effective in making positive change: intentionally addressing equity, engaging community, providing defined implementation steps, using performance measures, and ensuring implementation oversight.

A. Ensuring Policies + Plans Advance Equity

As noted previously, residents of low-income communities and communities of color may especially benefit from the changes to street conditions resulting from Complete Streets policies and bicycling and pedestrian plans. But without an explicit and intentional focus on underserved communities, policies to improve health through the built environment may actually widen disparities.³¹ It is important that Complete Streets policies and bicycle and pedestrian plans intentionally assess the needs of low-income communities and communities of color and include

provisions to address these needs in order to advance equity. What does it mean to include equity in Complete Streets policies and bicycle and pedestrian plans? Specific policy provisions and implementation processes are key, including prioritizing projects in high-needs communities, providing meaningful equity-oriented community engagement, and inclusion and reporting of equity-related performance measures. In addition, equity is advanced by ensuring that community members are included in Complete Streets or bicycle and pedestrian advisory committees or other public input and oversight opportunities, and training staff on the need for prioritizing high-needs communities. As in most interventions and programs, it is imperative that equity is woven throughout the planning, implementation, and evaluation process from the beginning.





CASE STUDY

NEW ORLEANS: COMPLETE STREETS FOR HEALTH EQUITY

The National Complete Streets Coalition's [Complete Streets for Health Equity: An Evaluation of New Orleans and Jefferson Parish](#) explores how to implement Complete Streets policies with an equity lens and establishes an approach to evaluate how Complete Streets address health equity.

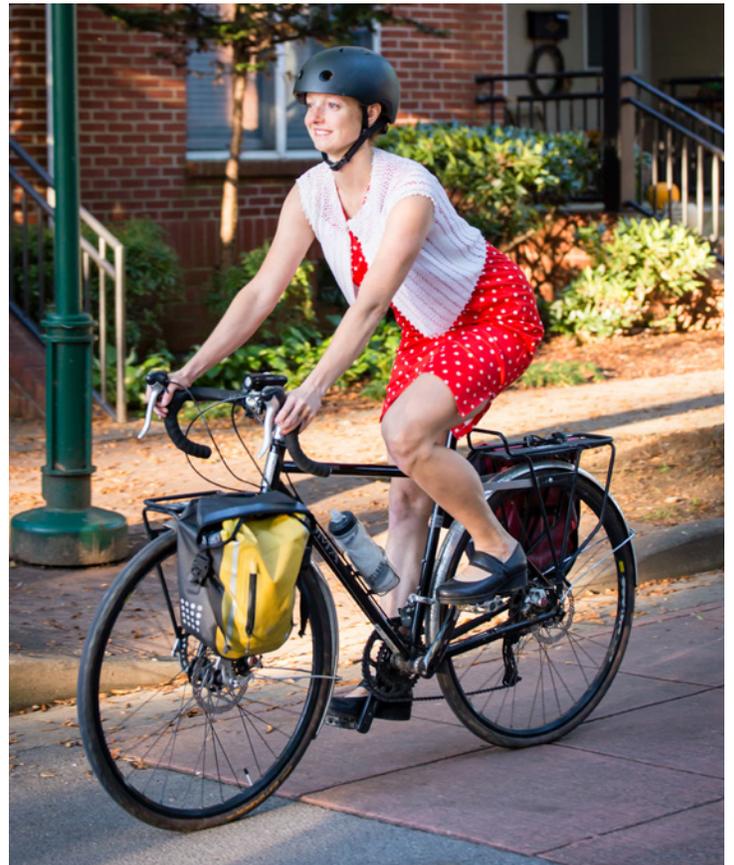
New Orleans adopted a Complete Streets ordinance in 2011. Since then, the city bike network has expanded to double what it was, and in turn, biking trips have also increased. This is a great win in the city; however, many of the ordinance's requirements have not been implemented, including annual reports that would allow the program to track important milestones. Without this tracking, it is unknown if the Complete Streets policy is benefiting low-income communities and communities of color.

The recommendations to increase equity in implementation of New Orleans' Complete Streets policy included:

- Creation and adoption of performance measures to assess the program's impact on health equity, including race/ income and community engagement measures.
- Implementation of meaningful community engagement and transparency in all levels of decision making, including a formal reviewing process that includes members of the public as well as proactive public engagement opportunities in low-income communities and communities of color.
- Prioritization of high-quality Complete Streets connections to everyday destinations, including targeting investments toward access to grocery stores, parks, and employment opportunities in low-income neighborhoods and communities with high chronic disease rates.

B. Meaningful Community Engagement

In order to create streets and neighborhoods that address local needs and priorities and achieve overall community visions, meaningful community engagement needs to occur throughout the development and implementation of Complete Streets policies and bicycle and pedestrian plans. Residents, business owners, and other local stakeholders should be asked to provide input on the overall goals and objectives for these policies and plans. Engaging community members will help the local jurisdiction identify challenges and concerns around walking and bicycling that are not shown through crash data or infrastructure assessments. Sharing potential infrastructure recommendations will allow community members to give feedback on whether the changes will address their challenges. Prioritization of projects within bicycle and pedestrian plans should consider community support for the project. Community members needs to be engaged after the policy or plan is adopted as well. Including community perspectives in implementation and evaluation will help ensure what is built remains aligned with the local needs, priorities, and visions established early on.





C. Defined Implementation Steps

For Complete Streets policies, specifying implementation steps in the adopted policy helps increase the likelihood of local jurisdiction follow through. Basic implementation steps that can be included in a Complete Streets policy include:

- Revising all transportation policies, procedures, design manuals, standards, and guidelines to incorporate Complete Streets, using best practices in urban design or street design such as the NACTO's Urban Street Design Guide
- Training staff to ensure the successful implementation of Complete Streets across the board and particularly in low-income communities and communities of color
- Creating a process, including community meetings, surveys, or public hearings, for community engagement regarding implementation and project selection

Bicycle and pedestrian plans are typically implementation-oriented and inherently delve deeper into specific actions that will be taken. Some key factors to ensure plans translate to successful implementation include:

- Identifying responsible parties to execute each action
- Establishing benchmarks
- Connecting actions to funding sources and priorities
- Establishing realistic but definitive timelines

CASE STUDY VANCOUVER, WASHINGTON COMPLETE STREETS POLICY

Vancouver, Washington adopted a [Complete Streets ordinance](#) in 2017 that includes detailed guidance on implementation, including how Complete Streets will be considered in budgeting, how the ordinance will be applied to private projects, and how outreach and education for schools, community members, and other stakeholders will be conducted. One of the first elements of implementing the Complete Streets policy was to develop a project checklist to assist city staff in scoping and developing of transportation capital projects. The checklist is a tool to ensure that projects are consistent with the Complete Streets policy.



D. Performance Measures + Reporting

Including performance measures and ensuring the jurisdiction is collecting the data and reporting on the measures is a key way to maintain accountability and improve likelihood of implementation.

Without defined performance measures and a specified process for collecting data and reporting, it is hard for a community to know if the plan or policy is effective and if implementation is really leading to achieving community goals.

Performance measures are commonly grouped into three categories: inputs, outputs, and outcomes/impacts. It is widely agreed that it is important to look at both output and outcomes in evaluating performance. In contrast, although inputs may provide a sense of the scope and scale of an effort, they are seen as a less meaningful measure of the effects of a policy

or process, and are frequently omitted from performance measures or addressed in a more cursory manner.

There are dozens or hundreds of performance measures related to Complete Streets and bicycle and pedestrian planning that can be tracked. Here are some key measures to require, each of which must include geographic and demographic breakdowns to enable equity analyses:

- Basic facility outputs, such as the number of miles of bike lanes and sidewalks as well as specific items such as number of curb ramps and trees planted
- Safety outcomes such as collisions, injuries, and fatalities

- Mode numbers for school and employment commutes
- Outcomes for proximity to needs such as parks, transit, and low-stress bike routes
- Health outcomes

In addition to establishing and collecting data for each performance measure, easily accessible public reports help community members understand what is happening and hold a jurisdiction accountable. Reporting should occur no less frequently than yearly. In addition to establishing and collecting data for each performance measure, easily accessible public reports help community members understand what is happening and hold a jurisdiction accountable. Reporting should occur no less frequently than yearly.

E. Implementation Committees or Formal Implementation Oversight

Complete Streets or bicycle and pedestrian advisory committees, also known as implementation committees, advisory councils, and the like, are official groups that meet to support the implementation of local Complete Streets policies or bicycle and pedestrian plans. A primary role of these committees is to create an accountability mechanism for the implementation of the policy or plan. Committees are generally comprised of some city staff, professionally affiliated members focused on multimodal transportation, economic development, health, or land use, and some community residents with no aligned professional representation. They meet at regular intervals, often monthly or quarterly.

These committees are generally established by policy and are usually advisory in nature. Core duties for committees involve working on the underpinnings of policy or plan implementation, through tasks such as determining performance measures and developing or reviewing annual or quarterly reports on the city's progress. Some committees focus primarily on reviewing and providing feedback on specific projects. As part of the policy or a separate matter, jurisdictions should establish a committee with a broad scope of responsibility for monitoring and supporting implementation of the policy, with duties to include review and feedback on proposed and ongoing performance measures, annual progress reports,



and exceptions processes; provide for a diverse membership that includes representation from different demographic groups, community groups, health-focused stakeholders, and different kinds of street users; and commit to monthly or quarterly meetings as well as staff support for committees.

SECTION 6

GETTING INVOLVED: KEY ROLES FOR HEALTH

Including health as an important consideration within Complete Streets policies and bicycle and pedestrian plans and involving organizations and individuals with a health focus makes for a stronger policy or plan with benefits to the community overall.

Communities around the country are recognizing the need to include health and many are making efforts to include health professionals. Where can those working in the health field insert themselves? Here are some key roles that those focused on health can take:

Community Engagement.

By playing a strong role in creating and implementing the community engagement process in Complete Streets policies and bicycle and pedestrian planning, organizations focused on health can help reach more community members and ensure the engagement is meaningful. Public health departments and healthcare organizations running programs within communities are often trusted partners as a result of their ongoing direct interaction with residents. Oftentimes these groups also have more experience with conducting community engagement than a planning or transportation department. These groups can also help translate technical data and elaborate government processes into information that is meaningful to community members.

Translating Health Data into Transportation Needs + Strong Policy Language.

Public health departments and healthcare organizations often have access to health data and are able to translate this data into transportation needs that can inform the policy or plan. This includes data related to physical inactivity and chronic disease, as well as helping transportation practitioners understand health disparities that may be correlated with lack of opportunities for safe walking and bicycling. Some communities have gone as far as including a Health Impact Assessment along with a policy or plan to ensure health data and needs receive specific attention. The [Health Impact Assessment Clearinghouse](#) includes a number of HIAs developed to inform Complete Streets policies and bicycle and pedestrian plans. Health stakeholders can use such data to advocate convincingly for the need for strong, equity-focused policy and plan provisions.

CASE STUDY

COWLITZ COUNTY HEALTH AND HUMAN SERVICES AND CASTLE ROCK COMPLETE STREETS ORDINANCE

The small city of Castle Rock, Washington successfully adopted a Complete Streets ordinance in 2017 partly due to the leadership and perseverance of the Cowlitz County Health and Human Services Department. Staff from the Health and Human Services Department identified Complete Streets as an opportunity to improve cities for walking and bicycling as part of implementing funding under the CDC's State and Local Public Health Actions to Prevent Obesity, Diabetes, and Heart Disease and Stroke program. After approaching cities throughout the county, the staff found interested community members in Castle Rock. The staff spearheaded creating a committee to develop the Complete Streets ordinance. The committee, which included representatives from the city council, a high school student, a senior resident who uses a mobility device, and local walking and bicycling advocates, met every two weeks for seven months to collectively draft the ordinance. The Health and Human Services Department provided technical assistance by sharing example language, bringing information on best practices to the group, and organizing the process. The resulting ordinance has received great support from the community.³⁴



CASE STUDY

STEP BY STEP LOS ANGELES COUNTY; PEDESTRIAN PLANS FOR UNINCORPORATED COMMUNITIES

In Los Angeles County, the Department of Public Health (DPH) has taken the lead on developing pedestrian plans for the County's unincorporated communities, with successful practices for others to consider using. DPH has a history of providing grants to local cities to develop active transportation plans and Complete Streets policies, understanding that these policies and plans help support active communities with better health outcomes. In the past few years, DPH transitioned to project managing and doing some of work in-house for under-resourced cities that otherwise would not have been able to

take advantage of the grants. When it came to the County's own active transportation planning, DPH took the lead in applying for California Active Transportation Program (ATP) funding to prepare pedestrian plans for the unincorporated communities. The planning process began in 2016 and the plan is expected to be adopted in 2019. The County Departments of Public Works and Regional Planning are integral partners in the work, but DPH's capacity and expertise in this area enabled them to lead this planning effort.

DPH staff talk about many benefits of leading the pedestrian planning process. The department's work as a service provider in the communities brought credibility and trust that enabled them to engage more community members in the planning process. Public health staff were able to translate data into meaningful information for residents, creating community buy-in. They were also able to draw on internal expertise in areas such as violence prevention to ensure the planning process not only addressed traffic safety but other factors of walkability.³⁵

Providing Health Perspective to Decision Makers. Decision makers such as city councils and county boards are looking to hear from a variety of perspectives when considering a new policy or plan. Hearing about the benefits of active transportation and considerations to improve local health outcomes can be most effective when the information comes from a health or healthcare professional with expertise in this arena. This could occur as public testimony during the policy or plan adoption hearing, or earlier in the process by serving on an advisory committee or participating in community engagement activities.

Non-Infrastructure Programmatic Recommendations. One component of a typical bicycle and pedestrian plan is programmatic or non-infrastructure recommendations. This includes education and encouragement programs that are intended to support increased safe walking and bicycling. Those working in health are often more experienced

than those in planning and transportation with implementing successful programs, including community education and behavior change campaigns. Health organizations can provide insight on effective programs and help design tailored programs to address community needs.

Funding + Implementation. Public health and healthcare organizations can play a role in helping fund the policy or plan development process, as well as in assisting in implementation. This could include directly funding the planning work, like the Los Angeles County Department of Public Health has done, or taking the lead on implementing education and encouragement programs. Or, an organization can play a direct role in assisting with implementation of infrastructure changes by funding or supporting projects on the streets or by updating its own facilities to support walking and bicycling. Additionally, having a health stakeholder representative on the

implementation committee, oversight or advisory committee formalizes a role for input from the health sector. This representative can ensure health is considered throughout the process.

Evaluation. While evaluation is a good practice, oftentimes transportation and planning departments do not prioritize it. A study in North Carolina showed that only 22 percent of pedestrian plans statewide included a plan for evaluation, but plans that included public health professionals were more likely to include evaluation than plans that did not.³² Health professionals are more likely to be experienced with evaluation and can help city or county staff understand the importance of evaluation, help identify appropriate methodologies, and assist with the actual evaluation process. Strong evaluation is essential to guide implementation, engage in course correction, identify additional policy or funding needs, and achieve the goals initially set out for the plan or policy.



SECTION 7

CONCLUSION

Complete Streets policies and bicycle and pedestrian plans are designed to shift street design from being car-centric to supporting people walking, bicycling, and being active in their communities.

These tools are key ways for local jurisdictions to formalize their commitment to active transportation and begin the process of making change. These plans and policies are opportunities to support health and offer a chance for health-focused organizations to become involved in local transportation decision making. Numerous studies show that

street design that supports walking and biking leads to positive health outcomes. However, more research is needed to directly connect Complete Streets policies and bicycle and pedestrian plans with better health outcomes. Nevertheless, there are many examples around the country of cities and counties who understand the importance

of these policies and plans in creating healthier communities and recognize the benefits of having health stakeholders at the table. These policies and plans are important opportunities for collaboration, as all groups work to encourage healthy, vibrant communities.

ENDNOTES

- ¹ Carlson, Susan A., E. Kathleen Adams, Zhou Yang, and Janet E. Fulton. "Percentage of Deaths Associated With Inadequate Physical Activity in the United States." *Preventing Chronic Disease* 15 (2018). doi:10.5888/pcd18.170354.
- ² U.S. Department of Health and Human Services. 2008 Physical Activity Guidelines for Americans. <http://health.gov/paguidelines/guidelines/>.
- ³ Centers for Disease Control and Prevention. Vital signs: walking among adults — United States, 2005 and 2010. *MMWR Morbid Mortal Wkly Rep.* 2012;61(31):595-601.
- ⁴ Sandt, Laura, et al. "Leveraging the Health Benefits of Active Transportation: Creating an Actionable Agenda for Transportation Professionals" *TR News* May-June (2012). <http://onlinepubs.trb.org/onlinepubs/trnews/trnews280.pdf>.
- ⁵ Ibid.
- ⁶ Davison K, Werder J and Lawson, C. "Children's Active Commuting to School: Current Knowledge and Future Directions." *Preventing Chronic Disease*, 5(3): A100, July 2008.
- ⁷ Jan Garrard, Chris Rissel, and Adrian Bauman. "Health Benefits of Cycling," in *City Cycling*, ed. John Pucher and Ralph Buehler (Cambridge, MA: The MIT Press, 2012), 31-56; see also Mallory Atkinson and Lynn Weigand, "A Review of the Literature: The Mental Health Benefits of Walking and Bicycling," Initiative for Bicycle and Pedestrian Innovation, Portland State University (June 2008), <http://www.pdx.edu/ibpi/sites/www.pdx.edu/ibpi/files/Mental%20Health%20Benefits%20White%20Paper.pdf>.
- ⁸ National Academies of Sciences, Engineering, and Medicine (2018). *The Built Environment, Obesity, and Health*, Chapter 2 in *Advancing Obesity Solutions Through Investments in the Built Environment: Proceedings of a Workshop*. The National Academies Press.
- ⁹ Brian McKenzie, "Modes Less Traveled—Bicycling and Walking to Work in the United States: 2008– 2012," *American Community Survey Reports*, 2014, <https://www.census.gov/library/publications/2014/acs/acs-25.html> and League of American Bicyclists, "The New Majority, Pedaling Towards Equity," https://www.bikeleague.org/sites/default/files/equity_report.pdf.
- ¹⁰ Katie M. Heinrich et al., "How Does the Built Environment Relate to Body Mass Index and Obesity Prevalence Among Public Housing Residents?" *Journal of Health Promotion*. 2008, 22(3):187-194.; M. Maciag, *Pedestrians Dying at Disproportionate Rates in America's Poorer Neighborhoods*, *Governing* (August 2014), <http://www.governing.com/topics/public-justice-safety/gov-pedestrian-deaths-analysis.html>; League of American Bicyclists, "The New Majority, Pedaling Towards Equity," https://www.bikeleague.org/sites/default/files/equity_report.pdf.
- ¹¹ "What Are Complete Streets?" *Smart Growth America*. Accessed September 11, 2018. <https://smartgrowthamerica.org/program/national-complete-streets-coalition/publications/what-are-complete-streets/>
- ¹² Kerr Z, Rodríguez DA, Evenson KR, and Aytur SA. Pedestrian and bicycle plans and incidence of crash-related injuries. *Accident Analysis & Prevention*. 2013; 50, 1252-1258.
- ¹³ "Bike & Pedestrian Master Plans." *County Health Rankings & Roadmaps*. November 16, 2017. Accessed October 04, 2018. <http://www.countyhealthrankings.org/take-action-to-improve-health/what-works-for-health/policies/bike-pedestrian-master-plans>.
- ¹⁴ See, e.g., Addy C, Wilson D, Kirtland K, et al. "Associations of Perceived Social and Physical Environmental Supports with Physical Activity and Walking Behavior." *American Journal of Public Health*, 94(3): 440–443, March 2004; Rodriguez D and Joo J. "The Relationship between Non–Motorized Mode Choice and the Local Physical Environment." *Transportation Research Part D: Transport and Environment*, 9(2): 151–173, March 2004; Sharpe P, Granner M, Hutto B, et al. "Association of Environmental Factors to Meeting Physical Activity Recommendations in Two South Carolina Counties." *American Journal of Health Promotion*, 18(3): 251–257, January/February 2004; Owen N, Humpel N, Leslie E, et al. "Understanding Environmental Influences on Walking; Review and Research Agenda." *American Journal of Preventive Medicine*, 27(1): 67–76, July 2004; Reed J, Wilson D, Ainsworth B, et al. "Perceptions of Neighborhood Sidewalks on Walking and Physical Activity Patterns in a Southeastern Community in the US." *Journal of Physical Activity and Health*, 3(2): 243–253, April 2006; Ewing R, Schroeder W and Greene W. "School Location and Student Travel: Analysis of Factors Affecting Mode Choice." *Transportation Planning and Analysis* 2004, 1895: 55–63, 2004.
- ¹⁵ See, e.g., Boarnet M, Day K., Anderson C, et al. "California's Safe Routes to School Program-Impacts on Walking, Bicycling, and Pedestrian Safety." *Journal of the American Planning Association*, 71(3): 301–317, September 2005; Hoehner C, Ramirez L, Elliott M, et al. "Perceived and Objective Environmental Measures and Physical Activity Among Urban Adult." *American Journal of Preventive Medicine*, 28(2): 105–116, February 2005; Sharpe P, Granner M, Hutto B, et al. "Association of Environmental Factors to Meeting Physical Activity Recommendations in Two South Carolina Counties." *American Journal of Health Promotion*, 18(3): 251–257, January/February 2004; Krizek K, El-Geneidy A and Thompson K. "A Detailed Analysis of How an Urban Trail System Affects Cyclists' Travel." *Transportation* 34 (5): 611–624, September 2007; Garrard J, Rose G and Lo S. "Promoting Transportation Cycling for Women: The Role of Bicycle Infrastructure." *Preventive Medicine*, 46(1): 55–59, January 2008; Wardman M, Hatfield R and Page M. "The UK National Cycling Strategy: Can Improved Facilities Meet the Targets." *Transport Policy*, 4(2): 123– 133, April 1997.
- ¹⁶ "Complete Streets & Streetscape Design Initiatives." *County Health Rankings & Roadmaps*. November 16, 2017. Accessed October 04, 2018. <http://www.countyhealthrankings.org/take-action-to-improve-health/what-works-for-health/policies/complete-streets-streetscape-design-initiatives>.
- ¹⁷ Todd Litman, *Evaluating Transportation Benefits and Costs*, Victoria Transport Policy Institute, February 2015, <http://www.vtpi.org/nmt-tdm.pdf>.
- ¹⁸ National Academies of Sciences, Engineering, and Medicine (2018). *The Built Environment, Obesity, and Health*, Chapter 2 in *Advancing Obesity Solutions Through Investments in the Built Environment: Proceedings of a Workshop*. The National Academies Press.

- ¹⁹ Sarkar, C., Webster, C., Gallacher, J. (2018). Neighbourhood walkability and incidence of hypertension: Findings from the study of 429,334 UK Biobank participants. *International Journal of Hygiene and Environmental Health*, 221.
- ²⁰ "Physical Activity." *The Guide to Community Preventive Services (The Community Guide)*. August 01, 2017. Accessed October 04, 2018. https://www.thecommunityguide.org/topic/physical-activity?field_recommendation_tid=All&items_per_page=All.
- ²¹ Sarkar, C., Webster, C., Gallacher, J. (2018). Neighbourhood walkability and incidence of hypertension: Findings from the study of 429,334 UK Biobank participants. *International Journal of Hygiene and Environmental Health*, 221.
- ²² C Brown, Alan M. Voorhees Transportation Center. *Economic Impacts of Active Transportation in New Jersey*. 2013. <http://njbikeped.org/wp-content/uploads/2013/05/Economic-Impacts-of-Active-Transportation-in-NJ.pdf>.
- ²³ G Pivo and J Fisher. "The walkability premium in commercial real estate investments." *Real Estate Economics*. March 1, 2011. 39: 185–219. doi:10.1111/j.1540-6229.2010.00296.
- ²⁴ Congress on New Urbanism. "Best bet for tax revenue: mixed-use downtown development." *Public Square: A CNU Journal*. September 13, 2010. <https://www.cnu.org/publicsquare/2010/09/13/best-bet-tax-revenue-mixed-use-downtown-development>.
- ²⁵ Gotschi, Thomas (2011). Costs and Benefits of Bicycling Investments in Portland, Oregon. *Journal of Physical Activity and Health*, Vol. 8, Supplement 1, pp. S49-S58.
- ²⁶ GP Whitfield, LA Meehan, N Maizlish, AM Wendel. "The Integrated Transport and Health Impact Modeling Tool in Nashville, Tennessee, USA: Implementation Steps and Lessons Learned." *Journal of Transport & Health*. 2017 Jun;5:172-181. Epub 2016 Jul 22.
- ²⁷ American Public Health Association and Transportation for America. "Case Study: Nashville TN: Prioritizing public health benefits through better project evaluation." September 2016. <http://t4america.org/wp-content/uploads/2016/09/Nashville-Case-Study.pdf>.
- ²⁸ BBC Research & Consulting for the Colorado Office of Economic Development and International Trade. "Economic and Health Benefits of Bicycling and Walking," October 2016. <http://choosecolorado.com/wp-content/uploads/2016/06/Economic-and-Health-Benefits-of-Bicycling-and-Walking-in-Colorado-4.pdf>.
- ²⁹ Southern California Association of Governments. "Active Transportation Health and Economic Impact Study." November 7, 2016. https://www.scag.ca.gov/programs/Documents/AT-HealthImpactStudy/2016ATHHealthEconomicImpactStudy_REPORT.pdf.
- ³⁰ "Elements of a Complete Streets Policy." *Smart Growth America*. Accessed October 04, 2018. <https://smartgrowthamerica.org/resources/elements-complete-streets-policy/>.
- ³¹ National Academies of Sciences, Engineering, and Medicine. (2018). *Achieving Equitable Healthy Environments*, Chapter 4, in *Advancing Obesity Solutions Through Investments in the Built Environment: Proceedings of a Workshop*. The National Academies Press.
- ³² Evenson, Kelly R., Sara B. Satinsky, Daniel A. Rodríguez, and Semra A. Aytur. "Exploring a Public Health Perspective on Pedestrian Planning." *Health Promotion Practice* 13, no. 2 (2011): 204-13. doi:10.1177/1524839910381699.
- ³³ Lantz, Alexis, and Miguel Ramos, and Justin Robertson. "Los Angeles County Department of Public Health Pedestrian Planning." Telephone interview by author. September 25, 2018.
- ³⁴ Aknin, Yasmina. "Cowlitz County Health and Human Services and Castle Rock Complete Streets Policy." Telephone interview by author. September 26, 2018.



www.saferoutespartnership.org