

# HOW-TO GUIDE FOR DEVELOPING ACTIVE TRANSPORTATION PLANS



*Photo credit: Leonard Bonarek, Bicycle Coalition of Greater Philadelphia*

## TABLE OF CONTENTS

1. Purpose .....	1
Who Should Use This “How-To” Guide? .....	1
How to Use This “How-To” Guide.....	1
Key Steps .....	1
Who Should be Involved? .....	2
2. Define the Scope .....	2
3. Engage the Community .....	4
4. Develop Vision and Goals .....	6
5. Assess Existing Conditions and Needs .....	7
6. Identify Proposed Network and Amenities.....	9
7. Prioritize Proposed Projects.....	11
8. Estimate Project Costs .....	13
9. Identify Funding Sources .....	13
10. Develop and Evaluate Performance Measures.....	15
11. Create an Implementation Strategy .....	17
References .....	19
Appendix A - Potential Funding Sources .....	Appendix - 1

## 1. Purpose

The “How-To” Guide (Guide) serves as a resource for Metropolitan Planning Organizations (MPOs), Regional Planning Organizations (RPOs), counties, and local municipalities throughout Pennsylvania to update or develop an Active Transportation Plan. An Active Transportation Plan is a comprehensive resource that documents existing conditions and guides the planning, design, implementation, and evaluation of bicycle and pedestrian programs, policies, guidelines, and infrastructure improvements.

This Guide lists essential steps and highlights noteworthy practices in the active transportation or bicycle and pedestrian planning process from pre-planning to implementation and evaluation, along with hyperlinked resources, handbooks, and Pennsylvania specific examples. While the resources and guides documented herein may reference a specific level of government (e.g., local, regional, state, national), they nonetheless provide a framework for developing active transportation plans that apply at any jurisdictional level under a variety of contexts. An agency’s approach to the guidance described in the Guide will depend on existing policies and targets, community needs, and/or available resources.

## Who Should Use This “How-To” Guide?

The Guide is intended for those interested in developing or updating an active transportation or bicycle and pedestrian plan to analyze existing bicycle and pedestrian needs, identify policy and program strategies, and inform safety investments. It is designed to be used by:

- Metropolitan/Rural Planning Organizations (MPOs/RPOs)
- Local governments
- Transportation and health professionals working for city, county, and regional agencies
- Elected officials and other policy makers
- Citizens and community organizations

## How to Use This “How-To” Guide

The Guide focuses on key steps and highlights noteworthy practices to help agencies develop an active transportation plan (e.g. bicycle and pedestrian plan). Each of the subsequent chapters of the guide is organized into three sections:

- **Key Steps** identify the major components of any Active Transportation Plan. The key steps are identified to help navigate the contents of this guide.
- **Example Plans and Policies** highlight local, regional, and/or national examples of the Key Steps.
- **General Resources** provides additional information related to the Key Steps. The resources documented in this section provide a framework for developing Active Transportation Plans that apply at any jurisdictional level under a variety of contexts.

## Key Steps

The Guide is organized according to key steps in the development of an Active Transportation Plan. Agencies may follow the process outlined below sequentially or they can reference those sections that are relevant to what they wish to accomplish. Key steps identified in the Guide include the following:

- Define the Scope
- Engage the Community
- Develop Vision and Goals
- Assess Existing Conditions and Needs
- Identify Proposed Networks and Amenities
- Prioritize Proposed Projects
- Estimate Project Costs
- Identify Funding Sources

- Develop and Evaluate Performance Measures
- Create an Implementation Strategy

While the key steps identified above are important in developing or updating an Active Transportation Plan, not all agencies will have the resources to fully address the list in its entirety. The following steps should be prioritized above the rest.

- Define the scope and articulate the vision and goals for the plan.
- Identifying a local champion is crucial at the local level to ensure the process for developing the plan moves forward.
- Assess existing bicycle and pedestrian infrastructure conditions and identify a proposed network.
- Prioritize proposed projects and ensure that they are part of an adopted plan (e.g., master plan, comprehensive plan, recreation plan, active transportation plan, county comprehensive plan, etc.) to apply for funding.

## Who Should be Involved?

The successful development of a plan is based on a collaborative and inclusive process that includes the following key stakeholders:

- Community Leaders and Planners
- Steering/Advisory Committee
- Partner Agencies
- Technical Stakeholder Working Groups
- General Public
- MPOs/RPOs planning staff
- Municipalities
- Advocates
- PennDOT

## 2. Define the Scope

Transportation planning is critical to developing safe, comfortable, and accessible multimodal networks for all users. A key topic under transportation planning, active transportation or bicycle and pedestrian plans are a useful way to monitor existing conditions, track trends, and identify ways to address the needs of pedestrians and bicyclists. Despite common goals and objectives, the need for an active transportation plan, as well as the level of detail, will vary depending on the agency. For example, the plan may arise from the need to meet local, regional, or state targets. Alternatively, the plan may seek to identify and prioritize projects for funding. In developing or updating the plan, it is important to understand the motivation behind the effort. The following section identifies key considerations in defining the scope and preparing for the planning process.

- **What is the purpose of the plan?** Prior to embarking on developing or updating a plan, it is important to clearly define the purpose of the planning effort. Examples of a purpose for developing an Active Transportation Plan might include; improving social determinants of health such as inequities in access to health care, jobs, and education; improving air quality or reducing traffic violence. Understanding what the plan seeks to accomplish will help clarify roles and responsibility, identify key stakeholders, eliminate duplicative efforts, and focus resources to ensure strategic bicycle and pedestrian investments.
- **What is the project area for the plan?** The scale of the plan (e.g., state, regional, county, or local municipality) will inform the level of coordination between various agencies and the scope of projects, policies, and programs recommended. Although agencies generally define the project area based on jurisdictional boundaries, it is important to assess existing conditions to identify locations with demonstrated need and high-risk locations, including those locations that connect to adjacent jurisdictions. The project area may focus on a series of locations (e.g., a specific intersection or a group of intersections), corridors (i.e., a linear segment that encompasses multiple intersections and modes), neighborhoods, and/or an entire jurisdiction.

- **Who is the intended audience?** Identify who will use the plan to ensure the appropriate level of detail and the relevancy of the information being analyzed.
- **How does this plan relate to existing Bicycle and Pedestrian Plans, Active Transportation Plans, programs, or policies?** Identify how the plan relates to other local, regional, statewide, and federal planning documents, policies, and programs (e.g., Complete Streets, Vision Zero, Active Transportation Plan, Comprehensive Plan, Long Range Transportation Plan, ADA Transition Plans, etc.) that reinforce common goals like improving bicycle and pedestrian safety, mobility, access, etc. For example, a pedestrian plan that seeks to eliminate gaps in pedestrian facilities should align with and complement the ADA Transition Plan, which requires public entities to identify barriers to pedestrian accessibility in transportation facilities within public rights of way, recommend potential mitigations, estimate funding requirements, and provide a timeline for implementation.
- **Active Transportation Plan** The needs of each mode differ and should be considered independently prior to deciding on the appropriate type of plan. Part of defining the scope involves identifying the needs of the community and the range of issues to be considered. Understanding the objectives of previous and planned efforts, as well as the roles and responsibilities of other institutions, can inform an agency's approach, provide direction, and eliminate duplicative efforts. For example, agencies should identify existing, funded projects (e.g., street resurfacing) to determine if proposed bicycle and/or pedestrian projects can be implemented simultaneously. Combining projects may result in lower costs, as well as reduced impacts to traffic, residents, and businesses. Likewise, some small jurisdictions may not have adequate resources to lead a bicycle or pedestrian plan, and incorporating appropriate active transportation goals, objectives, and identification of project need could be better suited as part of a Comprehensive Plan update.
- **Who should be involved in the planning process?** It is important to develop a meaningful and continuous process for engaging a diverse set of stakeholders. The group of - often referred to as a technical stakeholder working group - should encompass a broad spectrum of professionals and individuals from the community, including PennDOT, other State agencies, MPOs/RPOs, counties, cities, health institutions and professionals, community groups, educational institutions and professionals, equity professionals, and businesses, among others. These groups should be consulted often and have the technical background and professional expertise to support the development of a holistic plan. Additionally, the planning process should engage potential users and/or individuals who would be directly impacted by the plan.
- **What should be the budget, staff, and timing?** Active Transportation Plans vary in size and complexity depending on scope, location/scale, available funding, in-house staff, and project time frame. Prior to beginning the planning process, it is important to develop consensus on budget, staff, and timing to ensure alignment with the project's scope and desired outcomes. If necessary, hire a consultant to provide expertise or additional staff resources. Local advocacy groups are also valuable entities with knowledge and expertise that can support plan development.

## Example Plans and Policies

### PennDOT Connects

Defining the scope requires collaboration with multiple partners to develop an understanding of what plans, policies, and projects exist to support the development and/or update of an Active Transportation Plan.

PennDOT Connects is a PennDOT policy that outlines an approach to enhance local engagement and improve transportation-project planning, design, and delivery. Its aim is to make transportation planning a more collaborative process that supports community goals by ensuring that coordination and outreach with municipal officials happens early in the planning process and that each project is considered in a holistic way to improve safety, mobility, access, and improved environmental outcomes for all modes and local contexts. During this process, PennDOT works closely with MPOs/RPOs to

consult with local governments to discuss project needs and identify local community issues or concerns. Communities with an Active Transportation or Bicycle and Pedestrian Plan, which identifies prioritized and planned improvements may increase their opportunity to incorporate the plan's proposed recommendations into future PennDOT projects through the PennDOT Connects process.

**Roles and Responsibilities** – [Regional Active Transportation Plan for Southwestern Pennsylvania](#), Southwestern Pennsylvania Commission

In defining the scope of an Active Transportation Plan, it is important to understand who should be involved and the roles and responsibilities of your agency and of the different levels of government. In 2018, the Southwestern Pennsylvania Commission, a federally designated MPO, developed the Regional Active Transportation Plan to not only provide a cohesive vision for primarily non-motorized travel across the region, but also technical guidance to local governments seeking to achieve their respective active transportation goals. Section 1 introduces active transportation and clearly outlines the roles and responsibilities of federal, state, regional, and local agencies. Understanding each agency's role and responsibility in bicycle and pedestrian transportation can promote coordination, ensure alignment with existing targets, highlight available guidance, and identify potential funding resources.

## General Resources

[Wisconsin Rural Bicycle Planning Guide](#), (2016)

The Wisconsin Department of Transportation developed this document to provide a general set of guidelines to assist smaller, rural communities in planning and developing bicycle facilities. The document provides useful information on the planning process for developing a bicycle plan where local priorities may differ from those in a more urbanized area.

[Incorporating On-Road Bicycle Networks into Resurfacing Projects](#), (2016)

By planning ahead, agencies may be able to incorporate bicycle and pedestrian projects simply by updating pavement marking plans. This FHWA guide lays out a framework for making this happen and includes case studies from agencies that have been successful in taking advantage of these opportunities for implementation.

## 3. Engage the Community

The Define the Scope section identifies the need for a meaningful process to engage a diverse set of technical and professional stakeholders early in the planning process. A technical stakeholder working group is composed of experts from public agencies whose role is to provide technical guidance and identify gaps in the analysis.

In addition to the technical stakeholder working groups, the community should be viewed as a partner and engaged early and throughout the development of an active transportation plan. Community members are often involved in the planning and decision-making process through the creation of an advisory committee that supports work of the technical stakeholder working group. While the purpose and structure of advisory committees vary, they represent organizations such as neighborhood associations, environmental groups, business groups, advocacy groups, and local agencies and are an essential element in creating publicly supported and trusted policies, programs, and recommendations. Advisory committees can broaden the scope, provide valuable information regarding their experiences and perceptions related to walking and bicycling, can establish shared community goals, and can help identify potential concerns early in the process. Depending on the scope of the plan and the size of communities, technical stakeholder working groups and advisory committees can be one in the same.

In addition to advisory committees, communities can be engaged via a variety of to insure all members have an adequate opportunity to provide input. Public engagement is not a single event, but rather a recurring and integral component of the planning process focused on generating ideas, garnering input, providing information, empowering residents, and building support. The public should be involved in establishing the plan's vision, goals, and objectives, identifying constraints and opportunities, prioritizing projects and programs, and proposing modifications to the plan. While public involvement and engagement can take many forms, a combination of techniques should be used to allow the public the

opportunity to pick how they want to engage with the process. Common public engagement efforts include:

- Advisory committee
- Project website
- Online surveys and/or questionnaires
- Social Media (e.g., Facebook, Twitter)
- Community forums
- Email newsletter
- Focus groups
- Webinars
- Open houses
- Design charrettes or workshops
- Pop-up meetings/demonstrations

## **Example Plans and Policies**

### [Advisory Committee and Public Engagement – Jersey Shore Active Transportation Plan \(2018\)](#)

In 2018 the Borough of Jersey Shore, located in Southern Lycoming County, developed an Active Transportation Plan to create a safety-focused bicycle and pedestrian friendly community. Throughout the development of the Plan, the community was heavily involved. An advisory committee included technical and community representatives from the Geisinger Jersey Shore Hospital, Jersey Shore Area School District, Susquehanna Greenway Partnership, Lycoming County Transportation, Department of Conservation and Natural Resources, and the Jersey Shore YMCA, as well as bicycle and pedestrian advocates and Borough residents.

The advisory committee participated in discussions surrounding pedestrian and bicycle safety and was active in organizing and mapping existing community destinations such as schools, municipal buildings, parks, and libraries. They also outlined existing trails and routes that are being used but not currently designated as bicycle or pedestrian routes.

To solicit further community feedback, the Active Transportation Plan was presented at a public meeting. The public provided valuable feedback regarding the Plan and emphasized the need for connections to regional trail systems, including those in Clinton County, Williamsport, and the Pine Creek Rail Trail.

## **General Resources**

### [Incorporating Qualitative Data in the Planning Process: Improving Project Delivery and Outcomes](#), FHWA, (2017)

This report highlights techniques for gathering qualitative data and incorporating it into the local planning process in order to provide local transportation benefits and reflect community needs in projects, while at the same time reducing project delay and streamlining project delivery.

### [How to Develop a Pedestrian and Bicycle Safety Action Plan](#), FHWA, (2017)

The purpose of this guide is to assist agencies in developing and implementing a safety action plan to improve conditions for bicycling and walking. The guide aims to help agencies enhance their existing safety programs and activities. Chapter 4 provides useful guidance in identifying stakeholders to involve in the process, as well as key principles and strategies for involving those stakeholders.

### [A Resident's Guide for Creating Safer Communities for Walking and Biking](#), FHWA, (2015)

This guide is intended to assist residents, parents, community association members, and others in making communities safer for pedestrians and bicyclists. The guide includes facts, ideas, and resources to help residents learn about traffic problems that affect pedestrians and bicyclists and to find ways to help address these problems and promote safety among all road users. The guide includes information on identifying problems, acting to address bicycle and pedestrian concerns, finding solutions to improve safety, and resources to get additional information.

## 4. Develop Vision and Goals

Opportunities surrounding bicyclists and pedestrians are common and have the potential to influence a myriad of community needs such as mobility, access, safety, and public health. An Active Transportation Plan should be based on a clearly defined vision and should be organized around goals, objectives, and performance measures specific to the community or study area. The vision and goals should be developed early in the planning process and conceived by community members, local leaders, key stakeholders, and multidisciplinary staff to frame and guide policy, projects, and program recommendations that adequately respond to the community's unique and pressing needs.

- A **vision** statement should be clear, concise, and achievable. It identifies what the plan is expected to accomplish.
- **Goals** are broad statements that reflect the larger vision but describe with more detail what a community wants to achieve. Plans typically have three to six independent goals that ultimately structure the more detailed ways to measure and track existing conditions and progress of future initiatives and projects.
- **Objectives** are tasks that support the achievement of a particular goal. The objectives should be SMART (specific, measurable, achievable, reasonable, and time-focused) to ensure that they can be evaluated.

### Example Plans and Policies

Vision, Goals, and Objectives – [Bike Montco – The Bicycle Plan for Montgomery County](#)

The Bicycle Plan for Montgomery County, Pennsylvania was adopted in 2018 and serves as an example of a plan with a strong vision statement, six overarching themes, and a series of objectives with performance measures.

- **Vision Statement** – In Montgomery County, bicycling will be a fundamental part of daily life where all bicyclists can enjoy a safe, convenient ride every time they put their foot on a pedal.
- **Goals** –
  - o Goal 1: Connect communities with a robust network that supports bicycling as a daily transportation option.
    - ❖ Objective 1: Expand the bicycle network to connect important destinations, trails, urban centers, and transportation hubs.
    - ❖ Objective 2: Support bicycling as a legitimate travel mode.
    - ❖ Objective 3: Integrate the bicycle network with transit and other transportation systems.
  - o Goal 2: Expand bicycling opportunities for everyone.
    - ❖ Objective 1: Design bicycle infrastructure to accommodate different skill levels and abilities.
    - ❖ Objective 2: Improve bicycle infrastructure in underserved communities.
  - o Goal 3: Ensure that bicycling is safe for all.
    - ❖ Objective 1: Reduce bicycle-related injuries and fatalities.
    - ❖ Objective 2: Ensure the bicycle network is well-maintained.
  - o Goal 4: Support education and enforcement efforts that increase awareness of bicycling.
    - ❖ Objective 1: Increase acceptance of bicycles by other roadway users.
    - ❖ Objective 2: Educate drivers and bicyclists of their rights and responsibilities.
  - o Goal 5: Promote bicycling as a healthy and environmentally sustainable way to travel.
    - ❖ Objective 1: Increase bicycle use for health and fitness.
    - ❖ Objective 2: Increase bicycle use for commuting to work.
    - ❖ Objective 3: Increase bicycle use for non-commuting trips.
  - o Goal 6: Create and nurture a county bicycling industry.
    - ❖ Objective 1: Grow bicycle tourism and spending.
    - ❖ Objective 2: Improve bicycle access to economic generators and attract new businesses that value bicycling.



## General Resources

[Statewide Pedestrian and Bicycle Planning Handbook](#), FHWA, (2014)

This handbook is designed to help State DOTs develop or update state Active Transportation Plans. It covers statewide planning from plan inception and scoping to engaging stakeholders and the general public; developing goals, objectives and strategies; collecting and analyzing data; linking to the larger statewide transportation planning process; and implementation. Chapter 4 provides useful guidance pertaining to the development of goals, objectives, and performance measures. While this relates specifically to states, the principles relied upon to select a vision statement, goals, objectives, and performance measures can be applied universally to any jurisdiction developing an Active Transportation Plan.

## 5. Assess Existing Conditions and Needs

The purpose of this section is to present a comprehensive picture of the existing bicycle and pedestrian policies, facilities, and programs to guide the selection and prioritization of future projects. The specific infrastructure projects put forth in an Active Transportation Plan should be clearly connected to the vision, goals, and objectives, as well as to a sound technical analysis grounded in existing conditions and trends. Existing conditions establish a baseline and may form the foundation for future monitoring and reporting. The following steps and tools form the foundation for understanding existing conditions, issues, and potential opportunities:

- Review relevant plans and policies
  - The Active Transportation Plan should be all encompassing and should build upon relevant planning efforts. Previous plans may provide baseline data that will help demonstrate changes over time, and more recent plans may include analysis that can be referenced and/or incorporated into the Plan. Local, regional, or state plans, policies, and development guidelines may also provide background on overlapping efforts, community direction and input, and general guidance for developing and enhancing the transportation network.
- Collect and analyze data
  - To the extent possible, the following data should be collected to support the plan's goals and objectives:
    - ❖ Crash data from the [Pennsylvania Crash Information Tool \(PCIT\)](#), Pennsylvania's State Police, and local municipal police departments can help identify specific safety hot spots related to bicyclists and pedestrians.
    - ❖ Pedestrian and bicycle volumes and counts can be used to establish a baseline, measure facility usage, establish exposure, and monitor travel patterns. Refer to this section's *General Resources* for additional information regarding methods and technologies for counting bicycles and pedestrians.
    - ❖ Population and employment data can be downloaded from the US Census Bureau's website. It provides population and employment data, however any information related to transportation relates specifically to commute trips and will not account for other (e.g., recreational, shopping) non-motorized trips.
    - ❖ Existing and proposed roadway and active transportation infrastructure.
    - ❖ Existing and proposed freight corridors.
    - ❖ Existing and proposed land use can be referenced from local or regional comprehensive plans.
- Create inventory of existing infrastructure
  - An inventory of existing walking and bicycling infrastructure provides a baseline for measurement. Existing infrastructure may include sidewalks, curb ramps, bicycle and pedestrian signals, bike lanes, separated bike lanes, wide shoulders, shared-use paths, bike parking, transit stations, and bus stops.
  - Proximity of existing infrastructure to community amenities and destinations should be evaluated.

- o Identify gaps in the existing network.
- o Maps can help make information accessible to people, allowing them to draw conclusions from otherwise complex data analyses. Maps can also help planning professionals, elected officials, and the public at large understand a community's active transportation assets and where there may be room for improvement.
- Conduct safety audit or assessment
  - o Bicycle and pedestrian safety assessments bring together stakeholders to examine conditions for bicyclists and pedestrians at an intersection or corridor, as well as broader systemic concerns about bicycle and pedestrian safety. An assessment can focus on making recommendations for a specific roadway segment or project or can have a broader scope by using conditions around the assessment site to help understand issues related to roadway design, policies, and interdisciplinary coordination that may lead to challenging conditions for walking and bicycling.

## Example Plans and Policies

### [Sidewalk Inventory](#) – Bicycle and Pedestrian Master Plan, Lehigh Valley Planning Commission (LVPC)

Existing conditions establish a baseline and form the foundation for future monitoring and reporting. The LVPC is currently developing Walk/RollLV, the region's Bicycle and Pedestrian Master Plan. The plan will be a comprehensive blueprint with a goal of filling the gaps in the existing road, trail, and transit system to create a seamless network connecting every community in the region. The plan supports the larger regional goals of sustainability, resiliency, and enhanced livability. As part of the existing conditions analysis and needs assessment, LVPC inventoried sidewalks on all public roads for all of the 62 municipalities within Lehigh and Northampton counties. The results from the sidewalk inventory assesses sidewalk connectivity and will be used to underpin the Plan, complement and enhance a regional commuter/mode study, and leverage funding sources. The [sidewalk inventory](#) is available online.

## General Resources

### [Metropolitan Pedestrian and Bicycle Planning Handbook](#), FHWA, (2017)

This handbook provides Metropolitan Planning Organizations (MPOs) with practical information and examples, as they consider bicycle and pedestrian transportation in their regional planning activities. Chapter 4 provides guidance on analyzing existing conditions and needs.

### [Achieving Multimodal Networks – Applying Design Flexibility & Reducing Conflicts](#), FHWA, (2016)

This report highlights ways that agencies can apply current national design guidance to address common roadway design challenges and barriers. It focuses on reducing multimodal conflicts and achieving connected networks so that walking, and bicycling are safe, comfortable, and attractive options for people of all ages and abilities. A section of Part 2: Reducing Conflicts is dedicated to the interaction between freight and nonmotorized transportation. The section discusses crash types between freight and the other modes, as well as guiding principles to reduce conflicts.

### [Statewide Pedestrian and Bicycle Planning Handbook](#), FHWA, (2014)

This handbook is designed to help State DOTs develop or update state bicycle and pedestrian plans. Chapter 6 provides guidance on analyzing existing conditions and needs.

### [NCHRP Report 797 – Guidebook on Pedestrian and Bicycle Volume Data Collection](#), (2014)

This NCHRP guidebook is a resource for those involved in collecting non-motorized count data. The guidebook describes methods and technologies for counting pedestrians and bicyclists, offers guidance on developing a non-motorized count program, gives suggestions on selecting appropriate counting methods and technologies, and provides examples of how organizations have used non-motorized count data to better fulfill their missions.

### [Bikeway Selection Guide, FHWA, \(2019\)](#)

This document is a resource to help transportation practitioners consider and make informed decisions about tradeoffs relating to the selection of bikeway types. This report highlights linkages between the bikeway selection process and the transportation planning process. This guide presents these factors and considerations in a practical process-oriented way. It draws on research where available and emphasizes engineering judgment, design flexibility, documentation, and experimentation.

### [Don't Give Up at the Intersection, NACTO, \(2019\)](#)

This report provides detailed guidance on intersection design treatments that reduce vehicle-bike and vehicle-pedestrian conflicts. The guidance covers protected bike intersections, dedicated bike intersections, and minor street crossings, as well as signalization strategies to reduce conflicts and increase comfort and safety.

## **6. Identify Proposed Network and Amenities**

The findings of the existing conditions and needs assessment discussed in the previous section provide the quantitative data that will directly inform project recommendations. The proposed bicycle and pedestrian network and amenities should be the result of a collaborative, data-driven planning process involving both extensive public input and technical analysis. The overall purpose of the proposed network and amenities is to recommend policies, programs, and projects that address the needs of the community and align with the vision and goals of the plan. Agencies should consider the following in identifying the proposed bicycle and pedestrian network and amenities:

- existing and latent bicycle and/or pedestrian demand
- existing bicycle and/or pedestrian infrastructure
- existing roadway characteristics
- connections to desired destinations (e.g., transit, schools, parks, employment centers, retail centers, etc.)
- connections to existing bicycle and/or pedestrian facilities
- topography
- public input
- ease of implementation (e.g., cost, impacts, etc.)

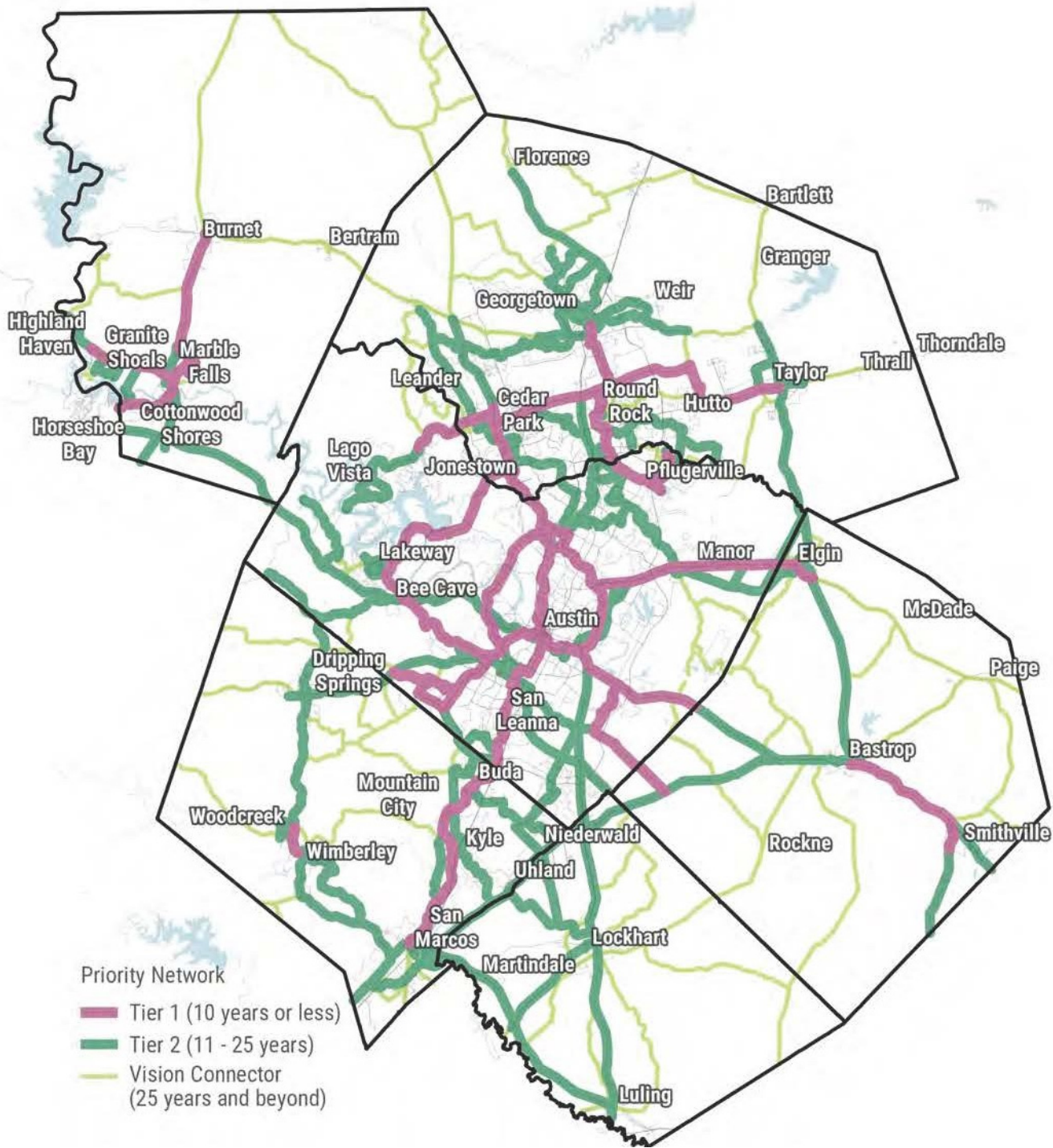
The section on developing and evaluating performance measures discussed in Section 10 of this Guide can also be applied to identify proposed bicycle and pedestrian projects and amenities.

### **Example Plans and Policies**

#### [Priority Bicycle Network – 2045 Regional Active Transportation Plan, CAMPO, \(2017\)](#)

The proposed network and amenities of a bicycle and pedestrian master plan should recommend policies, programs, and projects that address the needs of the community and align with the vision and goals of the master plan. The Capital Area Metropolitan Planning Organization is an MPO in the state of Texas. As part of the regional Active Transportation Plan, the agency developed a regional priority network that encompasses different types of facilities, including locations where facilities currently do not exist. Using the existing network, currently planned facilities, and locally identified bicycle and pedestrian needs, the agency identified high-priority regional routes to connect population centers and high-demand locations in the region (see Figure 1). The proposed regional network provides local governments with information to make decisions about where to build new facilities or upgrade current facilities in their jurisdictions.

Figure 1 – Priority Network – CAMPO Regional Active Transportation Plan



Source: 2045 Regional Active Transportation Plan, CAMPO (2017)

## 7. Prioritize Proposed Projects

Prioritizing the proposed improvements identified in an active transportation or bicycle and pedestrian plan will create a road map for strategic investment in the bicycle and pedestrian transportation network. A data-driven prioritization process can help remove politics from the process, potentially streamlining implementation. Prioritization processes can rank potential projects (e.g., high, medium, low) or sort recommendations into categories such as near-term, mid-term and long-term improvements. Factors that can be used to prioritize plan recommendations include:

- stakeholder input
- physical constraints
- safety
- opportunities
- project cost
- ease of implementation (e.g., part of resurfacing roadway project)
- demand
- connectivity
- geographic and social equity
- potential benefit
- project proposed on previous plans

The section on developing and evaluating performance measures discussed in Section 10 of this Guide can also be applied to compare, evaluate, and prioritize proposed bicycle and pedestrian projects.

### Example Plans and Policies

An Active Transportation Plan should include a strategy to prioritize the projects that will best meet the needs expressed in the vision, goals, and objectives. The example plans that follow detail some criteria used by agencies to prioritize projects identified in their respective plans.

Priority Projects – [Non-Motorized Transportation Plan](#), West Earl Township, Lancaster County, (2018)

In 2018, West Earl Township developed a Non-Motorized Transportation Plan to provide opportunities for people to be more physically active, for children to walk or bike to school, for people to commute to work without their cars, and to connect local communities and destinations. To prioritize projects, West Earl Township considered the following three factors:

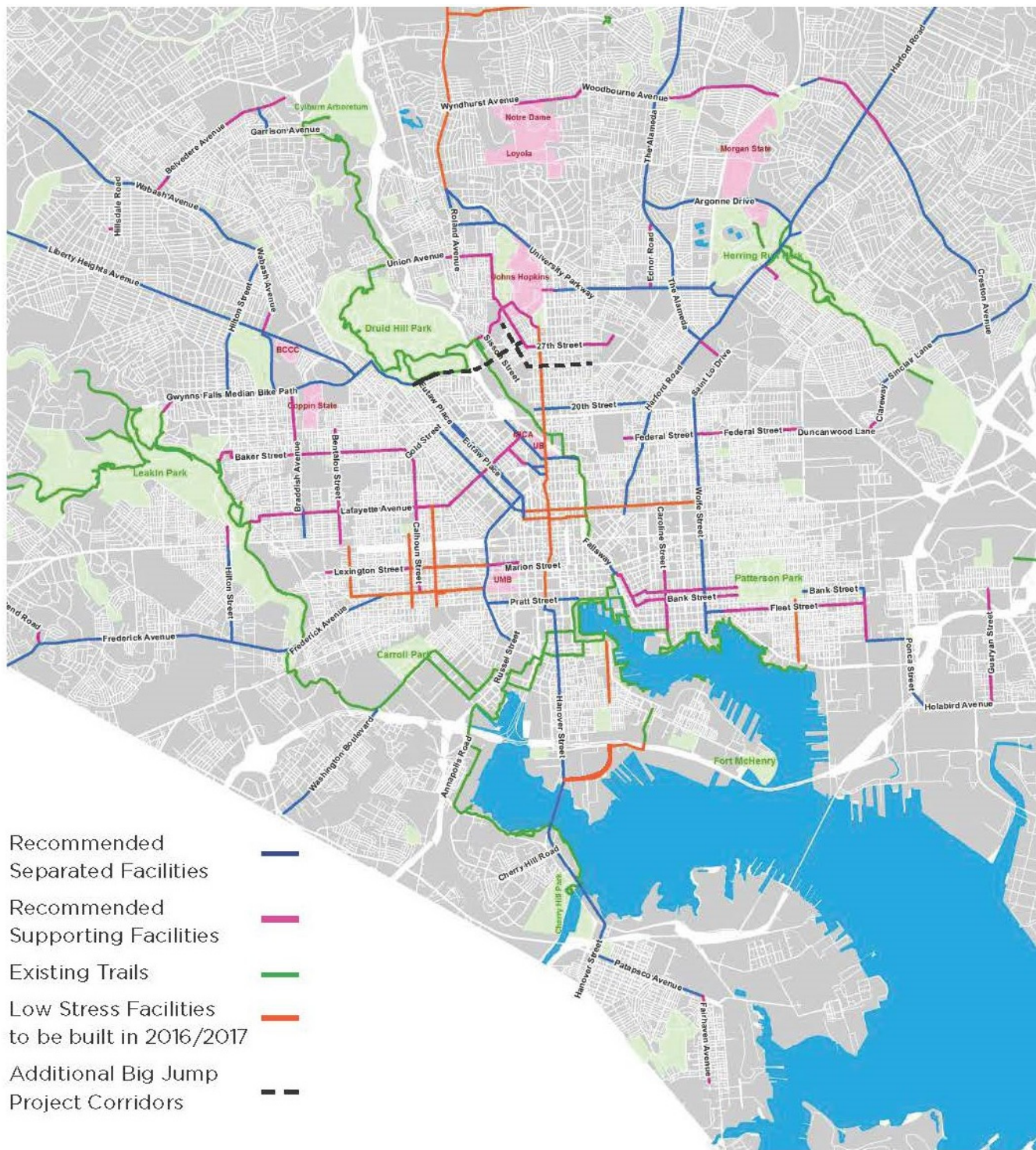
- Overall Benefit – completes a necessary link
- Ease of Implementation – total project cost
- Public Input

Not only did the evaluation criteria inform project prioritization, but it also helped identify a phasing plan for all identified projects. For each project, the plan lists the responsible parties, proposed type of improvement, the ease of implementation, the priority status, and the timeframe to implement. The timeframe for implementation for the proposed projects corresponds with the priority status.

Project Prioritization – [Separated Bike Lane Network: Addendum to 2015 Bike Master Plan Update](#), Baltimore City, (2017)

The 2017 Separated Bike Lane Network Addendum sought to build on the recommendations of the 2015 Bicycle Master Plan by identifying and prioritizing projects that would increase opportunities for people to meet their travel needs by bike. In order to identify strategic priority corridors, Baltimore City applied the level of traffic stress methodology. This methodology was applied to the city's entire street network and was supplemented with volume data to visualize neighborhoods connected by low stress streets and identify higher order roadways that serve as a barriers or connections. The strategic corridors identified via the level of traffic stress methodology were then prioritized based on a combination of technical and community factors (see Figure 2).

Figure 2 – Strategic Corridors Identified for Bicycle Improvements using the Level of Traffic Stress Methodology



Source: Separated Bike Lane Network: Addendum to 2015 Bike Master Plan Update, Baltimore City (2017)

## General Resources

[NCHRP Report 803: Pedestrian and Bicycle Transportation Along Existing Road –ActiveTrans Priority Tool Guidebook](#), NCHRP, (2015)

The "ActiveTrans Priority Tool (APT)" is a step-by-step methodology for prioritizing improvements to bicycle and pedestrian facilities, either separately or together as part of a "complete streets" evaluation approach. The methodology is flexible, allowing the user to assign goals and values that reflect those of the agency and the community. It is also transparent, breaking down the process into a series of discrete steps that can be easily documented and communicated to the public.

[The League of American Bicyclists: Equity of Access to Bicycle Infrastructure](#) (2015)

The purpose of this report is to provide tangible GIS methods for investigating the equity of access to bicycle infrastructure. This report provides a framework for how GIS can be used as a tool in decision-making and advocacy efforts with the understanding and provision that every community has a unique perspective, values, and equity concerns and may choose to apply different criteria to creating their own understanding of equity.

## 8. Estimate Project Costs

Projects identified in the Active Transportation Plan should include planning-level cost estimates to help agencies identify priority investments and potential phasing options. Since the base capital costs only capture a portion of the financial resources needed, contingencies should be added to capture unanticipated increases in the cost of project materials and/or labor. Costs will also vary depending on the combination of staff and consultant resources for project delivery phases including planning, preliminary engineering, final design, and construction.

### General Resources

[Costs for Pedestrian and Bicyclist Infrastructure Improvements](#), UNC Highway Safety Research Center, (2013)

This document (and associated database) is intended to provide meaningful estimates of infrastructure costs by collecting up-to-date cost information for bicycle and pedestrian treatments from states and cities across the country. Using this information, researchers, engineers, planners, and the general public can better understand the cost of bicycle and pedestrian treatments in their communities and make informed decisions about which infrastructure enhancements are best suited for implementation.

## 9. Identify Funding Sources

Funding is critical to the implementation of projects and programs aimed at facilitating biking and walking. Funding can support investments focused on addressing community needs, including enhancing mobility, reducing risk, and promoting an active lifestyle. However, resources are scarce and funding for transportation is limited, especially for projects and programs that focus on active transportation. It is important to prioritize projects and leverage funding with other projects (e.g., resurfacing projects) or funding opportunities. There are many funding opportunities available from federal, state, regional, local, and private source to help implement active transportation projects. The following section provides details on the funding sources from each potential partner agency.

- **Federal Funds**

- o Bicycle and pedestrian safety projects can be supported by funds made available through the Federal-aid Highway Program. Each funding source has specific stipulations as to the type of projects it can support, so a detailed review of the available funds is recommended. The FHWA Bicycle and Pedestrian Program maintains a detailed breakdown of potential [Pedestrian and Bicycle Funding Opportunities](#). Appendix A provides a summary of federal funding opportunities.

- **State Funds**

- o States typically raise revenue for highway and transportation infrastructure through a State motor vehicle fuel taxes and vehicle registration fees. Similar to the Federal legislation, laws

in many states make most bicycle and pedestrian programs eligible for funding. In some states, use of funds may be limited to improvements on state-owned and operated facilities. Within Pennsylvania, funding resources are available through a number of agencies including the Department of Community and Economic Development (DCED), Department of Conservation and Natural Resources (DCNR), and PennDOT. Potential funding sources include PennDOT Transportation Alternatives Program, DCNR Peer Program, PennDOT Multimodal Transportation Fund, and DCED Multimodal Transportation Fund. Refer to a [Resource Guide for Implementing Infrastructure Improvements of Walkability Assessments](#) for the full list of specific funding resources for Pennsylvania, and Appendix A provides a summary of state funding opportunities.

- **MPOs and RPOs**
  - o Metropolitan and rural planning agencies administer programs like the Transportation Improvement Program (TIP) where bicycle and pedestrian projects are eligible for federal and state transportation funding, such as the Transportation Alternatives Set-Aside Program (TA Set-Aside) and the Congestion Mitigation and Air Quality Improvement Program (CMAQ).
- **Local Funds**
  - o Some examples of revenue streams used by local municipalities to improve conditions for bicyclists and pedestrians include special bond issues, dedications of a portion of general revenue, and the use of the annual capital improvement budgets of public works and/or parks agencies. Liquid fuels funds can also be used for eligible improvements.
- **Health Agencies**
  - o Public health partners are often overlooked as potential sources of funding for bicycle and pedestrian projects. By collaborating with these partners on safety projects, agencies may be able to identify funding sources that can support projects that achieve shared goals between transportation and health organizations.
- **Developer Funding**
  - o The development community can also play a role in bicycle and pedestrian improvements through on-site development approval conditions, right-of-way dedication, and frontage improvements.
- **Private Funding**
  - o Private donations can support the development of bicycle and pedestrian infrastructure.

## Example Plans and Policies

### [WalkWorks](#)

WalkWorks is an initiative of the Pennsylvania Department of Health (DOH) aimed at increasing opportunities for physical activity among people of all ages and abilities. WalkWorks plans, implements, and markets community-based walking programs utilizing the built environment. It also establishes walking groups for social support and promotes policies designed to increase opportunities for physical activity throughout Pennsylvania. Routes are assessed and minimum and recommended improvements are established to ensure safe walking routes. WalkWorks understands that the successful implementation and completion of the recommendations depends on funding. Consequently, WalkWorks, in conjunction with PennDOT and the Department of Conservation and Natural Resources (DCNR), developed a [Resource Guide for Implementing Infrastructure Recommendations for Walkability Assessments](#) that includes a compendium of potential funding sources.

In addition, the following Pennsylvania specific plans identify potential funding sources:

- [Non-Motorized Transportation Plan](#), West Earl Township, Lancaster County
- [Active Transportation Plan](#), Jersey Shore, Lycoming County
- [Pedestrian Plan](#), Oakmont Borough, Allegheny County
- [Active Transportation Plan](#), Southwestern Pennsylvania Commission



## General Resources

[How to Develop a Pedestrian and Bicycle Safety Action Plan](#), FHWA, (2017)

The purpose of this guide is to assist agencies in developing and implementing a safety action plan to improve conditions for bicycling and walking. The guide aims to help agencies enhance their existing safety programs and activities. Chapter 6 provides funding strategies that can be applied to finance bicycle and pedestrian improvements.

[Metropolitan Pedestrian and Bicycle Planning Handbook](#), FHWA, (2017)

The purpose of this handbook is to provide Metropolitan Planning Organizations (MPOs) with practical information and examples, as they consider bicycle and pedestrian transportation in their regional planning activities. Chapter 6 provides guidance on identifying and leveraging funding sources.

[Small Town and Rural Multimodal Networks](#), FHWA, (2016)

The report is a resource intended to help small towns and rural communities support safe, accessible, comfortable, and active travel for people of all ages and abilities. It provides a bridge between existing guidance on bicycle and pedestrian design and rural practice, encourages innovation in the development of safe and appealing networks for bicycling and walking in small towns and rural areas, and shows examples of peer communities and project implementation that is appropriate for rural communities. The specific project implementation sections provide insight into the strategies and funding sources used to finance each project.

## 10. Develop and Evaluate Performance Measures

Performance measures provide an opportunity to evaluate and track how projects and programs support the vision, goals, and objectives for walking and biking outlined in the plan. By establishing performance measures, agencies demonstrate their commitment to stakeholders, partner agencies, and the general public to support walking and bicycling as an integral part of the multimodal transportation system.

A wide range of performance measures exist to evaluate programs, outcomes, and policies. Since no single performance measure can fully describe the impacts of walking and biking investments, many agencies consider multiple measures. When selecting performance measures, agencies should be careful to focus on measures that they will be able to influence or track. A key challenge with performance measures is the availability and inconsistency of data to support such performance measures. Typical bicycle and pedestrian performance measures could include:

- Safety
- Linear feet of sidewalks
- Bicycle infrastructure
- Volume (e.g., bicycle, pedestrian, vehicles)
- Level of Bicycle Stress
- Access to jobs
- Access to community destinations
- Connectivity
- Population served
- Equity (e.g., ensure that all all people have access to the same opportunities for active transportation.)

## Example Plans and Policies

Investment Decision Criteria – [Statewide Bicycle and Pedestrian Plan](#), Colorado Department of Transportation (CDOT), 2015

Agencies should establish performance measures to track and identify how proposed projects and investments align with vision and goals of the bicycle and pedestrian master plan. Colorado’s Statewide Bicycle and Pedestrian Plan focused on the development of measurable investment decision criteria to evaluate candidate pedestrian and bicycle projects. CDOT developed the investment decision criteria for each of the adopted goals and refined them through a collaborative process involving a formal stakeholder group, the CDOT Project Team, and the public. CDOT developed the criteria to evaluate projects alongside specific performance measures to aid project selection and help track statewide progress toward achieving plan goals. Table 1 below identifies the criteria established by CDOT.

Table 1 – CDOT Goals, Criteria, and Project-Level Performance Measures

Goals and Investment Decision Criteria	Project-Level Performance Measures
<b>Enhance Safety</b>	
Reduce crash rate or potential threat of crashes	<ul style="list-style-type: none"> <li>▪ Project would result in safety improvement as quantified by Crash Modification Factors<sup>12</sup></li> </ul>
<b>Increase Bicycling and Walking Activity</b>	
Improve (corridor) bicycling or walking conditions	<ul style="list-style-type: none"> <li>▪ Quality of improvement, measured as the change in bicycle or pedestrian LOS (primary benefit evaluation component)</li> </ul>
Expand permanent data collection infrastructure	<ul style="list-style-type: none"> <li>▪ Project includes installation of permanent bike/ped counting device</li> </ul>
<b>Expand Recreational Opportunities and Enhance Quality of Life</b>	
Enhance Scenic Byways	<ul style="list-style-type: none"> <li>▪ Project is located along a Scenic Byway (Yes/No)</li> </ul>
Create access to public lands	<ul style="list-style-type: none"> <li>▪ Project provides direct access to public lands (Yes/No)</li> </ul>
Provide multi-use pathways near populations	<ul style="list-style-type: none"> <li>▪ Project is a multi-use pathway (Yes/No)</li> <li>▪ Relative population of project area</li> </ul>
Preserve and enhance downtown character	<ul style="list-style-type: none"> <li>▪ Project is located in defined downtown or “Main Street” area</li> </ul>
<b>Improve Public Health</b>	
Reduce disease/obesity in children, adults, and seniors	<ul style="list-style-type: none"> <li>▪ Mode shift and induced recreational travel</li> <li>▪ Obesity rate in project county</li> </ul>
<b>Improve Environment, Air Quality, and Fossil Fuel Independence</b>	
Reduce carbon-based vehicle miles traveled through increased bicycling and walking	<ul style="list-style-type: none"> <li>▪ Mode shift</li> </ul>
<b>Provide Transportation Equity</b>	
Provide mobility options to underserved populations	<ul style="list-style-type: none"> <li>▪ Project is located in an area of underserved population (low-income or minority)</li> </ul>

Source: Statewide Bicycle and Pedestrian Plan, Colorado Department of Transportation (2015)

## General Resources

### [Guidebook for Developing Pedestrian and Bicycle Performance Measures](#), FHWA, (2016)

This guidebook is intended to help communities develop performance measures that can fully integrate bicycle and pedestrian planning in ongoing performance management activities. It highlights a broad range of ways that walking and bicycling investments, activity, and impacts can be measured and documents how these measures relate to goals identified in a community's planning process. It discusses how the measures can be tracked and what data are required, while also identifying examples of communities that are currently using the respective measures in their planning process. This report highlights resources for developing measures to facilitate high quality performance-based planning.

### [Evaluating Complete Streets Projects: A Guide for Practitioners](#), Smart Growth America, (2015)

This resource provides general steps to take in evaluating projects and discusses useful measures for common Complete Streets goals of access, economy, environment, equity, place, public health, and safety, and the metrics that a jurisdiction may use. Additionally, it provides resources for those ready to dive deeper into the why and how of performance measurement for Complete Streets.

### [Statewide Pedestrian and Bicycle Planning Handbook](#), FHWA, (2014)

This handbook is designed to help State DOTs develop or update State bicycle and pedestrian plans. This handbook covers statewide planning from plan inception and scoping to engaging stakeholders and the general public; developing goals, objectives and strategies; collecting and analyzing data; linking to the larger statewide transportation planning process; and implementation. Chapter 4 provides useful guidance pertaining to the development of goals, objectives, and performance measures.

### [Performance-Based Planning and Programming Guidebook](#), FHWA, (2013)

The Guidebook was designed to help State DOTs, MPOs, RTPOs, transit agencies, and other partner organizations understand: the key elements of a performance-based planning and programming process. The Guidebook is designed to highlight effective practices to help transportation agencies in moving toward a performance-based approach to planning and programming.

## 11. Create an Implementation Strategy

Creating an implementation strategy is a critical but often overlooked step in ensuring the proposed infrastructure and program recommendations outlined in the Active Transportation Plan become a reality. With limited funding to support bicycle and pedestrian infrastructure and programs, opportunities for collaboration and coordination should be identified and laid out in the implementation strategy. It is important to document how the plan will be put into action following adoption. Below are strategies to consider when creating an implementation plan.

- Develop a methodology that prioritizes projects that align with the plan's vision, goals, and objectives.
- Work across jurisdictions, departments, and organizations to achieve coordination on project roles, responsibilities, phasing, and timelines.
- Develop order of magnitude cost estimates to aid in the prioritization of projects and identification of funding sources.
- Identify and leverage funding sources.
- Develop a phasing plan.
- Track and evaluate progress towards achieving the plan's goals and objectives.
- Garner local support.

## Example Plans and Policies

### [Lancaster Active Transportation Plan – Appendix D](#), (2019)

Lancaster County, the Lancaster Inter-Municipal Committee (LIMC), and the City of Lancaster collaborated to develop the Lancaster Active Transportation Plan. Chapter 7 summarizes the plan's key recommendations and provides guidance on how to implement the plan, who are potential implementation partners, and performance measures to benchmark progress. In addition, Appendix D serves as a supplement to Chapter 7 and provides additional details and resources on certain plan recommendations.

#### Seattle Bicycle Master Plan – [2019-2024 Implementation Plan](#) (2019)

Key implementation elements discussed in the Bicycle Master Plan included a bicycle facility project prioritization process, a consistent project delivery process, clear direction for maintaining and improving facilities, an investment approach that would guide the funding strategy for plan implementation, and a method of measuring success through performance measures. The latest implementation plan identifies projects and programs that, combined with existing facilities, will make significant progress towards implementing the Bicycle Master Plan in the next 5 years.

### **General Resources**

#### [Metropolitan Pedestrian and Bicycle Planning Handbook](#), FHWA, (2017)

The purpose of this handbook is to provide Metropolitan Planning Organizations (MPOs) with practical information and examples, as they consider bicycle and pedestrian transportation in their regional planning activities. Chapter 6 provides guidance on implementing projects.

#### [Statewide Pedestrian and Bicycle Planning Handbook](#), FHWA, (2014)

This handbook is designed to help State DOTs develop or update state bicycle and pedestrian plans. This handbook covers statewide planning from plan inception and scoping to engaging stakeholders and the general public; developing goals, objectives and strategies; collecting and analyzing data; linking to the larger statewide transportation planning process; and implementation. Chapter 8 provides guidance pertaining to the implementation of a master plan.

## References

1. Baltimore Department of Transportation. [Separated Bike Lane Network: Addendum to 2015 Bike Master Plan Update](#). March 2017.
2. The Borough of Jersey Shore. [Active Transportation Plan](#). May 2018.
3. The Borough of Oakmont. [Pedestrian Plan](#). June 2018.
4. Capital Area Metropolitan Planning Organization. [2045 Regional Active Transportation Plan](#). October 2017.
5. Colorado Department of Transportation. [Statewide Bicycle and Pedestrian Plan](#). June 2015.
6. League of American Bicyclists. [Equity of Access to Bicycle Infrastructure: GIS Methods for Investigating the Equity of Access](#). September 2015.
7. Lehigh Valley Planning Commission. [Walk LV Regional Sidewalk Inventory](#). June 2016.
8. Montgomery County Planning Commission. [Bike Montco – The Bicycle Plan for Montgomery County](#). 2018.
9. National Association of City Transportation Officials. [Don't Give Up at the Intersection](#). May 2019.
10. NCHRP Report 797. [Guidebook on Pedestrian and Bicycle Volume Data Collection](#). 2014.
11. NCHRP Report 803. [Pedestrian and Bicycle Transportation Along Existing Roads – ActiveTrans Priority Tool Guidebook](#). 2015.
12. Pennsylvania Department of Health. [An Executive Summary of A Case Study of Transportation Policy for the Public's Health](#). 2018.
13. Pennsylvania Department of Transportation. [PennDOT Connects Implementation Report](#). 2018.
14. Seattle Department of Transportation. [Seattle Bicycle Master Plan: 2019-2024 Implementation Plan](#). June 2019.
15. Seskin, Stefanie, Hanna Kite, and Laura Searfoss. [Evaluating Complete Streets Projects: A Guide for Practitioners](#). 2015.
16. Southwestern Pennsylvania Commission. [Draft Regional Active Transportation Plan](#). June 2018.
17. TCRP Synthesis 85. [Effective Use of Citizen Advisory Committees for Transit Planning and Operations](#). 2010.
18. US Department of Transportation Federal Highway Administration. [Achieving Multimodal Networks – Applying Design Flexibility & Reducing Conflicts](#). August 2016.
19. US Department of Transportation Federal Highway Administration. [A Resident's Guide for Creating Safer Communities for Walking and Biking](#). January 2015.
20. US Department of Transportation Federal Highway Administration. [Bikeway Selection Guide](#). February 2019.
21. US Department of Transportation Federal Highway Administration. [Costs for Pedestrian and Bicyclist Infrastructure Improvements A Resource for Researchers, Engineers, Planners, and the General Public](#). October 2013.
22. US Department of Transportation Federal Highway Administration. [Guidebook for Developing Pedestrian & Bicycle Performance Measures](#). March 2016.
23. US Department of Transportation Federal Highway Administration. [How to Develop a Pedestrian and Bicycle Safety Action Plan](#). August 2017.
24. US Department of Transportation Federal Highway Administration. [Incorporating Qualitative Data in the Planning Process: Improving Project Delivery and Outcomes](#). March 2017.
25. US Department of Transportation Federal Highway Administration. [Incorporating On-Road Bicycle Networks into Resurfacing Projects](#). March 2016.
26. US Department of Transportation Federal Highway Administration. [Metropolitan Pedestrian and Bicycle Planning Handbook](#). February 2017.
27. US Department of Transportation Federal Highway Administration. [Performance-Based Planning and Programming Guidebook](#). September 2013.
28. US Department of Transportation Federal Highway Administration. [Statewide Pedestrian and Bicycle Planning Handbook](#). September 2014.
29. West Earl Township. [Non-Motorized Transportation Plan](#). June 2018.
30. Wisconsin Department of Transportation. [Wisconsin Rural Bicycle Planning Guide](#). April 2006.

## Appendix A - Potential Funding Sources

### Federal Funding Programs

**Funding Table 1: Federal Funding Abbreviations** shown below should be used as a key to understanding **Funding Table 2: Federal Funding Grant Matching Requirements** and **Funding Table 5: Bicycle and Pedestrian Project and Activities - Federal Funding** shown on pages A-3 and A-4.

**Funding Table 1: Federal Funding Abbreviations**

Abbreviation	Federal Funding Program
ATI	Associated Transit Improvement
BUILD	Better Utilizing Investments to Leverage Development-Transportation Discretionary Grants
CMAQ	Congestion Mitigation and Air Quality Improvement Program
FLTTP	Federal Lands and Tribal Transportation Programs (Federal Lands Access Program, Federal Lands Transportation Program, Tribal Transportation Program, Nationally Significant Federal Lands and Tribal Projects)
FTA	Federal Transit Administration (Capital Funds)
HSIP	Highway Safety Improvement Program - PennDOT Safety Grants
INFRA	Infrastructure for Rebuilding America Discretionary Grant Program
NHPP	National Highway Performance Program
NHTSA 402	State and Community Highway Safety Grant Program
NHTSA 402 2	National Priority Safety Programs (Nonmotorized safety)
PLAN	Statewide Planning and Research (SPR) or Metropolitan Planning funds
SRTS	Safe Routes to School (Program/Activities)
STBG	Surface Transportation Block Grant Program
TIFIA	Transportation Infrastructure Finance and Innovation Act

### Grant Matching Requirements

The following summarizes two current federal funding programs grant matching requirements.

**Funding Table 2: Federal Funding Grant Matching Requirements**

Abbreviation	Federal Funding Program
BUILD	BUILD Transportation Discretionary Grants may be used for up to 80 percent of the costs of projects located in an urban area and up to 100 percent of the costs of a project located in a rural area. For a project located in an urban area, total Federal assistance for a project receiving a BUILD grant may not exceed 80 percent.
INFRA	INFRA grants may be used for up to 60 percent of future eligible project costs. Other Federal assistance may satisfy the non-Federal share requirement for an INFRA grant, but total Federal assistance for a project receiving an INFRA grant may not exceed 80 percent of future eligible project costs.

## State Funding Programs

**Funding Table 3: State Funding Abbreviations** shown below should be used as a key to understanding **Funding Table 4: State Funding Grant Matching Requirements** and **Funding Table 6: Bicycle and Pedestrian Project and Activities - State Funding** shown pages A-5 and A-6.

**Funding Table 3: State Funding Abbreviations**

Abbreviation	State Funding Program
ARLE	Automated Red-Light Enforcement Funding
CDBG	Community Development Block Grants
CFA MTF	Commonwealth Financing Authority Multimodal Transportation Fund <i>(separate from PennDOT's Multimodal Program)</i>
DCNR	Department of Conservation and Natural Resources Grants
LFoD	Local Funding or Donations
M&CLPF	Municipal and County Liquid Fuels Funding
MTF	PennDOT Discretionary Multimodal Transportation Funding
AP	PennDOT Agility Program
PIB	Pennsylvania Infrastructure Bank
TA Set-Aside	Transportation Alternatives Set-Aside of the Surface Transportation Block Grant Program

## Grant Matching Requirements

The following summarizes some of the current state funding programs grant matching requirements.

**Funding Table 4: State Funding Grant Matching Requirements**

Abbreviation	State Funding Program
ARLE	Matching funds are not required; however projects with matching funds will receive higher scores under the Cost Sharing criteria section of the grant application.
DCNR	DCNR Development grants require a match. Depending on the project type and categories, matching funds may include CASH and/or NON-CASH Values: In-House Services, Equipment Use, Donated Goods & Services and/or Volunteer Labor.
MTF	Financial assistance under the Multimodal Transportation Fund shall be matched by local funding in an amount not less than 30% of the amount awarded.
PIB	Equipment loans require a 50% match. For all other loans there are no match requirements. The PIB will finance up to 100% of the costs, including borrowing costs such as attorney fees or any other costs associated with completing the loan.
TA Set-Aside	The FAST Act provides funding for the TA Set-Aside Program on an 80% federal, 20% state/local cost share basis; however, PennDOT allows the sponsor to pay all costs for pre-construction activities (design, environmental clearance, right of way, utilities, etc.) and PennDOT will provide 100% cost reimbursement for the construction phase (including construction inspection) of selected TA Set-Aside projects. The project sponsor may be responsible for any costs exceeding the statewide project award amount.

**Funding Table 5: Bicycle and Pedestrian Project and Activities - Federal Funding**

Project Type	Category	BUILD	INFRA	TIFIA	FTA	ATI	CMAQ	HSIP	NHPP	STBG	TA	RTP	SRTS	PLAN	NHTSA 402	NHTSA 402 2	FLTPP
Access enhancements to public transportation (includes benches, bus pads)	Pedestrian / Transit Infrastructure	\$	\$	\$	\$	\$	\$		\$	\$	\$						\$
ADA/504 Self Evaluation/Transition Plan	Planning									\$	\$	\$		\$			\$
Bicycle helmets (project or training related)	Safety and Education									\$	\$		\$		\$		
Bicycle helmets (safety promotion)	Safety and Education									\$	\$		\$				
Bicycle lanes on road	Bicycle Infrastructure	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$		\$				\$
Bicycle parking	Bicycle Infrastructure	\$	\$	\$	\$	\$	\$		\$	\$	\$	\$	\$				\$
Bicycle plans	Planning				\$					\$	\$		\$	\$			\$
Bicycle share (capital and equipment; not operations)	Bicycle Infrastructure	\$	\$	\$	\$	\$	\$		\$	\$	\$						\$
Bicycle storage or service centers (example: at transit hubs)	Bicycle Infrastructure	\$	\$	\$	\$	\$	\$			\$	\$						\$
Bike racks on transit	Bicycle / Transit Infrastructure	\$	\$	\$	\$	\$	\$			\$	\$						\$
Bridges/overcrossings for pedestrians and/or bicyclists	Bicycle / Pedestrian Infrastructure	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$				\$
Bus shelters and benches	Pedestrian / Transit Infrastructure	\$	\$	\$	\$	\$	\$		\$	\$	\$						\$
Coordinator positions (state or local)	Planning						\$			\$	\$		\$				
Counting equipment	Planning				\$	\$		\$	\$	\$	\$	\$	\$	\$			\$
Crosswalks (new or retrofit)	Pedestrian Infrastructure	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$				\$
Curb cuts and ramps	Pedestrian Infrastructure	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$				\$
Data collection and monitoring for pedestrians and/or bicyclists	Planning				\$	\$		\$	\$	\$	\$	\$	\$	\$			\$
Historic preservation (pedestrian and bicycle and transit facilities)	Bicycle / Pedestrian / Transit Infrastructure	\$	\$	\$	\$	\$				\$	\$						\$
Landscaping, streetscaping (pedestrian and/or bicycle route; transit access); related amenities (benches, water fountains); generally, as part of a larger project	Bicycle / Pedestrian / Transit Infrastructure	\$	\$	\$	\$	\$			\$	\$	\$						\$
Lighting (pedestrian and bicyclist scale associated with pedestrian/bicyclist project)	Bicycle / Pedestrian Infrastructure	\$	\$	\$	\$	\$		\$	\$	\$	\$	\$	\$				\$
Maps (for pedestrians and/or bicyclists)	Planning				\$	\$	\$			\$	\$		\$	\$			
Paved shoulders for pedestrian and/or bicyclist use	Bicycle / Pedestrian Infrastructure	\$	\$	\$			\$	\$	\$	\$	\$		\$				\$
Pedestrian plans	Planning				\$					\$	\$		\$	\$			\$
Recreational trails	Bicycle / Pedestrian Infrastructure	\$	\$	\$						\$	\$	\$					\$
Road Diets (pedestrian and bicycle portions)	Bicycle / Pedestrian Infrastructure	\$	\$	\$				\$	\$	\$	\$						\$
Road Safety Assessment for pedestrians and bicyclists	Planning							\$		\$	\$			\$			\$
Safety education and awareness activities and programs to inform pedestrians, bicyclists, and motorists on bicycle/pedestrian safety	Safety and Education									\$	\$		\$	\$	\$	\$	



Funding Table 5: Bicycle and Pedestrian Project and Activities - Federal Funding (continued)

Project Type	Category	BUILD	INFRA	TIFIA	FTA	ATI	CMAQ	HSIP	NHPP	STBG	TA	RTP	SRTS	PLAN	NHTSA 402	NHTSA 402 2	FLTPP
Safety enforcement (including police patrols)	Safety and Education									\$	\$		\$		\$	\$	
Safety program technical assessment (for pedestrians/bicyclists)	Safety and Education									\$	\$		\$	\$	\$		
Separated bicycle lanes	Bicycle Infrastructure	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$		\$				\$
Shared use paths/transportation trails	Bicycle / Pedestrian Infrastructure	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$				\$
Sidewalks (new or retrofit)	Pedestrian Infrastructure	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$				\$
Signed pedestrian or bicycle routes	Bicycle / Pedestrian Infrastructure	\$	\$	\$	\$	\$	\$		\$	\$	\$		\$				\$
Signs/signals/signal improvements	Bicycle / Pedestrian Infrastructure	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$		\$				\$
Stormwater impacts related to pedestrian and bicycle projects	Bicycle / Pedestrian Infrastructure	\$	\$	\$	\$	\$		\$	\$	\$	\$	\$	\$				\$
Traffic calming	Bicycle / Pedestrian Infrastructure	\$	\$	\$	\$			\$	\$	\$	\$		\$				\$
Trail bridges	Bicycle / Pedestrian Infrastructure	\$	\$	\$			\$	\$	\$	\$	\$	\$	\$				\$
Trail construction and maintenance equipment	Bicycle / Pedestrian Infrastructure									\$	\$	\$					
Trail/highway intersections	Bicycle / Pedestrian Infrastructure	\$	\$	\$			\$	\$	\$	\$	\$	\$	\$				\$
Trailside and trailhead facilities (includes restrooms and water, but not general park amenities; see program guidance)	Bicycle / Pedestrian Infrastructure	\$	\$	\$						\$	\$	\$					\$
Training	Safety and Education						\$	\$		\$	\$	\$	\$	\$	\$		
Training for law enforcement on ped/bicyclist safety laws	Safety and Education									\$	\$		\$			\$	
Tunnels/under crossings for pedestrians and/or bicyclists	Bicycle / Pedestrian Infrastructure	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$				\$

**Funding Table 6: Bicycle and Pedestrian Project and Activities - State Funding**

Project Type	Category	M&CLPF	CDBG	DCNR	ARLE	LFoD	TAP	MTF & CFA MTF	PIB	PAP
Access enhancements to public transportation (includes benches, bus pads)	Pedestrian/Transit Infrastructure		\$				\$	\$		\$
ADA/504 Self Evaluation/Transition Plan	Planning		\$							
Bicycle helmets (project or training related)	Safety and Education					\$	\$			
Bicycle helmets (safety promotion)	Safety and Education					\$	\$			
Bicycle lanes on road	Bicycle Infrastructure	\$	\$				\$	\$	\$	\$
Bicycle parking	Bicycle Infrastructure		\$			\$	\$	\$		
Bicycle plans	Planning		\$							
Bicycle share (capital and equipment; not operations)	Bicycle Infrastructure		\$				\$	\$		
Bicycle storage or service centers (example: at transit hubs)	Bicycle Infrastructure		\$				\$	\$		
Bike racks on transit	Bicycle/Transit Infrastructure		\$			\$		\$		
Bridges/overcrossings for pedestrians and/or bicyclists	Bicycle / Pedestrian Infrastructure		\$	\$			\$	\$	\$	
Bus shelters and benches	Pedestrian/Transit Infrastructure		\$					\$		
Local Coordinator positions	Planning						\$			
Counting equipment	Planning		\$			\$		\$		
Crosswalks (new or retrofit)	Pedestrian Infrastructure	\$	\$		\$	\$	\$	\$	\$	\$
Curb cuts and ramps	Pedestrian Infrastructure	\$	\$		\$		\$	\$	\$	\$
Data collection and monitoring for pedestrians and/or bicyclists	Planning		\$			\$		\$		
Historic preservation (pedestrian and bicycle and transit facilities)	Bicycle/Pedestrian / Transit Infrastructure						\$	\$		
Landscaping, streetscaping (pedestrian and/or bicycle route; transit access); related amenities (benches, water fountains); generally, as part of a larger project	Bicycle/Pedestrian / Transit Infrastructure		\$			\$	\$	\$	\$	\$
Lighting (pedestrian and bicyclist scale associated with pedestrian/bicyclist project)	Bicycle/Pedestrian Infrastructure	\$	\$		\$		\$	\$		\$
Maps (for pedestrians and/or bicyclists)	Planning					\$		\$		\$
Debris Removal (roadway, gutters, and shoulders)	Bicycle/Pedestrian Infrastructure	\$						\$		\$
Paved shoulders for pedestrian and/or bicyclist use	Bicycle/Pedestrian Infrastructure	\$	\$				\$	\$	\$	\$
Pedestrian plans	Planning		\$					\$		
Recreational trails	Bicycle/Pedestrian Infrastructure		\$	\$			\$	\$		
Road Diets (pedestrian and bicycle portions)	Bicycle/Pedestrian Infrastructure		\$				\$	\$	\$	
Road Safety Assessment for pedestrians and bicyclists	Planning		\$					\$		\$
Safe Routes to School Infrastructure Projects	Bicycle/Pedestrian Infrastructure	\$	\$		\$	\$	\$	\$	\$	\$

**Funding Table 6: Bicycle and Pedestrian Project and Activities - State Funding (continued)**

Project Type	Category	M&CLPF	CDBG	DCNR	ARLE	LFoD	TAP	MTF & CFA MTF	PIB	PAP
General Safety education and awareness activities and programs to inform pedestrians, bicyclists, and motorists on ped/bike safety	Safety and Education					\$				
SRTS Safety education and awareness activities and programs to inform pedestrians, bicyclists, and motorists on ped/bike safety	Safety and Education						\$			
Safety education positions	Safety and Education					\$	\$*			
Safety enforcement (including police patrols in school vicinity's)	Safety and Education						\$			
Safety program technical assessment (for peds/bicyclists)	Safety and Education						\$*			
Separated bicycle lanes	Bicycle Infrastructure	\$	\$				\$	\$	\$	\$
Shared use paths / transportation trails	Bicycle / Pedestrian Infrastructure		\$	\$			\$	\$	\$	\$
Sidewalks (new or retrofit)	Pedestrian Infrastructure		\$				\$	\$	\$	\$
Signed pedestrian or bicycle routes	Bicycle / Pedestrian Infrastructure		\$				\$	\$	\$	\$
Signs / signals / signal improvements	Bicycle / Pedestrian Infrastructure	\$	\$		\$		\$	\$	\$	\$
Stormwater impacts related to pedestrian and bicycle projects	Bicycle / Pedestrian Infrastructure	\$	\$		\$		\$	\$	\$	\$
Traffic calming	Bicycle / Pedestrian Infrastructure	\$	\$		\$	\$	\$	\$	\$	\$
Trail bridges	Bicycle / Pedestrian Infrastructure		\$	\$			\$	\$	\$	
Trail construction and maintenance equipment	Bicycle / Pedestrian Infrastructure		\$	\$				\$	\$	
Trail/highway intersections	Bicycle / Pedestrian Infrastructure	\$	\$	\$	\$		\$	\$	\$	\$
Trailside and trailhead facilities (includes restrooms and water, but not general park amenities; see program guidance)	Bicycle / Pedestrian Infrastructure		\$	\$		\$		\$		
Training	Safety and Education						\$*			\$
Training for law enforcement on ped/bicyclist safety laws	Safety and Education						\$*			
Tunnels / undercrossing for pedestrians and/or bicyclists	Bicycle / Pedestrian Infrastructure		\$	\$			\$	\$	\$	

\* (Only applicable for SRTS related programs.)