The bicycle culture recommendations and Vision Network outlined in Chapters 2 and 3 are essential ingredients to making Colorado Springs safer, integrated, and accessible with respect to bicycling. To make bicycle improvements viable—one of the five COS Bikes! goal themes—a strategic implementation approach is needed. How the City phases and implements programmatic and Vision Network changes is as important as the change itself.

COS Bikes! is action-oriented. This chapter includes guidance on which actions to implement first, and how, along with recommended City policy changes. As in Chapter 2, implementation recommendations are divided into Near-term and Long-term. Most recommendations will be feasible for the City to accomplish in the next few years, while some policy changes will require extensive coordination, outreach, and funding that may require several years to complete.
Chapter 4: Applying the Best Solutions

Implementation Approach

This chapter of COS Bikes! gives guidance for near-term actions that the City should take to improve its bicycling environment. Three priority steps are presented: implementing bicycle support recommendations; implementing projects in high Bicycle Priority Areas; and making small improvements to the existing network.

Priority Step: Implement Bicycle Support Recommendations

As the City implements COS Bikes!, it is important to understand that the programmatic recommendations in Chapter 2 and recommended institutional changes in this chapter (City Policy Changes) are as vital to achieving success as installing bicycle facilities. Building stronger community support for bicycle facilities and programs and developing a planning and engineering framework that embraces bicycling will ensure that new facilities will be embraced by the community and are planned, designed, and constructed in a thoughtful, context-sensitive way.

Priority Step: Implement Projects in High Bicycle Priority Areas

Building the Vision Network’s 379 total miles may appear daunting at the outset. The network, however, is intended to be a long-term and opportunistic investment. COS Bikes! recommends beginning Vision Network buildout where the landscape for bicycling is strong and appropriate—areas of the city with strong public support for projects and high potential demand and need for bicycle facilities. This step in the implementation process can happen concurrently with the bicycle support recommendations in Chapter 2.

COS Bikes! recognizes that as in many other cities, past bicycle projects have not always been embraced by the public. To change the narrative about bicycling, the City should begin Vision Network implementation in priority areas where success is likely. Years later, when the City can point to well-designed bike facilities with high use, little or no safety problems, and community backing, it will have an easier time expanding the Vision Network and building similar projects in other neighborhoods.

4.01 Begin Implementation of the Vision Network in Bicycle Priority Areas

The City should focus in Bicycle Priority Areas (BPAs). These are the areas where the bicycling environment is strong. High BPAs are areas of the city with the most streets and street connections, the most people, the people with the lowest incomes, and/or where trails are nearby. The BPAs were informed by coordination with the PlanCOS process. These areas are shown on the following page; the red indicates the highest priority for implementation of the Vision Network, while yellow indicates a medium priority. Green areas are the lowest priority.

BPAs—like Downtown, Old North End, the city’s west side, and Pikes Peak Park neighborhoods—should be considered as a strong starting point for Vision Network implementation. At a minimum, the City should identify one Vision Network project each year to complete in the high BPAs.

BPAs should be the City’s focus, but network implementation can also occur opportunistically by building bicycle facilities when opportunities arise outside of BPAs. For example, neighborhoods like Stratton Meadows and Ivywild do not score as well as the high priority areas, but have demonstrated public support for bike facilities, and should be included in discussions about Vision Network rollout. Additionally, infill development presents a good opportunity to implement bicycle facilities.

If necessary, the City should coordinate closely with other jurisdictions and agencies. This will be most applicable for the high-priority area near Old Colorado City.

Lead: Public Works, Parks & Recreation | Time: Near-term

Choosing the Best Bike Facility

While the BPAs help guide the City toward where to begin building the Vision Network, deciding what to build is the next step in the process. This Plan does not include facility recommendations for specific corridors, but contains guidance on the types of facilities that should be implemented under different conditions. The Bicycle Facility
Toolbox (Appendix B) discussed in this section will help the City choose the appropriate facility for each corridor based on its unique context, constraints, and opportunities.

**4.02 Plan and Construct Projects Using the Bicycle Facility Toolbox**

City staff should use the Bicycle Facility Toolbox (Appendix B) to help decide what facilities are appropriate for specific corridors. The Toolbox begins with information about how to select the appropriate bicycle facility for both Interested but Concerned and Experienced and Confident bicyclists based on traffic volume and posted speed. Subsequent pages provide guidance and considerations for many on- and off-street bicycle facilities and their variations depending on context. In addition to linear facility types, the Toolkit includes considerations and guidance for spot and intersection treatments, including dimensions, and when their use may be appropriate.

Using the Bicycle Facility Toolbox will help ensure that bicycle facilities built throughout Colorado Springs are appropriate for the desired type of cyclist, aligned with national best practices, and respond to the local land use and transportation context.

**Lead:** Public Works  |  **Time:** Near-term

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**Priority Step: Make Small Improvements to the Existing Network**

**4.03 Improve Bicycle Wayfinding**

At the May 2017 project open house, ‘Improve Bicycle Wayfinding’ was the number one priority recommendation, receiving over 100 votes. Wayfinding, which consists of informational signage directing riders to destinations, is a critical part of a low-stress and comfortable bike network. If wayfinding were added to today’s bicycle network, it could encourage more people to ride and make the riding experience more intuitive, less “tribal,” and more integrated and accessible. **Wayfinding is a low-cost and non-controversial way to begin to unlock the city’s bicycling potential and achieve many of the COS Bikes! goals.**

As one of the first implementation steps, the City should begin to install wayfinding along the existing network. **The City should add wayfinding to at least five miles of bicycle routes each year.** Additionally, as Vision Network projects are implemented, wayfinding should be added.

By making it easier for people to understand what they can access by bicycle, more people will choose to bicycle. In this way, a wayfinding system acts as a multiplying force, making the City’s investment in infrastructure useful to more people.

**Lead:** Public Works, Parks & Recreation  |  **Time:** Near-term

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**Street Trade-Offs**

Street design and retrofits are influenced by a number of considerations:

- Street width
- Traffic volumes and associated number of travel lanes
- On-street parking demand or perceived demand
- Travel speeds
- Adjacent land uses
- Neighborhood interest

On-street bike facilities, which are typically added as part of street retrofits, are no exception. Trade-offs need to be considered in the context of the Colorado Springs’ commitment to the Vision Network. The City and its partners, such as El Paso County and CDOT, should make every effort to install comfortable bicycling facilities, consistent with Bicycle Facility Toolbox guidance. If the City determines that a street is too constrained for an appropriate facility type, they should identify a parallel street that offers similar connectivity, access to destinations, and has space for an appropriate bicycle facility. If there is no parallel route—a likely scenario in many parts of the city without a connected street grid—the City could consider installing a less comfortable bicycle facility, one for the Enthused and Confident rider (see Appendix B). While these facilities will not attract the same number of bicyclists, they will provide connectivity benefits for a segment of the Colorado Springs population and may help people who do not have travel choices.

Street retrofits are not permanent and therefore, as time passes and conditions change, the City should seek ways to install the most comfortable bicycle facility possible to achieve the vision and goals of COS Bikes!

"If you wouldn’t want your child to ride it... it’s not safe" - COS Bikes! Open House Attendee
Bicycle Priority Areas

Colorado Springs Bike Master Plan

Toole Design Group

City of Colorado Springs Bike Plan DRAFT

Chapter 4: Applying the Best Solutions
4.04 Improve Bicycle Detection

A common public concern expressed during the planning process is that many intersections throughout the city lack bicycle detection. While all traffic signals in Colorado Springs are capable of detecting bicycles and granting a signal cycle, bicyclists are only recognized when positioned at the stop bar. Existing issues that prevent detection from always occurring include camera positioning and bicycle positioning.

The City should install informational signage and/or pavement markings at intersections to inform bicyclists about where to position themselves to be recognized by the bike sensors, and should make sure all sensors are working appropriately. Education about bicycle detection should also be included in educational outreach strategies organized by Bike Colorado Springs, the Communications Department, and others. In addition, when radar signal detection is piloted, bicycle detection, counting, and bicycle confirmation lights (to communicate that a bicycle has been detected at a traffic signal) should be explored.

**Lead:** Public Works | **Time:** Near-term

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**City Policy Changes**

The final ingredient of the COS Bikes! implementation strategy, to be conducted concurrent with the Priority Steps previously presented, is to enact internal policy and institutional changes. For the City to make progress toward achieving its vision and goals, and to ultimately become a Gold-level Bicycle Friendly Community, these changes will be needed to make it easier for City staff to design and maintain bicycle projects.

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**Design for Safety**

4.05 Update the Engineering Criteria Manual

The City’s engineering standards are reviewed and revised roughly every decade. When the Engineering Criteria Manual is next updated, staff from Traffic Engineering and the bike program should be involved as to ensure best practices in bike facility and Complete Streets design are reflected, consistent with the Toolbox in Appendix B. A full description of the current bikeway design criteria can be found in the State of Bicycling in Colorado Springs in Appendix A.

Updating the Manual to better reflect Complete Streets principles will ensure that bicyclists and pedestrians are given consistent consideration in planning and designing capital projects. Ultimately, updating the Engineering Criteria Manual to include and encourage high-comfort bicycle facilities will allow City staff to plan, design, and install facilities proven to attract more bicyclists and improve the safety of all road users.

**Lead:** Public Works | **Time:** Long-term

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**Complete Streets** are streets for everyone. They are shaped to be safe and accessible for all users—including pedestrians, bicyclists, transit riders, and drivers. Complete Streets create more livable cities and improve equity, safety, and public health. The City of Colorado Springs supports Complete Streets through their 2005 ordinance and continued application throughout the city.

While a bicycle facility can be part of a complete street, it is not always necessary and in fact, on-street facilities are not appropriate for every type of street. The Bicycle Facility Toolbox (Appendix B) includes guidance on which types of bicycle facilities are appropriate on which type of street.
Find the Right Opportunities

4.06 Update the Street Resurfacing and Capital Projects Process

To ensure the implementation of the Vision Network, the City should adopt a policy to review all street resurfacing and engineering projects against the Vision Network map for opportunities to implement high-comfort bicycle facilities.

Road resurfacing and restriping is generally the most cost-effective opportunity to add bicycle facilities on a corridor. The 2016 Federal Highway Administration publication, Incorporating On-Road Bicycle Networks into Resurfacing Projects workbook, has detailed guidance that the City, County, and CDOT should consider on roads under their respective purviews.

**Lead:** Public Works, CDOT, El Paso County  
**Time:** Near-term

4.07 Create a Policy for Street Reconfigurations

Street reconfiguration refers to changes in the way roadway space is allocated. A “road diet” is an example of a street reconfiguration where one or more travel lanes formerly used to carry vehicular traffic are repurposed for another use. Many streets in the U.S. are wider than needed, based on traffic volumes, and reallocating underused travel lanes to bicyclists is a cost-effective way to fit bicycle facilities within the existing curb-to-curb dimensions of a street. In fact, street reconfigurations are one of the most cost-effective and holistically beneficial implementation strategies for bicycle facilities. Street reconfigurations can also be used for traffic calming purposes in situations where there are safety concerns due to speeding, sight distance, frequent lane changing, and other issues.

Although street reconfigurations have many benefits and should be considered a valuable tool for Vision Network implementation, reconfiguring a corridor without an appropriate level of public process can result in confusion, frustration, and anger. Therefore, the City should develop a process for implementing street reconfigurations that addresses the development and communication of project goals, public outreach methods, and before-and-after evaluation of the projects. This process will ensure that concerns of residents and businesses are understood early in the project implementation process.

**Lead:** Public Works  
**Time:** Near-term

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Bicycle Project Funding

Currently, most bicycle projects in Colorado Springs are funded by:

- Revenue from the Pikes Peak Rural Transportation Authority (PPRTA), which collects a sales tax to fund transportation projects. PPRTA funding includes approximately $400,000 per year for on-street bikeway projects.
- The City's bicycle excise tax, which began in Colorado Springs nearly 30 years ago. A $4 tax is collected when a new bicycle is sold within city limits. The tax raises approximately $80,000 per year. The City’s first priority for the tax revenue is the construction of off-street bicycle paths and the second priority is “other bikeway improvements” in the approved bicycle plan.

The City is also able to deliver bicycle projects through its annual Capital Improvements Program (the City’s infrastructure budget), routine street resurfacing and restriping, and grant programs.

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Bicycling and Land Use

Sustainable land use policies encourage walkable neighborhoods, mixed-use and infill development, and the provision of transportation options. The development of PlanCOS, a comprehensive plan for the city’s future, is underway and is addressing land use policy. One of the PlanCOS vision themes is Unique Urban Places, which “centers on a vibrant Downtown and is strengthened by reinvesting in walkable, healthy, and interesting urban spaces that are located in new and reinvented areas within our defined City boundary.” COS Bikes! and PlanCOS were developed in parallel and will guide the City in promoting connectivity, shorter trips, and bike friendly streets.
Institutionalize the Change

4.08 Adopt a Bike Parking Ordinance

Just like a personal motor vehicle is parked most of the time, bicyclists also need parking where they begin and end their trips. Bicyclists may lock their bikes up inappropriately, travel to certain destinations instead of others, or not take trips at all if there isn’t convenient, secure, and/or protected bicycle parking at their destinations.

To create a systematic process for deploying bicycle parking across the city, the City should complete adoption of a bicycle parking ordinance. Such an ordinance would require specific quantities and types of bicycle parking (short-term and long-term) to be implemented in association with new construction, renovation, and retrofit projects. This approach to bicycle parking will help provide bicyclists safe, secure parking when and where they need it. A draft bicycle parking ordinance has been created, which creates a strong foundation for the completion of this action.

**Lead:** Public Works, Planning & Development  
**Time:** Near-term

4.09 Revise ATAC Charter and Structure

Working closely with the Active Transportation Advisory Committee (ATAC), the advisory board to the Citizen Transport Advisory Board (CTAB), the City should revise ATAC’s charter to identify appropriate opportunities to advise in decision-making and implementation of bike- and pedestrian-related programming. The selection criteria for members should be revised to encourage representation from diverse groups in the city, including universities, non-profit groups, economic development entities, and the public health community. ATAC should also have consistent representation and reporting from the Streets Operations and Maintenance Division, Parks and Recreation Department, Police Department, and Mountain Metro Transit.

**Lead:** ATAC, CTAB  
**Time:** Near-term

Maintain What You Build

4.10 Strive to Improve Bicycle Facility Maintenance

At the May 2017 COS Bikes! open house, better bike lane and trail maintenance was identified by attendees as one of the city’s greatest needs. A trail or on-street bike facility’s comfort is strongly influenced by its navigability and physical condition. Existing issues include debris, weeds, snow, ice, and along some trails, tents.

Currently, the City’s Public Works Department is responsible for maintaining on-street bicycle facilities and the Parks Department maintains off-street facilities. During winter storm events, snow and ice on roadways are often deposited in on-street bicycle facilities and are not cleared until other travel lanes are clear. Trail maintenance occurs as-needed, and the Parks Department currently uses a checklist to guide their weekly, monthly, or yearly maintenance duties while striving to clear priority urban (Tier 1) trails after a snow event.

The City’s current sweeping and snow-clearing maintenance practices balance available resources with a consideration for emergency events, air quality, and water quality. There is currently no official policy in place to prioritize maintenance activities on major trails or street bike routes, and no resources in the foreseeable future to do so. As more resources become available, the City should strive to improve bicycle facility maintenance as much as possible. This could include identifying priority bicycle routes to clear and/or sweep and identifying minimum maintenance standards for all facilities. The City should also continue to explore ways to maintain new facility types such as separated bike lanes.

**Lead:** Public Works, Parks & Recreation  
**Time:** Near- and Long-Term
Summary of Proposed Actions

The following table summarizes the key actions that Colorado Springs will need to take to implement the Vision Network.

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Unlocking the Potential

COS Bikes! outlines a strategic plan for improving the bicycling environment in Colorado Springs. By developing programs to build a stronger bike culture, beginning to implement the Vision Network in high Bicycle Priority Areas, making small changes to the existing bikeway network, and modifying some City policies, Olympic City USA will begin to realize its vision for bicycling.

As Colorado Springs changes, COS Bikes! will ensure that bicycling programs and infrastructure are part of that change and in some cases, leading the change. The City cannot and should not make all of the changes on its own—participation and support is needed from governmental partners such as PPACG, El Paso County, and CDOT, the advocacy community, the business community, and the residents of Colorado Springs.

*The Bike Master Plan envisions a healthy and vibrant Colorado Springs where bicycling is one of many transportation options for a large portion of the population, and where a well-connected and well-maintained network of urban trails, singletrack, and on-street infrastructure offers a bicycling experience for present and future generations that is safe, convenient, and fun for getting around, getting in shape, or getting away.*