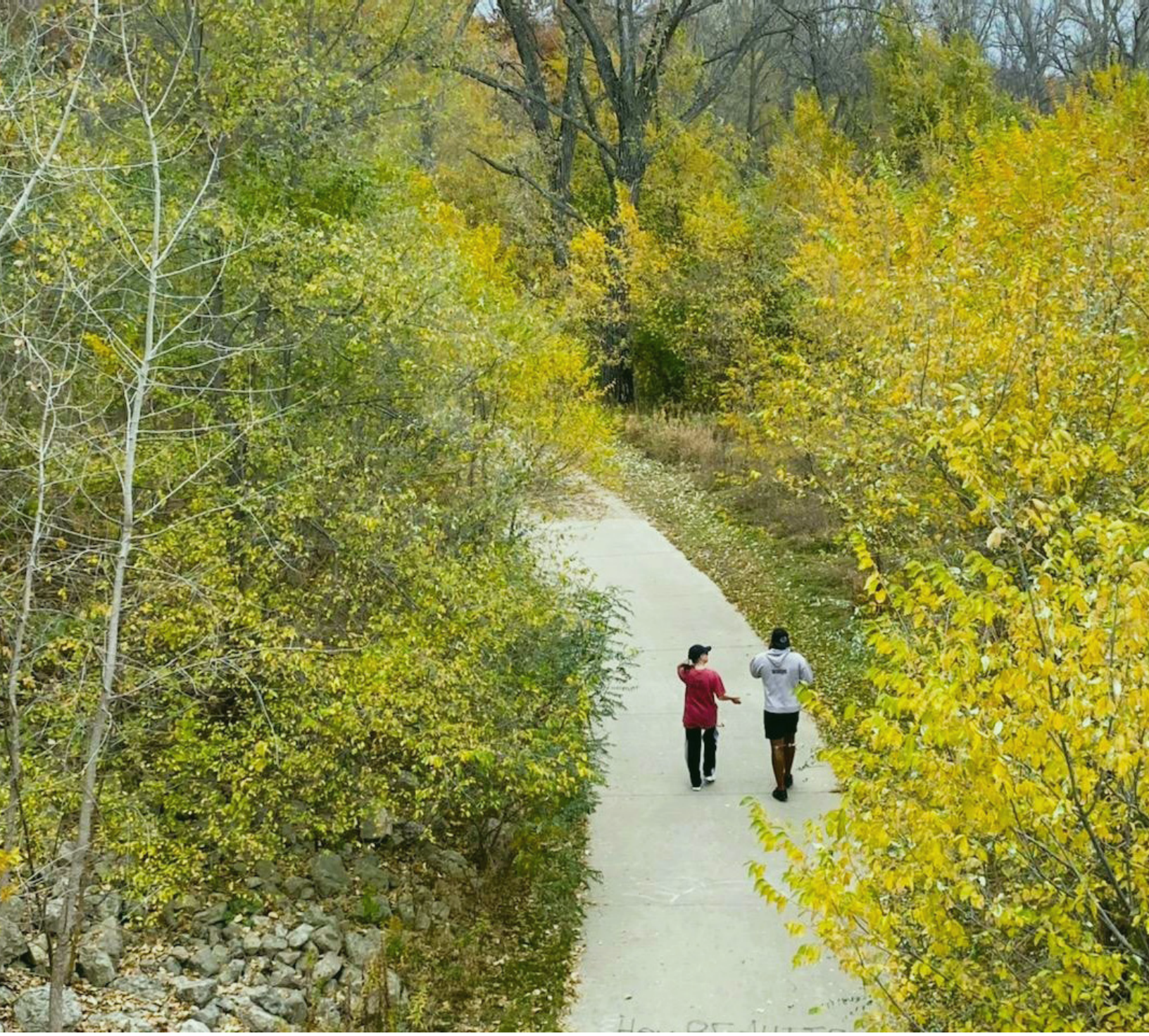

Linn County and Cedar Rapids

TRAILS AND BIKEWAYS PLAN

Adopted May 27, 2025

CEDAR RAPIDS
City of Five Seasons®

LINN COUNTY CONSERVATION

Acknowledgments

This plan was completed with the valuable input of many Cedar Rapids and Linn County stakeholders. Community members and City/County staff gave the planning team insight into the state of trails and bikeways in Cedar Rapids and Linn County. In addition to the public's input received through surveys, an open house, and pop-up workshops, the time and energy of the Trails & Bikeways Plan Steering/Advisory Committee was particularly appreciated.

Steering/Advisory Committee

Mitchell Ahrendsen
Ken Barker
Dave Benderson
Kyle Bieghler
Kesha Billings
Elizabeth Buch
Randy Burke
Bradley DeBrower
David Dechant
Ted Doscher
Jim Dwyer
Jonathan Galbraith
Ron Griffith
Seth Gunnerson
Lynn Haas
Roman Kiefer
Rob McKillip
Jacquie Montoya
Greg Januska
Bruce Nesmith
Tom Peffer
Phillip Platz
Keiko Rector
Garret Reddish
Paul Salamon
Tamara Schnell
Haley Sevening
Martin Smith
Derek Stepanek
Brian Tharp
Clifton Trebil-Smith

City/County Officials

Tiffany O'Donnell, Cedar Rapids Mayor
Tyler Olson, City Council At Large
Ann Poe, City Council At Large
David Maier, City Council At Large
Marty Hoeger, District 1
Scott Overland, District 2
Dale Todd, District 3
Scott Olson, District 4
Ashley Vanorny, District 5

Kirsten Running-Marquardt, *Linn County* Board Chair
Ben Rogers, *Linn County* Board Vice Chair
Louis J. Zumbach, *Linn County* Board Member

Steve Emerson, *Linn County Conservation* Board President
Brent Oleson, *Linn County Conservation* Board Vice President
George Kanz, *Linn County Conservation* Board Secretary
Kendal Hausmann, *Linn County Conservation* Board Member
Ashley Whittlesey, *Linn County Conservation* Board Member

Cover Credit

Linn County Trails Association

Snyder and Toole Design provided consulting services.

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Image Credit: [Cedar Rapids Tourism]

INTRODUCTION

01

Vision

Cedar Rapids and Linn County are leaders in Iowa's developing trail and bikeway network, making investments at a faster pace compared to peer communities. The Linn County and Cedar Rapids Trails and Bikeways Plan (hereafter referred to as "the Plan") lays out a vision for continuing this momentum, while simultaneously helping to achieve Cedar Rapids' and Linn County's adopted goals and strategies:

"Continue to work with partners to facilitate planned growth and development of a regional network of multi-use recreational trails that increases connections between communities and existing trails and parks and within the region."
Linn County Conservation Board Strategic Plan, 2022

"Support the development of an effective, regional, multi-modal transportation system."
EnvisionCR, 2023

"Assist with trails expansion and planning efforts with all appropriate local, regional, and state entities"
Linn County Comprehensive Plan, 2013

During community engagement for the Plan, residents were asked to provide three words to describe their ideal trail and bikeway system. Their answers, summarized in Figure 1.1, inspired the vision for trails and bikeways in Cedar Rapids and Linn County:

"In the future, the trails and bikeways system will be a connected, expanded, and safer network for people of all ages and abilities throughout Cedar Rapids and Linn County."

Why a trails and bikeway system?

Trails and bikeways in Cedar Rapids and Linn County are valued for their recreational, health, and connecting qualities. A network of trails and bikeways will bring the community closer together, allowing children, families, adults, and older adults the freedom to reach one another and their destinations. These pathways also promote active transportation, offering a sustainable and healthy alternative to motorized travel. With easy access to recreation and leisure activities, residents are encouraged to lead healthier lifestyles, fostering a sense of well-being and vitality in the community.

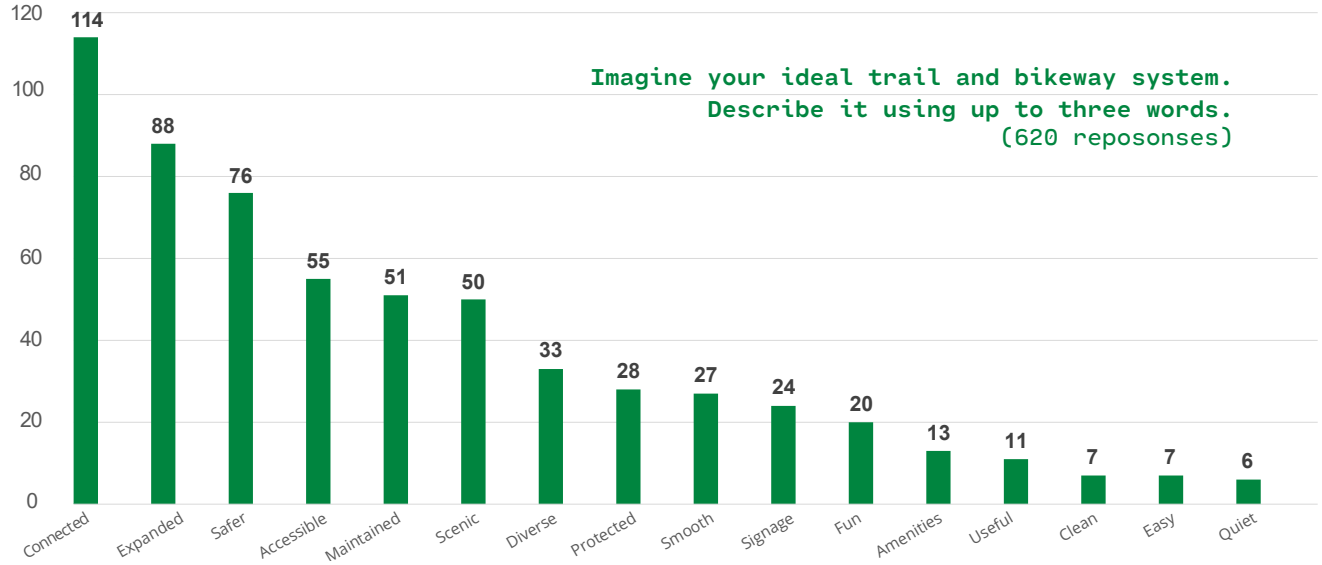


FIGURE 1.1 287 people responded with three words to describe their ideal trails network.

Why a City/ County Trails and Bikeways Plan?

Over the past 50 years trails and bikeways across the Cedar Rapids metropolitan area have continued to grow within different communities. Many of these communities are now looking to ensure that their future trail and bikeway connections align with neighboring communities. To achieve this, the Corridor Metropolitan Planning Organization (CMPO) is funding a regional trail and bikeways plan that has been split into two phases. The first phase is a joint plan with the City of Cedar Rapids and the Linn County Conservation Board. These two entities have partnered for the first phase of the regional trails and bikeway plan due to their long histories of managing and partnering on trail development. A prime example of this partnership is the Cedar Valley Nature Trail. The second phase will include Plan development for the remaining communities under the Corridor MPO's jurisdiction including: Ely, Fairfax, Hiawatha, Marion, Palo, and Robins.

Who was involved?

The City of Cedar Rapids and Linn County received a federal transportation grant to complete the Plan, and in 2023 hired the consulting team of Snyder & Associates, Inc. and Toole Design to facilitate the process. City and County staff assembled a Steering Committee and Advisory Committee to assist with guiding the development of the Plan. Gaining community input was a key part of Plan development. The Plan is the distillation of ideas from over 775 interactions with the public about their desires for the future. Residents were engaged through community open houses, pop-up workshops, and online surveys. Local advocacy groups, including Linn County Trails Association and Linn Area Mountain Bike Association were also included in the plan development process.

What did the community tell us?

Residents told the planning team their biggest needs for the trails and bikeways network are fourfold:

1. Connectivity is the highest priority
2. Trail and bikeway facility types that provide greater separation between motorists and trail/ bikeway users are preferred
3. Local connections to regional trails and destinations are also a high priority
4. Additional trail and bikeway amenities are highly desired

These results are summarized in Chapter 2 – Community Engagement and detailed in Appendix A.

Where do we go from here?

To achieve the vision of a connected, expanded, and safer system, the Plan describes goals, strategies, and action steps, including timeframes and responsible parties (Chapter 3). The Plan also details trail and bikeway projects with clear regional and local priorities (Chapter 4). These prioritized projects are intended to help the City of Cedar Rapids and Linn County program projects in their annual and five-year capital improvement budgets, as well as pursue additional funding opportunities.

Image Credit: Linn County Trails Association

COMMUNITY ENGAGEMENT

02

FIGURE 2.1 Members of the steering committee prioritized ideas at a meeting in 2023.

Broad engagement with residents of Cedar Rapids and Linn County was embraced as a priority throughout the planning process, reflecting their vision and priorities. Community members were engaged in the summer of 2023 to gather input and ideas before drafting the Plan. A more detailed analysis of the community engagement results can be found in Appendix A.

How we engaged

Approximately 822 participant interactions took place. It was important for the project team to use a range of strategies to solicit feedback from community members, engaging people with varying levels of interest. The following strategies were used:

- 440 participant interactions using an online and WikiMap survey
- 200 participant interactions at tabling events at the Cedar Rapids Farmers Market (Figure 2.2) and during Bike to Work Week
- 125 participant interactions at pop-up workshops along the Cedar Valley Nature Trail and Mount Vernon Farmers Market
- 62 attendees at two open houses

What we heard

Key findings were made by analyzing the public's input. These findings are addressed in subsequent chapters, which include recommendations for responding to community priorities. Key findings are:

1. **Trail and bikeway connectivity is the highest priority.** The top priority of those engaged for new trail/bikeway projects is connectivity. The completion of trails such as CeMar, Grant Wood, and Interurban are heavily favored by those who were engaged. Improvements to existing regional trails are also desired, led by the Cedar Valley Nature Trail where it crosses busy streets in Downtown Cedar Rapids and the Northeast quadrant of Cedar Rapids. This priority is further illustrated in conditions ratings, where the ease of crossing busy streets while riding on trails is rated 4th out of 14 conditions.
   How this finding was addressed in the Plan: A connected, regional network of trails was developed, with clear identification of projects (Chapter 4).
2. **Respondents favor trail and bikeway facility types that provide greater separation between motorists and trail/bikeway users.** The facility types where respondents would like to see greater investments (in prioritized order) are: a) paved trails along greenways, b)

protected bike lanes, c) unpaved trails along greenways, and d) shared use paths along 4-lane roads (Figure 2.3). These preferences largely reflect their comfort level on these facilities. Many respondents do not favor riding on painted bike lanes, shoulders, or shared lane markings, nor do they support investments in these facility types.

How this finding was used in the Plan: *The future bikeway network focuses on favored facility types, with a reduced emphasis on shared lane markings, shoulders, and painted bike lanes. (Strategy 1 in Chapter 3).*

3. **Local connections to regional trails and destinations are also a high priority.** The most significant barrier to using trails is the lack of local connections to existing regional trail facilities.Over half of respondents identifying this as a personal challenge.

   How this finding was used in the Plan: *A greater focus was placed on developing local connections to regional trails that are comfortable for all users (Chapter 4).*

4. Additional trail and bikeway amenities are highly desired. In an open-ended question at tabling events at the Cedar Rapids Farmers' Market, the top wish on the "wish list" was trail amenities. When online survey respondents were asked to rank their most desired amenities, they were (in prioritized order: a) water/rest stations, b) green infrastructure (e.g., bioswales, rain gardens, small parks), c) trailhead parking lots, d) wayfinding kiosks/signs, and e) online maps/apps.

   How this finding was used in the Plan: *Recommendations regarding these five amenities are included in the Goals and Strategies section of the Plan (Strategy 4 in Chapter 3).*

FIGURE 2.2 Cedar Rapids farmers market attendees shared wish list ideas with the project team.

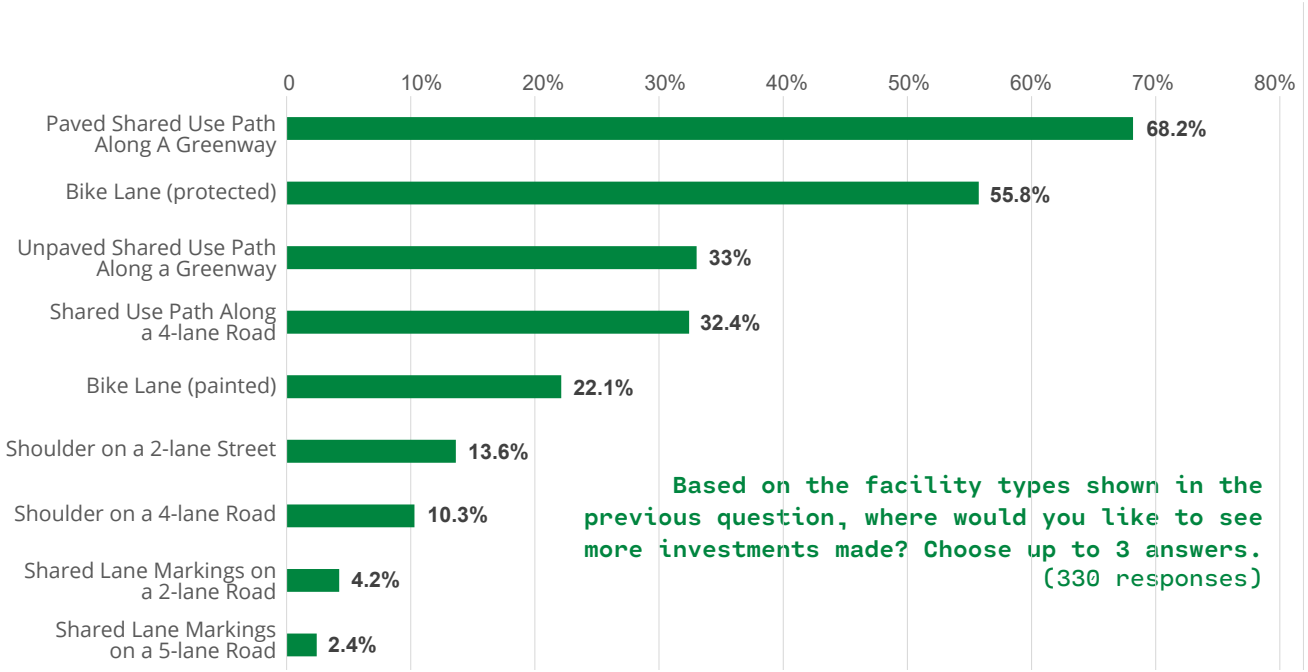


FIGURE 2.3 Top facility types where respondents preferred to see more investment.

Image Credit: Ken Barker

GOALS & STRATEGIES

03

Community engagement findings are the basis for all goal and strategy recommendations, as shown in Figure 3.1. Over 300 respondents answered the following question, "How do you rate the following trail or bikeway conditions in Cedar Rapids and Linn County?" Possible answers were given on a five-point scale including excellent, good, okay, not good, or bad. Wherever 50% or less of respondents rated trail or bikeway conditions as excellent or good, a strategy was created to improve the condition. One additional condition was identified by the Steering Committee as needing attention, "smoothness (i.e., pavement quality) of the trail and bikeway network," as a higher preference than a potential pavement marking maintenance strategy. This additional strategy is also highlighted in Figure 3.1. An additional strategy to "identify resources necessary for trails and bikeways use, expansion, and maintenance" was also included to support needs identified by the public.

The intent of the goals, strategies, and actions is to provide a roadmap to support the Plan vision of:

"In the future, the trails and bikeways system will be a connected, expanded, and safer network for people of all ages and abilities throughout Cedar Rapids and Linn County."

Each action step identifies a lead and a recommended timeframe for implementation. The lead represents the organization or department that will lead implementation but may not encompass all organizations or departments to be involved in implementation. The timeframes assigned are estimates and are assumed to be flexible in response to future projects or changing circumstances. The table on the following page outlines all goals, strategies, and actions. Following this table, each goal, strategy, and action is described in detail.

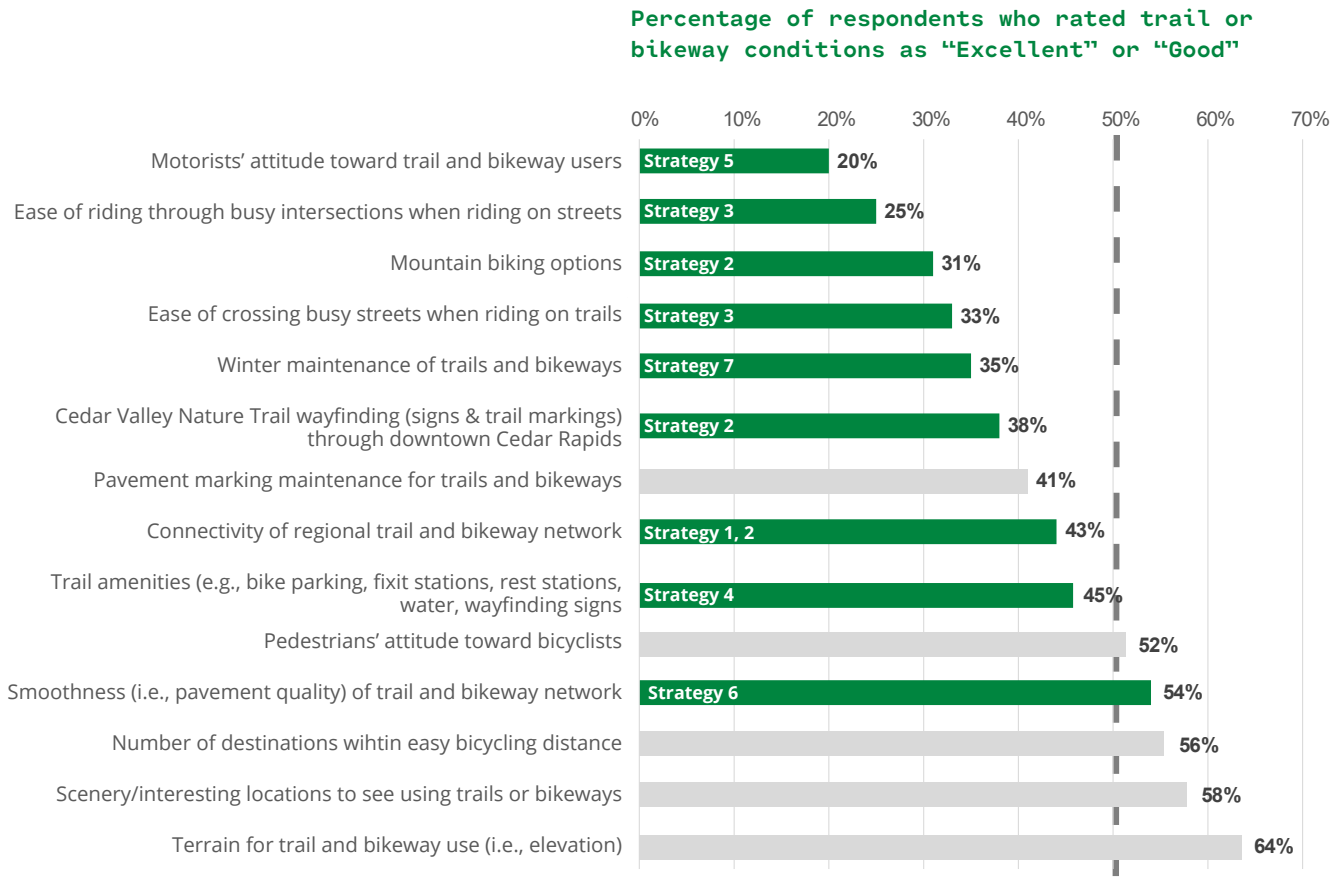


FIGURE 3.1 Percentage of respondents who rated trail or bikeway conditions as "Excellent" or "Good." Conditions shown in green are addressed in Chapter 3.

GOAL A: EXPAND THE EXTENT AND USE OF THE TRAIL AND BIKEWAY NETWORK		TIMEFRAME	LEAD	SUPPORT
Strategy 1 Focus on facility types that provide greater separation, comfort, and safety	**Action 1.1** Develop supplementary bicycle facility type guidance	4–5 years	City: Public Works	
	Action 1.2 Adopt FHWA's Bikeway Selection Guide as the reference used to guide the outcome of bikeway facility decisions	Within 1 year	City: Public Works County: Linn County Conservation	
	Action 1.3 Incorporate facility type guidance and outcomes into the Project Development and Management Manual (PDMM), Statewide Urban Design and Specifications (SUDAS) Manual, and/or City Code	4–5 years	City: Public Works	
Strategy 2 Develop the regional and local trail and bikeway network	**Action 2.1** Designate and define regional and local bicycle facilities for funding, maintenance, and design purposes	Within 1 year	Corridor MPO	
	Action 2.2 Create a process for designating the names of trails	2–3 years	Corridor MPO	
	Action 2.3 Double the mileage of mountain biking trails	Beyond 5 years	LAMBA	City: Parks and Recreation County: Linn County Conservation
	Action 2.4 Update EnvisionCR to incorporate review and evaluation of trail and bikeway connections in the planning guidelines	Within 1 year	City: Community Development	
	Action 2.5 Explore amendments to Chapter 32 of the Cedar Rapids Municipal Code to require trail construction at the time of development	Within 1 year	City: Community Development	
	Action 2.6 Make trail system connections between City facilities/trail systems, County park and recreation areas, and smaller communities as possible	Beyond 5 years	City: Public Works County: Linn County Conservation	
	Action 2.7 Expand trail system connections to all adjacent counties	Beyond 5 years	County: Linn County Conservation	
	Action 2.8 Evaluate implementation of the City's Complete Streets Policy with a specific focus on trail and bikeway facilities	2–3 years	City: Community Development	
Strategy 3 Make it easier to safely cross busy streets	**Action 3.1** Complete a systemic, proactive bicyclist and pedestrian crash analysis to determine high-risk locations	2–3 years	City: Public Works	
	Action 3.2 Amend the Project Development and Management Manual to identify intersection safety countermeasures along projects that include trails or bikeways	Within 1 year	City: Public Works	

GOAL A: EXPAND THE EXTENT AND USE OF THE TRAIL AND BIKEWAY NETWORK		TIMEFRAME	LEAD	SUPPORT
Strategy 4 Improve amenities	**Action 4.1** Analyze existing trailhead parking lots and identify gaps to maintain trailhead parking lots at minimum 5-mile intervals along the regional network	4–5 years	City: Public Works	City: Community Development County: Linn County Conservation
	Action 4.2 Analyze existing water and toilet facilities and identify gaps to maintain water and toilet facilities at minimum 5-mile intervals along the regional network	Within 1 year	City: Public Works County: Linn County Conservation	City: Community Development; Parks and Recreation County: Linn County Conservation
	Action 4.3 Develop a policy for providing water and toilet facilities year-round	4–5 years	City: Public Works	County: Linn County Conservation
	Action 4.4 Identify opportunities to add green infrastructure to the trail and bikeway system and amend the Project Development and Management Manual to incorporate green infrastructure along trails and bikeways	2–3 years	City: Public Works	City: Parks and Recreation County: Linn County Conservation
	Action 4.5 Analyze existing arts and related attractions and identify gaps to maintain arts and related attractions at minimum 5-mile intervals along the regional trail system	Within 1 year	Corridor MPO	City: Community Development
	Action 4.6 Update bike parking standards contained within Chapter 32 of the Cedar Rapids Municipal Code	2–3 years	City: Community Development	
	Action 4.7 Consider development of a program to help fund installation of bike parking	4–5 years	City: Public Works	
	Action 4.8 Pilot installation of a public bike locker	4–5 years	City: Community Development	City: Public Works
Strategy 5 Improve the publics' attitude toward bikeway users	**Action 5.1** Initiate an annual trail loop ride with more than 500 riders	Beyond 5 years	Corridor MPO	City: Community Development; Public Works County: Linn County Conservation LCTA, LAMBA, HBA
	Action 5.2 Enhance trail and bikeway communications to educate the public about the vision and purpose of the trail and bikeway system	Within 1 year	City: Community Development	City: Public Works; Communications
	Action 5.3 Identify one entity to host trail and bikeway count data	Within 1 year	Corridor MPO	City: Public Works; Community Development County: Linn County Conservation LCTA

GOAL B: MAINTAIN THE EXISTING TRAIL AND BIKEWAY NETWORK		TIMEFRAME	LEAD	SUPPORT
Strategy 6 Improve smoothness of pavement surfaces	**Action 6.1** Initiate and maintain a trail pavement preservation and inspection program	2–3 years	Corridor MPO	
	Action 6.2 Incorporate pavement maintenance techniques into capital budget planning	2–3 years	City: Parks and Recreation	
Strategy 7 Improve winter maintenance	**Action 7.1** Develop performance measures and priorities for winter maintenance	2–3 years	City: Parks and Recreation County: Linn County Conservation	City: Public Works
	Action 7.2 Expand resources to improve winter maintenance	4–5 years	City: Parks and Recreation; Public Works County: Linn County Conservation	
	Action 7.3 Develop supplementary design guidance to support winter maintenance	4–5 years	City: Public Works	
Strategy 8 Identify resources necessary for trails and bikeways use, expansion, and maintenance	**Action 8.1** Evaluate and maintain 5-yr and 10-yr capital budgets and 5-yr and 10-yr operations budgets for trails and bikeways use, expansion, and maintenance	2–3 years	City: Public Works; Parks & Recreation	County: Linn County Conservation
	Action 8.2 Identify, coordinate, and pursue supplemental funding options	2–3 years	City: Public Works	City: City Manager's Office County: Linn County Conservation
	Action 8.3 Provide adequate staffing for trails and bikeways use, expansion, and maintenance	2–3 years	City: Public Works	County: Linn County Conservation
	Action 8.4 Define the purpose, goals, responsibilities, and duties of the BikeCR Committee.	Within 1 year	City: Public Works; Community Development	City: Public Works County: Linn County Conservation
	Action 8.5 Partner with advocacy groups, agencies, schools, and neighboring communities to promote, educate, and provide opportunities to those who depend on cycling or are under-represented	Ongoing	City: Community Development County: Linn County Conservation	

Throughout this chapter, and throughout the Cedar Rapids and Linn County Trails and Bikeways Plan, the terms "**walking**" and "**pedestrian**" are used inclusively of people of all abilities including those using assistive devices. While trails are a subset of bikeways, this Plan often refers to "trails and bikeways," acknowledging the added importance of trails to people who walk and use assistive devices.

Goal A: Expand the extent and use of the trail and bikeway network

The first goal of the Plan covers a wide variety of issues that the public has identified. While the trail and bikeway system has undergone extensive expansion over the past two decades, less than half of survey respondents think the connectivity of the regional trail and bikeway network is "excellent" or "good," as identified in Figure 3.1. Similarly, crossing busy streets is only rated favorably by one-quarter to one-third of respondents. Even fewer respondents (one out of five) believe that motorists' attitudes toward trail and bikeway users are positive. This suggests that most Cedar Rapids and Linn County residents may not have direct experience using the trail and bikeway network.[1]

Results such as these suggest that continued expansion and increased use of the trail and bikeway network should be an overarching goal of the Plan. Research across 90 American cities has revealed that more extensive trail and bikeway networks lead to more bicycling.[2]

Strategy 1: Focus on facility types that provide greater separation, comfort, and safety

Focusing on facility types that provide greater separation, comfort, and safety helps to address survey respondents' collective viewpoint that they prefer separation from motorists when using trails or bikeways. This desire for separation is also related to their desire to expand the regional trail and bikeway network. Actions to achieve this strategy include developing supplementary bicycle facility type guidance (1.1), adopting FHWA's Bikeway Selection Guide as the reference to guide the outcome of bikeway facility decisions (1.2), and incorporating facility type guidance and outcomes into the Project Development and Management Manual (PDMM), Statewide Urban Design and Specifications (SUDAS) Manual, and/or City Code (1.3).

Action 1.1: *Develop supplementary bicycle facility type guidance*

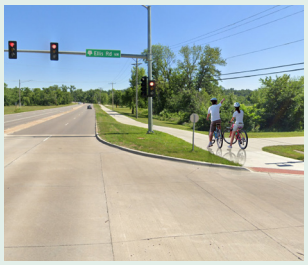
During the community engagement process, participants were asked to share their preferences for trail and bikeway facility types. Respondents overwhelmingly preferred separation that included vegetation and/or curbs along trails or separated bike lanes. They were less comfortable with unseparated facilities, such as painted lines for bike lanes/shoulders and bicycle symbols within shared lanes, as shown in Figure 3.2. Similarly, when respondents were asked to prioritize future investments, they overwhelmingly chose facility types that included separation, as shown in Figure A.15 in Appendix A

1 Goddard, Tara Beth, "Drivers' Attitudes and Behaviors Toward Bicyclists: Intermodal Interactions and Implications for Road Safety" (2017). Dissertations and Theses. Paper 3645. https://doi.org/10.15760/etd.5529

2 Buehler, R., Pucher, J. Cycling to work in 90 large American cities: new evidence on the role of bike paths and lanes. Transportation 39, 409–432 (2012). https://doi.org/10.1007/s11116-011-9355-8

SEPARATED

Paved shared use path along a greenway (98%)

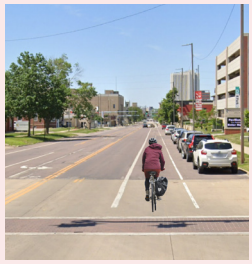


Shared use path along a 4-lane road (90%)

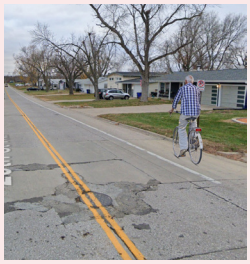
Protected bike lane (87%)

Unpaved shared use path along a greenway (67%)

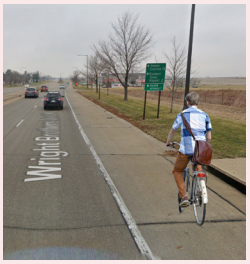
UNSEPARATED



Painted bike lane (40%)

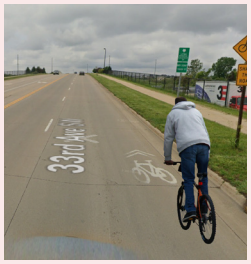


Shoulder on a 2-lane street (21%)



Shoulder on a 4-lane road (14%)

Shared lane markings on a 2-lane road (12%)



Shared lane markings on a 5-lane road (9%)

FIGURE 3.2 Respondents during the community engagement process preferred trails and bikeways with greater separation from motorists. Percentages show the proportion of respondents who said they would be "Very Comfortable" or "Comfortable" on each facility.

Facility type guidance for bikeways has rapidly evolved over the past 10 to 20 years. In 2012, when the City of Cedar Rapids last adopted a Trails and Bikeways Plan, there were seven facility types:

1. Bike lane (with parking)
2. Bike lane (no parking)
3. Sharrow (with parking)
4. Sharrow (no parking)
5. Paved shoulder
6. Multi-use path
7. Separated trail or greenway

Since that time, protected bike lanes, buffered bike lanes, super sharrows, and bike boulevards have been introduced on some streets in Cedar Rapids, along with bike lanes that include green pavement markings in high-conflict areas. The design of these new facility types is changing as local transportation officials gain experience with their use.

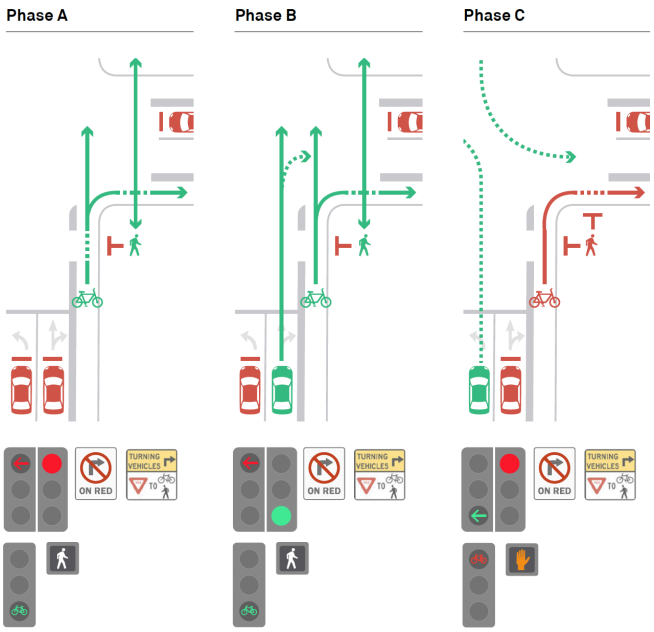


FIGURE 3.3 An example of supplementary information that may be developed by the City of Cedar Rapids. This example shows a Leading Bike Interval (LBI) and Lagging Left Turn. Credit: NACTO Don't Give Up at the Intersection.

Cedar Rapids has adopted Iowa's Statewide Urban Design and Specifications (SUDAS) manual, which contains facility type guidance on trails and bikeways. The City has supplemented SUDAS with specifications for painted bike lane pavement markings[3], which provide a greater level of detail for how this facility type should be implemented in Cedar Rapids.

This Plan recommends developing additional supplementary facility type guidance for the bicycle facilities section of SUDAS. The SUDAS manual was recently updated to become more bicycle friendly. The City should thoroughly review the latest edition of the manual for facility types that need more detail. Other design manuals that cover bicycle facilities in greater detail than the SUDAS manual may serve as an inspiration for this action item.

For example:

- **Separated bike lanes** are divided into several sub-categories in the *Minneapolis Street Design Guide*[4], including delineator-separated, planter-separated, in-street curb-separated, and side-walk-level separated.
- The *Minneapolis Street Design Guide* also includes guidelines for **bike racks** and interactions between **bikeways and bus stops.**
- The 2024 AASHTO (American Association of State Highway and Transportation Officials) *Guide for the Development of Bicycle Facilities* has a 25-page chapter on the design of **bike boulevards**, which are located on lower traffic, local streets designed to prioritize bicycle travel. This guide also has a section on **surface considerations for shared use paths** (typically referred to in this Plan as trails).
- The National Association of City Transportation Officials' (NACTO) publication *Don't Give Up at the Intersection*[5] includes examples of **bicycle signal phasing**, as shown in Figure 3.3.
- The US Access Board's *Outdoor Developed Areas: A Summary of Accessibility Standards for Federal Outdoor Developed Areas*[6] includes guidelines for how natural surface trails like the Sac & Fox Trail can be designed and maintained to be **accessible for people with disabilities**.

Supplementary facility guidance will allow the City to develop more comfortable facility types. For example, many people are not currently confident riding in the street. Yet there are many local, unmarked streets that are suitable for bicycling. Supplementary facility guidance for bike boulevards can make local streets more welcoming to new riders by providing designs for crossing busy streets, as shown in Figure 3.4.

3 See 8020.994 Pavement Markings Bike Lanes *https://www.cedar-rapids.org/local_government/departments_g_-_v/public_works/supplemental_specifications.php*

4 *https://sdg.minneapolismn.gov/*

5 *https://nacto.org/publication/dont-give-up-at-the-intersection/*

6 *https://www.access-board.gov/files/aba/guides/outdoor-guide.pdf*

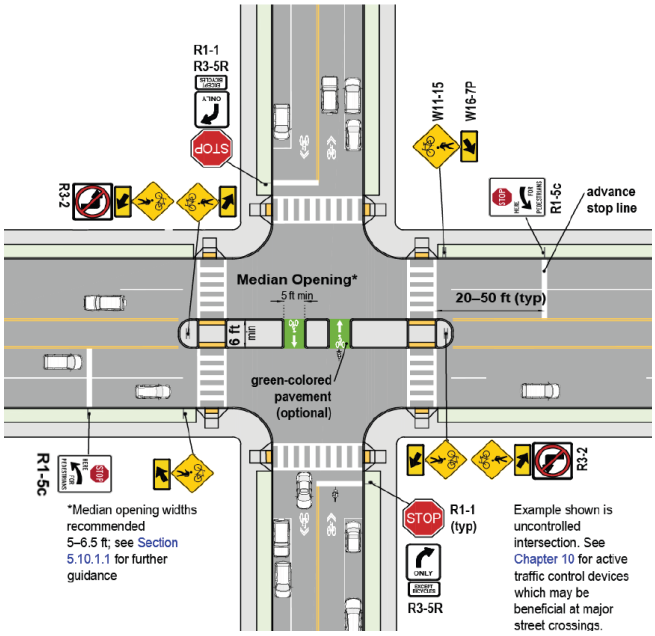


FIGURE 3.4 Supplementary guidance for bike boulevards can illustrate how local crossings of busy streets and be made more comfortable for bicycling. Credit: AASHTO Bike Guide

Another example is that some busy streets that are uncomfortable for bicycling have many driveways. Installing separated bike lanes can create a potential crash risk due to the conflict between through bicyclists and turning motor vehicles at these driveways. This conflict can be mitigated through good design that improves visibility and expected behaviors, as shown in Figure 3.5.

FIGURE 3.5 To mitigate conflicts, the City may develop supplementary design guidelines for side paths along streets with frequent driveways.

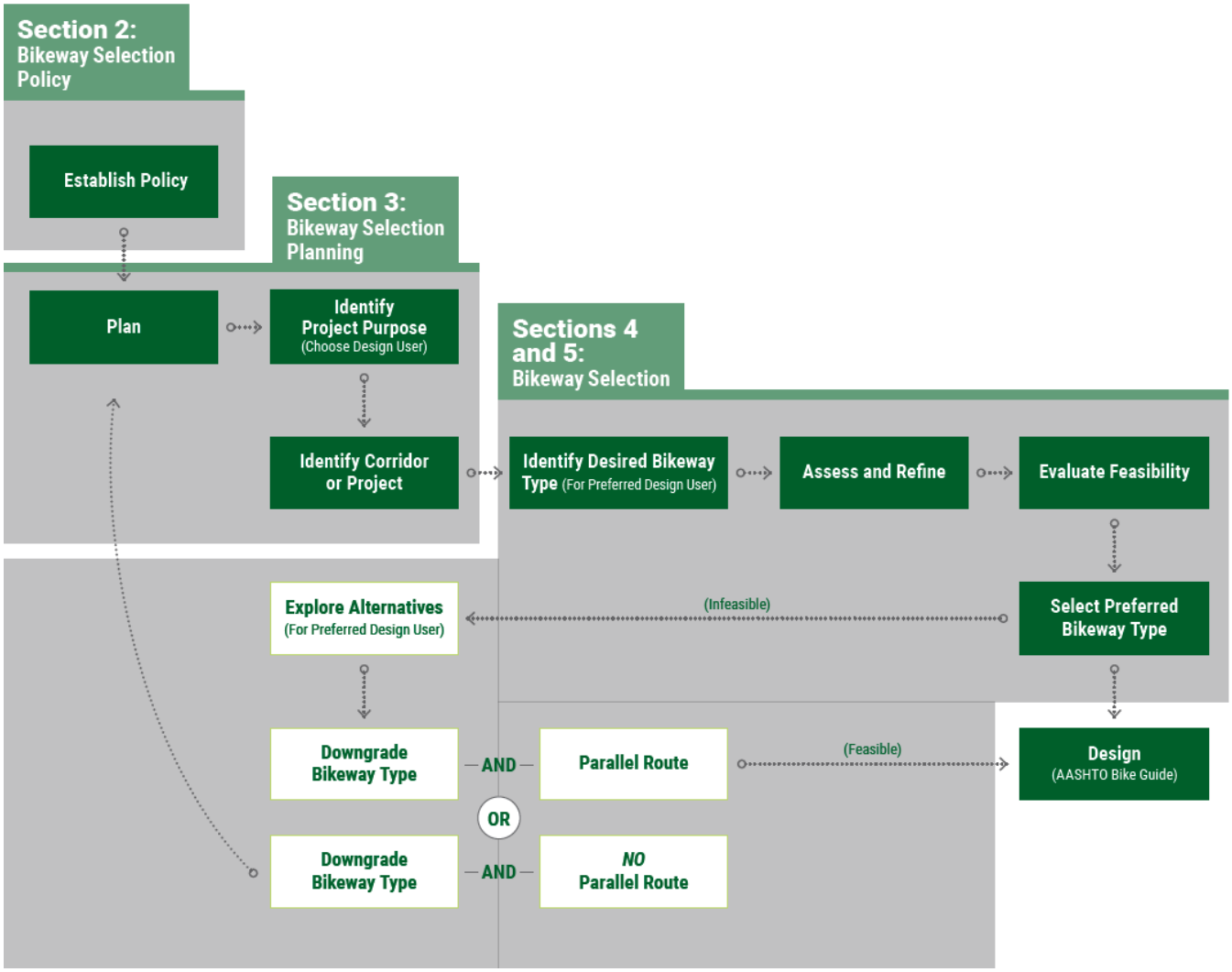
Action 1.2: Adopt FHWA's Bikeway Selection Guide as the reference used to guide the outcome of bikeway facility decisions

Designating bicycle facility types for the future network assists decision makers with design. Since the public largely prefers separating motorists and trail and bikeway users, that preference should be integrated into facility type designations. As shown in Figure 3.2, various facility types exist within separated and unseparated categories. Many factors influence the final bicycle facility type, including available right-of-way, street width, traffic volumes, street parking, safety considerations, available budget, and stakeholder values. Deciding on a specific bicycle facility type depends upon a design and community engagement process that fully explores these factors.

This Plan designates desired bicycle facility types into two overarching categories: separated and unseparated, as discussed in Chapter 4. Designations are informed by motor vehicle traffic volumes and speeds. Wherever volumes are anticipated to be greater than 6,500 motor vehicles per day, the bicycle facility is ideally separated, and wherever it is less than 6,500, the bicycle facility may be unseparated. Similarly, the bicycle facility is ideally separated wherever operating speeds are anticipated to be greater than 30 mph. The bicycle facility may be unseparated wherever it is less than or equal to 30 mph.

This Plan recommends utilizing FHWA's Bikeway Selection Guide to guide the outcome of bicycle facility decisions. Figure 3.6 illustrates the decision-making process described in that guidebook. There will be instances where the ideal bicycle facility type is deemed infeasible, and alternatives and parallel routes should be explored in those cases. This process should be documented in any project development process by the City or County.

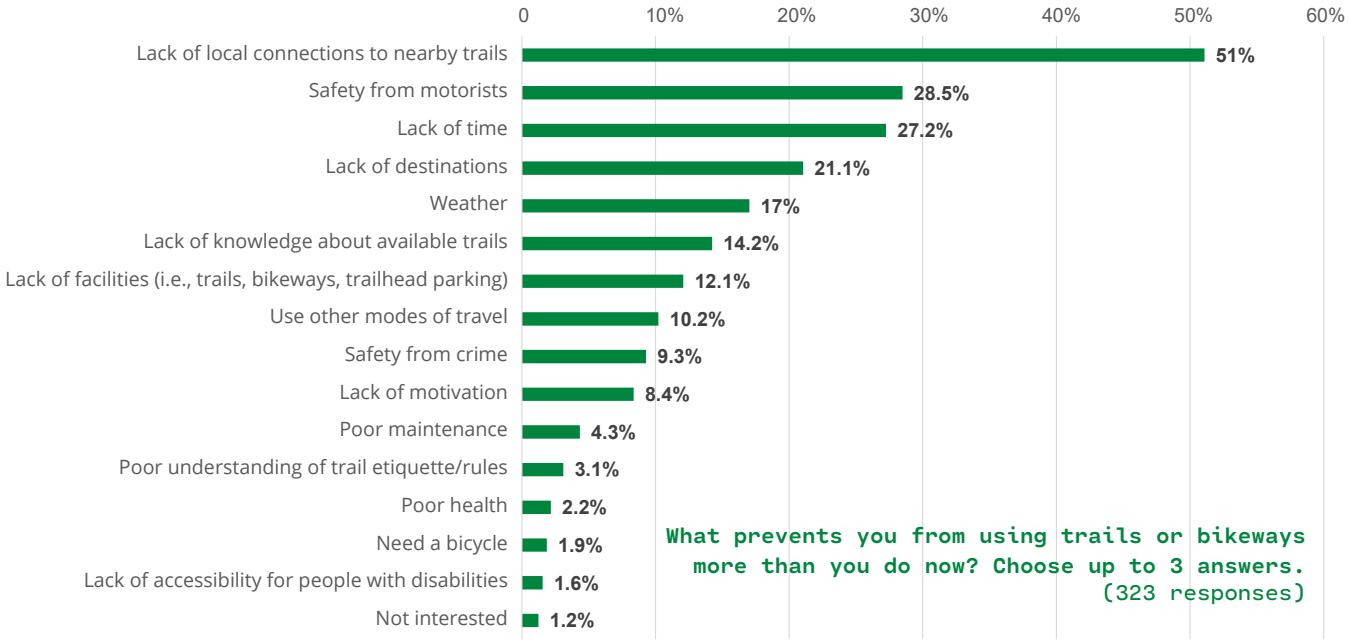
FIGURE 3.6 The process for determining bicycle facility types. Credit: FHWA Bikeway Selection Guide



Action 1.3: Incorporate facility type guidance and outcomes into the Project Development and Management Manual (PDMM), Statewide Urban Design and Specifications (SUDAS) Manual, and/or City Code

It will be important to codify changes to encourage and mandate the use of bikeway guidance and outcomes. The City requires using the PDMM, SUDAS, and City Code as part of the public and private project development process. Including guidance in these documents will improve designs by reducing errors, accelerating the review process, and providing clear direction on facility type and location. This step is important to the overall comfort and quality of the trail and bikeway system and to ensure users of all abilities are reasonably accommodated.

FIGURE 3.7 The most significant deterrent to more bicycling and walking is a lack of local connections to nearby trails.



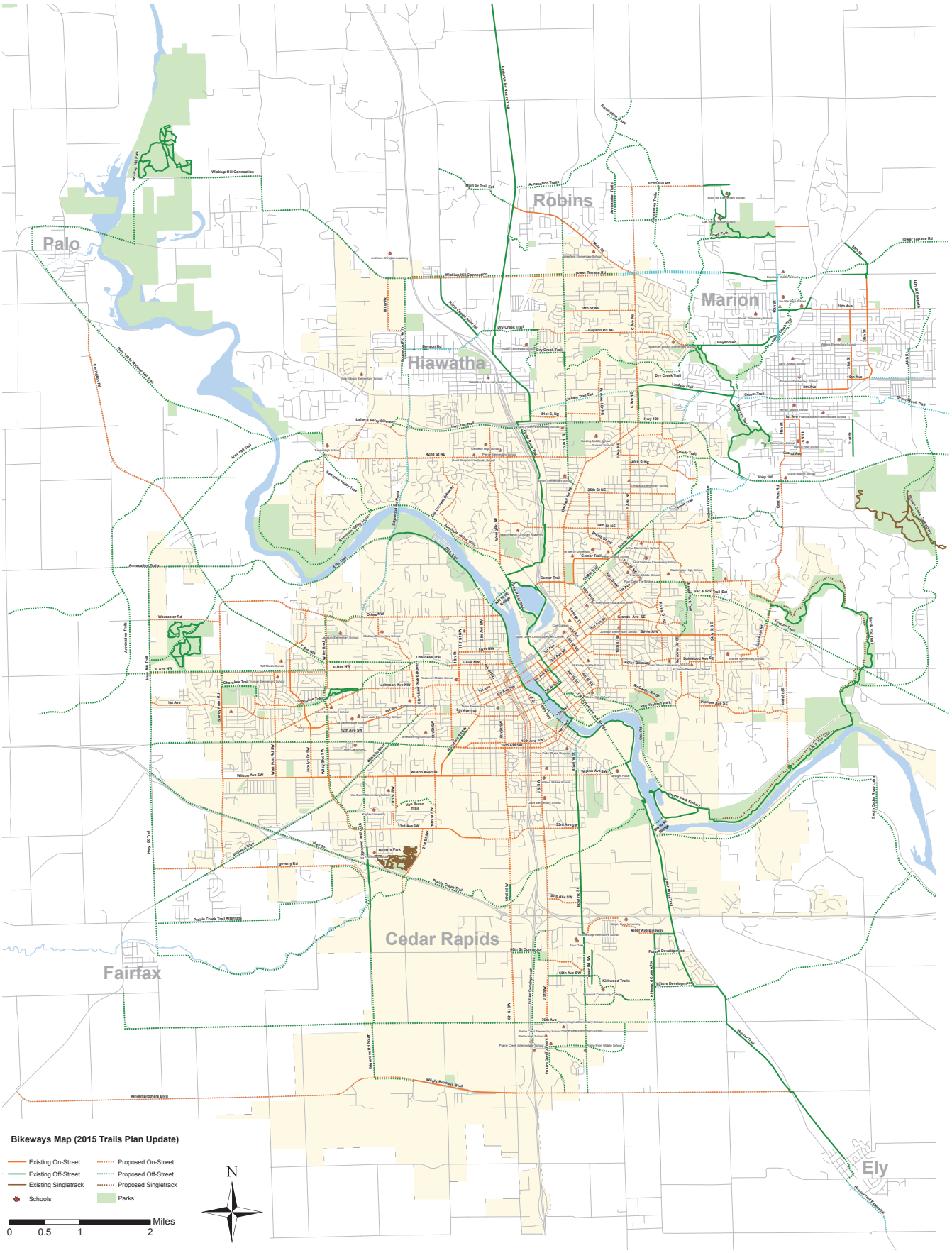
Strategy 2: Develop the regional and local trail and bikeway network

Developing the regional and local trail and bikeway network addresses survey respondents' collective viewpoint that the extent of the regional trail and bikeway network and mountain biking options need to be expanded. Additionally, survey respondents reported the most significant barrier to using trails or bikeways was the lack of local connections to nearby trails, as shown in Figure 3.7. Actions to achieve this strategy include designating and defining regional and local bicycle facilities for funding, maintenance, and design purposes (2.1); creating a process for designating the names of trails (2.2); doubling the mileage of mountain biking trails (2.3); updating EnvisionCR to incorporate review and evaluation of trail and bikeway connections in the planning guidelines (2.4); exploring amendments to Chapter 32 of the Cedar Rapids Municipal Code to require trail construction at the time of development (2.5); making trail system connections between City facilities/trail systems, County park and recreation areas, and smaller communities as possible (2.6); expanding trail system connections to all adjacent counties (2.7) ; and evaluating implementation of the City's Complete Streets Policy with a specific focus on trail and bikeway facilities (2.8).

Action 2.1: Designate and define regional and local bicycle facilities for funding, maintenance, and design purposes

A regional trail and bikeway network serves as the arterial system for bicycling, like how the interstate and state highway systems function for driving. Local trails and bikeways can then feed into the regional network, similar to how county and city roads function for driving. While the Corridor Metropolitan Planning Organization (MPO) has not designated any trails or bikeways to be a part of the regional network, as shown in Figure 3.8, facilities such as the Cedar Valley Nature Trail and Grant Wood Trail serve as "regional" facilities.

FIGURE 3.8 The 2015 Cedar Rapids Trails and Bikeways Update did not designate regional and local trails and bikeways.



This Plan recommends the Corridor MPO begin designating regional and local trails and bikeways for the following purposes:

- Setting priorities for federal, state, and local funding
- Determining the order of operations for maintenance
- Guiding minimum design specifications (e.g., requiring wider trail widths on regional facilities)

One example of a regional network designated by a metropolitan planning organization in the Midwest is the Twin Cities metro area in Minnesota. This seven-county metro area has a regional trail and bikeway network called the Regional Bicycle Transportation Network (RBTN). Initially created in 2014 through the Twin Cities Regional Bicycle System Study[7], the purpose of the RBTN is to serve as an arterial system of trails and other bikeways. Federal funding allocated by the regional Metropolitan Planning Organization for trails and bikeways is prioritized for corridors on the Twin Cities RBTN.

The Twin Cities Regional Bicycle System Study reviewed regional bikeway corridor spacing in peer regions. It found that spacing from the center of the primary business district generally increased as the distance from the center increased (Figure 3.9).

Given that the Cedar Rapids metropolitan area is smaller in geography than the four metropolitan areas listed in Figure 3.9, this Plan recommends adjusting regional trail and bikeway spacing for a smaller metro area. Within the city limits of Cedar Rapids and adjacent municipalities such as Hiawatha, Marion, and Robins, where density is higher, 2.5-mile spacing for regional trails and bikeways is recommended. This should be increased to a five-mile spacing in the far southwest and southeast quadrants of Linn County and further increased to a 10-mile spacing in the northern areas of the county. Recommendations within Chapters 4 reflect this spacing.

Local facilities are still an important consideration for the public (Figure 3.7). While they may not carry high volumes of bicyclist and pedestrian traffic compared to regional facilities, they remove barriers to reaching them, facilitating increased traffic on the regional network. This Plan recommends local trail and bikeway facilities approximately every half mile in denser areas of Cedar Rapids and up to every mile in less dense neighborhoods. However, sidewalks connecting pedestrians to trails will be located more frequently, according to the Cedar Rapids Pedestrian Master Plan.

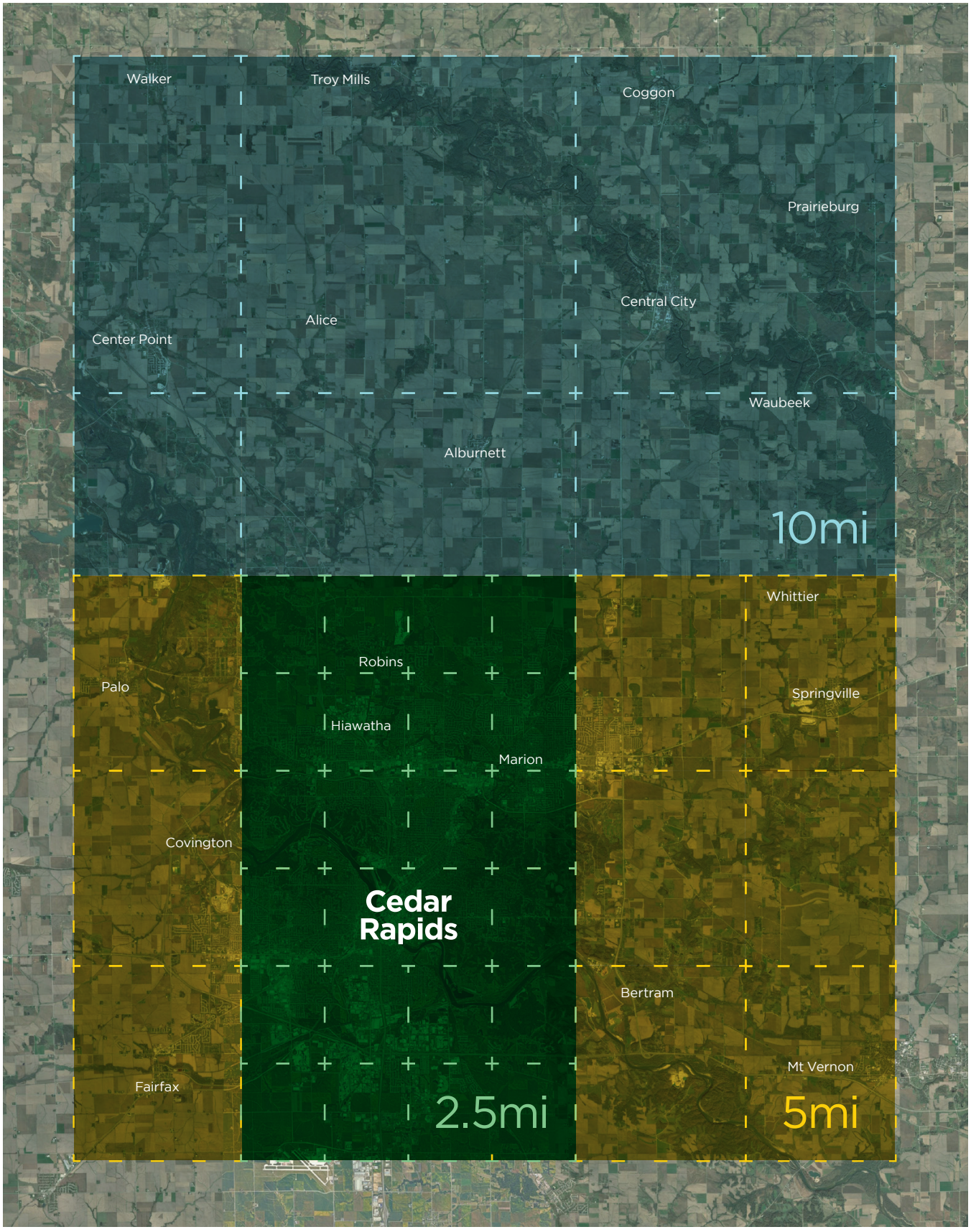
Figure 3.10 illustrates these recommended spacings of regional and local trail and bikeway facilities in Cedar Rapids and Linn County.

FIGURE 3.9 Regional bikeway spacing in four major metropolitan areas. Credit: Twin Cities Regional Bicycle System Study

METROPOLITAN AREA	5 MILES FROM PRIMARY BUSINESS DISTRICT	10 MILES FROM PRIMARY BUSINESS DISTRICT	15 MILES FROM PRIMARY BUSINESS DISTRICT
Atlanta	3.4 mi	3.1 mi	6.6 mi
Denver	4.2 mi	4.7 mi	5.0 mi
Nashville	2.6 mi	4.3 mi	3.9 mi
Twin Cities	1.1 mi	1.7 mi	2.7 mi
Average	2.8 mi	3.5 mi	4.6 mi

7 *https://metrocouncil.org/Transportation/System/Bicycle-and-Pedestrian/Studies/Regional-Bicycle-System-Study-Final-Report.aspx*

FIGURE 3.10 Recommended regional and local trail and network spacing in Cedar Rapids and Linn County. Note that these lines are conceptual only and do not reflect the exact locations of trails and bikeways. Refer to Chapter 4 for location recommendations.



Action 2.2: Create a process for designating the names of trails

Trails are a key facility type for bicycling and walking. Often, trails run along corridors that are separate from street alignments. Most independently aligned trails in Cedar Rapids and Linn County already have names. However, there are instances where trails have remained unnamed (e.g., the flood wall trail along the Cedar River near downtown) and other circumstances where trail termini are unclear (e.g., the southern termini of the Ellis Trail along the west side of the Cedar River).

Having clear names for independently aligned trails raises public awareness, generates excitement about the developing trail network, aids trail users with navigation, and assists police, fire, and ambulance responders with trail emergencies and crime reports. Some trails already include mile marker signs with trail names and emergency coordinate information using the United States National Grid[8] (Figure 3.11).

This Plan recommends creating a process to name trails primarily running along corridors that are separate from street alignments. Reviewing the process for naming streets and creating a similar but unique process for trails may be beneficial.

Some communities hold trail naming contests to designate facilities, which could become an optional part of the process. For example, the Sweetwater Trails Association in Rock Springs, Wyoming, held a contest in 2021 to name a trail adjacent to a community college. The resulting name, the Mustang Loop, was suggested by a resident who then won a prize.[9]

FIGURE 3.11 A mile marker sign on the Cedar Valley Nature Trail also includes emergency coordinate information.

FIGURE 3.12 The intersection of the Cedar Valley Nature Trail with 2nd Avenue SE does not have a street name sign or a trail name sign. Credit: Google

8 *https://www.fgdc.gov/usng*

9 *https://www.sweetwaternow.com/western-announces-winner-of-bike-trail-name-contest/*

FIGURE 3.13 This intersection in Madison, WI has a street name sign for Walter Street and a trail name sign for the Capital City Trail mounted on one signpost on the left side. Credit: Google

This process should also consider how independently aligned trails can be signed at intersections, whether between trails and streets or trails with other trails. For example, Cedar Valley Nature Trail intersections through Downtown do not currently have guide signs, (Figure 3.12). The City of Madison, Wisconsin, posts name signs at all trail and street intersections (Figure 3.13). Several cues are given to travelers in Madison that this is the intersection of a street with an independently aligned trail:

- A symbol of a pedestrian and bicyclist is included on the trail name sign
- The trail name sign contains the word "PATH" in capital letters
- The street name sign is standard for other street with street intersections
- A supplementary "Motor Driven Vehicles Prohibited" sign is included, with white letters on a red background

Due to the Corridor MPO having the Corridor Bicycle and Pedestrian Roundtable that facilitates regional trail topics, the MPO has been designated as the lead for this action item. Corridor MPO staff will pursue implementing an annual process that facilitates all member communities within its planning boundaries to coordinate on the upcoming years trail development. Items during these meeting will include trail naming, trail connections, and much more.

Action 2.3: Double the mileage of mountain biking trails

Mountain biking trails give people an opportunity to have an immersive experience in nature, experience freedom and adventure, and improve their physical and mental health. Mountain biking is similar in popularity to canoeing, skateboarding, and snowboarding and more popular than archery, cross-country skiing, and indoor climbing.[10] Mountain bike trails can also be used for walking, hiking, and running. The Cedar Rapids area already has mountain biking options at seven local parks:

- Creek Confluence in Marion, 1 mile
- Beverly Park in Cedar Rapids, 4.6 miles
- BMX Track (USA sanctioned) in Cedar Rapids, 0.2 mile
- Boyson Park in Marion, 0.4 mile
- Mount Trashmore Flow Trail in Cedar Rapids, 0.8 mile
- Sac and Fox Trail in Cedar Rapids, 7.2 miles
- Wanatee Park in Marion, 4.8 miles

In 2023, Portland, Oregon, adopted an Off-Road Cycling Master Plan[11], which included a comparison of mountain bike trail miles per 1,000 residents in communities known for mountain biking. These ranged from 0.2 miles per 1,000 residents in Richmond, Virginia, to 1.6 miles per 1,000 residents in Boise-Eagle, Idaho (Figure 3.14). Portland, Oregon's rate is 0.02 miles per 1,000 residents, while Cedar Rapids and Marion have 0.1 miles of mountain bike trails per 1,000 residents (five times the rate of Portland). This suggests Cedar Rapids is already halfway toward becoming a mountain biking-friendly community.

10 *https://outdoorindustry.org/wp-content/uploads/2015/03/2021-Outdoor-Participation-Trends-Report.pdf*

11 *https://www.portland.gov/bps/planning/off-road-cycling*

FIGURE 3.14 According to the Portland Off-Road Cycling Master Plan, mountain bike friendly communities are shown in green.

COMMUNITY	POPULATION	OFF-ROAD CYCLING TRAIL MILEAGE	MILEAGE PER 1,000 RESIDENTS
Portland, OR	640,000	13.5	0.02
Cedar Rapids/Marion	178,000	18.4	0.10
Richmond, VA	223,000	45	0.20
Louisville, KY	253,000	100	0.40
Tuscon, AZ	526,000	300	0.57
Chatanooga, TN	173,000	100	0.58
Boise-Eagle, ID	241,000	390	1.62

Mountain biking can take several forms. Often, options include densely packed, interconnected trail loops within a park, such as Beverly and Wanatee Parks. Other times, linear singletrack paths run along a greenway, such as along the Sac & Fox Trail (Figure 3.15), which is also popular in the winter with fat tire bike riders. The Linn Area Mountain Bike Association (LAMBA) is a local nonprofit organization that advocates for and volunteers to create mountain biking options. Volunteers maintain trails in public parks by mowing, trimming, and winter grooming mountain biking trails. LAMBA's top priorities over the coming years include the following:

- Adding mountain bike trails at Pinicon Ridge County Park in Central City
- Formalizing and expanding mountain bike trails at Seminole Valley and Van Vechten Parks in Cedar Rapids
- Adding a portable toilet at existing mountain bike trails in Beverly Park

Linn County and Cedar Rapids have the potential to take advantage of mountain bike tourists with these expansions. Mountain bike trail systems benefit a community economically when their concentration is high enough to attract visitors to stay overnight and spend money. The existing total of mountain bike trails in Linn and Johnson Counties (including 11 miles of mountain biking trails at Sugar Bottom Recreational Area and 5 miles in Coralville) is approximately 34 miles. According to a 2015 survey by Singletracks,[12] the average daily miles ridden by mountain bike tourists is 55 miles. Mountain bike tourists take an average of two vacations per year, spend two days at their destination, and are currently traveling to Michigan, Minnesota, and Wisconsin for regional trips.

This Plan recommends that the City and County partner with LAMBA to undertake long-term planning to double mountain biking options in Cedar Rapids and Linn County from 18 miles to 36 miles to become a regional mountain biking destination.

FIGURE 3.15 A singletrack mountain bike trail running parallel to the Sac & Fox Trail near Indian Creek Nature Center.

12 *https://www.singletracks.com/mtb-trails/mountain-bike-tourism-by-the-numbers/*

Action 2.4: Update EnvisionCR to incorporate review and evaluation of trail and bikeway connections in the planning guidelines

EnvisionCR, the City's Comprehensive Plan, provides the foundation for future planning efforts. Review and evaluation of trail and bikeway connections should become part of the planning guidelines for the development of neighborhood, area, micro-area, and corridor action plans. In particular, these plans should consider local trail and bikeway connections missing from the Plan map (Figure 4.6), specification of specific facility types for identified future facilities, and opportunities to improve existing facilities. This Plan or other City plans may need to be updated to reflect the results of these additional planning efforts.

Action 2.5: Explore amendments to Chapter 32 of the Cedar Rapids Municipal Code to require trail construction at the time of development

Amendments to Chapter 32 (Zoning) of the Cedar Rapids Municipal Code should be explored to require trail and bikeway construction with new or re-development projects to expand and enhance connectivity of the trail and bikeway system.

Action 2.6: Make trail system connections between City facilities/trail systems, County park and recreation areas, and smaller communities as possible

Much of the recent trail system expansion in Linn County has been planned toward connecting County parks and recreation areas. A continued effort should include connecting these trails and parks to nearby population concentrations, including city and rural neighborhoods. It may be best to let public demand set the priority for certain additional trail segments; however, a proactive approach could be completing a "sub-area study" as regional trails are planned and designed to determine initial connections. Sub-area studies can also be helpful when development pressures are causing changes that will make a trail connection desirable.

For connecting smaller communities to the regional trail system, it is useful to identify an existing public right-of-way corridor as the likely route. Once identified, this route can be monitored for upcoming rehabilitation or enhancement projects. The appropriate bicycle accommodation can then be planned to be incorporated within those improvements. For example, if a paved county road with granular shoulders is due for pavement rehabilitation (such as an asphalt overlay), base widening and shoulder paving could be included to provide accommodation for bike lanes or even buffered bike lanes. Similarly, if a roadway is planned for reconstruction, that is an opportune time to consider and include separated accommodation such as a side path.

Action 2.7: Expand trail system connections to all adjacent counties

Chapter 4 describes the vision that connects Linn County's future trail system into a regional (Figure 4.12) and statewide network. Iowa was traversed by many railroad routes that peaked in the early 1900s, then declined over time as roadway transportation became more significant. Most of those routes were abandoned, and the rights of way reverted to adjacent parcel ownership. However, after the National Trails System Act of 1983 was passed, many corridors otherwise set for abandonment and eventual loss of the right-of-way were preserved through the concept of "railbanking". This preserves the corridor for future railroad use while allowing current use as a multi-purpose trail in the interim. Hundreds of miles of former railroad right-of-way have been preserved and much of it converted to trail use. These trails form the backbone of the Statewide Trails Vision map in the Iowa Bicycle and Pedestrian Plan (Figure 3.16).

The intent of the Statewide Trails Vision map is as an adaptable map that is informed by studies such as this plan. Rather than taking on the tedious effort of developing a statewide plan to extreme detail, it is more advantageous for the established system of Metropolitan Planning Organizations (MPOs) and Regional Planning Affiliations (RPAs) to provide detailed plans of each of their regions to inform the state map. The Iowa DOT can then coordinate between the MPOs and RPAs to ensure the system matches up between regions. The Statewide Trails Vision map then becomes a valuable tool for determining needed funding levels and priorities.

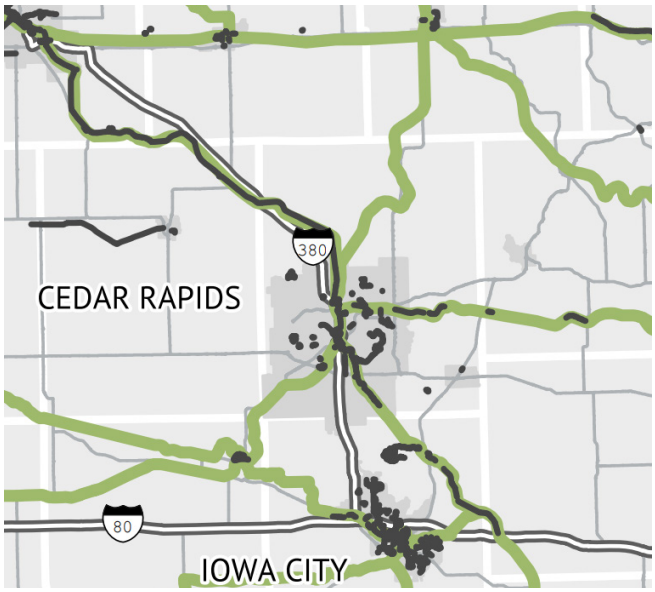


FIGURE 3.16 The statewide trails vision (green lines) shows five trails leading out of Cedar Rapids, one each to the northwest, northeast, east, southeast, and southwest. Credit: *Iowa Bicycle and Pedestrian Plan*

A review of historic railroad mapping can provide clues to potential trail corridors (Figure 3.17). Although some of these corridors were fully abandoned before the preservation efforts allowed by the National Trails Act, in many cases, the remnants of the former railroad alignment still exist, and sometimes still exist as independent parcels of the former right-of-way, though now in private ownership. In some areas, the railroad right-of-way has been reclaimed in favor of farming operations. Alternate routes around these segments are typically needed to create a continuous trail route, respectful of the land use change. Further abandonment of existing railroads should be monitored for potential acquisition as a rail-banked corridor.

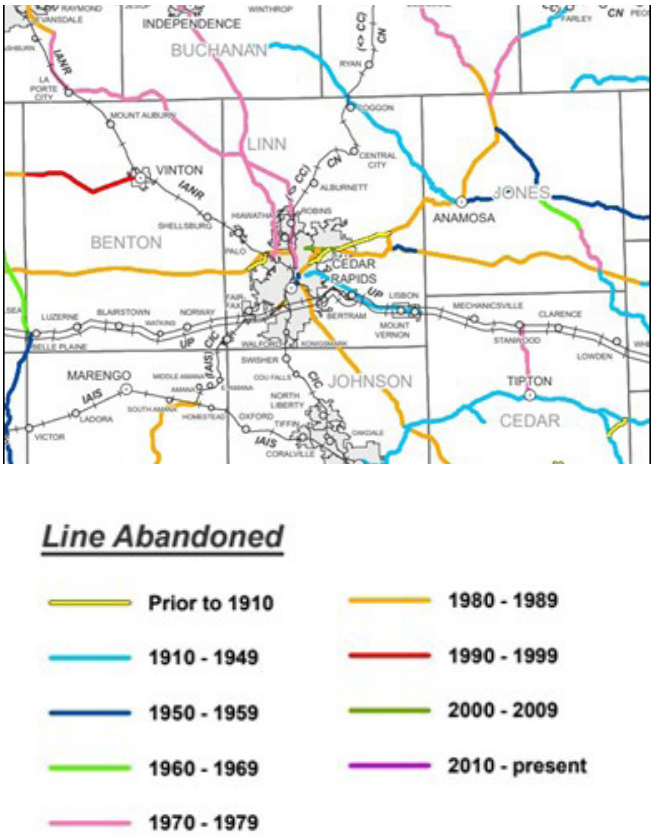


FIGURE 3.17 Abandoned railroads in Linn County and surrounding areas. Credit: *Iowa DOT Chronology of Railroad Abandonments*

Action 2.8: Evaluate implementation of the City's Complete Streets Policy with a specific focus on trail and bikeway facilities

The City's Complete Streets Policy was adopted in 2014. With over 10 years of implementation underway, the City should evaluate implementation to identify how frequently trail and bikeway facilities are being incorporated in alignment with the Policy. In the cases where trails or bikeways were not incorporated per the Policy, further analysis on the reasons why they weren't included should be completed. Based on the findings, Staff should determine if updates to the Complete Streets Policy are necessary.

Strategy 3: Make it easier to safely cross busy streets

Making it easier to cross busy streets safely addresses the survey respondents' collective viewpoint that the ease of crossing busy streets needs improvement. Out of all the trail and bikeway conditions in Cedar Rapids and Linn County, respondents rated crossing busy intersections when riding on streets as the second lowest rated condition and crossing busy streets when riding on trails as the fourth lowest rated condition (Figure 3.1). Actions to address this strategy include completing a systemic, proactive bicyclist and pedestrian crash analysis to determine high-risk locations (3.1) and amending the Project Development and Management Manual to identify intersection safety countermeasures along projects that include trails or bikeways (3.2).

Action 3.1: Complete a systemic, proactive bicyclist and pedestrian crash analysis to determine high-risk locations

Cedar Rapids currently conducts an annual review of crash data compiled by the Iowa Department of Transportation on the Iowa Crash Analysis Tool (ICAT). Data is limited to crashes between motorists and pedestrians or bicyclists. This data does not include crashes that are unreported to the police or those that do not involve a motor vehicle. Unreported crashes can make up a significant portion of those affecting bicyclists and pedestrians. For example, the City of San Francisco found that 39 percent of bicyclist and 24 percent of pedestrian severe injury crashes were unreported in police records when compared to emergency room data.[13]

Over the past ten-year 2013 – 2023 period in Cedar Rapids and Linn County, there have been 13 bicyclist or pedestrian fatalities reported to police that involved a motor vehicle. Over that same period, 91 bicyclists or pedestrians reported serious injuries (see Figure 3.18).

This Plan recommends completing a systemic, proactive bicyclist and pedestrian crash analysis to determine high-risk locations. The systemic, proactive approach differs from a hotspot, reactive approach that only looks backward. According to the National Cooperative Highway Research Program (NCHRP) Report Guidance to Improve Pedestrian and Bicyclist Safety at Intersections[14]:

"It may seem counterintuitive, but specific locations where crashes have occurred will not necessarily experience a crash again any time soon, as crashes tend to vary around over time. . . This effect is particularly true for less-common crashes like pedestrian and bicyclist crashes, which are influenced by whether someone happens to be walking or bicycling at a certain time in a certain place, or where road user distraction or impairment may be involved. The focus on locations where crashes have occurred – in contrast to a more macro-level focus on common characteristics of those locations – means that hot spot analysis does not easily identify high-risk locations for less-frequent crash types. In addition, the lack of past crashes at an intersection does not necessarily mean that it is safe, particularly for pedestrians and bicyclists."

13 https://www.sfmta.com/sites/default/files/agendaitems/2017/7-21-17%20PAG%20Item%206%20High%20Injury%20Network%20Update.pdf

14 https://www.trb.org/Main/Blurbs/181781.aspx

FIGURE 3.18 Crashes reported by police between 2013 and 2023 that involved a motor vehicle and a bicyclist or pedestrian. Source: Iowa Crash Analysis Tool.

MODE TYPE	GEOGRAPHY	FATALITIES	SERIOUS INJURIES	MINOR INJURIES	POSSIBLE INJURIES	TOTAL CRASHES (2013-2023)
Bicyclists	Cedar Rapids	1	16	77	73	171
	Linn County (Including CR)	1	27	128	96	251
Pedestrians	Cedar Rapids	7	44	81	89	214
	Linn County (Including CR)	12	64	111	125	299

In contrast, the systemic, proactive approach seeks out common characteristics of crash locations, such as motor vehicle traffic volume, turning volumes, speed limit, presence of on-street parking, and number of motor vehicle lanes. The characteristics of crash locations can then be used to predict the types of intersections where future crashes are likely to occur.

To illustrate challenges with crashes in Cedar Rapids, Figure 3.19 shows eight intersections where serious injuries to bicyclists involving a motorist occurred between 2013 and 2023. Only one serious injury to a bicyclist was reported at each location. Further analysis is needed to determine the common characteristics of intersections needing improvement.

This Plan also recommends reviewing intersections identified by survey respondents as dangerous. See Figure A.5 in Appendix A for a map illustrating these intersections.

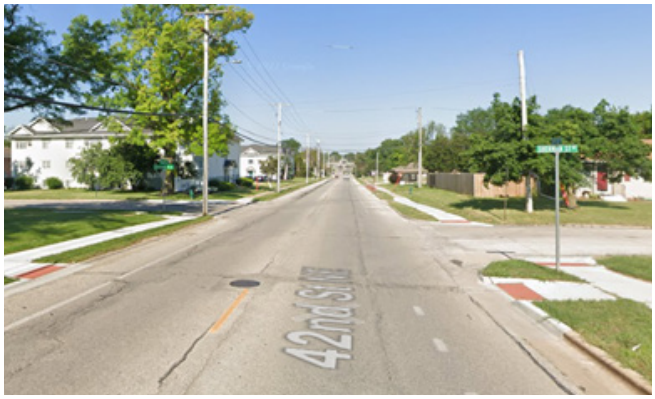
FIGURE 3.19 These eight intersections were locations where a serious injury to a bicyclist occurred between 2013 and 2023. Credit: Google

16th Street NE & B Avenue NE

3rd Avenue SE & 10th Street SE

6th Avenue SE & 15th Street SE

1st Avenue W & 5th Street W



42nd Street NE & Sherman Street NE

H Avenue NE & 12th Street NE

15th Avenue SW & 9th Street SW

Edgewood Road NW & Johnson Avenue NW

Action 3.2: Amend the Project Development and Management Manual to identify intersection safety countermeasures along projects that include trails or bikeways

The Federal Highway Administration (FHWA) has a national strategy to improve roadway safety.[15] This includes five Safe System objectives and six Safe System principles:

SAFE SYSTEM OBJECTIVES	SAFE SYSTEM PRINCIPLES
1. Safer people 2. Safer roads 3. Safer speeds 4. Safer vehicles 5. Post-crash care	1. Death/serious injury are unacceptable 2. Humans make mistakes 3. Humans are vulnerable 4. Responsibility is shared 5. Safety is proactive 6. Redundancy is critical

Supporting the Safe System approach is the Proven Safety Countermeasures initiative[16], which is a collection of measures that have proven to be effective in reducing fatalities and serious injuries on streets and highways.

The 28 Countermeasures shown in Figure 3.20 are grouped into five categories. Eight of the countermeasures highlighted in green boxes improve intersection safety, and thereby make crossing busy streets easier. Each of these are briefly described in Figure 3.21. Refer to *FHWA's Proven Safety Countermeasures website* for further details on all 28 countermeasures.

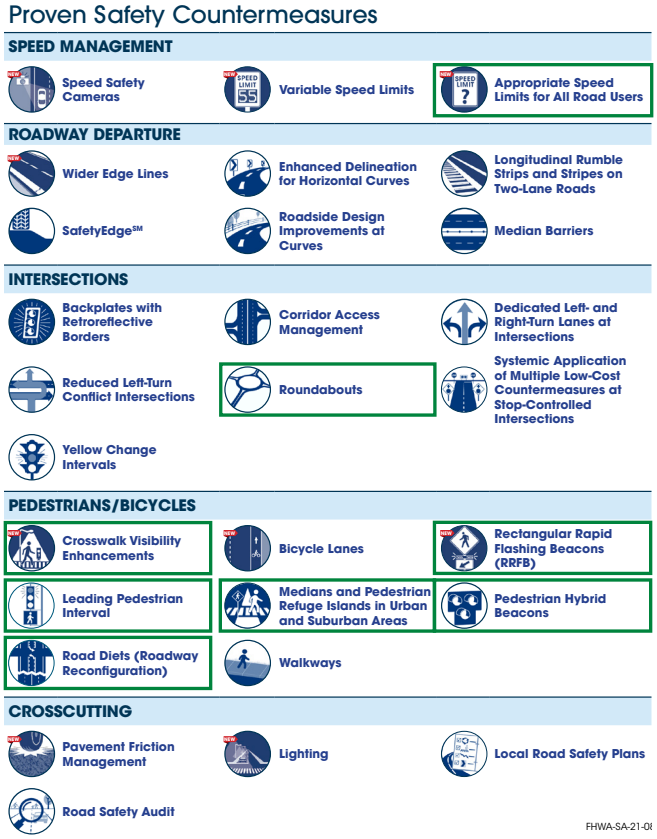


FIGURE 3.20 Eight of the 28 Proven Safety Countermeasures highlighted in green are recommended to improve crossing safety for pedestrians and bicyclists and are further described in Figure 3.21.
Image Credit: FHWA

15 *https://www.transportation.gov/NRSS*

16 *https://highways.dot.gov/safety/proven-safety-countermeasures*

FIGURE 3.21 FHWA Proven Safety Countermeasures recommended to improve the safety of pedestrians and bicyclists at crossings. Image and Text Credits: FHWA Proven Safety Countermeasures website: *https://highways.dot.gov/safety/proven-safety-countermeasures*

FHWA PROVEN SAFETY COUNTERMEASURE	SAFETY BENEFITS	DESCRIPTION (SELECTED TEXT)
Appropriate speed limits for all road users	*"Traffic fatalities in the City of Seattle decreased 26 percent after the city implemented comprehensive, city-wide speed management strategies and countermeasures inspired by Vision Zero. This included setting speed limits on all non-arterial streets at 20 mph and 200 miles of arterial streets at 25 mph."*	*"There is broad consensus among global roadway safety experts that speed control is one of the most important methods for reducing fatalities and serious injuries . . . (A study shows that) a driver traveling at 30 miles per hour who hits a pedestrian has a 45 percent chance of killing or seriously injuring them. At 20 miles per hour, that percentage drops to 5 percent[17]. . . . a growing body of research shows that speed limit changes alone can lead to measurable declines in speeds and crashes[18]. . . . When setting a speed limit, agencies should consider a range of factors such as pedestrian and bicyclist activity, crash history, land use context, intersection spacing, driveway density, roadway geometry, roadside conditions, roadway functional classification, traffic volume, and observed speeds.*
Roundabouts	*"82% reduction in fatal and injury crashes when a two-way stop-controlled intersection is converted to a round-about, and 78% reduction in fatal and injury crashes when a signalized intersec-tion is converted to a roundabout."*	*"Roundabouts are not only a safer type of inter-section; they are also efficient in terms of keeping people moving. Even while calming traffic, they can reduce delay and queuing when compared to other intersection alternatives. Furthermore, the lower vehicular speeds and reduced conflict environment can create a more suitable environ-ment for walking and bicycling."*
Crosswalk Visibility Enhancements	*"**High visibility crosswalks** can reduce pedestrian injury crashes up to 40% Intersection lighting can reduce pedestrian crashes up to 42%* ***Advance yield or stop markings and signs** can reduce pedestrian crashes up to 25%"*	*"**High visibility crosswalks:** Agencies should use materials such as inlay or thermoplastic tape, instead of paint or brick, for highly reflective crosswalk markings.* ***Intersection lighting:** The goal of crosswalk lighting should be to illuminate with positive contrast to make it easier for a driver to visually identify the pedestrian. This involves carefully placing the luminaires in forward locations to avoid a silhouette effect of the pedestrian.* ***Advance yield or stop markings and signs:** On multilane roadways, agencies can use 'YIELD Here to Pedestrians' or 'STOP Here for Pedestrians' signs 20 to 50 feet in advance of a marked crosswalk to indicate where a driver should stop or yield to pedestrians, depending on State law. To supple-ment the signing, agencies can also install a STOP or YIELD bar (commonly referred to as 'shark's teeth') pavement markings."*

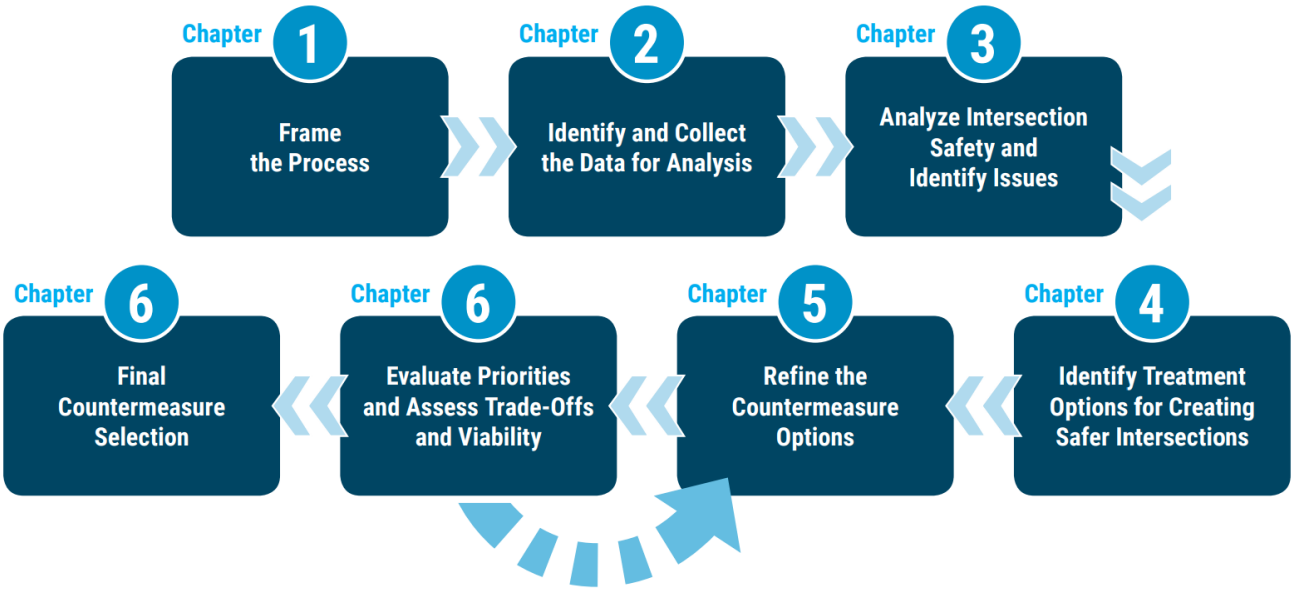
17 *https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1127572/*

18 Hu, W. and J. Cicchino (2019). Lowering the speed limit from 30 to 25 mph in Boston: effects on vehicle speeds. Insurance Institute for Highway Safety.

FIGURE 3.21, continued

FHWA PROVEN SAFETY COUNTERMEASURE	SAFETY BENEFITS	DESCRIPTION (SELECTED TEXT)
Leading Pedestrian Intervals	*"A 13% reduction in pedestrian vehicle crashes at intersections"*	*"A leading pedestrian interval (LPI) gives pedestrians the opportunity to enter the crosswalk at an intersection 3-7 seconds before vehicles are given a green indication. Pedestrians can better establish their presence in the crosswalk before vehicles have priority to turn right or left."*
Road Diets (Roadway Reconfiguration)	*"A 19 – 47% reduction in total crashes with 4-lane to 3-lane road diet conversions"*	*"A Road Diet typically involves converting an existing four-lane undivided roadway to a three-lane roadway consisting of two through lanes and a center two-way left-turn lane."*
Medians and Pedestrian Refuge Islands in Urban and Suburban Areas	*"**Medians with marked crosswalks** result in a 46% reduction in pedestrian crashes* ***Pedestrian refuge islands** result in a 56% reduction in pedestrian crashes"*	*"A median is the area between opposing lanes of traffic, excluding turn lanes. Medians in urban and suburban areas can be defined by pavement markings, raised medians, or islands to separate motorized and non-motorized road users . . .* *A pedestrian refuge island (or crossing area) is a median with a refuge area that is intended to help protect pedestrians who are crossing a road."*
Pedestrian Hybrid Beacons	*"A 55% reduction in pedestrian crashes and 15% reduction in serious injury and fatal crashes"*	*"A traffic control device designed to help pedestrians safely cross higher-speed roadways at midblock crossings and uncontrolled intersections. The beacon head consists of two red lenses above a single yellow lens. The lenses remain 'dark' until a pedestrian desiring to cross the street pushes the call button to activate the beacon, which then initiates a yellow to red lighting sequence consisting of flashing and steady lights that directs motorists to slow and come to a stop and provides the right-of-way to the pedestrian to safely cross the roadway before going dark again."*
Rectangular Rapid Flashing Beacons (RRFB)	*"Up to a 47% reduction in pedestrian crashes and can increase motorist yielding rates up to 98%"*	*"To enhance pedestrian conspicuity and increase driver awareness at uncontrolled, marked crosswalks, transportation agencies can install a pedestrian actuated Rectangular Rapid Flashing Beacon (RRFB) to accompany a pedestrian warning sign. RRFBs consist of two, rectangular-shaped yellow indications, each with a light-emitting diode (LED)-array-based light source. RRFBs flash with an alternating high frequency when activated to enhance conspicuity of pedestrians at the crossing to drivers."*

FIGURE 3.22 The process for identifying countermeasures to improve safety at intersections. Credit: NCHRP Guidance to Improve Pedestrian and Bicyclist Safety at Intersections.



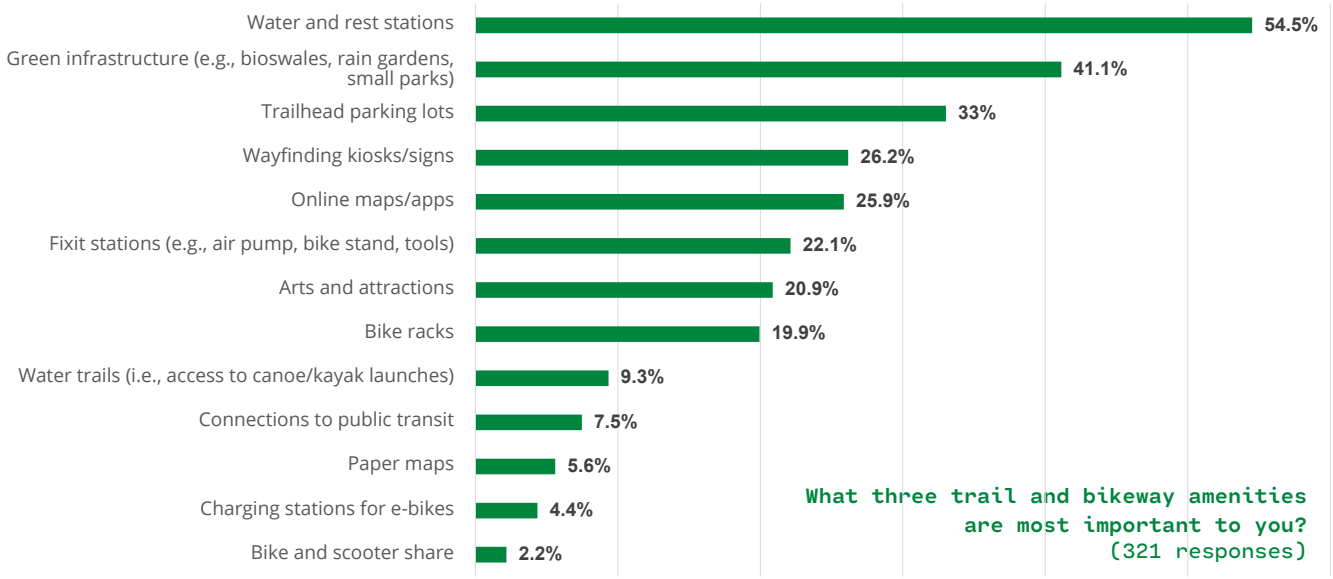
The City has a Project Development and Management Manual, which is required for all improvement program projects. These include street construction, reconstruction, utility improvements, trail improvements, and other significant maintenance projects. The purpose of the guide is to help scope each project. The guide ensures compliance with the 2015 Cedar Rapids Comprehensive Trails & Bikeways Map. Currently, it requires only the identification of linear trail and bikeway projects (i.e., bike lanes, trails, shared lanes), but not intersection treatments on those projects. This Plan recommends amending the Project Development and Management Manual to identify intersection safety countermeasures along projects that include trails or bikeways. The NCHRP report Guidance to Improve Pedestrian and Bicyclist Safety at Intersections describes the process for effectively choosing countermeasures, as shown in Figure 3.22. This NCHRP report also includes a more detailed list of countermeasures than FHWA's Proven Safety Countermeasures website.

Strategy 4: Improve Amenities

Improving amenities helps to address survey respondents' collective viewpoint that amenities need enhancement, as shown in Figure 3.1. Also supporting this conclusion was the result of an open-ended trails and bikeway "wish list," which revealed that the top wish was amenities, as shown in Figure A.20 of Appendix A. Finally, during the community engagement process, an online survey asked respondents to rank which amenities were most important to them, as shown in Figure 3.23.

This Plan recommends the following actions to address priority amenities identified through engagement: analyzing existing trailhead parking lots and identifying gaps to maintain trailhead parking lots at minimum 5-mile intervals along the regional network (4.1), analyzing existing water and toilet facilities and identifying gaps to maintain water and toilet facilities at minimum 5-mile intervals along the regional network (4.2), developing a policy for providing water and toilet facilities year-round (4.3), identifying opportunities to add green infrastructure to the trail and bikeway system and amending the Project Development and Management Manual to incorporate green

FIGURE 3.23 Trail and bikeway amenities that are addressed in Strategy 4 are outlined in black. Wayfinding kiosks/signs and online maps/apps are being addressed through separate planning work.



infrastructure along trails and bikeways (4.4), analyzing existing arts and related attractions and identifying gaps to maintain arts and related attractions at minimum 5-mile intervals along the regional trail system (4.5), updating bike parking standards contained within Chapter 32 of the Cedar Rapids Municipal Code (4.6), considering development of a program to help fund installation of bike parking (4.7), and piloting installation of a public bike locker (4.8).

Action 4.1: Analyze existing trailhead parking lots and identify gaps to maintain trailhead parking lots at minimum 5-mile intervals along the regional network

Trailhead parking lots provide places for trail users to park their motor vehicles. People may arrive at trailhead parking lots with vehicles because they do not live close by, but they may also live close by but do not have another convenient way to access the trail. Trailhead parking lots were the third most popular amenity desired by survey respondents (Figure 3.23). 26 trailhead parking lots currently exist along the trails and bikeways system. Figure 3.24 lists each trailhead parking lot, its owner, the purpose of the parking lot, and available amenities. Figure 3.24 corresponds with the map in Figure 3.25.

This Plan recommends providing trailhead parking lots at minimum five-mile intervals along the regional network. This reflects the existing spacing along the Cedar Valley Nature Trail, except for the gap between Center Point Depot and County Home Road, which is approximately 10 miles. Five-mile intervals for trailhead parking lots are similar to the extensive trail network in the Des Moines metropolitan area.[19] To help meet this recommendation, the Plan Map and existing facilities should be further analyzed to identify where future trailhead parking facilities will be needed as the system continues to expand. Analysis should take into account existing trail use and demand to inform the future locations of trailhead parking lots. If it is not feasible to adhere to the recommended 5-mile interval due to existing conditions or other barriers, alternative options should be explored to get as close as possible to the 5-mile interval.

FIGURE 3.24 The location and characteristics of existing primary trailhead parking lot locations in Cedar Rapids and Linn County.

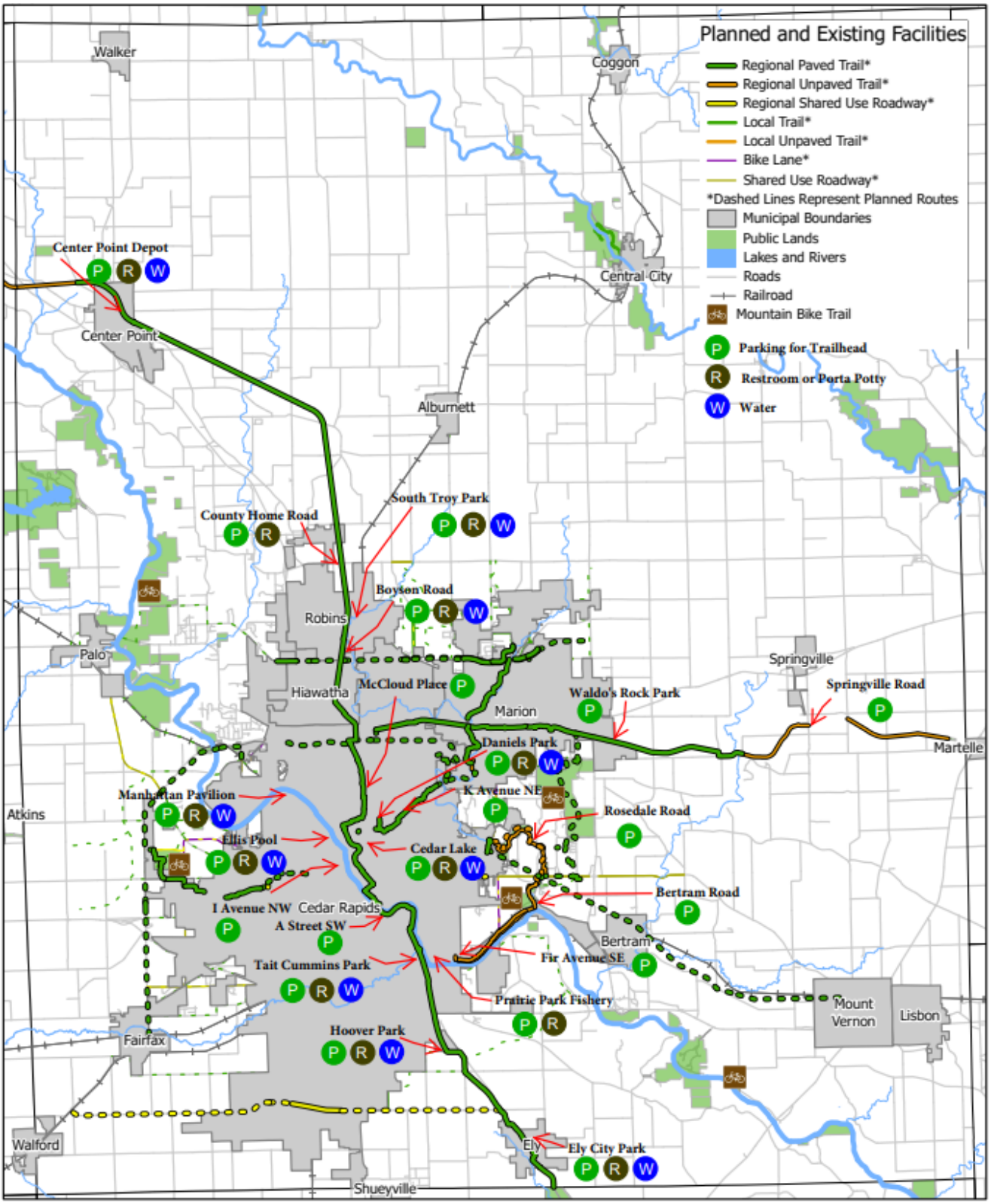
TRAIL	TRAILHEAD PARKING LOT LOCATION	OWNER	PARKING LOT PURPOSE	REST STOP AMENITIES	ADDITIONAL NOTES
Cedar Valley Nature Trail	Center Point Depot	Linn County Conservation Board	Trailhead only	Drinking water, Restroom	N/A
	County Home Road	Linn County Conservation Board	Trailhead only	Restroom	
	South Troy Park	City of Robins	Trailhead + South Troy Park	Drinking water, Restroom	
	Boyson Road	Linn County Conservation Board	Trailhead only	Drinking water, Restroom	
	McCloud Place	City of Cedar Rapids	Trailhead only	N/A	
	Cedar Lake	City of Cedar Rapids	Trailhead + Cedar Lake Park	Restroom, Drinking water	
	A Street SW	City of Cedar Rapids	Trailhead only	N/A	
	Tait Cummins Park	City of Cedar Rapids	Trailhead only	Drinking water, Porta potty	
	Hoover Park	City of Cedar Rapids	Trailhead + Hoover Park	Drinking water, Porta potty	
	Ely City Park	City of Ely	Trailhead + Ely City Park	Drinking water, Restroom	Nearby trailhead also exists at Ely Community Center
CeMar Trail	K Avenue NE	City of Cedar Rapids	Trailhead only	N/A	N/A
	Daniels Park	City of Cedar Rapids	Trailhead + Daniels Park	Restroom, Playground, Pavilions, Splash Pad	

19 See major trail maps in Polk County: *https://www.polkcounty-iowa.gov/conservation/parks-trails/*

FIGURE 3.24, continued

TRAIL	TRAILHEAD PARKING LOT LOCATION	OWNER	PARKING LOT PURPOSE	REST STOP AMENITIES	ADDITIONAL NOTES
Ellis Trail	Manhattan Pavilion	City of Cedar Rapids	Trailhead + Manhattan Pavilion	Drinking water, Restroom	N/A
	Ellis Pool	City of Cedar Rapids	Trailhead + Ellis Pool	Drinking water, Restroom, Pool, Pavilions	
	I Avenue NW	City of Cedar Rapids	Trailhead only	N/A	
	Waldo's Rock Park	City of Marion	Trailhead + Waldo's Rock Park	Porta potty	Linn County Conservation Board also maintains a nearby trailhead only parking lot at the south end of 62nd Street
Grant Wood Trail	Secrist Road Parking	Linn County Conservation Board	Trailhead only	Restroom	N/A
	Springville Road	Linn County Conservation Board	Trailhead only	N/A	
Sac & Fox Trail	Rosedale Road	City of Cedar Rapids	Trailhead only	N/A	N/A
	Bertram Road	Indian Creek Nature Center	Trailhead only	N/A	
	Fir Avenue SE	City of Cedar Rapids	Trailhead only	N/A	
	Prairie Park Fishery	City of Cedar Rapids	Trailhead + Prairie Park Fishery	Porta potty	
Cherokee Trail	Morgan Creek Park	Linn County	Trailhead + Morgan Creek Park	Drinking Water, Restroom, Playground, Shelter	Also Serves as a trailhead for the Morgan Creek Trail
	Cherry Hill Park	City of Cedar Rapids	Trailhead + Cherry Hill Pool	Drinking Water, Restroom, Playground, Pool	
	Sharon Lane NW	City of Cedar Rapids	Trailhead only	N/A	
	Jacolyn Park	City of Cedar Rapids	Trailhead + Jacolyn Park	Drinking Water, Restroom, Playground, Splash Pad	
	Cherokee Park	City of Cedar Rapids	Trailhead + Cherokee Park	Drinking Water, Porta potty, Outdoor Fitness Equipment	

FIGURE 3.25 21 existing trailhead parking lot locations throughout Linn County are shown with available rest stop amenities.



Action 4.2: Analyze existing water and toilet facilities and identify gaps to maintain water and toilet facilities at minimum 5-mile intervals along the regional network

Access to drinking water and rest stations were the top desired amenities by survey respondents. Figures 3.23 and 3.24 show that drinking water is available at nine out of 21 trailhead parking lots, and 12 out of 21 parking lots have restrooms or Porta Potties. This Plan recommends providing water and toilet facilities at minimum 5-mile intervals along the regional network. To help meet this recommendation, the Plan Map and existing facilities should be further analyzed to identify where future water and toilet facilities will be needed as the system continues to expand. This effort should be combined with the analysis recommended in Action 4.1. Trailhead parking lots are an excellent existing opportunity to add and improve options for drinking water and toilet facilities. They help not only people who arrive by motor vehicle but also people who arrive by other means. Locating water and toilets at 5-mile intervals along regional trails also helps trail users to keep moving as they travel through the network.

Public-private partnerships may be utilized for water and toilet facilities. This could be modeled upon the permit process the City of Cambridge, Massachusetts, has developed for Privately Owned Public Spaces.[20]

Action 4.3: Develop a policy for providing water and toilet facilities year-round

To support year-round trail use and promote trails as a viable transportation option, a policy should be developed to ensure access to water and toilet facilities in all seasons. While current facilities are not winterized, trail users—whether for recreation or commuting—continue to depend on these amenities throughout the year. Providing reliable facilities is essential to enhancing user experience and aligning trails with broader transportation goals. However, challenges include the significant cost of winterizing plumbing systems, operational expenses for heating, increased maintenance needs during colder months, and potential issues with unauthorized use or vandalism. A phased approach that prioritizes high-traffic trailheads, explores cost-effective solutions like temporary facilities, and leverages partnerships or alternative funding sources can address these challenges while advancing the year-round accessibility and utility of the trail system.

Action 4.4: Identify opportunities to add green infrastructure to the trail and bikeway system and amend the Project Development and Management Manual to incorporate green infrastructure along trails and bikeways

Green infrastructure was the second most desired amenity by survey respondents. The examples listed in the survey included bioswales, rain gardens, and small parks. This Plan recommends identifying opportunities to add green infrastructure along the trail and bikeway system and amending the City's Project Development and Management Manual to incorporate the addition of green infrastructure with trail and bikeway projects. Green infrastructure may also include trails, prairie plantings, and other vegetation.

Linn County Conservation Board's Strategic Plan[21] also has one strategy that supports green infrastructure along trails and bikeways: *"Complete innovative demonstration projects that improve water quality and aquatic habitat in the county."*

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20 *https://www.cambridgema.gov/CDD/zoninganddevelopment/specialpermits/specialpermitpublicopenspace*

21 See the *Linn County Conservation Board Strategic Plan 2022 Update*

Action 4.5: Analyze existing arts and related attractions and identify gaps to maintain arts and related attractions at minimum 5-mile intervals along the regional trail system

The Rails to Trails Conservancy maintains a Public Art website[22] that includes many examples of art that can transform trail infrastructure into cherished community assets. Types of trail art include murals, sculptures, artistic benches, lights, necessary fencing, and musical instruments. Each of these is illustrated in Figures 3.26 through 3.31. This Plan recommends inventorying existing art along the regional trail system to better understand the extent to which it already exists and then establishing a goal to expand its use at a minimum of 5-mile intervals. To help meet this recommendation, the Plan Map and existing facilities should be further analyzed to identify where future art could be installed as the system continues to expand. This effort should be combined with the analysis recommended in Action 4.1 and Action 4.2.

FIGURE 3.26 Mural on Cherry Creek Trail, Denver, CO.

FIGURE 3.27 Sculpture on Trout Run Trail, Decorah, IA. Credit: *NE Iowa Tourism Association*

FIGURE 3.28 Artistic bench created by third and fourth graders; Marine on Saint Croix, MN. Credit: *artbenchtrail.org*

FIGURE 3.29 Light installation along Rail Trail in Charlotte, NC. Credit: *charlotterailtrail.org*

22 *https://www.railstotrails.org/build-trails/trail-building-toolbox/design/public-art/*

FIGURE 3.30 Fence separating a railroad along the Greenway Trail, Whittier, CA. Credit: *la.streetsblog.org*

FIGURE 3.31 Interactive drums on sculptures on the Enid Trail; Enid, OK. Credit: *enidnews.com*

Action 4.6: Update bike parking standards contained within Chapter 32 of the Cedar Rapids Municipal Code

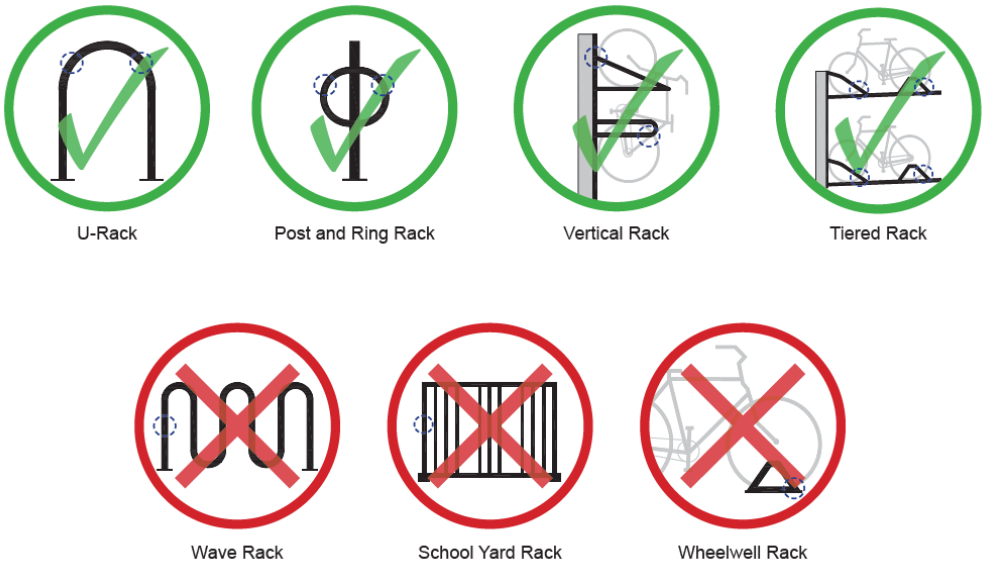
Bike parking gives bicyclists safe places to secure their bicycles. The City of Cedar Rapids zoning ordinance contained within Chapter 32 of the Municipal Code[23] has already established minimum bicycle parking spaces for various land uses, and standards for bike rack types and layout dimensions. For example, allowed bike rack types include *"inverted u, inverted u series, post and ring, secured wheel well, tree-guard, modified coat hanger, two-tier, double-decker, and wall mounted racks."* Bike rack types not allowed include *"undulating, spiral, schoolyard grid or comb, wheel well, and coat hanger racks."* Because there are no illustrations to go along with these standards, this Plan recommends amending the Zoning Ordinance to illustrate City standards clearly.

An example of clear bike rack illustrations is shown in Figure 3.32. In addition to specifying the type of bike rack, the Project Development and Management Manual should be updated to include a section on bicycle parking design standards using the Association of Pedestrian & Bicycle Professionals (APBP) "Bicycle Parking Guidelines."[24]

23 *https://www.cedar-rapids.org/local_government/departments_a_-_f/development_services/zoning.php*

24 *https://www.apbp.org/assets/docs/EssentialsofBikeParking_FINA.pdf*

FIGURE 3.32 An illustrated image of allowed and disallowed bike rack types, recommended for an inclusion of the updated Cedar Rapids Zoning Ordinance. Credit: AASHTO Guide for the Development of Bicycle Facilities



Action 4.7: Consider development of program to help fund installation of bike parking

Some municipal government agencies have developed bicycle rack programs where public funds are used to install bike racks at publicly accessible locations outside businesses, usually on sidewalk boulevards where clear paths for pedestrians are not obstructed. These efforts can help place bike racks at buildings not covered by existing Cedar Rapids Zoning Ordinance requirements (i.e., the zoning ordinance applies only to new buildings or alterations of existing buildings). For example, the City of Madison, Wisconsin pays the entire cost of installing bike racks in front of businesses.[25] In contrast, the City of Minneapolis, Minnesota pays 50% of the cost under a similar program.[26] The City of Cedar Rapids has several Self-Supported Municipal Improvement Districts (SSMID), which have funded the purchase and installation of new bike racks for existing buildings. This Plan recommends that the City of Cedar Rapids consider development of a program to initiate bike parking options for existing buildings.

Action 4.8: Pilot installation of a public bike locker

The Cedar Rapids Zoning Ordinance contains guidance for long-term bike parking, including bike lockers. A locker is like a miniature bicycle-sized garage that fully encloses a bicycle. Access is gained with a key or other secure method. The City of Cedar Rapids does not currently offer bike lockers for rent to the public. In the Twin Cities of Minnesota, bike lockers are offered for rent at various transit stations throughout the metro region by Metro Transit, the regional transit authority.[27] In Minneapolis, bike lockers are available for rent at public parking ramps operated by the Minnesota Department of Transportation.[28] This Plan recommends that the City of Cedar Rapids launch a pilot program to offer bike lockers for rent at a convenient location for commuters and other visitors. For example, bicycle lockers at the Cedar Rapids Ground Transportation Center or Park & Ride Lot 44 would allow riders on the Express 380 bus to combine bicycling with transit.

25 https://www.cityofmadison.com/bikemadison/programs/bikeparking.cfm

26 https://www.minneapolismn.gov/getting-around/bicycling/bike-safety-rules/bike-parking/bike-racks/

27 https://www.metrotransit.org/bike-lockers

28 https://www.abc-ramps.com/bicycle

Strategy 5: Improve the public's attitude toward trail and bikeway users

Improving the public's attitude toward trail and bikeway users addresses survey respondents' collective viewpoint that motorists' attitude toward trail and bikeway users needs improvement, as shown in Figure 3.1. This was the lowest-rated condition in the survey. Actions to achieve this strategy include initiating an annual trail loop ride with more than 500 riders (5.1), enhancing trail and bikeway communications to educate the public about the vision and purpose of the trail and bikeway network (5.2), and identifying one entity to host trail and bikeway count data (5.3).

Action 5.1: Initiate an annual trail loop ride with more than 500 riders

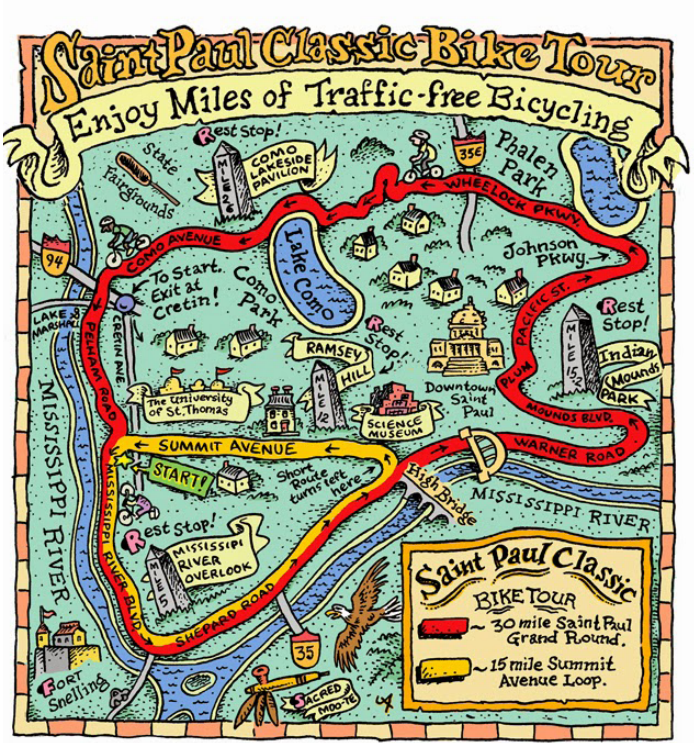
One of the top complaints by motorists on the City of Cedar Rapids' social media channels is that bicyclists do not stop at stop signs and stoplights. Conversely, some of the many complaints by cyclists about drivers include not sharing the road, driving too fast or too close, and not yielding when required by law.

Most bicyclists also have a driver's license[29], which suggests that the public's behavior changes once they switch from driving to bicycling and vice versa. Increasing opportunities for the public to use trails and bikeways will give more people the ability to gain a better understanding of the physical effort required for bicycling, the challenges of using the existing transportation system on a bicycle, and the plentiful opportunities to enjoy bicycling in Cedar Rapids.

Already, several opportunities exist for the public to use trails and bikeways:

- The City hosts an annual "Ride the Districts Bike Tour" and "Bike to Work Week" to experience the Trails and Bikeways System and learn about upcoming and recent projects
- The Corridor Metropolitan Planning Organization hosts an annual 15-mile or 30-mile bike ride to kick off Bike to Work Week
- The Hawkeye Bicycle Association hosts several rides each week
- Meet Me at the Market, a wellness event hosted by NewBo City Market, includes four bike rides each summer
- The Linn Area Mountain Bike Association and local BMX club host family days
- Freedom Festival hosts an annual Freedom Bike Ride in the summer

FIGURE 3.33 The annual St Paul Classic Bike Tour is a 30-mile loop. Credit: Bicycle Alliance of Minnesota



29 See for example: Sener, I. N., Eluru, N., & Bhat, C. R. (2009). Who are Bicyclists? Why and how much are they Bicycling? Transportation Research Record, 2134(1), 63–72. https://www.caee.utexas.edu/prof/bhat/abstracts/sener_eluru_bhat_bicycle_rev_jan18_trbstyle.pdf

These rides are great opportunities for the public to join a small group of less than 100 people. To continue to welcome new riders, this Plan recommends an annual loop ride that uses mostly trails with more than 500 riders. Each year in Minnesota, the Bicycle Alliance of Minnesota[30] hosts two annual bike rides with more than 1,500 riders. They include:

RIDE NAME	COMMUNITY POPULATION	ANNUAL RIDERS (APPROXIMATE)	LOOP LENGTHS
Mankato River Ramble	45,000	1,800	13 mi, 25 mi, 42 mi
Saint Paul Classic	307,000	2,500	15 mi, 30 mi

These rides are supported with rest stops, live bands, refreshments, bathrooms, sag wagons, ride marshals, and mechanics. The cost is $45 for adults, $20 for college students, and free for kids. Profits go to support the Bicycle Alliance of Minnesota. The rides are loops and run mostly along routes with already-established trails (Figure 3.33). A similar route could be established Northeast/Southeast Cedar Rapids and Marion, taking advantage of Linn County's most extensive existing trail corridors, including the Cedar Valley Nature Trail, Grant Wood Trail, Indian Creek Trail, and Sac & Fox Trail. A non-profit organization such as the Linn County Trails Association could host the annual bike ride as a fundraiser.

Action 5.2: Enhance trail and bikeway communications to educate the public about the vision and purpose of the trail and bikeway network

Participants on the City of Cedar Rapids' social media channels have shown enthusiasm about the rapidly developing trail and bikeway network. The City already makes efforts to keep the public up-to-date about gaps being filled in the regional trail system. This Plan recommends the City and County educate the public about the vision and purpose of the trail and bikeway network by using the following tools:

- Sharing a simplified regional trail and bikeway network map, with illustrations showing how gaps are being filled (see Chapter 4)
- Giving examples of how separating motorists from trail/bikeway users is improving comfort and safety for everyone
- Reminding the public why the trail and bikeway network exists:
  - To provide opportunities to get outdoors and improve physical and mental health
  - Giving all residents an alternative way to travel to destinations, including those who don't have access to a motor vehicle
  - Reducing impacts to the environment compared to travel by motor vehicle
  - Having a place to walk dogs and socialize with other people
  - Increasing economic activity between local businesses and residents or tourists

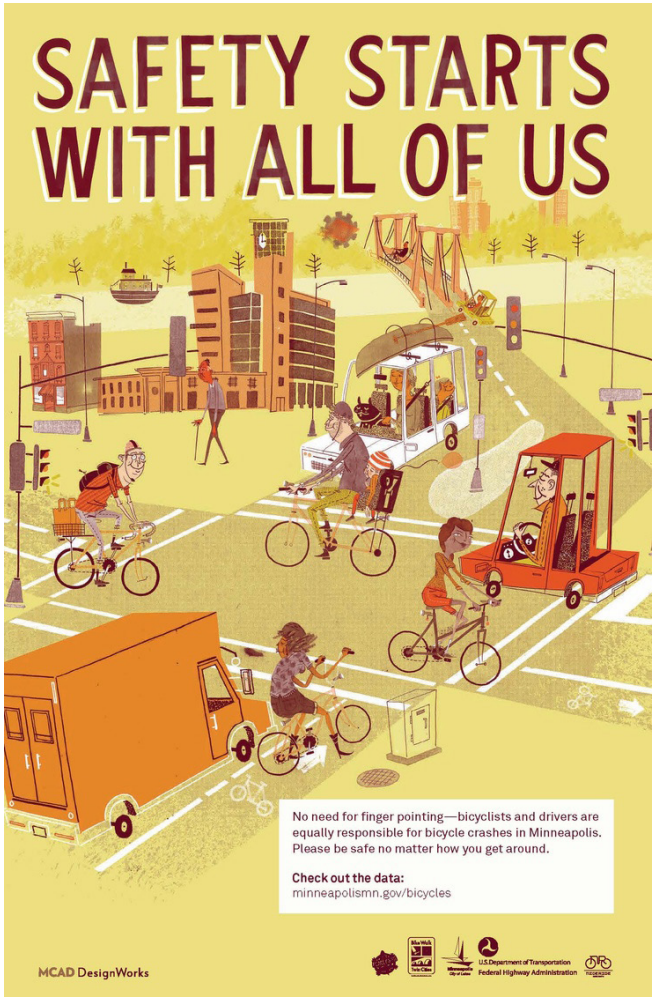
This educational information can be accompanied by positive imagery that reflects how residents are already making walking and bicycling a regular part of their daily lives in Cedar Rapids and Linn County. Images should also include the area's racially diverse community members walking and bicycling in everyday situations.

This Plan also recommends raising public awareness of safety issues. For example, if the crash data analysis in Action 3.1 determines that motorists are not yielding to pedestrians and bicyclists in crosswalks, information should focus on increasing compliance with Iowa's crosswalk law. Any campaign should be backed with a data analysis and established as a partnership between the City's and/or County's Communications, Public Works/Roads, and Police/Sheriff's Departments.

Resource materials about safety should be friendly and accessible with a positive message of sharing the road (Figure 3.34). Once developed, the campaign materials should be widely distributed throughout the community. Potential avenues for communication may be the City and County

30 https://www.bikemn.org/all-events/

FIGURE 3.34 An example of a safety focused campaign that keeps the message positive. Credit: City of Minneapolis



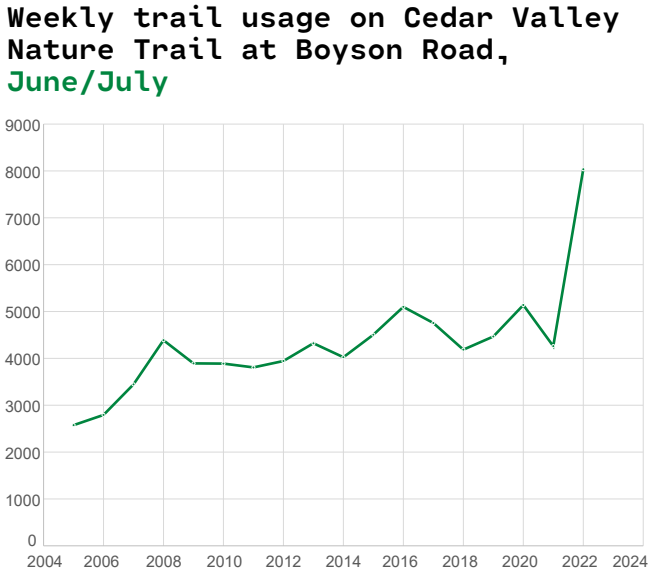
websites, newsletters, social media channels, utility bill inserts, and bus ads.

Finally, this Plan recommends that the City update its "*Bicycles and Pedestrians*" and "*Trails*" webpages to better convey existing information and enhance user friendliness. These pages could be combined and/or enhanced to convey the system and safety information recommended in this action, as well as information about relevant events, trail and bikeway project timelines, trail and bikeway maps, etc.

Action 5.3: Identify one entity to host trail and bikeway count data

The City of Cedar Rapids, Linn County Trails Association (LCTA), and Corridor Metropolitan Planning Organization (CMPO) conduct counts of people walking and bicycling along area trails. LCTA began conducting trail counts with infrared machines in 2005 at nine locations and is now up to 13 locations, with one example shown in Figure 3.35. The CMPO conducts counts at three locations using EcoCounter. The City is able to count people on bicycles at intersections using portable video recorders but doesn't currently have a formal count program. This Plan recommends expanding the trail counter program within the City of Cedar Rapids and establishing trail counters along trails managed by Linn County. The MPO will work with these communities to host trail and bikeway count data on an online platform that is easily accessible to the public and includes trail count data from all metro communities.

FIGURE 3.35 Changes in weekly trail usage along the Cedar Valley Nature Trail at Boyson Road, 2005—2022



Goal B: Maintain the Existing Trail and Bikeway Network

As shown in Figure 3.1, survey respondents ranked winter maintenance of trails and bikeways as the fifth worst rated condition and pavement marking maintenance as the seventh worst rated condition. Additionally, while pavement smoothness was not ranked as low by survey respondents, pavement maintenance was identified as an impending problem for the existing aging trail network. Maintenance can continue to be improved with routine pavement surface treatments, winter practices, and investments in pavement markings. The benefits of maintenance include a greater return on the initial investment (with more users year-round), safer and more accessible facilities for people of all abilities, and a more enjoyable experience for people walking and bicycling. Cedar Rapids has 74.3 miles of trails and 58.3 miles of bikeways, and the Linn County Conservation Board has 56.6 miles of trails. With 157 miles of additional facilities planned in Cedar Rapids alone, as described in Chapter 4, the following strategies will facilitate the goal of maintaining the trail and bikeway network.

Strategy 6: Improve routine maintenance of trail and bikeway pavement

Improving routine maintenance of trail and bikeway pavement addresses concerns that the smoothness of the existing trail network will degrade significantly in the near term. Actions to achieve this strategy include initiating and maintaining a trail pavement preservation and inspection program (6.1) and incorporating pavement maintenance techniques into capital budget planning (6.2).

Action 6.1: Initiate and maintain a trail pavement preservation and inspection program

This Plan recommends initiating a preservation inspection program to better plan for maintenance regarding the condition of asphalt trails. This program for trails and bikeways is already under development by the Corridor MPO. The City of Cedar Rapids also has an inspection process for roadways, which is used to prioritize maintenance under the City's Paving for Progress program. Inspection programs for concrete trails are not covered in this Plan but can be referenced in the FHWA's Guide for Maintaining Pedestrian Facilities for Enhanced Safety.

A path inspection program can guide the various types of pavement preservation noted in Action 6.1. It can be carried out by a contractor or in-house and can cover roads and paths or paths only.

One example is Three Rivers Park District (TRPD) in Hennepin County, Minnesota, which uses an asset management software that rates and helps track pavement conditions of their trails. The rating system, PASER, or Pavement Surface Evaluation and Rating, was developed by the University of Wisconsin-Madison Transportation Information Center. TRPD combines the PASER system with an in-house GIS database to evaluate and track trail conditions. Visual inspections are completed every two years, when technicians drive along the trails doing "windshield surveys" and assign them a rating based on a set of criteria defined by PASER. The PASER rating system is based on a 1-10 scale, with ten being a new trail in excellent condition (Figure 3.36).

In another example, the City of Eden Prairie, Minnesota, contracts with Goodpointe Technology, which uses ICON software. The ICON condition rating system uses a 100-point scale for all roads and trails. Eden Prairie has a goal of maintaining all surfaces at a level above 70 on the condition rating scale. When trails fall below 70, maintenance is performed on an ongoing basis. The City completes a survey every two to three years to ensure up-to-date ratings. The ratings are done block-by-block, even though there is often variation within each block.

FIGURE 3.36 The PASER rating system, adapted for use on trails. Credit: Hennepin County Bikeway Maintenance Study

NUMBER	SURFACE RATING	VISIBLE DISTRESS*	GENERAL CONDITION/ TREATMENT MEASURES
10	Excellent	None.	New construction
9	Excellent	None.	Recent overlay. Like new.
8	Very Good	No longitudinal cracks except reflection of paving joints. Occasional transverse cracks, widely spaced (40' or greater). All cracks sealed or tight (open less than 1/4").	Recent sealcoat or new cold mix. Little or no maintenance required.
7	Good	Very slight or no raveling, surface shows some traffic wear. Longitudinal cracks (open 1/4") due to reflection or paving joints. Transverse cracks (open 1/4") spaced 10' or more apart, little or slight crack raveling. No patching or very few patches in excellent condition.	First signs of aging. Maintain 7 with routine crack filling.
6	Good	Slight raveling (loss of fines) and traffic wear. Longitudinal cracks (open 1/4"—1/2"), some spaced less than 10'. First sign of block cracking. Sight to moderate flushing or polishing. Occasional patching in good condition.	Shows signs of aging. Sound structural condition. Could extend life with sealcoat.
5	Fair	Moderate to severe raveling (loss of fine and coarse aggregate). Longitudinal and transverse cracks (open 1/2") show first signs of slight raveling and secondary cracks. First signs of longitudinal cracks near pavement edge. Block cracking up to 50% of surface. Extensive to severe flushing or polishing. Some patching or edge wedging in good condition.	Surface aging. Sound structural condition. Needs sealcoat or thin non-structural overlay (less than 2").
4	Fair	Severe surface raveling. Multiple longitudinal and transverse cracking with slight raveling. Longitudinal cracking in wheel path. Block cracking (over 50% of surface). Patching in fair condition. Slight rutting or distortions (1/2" deep or less).	Significant aging and first signs of need for strengthening. Would benefit from a structural overlay (2" or more).
3	Poor	Closely spaced longitudinal and transverse cracks often showing raveling and crack erosion. Severe block cracking. Some alligator cracking (less than 25% of surface). Patches in fair to poor condition. Moderate rutting or distortion (1" or 2" deep). Occasional potholes.	Needs patching and repair prior to major overlay. Milling and removal of deterioration extends the life of overlay.
2	Very Poor	Alligator cracking (over 25% of surface). Severe distortions (over 2" deep). Extensive patching in poor condition. Potholes.	Severe deterioration. Needs reconstruction with extensive base repair. Pulverization of old pavement is effective.
1	Failed	Severe distress with extensive loss of surface integrity.	Failed. Needs total reconstruction.

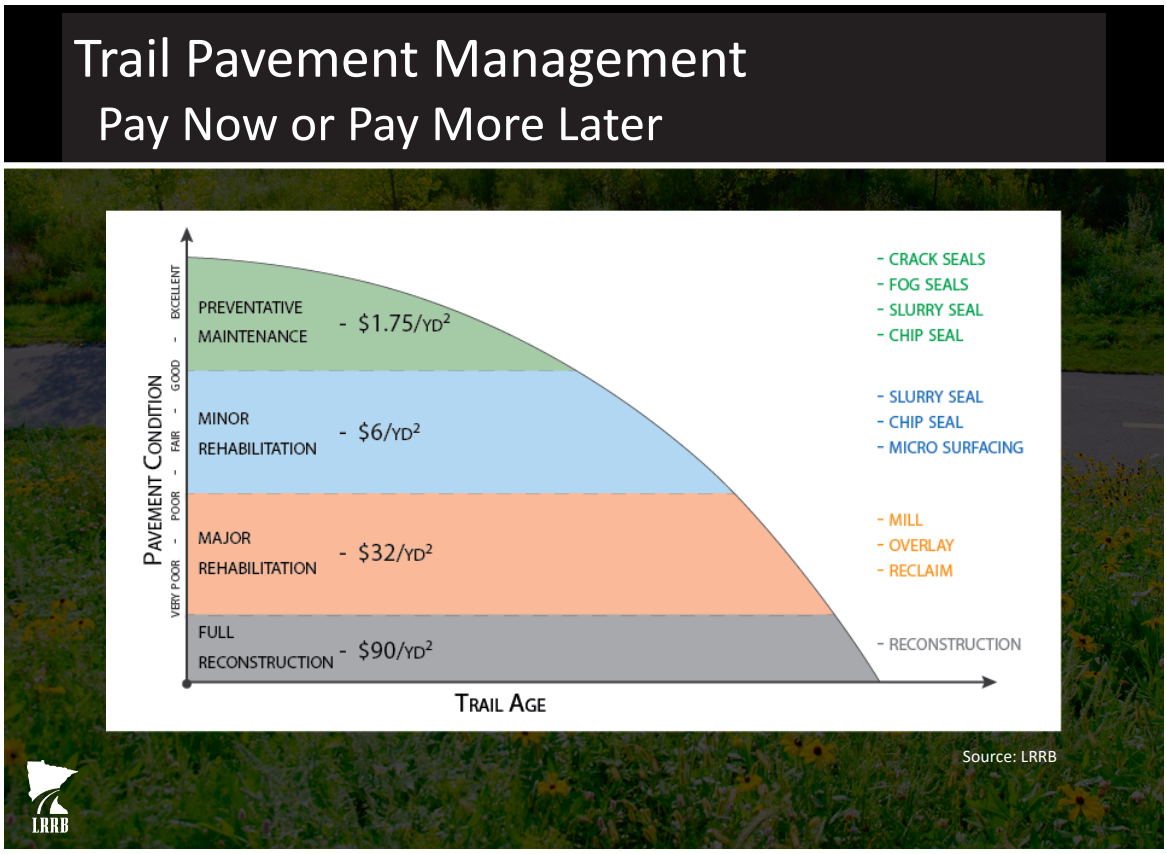
Locally, the Corridor MPO's pavement condition program will be utilizing the accelerometer within an iPhone to gather pavement roughness data. An accelerometer gathers the speed and movement on the X, Y, and Z axis. To gather the accelerometer data, an iPhone will be mounted to an e-bike that will ride all the trails and bikeways throughout the Corridor MPO's planning area. Upon the collection of this data, the Corridor MPO will publish it online on the "Corridor MPO Trail and Bikeway Pavement Condition Dashboard," as well as prepare a report based on the condition of the trail system and provide some recommendations on how the MPO's member communities can improve their trail and bikeways' pavement condition.

All pavement condition data within the Corridor MPO's online dashboard and report will fall within the categories of excellent, good, fair, poor, and very poor conditions. Each data point will be able to be viewed on the online dashboard along with images of the pavement. These conditions are determined based on the Z-axis displacement from zero on the accelerometer. The values from the accelerometer are single digits from negative 10 to 10. To ensure that the pavement condition data is easy to interpret, the data will be multiplied by 10. This methodology is to make it clearer what their value is out of 100:

TRAIL STATUS	PAVEMENT DATA VALUES
Excellent	<20
Good	20-40
Fair	40-60
Poor	60-80
Very Poor	80-100

Linn County inspects its 56.6 miles of trail weekly to see if the pavement condition has declined in the past year. This inspection allows the county to understand better when future pavement maintenance will need to occur and budget appropriately for it. One pavement preservation program that utilizes annual funding is the practice of putting sealant on the asphalt trails across the county on a rotation. In doing so, the surface of the asphalt is less likely to wear down and, in turn, preserves the trail's foundation.

FIGURE 3.37 Preventative shared use path maintenance is less costly over the long term than more expensive overlay or reconstruction projects. Credit: Minnesota Local ad



Action 6.2: Incorporate pavement maintenance techniques into capital budget planning

After constructing a trail, ongoing pavement preservation is important to maintain a smooth surface for bicyclists and pedestrians and prolong the life of the asphalt pavement. Maintaining a smooth surface is more important for bicyclists and people with disabilities than other travelers, as they are more vulnerable to cracks and rough surfaces.

Properly maintaining paths is also more cost-effective than neglecting preventative maintenance and allowing the condition to decay to the point that a costly reconstruction is needed (Figures 3.37, 3.38, and 3.39).

This Plan recommends that the City and County incorporate pavement maintenance techniques into capital budget planning to reduce long-term costs. Concrete trail maintenance is not covered in this Plan but can be referenced in the FHWA's Guide for Maintaining Pedestrian Facilities for Enhanced afety[31] and Iowa State University's Guide to Concrete Trails[32].

31 https://highways.dot.gov/safety/data-analysis-tools/rsdp/rsdp-tools/guide-maintaining-pedestrian-facilities-enhanced-safety

32 https://intrans.iastate.edu/app/uploads/2019/08/concrete_trails_guide.pdf

Types of asphalt pavement preservation include crack treatments, surface treatments, and resurfacing:

Crack treatments are necessary to prevent moisture infiltration into path pavements, which can accelerate pavement distress. Crack treatments should be applied within the first five years of pavement construction to achieve the maximum benefit, then reapplied as needed.

Surface treatments are intended to restore minor surface defects and to seal and refresh the pavement surface. Compared to pavement overlays, these generally have relatively short lives and must be reapplied regularly to obtain maximum benefits. They include the following:

Fog seals are recommended for sealing and enriching the asphalt surface, sealing minor cracks, and helping prevent raveling (i.e., surface deterioration).

Slurry seals are a mixture of fine aggregates (i.e., rock) ranging in size from approximately ¼ to ½ inch in diameter, asphalt emulsion (i.e., oil), water, and mineral filler, which is mostly Portland cement. Slurry seals, typically ¼ to ½" thick, may be used to seal existing oxidized and hardened asphalt pavements, slow surface raveling, seal small cracks, and improve skid resistance. Caution must be exercised in their use as this material takes between two to eight hours to harden, depending on the temperature and humidity.

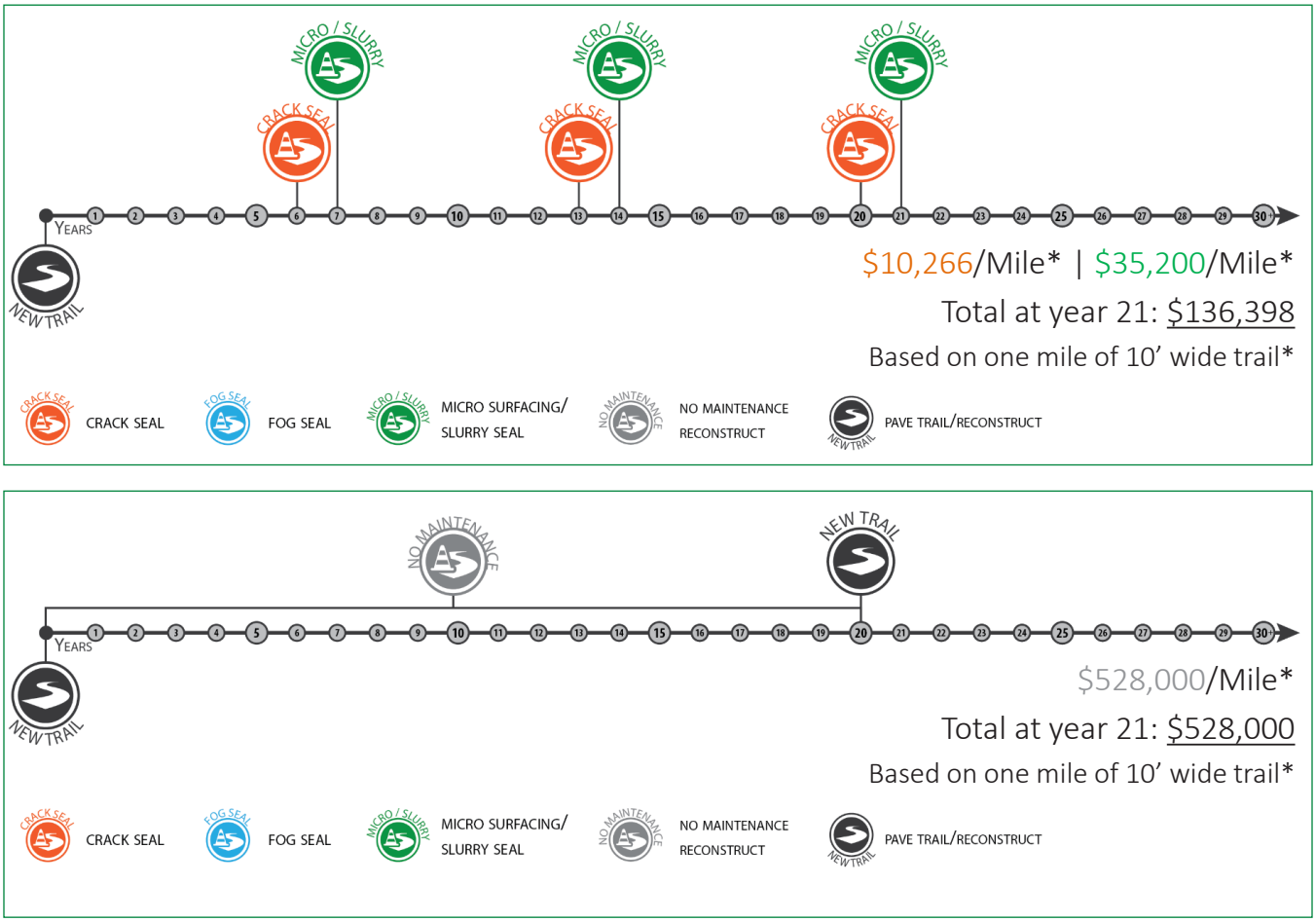
Microsurfacing is a mix of polymer-modified asphalt emulsion, well-graded and crushed mineral aggregate, mineral filler, water, and chemical additives that control the "break" (i.e., separation of water from asphalt) and evaporation time. Microsurfacing is primarily used as a preventive maintenance technique or surface treatment for asphalt pavements in good general condition. Microsurfacing can slow the raveling of aging asphalt pavements. A decided advantage of microsurfacing is that it develops strength faster than slurry seals and can be opened to traffic in about an hour.

FIGURE 3.38 An example of a trail that would benefit from crack and surface treatments.

Resurfacing is carried out after a path has reached the end of its useful life. Methods include:

- **Asphalt overlays** are the application of a new layer of hot-mix asphalt over the path surface.
- **Mill and overlays** are the removal of a surface layer of asphalt to eliminate surface defects before applying a new layer of hot-mix asphalt surfacing.
- **Ultrathin bonded** wearing course is a polymer-modified asphalt emulsion membrane followed within seconds by an ultra-thin life of high-performance open-graded asphalt concrete mix, with immediate release to traffic.

FIGURE 3.39 Two scenarios for path maintenance: The upper image involves crack sealing and microsurfacing with a total 20-year cost of $136,000, and the lower image involves no maintenance for a 20-year cost of $528,000.
Credit: Minnesota Local Road Research Board



Strategy 7: Improve winter maintenance of trail and bikeway facilities

Improving winter maintenance of trail and bikeway facilities addresses the survey respondents' collective viewpoint that winter maintenance needs to be improved. Many trail users continue to walk and bicycle in winter. Snow and ice on trails and bikeways can present hazards to people walking and bicycling. Actions to achieve this strategy include developing performance measures and priorities for winter maintenance (7.1), expanding resources to improve winter maintenance (7.2), and developing supplementary design guidance to support winter maintenance (7.3).

Action 7.1: Develop performance measures and priorities for winter maintenance

The City of Cedar Rapids Parks and Recreation Department has a policy of clearing trails within a couple of days after the end of a snowfall. Similarly, the City of Cedar Rapids Public Works Department has a policy of clearing protected bike lanes within a few days of the end of a snowfall.

This Plan recommends expanding measures and priorities for winter maintenance. Many bicycle-friendly communities in the Midwest have adopted performance measures of clearing trails within 24 to 36 hours of the end of a snowfall[33].

33 See for example policies in *Madison, WI*; *Milwaukee County, WI*; *Rochester, MN*

If this policy is adopted, it is recommended that regional trails and protected bike lanes are prioritized above local trails. Like snow emergency routes for streets, protected regional bikeways could be plowed before less trafficked routes. Any newly adopted policies should be posted on local government agency websites. Upon completion of this action, resources necessary to implement the identified measures and priorities can be identified through Action 7.2.

Action 7.2: Expand resources to improve winter maintenance

Winter maintenance of trails varies by jurisdiction within Linn County (Figure 3.40). Trails within municipalities (i.e., Cedar Rapids, Ely, Marion) are generally maintained in winter, but trails outside municipalities are not. In nearly all cases, unmaintained trails are owned and operated by the Linn County Conservation Board. One notable exception is the Sac & Fox Trail, which is owned by the City of Cedar Rapids but not maintained in the winter (the Sac & Fox Trail lies both within and outside Cedar Rapids' municipal boundary).

The City of Cedar Rapids Parks & Recreation Department, which performs winter maintenance on Cedar Rapids' paved trail network, already has a machine fleet that performs winter maintenance. This Plan recommends the continued expansion of resources to improve winter maintenance as the Cedar Rapids trail network expands.

Other communities have equipment to maintain trails, including pick-up trucks, skid loaders, miniature tractors, and lawn mower tractors converted to winter maintenance vehicles. Attachments include blowers, plows, brooms, sand spreaders, rock salt spreaders, and salt brine applicators. Where salt is used, salt brine can be applied using "pencil spray nozzles" attached to the back of a truck or utility vehicle, leaving parallel lines of salt brine mixture on a sidewalk or path. Pre-treating facilities with salt brine before snow or icefall has the benefit of faster salt activation than salt granules, quicker melting, better salt penetration, and reduced salt loss due to a lower "bounce and scatter" rate, which saves money and reduces environmental impacts (compared to salt granules) by using less salt. Due to environmental concerns, any applications of salt need to be done with care[34].

The Public Works Department maintains protected bike lanes in Cedar Rapids with sidewalk-clearing machines. All other bikeways and travel and parking lanes are cleared using street plows. Another way that resources could be expanded to improve winter maintenance is to prioritize snow plowing on streets with bike lanes or bike boulevards.

As stated previously, the Linn County Conservation Board does not conduct any winter maintenance on the County's trail segments. This is due to liability concerns and the overall cost of conducting winter maintenance. As the Cedar Rapids metropolitan area continues to grow the pressure to conduct winter maintenance has been building. To better showcase to the public the overhead costs of winter maintenance and understanding priority routes that may need to be cleared in the future for year around commuting, the Linn County Conservation Board has stated they would be open to conducting a winter maintenance study. A prime example of a winter maintenance study would be the one conducted for the City of Minneapolis. The City of Minneapolis conducted this study to understand overhead costs, compliance with the American Disabilities Act, as well as designating priority routes for snow removal. This study has allowed the City of Minneapolis to be more strategic with its budget while also ensuring their community is able to be active even in the winter months.

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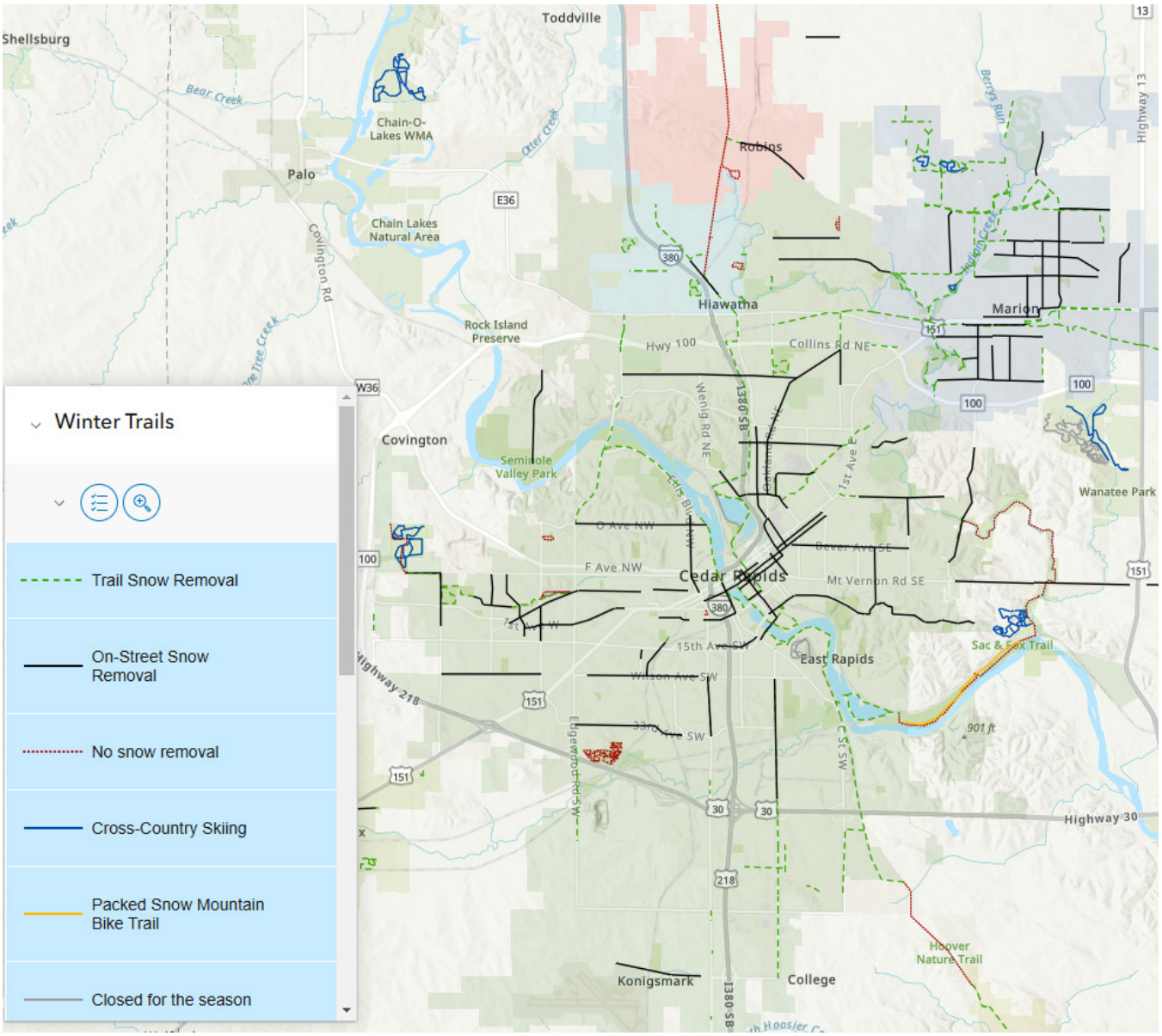
34 See Toole Design's Winter Maintenance Resource Guide: *https://tooledesign.com/insights/2019/12/winter-maintenance-resource-guide/*

FIGURE 3.40 Winter maintenance of trails and bikeways in the Cedar Rapids metro area.



Action 7.3: Develop supplementary design guidance to support winter maintenance

Supplementary design guidance may be developed (related to Action 1.1) to support winter maintenance.

Trails and protected bike lanes can be designed to make winter maintenance easier. This Plan recommends focusing on facility width and drainage for improved winter maintenance. For example, the Minnesota Department of Transportation's Bicycle Facility Design Guide recommends a buffer width of 10 feet between the curb and trail as ideal for snow storage, although six feet is acceptable.[35] Wherever an adequate buffer width is not possible, plans can be made to remove snow from the buffer in winter.

Designers of trails and protected bike lanes should ensure that the areas next to a facility are graded away on both sides to prevent water from pooling

35 *https://www.dot.state.mn.us/bike/bicycle-facility-design-manual.html*

on or running across the surface. Proper drainage is also facilitated by using cross slopes of 1.5%, ensuring that water flows to one edge of a trail. Where proper drainage cannot be achieved along a trail, adequate drainage infrastructure should be provided to prevent standing water, which will otherwise turn into ice when temperatures fall below freezing.

Where a trail transitions to a curb ramp, ramps should be located at the high point of an intersection to avoid standing pools of water, and if this isn't possible, ADA-compliant storm drain grates should be added near the base of the ramps to drain standing water.

Strategy 8: Identify resources for trails and bikeways use, expansion, and maintenance

As the trails and bikeways system continues to expand, the resources dedicated to the system will need to expand to the same degree. Actions to achieve this strategy include evaluating and maintaining 5-year and 10-year capital budgets and 5-year and 10-year operations budgets for trails and bikeways use, expansion, and maintenance (8.1); identifying, coordinating, and pursuing supplemental funding options (8.2); providing adequate staffing for trails and bikeways use, expansion, and maintenance (8.3); defining the purpose, goals, responsibilities, and duties of the BikeCR Committee (8.4); and partnering with advocacy groups, agencies, schools, and neighboring communities to promote, educate, and provide opportunities to those who depend on cycling or are under-represented (8.5).

Action 8.1: Evaluate and maintain 5-year and 10-year capital budgets and 5-year and 10-year operations budgets for trails and bikeways use, expansion, and maintenance

Successful execution of the plan will require a commitment to budgets that allow for expected growth and regular maintenance of the trails and bikeways network. The City of Cedar Rapids and Linn County maintain 5-year budgets for infrastructure needs, but do not include 5-year projections for operations budgets. This Plan recommends evaluating the current 5-year budget process and the possible inclusion of operating budgets and 10-year budget forecasts to address future needs for the trails and bikeways system adequately.

Action 8.2: Identify, coordinate, and pursue supplemental funding options

Resources are limited, and trails and bikeways must compete with other infrastructure projects at relatively constant funding levels unless grants and other funds outside typical revenue streams can be secured. Historically, the City of Cedar Rapids has yet to be very successful in attaining grant funding from State or Federal levels and the County has had similar results. Hopefully, focusing on a regional trail system will change this by adding value to specific trail segments that may have previously only served City or County needs. A regional trails and bikeways network benefits those residing within the City and County and can also be a draw for tourists seeking recreational opportunities outside of their community. See Appendix B - Funding Strategies for additional information. This Plan recommends that the City develop a coordinated and strategic approach to pursuing grant funding for trails and bikeways. The City and County should also review grant writing processes and work together with neighboring communities as necessary to support the creation of regional trails and bikeways.

Action 8.3: Provide adequate staffing for trails and bike-ways use, expansion, and maintenance

It will be necessary to provide staffing at acceptable levels to ensure the City of Cedar Rapids and Linn County can design, build, and maintain a system of trails and bikeways that allows safe, comfortable, and equitable access for all users. Also important to the City of Cedar Rapids is the ability to adequately address the 5 E's (Equity & Accessibility; Engineering; Education; Encouragement; Evaluation & Planning) to achieve a Silver Bicycle Friendly Community (BFC) designation as defined by the League of American Bicyclists (LAB)[36]. The LAB has used the ratio of bicycle staff to population as one of the criteria for BFC designation. Silver BFC Communities average one full-time staff person per 70K population. The City does not have a full-time staff person dedicated to trails and bikeways. The City and County should evaluate trails and bikeway staffing to determine the appropriate levels needed to support this Plan.

Action 8.4: Define the purpose, goals, responsibilities, and duties of the BikeCR Committee

BikeCR is an informal City of Cedar Rapids Committee that meets to discuss ongoing and future trail and bikeway events, projects, plans, and user safety. The Public Works Traffic Division staffs the Committee, which meets monthly. Attendees are generally community members and bicycle advocates. Due to the Committee's informal nature, the Committee is not guided by a set of by-laws, does not have specific duties/responsibilities, nor has a specific membership composition. This Plan recommends that the City outlines the purpose and goals of the Committee and establish specific duties and responsibilities in alignment with the purpose and goals. Through this process, the City should consider whether this becomes a formal Bicycle Advisory Committee (or Bicycle and Pedestrian Advisory Committee), which would include adopted by-laws that outline the Committee's purpose, functions, responsibilities, membership criteria/composition/terms, and meeting format/frequency. For additional information, see Appendix C – Bicycle Advisory Committees.

Action 8.5: Partner with advocacy groups, agencies, schools, and neighboring communities to promote, educate, and provide opportunities to thosewho depend on cycling or are under-represented

The terms "invisible rider" or "invisible cyclist" refer to cyclists not often considered in trail and bikeway planning, design, and advocacy. Low-income cyclists, immigrant populations, youth, and other under-represented populations are frequently left out of the planning process and experience greater barriers to using the trail and bikeway system. This Plan recommends building relationships and establishing partnerships with advocacy groups, community organizations, schools, and other agencies to engage with and provide opportunities to underrepresented populations and create an equitable trail and bikeway system that serves all community members.

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36 *https://bikeleague.org/sites/default/files/BFC%20infographic.pdf*

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Image Credit: Ken Barker

NETWORK IMPLEMENTATION

04

The trails and bikeways network in Linn County and Cedar Rapids is the basic infrastructure that serves people traveling in the community. This chapter addresses the following items:

1. Existing facilities provide the starting point for examining Linn County's and Cedar Rapids' network.
2. Previous planning recommendations have already recommended an expansion of Linn County's and Cedar Rapids' trails and bikeways network.
3. Facility types consisting of two basic types are recommended for future expansion of Linn County's and Cedar Rapids' trails and bikeways network.
4. The future trails and bikeways network lays out a comprehensive vision for where expansion should take place at both the regional and local level. Each future project is prioritized.

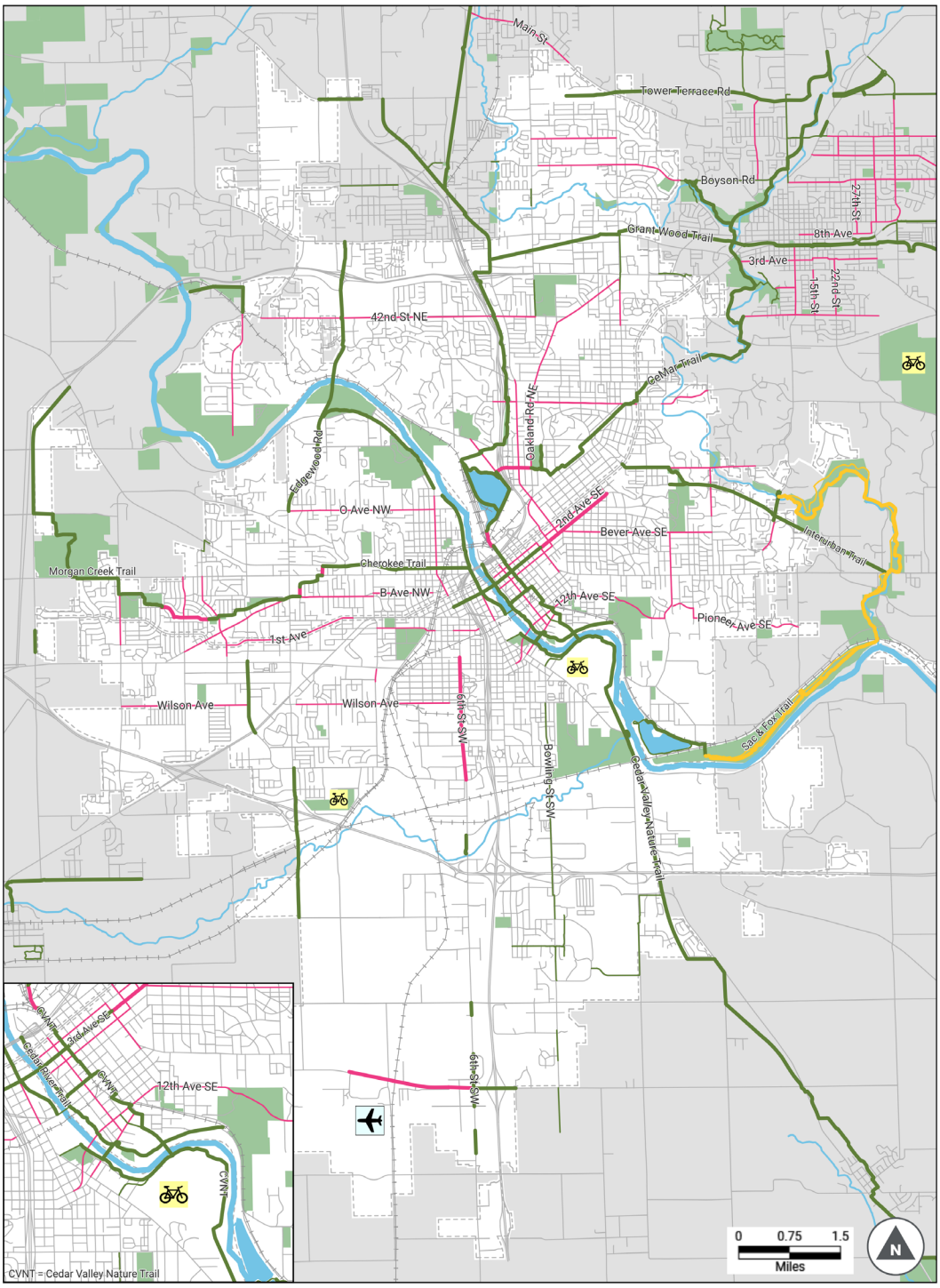
Existing and Funded Facilities

Existing and funded trail and bikeway facilities within the City of Cedar Rapids and Linn County are shown in Figures 4.1 and 4.2. While no formal process designated regional trails and bikeways before this Plan was developed, several major trails had been informally considered regional in nature:

- **Cedar Valley Nature Trail**: Part of the American Discovery Trail and Great American Rail-Trail, it runs generally north-south between the northern and southern city limits. To the north it extends beyond Linn County to Waterloo/Cedar Falls and to the south it merges with the Hoover Nature Trail and heads into Johnson County, where it ends in Solon.
- **CeMar Trail:** connects Cedar Lake and the Cedar Valley Nature Trail to the southeast side city limit boundary with the City of Marion near 33rd St Dr SE and Mt. Calvary Cemetery.
- **Cherokee Trail:** runs east-west in Northwest Cedar Rapids, connecting to the Morgan Creek Trail and eventually to the Ellis Trail and Downtown Cedar Rapids.
- **Edgewood Trail:** generally follows the alignment of Edgewood Rd from the southwest to north-east side of Cedar Rapids.
- **Ellis Trail:** runs along the west side of the Cedar River from Downtown Cedar Rapids to the Edgewood Trail.
- **Grant Wood Trail:** runs east-west in Northeast Cedar Rapids and continues into Marion and Linn County. The east end starts at the Cedar Valley Nature Trail utilizing a former rail corridor as it heads toward Marion.
- **Morgan Creek Trail:** goes through Morgan Creek Park and nearby neighborhoods on Cedar Rapids' west side. It connects to the Cherokee Trail on the south.
- **Sac & Fox Trail:** runs along the Cedar River and Indian Creek on Cedar Rapids' east side.

Formal regional and local designations have now been given to all trails and bikeways in and around Cedar Rapids (Figure 4.1). All Linn County facilities shown later in this chapter are considered regional.

FIGURE 4.1 Existing and funded trails in Cedar Rapids

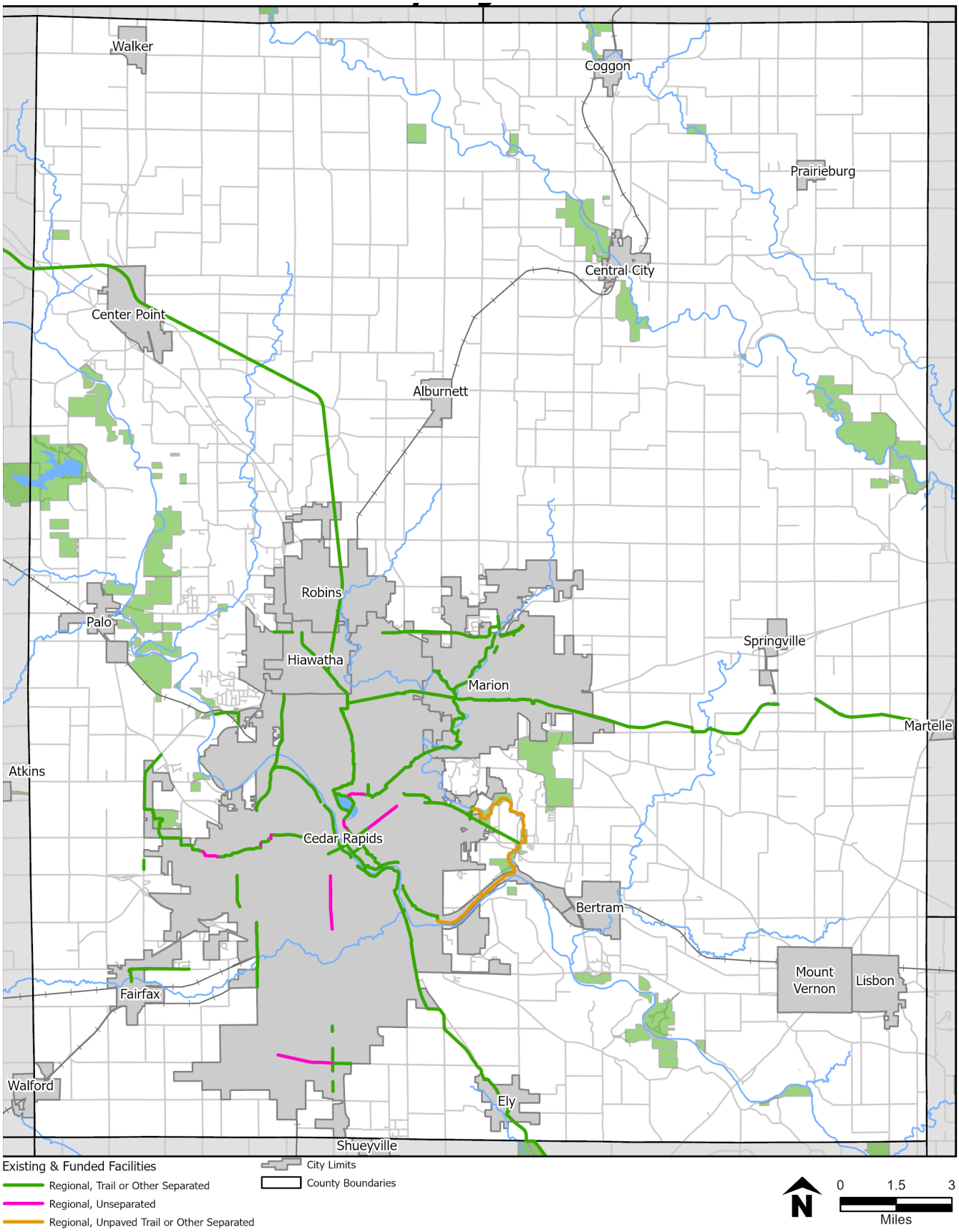


Existing and Funded* Facilities

- Regional, Trail or Other Separated
- Regional, Unseparated
- Regional, Unpaved Trail
- Local, Trail or Other Separated
- Local, Unseparated
- Local, Unpaved Trail
- Mountain Bike Trails

* Some segments may not be 100% committed with local sources of funding.

FIGURE 4.2 Existing and funded trails in Linn County



Updated 4/28/2025

Previous Planning Recommendations

Previous planning recommendations for trails and bikeways were made in the Cedar Rapids Comprehensive Trails Plan (adopted in January 2012) and the map update (adopted in 2015). Additional trails/bikeways have been identified through other community plans, as described in Appendix D and shown in Figure 4.3.

FIGURE 4.3 The plans in this chart included trail and bikeway recommendations that informed future network recommendations

PLAN OWNER	PLAN NAME	DATE ADOPTED
City of Cedar Rapids	6th Street SW Corridor Action Plan	2021
	Budget Book (2023)	2022
	College District Area Action Plan	2018
	Comprehensive Plan (Envision CR)	2021
	Czech Village NewBo Area Action Plan	2019
	Flood Control System Master Plan	2022
	Highway 30 Area Study	2015
	Kingston Village Neighborhood Plan	2013
	Mt. Vernon Road Corridor Action Plan	2017
	Northwest Neighborhood Action Plan	2017
	Parks and Recreation Master Plan	2010
	Tower Terrace Road Corridor Management Plan Update	2019
	Wellington Heights Neighborhood Plan	2013
Linn County	Morgan Creek Master Plan	2015
	Pinicon Ridge County Park Master Plan	2015
	Wanatee Park Master Plan	2015
	Linn County Trails Plan	n/a
Corridor Metropolitan Planning Organization	Highway 100 Corridor Study	2016
	Transportation Improvement Program 2025—2028	2024
State of Iowa	Iowa Bicycle and Pedestrian Long Range Plan	2018

Facility Types

As described in Strategy 1 in Chapter 3, the Plan recommends two basic facility types for Linn County's and Cedar Rapids' future trails and bikeways network: 1) trails and separated bikeways and 2) unseparated bikeways.

Trails and separated bikeways include a physical barrier between motorists and trail/bikeway users, such as vegetation, concrete curbs, and vertical traffic delineators. When a trail or bikeway is placed along a street, separated bikeways are preferred where traffic volumes exceed 6,500 motor vehicles per day or operating speeds are greater than 30 mph, as shown in Figure 4.4. Examples of separated bikeways are shown in Figure 3.2 in Chapter 3.

Unseparated bikeways do not include a physical barrier but instead include visual cues to guide roadway travelers. Examples include painted bicycle lanes, shoulders, advisory lanes, bicycle symbols within a motor vehicle travel lane, and bike route signs. Unseparated bikeways are recommended to be used where traffic volumes are less than 6,500 motor vehicles per day, and operating speeds are 30 mph or less. Examples of unseparated bikeways are shown in Figure 3.2 in Chapter 3.

Exceptions to the guidelines shown in Figure 4.4 may be made on rural roads where providing a separated bikeway is not feasible. In these rural settings, paved shoulders may be used. Shoulder widths should follow the guidance shown in Figure 4.5.

FIGURE 4.4 Guidelines for using separated versus unseparated bikeways in urban, suburban, and small-town settings. Credit: AASHTO Bike Guide

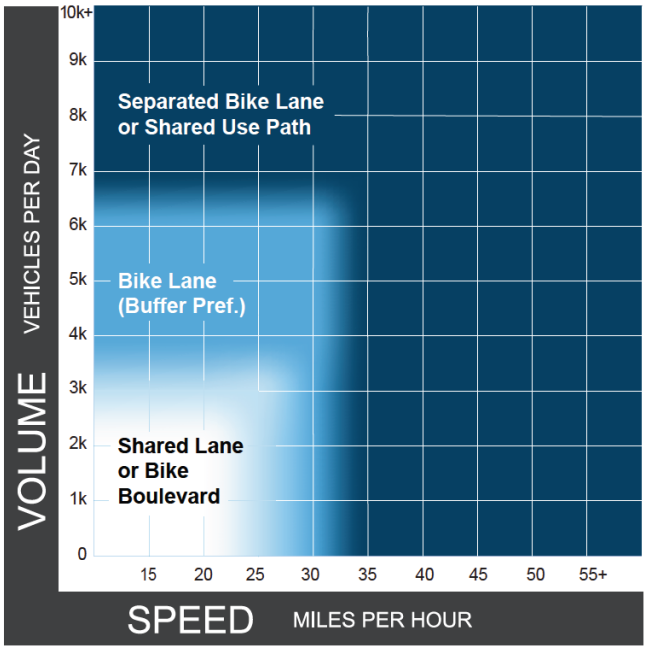
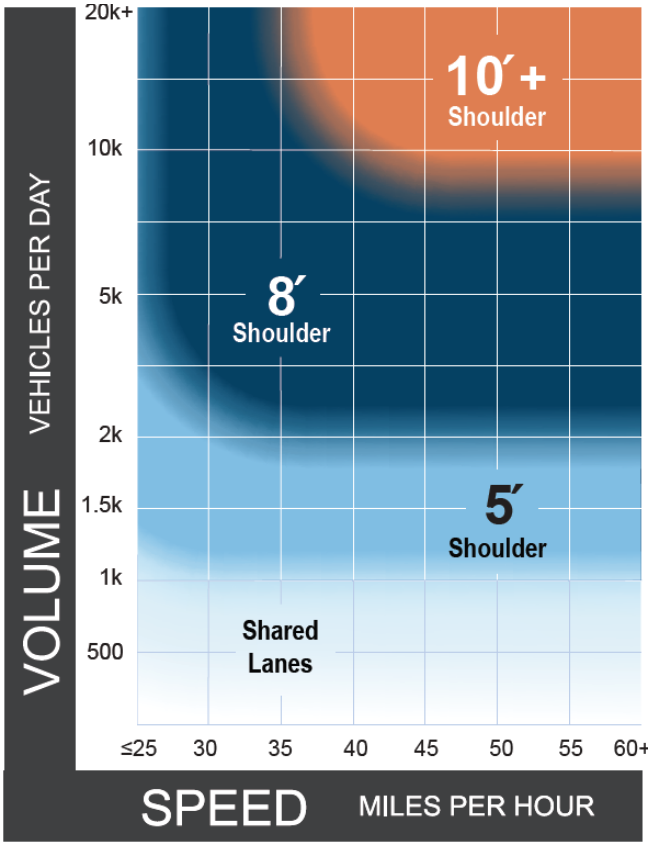


FIGURE 4.5 Guidelines for shoulder widths on rural roads. Credit: AASHTO Bike Guide



Future Trails and Bikeways Network

Cedar Rapids and Linn County's future trails and bikeways network combines the community's preferences from Chapter 2 with goals and strategies from Chapter 3. The vision is a completed network.

As detailed in Action 2.1 of Chapter 3, the future network designates regional versus local facilities. Regional facilities are spaced approximately every 2.5 miles within the City of Cedar Rapids. This spacing increases to every five to 10 miles in more rural areas of Linn County. Local bikeway facilities within Cedar Rapids are spaced approximately every half mile in denser parts of the city and up to every mile in less dense neighborhoods. The future Cedar Rapids trails and bikeways system (Figure 4.7) will double the existing and funded system from 146 miles to 303 miles (Figure 4.6).

As with any plan, the future network identified in this Plan was analyzed at a planning level and does not represent a detailed, site-specific study. While the facility type defined for each project in the network is recommended, different decisions may be made as each project advances based on important factors such as available right-of-way, public support, construction cost, traffic volumes, and overall mobility goals. The City and County will seek to provide the most comfortable and safe facility possible for each project.

Each City project was scored based on six factors, with possible scores of zero, one, or two (Figure 4.8). Each factor was also weighted based on input from the public, the Steering Committee, and Advisory Committee (Figure 4.9):

1. **Crashes (weight = 5):** Projects with higher past crashes involving bicyclists or pedestrians (2015 – 2024). Source: *Iowa DOT's Crash Analysis Tool*
2. **Destinations (weight = 8):** Projects closer to destinations not currently connected to the existing/funded network. Source: *Corridor Metropolitan Planning Organization Destinations Map*
3. **Equity (weight = 8):** Projects in geographic areas currently underserved by the existing/funded network. Source: *Corridor Metropolitan Planning Organization Built Equity Index*
4. **Facility Type (weight = 6):** Projects including more separation from motor vehicle traffic. Source: Figure 4.7
5. **Gaps (weight = 9):** Projects filling gaps in the existing/funded network. Source: Figure 4.7
6. **Transit (weight = 3):** Projects near transit stops. Source: *City transit stop map*

FIGURE 4.6 Miles of each type of trail or bikeway in the existing/funded system, compared to the miles of future facilities.

TRAIL/BIKEWAY TYPE	EXISTING/FUNDED CENTERLINE MILES WITHIN CR CITY LIMITS*	FUTURE CENTERLINE MILES WITHIN CR CITY LIMITS*	TOTAL CENTERLINE MILES WITHIN CR CITY LIMITS*
Regional, Trail or Other Separated	59.0	55.0	114.0
Regional, Unseparated	5.4	0.8	6.2
Local, Trail or Other Separated	27.1	69.3	96.4
Local, Unseparated	54.4	33.6	88.0
Total	**145.9**	**158.7**	**304.6**

**NOTE: SOME TRAILS AND BIKEWAYS ARE NOT WITHIN CEDAR RAPIDS CITY LIMITS BUT ARE OWNED AND OPERATED BY THE CITY OF CEDAR RAPIDS (E.G., SAC & FOX TRAIL).*

FIGURE 4.7 Future trails and bikeways in Cedar Rapids. Project ID numbers correspond with Figures 4.8, 4.9, and 4.10.

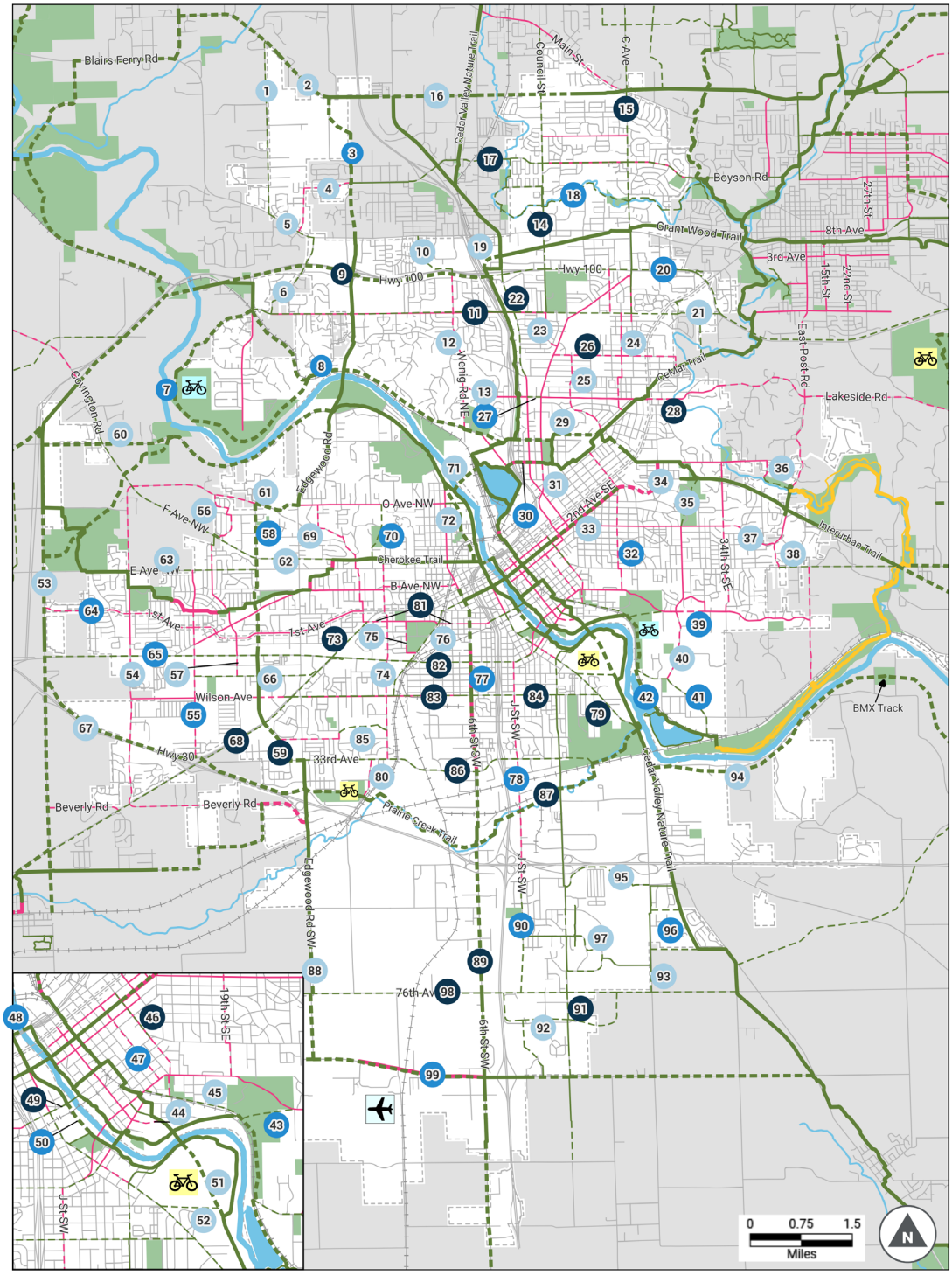


FIGURE 4.8 Each project in Cedar Rapids was scored on 6 factors.

Project Number/Name	Crash score	Destination score	Equity score	Facility type score	Gaps score	Transit score	Total Unweighted Score
	Higher score (2=highest score, 0=lowest score) with . . .						
	More crashes involving bicyclists or pedestrians	More destinations	More disadvantaged communities	More separation	More connections to existing facilities	Closer proximity to transit stops	
1: Milburn Road NE	1	0	1	1	0	0	3
2: Tower Terrace Road NE	0	0	1	1	1	0	3
3: Edgewood Road NE	0	2	1	1	2	1	7
4: Carpenter Road NE/Gibson Drive NE	1	2	1	0	1	1	6
5: Blairs Ferry Road NE	1	0	1	1	0	1	4
6: Ushers Ferry Road NE/42nd Street NE	0	2	1	1	1	1	6
7: 42nd Street NE/Seminole Valley Park Trail/Seminole Valley Trail NE	0	2	1	2	1	0	6
8: Seminole Valley Trail NE/J Avenue NE	0	2	1	2	2	0	7
9: State Highway 100	1	2	1	1	2	1	8
10: Cold Stream Trail	0	2	1	2	0	1	6
11: 42nd Street NE	2	1	1	1	2	2	9
12: Wenig Road NE	1	1	1	0	1	1	5
13: Coldstream Avenue NE	0	1	1	0	1	0	3
14: Council Street NE	2	2	2	1	2	2	11
15: C Avenue NE	2	2	2	1	2	2	11
16: Tower Terrace Road NE	0	0	1	1	2	2	6
17: Boyson Road	1	2	1	1	2	2	9
18: Dry Run Creek Trail/Northbrook Drive NE	0	2	2	2	0	1	7
19: Grant Wood Trail	1	0	0	2	2	1	6
20: State Highway 100	2	2	0	1	2	1	8
21: 42nd Street NE	2	2	0	1	1	1	7
22: Center Point Road NE	2	2	0	1	2	2	9
23: Hollywood Boulevard NE/Council Street NE	0	1	0	0	2	1	4
24: 27th Street NE/Lindale Avenue NE/32nd Street NE/E Avenue NE	0	1	2	0	1	0	4
25: Prairie Drive NE	1	1	0	0	1	1	4
26: 35th Street NE/3rd Avenue SE	2	2	2	0	2	1	9
27: 29th Street NE	2	1	0	1	2	2	8
28: 29th Street NE/SE	2	1	2	0	2	2	9
29: J Avenue NE/Maplewood Drive NE/K Avenue NE	0	1	0	1	2	1	5
30: H Avenue NE	2	1	0	1	2	2	8
31: Oakland Road NE	0	1	0	0	2	2	5
32: 19th Street NE/SE	1	1	2	0	2	2	8
33: 3rd Avenue SE	2	1	0	1	1	2	7
34: Linden Drive SE/Forest Drive SE	1	1	0	0	2	1	5

FIGURE 4.8, continued

Project Number/Name	Crash score	Destination score	Equity score	Facility type score	Gaps score	Transit score	Total Unweighted Scor
	Higher score (2=highest score, 0=lowest score) with . . .						
	More crashes involving bicyclists or pedestrians	More destinations	More disadvantaged communities	More separation	More connections to existing facilities	Closer proximity to transit stops	
35: Bever Park Trail	0	1	0	2	2	1	6
36: Sunland Drive SE/Cottage Grover Parkway SE/E Post Road SE	0	1	0	1	2	0	4
37: 34th Street SE/Bever Avenue SE/E Post Road SE	0	0	1	0	2	0	3
38: Mount Vernon Road SE	0	0	2	1	0	0	3
39: McCarthy Road SE	0	1	2	0	2	1	6
40: Memorial Drive SE	0	2	2	0	1	0	5
41: Otis Road SE/Cole Street SE/Fir Avenue SE	1	2	2	1	1	0	7
42: Prairie Park Fishery Driveway/Van Vechten Park Trail	0	1	2	2	2	0	7
43: Van Vechten Park Trail	0	1	2	2	2	0	7
44: 3rd Street SE	0	1	0	0	2	0	3
45: 15th Avenue SE/Otis Road SE	0	1	0	1	2	1	5
46: 10th Street SE	2	2	0	1	2	2	9
47: 8th Street SE	2	2	0	0	2	2	8
48: Cedar River Trail East/E Avenue NW	2	1	0	1	2	1	7
49: 8th Avenue SW	2	2	0	1	2	2	9
50: Cedar River Trail West	0	2	0	2	2	1	7
51: Cedar Valley Nature Trail	0	0	0	2	2	0	4
52: Hawthorne Drive SW	0	0	0	2	0	2	4
53: 80th Street SW	0	1	1	1	1	0	4
54: Stoney Point Road SW	0	2	1	0	1	1	5
55: West Post Road SW/NW	0	2	2	0	1	2	7
56: Jacolyn Drive NW/Koudsi Boulevard NW/Moose Drive NW/Wolf Drive NW/ Bobcat Drive NW	0	1	1	0	1	0	3
57: Jacolyn Drive SW	1	1	0	0	1	2	5
58: Wiley Boulevard SW (extension of Edgewood Trail)	1	2	1	1	1	1	7
59: Wiley Bouelvard SW/33rd Avenue SW	1	2	1	1	2	2	9
60: Ellis Trail	0	1	1	1	2	0	5
61: Rogers Road NW/O Avenue NW (extension of Edgewood Trail)	1	2	1	1	1	0	6
62: F Avenue NW	1	2	1	1	1	0	6
62: F Avenue NW	1	2	1	1	1	0	6
63: E Avenue NW	0	1	1	1	2	1	6
64: 1st Avenue West	1	1	1	0	2	2	7
65: 16th Avenue SW	0	2	1	1	1	2	7
66: 20th Avenue SW	0	2	0	1	1	2	6
67: US Highway 30 Trail	0	0	1	1	1	1	4

FIGURE 4.8, continued

Project Number/Name	Crash score	Destination score	Equity score	Facility type score	Gaps score	Transit score	Total Unweighted Scor
	Higher score (2=highest score, 0=lowest score) with . . .						
	More crashes involving bicyclists or pedestrians	More destinations	More disadvantaged communities	More separation	More connections to existing facilities	Closer proximity to transit stops	
68: US Highway 151/Williams Boulevard SW	2	2	2	1	1	0	8
69: Woodside Drive NW/Westwood Drive NW/E Avenue NW/21st Street	0	2	0	0	2	1	5
70: Shawnee Park Trail/19th Street NW	0	2	0	2	2	1	7
71: Cedar River Bridge Trail	0	1	0	2	2	0	5
72: Time Check Levee Trail	0	1	0	2	2	1	6
73: Williams Boulevard SW	2	2	2	1	1	2	10
74: 18th Street SW/NW	1	1	2	0	0	2	6
75: 15th Street SW/14th Avenue SW	0	1	0	0	1	1	3
76: Rockford Road SW/3rd Avenue SW	2	1	0	1	1	1	6
77: 6th Street SW	2	1	0	1	2	2	8
78: J Street SW	2	2	2	0	0	2	8
79: 1st Street SW/C Street SW	2	1	2	1	2	2	10
80: 21st Street SW	0	1	1	0	0	1	3
81: 8th Avenue SW	0	2	2	0	2	2	8
82: 16th Avenue SW	2	2	2	1	2	2	11
83: Wilson Avenue SW	1	2	2	1	2	2	10
84: Wilson Avenue SW	2	1	2	1	2	2	10
85: 29th Avenue SW/27th Street SW	1	2	1	1	0	0	5
86: 33rd Avenue SW	2	2	2	1	2	2	11
87: Prairie Creek Trail	0	2	2	2	2	0	8
88: Edgewood Road SW	0	0	2	1	1	0	4
89:- 6th Street SW	1	2	2	1	2	2	10
90: J Street SW	0	2	2	1	1	1	7
91: Kirkwood Boulevard SW	0	2	2	1	2	2	9
92: Prairie Spirit Lane SW/South Prairie Road SW/Prairie Point Road SW/Prairie View Lane SW	0	2	1	1	1	0	5
93: C Street SW	0	0	0	1	1	1	3
94: Old River Road SW	1	2	1	1	1	0	6
95: Miller Avenue Drive SW/Bell Drive SW/Thomas Edison Boulevard SW	0	1	0	1	2	1	5
96: East-West Trails	0	1	1	2	2	1	7
97: Johnson View Parkway SW/Cedar View Parkway SW/Tower Road SW	0	1	0	1	2	2	6
98: 76th Avenue SW	2	2	2	1	1	2	10
99: Wright Brothers Boulevard	0	2	1	1	2	2	8

FIGURE 4.9 Each score within each project in Cedar Rapids was weighted.

Project Number/Name	Crash score	Weight	Destination score	Weight	Equity score	Weight	Facility type score	Weight	Gaps score	Weight	Transit score	Weight	Total Unweighted Score	Total Weighted Score
	More crashes involving bicyclists or pedestrians	5	More destinations	8	More disad-vantaged communities	8	More separation	6	More connections to existing facilities	9	Closer proximity to transit stops	3		
		Score		Score		Score		Score		Score		Score		
14: Council Street NE	2	10	2	16	2	16	1	6	2	18	2	6	11	72
15: C Avenue NE	2	10	2	16	2	16	1	6	2	18	2	6	11	72
82: 16th Avenue SW	2	10	2	16	2	16	1	6	2	18	2	6	11	72
86: 33rd Avenue SW	2	10	2	16	2	16	1	6	2	18	2	6	11	72
83: Wilson Avenue SW	1	5	2	16	2	16	1	6	2	18	2	6	10	67
89: 6th Street SW	1	5	2	16	2	16	1	6	2	18	2	6	10	67
79: 1st Street SW/C Street SW	2	10	1	8	2	16	1	6	2	18	2	6	10	64
84: Wilson Avenue SW	2	10	1	8	2	16	1	6	2	18	2	6	10	64
73: Williams Boulevard SW	2	10	2	16	2	16	1	6	1	9	2	6	10	63
98: 76th Avenue SW	2	10	2	16	2	16	1	6	1	9	2	6	10	63
26: 35th Street NE/3rd Avenue SE	2	10	2	16	2	16	0	0	2	18	1	3	9	63
91: Kirkwood Boulevard SW	0	0	2	16	2	16	1	6	2	18	2	6	9	62
87: Prairie Creek Trail	0	0	2	16	2	16	2	12	2	18	0	0	8	62
17: Boyson Road	1	5	2	16	1	8	1	6	2	18	2	6	9	59
59: Wiley Bouelvard SW/33rd Avenue SW	1	5	2	16	1	8	1	6	2	18	2	6	9	59
28: 29th Street NE/SE	2	10	1	8	2	16	0	0	2	18	2	6	9	58
68: US Highway 151/Williams Boulevard SW	2	10	2	16	2	16	1	6	1	9	0	0	8	57
11: 42nd Street NE	2	10	1	8	1	8	1	6	2	18	2	6	9	56
22: Center Point Road NE	2	10	2	16	0	0	1	6	2	18	2	6	9	56
46: 10th Street SE	2	10	2	16	0	0	1	6	2	18	2	6	9	56
49: 8th Avenue SW	2	10	2	16	0	0	1	6	2	18	2	6	9	56
9 :State Highway 100	1	5	2	16	1	8	1	6	2	18	1	3	8	56
81: 8th Avenue SW	0	0	2	16	2	16	0	0	2	18	2	6	8	56
99: Wright Brothers Boulevard	0	0	2	16	1	8	1	6	2	18	2	6	8	54
8: Seminole Valley Trail NE/J Avenue NE	0	0	2	16	1	8	2	12	2	18	0	0	7	54
42: Prairie Park Fishery Driveway/Van Vechten Park Trail	0	0	1	8	2	16	2	12	2	18	0	0	7	54
43: Van Vechten Park Trail	0	0	1	8	2	16	2	12	2	18	0	0	7	54
20: State Highway 100	2	10	2	16	0	0	1	6	2	18	1	3	8	53
32: 19th Street NE/SE	1	5	1	8	2	16	0	0	2	18	2	6	8	53
41: Otis Road SE/Cole Street SE/Fir Avenue SE	1	5	2	16	2	16	1	6	1	9	0	0	7	52
3: Edgewood Road NE	0	0	2	16	1	8	1	6	2	18	1	3	7	51
47: 8th Street SE	2	10	2	16	0	0	0	0	2	18	2	6	8	50
90: J Street SW	0	0	2	16	2	16	1	6	1	9	1	3	7	50
50: Cedar River Trail West	0	0	2	16	0	0	2	12	2	18	1	3	7	49
70: Shawnee Park Trail/19th Street NW	0	0	2	16	0	0	2	12	2	18	1	3	7	49

FIGURE 4.9, continued

Project Number/Name	Crash score	Weight	Destination score	Weight	Equity score	Weight	Facility type score	Weight	Gaps score	Weight	Transit score	Weight	Total Unweighted Score	Total Weighted Score
	More crashes involving bicyclists or pedestrians	5	More destinations	8	More disad-vantaged communities	8	More separation	6	More connections to existing facilities	9	Closer proximity to transit stops	3		
		Score		Score		Score		Score		Score		Score		
96: East-West Trails	0	0	1	8	1	8	2	12	2	18	1	3	7	49
27: 29th Street NE	2	10	1	8	0	0	1	6	2	18	2	6	8	48
30: H Avenue NE	2	10	1	8	0	0	1	6	2	18	2	6	8	48
77: 6th Street SW	2	10	1	8	0	0	1	6	2	18	2	6	8	48
78: J Street SW	2	10	2	16	2	16	0	0	0	0	2	6	8	48
18: Dry Run Creek Trail/Northbrook Drive NE	0	0	2	16	2	16	2	12	0	0	1	3	7	47
55: West Post Road SW/NW	0	0	2	16	2	16	0	0	1	9	2	6	7	47
58: Wiley Boulevard SW (extension of Edgewood Trail)	1	5	2	16	1	8	1	6	1	9	1	3	7	47
48: Cedar River Trail East/E Avenue NW	2	10	1	8	0	0	1	6	2	18	1	3	7	45
64: 1st Avenue West	1	5	1	8	1	8	0	0	2	18	2	6	7	45
65: 16th Avenue SW	0	0	2	16	1	8	1	6	1	9	2	6	7	45
7: 42nd Street NE/Seminole Valley Park Trail/Seminole Valley Trail NE	0	0	2	16	1	8	2	12	1	9	0	0	6	45
39: McCarthy Road SE	0	0	1	8	2	16	0	0	2	18	1	3	6	45
21: 42nd Street NE	2	10	2	16	0	0	1	6	1	9	1	3	7	44
61: Rogers Road NW/O Avenue NW (extension of Edgewood Trail)	1	5	2	16	1	8	1	6	1	9	0	0	6	44
62: F Avenue NW	1	5	2	16	1	8	1	6	1	9	0	0	6	44
94: Old River Road SW	1	5	2	16	1	8	1	6	1	9	0	0	6	44
63: E Avenue NW	0	0	1	8	1	8	1	6	2	18	1	3	6	43
6: Ushers Ferry Road NE/42nd Street NE	0	0	2	16	1	8	1	6	1	9	1	3	6	42
4: Carpenter Road NE/Gibson Drive NE	1	5	2	16	1	8	0	0	1	9	1	3	6	41
35: Bever Park Trail	0	0	1	8	0	0	2	12	2	18	1	3	6	41
72: Time Check Levee Trail	0	0	1	8	0	0	2	12	2	18	1	3	6	41
40: Memorial Drive SE	0	0	2	16	2	16	0	0	1	9	0	0	5	41
60: Ellis Trail	0	0	1	8	1	8	1	6	2	18	0	0	5	40
33: 3rd Avenue SE	2	10	1	8	0	0	1	6	1	9	2	6	7	39
10: Cold Stream Trail	0	0	2	16	1	8	2	12	0	0	1	3	6	39
92: Prairie Spirit Lane SW/South Prairie Road SW/Prairie Point Road SW/Prairie View Lane SW	0	0	2	16	1	8	1	6	1	9	0	0	5	39
16: Tower Terrace Road NE	0	0	0	0	1	8	1	6	2	18	2	6	6	38
19: Grant Wood Trail	1	5	0	0	0	0	2	12	2	18	1	3	6	38
97: Johnson View Parkway SW/Cedar View Parkway SW/ Tower Road SW	0	0	1	8	0	0	1	6	2	18	2	6	6	38
71: Cedar River Bridge Trail	0	0	1	8	0	0	2	12	2	18	0	0	5	38
66: 20th Avenue SW	0	0	2	16	0	0	1	6	1	9	2	6	6	37
69: Woodside Drive NW/Westwood Drive NW/E Avenue NW/21st Street	0	0	2	16	0	0	0	0	2	18	1	3	5	37

FIGURE 4.9, continued

Project Number/Name	Crash score	Weight	Destination score	Weight	Equity score	Weight	Facility type score	Weight	Gaps score	Weight	Transit score	Weight	Total Unweighted Score	Total Weighted Score
	More crashes involving bicyclists or pedestrians	5	More destinations	8	More disad-vantaged communities	8	More separation	6	More connections to existing facilities	9	Closer proximity to transit stops	3		
		Score		Score		Score		Score		Score		Score		
76: Rockford Road SW/3rd Avenue SW	2	10	1	8	0	0	1	6	1	9	1	3	6	36
54: Stoney Point Road SW	0	0	2	16	1	8	0	0	1	9	1	3	5	36
74: 18th Street SW/NW	1	5	1	8	2	16	0	0	0	0	2	6	6	35
29: J Avenue NE/Maplewood Drive NE/K Avenue NE	0	0	1	8	0	0	1	6	2	18	1	3	5	35
45: 15th Avenue SE/Otis Road SE	0	0	1	8	0	0	1	6	2	18	1	3	5	35
85: 29th Avenue SW/27th Street SW	1	5	2	16	1	8	1	6	0	0	0	0	5	35
95: Miller Avenue Drive SW/Bell Drive SW/Thomas Edison Boulevard SW	0	0	1	8	0	0	1	6	2	18	1	3	5	35
34: Linden Drive SE/Forest Drive SE	1	5	1	8	0	0	0	0	2	18	1	3	5	34
12: Wenig Road NE	1	5	1	8	1	8	0	0	1	9	1	3	5	33
24: 27th Street NE/Lindale Avenue NE/32nd Street NE/E Avenue NE	0	0	1	8	2	16	0	0	1	9	0	0	4	33
31: Oakland Road NE	0	0	1	8	0	0	0	0	2	18	2	6	5	32
36: Sunland Drive SE/Cottage Grover Parkway SE/E Post Road SE	0	0	1	8	0	0	1	6	2	18	0	0	4	32
53: 80th Street SW	0	0	1	8	1	8	1	6	1	9	0	0	4	31
88: Edgewood Road SW	0	0	0	0	2	16	1	6	1	9	0	0	4	31
51: Cedar Valley Nature Trail	0	0	0	0	0	0	2	12	2	18	0	0	4	30
23: Hollywood Boulevard NE/Council Street NE	0	0	1	8	0	0	0	0	2	18	1	3	4	29
57: Jacolyn Drive SW	1	5	1	8	0	0	0	0	1	9	2	6	5	28
67: US Highway 30 Trail	0	0	0	0	1	8	1	6	1	9	1	3	4	26
37: 34th Street SE/Bever Avenue SE/E Post Road SE	0	0	0	0	1	8	0	0	2	18	0	0	3	26
44: 3rd Street SE	0	0	1	8	0	0	0	0	2	18	0	0	3	26
25: Prairie Drive NE	1	5	1	8	0	0	0	0	1	9	1	3	4	25
13: Coldstream Avenue NE	0	0	1	8	1	8	0	0	1	9	0	0	3	25
56: Jacolyn Drive NW/Koudsi Boulevard NW/Moose Drive NW/Wolf Drive NW/Bobcat Drive NW	0	0	1	8	1	8	0	0	1	9	0	0	3	25
2: Tower Terrace Road NE	0	0	0	0	1	8	1	6	1	9	0	0	3	23
5: Blairs Ferry Road NE	1	5	0	0	1	8	1	6	0	0	1	3	4	22
38: Mount Vernon Road SE	0	0	0	0	2	16	1	6	0	0	0	0	3	22
75: 15th Street SW/14th Avenue SW	0	0	1	8	0	0	0	0	1	9	1	3	3	20
1: Milburn Road NE	1	5	0	0	1	8	1	6	0	0	0	0	3	19
80: 21st Street SW	0	0	1	8	1	8	0	0	0	0	1	3	3	19
52: Hawthorne Drive SW	0	0	0	0	0	0	2	12	0	0	2	6	4	18
93: C Street SW	0	0	0	0	0	0	1	6	1	9	1	3	3	18

FIGURE 4.10 Cedar Rapids project details.

PROJECT ID	ROADWAY/TRAIL/ INTERSECTION NAME	PROJECT EXTENTS	LENGTH (MILES)	PROJECT TYPE	LEAD AGENCY (PARTNER/S)	PRIORITY LEVEL	PLANNING LEVEL COST ESTIMATE FOR CITY*	RANKING SCORE	OPPORTUNITIES AND CHALLENGES
1	Milburn Road NE	Blairs Ferry Road NE to Tower Terrace Road NE	2	Local, Trail or Other Separated	City of Cedar Rapids	Low Priority	$$	19	Milburn Road NE largely exists on the northwest border of Cedar Rapids, and is a 28' wide road with 11' travel lanes, 3' paved shoulders, and an approximate 80' right-of-way. A trail on the east side is preferable to avoid unnecessary crossings of Milburn Road NE. Additional right-of-way beyond the edge of pavement varies from 17' to 40'. Potential challenges include trees, driveways, power lines, fences, and homeowner landscaping.
2	Tower Terrace Road NE	Milburn Road NE to Miller Road NE	1	Regional, Trail or Other Separated	City of Cedar Rapids (City of Hiawatha)	Low Priority	$	23	Build a trail on the north side of Tower Terrace Road NE as areas along the north side are annexed into city limits (i.e., Cedar Rapids or Hiawatha). A north side trail will match into the existing trail on the north side of Tower Terrace Road NE, east of Miller Road NE.
3	Edgewood Road NE	Blairs Ferry Road NE to 2000' north of Tower Terrace Road NE	2.1	Regional, Trail or Other Separated	City of Cedar Rapids (City of Hiawatha)	Medium Priority	$	51	Trails are already planned to be built along both sides of the upcoming Edgewood Road NE extension project.
4	Carpenter Road/ Gibson Drive NE	Miller Road NE to Blairs Ferry Road NE	1.1	Local, Unseparated	City of Cedar Rapids	Low Priority	$	41	Carpenter Road is approximately 25' wide with no curbs and parking allowed. A 5' shoulder was recently marked on the south side from Gibson Drive to Miller Road. Just east of Gibson Drive NE, Carpenter widens to 32' wide and includes curbs and sidewalks. Gibson Drive NE is 32' wide with curbs and sidewalks. Parking is prohibited along a southern segment of Gibson Drive NE, but is otherwise allowed. Adding bike boulevard-related traffic calming features to these streets is the likeliest opportunity since parking removal for bike lanes would likely be a challenge.
5	Blairs Ferry Road NE	Milburn Road NE to Ushers Ferry Road NE	0.6	Local, Trail or Other Separated	City of Cedar Rapids	Low Priority	$	22	A trail on the north side of Blairs Ferry Road NE would best serve more densely populated neighborhoods within municipal limits, as well as be in closer proximity to Viola Gibson Elementary. The width of the road varies from 24' to 50' depending upon the number of lanes, resulting in additional right-of-way behind the curb varying from 30' to 40'. Potential challenges include power lines, ditch drainage, driveways, trees, signs, fire hydrants, utility boxes, and a waterway crossing near Ushers Ferry Road.
6	Ushers Ferry Road NE/42nd Street NE	Preserve Lane NE to Ushers Ferry Road (42nd Street) and 42nd Street to Blairs Ferry Road NE	1.3	Local, Trail or Other Separated	City of Cedar Rapids (Linn County)	Low Priority	$$	42	Ushers Ferry Road NE is approximately 25' wide with varying road ownership between the City of Cedar Rapids and Linn County. The road widens near Highway 100 where left turn lanes are present. Right-of-way varies widely from 24' to 160'. Potential challenges may include right-of-way acquisition, ditch drainage, trees, power lines, utility boxes, and driveways. Both sides of Ushers Ferry Road NE should be evaluated to determine a preferred trail alignment. Along 42nd Street NE, the sidewalk on the north side should be widened to trail width.
7	42nd Street NE/ Seminole Valley Park Trail/Seminole Valley Trail NE	Iowa Northern Railway Company to Preserve Lane NE	3.4	Regional, Trail or Other Separated	City of Cedar Rapids (Linn County)	Medium Priority	$$$	45	42nd Street NE is a dead end road with shared ownership between the City of Cedar Rapids and Linn County. It has an approximate 24' width and a right-of-way varying between 65' and 75'. Potential challenges along the 42nd Street NE segment include ditch drainage, trees, rock landscaping, steep slopes, driveways, fire hydrants, and utility boxes. Between 42nd Street's dead end and City-owned Seminole Valley Park, there are a handful of private property parcels, creating a right-of-way acquisition challenge. Trail development through Seminole Valley Park is flexible due to the large amount of land owned by the City. Along Seminole Valley Trail NE, a trail is being built on the southeast side as houses are being built. This trail may lead to a City-owned parcel next to 5515 Seminole Valley Trail NE that may lead to the Iowa Northern Railway Company corridor with additional right-of-way acquisition.
8	Seminole Valley Trail NE/J Avenue NE	42nd Street NE to Sierra Drive NE	3.7	Regional, Trail or Other Separated	City of Cedar Rapids	Medium Priority	$$$	54	Build a rail with trail facility along the track operated by the Iowa Northern Railway Company between 42nd Street NE and Mohawk City Park. Between 42nd Street at the City's access at Seminole Valley Trail NE (see project #7), a trail on the southwest side of the tracks would provide access for future housing southwest of the railroad. Alternatively, if a rail-with-trail proves infeasible, the trail could be placed on the northeast side of the tracks, working with Riverbend Nature Association (a large landowner in the area). However, a gun range on the northeast side of the tracks owned by the Izaak Walton League is a potential challenge. Since the tracks run close to the Cedar River between Seminole Valley Trail NE and J Avenue NE, a rail-with-trail facility should be placed on the north side in this segment. At the Edgewood Avenue bridge and trail, a connecting trail should be built. At J Avenue, a trail on the north side would connect with Shaver Park. J Avenue NE has a road width varying from 25' to 35' and a right-of-way width varying from 60' to 80'. Both sides of the road should be evaluated to determine a preferred trail alignment, but a north side trail may preferred due to the Shaver Park connection. Potential challenges include the railroad, right-of-way acquisition, steep slopes, power lines, and trees.
9	State Highway 100	Iowa Northern Railway Company railroad to Cedar Valley Nature Trail	3.2	Regional, Trail or Other Separated	City of Cedar Rapids (Iowa DOT, Linn County)	High Priority	$$$	56	Build a trail on the north side of State Highway 100 between Ushers Ferry Road NE and Edgewood Road NE due to an existing trail easement. Between Edgewood Road NE and the Cedar Valley Nature Trail, both sides of State Highway 100 should be evaluated to determine a preferred trail alignment. Iowa DOT right-of-way and City-owned land present opportunities in this segment, although potential challenges include right-of-way acquisition from private property owners, crossings at Edgewood Road NE and I-380, steep slopes, trees, waterways, and fences. The south side may be preferred due to the proximity of City-owned Twin Pines Golf Course and Kennedy High School.

* $ = Low, $$ = Medium, $$$ = High

FIGURE 4.10, continued

PROJECT ID	ROADWAY/TRAIL/ INTERSECTION NAME	PROJECT EXTENTS	LENGTH (MILES)	PROJECT TYPE	LEAD AGENCY (PARTNER/S)	PRIORITY LEVEL	PLANNING LEVEL COST ESTIMATE FOR CITY*	RANKING SCORE	OPPORTUNITIES AND CHALLENGES
10	Cold Stream Trail	Wenig Road NE to Blairs Ferry Road NE	0.7	Local, Trail or Other Separated	City of Cedar Rapids (Iowa DOT)	Low Priority	$$$	39	Build a trail along future right-of-way which would need to be acquired from Radiant Church (3233 Blairs Ferry Road NE) leading to State Highway 100 right-of-way. The City of Cedar Rapids also owns land along this corridor. A bridge would be required over Highway 100. This trail has the opportunity to connect residential areas south of Highway 100 with residential areas north of Blairs Ferry Road NE, as well as Five Seasons Manufactured Home Community (3421 Blairs Ferry Road). Inbetween is a large shopping area with Wal-Mart, Sam's Club, Lowe's, and Aldi as major destinations. Potential challenges include waterways, trees, right-of-way acquisition, and tunnel design.
11	42nd Street NE	Ushers Ferry Road NE to Old Marion Road NE	3.6	Local, Trail or Other Separated	City of Cedar Rapids	High Priority	$$$	56	Build a trail along one side of 42nd Street NE. Both sides of the street should be evaluated to determine a preferred trail alignment, but the north side is likely preferred due to the presence of schools and parks (i.e., Xavier, Twin Pines Golf Course, Kennedy High, Pierce Elementary, and Noelridge Aquatic Center). The existing sidewalks may be widened into a trail. Likely challenges include driveways, fire hydrants, traffic signals, power lines, McLoud Run, business signs, off-street parking lots, street lights, retaining walls, and fencing.
12	Wenig Road NE	J Avenue NE to Towne House Drive NE	1.8	Local, Unseparated	City of Cedar Rapids	Low Priority	$	33	Wenig Road NE is a 32' wide street with varying characteristics. North of White Pine Drive NE, there are no pavement markings and parking is allowed on the east side during non-school hours. Between White Pine Drive NE and Falbrook Drive NE, a center left turn lane is marked with no parking allowed. Between Falbrook Drive NE and Glass Road NE, there are no pavement markings and parking is allowed on both sides. Between Glass Road NE and Coldstream Avenue NE, an offset centerline is marked and parking is allowed on the west side. Between Coldstream Avenue NE and J Avenue NE, a centerline is marked and no parkings is allowed. In several segments, a bike boulevard or bike lanes are opportunities. Where parking removal is a challenge, a bike boulevard with traffic calming is the preferred option. Near Kennedy High School and 42nd Street NE, a separated bicycle facility may be preferred due to high peak traffic volumes during arrivals, dismissals, and events.
13	Coldstream Avenue NE	Wenig Road NE to Sierra Avenue NE	0.5	Local, Unseparated	City of Cedar Rapids	Low Priority	$	25	Coldstream Avenue NE is 32' wide. Between Wenig Road NE and Linmar Drive NE, parking is allowed on the north side with an offset double yellow centerline. Between Linmar Drive NE and Sierra Avenue NE, parking is generally allowed on both sides and no pavement markings exist. Due to the steep westbound slope between Linmar Drive NE and Wenig Road NE, a climbing buffered bike lane on the north side is preferable if parking can be removed. However, a bike boulevard treatment with traffic calming along the entire 0.5 segment would also help to create a more pedestrian-friendly environment since sidewalks are intermittent along Coldstream Avenue NE.
14	Council Street NE	Noelridge Park Driveway to Frentress Drive NE	2.4	Local, Trail or Other Separated	City of Cedar Rapids (City of Robins)	High Priority	$$	72	A trail on the east side of Council Street NE will match into the existing trail along Noelridge Park, south of the Noelridge Park driveway. Where sidewalks exist, they should be widened to a trail. At the north end of the project, the trail should shift to the west side of Council Street NE at Fox Trail Drive NE. Potential challenges include power lines, street lights, utility boxes, trees, waterways, ditch drainage, traffic signals, driveways, fire hydrants, private parking lots, and transit shelters.
15	C Avenue NE	Grant Wood Trail to Echo Hill Road NE	2.9	Local, Trail or Other Separated	City of Cedar Rapids	High Priority	$$$	72	Build a trail on the east side of C Avenue NE to match into the existing trail between the Grant Wood Trail and Nilsen Road NE. Potential challenges include trees, fences, utility boxes, traffic signals, retaining walls, narrow right-of-way near Brentwood Drive, the Dry Creek Bridge, power lines, and driveways.
16	Tower Terrace Road NE	Chicago, Central, & Pacific Railroad to Monterey Drive NE	0.7	Regional, Trail or Other Separated	City of Cedar Rapids (City of Robins)	Low Priority	$	38	As Tower Terrace Road NE is constructed, build trails on both sides of the road.
17	Boyson Road	Dry Run Creek Court NE to Walden Road NE	0.6	Local, Trail or Other Separated	City of Cedar Rapids	High Priority	$$	59	A trail on the south side of Boyson Road NE would match into the existing trail on the south side of the Dry Run Creek Bridge, as well as segments further west in the City of Robins. Potential challenges include utility boxes, trees, fire hydrants, power lines, street lights, driveways, and traffic signals. As it heads east towards Council Street NE the future trail should cross Boyson Road NE to match future plans for a trail on the north side between Council Street NE and C Avenue NE.
18	Dry Run Creek Trail/ Northbrook Drive NE	Boyson Road NE to City of Marion municipal boundary	3.5	Local, Trail or Other Separated	City of Cedar Rapids (City of Hiawatha)	Medium Priority	$$$	47	Build a greenway trail along Dry Run Creek Trail, working with the City of Hiawatha. Between Boyson Road NE and the City of Hiawatha municipal boundary, the City of Cedar Rapids owns land on both sides of Dry Run Creek. Within the City of Hiawatha segment, the land is owned by the City of Hiawatha. Between the Hiawatha/Cedar Rapids boundary and Broderick Park there are three private property owners: St Andrew's Golf Club, Metro Youth Football Association, and Timberland Partners LLP. Between Broderick Park and the Marion/Cedar Rapids boundary, Rockwell Collins is a private property owner. The primary challenge along this greenway corridor will be right-of-way acquisition. Northbrooke Drive NE between Dry Run Creek and Council Street NE may include a trail on the north side as an interim and long term connection.
19	Grant Wood Trail	I-380 to Center Point Road NE	0.3	Regional, Trail or Other Separated	City of Cedar Rapids	Low Priority	$$	38	A rail with trail facility along the track owned by Canadian National Railroad would provide a greenway alternative connecting the Grant Wood Trail to the Cedar Valley Nature Trail. The primary challenge along this corridor would be right-of-way acquisition.

* $ = Low, $$ = Medium, $$$ = High

FIGURE 4.10, continued

PROJECT ID	ROADWAY/TRAIL/ INTERSECTION NAME	PROJECT EXTENTS	LENGTH (MILES)	PROJECT TYPE	LEAD AGENCY (PARTNER/S)	PRIORITY LEVEL	PLANNING LEVEL COST ESTIMATE FOR CITY*	RANKING SCORE	OPPORTUNITIES AND CHALLENGES
20	State Highway 100	Cedar Valley Nature Trail to N Property Lane SE	3	Local, Trail or Other Separated	City of Cedar Rapids (Iowa DOT, City of Marion)	Medium Priority	$$	53	Build trails on both sides of State Highway 100 within DOT right-of-way, to match into the existing trails on both sides of the highway between N Park Place NE and Twixt Town Road NE. Potential challenges include steep slopes, ditch drainage, trees, fences, right-of-way acquisition, power lines, waterways, driveways, utility boxes, major intersection crossings, fire hydrants, traffic signals, off-street parking lots, access roads, and street lights.
21	42nd Street NE	Old Marion Road NE to State Highway 100, including spurs to 1st Avenue and Indian Creek	2.3	Local, Trail or Other Separated	City of Cedar Rapids	Low Priority	$$$	44	Between Old Marion Road NE and C Avenue NE, an approximate 25' right-of-way exists with the exception of 2 parcels. It is currently used for power lines and is largely incorporated into back yards, with potential challenges including fences, trees, landscaping, and adjacent property owner opposition. Between C Avenue NE and Collins Road NE/State Highway 100, the alignment is privately owned, with some larger parcels owned by Cedar Memorial Park Cemetery Association and ITC Midwest LLC. At the far east end, the spur south to Indian Creek is privately owned. The spur north along Glenbrook Drive SEand 1st Avenue East contains public right-of-way. Potential challenges east of C Avenue NE include right-of-way acquisition, the crossing at 1st Avenue East, and trees.
22	Center Point Road NE	32nd Street NE to Cedar Valley Nature Trail	1.3	Local, Trail or Other Separated	City of Cedar Rapids	High Priority	$$	56	Center Point Road NE is a 35mph, 5-lane road between State Highway 100 and Texas Avenue NE, and a 4-lane road between Texas Avenue NE and 32nd Street NE. In general, sidewalks are more prevalent on the east side of Center Point Road NE, which has more residential use. Since sidewalks on the west side will need to be built, and the existing Cedar Valley Nature Trail north of State Highway 100 is on the west side, a trail on the west side is preferred. Adequate right-of-way generally exists on the west side behind the existing curb. Potential challenges include power lines, trees, off-street parking lots, driveways, business signs, utility boxes, trees, transit shelters, landscaping, traffic signals, fire hydrants, street lights, ditch drainage, and the State Highway 100 bridge.
23	Hollywood Boulevard NE/ Council Street NE	Oakland Road NE to 42nd Street NE	0.5	Local, Unseparated	City of Cedar Rapids	Low Priority	$	29	Council Street NE and Hollywood Boulevard NE are 25mph local streets with varying widths and uses. Council Street NE between 42nd Street NE and 40th Street NE is 40' wide with 3 lanes and parking is not allowed. Council Street NE between 40th Street NE and Hollywood Boulevard NE is 34' wide with various parking rules due to the presence of Wright Elementary. Hollywood Boulevard NE between Council Street NE and Richmond Road NE is 26' wide with parking allowed on both sides. Hollywood Boulevard NE between Richmond Road NE and Oakland Road NE is 34' wide with parking allowed on both sides. In several segments, a bike boulevard or bike lanes are opportunities. Where parking removal is a challenge or unnecessary due to lower traffic volumes, a bike boulevard with traffic calming is the preferred option. Near Wright Elementary, a separated bicycle facility may be preferred due to high peak traffic volumes during arrivals, dismissals, and events.
24	27th Street NE/Lindale Avenue NE/32nd Street NE/E Avenue NE/F Avenue NE	CeMar Trail to Collins Road NE	1.7	Local, Unseparated	City of Cedar Rapids	Low Priority	$	33	This series of 25mph residential streets generally allow parking on both sides and are 32' wide. Due to lower traffic volumes, a bike boulevard with traffic calming is the facility type best suited to this corridor. Exceptions may include E Avenue NE adjacent to Kenwood Elementary and 32nd Street NE between E Avenue NE and Lindale Avenue NE, where bike lanes or separated facilities may be better suited due to higher traffic volumes.
25	Prairie Drive NE	CeMar Trail to 35th Street NE	1.1	Local, Unseparated	City of Cedar Rapids	Low Priority	$	25	Prairie Drive NE is a 25mph local street from 20' to 32' in width in its northern stretches. Parking is allowed on both sides. A bike boulevard with traffic calming is best suited to lower traffic volumes in this segment. Between 27th Street NE and the CeMar Trail, the street is 36' wide and becomes busier with parking not allowed on its northeast side. In this segment, parking removal and bike lanes are preferable. However, if parking removal proves infeasible, a trail can be built on the southwest side of Prairie Drive NE adjacent to Mount Mercy University and Regis Middle School.
26	35th Street NE/3rd Avenue SE	Oakland Road NE to CeMar Trail	1.6	Local, Unseparated	City of Cedar Rapids	High Priority	$	63	A 30mph local street, 35th Street NE west of 1st Avenue East is 36' wide with parking generally allowed on both sides. This segment is best suited to a bike boulevard with traffic calming where traffic volumes are lower and parking removal is infeasible or unnecessary. As 35th Street NE approaches 1st Avenue East, the street widens to 40' and has 3 marked lanes. In this section, bike lanes are needed. East of 1st Avenue East, 35th Street Drive SE (30mph local street) and 3rd Avenue SE (25mph local street) narrow to less than 30' and are best suited as a bike boulevard.
27	29th Street NE	Russell Drive NE to Oakland Road NE	0.1	Local, Trail or Other Separated	City of Cedar Rapids	Medium Priority	$	48	As 29th Street NE is rebuilt through the Center Point Road NE intersection, painted bike lanes should transition to separated bike lanes due to high traffic volumes. The 30mph, minor arterial is 36' wide with 3 traffic lanes as it approaches Oakland Road NE. The right-of-way is approximately 60'. Since there are no sidewalks in this segment, a separated bike facility may need to be combined with a pedestrian facility.

* $ = Low, $$ = Medium, $$$ = High

FIGURE 4.10, continued

PROJECT ID	ROADWAY/TRAIL/ INTERSECTION NAME	PROJECT EXTENTS	LENGTH (MILES)	PROJECT TYPE	LEAD AGENCY (PARTNER/S)	PRIORITY LEVEL	PLANNING LEVEL COST ESTIMATE FOR CITY*	RANKING SCORE	OPPORTUNITIES AND CHALLENGES
28	29th Street NE/SE	CeMar Trail to Indian Creek Bridge	0.3	Local, Unseparated	City of Cedar Rapids	High Priority	$	58	Bike lanes are needed along 29th Street, particularly through the intersection with 1st Avenue East. West of 1st Avenue East, the street widens to 38' as it approaches 1st Avenue East and has 3 lanes. East of 1st Avenue East, the street is 35' also with 3 lanes. East of the 3-lane cross section, parking is allowed on the south side and is not allowed on the north side. 29th Street is a 30mph minor arterial. Available right-of-way varies from 60' to 70'. Potential challenges include narrowing traffic lanes and removing parking. Due to traffic volumes approaching 6,000, it may be preferable to create bicycle facilities separated from traffic. Placing these next to sidewalks or creating combined 8' trail facilities may be an opportunity. Potential challenges with this approach include traffic signals, trees, retaining walls, angled parking at 2903 1st Avenue East, street lights, power lines, and landscaping.
29	J Avenue NE/Maplewood Drive NE/K Avenue NE	Cedar Valley Nature Trail to CeMar Trail	1.1	Regional, Trail or Other Separated	City of Cedar Rapids	Low Priority	$$	35	Both sides of J Avenue NE should be evaluated for a trail. West of Center Point Road NE, J Avenue NE is a 30mph, 36' wide local street with parking not allowed near Center Point Road NE. Between Center Point Road NE and Oakland Avenue NE, J Avenue NE narrows to 32' with parking allowed on both sides. The north side of J Avenue NE does not currently have a sidewalk, and as a result a trail on the north may be beneficial. Between Oakland Avenue NE and Maplewood Drive NE the spped limit changes to 25mph. A trail on the south side may be more feasible due to City owned property along Daniels Park. Along Maplewood Drive NE, both sides of the street should be evaluated for a trail. A trail along the west side of Maplewood Drive NE heads south towards H Avenue NE where it connects to the CeMar Trail. Adequate right-of-way exists to widen existing sidewalks on either side. K Avenue is generally a curbless street with varying narrow widths and a sidewalk along the south side. There are fewer private property owners on the north due to Mount Mercy University's presence. Widening the south sidewalk to a trail may be more challenging due to the higher number of vehicles parking in the boulevard. Potential challenges with a north side trail include driveways, steep slopes, and trees. East of 1859 K Avenue NE, a nearly 8' wide south sidewalk could be widened to a regional trail facility.
30	H Avenue NE	Cedar Lake Trail to CeMar Trail	0.4	Regional, Trail or Other Separated	City of Cedar Rapids	Medium Priority	$$	48	H Avenue NE is a 30mph collector roadway with an interchange with I-380. Due to high traffic volumes, painted buffered bike lanes should be made separated by temporarily installing bollards or permanently switching the alignments of the street frontage with the bike lanes. An alternative opportunity could be to shift the curbs north or south and widen a sidewalk on one side of H Avenue NE to a trail. For this latter option, additional trail and boulevard space could be achieved by removing the painted buffered bike lanes.
31	Oakland Road NE	College Drive NE to H Avenue NE	0.4	Local, Unseparated	City of Cedar Rapids	Low Priority	$	32	Oakland Road NE is a one-way 30mph, 36' wide arterial with 2 northbound lanes and parking allowed on both sides. South of E Avenue NE there is a northbound, right-hand, curbside bike lane on College Drive NE and north of H Avenue NE there is a northbound, right-hand curbside bike lane on Oakland Road NE. To create a continuous northbound curbside facility, parking can be removed from the east side. If west side parking removal is more feasible, east side parking may be retained instead, with a northbound bike lane between the parking lane and right-hand northbound travel lane. Conversion to two-way operation is expected in the next 5 years. A northbound bike lane is preferred to pair with the southbound bike lane on Center Point Road NE. Both Center Point Road NE and Oakland Road NE were one-way pairs until Center Point Road NE was converted to two-way in 2023.
32	19th Street NE/SE	12th Avenue SE to CeMar Trail	1.8	Local, Unseparated	City of Cedar Rapids	Medium Priority	$	53	19th Street SE is a 30mph arterial roadway to 1st Avenue East where it changes to a 25mph local street between 1st Avenue East and E Avenue NE. Between 12th Avenue SE and 3rd Avenue SE, 19th Street SE is 30' to 34' wide with an offset marked centerline and parking allowed on the east side. In this segment, parking can be removed to add painted bike lanes. At Mount Vernon Road SE, a short segment of separated bike lanes will be needed to protect bicyclists on this busy road. Between the CeMar Trail and 1st Avenue East, 19th Street NE is a lower traffic residential street with parking on both sides. A bike boulevard facility with traffic calming is preferable. Between 1st Avenue East and 3rd Avenue SE, 19th Street SE varies in width with restricted parking and many turn lanes. In this segment, lanes may be narrowed and the least needed turn lanes may be removed to add painted bike lanes.
33	3rd Avenue SE	8th Street SE to 19th Street SE	1	Regional, Trail or Other Separated	City of Cedar Rapids	Low Priority	$$	39	An opportunity exists in this segment to extend separated bike lanes already on 3rd Avenue SE southwest of 8th Street SE by switching the location of bike lanes and parking. Between 8th SE Street and Bever Avenue SE, parking exists on both sides. Between Bever Avenue SE and 19th Avenue SE, parking exists only on the northwest side of the street. In this latter segment, the curbside bike lane can become separated by moving it to the sidewalk level within the boulevard near the sidewalk. The boulevard is sufficiently wide to accommodate an eastbound separated bike lane. 3rd Avenue SE is a 30mph arterial for this segment.
34	Linden Drive SE/Forest Drive SE	19th Street SE to Cottage Grove Avenue SE	0.8	Regional, Unseparated	City of Cedar Rapids	Low Priority	$	34	Linden Drive SE and Forest Drive SE are local streets that vary in width between 25' and 36' with a posted speed limit of 25mph. Parking is not allowed and a centerline is marked. Where sufficient width exists, bike lanes can be marked. Where it does not exist, and bike boulevard facility with traffic calming can slow traffic enough to make it safer and more comfortable for bicycling.
35	Bever Park Trail	Memorial Drive SE to Interurban Trail	0.6	Local, Trail or Other Separated	City of Cedar Rapids	Low Priority	$$	41	Build a trail through Bever Park to connect Memorial Drive SE with the funded Interurban Trail, enabling neighborhoods south of Bever Park to connect with this new regional facility.

* $ = Low, $$ = Medium, $$$ = High

FIGURE 4.10, continued

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36	Sunland Drive SE/Cottage Grove Parkway SE/E Post Road SE	Cottage Grove SE to City of Cedar Rapids Municipal Boundary	1	Local, Unseparated	City of Cedar Rapids (Linn County)	Low Priority	$	32	Along local 25mph streets Sunland DriveSE and Cottage Grove Parkway SE, a bike boulevard facility with traffic calming is preferred, although a trail may be used as an alternative within Cottage Grove Parkway Park. Along East Post Road SE, existing 4' paved shoulders may be widened to 6' in coordination with Linn County to provide a safer and more comfortable facility for bicyclists.
37	34th Street SE/Bever Avenue SE/E Post Road SE	Pioneer Avenue SE to Terry Drive SE	2.2	Local, Unseparated	City of Cedar Rapids	Low Priority	$$	26	34th Street SE between Terry Drive SE and Bever Avenue SE is 24' wide, 30mph collector street with no parking allowed and a marked centerline. 34th Street SE can be widened to include shoulders to match existing shoulders north of Terry Drive SE. Potential challenges include retaining walls, steep slopes, and trees. Bever Avenue SE is a 25mph, 32' wide collector and allows parking on both sides. If parking can be removed, bike lanes or shoulders can be striped to provide space for pedestrians since sidewalks are not present. Between Lost Valley Road SE and Red Fox Road SE, Bever Avenue SE is a dead end street. If right-of-way can be obtained from 1 or 2 private property owners, a short trail can be built to connect the street for bicyclists and pedestrians. East Post Road SE between Bever Avenue SE and Mount Vernon Road SE is 40' wide with 2 travel lanes and no parking allowed. Buffered bike lanes can be striped.
38	Mount Vernon Road SE	E Post Road SE to 44th Street SE	0.4	Local, Trail or Other Separated	City of Cedar Rapids (Linn County)	Low Priority	$$	22	Build a trail on the south side of Mount Vernon Road SE to connect East Post Road SE with 44th Street. Potential challenges include power lines, driveways, trees, and steep slopes. Currently cyclists and pedestrians use an existing 5' wide shoulder on both sides.
39	McCarthy Road SE	Memorial Drive SE to 30th Street SE	0.3	Local, Unseparated	City of Cedar Rapids	Medium Priority	$	45	If and when McCarthy Avenue SE is extended east to meet Pioneer Avenue SE, the existing bike facility on 30th Street SE/Seely Avenue SE/Memorial Drive SE can shift to this new street. If the street does not directly connect to Pioneer Avenue SE, right-of-way should be preserved for a local trail connection.
40	Memorial Drive SE	Otis Road SE to McCarthy Road SE	0.8	Local, Unseparated	City of Cedar Rapids	Low Priority	$	41	North of 1647 Memorial Drive SE, the 30mph local street is 32' wide with parking allowed, curbs, and no marked centerline. South of this point, Memorial Drive varies in width but is generally 26' or less and has no curbs. In the northern segment, bike lanes may be striped if parking can be removed. In the southern segment, experimental advisory shoulders may be considered to provide space for bicyclists and pedestrians.
41	Otis Road SE/Cole Street SE/Fir Avenue SE	Prairie Park Fishery Driveway to Sac & Fox Trail	1.3	Local, Trail or Other Separated	City of Cedar Rapids	Medium Priority	$$	52	A trail should be built on the south and west side of Otis Road due to large amount of City-owned property that already exists in this area. Along Cole Street's west side and Fir Street's south side, there are 3 property owners: the City of Cedar Rapids, Cargill, and C & NW Trans Co. Potential challenges include ditch drainage, power lines, trees, fences, utility boxes, driveways, waterways, and steep slopes. While adequate right-of-way exists in many segments beyond the roadway's edge, in some locations, the road may need to be shifted in the other direction to avoid the need for right-of-way acquisition.
42	Prairie Park Fishery Driveway/Van Vechten Park Trail	Prairie Park Fishery parking lot to Otis Avenue SE crossing of north railroad tracks	1.3	Regional, Trail or Other Separated	City of Cedar Rapids	Medium Priority	$$	54	Starting at the Prairie Park Fishery Loop Trail, build a new Trail along the Prairie Park Fishery Driveway, which is owned by the City of Cedar Rapids. A north-south trail can be built through Van Vechten Park from the Prairie Park Fishery Driveway then over the Otis Road SE crossing of the south railroad tracks to the Otis Road SE crossing of the north railroad tracks.
43	Van Vechten Park Trail	Otis Avenue SE to McCarthy Road SE	0.4	Local, Trail or Other Separated	City of Cedar Rapids	Medium Priority	$$	54	Build an east-west trail through Van Vechten Park to connect the Otis Road SE trail with the McCarthy Road SE bikeway.
44	3rd Street SE	16th Avenue SE to Cedar Valley Nature Trail	0.2	Local, Unseparated	City of Cedar Rapids	Low Priority	$	26	As 3rd Street SE is extended, bike lanes should be added to connect the bikeway northwest of 16th Avenue SE with the Cedar Valley Nature Trail.
45	15th Avenue SE/Otis Road SE	12th Avenue SE to crossing of railroad tracks	0.7	Local, Trail or Other Separated	City of Cedar Rapids	Low Priority	$$	35	Both sides of 15th Avenue SE/Otis Road SE should be evaluated for a trail. While the City of Cedar Rapids owns most of the land on the north side of these streets, the Jane Boyd Community House at 943 14th Avenue SE presents a right-of-way challenge. The Union Pacific rail lines present a challenge on the south side. A trail crossing at this location would be beneficial for nearby residents. Potential challenges include the railroad, retaining walls, trees, and steep slopes.

* $ = Low, $$ = Medium, $$$ = High

FIGURE 4.10, continued

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46	10th Street SE	2nd Avenue SE to 15th Avenue SE	0.9	Local, Trail or Other Separated (0.4) and Unseparated (0.5)	City of Cedar Rapids	High Priority	$$	56	10th Street SE between 2nd Avenue SE and 8th Avenue SE currently has painted bike lanes. Due to high traffic volumes, painted buffered bike lanes should be made separated by temporarily installing bollards or moving curbs toward the center of the road and placing separated bike lanes adjacent to sidewalks. 10th Street SE between 8th Avenue SE and 12th Avenue SE has lower traffic volumes, so a bike boulevard with traffic calming is the facility type best suited for this segment. South of 12th Avenue, 10th Street becomes a one-way street and dead end. In this segment, bikes may be allowed to ride both ways, or a trail may be built along City-owned land on either of the street.
47	8th Street SE	4th Avenue SE to 12th Avenue SE	0.6	Local, Unseparated	City of Cedar Rapids	Medium Priority	$	50	8th Street SE is a 30mph, 40' wide arterial street with a marked centerline and parking generally allowed on both sides. If parking can be removed on one side, bike lanes can be painted.
48	Cedar River Trail East/E Avenue NW	Cedar River Trail West (Ellis Trail) to Cedar River Trail East	0.1	Regional, Trail or Other Separated	City of Cedar Rapids	Medium Priority	$$	45	A separated path for bicycles only is proposed adjacent to the the sidewalk on the south side of the E Avenue NW Bridge over the Cedar River can be widened to a trail. A trail is planned to be built through the park along the Cedar River between E Avenue and 1st Avenue.
49	8th Avenue SW	L Street SW to Cedar River Trail West	0.4	Local, Trail or Other Separated	City of Cedar Rapids	High Priority	$$	56	8th Avenue SW is a local 30mph street, generally 36' wide with 3 traffic lanes and no parking allowed. Build a trail on either side to connect with a funded trail on the south side of the 8th Avenue bridge over the Cedar River. Alternatively, bike lanes may be striped if the center turn lane can be removed or if 8th Avenue SW can be widened.
50	Cedar River Trail West	A Street SW to 8th Avenue SW	0.3	Regional, Trail or Other Separated	City of Cedar Rapids	Medium Priority	$$$	49	The west Cedar riverfront is currently occupied by a large industrial property owner with a planned flood wall. A trail may be cantilevered from this flood wall. If the land use changes in the future, a riverfront trail may be added west of the flood wall. If neither option is feasible, an alternative that could be explored is a trail bridge built within the Cedar River channel along the west bank.
51	Cedar Valley Nature Trail	Cedar River Valley Nature Trail to Alliant LightLine Bridge over the Cedar River	0.6	Regional, Trail or Other Separated	City of Cedar Rapids (Linn County)	Low Priority	$$	30	A more direct alignment for the Cedar Valley Nature Trail is possible along the access road between Mount Trashmore and the Cedar River. This road is currently operated by the Cedar Rapids Linn County Solid Waste Agency.
52	Hawthorne Drive SW	C Street SW to future Cedar Valley Nature Trail alignment	0.4	Local, Trail or Other Separated	City of Cedar Rapids (Linn County)	Low Priority	$$	18	At the far west end of this segment, Hawthorne Drive right-of-way currently exists. Further east, property is owned by the Cedar Rapids Linn County Solid Waste Agency. Build a trail along this alignment.
53	80th Street SW	City of Fairfax to Worcester Road	3.8	Regional, Trail or Other Separated	City of Cedar Rapids (Linn County, Cedar Rapids School District)	Low Priority	$$	31	As Cedar Rapids expands to the west, build a trail along 80th Street between the City of Fairfax and Worcester Road. Within Morgan Creek Park, Linn County can serve as a partner, and on land owned by the Cedar Rapids School District, the district can serve as a partner. A trail on the east side is preferred since the 80th Street trail north of Worcester Road is on the east side.
54	Stoney Point Road SW	Quail Ridge Drive SW to Beverly Road SW	1.9	Local, Unseparated	City of Cedar Rapids (Linn County)	Low Priority	$$	36	For most of its length, Stoney Point Road currently has unpaved shoulders along this 2-lane road. These can be paved to add a bicycle facility. In locations where curbs and a 3-lane section exist, the road should be widened to continue the shoulder facility.
55	West Post Road SW/ NW	US Highway 30 Trail to Gordon Avenue NW	1.7	Local, Unseparated	City of Cedar Rapids	Medium Priority	$$	47	Between a future US Highway 30 trail and Dostal Drive SW a gap exists between houses, but the property is privately owned. Right-of-way may be obtained to create a short trail connection. Between and Dostal Drive SW and Ruhd Street SW, the local road is posted at 35mph, 32' wide with a marked centerline, curbs, and on-street parking. Parking can be removed to add bike lanes. Between and Ruhd Street SW and Wilson Avenue SW, the local road's width is approximately 25', and it can also be widened to 30' to 32' to add bike lanes. Between Wilson Avenue SW and 16th Avenue SW, West Post Road SW becomes a collector street, 26' to 30' wide with no curbs and a marked centerline. The road can be widened to 30' to 32' and bike lanes can be striped. Between 16th Avenue SW and Johnson Avenue SW the speed limit slows to 30mph and the road is 40' wide with 3 lanes and curbs. These lanes can be narrowed to add bike lanes. Between Johnson Avenue SW and Gordon Avenue NW, West Post Road SW/NW is still a 30mph collector, but a has lower traffic volumes, so a bike boulevard with traffic calming is the facility type best suited for this segment.

* $ = Low, $$ = Medium, $$$ = High

FIGURE 4.10, continued

PROJECT ID	ROADWAY/TRAIL/ INTERSECTION NAME	PROJECT EXTENTS	LENGTH (MILES)	PROJECT TYPE	LEAD AGENCY (PARTNER/S)	PRIORITY LEVEL	PLANNING LEVEL COST ESTIMATE FOR CITY*	RANKING SCORE	OPPORTUNITIES AND CHALLENGES
56	Jacolyn Drive NW/Koudsi Boulevard NW/Moose Drive NW/Wolf Drive NW/ Bobcat Drive NW	E Avenue NW to Rogers Road NW	1.2	Local, Unseparated	City of Cedar Rapids	Low Priority	$	25	This is a series of 25mph residential streets with parking allowed on both sides. The corridor would be best suited to a bicycle boulevard facility type with traffic calming due to lower traffic volumes. A short trail segment will connect Jacolyn Dr NW with Koudsi Boulevard NW in 2025.
57	Jacolyn Drive SW	20th Avenue SW to 12th Avenue SW	0.4	Local, Unseparated	City of Cedar Rapids	Low Priority	$	28	Between 20th Avenue SW and 18th Avenue SW, Jacolyn Drive SW is a 30mph, 32' wide local street and allows parking on both sides. Parking can be removed and bike lanes can be striped, or the street can be widened within existing right-of-way. Jacolyn Drive SW between 18th Avenue SW and 12th Avenue SW is a 30mph, 40' wide local street with 3 travel lanes. The lanes can be narrowed to include bike lanes.
58	Wiley Boulevard SW (extension of Edgewood Trail)	16th Avenue SW to Rogers Road NW	1.8	Regional, Trail or Other Separated	City of Cedar Rapids	Medium Priority	$$	47	South of the Cherokee Trail, build a trail on the west side of Wiley Boulevard SW to match into the existing west side trail south of 16th Avenue. North of the Cherokee Trail, add a trail should be added to the east side of Wiley Boulevard to connect with Rogers Road (project #61). Potential challenges include trees, business signs, driveways, utility boxes, gates, street lights, fire hydrants, power lines, retaining walls, ditch drainage, and fencing.
59	Wiley Boulevard SW/33rd Avenue SW	Williams Boulevard SW to Edgewood Boulevard SW	0.7	Regional, Trail or Other Separated	City of Cedar Rapids	High Priority	$$$	59	Build a trail on the east side of Wiley Boulevard SW and north side of 33rd Avenue to match into the existing west side trail north of Williams Boulevard SW. Potential challenges include transit shelters, power lines, street lights, utility boxes, driveways, and fire hydrants. Tunnel crossings at both Williams Boulevard SW and Edgewood Boulevard SW would prevent conflicts with motorists.
60	Ellis Trail	80th Street NW to Edgewood Boulevard NW	3.7	Regional, Trail or Other Separated	Linn County (City of Cedar Rapids)	Low Priority	$$$	40	Build a trail on the north side, except for the middle segment where Ellis Road runs along the Cedar River. In this middle area, the trail should be placed on the south side. Potential challenges include power lines, steep slopes, trees, waterways, and driveways.
61	Rogers Road NW/O Avenue NW (extension of Edgewood Trail)	Wiley Boulevard NW to Edgewood Road NW	0.5	Regional, Trail or Other Separated	City of Cedar Rapids	Low Priority	$$	44	Since a sidewalk already exists along most of the south side of Rogers Road NW and O Avenue NW, widen the sidewalk to a trail. Potential challenges include steep slopes, power lines, and ditch drainage.
62	F Avenue NW	Koudsi Boulevard NW to 27th Street NW	1.4	Local, Trail or Other Separated	City of Cedar Rapids	Low Priority	$$	44	Build a trail on the north side of F Avenue NW, shifting to the south side at 29th Street NW to match into the existing south side Cherokee Trail east of 27th Street NW.
63	E Avenue NW	Stoney Point Road NW to Wiley Boulevard NW	1.5	Local, Trail or Other Separated	City of Cedar Rapids	Low Priority	$$	43	A trail on the north side of E Avenue NW will serve Taft Middle School and includes fewer driveway conflict points than the south. A sidewalk already exists along E Avenue NW between West Post Road NW and Olive Drive NW, and this can be widened to a trail. West of West Post Road NW and east of Oliver Drive NW, a trail can be built. Potential challenges include power lines, ditch drainage, driveways, trees, street lights, fire hydrants, and utility boxes.
64	1st Avenue West	80th Street W to Jacolyn Drive W	2.4	Local, Unseparated	City of Cedar Rapids	Medium Priority	$	45	Between 80th Street W and Johnson Avenue W, 1st Avenue West is posted from 25mph (west of Stoney Point Road W) to 30mph. The collector street is 32' wide with no marked centerline and parking is generally allowed on both sides. A new school, West Willow Elementary opened in 2022 just east of Stoney Point Road W. Between Johnson Avenue W and Jacolyn Drive W, 1st Avenue West widens to 36' with no marked centerline and parking is allowed only on the south side. In general, a bike boulevard with traffic calming is preferred on this west portion of the street, with no need for parking removal. Bike lanes are preferred on the east portion of this street, where parking removal would be necessary. A potential challenge is determining the transition between these two facility types and the associated parking removal limits.
65	16th Avenue SW	80th Street SW to Williams Boulevard SW	3.4	Local, Trail or Other Separated	City of Cedar Rapids	Medium Priority	$$$	45	Build a trail on the north side of 16th Avenue SW due to higher residential density, including apartment complexes between West Post Road SW and Edgewood Road SW. Potential challenges include fire hydrants, ditch drainage, driveways, off-street parking lots, traffic signals, trees, street lights, utility boxes, and power lines. The crossings at Edgewood Rd SW and Williams Boulevard SW are likely challenges, where a tunnel crossing would protect trail users from conflicts with motorists.
66	20th Avenue SW	West Post Road SW to Williams Boulevard SW	1.4	Local, Trail or Other Separated	City of Cedar Rapids	Low Priority	$$	37	A portion of the Trail is part of new Library construction scheduled for 2026. Trail will be on the north side of 20th Avenue SW east of Wiley Blvd SW.

* $ = Low, $$ = Medium, $$$ = High

FIGURE 4.10, continued

PROJECT ID	ROADWAY/TRAIL/ INTERSECTION NAME	PROJECT EXTENTS	LENGTH (MILES)	PROJECT TYPE	LEAD AGENCY (PARTNER/S)	PRIORITY LEVEL	PLANNING LEVEL COST ESTIMATE FOR CITY*	RANKING SCORE	OPPORTUNITIES AND CHALLENGES
67	US Highway 30 Trail	80th Street SW to Edgewood Road SW	3.4	Regional, Trail or Other Separated	City of Cedar Rapids (Iowa DOT)	Low Priority	$$$	26	Build a trail on the north side of US Highway 30 on existing trail easements tied to development along US Highway 30 or within Iowa DOT right-of-way. Tunnel crossings of Edgewood Road SW and Williams Boulevard SW will be required. Potential challenges include steep grades and waterways.
68	US Highway 151/Williams Boulevard SW	Western City limits to Wiley Boulevard SW	2	Local, Trail or Other Separated	City of Cedar Rapids (City of Fairfax, Linn County Conservation, Iowa DOT)	High Priority	$$$	57	Build a trail on the northwest side of US Highway 151 within Iowa DOT right-of-way. This should start at Beverly Road on the northwest side of Hwy 151 to serve the Lakeview Lake residential neighborhood. Tunnel crossings of US Highway 30 access ramps and a bridge crossing of US Highway 30 will be needed. Potential challenges include steep grades and waterways.
69	Woodside Drive NW/ Westwood Drive NW/E Avenue NW/21st Street	8th Avenue SW to O Avenue NW	1.7	Local, Unseparated	City of Cedar Rapids	Low Priority	$	37	These are a series of lower traffic residential streets that generally allow parking on both sides. A bike boulevard with associated traffic calming is the preferred facility type. F Avenue NW, E Avenue NW, and Johnson Avenue NW may need changes to make crossings safer and more comfortable. At E Avenue NW, bike lanes may be striped for this short segment. At Johnson Avenue NW, the nearby stoplight is proposed to be moved to 21st Street NW to facilitate crossings in 2026.
70	Shawnee Park Trail/19th Street NW	Cherokee Trail to O Avenue NW	0.7	Local, Trail or Other Separated	City of Cedar Rapids	Medium Priority	$$	49	This connection between O Avenue NW and F Avenue NW primarily connects residents of the Meth-Wick retirement community with the regional Cherokee Trail. The City of Cedar Rapids owns right-of-way along Belmont Parkway NW and 18th Street NW between Meth-Wick and Shawnee Park. A trail within Shawnee Park can connect to 19th Street NW, where no sidewalks exist. Either a trail can be constructed or it can be designated as a short bike boulevard connection on this dead end street.
71	Cedar River Bridge Trail	Ellis Trail to Cedar Valley Nature Trail	0.4	Regional, Trail or Other Separated	City of Cedar Rapids	Low Priority	$$$	38	Build a trail bridge over the Cedar River connecting Ellis Trail, Ellis Park and the NW side to the Cedar Valley Nature Trail and Cedar Lake and the NE side. The precise location needs further examination and design, and mat include areas other within Ellis Park and Cedar Lake Park. The northwest side of downtown lacks river crossings compared to south-east of downtown.
72	Time Check Levee Trail	Cherokee Trail to O Avenue NW	1	Regional, Trail or Other Separated	City of Cedar Rapids	Low Priority	$$	41	Levee top trail to be constructed with flood control project. See City of Cedar Rapids Greenway Plan for additional information.
73	Williams Boulevard SW	Wiley Boulevard SW to 8th Avenue SW	1.7	Local, Trail or Other Separated	City of Cedar Rapids	High Priority	$$	63	An existing sidewalk on the northwest side of Williams Boulevard SW can be widened to a trail. Potential challenges include trees, power lines, driveways, fire hydrants, utility boxes, traffic signals, the Edgewood Rd SW crossing and 16th Avenue SW crossing, steep slopes, and ditch drainage.
74	18th Street SW/NW	33rd Avenue SW to Cherokee Trail	2.4	Local, Unseparated	City of Cedar Rapids	Low Priority	$$	35	Between and 33rd Avenue SW and Blackberry Circle SW , the 35mph local road widens from 30' with 2 lanes to 40' with 3 lanes. Lanes can be narrowed and bike lanes can be striped. Between and Blackberry Circle SW and Wilson Avenue SW, 18th Street SW transitions to a 25mph local road with 2 lanes, a centerline and no curbs, with widths varying between 25' and 30'. The road can be widened to add bike lanes. Between Wilson Avenue SW and 16th Avenue SW, 18th Street SW is a 30mph collector street, 40' wide with a combination of 3-lane sections, buffered bike lanes, and 2-lane sections with parking. In 3-lane sections, lanes can be narrowed and bike lanes can be striped. In 2-lane sections, parking can be removed on one side to add bike lanes. Between 16th Avenue SW and 1st Avenue W, 18th Street SW is is designated as a 25mph local street and serves as a primary access to Jefferson High School. It is generally 35' wide with a marked centerline. Parking is allowed except at major streets and during school hours. Removing parking and striping bike lanes in this section is preferred. If parking cannot be removed, adding traffic calming to this section and turning it into a bike boulevard is an alternative. Between the 1st Avenue W and the dead end north of E Ave NW, 18th Street NW is low traffic with parking allowed on both sides. A bike boulevard would be best suited to this segment, except at Johnson Avenue NW where bike lanes are needed due to the presence of turn lanes. At the far north end, the City of Cedar Rapids owns right-of-way where a short trail and bridge can be built between the Cherokee Trail and the 18th Street NW dead end.
75	15th Street SW/14th Avenue SW	Rockford Road SW to 8th Avenue SW	0.5	Local, Unseparated	City of Cedar Rapids	Low Priority	$	20	15th Street SW is 35' wide with a marked centerline. Between 8th Avenue SW and 11th Avenue SW, parking is allowed on the west side only. Between 11th Avenue SW and 14th Avenue SW, parking is allowed on both sides. 3 options include 1) removing parking and striping bike lanes, 2) retaining parking, but removing the centerline and adding traffic calming for a bike boulevard, 3) build a trail on the north side of 14th Ave SW and the east side of 15th Ave SW. On 14th Avenue between 15th Street and Rockford Road, the street is 30' with no curbs or marked centerlines. In this segment, advisory bike lanes can be marked or a bike boulevard with traffic calming can be added. Removing parking will be difficult due to the Sports Complex nearby, including the Jefferson High School baseball diamond at the corner of 15th St SW and 14th Ave SW.

* $ = Low, $$ = Medium, $$$ = High

FIGURE 4.10, continued

PROJECT ID	ROADWAY/TRAIL/ INTERSECTION NAME	PROJECT EXTENTS	LENGTH (MILES)	PROJECT TYPE	LEAD AGENCY (PARTNER/S)	PRIORITY LEVEL	PLANNING LEVEL COST ESTIMATE FOR CITY*	RANKING SCORE	OPPORTUNITIES AND CHALLENGES
76	Rockford Road SW/3rd Avenue SW	Wilson Avenue SW to 6th Street SW	1.5	Local, Trail or Other Separated	City of Cedar Rapids	Low Priority	$$	36	Along Rockford Road SW, the widen the sidewalk on the northwest side to a trail. Potential challenges include trees, retaining walls, the 16th Avenue SW bridge, fire hydrants, and utility boxes. Include a connection to the 16th Ave SW bridge. Along 3rd Avenue SW, bike lanes should be placed at sidewalk level adjacent to sidewalks, allowing the street to remain the same width. Potential challenges include traffic signals, trees, driveways, the 3rd Avenue SW/5th Avenue SW split, street lights, fire hydrants, and power lines.
77	6th Street SW	1st Avenue W to 33rd Avenue SW	2.2	Regional, Trail or Other Separated	City of Cedar Rapids	Medium Priority	$$	48	6th Street SW between 1st Avenue W and 16th Avenue SW is generally 46' wide with 4 travel lanes, except for a 4-to-3 lane road diet with bike lanes between 14th Avenue and 16th Avenue. As 6th Street SW is reconstructed, trails should be added on both sides to provide separation and seamlessly transition between bike lanes north of 1st Avenue and south of 16th Avenue SW. Between 16th Avenue SW and 33rd Avenue SW, the sidewalk on the east side of 6th Street SW should be widened to a trail. Potential challenges include trees, driveways, transit shelters, street lights, retaining walls, and ditch drainage.
78	J Street SW	US Highway 30 to 16th Avenue SW	2.5	Local, Unseparated	City of Cedar Rapids	Medium Priority	$$	48	Between US Highway 30 and Prairie Creek, J Street SW has curbs, parking is allowed, and the width varies between 35' and 48'. The local street has a posted speed limit of 35mph. Bike lanes can be striped in this section with some parking retained in the wider segments. Between 26th Avenue SW and Prairie Creek, parking is again allowed on both sides. In these sections, bike lanes can be marked where parking is removed. If parking cannot be removed, J Street SW could be widened to add bike lanes. Between Prairie Creek and the railroad, there are no curbs and the road width varies from 25' to 28'. In this segment, the road can be widened to add paved shoulders. J Street SW between the railroad and 33rd Avenue SW adds curbs and widens to 36' with a marked centerline and parking allowed on both sides. North of 33rd Ave SW to 21st Ave Ave SW the speed limit changes to 30mph and J Street SW becomes a collector street. Parking is allowed on both sides of the street. Remove parking or widen roadway to add bike lanes. J Street SW between 21st Avenue SW and 16th Avenue SW is 30' wide with parking allowed on the west side but not the east, with an offset centerline. Widen J St SW and remove parking to add bike lanes.
79	1st Street SW/C Street SW	Cedar Valley Nature Trail to 8th Avenue SW	2.1	Local, Trail or Other Separated (1.5) and Unseparated (0.6)	City of Cedar Rapids	High Priority	$$	64	Between the Cedar Valley Nature Trail and Bowling Street SW, build a trail on the northeast side of C Street SW. Potential challenges include trees, power lines, utility boxes, driveways, retaining walls, fire hydrants, ditch drainage, and the Prairie Creek bridge. Between Bowling Street and 17th Avenue SW, C Street SW is 25mph, 30' wide arterial street with parking allowed on both sides. A bike boulevard facility with traffic calming is best suited to this segment. Between 17th Avenue SW and 12th Avenue SW, heavy truck traffic volumes are reduced and painted bike lanes may be added. C Street SW is 40' wide with parking generally not allowed. At intersections with turn lanes, lanes can be narrowed to add bike lanes. 1st Street SW and C Street SW between 12th AvenueSW and 8th Avenue SW are generally 2 lanes, narrowing from 56' at 8th Avenue SW to 40' at 12th Avenue SW. A mix of parking regulations and restrictions occurs in this segment. If parking can be removed, separated bike lanes can be added next to the curb. Where parking cannot be removed and width is insufficient, bike lanes can be placed at sidewalk level adjacent to sidewalks.
80	21st Street SW	37th Avenue SW to 33rd Avenue SW	0.6	Local, Unseparated	City of Cedar Rapids	Low Priority	$	19	21st Street SW is a road without curbs or a marked centerline and is approximately 20' wide. It can be marked with advisory shoulders for bicyclists and pedestrians. Bikeway should connect to Beverly Park to access mountain bike trails.
81	8th Avenue SW	21st Street SW to 18th Street SW; 10th Street SW to 7th Street SW	0.5	Local, Unseparated	City of Cedar Rapids	High Priority	$	56	8th Avenue SW is generally a 30mph local street between 21st Street SW and 18th Street SW is approximately 36' wide with a marked centerline and parking generally allowed on both sides. 8th Avenue SW between 10th Street SW and 7th Street SW is approximately 34' wide with an offset centerline and parking is allowed on the north side only. If parking can be removed in both sections, bike lanes can be striped. If parking cannot be removed, the road can either be widened into the boulevards or the centerline can be removed with a bike boulevard and traffic calming added.
82	16th Avenue SW	Williams Boulevard SW to C Street SW	2.5	Local, Trail or Other Separated	City of Cedar Rapids	High Priority	$$$	72	A trail should be placed on the south side of 16th Avenue. Potential challenges include street lights, driveways, fire hydrants, off-street parking lots, trees, traffic signals, retaining walls, utility boxes, and steep slopes. Some of these challenges can be mitigated between 12th Street SW and 6th Street SW by narrowing the street, which is currently 48' wide with 2 lanes and parking allowed on both sides. Between 6th Street SW and J Street SW, 16th Avenue SW is 25' with 2 lanes and no parking allowed. Between J Street SW and 1st Street SW, 16th Avenue is 40' wide with 2 lanes and parking allowed on the north side.

* $ = Low, $$ = Medium, $$$ = High

FIGURE 4.10, continued

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83	Wilson Avenue SW	Wiley Boulevard SW to 6th Street SW	2.5	Local, Trail or Other Separated	City of Cedar Rapids	**High Priority**	$$$	67	Between Wiley Boulevard SW and Scotty Drive SW, Wilson Avenue SW varies from 40' to 30' in width with no marked centerline and parking is generally not allowed. Bike lanes can be striped in this 2-block segment. Between Scotty Drive SW and Williams Boulevard SW, right-of-way may be acquired from Hills Bank & Trust to construct a short trail. While both sides of Wilson Avenue SW should be further evaluated for a preferred trail alignment, the north side is generally preferred between Williams Boulevard SW and 14th Street SW due to fewer residential driveways, higher housing density, and Hughes Park. Most of this segment already has a sidewalk that can be widened. Potential challenges include street lights, driveways, power lines, trees, traffic signals, fire hydrants, utility boxes, and railroad tracks. Between 14th Street SW and 6th Street SW, the south side is preferred due to a general lack of conflict with residential driveways. Potential challenges include trees, power lines, utility boxes, business signs, commercial driveways, and fences.
84	Wilson Avenue SW	6th Street SW to C Street SW	1.5	Local, Trail or Other Separated	City of Cedar Rapids	**High Priority**	$$$	64	As Wilson Avenue SW is reconstructed to include sidewalks on both sides, one side of the street should be chosen for a trail. This is flexible due to the relatively equal number of residential driveways on both sides (the surface treatment of the bikeway should be carried across driveways to communicate right-of-way for trail users). However, the south side may be preferable due to the presence of Jones Pool and Wilson Middle School. In general, the right-of-way exists for a trail, but the disruption to residences with driveways would be best coordinated during a full street reconstruction.
85	29th Avenue SW/27th Street SW	Wiley Boulevard SW to 18th Street SW	1.4	Local, Trail or Other Separated (0.6) and Unseparated (0.8)	City of Cedar Rapids	**Low Priority**	$$	35	29th Avenue SW between Wiley Boulevard SW and Edgewood Road SW is 50' wide with 4 lanes, posted at 30mph. Due to low traffic volumes, the number of lanes can be reduced to add bike lanes. Between Edgewood Road SW and Chapel Drive SW, 29th Avenue is a 25mph, 40' wide local street with 3 lanes. These lanes can be narrowed to add bike lanes. Between Chapel Drive SW and 27th Street SW, 29th Avenue SW is 32' wide with parking allowed on both sides. This segment can be designated as a bike boulevard with traffic calming. Between 27th Street SW and 18th Street SW, land may be developed in the future for housing. If and when that happens, a trail should be placed along the creek.
86	33rd Avenue SW	Wiley Boulevard SW to Prairie Creek Trail	3.5	Local, Trail or Other Separated	City of Cedar Rapids	**High Priority**	$$$	72	Build a trail on the south side of 33rd Avenue SW between Wiley Boulevard SW and Bowling Street SW. Most of the road already has a sidewalk on the south side, but some sections do not. Potential challenges include driveways, street lights, trees, retaining walls, utility boxes, fences, bridges over railroad tracks, steep slopes, off-street parking lots, fire hydrants, traffic signals, the I-380 bridge, power lines, and steep slopes. Between Bowling Street SW and Prairie Creek Trail, a trail may be placed within Jones Park to connect 33rd Avenue SW with the Prairie Creek Trail.
87	Prairie Creek Trail	Edgewood Road SW to Cedar Valley Nature Trail	5	Regional, Trail or Other Separated	City of Cedar Rapids (Iowa DOT)	**High Priority**	$$$	62	Build a trail along Prairie Creek on several parcels owned by the City of Cedar Rapids. The furthest west segment can be built along US Highway 30 right-of-way and through Beverly Park. An at-grade crossing of 21st Street SW or a bridge over 21st Street SW and adjacent railroad tracks can provide access to City-owned land east of 21st Street SW. Between 21st Street SW and 6th Street SW, there is a combination of City-owned, industry-owned, and DOT-owned property. Between 6th Street SW and I-380, land adjacent to Prairie Creek is City-owned. A private park (Cassill Park) west of 6th St SW and south of Hawkeye Downs Speedway has been proposed as a possible trail head with bike amenities and would contain a portion of the Prairie Creek Trail alignment. Between I-380 and Bowling Street SW, most land is City-owned with a smaller railroad-owned section. Between Bowling Street SW and the Cedar Valley Nature Trail, nearly all land is City-owned. Right-of-way acquisition, railroad crossings and crossings of Prairie Creek are likely challenges.
88	Edgewood Road SW	60th Avenue SW to Wright Brothers Boulevard	1.8	Regional, Trail or Other Separated	City of Cedar Rapids	**Low Priority**	$$	31	Build a trail on the east side to match into the existing trail north of 60th Avenue.
89	6th Street SW	33rd Avenue SW to French Court SW	5.2	Regional, Trail or Other Separated	City of Cedar Rapids	**High Priority**	$$	67	Build a trail the east side to match into segments along this road that have already been built on the east side.
90	J Street SW	76th Avenue SW to US Highway 30	1.5	Local, Trail or Other Separated	City of Cedar Rapids (College Community School District)	**Medium Priority**	$$	50	Build a trail along the west side of J Street SW to provide an off-street facility along this residential street (no sidewalks exist) and provide a direct connection to Lincolnway Park. Coordination may be needed with College Community School District if their campus expands northward onto land they own between 68th Avenue SW and 76th Avenue SW.

* $ = Low, $$ = Medium, $$$ = High

FIGURE 4.10, continued

PROJECT ID	ROADWAY/TRAIL/ INTERSECTION NAME	PROJECT EXTENTS	LENGTH (MILES)	PROJECT TYPE	LEAD AGENCY (PARTNER/S)	PRIORITY LEVEL	PLANNING LEVEL COST ESTIMATE FOR CITY*	RANKING SCORE	OPPORTUNITIES AND CHALLENGES
91	Kirkwood Boulevard SW	Southern City limits to Jones View Parkway SW	2.5	Local, Trail or Other Separated	City of Cedar Rapids	High Priority	$$	62	Build a trail along the east side of Kirkwood Boulevard SW to match into segments along this road that have already been built on the east side. Between Wright Brothers Boulevard SW and the southern municipal boundary, a north-south trail should be built through the housing development owned by Prairie Land Development LLC.
92	Prairie Spirit Lane SW/ South Prairie Road SW/ Prairie Point Road SW/ Prairie View Lane SW	76th Avenue SW to Wright Brothers Boulevard	2.8	Local, Trail or Other Separated	College Community School District (Kirkwood Community College, City of Cedar Rapids)	Low Priority	$$	39	Build a trail along College Community School District's access road (i.e., Prairie Spirit Lane SW, South Prairie Road SW, Prairie Point Road SW) as well as through land owned by Kirkwood Community College if and when its campus expands. A north-south trail should be built through the ball diamonds owned by College Community School District across Hoosier Creek and along one side of Prairie View Lane SW.
93	C Street SW	7th Avenue SW to 800' north of 76th Avenue SW	0.2	Local, Trail or Other Separated	City of Cedar Rapids	Low Priority	$	18	Build trail on the west side of C Street SW to match into an existing trail on the west side of C Street SW.
94	Old River Road SW	Cedar Valley Nature Trail to eastern City limits	1.3	Regional, Trail or Other Separated	City of Cedar Rapids	Low Priority	$$	44	Build a trail on the north side of Old River Road SW. Much of the land is owned by the City of Cedar Rapids. Where land is not owned by the City, a trail can be built in the existing right-of-way, which varies but is approximately 70', with a 30' wide road.
95	Miller Avenue Drive SW/ Bell Drive SW/Thomas Edison Boulevard SW	Kirkwood Boulevard SW to C Street SW	1.3	Local, Trail or Other Separated	City of Cedar Rapids (Iowa DOT)	Low Priority	$$	35	Build a trail on one side of this series of roads to provide access to the regional trail network for residents of Kirkwood Estates. Between Miller Avenue Drive SW and Bell Drive SW, there is a 300' gap between public rights-of-way, currently owned by Prairie Pine Properties LLC. Acquisition would need to occur for a trail to be built. If this is not possible, a trail may be built along US Highway 30 in coordination with Iowa DOT.
96	East-West Trails	C Street SW to Cedar Valley Nature Trail	0.9	Local, Trail or Other Separated	City of Cedar Rapids	Medium Priority	$$	49	As property is developed in this area, east-west trails should be built to provide local neighborhood access points to the Cedar Valley Nature Trail.
97	Johnson View Parkway SW/Cedar View Parkway SW/Tower Road SW	1,000' west of Kirkwood Road SW to Kirkwood Boulevard SW	0.8	Local, Trail or Other Separated	Kirkwood Community College	Low Priority	$$	38	Build a trail along this series of streets through Kirkwood Community College's campus.
98	76th Avenue SW	Western City limits to eastern City limits	5	Local, Trail or Other Separated	City of Cedar Rapids	High Priority	$$	63	Build a trail along the south side of 76th Avenue SW as the city limits expand west and east (currently at Cherry Valley Road SW and C Street SW).
99	Wright Brothers Boulevard	Western City limits to eastern City limits	5	Regional, Trail or Other Separated	City of Cedar Rapids (Cedar Rapids Airport Commission)	Medium Priority	$$	54	Build a trail on the north side to match into already existing plans for the interchange of I-380 with Wright Brothers Boulevard. A trail should connect to the Eastern Iowa Airport near 18th Street SW in partnership with the Cedar Rapids Airport Commission.
Total miles	Projects #1 - 99	Subtotal: Local, Trail or Other Separated	69.3	44%					
		Subtotal: Local, Unseparated	33.6	21%					
		Subtotal: Regional, Trail or Other Separated	55	34.5%					
		Subtotal: Regional, Unseparated	0.8	0.5%					
		All Total	159	100%					

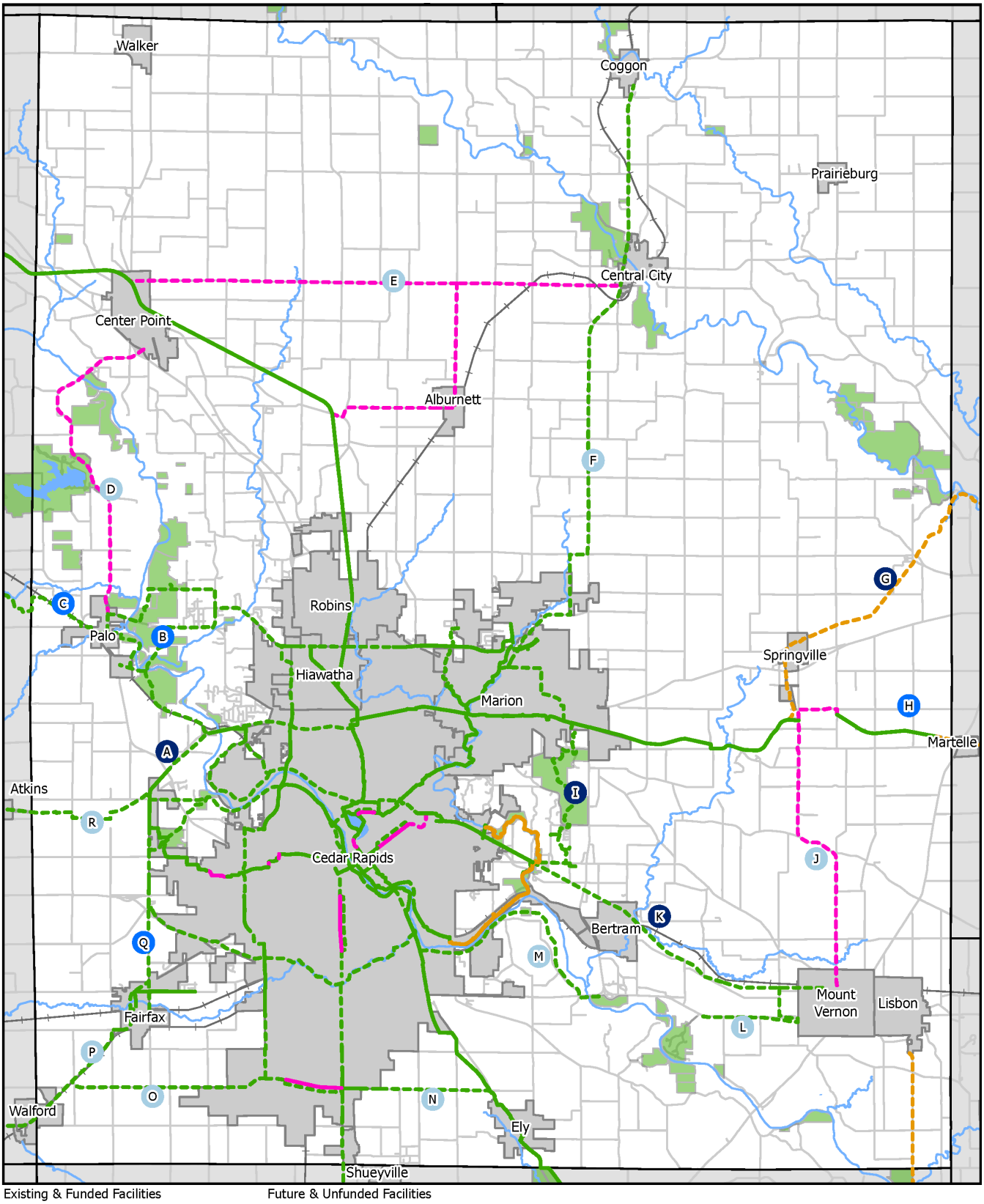
* $ = Low, $$ = Medium, $$$ = High

The existing and future Linn County trail and bikeway system is shown in Figure 4.11, and in the context of the regional 9-county network (Figure 4.12). Each County project was scored based on eight factors, with possible scores of zero, one or two (Figure 4.13). Each factor was also weighted based on input from the County (Figure 4.14).

- **Gap Score (weight = 7):** Project fills a gap in the system
- **Demand Score (weight = 5):** Population served and public input interest
- **Quality of Route/Experience Score (weight = 3):** Desirable topography, habitat, viewsheds, historical significance
- **Readiness Score (weight = 6):** Available right of way, applicable funding streams, permitting, constructability
- **Geographic Balance Score (weight = 5):** Connects populations currently without regional trail access
- **Destinations Score (weight = 6):** Accesses a high-quality destination
- **Regional Impact Score (weight = 6):** Connects or expands the regional rail system
- **Safety Score (weight = 4):** Fewer interactions with vehicular traffic, independent alignment

Each project in Figure 4.11 is also described in further detail in Figure 4.15.

FIGURE 4.11 Future trails and bikeways in Linn County. Project ID letters correspond with Figures 4.13, 4.14, and 4.15.



Updated 4/28/2025

FIGURE 4.12 The future trails and bikeways network for the nine-county area, illustrating how Linn County fits into the larger regional vision.

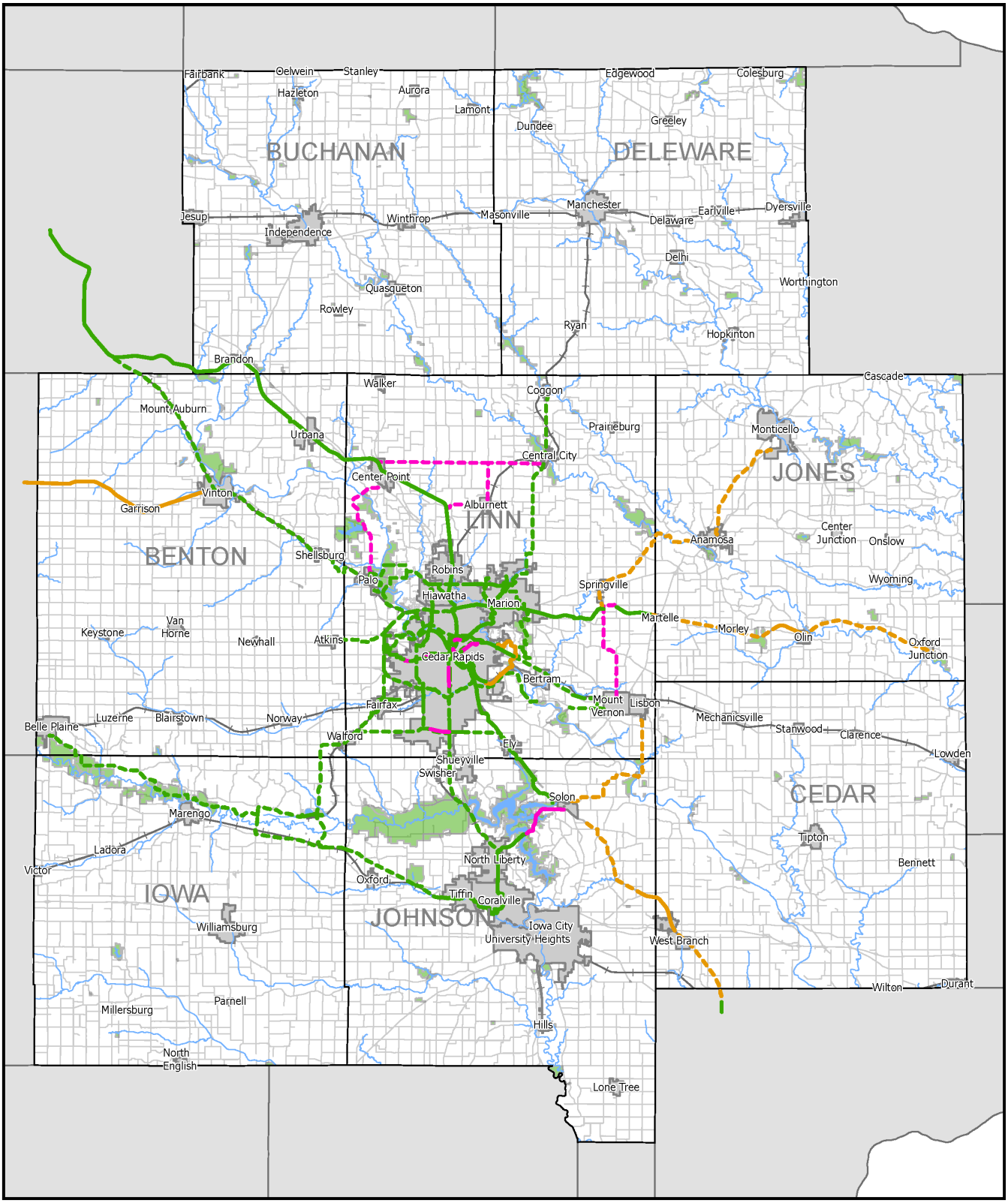


FIGURE 4.13 Each project in Linn County was scored on 8 factors.

Gap Score	Demand Score	Quality of Route/ Experience Score	Readiness Score	Geographic Balance Score	Destinations Score	Regional Impact Score	Safety Score	Total Unweighted Score
Score (2=highest score, 0=lowest score)								
Fills a gap in the system	Population Served and Public Input Interest	Topography, Habitat, Viewsheds, Historical Significance	Available Right of Way, Applicable Funding Streams, Permitting and Constructibility	Connects Populations Currently w/o Regional Trail Access	Accesses a High Quality Destination	Connects or Extends the Regional Trail System	Fewer Interactions with Vehicular Traffic, Independent Alignment	
A: Morgan Creek Trail								
2	2	2	2	1	2	2	2	**15**
B: Wickiup Loop								
1	0	2	1	1	2	2	2	**11**
C: Palo to County Line +								
1	1	1	1	1	0	2	1	**8**
D: Palo to Center Point								
0	1	2	1	2	1	0	0	**7**
E: Center Point, Central City, Alburnett								
1	1	0	0	2	1	0	0	**5**
F: Marion, Central City, Coggon								
0	1	0	0	2	1	2	0	**6**
G: Grant Wood, Springville, Stone City								
0	2	2	2	2	2	2	2	**14**
H: Grant Wood Trail Extension to County Line +								
1	2	1	1	0	1	2	2	**10**
I: Dows/Maniti Trail								
2	2	1	2	1	1	2	2	**13**
J: Mount Vernon To Springville								
0	1	0	1	2	1	0	0	**5**
K: Inter-Urban Cedar Rapids, Bertram, Mount Vernon								
1	2	2	2	2	1	2	2	**14**
L: Palisades Connector								
0	0	2	0	0	2	1	1	**6**
M: South Riverfront								
0	0	2	0	0	1	1	2	**6**
N: Ely Connector								
0	1	0	0	2	1	2	0	**6**
O: Walford Connector								
0	1	0	0	2	1	2	0	**6**
P: Hwy 151 Trail								
0	2	0	1	2	1	2	0	**8**
Q: Fairfax to Morgan Creek Trail Connector								
2	1	0	0	2	1	2	0	**8**
R: Atkins to Morgan Creek Trail Connector								
1	1	0	0	2	1	2	0	**7**

FIGURE 4.14 Each score within each project in Linn County was weighted.

Gap Score	Demand Score	Quality of Route/ Experience Score	Readiness Score	Geographic Balance Score	Destinations Score	Regional Impact Score	Safety Score	Total Unweighted Score
Score (2=highest score, 0=lowest score)								
Fills a gap in the system	Population Served and Public Input Interest	Topography, Habitat, Viewsheds, Historical Significance	Available Right of Way, Applicable Funding Streams, Permitting and Constructibility	Connects Populations Currently w/o Regional Trail Access	Accesses a High Quality Destination	Connects or Extends the Regional Trail System	Fewer Interactions with Vehicular Traffic, Independent Alignment	
Weight								
7	5	3	6	5	6	6	4	
A: Morgan Creek Trail								
14	10	6	12	5	12	12	8	**79**
K: Inter-Urban Cedar Rapids, Bertram, Mount Vernon								
7	10	6	12	10	6	12	8	**71**
G: Grant Wood, Springville, Stone City								
0	10	6	12	10	12	12	8	**70**
I: Dows/Maniti Trail								
14	10	3	12	5	6	12	8	**70**
B: Wickiup Loop								
7	0	6	6	5	12	12	8	**56**
H: Grant Wood Trail Extension to County Line +								
7	10	3	6	0	6	12	8	**52**
Q: Fairfax to Morgan Creek Trail Connector								
14	5	0	0	10	6	12	0	**47**
P: Hwy 151 Trail								
0	10	0	6	10	6	12	0	**44**
C: Palo to County Line +								
7	5	3	6	5	0	12	4	**42**
R: Atkins to Morgan Creek Trail Connector								
7	5	0	0	10	6	12	0	**40**
D: Palo to Center Point								
0	5	6	6	10	6	0	0	**33**
F: Marion, Central City, Coggon								
0	5	0	0	10	6	12	0	**33**
N: Ely Connector								
0	5	0	0	10	6	12	0	**33**
O: Walford Connector								
0	5	0	0	10	6	12	0	**33**
L: Palisades Connector								
0	0	6	0	0	12	6	4	**28**
E: Center Point, Central City, Alburnett								
7	5	0	0	10	6	0	0	**28**
J: Mount Vernon To Springville								
0	5	0	6	10	6	0	0	**27**
M: South Riverfront								
0	0	6	0	0	6	6	8	**26**

FIGURE 4.15 Linn County project details.

PROJECT ID	ROADWAY/TRAIL/ INTERSECTION NAME	PROJECT EXTENTS	LENGTH (MILES)	PROJECT TYPE	LEAD AGENCY (PARTNER/S)	PRIORITY LEVEL*	PLANNING LEVEL COST ESTIMATE FOR COUNTY*	RANKING SCORE	OPPORTUNITIES AND CHALLENGES
A	Morgan Creek Trail	Morgan Creek Park to Xavier High School	4.7	Regional, Trail or Other Separated	Linn County Conservation	High Priority Mid Term	$$$	79	Portions of the trail are complete from Morgan Creek Park through Covington Road, and additional projects to the north are in development. The major challenge for full completion is the fundraising needed for the 1,040' bridge over the Cedar River along the former Milwaukee Road RR grade. The bridge is also an opportunity to create a destination draw.
B	Wickiup Loop	Palo to Wickiup Hill to Tower Terrace Road	8	Regional, Trail or Other Separated	Linn County Conservation	Medium Priority Mid Term	$$	56	Project envisions a potential loop connection via public land and existing rights of way, possibly using Blairs Ferry Road or the former roadway route across Chain Lakes Bridge. Potential right of way needs and permitting challenges exist for the river crossings and possible sidepath accommodations along existing roadways.
C	Palo to County Line +	Palo to west County Line (toward Old Creamery Nature Trail in Benton County)	2.2	Regional, Trail or Other Separated	Linn County Conservation (City of Palo and Benton County Conservation)	Medium Priority Long Term	$$	42	Potential future rail to trail or rail with trail regional connection into Benton County and the Old Creamery Nature Trail.
D	Palo to Center Point	Palo Marsh Road/ Lewis Bottoms Road	9.4	Regional, Unseparated	Linn County Conservation (Cities of Palo and Center Point)	Low Priority Long Term	$$	33	Route identified during public engagement. Would likely include unseparated accommodations being constructed concurrently with roadway resurfacing projects.
E	Center Point, Central City, Alburnett	Central City Road, Alburnett Road, Roosevelt Street	19.5	Regional, Unseparated	Linn County Conservation (Cities of Center Point, Central City, and Alburnett)	Low Priority Long Term	$$	28	Route identified during public engagement. Would likely include unseparated accommodations being constructed concurrently with roadway resurfacing projects.
F	Marion Central City, Coggon	Following Highway 13	16.6	Regional, Trail or Other Separated	Linn County Conservation (Iowa DOT, Cities of Marion, Central City, and Coggon)	Low Priority Long Term	$$	33	Sidepath following Iowa Highway 13 right of way.
G	Grant Wood, Springville, Stone City	Former Milwaukee Road Railroad Grade	8	Regional, Trail or Other Separated	Linn County Conservation (City of Springville)	High Priority Mid Term	$$	70	Overall route follows former Milwaukee Road RR Grade that has generally reverted to private ownership. However, the connection from Peralta to Springville has ROW available and is a high priority. Significant right of way acquisition challenges and likely reroutes to public rights of way needed elsewhere, so the remainder of the alignment is low priority.
H	Grant Wood Trail Extension to County Line +	Fill Gaps to Martelle, continue east into Jones County	10.5	Regional, Trail or Other Separated	Linn County Conservation (Jones County)	Medium Priority Mid Term	$$	52	Includes paving of granular sections and extension to and beyond Martelle.
I	Dows/Maniti Trail	Grant Wood Trail to Mount Vernon Road, Inter-Urban and Sac and Fox Trail	5.6	Regional, Trail or Other Separated	Linn County Conservation	High Priority Mid Term	$$	70	Trail is located on public land. Full connections to other trails may require lengths of side path construction along Mount Vernon Road and along 44th Street in Marion. Crossing of Iowa Highway 100 should include a grade separated tunnel.
J	Mount Vernon to Springville	Along Springville Road	9.6	Regional, Unseparated	Linn County Conservation (Cities of Mount Vernon and Springville)	Low Priority Long Term	$$	27	Route identified during public engagement. Would likely include unseparated accommodations being constructed concurrently with roadway resurfacing projects.

* Near Term = one to five years, 2025 to 2030; Mid Term = six to 10 years, 2031 to 2035; Long Term = 11 to 20 years; 2036 to 2045

** $ = Low, Single Phase Project $$ = Medium, Multi-Phase Project $$$ = High, Discretionary Grant Need

FIGURE 4.15, continued

PROJECT ID	ROADWAY/TRAIL/ INTERSECTION NAME	PROJECT EXTENTS	LENGTH (MILES)	PROJECT TYPE	LEAD AGENCY (PARTNER/S)	PRIORITY LEVEL*	PLANNING LEVEL COST ESTIMATE FOR COUNTY*	RANKING SCORE	OPPORTUNITIES AND CHALLENGES
K	Inter-Urban Cedar Rapids, Bertram, Mount Vernon	Cedar Rapids to Mount Vernon on former Railroad grade	8.8	Regional, Trail or Other Separated	Linn County Conservation (Cities of Cedar Rapids, Bertram, and Mount Vernon)	**High Priority Mid Term**	$$	71	Former railroad grade may not be entirely in public ownership. Major crossing challenges include Mount Vernon Road/ Indian Creek, Squaw Creek, US 151/Iowa Highway 13, and Big Creek/Union Pacific Railroad. Right of way is also encumbered with utilities, including poles installed in the center of the grade.
L	Palisades Connector	Mount Vernon To Palisades - Kepler State Park	5.4	Regional, Trail or Other Separated	Linn County Conservation (City of Mount Vernon, Iowa DNR)	**Low Priority Long Term**	$$	28	The US Highway 30 Mount Vernon/Lisbon Bypass included a potential future trail undercrossing with Willow Creek Road. This was included to accommodate a desire for the City of Mount Vernon to connect to Palisades-Kepler State Park. Right of way is likely needed although the potential route follows existing public right of way. The route into Palisades Kepler to any usage areas of the park will require significant coordination with Iowa DNR.
M	South Riverfront	From Cedar Valley Nature Trail under US Highway 30 along the Cedar River Greenbelt	6.6	Regional, Trail or Other Separated	Linn County Conservation	**Low Priority Long Term**	$$	26	Route identified during public engagement. Trail would follow Old River Road past Cheyenne Park to cross under US Highway 30, potentially to the quarry road.
N	Ely Connector	Follows Wright Brothers Blvd	3.8	Regional, Trail or Other Separated	Linn County Conservation (Cities of Cedar Rapids and Ely)	**Low Priority Long Term**	$$	33	Route follows Wright Brothers Boulevard.
O	Walford Connector	Follows Wright Brothers Blvd	7.2	Regional, Trail or Other Separated	Linn County Conservation (Cities of Cedar Rapids and Walford)	**Low Priority Long Term**	$$	33	Route follows Wright Brothers Boulevard.
P	Hwy 151 Trail	Follows US 151 from Fairfax to Walford (to Amana Colonies)	6	Regional, Unseparated	Linn County Conservation (Iowa DOT, Cities of Fairfax, Walford and the Amana Colonies)	**Low Priority Long Term**	$$	44	New bridges along US 151 in Fairfax include sidepath accommodation on the north side. Further accommodation south on US 151 would likely be via paved shoulders, however the right of way may be wide enough for continuous sidepath accommodation. The Amana Colonies have a trail plan that includes the desire to connect to the Cedar Rapids metro, as well as the Iowa City metro, to create a regional loop.
Q	Fairfax to Morgan Creek Connector	Along 80th St SW	3.7	Regional, Trail or Other Separated	Linn County Conservation (City of Fairfax)	**Medium Priority Long Term**	$$	47	Route follows 80th Street SW.
R	Atkins to Morgan Creek Connector	Along former Milwaukee Road RR grade or greenway	4.8	Regional, Trail or Other Separated	Linn County Conservation (City of Atkins)	**Low Priority Long Term**	$$	40	City of Atkins has a draft parks and trails master plan that includes a desired connection to the Cedar Rapids metro. Requires acquisition of former Milwauke Road RR right of way, where it still exists, and along a parallel waterway where it doesn't. Fallback route is along Ellis Road (County E44).
	Projects # A - R	Subtotal: Regional, Trail or Other Separated	95.9	68%					
		Subtotal: Regional, Unseparated	44.5	32%					
		All Total	140	100%					

* Near Term = one to five years, 2025 to 2030; Mid Term = six to 10 years, 2031 to 2035; Long Term = 11 to 20 years; 2036 to 2045

** $ = Low, Single Phase Project $$ = Medium, Multi-Phase Project $$$ = High, Discretionary Grant Need

Trails and Bikeways Plan

Appendix A: Community Engagement Report

August 17, 2023

Key Findings, Engagement Strategies, and Detailed Results

Contents

INTRODUCTION

The purpose of this community engagement report is to summarize the approach to, and results of, engaging community members around the Cedar Rapids and Linn County Trails and Bikeways Plan (Plan). The voices of residents identified key findings for the project team to further analyze and guide recommendations in the Plan.

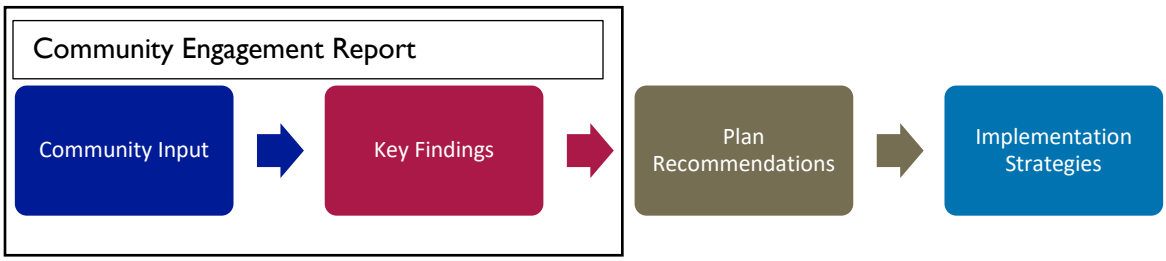


Illustration of Plan development process: community input informs key findings which lead to recommendations and implementation strategies.

In 2023, there were approximately 775 participant interactions that resulted in recorded input.

Trail crossings at busy streets were a topic raised during the public engagement process.

KEY FINDINGS

1) **Trail and bikeway connectivity is the highest priority.** The highest priority of those engaged for new trail/bikeway projects was connectivity, as shown in Figures A.16 and A.22. The completion of trails such as CeMar, Grant Wood, and Inter Urban as shown in Figure A.1, are heavily favored by those who were engaged. Improvements to existing regional trails are also desired, led by the Cedar Valley Nature Trail where it crosses busy streets in Downtown Cedar Rapids and the Northeast quadrant, as shown in Figure A.5. This is further illustrated in conditions ratings, where the ease of crossing busy streets while riding on trails was the fourth lowest rated out of 14 conditions, as shown in Figure A.13.
   How this finding should be used in the Plan: *A connected, regional network of trails should be developed, with clear identification of projects.*
2) **Respondents favor trail and bikeway facility types that provide greater separation between motorists and trail/bikeway users**. The facility types where respondents would like to see greater investments (in prioritized order) are a) paved trails along greenways, b) protected bike lanes, c) unpaved trails along greenways, and d) shared use paths along 4-lane roads, as shown in Figure A.15. These preferences largely follow their comfort level on these facilities, as shown in Figure A.14. Most respondents do not favor riding painted bike lanes, shoulders, or shared lane markings, nor do they favor investments in these facility types.
   How this finding should be used in the Plan: *The future bikeway network should focus more on favored facility types, and have a lesser focus on shared lane markings, shoulders, and painted bike lanes.*
3) **Local connections to regional trails and destinations are also a high priority.** The largest deterrent to using trails more is the lack of local connections to existing regional trail assets, with over half of respondents identifying this as a personal problem, as shown in Figure A.12.
   How this finding should be used in the Plan: *A greater focus should be placed on developing local connections to regional trails that are comfortable.*
4) **Additional trail and bikeway amenities are highly desired**. In an open-ended question at tabling events at the Cedar Rapids Farmers' Market, the top wish on the "wish list" was trail amenities, as shown in Figure A.20. When online survey respondents were asked to rank their most desired amenities, as shown in Figure A.17, they were (in prioritized order) a) water/rest stations, b) green infrastructure (e.g., bioswales, rain gardens, small parks), c) trailhead parking lots, d) wayfinding kiosks/signs, and e) online maps/apps.
   How this finding should be used in the Plan: *Recommendations regarding these five amenities should be the primary focus in the amenities section of the Plan.*

STRATEGIES FOR ENGAGING CEDAR RAPIDS AND LINN COUNTY RESIDENTS

The Cedar Rapids and Linn County Trails and Bikeways Plan is intended to reflect the vision and goals of the community, not just those who explicitly identify as a current trail or bikeway user. By also uncovering the issues and ideas from community members with passive interest in trails or bikeways, the Plan recommendations will better reflect the community's values and priorities. For example, while parents of children may not identify as a trail or bikeway user, they may have a personal interest in a trail that leads to local schools for the safety and well-being of children.

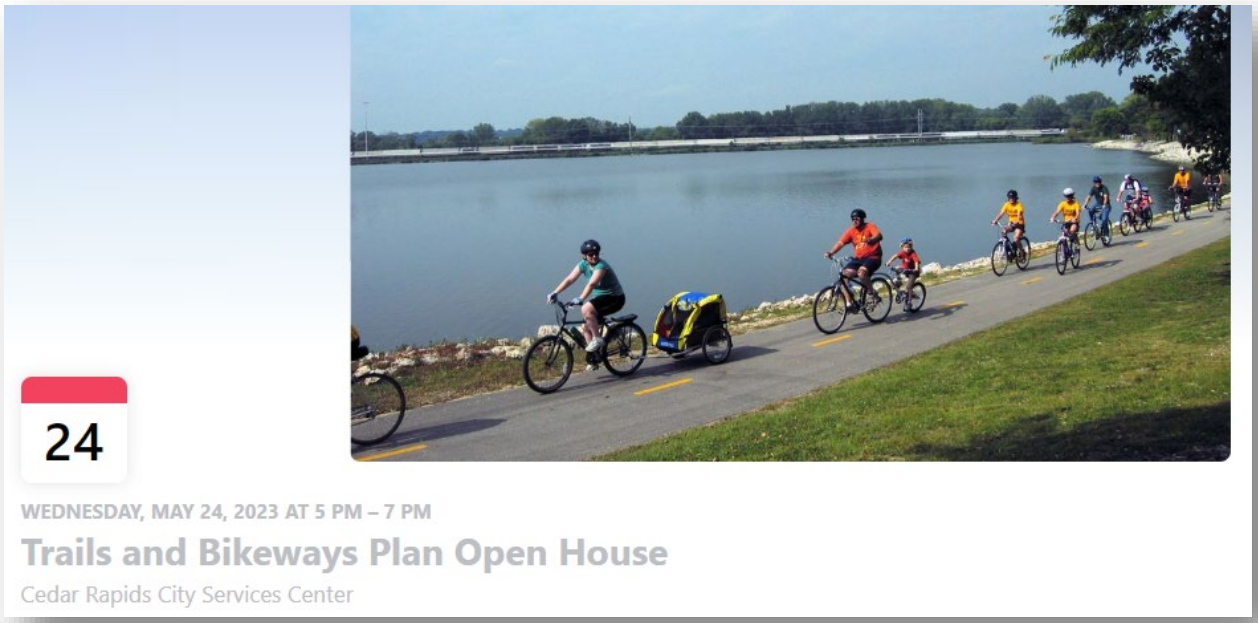
Oftentimes communities have widespread interest in trails or bikeways, but limited time to devote to meetings and volunteer opportunities, making it difficult to gauge public opinion through conventional public meetings. Making engagement easy, tailored, and inviting helps reach people who may care, but are generally less vocal on a single issue like trails or bikeways. For these reasons, it was important for the project team to use a range of strategies to solicit feedback from community members.

Approximately 12 community members were engaged at an open house, held at the City Services Center on May 24, 2023.

This section summarizes the strategies used to engage a range of community voices, why the strategies were selected, and the input that was received.

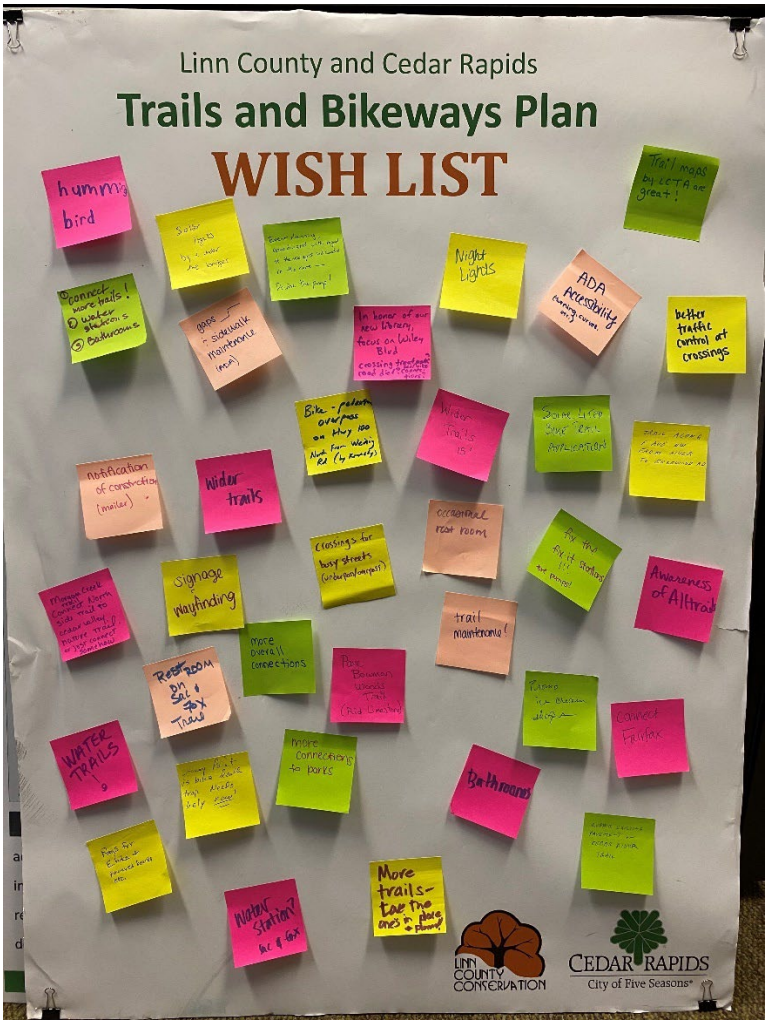
Strategy A: Open House, Pop-up Workshops, Tabling Events, and Online Questionnaires

On May 24th the project team solicited input at an open house with 12 participants. The open house was advertised on Cedar Rapids' social media channels. Community members were also directed to the project website and online questionnaire. An online map was also linked on the project website. Two pop-up workshops were also held: one at Sam's Club and the intersection of the Cedar Valley Nature Trail and 42nd Street NE on May 25th with approximately 50 participants reached and another at the Mount Vernon Farmers' Market on June 8th with approximately 75 participants reached. Two tabling events were also hosted by City of Cedar Rapids staff, with approximately 100 participants reached at each event. The first took place throughout Bike to Work Week between Saturday, May 13th and Friday, May 19th. The second occurred at the Cedar Rapids Farmers' Market on Saturday June 3rd.

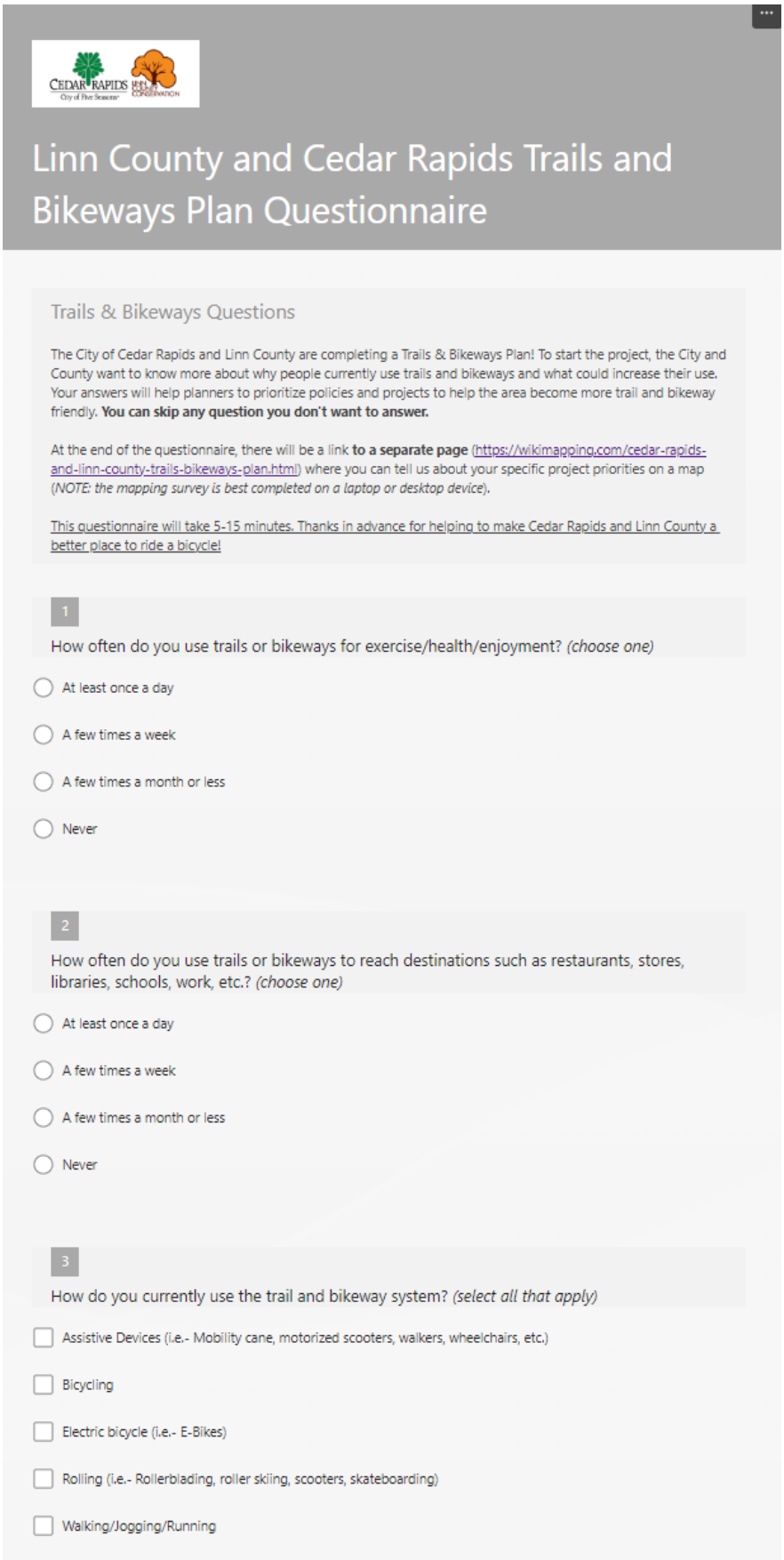


A Facebook event advertising the open house.

The online questionnaire and online map were promoted to Cedar Rapids and Linn County community members between May 16th and June 16th. Excerpts from the questionnaire and map are provided on the following pages. Portions of the questionnaire and map mimicked the format that was used at the open house and pop-up workshop events. Approximately 335 people took the online questionnaire and 100 people completed the map. The results of the open house and questionnaire/map are combined in the following section to provide a composite snapshot.



Approximately 100 community members engaged at tabling events shared their wish list ideas for trails and bikeways.



Linn County and Cedar Rapids Trails and Bikeways Plan Questionnaire

Trails & Bikeways Questions

The City of Cedar Rapids and Linn County are completing a Trails & Bikeways Plan! To start the project, the City and County want to know more about why people currently use trails and bikeways and what could increase their use. Your answers will help planners to prioritize policies and projects to help the area become more trail and bikeway friendly. **You can skip any question you don't want to answer.**

At the end of the questionnaire, there will be a link **to a separate page** (https://wikimapping.com/cedar-rapids-and-linn-county-trails-bikeways-plan.html) where you can tell us about your specific project priorities on a map (*NOTE: the mapping survey is best completed on a laptop or desktop device*).

This questionnaire will take 5-15 minutes. Thanks in advance for helping to make Cedar Rapids and Linn County a better place to ride a bicycle!

1

How often do you use trails or bikeways for exercise/health/enjoyment? *(choose one)*

- ◯ At least once a day
- ◯ A few times a week
- ◯ A few times a month or less
- ◯ Never

2

How often do you use trails or bikeways to reach destinations such as restaurants, stores, libraries, schools, work, etc.? *(choose one)*

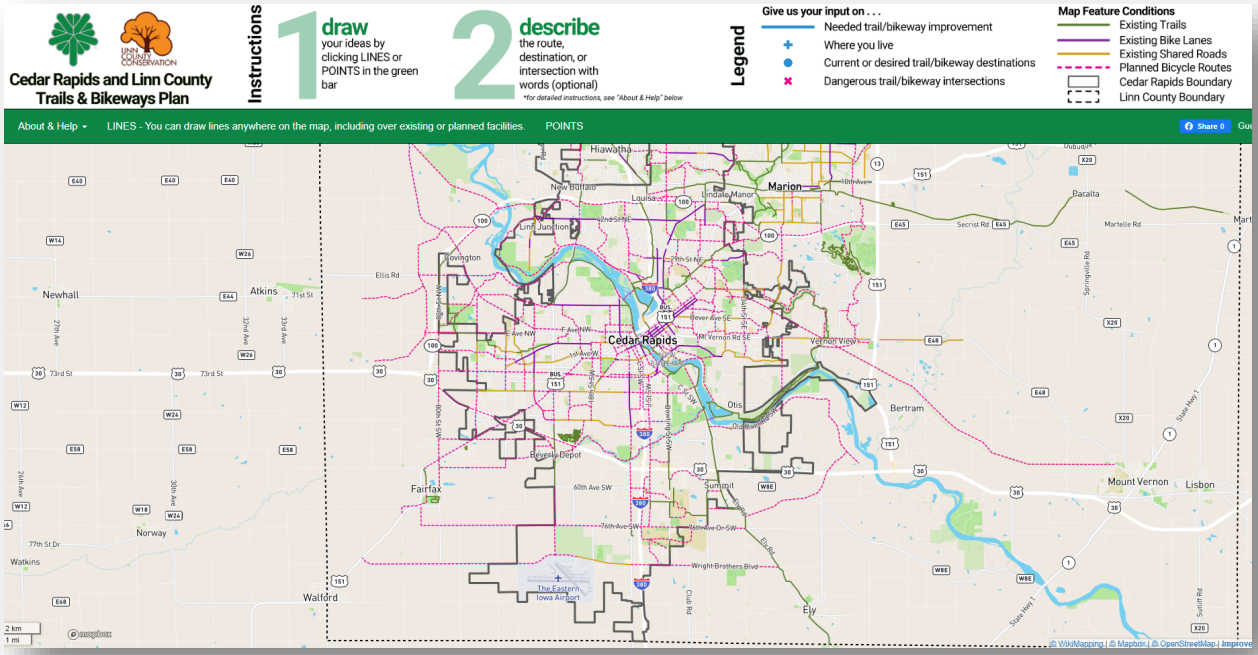
- ◯ At least once a day
- ◯ A few times a week
- ◯ A few times a month or less
- ◯ Never

3

How do you currently use the trail and bikeway system? *(select all that apply)*

- ☐ Assistive Devices (i.e.- Mobility cane, motorized scooters, walkers, wheelchairs, etc.)
- ☐ Bicycling
- ☐ Electric bicycle (i.e.- E-Bikes)
- ☐ Rolling (i.e.- Rollerblading, roller skiing, scooters, skateboarding)
- ☐ Walking/Jogging/Running

A screen capture of the online questionnaire showing questions about trails and bikeways in Cedar Rapids and Linn County.



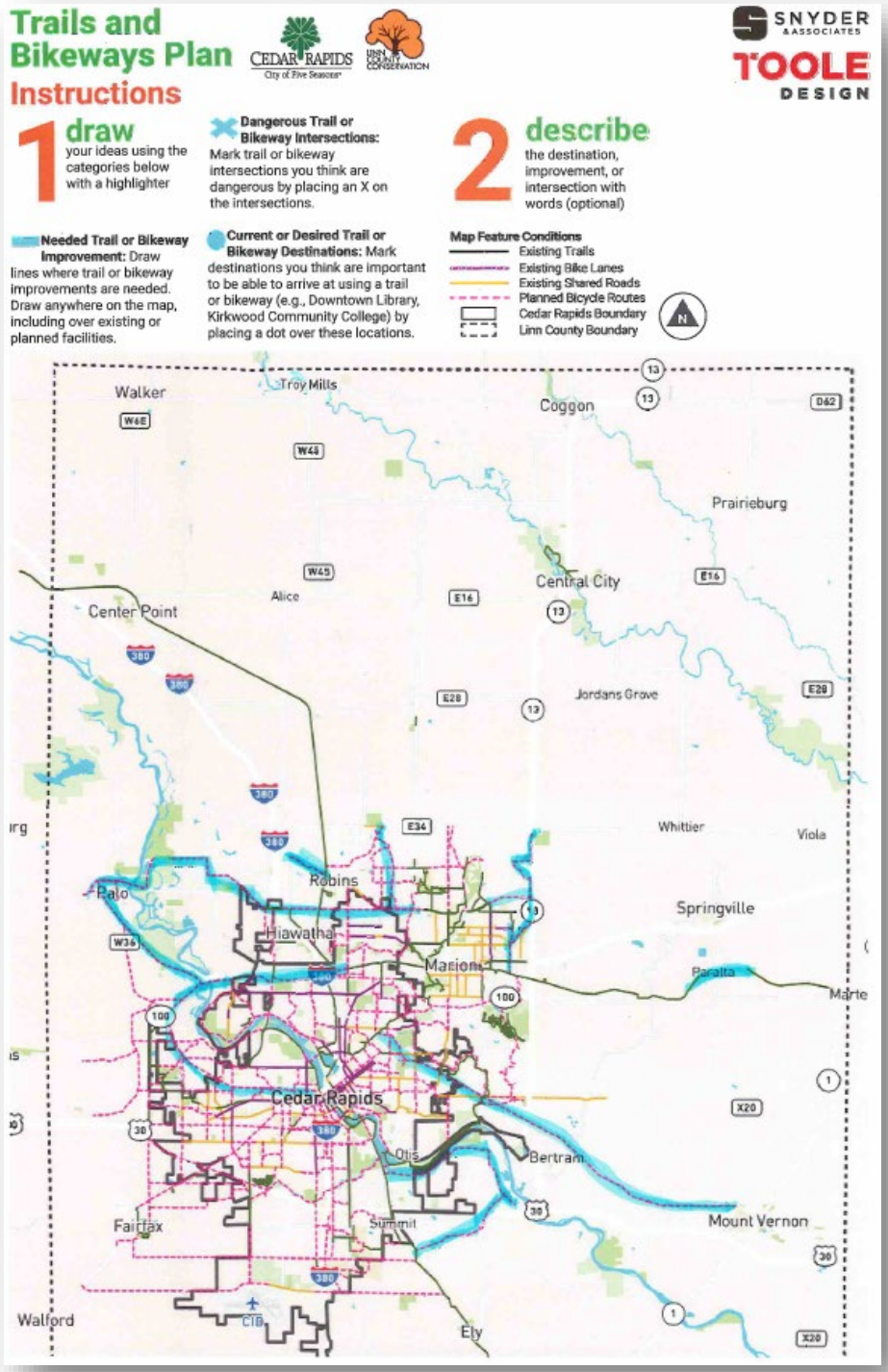
A screen capture of the online map that asked for input on needed trail/bikeway improvements, destinations, and dangerous intersections.

MAPPING

Cedar Rapids and Linn County stakeholders, reached at both in-person events and online through an interactive mapping website, were invited to identify examples of needed trail/bikeway improvements, current or desired trail/bikeway destinations, dangerous trail/bikeway intersections, and where they live.

Approximately 100 respondents submitted a total of:

- 301 needed trail/bikeway improvements
- 174 current or desired trail/bikeway destinations
- 150 dangerous trail/bikeway intersections
- 60 locations where respondents live



Participants completed paper maps at the open house on May 24, 2023.

Needed Trail/Bikeway Improvements

The maps shown in Figures A.1 and A.2 summarize the 301 routes where respondents identified there are needed trail/bikeway improvements within Cedar Rapids and Linn County. The three most needed improvements include:

1) CeMar Trail between Mount Calvary Cemetery and Highway 100
2) Inter Urban Trail between Bever Park and Mount Vernon
3) Grant Wood Trail between the Cedar Valley Nature Trail and Council Street

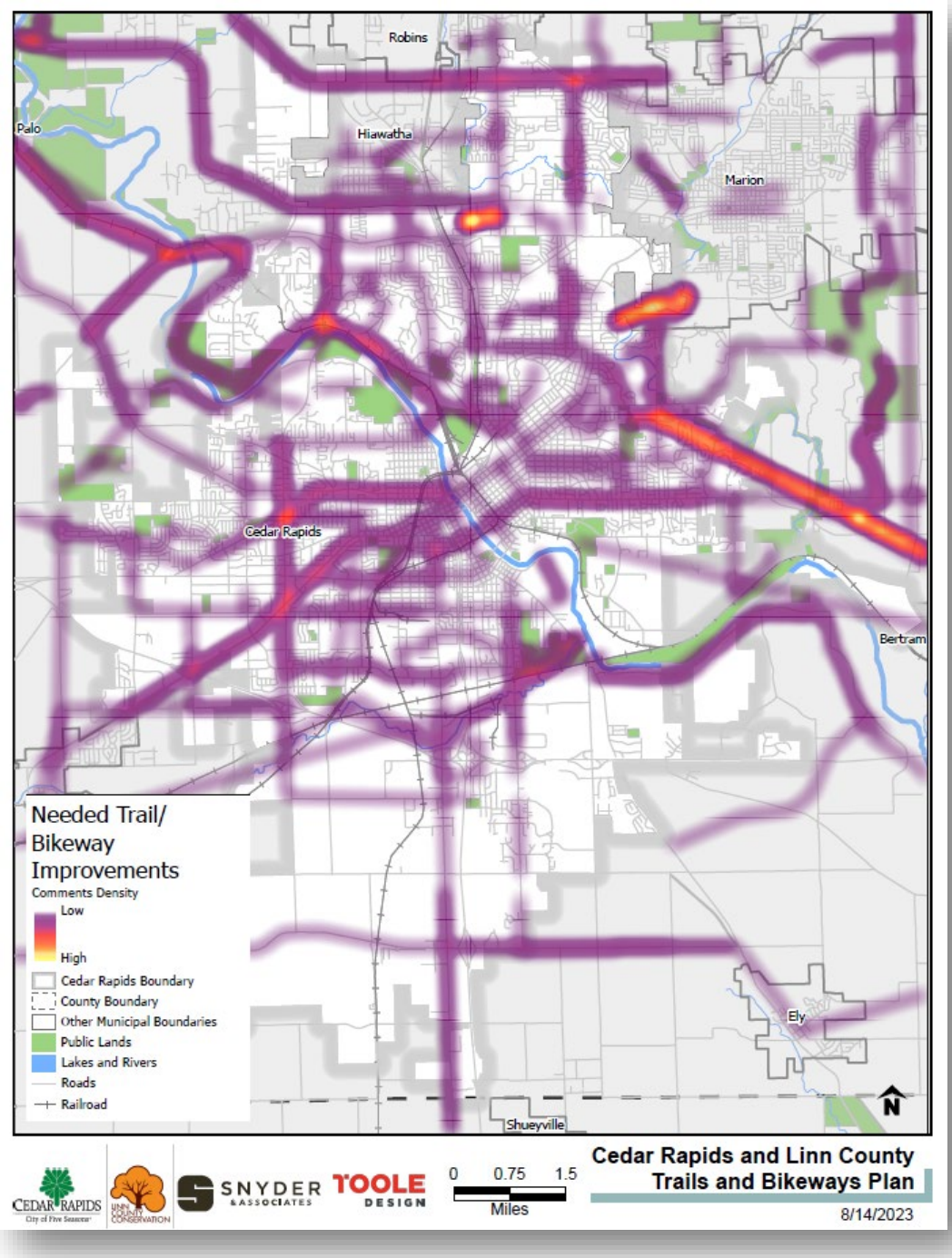


Figure A.1. Participants were asked to trace routes where there are needed trail/bikeway improvements within and near to Cedar Rapids.

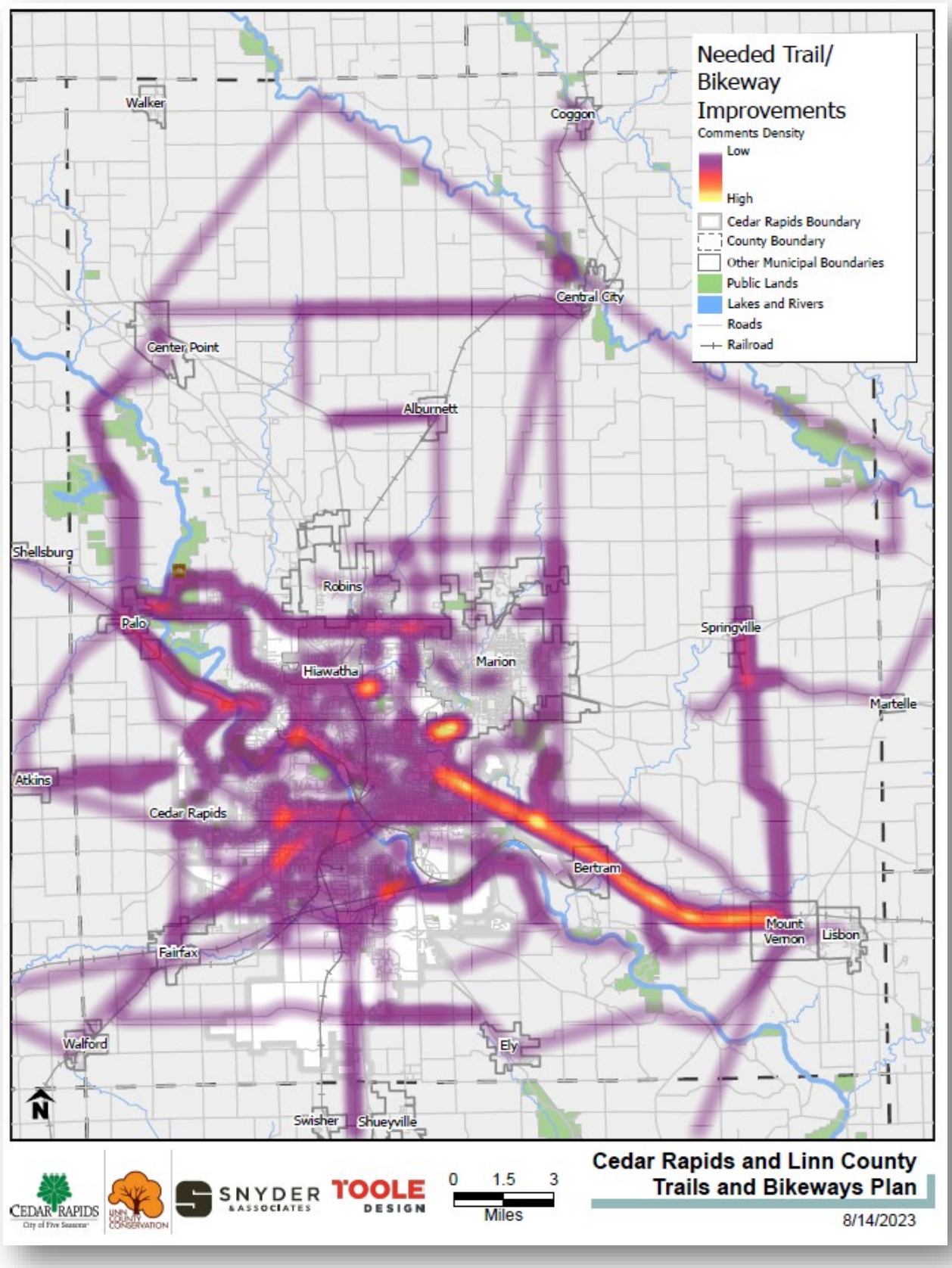


Figure A.2. Participants were asked to trace routes where there are needed trail/bikeway improvements within and near to Linn County.

Current or Desired Trail/Bikeway Destinations

The map shown in Figures A.3 and A.4 summarize the 174 current or desired trail/bikeway destinations respondents identified. The two largest concentrations of destinations were:

1) Downtown Cedar Rapids, in an area centering around Green Square and the Public Library
2) New Bohemia District, just southeast of Downtown Cedar Rapids

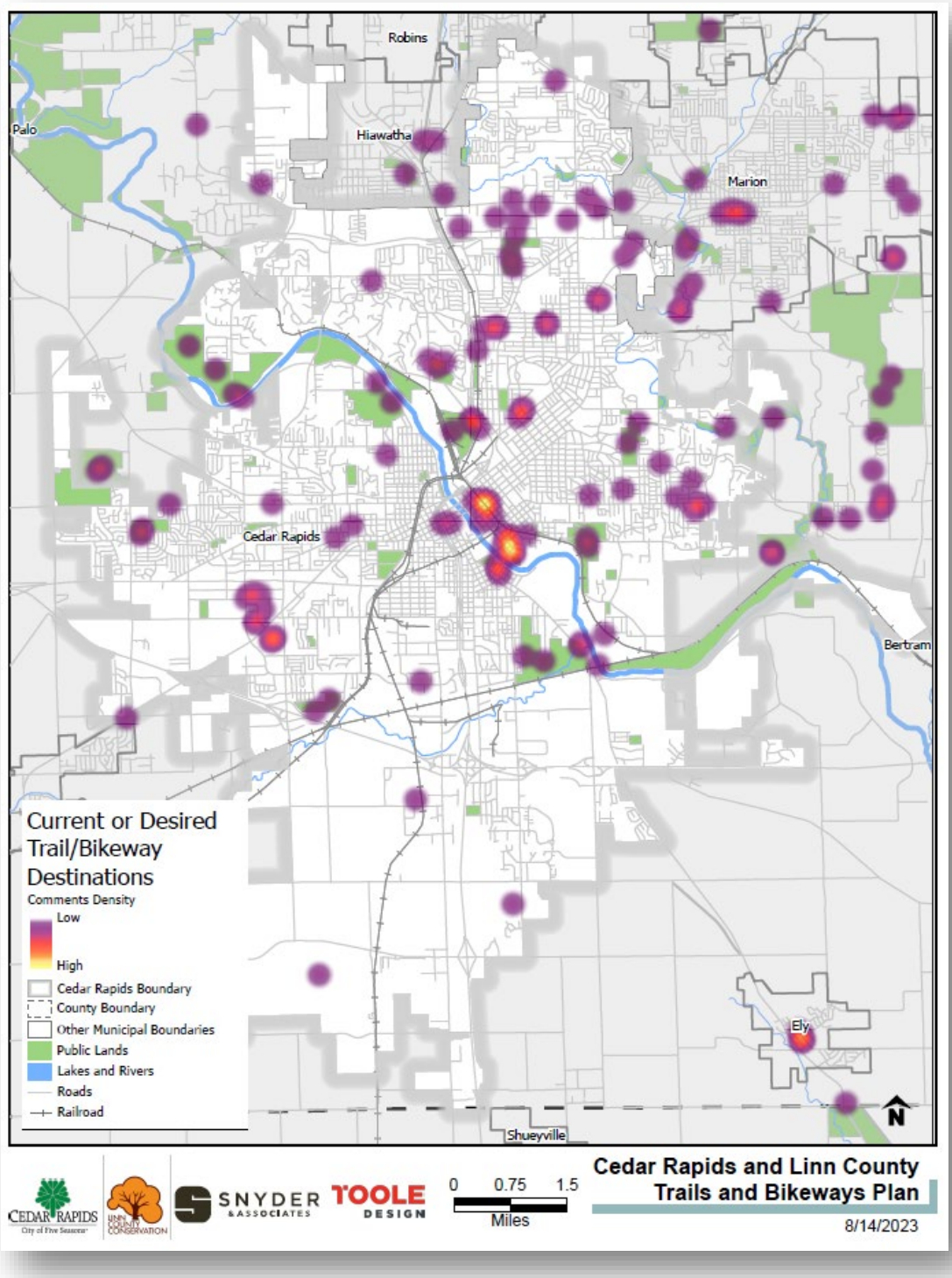


Figure A.3. Participants were asked to place points at current or desired trail/bikeway destinations within and near to Cedar Rapids.

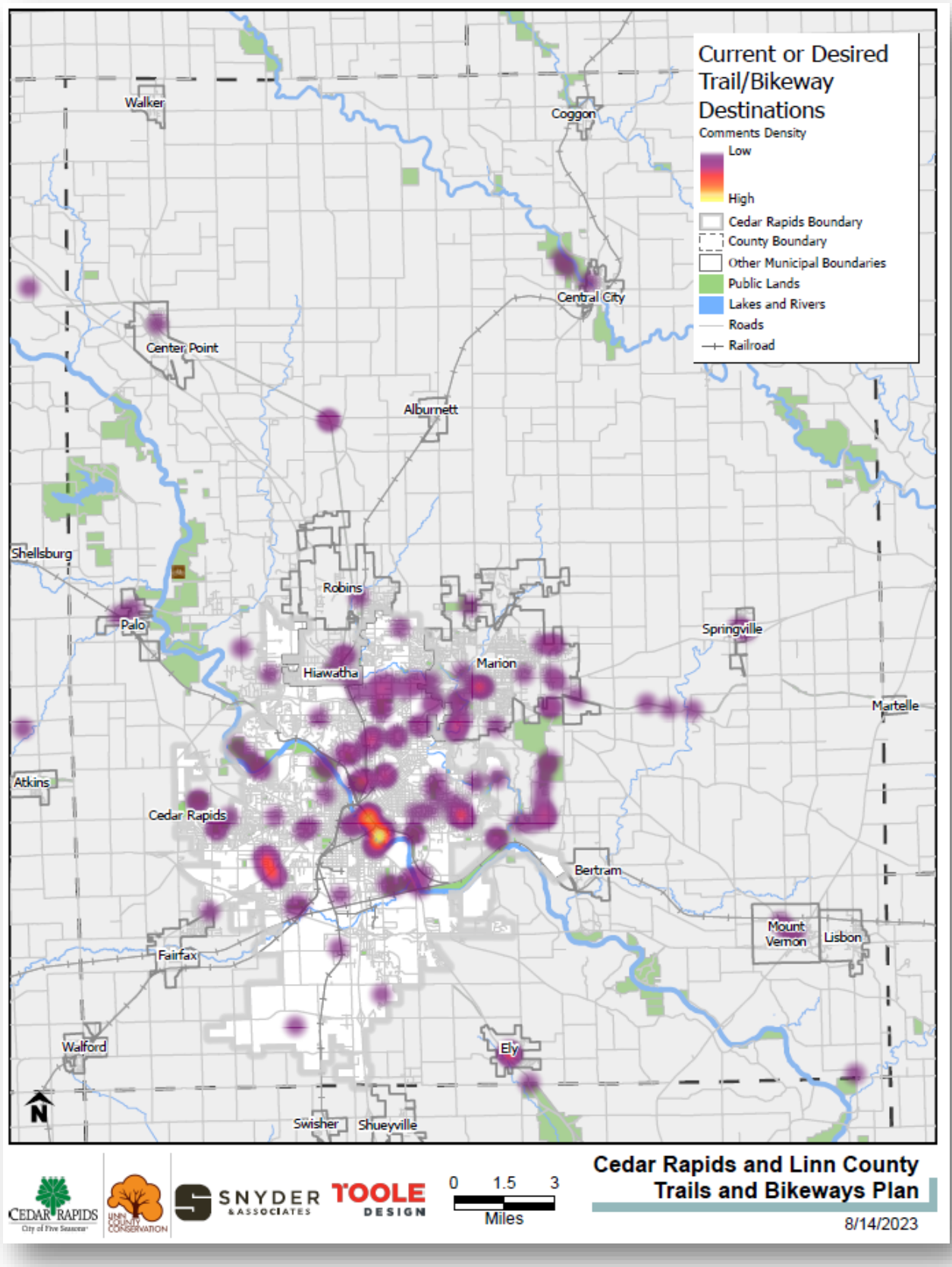


Figure A.4. Participants were asked to place points at current or desired trail/bikeway destinations within and near to Linn County.

Dangerous Trail/Bikeway Intersections

The maps shown in Figures A.5 and A.6 summarize the 150 locations respondents identified as dangerous trail/bikeway intersections. The two most dangerous intersections were:

1) Cedar Valley Nature Trail with Blairs Ferry Road NE
2) Cedar Valley Nature Trail with Sylvia Ave NE

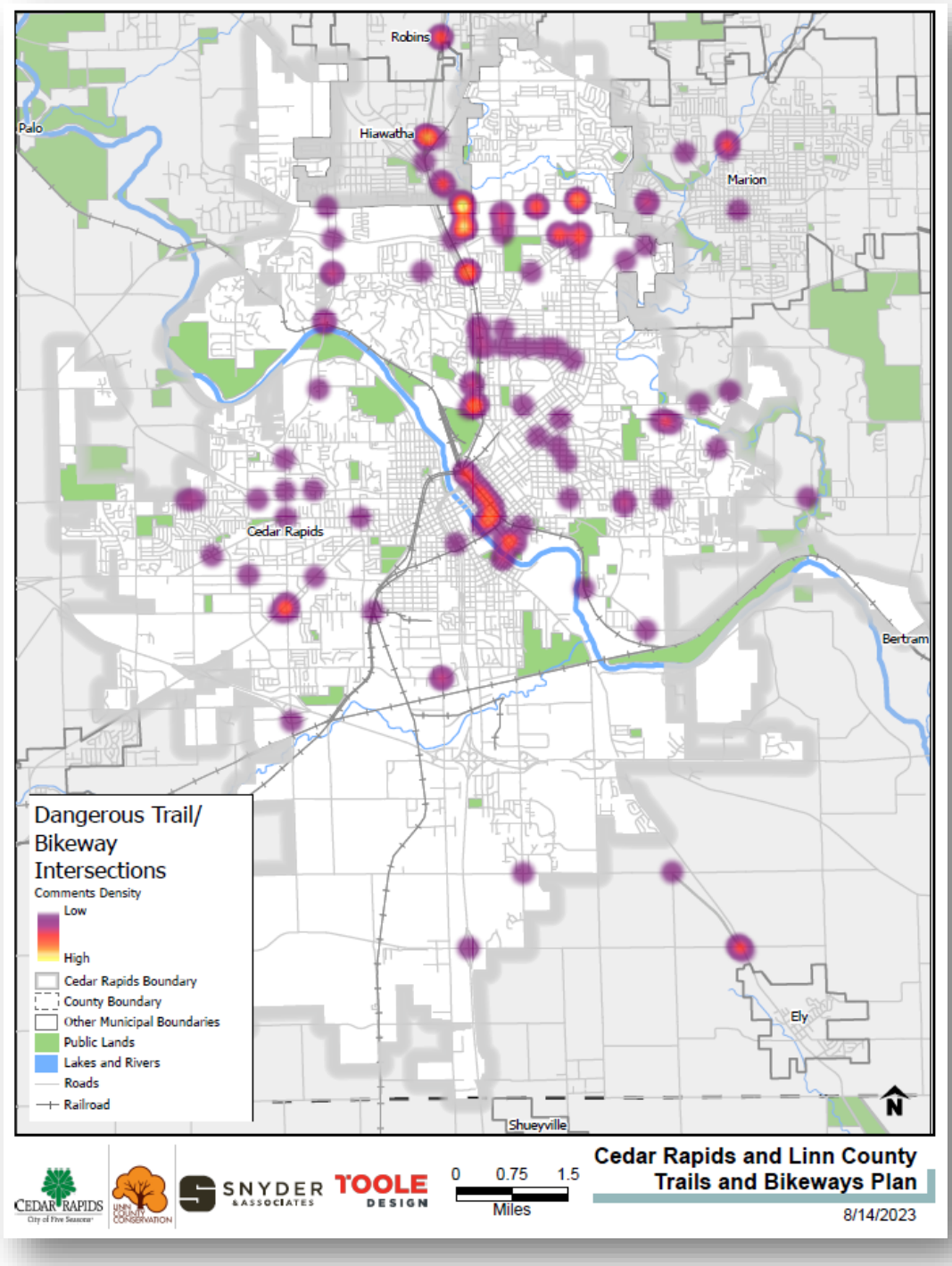


Figure A.5. Participants were asked to place points at dangerous trail/bikeway intersections within and near to Cedar Rapids.

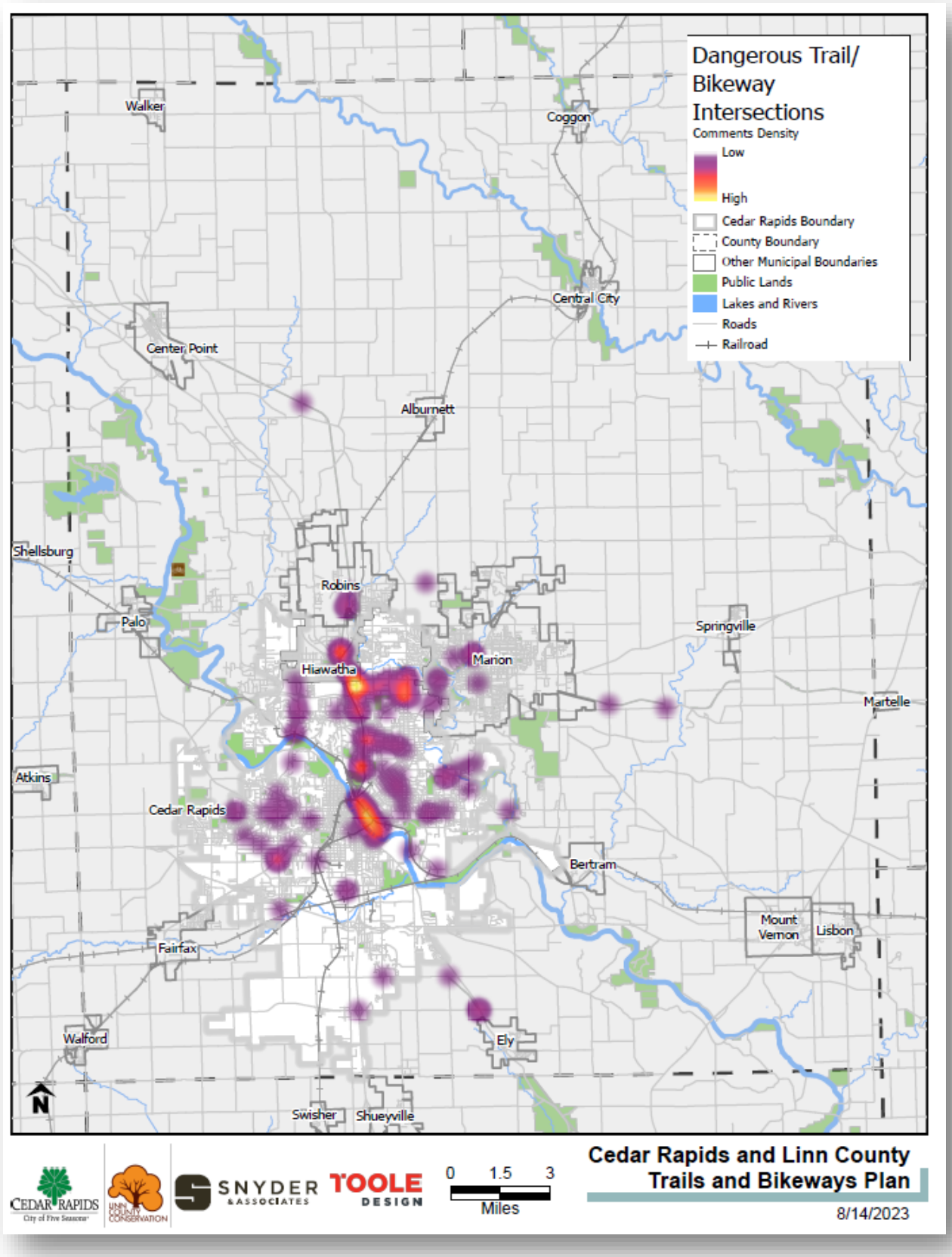


Figure A.6. Participants were asked to place points at dangerous trail/bikeway intersections within and near to Linn County.

Where Respondents Live

The maps shown in Figure A.7 and A.8 summarize the 60 locations respondents identified as where they live. The highest concentrations of respondents came from Marion and the Northeast and Southeast quadrants of Cedar Rapids.

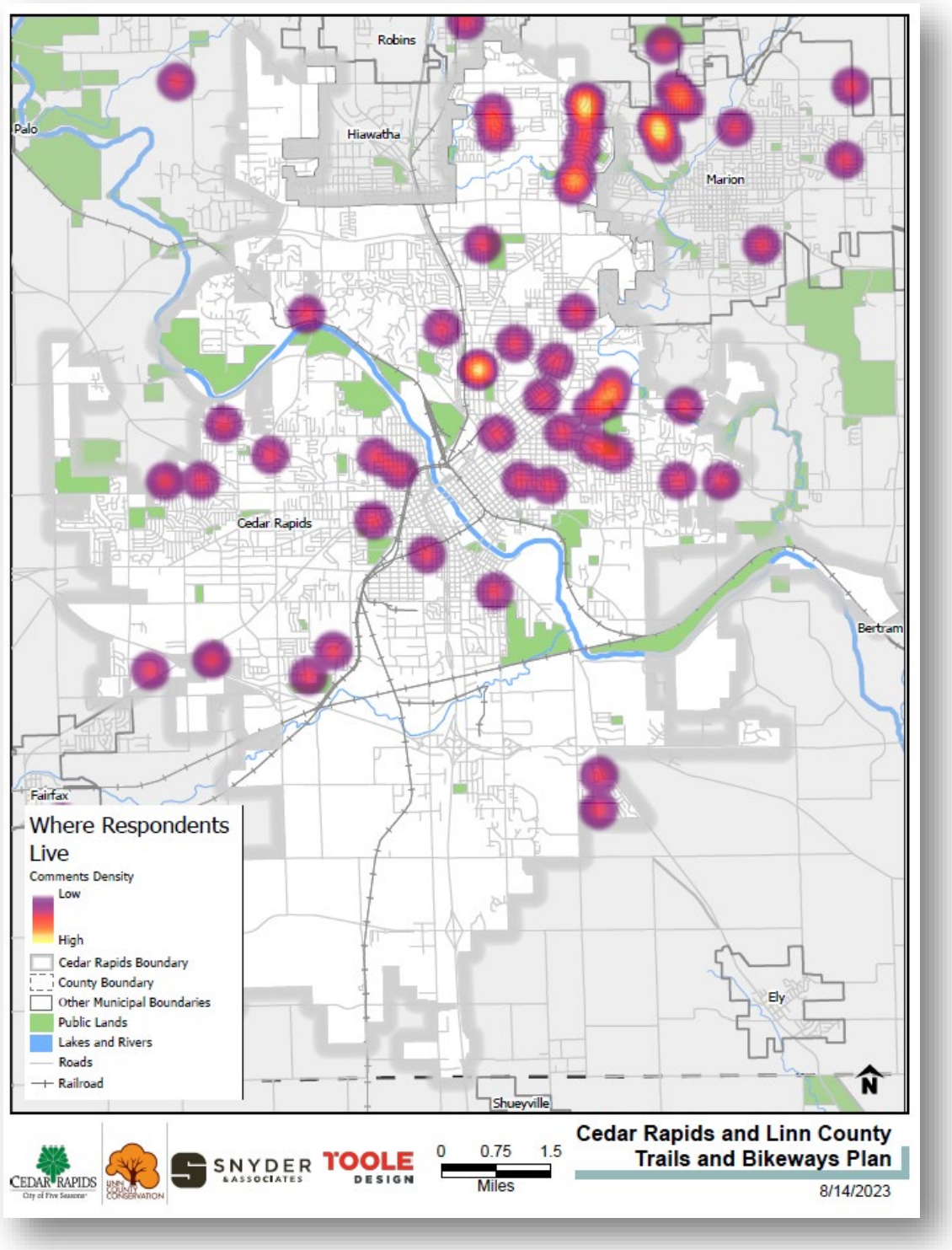


Figure A.7. Participants were asked to place points at locations where they live within and near to Cedar Rapids.

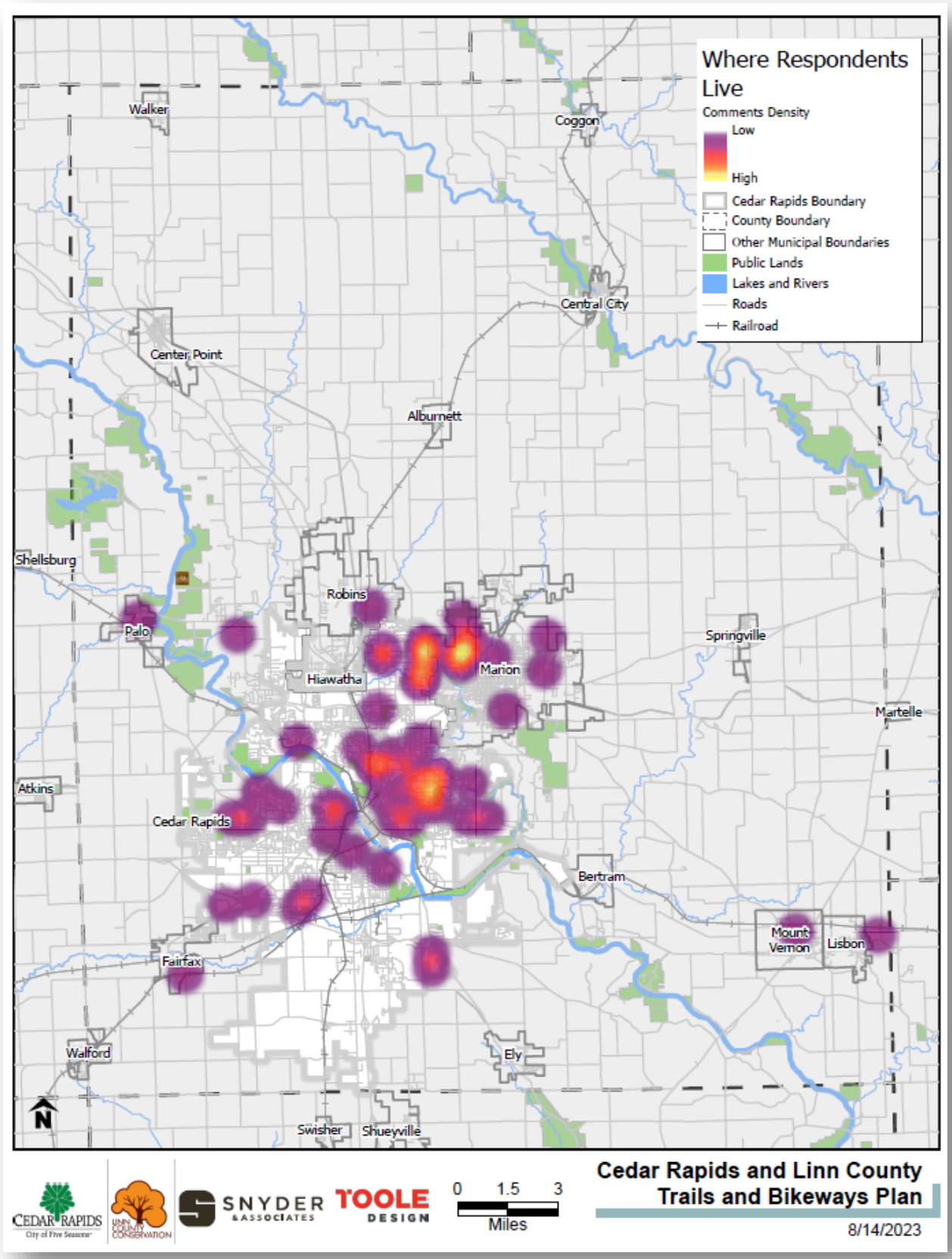


Figure A.8. Participants were asked to place points at locations where they live within and near to Linn County.

FREQUENCY OF USING TRAILS/BIKEWAYS

Most respondents (62 percent) reported using trails or bikeways for **exercise/health/enjoyment** a few times a week, 23 percent reported using trails/bikeways for those purposes a few times a month or less, 13 percent reported using trails/bikeways at least once a day, and two percent reported never using trails/bikeways for those reasons.

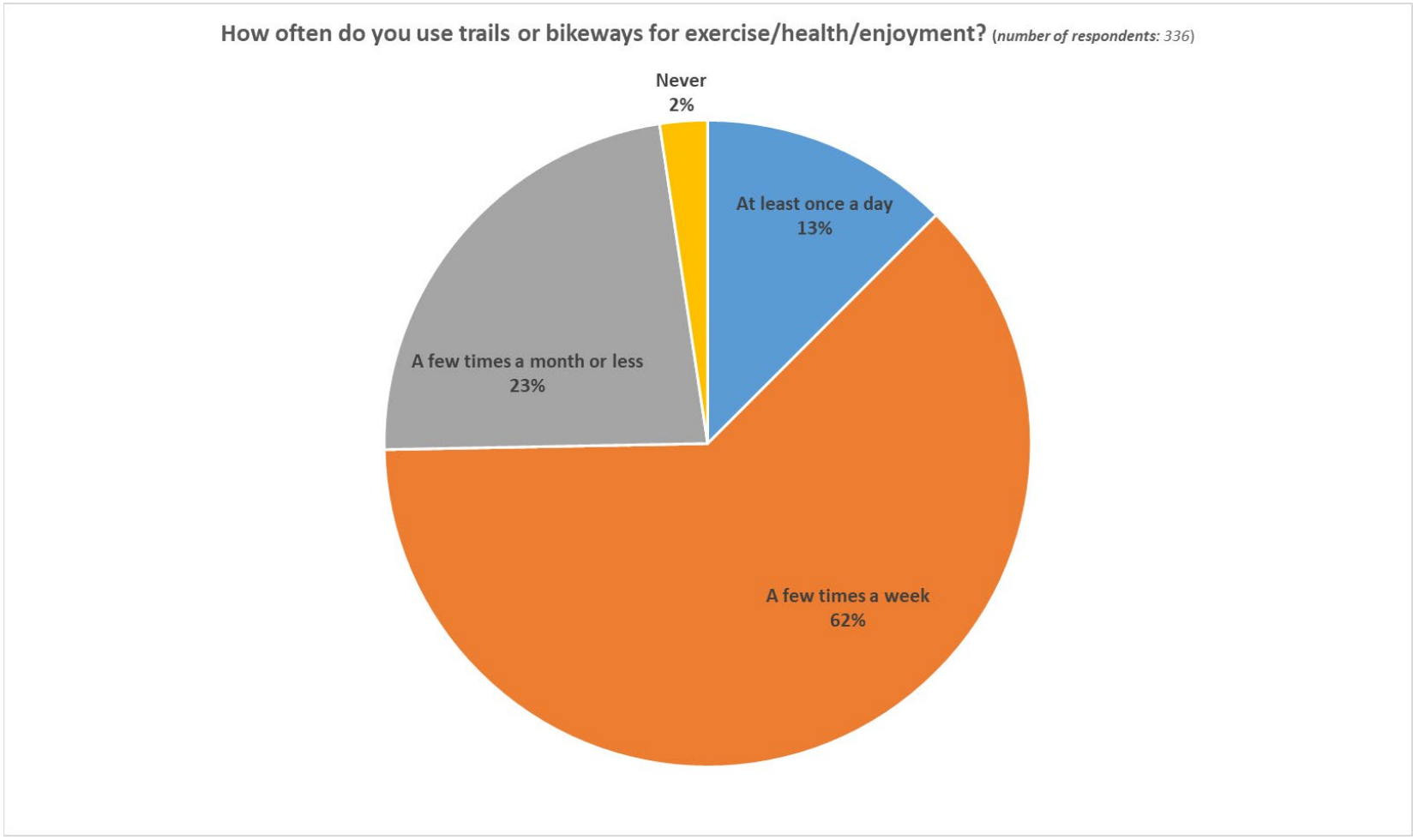


Figure A.9. Frequency with which participants in the Cedar Rapids/Linn County public engagement activities reported using trails/bikeways for exercise/health/enjoyment (answered by 336 participants).

Most respondents (44 percent) reported using trails or bikeways to reach destinations such as **restaurants, stores, libraries, schools, work, etc.** a few times a month or less, 30 percent reported using trails/bikeways a few times a week for those purposes, 21 percent reported never using trails/bikeways, and five percent reported using trails/bikeways for those reasons at least once a day.

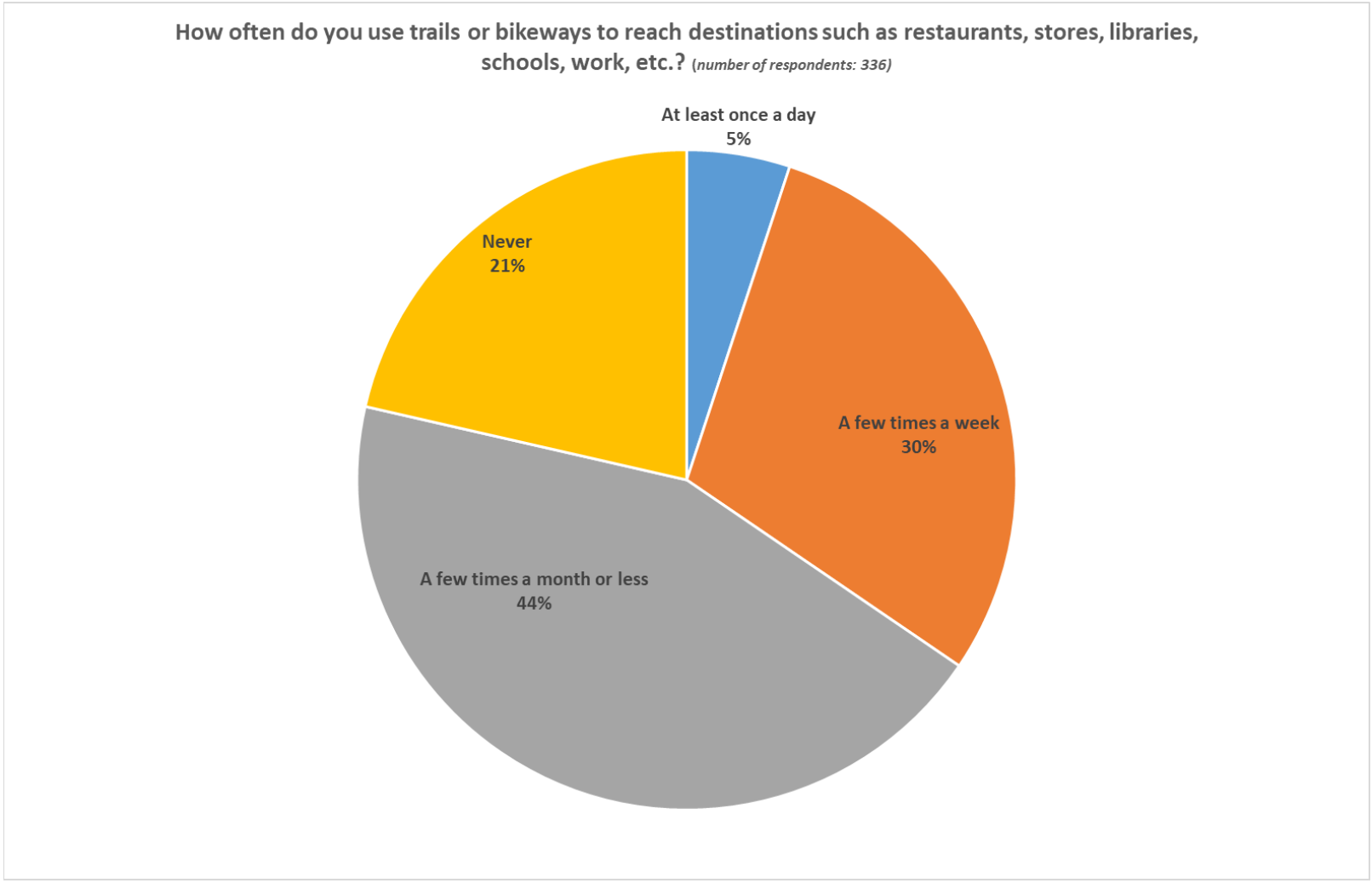


Figure A.10. Frequency with which participants in the Cedar Rapids/Linn County public engagement activities reported using trails/bikeways to reach destinations such as restaurants, stores, libraries, school, and work (answered by 336 participants).

HOW TRAILS/BIKEWAYS ARE USED

Participants were asked what modes of transportation they used on trails or bikeways and could select all modes that applied. Most respondents (88 percent) reported using trails or bikeways by bicycling, 64 percent reported using trails/bikeways while walking/jogging/running, 12 percent reported using trails/bikeways with e-bikes, four percent reported using trails/bikeways by rolling, and one percent use assistive devices.

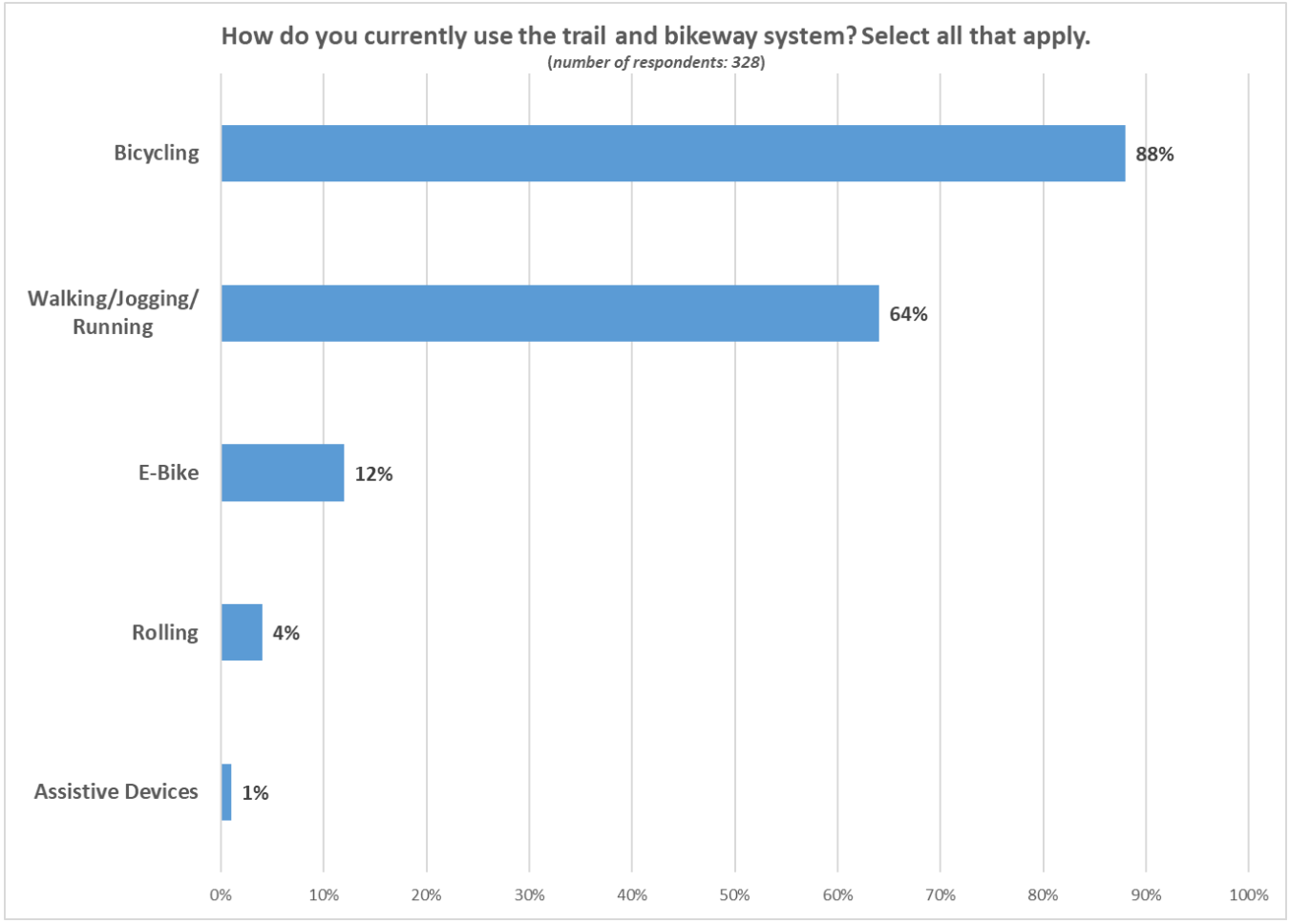


Figure A.11. How participants in the Cedar Rapids/Linn County public engagement activities reported using trails/bikeways (answered by 328 participants).

DETERRENTS FROM USING TRAILS/BIKEWAYS

Participants were asked the following multiple-choice question about what deters them from using trails/bikeways:

What prevents you from using trails or bikeways more than you do now?

323 people responded and identified a total of 689 deterrents (each respondent was allowed to choose up to three deterrents). Figure A.12 shows the most common deterrents. The three most common were:

1. Lack of local connections to nearby trails (165/323, or 51%)
2. Safety from motorists (92/323, or 28%)
3. Lack of time (88/323, or 27%)

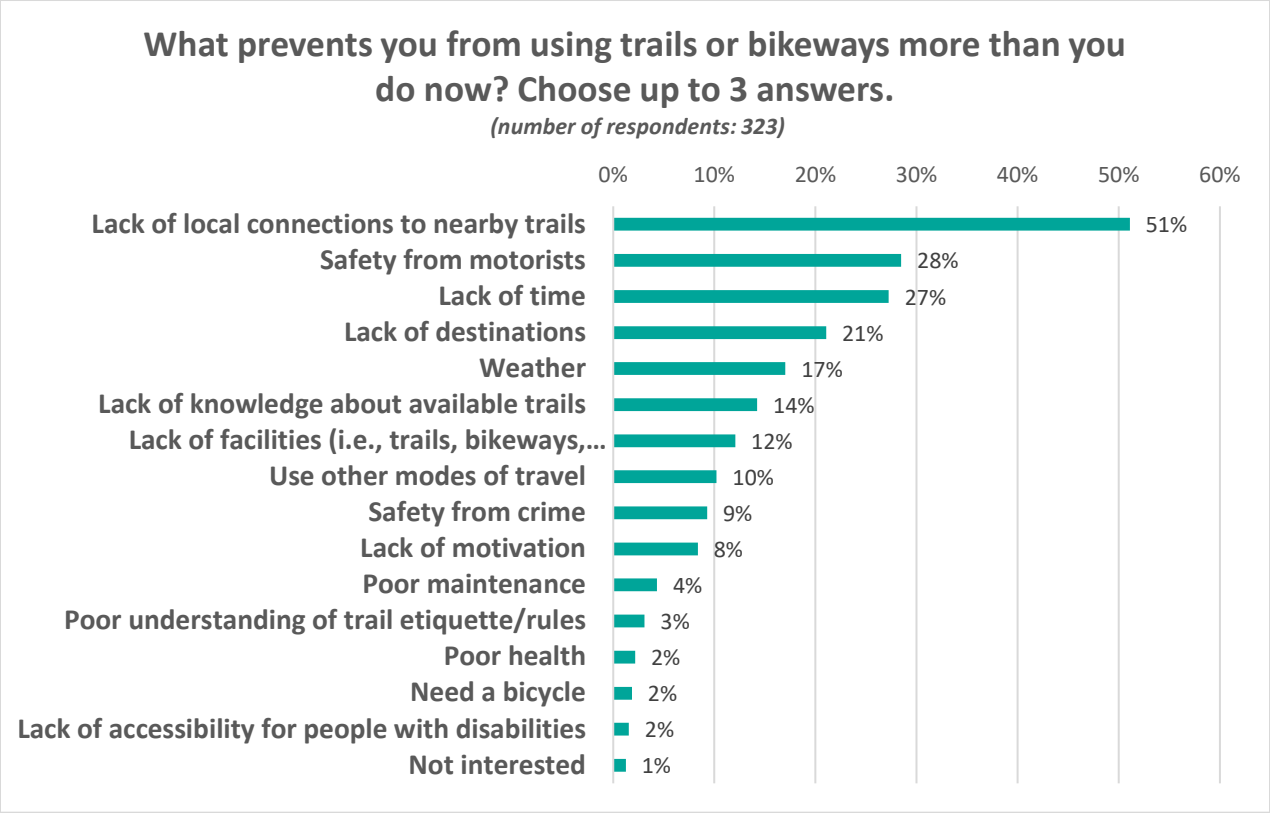


Figure A.12. Bar chart showing deterrents to using trails/bikeways more.

RATING CURRENT CONDITIONS

Participants in the online questionnaire and open house/pop-up workshops were asked to rank 14 current trail/bikeway conditions in Cedar Rapids and Linn County on a five-point scale from 'Excellent' to 'Bad.' Figure A.13 displays the results of participants who voted for each condition as either 'Excellent' or 'Good'. Conditions where less than 50% of respondents rated each as 'Excellent' or 'Good' are recommended to be addressed in the Plan:

1. Motorists' attitude toward trail and bikeway users (20%)
2. Ease of riding through busy intersections when riding on streets (25%)
3. Mountain biking options (31%)
4. Ease of crossing busy streets when riding on trails (33%)
5. Winter maintenance of trails and bikeways (35%)
6. Cedar Valley Nature Trail wayfinding (signs & trail markings) through downtown CR (38%)
7. Pavement marking maintenance for trails and bikeways (41%)
8. Connectivity of regional trail and bikeway network (43%)
9. Trail amenities (e.g. bike parking, fixit stations, rest stations, water, wayfinding signs (45%)

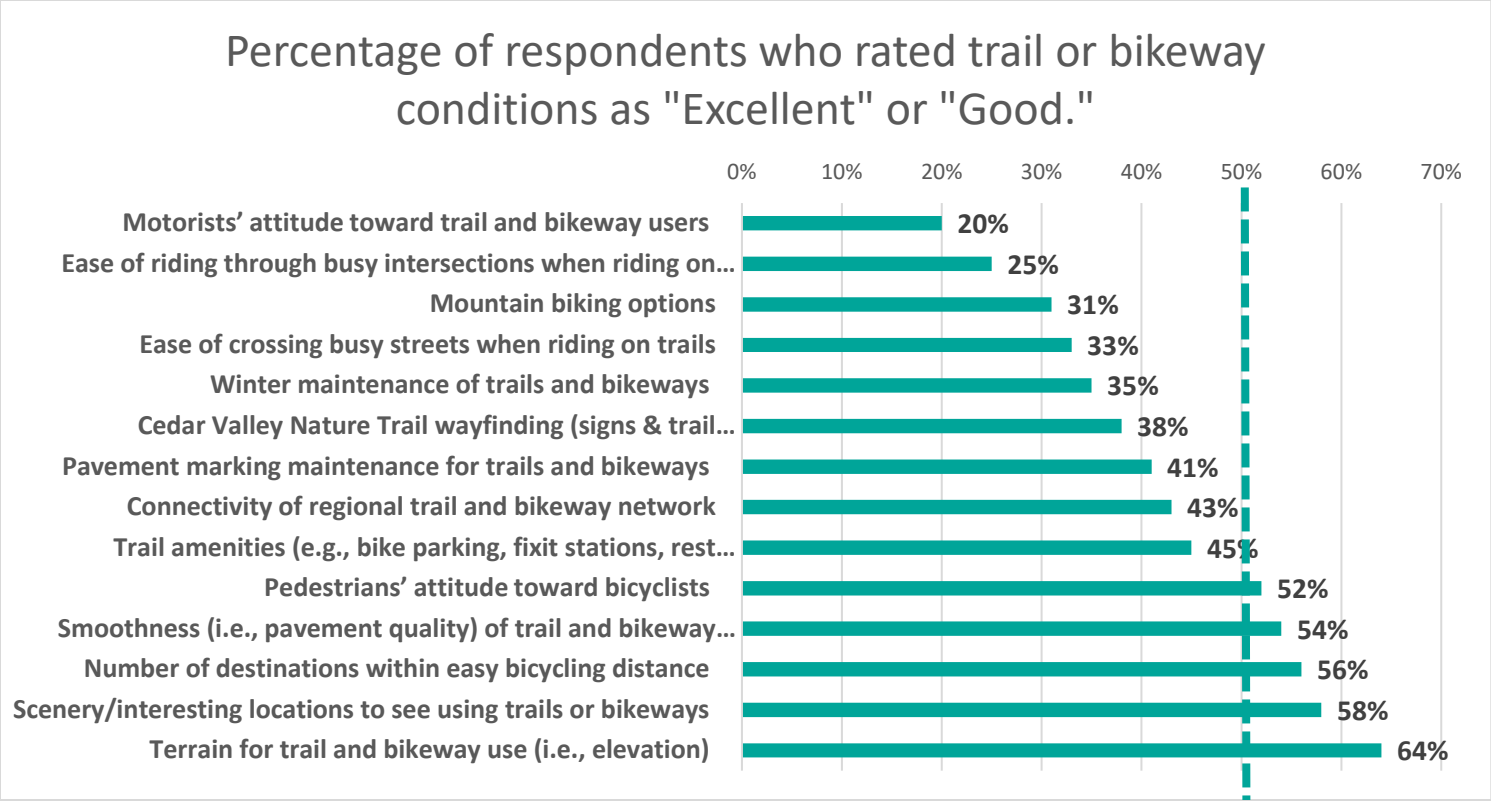


Figure A.13. Summary graph of percentage of respondents who rated each trail or bikeway condition as 'Excellent' or 'Good'.

DESIGN AND INVESTMENT PREFERENCES FOR TRAILS/BIKEWAYS

Respondents were asked to rate their comfort level using various trail or bikeway types. Participants viewed a photo of each trail/bikeway type, and then rated each on a five-point scale from 'Very Comfortable' to 'Very Uncomfortable'. Figure A.14 shows the percentage of respondents who ranked each category as either 'Very Comfortable' or 'Comfortable'. Approximately 341 people answered this question. The three trail/bikeway types that received the most responses for 'Very Comfortable' or 'Comfortable' were paved shared use path along a greenway (98%), shared use path along a 4-lane road (90%), and protected bike lanes (87%). The complete results of the trail/bikeway types and images of each facility are shown below.

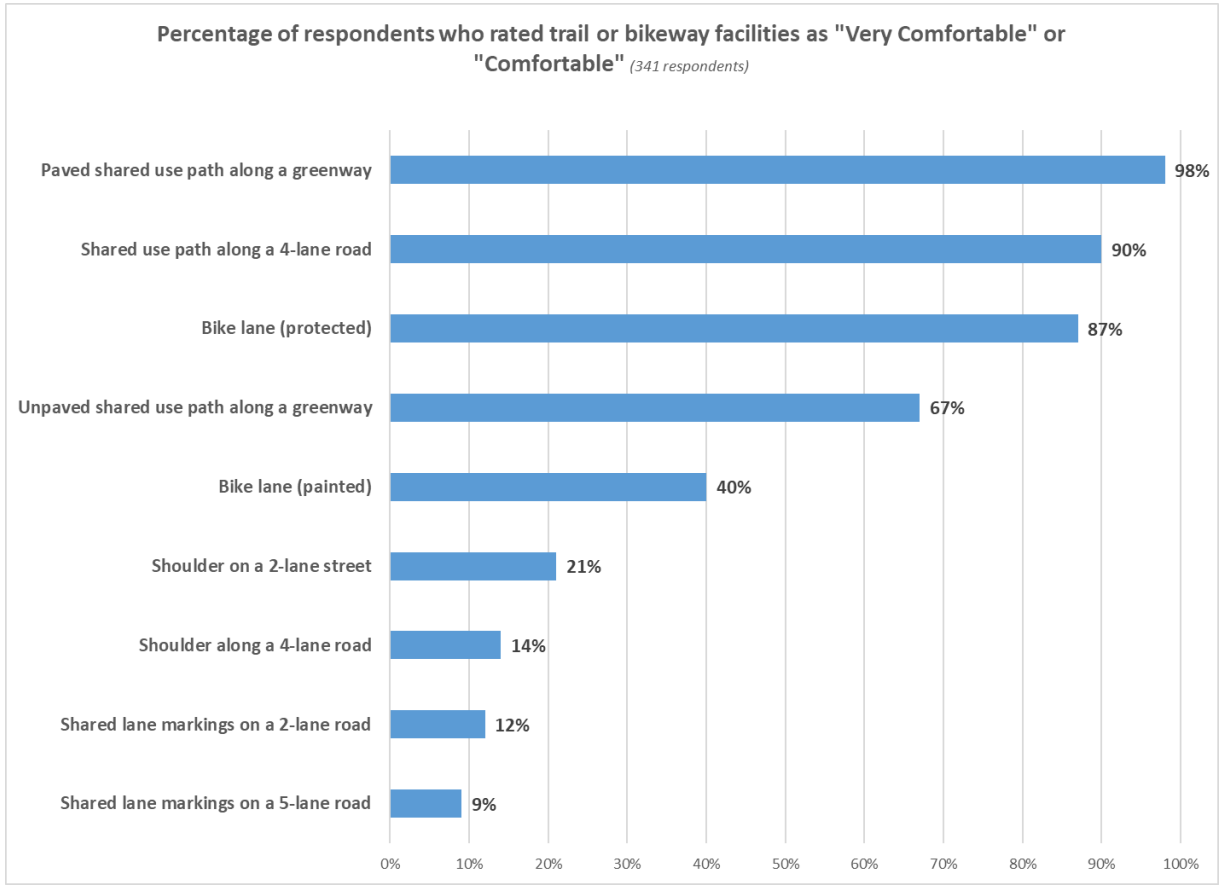
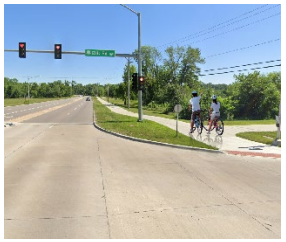


Figure A.14. Summary graph of percentage of respondents who rated each trail or bikeway environment as 'Very Comfortable' or 'Comfortable'. The images on the following page were included in the questionnaire.

Paved shared use path along a greenway (98%)



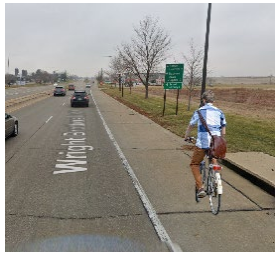
Shared use path along a 4-lane road (90%)

Protected bike lane (87%)

Unpaved shared use path along a greenway (67%)

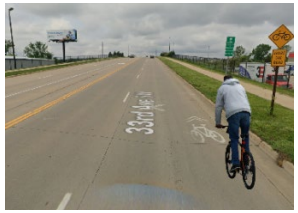
Painted bike lane (40%)

Shoulder on a 2-lane street (21%)



Shoulder on a 4-lane road (14%)

Shared lane markings on a 2-lane road (12%)



Shared lane markings on a 5-lane road (9%)

Respondents were then asked, based on the images on the previous page, which trail/facility types they would prefer to see more investments made. Each person was allowed to select up to three answers. 330 respondents chose 799 answers. Figure A.15 shows the percentage of respondents who chose each facility type. The three trail/bikeway types that received the most responses were:

1. Paved shared use path along a greenway (225/330, or 68%)

2. Protected bike lanes (184/330, or 56%)
3. Unpaved shared use path along a greenway (109/330, or 33%)

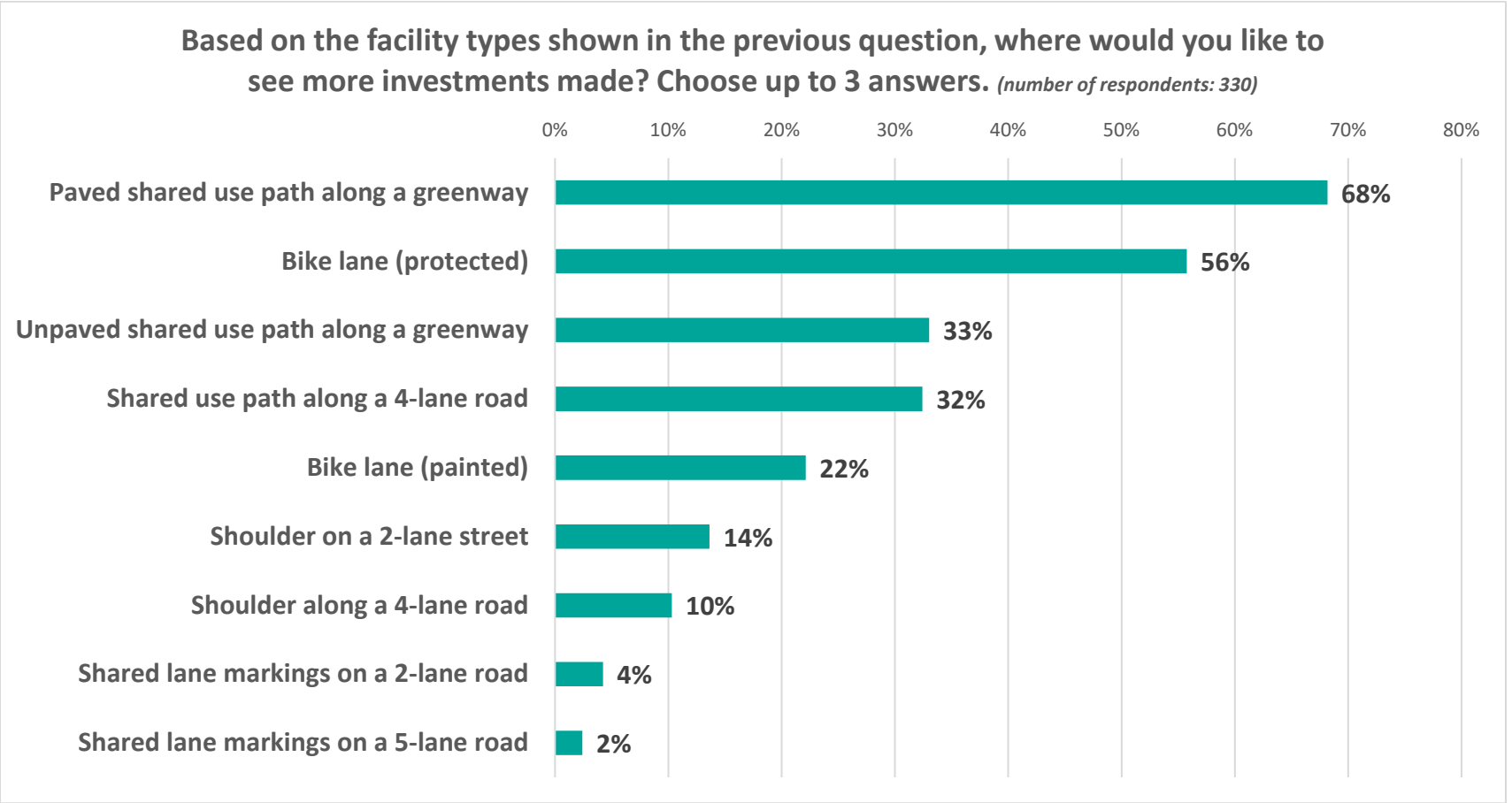


Figure A.15. Bar chart showing preferences for trail/bikeway facility type investments.

NEW PROJECT AND AMENITY PRIORITIZATION

Respondents were asked how they would prioritize new trail and bikeways projects, based on a list of factors. Each person was allowed to select up to three answers. 332 respondents chose 903 answers. Figure A.16 shows the percentage of factors chosen. The three factors that received the most responses were:

1. Fills a gap in the existing trail or bikeway network (270/332, or 81%)
2. Connects existing trail or bikeway segments to new destinations (264/332, or 80%)
3. Improves safety at a location that has a high number of bicycle crashes (112/332, or 34%)

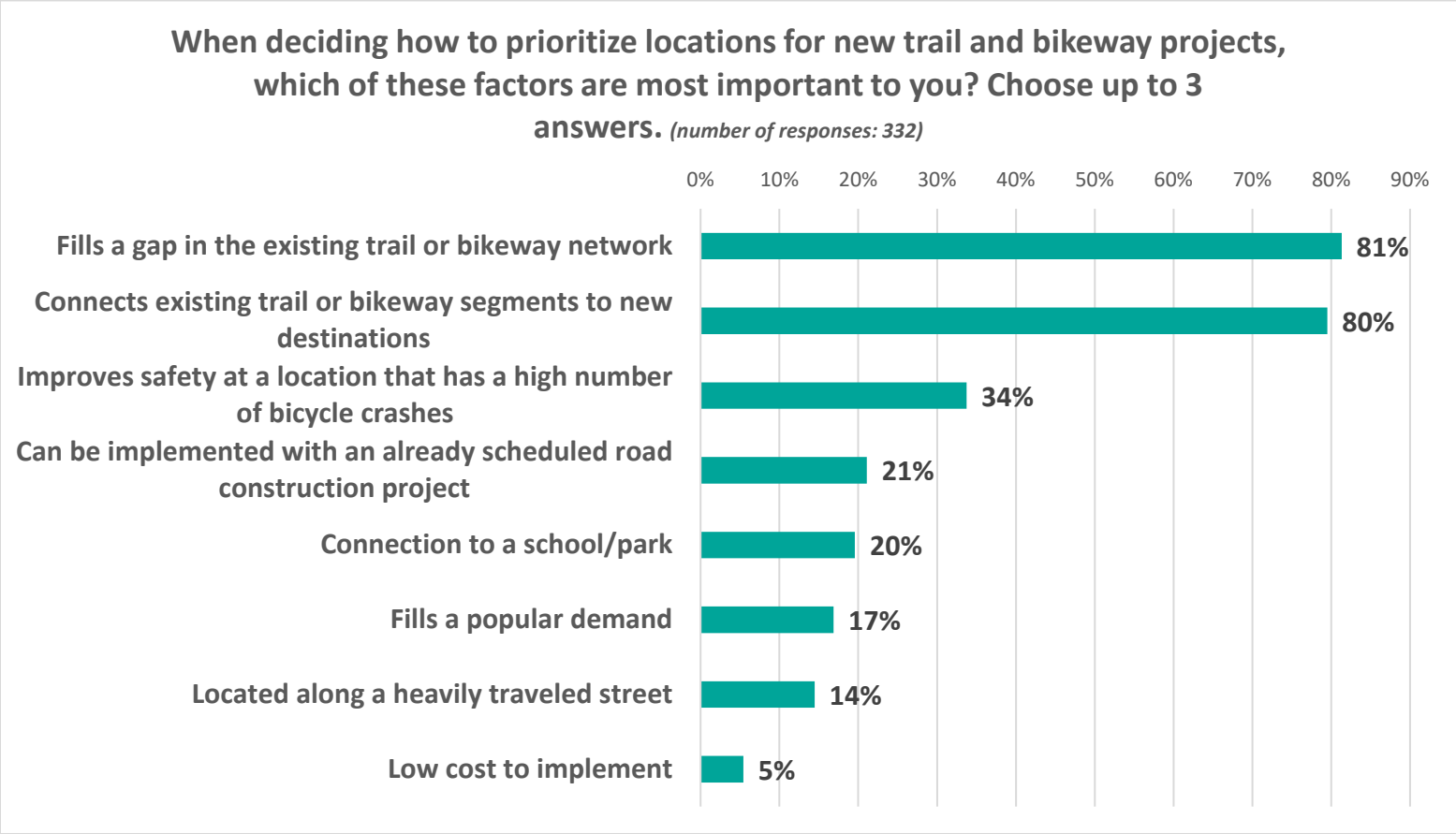


Figure A.16. Bar chart showing preferences for new project prioritization.

Respondents were asked which amenities were most important. Each person was allowed to select up to three answers. 321 respondents chose 875 answers. Figure A.17 shows the percentage of amenities chosen. The three amenities that received the most responses were:

1. Water and rest stations (175/321, or 55%)

2. Green infrastructure (e.g., bioswales, rain gardens, small parks (132/321, or 41%)
3. Trailhead parking lots (106/321, or 33%)

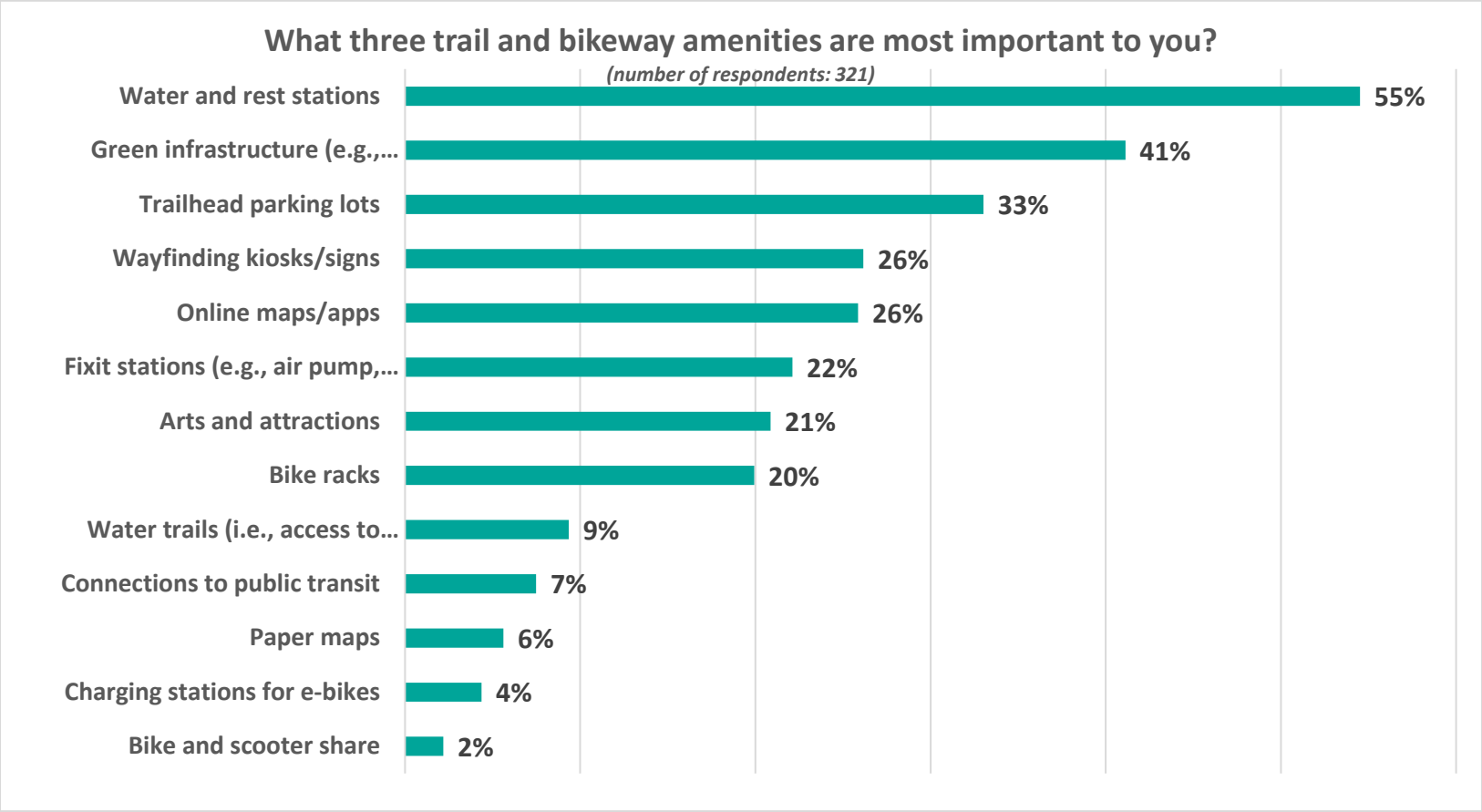


Figure A.17. Bar chart showing preferences for trail and bikeway amenities.

TOP ROUTES/INTERSECTIONS FOR IMPROVEMENT AND WISH LIST

Respondents were asked the following question and then encouraged to answer with an open-ended written text response: *Imagine you had a magic wand and could instantly change one route and one intersection in our community. Which ones would you select?*

240 respondents submitted 147 routes and 106 intersections, as shown in Figures A.18 and A.19. The CeMar Trail was the top route for improvement in 16 out of 147 ideas (or 11%), while the intersections of the Cedar Valley Nature Trail (CVNT) with 1st Avenue E and Blairs Ferry Road NE tied to be the top intersections for improvement in 12 out 109 ideas (or 10% each).

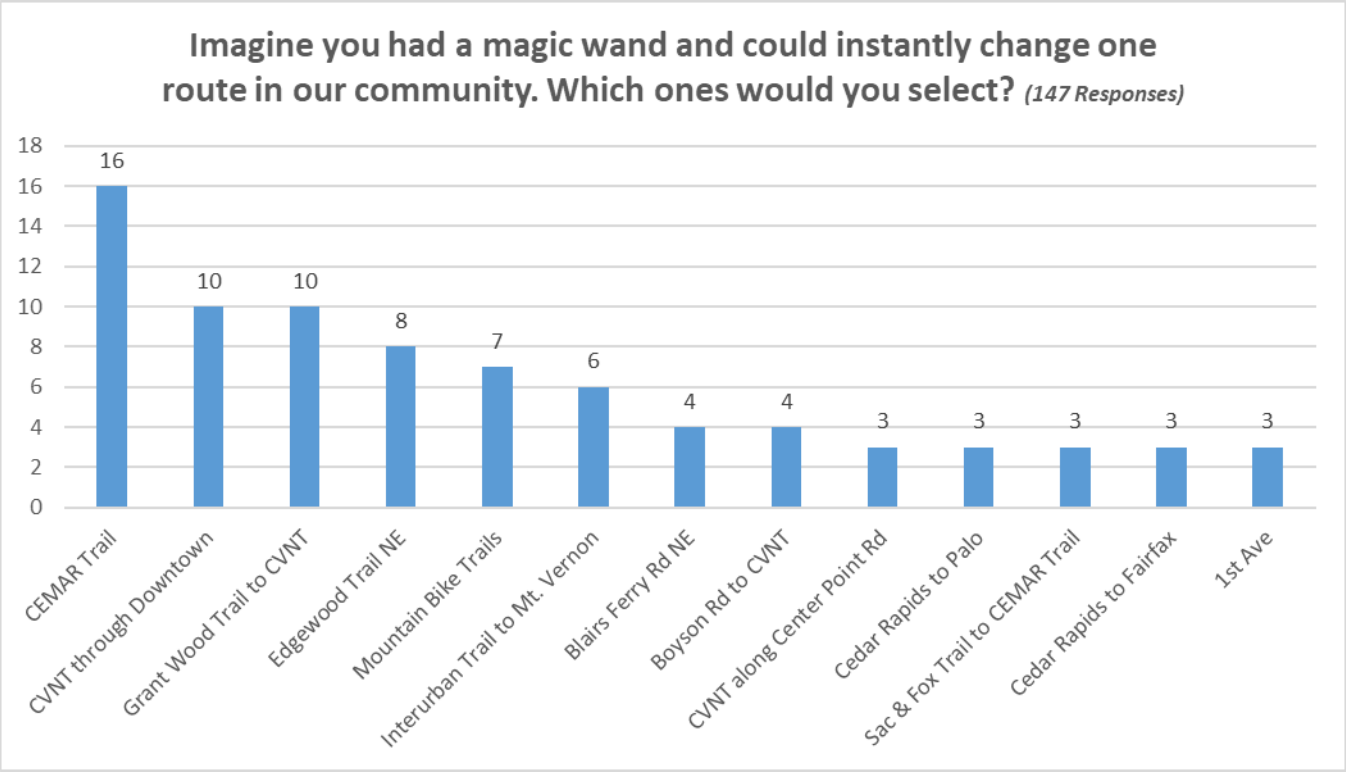


Figure A.18. Column chart showing top routes for improvement. Routes with two or fewer responses are not shown in the chart.

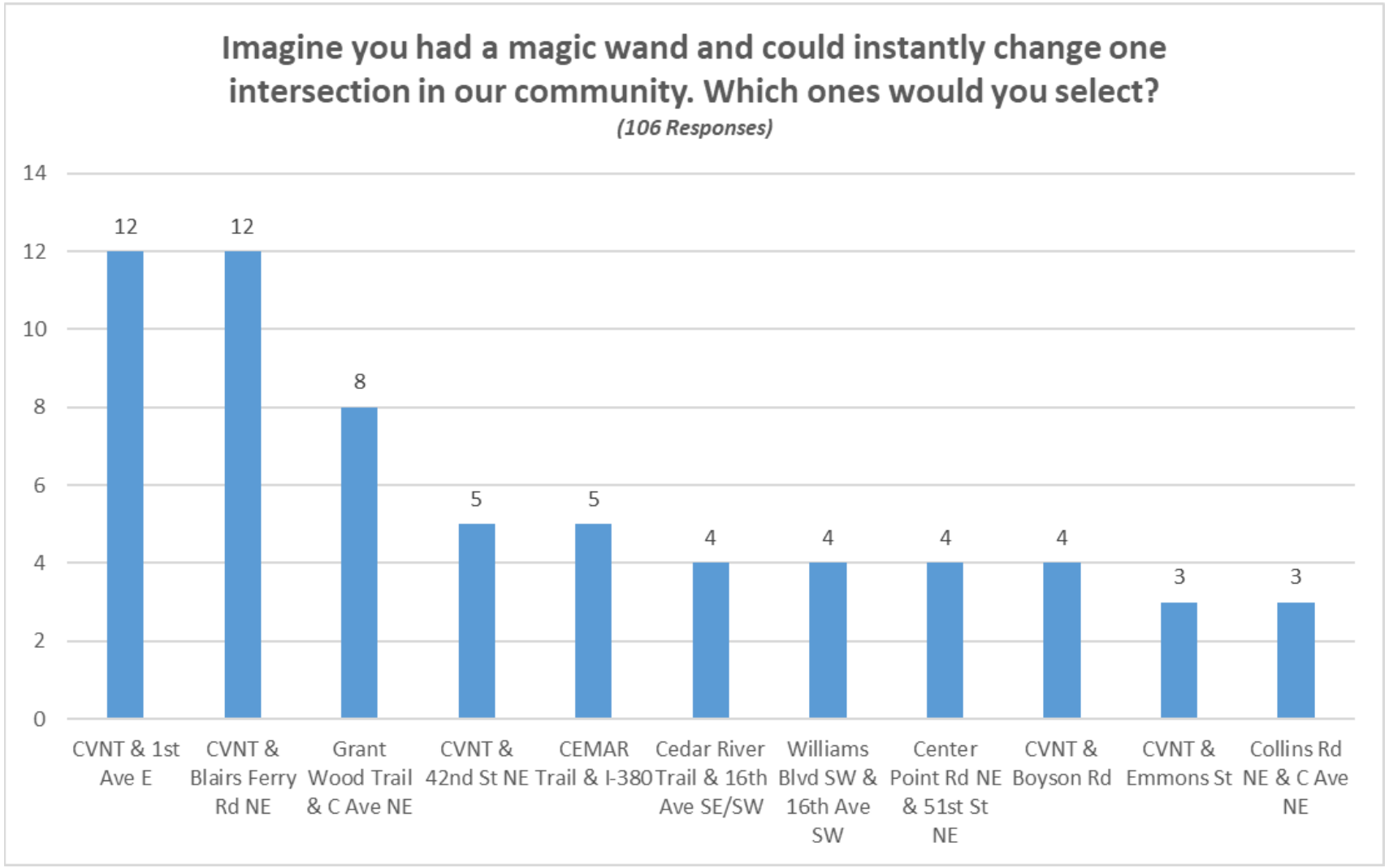


Figure A.19. Column chart showing top intersections for improvement. Intersections with two or fewer responses are not shown in the chart.

Stakeholders at tabling events were presented with blank posters where they could add ideas for a trails and bikeways wish list. 102 people submitted ideas which are summarized in Figure A.20. The top wish was for amenities (e.g., benches, drinking stations, bathrooms).

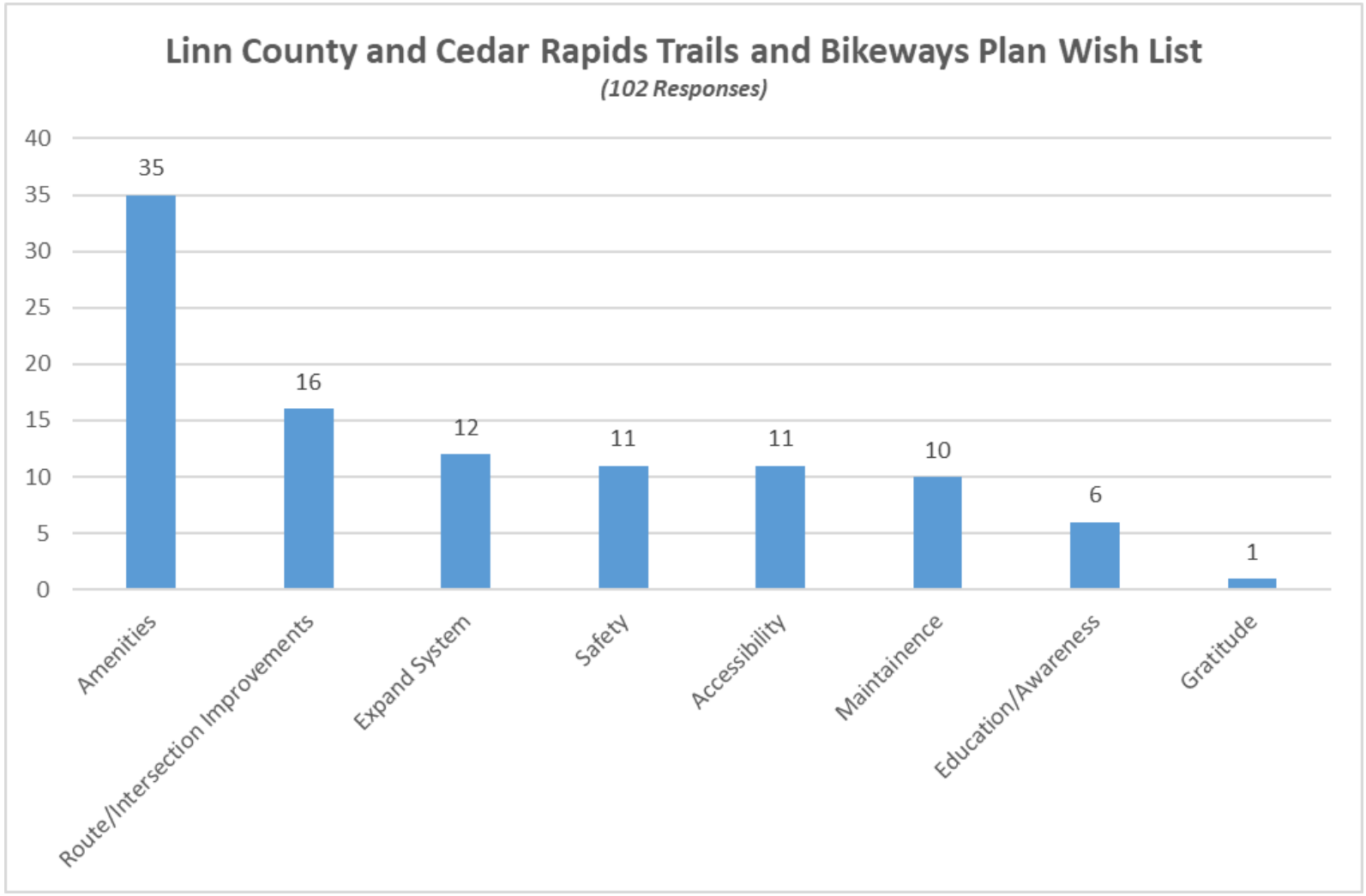


Figure A.20. Column chart showing top wishes for the trail and bikeway system.

STORIES ABOUT BICYCLING OR WALKING

Community members were asked the following question and then encouraged to answer with an open-ended written text response:

We want to know why the trails and bikeways system is important to you. Share about the people in your life who would benefit from a better trails and bikeways system.

240 people submitted stories with 432 themes, which are summarized in Figure A.21. Only themes mentioned by 10 or more respondents were included. The most popular themes were:

1. Health (101/242, or 42%)
2. Commuting and transportation (76/242, or 31%)
3. Socialization (63/242, or 26%)

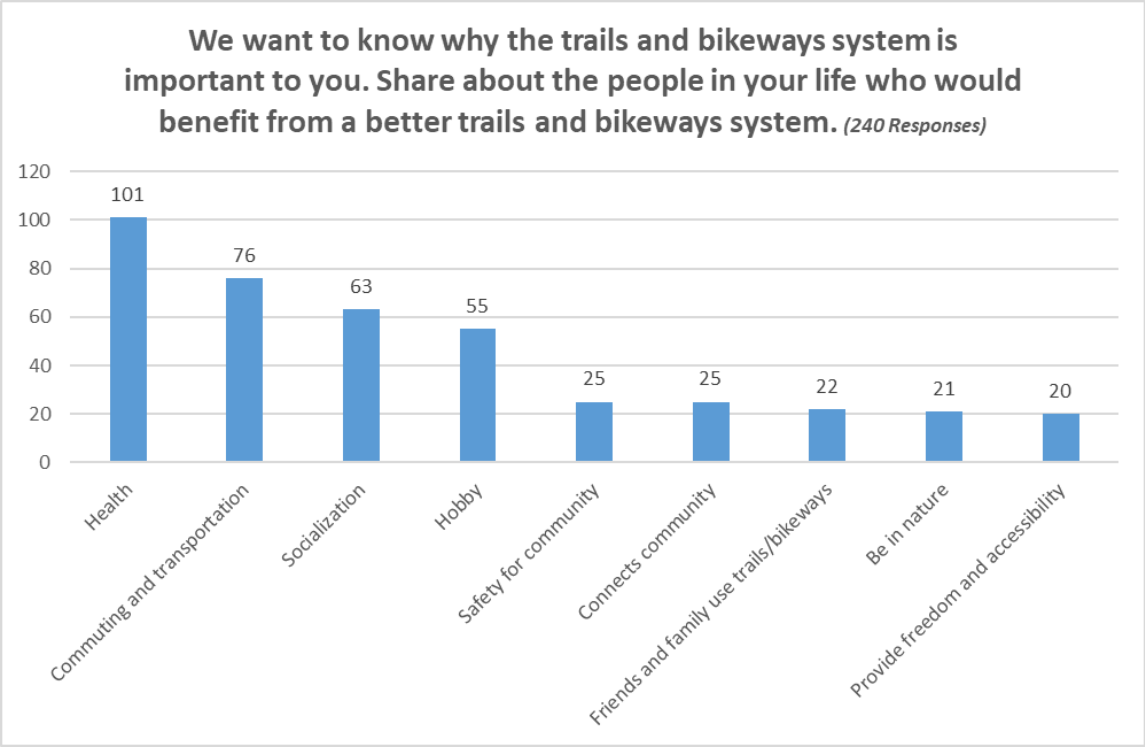


Figure A.21. Column chart showing the most popular themes in respondents' stories about why trails and bikeways are personally important.

ADDITIONAL COMMENTS

217 respondents submitted additional comments to be considered for the Plan. The question prompt was the following: *Is there anything else you would like to share with us about the trails and bikeways system?*

Each comment was assigned general topics corresponding to their content. 291 topics were submitted. Only topics mentioned by five or more respondents were included in Figure A.22. The following five topics were the most mentioned in the additional comments:

1. Would like more trails, lanes, and connectivity (71/217, or 33%)
2. Happy with recent trail investment (60/217, or 28%)
3. Would like more focus on safety, road sharing, and protected bike lanes (52/217, or 24%)

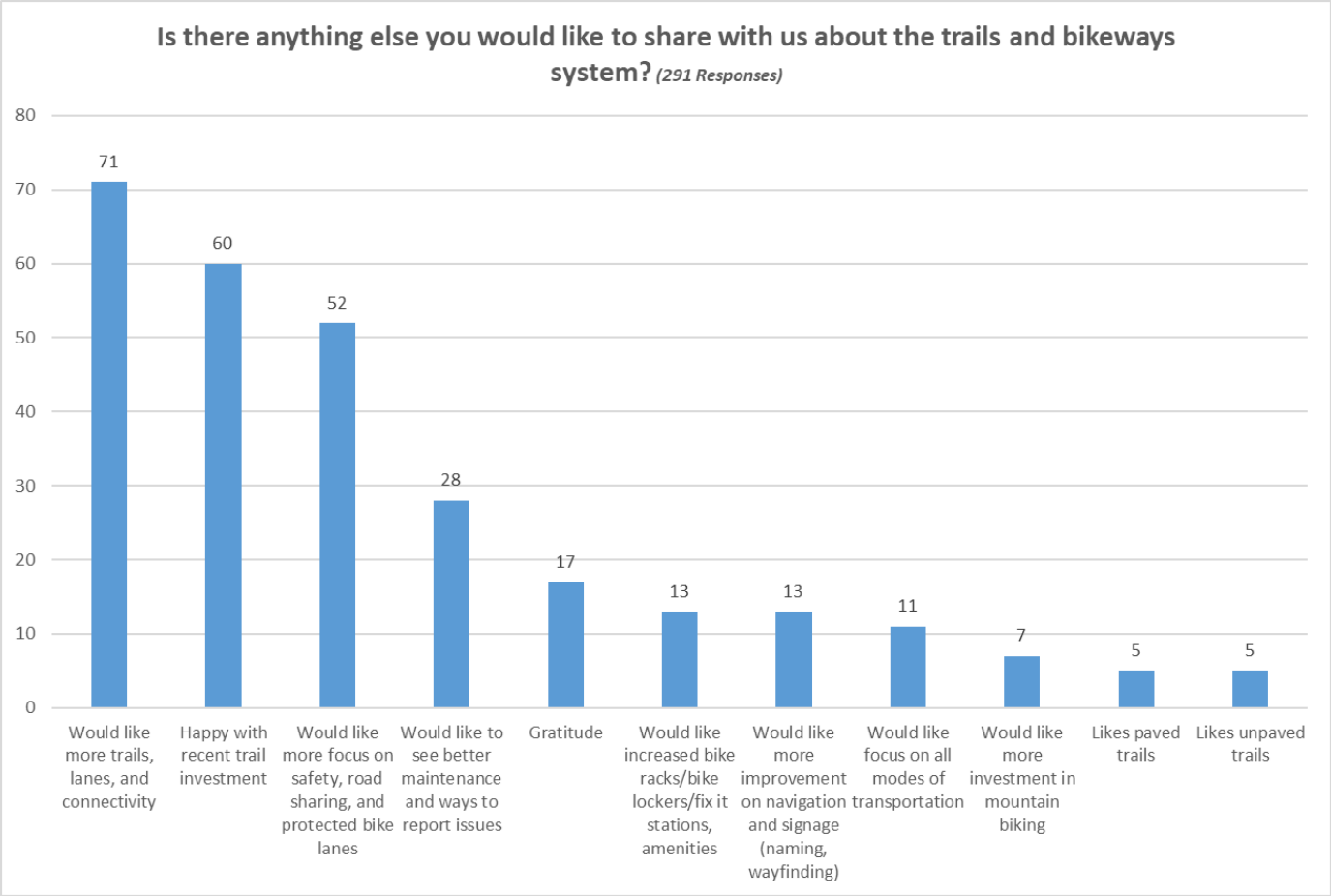


Figure A.22. Column chart of additional comments by topic.

VISIONING

Respondents were asked to provide three words to describe their ideal trail and bikeway system. 287 people responded with 620 words. Figure A.23 shows the most common visionary words chosen by individuals. Only words mentioned by six or more respondents were included in the chart. The community most said they wanted the trail and bikeway system to be:

1. Connected (114/287, or 40%)
2. Expanded (88/287, or 31%)
3. Safer (76/287, or 26%)

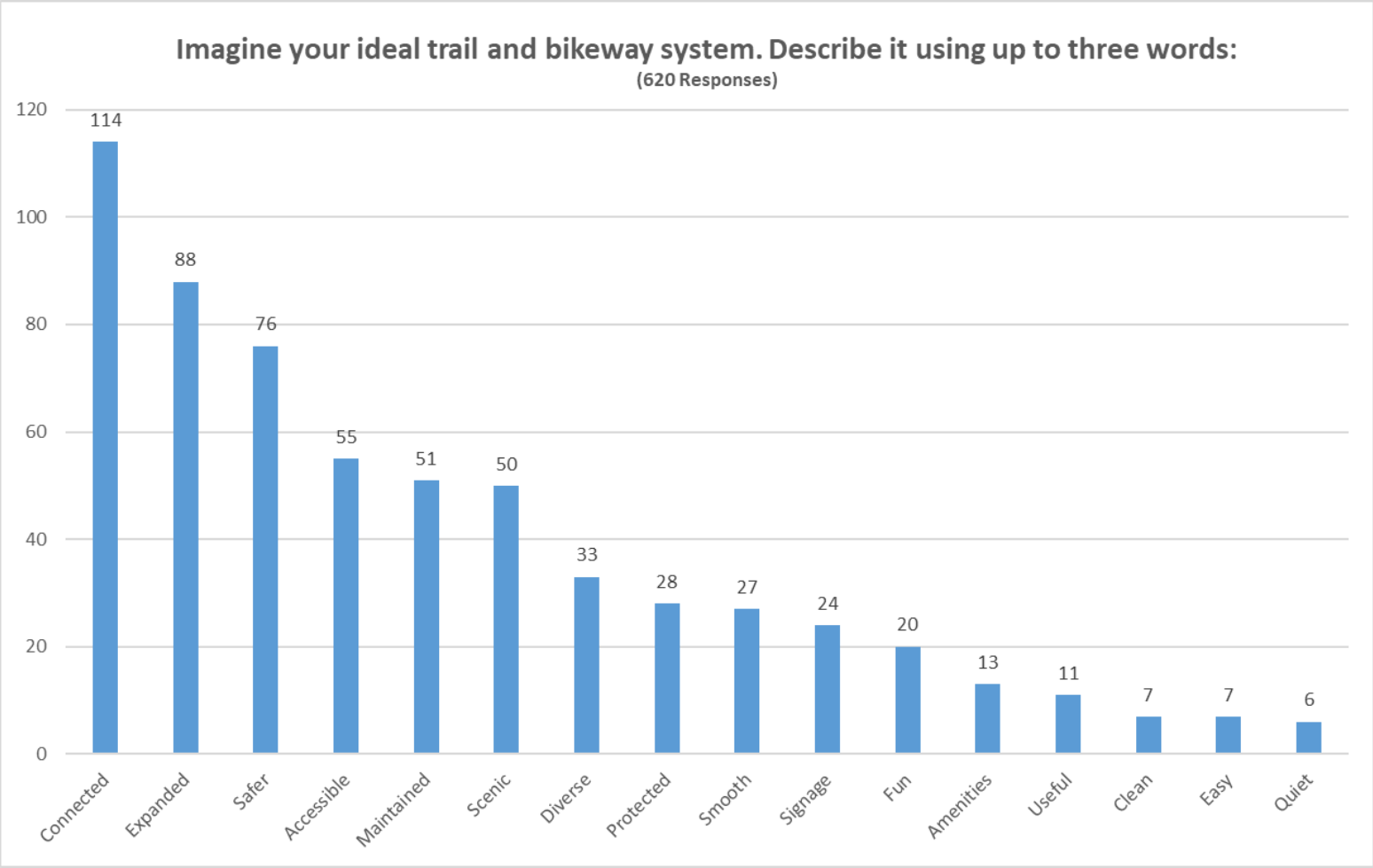


Figure A.23. Column chart of visioning words.

PARTICIPANT DEMOGRAPHICS

The following section describes demographic characteristics of online public engagement participants. 59% of participants were male, 40% were female, and 1% were agender/non-binary as shown in Figure A.24. 1% of respondents also identified as transgender, as shown in Figure A.25. In the 2020 census, 50% of Linn County residents were female.

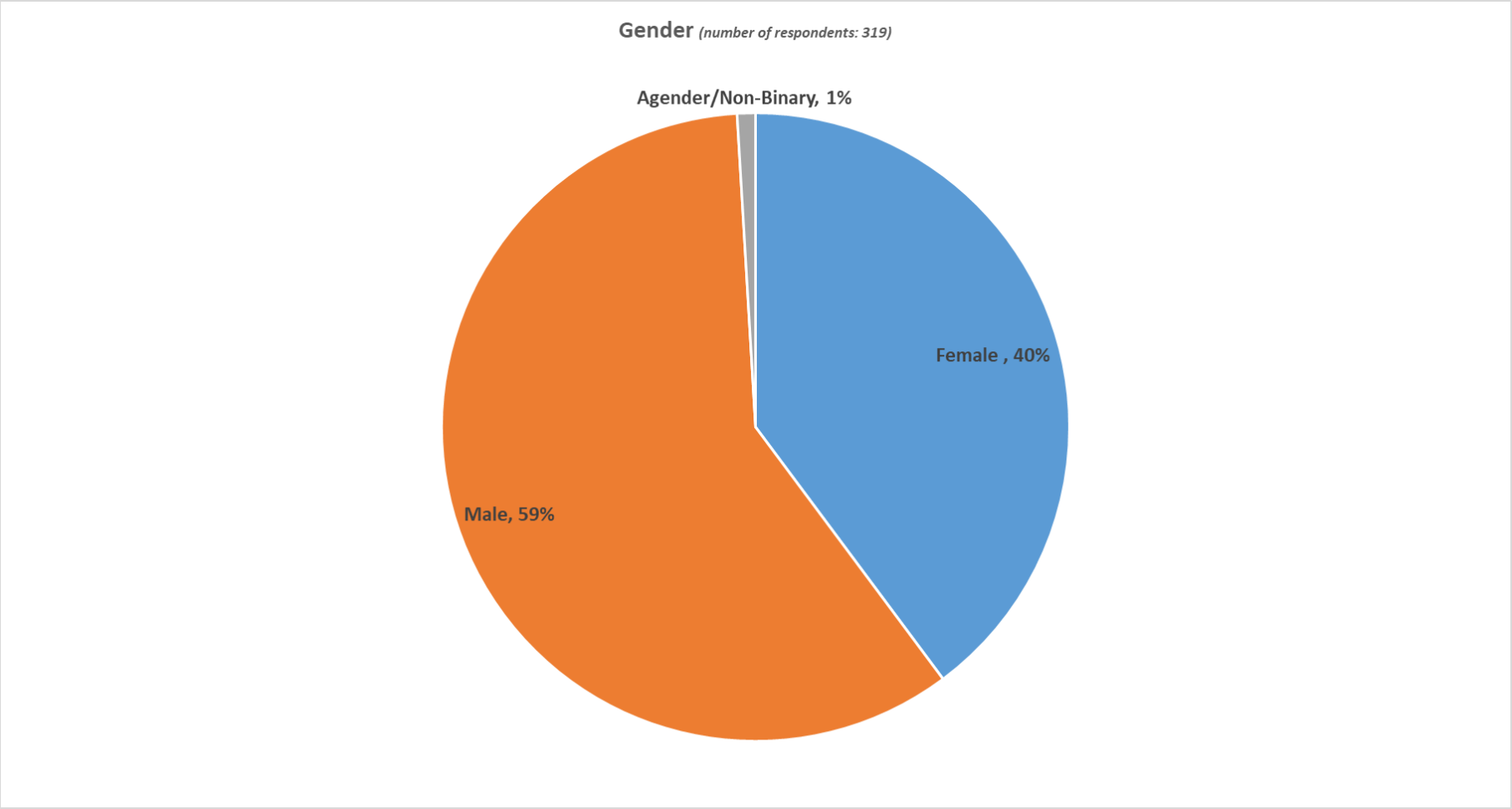


Figure A.24. Gender of participants in the online questionnaire.

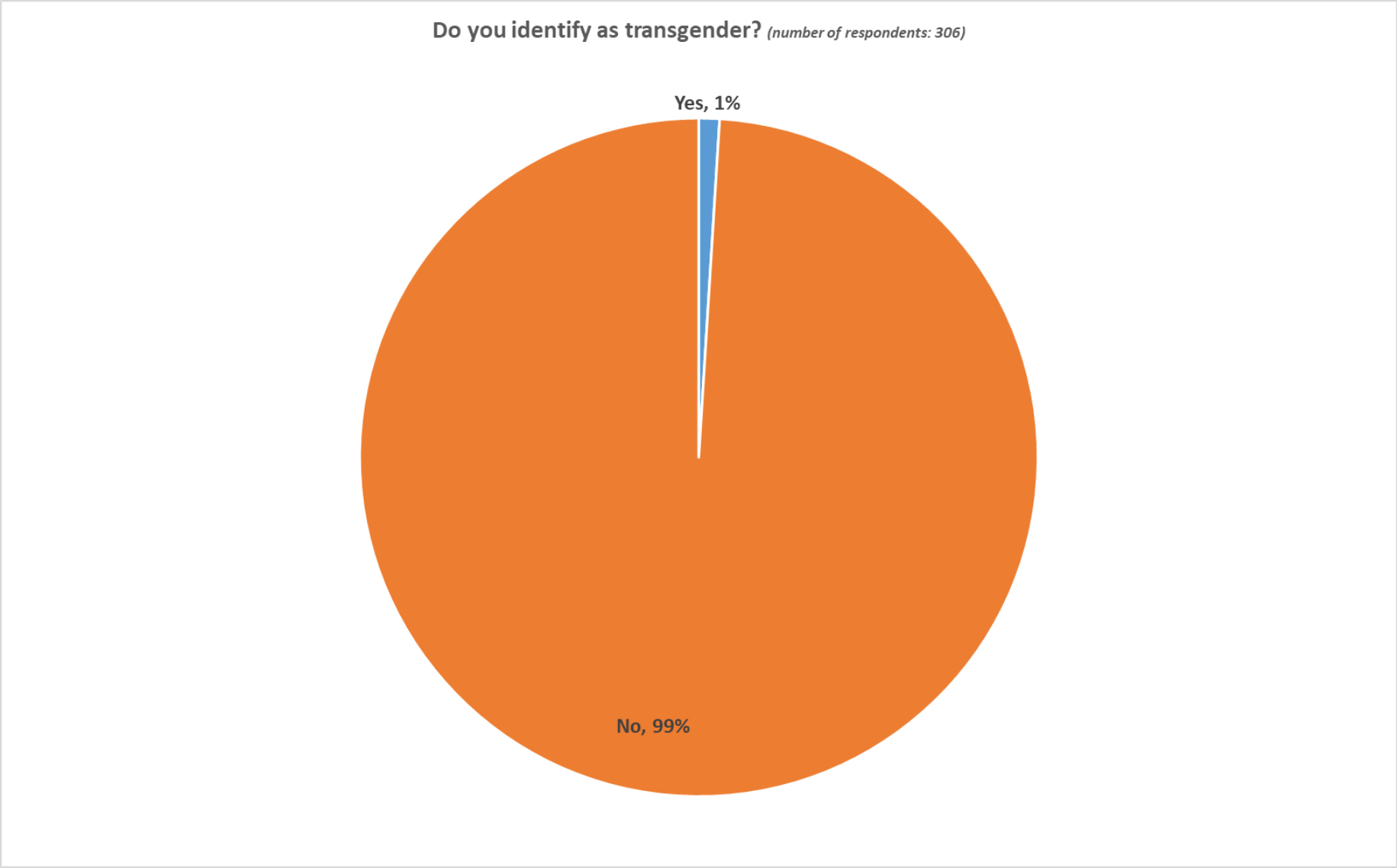


Figure A.25. Transgender identity of participants in the online questionnaire.

95.2% of participants were white, 1.6% were Black, 1.3% were Hispanic, 0.6% were American Indian, and the remaining the remaining 1.3% were Middle Eastern, Asian, or Pacific Islander as shown in Figure A.26. In the 2020 census, 87% of Linn County residents were white, 7% Black, 4% Hispanic, 3% two or more races, and 3% Asian.

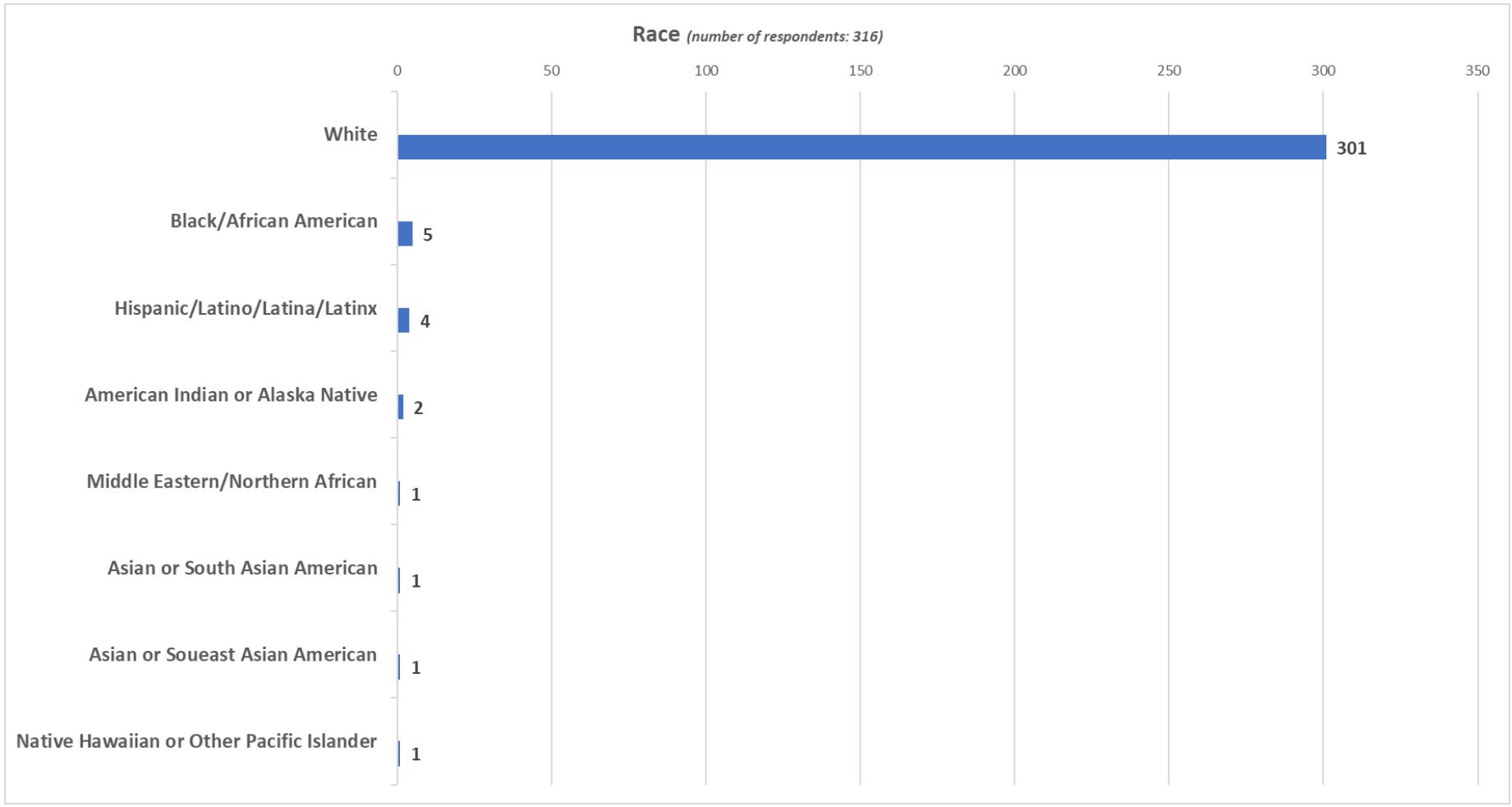


Figure A.26. Race of online questionnaire respondents.

The most participants (25%) were between the ages of 45 and 54 followed by the ages of 55 and 64, as shown in Figure A.27.

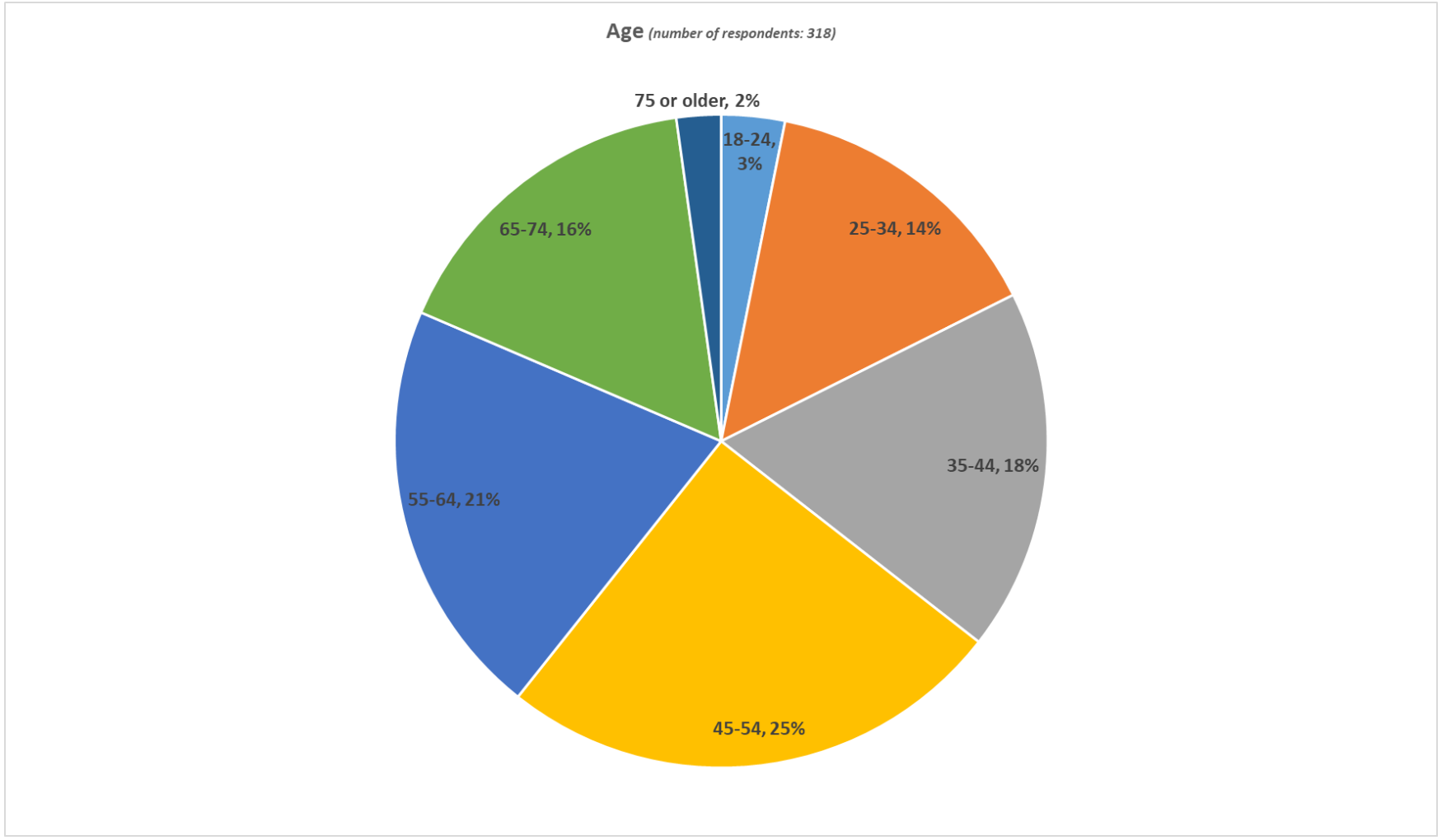


Figure A.27. Age of participants in the online questionnaire.

Most participants (57%) had a household income of more than $100,000, as shown in Figure A.28. According to the Census Bureau, the median household income in Linn County was $69,420 in 2021.

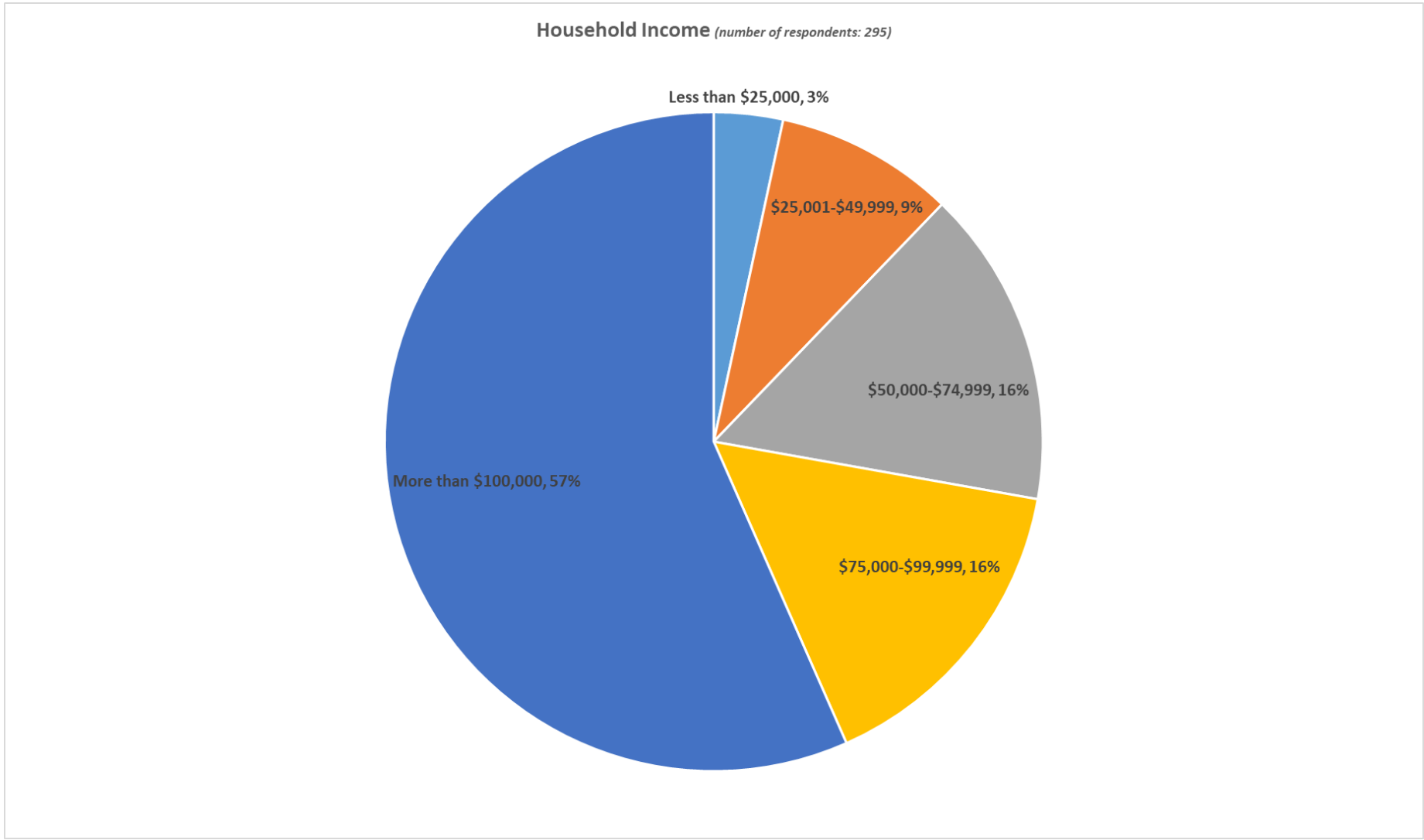


Figure A-28. Household income of participants.

Most participants (69%) reside in Cedar Rapids, as shown in Figure A.29. According to the Census Bureau, in 2021 the population of Cedar Rapids was 136,000 (59%) and the population of areas within Linn County but not in Cedar Rapids was 93,000 (41%).

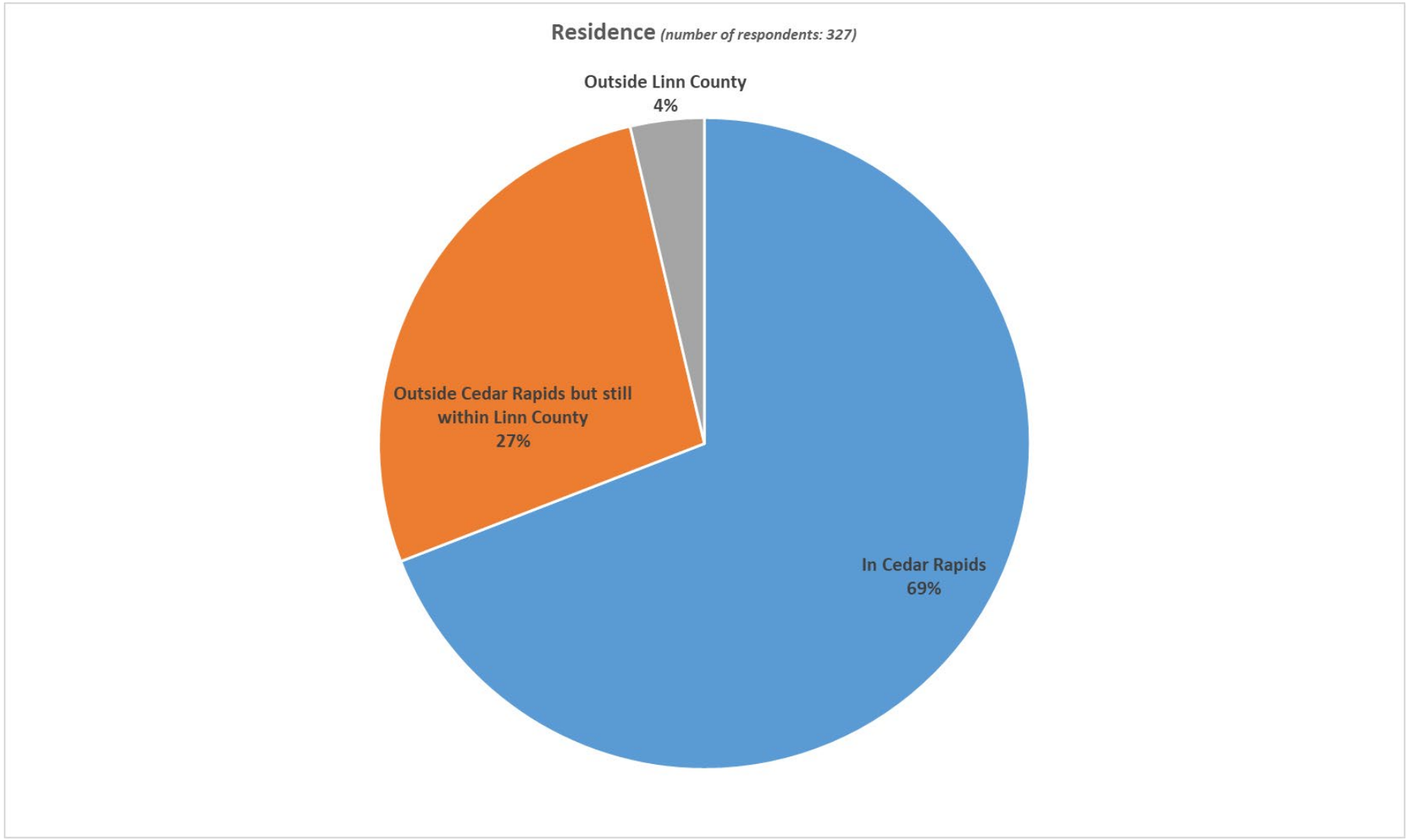


Figure A.29. Residence of participants in the online questionnaire.

Most participants (26%) reside in the 52402-zip code, as shown in Figure A.30.

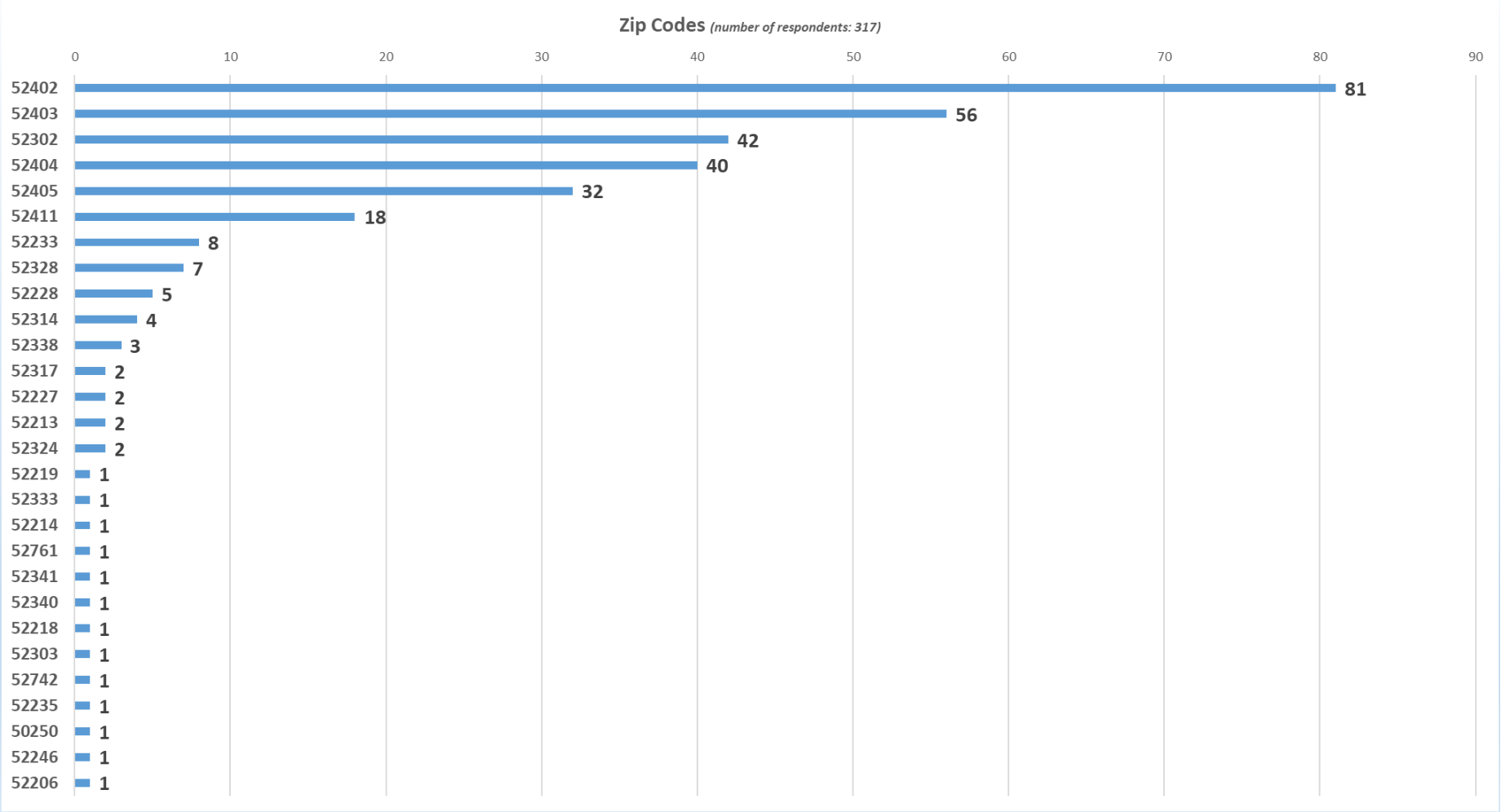


Figure A.30. Zip code of participants in the online questionnaire.

Strategy B: Advisory Committee

In February of 2023, members of the Trails & Bikeway Plan Advisory Committee met to give input on the Plan. The consultant team facilitated the meeting with a focus on four key pieces of information: **strengths** *(what are you proud of?)*, **weaknesses** (*what are the biggest shortcomings?*), **opportunities** (*are there organizations doing work, or upcoming projects we should know about?*), and **challenges** (*what are the external forces that will make it difficult to build more bikeways in Cedar Rapids and Linn County?*).

Advisory Committee members individually brainstormed ideas under each category, and then worked in groups to categorize them. Each person then was allowed to vote on their top areas. Results included:

Category	Sub-categories (votes)
Strengths	Trails (9), Community culture (7), Facility network/bikeways (3)
Weaknesses	Connectivity (16), Safety (5), Amenities (3), Funding (3), Public support (3)
Opportunities	Experience improvements (14), Physical expansion (11), Community + partner + people engagement (8), Funding (1)
Challenges	Safety + accessibility + equity + inclusivity (14), Funding/$ (8), Right-of-way (4), Meeting minimum standards (3), Community buy-in (2)

Appendix B – Funding Strategies

Funding for trails and bikeways in Cedar Rapids and Linn County starts at the local level with annual budget planning. The City of Cedar Rapids budget includes a separated section for trail projects. Yearly budget allocations fluctuate as the projects overlap fiscal years. The budgeting typically includes a tabulation of where the funds are being drawn from, including Federal Grants, GO bonds and TIF bonds. On street bikeway accommodations are not budgeted separately from the associated parent roadway project, they are included as part of the regular project cost. Planning and policies determine the inclusion of bike specific accommodations on roadway projects rather than budgetary set-asides.

Linn County Conservation Board has set aside a portion of funds from a bond referendum (12-15% of the $40M bond) toward trails. These funds are used to match grant funds to stretch the dollars to maximum effect. They also have funds within their regular budget for projects, many of which are trails. They also allocate funds specifically for trail maintenance and use a portion of that on a yearly basis.

Cedar Rapids, Linn County, and other member jurisdictions of the Corridor MPO have set the bar in Iowa in terms of robust funding allocations for trails and bikeways. Current policy in the Long-Range Transportation Plan includes the following breakdown of allocated federal funds:

- 48% of funding is allocated to roadway projects (that might include bikeway elements)
- 35% of funding is allocated to trails
- 17% of funding is allocated to transit

Funds are made up of Surface Transportation Block Grant (STBG), Transportation Alternatives Set-Aside Program (TASA, formerly TAP), and Carbon Reduction Funds. Historically, the funding levels for trails and transit were generally kept to the minimum requirements of the governing legislation. Local governments competed for funding and there were winners and losers. Today, with more robust funding allocations, the member governments work in a more collaborative manner, understanding and embracing what's good for the region. The member governments still must apply and compete for funding; however, they also work together to prioritize the most viable projects within the available funding.

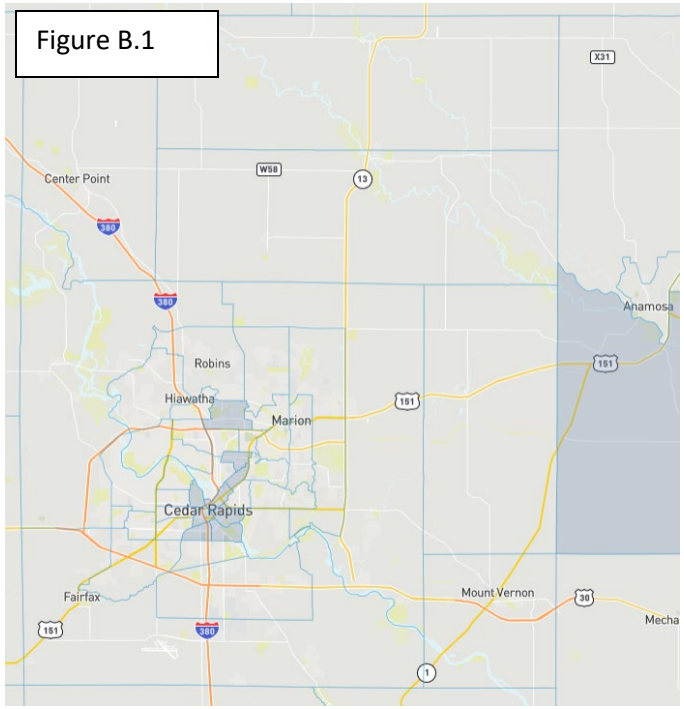
As such, the funding for most of the trail and bikeway projects has been reasonably straightforward with local funding allocations bolstered with federal aid. However, the funds through the MPO are but one of several competitive funds the jurisdictions can go after. It is helpful to consider stretching the available funds by seeking out the other funding streams. The table below is organized by the typical annual application deadlines through the calendar year.

Trails that expand the regional system or are multi-jurisdictional will generally score better with these funding programs than local connecting trails and sidepaths.

Several new discretionary grant programs have been created by recent legislation, including the Bipartisan Infrastructure Law, and the Inflation Reduction Act. These are worth exploring for applicability for certain projects. The current focus on these programs includes projects that benefit historically disadvantaged neighborhoods.

Figure B.1 is a map from a screening tool developed to identify census tracts that meet the average income criteria noted in these programs. Note the locations shown in the Cedar Rapids metro, as well as southern Jones County. Trails and bikeways that benefit these locations may be suitable candidates for application.

Figure B.1



Map from https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5

Due Date	Program	Max Award	Approximate Funding Total	Match Required	Date Funds Available	Completion Date
January 15 (quarterly thru year)	Community Attraction and Tourism (CAT)	45% of the final project cost, not to exceed $1 Million	$5M	At least 65% of cost must be secured, grant is last dollar in	Upon award	As per the agreement
April and October	PeopleforBikes Community Grant	$10,000	$50,000 per cycle	50%	December	Provide updates every 6 months
May	Wellmark Large MATCH Grant	$100,000	n/a	100%	September	2 years
May 1	Iowa Great Places	$400,000 ($185,000 average)	n/a	100%	October	As per the agreement
June	Wellmark Small MATCH Grant	$25,000	n/a	50%	December	2 years
July 1	State Recreational Trails	None specified (highest award $780,000)	Varies $1M - $2.5M	25%	Upon authorization	As per the agreement
August 15	Resource Enhancement and Protection (REAP) City Parks & Open Spaces	Award amount is based on City population	varies annually	none	October	As per the agreement (~2 years)
August 15	Resource Enhancement and Protection (REAP) County Conservation	None specified	40% of statewide county conservation account	none	October	As per the agreement
October 1	Federal Recreational Trails	$5,000 min – no upper limit (highest award $490,000)	$1.3M	20%	Upon authorization	As per the agreement
December 1	Statewide Transportation Alternatives Set-Aside (TASA)	None specified	$5M	20%	Upon authorization	As per the agreement
December 17 (2023)	CMPO STBG & TASA	None specified	$5.8M	20%	FFY 2025-2029	As per the agreement

MEMORANDUM

August 9, 2023

To: Ron Griffith
Organization: City of Cedar Rapids, Linn County Conservation Board
From: Mitzi Alex, Shaun Murphy-Lopez, Patrick Schwickerath, Rich Voelker
Project: Cedar Rapids and Linn County Trails & Bikeways Plan

Re: Appendix C – Bicycle Advisory Committees

Toole Design and Snyder & Associates have completed a summary of existing bicycle-related advisory committees in the local area, reviewed membership and responsibilities in other communities, and developed recommendations for how a local bicycle advisory committee could best support the Trails & Bikeways Plan in the future.

Existing Bicycle-Related Advisory Committees

The only current bicycle-related advisory committee in the local area is operated by the City of Cedar Rapids. It is not listed as an official City board or commission, and as such does not include an official membership list or set of responsibilities. The committee is staffed by Traffic Engineering and meets in the City Services Center on a monthly basis. Linn County has no listed bicycle-related advisory committees on its list of advisory boards and commissions.

According to the League of American Bicyclists (LAB) report, Making Bicycling and Walking a Norm for Transportation Agencies: Best Practices for Bicycle and Pedestrian Advisory Committees, advocacy groups are distinct from Bicycle Advisory Committee's (BAC's). Advocacy groups are also non-profits organizations comprised solely of community members. While BAC's may be made up solely of community members, they are legally part of local government structure, with no independent status. The Linn County Trails Association and Linn Area Mountain Biking Association are both independent 501 c3 non-profit organizations with their own boards. As a result, they do not fit the LAB definition of a bicycle-related advisory committee.

Membership and Responsibilities in Peer Communities

Our review of BAC's in peer communities show a variety of names, membership composition, appointing authorities, staffing, and duties. We reviewed the websites of 16 communities, mostly located in the Midwest, as shown below and on pages C-3 through C-5. This included BAC's in 13 cities, two counties, and one state (Iowa):

- Cedar Falls, IA
- Columbia, MO
- Eau Claire, WI
- Fort Collins, CO
- Hennepin County, MN

- State of Iowa
- La Crosse, WI
- Lincoln, NE
- Milwaukee, WI
- Minneapolis, MN
- Multnomah County, OR
- Omaha, NE
- Rochester, MN
- Sioux Falls, SD
- Urbana, IL
- West Des Moines, IA

Review of other community BAC's identified the following:

- The names of the committees varied, with 12 out of 16 including pedestrians.
- The number of members varied from six in Omaha to 29 in Minneapolis. Out of the 16 examples where the number of members was listed, the average BAC membership equaled 12.
- The membership type included six examples where only residents were official committee members. Six examples included a combination of residents, advocacy staff, agency staff, consultant staff, and/or real estate/developer representatives. The membership composition was unclear in the remaining four examples.
- In eight out of the 16 examples, appointment authority for BAC members was given to elected officials, although sometimes agency department heads or partner agencies were given this authority where a seat was given to agency staff. In the remaining eight examples, appointment authority was not clear.
- Committee staffing for each BAC was clear in ten instances, with five from transportation-related departments, three from planning-related departments, one from an administration department, and one from a parks and recreation department.
- 15 out of 16 examples listed the duties or responsibilities of each respective BAC. Some common duties included:
    - Advising local elected officials and staff on issues (e.g., plans, policies, projects, programs) related to bicycling and walking.
    - Making recommendations regarding the prioritizing of projects.
    - Educating and encouraging stakeholders and the public to become more bicycle friendly.
    - Overseeing the development of a bicycle plan or recommending changes to an existing bicycle plan.
    - Achieving or maintaining bicycle friendly status with the Bicycle Friendly Community program of the League of American Bicyclists.
    - Developing annual work plans or reports.
    - Improving coordination with partner agencies.
    - Reviewing design guidelines for bicycle safety.

Location	Name	Population (2021)	Number of Members	Membership Type	Appointed by	Staffing Handled by	Listed Duties
Cedar Falls	Bicycle and Pedestrian Advisory Committee	40,000	7	Residents only		Planning and Community Services Division	
Cedar Rapids	Bicycle Advisory Committee	136,000				Traffic Engineering	1) Provides an opportunity for residents and organizations to discuss upcoming bike facility projects, 2) Plan events that bring cyclists together, 3) Bring attention to issues
Columbia, MO	Bicycle/Pedestrian Commission	127,000	9		City Council		1) Develop a master bike plan for the city, such master plan being subject to periodic review and revision by the commission based on changes in traffic patterns and other changes associated with the growth of Columbia; 2) Work in concert with the administration in preparation and submission of yearly grant requests; 3) Implement the plan as money becomes available according to priorities based on need and cost of bike routes; 4) Develop programs and methodology for teaching proper bike use and registration; 5) Advise the city council on issues relating to city sidewalks, walkways and trails
Eau Claire, WI	Bicycle and Pedestrian Advisory Committee	69,000	9	Residents only		Engineering Department	2023 Work Plan
Fort Collins, CO	Bicycle Advisory Committee	169,000	14				1) Reviews bicycle plans for capital improvements, 2) Provides recommendations to the Transportation Board regarding bicycle policies, 3) Prioritizes bike plan recommendations
Hennepin County, MN	Active Transportation Committee	1,267,000	7	Residents only	County Commissioners	Public Works Department	1) Provide expertise and multiple view points on biking, walking, and rolling around the county; 2) Advise Hennepin County leaders and staff and other governmental city and agency staff on current plans, policies, and projects; 3) Guide the implementation of transportation plans pertaining to active transportation; 4) Utilize ATC adopted guiding principles, which should be reaffirmed every two years and adopted by the Hennepin County Board of Commissioners.
State of Iowa	Bicycle and Pedestrian Advisory Committee	3,193,000	23	Combination of advocacy organization staff and agency staff		Iowa DOT	1) Provide education and advice to the Iowa DOT, 2) Make recommendations regarding policies and procedures, 3) Serve as the Complete Streets Advisory Committee, 4) Assist in updating design guidance, 5) Provide educational opportunities to stakeholders, 6) Inform measures for monitoring success, 7) Review and comment on various materials, 8) Support the implementation of Iowa's Bicycle and Pedestrian Long Range Plan, 9) Recommend changes to the plan, 10) Prepare periodic reports
La Crosse, WI	Bicycle-Pedestrian Advisory Committee	52,000	7	Combination of advocacy and agency staff			1) Advise the Common Council on updating, maintaining and implementing the Bicycle and Pedestrian Master Plan and the Transportation Element of the Comprehensive Plan; 2) Work to achieve Bicycle-Friendly Community Gold designation and Walk-Friendly Community designation; 3) Promote the integration of bicycling and walking in the City's planning, engineering, design, and development of transportation facilities by implementation of the Green Complete Streets Ordinance; 4) Make recommendations to the City with regard to the capital and operating budget to identify bicycle and pedestrian needs, services, programs, or facilities; 5) Work with the local organizations and programs to educate all age groups on safe bicycling and walking skills; 6) Develop and distribute informational, educational and promotional materials for bicyclists, pedestrians and motorists; 7) Work with WisDOT, MPO, School District, and other agencies and departments to ensure these entities are aware of the Bicycle and Pedestrian Master Plan and its relevance to those entities' plans, programs, policies, and projects

Location	Name	Population (2021)	Number of Members	Membership Type	Appointed by	Staffing Handled by	Listed Duties
Lincoln	Pedestrian/Bicycle Advisory Committee	293,000	14				1) To provide advice and recommendations to the Mayor, City Council, and Parks & Recreation Department on the development of a comprehensive plan for a bicycle and pedestrian network; 2) Makes recommendations on the location, needs, designs, safety, and development of policies relating to the use of trails and routes
Milwaukee	Pedestrian and Bicycle Advisory Committee	569,000		Residents only			1) Makes recommendations to the mayor and the common council relating to pedestrian and bicycle safety, policy, and encouragement programs; 2) Provides technical assistance for the development of strong partnerships, the effective use of data, the implementation of comprehensive strategies, and the civic engagement of pedestrians and bicyclists
Minneapolis	Bicycle Advisory Committee	425,000	29	Combination of residents and agency staff	Combination of City Council members, mayor, department heads, partner agencies	Public Works Department	1) Advises the Mayor, City Council, and Park Board on bicycling related issues; 2) Helps advance the state of bicycle infrastructure; 3) Encourages more people to bike; 4) Educates the public; 5) Works towards more compliance with traffic laws; 6) Helps the City and Park Board make bicycle plans; 7) Works to increase equity between bicyclists and other modes of transportation; 8) Reviews and suggest legislative and policy changes; 9) Recommends priorities for the use of public funds on bicycle projects; 10) Helps ensure Minneapolis keeps and improves its status as a bicycle friendly community; 11) Serves as a liaison between Minneapolis communities and the City and Park Board; 12) Coordinates between different agencies that interact with bicyclists.
Multnomah County, OR	Bicycle and Pedestrian Community Advisory Committee	804,000	15	Residents only	County Board Chair with County Board approval	Transportation Division	1) Advise the Board and the Transportation Division on matters involving bicycle and pedestrian transportation; 2) Identify specific bicycle and pedestrian issues, problems, and opportunities, and assist in evaluating projects for the Bicycle Capital Improvement Plan and the Pedestrian Capital Improvement Plan; 3) Serve as a source of volunteers for assisting the Transportation Division at public events supporting bicycle and pedestrian issues; 4) Adopt rules consistent with Ordinance No. 979 and all state and federal laws for the operation of the Committee
Omaha	Active Living Advisory Committee	487,000	6	Combination of advocacy organization, agency, and consultant staff	Mayor	Planning Department	Provide a forum for community collaboration and input to the City of Omaha Planning, Public Works, Parks and Recreation Departments, as well as the Mayor and City leadership and officials, about "active living" community development and design principles

Location	Name	Population (2021)	Number of Members	Membership Type	Appointed by	Staffing Handled by	Listed Duties
Rochester, MN	Pedestrian and Bicycle Advisory Committee	121,000	9	Residents only	Mayor, with City Council approval	Administration Department	1) Inform City Public Works, Parks and Recreation, and Community Development Departments of priorities and needs of user groups; 2) Be a conduit for users to understand the contexts of constraints and opportunities for improving public and private transportation systems serving pedestrians and bicyclists; 3) Provide input on policy, funding, and design issues as determined by Directors of Public Works, Parks and Recreation, and Planning
Sioux Falls, SD	Active Transportation Board	197,000	9	Combination of residents, agency staff, and real estate/developer representative	Combination of Mayor, City Council, and department heads	Planning and Development Services	Provide letters of advocacy on the following matters pertaining to complete streets and active and accessible pedestrian transportation: 1) Bicycle and pedestrian corridor and connection plans; 2) On-street bicycle route changes; 3) Any complete street design review; 4) Pedestrian and bicycle safety programs and education; 5) Bicycle trail projects; 6) Walk or bicycle on-site reviews; 7) Traffic signal, intersection control, and crosswalk improvements; 8) Bicycle parking; 9) Sidewalk furnishing; 10) School traffic and safe routes to school improvements; 11) Other complete street, pedestrian, or bicycle issues
Urbana, IL	Bicycle & Pedestrian Advisory Commission	39,000	11	Combination of residents and agency staff	Mayor, with City Council approval		1) Analyze routing, operation, and safety of bicycles; 2) Review and make recommendations regarding the City's Capital Improvement Plan, Bicycle Master Plan, and Pedestrian Master Plan; 3) Perform a regular evaluation and recommend an action plan for biking and walking facilities; 4) Coordinate with external agencies on maps and regional connections; 5) Develop education and public outreach opportunities on bicycle and pedestrian issues; 6) Assist the City in the development of bicycle and pedestrian systems with the community
West Des Moines	Bicycle Advisory Commission	70,000	7			Parks & Recreation Department	Advises the City Council on bicycle plans, programs, and policies

Recommendations for the Future

The LAB's report, Making Bicycling and Walking a Norm for Transportation Agencies: Best Practices for Bicycle and Pedestrian Advisory Committees contains many recommendations for communities that are embarking on the development of a BAC. Many of the following recommendations are inspired or supported by that report's recommendations.

Bicycling alone, or bicycling plus walking?

While most peer communities reviewed included both bicycling and walking in their advisory committee makeup, the LAB report recommends separate committees if there are sufficient staff resources. This is because bicycling issues typically overshadow walking issues. Staffing for an advisory committee is important. Successful BAC's have a staff member who guides the committee and its chairperson. Responsibilities listed in the LAB report include:

1. Helping the committee chair to run an efficient meeting
2. Assisting the chair with agenda preparation
3. Identifying another member to act as secretary to prepare meeting minutes
4. Working with other agency staff to identify projects and other initiatives to be reviewed by the committee
5. Sharing the agency's annual work plan and progress report
6. Maintaining a distinction of responsibility to the agency, not the advisory committee

If resources are not sufficient to staff two committees, it is recommended that a BAC becomes a Bicycle and Pedestrian Advisory Committee (BPAC). The Cedar Rapids Pedestrian Master Plan already recommends that a Pedestrian Advisory Committee be formed to "discuss future projects, educate the public, advocate for the needs of pedestrians, and support the application to become a Walk Friendly Community" (see Action 17.3 in Chapter 6).

Membership

The membership of a BAC or BPAC will depend not only on the type of committee that is formed, but also the geographic scope of the committee. First, if the committee also focuses on walking issues, it will be important to designate an equal number of members whose main interest is walking versus bicycling. This will help to ensure that the committee does not become dominated by bicycling issues. For example, if a committee is composed of 10 residents, five should have a primary interest in walking and five should have a similar interest in bicycling.

Members of a BAC or BPAC are typically appointed by elected officials. If the geography of the committee is limited to the City of Cedar Rapids, each of the eight City Council members could appoint a resident of their district (or at-large, in the case of the three at-large Council members). Alternatively, a slate of members could be proposed by the mayor and confirmed by the City Council. Additionally, if the committee includes Linn County, three additional members could be added to represent each of the supervisory districts of the county.

Many communities also require agency staff to be voting members of a BAC or BPAC. The advantage of including agency staff is that the committee can become more balanced to include the perspectives of those whose jobs are to carry out projects, policies, or programs. While an elected official may be likely to appoint a member of an advocacy group, such as the Linn County Trails Association, they are less likely to appoint an agency staff member to provide this additional perspective.

The most important thing to keep in mind is that the selection procedure should be clear to everyone. While most seats are likely to be appointed by an individual or collective set of elected officials, it may be easier in some cases to allow a department or agency head to appoint a designee to represent a particular set of agency staff. Figure C.1 illustrates how Minneapolis has combined both selection methods into the procedure for their BAC.

Selection Procedure:

a) 13 Ward-specific members of the bicycling community to be selected by Council Members

b) 3 at-large members of the bicycling community to be selected by the Minneapolis Park and Recreation Board

c) 6 City staff members to be appointed by the following:

- Mayor
- City Council
- Minneapolis Director of Public Works
- Minneapolis Health Commissioner
- Minneapolis Director of Community Planning and Economic Development
- Minneapolis Police Department

d) **6** **7** representatives from partner agencies:

- Minneapolis Park and Recreation Board
- Minneapolis Public Schools
- Metro Transit
- Downtown Transportation Management Organization
- Minnesota Department of Transportation (Bike/Ped staff)
- Hennepin County Public Works
- Metropolitan Council

Figure C.1: An example of a clear selection procedure for a BAC.

Duties and Responsibilities of an Advisory Committee

The duties and responsibilities largely depend upon what each agency is seeking. Currently the City of Cedar Rapids uses its BAC to spread information within the community about upcoming bicycle facility projects. If the City seeks to gain additional input on the design of various projects, it may be important add a duty to review project designs before they gain approval by the City Council.

The Trails & Bikeways Plan will include project prioritization, but this will be conducted as a snapshot in time. As the years pass and conditions change, it may be beneficial to seek the BAC or BPAC's input on prioritizing projects.

One of the most important aspects of developing duties and responsibilities is creating a clear distinction between what staff will do and what committee members are expected to do. In most communities, it is unlikely that a group of volunteers can develop a bicycle plan. They are more suited to provide input on the bicycle plan and recommend high level changes to a plan. Staff or consultants are more likely to develop a plan, often utilizing the advice and recommendations of a BAC or BPAC.

As the LAB report mentions, there is an inherent tension between staff who must carry out projects under budgetary and political constraints, and advisory committee members who seek changes to facilitate a more ideal bicycling environment. Discussing duties and responsibilities on a regular basis will ensure that the relationship between staff and advisory committee members can evolve over time.

Memorandum

To: Ron Griffith, PE **Date:** 04/04/23

From: Rich Voelker, PE, Patrick Schwickerath, PE & Shaun Murphy Lopez

CC:

RE: Appendix D – Summary of Plans

Based on information provided by City staff, Snyder and Toole Design have conducted a comprehensive review of existing local and regional plans and documents related to trails and bikeways. This memo provides a summary of local and regional bicycle and pedestrian goals and policies as well as recommended network routing and projects to consider and/or incorporate into the Cedar Rapids and Linn County Trails and Bikeways Plan.

6th Street SW Corridor Action Plan

This 2021 corridor plan includes two primary bicycle-related action steps:

1. Convert the road from 4 to 3 travel lanes and add protected bicycle lanes (see Figure D.1).
2. Expand the bike share system to include stations along 6th Street SW.

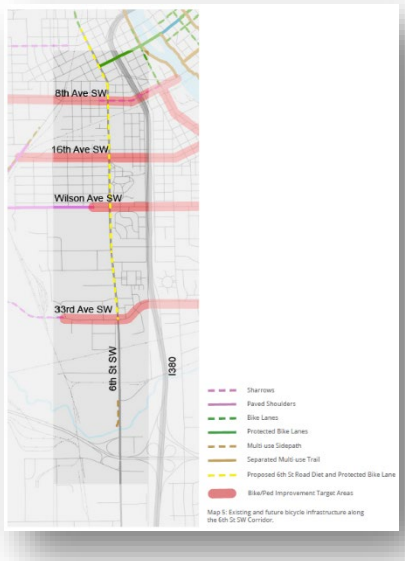


Figure D.1. *A 4-to-3 lane conversion with the addition of protected bike lanes is recommended from 33rd Ave SW and points northward, in the 6th Street SW Corridor Action Plan.*

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

6th Street SW should be considered as a possible future protected bicycle lane facility, and 6th Street SW should be considered as a potential area for bike share expansion.

College District Area Action Plan

This 2018 plan includes a map showing existing and future trails and bike lanes (see Figure D.2). These bikeways match those in the 2015 Cedar Rapids Trails and Bikeways Update except for 2nd Avenue SE, which is included in the College District Area Action Plan as a future on-street bike lane facility, but not the 2015 update.

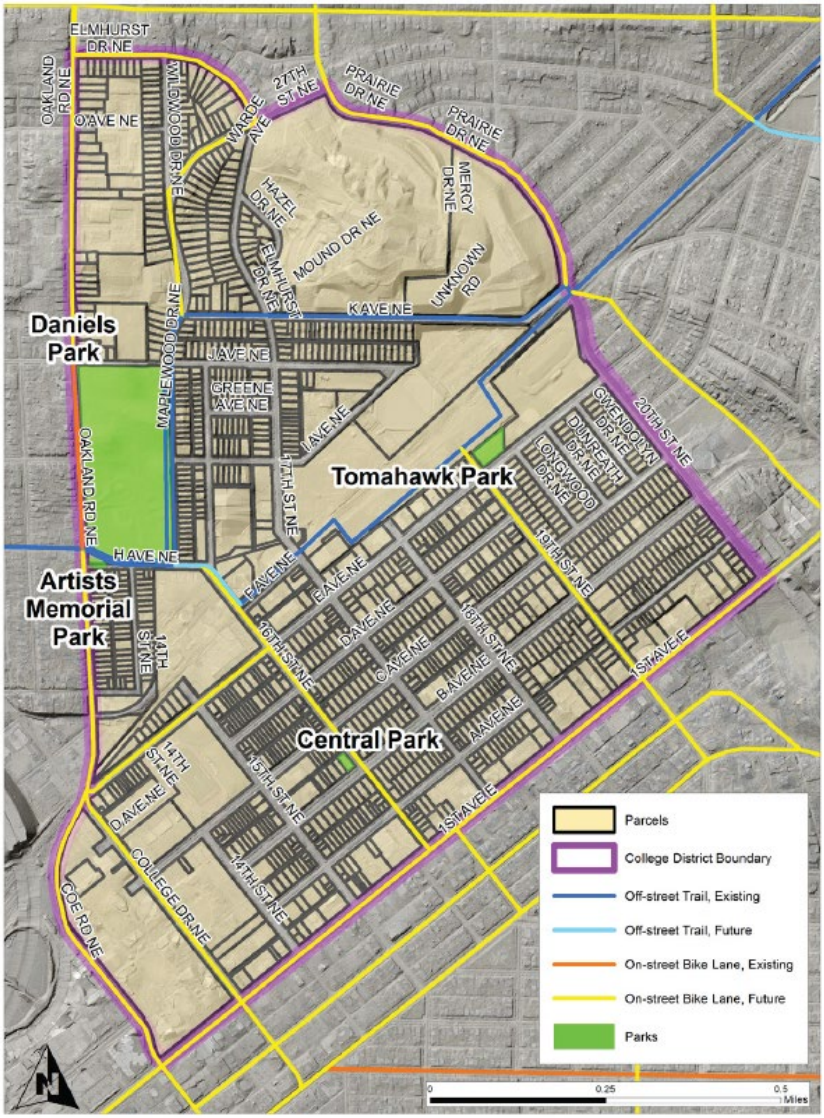


Figure D.2. *Existing and future bicycle facilities in the College District Area Action Plan.*

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

2nd Avenue SE should be considered as a possible future on-street bike lane.

Czech Village NewBo Area Action Plan

This 2019 plan lays out a vision for future trails in the Czech Village/NewBo area. These include but are not limited to bicycle improvements along the 3rd Street Promenade, 4th Street Trail Extension along rail corridors, the Market Trail along 11th Avenue, and the Community Arts Trail along 10th Avenue. Figure D.3 is a map from the plan which compiles all future recommendations.

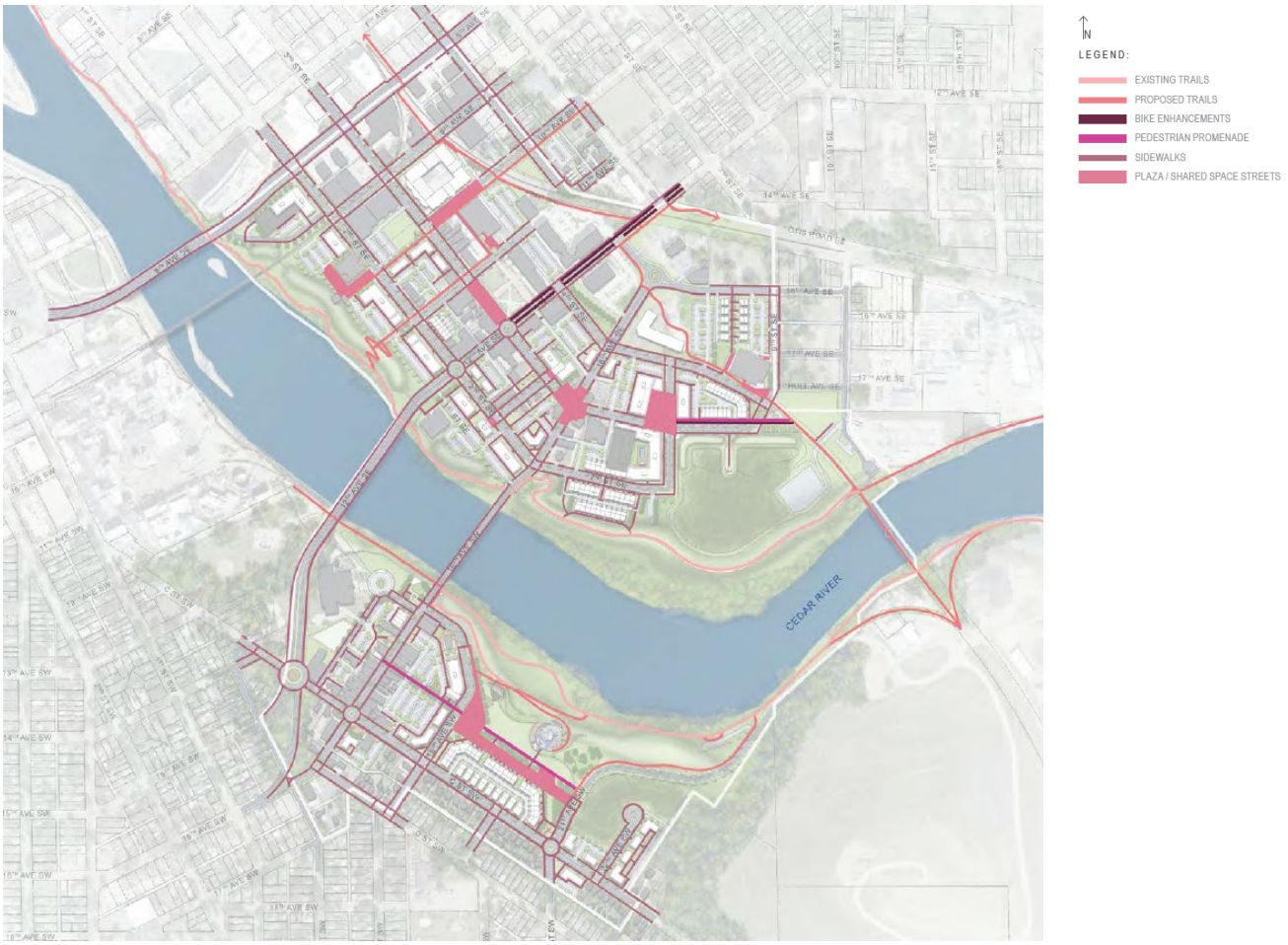


Figure D.3. *A map from the Czech Village NewBo Area Action Plan showing proposed trails and bike enhancements.*

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

All proposed trails and bike enhancements should be considered as possible future bikeway facilities.

Ellis Boulevard Area Neighborhood Plan

This 2013 plan has no relevant information for the Cedar Rapids and Linn County Trails & Bikeways Plan.

Highway 30 Area Study

This 2015 study examines the potential impacts from development north and south of US Highway 30 between C Street SW on the west and the Cedar River on the east. Two scenarios for transportation network alterations are included in the study, with designations of existing and proposed arterial and collector roads, as shown in Figure D.4. The study also includes an introductory message from the Corridor MPO Policy Board which requests two bicycle-related issues be considered in the future:

1. Future trails need to be considered in the study to connect with the existing trail system.
2. Access across the river for non-motorized modes needs to be considered.

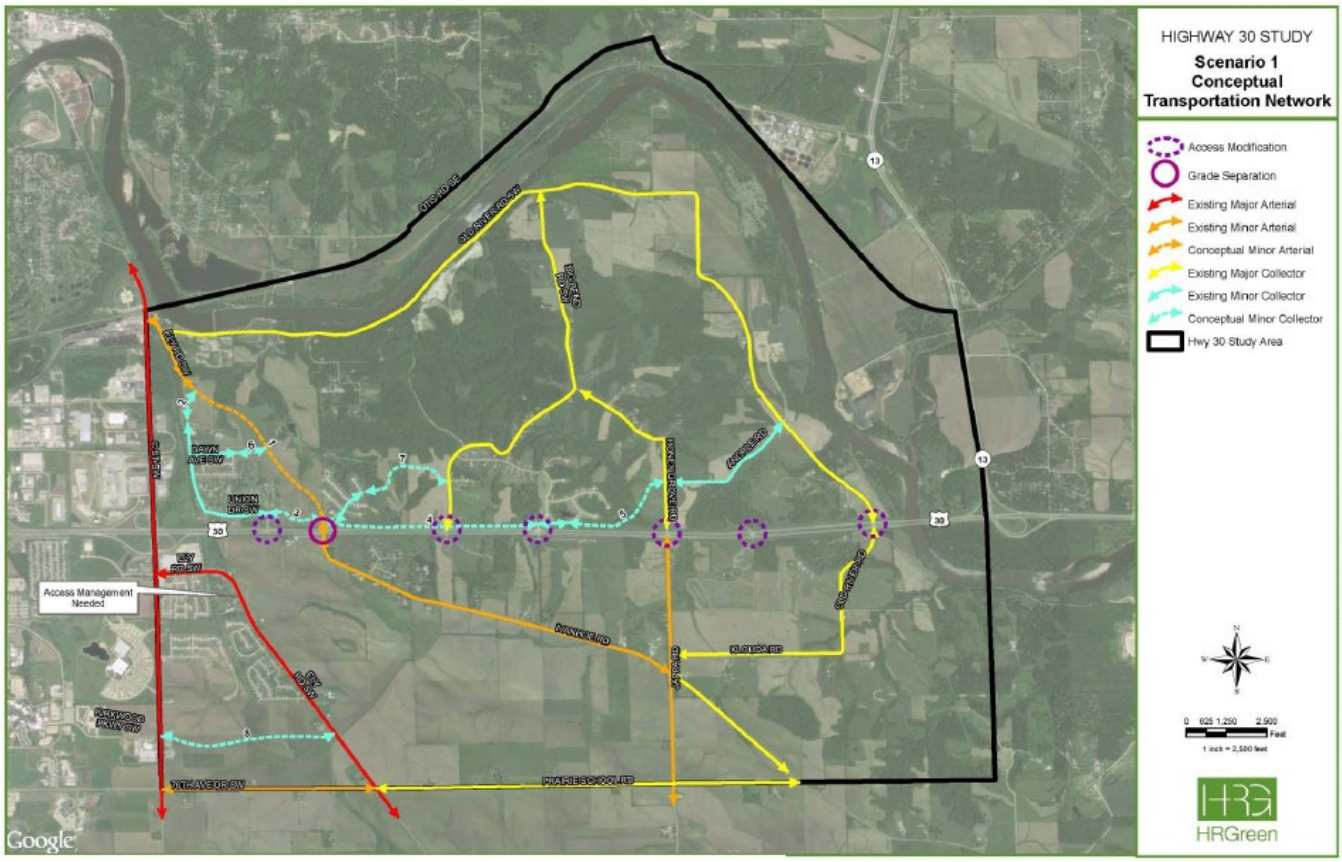


Figure D.4. *One of two scenarios for the future transportation network in the Highway 30 Area Study designate arterial and collector roads.*

<u>How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan</u>

The plan should consider how future trails and bikeways in this geographic area will be designated as development occurs. The plan should also consider a river crossing.

Kingston Village Neighborhood Plan

As shown in Figure D.5, this 2013 plan makes a recommendation for a continuous river trail on the west side of the Cedar River (across from downtown) that goes under bridges, instead of at-grade only crossings.

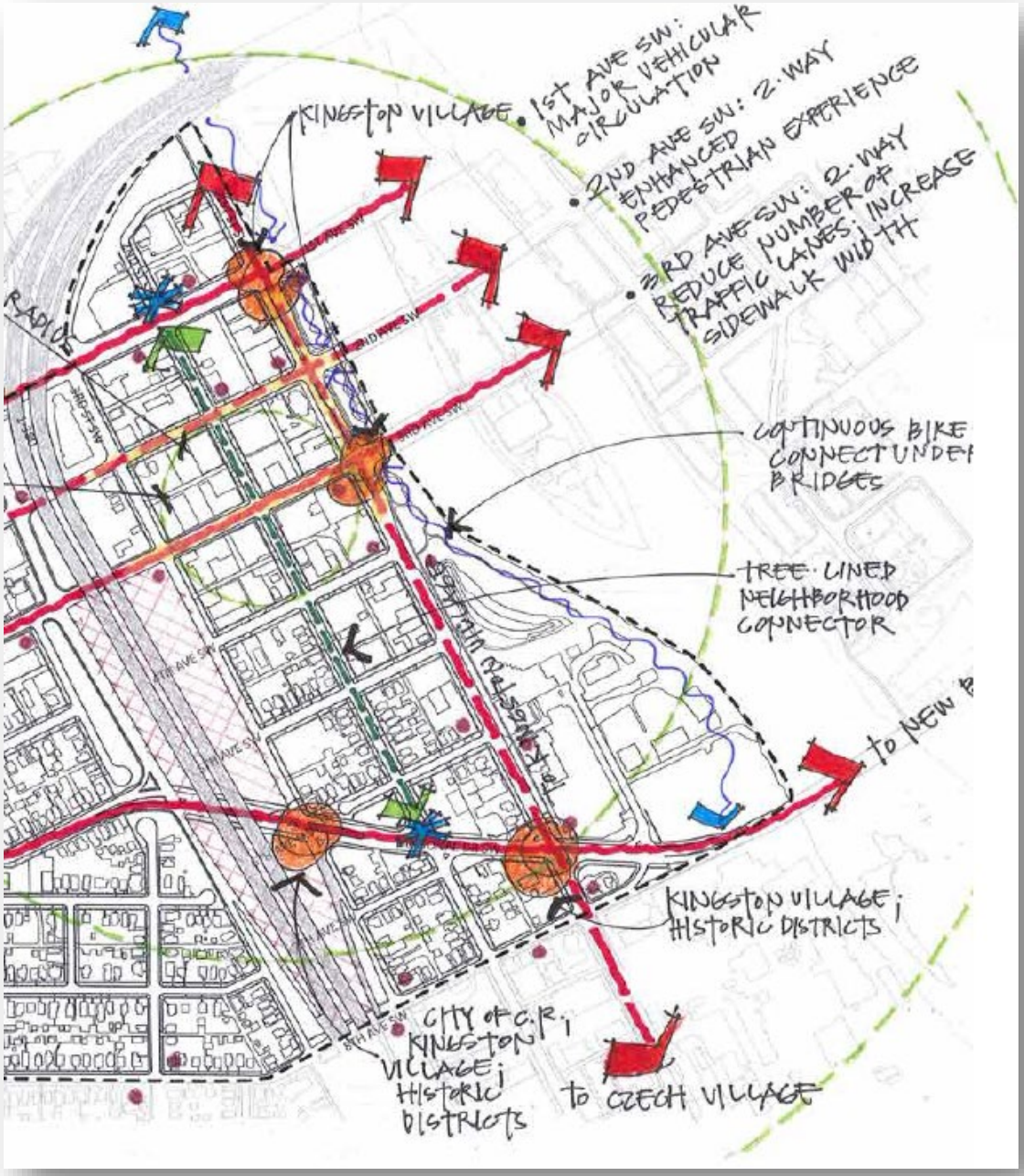


Figure D.5. *The Kingston Village Neighborhood Plan recommends a continuous trail under the 1st, 2nd, 3rd, and 8th Avenue bridges.*

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

The plan should consider how the riverfront trail might be routed underneath existing bridges over the Cedar River.

Mt. Vernon Road Corridor Action Plan

This 2017 plan has an action item to "provide signage to delineate the preferred bicycle routes through and around the Mt. Vernon Road Corridor," as shown in Figure D.6.

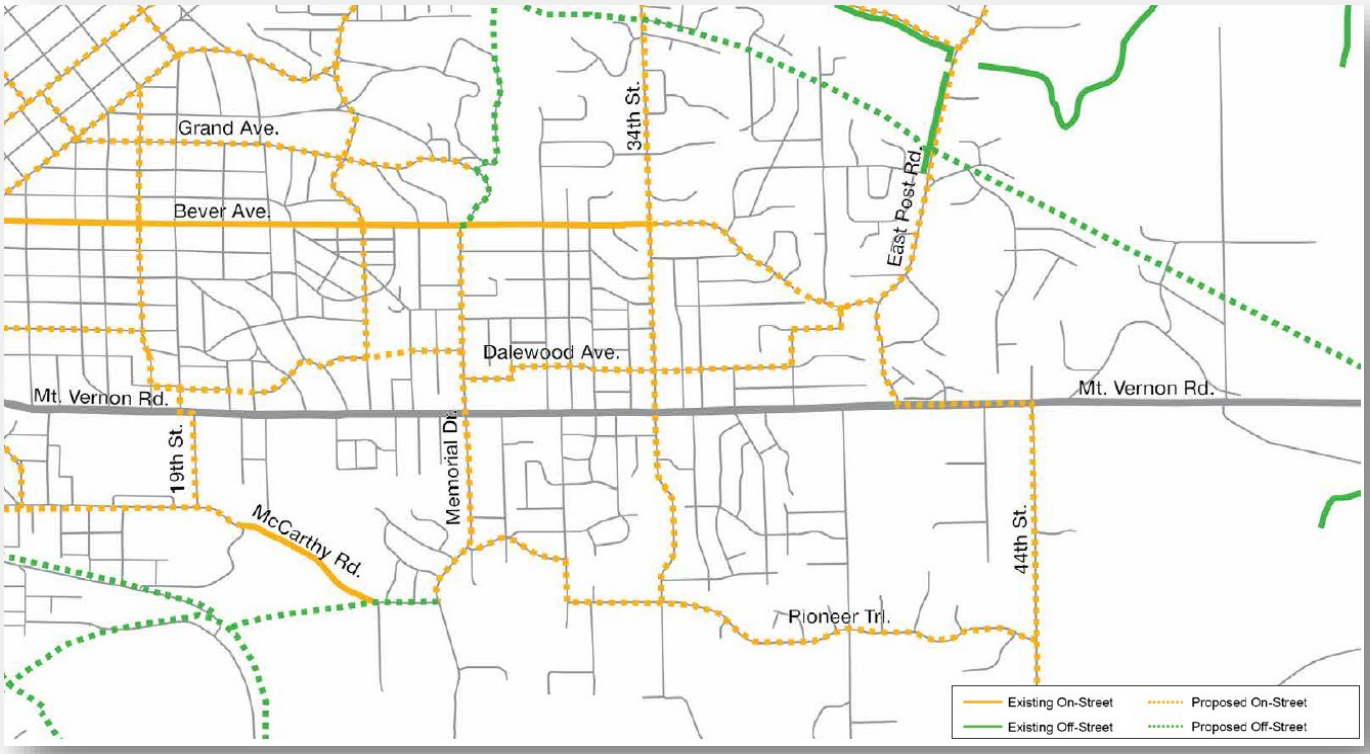


Figure D.6. *Bicycle routes in the vicinity of Mt. Vernon Road indicate existing and future east-west parallel bikeways.*

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

The plan should consider how wayfinding signs will connect bicyclists to parallel routes along the Mt. Vernon corridor.

Northwest Neighborhood Action Plan

This 2017 plan makes recommendations for future bicycle facilities, as shown in Figure D.7. These bikeways match those in the 2015 Cedar Rapids Trails and Bikeways Update, except for E Avenue NW. E Avenue NW is included in the Northwest Neighborhood Action Plan as a bike facility but is not included the 2015 update.

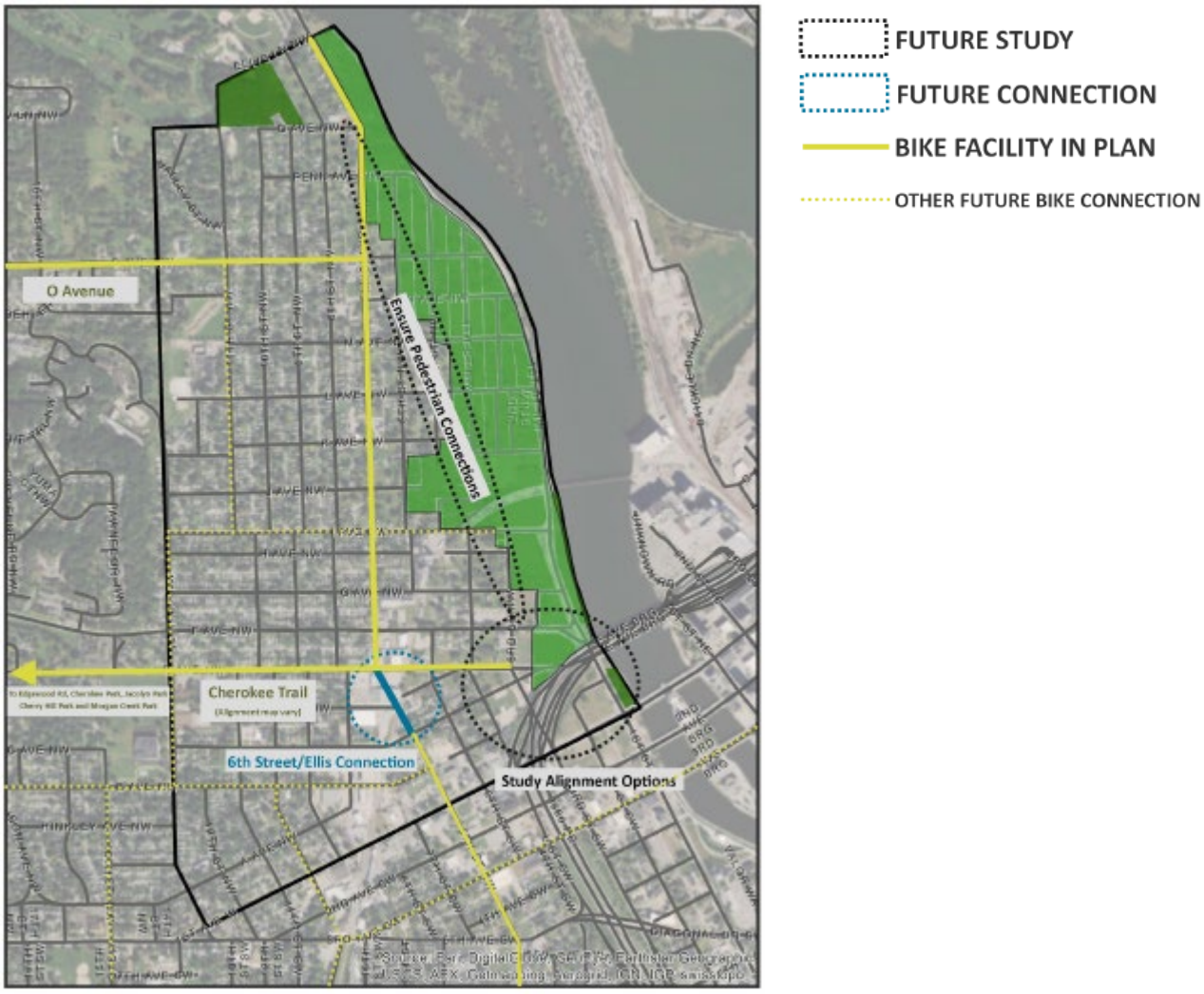


Figure D.7. *Bicycle facilities in the Northwest Neighborhood Action Plan.*

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

E Avenue NW should be considered as a possible future bicycle facility.

Tower Terrace Road Corridor Management Plan Update

This 2019 plan update recommends trails on the north and south sides of Tower Terrace Road as this east-west corridor is built across the northern sections of Cedar Rapids, Hiawatha, and Marion. Figure D.8 illustrates the typical cross section. On-street bike lanes are also recommended on Tower Terrace Road as an interim measure, and the Cedar Valley Nature Trail at-grade crossing is recommended to be converted to an overpass or underpass when the road is reconstructed at that location.

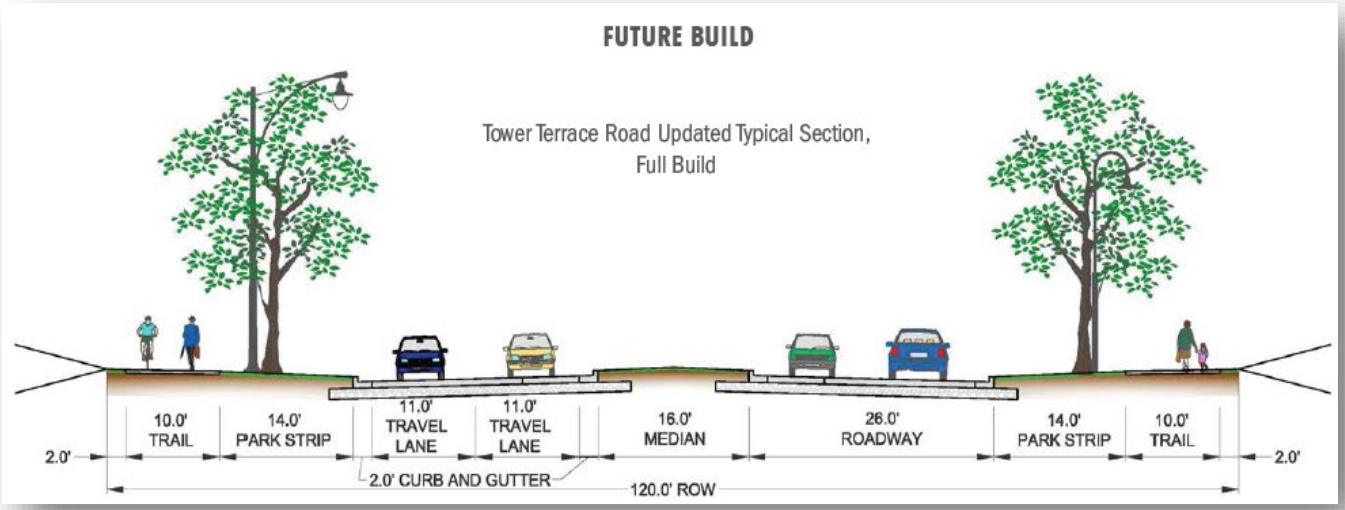


Figure D.8. *Trails are recommended on both sides of Tower Terrace Road.*

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

Trails should be considered as future bikeway facilities on both sides of Tower Terrace Road.

Wellington Heights Neighborhood Plan

As shown in Figure D.9, this 2013 plan recommends bike lanes on 3rd Avenue SE (1), a bike path connection between College Drive and 4th Avenue SE (3), a signed bicycle route along 15th Street (4), a trail along 4th Avenue SE (5), and a signed bicycle route along 13th Street and College Drive (8).

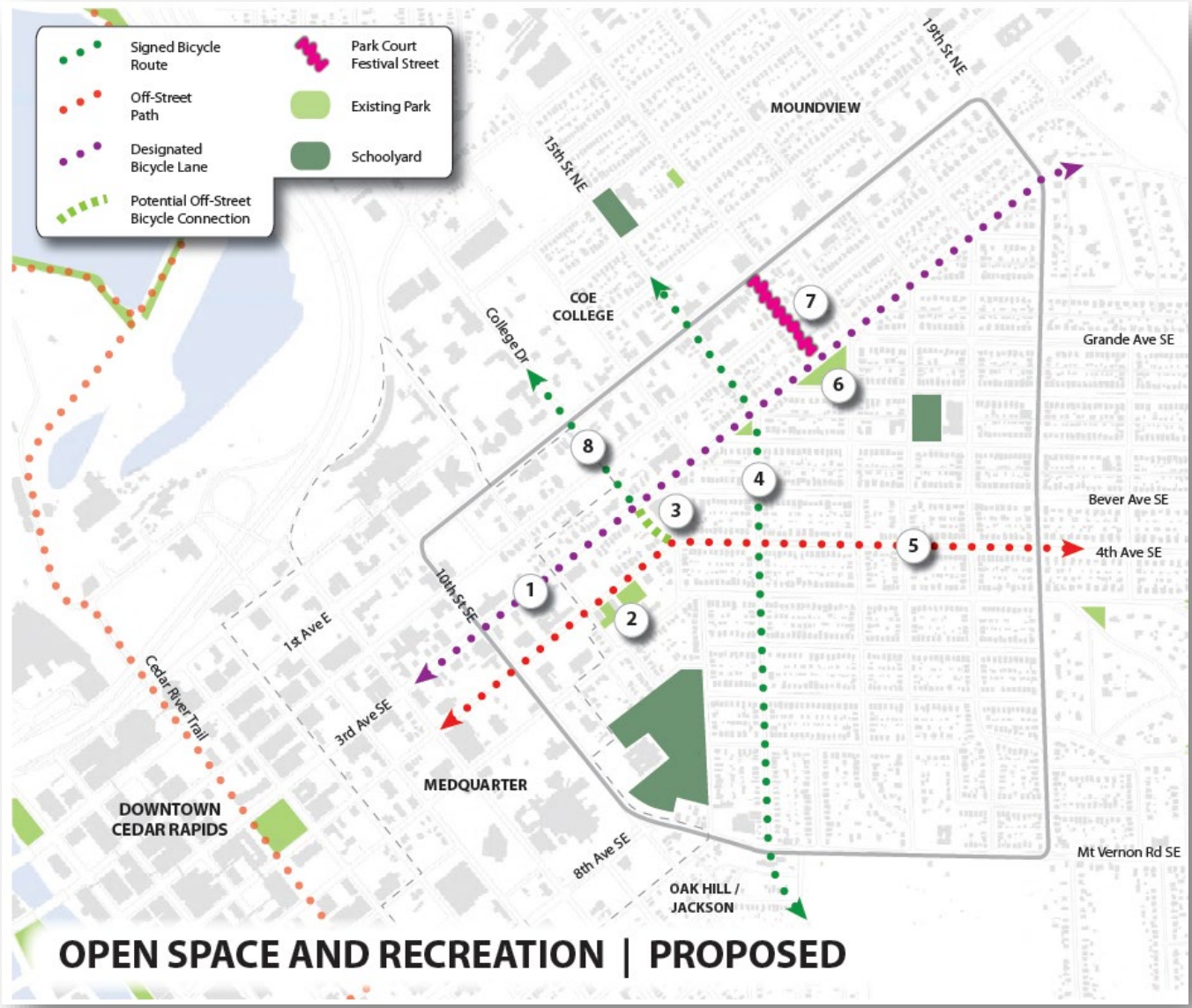


Figure D.9. *Bicycle facilities recommended in the Wellington Heights Neighborhood Plan.*

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

Recommended routes should be considered as possible future trail and bikeway facilities.

Cedar Rapids Community Climate Action Plan

This 2021 plan includes several bicycle-related actions:

1. "Create a sustainable development policy that defines the characteristics of a 15-minute neighborhood and develops guidance and incentives to fill in missing amenities and features, prioritizing vulnerable neighborhoods."
2. "Enhance transit and shared transportation options (micro-mobility and car-sharing) in under-resourced communities and high priority transit locations."
3. "Enhance the Complete Streets Policy to further community education and prioritize urban heat island mitigation plantings in vulnerable neighborhoods" (see Figure D.10).

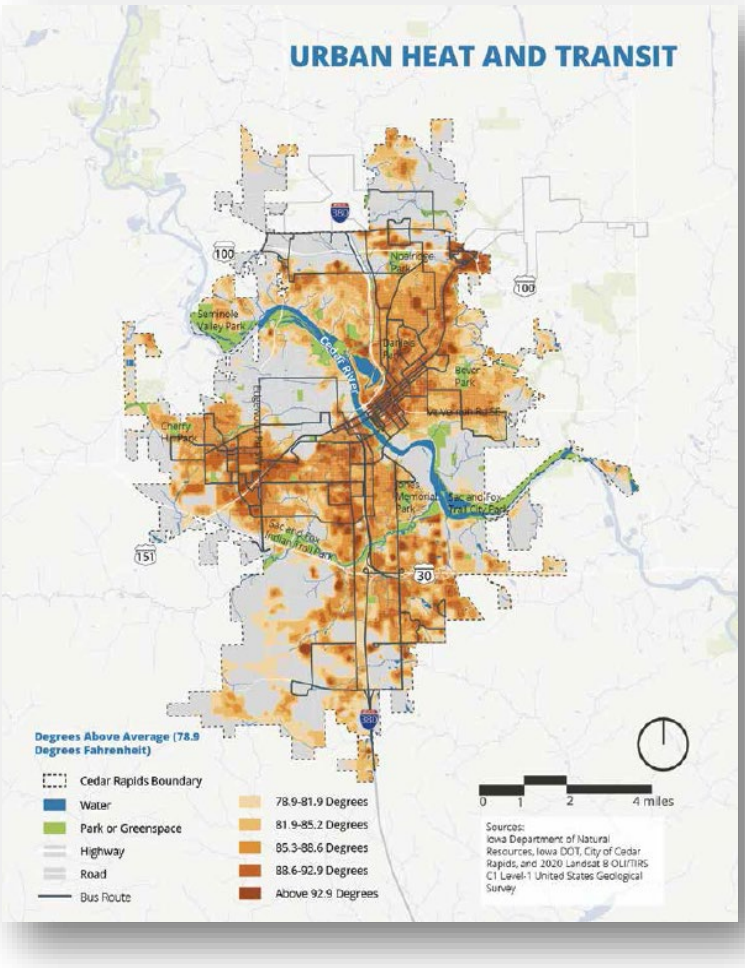


Figure D.10. *Urban heat islands within Cedar Rapids show where summer temperatures rise higher than surrounding areas.*

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

Bikeway, trail, and bike share projects could be prioritized in areas with already dense development and high exposure to heat islands.

Cedar Rapids Complete Streets Policy

This 2014 policy requires streets to be designed, maintained, and operated for all users regardless of age or ability, including bicyclists, pedestrians, and those with disabilities. The policy covers new, reconstructed, and maintenance projects. Complete streets must incorporate one or more of the following: side paths, sidewalks, bike lanes, shared lane markings, or improved wayfinding signage, and are intended to serve as part of a connected multi-modal street network.

Maintenance-type projects are defined in the policy as those that do not significantly alter the street, and which are less than half of the cost of a new street with the same components. Maintenance projects also do not change the geometric features of a street.

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

Project phasing should include timing for all street projects overlapping the future bikeway network, including maintenance-type projects.

Cedar Rapids Comprehensive Trails Plan

This 2012 plan and its 2015 map update creates a Primary Connectivity Network for bicycle facilities at approximate half-mile increments, as shown in Figure D.11. The map update is shown in Figure D.12. Four primary facility types are bike lanes, shared lane markings, paved shoulders, and multi-use paths. These facility types are then divided into 15 typical cross sections. The network includes 32 individually named segments. Each segment includes corresponding typical cross sections and is identified as a short, medium, or long-term project. Logos and wayfinding signs for the network are also recommended.

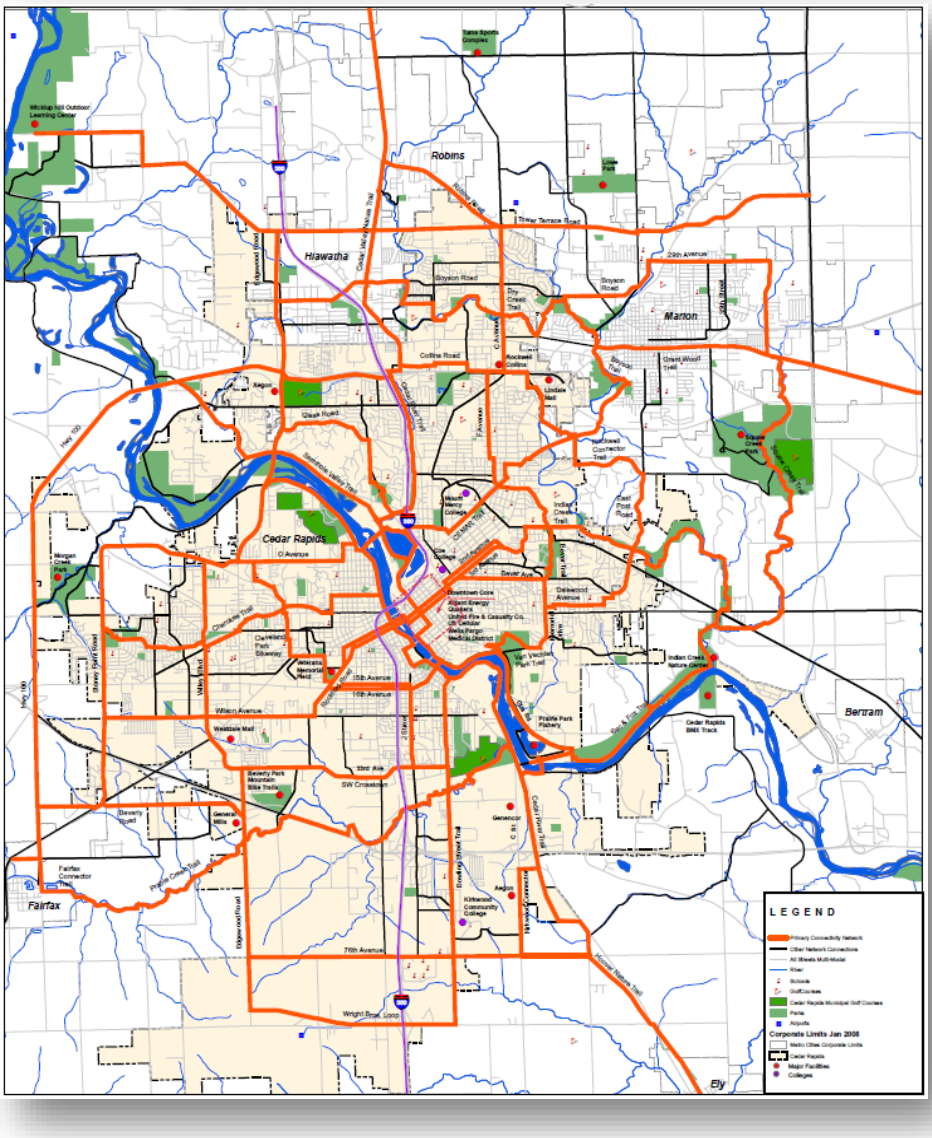


Figure D.11. *The Primary Connectivity Network in the Trails & Bikeways Plan lays out a future vision for facilities in Cedar Rapids and the surrounding areas.*

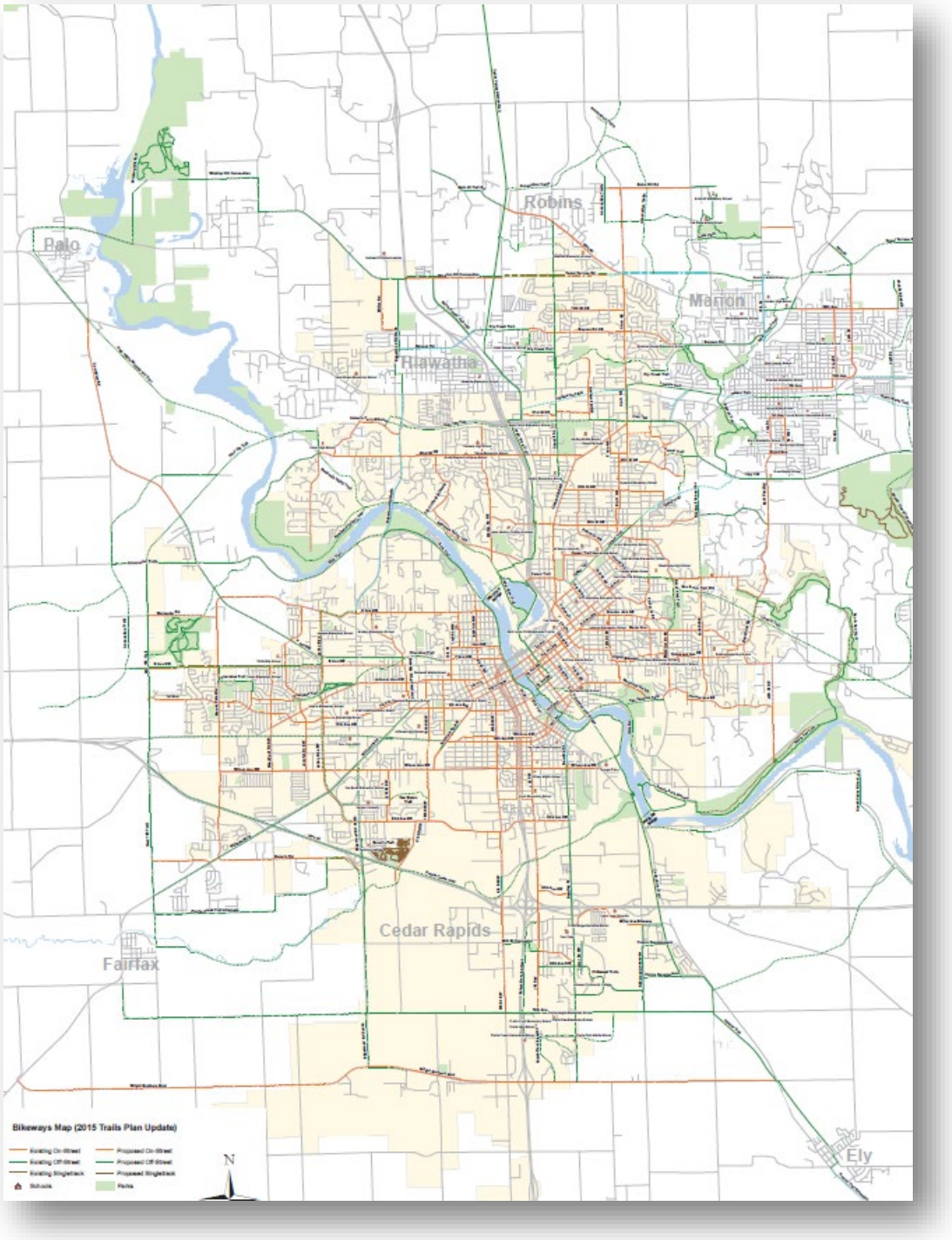


Figure D.12. *The 2015 map update to the Cedar Rapids Trails and Bikeways Plan.*

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

All future trails and bikeways should be considered as potential projects for the 2023 project. Facility types and phasing for each segment should also be considered as the Trails and Bikeways Plan is updated.

Cedar Rapids Flood Control System Master Plan

This 2015 plan (last updated in 2022) includes details of the flood control system along the Cedar River, as shown in Figure D.13. In 2022, the plan was updated with a Trail Alignment, as shown in Figure D.14. The plan also includes trail surface design that varies based on three locations, including downtown, parks, and intersection approaches.

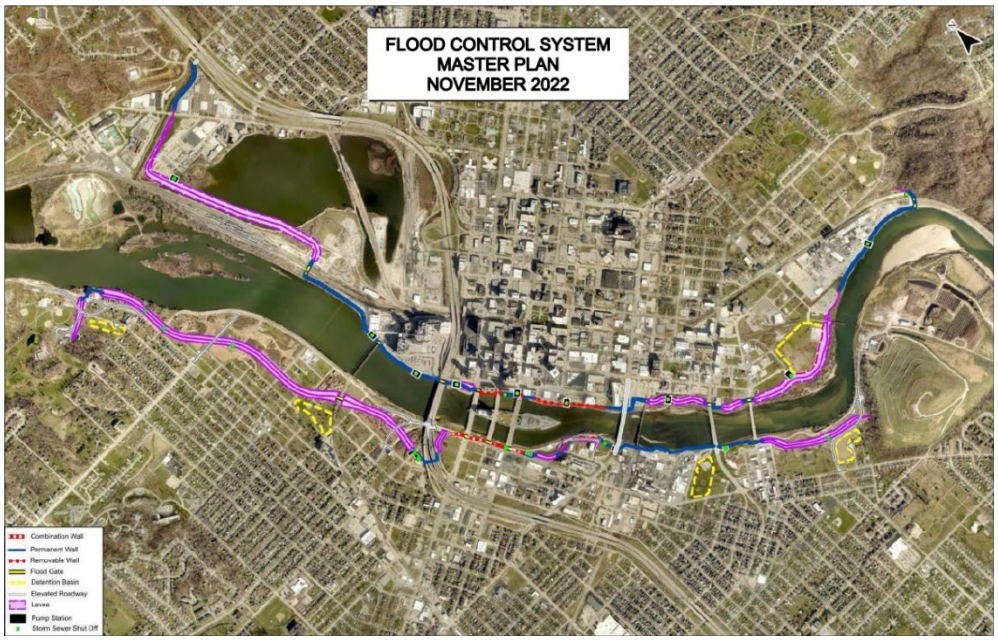


Figure D.13. *The future flood control system along the Cedar River.*

Figure D.14. *This flood control system trail alignment map was included in a 2022 update of the plan.*

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

All future trail alignments and surface designs should be considered for inclusion in the plan.

Cedar Rapids Parks and Recreation Master Plan

This 2010 plan includes an extensive public survey that found the top outdoor facility type to be "added, expanded, or improved" was trails, as shown in Figure D.15. The plan also includes two trail-related goals and nine strategies:

"GOAL 1: Develop a connected recreational trail system.

1. Prioritize recreational trail construction that:
    a. Connects signature parks, downtown, and the riverfront
    b. Creates loops within the system
    c. Connects to regional trails
2. Improve trailheads and signage.
3. Complete the Comprehensive Trails Plan.
4. Require trail development as a part of new residential construction in parkland dedication ordinances in accordance with the citywide trail system plan, [as shown in Figure D.16].
5. Designate a staff trails resource person to interact and coordinate with other City and County departments, the public, and Parks and Recreation Department staff. This staff person should also investigate grant opportunities and advocate for trails funding.

GOAL 2: Provide adequate maintenance of the trail system.

1. Develop trail maintenance standards.
2. Identify a dedicated full-time trails maintenance staff with a seasonal trails crew.
3. Coordinate with other City departments such as Public Works and Community Development about upcoming trail construction and new trails that will need to be maintained by the Parks and Recreation Department.
4. Create a maintenance plan for new trails and ensure adequate trail maintenance funds are allocated in the general budget."

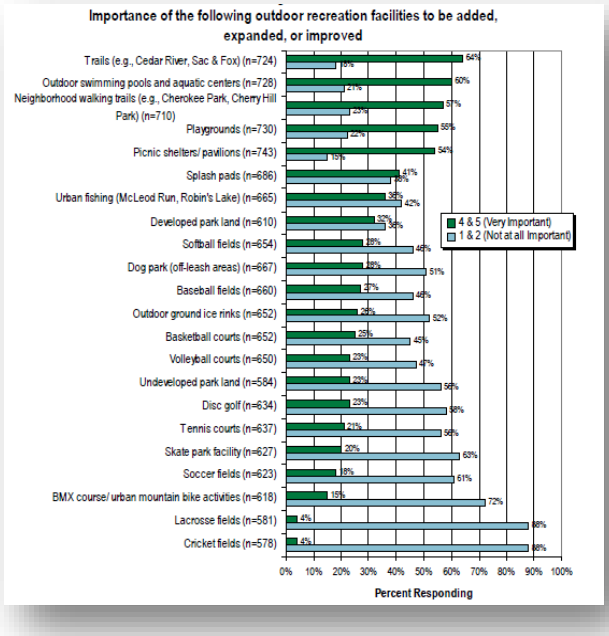


Figure D.15. *Trails were found to be the most desired type of outdoor recreation facility for expansion by the public.*

Figure D.16. *The regional trail system, as envisioned in the 2010 Cedar Rapids Parks & Recreation Master Plan.*

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

All trail-related goals and strategies should be considered for inclusion if they have not already been achieved, and the regional trail network in Figure D.16 should be considered for regionally important projects.

Cedar Rapids Public Art Plan

This 2022 plan identifies trails and greenways as potential sites for public art projects and includes a list of five existing pieces of art in the City's collection along the Cedar Valley Nature Trail.

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

If art is included as an amenity in the plan, recommendations should be tied to the Cedar Rapids Public Art Plan.

Cedar Rapids Pedestrian Master Plan

This 2019 plan includes one policy related to trails, “clear shared use paths within 24 hours of snowfall.” The plan also notes that the City’s 2018 – 2022 annual budget includes between $100,000 and $150,000 for a trail repair program. Appendix C of the plan includes trail designs to reduce walking and bicycling conflicts on shared-use paths, as shown in Figure D.17. Appendix C also includes a recommended cross section for Bowling Street SW that creates a buffer between the street and the trail by narrowing the street from 45’ to 37’.

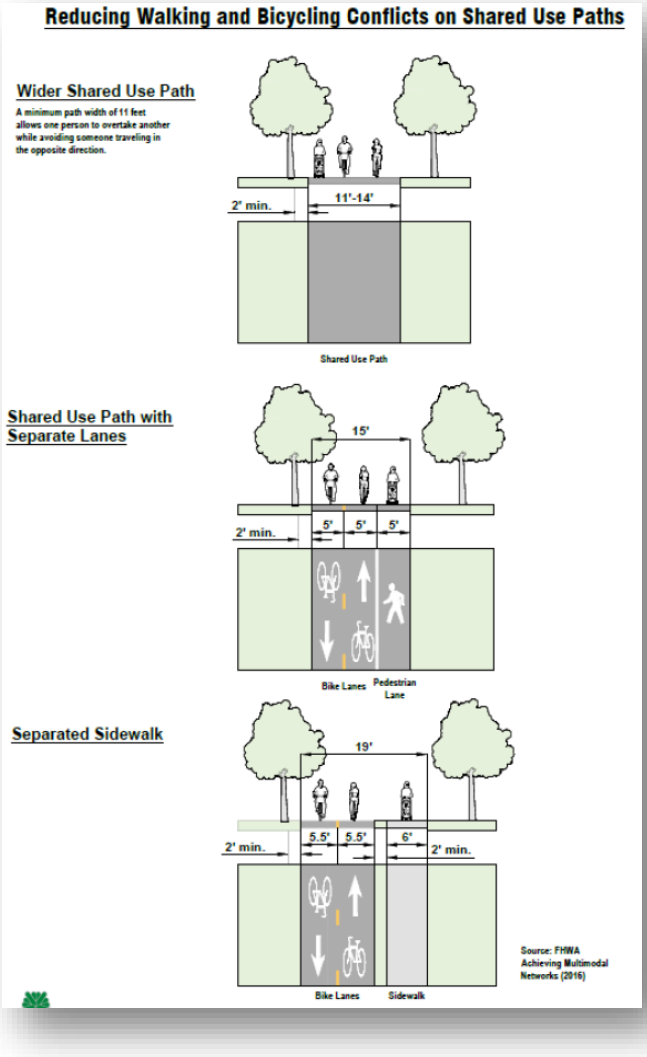


Figure D.17. *Trail cross sections that reduce conflicts are included in the Pedestrian Master Plan.*

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

The trail-related policy for winter maintenance and typical trail cross sections should be considered for inclusion. Current funding levels for the City’s trail maintenance program should be investigated, and the recommended cross section for Bowling Street SW should be considered as a future recommendation.

Cedar Rapids Comprehensive Plan (Envision CR)

This 2015 plan, last updated in 2021, includes three components related to trails and bikeways: growth, greening, and connection. Within each component, there are specific recommendations:

Growth

As shown in Figure D.18, there are four potential growth areas on in Cedar Rapids. As shown in Figure D.19, each of these areas include trail related recommendations, some of which overlap with future facilities in the existing Trails & Bikeways Plan.

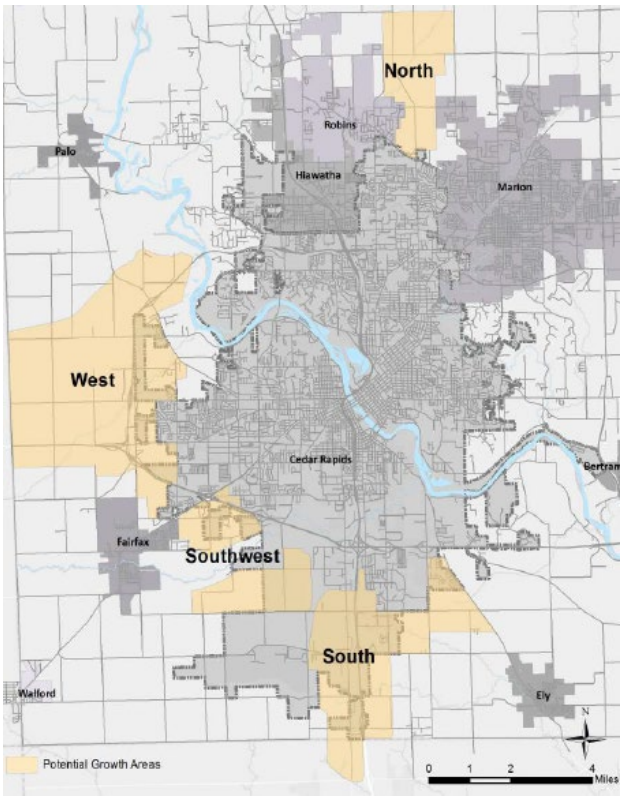


Figure D.18. *Future growth areas in the Comprehensive Plan.*

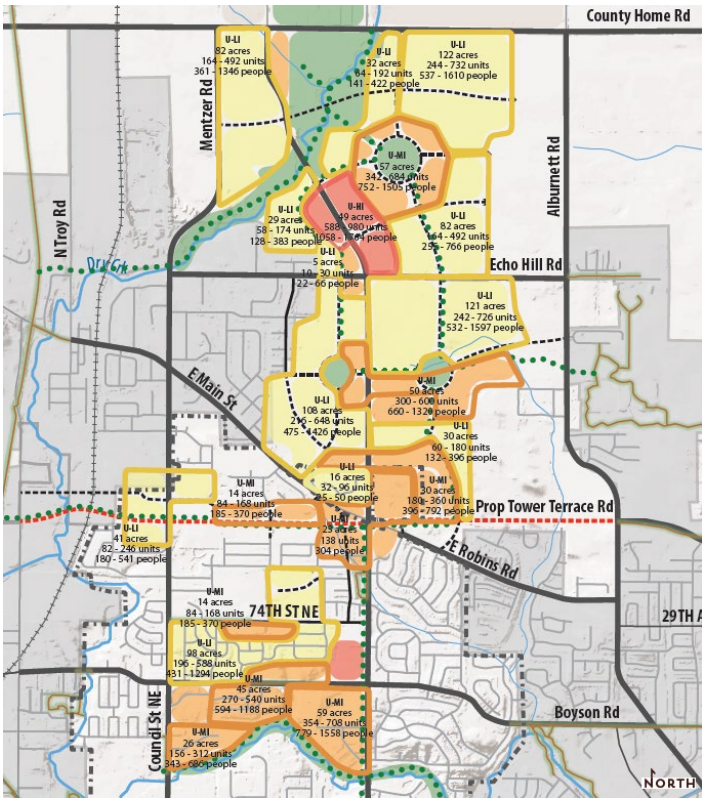


Figure D.19. *Future trail recommendations in the North growth area are shown as dotted green lines.*

Greening

This component of the comprehensive plan includes a goal to have the best trails system in the region. The plan references the Greenway Parks Plan, which was adopted in 2014 and "shows concepts for three connected parks along the west side of the Cedar River: Time Check Park, Riverfront Park, and Czech Village Park." Two related initiatives include:

1. "Continue to update the greenway plan and identify external funding opportunities for construction of the enhanced greenway system.
2. Finalize design plans for the Smokestack Bridge and land-based improvements to Cedar Lake [as shown in Figure D.20]."

Figure D.20. *The addition of a trail on the east side of Cedar Lake is referenced in the City's Comprehensive Plan.*

Connection

This component includes five goals related to trails and bikeways:

1. "Provide choices for all transportation users.
2. Build a complete network of connected streets.
3. Establish a network of complete streets.
4. Improve the function and appearance of key corridors.
5. Support the development of an effective, regional, multi-modal transportation system."

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

The plan should consider how future trails and bikeways in growth areas will be designated as development occurs. The plan should also consider including recommendations from the Greenways Master Plan as well as funded projects around Cedar Lake and the Smokestack Bridge. The Trails & Bikeways Plan should reinforce connection-related goals in the comprehensive plan.

Cedar Rapids Budget Book

The 2023 budget book includes a trails fund (325) for amounts at $1.35 million in 2023, $5.895 million in 2024, $4.803 million in 2025, and $0.5 million in 2026. Trail construction is also included in the following funds and projects:

- Connect CR Cedar Lake Trail and Smokestack Bridge (Fund #327)
- Flood Control System (Fund #331), including
    - Tree of Five Seasons Park
    - 4th Avenue Riverfront
    - 8th Avenue Bridge
- Tower Terrace Road NE from east of C Avenue to Alburnett Road (Project #301666)
- Wiley Blvd from 16th Avenue SW to Williams Boulevard (Project #325052)
- Cherokee Trail from Morgan Creek to Cedar River (Project #325069)
- Lindale Trail Extension from east of C Avenue to Cedar Valley Nature Trail (Project #325071)
- Edgewood Road Trail from Blairs Ferry to Glass Road NE (Project #325073)

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

The plan should include these future projects as funded.

Green CR Action Plan

This 2020 plan includes a goal of fostering "a transportation network which cultivates an inclusive and healthy community." The plan also has an objective of achieving "American Community Survey bike/walk/transit commute rate of 6% for residents by F22." The following bicycle-related initiatives are listed:

1. "Report annually on bike-share performance metrics.
2. Create assessment of opportunities to promote bike incentives to City staff and community (and implement if feasible).
3. Conduct bike traffic measurements to access before-and-after impacts of new bicycle facilities.
4. Conduct annual measurements of bike traffic on Cedar Lake trail, 3rd Street SE, 3rd Avenue SE.
5. Report local Safe Routes to School data annually, capturing all modes of transportation.
6. Identify and reduce gaps in sidewalk, trail, and on-street bikeway facilities.
7. Create assessment of opportunities (and implement if feasible) to use and promote federal transit incentives for City staff and local businesses.
8. Maintain League of American Bicyclists' Bicycle-Friendly Community Bronze designation and earn Silver designation.
9. Continue annual active transportation education and outreach efforts (e.g., need-based cycling, Bike to Work Week, Move More Week, safety gear giveaways, free student transit).
10. Conduct annual assessment of need-based cycling behavior.
11. Increase number of City worksites designated as League of American Bicyclists' Bicycle-Friendly Businesses.
12. Report pedestrian and bicyclist crashes annually. Identify and improve safety opportunities."

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

The objective and 12 initiatives should be considered for inclusion.

Cedar Rapids Trail Cross Sections

Recent cross sections for trails built in Cedar Rapids show that trails are typically 10’ wide with a 1.5% cross slope. Material type is asphalt or concrete. The top layer is 6” thick with a 6” granular subbase, although a subbase is not always used with concrete trails. Shoulders typically slope toward trails on one side, and away from the trail on the other (with drainage subsequently occurring across trails) as shown in Figure D.21.

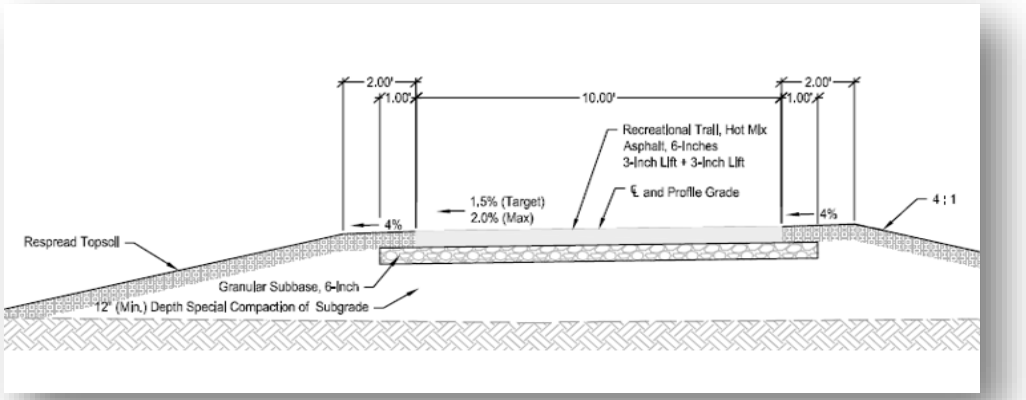


Figure D.21. *A typical trail section with shoulder drainage coming across the trail from the right, and away from the trail on the left.*

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

Recommended alterations to typical trail cross sections may be addressed in the plan.

Cedar Rapids Pavement Marking Details

Pavement marking details last updated in 2020 and 2022 show:

- Bike lanes can be marked with six inch or 12-inch white lines
- Stop and yield lines at intersections are set back a minimum of five feet from crosswalks and trail crossings
- Stop and yield lines at mid-block crossings are set back a minimum of 40 feet from crosswalks and trail crossings
- Bike lane symbols are unique from sharrow symbols
- Bike lane dotted lines may be included within a turn lane
- Sharrows may be supplemented with dotted lines (aka super sharrows)
- Sharrows may be supplemented with “BLVD” on bicycle boulevards
- Bike lane lines transition from solid to dotted at intersections, and may be extended across intersections (as shown in Figure D.22) or include green pavement markings
- Bike lane symbol spacing varies upon the design speed of a street
- Bike lane sign spacing is every ½ mile
- Share the Road or Bicycles May Use Full Lane signs may be used with sharrows

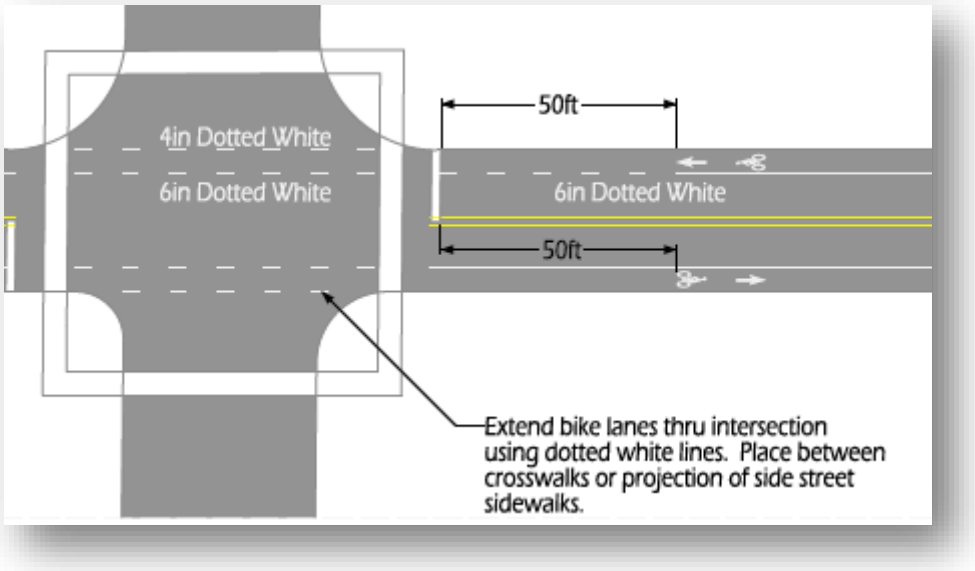


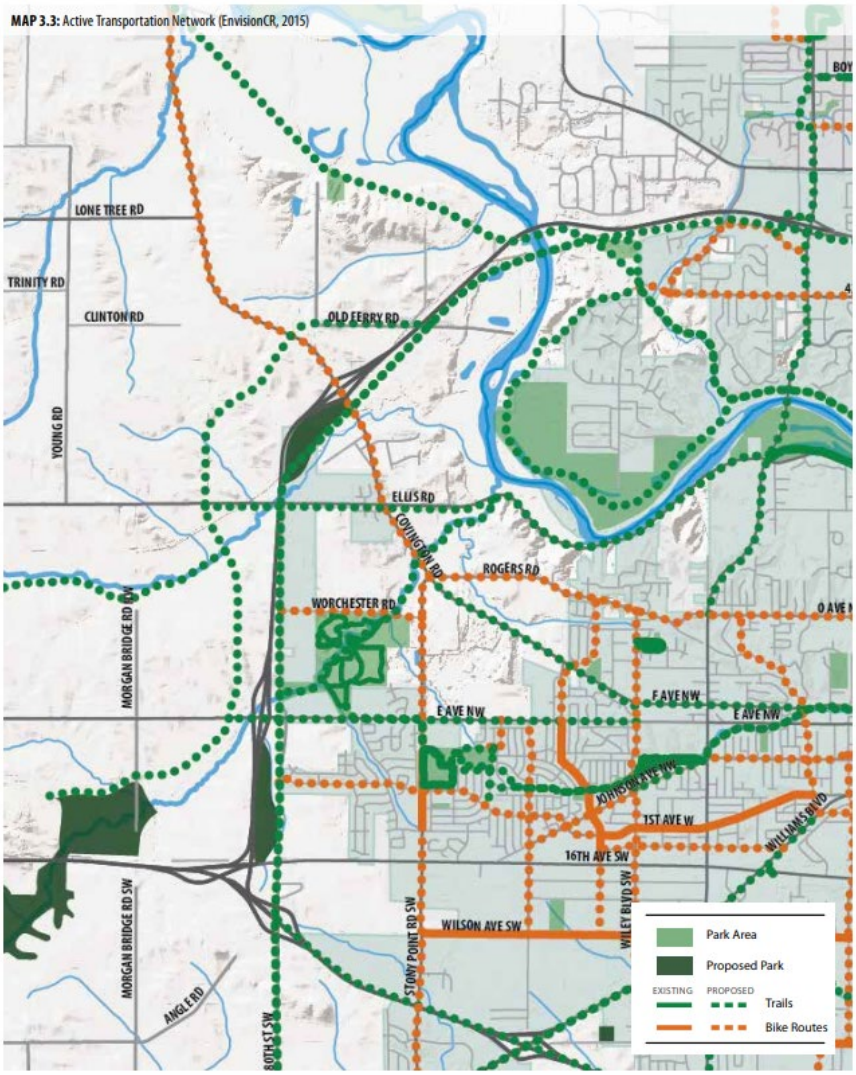
Figure D.22. *Cedar Rapids pavement marking details include the possibility of bike lanes extending through intersections.*

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

Recommended alterations to pavement marking details may be addressed in the plan.

Highway 100 Corridor Study

This 2016 study addresses land use around Highway 100 on the west side of the metro. Paved shoulders were recommended for rural roadways in the area for potential bicycle use. Map 3.3 illustrates proposed trails and bike routes within and through the study area.



How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

All future trails and bikeways should considered for inclusion in the plan.

Morgan Creek Master Plan

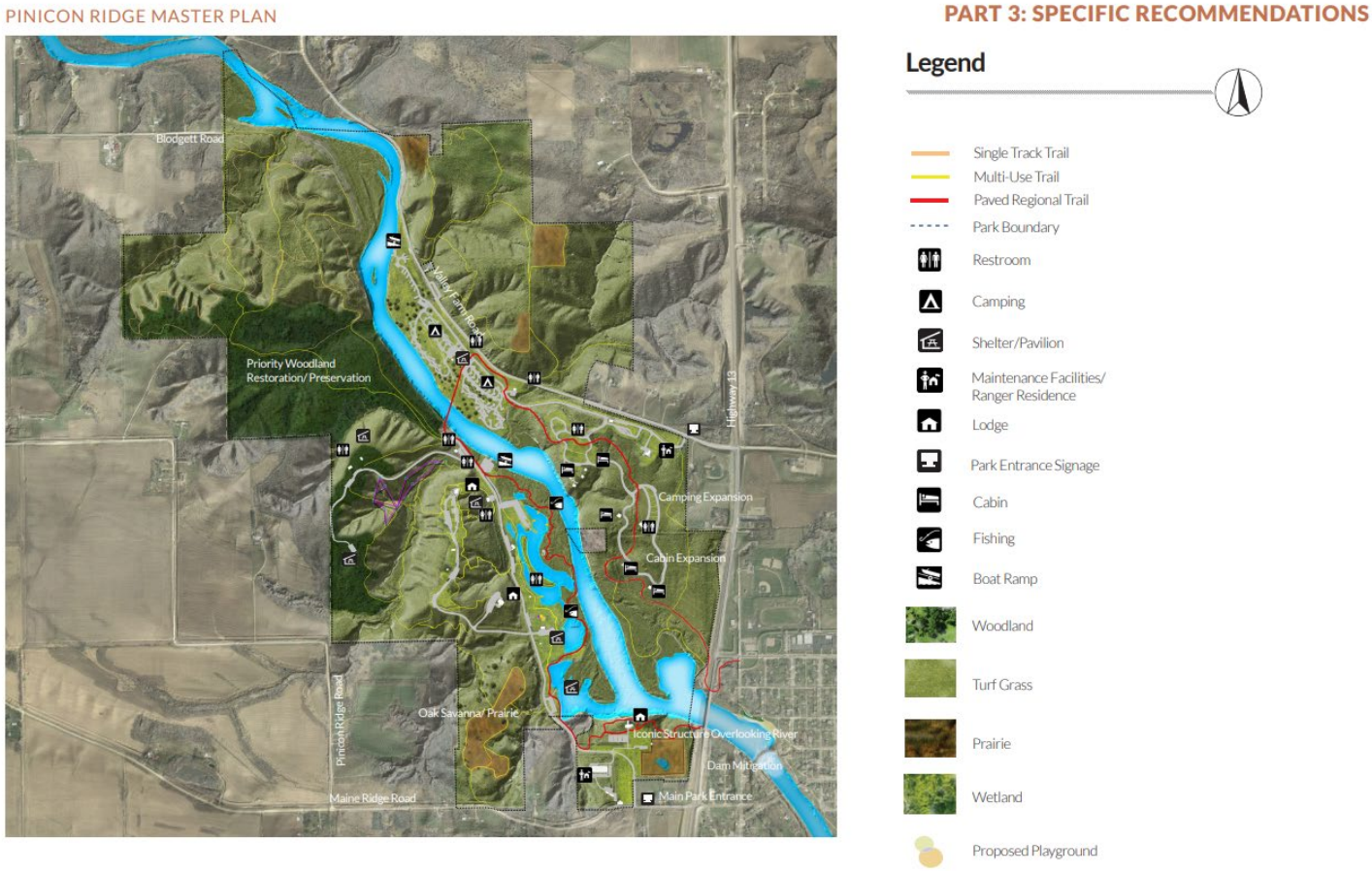
Park planning from 2015 includes several internal park trails of varying types, plus description of the “Cherokee Trail” as a 12 feet wide paved regional trail adjacent to and through the park.

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

Consider the regional trail recommendation for inclusion in the plan. Also consider including the internal soft trails proposed as a destination resource.

Linn County Conservation Board Pinicon Ridge County Park Master Plan – August 2015

One of the key goals in this plan is improved trail connections and accessibility. The study identifies a paved regional trail loop within the park and connecting to Central City, plus multi-use trails and single-track trails.

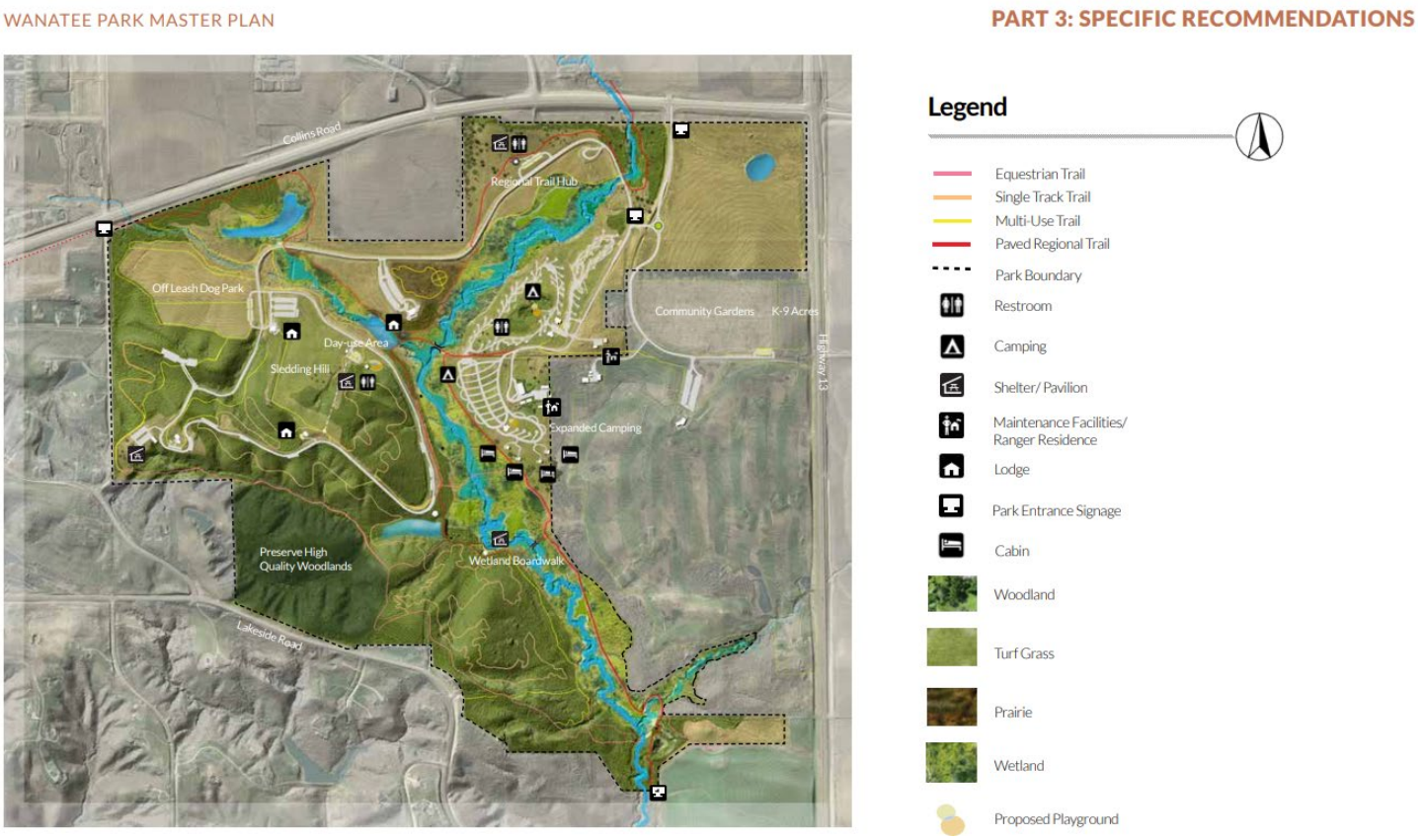


How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

The regional trail project should be considered for inclusion in the plan. The other trail projects should be considered as a destination amenity.

Wanatee Park Master Plan

This 2015 plan includes adding a regional trail hub and a generally north-south regional trail through the park.



How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

Consider the regional trail recommendation for inclusion in the plan. Include soft trails and single-track trails for consideration as a regional amenity.

Linn County Trails Association Trail Counts

The Linn County Trails Association collects count data from a number of infra-red counter devices on several trails in Linn County. Records date back to 2004. The data can be used to observe trends at each location as well as for usage over time.

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

The data provides a benchmark for usage that is relatable to the public's observations of how busy the trail system is in certain locations. All trails currently monitored for traffic counts should be included in the plan as current regional trails. The plan may identify expansion of the system and suggest new or relocated counter locations for continued collection of useful data, as well as a monitoring of the performance of the trail system before and after major connections are made.

Linn County Comprehensive Plan 2013: A Smarter Course

This comprehensive plan was completed in 2013 to balance rural and urban interests; incorporate the Iowa Smart Planning Principles and Elements, and promote intergovernmental and regional cooperation. Through a multi-pronged update process, this comprehensive plan identified plan goals and objectives that would be implemented using certain strategies. Within the transportation planning element, the following strategies focused on bicycling and pedestrian-related needs.

Strategy	Priority	Type	Timeframe
Encourage all municipalities to adopt guidelines that promote and enhance pedestrian and bicycle trips to community facilities such as parks, schools, and libraries.	High	Collaboration	Long-term
Maintain or add bike and pedestrian trails along former rail corridors.	High	Project	Long-term
Support pedestrian and bicycle connections from park-and-ride lots, bus transfer points, and other intermodal facilities.	High	Collaboration/ Project	Mid-term
Assist with grant funding opportunities for trails improvements and expansion including the Federal Recreational Trails Program, State Recreational Trails Program, and Federal Transportation Enhancement Program.	Med	Collaboration	Long-term
Assist with trails expansion and planning efforts with all appropriate local, regional, and state entities.	Med	Collaboration	Mid-term
Ensure that county trail projects align with adopted trails plans.	Med	Collaboration/ Project	Mid-term
Consider easements for new development that are in conformance with existing trails plans.	Med	Policy	Mid-term
Encourage Linn County cities and towns to include pedestrian and bicycle accessibility and facilities in all transportation planning efforts.	Med	Collaboration	Mid-term
Encourage the Linn County Secondary Roads Department to consider adding or improving bicycle facilities as part of major roadway improvements, and to consider adopting “Share the Road” signage, where appropriate.	Med	Policy/ Collaboration	Long-term
As appropriate, incorporate paved shoulders on secondary roads for alternative transportation modes.	Med	Policy	Long-term

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

The above plan did not identify any specific trail or bikeway plan improvements. The overall goals and strategies should be considered for includion in the Trails and Bikeway Plan, with Linn County Conservation noted as a project partner.

Linn County Conservation Board Strategic Plan – 2022 Update

Linn County Conservation's development of a five-year strategic plan incorporated the conservation of natural resources while promoting the health and welfare of the people and ecosystems of Linn County.

Recreation Goal: Provide opportunities and access for residents to experience nature to improve their health and quality of life.

Strategies:

- Continue to work with partners to facilitate planned growth and development of a regional network of multi-use recreational trails that increases connections between communities and existing trails and parks and within the region.
- Enhance outdoor recreation opportunities by improving and expanding facilities and amenities in parks by implementing park master plans, which emphasize natural resource protection and enhancement while serving the needs of Linn County residents.
- Expand the reach and impact of recreation opportunities by enhancing programming, partnerships and learning opportunities that contribute to specific improvements. These include improved health, connection to nature, economic growth through employee retention, and economic benefits for local businesses and broaden inclusion for all community members.

Inventory existing recreational activities and seek feedback from users, residents and partners to inform adaptive management practices. Ensure superior customer satisfaction.

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

The above plan did not identify any specific trail or bikeway plan improvements. The overall goals and strategies should be considered for includion in the Trails and Bikeway Plan, with Linn County Conservation noted as a project partner.

Corridor MPO Transit Study

This 2016 plan has no relevant information for the Cedar Rapids and Linn County Trails & Bikeways Plan, except that all 30 buses in the fleet currently include bike racks.

East Central Iowa Council of Governments Long Range Transportation Plan

Regional Planning Association (RPA) 10 includes Benton, Cedar, Iowa, Johnson, Jones, Linn, and Washington Counties, except for those served by the Corridor MPO and the MPO of Johnson County). However, the RPA takes the entire region's transportation needs into consideration.

The 2022 RPA 10 plan identified recommendations and projects to fulfill goals that were developed through the planning input process. The goals pertaining to Active Transportation consisted of:

- Enhance *connectivity* of the regional and local trail system
- Increase *funding* for trails and other recreation resources
- Consider *diversity* of users in natural and recreational planning
- Improve *visibility* of users in natural and recreation planning.

Based on these goals, the following active transportation recommendations and actions were developed:

Connectivity

- Formalize the opportunity for joint planning among Corridor MPO, MPO of Johnson County, and RPA 10.
- Increase transportation options, including vanpools, rideshare, trails, and other modes.
- Encourage compliance with Complete Streets policies for all new and reconstructed road projects.

Funding

- Advocate for funding for the Natural Resources and Outdoor Recreation Trust Funds.
- Minimize intra-regional competition for state and federal resources by developing a regional pitch and prioritization process.

Diversity

- Encourage partnerships between county conservation boards, human service agencies, and public transit providers to increase access to and utilization of natural and recreational resources and facilities for education, improved health, and acclimation of new community members.

Visibility

- Conduct a study to determine the regional economic impact of recreational resources.
- Coordinate with organizations to understand what amenities are necessary to attract and retain residents.Develop resource materials describing regional trails and amenities.

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

The above plan did not identify any specific trail or bikeway plan improvements. The overall goals and strategies should be considered for includion in the Trails and Bikeway Plan, with Linn County Conservation noted as a project partner.

Corridor MPO Transportation Improvement Program FFY 2023 – FFY 2026

Final approval July 21, 2022

Surface Transportation Block Grant Projects:

36995: Ped/Bike ROW, Ped/Bike Grade & Pavement, Ped/Bike Miscellaneous: Lindale Trail Ext ph2 from Council St NE along abandoned railway to 51st St & the CVNT Train near Hwy 100 – Letting Date 12/20/2022

38368: Ped/Bike Grade & Pavement on Edgewood Rd NE from the north side of the Edgewood Rd Bridge to the ext trail aprox 1k' north.

48390: Ped/Bike Grade & Pavement of 0.65 miles of 12' paved trail between 9th Ave SE and Cedar River Trail along old RR grade.

30992: Ped/Bike ROW, Ped/Bike Grade & Pave, Ped/Bike Structures in Cedar Rapids from Marion City limit N to Hwy 100 and Lindale Mall Shopping Centers

36965: Ped/Bike Grade & Pavement, Ped/Bike Structures in Cedar Rapids from Midway Dr along Vinton Ditch to E Ave, along E Ave to Vinton Ditch, to along F Ave to 13 St.

39455: Ped/Bike Grade & Pavement in Cedar Rapids sidewalk, transit improvements west side of Edgewood Road NW from12th Ave NW to o Ave NW

39557: Ped/Bike ROW, Ped/Bike Grade & Pavement, Ped/Bike Structures in Marion from city limits East under Hwy 100 Bridge over Indian Creek to Grand Ave spur

52739: Ped/Bike Grade & Pavement, Ped/Bike Structures in Palo, S Palo Marsh Rd from Marsh Parking to Blairs Ferry Rd, E on Blairs Ferry Rd, S through Palo.

36938: Ped/Bike ROW, Ped/Bike Grade & Pavement, Ped/Bike Structures 42nd St N along Preserve Ln to Rock Island Preserve along abandoned rail approx. 250' E of Cedar River.

39453: Ped/Bike ROW, Ped/Bike Grade & Pave Worcester Rd W to 80th St NW, then N until Ellis Rd then along Hwy 100 and abandoned rail ROW to Covington Rd

39452: ped/Bike ROW; Ped/Bike Grade & Pavement on E Cemetery Rd from Driftwood Ln E to Fairfax City limits.

45506: Ped/Bike Grading in the City of Robins, on W Main Street from N. Center Point Road SE to the Cedar Valley Nature Trail.

45505: Ped/Bike ROW, Ped/Bike Grade & Pavement in Cedar Rapids, on Cottage Grove Ave SE from CeMar Trail SE to East Post Road.

48391: Ped/Bike Grade & Pavement, Ped/Bike Structures in Marion, Lucore Rd sidepath connection on E side, build ped bridge over Indian Creek to Indian Creek Road.

48392: Ped/Bike Grade & Pavement in the City of Cedar Rapids, sidewalk along Stoney Point and crossing F Ave to connect to Jacolyn Dr.

52740: PCC Sidewalk/Trail in Cedar Rapids sidewalk on Burch Ave, 1st Ave SW, Cleveland St SW, 10th St SW, 10th Ave SW, 8th Ave SW.

25525: Ped/Bike Grade & Pave, Ped/Bike Structures in Cedar Rapids on Edgewood Rd NE from Glass Rd NE to approx. 350’ S of Blairs Ferry Rd NE

38371: Traffic Signals, Ped/Bike Grade and Pavement, Ped/Bike Miscellaneous in Cedar Rapids, W side of Wiley Blvd SW 16th Ave to Williams Blvd SW including all required intersection improvements.

29793: Ped/Bike Grade & Pavement, Ped/Bike Development in Cedar Rapids Bowling St 10’ trail from 33rd Ave N to 21st Ave, 21st Ave -A Ave on Bowling St, 21st Ave 6’ sidewalk and on street.

36964: Ped/Bike Grade & Pavement in Cedar Rapids, F Ave NW from 13th St NW to the Cedar River, along the river north to I Ave NW and south to 1st Ave W.

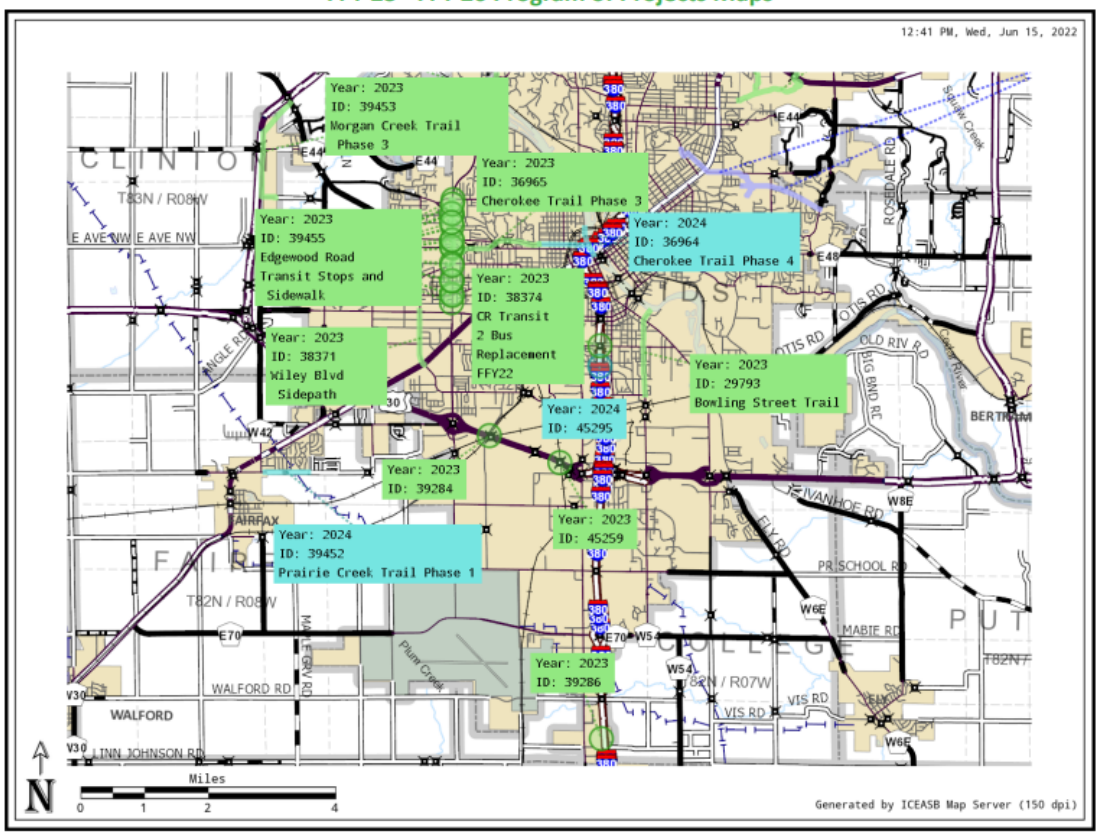
48679: Grade and Pave, Ped/Bike Grade & Pave in Cedar Rapids and Marion, on Tower Terrace Road from E of Meadowknolls Rd to Alburnett Rd.

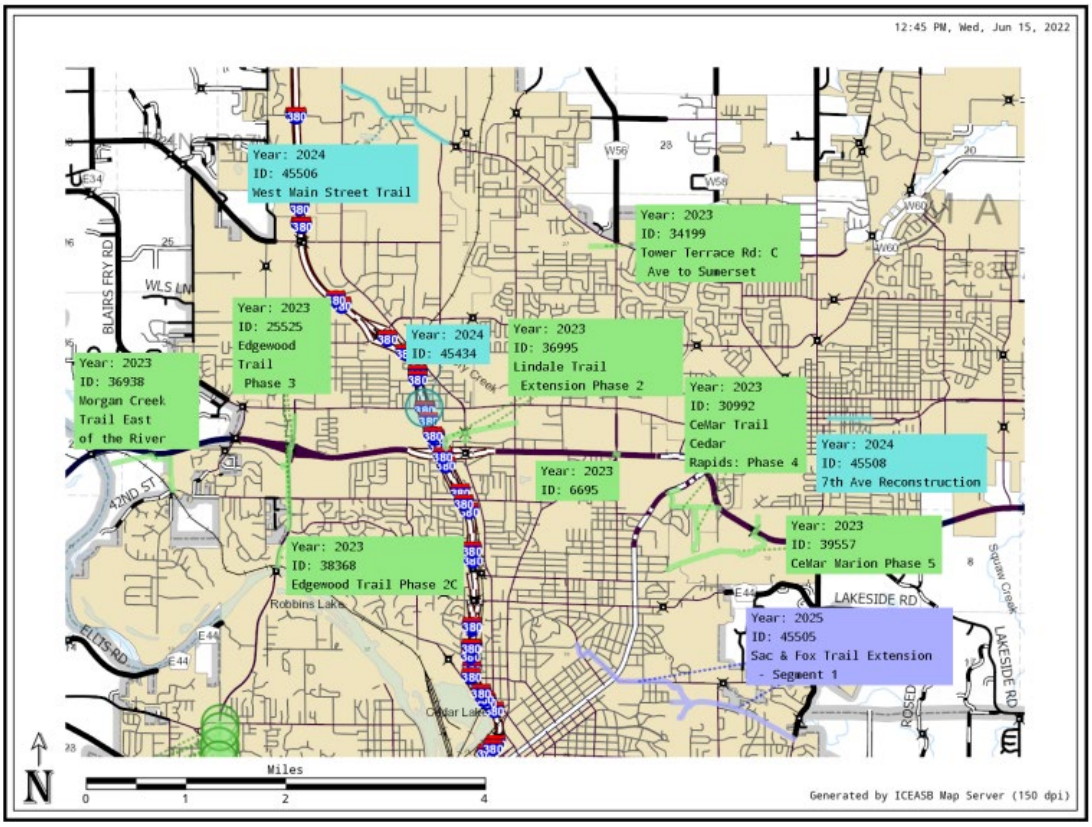
48681: Grade and Pave, Ped/Bike Grade & Pave, in Cedar Rapids paving from C Ave to E of Meadowknolls Road

34199: Ped/Bike Grade & Pave, in Cedar Rapids on the proposed Tower Terace Rd construct Tower Terrace from C Ave to Sumerset Ave

48680: Ped/Bike Grade & Pave in Cedar Rapids from C Ave to E of Meadowknolls Road

FFY 23 - FFY 26 Program of Projects Maps





How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

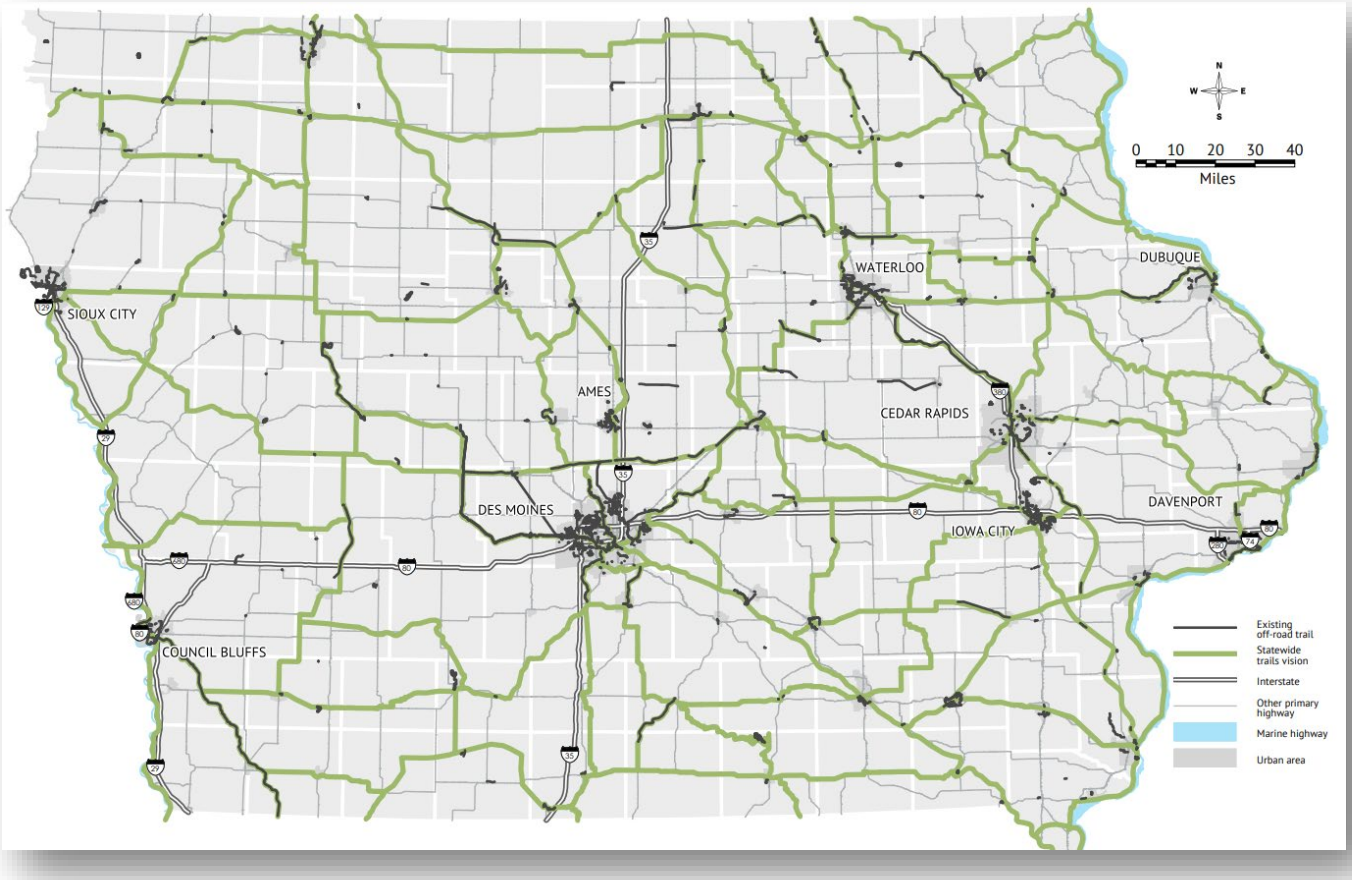
Since these planned projects have been allocated funding and passed through decision-making that commits to their likelihood of being constructed or let for construction, within the next five years, these projects should be included in the TBP, with the relative jurisdictions noted as partners.

Iowa Bicycle and Pedestrian Long Range Plan

This plan adopted by the Iowa Highway Commission in 2018 was intended to improve policies and practices for the ongoing development of the Iowa bicycle and pedestrian system and program, expand the intercity and intracity bicycle network by providing guidance for the completion of major connections, and facilitate implementation by including a funding toolbox, enhancing design guidelines, and making recommendations for program priorities.

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

Preparation of the Trails and Bikeways Plan is precisely following recommendations contained in the Iowa Plan for Cities and Counties relative to community wide planning and network planning. Proposed TBP goals should be consistent with Iowa Plan goals. Proposed regional connections should include those mapped on the Statewide Trails Vision in the Iowa Plan, but also the TBP should inform potential adjustment of the Statewide Trails Vision map since it is intended to be influenced by local and regional plans.



Public Right of Way Accessibility Guidelines

These 2011 guidelines published by the U.S. Access Board are the model code for accessibility for people with disabilities. The guidelines cover shared-use paths:

- Surfaces on shared use paths should be firm, smooth, and free of large gaps. Vertical trip hazards should not exceed 0.25 inches, although they may be up to 0.5 inches if they are beveled to a maximum 1:2 or 50 percent slope.
- Running slopes may not exceed 5% unless the adjacent roadway is more than 5%. Two additional exceptions include:
    - At overpasses or underpasses, but handrails and level landings must be located every 30 feet.
    - If the shared use path is not adjacent to a roadway, the running slope shall not exceed 5% unless physical constraints make compliance impractical.
- Cross slopes should not exceed 2%.
- Obstructions may not protrude into more than 4 inches into the pedestrian route unless a curb is built around the object.
- Curb ramps along shared use paths must be provided at roadways crossings, mid-block crossings, median islands, and railroad crossings. The maximum running slope for ramps is 8.33%.
- The tops and bottoms of curb ramps should have a level landing area and should be a minimum of 48” by 48” and may not exceed 2% slope in any direction.
- In locations where standing water accumulates at the bottom of ramps, drainage inlets should be placed directly upstream from the flow of water to correct the issue.

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

These guidelines may be included as part of trail facility design.

Iowa Statewide Urban Design and Specifications (SUDAS) Chapter 12

Iowa SUDAS is a statewide set of urban design standards and specifications used by numerous communities across Iowa. It provides consistency and uniform guidance so that neighboring communities typically will not have drastically different designs on similar projects. Chapter 12 addresses sidewalks and bicycle facilities. The Iowa DOT has a separate Design Manual, but through coordination efforts, the DOT Design Manual Chapter 12 is identical to SUDAS Chapter 12.

How the Recommendations Should Be Considered in the Cedar Rapids and Linn County Trails & Bikeways Plan

Chapter 12 is currently under review for updates, and many are somewhat significant. The Trails and Bikeways Plan should reference Iowa SUDAS Chapter 12 as the recognized design standard. Recommendations within the plan should be consistent with Chapter 12 guidance.