FINAL DRAFT PLAN - JANUARY 2020

2020

CENTRAL VISALIA TRAFFIC SAFETY ACTION PLAN

Designing Safe, Walkable Communities

RBS

Contents

The preparation of this document has been financed, in part, through the Office of Community Planning's Grant Program from the California Department of Transportation. Views and opinions expressed in this report do not necessarily represent the views or opinions of the California Department of Transportation (Caltrans) or the California State Transportation Agency.

Preface

The Central Visalia Traffic Safety Action Plan is a planning document that presents recommendations for a bicycle and pedestrian facility network in Downtown and East Downtown Visalia. The recommendations serve as guidelines to make the study area more walkable and bikeable, and should be considered a starting point towards implementation. Additionally, it should be noted that while opinions of probable costs were developed as part of this Plan, additional analysis is needed to determine the specific costs. The probable costs presented include general contingencies; however, itemized construction costs and right-of-way impacts should be included in any detailed estimates during the design and construction processes.

1. Introduction

Area Context

The City of Visalia is located in the agricultural center of the San Joaquin Valley in California. It lies between the cities of Bakersfield to the south and Fresno to the north, and is the largest city in Tulare County at over 138,000 people.[1] State Highway 99, which runs north-south, abuts Visalia to the west, and connects to State Highway 198, which runs east-west across the City.

Serving as the County seat of Tulare County, the City continues to grow while maintaining its unique historic character that has roots from the Gold Rush days. Over the years, population growth and developing land spurred transportation infrastructure improvements. Specifically, in the Downtown and surrounding areas, increasing interest in walking and biking prompted taking a closer look at current biking and walking facilities. For this reason, the Central Visalia Traffic Safety Action Plan ("the Plan") was commissioned.

The Action Plan serves as a roadmap for the development of safe bike and pedestrian facilities in Downtown and East Downtown. It is a planning and guidance document that provides the City, community, and stakeholders with the approach for identifying, prioritizing, and funding these multimodal improvements. However, additional analysis is needed to advance these improvements into design and construction.

Figure 1. Area Context

[1] California Department of Finance Population Estimate (2019)

Purpose of the Plan

Study Area

The Plan focuses on developing pedestrian and bicycle safety recommendations for areas in Visalia's Downtown and East Downtown. The Downtown portion is bounded by Murray Avenue to the north, Mineral King Avenue to the south, Giddings Street to the west, and Tipton Street to the east. The East Downtown area includes land east of Tipton Street, north of Mineral King Avenue, west of Ben Maddox Way, and south of Goshen Avenue, plus the southern half of the block bounded by Burke Street, Douglas Avenue, Ben Maddox Way, and Goshen Avenue (see Figure 2).

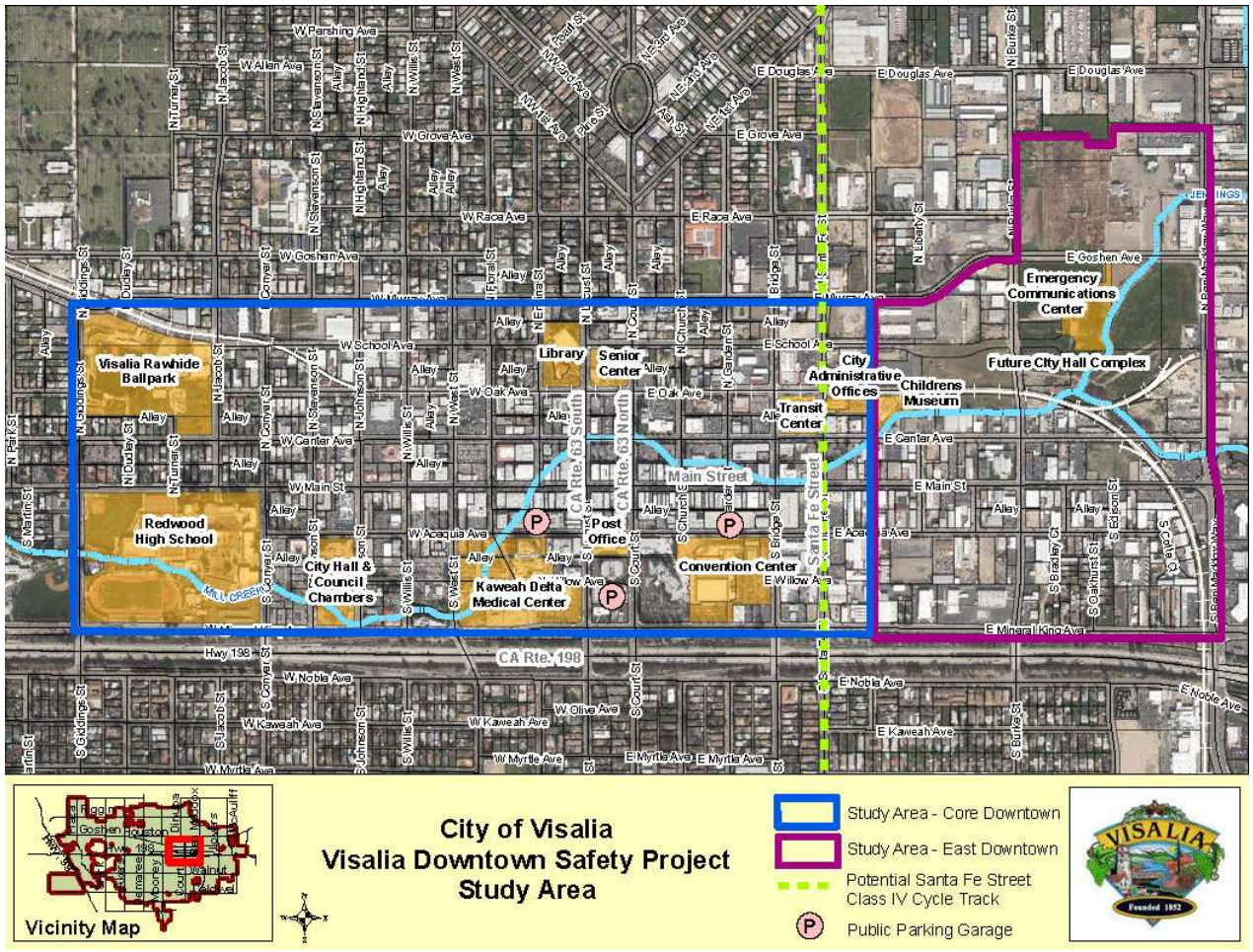


Figure 2. Central Visalia Traffic Safety Action Plan Study Area

Foundation of the Plan

The Central Visalia Traffic Safety Action Plan is a community-based effort that identifies current challenges and opportunities of walking and biking in Central Visalia. Additionally, primary goal of the Plan is to facilitate convenient access to transit facilities in Downtown. Ultimately, the City aims to create an environment in Downtown and its vicinity that encourages people to use modes of transportation other than the car. This is in line with federal, state, and local goals of enhancing multimodal mobility and accessibility for people by providing viable options.

The Plan will aid the City in meeting its vehicle miles traveled (VMT) reduction target that is identified in the Tulare County Association of Government's Sustainable Communities' Strategy/Regional Transportation Plan. The Plan also addresses the requirements of AB 1358, the California Complete Streets Act.

The Central Visalia Traffic Safety Action Plan builds upon previous efforts undertaken by the City to further advance multimodal transportation planning and implementation. This includes:

- The Active Transportation Plan, adopted in 2017.
- The 2030 General Plan, adopted in 2014.
- The Bikeway Plan, adopted in 2011.
- The Waterways and Trails Master Plan, adopted in 2010.

In addition, county, regional, and state plans and initiatives were consulted to ensure consistency and continuity. Detailed summaries of the plans and programs researched as part of the Central Visalia Traffic Safety Action Plan are provided in the Existing Conditions section of this report.

Contents and Organization of the Plan

In addition to the extensive community input, the Plan involved a thorough analysis of existing conditions data. The project team consulted and built upon previous relevant planning documents to maintain consistency. A design guidelines section is provided in the Plan to provide a toolbox of strategies and design elements that can be utilized by the City to build "Complete Streets" based on the recommendations of the Plan and future planning efforts.

The Plan culminates in an Action Plan that identifies a prioritized list of recommendations with specific pedestrian and bicycle facility improvements throughout the study area. The recommendations are context-sensitive, taking into account the surrounding character, built environment, and specific needs of each corridor. A prioritization approach was developed to provide an order of implementation schedule for the recommendations. The prioritization was based on implementation cost, facilitating access to key destinations such as parks and schools, roadway volumes and speeds, connections to existing bike and pedestrian facilities, as well as proximity to transit. A non-weighting scoring system was then applied to rank each of the recommended bike and pedestrian improvements. Furthermore, a breakdown of applicable federal, state, and local funding mechanisms is provided to help guide the programming and implementation process of the recommended improvements.

This report includes a detailed description of the steps undertaken to develop the Central Visalia Traffic Safety Action Plan. The report is divided into five main sections:

1. Introduction – a description of the context and purpose of the Plan.
2. Existing Conditions – a summary of current and forecasted demographics within the study area, as well as a description of existing transportation facilities within the Downtown and East Downtown areas.
3. Public Outreach – a synopsis of the community engagement and stakeholder involvement presentation efforts undertaken throughout the development process of the Plan.
4. Recommendations – planning-level cost estimates for bikeway and pedestrian recommendations, design guidelines, corridors, and cross-section recommendations.
5. Implementation –prioritization results, phasing plan, and funding mechanisms.

Elements Considered

The Central Visalia Traffic Safety Action Plan is dependent on a number of elements with the overall goal of providing a comprehensive evaluation and set of recommendations that would meet the community's needs and enhance the quality of life. The Plan incorporates active transportation and Complete Streets principles, and can be coordinated and applied to Safe Routes to School (SRTS) projects. The following describes how these elements relate to the Plan.

Active Transportation

The term active transportation refers to all forms and purposes of walking and biking within the built environment. Specifically, people who walk, regardless of their ability, are considered active transportation users, whether they are walking for recreational purposes, commuting, or running errands. Similarly, bicyclists, including adults and children, avid riders, and commuters, are considered active transportation users. Active Transportation also encompasses people using skateboards; assisted mobility devices; and emerging transportation modes, such as shared electric scooters and electric bicycles ("e-bikes").

This Plan adopts an intentional approach to promoting an active transportation environment in Downtown. The evaluations undertaken as part of the Plan involved understanding the challenges that people who walk and bike currently face, identifying the missing links to the present walkway and bikeway systems, and developing feasible solutions that achieve a connected active transportation system. All of this was done in collaboration with the community, who actively helped shape the end results of the Plan that when implemented, would promote active transportation within a safe and convenient environment.

Complete Streets

To adequately meet the needs of active transportation users, a Complete Streets system approach is required. The premise of Complete Streets is that all road users, regardless of their means of travel or ability, should be able to use the transportation safely and conveniently. In 2008, the California Legislature passed Assembly Bill 1358, which mandated local agencies to amend their Comprehensive Plans guidelines to foster multimodal mobility, in turn improving public health and reducing greenhouse gas emissions.

The City of Visalia embraced this approach by integrating multimodal mobility and accessibility into its 2030 General Plan, adopted in 2014. The Plan incorporates policies on establishing a Complete Streets system that enhances multimodal transportation into its Circulation; Land Use; Schools, Communities, and Utilities; Open Space and Conservation; and Housing elements. The Central Visalia Traffic Safety Action Plan furthers this commitment by identifying actionable recommendations for an enhanced walking and biking environment.

Safe Routes to School

Since the establishment of the Safe Routes to School (SRTS) program in 2005 by the SAFETEA-LU, local jurisdictions across the country have been gradually adopting the initiative to create safer walking and biking environments for children to get to school. The cornerstone of SRTS is based on developing robust walking and biking routes that benefit from both infrastructure improvements, as well as safety policies and programs.

SRTS embraces the 5 safety Es: Evaluation, Engineering, Education, Encouragement, and Enforcement. Each of these principles is critical in constructing an effective and sustainable SRTS program in the community. When applied in tandem, the 5 Es complement each other by encouraging and educating the community on safe walking and biking to school practices, seeking infrastructure improvements to provide accessible routes to school, utilizing police enforcement to fortify adherence to traffic laws, and continuously monitoring and evaluating safety solutions to gauge effectiveness and update or upgrade practices as needed.

The study area includes Redwood High School, as well as the Recreation Center, which includes a ballpark and community center at the corner of Giddings Street and Murray Avenue. While Highland Elementary is not within the study area, it is within the area of influence. It is encouraged that the recommendations in this Traffic Safety Action Plan be utilized to implement safe routes to the nearby schools and coordinate policy, program, and funding efforts.

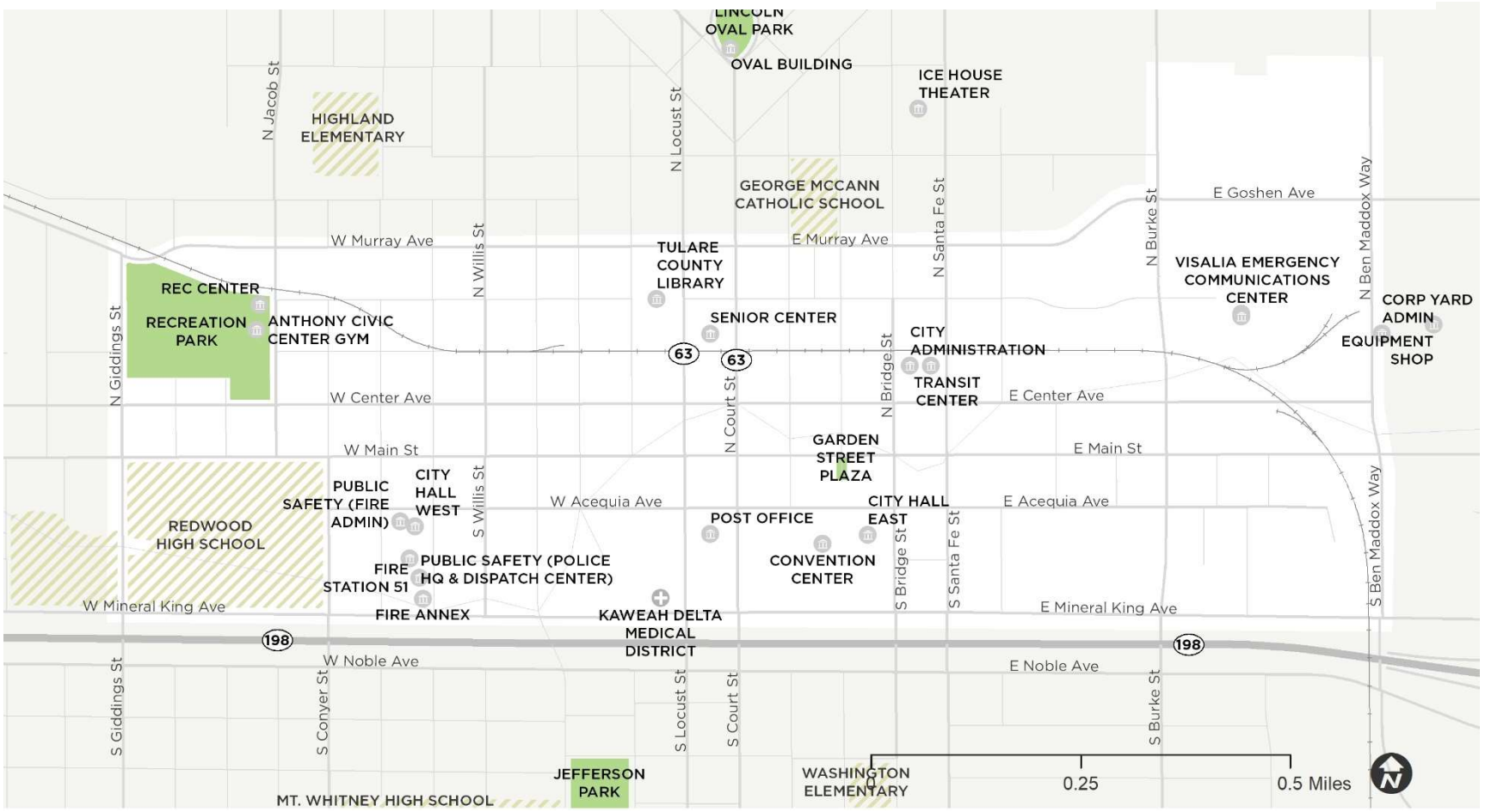
2. Existing Conditions

This section provides the context for the Central Visalia Traffic Safety Action Plan. It provides a background of the demographic, geographic, and socioeconomic conditions for the City, then describes the transportation network within the project area of Downtown and East Downtown. Included in this description are several figures depicting the current conditions in the project area, including notable facilities, roadway traffic control and lighting features, bicycle facilities, transit facilities, and recent collisions involving bicyclists and pedestrians. The chapter then reviews relevant plans and policy documents which help provide context for the Central Visalia Traffic Safety Action Plan.

Community Context

Most areas of the city are accessible within a 30- to 35-minute bike ride, and the predominantly flat terrain and favorable climate make walking and bicycling feasible for most of the year. The Downtown area of the city is composed of about one square mile of grid patterned development. This is in contrast to the low-density, residential cul-de-sacs that exist throughout most of the rest of the city. The Downtown and East Downtown areas combined make up the major economic center for the city. Figure 3 presents a map depicting the study area and key destinations.

Figure 3. Key destinations in the study area



Demographics

Figure 4 shows key demographics that contribute to travel characteristics.

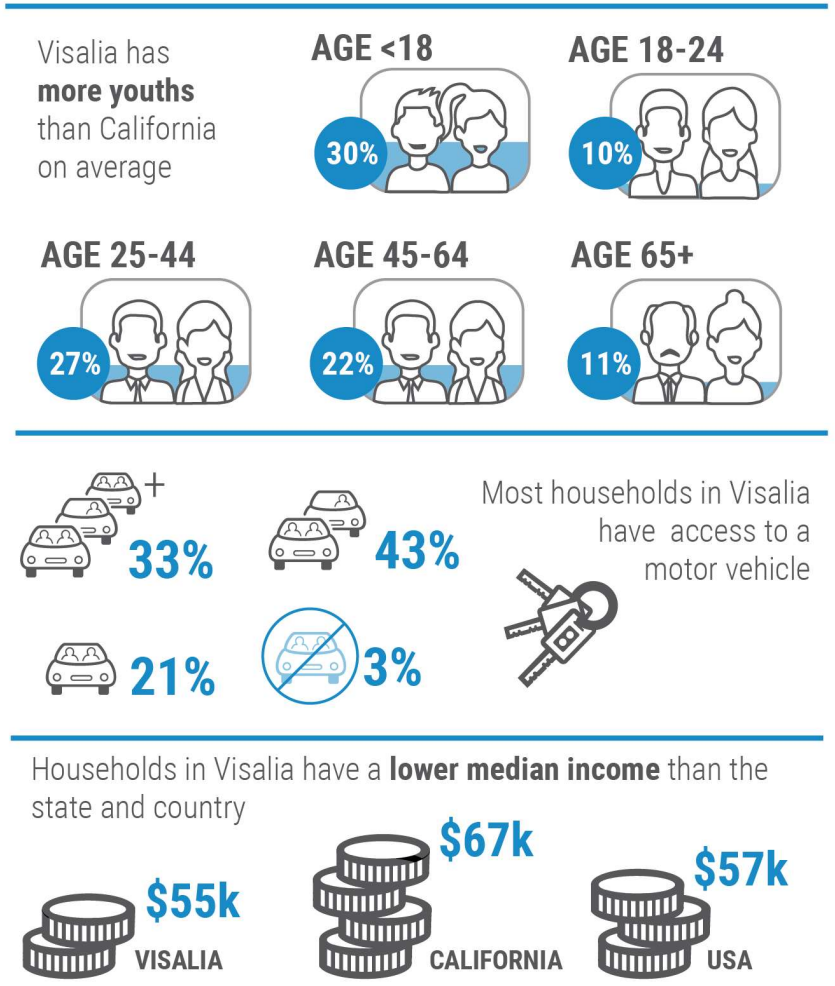
According to the 2017 American Community Survey five-year population estimates, the population of Visalia is over 138,000. This figure is expected to grow to over 171,000 by 2040.[2]

The population in Visalia is youthful: those under 18 making up about 30% of the population, compared to 24% for the State.

Most of the residents of Visalia have access to at least one vehicle. About 3% of the population does not have access to a car, while most of the population has access to at least two vehicles.

In Visalia the median income is lower than the rest of the state: $54,934 in Visalia, compared to $67,169 for California.

Figure 4. City of Visalia demographics



[2] Environmental Impact Report associated with the region's 2018 Regional Transportation Plan (Website: http://www.tularecog.org/rtp2018/

Transportation

Figure 5 depicts the breakdown of Visalia residents by how they get to work. Currently, 77% of residents drive alone to get to work according to the American Community Survey 5-year estimates. The City of Visalia Active Transportation Plan, adopted in 2017, identifies the percentage of existing commuting trips by mode of transportation throughout Visalia. This analysis found that most of Visalia residents commute to work alone or carpool, while less than 10 percent use other means of transportation. Current projected growth data predicts about a four percent annual increase in people using active transportation under business as usual. The implementation of this Central Visalia Traffic Safety Action Plan should contribute to an increase in this number.

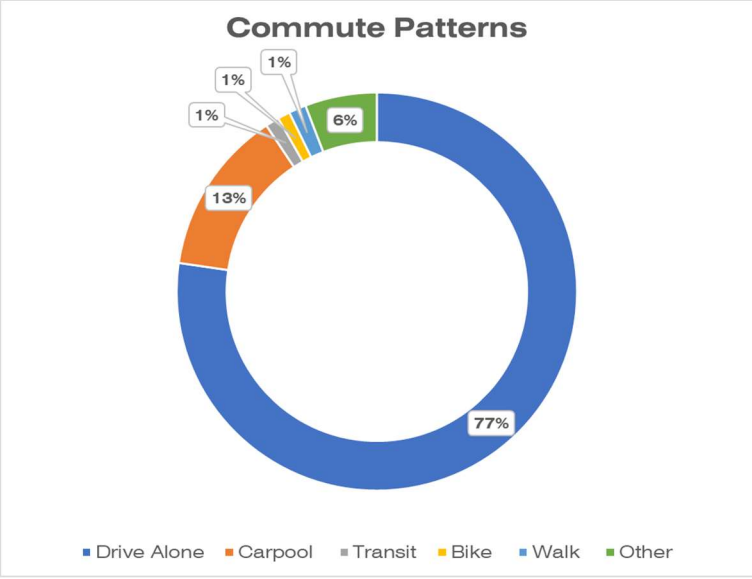


Figure 5. Commute modes in central Visalia

Figure 6. Transit Routes and Stops from Charrette Site Analysis

Transit

The Visalia Transit Center (VTC) at Oak Avenue between Bridge and Santa Fe Streets is the main transportation hub in the city. Figure 6 shows the site analysis from the charrette, including transit stops and routes. The VTC provides various facilities and amenities for pedestrians, such as curb ramps, sidewalks, seating, and lighting. Blocks surrounding the VTC do not consistently share these features. Each transit bus has a bicycle rack on the front. Public transportation throughout Visalia and the surrounding communities is provided by three transit systems; Visalia Transit, Tulare Area County Transit, and the Kings Area Rapid Transit System.

Visalia Transit

Visalia Transit services 13 fixed bus routes from 6:00 AM to 9:30 PM on weekdays and 8:00 AM to 6:30 PM on weekends. All 13 routes run within the project area.

Tulare County Area Transit (TCaT)

The TCaT System services three routes that provide transportation to and from Visalia to Dinuba, Woodlake, Tulare, and Porterville. Route 10 provides service north to Dinuba from the Visalia Transit Center.

Kings Area Rapid Transit (KART)

KART connects Hanford's downtown transit center and Amtrak station to the Visalia Transit Center. This route only operates on weekdays.

Bikeways

Visalia is located on a very shallow slope and, with the exception of summer months, the weather is relatively mild, making Visalia a good place for biking and walking. There is a total of 77.8 miles of bike lanes throughout the City. The three local transit providers also provide bike racks on buses for short local commutes, which may enhance mode shift and increase ridership in the area. The City of Visalia Active Transportation Plan notes that over $6

million was spent in the last five years constructing 25.03 miles of Class I Shared-Use Paths, Class II Bike Lanes, and Class III Bike Routes. Bicycle facilities within the project area exist and are planned along many of the primary roadways which carry motor vehicle traffic (Figure 7. Existing and Previously Proposed Bikeways, page 14).

Class I Shared-Use Paths (24.4 Miles)

Most of the Class I shared-use paths in Visalia are eight to 12 feet wide and are located along the city's irrigation canals and streams. Because Visalia has a few north-to-south irrigation canals, most of the Class I facilities run east-to-west. In Downtown, a Class I path connects Goshen Trail to the northwest side of downtown.

Class II Bike Lanes (42.6 Miles)

Class II bike lanes in Visalia are generally four to six feet wide and are located adjacent to a parking lane. In Downtown and East Downtown, the main Class II bike lanes are north-to-south, except for one along Acequia Avenue which traverses Downtown east-to-west.

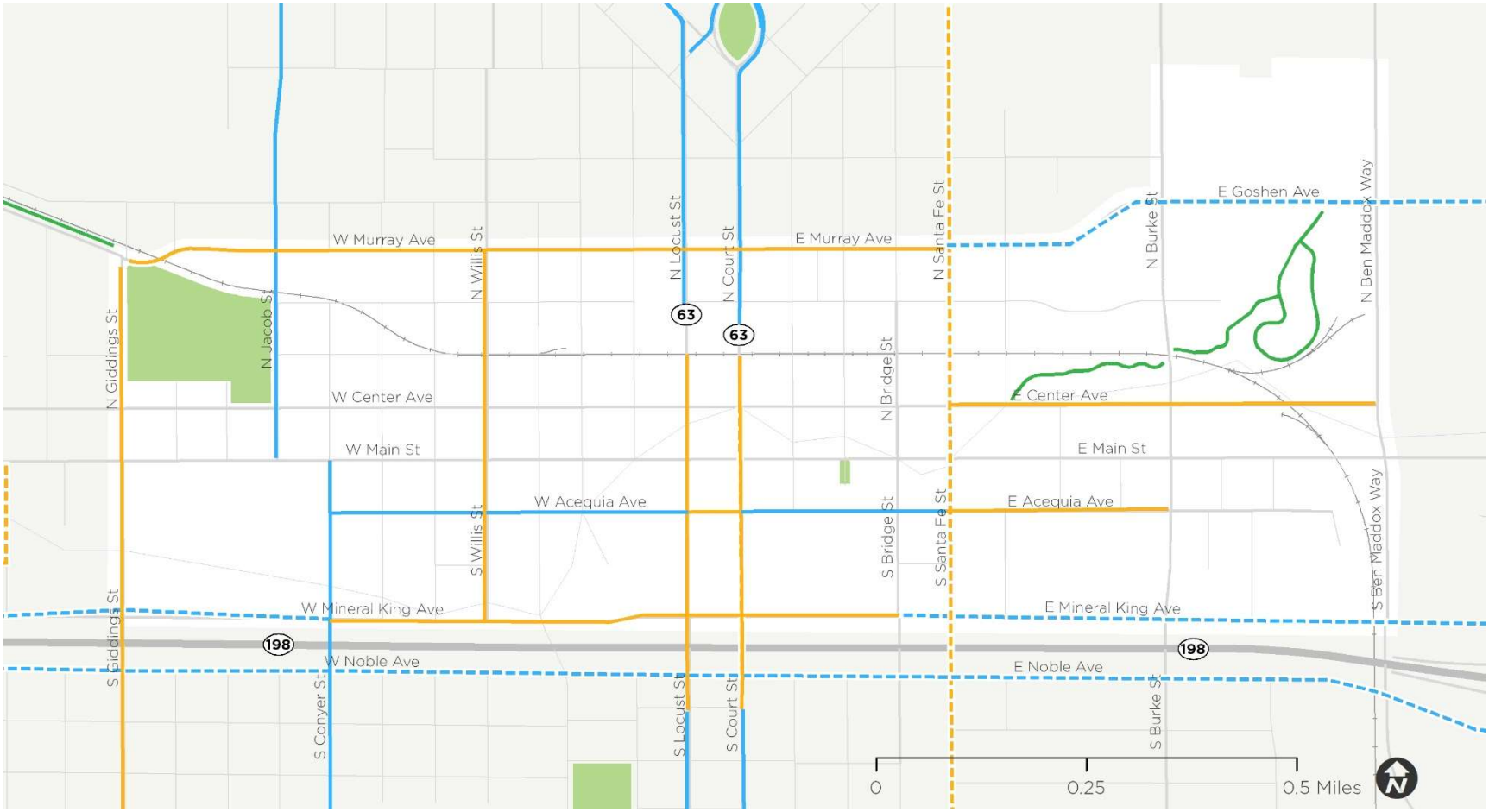
Class III Bike Routes (10.8 Miles)

Class III Bike Routes in Visalia are identified on roadways through signs and shared-lane street markings. Class III routes in the Downtown area are located along Giddings Street and West Murray Avenue, in the northwest side of Downtown. Two Class III routes run parallel on South Court and South Locust Streets, connecting Class II lanes on the north and south sides.

Class IV Separated Bikeways (0.0 Miles)

There are no existing Class IV On-Street Separated Bikeways in Visalia.

Figure 7. Existing and Previously Proposed Bikeways



Pedestrian Facilities

Pedestrian facilities primarily include sidewalks, curb ramps, and other pedestrian support facilities such as median islands, crosswalks, lighting, and seating.

Sidewalks

Sidewalks form the backbone of the pedestrian transportation network in the City. According to the Visalia Active Transportation Plan, the City requires that sidewalks are maintained on a five-foot-wide basis in residential areas, six feet wide in commercial/office areas with a three-and-a-half-foot planting strip, and nine and a half feet wide in Downtown. A minimum four-foot-wide clear path is required around all obstructions.

Curb Ramps

Curb ramps allow pedestrians, especially persons of limited mobility abilities, to access sidewalks, crosswalks, and median islands.

Crosswalks

Crosswalks are a legal extension of the sidewalk and provide guidance for pedestrians who are crossing roadways by defining and delineating their path of travel. Crosswalks are not required to be marked, however marked crosswalks alert drivers of a pedestrian crossing point and increase yielding to pedestrians.

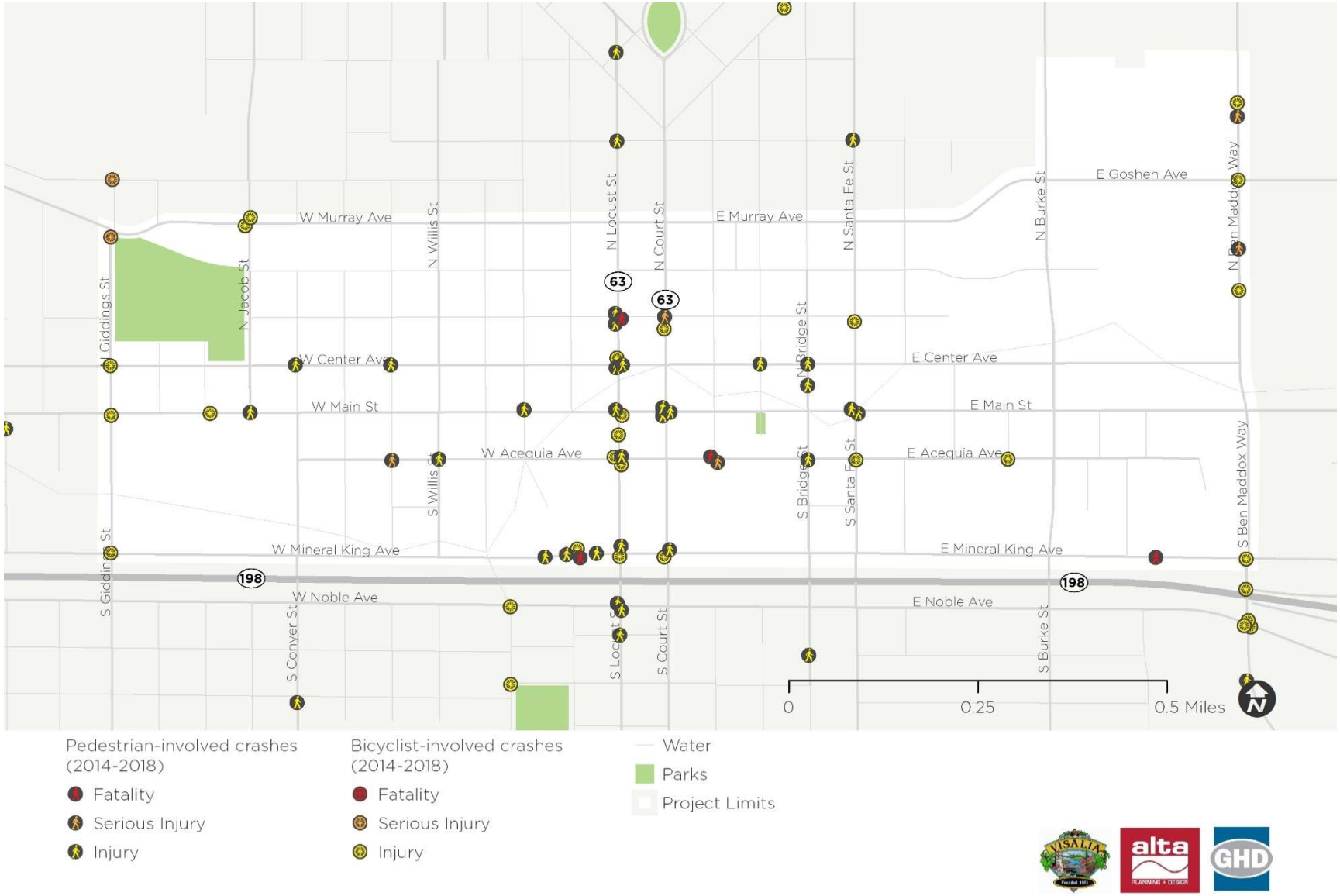
Collisions

This review includes both data analysis and field observations of the Downtown and East Downtown areas. During the spring of 2019, a desktop review of major facilities within the project area was conducted to evaluate the generated active transportation demand. This was followed by a field review to document traffic control devices, signage, and streets.

The traffic control inventory analysis showed that traffic signals were present along major corridors, with most local streets within the study area governed by 4-way stop signs. Street lighting is concentrated in the Downtown core near major civic facilities including City Hall, the Transit Center, and the Convention Center.

Traffic crashes within the study area were also analyzed. Figure 8. Crashes Involving People Walking and Biking, page 16, shows the crash locations by type along the corridors within the study area. Between the five-year period of 2014 to 2018, there were 23 crashes involving bicyclists and 33 crashes involving pedestrians, for a total of 56 active transportation collisions. A critical goal of this Plan is to devise recommendations and improvements that are aimed at preventing additional pedestrian and bicycle crashes. High crash locations will be evaluated for targeted improvements, and policy recommendations will be crafted to help improve the built environment for pedestrians and bicyclists.

Figure 8. Crashes Involving People Walking and Biking (2014-2018)



Plan Review

A review of local, regional, and statewide plans that are relevant to the Central Visalia Traffic Safety Action Plan was conducted during the evaluation of existing conditions phase. The plans reviewed offered a snapshot of chronological and developing policies that support multimodal transportation needs in the City, and have led to facilitating the planning and implementation of pedestrian and bicycle infrastructure improvements.

Local Plans

City of Visalia Active Transportation Plan (2017)

The City of Visalia Active Transportation Plan provides a framework for increasing active transportation in the City of Visalia for work, daily activities, and recreation. The Plan is an update of the previously adopted Bikeway Plan and the Waterways and trails Master Plan to provide a comprehensive plan that addresses the City's active transportation needs.

The Active Transportation Plan's key goal is to support non-motorized transportation modes, specifically bicycling and walking, to conduct daily activities such as commuting to work, shopping, and recreational trips. The Plan's vision is to *"strive to be a city where active transportation, specifically bicycling and walking, is fully integrated into daily life, providing healthy and environmentally-friendly transportation alternatives that are both safe and convenient for people of all ages and abilities."*

2030 City of Visalia General Plan (2014)

The 2030 City of Visalia General Plan (VGP) presents a vision for the future development of the city into the year 2030. It guides the decision-making process relating to land uses, such as housing, transportation, shopping and industry. The VGP focuses on strengthening existing activity centers and expanding on the city's industrial capacity, retail base, and new residential neighborhoods. Additionally, several elements outlined in the VGP help guide the future development of bicycle and pedestrian facilities.

Circulation Element

The circulation element includes policy that is relevant in providing an integrated transportation system for the safe and efficient movement of goods and people. This includes: Ensuring everyone pays the fair share of development related transportation facilities, implementation of "complete streets", maintaining Level of Service (LOS) standards, and developing bikeways that are consistent with the 2011 Bikeway Plan.

Land Use Element

This section of the VGP describes the future land uses in the City. It identifies the need for alternative modes of transportation in order to improve air quality in the region and enhance the connectivity of pedestrian and bicycle routes. It also promotes pedestrian-oriented development that cultivates strong economic and pedestrian connections in downtown and adjacent neighborhoods

Schools, Community Facilities and Utilities Element

The policies and objectives in this section focus on the development and maintenance of parks, schools, and other community facilities. The plan recognizes the importance of enhancing linkages between schools and parks as envisioned in the Circulation Element.

Open Space and Conservation Element

This element emphasizes providing the community with access to recreational facilities, such as parks, rivers, trails, and scenic highways. This includes bicycle and pedestrian trails and paths, and public parks, particularly along the Saint Johns River.

Housing Element

The Housing Element of the VGP describes how the City will incorporate linkages between affordable housing and alternative modes of transportation, including transit, biking, and walking facilities.

City of Visalia Bikeway Plan (2011)

The City of Visalia's Bikeway Plan set a vision for a comprehensive bikeway network throughout the City; to provide recommended improvements for recreation, commuting, and other daily trip purposes. The Plan includes recommendations for bikeways, support facilities, and programs to raise awareness of safe bicycling and driving near bicycles. The recommendations in the Bikeway Plan were updated with the development of the Active Transportation Plan in 2017.

Waterways and Trails Master Plan (2010)

The Waterways and Trails Master Plan (WTMP) envisions a system of trails along the Visalia waterways. It enhances the connections between neighborhoods, recreational opportunities for walking, bicycling, and skating. The WTMP also helps enhance the landscape through habitat restoration, promotion of native plants, and development of urban open space throughout the creek. The Plan emphasizes that the trail system should be accessible to all, support mixed transportation needs, and increase safety and security along the trail. The recommendations for pedestrian and trail facilities were updated and incorporated into the Active Transportation Plan in 2017.

Regional Plans

Tulare County Association of Governments (TCAG) Active Transportation Plan for The Tulare County Region (2016)

The Tulare County Active Transportation Plan includes 70 projects within the County that focus on enhancing pedestrian and bicycle facilities. This includes improving existing sidewalks, filling sidewalk gaps, constructing new sidewalks, and implementing on-street bikeways, off-street trails, crossings, as well as supporting Safe Routes to School projects.

Statewide Plans

Toward an Active California: Statewide Bicycle and Pedestrian Plan (2017)

This plan is the first bicycle and pedestrian plan developed for the state. It aims to align Caltrans' policies that support biking and walking, and guide the development of local plans such as Safe Routes to School and Active Transportation Plans. The vision of Toward Active California states that people in California of all ages, abilities, and incomes should safely, conveniently, and comfortably walk and bike for their transportation needs by the year 2040. The plan includes strategies and actions intended to influence change at the state level while informing development of local plans. These are organized into four key objectives: safety, mobility, preservation, and social equity

California Transportation Plan 2040 (CTP) (2016)

The CTP is a long-range policy document that supports Caltrans' efforts in effectively meeting the state's mobility needs, while working to reduce greenhouse gas emissions. The vision of the CTP is to assure that:

> *"California's transportation system is safe, sustainable, and globally competitive. It provides reliable and efficient mobility and accessibility for people, goods and services while meeting greenhouse gas emission reduction goals and preserving community character. This integrated, connected, and resilient multimodal system supports a prosperous economy, human and environmental health, and social equity."*

Caltrans Strategic Management Plan

The Strategic Management Plan provides direction for Caltrans as an organization. The most recent 2015-2020 plan set a goal to double walking and triple biking in California by 2020, reduce bicycle and pedestrian fatalities by 10 percent per year, and increase the number of Complete Streets projects by 20 percent.

California Complete Streets Deputy Directive 64

This policy is the foundation of active transportation policy in California, requiring Complete Streets principles to be integrated in all agency activities since 2008. Caltrans guides Complete Streets' initiatives through its *Complete Streets Implementation Action Plan,* released in 2010, and the updated *Complete Streets Implementation Action Plan 2.0,* released in 2014.

Smart Mobility 2010: A Call to Action for the New Decade

Caltrans' Smart Mobility framework provides tools and resources to help state and local agencies create a more sustainable transportation system, with policies centered on public health and safety. The Smart Mobility framework incorporates the California Transportation Plan and Regional Blueprint planning efforts, calling on the state Department of Transportation to design and implement complete streets that support walking, bicycling, and transit as everyday transportation choices.

Main Street California: A Guide for Improving Community and Transportation Vitality (2013)

This document focuses on the design of state highways in California that also serve as main streets or local commercial streets in communities. The guide consolidates information from existing Caltrans manuals and policies, as well as national resources, to help communities improve multimodal access, livability, and sustainability while meeting appropriate engineering standards. The guide helps readers find information about standards and procedures described in the Caltrans Highway Design Manual (HDM), the California Manual of Uniform Traffic Control Devices (CAMUTCD), and the Project Development Procedures Manual.

Complete Intersections: A Guide to Reconstructing Intersections and Interchanges for Bicyclists and Pedestrians

This guide provides direction on implementing an important component of Caltrans' Complete Streets policy by identifying *"actions that will improve safety and mobility for bicyclists and pedestrians at intersections and interchanges."* The guide is intended primarily for Caltrans planners, engineers, and other highway designers working as generalists or specialists in advising, engineering, or designing for safe travel for all highway users at intersections and interchange.

3. Public Outreach

Residents and stakeholders of the downtown, east downtown and surrounding neighborhoods shared input that facilitated analysis of existing conditions and development of recommendations to ensure that streets are complete and accessible for all users. This project included a robust public engagement process that offered multiple opportunities for residents to participate and provide feedback into the development of the Traffic Safety Action Plan.

Project Milestones	
Advisory Group Meeting #1	April 2019
Community Design Events	May 20-23, 2019
Advisory Group Meeting #2	July 2019
Advisory Group Meeting #3	September 2019
Draft Plan Workshop	November 2019
Final Presentation	Early 2020

Advisory Group Meetings

An Advisory Group was formed to help guide the project team with outreach and plan development. The Advisory Group had two group meetings with the project team to share information, brainstorm ideas, and give feedback throughout the project. The Advisory Group was made up of representatives from the following organizations:

- City of Visalia, Transit
- City of Visalia, Planning
- City of Visalia, Engineering
- Downtown Visalians
- City of Visalia Police Department
- Local Government Commission
- ProYouth
- Visalia Unified School District

The first Advisory Group Meeting was held on April 4, 2019. The consultant team presented information about the project, existing conditions analysis, planned public engagement activities, and next steps.

The Advisory Group met for the second time on July 11, 2019, to review the design charrette, refine the outline, and evaluate recommendations for the Traffic Safety Action Plan. The advisory group convened for a third meeting on September 25, 2019, to review and provide feedback on a first draft of the Traffic Safety Action Plan and to prepare for the upcoming public workshop.

Community Design Events

A series of community design events were held May 20-23, 2019. The charrette engaged residents and stakeholders in an intensive and highly participatory public process to assess and document conditions for all travel modes (walking, bicycling, transit, and driving) and users (youth, seniors, people with disabilities, residents, diverse groups, freight, visitors, and businesses), identify shared values and concerns, and identify and prioritize enhancements.

Opening Workshop

The Opening Workshop was held on May 21 from 5:30 PM – 7:30 PM at 210 Café. The agenda for this workshop included exercises designed to reveal people's visions for Central Visalia, a presentation about the project and highlighting examples from other communities on various street design tools for improving safety, a transportation design issues exercise, and an economic issues exercise. The transportation design and economic issues exercise offered an opportunity for participants to work together in small groups to identify critical issues to address, and to provide their own street design solutions.

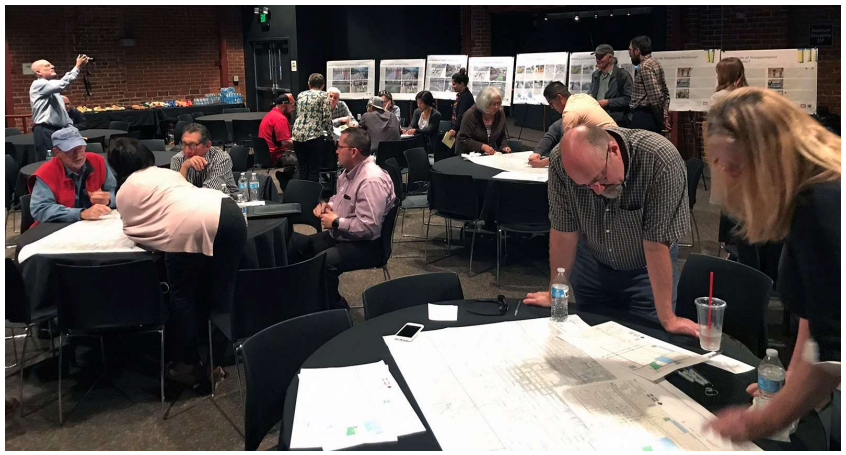


Figure 9. Participants at the May 21 opening workshop.

Key issues discussed during the Opening Workshop:

- Future vision for downtown includes more residential development, Class IV separated bikeways and support infrastructure, enhanced streetscapes, and accessibility for all.
- Need for pedestrian lighting, seating, curb extensions, and shade structures/trees.
- Sidewalks are in disrepair and require repair and accessibility features.
- The on-ramp to Highway 198 at Willis and Mineral King is a difficult place for pedestrians to cross, partially due to heavy vehicle traffic. Currently it is difficult to cross east-west across Willis Street at the north side of the intersection, due to the high volumes along Mineral King Avenue. Drivers attempting to turn onto Mineral King Avenue or cross over to the on-ramp are looking for gaps in traffic rather than pedestrians crossing.
- Bike infrastructure should be designed to support all ages and abilities, and parking should be easily accessible from bikeways.
- Vehicle speeds are a concern on Court Street and Locust Street.
- Need intuitive, accessible parking options.
- East Downtown and Downtown should be one cohesive district.
- Need to address the homeless population.

Focus Meetings

Over the course of the community design events, the project team held focus group meetings with special interest groups:

Emergency response and safety

The Emergency Response Focus Group reported on programs that the Visalia Police Department operates, their concerns about safety, and their vision for future changes.

Key issues discussed during the Emergency Response and Safety Focus Group meeting:

- The Police Department reports that they have significant grant funding that supports walking and biking traffic enforcement. This includes enforcement for drivers, bicyclists, and pedestrians. They also have ten officers who do daily targeted enforcement at schools.
- Kaweah Delta Medical Center has a lot of pedestrians crossing uncontrolled to access the buildings throughout the campus.
- There is speeding on Mineral King Avenue, Locust Street, and Murray Avenue.
- Significant crash history on Oak Avenue & Center Avenue, including some fatalities.
- The Police Department receives many requests to shut down Encina Street to vehicular traffic for events, so it would make a good pedestrian street.
- The fleet of firetrucks and EMS vehicles is made up of large vehicles, which can make it difficult to navigate some narrow streets and other road features. They would like to get some smaller vehicles for the downtown station.

Figure 10. Members of the Police and Fire Departments talking with the project team.

Transportation and Planning

The Transportation and Planning Focus Group reported on programs that the Visalia Police Department operates, their concerns about safety, and their vision for future changes.

Key issues discussed during the Transportation and Planning Focus Group meeting:

- There are issues with pedestrians crossing at an uncontrolled location near Kaweah Delta Medical Center and City Hall.
- There are concerns over speeding and heavy vehicle traffic on Court Street
- The walking environment is lacking. The curb extensions on Main Street are poorly designed and pedestrians must use push button to activate traffic signal. Many sidewalks are in disrepair.
- Diagonal parking downtown makes bicycling uncomfortable. Acequia Avenue could be a nice bicycle corridor with enhancements. There is some interest in back-in diagonal parking, and Kaweah Delta could serve as a pilot location.
- There is new residential development envisioned for East Downtown.
- Potential funding sources for walking and biking infrastructure include Caltrans and the Tulare County Association of Governments, which have both recently funded similar projects nearby.

Pop-up Event

The project team did a pop-up event at the Senior Center on May 20. They engaged with residents about their issues getting to and from the Senior Center as well as other Downtown locations.

Figure 11. The project team engaged lunch-goers at the Senior Center.

Walking Tour

Team members participated in a walk audit in Downtown Visalia on May 21 from 4:00 PM – 5:00 PM. During this walk audit, participants walked around downtown with the team, identifying deficiencies in the existing network and discussing opportunities for improvement.

Figure 12. Residents on a walk audit with the project team.

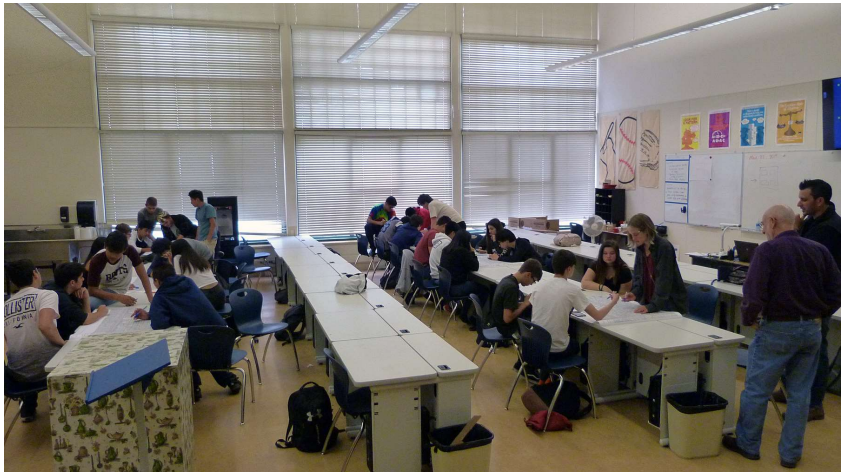


Figure 13. High school students participate in a mini-workshop.

High School Mini-Workshop

The project team also conducted a mini-workshop with Redwood High School students to allow younger residents of Visalia to weigh in on the plan and help identify the issues they face in getting to and from Redwood High School, and other locations in Downtown Visalia.

Key issues discussed during the High School Mini-Workshop:

- Need high visibility crosswalk on Main Street
- Reduce speeds and traffic
- Southeast corner of campus needs improvements at the intersection
- Curb extensions should be considered all around the high school

Closing Workshop

The Closing Workshop was held May 23 from 6:00 PM – 7:30 PM. During this workshop, the project team shared a summary of the feedback collected during the week, the proposed vision for the downtown area, and proposed infrastructure, policies and programs. Community members shared their thoughts on the recommendations through conversation with team members.

Key issues discussed during the Closing Workshop:

- Need guidance on intersections with one-way streets and two-way bikeways (Class IV on a one-way) and how to design the transitions between one-way bikeways and two-way bikeways
- Attendees would like the project team to consider creating graphic illustrations to reflect existing curb extensions in Visalia (full sidewalk corner brought down to street level)
- Concerns about back-in angled parking on a higher volume/speed street. Think it could work well on a side street, but not on Main Street.
- Need for pedestrian-scaled lighting and maintenance of trees to avoid blocking light.
- There is a lighting and water project being implemented with LED lights in January 2020.
- Congestion challenges exist when pedestrian flow is near constant in the crosswalk. May benefit from a pedestrian hybrid beacon (PHB) or other treatment to manage pedestrian flow and create gaps for car flow.
- There is a perceived lack of parking that could be addressed through wayfinding.
- Support for a raised crosswalk, especially for midblock
- Dislike the “Yield-to-Pedestrian-in-Crosswalk” paddle signs on centerline at crosswalks
- Need to address sidewalk overhang with back-in angled parking (for example, long trucks plus trailer hitch)
- Add secure bike parking in existing garages underneath stairwells and other covered areas
- Interest in a protected bikeway on the south side of Mineral King Avenue or on Noble Avenue
- Improve coordination and timing of signals
- Curb extensions to help reduce speeds on Locust and Court Streets

Summary of Needs

Continuity of identity between Downtown and East Downtown

East Downtown is a transitioning area. The vision for East Downtown includes expanded residential development, which could bring more foot traffic to downtown. Enhanced connections between Downtown and East Downtown will help catalyze positive change for East Downtown.

Accessible and inviting pedestrian network

Downtown should be a place where it is easy to choose walking. There is currently good tree canopy, but lack of enough shade to provide a safe and comfortable walking environment. The current environment of the higher speed one-way streets is not conducive to the walking environment that the community desires. Intersection enhancements such as signal adjustments, curb extensions, and ADA-upgrades will help create a more accessible and inviting pedestrian network.

Improved bicycle network

The Downtown bicycle network has gaps, and some of the facilities that exist are substandard. The future network should strive to be more complete, and composed of more robust infrastructure. Accessible, intuitive, and secure bicycle parking will also help encourage bicycle trips to downtown.

Reduce collisions involving bicyclists and pedestrians

Recent crashes reinforce safety as a key concern. The area around the transit center is perceived as a particularly unsafe area. Safety improvements like enhanced crossings should be considered wherever possible. This also needs to be balanced with mitigating congested areas in downtown so as not to exasperate existing issues.

Charrette Outcomes

The public charrette held as part of the development of the Central Visalia Traffic Safety Action Plan involved multiple visioning and representation sessions. They aimed to capture community needs and opportunities, process and build upon the current built environment, and produce context-sensitive solutions for each critical segment within the study area. The charrette engaged the community and stakeholders in a meaningful and intentional approach that helped shape the area's vision and develop implementable hardscape and policy recommendations.

The key characteristics that together helped create the vision and recommendations for the Central Visalia Traffic Safety Action Plan are:

1. Identifying the area's core centers and surrounding neighborhoods.
2. Developing a street hierarchy that considers built environment elements such as land uses and density. This also involved identifying properties that are prime for redevelopment, such as vacant land and surface parking lots.
3. Honing in on creating a connected bike facility network that truly promotes biking as a viable transportation mode through Downtown.
4. Distinguishing the various character areas within Downtown that impact the design of the transportation system.
5. Identifying the different street elements that help complete the overall character of the built environment, which includes urban design features such as building types, architectural styles, and open spaces.

Section 4 of this report describes the recommendations that resulted from this charrette effort. Appendix A includes a summary charrette report that describes the step by step process undertaken.

4. Recommendations

The intensive public input and stakeholder involvement efforts led to developing a targeted set of recommendations throughout the Downtown and East Downtown areas. The recommendations were both comprehensive and context-sensitive; encompassing corridor-specific improvements aimed at enhancing pedestrian and bicycle safety. This section describes the design, contextual, and policy recommendations developed for this Action Plan.

Corridor Recommendations

Through the analysis, design, and community input process, key corridors within the study area were identified for specific bicycle and pedestrian improvements. The bicycle improvements included placing bike lanes on segments that either do not have current bike facilities, or currently have a shared bicycle facility that does not meet the needs of the community for safe bike travel. Pedestrian facilities focused on completing the sidewalk network within the study area by filling in current gaps. The sidewalk completeness effort also aimed at providing sidewalks along both sides of the street, particularly along key corridors anticipated to have higher pedestrian activity.

While the costs include some contingencies to account for general design and construction cost incurrence, they do not represent all implementation costs such as easement or potential right-of-way costs, ADA-compliant ramps, and other detailed, itemized construction costs. It is recommended that this opinion of probable costs be expanded upon for the purposes of final design and construction.

Recommended Bike Facilities

The bike facility recommendations included improving bike facilities along both north-south and east-west corridors within the study area. As shown in Figure 14, the proposed bike lanes are recommended across Downtown, and extend beyond project limits, to create a continuously safe and convenient bike network that would facilitate all purposes of bike travel in and out of Downtown.

In some cases, trade-offs were evaluated to accommodate a connected bike network. For instance, adding bike lanes on Murray Avenue between Giddings Street and Santa Fe Avenue instead of the existing shared lanes requires removing on-street parking on one side of the street. In other cases, travel lane widths are reduced to fit in a Class II bike system. The analysis also examined existing design obstacles such as pedestrian bulb outs at intersections that were obstructing the bike lane. These trade-offs were made with the overall multimodal functionality of the street in mind, where if you can accommodate a safe and convenient bike facility by repurposing the current space, while still meeting design standards for all components, then you are creating a more balanced transportation system. This trade-offs evaluation process was conducted with City staff, the community, and stakeholders. Further evaluation is needed as these projects advance to fiscal year programming to determine overall mobility, accessibility, and parking conditions, as well as policy changes needed.

A full list of the proposed bike facilities along each of the recommended corridors is shown in Table 1. The list includes the planning-level cost estimates that were developed for the proposed bike facilities.

Table 1. Proposed Bikeway Segments

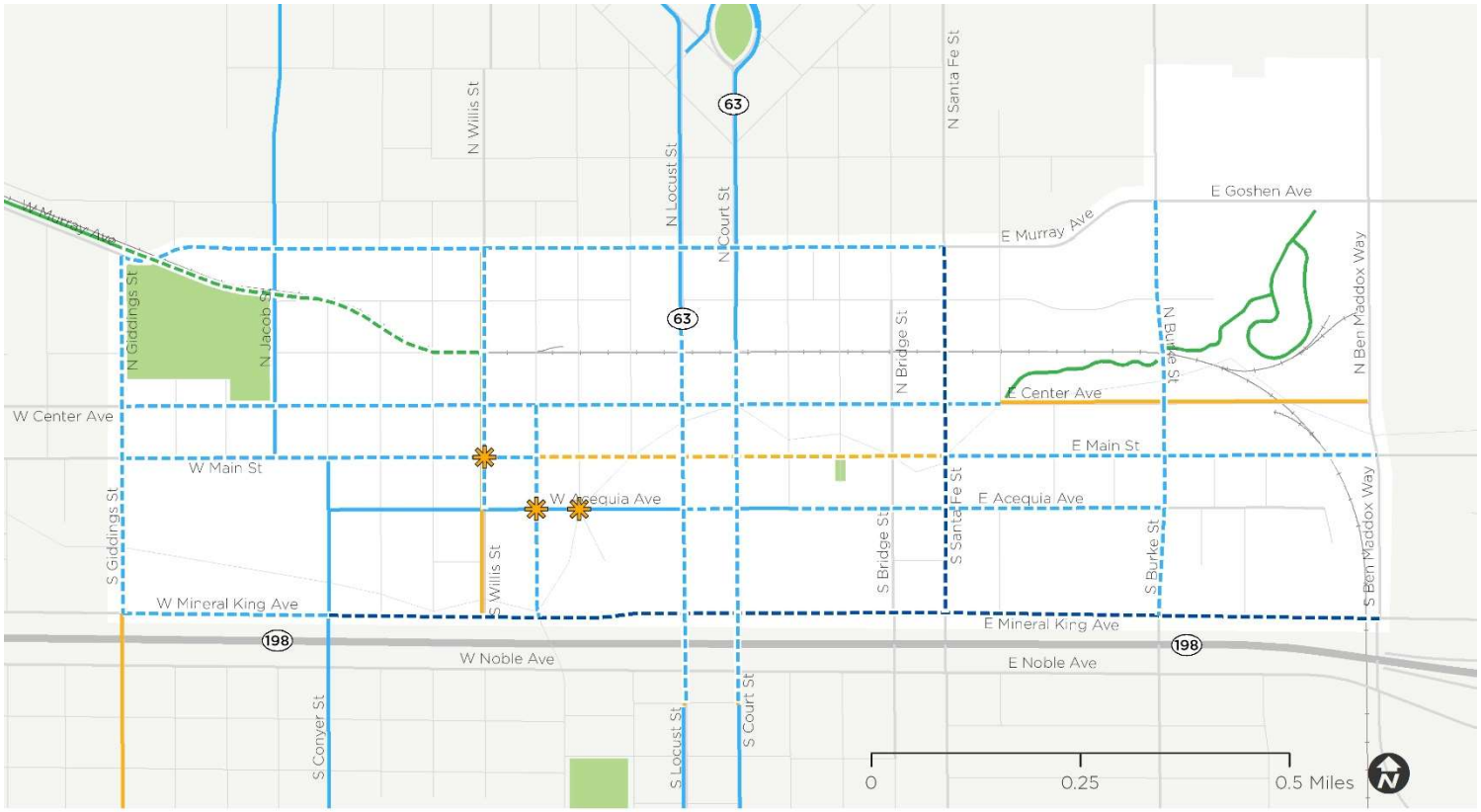
BIKE PROJECT ID	LOCATION	FROM	TO	EXISTING	PROPOSED	LENGTH (MI)	COST ESTIMATE
1	Murray Ave	Giddings St	Santa Fe Ave	Class III	Class II bike lanes with 1-3 ft buffer where feasible	1.0	$153,000
2	Center Ave	Giddings St	Tipton St	None	Class II bike lanes – 7 ft	1.1	$168,000
3	Main St	Giddings St	Conyer St	None	Class II bike lanes – 7.5 ft	0.3	$46,000
4	Main St	Conyer St	Stevenson St	None	Class II bike lanes – 7.5 ft	0.1	$15,000
5	Main St	Stevenson St	Johnson St	None	Class II bike lanes – 7 ft with 1 ft buffer	0.1	$15,000
6	Main St	Johnson St	Willis St	None	Class II bike lanes – 7 ft	0.1	$15,000
7	Main St	Willis St	West St	None	Class II bike lanes	0.1	$15,000
8	Main St	West St	Santa Fe St	None	Class III with sharrows in right lane	0.5	$19,000
9	Main St	Santa Fe St	Ben Maddox Way	None	Class II bike lanes	0.6	$92,000
10	Acequia Ave	Locust St	Court St	Class III	Class II bike lanes – 6 to 7 ft	0.2	$31,000
11	Acequia Ave	Church St	Bridge St	Class II	Class II bike lanes – upgrade	0.2	$31,000
12	Acequia Ave	Bridge St	Santa Fe St	Class II	Class II bike lanes – upgrade	0.2	$31,000
13	Acequia Ave	Santa Fe St	Burke St	None	Class II bike lanes – 6 ft	0.3	$46,000
14	Mineral King Ave	Giddings St	Conyer St	None	Class II bike lane – 7 ft with 3 ft buffer on each side	0.3	$46,000
15	Mineral King Ave	Conyer St	Ben Maddox Way	None	Class IV separated bikeway – 6 ft bikeway with 3 ft buffer to include vertical barrier element	1.3	$2,677,000
16	Giddings St	Murray Ave	Mineral King Ave	Class III	Class II bike lanes – 5 ft	0.5	$77,000
16A	Shared-Use Path along Railroad Tracks	Giddings St	Willis St	None	Class I shared-use path – 10 ft preferred; 8 ft minimum	0.4	$1,272,860
17	Willis St	Murray Ave	Acequia Ave	None	Class II bike lanes – 5 ft	0.4	$61,000
18	West St	Center Ave	Mineral King Ave	None	Class II bike lanes – 5 ft	0.3	$46,000
19	Locust St	Oak St	Olive Ave	Class III	Class II bike lane – 5 ft with 2 ft buffer, on east side**	0.5	$77,000
20	Court St	Oak St	Olive Ave	Class III	Class II bike lane – 5 ft with 2 ft buffer, on west side**	0.5	$77,000
21	Santa Fe St	Murray Ave	Center Ave	None	Class IV separated bikeway	0.3	$514,875
22	Santa Fe St	Center Ave	Acequia Ave	None	Class IV separated bikeway	0.2	$411,900
23	Santa Fe St	Acequia Ave	Mineral King Ave	None	Class IV separated bikeway	0.2	$411,900
24	Burke Ave	Goshen Ave	Center Ave	None	Class II bike lanes – 7 ft	0.3	$46,000
25	Burke Ave	Center Ave	Acequia Ave	None	Class II bike lanes – 7 ft	0.2	$31,000
26	Burke Ave	Acequia Ave	Mineral King Ave	None	Class II bike lanes – 7 ft	0.6	$92,000

Table 2. Proposed Bikeway Intersection Improvements

BIKE PROJECT ID	STREET	INTERSECTION	EXISTING	PROPOSED	LENGTH (MI)	COST ESTIMATE
27	Main St	Willis St	None	Bike box in righthand lane on west approach*	0.1	$10,000
28	Acequia Ave	West St	Shoulder	Restripe travel lanes at 11 ft and turn lane at 10 ft to maintain bike lanes at intersection approach*	0.1	$15,000
29	Acequia Ave	Floral St	Obstructed	Remove curb extension or restripe travel lanes at 10 ft*	0.1	$15,000

*These bicycle facility improvements are shown as intersection improvements on the map.
**The road diet needed to implement these bicycle facilities would require a traffic operational study to be approved by Caltrans.

Figure 14. Proposed Bikeways and Intersection Improvements Map



Proposed Bikeways & Intersection Improvements

CENTRAL VISALIA TRAFFIC SAFETY ACTION PLAN

EXISTING	PROPOSED
	Class I: Shared-Use Path
	Class II: Bike Lane
	Class III: Bike Route
	Class IV: Separated Bikeway

- Intersection improvements for bicyclists
- Water
- Parks
- Project Limits

Recommended Sidewalk Facilities

Connecting sidewalks by filling in current gaps is critical in creating a viable and equitable pedestrian facility network. The recommendations for pedestrian facilities primarily focused on identifying and connecting missing sidewalk links. The sidewalk gaps utilized the analysis of the overall built environment in identifying the specific proposed sidewalk segments. In some cases, a sidewalk exists on one side of the street; however, a safe and convenient sidewalk network should provide sidewalks on both sides of the street. Therefore, the recommendations were developed at a granular enough level to identify the specific needs of each corridor.

Sidewalk gap recommendations were proposed for segments along both north-south and east-west corridors. Similar to bike facilities, the corridor segments were chosen based on community and stakeholder input, as well as the characteristics and surrounding land uses of the corridor. Specifically, Ben Maddox Way, Bridge Street, Center Avenue, Conyer Street, Dudley Street, Giddings Street, Goshen Avenue, Jacob Street, Johnson Street, Main Street, Murray Avenue, Santa Fe Street, School Avenue, Stevenson Street, and Tipton Street included segments with proposed sidewalk construction.

The full list of the corridors recommended for sidewalk implementation is included in Table 3. Planning-level cost estimates were developed for the sidewalk recommendations and are included in the list.

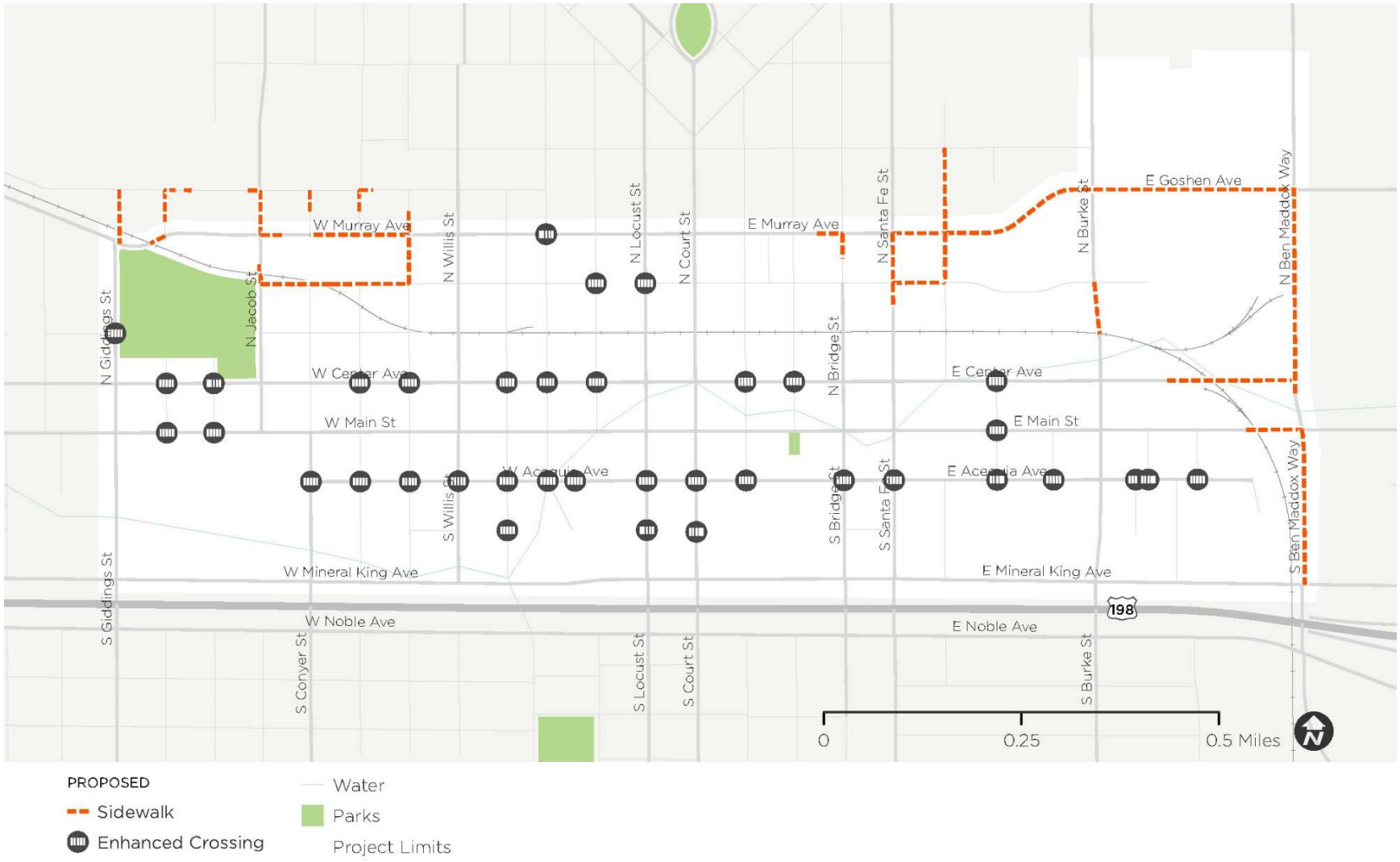
Table 3. Proposed Sidewalk Segments

PED PROJECT ID	LOCATION	FROM	TO	SIDE OF STREET	LENGTH (FT)	COST ESTIMATE
1*	Giddings St	Goshen Ave	Murray Ave	West	220	$72,535
2*	Dudley St	South of Goshen Ave	North of Murray Ave	West	80	$34,525
3*	Dudley St	Goshen Ave	North of Murray Ave	East	180	$61,675
4*	Goshen Ave	Dudley St	East of Dudley St	South	190	$64,390
5*	Goshen Ave	West of Jacob St	Jacob St	North	50	$26,375
6*	Jacob St	Goshen Ave	Murray Ave	East	220	$72,535
7*	Murray Ave	Jacob St	East of Jacob St	North	110	$42,670
8*	Conyer St	Goshen Ave	North of Murray Ave	West	110	$42,670
9	Stevenson St	Goshen Ave	North of Murray Ave	East	120	$45,385
10*	Goshen Ave	Stevenson St	East of Stevenson St	South	80	$34,525
11*	Murray Ave	East of Santa Fe St	Tipton St	North	100	$39,955
12*	Tipton St	North of Murray Ave	Murray Ave	West	240	$77,965
13	Murray Ave	Tipton St	Burke St	North	1050	$249,810
14	Goshen Ave	West of Burke St	Ben Maddox Way	South	1850	$540,710
15	Murray Ave	Santa Fe St	Tipton St	South	300	$94,255
16	Murray Ave	West of Bridge St	Bridge St	South	140	$50,815
17	Murray Ave	West of Johnson St	Johnson St	North	130	$48,100
18	Johnson St	South of Goshen Ave	Murray Ave	West	130	$48,100
19	Murray Ave	Conyer Ave	Johnson St	South	590	$185,800
20	Murray Ave	Railroad	Dudley St	South	70	$31,805
21	Jacob St	South of Murray Ave	Railroad	West	50	$26,375
22	Jacob St	Railroad	School Ave	East	40	$23,660
23	School Ave	Jacob St	Johnson St	North	930	$452,065
24	Johnson St	Murray Ave	School Ave	West	260	$83,395
25	School Ave	East of Conyer St	Stevenson St	South	210	$69,820
26	Bridge St	Murray Ave	South of Murray Ave	West	130	$48,100
27	Santa Fe St	Murray Ave	School Ave	East	270	$86,110
28	School Ave	Santa Fe St	Tipton St	North	300	$94,255

**Project is outside of the study area, but within the area of influence*

PED PROJECT ID	LOCATION	FROM	TO	SIDE OF STREET	LENGTH (FT)	COST ESTIMATE
29	Tipton St	Murray Ave	School Ave	West	270	$86,110
30	School Ave	Santa Fe St	East of Santa Fe St	South	80	$34,520
31	Santa Fe St	School Ave	South of School Ave	East	120	$45,385
32	Burke St	School Ave	Railroad	West	230	$75,250
33	Center Ave	East of Burke St	Ben Maddox Way	South	800	$242,820
34	Center Ave	East of Burke St	Ben Maddox Way	North	650	$202,090
35	Ben Maddox Way	Goshen Ave	South of Center Ave	West	1330	$399,525
36	Main St	West of Ben Maddox Way	Ben Maddox Way	South	280	$88,825
37	Ben Maddox Way	Main St	Mineral King Ave	West	960	$286,260

Figure 15. Proposed Sidewalks and Uncontrolled Crossing Treatments



Uncontrolled Pedestrian Crossings at Intersections and Mid-Block Locations

The project team evaluated current pedestrian crossing conditions at 41 uncontrolled intersections and mid-block locations. The locations were identified at both intersections and locations between intersections where there are opportunities for enhancing existing crosswalks, installing new crosswalks, and adding traffic control devices. The high-level assessment considered existing traffic control treatments, proximity to nearby crossings, and the potential for warranting new crosswalks and associated treatments. The assessment also considered the functionality of the street and posted speed limit to provide options that match the context.

The following functional roadway classification map (Figure 16) was utilized to guide the development of the preliminary assessment of the pedestrian crossing locations. With the absence of traffic counts, the functional roadway classification serves as a proxy for assuming the anticipated vehicular volumes. For example, arterial roadways generally have more capacity than collector or local streets, and therefore have the potential to carry heavier volumes of cars. This in turn requires additional pedestrian crossing treatments to support a safer pedestrian environment.

The following posted speed limit map (Figure 17) was used for the pedestrian crossing assessment. Generally, higher posted speeds require additional traffic control treatments for pedestrian crossings to manage driver speeds and expectations.

Figure 16. Roadway Classification

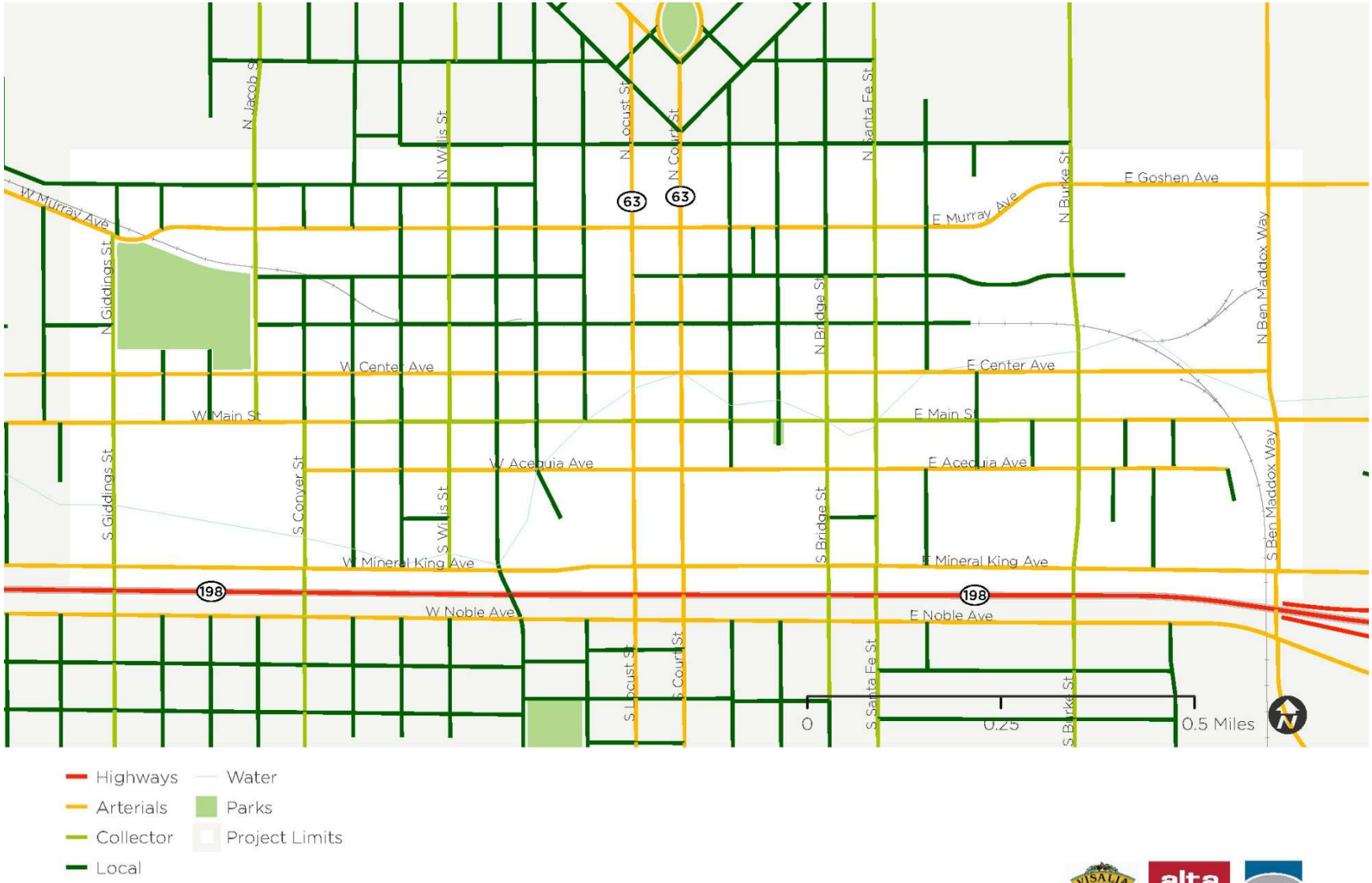
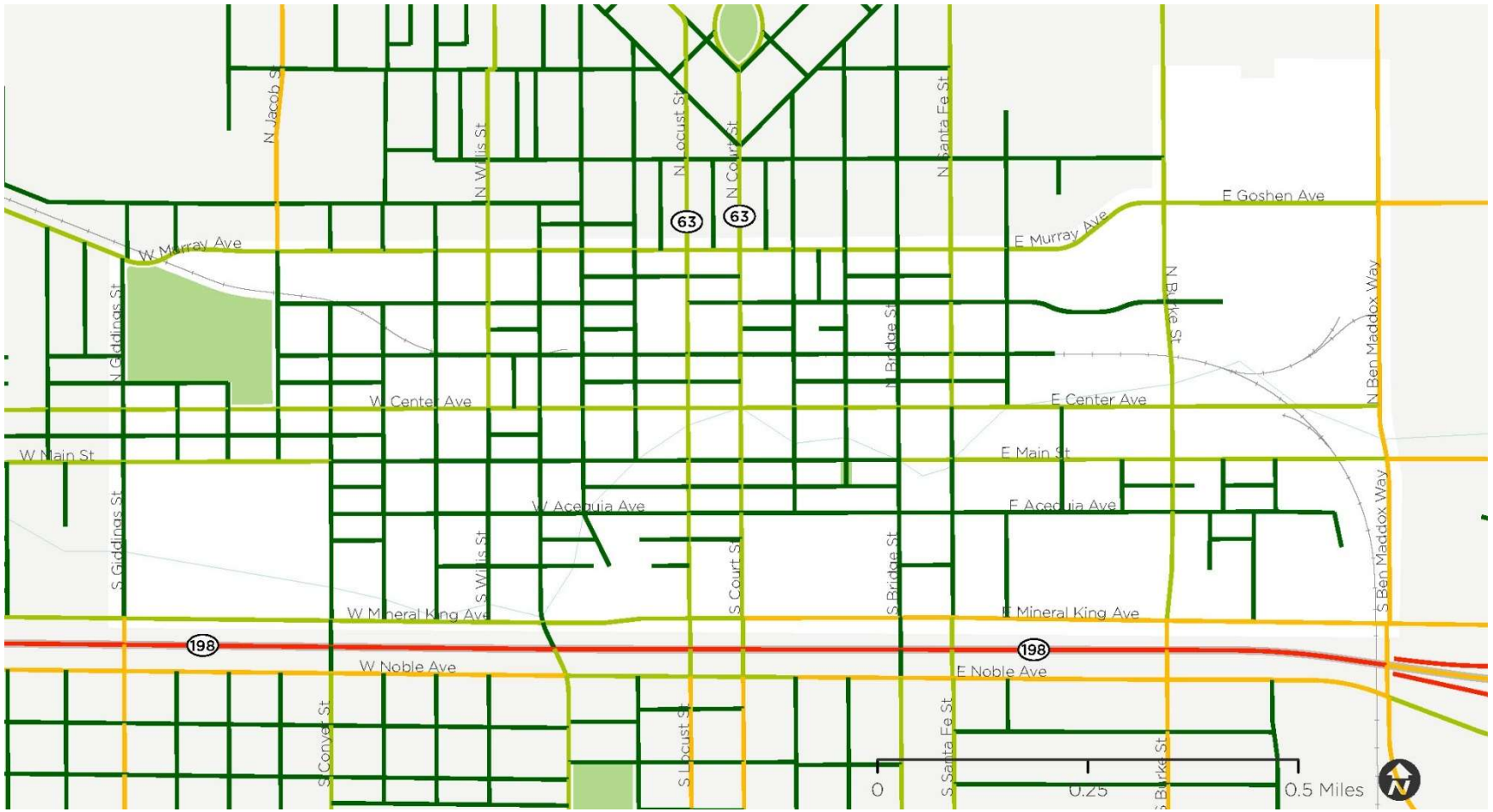


Figure 17. Speed Limits



The planning-level assessment approach set forth in this section is consistent with national best practices and guidelines. In 2018, FHWA updated its "Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations". The guide includes a summary of potential treatments that can, and in some cases, should be considered. Those treatments are tied to their effectiveness in reducing pedestrian crashes, and are related to the street environment, including speeds, volumes, and number of lanes. The following table from the guide illustrates the pedestrian crossing treatments to be considered.

Table 4 on page 38 includes the results of the preliminary evaluation of potential enhancements at the crossing locations. Options are provided for some of the locations in case the City opts to adopt an incremental approach based on the availability of funds. A description of the proposed enhancement is included in the Design Elements section of this report. **If upgraded, ADA-compliant curb ramps and other ADA considerations such as meeting minimum sidewalk cross slopes and proximity to pedestrian signal push buttons must be installed.** It is important to note that the recommendations provided serve as a preliminary assessment. Traffic and pedestrian data collection and analysis, as well as coordination with partner agencies, is needed to implement these preliminary evaluations. Additionally, all potential enhancements should meet the City's design standards and policies. The potential enhancements can serve as a starting point to evaluate the listed intersection and mid-block pedestrian locations; however, additional analysis, and priority programming and funding may be needed to advance the enhancements into design and implementation.

Roadway Configuration	Posted Speed Limit and AADT								
	Vehicle AADT <9,000			Vehicle AADT 9,000–15,000			Vehicle AADT >15,000		
	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph
2 lanes (1 lane in each direction)	❶ 2 4 5 6	❶ 5 6 7 9	① 5 6 ❼ ❾	❶ 4 5 6	❶ 5 6 7 9	① 5 6 ❼ ❾	❶ 4 5 6 7 9	① 5 6 7 9	① 5 6 ❾
3 lanes with raised median (1 lane in each direction)	❶ 2 3 4 5	❶ ❸ 5 7 9	① ❸ 5 ❼ ❾	① 3 4 5	① ❸ 5 ❼ ❾	① ❸ 5 ❼ ❾	① ❸ 4 5 7 9	① ❸ 5 7 ❾	① ❸ 5 ❾
3 lanes w/o raised median (1 lane in each direction with a two-way left-turn lane)	❶ 2 3 4 5 6 7 9	❶ ❸ 5 6 7 9	① ❸ 5 6 ❾	① 3 4 5 6 7 9	① ❸ 5 6 ❼ ❾	① ❸ 5 6 ❾	① ❸ 4 5 6 7 9	① ❸ 5 6 ❾	① ❸ 5 6 ❾
4+ lanes with raised median (2 or more lanes in each direction)	❶ ❸ 5 7 8 9	❶ ❸ 5 7 8 9	① ❸ 5 8 ❾	① ❸ 5 7 8 9	① ❸ 5 ❼ 8 ❾	① ❸ 5 8 ❾	① ❸ 5 ❼ 8 ❾	① ❸ 5 8 ❾	① ❸ 5 8 ❾
4+ lanes w/o raised median (2 or more lanes in each direction)	❶ ❸ 5 6 7 8 9	① ❸ 5 ❻ 7 8 9	① ❸ 5 ❻ 8 ❾	① ❸ 5 ❻ 7 8 9	① ❸ 5 ❻ ❼ 8 ❾	① ❸ 5 ❻ 8 ❾	① ❸ 5 ❻ ❼ 8 ❾	① ❸ 5 ❻ 8 ❾	① ❸ 5 ❻ 8 ❾

Given the set of conditions in a cell,

- # Signifies that the countermeasure is a candidate treatment at a marked uncontrolled crossing location.
- ● Signifies that the countermeasure should always be considered, but not mandated or required, based upon engineering judgment at a marked uncontrolled crossing location.
- ○ Signifies that crosswalk visibility enhancements should always occur in conjunction with other identified countermeasures.*

The absence of a number signifies that the countermeasure is generally not an appropriate treatment, but exceptions may be considered following engineering judgment.

1 High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs
2 Raised crosswalk
3 Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line
4 In-Street Pedestrian Crossing sign
5 Curb extension
6 Pedestrian refuge island
7 Rectangular Rapid-Flashing Beacon (RRFB)**
8 Road Diet
9 Pedestrian Hybrid Beacon (PHB)**

Table 4. Potential Uncontrolled Pedestrian Crossings and Intersection Crossing Enhancements

PED PROJECT ID	LOCATION	POSSIBLE ENHANCEMENT TO BE CONSIDERED	NOTES
39	Acequia Avenue at Parking Garage/Plaza/Bus Stop between Church St and Bridge St	Option 1: Conduct uncontrolled crossing warrant analysis. If warranted, install high-visibility crosswalk with Rectangular Rapid Flashing Beacons (RRFBs). Option 2: Relocate bus stop closer to either one of the intersections.	This crossing may not be warranted due to the short distance to the nearest crosswalks.
40	Acequia Avenue at Bradley Court	Install high-visibility crosswalk across Bradley Court	It is unlikely that a crosswalk would be warranted across Acequia Avenue with current land uses and conditions. However, if density and land use types increase, an uncontrolled crosswalk could become viable.
41	Acequia Avenue at Bradley Street	Install high-visibility crosswalk across Bradley Street.	It is unlikely that a crosswalk would be warranted across Acequia Avenue with current land uses and conditions. However, if density and land use types increase, an uncontrolled crosswalk could become viable.
42	Acequia Avenue at Bridge Street	Upgrade all crosswalks to high-visibility.	
43	Acequia Avenue at Burke Street	Install high-visibility crosswalks at all legs of this intersection.	
44	Acequia Avenue at Church Street	Option 1: Stop Sign if warranted + High-Visibility Crosswalk Option 2: RRFB + High-Visibility Crosswalk + in-street lighting Option 3: Raised Intersection	The simplest & most cost-effective method is Option 1. Prior to conducting official traffic counts and analysis, an observational study, along with any available traffic volume data, can be examined for the potential of stop signs along Acequia getting warranted.
45	Acequia Avenue at Clark Street	Install high-visibility crosswalk across Clark Street.	It is unlikely that a crosswalk would be warranted across Acequia Avenue with current land uses and conditions. However, if density and land use types increase, an uncontrolled crosswalk could become viable.
46	Acequia Avenue at Conyer Street	Upgrade all crosswalks to high-visibility. Install RRFBs at least one of the crosswalks across Conyer Street.	
47	Acequia Avenue at Court Street	Upgrade all crosswalks to high-visibility.	

PED PROJECT ID	LOCATION	POSSIBLE ENHANCEMENT TO BE CONSIDERED	NOTES
48	Acequia Avenue at Edison Street	Install high-visibility crosswalk across the east leg of Acequia Avenue.	Additional crosswalks at this location are not recommended due to the curve and limited sight distance.
49	Acequia Avenue at Floral Street	Option 1: Conduct warrant analysis for all-way stop. Option 2: Install RRFBs. Option 3: Push back crosswalk so it is straighter and has less crossing distance, reconstruct ADA ramps, and install RRFBs. Also evaluate design potential to fit in pedestrian refuge island.	Since this is a skewed intersection, the need for a stop sign may be warranted. If not, while it is more expensive, relocating the crosswalk to make it straighter is preferred over keeping it at the existing location with an RRFB.
50	Acequia Avenue at Liberty Street	Install high-visibility crosswalk across Liberty Street.	It is unlikely that a crosswalk would be warranted across Acequia Avenue with current land uses and conditions. However, if density and land use types increase, an uncontrolled crosswalk could become viable.
51	Acequia Avenue at Locust Street	Upgrade all crosswalks to high-visibility.	
52	Acequia Avenue at Santa Fe Street	Upgrade all crosswalks to high-visibility.	
53	Acequia Avenue at Stevenson Street	Upgrade all crosswalks to high-visibility. Install RRFBs at at least one of the crosswalks across Stevenson Street.	
54	Acequia Avenue at Tipton Street	Install high-visibility crosswalk across Tipton Street.	It is unlikely that a crosswalk would be warranted across Acequia Avenue with current land uses and conditions. However, if density and land use types increase, an uncontrolled crosswalk could become viable.
55	Acequia Avenue at West Street	Upgrade all crosswalks to high-visibility.	
56	Acequia Avenue at Willis Street	Upgrade all crosswalks to high-visibility.	
57	Center Avenue at Church Street	Upgrade to high-visibility crosswalks at all sides of the intersection. Option 1: Evaluate installing a Pedestrian Hybrid Beacon (PHB). Option 2: If a PHB is not warranted, install RRFBs at the crosswalks across Center Avenue.	

PED PROJECT ID	LOCATION	POSSIBLE ENHANCEMENT TO BE CONSIDERED	NOTES
58	Center Avenue at Conyer Street	Upgrade existing crosswalk to high-visibility. Install high-visibility crosswalk on the northern leg of the intersection across Conyer Street. Option 1: Evaluate warranting a 4-way stop sign. Option 2: If not warranted, evaluate warranting a PHB. Option 3: If a PHB is not warranted, install RRFBs at the crosswalks across Center Avenue.	
59	Center Avenue at Dudley Street	Install high-visibility crosswalks across the west, south, and north legs of the intersection.	
60	Center Avenue at Encina Street	Upgrade to high-visibility crosswalks at all sides of the intersection. Option 1: Evaluate installing a PHB. Option 2: If a PHB is not warranted, install RRFBs at the crosswalks across Center Avenue.	
61	Center Avenue at Floral Street	Upgrade to high-visibility crosswalks at all sides of the intersection. Option 1: Evaluate installing a PHB. Option 2: If a PHB is not warranted, install RRFBs at the crosswalks across Center Avenue.	
62	Center Avenue at Garden Street	Upgrade to high-visibility crosswalks at all sides of the intersection. Option 1: Evaluate installing a PHB. Option 2: If a PHB is not warranted, install RRFBs at the crosswalks across Center Avenue.	
63	Center Avenue at Johnson Street	Upgrade existing crosswalk to high-visibility. Install high-visibility crosswalk on the southern leg of the intersection across Johnson Street. Option 1: Evaluate installing a PHB. Option 2: If a PHB is not warranted, install RRFBs at the crosswalks across Center Avenue.	

PED PROJECT ID	LOCATION	POSSIBLE ENHANCEMENT TO BE CONSIDERED	NOTES
64	Center Avenue at Liberty Street	High-visibility crosswalk should be installed across Liberty Street.	Given that Center Avenue is a higher speed arterial roadway in this section, and Liberty Street ends, it is unlikely that an uncontrolled crossing would get warranted at this location. Redevelopment and street retrofit designs would help trigger a need at this location.
65	Center Avenue at Stevenson Street	Upgrade to high-visibility crosswalks at all sides of the intersection. Option 1: Evaluate installing a PHB. Option 2: If a PHB is not warranted, install RRFBs at the crosswalks across Center Avenue.	
66	Center Avenue at Turner Street	Install a high-visibility crosswalk at the southern leg of the intersection across Turner Street.	It is unlikely that this location will be warranted for a 2-way stop or a signalized traffic control; therefore, it is best to cross Center Avenue at Jacob Street.
67	Court Street at Willow Street Parking Garage/Convention Center	Evaluate uncontrolled crossing warrants for this location. Approximate location should be at the bus shelter. The uncontrolled location should at minimum have an RRFB since Court Street is an arterial roadway.	uncontrolled
68	Giddings Street at Oak Avenue	Install high visibility crosswalk across Oak Avenue. Evaluate warrants for a pedestrian uncontrolled crosswalk north or south of Giddings St. The analysis should include identifying whether a PHB would be warranted.	If an uncontrolled crosswalk is warranted but a PHB is not, the City could install an RRFB.
69	Johnson Street at Acequia Avenue	Option 1: Evaluate multi-way stop installation. Option 2: Evaluate PHB installation.	
70	Locust Street at Willow Street parking garages/hospital	Evaluate uncontrolled crossing warrants for this location. Approximate location should be at the bus shelter. The uncontrolled location should at minimum have an RRFB since Locust Street is an arterial roadway.	An issue in the warrant analysis might be that the proposed uncontrolled crossing is too close to the nearest crossings. However, the existing sign prohibiting crossings there is an indication that the pedestrian volumes might trigger the need for a crossing.
64	Center Avenue at Liberty Street	High-visibility crosswalk should be installed across Liberty Street.	Given that Center Avenue is a higher speed arterial roadway in this section, and Liberty Street ends, it is unlikely that a uncontrolled crossing would get warranted at this location. Redevelopment and street retrofit designs would help trigger a need at this location.
65	Center Avenue at Stevenson Street	Upgrade to high-visibility crosswalks at all sides of the intersection. Option 1: Evaluate installing a PHB. Option 2: If a PHB is not warranted, install RRFBs at the crosswalks across Center Avenue.	

PED PROJECT ID	LOCATION	POSSIBLE ENHANCEMENT TO BE CONSIDERED	NOTES
71	Locust Street at School Avenue	Option 1: Investigate an all-way stop at School Avenue and Locust Street, and if warranted, install crosswalks on both sides across Locust Street. Option 2: If not warranted, evaluate warrants for an uncontrolled crossing. If warranted, install RRFB and high-visibility crosswalks, with location approximately at the pedestrian pathway leading to the library south of the intersection.	It is unlikely that this location will be warranted for a 2-way stop. However, pedestrian volumes might help warrant an uncontrolled crosswalk.
72	Main Street at Garden Street Plaza	Install "Cross Here" Warning signs (W11-2) and the general crossing assembly at the eastern crosswalk crossing Main Street. Enhance the crosswalk across Garden Street into high-visibility.	
73	Main Street at Liberty Street	High-visibility crosswalks should be installed across Liberty Street at both approaches.	Based on current conditions, it is unlikely that this location will be warranted for an uncontrolled crossing across Main Street.
74	Main Street at Dudley Street	Since Main Street is an arterial roadway in that section, evaluate the need for (1) a traffic signal based on volumes; if not, (2) Pedestrian Hybrid Beacon or (3) RRFB installation at minimum.	Since this crosswalk is within a school zone, it can be prioritized for enhancements. And given the proximity to the nearest signalized intersection, a full traffic signal might not work; however, a case can be made for a Pedestrian Hybrid Beacon. This is due to Main Street's classification as an arterial roadway, which inherently assumes higher vehicular volumes, in addition to the location within a school zone, as well as the cross-section consisting of 4 lanes without a pedestrian refuge island.
75	Main Street at Jacob Street	Evaluate this intersection for an all-way stop. Given that this is the intersection of an arterial roadway and a collector street (i.e., it has higher volumes than local streets), and that high peak hour pedestrian volumes are anticipated, it is likely to get warranted.	

PED PROJECT ID	LOCATION	POSSIBLE ENHANCEMENT TO BE CONSIDERED	NOTES
76	Main Street at Johnson Street	Option 1: Evaluate for an all-way stop sign. Option 2: If not warranted, install RRFBs.	
77	Main Street at Turner Street	Install high-visibility crosswalks at all legs of this intersection.	
78	Murray Ave at Floral Street	Upgrade existing crosswalk across Murray Ave to a high-visibility crosswalk and install RRFB. Install high-visibility crosswalks across Floral Street.	
79	West Street at Willow Avenue	Option 1: Conduct warrant analysis for all-way stop. Option 2: Install RRFBs at both crosswalks across West Street.	Regardless of which option is used for implementation, all crosswalks should be upgraded to high-visibility crosswalks.

Cross-Sections

Figure 18 through Figure 22 present a representative set of proposed cross-sections that portray the transformations of existing corridors into safer, more connected environments for pedestrians and bicyclists.

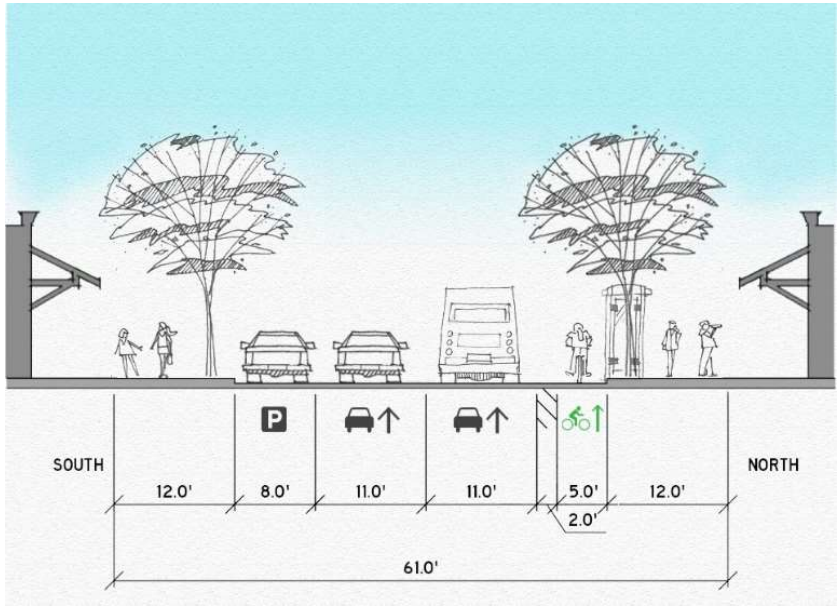


Figure 18. Proposed Center Avenue Cross-Section

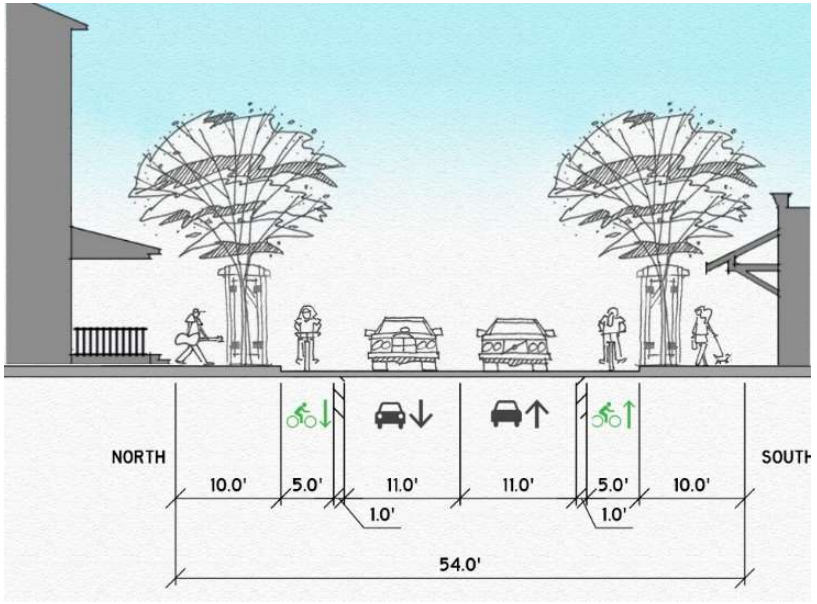


Figure 19. Proposed Murray Avenue Cross-Section

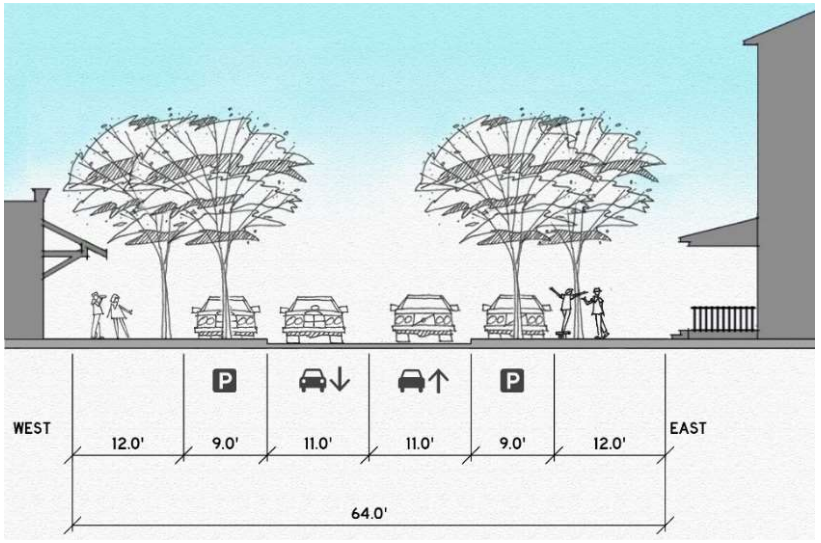


Figure 20. Proposed Johnson Street Cross-Section

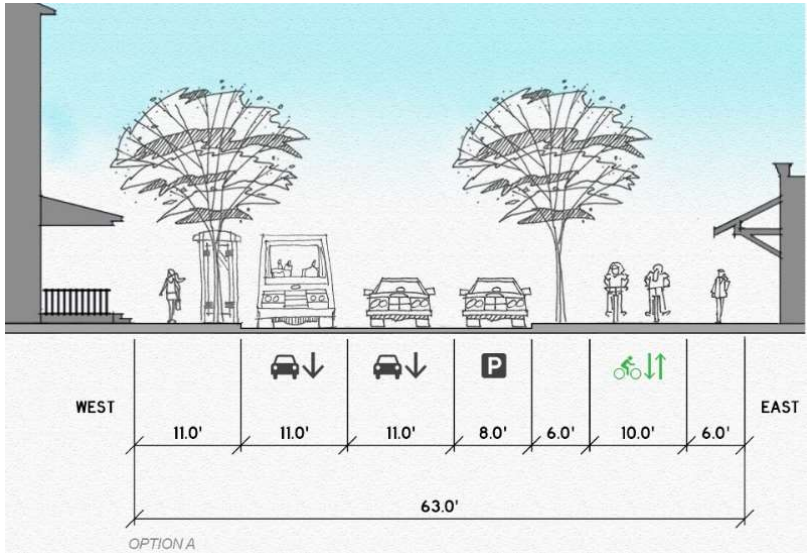


Figure 21. Proposed Locust Street Cross-Section (Option A)

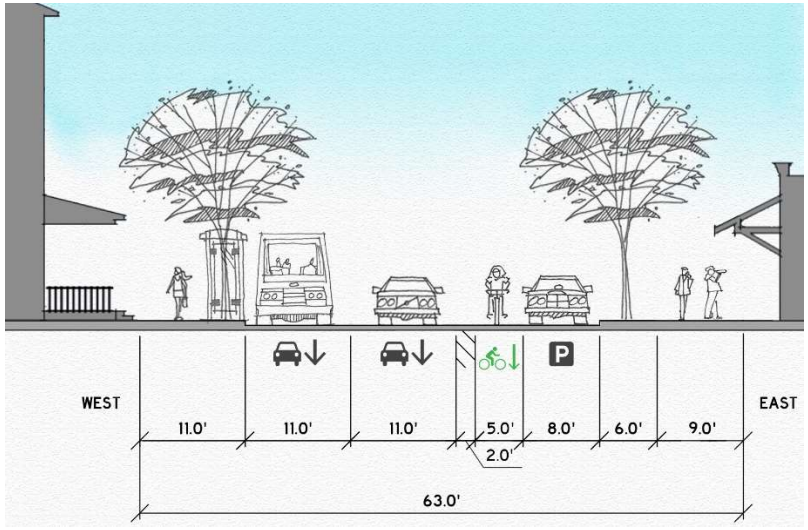


Figure 22. Proposed Locust Street Cross-Section (Option B)

The cross-sections developed for the key corridors within the Study Area represent a concept-level depiction of proposed conditions for each of the corridors. Detailed analysis and design are needed to examine each corridor for specific treatments at conflict areas and intersections. The Design Guidelines Section includes best practices on examples of these treatments.

Long Term Vision

The following concepts represent a long-term vision for Main Street and Court Street corridors, as envisioned by the community. While there are challenges to implementing these changes in the near term, the vision can eventually be realized through new funding sources or redevelopment activity.

Figure 23. Long Term Vision for Main Street

Figure 24. Long Term Vision for Court Street

Design Standards

In order to create a safe and convenient biking and walking environment; appropriate, context-sensitive design features should be considered for every part of the street's cross-section. These features compete within a limited public right-of-way; therefore, it is important to provide amenities that optimize the utility of each road user. Compatible features, or design elements, ultimately create a Complete Street that supports a more sustainable transportation environment. The National Association of City Transportation Officials (NACTO) provides a solid foundation for these elements that local jurisdictions can build upon to create a street environment suitable for their local context.

This section is organized as follows:

- Street Zones: a description of the street "zones" that compose an urban street is provided. The elements within each zone are also described. The zones within a street cross-section include:
    - The Frontage Zone.
    - The Pedestrian Zone.
    - The Furnishing Zone.
    - The Bike Zone.
    - The Curb Zone.
    - The Travel Lane Zone.
    - The Median Zone.
- Design Elements: the recommendations of the specific design elements within each zone are then described. A description of each design element is provided. This is divided into the following subcategories:

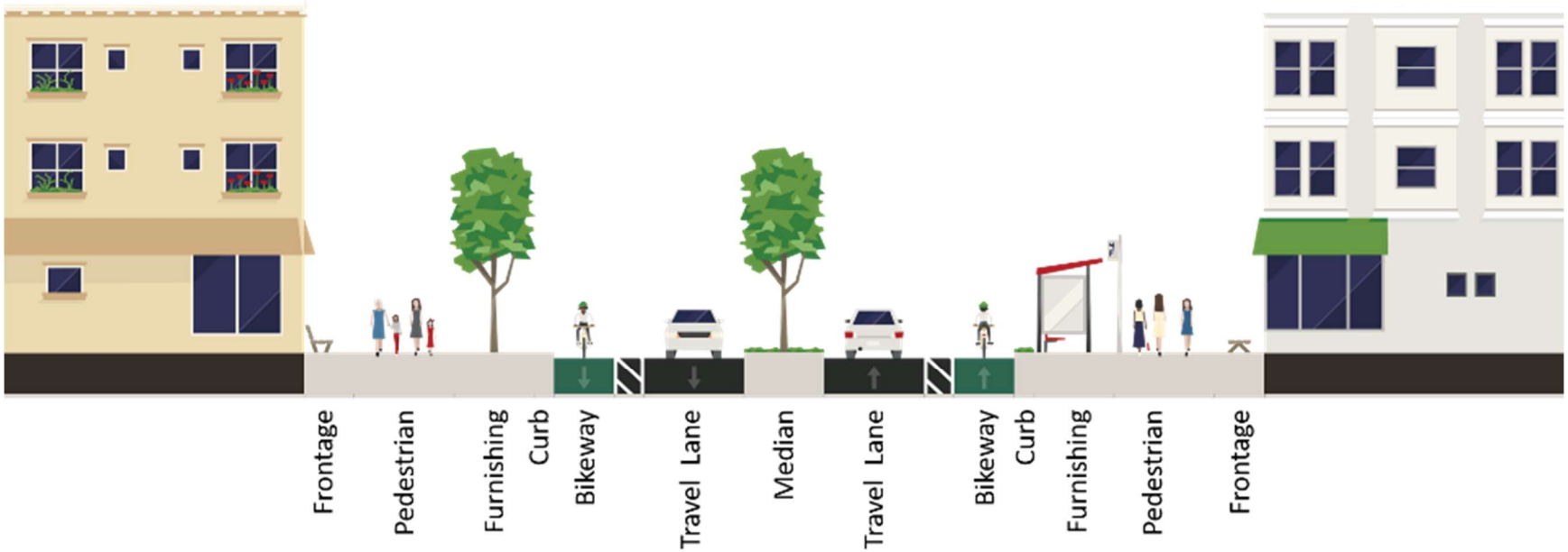


Figure 25. Street Zones

- Street repurposing options; including road diets, lane narrowing, back-in angle parking, medians, and transit accommodations.
- Bike facilities; including bike lanes, separated bikeway facilities, and sharrows, as well as bike amenities.
- Pedestrian facilities; including sidewalks, crosswalks, and curb extensions.
- Street furniture, such as green infrastructure, lighting, and public art.
- Traffic operations' tools that facilitate a more inclusive roadway environment that actively considers pedestrians and bicyclists. This includes signalization, detection, and uncontrolled crossing treatments.

Street Zones

The street can be broken down into several zones that describe the utility of each. This emphasizes the importance of considering each zone while designing a multimodal street, to understand the potential challenges and opportunities of creating a transportation system for all road users. Figure 23 depicts the different zones and potential "ingredients" of each zone.

It is important to note that the goal is not to always incorporate all of the zones on a street, but rather consider the appropriate zone that fits within the context of the specific corridor.

The following is a detailed description of the different street zones.

Frontage Zone

The Frontage Zone is the space between the building front and the through pedestrian zone. The Frontage Zone is typically provided as a buffer between people walking and building operations, such as opening doors and stopping to view a display. In residential areas, the Frontage Zone may provide a buffer between the sidewalk and improvements on the adjacent property, such as a fence or a hedge. Café seating, business displays, bike racks, and planters are examples of items that can be placed within the Frontage Zone. The minimum width of the Frontage Zone typically ranges from 1 to 3 feet, depending on typology.

Common Elements/Features:

- Seating such as benches, as well as platform seating
- Landscaping and trees
- Pedestrian-oriented lighting
- Bicycle parking
- Public art
- Sidewalk cafés – seating, sandwich boards, fixtures, stairs

Pedestrian Zone

The Pedestrian Zone is the main accessible throughway for people to walk. Sidewalks should be implemented on both sides of the street. They should provide a straight path that lines up with crosswalks to facilitate convenient walking and clear lines of sight. The Pedestrian Zone should remain free of obstructions to avoid tripping hazards. Surfaces and slopes must be compliant with the Americans with Disabilities Act (ADA) and should remain slip resistant when wet. Lighting should illuminate this zone to create a safe walking environment, and widths should be sufficient for the anticipated volumes of people. In residential areas, the Pedestrian Zone width should be 5-7 feet minimum, and 8-12 feet in commercial and downtown areas.

Common Elements/Features:

- Sidewalks
- Bus stops
- Public art

Furnishing Zone

The Furnishing Zone is located between the Pedestrian Zone and the Curb Zone, and provides space for public space elements that enhance the experience of people walking. The Furnishing Zone also serves as the primary separation between people walking on the sidewalk and vehicular traffic. Landscaping, street trees, furniture, litter and recycling bins, transit shelters, utility equipment, and parking meters should all be placed within the Furnishing Zone where space permits. In urban areas, café seating can sometimes be provided within the Furnishing Zone in locations where the Frontage Zone is not wide enough to accommodate it. Placement of these

items within the Furnishing Zone leaves the Pedestrian Zone free of obstacles.

Common Elements/Features:

- Street landscaping and trees
- Street lighting
- Public seating
- Bus shelters
- Vehicular and pedestrian wayfinding
- Bicycle parking
- Bollards
- Parking meters
- Utilities such as power and light poles.

Bikeway Zone

The Bikeway Zone is the space within the right-of-way that is dedicated to bicycle travel. Depending on the context, usage, and available right-of-way, the Bikeway Zone can be accommodated in different ways – through a conventional bicycle lane that is level with the travel way, though a shared bicycle-vehicular travel lane, or through a physically separated design element that provides a striped or vertical buffer between bicyclists and vehicles. Dedicated bicycle lanes are marked with bicycle pavement markings and can be further enhanced with green paint. The placement of the Bikeway Zone within the right-of-way varies- as it can be placed:

- between the curb zone and travel lane zone
- between the curb zone and parked cars
- between the furnishing zone and the curb zone
- between the pedestrian zone and furnishing zone.

Bicycle facilities can be designed as one-way lanes on each side of a bi-directional travel street, one-way on one-way vehicular travelways, contraflow to the direction of travel, or two-way on the same side of the street, often referred to as “cycle tracks.”

Common Elements/Features:

- One-way or two-way bicycle lane(s).
- Bicycle lane buffer (painted or physical).

Curb Zone

The Curb Zone occupies the space between the travelway and the Furnishing Zone, typically including the street curb, and in some cases, other elements as well. The Curb Zone should remain clear of vertical obstacles. It may also be expanded to include sidewalk-level separated bicycle lanes (raised bicycle lanes) or elements that expand the sidewalk into the roadway, such as parklets. In more rural settings, the Curb Zone may also include swale areas for roadway drainage. Adequate curb design that considers drainage and flooding conditions is critical to creating an overall safe and pleasant road user environment.

Common Elements/Features:

- Curb and gutter
- Swales
- Temporary or permanent curb extensions (see design standards for curb extensions on page 54)
- Bollards

Travel Lane Zone

The Travel Lane Zone supports nearly all transportation options and, consequently, is the most critical part of any street design. Complete Streets projects prioritize safety above all else for all street users. The Travel Lane Zone is not just about moving motorized vehicles – its design affects multimodal mobility, the safety and comfort of walkways and bikeways, and the ability to cross the street. Different travel lane design guidelines exist for the different roadway classifications and land use contexts. Minimum lane widths generally range from 9 to 12 feet, where narrower lanes are typically installed on roadways with posted speeds of 35 mph or less. Number of lanes and lane widths are typically designed with a focus on the anticipated vehicle mix on a specific street. For example, on streets that are anticipated to have higher rates of heavy vehicles and buses, a minimum of 11-foot

lanes are usually implemented. When right-of-way does not allow achieving this for all lanes on a multi-lane street, the outside lanes can be designed as 11 feet, while the inside and center lanes can be narrower. Moreover, bicycle lane design is often integrated as part of the travelway design. While increased spatial and physical separation between bicycles and vehicles is needed on high-speed, high-volume streets, low-volume, low-speed streets can benefit from a shared-space approach, often referred to as "sharrows".

Common Elements/Features:

- Travel lanes delineated by pavement markings.
- Dedicated transit lanes.

Median Zone

The Median Zone is the area in the street typically separating two-way traffic. The separation is through either pavement markings or a physical, raised or depressed, separation, such as a raised concrete median or a depressed/swale median. Depending on available width, medians can serve a diverse and versatile function for street users. Medians can enhance safety for both vehicles and non-motorized users. For example, physical medians provide a buffer between bi-directional traffic that reduces the occurrence and severity of head-on crashes. Additionally, if right-of-way allows for a minimum median width of 6 feet, a pedestrian refuge island can be installed in the median to create a "refuge" area for pedestrians and bicyclists crossing the street. On multi-lane, higher volume streets, pedestrian refuge islands can be "actuated" or signalized to allow a two-step crossing for pedestrians; this is especially important as pedestrians often struggle to find appropriate and safe gaps in traffic to cross streets. Additionally, for wider multi-lane roadways, pedestrian refuge islands are sometimes installed as an offset, where the pedestrian would have to change direction in the middle of the refuge island for increased alertness, and also face opposing traffic. Landscaping can also be planted in medians to capture and clean stormwater runoff. Moreover, medians can be placed at intersections where left turns need to be prohibited, often referred to as "median channelization islands".

Common Elements/Features:

- Pavement markings
- Raised concrete island
- Depressed/swale median
- Landscaped median
- Pedestrian refuge island
- Uncontrolled signalization

Design Elements

This section describes the design elements that go into creating a multimodally functional and convenient street environment. The elements present a toolbox of design features that can be utilized to repurpose the public right-of-way to accommodate pedestrian and bicycle-friendly elements, and also provide sustainable design that considers green infrastructure.

Street Repurposing

Road Diet

Road diets are a reduction in the number of lanes along a roadway. Typically, four lane roads are reduced to three lanes – one lane for each direction of travel and a center two-way turning lane. By reducing the amount of the roadway dedicated to motor vehicles, more space is available for bicycle and pedestrian facilities. This not only improves conditions for bicyclists, but also enhances the pedestrian environment, improves traffic flow, and reduces vehicle-on-vehicle collision rates.

Lane Narrowing

Lane narrowing is when an excessively wide lane is reduced through the striping of a shoulder or the addition of bike lanes. This helps reduce motor vehicle speeds and creates dedicated space for bicyclists and/or pedestrians.

Back-In Angled Parking

'Back-in' or 'Reverse Angle' parking requires drivers to back their vehicles into diagonally angled parking spaces. The benefits of this parking configuration include an increased field of vision when exiting a space, which reduces the risk of collisions with pedestrians or bicyclists, and for some drivers it is easier than standard parallel parking. Loading and unloading is also more convenient with the vehicle's trunk space oriented toward the

sidewalk. This type of parking configuration should be considered as part of any road diet project.

Figure 26. Back-in angle parking should be accompanied with signage and education to encourage proper use.

Medians

Medians can reduce head-on and turning collisions and provide refuge for pedestrian crossings. Where space permits, an added bonus to wider medians (wider than 8 feet) is to install plantings in the middle between the median curb and gutter. Trees have been found to cool surface temperatures by as much as 45 degrees, providing much needed shade. It is recommended that trees are spaced no further apart than their mature tree canopy size to create a continuous shade along city streets. Plantings also enhance the experience of the street and can aid in traffic calming.

Transit Accommodations

Transit stations and routes should connect to other modes of transportation, such as pedestrian and bike networks, park and ride centers, and airports. For all users, transit stations should provide accessible alighting zones, benches for the comfort of waiting passengers, and a covered space to protect passengers from inclement weather. Transit route and station design should also minimize conflicts with bicyclists, provide secure bicycle parking, and provide ample loading space for bicycles on bus-mounted bicycle racks. Transit stops should respond to the unique qualities of a place and community landmarks. Local, relevant art should be incorporated into the transit stations and all aspects of the transit system in order to improve the quality of users' experiences.

Bicycle Facilities

Bike Lanes (Class II)

Bike lanes are designated exclusively for bicycle use and are demarcated with pavement markings and signage. They are located on the roadway directly adjacent to motor vehicle travel lanes and follow the same direction as motor vehicles. Bike lanes provide visual separation from motor vehicles, which helps bicyclists and motorists anticipate one another's movements and behaviors.

Bike lanes can also increase safety and promote proper riding by:

- Defining road space for bicyclists and motorists and reducing the possibility that motorists will stray into the bicyclists' path;
- Discouraging bicyclists from riding on the sidewalk;
- Reducing the incidence of wrong way riding; and,
- Reminding motorists that bicyclists have a right to the road.

The optimal width of a bike lane is 6-feet. The minimum preferred width is 5-feet.

Bike lanes can be enhanced with buffer zones, which further separate the bike lane from adjacent motor vehicle lanes. Buffer zones are most appropriate on roadways with high motor vehicle traffic volumes and speeds and adjacent to parking lanes.

On-Street Separated Bikeways (Class IV)

A separated bike lane is an exclusive bicycle facility that combines the user experience of a separated path with the on-street infrastructure of a conventional bike lane. A separated bike lane is physically separated from motor vehicle traffic and distinct from the sidewalk.

Separated bike lanes may be directional (i.e., one-way) or bidirectional (i.e., two-way) and may be at street level, sidewalk level, or at an intermediate level. If at sidewalk level, a curb or median separates the facility from motor traffic, while different pavement color/texture separates the facility from the sidewalk. If at street level, they can be separated from motor traffic by raised medians, on-street parking, or flexible delineators.

Figure 27. This separated bikeway example in Cambridge, Massachusetts is separated from the vehicle lanes by on-street parking and loading area, and from the parallel sidewalk by a row of shade trees.

By separating bicyclists from motor traffic, separated bike lanes can offer a higher level of comfort than bike lanes and are attractive to a wider spectrum of the public.

Separated bikeways can increase safety and promote proper riding by:

- Defining road space for bicyclists and motorists, reducing the possibility that motorists will stray into the bicyclists' path.
- Discouraging bicyclists from riding on the sidewalk.
- Reducing the incidence of wrong way riding.
- Reminding motorists that bicyclists have a right to the road.

Shared Lane Markings ("Sharrows")

Shared roadways are designated bicycle routes where bicyclists and cars operate within the same travel lane, either side by side or in single file depending on roadway configuration. These facilities are best suited for local roads with low speeds and low traffic volumes. Shared roadway treatments can include various forms of signage and shared lane markings that delineate a roadway as a bicycle route and indicating that drivers must share the road and/or allow bicyclists to occupy the entire lane of travel.

Bicycle Parking

No bicycle network is complete without secure places to park bicycles near desired destinations in visible, well-situated locations. Bicycle racks for short-term parking are relatively inexpensive and can be installed in unused space along building frontages, in furniture zones on sidewalks, or in underutilized parking spaces (often called a 'bike corral').

A bicycle corral creates additional bicycle parking by removing an existing on-street parking space, and replacing with a row of bicycle racks. They work well in areas where sidewalks are too narrow to accommodate bike racks, or demand for bicycle parking is not met by existing sidewalk racks alone.

Figure 28. This bicycle corral utilizes the area of a single parking space to provide parking for up to six bicycles.

Bicycle parking areas, where provided, shall be accessed via a sidewalk with a minimum width of 5 feet. Bicycle racks shall allow for two points of contact between rack and bicycle. The clear space between bicycle racks should be a minimum of 5 feet.

The rack types illustrated here are consistent with those recommended in the Association of Pedestrian and Bicycle Professionals' *Essentials of Bike Parking: Selecting and Installing Bike Parking that Works (2015)*.

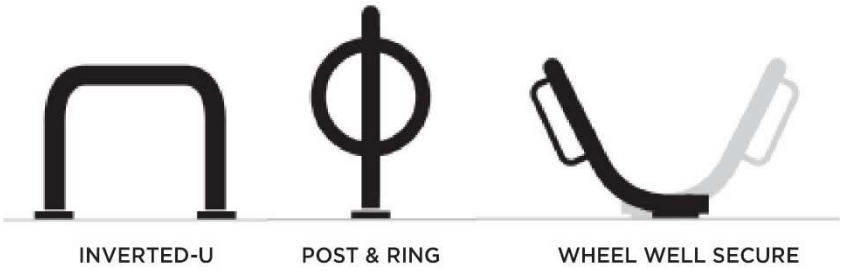


Figure 29. Types of bicycle racks (short-term parking)

Pedestrian Facilities

Sidewalks

Sidewalks are the most fundamental element of the walking network, as they provide an area for pedestrian travel separated from vehicle traffic. Providing adequate and accessible facilities can lead to increased numbers of people walking, improved accessibility, and the creation of social space.

While a 5-foot wide sidewalk is typically the minimum desired space for pedestrian use, wider sidewalks should be installed near schools, at transit stops, in downtown areas, or anywhere high concentrations of pedestrians exist. Sidewalks in the Downtown and East Downtown area should be a minimum of 6 feet wide.

Sidewalks should also be placed at a maximum slope of 2% to accommodate people of all abilities and to create a truly walkable environment that does not burden pedestrians. Sidewalks should be continuous on both sides of urban commercial streets, and should be required in areas of moderate residential density (1-4 dwelling units per acre). When retrofitting gaps in the sidewalk network, locations near transit stops, schools, parks, public buildings, and other areas with high concentrations of pedestrians should be the highest priority.

Curb Ramps

Curb ramps are the design elements that allow all users to make the transition from the street to the sidewalk. A sidewalk without a curb ramp can be useless to someone in a wheelchair, forcing them back to a driveway

and out into the street for access. There are a number of factors to be considered in the design and placement of curb ramps.

The level landing at the top of a ramp shall be at least 4 feet long and at least the same width as the ramp itself. The slope of the ramp shall be compliant to current standards. If the ramp runs directly into a crosswalk, the landing at the bottom will be in the roadway. If the top landing is within the sidewalk or corner area where someone in a wheelchair may have to change direction, the landing must be a minimum of 4'-0" long (in the direction of the ramp run) and at least as wide as the ramp, although a width of 5'-0" is preferred.

Curb Extensions

Curb extensions are an effective method to improve pedestrian visibility and reduce pedestrian crossing time. This may improve safety for pedestrians, as it reduces the length of time that pedestrians are exposed to potential conflicts with motor vehicles. Curb extensions also narrow the perceived roadway width for drivers, which may reduce speeds. They reduce vehicle speeds by reducing turning radius, which increase the chance of survival for a pedestrian in the event of a collision. At signalized intersections, curb extensions can reduce delays by allowing for shorter pedestrian "walk" phases due to the reduced crossing distance.

Curb extensions extend the sidewalk or curb line out into the parking lane, reducing the effective street width. They can only be used where there is on-street parking, and should not encroach into bicycle lanes. Curb extensions should also allow buses to complete turning movements and load and unload passengers safely. Additionally, curb extension geometry should allow mechanical street sweepers to clean transitions from the parking lane to the extended curb. They may also require storm drainage re-engineering, or may be constructed with a channel to preserve existing drainage and reduce costs. They can be installed both at intersections and uncontrolled crossing locations. Curb extensions should be designated for pedestrians, including people in wheelchairs, and free of potential obstructions such as planters and bollards.

Figure 30. These curb extensions on either side of the street shorten the crossing distance.

High Visibility Crosswalks

There are a number of marked crosswalk types. Standard transverse crosswalks consist of two parallel lines that mark the edges of the crosswalk.

High visibility markings include ladder-style crosswalks, which include transverse lines in addition to bold bars across the crosswalk. These markings are more noticeable to drivers and are typically used where there is existing or anticipated high walking activity, where slower walkers are expected (near schools and senior centers), at uncontrolled crossings, and where high numbers of pedestrian related crashes have occurred. In school areas, the crosswalks are yellow whereas outside school areas the crosswalks are white.

Artistic crosswalks serve as high visibility crosswalks and can improve the attractiveness of public space and create a sense of place. The most recent guidance from the Federal Highway Administration (Interpretation Letter 3(09)-24(I)) has recommended limited colors and patterns.

Street Furniture

Trees

Street trees and landscaping produce a feeling of enclosure and add visual stimuli along a roadway corridor. Urban forests and green infrastructure also provide environmental benefits. Trees have been found to cool surface temperatures by as much as 45 degrees, providing much needed shade and making it more comfortable to walk and bike during the summer months. It is recommended that trees are spaced no further apart than their mature tree canopy size to create a continuous shade along city streets. Plantings also enhance the experience of the street and beautify communities while creating a buffer between pedestrians and vehicle traffic.

During the walking audits and community engagement efforts undertaken as part of this Plan, stakeholders and community members pointed out that many of the trees in the sidewalks have caused non-compliant ADA sidewalk conditions due to overgrown roots and cracked/uneven sidewalks. Therefore, an area-wide assessment of current tree and landscaping conditions is recommended to establish a canopy plan that would address issues with existing foliage, as well as lay out a plan for investing in landscaping on pedestrian priority streets. The canopy plan should propose methods of sustainable and durable integration of trees along accessible paths on sidewalks, such as installing structural soil to manage root growth, maintaining specimen trees, and scheduling sidewalks for routine improvements.

Lighting

Appropriately scaled street lighting provides a safer, more visible, and more inviting environment for all roadway users. Pairing pedestrian-scaled street lighting with other improvements, such as street trees, helps alert motorists to the potential presence of pedestrians and bicyclists. Providing adequate street lighting can be the change agent that activates a public space due to the safety, perception, and added utility it brings to an urban environment.

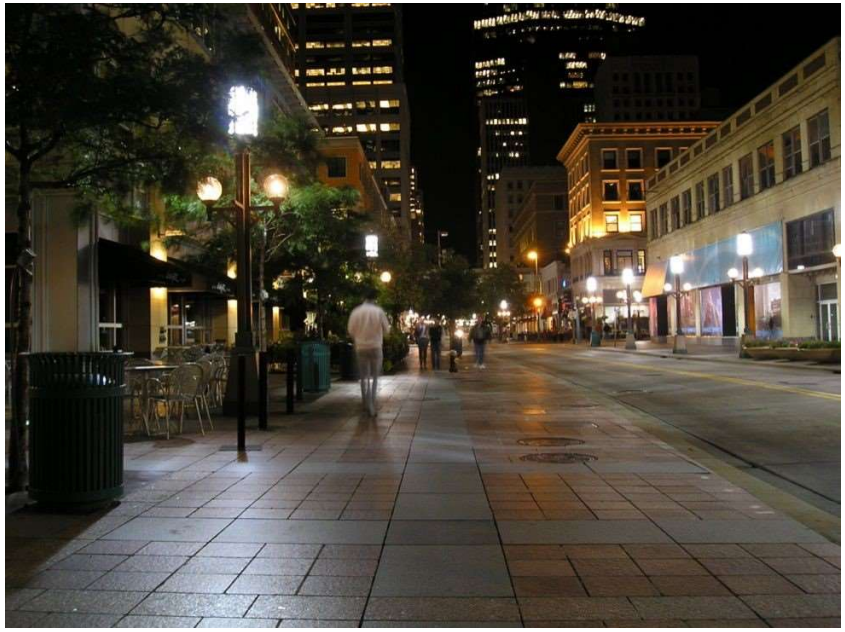


Figure 31. Lighting should be scaled for pedestrians and clearly illuminate key walkways and bikeways.

Public Amenities

Site furnishings are critical components of creating a socially and economically vibrant streetscape and accommodating a wide range of needs and activities. Providing benches at key rest areas and viewpoints encourages people of all ages to use the walkways by ensuring that they have a place to rest along the way. Bike racks accommodate bicyclists traveling to their destinations. Trash and recycling receptacles promote cleanliness and sustainability. Landscaped planters and movable furniture offer aesthetic and placemaking benefits to the sidewalk.

Public Art

A useful component in enhancing user experience and creating a sense of place in public space is art. Public art can be in the form of murals, sculptures, or decorative paving. Culturally relevant art should be a priority for inclusion in public space and partnering with local artists is an added

bonus. Functionally, public art can serve as a landmark, wayfinding element, educational, placemaking element, reinforce cultural identity etc. Public art should be located in areas with high pedestrian concentrations, such as downtown, and can be located anywhere in the sidewalk zone except the path of travel.

Wayfinding

Bicycle and Pedestrian Wayfinding

Human-scale, versus vehicular-scale, wayfinding and signage can make it easier to utilize walking and biking as a primary mode of transportation. It can also encourage people to bike and walk if placed strategically and creatively, such as near a major destination with the walking time needed to get there. Key destinations, such as parks, schools, and shopping areas are often included in a city's wayfinding plan.

See Appendix D for further guidance on bicycle wayfinding signage.

Parking Wayfinding

As part of the development of the Action Plan, stakeholders and the community communicated a need for wayfinding to guide drivers to available parking. A more comprehensive and clear wayfinding parking plan may help reduce the extra miles people need to drive in order to get to their parking space, reduce distracted driving due to people scanning for parking, and also alleviate traffic congestion resulting from circulating in search of parking.

A unified branding structure can be developed through the zoning code that dictates the location and aesthetics of parking signage so people can easily recognize where to go. A smartphone app can also be linked to parking locations as a tool to show people where there is parking and what it costs. With the installation of parking space utilization sensor devices, the City can also create dynamic signage and incorporate this up-to-date information into the smartphone app so people are not guided to full lots. Additionally, advertising is a key component of any new parking initiative and should be considered to promote new branding or smartphone apps.

Figure 32. These advertisements were posted on bus shelters in San Francisco to promote their unified parking brand, SF Park. (Source: SFPark.org)

Figure 33. With the addition of sensor devices, the City would be able to communicate the available parking spaces. (Source: Seattle.gov)

Green Infrastructure

Greening

Stormwater swales are densely planted linear depressions that are designed to slow, filter, infiltrate, and convey stormwater. Check dams can be incorporated along the length of the swale to slow the conveyance of water and encourage infiltration. Swales can be enhanced with a subsurface gravel layer to increase storage capacity and an underdrain to convey excess stormwater to existing storm drains.

Figure 34. In this example, bioswales buffer the bike lane from the vehicle lanes, creating a Class IV separated bikeway.

Stormwater planters, which include rain gardens, are manmade depressions in the landscape that slow, filter, and infiltrate stormwater. Unlike stormwater swales, which often parallel a road and have a larger catchment area, stormwater planters are designed to collect water from a discrete, local source, such as a rooftop, driveway, or street corner. Stormwater planters can be planted with perennials, grasses, shrubs, and/or trees and provide a great opportunity to improve streetscape aesthetics.

Figure 35. This rain garden buffers the sidewalk from adjacent travel lanes, adds shade to the pedestrian realm, and help recharge groundwater supply by funneling stormwater directly into the ground.

Cool Paving

Dark colored pavements, such as the asphalt most roads are made of, get hot in the sun because they absorb 80-95% of its rays. These hot pavements intensify what is known as the "urban heat island effect" by raising the local air temperature in cities that are dominated by impermeable surfaces like pavement and buildings, versus permeable surfaces like planted areas. By using light-colored materials for paving that reflect sunlight, the urban heat island effect can be reduced. Many cities are using light-colored surface treatments on asphalt roads to create "cool streets," such as the example below in the City of Los Angeles.

Figure 36. Lighter pavement surfaces like this one do not retain as much heat as conventional pavement treatments.

Intersection Design and Operations

The following operational improvements are intended to provide a more pedestrian- and bicycle-friendly environment that facilities their mobility through the transportation network as a whole. The implementation of these recommendations will be on a case-by-case basis, where location-specific elements should be considered, such as establishing a balance with transit and vehicular operations. Additionally, implementation of these facilities should be coordination with Caltrans, the owner and maintenance agency of traffic signal and operations.

Traffic Signals

- Traffic Signal Timing and Optimization: optimizing traffic signal operations is an opportunity to improve safety and mobility conditions for all road users. This is particularly helpful when introducing new bike and pedestrian facilities and additional multimodal demand is anticipated. In coordination with the other operational improvements put forth in this section, retiming traffic signals to optimize conditions for both pedestrians and vehicles, as well as for bicyclists if bicycle signalization is introduced, minimizes delays and optimizes the system to run more efficiently.
- Shorter Signal Cycle Length prioritizes pedestrian and bicycle movements at intersections by decreasing wait times to cross the street. This encourages better bicyclist and pedestrian behavior and provides more consistent crossing opportunities.
- Left Turn Restrictions: Split Phasing divides the green light segment of a traffic signal into separate phases. One phase is for through traffic and pedestrian crossing, and another for turning vehicles. In practice, this eliminates conflict between turning vehicles and pedestrians. It can be applied at intersections with dedicated turning lanes and higher pedestrian crossing volumes.
- Bicycle Detection: Detection Traffic signals control traffic by either using timers or actuation (detection). Bicycle detection at actuated traffic signals provides a substantial improvement for bicycle access and mobility. California Assembly Bill 1581 requires all new and modified actuated traffic signals to detect bicyclists. Caltrans Policy Directive 09-06 clarifies the requirements. By installing bicycle

detection at actuated intersections in coordination with roadway repaving or other maintenance activities, costs may be reduced.

- A Leading Pedestrian Interval (LPI) prioritizes pedestrian movement at intersections by giving pedestrians a head start when entering a crosswalk. This makes pedestrians more visible and may help reduce conflicts. They are best utilized at intersections with high volumes of pedestrian crossings and vehicle turning movements. The following intersections within the study area should be evaluated for an LPI installation due to the observed high pedestrian volumes:
    - Locust Street at Acequia Avenue, Main Street, Center Avenue, and Murray Avenue
    - Court Street at Acequia Avenue, Main Street, Center Avenue, and Murray Avenue
    - Willis Street at Main Street, Center Avenue, and Murray Avenue
    - West Street at Main Street
    - Santa Fe Street at Acequia Avenue, Main Street, Center Avenue, and Murray Avenue
    - Giddings Street at Main Street, Center Avenue, and Murray Avenue
- In Downtown areas, traffic signals should be programmed to "recall" the pedestrian phase during every traffic signal cycle. This allows pedestrians to cross at the same time when parallel vehicles get the green light.
- An exclusive pedestrian phase, sometimes referred to as a "Scramble Crossing", can be installed at locations with very high pedestrian volumes, such as downtown commercial corridors.

Rectangular Rapid Flashing Beacons (RRFBs) and Pedestrian Hybrid Beacons (PHBs)

Rectangular Rapid Flashing Beacons (RRFBs) are user-actuated warning beacons that supplement pedestrian warning signs at unsignalized intersections or uncontrolled crossings. RRFBs have also been shown to increase motor vehicle yielding compliance at crossings of multi-lane or high-volume roadways. RRFBs should be paired with a marked crosswalk, advanced yield pavement markings, and push buttons allowing pedestrians and bicyclists to activate the RRFBs.

Figure 37. Rectangular Rapid Flashing Beacons (RRFBs) are an option for upgrading unsignalized pedestrian crossings.

Pedestrian Hybrid Beacons (PHBs) were adapted in Arizona based on similar European designs to increase motorist awareness at uncontrolled marked crosswalks. It is activated when a pedestrian pushes the button signaling vehicles to stop. Studies have shown that PHBs can reduce pedestrian crashes at a particular uncontrolled pedestrian crossing location by up to 69%. They can also significantly increase motorist compliance to stop at an uncontrolled crosswalk. PHBs are often used on multi-lane roadways where a full traffic signal may not be warranted, however, current pedestrian conditions are too dangerous to cross without formal traffic control beyond signage.

Protected intersections

Protected intersections reduce turning conflicts between drivers and bicyclists by providing clear paths for each user. Protected intersections are relatively new to the United States and have been shown to reduce collisions.

The protected intersection is a way of accommodating separated bikeways at intersections. It is modeled after Dutch intersection design and includes features for corner refuge islands that put the stop bar for bicyclists ahead of the stop bar for vehicles and bicyclist crossings set back approximately one car length from the adjacent travel lane. Protected Intersection design has promise, yet there are some challenges in implementation.

Figure 38. Protected intersections create a more intuitive path for bicyclists through intersections, especially for separated bikeways at major intersections.

Bike Boxes & Two-Stage Left Turn Boxes

Bike Boxes designate an area for bicyclists to queue in front of automobiles at signalized intersections. These designs increase visibility and reduce vehicle incursion into crosswalks. Bike Boxes are also helpful at facilitating left turns by when configured as two-stage left turn boxes.

Figure 39. Bike boxes facilitate left-turning bicyclists by allowing them to queue at the front of stopped traffic.

Policies and Programs

To complement the hardscape and operational recommendations outlined in this section, the full success of implementing this plan would be realized by instituting policies and programs prioritizing pedestrians and bicyclists. This section provides a number of examples of how the City of Visalia can mobilize the implementation of a multimodal Downtown and surrounding area.

Public-Private Partnerships

Given the potential development opportunities within the Study area, the City can collaborate with developers to implement multimodal infrastructure facilities as part of redevelopment projects. Similarly, the City can promote enhancing existing facilities and access by offering incentives to property and business owners.

In addition to the tree canopy plan recommended in the Design Elements section of this Plan, establishing a tree installation and maintenance agreement process between the City and private property owners would help create a more uniform approach to landscape policy and maintenance processes in the Downtown area.

Visalia Opportunity Zones

Through the federal 2017 Tax Cuts and Jobs Act, the City of Visalia has just under 7,000 acres of Qualified Opportunity Zones. In Downtown, the Opportunity Zones include commercial, mixed-use, and connections to historic Oval Park opportunities. As part of the implementation process of this Plan, these Opportunity Zone areas can be leveraged to provide safe and convenient pedestrian and bicycle facilities that help foster economic development in the area.

Demonstration and Pilot Installations

Prior to the permanent construction of recommended infrastructure improvements, the City could test the design of a particular project through a temporary demonstration or pilot installation. These temporary installations could range from one day using materials borrowed from local vendors, to one or more years as a pilot using longer-lasting materials.

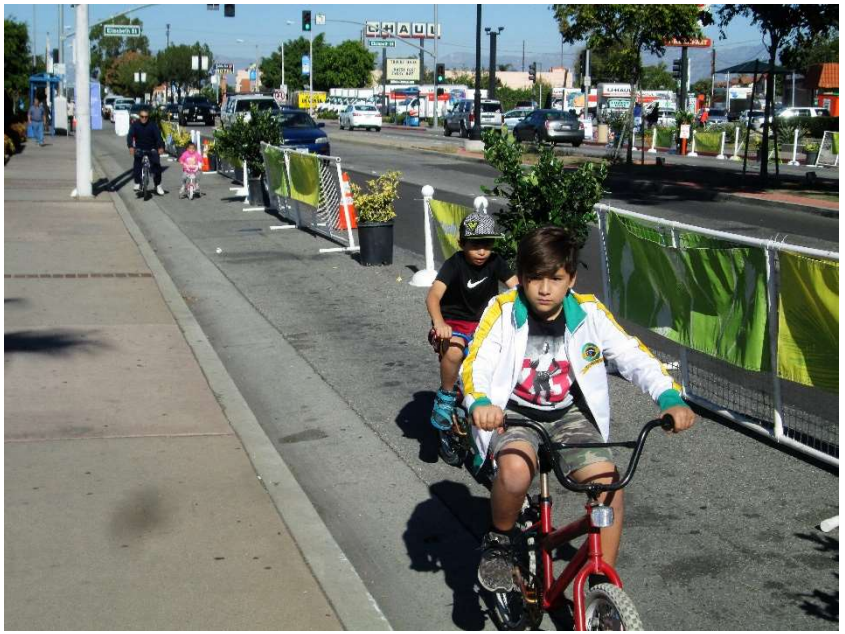


Figure 40. Temporary bike lane pop-up project in Cudahy, CA

Benefits of this approach include:

- Providing the community an opportunity to experience possible improvements prior to permanent installation.
- Allowing City staff to test and revise specific design elements in real world conditions.

Pilot demonstration of back-in angled parking

During discussions with City staff and community members, there has been interest expressed in testing back-in angled parking, as this treatment has proven to be safer for both drivers and bicycle riders in other cities. Since

the general public in Visalia is not yet accustomed to the concept, the City could implement a pilot program on a relatively low volume street, such as Johnson Street, to provide an opportunity for people to adapt to the new system. After collecting sufficient data on the pilot, the City could potentially expand the back-in angled parking design to other locations in Downtown.

Figure 41. Back-in angle parking signage

PARK(ing) Day and Open Streets events

PARK(ing) Day is an international celebration of public space during which community organizations are granted permission by City agencies to convert on-street vehicle parking spaces into temporary parks and mini-plazas for a few hours. This is an opportunity to imagine new possibilities for public spaces along a commercial corridor, and the event can be coordinated with transportation planning efforts to maximize community input.

In addition to PARK(ing) Day, the City could consider hosting an open streets event or a Downtown block party showcase the active transportation possibilities on streets that are typically dedicated to moving automobiles through the neighborhood. During these events the City should encourage restaurants and other establishments to set up on sidewalks or in the streets, which helps to build a sense of community and benefit local businesses.

Figure 42. Open-streets event

Transportation Demand Management Plan for Kaweah Delta Medical Center

The City could partner with Kaweah Delta Medical Center to develop a Transportation Demand Management (TDM) Plan that encourages employees and visitors to travel to and from the hospital complex using methods other than driving alone. This would likely improve the overall transportation situation in Downtown, while potentially making the streets and sidewalks surrounding the Medical Center safer and more enjoyable for people walking and bicycling.

Transformative Visions

Relocate or Relinquish State Route 63 from Court and Locust Streets

The City could work closely with Caltrans to explore relinquishment of State Route 63 through Central Visalia, so that Court and Locust Streets might be redesigned to prioritize local pedestrian and bicycle trips while also providing opportunities for diagonal parking and traffic calming measures. It is important to note, however, that since Route 63 is a designated state

route facility, multiple steps and analysis would need to be conducted and coordinated with Caltrans to provide a justification for the relinquishment.

Convert one-way streets to two-way travel

The City could commission an engineering study and community involvement strategy to explore the conversion of several one-way streets to two-way travel, which would likely create safety benefits due to reduced vehicle speeds. One-way to two-way conversions have also been shown to improve economic conditions for local businesses, since drivers would be traveling more slowly through the community and people would be drawn by the more pedestrian- and bicycle-friendly conditions.

Create paseos through “super blocks” to improve pedestrian permeability

The City could explore creating paseos through large lots that interrupt the street grid, especially in the industrial East Downtown. These pedestrian- and bicycle-only cut-throughs would improve connectivity and accessibility, potentially resulting in economic development opportunities. Particular attention should be given to providing adequate lighting for security and landscaping for comfort.

Figure 43. Walking and Biking "Paseo"

5. Implementation

The implementation section of the Central Visalia Traffic Safety Action Plan outlines the prioritization process and funding options available for the recommendations put forth in the Plan. This section is intended to serve as a guiding document for the recommendations' policy and programming purposes, and can also be used as a blueprint for the ultimate vision of Downtown and East Downtown Visalia. The implementation section describes the cost methodology undertaken to identify improvement costs, the prioritization criteria, and the federal, state, and local funding options.

Cost Estimates

California-based construction material costs were used to estimate the planning-level costs of the recommended bike and pedestrian facility improvements. The costs are on a per mile basis, and represent a typical installation rate for the types of facilities recommended in the Plan. It is important to note, however, that these costs should only be used for planning and future programming purposes. The costs presented include typical contingencies applied for an opinion of probable costs; however, they do not specifically include or itemize more detailed-level costs such as ADA-compliant costs or potential easement and right-of-way costs. Design- and construction-level cost estimates should be developed to determine the feasibility of construction at the specific implementation time, as construction material costs vary greatly by year, and in some cases by season.

Based on the proposed bicycle facility types, it is estimated that all bicycle facility recommendations will cost approximately **$6.56 million**. This planning-level total includes general contingencies such as mobilization, traffic control, surveying, environmental, design, and construction management. The costs do not include drainage, right-of-way acquisition, and utility relocation costs, as those vary greatly by location and should be investigated once the project advances to design. An incremental approach can be adopted to implementing the proposed bike facilities, which hinges on the prioritized recommendations list outlined in the next section. Appendix B includes the list of recommended bike facilities and respective implementation cost.

Similarly, unit costs to implement the recommended sidewalk locations were derived from sources local to California. Contingencies similar to the ones applied to bike facilities were used for sidewalk total costs. Also, potential additional costs such as drainage impacts, right-of-way acquisition, and utility relocation costs are not included. Overall, proposed sidewalk improvements are estimated to cost a total of **$4.5M**. Itemized costs per recommended sidewalk link are provided in Appendix B.

Prioritization

The prioritization process for the bike and pedestrian improvements recommended by this Action Plan included criteria that aimed to address the key elements that if addressed would provide a comfortable and convenient walking and biking environment. The prioritization effort is based on an objective technical approach using factual information. The scoring process is intended to be repeatable and scalable, and is designed so that new criteria can be either added or can replace proposed criteria based on community and Council feedback.

Once the costs for the recommendations were developed, they were utilized as one of the criteria that were used to prioritize and rank the proposed bicycle and pedestrian improvements. The other criteria were access to nearby destinations, traffic volumes and speeds, connectivity to existing bike and pedestrian facilities, and proximity to transit stops.

Each project received either a score of 1 or 0 for each criterion, and the scores for each project were then summed up for a maximum score of 6 based on the six adopted criteria. All criteria were assumed to have equal weighting on the outcome and rank of the specific project. The scoring was specifically applied to each criterion as follows:

1. Accessibility: If the proposed improvement is located on the same block of a major destination (school, parks, or civic/community facility), it receives a score of 1. Starting the pedestrian and bicycle facilities at destinations enables addressing the immediate community needs, and allows for a radial expansion of the network to achieve connectivity.
2. Speed: Segments with speeds higher than 25 mph get a score of 1. Statistics and analysis have proven that speed is a primary factor in causing pedestrian and bicycle deaths and serious injuries. By

prioritizing facilities on higher-speed roadways, people are able to permeate the transportation network by walking and bicycling along and across corridors that are currently considered physical barriers.

3. Traffic Volume: Segments that are along arterials get a score of 1, considering it would be a "higher stress facility" and thus in need of a facility improvement.
4. Cost/Feasibility: Recommendations that exceed the average bike or sidewalk implementation cost get a score of 0, based on the assumption that a cheaper improvement is more feasible to program.
5. Connectivity: If a proposed segment connects to an existing facility, it gets a score of 1. By creating a more connected pedestrian and bicycle network, people will be more likely to use the facilities, and to take longer trips by means other than the car.
6. Proximity to transit: If the segment is within a block of a transit stop, it gets a score of 1. Studies have shown that providing access to transit through enhancing pedestrian and bicycle facilities has a direct benefit on increasing transit ridership. Through incorporating the transit network as a priority measure, this Plan aims to enhance the first/last mile connectivity and create a seamless, multimodal network across all modes.

The prioritization process revealed that street segments along Main Street, Mineral King Avenue, Locust Street, and Court Street received the highest scores based on the criteria for implementing the recommended bicycle improvements. For the proposed sidewalk implementations, segments along Murray Avenue received the highest scores. Detailed scoring tables for both the bicycle and pedestrian recommendations are provided in Appendix C.

Funding Mechanisms

A variety of sources exist to fund bicycle and pedestrian infrastructure projects, programs, and studies. Local and regional funding sources that can be used for construction or maintenance of bicycle or pedestrian improvements, along with statewide and federal grant programs, are described on the following pages. The reach of these funding sources can be maximized through developing creating strategies that address all elements of a successful and 'complete' pedestrian and bicycle system; including crossings, parking, and signalization in addition to the on-road facilities.

Local and Regional Funding Sources

Measure R

Measure R is a ½ cent sales tax for transportation improvements originally passed in 2006. The sales tax is anticipated to generate a total of $652m over its 30-year lifespan. The program dedicates 50% of funds to regional projects, 35% to local projects, and 14% to transit/bike/environmental projects.

State Funding Sources

Project champions will work with Caltrans to identify stand-alone projects as well as ancillary projects from the list that qualify for funding through the State Highway Operation and Protection Program. It is unlikely that projects will be prioritized for the Interregional Transportation Improvement Program, but should this be an option, coordination between the City of Visalia, Tulare County Association of Governments, and Caltrans will be critical.

Active Transportation Program (ATP)

In 2013, Governor Brown signed legislation creating the Active Transportation Program (ATP). This program is a consolidation of the Federal Transportation Alternatives Program (TAP), California's Bicycle Transportation Account (BTA), and Federal and California Safe Routes to School (SRTS) programs.

The ATP program is administered by Caltrans Division of Local Assistance, Office of Active Transportation and Special Programs. Program goals include:

- Increase the proportion of trips accomplished by biking and walking,
- Increase safety and mobility for nonmotorized users,
- Advance the active transportation efforts of regional agencies to achieve greenhouse gas reduction goals,
- Enhance public health,

- Ensure that disadvantaged communities fully share in the benefits of the program, and
- Provide a broad spectrum of projects to benefit many types of active transportation users.

The California Transportation Commission ATP Guidelines are available here: http://www.dot.ca.gov/hq/LocalPrograms/atp/index.html

The minimum request for non-SRTS projects is $250,000. There is no minimum for SRTS projects. Eligible pedestrian and SRTS projects include:

- Infrastructure Projects: Capital improvements that will further program goals, typically including planning, design, and construction.
- Non-Infrastructure Projects: Education, encouragement, enforcement, and planning activities that further program goals. The focus of this category is on pilot and start-up projects that can demonstrate funding for ongoing efforts.
- Infrastructure projects with non-infrastructure components

Generally speaking, successful ATP applications include widespread community support and support data for the proposed project. These projects are clearly the community and even regional priority projects. Additionally, successful projects prove they meet the goals of the ATP by improving safety and access for bicyclists and pedestrians.

More information: http://www.dot.ca.gov/hq/LocalPrograms/atp/

Sustainable Communities Grant

Sustainable Communities Grants are awarded from the California Department of Transportation to fund plans for walking, biking and safe routes to school. A call for grant applications is generally released late summer.

More information: https://dot.ca.gov/programs/transportation-planning/regional-planning/sustainable-transportation-planning-grants

Office of Traffic Safety (OTS) Grants

Office of Traffic Safety Grants are supported by Federal funding under the National Highway Safety Act and SAFETEA-LU. In California, the grants are administered by the Office of Traffic Safety. Grants are used to establish new traffic safety programs, expand ongoing programs or address deficiencies in current programs. Eligible grantees are governmental agencies, state colleges, state universities, local city and county government agencies, school districts, fire departments, and public emergency services providers. Grant funding cannot replace existing program expenditures, nor can traffic safety funds be used for program maintenance, research, rehabilitation, or construction. Grants are awarded on a competitive basis, and priority is given to agencies with the greatest need. Evaluation criteria to assess need include potential traffic safety impact, crash statistics and rankings, seriousness of problems, and performance on previous OTS grants. The California application deadline is January of each year. There is no maximum cap to the amount requested, but all items in the proposal must be justified to meet the objectives of the proposal.

More information: http://www.ots.ca.gov/

Sustainable Transportation Planning Grants

Caltrans Sustainable Transportation Planning Grants are available to communities for planning, study, and design work to identify and evaluate projects, including conducting outreach or implementing pilot projects. The objective of this funding is to advance the appropriate Regional Transportation Plan's (RTP) Sustainable Communities Strategies (SCS) through multimodal transportation and land use planning projects. This program is broken into four types of grants in the 2019 application:

- Sustainable Communities Competitive Grants ranged from $50k to $1m, for a total of $17m in 2019. City of Visalia is eligible to apply as a primary applicant, or a sub-applicant.
- Sustainable Communities Formula Grants are allocated to MPOs based on the same formula used to distribute FHWA metropolitan Planning (PL) funds, and totaled $12.5m in 2019. Only MPOs are eligible to apply.

- Strategic Partnership Grants are slightly unique from the other three grants in this program because they fund planning studies in partnership with Caltrans that address the regional, interregional and statewide needs of the state highway system, rather than from a more multimodal perspective. The City of Visalia is eligible to apply as a sub-applicant under an MPO or RTPA as the primary applicant.
- Strategic Partnerships - Transit Grants were funded at $1.5 million in 2019, with a minimum award of $100k, and a maximum award of $1.5m. Only MPOs are eligible to apply.

Communities are typically required to provide an 11.47 percent local match for the Sustainable Communities Grants (Competitive and Formula) and the Strategic Partnership Transit grants, but there exists a 20% local match for Strategic Partnership Grants. Staff time or in-kind donations are eligible to be used for the match provided the required documentation is submitted.

Funds are programed by Caltrans. More information: https://dot.ca.gov/programs/transportation-planning/regional-planning/sustainable-transportation-planning-grants

Solutions for Congested Corridors Program

Funded by SB1, the Congested Corridors Program strives to reduce congestion in highly traveled and congested roads through performance improvements that balance transportation improvements, community impacts, and environmental benefits. This program can fund a wide array of improvements including bicycle facilities and pedestrian facilities. Eligible projects must be detailed in an approved corridor-focused planning document. These projects must include aspects that benefit all modes of transportation using an array of strategies that can change travel behavior, dedicate right of way for bikes and transit, and reduce vehicle miles traveled.

Funds are programed by the CTC. More information: https://catc.ca.gov/programs/sb1/solutions-for-congested-corridors-program#targetText=The%20Solutions%20for%20Congested%20Corridors,and%20that%20provide%20environmental%20benefits.

Affordable Housing and Sustainable Communities Program

The AHSC program funds land-use, housing, transportation, and land preservation projects that support infill and compact development that reduces greenhouse gas emissions. Projects must fall within one of three project area types: transit-oriented development, integrated connectivity project, or rural innovation project areas. Fundable activities include: affordable housing developments, sustainable transportation infrastructure, transportation-related amenities, and program costs.

Funds are programmed by the Strategic Growth Council and implemented by the Department of Housing and Community Development. More information: http://www.hcd.ca.gov/grants-funding/active-funding/ahsc.shtml

Cultural, Community and Natural Resources Grant Program – Proposition 68

Proposition 68 authorizes the legislature to appropriate $40 million to the California Natural Resources Agency to protect, restore, and enhance California's cultural, community, and natural resources. One type of eligible project that this program can fund are projects that develop future recreational opportunities including: creation or expansion of trails for walking, bicycling, and/or equestrian activities and development or improvement of trailside and trailhead facilities, including visitor access to safe water supplies.

Funds are programmed by the California Natural Resources Agency. More information: http://bondaccountability.resources.ca.gov/Prop68Guidelines.aspx

Urban Greening Grants

Urban Greening Grants support the development of green infrastructure projects that reduce GHG emissions and provide multiple benefits. Projects must include one of three criteria, most relevantly: reduce commute vehicle miles travels by constructing bicycle paths, bicycle lanes or pedestrian facilities that provide safe routes for travel between residences, workplaces, commercial centers, and schools. Eligible projects include green streets and alleyways and non-motorized urban trails that provide safe routes for travel between residences, workplaces, commercial centers, and schools.

Funds are programmed by the California Natural Resources Agency. More information: http://resources.ca.gov/grants/urban-greening/

Local Partnership Program

This program provides local and regional agencies that have passed sales tax measures, developer fees, or other transportation-imposed fees to fund road maintenance and rehabilitation, sound walls, and other transportation improvement projects using SB1 funds. Jurisdictions with these taxes or fees are then eligible for a formulaic annual distribution of no less than $100,000. These jurisdictions are also eligible for a competitive grant program. Local Partnership Program funds can be used for a wide variety of transportation purposes including roadway rehabilitation and construction, transit capital and infrastructure, bicycle and pedestrian improvements, and green infrastructure.

Funds are programmed by the CTC. More information: https://catc.ca.gov/programs/sb1/local-partnership-program

Road Maintenance and Rehabilitation Program

Senate Bill 1 created the Road Maintenance and Rehabilitation Program (RMRP) to address deferred maintenance on state highways and local road systems. Program funds can be spent on both design and construction efforts. On-street active transportation related maintenance projects are eligible if program maintenance and other thresholds are met. Funds are allocated to eligible jurisdictions. More information can be found here: https://www.sco.ca.gov/aud_road_maintenance_sb1.html

Funds are programmed by the State Controller's Office with guidance from the CTC. More information:

Transformative Climate Communities Program

The Transformative Climate Communities Program (TCCP) was authorized through Assembly Bill (AB) 2722 to support the "development and implementation of neighborhood-level transformative climate community plans that include multiple, coordinated greenhouse gas emissions reduction projects that provide local economic, environmental, and health benefits to disadvantaged communities." The TCCP has contributed funding to a wide variety of project types relevant to Visalia's Traffic Safety Action Plan, including but not limited to:

- Transit stations and facilities
- Bicycle and car share programs
- Urban greening projects
- Bicycle and pedestrian facilities
- Health and well-being projects

Rounds one and two of TCCP awarded $133 million and $46 million respectively. More information can be found here: http://sgc.ca.gov/programs/tcc/

Regional Parks Program

The Regional Parks Program distributes funds from the California Department of Parks and Recreation for acquisition of new or enhanced public access and use, including but not limited to trails, regional sports complexes, and visitors' centers. Eligible applicants include counties, regional park districts, special districts joint powers authorities and nonprofits.

More information: https://www.parks.ca.gov/?page_id=29940

Transformative Climate Communities Program Implementation Grant

The Transformative Climate Communities Program Implementation Grants, run by the California Strategic Growth Council, can be used toward the following objectives:

- equitable housing and neighborhood development
- affordable housing land acquisition
- transit access and mobility
- solar efficiency
- water efficiency
- recycling and waste management
- urban greening and green infrastructure
- land conservation
- health and well-being

At least three such projects must be implemented with each grant. In 2019/2020, two grants were awarded in the amount of $28.2m each.

More information: http://sgc.ca.gov/programs/tcc/

Infrastructure State Revolving Fund (ISRF) Program

The ISRF program gives loans from $50k to $25m with terms for the useful like of the projects up to 30 years. Applications are submitted on a rolling basis and reviewed monthly. These funds can be used for a variety of infrastructure types, including city streets, county highway, public transit, parks, recreational facilities, cultural and social facilities, and sewage collection and treatment.

More information: http://www.ibank.ca.gov/infrastructure-state-revolving-fund-isrf-program/

Federal Funding Sources

Fixing America's Surface Transportation Act (FAST Act)

The FAST Act, which replaced Moving Ahead for Progress in the 21st Century Act (MAP-21) in 2015, provides long-term funding certainty for surface transportation projects, meaning States and local governments can move forward with critical transportation projects with the confidence that they will have a Federal partner over the long term (at least five years).

The law makes changes and reforms to many Federal transportation programs, including streamlining the approval processes for new transportation projects and providing new safety tools. It also allows local entities that are direct recipients of Federal dollars to use a design publication that is different than one used by their State DOT, such as the *Urban Bikeway Design Guide by the* National Association of City Transportation Officials.

More information: https://www.transportation.gov/fastact

Surface Transportation Block Grant Program (STBGP)

The Surface Transportation Block Grant Program (STBGP) provides states with flexible funds which may be used for a variety of highway, road, bridge, and transit projects. A wide variety of bicycle and pedestrian improvements are eligible, including trails, sidewalks, bike lanes, crosswalks, pedestrian signals, and other ancillary facilities. Modification of sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA) is also an eligible activity. Unlike most highway projects, STBGP-funded pedestrian facilities may be located on local and collector roads which are not part of the Federal-aid Highway System.

Fifty percent of each state's STBGP funds are sub-allocated geographically by population. In Concord, funds are funneled through the California Department of Transportation (Caltrans) to MPOs in the state. The remaining 50 percent may be spent in any area of the state.

STBGP Set-Aside: Transportation Alternatives Program

Transportation Alternatives Program (TAP) has been folded into the Surface Transportation Block Grant Program (STBGP) as a set-aside funded at $835 million for 2016 and 2017, and $850 million for 2018, 2019, and 2020. Up to 50 percent of the set-aside is able to be transferred for broader STBGP eligibility.

Improvements eligible for this set-aside fall under three categories: Transportation Enhancements (TE), Safe Routes to School (SR2S), and the Recreational Trails Program (RTP). These funds may be used for a variety of pedestrian and streetscape projects including sidewalks, multi-use paths, and rail-trails. TAP funds may also be used for selected education and encouragement programming such as Safe Routes to School.

Non-profit organizations (NGOs) are now eligible to apply for funding for transportation safety projects and programs, including Safe Routes to School programs and bike share.

Complete eligibilities for TAP include:

1. Transportation Alternatives. This category includes the construction, planning, and design of a range of pedestrian infrastructure including "on–road and off–road trail facilities for pedestrians, bicyclists, and other active forms of transportation, including sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic calming techniques, lighting and other safety–related infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act of 1990." Infrastructure projects and systems that provide "Safe Routes for Non-Drivers" is still an eligible activity.

2. Recreational Trails. TAP funds may be used to develop and maintain recreational trails and trail-related facilities for both active and motorized recreational trail uses. Examples of trail uses include hiking, in-line skating, equestrian use, and other active and motorized uses. These funds are available for both paved and unpaved trails, but may not be used to improve roads for general passenger vehicle use or to provide shoulders or sidewalks along roads.
3. Safe Routes to School. The Safe Routes to School (SRTS) program aims to increase the number of children walking and bicycling to school by making it safer for them to do so. All school levels are eligible, from Transitional Kindergarten through 12th grade.
4. Planning, designing, or constructing roadways within the right-of-way of former Interstate routes or divided highways. At the time of writing, detailed guidance from the Federal Highway Administration on this new eligible activity was not available.

These programs are funded in California through the Active Transportation Program.

405 National Priority Safety Program

Approximately $14 million annually (5 percent of the $280 million allocated to the program overall) will be awarded to States to decrease bike and pedestrian crashes with motor vehicles. States where bike and pedestrian fatalities exceed 15 percent of their overall traffic fatalities will be eligible for grants that can be used for:

- Training law enforcement officials on bike/pedestrian related traffic laws
- Enforcement campaigns related to bike/pedestrian safety
- Education and awareness programs related to relevant bike/pedestrian traffic laws

Highway Safety Improvement Program (HSIP)

The Highway Safety Improvement Program (HSIP) provides $2.4 billion nationally for projects that help communities achieve significant reductions in traffic fatalities and serious injuries on all public roads, bikeways, and walkways. Non-infrastructure projects are no longer eligible. Eligible projects are no longer required to collect data on all public roads. Pedestrian safety improvements, enforcement activities, traffic calming projects, and crossing treatments for active transportation users in school zones are examples of eligible projects. All HSIP projects must be consistent with the state's Strategic Highway Safety Plan.

The 2017 California SHSP is located here: https://dot.ca.gov/-/media/dot-media/programs/traffic-operations/documents/f0017926-ca-hsip-2017.pdf

Congestion Mitigation and Air Quality Improvement Program (CMAQ)

The Congestion Mitigation and Air Quality Improvement Program (CMAQ) provides funding for projects and programs in air quality nonattainment and maintenance areas for ozone, carbon monoxide, and particulate matter which reduce transportation related emissions. These federal dollars can be used to build pedestrian and bicycle facilities that reduce travel by automobile. Purely recreational facilities generally are not eligible.

To be funded under this program, projects and programs must come from a transportation plan (or State (STIP) or Regional (RTIP) Transportation Improvement Program) that conforms to the SIP and must be consistent with the conformity provisions of Section 176 of the Clean Air Act. States are now given flexibility on whether to undertake CMAQ or STBGP-eligible projects with CMAQ funds to help prevent areas within the state from going into nonattainment.

In Tulare County, CMAQ funding is administered through the Tulare County Association of Governments (TCAG) on the local level. These funds are eligible for transportation projects that contribute to the attainment or maintenance of National Ambient Air Quality Standards in non-attainment or air-quality maintenance areas. Examples of eligible projects include enhancements to existing transit services, rideshare and vanpool programs, projects that encourage pedestrian transportation options, traffic light synchronization projects that improve air quality, grade separation projects, and construction of high-occupancy vehicle (HOV) lanes. Projects that are proven to reduce direct PM2.5 emissions are to be given priority.

More information:
https://www.fhwa.dot.gov/map21/guidance/guidecmaq.cfm

Surface Transportation Program (STP)

The Surface Transportation Program (STP) provides states with flexible funds which may be used for a variety of highway, road, bridge, and transit projects. A wide variety of pedestrian and bicycle improvements are eligible, including trails, sidewalks, crossings, pedestrian signals, and other ancillary facilities. Modification of sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA) is also an eligible activity. Unlike most highway projects, STP-funded facilities may be located on local and collector roads which are not part of the Federal-aid Highway System. Fifty percent of each state's STP funds are sub-allocated geographically by population. These funds are funneled through Caltrans to the MPOs in the state. The remaining 50 percent may be spent in any area of the state.

More information:
https://www.fhwa.dot.gov/map21/guidance/guidestprev.cfm

Partnership for Sustainable Communities

Founded in 2009, the Partnership for Sustainable Communities is a joint project of the Environmental Protection Agency (EPA), the U.S. Department of Housing and Urban Development (HUD), and the U.S. Department of Transportation (USDOT). The partnership aims to "improve access to affordable housing, more transportation options, and lower transportation costs while protecting the environment in communities nationwide." The Partnership is based on five Livability Principles, one of which explicitly addresses the need for pedestrian infrastructure ("Provide more transportation choices: Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health").

The Partnership is not a formal agency with a regular annual grant program. Nevertheless, it is an important effort that has already led to some new grant opportunities (including the TIGER grants). Visalia should track Partnership communications and be prepared to respond proactively to announcements of new grant programs.

More information: http://www.epa.gov/smartgrowth/partnership/

Better Utilizing Investments to Leverage Development (BUILD) Transportation Discretionary Grant Program

BUILD Transportation Discretionary Grants are distributed through the US Department of Transportation for a wide range of surface transportation infrastructure projects that help local and state agencies or organizations implement projects that will help to advance national goals. This is a highly competitive program with opportunity for high cost projects that are projected to make a significant impact. This program was previously known as the Transportation Investment Generating Economic Recovery (TIGER) Program.

More information: https://www.transportation.gov/BUILDgrants/about

Other Sources

Safe Routes to Parks Activating Communities Program

Nonprofits can apply for Safe Routes to Parks Activating Communities Program for action plans and implementation activities that improve access to parks. This may include right-of-way acquisition, maintenance and street design. In 2019, 12 projects were awarded $12,500 each.

More information: https://www.saferoutespartnership.org/healthy-communities/saferoutestoparks/2019

Phasing

The bicycle and pedestrian facility recommendations presented in this Plan provide guidelines for creating a more walkable and bikeable environment in Central Visalia. An objective prioritization process was applied, street design guidelines were established, potential funding mechanisms were compiled, and cross-sections were developed for key corridors. In order to further inform the process and develop a timeline for these recommendations, the improvements were categorized into implementation timelines. The established timelines reflect short-, mid-, and long-term implementation phases. A short-term improvement refers to a recommendation that can or should be programmed for implementation within the next 1-5 years. A mid-term improvement reflects a recommendation that requires additional planning, coordination, and feasibility analysis to implement in 5-10 years. A long-term recommended improvement will require multiple processes to accomplish, due to policy and design implications and coordination with partner agencies. These improvements are planned for implementation in the 10+ year horizon. The short-, mid-, and long-range recommendations are identified as phases 1, 2, and 3, respectively.

The following is a summary of the bicycle and pedestrian facility phasing processes.

Bicycle Facility Phasing

Bicycle facility recommendations are grouped into short-, mid- and long-term improvements based on the following criteria:

- A bicycle facility is considered implementable in the short-term if it only involves resurfacing, restriping, and/or lane narrowing based on the assessments performed as part of this Plan.
- A bicycle facility is grouped into the mid-term phase if it involves removal of public parking and/or minor reconstruction efforts.
- Bicycle facility recommendations that would require road diets, in some cases in addition to on-street parking removal, are considered long-term improvements. Additionally, Class I shared-use paths and Class IV separated bikeways are assumed to involve major reconstruction efforts, so they are grouped into Phase 3. Finally, roadway ownership and maintenance often impact improvement recommendations and approaches. For this reason, recommendations to State Road facilities are included in Phase 3, with the assumption that they would require additional coordination, analysis, and vetting from state agencies to align policies and roadway functionality.

Table 5 shows the bicycle facility recommendations, categorized by Phase.

Table 5. Bicycle Facility Phasing Plan

PHASE	LOCATION	FROM / AT	TO	EXISTING FACILITY	IMPROVEMENT	NOTES
1	Acequia Ave	Bridge St	Santa Fe St	Class II	Class II bike lanes – upgrade	At next resurfacing, restripe to 6 ft bike lanes on each side
1	Acequia Ave	Church St	Bridge St	Class II	Class II bike lanes – upgrade	At next resurfacing, restripe to 6 ft bike lanes on each side (use existing space between bike lane and valley gutter)
1	Acequia Ave	Santa Fe St	Burke St	Class III	Class II bike lanes – 6 ft	
1	Acequia Ave	West St		Shoulder	Class II bike lanes	Restripe travel lanes at 11 ft and turn lane at 10 ft to maintain bike lanes at intersection approach
1	Burke Ave	Center Ave	Acequia Ave	None	Class II bike lanes – 7 ft	Restripe travel lanes to 11 ft and on-street parking to 7 ft
1	Center Ave	Giddings St	Tipton St	None	Class II bike lanes – 7 ft	Could add buffer if desired later
1	Main St	Johnson St	Willis St	None	Class II bike lanes – 7 ft	From Johnson, add dashed lines through intersection to show shift in alignment
1	Main St	Santa Fe St	Ben Maddox Way	None	Class II bike lanes	Maintain existing travel lanes and on street parking. Bike lane width will vary from 5-6 ft near intersections up to 7 ft wherever feasible
1	Main St	Stevenson St	Johnson St	None	Class II bike lanes – 7 ft with 1 ft buffer	
1	Main St	West St	Santa Fe St	None	Class III with sharrows in right lane	Sharrows should be positioned in the center of the lane, two stencils per block
1	West St	Center Ave	Mineral King Ave	None	Class II bike lanes – 5 ft	Maintain existing travel lanes and mark on-street parking at 7 ft. Buffered bike lanes could be accommodated by removing on-street parking on one side.
1	Willis St	Murray Ave	Acequia Ave	None	Class II bike lanes – 5 ft	Maintain existing travel lanes and mark on-street parking at 7 ft. Buffered bike lanes could be accommodated by removing on-street parking on one side.
2	Acequia Ave	Floral St		Obstructed	Remove curb extension or restripe travel lanes at 10 ft	Existing curb extension blocks bike lanes
2	Burke Ave	Acequia Ave	Mineral King Ave	None	Class II bike lanes – 7 ft	Remove on-street parking on one side and mark travel lanes at 11 ft.
2	Burke Ave	Goshen Ave	Center Ave	None	Class II bike lanes – 7 ft	Remove on-street parking on one side and mark travel lanes at 11 ft.
2	Giddings St	Murray Ave	Mineral King Ave	Class III	Class II bike lanes – 5 ft	Maintain existing travel lanes and mark on-street parking at 7 ft. Buffered bike lanes could be accommodated by removing on-street parking on one side.

PHASE	LOCATION	FROM / AT	TO	EXISTING FACILITY	IMPROVEMENT	NOTES
2	Locust St	Oak St	Olive Ave	Class III	Class II bike lane – 7 ft, on west side	Remove on-street parking from one side, or remove one travel lane. Travel lanes would be reduced to 11 ft and on-street parking to 7 ft.
2	Main St	Conyer St	Stevenson St	None	Class II bike lanes – 7.5 ft	Remove 9 parking stalls on south side to maintain lane alignment (surface lot located 1 block away)
2	Main St	Willis St	West St	None	Class II bike lanes	Eliminate 5 parking stalls on north side (parking deck located on this block)
2	Main St	Willis St		None	Bike box in righthand lane on west approach	Transition from Class II to Class III
2	Murray Ave	Giddings St	Santa Fe Ave	Class III	Class II bike lanes with 2-3 ft buffer where feasible	Remove on-street parking on one side
3	Acequia Ave	Locust St	Court St	Class III	Class II bike lanes – 6 to 7 ft	Remove on-street parking on north side, remove center turn lane (keep turn pockets)
3	Court St	Oak St	Olive Ave	Class III	Class II bike lane – 7 ft, on east side	Remove on-street parking from one side, or remove one travel lane. Travel lanes would be reduced to 11 ft and on-street parking to 7 ft.
3	Main St	Giddings St	Conyer St	None	Class II bike lanes – 7.5 ft	Remove one eastbound lane (current AADT is 7,197 bi-directional); could add buffer if desired later
3	Mineral King Ave	Conyer St	Ben Maddox Way	None	Class IV separated bikeway – 6 ft bikeway with 3 ft buffer to include vertical barrier element	Compatible with three 12-ft travel lanes, bikeway to be on north side. At intersections, use buffer area to create pedestrian refuge at crossings.
3	Mineral King Ave	Giddings St	Conyer St	None	Class II bike lane – 7 ft with 3 ft buffer on each side	Road configuration with school drop off lane provides room for the buffered lane between travel lanes and the drop-off lane. Would require shifting lanes 5-6 ft south, into excess space behind the angled parking on the south side
3	Santa Fe St	Acequia Ave	Mineral King Ave	None	Class IV separated bikeway – 6 ft bikeway with 4 ft buffer to include vertical barrier element	Current street width is 60 ft. Convert 12 ft travel lanes, 8' on-street parallel parking on both sides
3	Santa Fe St	Center Ave	Acequia Ave	None	Class IV separated bikeway – 5.5 ft bikeway with 2.5 ft buffer to include vertical barrier element	Current street width is 46 ft. Restripe to 11 ft travel lanes, 7 ft parallel on-street parking on one side. Remove on-street parking on one side to allow for buffered bike lanes (7 ft lane, 2 ft buffer).
3	Santa Fe St	Murray Ave	Center Ave	None	Class IV separated bikeway – 6 ft bikeway with 4 ft buffer to include vertical barrier element	Current street width is 62 ft. Restripe to 12 ft travel lanes, 9 ft parallel on-street parking on both sides.
3	Shared-Use Path along Railroad Tracks	Giddings St	Willis St	None	Class I shared-use path – 10 ft preferred; 8 ft minimum	Continue existing path just west of Giddings St. The shared-use path should clearly delineate the bike route through signage and striping. In some areas where right-of-way is constrained, the path may be reduced to a minimum of 8 feet. Easements may need to be negotiated with private property owners (not included in cost).

Sidewalk Recommendations Phasing

Recommendations for filling in sidewalk gaps are phased utilizing a different approach than that for bicycle facilities. The intent of categorizing the sidewalk recommendations into the different time horizons is to prioritize those that create a connected sidewalk network near schools, parks, or other key destinations. A second phase of sidewalk improvements is established based on the proposed sidewalk installations that are fairly close to the downtown core, complete a connected block, or are along a transit facility. Lastly, sidewalk improvements are categorized into the long-term implementation horizon if they are located along the periphery of Central Visalia, where land uses are either low density or are prime for redevelopment. This enables the City to create a corridor plan that potential developers can use as a guide for redeveloping the built environment along these corridors, including the installation of sidewalks.

Table 6 on page 76 illustrates the sidewalk recommendations, categorized by phase.

As shown, sidewalk recommendations in the northwest portion of the study area are prioritized for implementation and recommended for Phase 1 programming. These improvements would create a connected network near Highland Elementary School, Recreation Park, Visalia Rawhide Baseball Club, places of worship, and other major destinations.

Phase 2 sidewalk recommendations consist of the potential improvements near Santa Fe Street and Murray Avenue. The sidewalk improvements in this area provide a block of connected sidewalks that are along bus routes.

Sidewalk recommendations along Ben Maddox Way and its adjacent streets are grouped into Phase 3. There are several large lots that are currently undeveloped in that area, which creates an opportunity for the City to incorporate these recommendations as part of an overall vision for the neighborhood. This could potentially result in a public-private partnership, where developers can be part of reimagining the corridors.

Table 6. Sidewalk Phasing Plan

PHASE	LOCATION	FROM	TO	SIDE	LENGTH (FT)
1	Bridge St	Murray Ave	South of Murray Ave	West	130
1	Conyer St	Goshen Ave	North of Murray Ave	West	110
1	Dudley St	Goshen Ave	North of Murray Ave	East	180
1	Dudley St	South of Goshen Ave	North of Murray Ave	West	80
1	Giddings St	Goshen Ave	Murray Ave	West	220
1	Goshen Ave	Dudley St	East of Dudley St	South	190
1	Goshen Ave	Stevenson St	East of Stevenson St	South	80
1	Goshen Ave	West of Jacob St	Jacob St	North	50
1	Jacob St	Goshen Ave	Murray Ave	East	220
1	Jacob St	Railroad	School Ave	East	40
1	Jacob St	South of Murray Ave	Railroad	West	50
1	Johnson St	Murray Ave	School Ave	West	260
1	Johnson St	South of Goshen Ave	Murray Ave	West	130
1	Murray Ave	Conyer Ave	Johnson St	South	590
1	Murray Ave	Jacob St	East of Jacob St	North	110
1	Murray Ave	Railroad	Dudley St	South	70
1	Murray Ave	West of Johnson St	Johnson St	North	130
1	School Ave	East of Conyer St	Stevenson St	South	210
1	School Ave	Jacob St	Johnson St	North	930
2	Burke St	School Ave	Railroad	West	230
2	Murray Ave	East of Santa Fe St	Tipton St	North	100
2	Murray Ave	Tipton St	Burke St	North	1052
2	Murray Ave	West of Bridge St	Bridge St	South	140
2	Santa Fe St	Murray Ave	School Ave	East	270
2	Santa Fe St	School Ave	South of School Ave	East	120
2	School Ave	Santa Fe St	Tipton St	North	300
2	School Ave	Santa Fe St	East of Santa Fe St	South	80
2	School Ave	Tipton St	Burke St	North	870
2	Stevenson St	Goshen Ave	North of Murray Ave	East	120
2	Tipton St	Murray Ave	School Ave	West	270
2	Tipton St	North of Murray Ave	Murray Ave	West	240
3	Ben Maddox Way	Goshen Ave	South of Center Ave	West	1330

PHASE	LOCATION	FROM	TO	SIDE	LENGTH (FT)
3	Ben Maddox Way	Main St	Mineral King Ave	West	960
3	Center Ave	East of Burke St	Ben Maddox Way	South	800
3	Center Ave	East of Burke St	Ben Maddox Way	North	650
3	Main St	West of Ben Maddox Way	Ben Maddox Way	South	280
3	Murray Ave	West of Burke St	Ben Maddox Way	South	1850