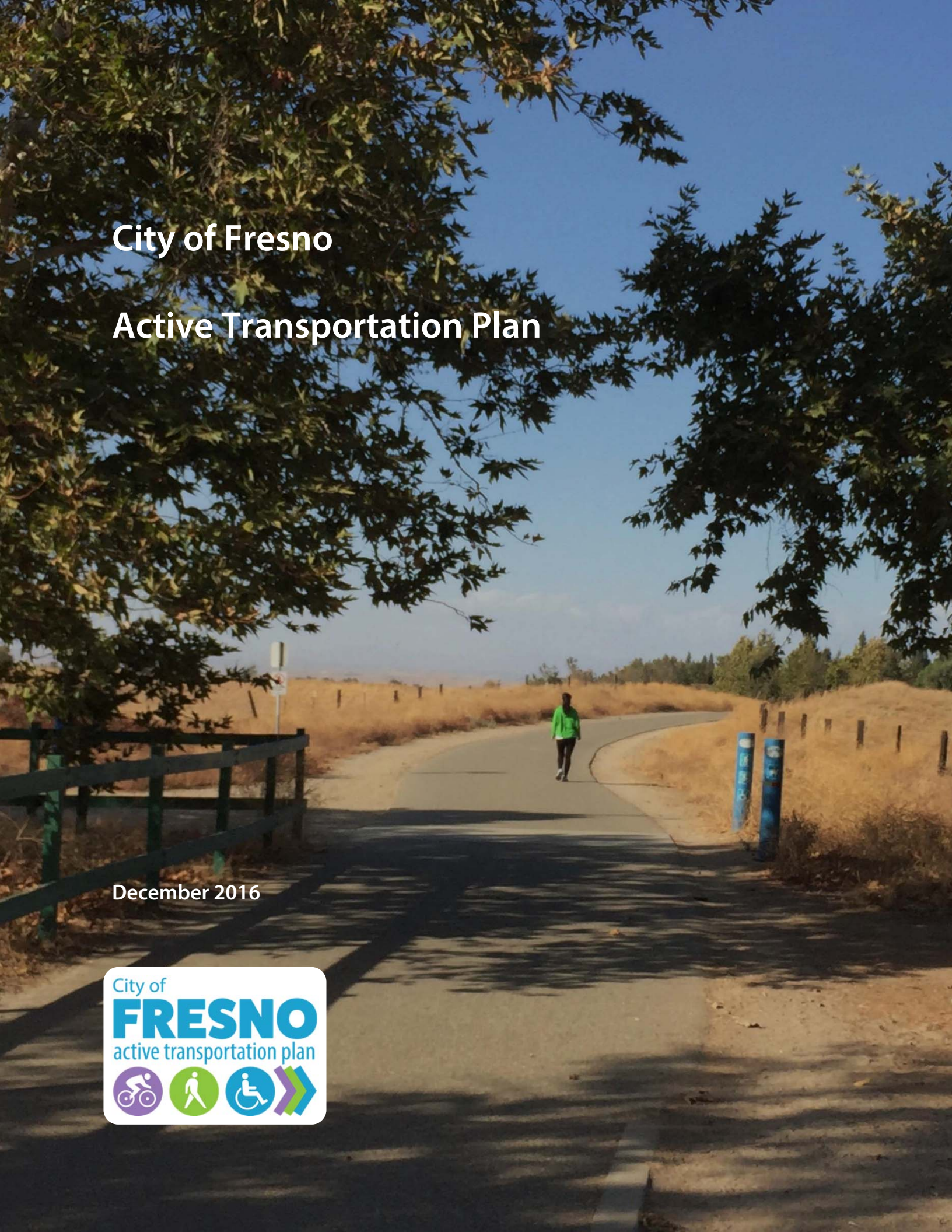


City of Fresno

Active Transportation Plan

December 2016

City of FRESNO active transportation plan

[This page intentionally left blank]

Acknowledgements

The City of Fresno thanks the community and public agencies who participated on the stakeholder advisory committee and all residents who contributed to the creation of this plan.

Alternate formats of this document will be provided upon request. To request alternate formats, contact:

Citywide ADA Coordinator
City of Fresno
2600 Fresno Street
Fresno, CA 93721
(559) 621-8716

Cover: Lewis S. Eaton Trail, Woodward Park

[This page intentionally left blank]

Table of Contents

[This page intentionally left blank]

List of Figures

List of Tables

[This page intentionally left blank]

EXECUTIVE SUMMARY

The Fresno Active Transportation Plan (ATP) is a comprehensive guide outlining the vision for active transportation in the City of Fresno, and a roadmap for achieving that vision. The ATP envisions a complete, safe, and comfortable network of trails, sidewalks, and bikeways that serves all residents of Fresno. This plan seeks to achieve the following goals:

- Equitably improve the safety and perceived safety of walking and bicycling in Fresno
- Increase walking and bicycling trips in Fresno by creating user-friendly facilities
- Improve the geographic equity of access to walking and bicycling facilities in Fresno
- Fill key gaps in Fresno's walking and bicycling networks

To achieve these goals, the ATP proposes a long-term, comprehensive network of citywide bikeways, trails, and sidewalks that connect all parts of Fresno. Since this build-out network will take many years to complete, the ATP also identifies a priority network of connected bikeways and priority pedestrian areas to focus the City's efforts in the near-term. These priority networks provide links to key destinations, support existing and future walking and biking activity areas, and equitably serve neighborhoods throughout the City.

The recommended build out network would add 166 miles of Class I Bike Paths, 691 miles of Class II Bike Lanes, 69 miles of Class III Bike Routes, 21 miles of Class IV Separated Bikeways, and 661 miles of sidewalks. This recommended network only includes planned Class IV facilities in locations identified in the Downtown Neighborhoods Community Plan, Fulton Corridor Specific Plan, and on Maroa Avenue and Fresno Street as alternatives to Blackstone Avenue. However, recommendations out of the Fresno Council of Governments Separated Bikeway Feasibility Study may identify additional corridors for Class IV implementation, and some corridors planned for Class II bike lanes in this plan may be considered for Class IV treatment during the project development phases.

The recommended network also includes several grade-separated crossings of barriers such as freeways, canals, and railroad tracks. The ATP also makes recommendations for bicycle detection at traffic signals, destination signage, bicycle parking, showers and changing facilities, and bikeway maintenance.

The estimated total cost of the proposed network is $1.3 billion, while the estimated cost for the priority network is $114.7 million. Implementation of the entire network facilities will occur over many years. Several improvements can be implemented relatively easily; however, other improvements are more complex and are not anticipated to occur for many years. Facilities will be constructed in conjunction with adjacent land development, roadway maintenance and capacity enhancement projects, as well as active transportation infrastructure projects using funds available from several different local, state, and federal funding sources.

1. INTRODUCTION

Purpose

The Fresno Active Transportation Plan (ATP) is a comprehensive guide outlining the vision for active transportation in the City of Fresno, and a roadmap for achieving that vision. Active transportation is human-powered travel including walking, bicycling, and wheelchair use. This plan strives to improve the accessibility and connectivity of the bicycle and pedestrian network in order to increase the number of persons that travel by active transportation and to provide walking and bicycling facilities equitably for all City residents.

This plan updates and supersedes the existing City of Fresno Bicycle, Pedestrian, & Trails, Master Plan (BMP) that was adopted in 2010. In addition to updating elements of the BMP, the ATP includes more robust planning for pedestrian travel and infrastructure than presented in the BMP. While the BMP focused primarily on bicycling, the ATP includes goals and plans for all forms of active transportation by expanding analysis of pedestrian facilities. Therefore, this plan serves as the City's bicycle master plan and pedestrian master plan.

Bicycling and walking have many important health, economic, environmental, and social benefits. These benefits include:

- Helping people get to their destinations, including connectivity to public transit
- Reducing the likelihood of developing heart disease, high blood pressure, Type 2 diabetes, mental illness, and obesity and improving overall health
- Reducing road congestion and air pollution by replacing vehicle trips with walking or biking
- Providing personal financial savings on gas, parking, and vehicle upkeep by reducing trips or eliminating the need to own multiple vehicles

The City of Fresno is the fifth-largest city in California, with an estimated population of 520,453 people in 2016 (California Department of Finance). The City is located in the heart of the San Joaquin Valley, and serves as the county seat for Fresno County. Many people commute to the City for work or visit for

shopping, entertainment, or government services. The City's semi-arid climate and level terrain make walking and biking great transportation options in Fresno.

Walking and bicycling additionally provide connections to park and recreation facilities. Recognizing this fact, the City has created the ATP in conjunction with an update to the Parks Master Plan. Pedestrian and bicycle facilities have been developed with consideration of connectivity to parks and adding facilities to underserved areas. Similarly, the Parks Master Plan will be developed with consideration of this ATP.

This plan will support City applications for funding of active transportation projects, including the statewide Active Transportation Program. This plan will also support best use of funds provided through sources such as the Fresno County Measure C program. This plan meets all requirements for active transportation plans as specified by the California Transportation Commission's 2017 Active Transportation Program Guidelines. A summary of these requirements and where they are addressed within this plan is provided in Appendix A, "Plan Conformance With ATP Guidelines."

Vision

The City of Fresno Active Transportation Plan envisions a complete, safe, and comfortable network of trails, sidewalks, and bikeways that serves all residents of Fresno. Specifically, this plan has been developed to accomplish the following goals:

- Equitably improve the safety and perceived safety of walking and bicycling in Fresno
- Increase walking and bicycling trips in Fresno by creating user-friendly facilities
- Improve the geographic equity of access to walking and bicycling facilities in Fresno
- Fill key gaps in Fresno's walking and bicycling networks

Bicycle Riders, Traffic Stress, & the Active Transportation Network

Bicycle riders vary in experience, skill, ability, and confidence. As such, they rely on the bikeway system to cater to their specific needs and abilities. Some cyclists are more comfortable riding in traffic and value bikeways and routes that are direct and limit unnecessary delay. These cyclists more comfortably utilize facilities that share the roadway with automobiles or have limited bicycle infrastructure. People with limited bicycling confidence and lower or developing skill levels such as children and older adult riders may desire more separation from traffic to feel comfortable enough to ride. Different bicycle types also require more space in bicycle facilities, such as trailers for children or cargo or adult tricycles. For these

reasons, facilities should be designed to accommodate the lowest skill levels, especially in heavily traveled areas.

Recent research has correlated these different bicycle riders with the level of "traffic stress" they are willing to experience while cycling. Bicycle Level of Traffic Stress (LTS) refers to the comfort associated with roadways, or the mental ease people experience riding on them. Metrics for bicycling LTS were developed at the Mineta Transportation Institute (MTI) and published in the report "Low-Stress Bicycling and Network Connectivity."[1] The criteria establish a "weakest link" approach, as roadways are classified based on their segments with the highest level of traffic stress, assuming that only those that are comfortable riding under the higher stress would travel on that road. Factors influencing LTS include:

- Number of travel lanes
- Speed of traffic
- Number of vehicles
- Presence of bike lanes
- Width of bike lanes
- Presence of physical barrier

Bicycle level of traffic stress (LTS) criteria span from 1 to 4, with 1 being the least stressful and 4 being the most stressful:

- LTS 1: Most children and older adult riders can tolerate this level of stress and feel safe and comfortable. LTS 1 roadways typically require more separation from traffic.
- LTS 2: This is the highest level of stress that the mainstream adult population will tolerate while still feeling safe.
- LTS 3: Bicyclists who are considered "enthused and confident" but still prefer having their own dedicated space for riding will tolerate this level of stress and feel safe while bicycling.
- LTS 4: For bicyclists, this is tolerated only by those characterized as "strong and fearless," which comprises a small percentage of the population. These roadways have high speed limits, multiple travel lanes, limited or non-existent bike lanes and signage, and large distances to cross at intersections.

Figure 1 summarizes these criteria and the share of the population that each represents.

[1] Mekuria, Maaza C., Peter G. Furth, and Hilary Nixon, (2012). *Low-Stress Bicycling and Network Connectivity*. San Jose, California: Mineta Transportation Institute.

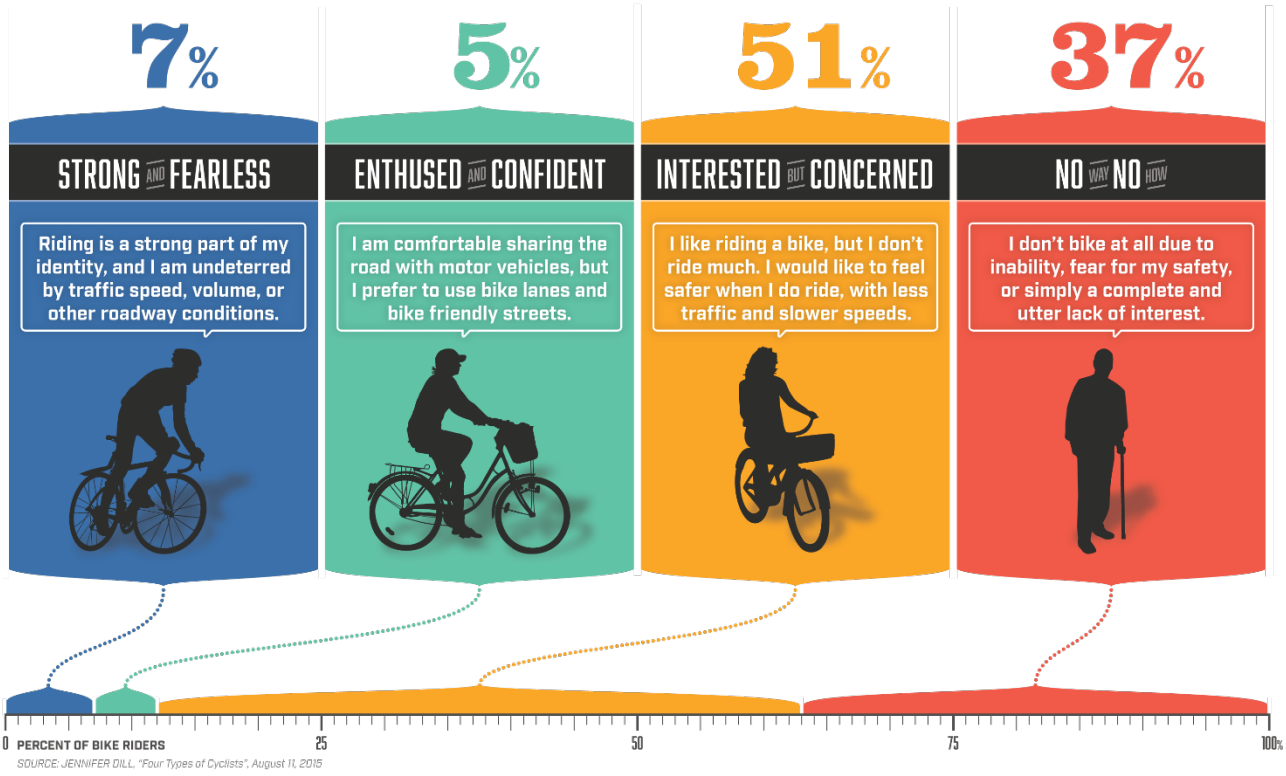


Figure 1: Four Types of Cyclists[2]

Most of the arterial and collector streets within the City have a high level of traffic stress (LTS 3 and LTS 4) as discussed in the Existing Conditions section of this plan and shown in Figure 35. The bicycling portion of the ATP focuses on creating a priority network of lower stress facilities to the extent feasible that will attract the "interested but concerned" riders and connect them to key destinations throughout the City. This network will be the target of bicycle investment in the near term.

Though traffic stress is not measured specifically for pedestrians, traffic stress concepts generally apply. The pedestrian portion of the ATP similarly focuses on improvements serving areas of high pedestrian demand where facilities are missing and older neighborhoods that have fewer pedestrian facilities. The ATP also recommends improvements for locations that experience a higher frequency of pedestrian-involved collisions. These recommendations and the process of creating them are further discussed in Chapter 5, Proposed Networks.

[2] Dill, Jennifer, (2015). Four Types of Cyclists. Portland, Oregon: Portland State University

Public Participation

Obtaining input from the residents of Fresno was an important part of the ATP development process. At the start of the project, a Community Engagement Plan (see Appendix K) was prepared to strategically plan an effective and transparent public outreach process that would engage stakeholders and the general public throughout the development of this plan.

The public were vital participants in identifying recommended improvements to the bicycling and walking facilities as well as where priority pedestrian and bicycle facilities should be constructed. The City requested public input on both walking and bicycling in Fresno, particularly focusing on:

- Goals for the plan
- Challenges that residents experience while walking and biking within Fresno
- New walking and bicycling connections and facilities desired by residents
- Proposed walking and bicycling networks

Participation was solicited through:

- Meetings with stakeholders representing key community constituencies
- Interactive workshops for the general public
- An online crowdsourced interactive map
- Outreach via email and Facebook\
- Stakeholder-led community meetings which provided feedback from residents

A summary of each of these inputs is provided below. Appendix B, Public Participation, provides additional details of the public input received. In addition to these efforts, a web page was maintained on the City of Fresno website to communicate the project schedule, share project documents, and provide general information about the plan process. The website included links to the crowdsourced interactive map and a dedicated email address for the public to provide comments or ask questions throughout the development of this plan. City staff also provided interviews to local media and met with local community groups to further publicize the plan and obtain public input.

Stakeholder Advisory Committee Meetings

The City formed a stakeholder advisory committee (SAC) with representatives from key community constituencies to provide direction for the plan and feedback throughout the planning process. Member organizations included:

- Local community groups
- Cycling and pedestrian groups
- Schools and higher educational institutions
- Environmental organizations
- Organizations representing people with disabilities
- Other local, regional, and state government organizations

The City held three SAC meetings for the project.

- The first meeting, held on April 19, 2016, was focused on creating goals for the plan, which are identified in the Vision section of this document above (Figure 2).
- The second meeting, held on July 19, 2016, obtained feedback on the proposed bicycle and pedestrian networks.
- The third meeting, held on October 6, 2016, obtained feedback on the draft plan.

A detailed list of stakeholder groups and summaries of each meeting are provided in Appendix B.

Figure 2: Stakeholders Discuss Goals for the ATP at the First SAC Meeting

Public Workshops

The City held two sets of public workshops for the plan:

- The first set of public workshops, held on May 18 and 19, 2016, obtained input from the public on biking and walking facility needs and desires. Feedback on new types of treatments that may be used in Fresno was also gathered. A combined total of 95 people attended these two workshops (Figure 3 and Figure 4). Important feedback received in these meetings included requests for improvements in specific neighborhoods in southeast Fresno, and many non-network requests including crossing improvements and control of stray dogs.
- The second set of workshops, held on August 11 and 18, 2016, gathered feedback on proposed biking and walking networks and priorities. A combined total of over 60 people attended these two workshops. Feedback from these workshops was used to improve the networks discussed in Chapter 5.

Most workshop materials were provided in both English and Spanish, and Spanish translation was provided at all workshops to encourage diverse public participation and input. Summaries of these meetings are provided in Appendix B.

Figure 3: Participants Gather at the May 18th Workshop

Figure 4: Residents Provide Feedback at the May 19th Workshop

Additionally, some stakeholders led meetings with their constituents. City staff participated in some of these meetings. This allowed City staff to discuss neighborhood-level priorities and obtain additional input from disadvantage communities.

Online Crowdsourced Interactive Map

An online crowdsourced interactive map survey was provided to the public to facilitate input from those who could not attend the workshops or who wanted to spend additional time reviewing the networks. The interactive map was publicized at the first round of public meetings, in public outreach via the Stakeholder Advisory Committee, and on the City website. The interactive map allowed users to add points, lines and comments on top of a map of the City's existing biking facilities. During the three months that the map was open to the public, users provided nearly 400 specific inputs including recommendations for new bike lanes, trails, sidewalks, crosswalks, and bike parking as well as lighting improvements and maintenance requests. Figure 5 shows a screen shot of the interactive map survey. Similar to the public workshops, much of the input received also focused on southeast Fresno. A summary is provided in Appendix B.

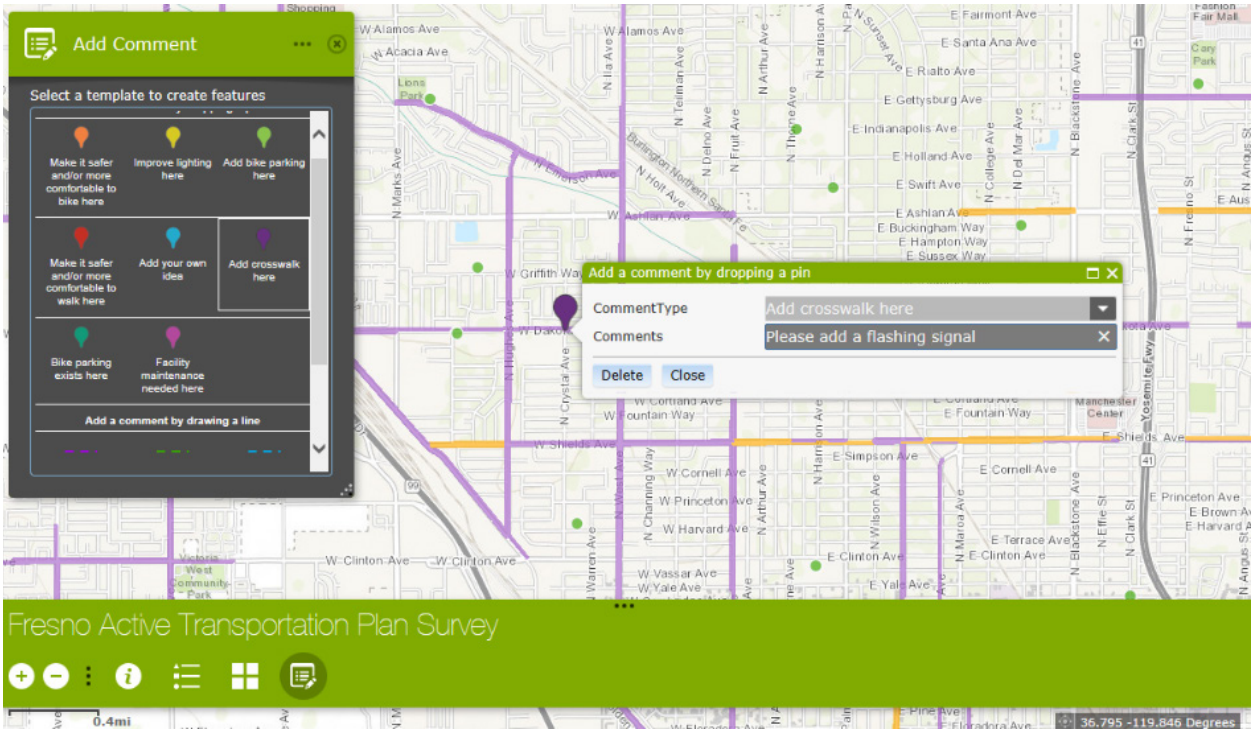


Figure 5: Screenshot of the Online Crowdsourced Interactive Map Survey

2. TYPES OF FACILITIES

The active transportation facilities in Fresno consist of many components, which are described in this chapter. This chapter also explains newer facilities available for implementation in Fresno that have not yet been constructed within the City. These facilities can be classified into the following types:

- Bikeways – facilities provided for bicycle travel
- Shared use paths – used by both bicyclists and pedestrians
- Sidewalks – intended for pedestrian travel
- Bicycle treatments and support facilities – other infrastructure that makes biking safer, easier, more accessible, and more comfortable
- Pedestrian treatments and support facilities – other infrastructure that makes walking safer, easier, more accessible, and more comfortable

Bikeway Types

Bikeways are classified in Chapter 1000 of the Highway Design Manual (Caltrans, 2015), which identifies four primary types of bikeways: Class I bike paths (including shared use paths), Class II bike lanes, Class III bike routes, and Class IV separated bikeways.

Class I Bikeway (Bike Path)

Bike paths, often referred to as shared-use paths or trails, are off-street facilities that provide exclusive use for non-motorized travel, including bicyclists and pedestrians. Bike paths have minimal cross flow with motorists and are typically located along landscaped corridors (Figure 6). Bike paths can be utilized for both recreational and commute trips. These paths provide an important recreational amenity for bicyclists, pedestrians, dog walkers, runners, skaters, and all residents using other non-motorized forms of travel. They are frequently designed to offer a benefit to users, such as a connection not previously included in the bicycle or pedestrian network, like traversing a barrier such as a freeway or river. Unless specifically allowed by local laws, equestrians are generally prohibited from using bike paths. If horses and riders are allowed to use the facility, paths should be designed to accommodate all users. This typically means developing paths with wider widths than traditional multi-use paths.

Important considerations when designing a Class I Bikeway (Figure 7):

- Separation from traffic
- Scenic attributes such as landscaping and location highlighting views
- Shade to encourage use
- Connections with other bikeways and activity centers
- Well-designed street crossings with measures such as grade separated crossings, bike and pedestrian activated traffic signals, median islands, and warning signs
- Curb ramps and curb cuts that are convenient and conform to the Americans with Disabilities Act (ADA)
- Adequate trail width, sight distance, and drainage
- Pavement markings and wayfinding signs
- Long-term maintenance needs

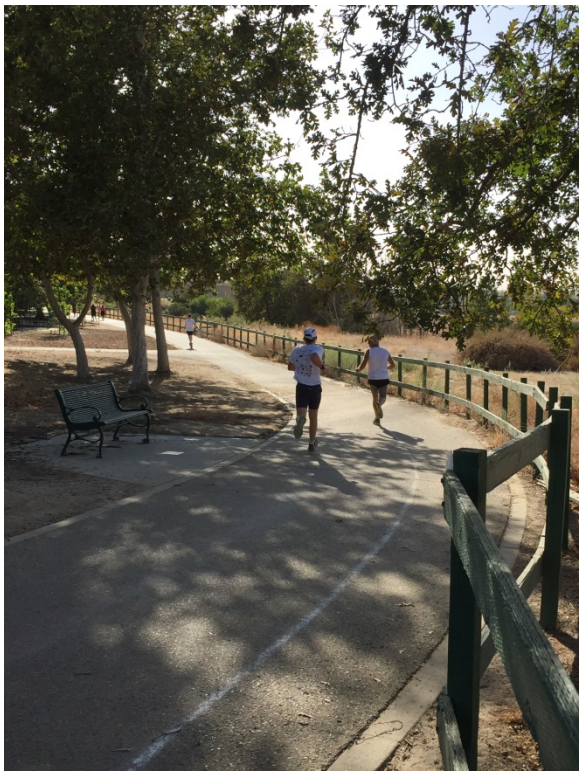


Figure 6: Lewis S. Eaton Trail

Figure 7: Class I - Bike Path

Class II Bikeway (Bike Lane)

Class II bike lanes are on-street facilities that use striping, stencils, and signage to denote preferential or exclusive use by bicyclists. On-street bikes lanes are located adjacent to motor vehicle traffic (Figure 8). Bike lanes are intended to alert drivers about the predictable movements of bicyclists, and provide adequate space for comfortable riding. Current City standards require bike lanes on all new collectors and arterials; many existing collectors are already constructed with Class II bike lanes.

Figure 8: Bike Lane on West Avenue near Normal Avenue

Key considerations when designing a Class II Bikeway (Figure 9):

- Existing conditions
    - Most helpful on streets with greater than 3,000 vehicle average daily traffic (ADT) and a posted speed that is greater than 25 mph
    - Curb to curb width and parking considerations in older neighborhoods can present challenges to design due to narrow roadways
- Design principles
    - Provide the maximum bike lane widths available to allow bicyclists to pass other riders safely and navigate around parked cars and other road hazards
    - Lane striping (six inches wide) should be dashed through heavily trafficked merging areas, including turn lanes at intersection approaches

- Skipped green markings may also be used in conflict zones, as recently piloted by the City (see Figure 15)
- Inlet grates are required to be bicycle friendly
- Left-side painted buffers on bike lanes improve separation between bicycles and vehicles in cases with speeds that are greater than 35 mph and high vehicle volumes
- Right-side painted buffers can be added between parallel parked cars and the bike lane to create a separation in the "door zone," an area in which a driver may open their car door and hit a bicyclist

- Maintenance needs
  - Conduct maintenance frequently to avoid roadway hazards such as potholes and debris
  - Refresh striping and repair or replace damaged or faded signage

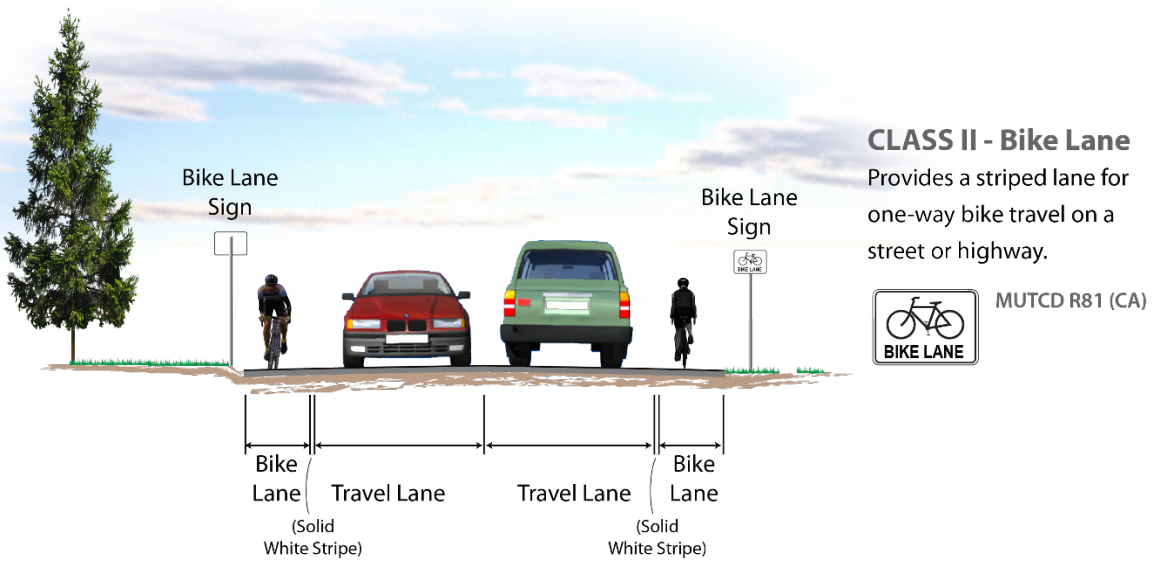


Figure 9: Class II – Bike Lane

Class III Bikeway (Bike Route)

Class III bike routes are on-street pavement markings or signage that connect the bicycle roadway network (Figure 10). Class III bike routes can be utilized to connect bicycle lanes or paths along corridors that do not provide enough space for dedicated lanes on low-speed and low-volume streets (Figure 11). Shoulders are useful but not required on streets with Class III bike routes.

Figure 10: Bike Route Sign on Shields Avenue near Maroa Avenue

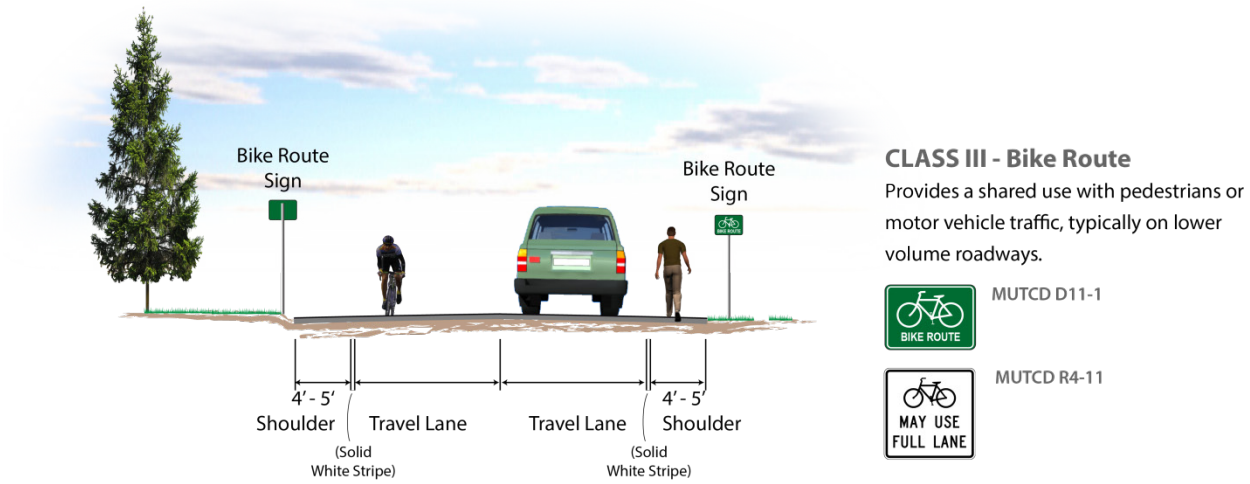


Figure 11: Class III – Bike Route

Shared-lane markings, or "sharrows," are a common Class III pavement marking that alerts drivers that bicyclists are sharing the road. They are best used on streets with less than 3,000 ADT.

The chevrons should be painted near the center of the travel lane (Figure 12), out of the parked vehicle "door zone" in which a driver may open their door and hit a bicyclist. Beyond alerting the users of the shared roadway, the Class III bike route's primary purpose is to help bike riders find their way to other bikeways or regional destinations like schools and parks. Sharrows may also facilitate wayfinding through neighborhoods.

Figure 12: Sharrow Properly Positioned near Center of Travel Lane

Bicycle Boulevard

A subset of Class III bike routes, bicycle boulevards are low-volume and low-speed streets that prioritize bicycle travel (Figure 13). They incorporate signage, pavement markings, and traffic calming tools to improve the comfort and connectivity of the bicycle roadway network. Bicycle boulevards offer an alternative to bicycling on busy streets with high traffic volumes. Many bicycle boulevards couple speed management strategies with Class III bike route signage to create safer streets.

Figure 13: Bicycle Boulevard in Berkeley

Class IV Bikeways (Separated Bikeways)

Class IV separated bikeways, commonly known as "cycle tracks," are physically separated bicycle facilities that are distinct from the sidewalk and designed for exclusive use by bicyclists. They are located within the street right-of-way, but provide similar comfort when compared to Class I multi-use paths. The key feature

of a separated bikeway is a vertical element that provides further separation from motor vehicle traffic. Common vertical elements used for separation include a vertical curb, a painted buffer with flexible posts, parked cars, a landscaped area, or a fixed barrier. Separated bikeways may also be constructed by creating a bike lane at a height above the vehicular lanes, with a continuous sloped transition. Separated bikeways can be either one-way or two-way, accommodating a single direction of travel or both (Figure 14).

The preferred bike lane width for a separated bikeway is seven feet to allow for passing and maintenance. Minimum buffer width should be three feet.

Streets with high vehicular volumes and speeds are appropriate candidates for separated bikeways since they increase the separation between bicyclists and motor vehicle traffic. Separated bikeways necessitate wider right-of-way than Class II and III facilities and are best placed in areas with fewer driveways, and thus require careful planning.

The Fresno Council of Governments (Fresno COG) is leading a project to develop guidelines for separated bikeways and recommend potential locations for their implementation in the Fresno Metropolitan Area. This effort will help guide future implementation of separated bikeways within Fresno. The plan is expected to be complete in late 2016 or early 2017.

Since the Fresno COG Separated Bikeway Feasibility Study will provide recommendations for guidelines and locations of Class IV facilities in the Fresno Metropolitan Area, this plan only identifies a few possible locations for separated bikeways. These include:

- Locations identified in the City of Fresno Downtown Neighborhoods Community Plan and City of Fresno Fulton Corridor Specific Plan
- On Maroa Avenue and Fresno Street from Shields Avenue to Herndon Avenue as parallel alternatives to Blackstone Avenue

While this plan does not identify additional locations for Class IV separated bikeways, some corridors planned for Class II bike lanes may be considered for Class IV treatment during the project development phases.

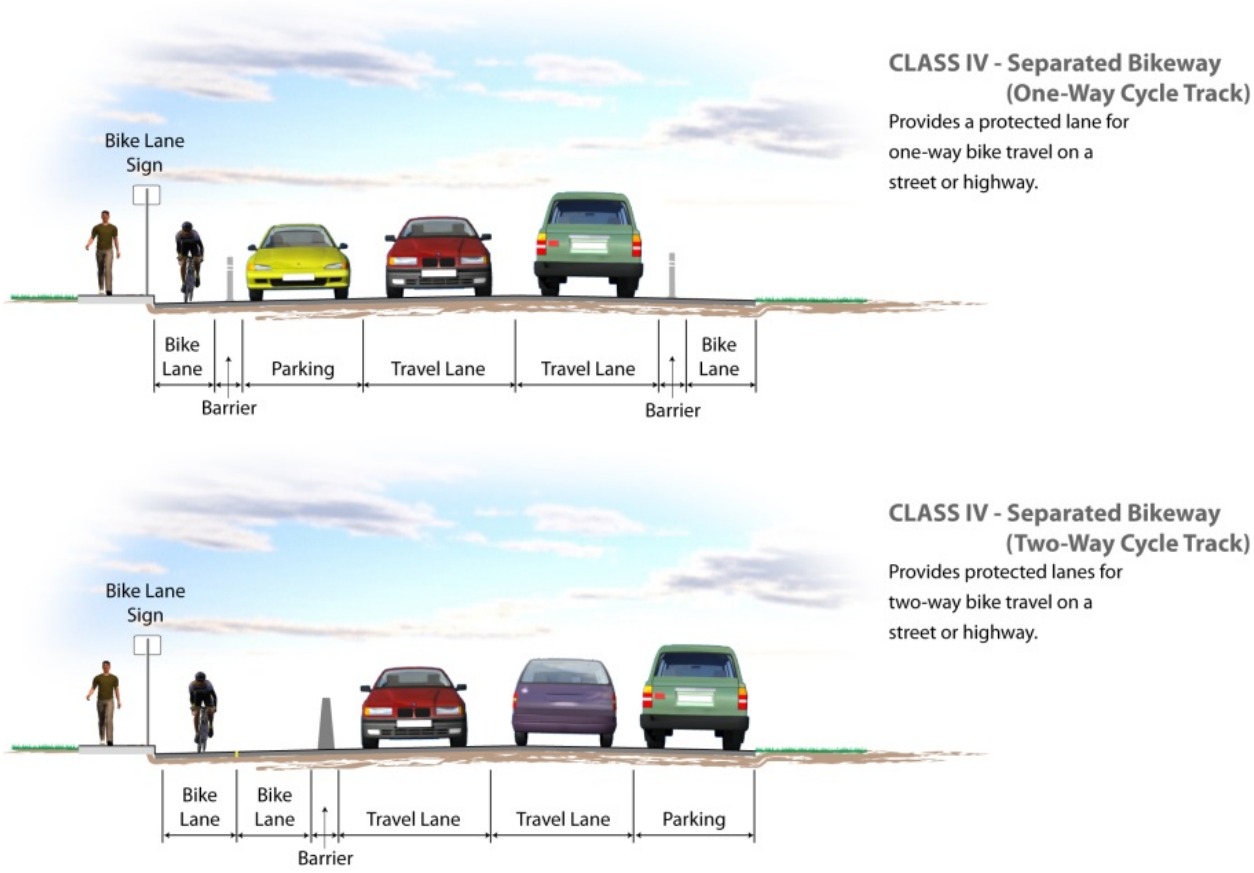


Figure 14: Class IV Separated Bikeways

Bicycle Treatments and Support Facilities

Green Colored Pavement

In 2011, the Federal Highway Administration (FHWA) Manual on Uniform Control Devices (MUTCD) published a memorandum on the "Interim Approval for Optional Use of Green Colored Pavement." [3] This interim approval was adopted by California later in 2011. Green bike lanes include colored pavement to call attention visually to conflict areas between bicyclists and motorists. Green markings are more likely to be used in high volume intersections and busy driveway locations. Bike lane lines can be installed with either paint or thermoplastic. Painted lanes are less expensive to install. Thermoplastic is initially more expensive, but less expensive when considering maintenance lifecycle costs. In Fresno, lane lines are marked with thermoplastic and green bike lane marking is done with methyl methacrylate (MMA) paint. Recommended best practices for green bike lanes include:

- Focus green markings in locations that impact safety
- Use sparingly and prioritize high conflict areas to maximize effectiveness
- Use as a supplement to required markings
- Use skipped green in weaving areas, following conditions of the Interim Approval (Figure 15).

Figure 15: Green Colored Pavement on Palm Avenue

[3] Lindley, J (2011). *Information: MUTCD – Interim Approval for Optional Use of Green Colored Pavement for Bike Lanes (IA – 14)* [Memorandum]. U.S. Department of Transportation Federal Highway Administration.

Buffers and Bollards

Buffers and bollards are treatments used to increase the separation between bicyclists and motorists. They are implemented on streets that are candidates for traditional bicycle lanes but have high travel speeds and traffic volumes. Separating bicyclists from vehicle traffic is ideal anytime the street space allows for it.

Buffers are painted markings adjacent to bicycle lanes. In addition to increasing the distance between bicyclists and vehicle travel lanes or parking, they also provide more space for bicyclists to pass one another. They improve the perceived safety and comfort of riding and are particularly helpful for cautious riders. If the buffer is less than three feet, it is marked with two striped lines, if wider than three feet it is marked with chevron cross-hatchings. Three feet is the desired width of a buffer to prevent conflicts in the door zone when adjacent to a parking lane.

Figure 16: Separated Bikeway with Bollards & Linear Separators in Modesto

Flexible bollards, or tubular markers, are physical barriers used to supplement wide buffer spaces and protect bicyclists from motor vehicles (Figure 16). These are often used in Class IV separated bikeways. If the road space allows, planters or curbs can also serve the same purpose.

Intersection Treatments for Bicyclists

Intersections are major conflict points for bicyclists and motorists. The following treatments improve the safety and ease of travel for bicyclists at intersections.

Through Bike Lanes

Travelling at intersections can be particularly challenging if the bike lane ends at an approach with vehicular turn lanes. Continuing the bicycle lane into the intersection approach provides bicyclists the opportunity to avoid conflicts with turning vehicles. Through bike lanes, also known as "bicycle pockets," reduce conflicts by allowing bicyclists to follow the preferred travel path, ideally a straight connection from the preceding bike lane (Figure 17). Through bike lanes should be placed to the left of the right-turn only lane. Dotted lines are used to signify the merge area that motorists traverse to get to the right-turn lane.

Figure 17: Through Bike Lane on Fruit Avenue at Dakota Avenue

Bicycle Boxes

A bicycle box is dedicated space at a signalized intersection for bicyclists to wait safely and visibly. Because bicyclists are waiting in front of vehicle traffic, they have priority crossing major streets (Figure 18). Bicycle boxes also benefit pedestrians as they minimize vehicle encroachment into crosswalks. They can provide space for the entire approach, allowing bicyclists safe waiting zones for left turns, or can be placed just in front of the right-turn lane. Colored pavement, typically green, should be included in the bike box to encourage compliance by motorists. Bicycle boxes are currently in experimental use by Caltrans, waiting for interim approval.

Figure 18: Bicycle Box in San Francisco

Bicycle Parking

Bicycle parking is a key component to encouraging ridership by supporting the final stage of a bicycle trip. Locations with high ridership are excellent candidates for bicycle parking, including civic, residential, commercial, and office spaces (Figure 19 and Figure 20). At these locations, both short-term and long-term parking should be accommodated. Bicycle parking can be classified into two types (Figure 21):

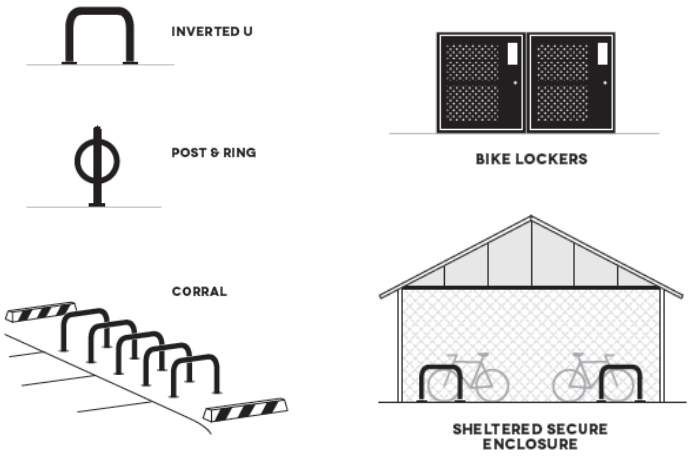
- Short-term bicycle parking is temporary bicycle parking intended for visitors. Bicycle racks are a common form of short-term parking. Bicycle racks in front of stores and other destinations allow patrons to park their bike for short periods, typically around two hours. Bike parking should be located in well-lit areas to discourage theft. Installing permanent bicycle racks near main entrances also helps bicyclists feel welcome and encourages them to ride their bicycle again on a return trip. Bicycle racks that allow at least two points of contact, such as the wheel and frame, provide the most protection against theft and accidental damage.
- Long-term bicycle parking is intended for employees, students, commuters, and residents to protect bicycles for long periods. Long-term facilities are more secure than short-term bicycle parking and should fully protect bicycles from the weather. Long-term bicycle parking includes bike lockers, bike cages, and bike rooms. Bike lockers are outdoor enclosures that accommodate one or two bicycles and are usually leased on a monthly basis or paid short-term use.

Figure 19: U-shaped Bicycle Rack in the Tower District

Figure 20: FAX Bike Locker in Downtown Fresno

Bike cages are fully enclosed, roofed shelters that house racks of bicycle parking, typically found at schools. Bicycle rooms are commonly found inside office or residential buildings, and provide secure indoor parking. Bicycle rooms may feature amenities such as bike pumps and quick-fix tools for employees and residents.

Short-Term Bicycle Parking **Long-Term Bicycle Parking**



Images from APBP *Essentials of Bike Parking: Selecting and Installing Bike Parking that Works* (2015), pages 2-3, www.apbp.org, used with permission from the copyright holder.

Figure 21: Types of Bicycle Parking

Shower and Changing Spaces

Providing showers and changing spaces at employment centers make commuting by bicycle more desirable. Showers and changing rooms are particularly useful to Fresno bicycle commuters during the hot summer months. The Fresno Municipal Code includes requirements for provision of showers in new non-residential construction (details are provided in the Municipal Code and Charter of Fresno, California (2016) section of Appendix C).

Bike Share

Regional bike share programs are often implemented as a way to promote bicycle travel. They offer temporary bicycle rental services that are ideal for short-distance trips. Users pick up bikes at one station and leave their bike at the station closest to their destination (Figure 22). Bike share programs aim to solve the "last mile" problem, the challenge of moving travelers from the end of their transit trips to their final destinations. Bike share can allow people to reach transit options with minimal user planning involved.

Figure 22: Bay Area Bikeshare Station in Downtown San Jose

Bike share could be implemented in Fresno to complement the planned downtown high-speed rail station and the bus rapid transit system now being constructed. By providing a network of bike share stations that includes these rail and transit stops, travelers will have a mode option complementing walking, taxis, and transportation networking companies such as Uber.

Pedestrian Treatments and Support Facilities

Sidewalks

Sidewalks are paved areas immediately adjacent to the vehicular right-of-way for the exclusive use of pedestrians (Figure 23). Unlike shared-use paths, they are directly adjacent to the main right-of-way and use by bicyclists is usually prohibited. As with trails, shade is important to encourage walking in Fresno's hot summer climate.

Figure 23: Sidewalk at Fresno City College

Crosswalks

Marked crosswalks feature striping and other enhancements to delineate a street crossing for pedestrians. There are two types of marked crosswalks: controlled and uncontrolled. At uncontrolled crosswalks, drivers are legally required to yield to pedestrians, but do not have to stop when a pedestrian is not present. In Fresno, uncontrolled crosswalks are not used without careful study and employ high visibility markings. Controlled crosswalks are located at intersections with stop signs or traffic signals.

Figure 24: Uncontrolled Crosswalk with High Visibility Markings and Median Refuge Islands in Downtown Fresno

Curb ramps provide access to the sidewalk for pedestrians, including people who use wheelchairs or other mobility devices. The truncated domes alert blind and visually impaired pedestrians that they are approaching a vehicular way.

Median Refuge Islands

Median refuge islands provide a safe space in longer crosswalks (Figure 24). They are particularly helpful for older adults and people with disabilities, who may require more time to get across the street, or need to pause in between long crossing segments. Median refuge islands are recommended to be at least six feet wide, and preferably ten feet wide. Design of specific median refuge islands, as well as other features, should consider local context.

Bulb-Outs

Bulb-outs are another mechanism to decrease the crossing distance at intersections. They are beneficial to pedestrians because they decrease the distance needed to cross lanes of vehicle traffic. In addition, bulb-outs improve the visibility of pedestrians waiting to cross (Figure 25).

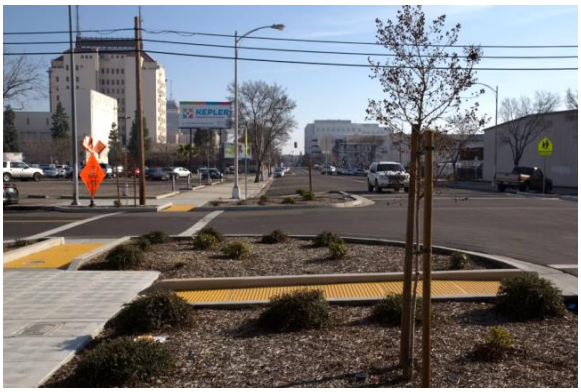


Figure 25: Bulb-outs at the intersection of Broadway and Amador Streets

In-Street and Overhead Pedestrian Crossing Signs

Pedestrian street signage improves visibility of crosswalks and can increase the likelihood that a driver will yield or stop to pedestrians. In-street signs are ideal for streets with low vehicle speeds and two lanes. In-street signs can be permanently installed or movable for peak hours such as pick-up/drop-off times at schools (Figure 26). Overhead signs are more impactful at busier, wider streets. These are typically installed at mid-block crossings or intersections. Additional signage in school zones helps alert drivers that children, who are known to make unpredictable movements, may be present.

Figure 26: In-Street Pedestrian Crossing Sign

Rectangular Rapid Flashing Beacons

Rectangular Rapid Flashing Beacons (RRFB) provide a pedestrian actuated flashing warning light indicating that pedestrians are crossing. They are a lower cost alternative to traffic signals. When combined with other pedestrian treatments such as median refuge islands or advance yield markings, they can have even more impact on improving visibility of pedestrians and increasing yielding by motorists (Figure 27). These treatments are typically powered by solar panels but can also be wired to a traditional power source.

Figure 27: Rectangular Rapid Flashing Beacons in Davis

Pedestrian Hybrid Beacons

Pedestrian Hybrid Beacons (PHBs), also known as High-intensity Activated crossWalKs or HAWK signals, require vehicles to stop at a red light to allow pedestrians to cross. PHBs are ideal for roadways that are higher speeds and volumes than a rectangular rapid flashing beacon, but do not require a full pedestrian signal. They should only be installed in locations that include a marked crosswalk. The California Manual on Uniform Traffic Control Devices (MUTCD) provides details on use of PHBs.

The treatments operate with the following phases:

- **Flashing Yellow** – Upon actuation, beacon flashes yellow
- **Solid Yellow** – Alerts drivers pedestrians will soon cross
- **Solid Red** – Drivers must stop and remain stopped (Figure 28)
- **Flashing Red** – Drivers stop and proceed when clear, as they would with a stop sign
- **No Indication** – When not actuated, signal is dark, unlike standard signals

Figure 28: Pedestrian Hybrid Beacon in Sacramento

Tighter Curb-Return Radii

Motorists that navigate intersections with a wide corner radius are more likely to travel at faster speeds. By tightening the curb-return radius, vehicles are forced to slow down, which can substantially improve pedestrian safety. It is recommended that corners are designed to limit turning speeds to 15mph or less by decreasing the width of the effective radius. The land use context should be considered when reducing

radii – industrial areas with frequent truck traffic require larger radii than commercial or residential areas. Tighter radii are particularly useful in suburban settings where larger radii were historically installed, but may be used by many pedestrians.

Pedestrian Scramble

Pedestrian scrambles are intersection treatments that include a pedestrian-only phase in the signal light cycle. During the pedestrian phase, all motorists are prohibited from entering the intersection. Unlike typical crosswalks, pedestrians are able to cross to the opposite corner by travelling through the middle of the intersection (Figure 29). Pedestrian scrambles are best utilized at intersections with high pedestrian volumes, in order to reduce potential pedestrian-vehicle conflict points. They more efficiently allow pedestrians to cross directly to their destination. Scrambles should include Accessible Pedestrian Signals (APS) to maximize accessibility and wayfinding for people who are blind or visually impaired. In addition to an existing pedestrian scramble at the intersection of Cedar Avenue and Bulldog Lane, pedestrian scrambles are being installed as part of the Fulton Street Reconstruction Project in Downtown Fresno.

Figure 29: Pedestrian Scramble at Cedar Avenue & Bulldog Lane

Wayfinding

Wayfinding refers to the network of informational signage posted to guide pedestrians or bicyclists to their destination. Good wayfinding signage presents destination, direction, and distance information in a manner that is easy to read and interpret. Bicycle specific wayfinding must be tailored so that bicyclists can see the information from a comfortable distance. Signs posted at trail junctions and intersections of trails with arterials are particularly helpful. Guidance on sign design and installation is available in Chapter 9B of the 2014 California MUTCD and the National Association of City Transportation Officials (NACTO) design guidelines. Wayfinding signage can also be enhanced with average walk times and bike times to destinations and local branding (Figure 30).

Figure 30: Rendering of Possible Wayfinding Signage for the City of Fresno

Lighting

Sufficient lighting on bicycle and pedestrian facilities reduces the fear of crime and prevents collisions that occur due to decreased visibility. Pedestrian walkways should have lighting that allows people to identify faces from a distance of about 30 feet. Lighting should be consistent to reduce deep shadows and avoid excessive glare. It is necessary to maintain conventional light fixtures regularly, keeping lamp bowls clean and promptly replacing bulbs that have burnt out. Newer light emitting diode (LED) fixtures, which have much longer bulb life, have greatly decreased maintenance requirements.

3. GOALS & POLICIES

This chapter summarizes established goals and relevant policies that influence the planning of pedestrian and bicycle infrastructure in the City of Fresno.

Goals

The Stakeholder Advisory Committee was responsible for developing the goals that shape the City of Fresno Active Transportation Plan, as presented in Chapter 1. They developed the following goals for this plan:

- Equitably improve the safety and perceived safety of walking and bicycling in Fresno
- Increase walking and bicycling trips in Fresno by creating user-friendly facilities
- Improve the geographic equity of access to walking and bicycling facilities in Fresno
- Fill key gaps in Fresno's walking and bicycling networks

Appendix B provides further details of the stakeholder meeting participants and discussion leading to the creation of these goals.

Relationship to Other Plans

The Fresno General Plan is the primary document specifying goals and policies for the City, including those relating to walking and bicycling. These policies are listed in detail below. Several other local, regional, and statewide plans also contain goals and policies relating to bicycling and walking in Fresno. These plans are listed in this section. Relevant goals and policies from all plans are summarized in Appendix C, Relationship to Other Plans.

In 2011, the League of American Bicyclists awarded the City of Fresno with a "Bronze" Bicycle Friendly Community ranking, a level it currently maintains. In 2015, the League again awarded the City a "Bronze" ranking and provided steps for the City of Fresno to take to work towards a "Silver" ranking. These goals help inform the general direction of future bicycle friendly improvements.

The City has also conducted pedestrian and bicycle safety assessments. These assessments benchmarked Fresno policies, programs and practices against national best practices.

Fresno General Plan

The Fresno City Council adopted the Fresno General Plan in December 2014. This plan establishes guidance for future planning in the City through 2035 and beyond. Nearly half of the Fresno General Plan's 17 goals are related to bicycling and walking and are excerpted below:

- **Goal 4:** Emphasize achieving healthy air quality and reduced greenhouse gas emissions.
- **Goal 7:** Provide for a diversity of districts, neighborhoods, housing types (including affordable housing), residential densities, job opportunities, recreation, open space, and educational venues that appeal to a broad range of people throughout the City.
- **Goal 8:** Develop Complete Neighborhoods and districts with an efficient and diverse mix of residential densities, building types, and affordability which are designed to be healthy, attractive, and centered by schools, parks, and public and commercial services to provide a sense of place and that provide as many services as possible within walking distance. *Intentionally plan for Complete Neighborhoods as an outcome and not a collection of subdivisions which do not result in Complete Neighborhoods.*
- **Goal 9:** Promote a City of healthy communities and improve quality of life in established neighborhoods.

  Emphasize supporting established neighborhoods in Fresno with safe, well maintained, and accessible streets, public utilities, education and job training, proximity to jobs, retail services, health care, affordable housing, youth development opportunities, open space and parks, transportation options, and opportunities for home grown businesses.

- **Goal 11:** Emphasize and plan for all modes of travel on local and major streets in Fresno.

  Facilitate travel by walking, biking, transit, and motor vehicle with interconnected and linked neighborhoods, districts, major campuses and public facilities, shopping centers and other service centers, and regional transportation such as air, rail, bus and highways.

- **Goal 12:** Resolve existing public infrastructure and service deficiencies, make full use of existing infrastructure, and invest in improvements to increase competitiveness and promote economic growth.

Emphasize the fair and necessary costs of maintaining sustainable water, sewer, streets, and other public infrastructure and service systems in rates, fees, financing and public investments to implement the General Plan. Adequately address accumulated deferred maintenance, aging infrastructure, risks to service continuity, desired standards of service to meet quality-of-life goals, and required infrastructure to support growth, economic competitiveness and business development.

- **Goal 14:** Provide a network of well-maintained parks, open spaces, athletic facilities, and walking and biking trails connecting the City's districts and neighborhoods to attract and retain a broad range of individuals, benefit the health of residents, and provide the level of public amenities required to encourage and support development of higher density urban living and transit use.
- **Goal 16:** Protect and improve public health and safety.

To accomplish these goals, the Plan is divided into twelve elements, each of which includes supporting objectives and policies. The most relevant elements to the ATP are the Mobility and Transportation Element and the Parks, Open Space, and Schools Element. These are described below. The Urban Form, Land Use, and Design Element and the Healthy Communities Element also contains policies related to bicycling and walking; they are provided in Appendix C, Relationship to Other Plans.

Mobility and Transportation Element

The Fresno General Plan Mobility and Transportation Element reinforces the City's role in providing an efficient, multimodal transportation system.

The Roadways and Automobiles section notably discusses all users of roadways and includes discussion of multimodal level of service, which considers the experience of pedestrians, bicyclists, and transit users as well as drivers. Figure 31 depicts the circulation diagram provided in this element, and Table 1 depicts the roadway characteristics corresponding to each roadway classification.

The Bikes and Pedestrians section describes the City's commitment to bicycling and walking and references the 2010 Bicycle, Pedestrian and Trails Master Plan. The objectives and policies in the Mobility and Transportation Element related to walking and bicycling are provided in Appendix C.

[This page intentionally left blank]

1. See Policies MT-3-a and MT-3-b for Scenic Corridors.

Note: The Fresno Air National Guard Base, a military airport, and the Fresno Yosemite International Airport are located in the area represented as Fresno Yosemite International Airport.

Source: City of Fresno, 2014.

[This page intentionally left blank]

Table 1: Roadway Characteristics Matrix

Roadway Type	Number of Vehicle Lanes	Bike Lanes	Pedestrian Facilities	On-Street Parking	Median
Expressway	4 to 6	No	Trail	No	Yes
Super Arterial	4 to 6	Yes	Sidewalks[1]	No	Yes
Arterial	4 to 6	Yes	Sidewalks[1]	Possible	Yes
Collector	2 to 4	Yes	Sidewalks	Yes	Possible
Local	2 to 3	Possible (or Trail)	Sidewalks	Yes	Possible

Source: Fehr & Peers, 2011, from Fresno General Plan
1. Where called for by the General Plan, a trail may be required instead of a sidewalk.

Parks, Open Space, and Schools Element

The Parks, Open Space, and Schools Element discusses guidance for a broad range of open spaces and community facilities in Fresno, including trails, greenways, and parkways. A significant issue addressed by this element is the shortage of parks and recreation space in many areas of the City. The objectives and policies in this element related to walking and bicycling are provided in Appendix C, Relationship to Other Plans.

Other Plans and Documents

Several other City, regional, and State plans and other documents contain goals, policies, and requirements relevant to the Fresno ATP. These plans and documents are listed below and summarized in Appendix C, Relationship to Other Plans.

City of Fresno

- City of Fresno Bicycle, Pedestrian, and Trails Master Plan (2010)
- City of Fresno Downtown Neighborhoods Community Plan (2016)
- City of Fresno Fulton Corridor Specific Plan (2016)
- City of Fresno Standard Specifications
- City of Fresno Standard Drawings
- Municipal Code and Charter of Fresno, California (2016)

- City of Fresno Traffic Impact Study Report Guidelines (2009)
- Herndon Avenue Class I Bike Trail Feasibility Study (2015)
- City of Fresno Americans with Disabilities Act Transition Plan for the Public Right of Way (2016)
- City of Fresno Community, Specific, and Neighborhood Plans (details in Appendix C)

Local and Regional

- Fresno Council of Governments Regional Transportation Plan and Sustainable Communities Strategy (2014)
- Bus Rapid Transit Master Plan (2008)
- Fresno Area Express Short-Range Transit Plan (2013)
- City of Clovis Active Transportation Plan (2016)
- Fresno County Regional Bicycle and Recreational Trails Master Plan (2013)
- California State University, Fresno, Active Transportation Plan (2015)
- City of Fresno: Downtown Transportation & Infrastructure Study (2007)
- San Joaquin River Parkway Master Plan (2000)
- Old Fig Garden Community Transportation Study (2013)
- Ventura / Kings Canyon Corridor Complete Streets Plan (2015)

State and Federal

- California Green Building Code
- California Assembly Bill 32
- California Senate Bill 375
- California Assembly Bill 1358
- California Assembly Bill 743
- US DOT Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations
- US Americans with Disabilities Act
- Public Rights of Way Accessibility Guidelines (PROWAG)

Plans Under Development

Several local plans are currently being developed. Where possible, the anticipated outcomes of these plans have been incorporated into this document. Future revisions of the ATP should review the final versions of these plans and be updated accordingly. The plans being developed include:

- City of Fresno Southwest Fresno Specific Plan
- City of Fresno Parks Master Plan
- City of Fresno High-Speed Rail Station Area Master Plan
- Fresno Council of Governments Fresno-Clovis Metropolitan Area Class IV Separated Bikeway Feasibility Study

League of American Bicyclists Bicycle Friendly Community Report Card

In Fall 2015, the League of American Bicyclists again awarded the City of Fresno a "Bronze" Bicycle Friendly Community (BFC). The following report card (Figure 32) shows Fresno's rankings, and how the City compares to other cities that have received a higher commendation with a "Silver" ranking. The report card also recommends steps to lead Fresno to a Silver ranking. Key recommendations included:

- Implement road diets in appropriate locations to make streets more efficient and safer for all road users. Use the newly created space for bicycle and pedestrian facilities.
- Ensure that there are bicycle education opportunities specifically for women, seniors, families and other specific demographic groups [who are less likely to ride bicycles]. By specifically targeting education opportunities to certain groups you can ensure that those groups are better reached and their specific concerns are addressed by the curriculum.
- Compared to many communities, your current bike plan has a long implementation period. Ensure that it is flexible or updated in ways that allow the incorporation of state-of-the-art bicycle facilities. If implementation goals are not being reached, then revisit the framework of the plan and find a solution that works with shorter time horizons.
- Expanding the staff time focused on bicycle projects would help in scaling up your BFC efforts
- Launch a bike share system that is open to the public. Bike sharing is a convenient, cost effective, and healthy way of encouraging locals and visitors to make short trips by bike and to bridge the "last mile" between public transit and destinations.
- Ensure that bicycle/motor vehicle crashes are investigated thoroughly and that citations are given fairly,

FRESNO, CA

BICYCLE FRIENDLY COMMUNITY Fall 2015 BRONZE THE LEAGUE OF AMERICAN BICYCLISTS

TOTAL POPULATION	509,924
TOTAL AREA (sq. miles)	111
POPULATION DENSITY	4098
# OF LOCAL BICYCLE FRIENDLY BUSINESSES	1
# OF LOCAL BICYCLE FRIENDLY UNIVERSITIES	0

10 BUILDING BLOCKS OF A BICYCLE FRIENDLY COMMUNITY

	Average Silver	Fresno
Arterial and Major Collector Streets with Bike Lanes	45%	50%
Total Bicycle Network Mileage to Total Road Network Mileage	30%	8%
Public Education Outreach	GOOD	GOOD
Share of Transportation Budget Spent on Bicycling	7%	0.2%
Bike Month and Bike to Work Events	GOOD	GOOD
Active Bicycle Advocacy Group	ACTIVE	YES
Active Bicycle Advisory Committee	ACTIVE	MEETS MONTHLY OR MORE
Bicycle-Friendly Laws & Ordinances	SOME	GOOD
Bike Plan is Current and is Being Implemented	YES	YES
Bike Program Staff to Population	1 PER 70K	1 PER 679.9K

CATEGORY SCORES

ENGINEERING *Bicycle network and connectivity*	4/10
EDUCATION *Motorist awareness and bicycling skills*	3/10
ENCOURAGEMENT *Mainstreaming bicycling culture*	3/10
ENFORCEMENT *Promoting safety and protecting bicyclists' rights*	5/10
EVALUATION & PLANNING *Setting targets and having a plan*	1/10

KEY OUTCOMES

	Average Silver	Fresno
RIDERSHIP *Percentage of Commuters who bike*	3.5%	1.0%
SAFETY MEASURES **CRASHES** *Crashes per 10k bicycle commuters*	180	656
SAFETY MEASURES **FATALITIES** *Fatalities per 10k bicycle commuters*	1.4	17.7

KEYSTEPSTOSILVER

» Implement road diets in appropriate locations to make streets more efficient and safer for all road users. Use the newly created space for bicycle and pedestrian facilities.

» Ensure that there are bicycle education opportunities specifically for women, seniors, families and other specific demographic groups. By specifically targeting education opportunities to certain groups you can ensure that those groups are better reached and their specific concerns are addressed by the curriculum.

» ompared to many communities your current bike plan has a long implementation period. Ensure that it is flexible or updated in ways that allow the incorporation of state-of-the-art bicycle facilities. If implementation goals are not being reached the revisit the framework of the plan and find a solution that works with shorter time horizons.

» Expanding the staff time focused on bicycle projects would help in scaling up your BFC efforts.

» Launch a bike share system that is open to the public. Bike sharing is a convenient, cost effective, and healthy way of encouraging locals and visitors to make short trips by bike and to bridge the "last mile" between public transit and destinations.

» Ensure that bicycle/motor vehicle crashes are investigated thoroughly and that citations are given fairly.

Figure 32: League of American Bicyclists Report Card for Fresno

Pedestrian Safety Assessment

The University of California, Berkeley, Institute of Transportation Studies conducted a Pedestrian Safety Assessment for the City of Fresno in 2009. The assessment analyzed pedestrian-related programs, practices, and policies in Fresno by reviewing relevant data, holding interviews, and conducting site visits. Fresno's programs, practices, and policies were then compared to best practices in cities of comparable size and population. The recommendations from the Pedestrian Safety Assessment are included in Appendix C.

Bicycle Safety Assessment

The City of Fresno conducted a Bicycle Safety Assessment in 2016. The findings follow the guidance of "A Technical Guide for Conducting Bicycle Safety Assessments for California Communities" published by UC Berkeley Institute of Transportation Studies Technology Transfer Program (2014). Detailed recommendations, intended to improve areas in which the City already excels or provide guidance on how to strengthen areas that are in need of improvement, are provided in Appendix D.

The recommendations developed in the bicycle safety assessment are in line with the suggestions to improve the City's likelihood of receiving a Silver Bicycle-Friendly Community ranking from the League of American Bicyclists.

[This page intentionally left blank]

4. EXISTING CONDITIONS

This chapter describes the status of walking and biking facilities in the City of Fresno. The existing trails, bikeways, and sidewalks are presented along with a description of the socioeconomic and land use context of walking and biking in the City. The chapter also describes the facilities and programs that support active transportation networks.

Although Fresno's flat terrain and relatively dry climate is conducive to bicycling and walking, other local environmental conditions make active transportation more challenging. Summers are hot, with average high temperatures of 97 and 98 degrees Fahrenheit in July and August, respectively, and daily highs frequently exceeding 100 degrees Fahrenheit. Air quality in the region frequently reaches the unhealthy range or higher, both due to ozone and particulate matter.

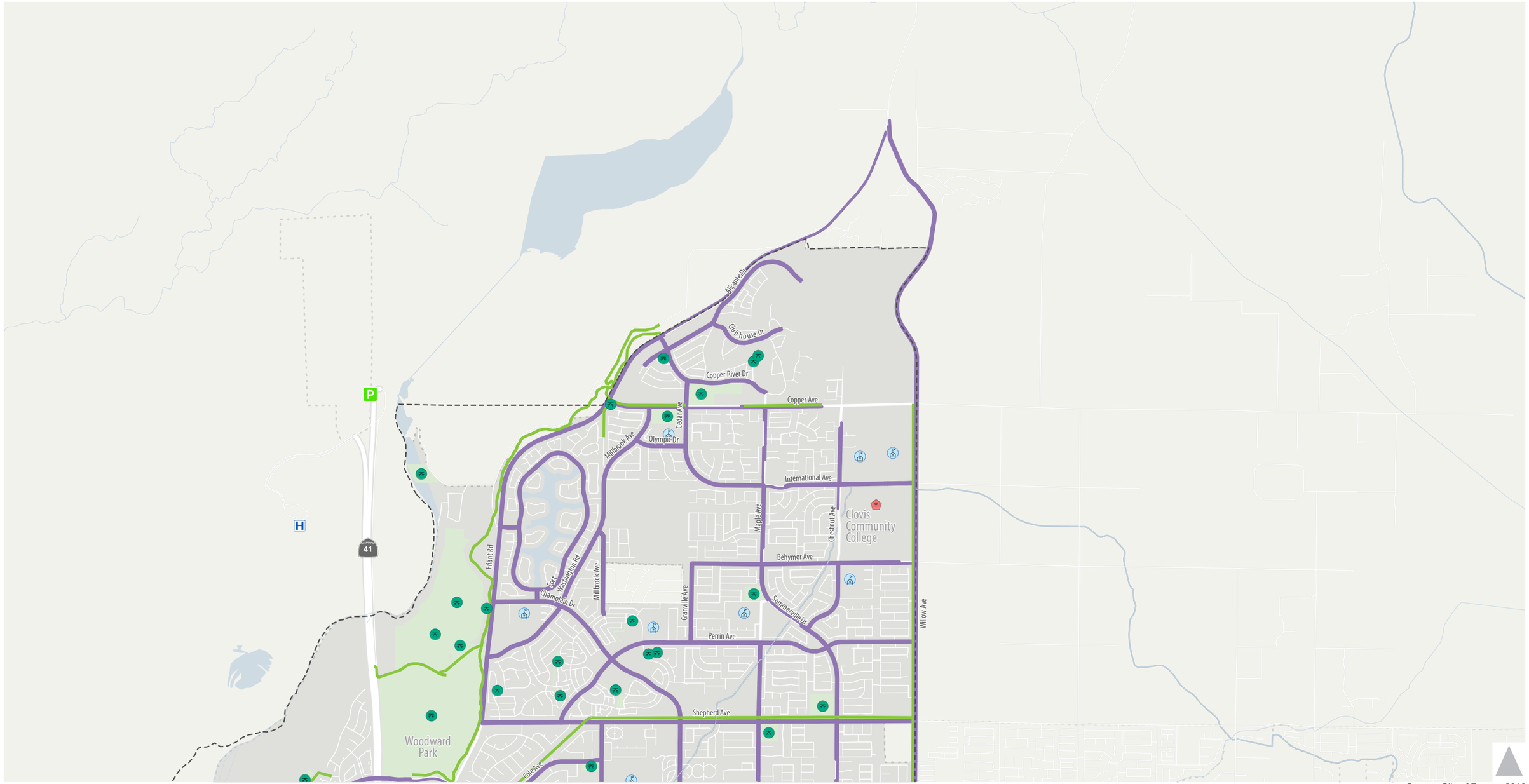
Existing Networks

The existing active transportation networks in Fresno consist of paths used by both cyclists and pedestrians, bike lanes, bike routes, and sidewalks. These networks are summarized in Table 2 and depicted in Figure 33 and Figure 34. Much of this network has been built in segments over time, and may contain discontinuities or gaps.

In some existing neighborhoods, streets were constructed without sidewalks intentionally. Some may have been built while under Fresno County's jurisdiction and subsequently annexed into the City. Others were built according to City standards that at the time that did not require sidewalks.

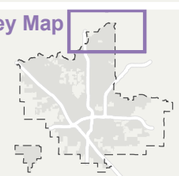
Newer developments were more likely to be built with sidewalks and/or bikeways than older portions of the city. Similarly, these same neighborhoods are more likely to have wider streets and right-of-ways, which allow easier retrofit of active transportation facilities. This distinction is important, as the physical space available influences the recommended treatments that can be feasibly applied. Space considerations have informed the priority network recommendations in this document.

[This page intentionally left blank]



Source: City of Fresno, 2016

Key Map



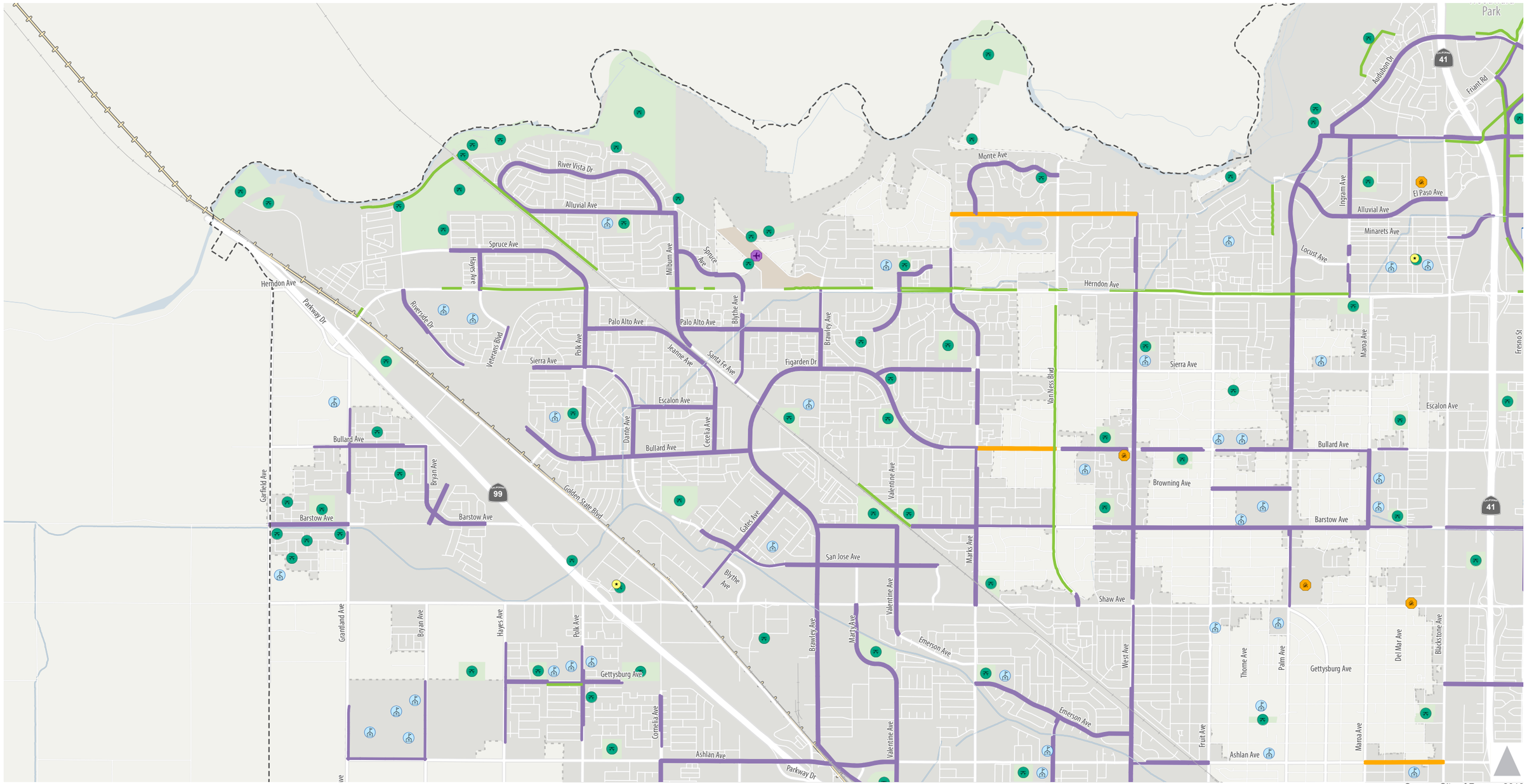
Existing Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route

Key Destinations
- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- High Speed Rail Alignment
- Canal
- City Sphere of Influence
- Parks
- Airports
- Water
- City

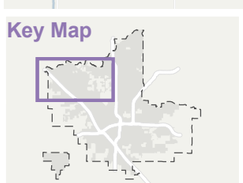
City of FRESNO active transportation plan

Figure 33

Existing Bikeways - Inset 1



Source: City of Fresno, 2016



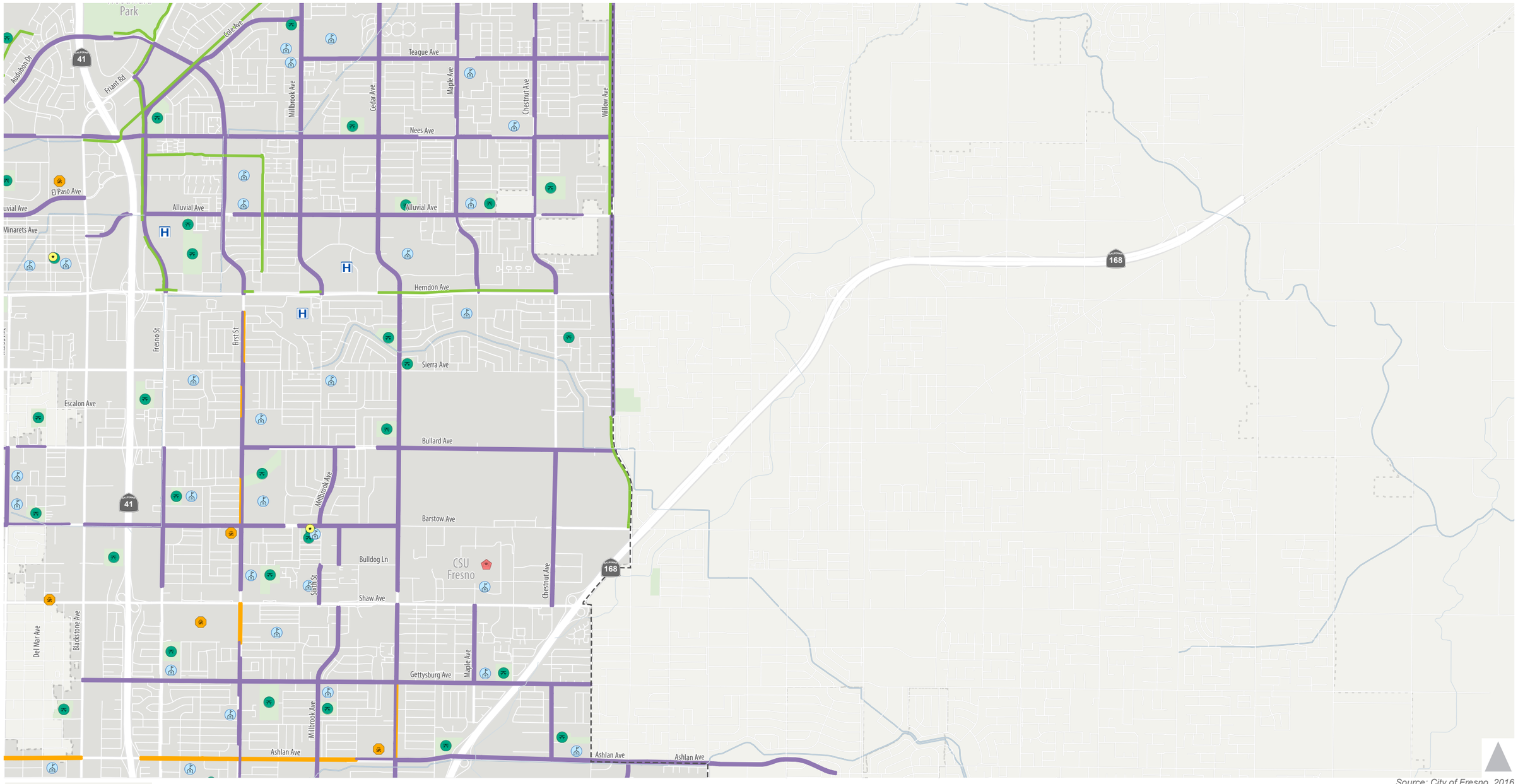
Existing Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route

Key Destinations
- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- High Speed Rail Alignment
- Canal
- City Sphere of Influence
- Parks
- Airports
- Water
- City

City of FRESNO active transportation plan

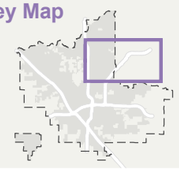
Figure 33

Existing Bikeways - Inset 2



Source: City of Fresno, 2016

Key Map



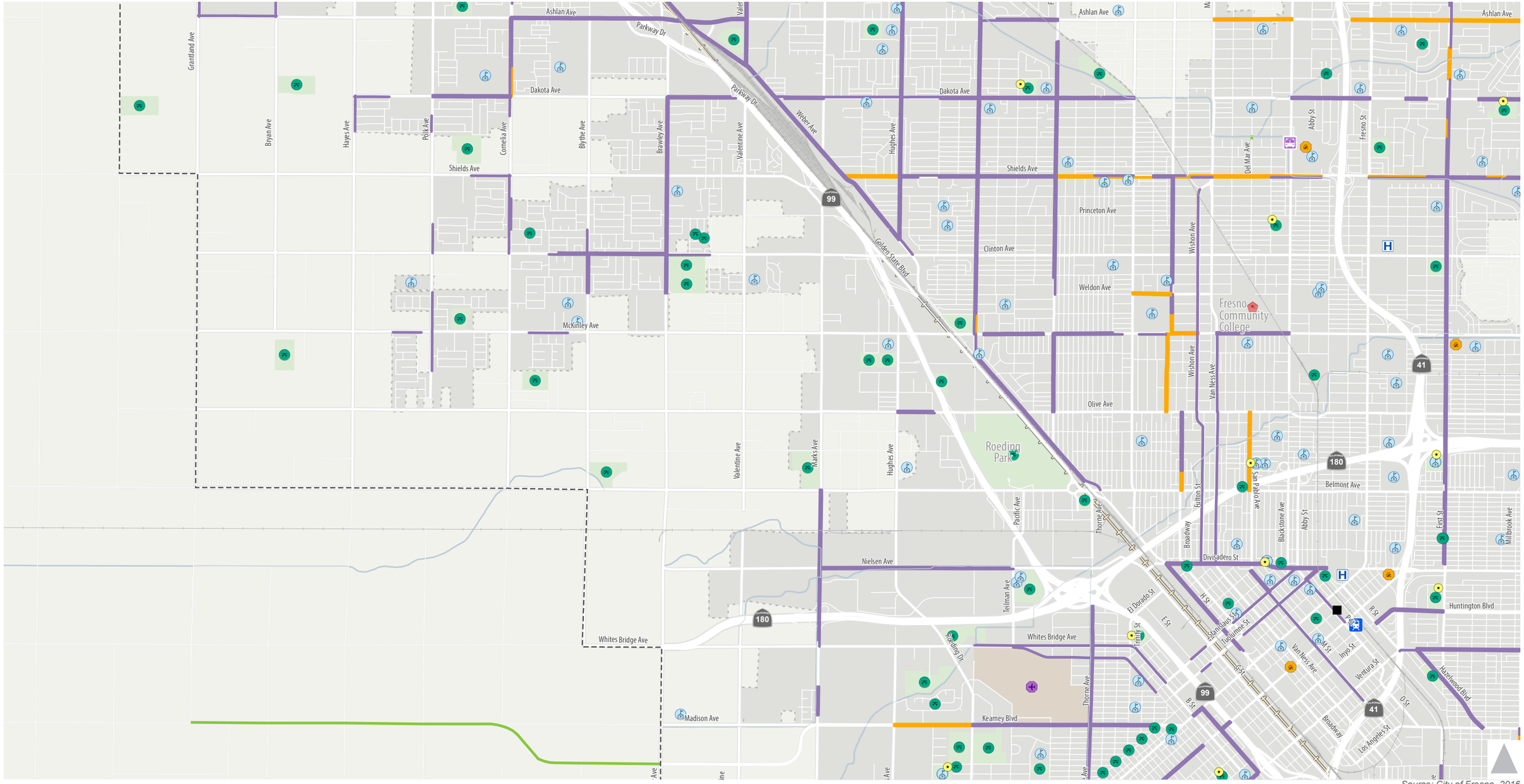
Existing Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route

Key Destinations
- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- High Speed Rail Alignment
- Canal
- City Sphere of Influence
- Parks
- Airports
- Water
- City

City of FRESNO active transportation plan

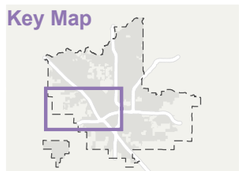
Figure 33

Existing Bikeways - Inset 3



Source: City of Fresno, 2016

Key Map



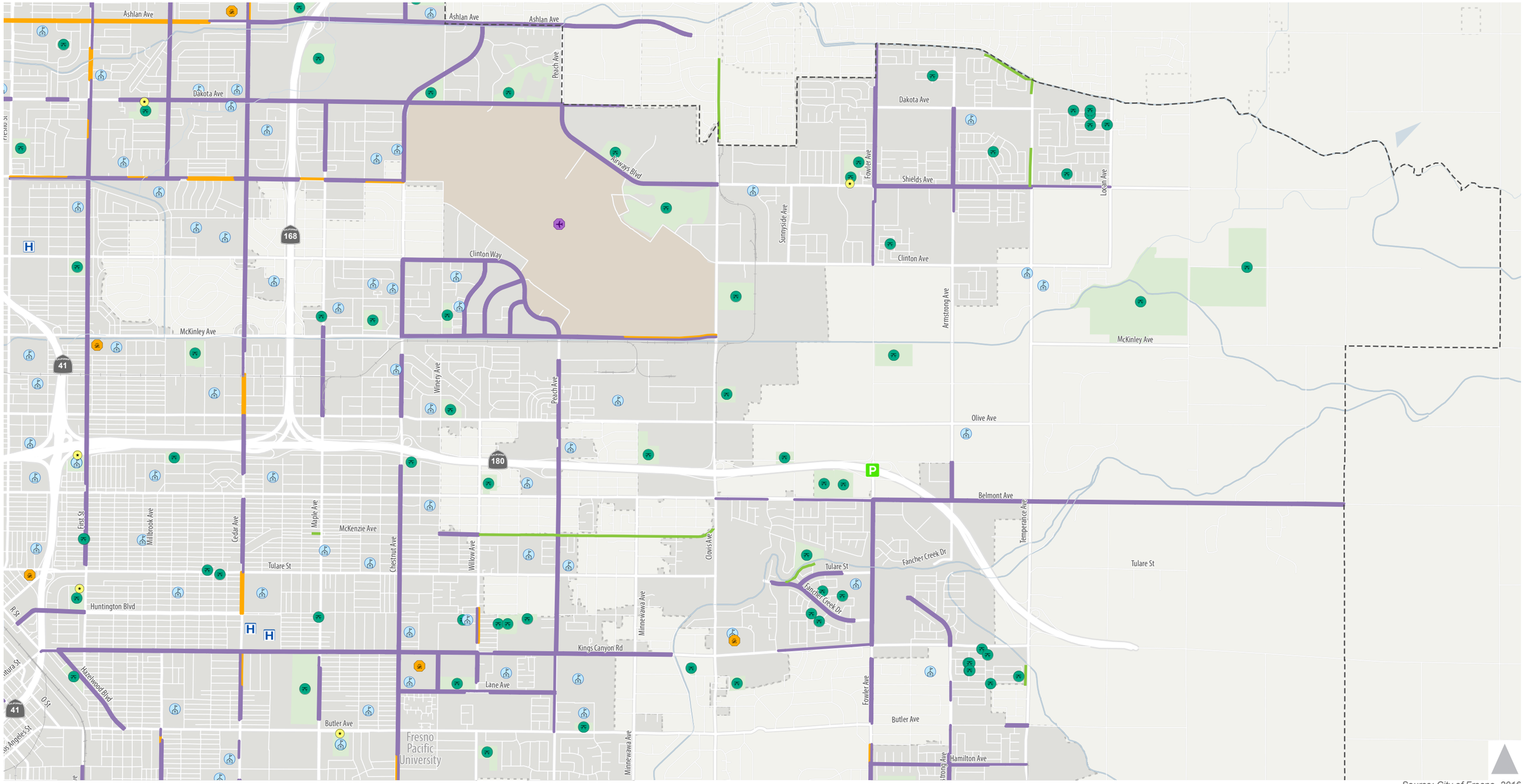
Existing Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route

Key Destinations
- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- High Speed Rail Alignment
- Canal
- City Sphere of Influence
- Parks
- Airports
- Water
- City

City of FRESNO active transportation plan

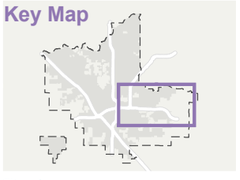
Figure 33

Existing Bikeways - Inset 4



Source: City of Fresno, 2016

Key Map



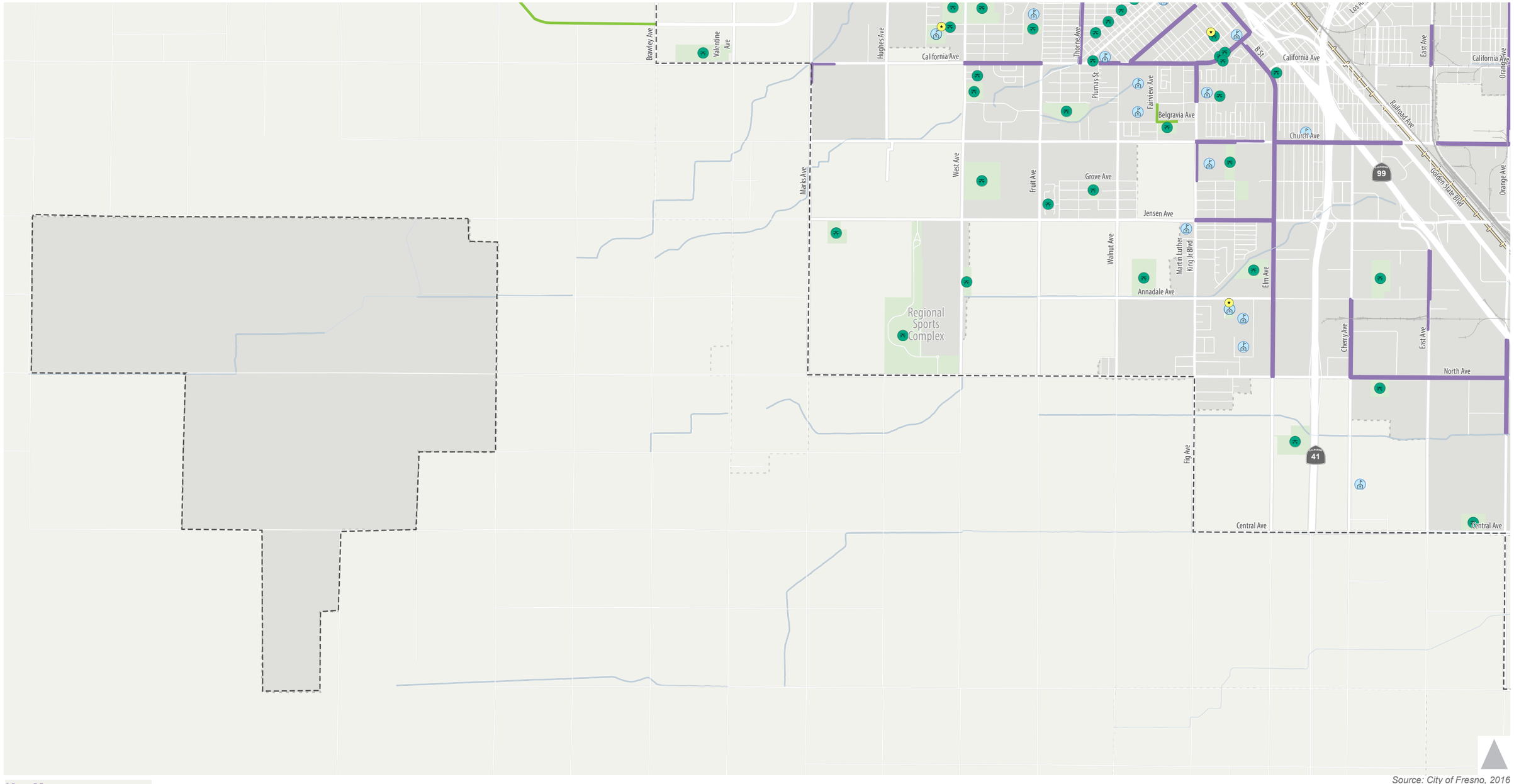
Existing Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route

Key Destinations
- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- High Speed Rail Alignment
- Canal
- City Sphere of Influence
- Parks
- Airports
- Water
- City

City of FRESNO active transportation plan

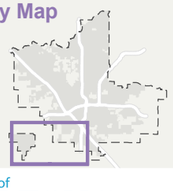
Figure 33

Existing Bikeways - Inset 5



Source: City of Fresno, 2016

Key Map



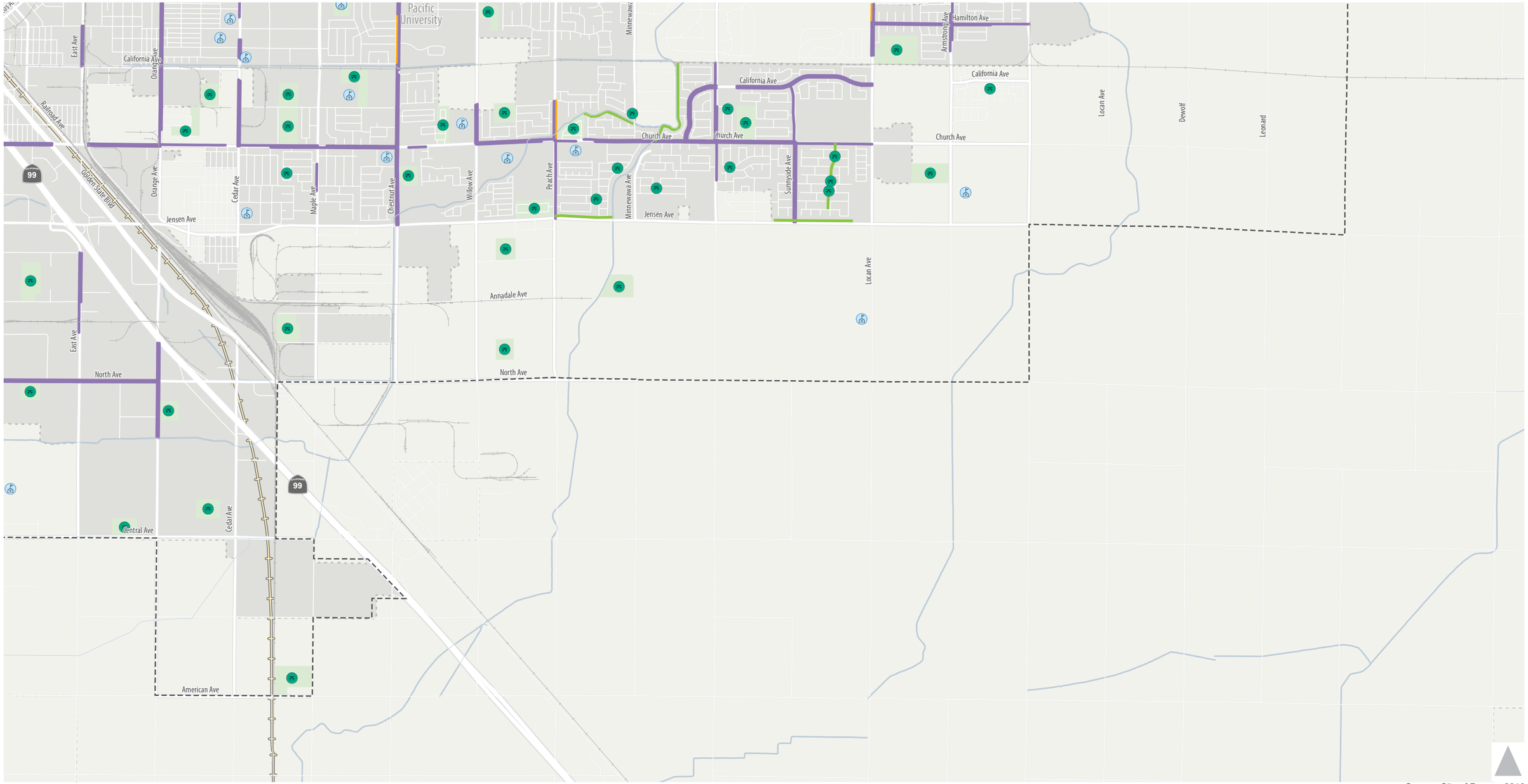
Existing Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route

Key Destinations
- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- High Speed Rail Alignment
- Canal
- City Sphere of Influence
- Parks
- Airports
- Water
- City

City of FRESNO active transportation plan

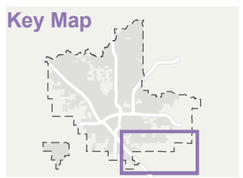
Figure 33

Existing Bikeways - Inset 6



Source: City of Fresno, 2016

Key Map



Existing Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route

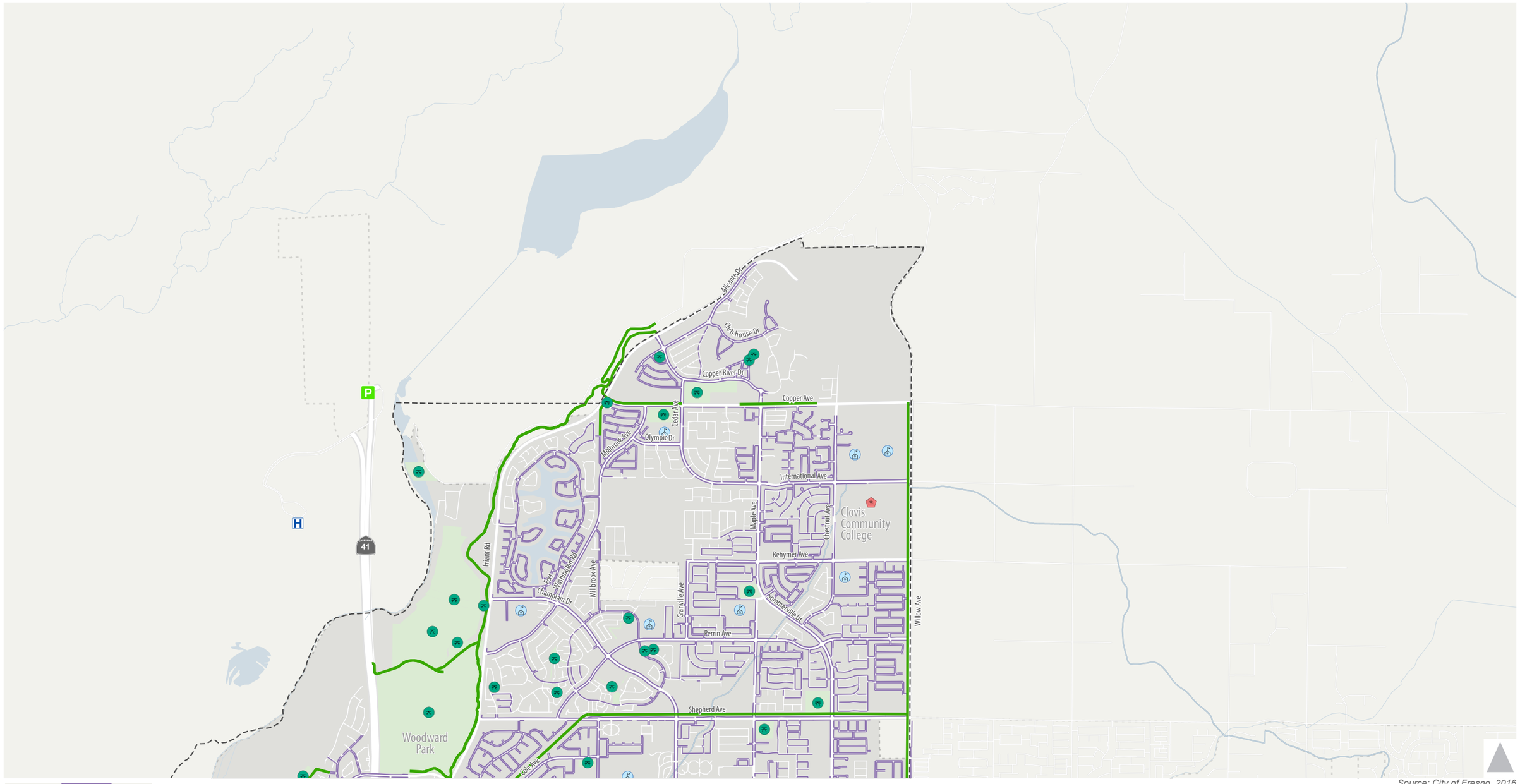
Key Destinations
- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- High Speed Rail Alignment
- Canal
- City Sphere of Influence
- Parks
- Airports
- Water
- City

City of FRESNO active transportation plan

Figure 33

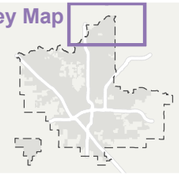
Existing Bikeways - Inset 7

[This page intentionally left blank]



Source: City of Fresno, 2016

Key Map



- Class I Bike Path
- Existing Sidewalk

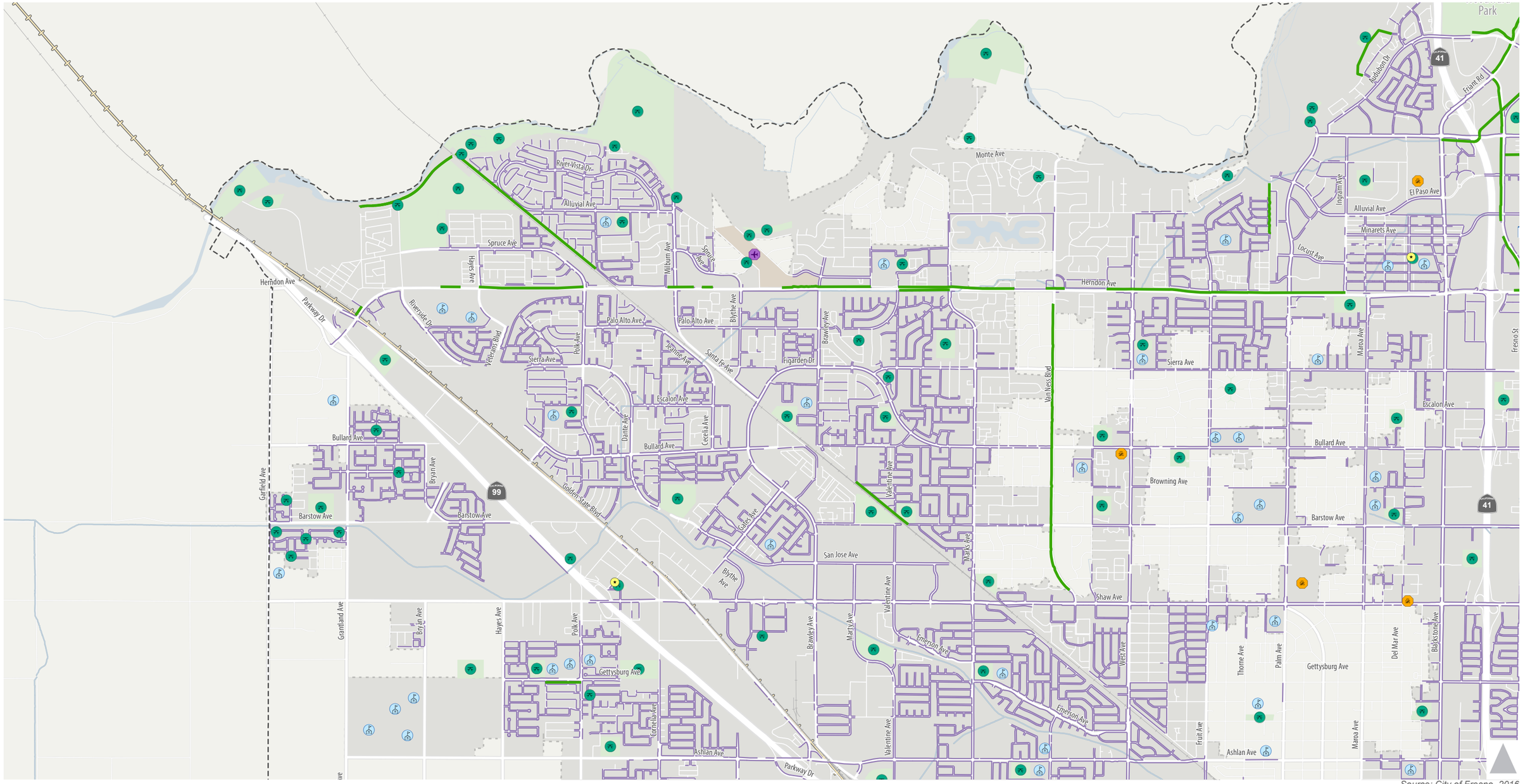
Key Destinations

- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- City Sphere of Influence
- Rail
- Water
- Canal
- High Speed Rail Alignment
- Parks
- Airports
- Water
- City

City of FRESNO active transportation plan

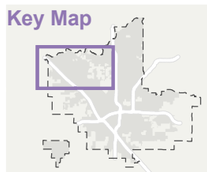
Figure 34

Existing Sidewalks and Trails - Inset 1



Source: City of Fresno, 2016

Key Map



- Class I Bike Path
- Existing Sidewalk

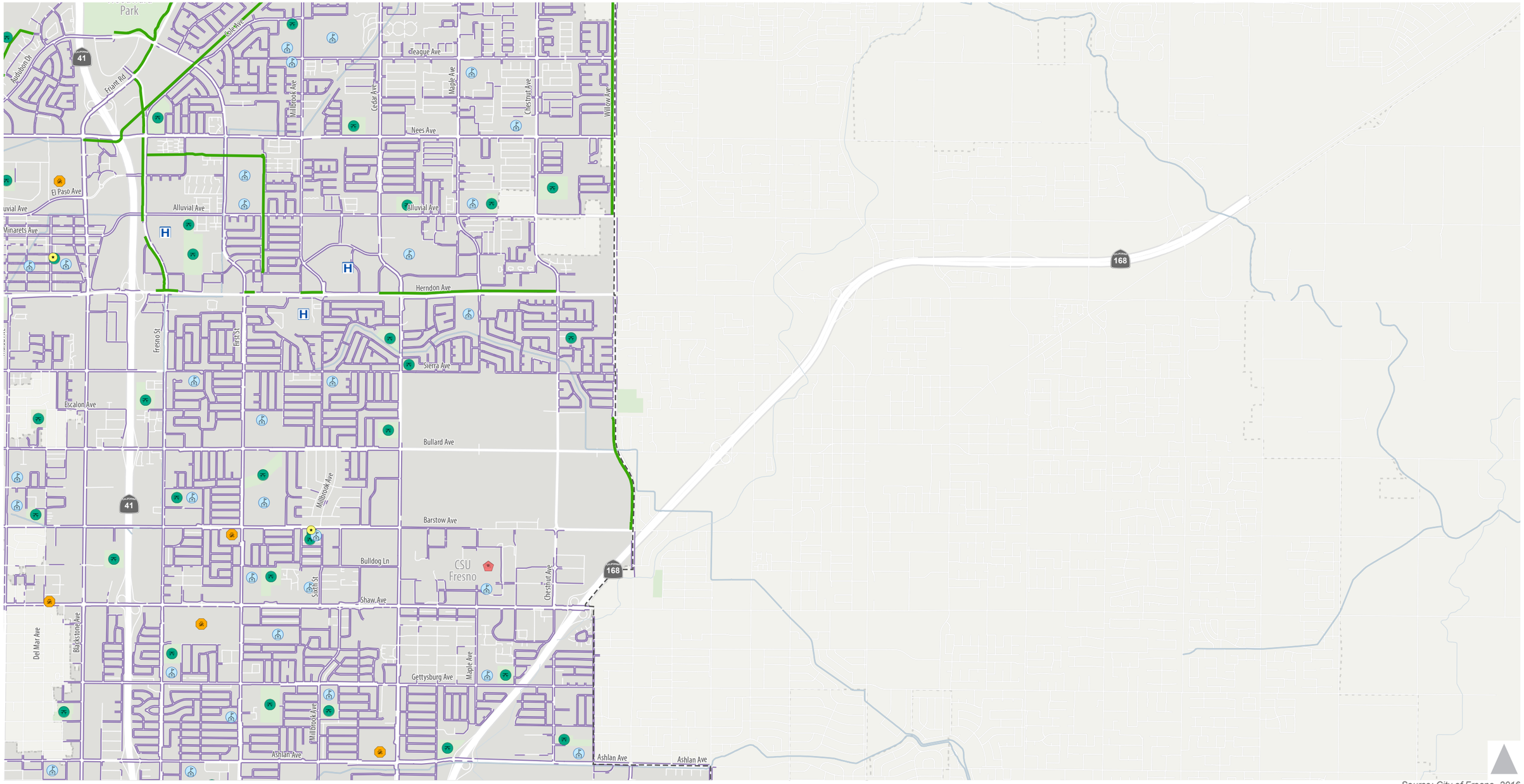
Key Destinations

- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- City Sphere of Influence
- Rail
- Water
- Canal
- High Speed Rail Alignment
- Parks
- Airports
- Water
- City

City of FRESNO active transportation plan

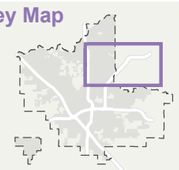
Figure 34

Existing Sidewalks and Trails - Inset 2



Source: City of Fresno, 2016

Key Map



- Class I Bike Path
- Existing Sidewalk

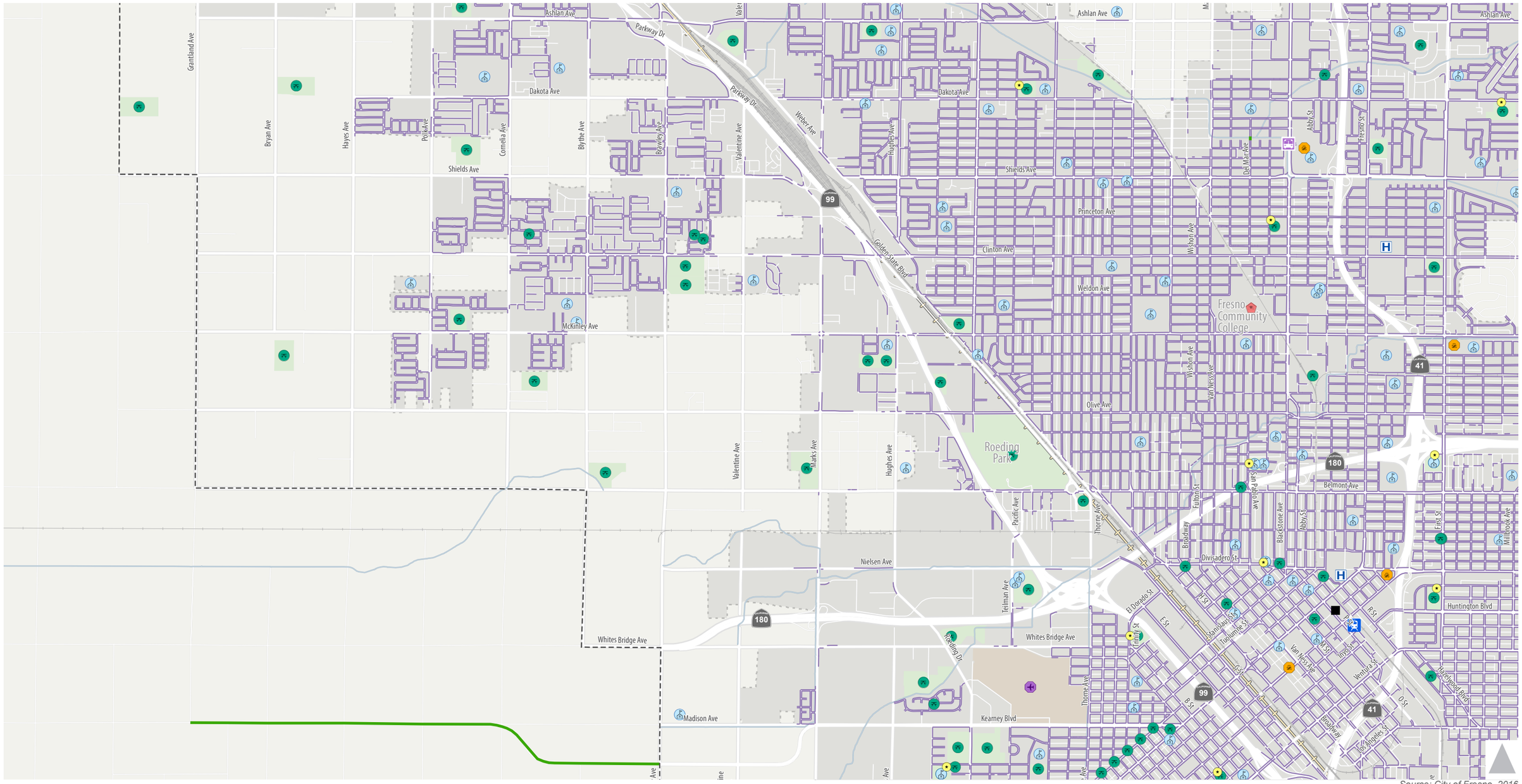
Key Destinations

- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- City Sphere of Influence
- Rail
- Water
- Canal
- High Speed Rail Alignment
- Parks
- Airports
- Water
- City

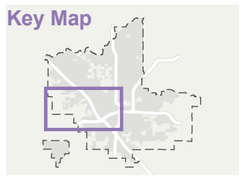
City of FRESNO active transportation plan

Figure 34

Existing Sidewalks and Trails - Inset 3



Source: City of Fresno, 2016



Key Map

- Class I Bike Path
- Existing Sidewalk

Key Destinations

- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- City Sphere of Influence
- Rail
- Water
- Canal
- High Speed Rail Alignment
- Parks
- Airports
- Water
- City

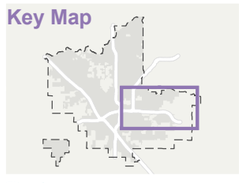
City of FRESNO active transportation plan

Figure 34

Existing Sidewalks and Trails - Inset 4

Source: City of Fresno, 2016

Key Map



Class I Bike Path
Existing Sidewalk

Key Destinations
Higher Education

Airport
Shopping
Hospital
Manchester Transit Center

City Hall
Neighborhood/Community Center
Amtrak Station
Park-and-Ride

School
Park
City Sphere of Influence

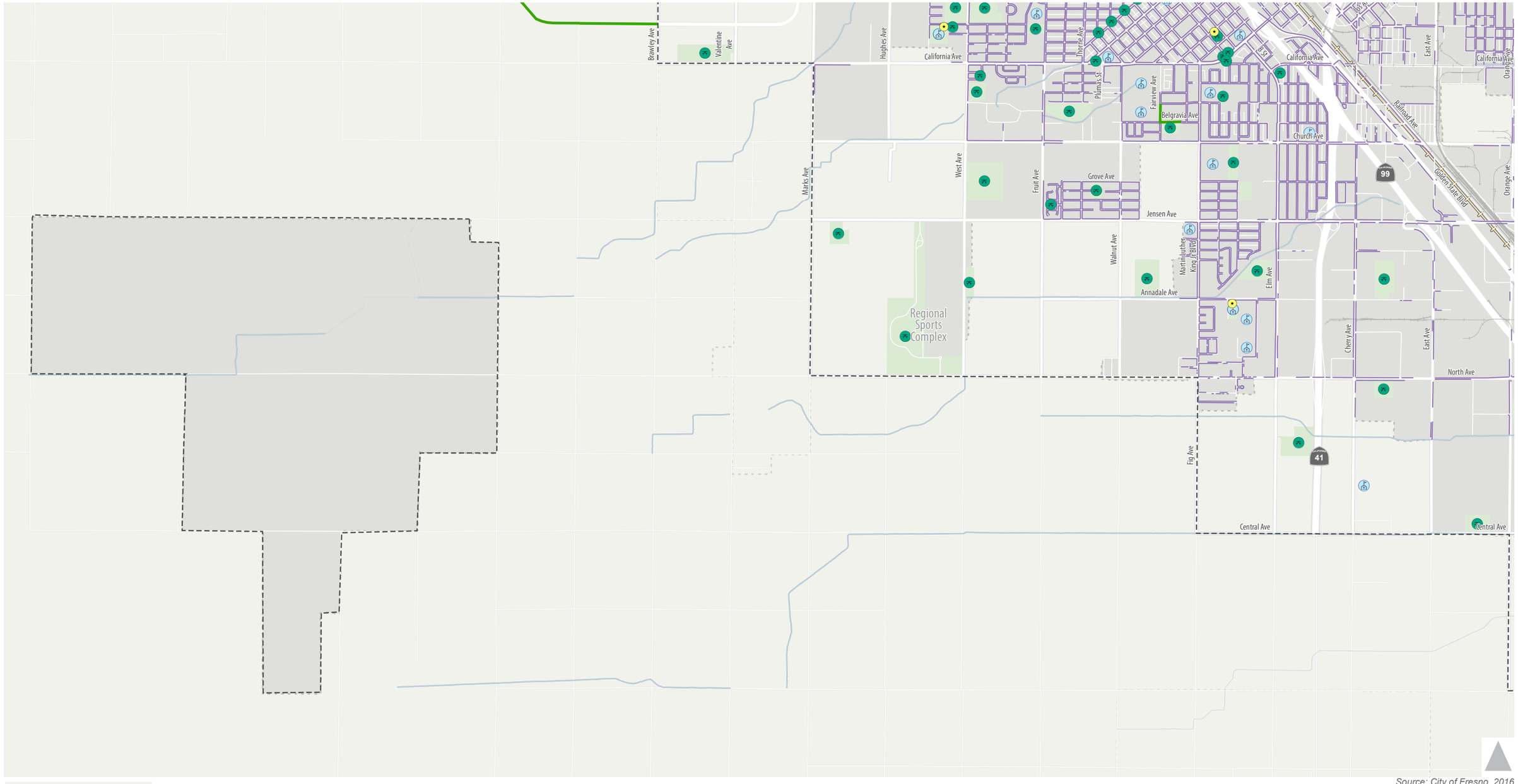
Rail
Water
Canal
High Speed Rail Alignment

Parks
Airports
Water
City

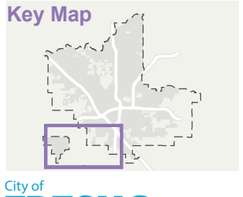
City of FRESNO active transportation plan

Figure 34

Existing Sidewalks and Trails - Inset 5



Source: City of Fresno, 2016



Key Map

- Class I Bike Path
- Existing Sidewalk

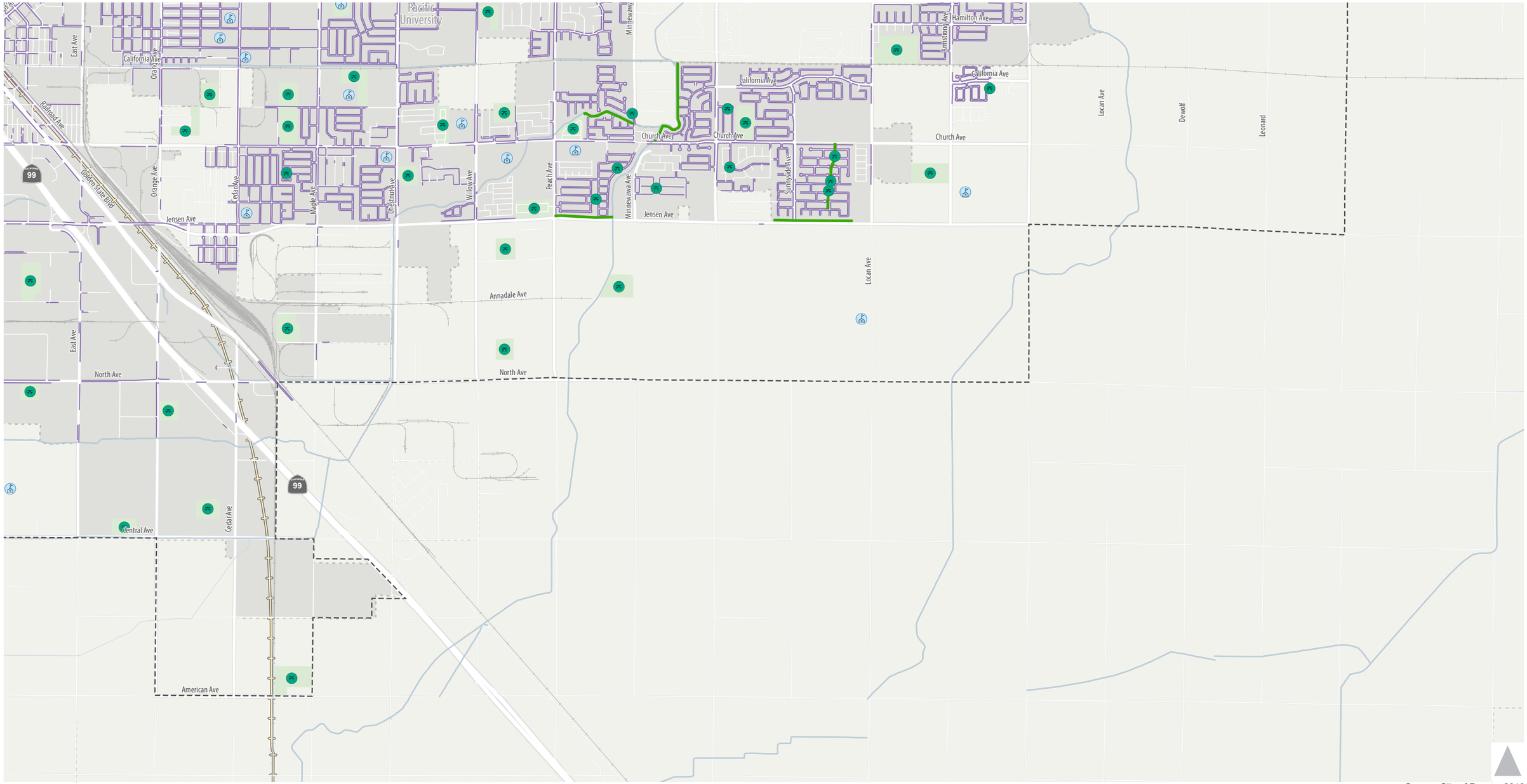
Key Destinations

- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- City Sphere of Influence
- Rail
- Water
- Canal
- High Speed Rail Alignment
- Parks
- Airports
- Water
- City

City of FRESNO active transportation plan

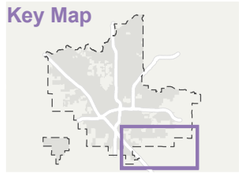
Figure 34

Existing Sidewalks and Trails - Inset 6



Source: City of Fresno, 2016

Key Map



- Class I Bike Path
- Existing Sidewalk

Key Destinations

- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- City Sphere of Influence
- Rail
- Water
- Canal
- High Speed Rail Alignment
- Parks
- Airports
- Water
- City

City of FRESNO active transportation plan

Figure 34

Existing Sidewalks and Trails - Inset 7

[This page intentionally left blank]

Table 2: Existing Facilities

Type	2010 Miles	2016 Miles
Class I Bike Paths	14	38
Class II Bike Lanes (one direction)	226	431
Class III Bike Routes (one direction)	14	22
Sidewalks	Unknown	1,984

Source: Fehr & Peers 2016

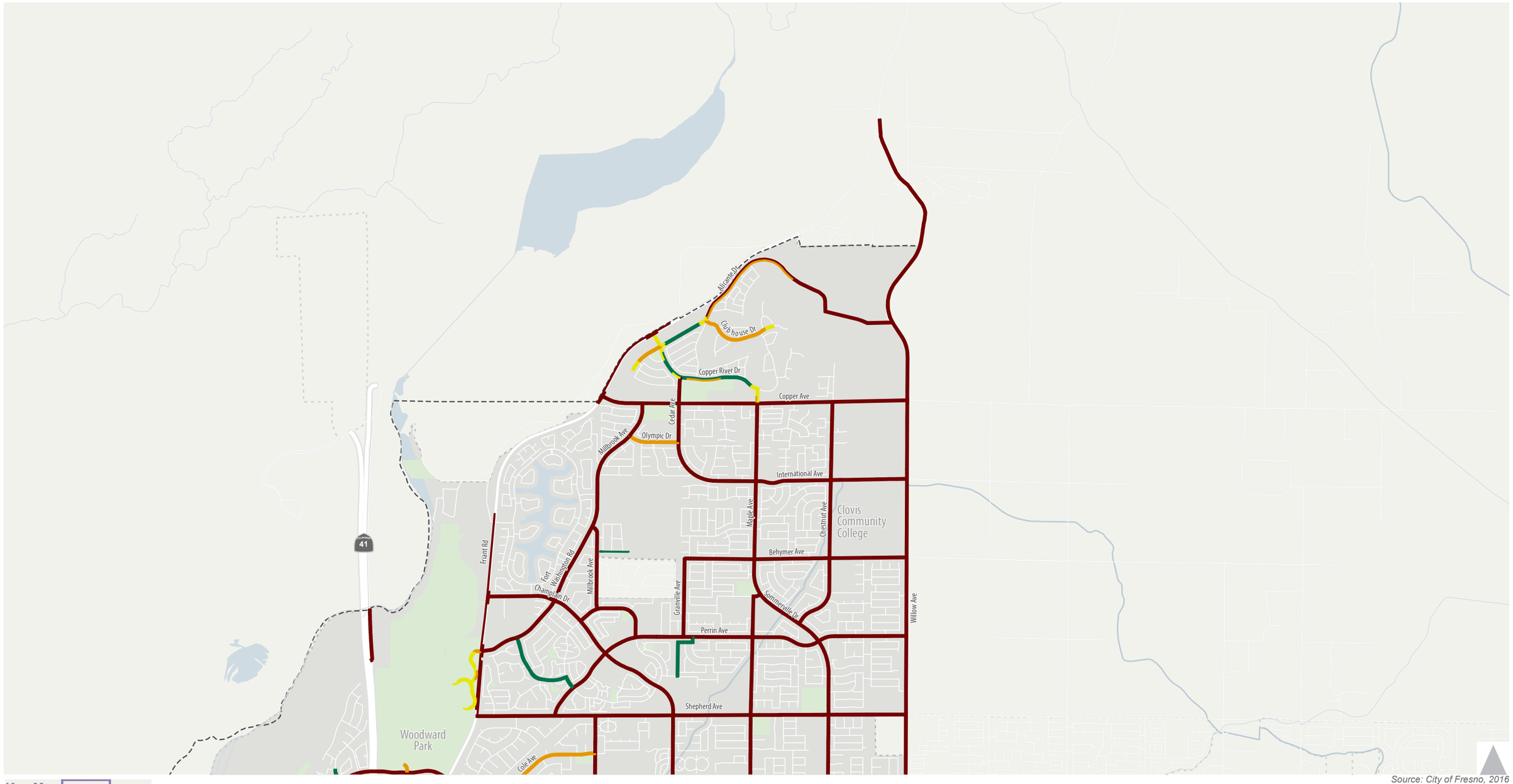
As discussed in the Introduction, this study also evaluated the Bicycle Level of Traffic Stress (LTS) for on-street bikeway travel throughout the city. Bicycle level of traffic stress (LTS) criteria span from LTS 1 to LTS 4, with LTS 1 being the least stressful for cyclists and LTS 4 being the most stressful for cyclists. Most of the arterial and collector streets within the City have a high level of traffic stress (LTS 3 and LTS 4) as shown in Figure 35. This is the result of relatively high vehicle speeds (greater than 35 miles per hour) on most arterial and collector streets. Figure 35 shows the existing LTS levels for on-street bikeway travel in the city.

To improve the LTS for on-street bikeway travel, the following improvements could be made:

- Traffic calming, such as lane width reductions and bulb-outs, to reduce vehicle travel speeds
- Buffered bike lanes or separated bikeways to provide a more comfortable distance between cyclists and vehicle traffic (may require the narrowing of travel lanes to 10 feet or 11 feet to accommodate the buffer or physical separation) – see Figure 55 through Figure 58, for example

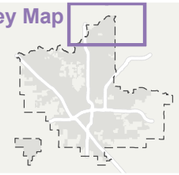
These improvements are discussed further in Chapter 5, Planned Networks.

[This page intentionally left blank]



Source: City of Fresno, 2016

Key Map



Level of Traffic Stress (LTS)
- LTS 1: All riders feel safe
- LTS 2: Most adult riders feel safe
- LTS 3: Riders that are "enthused and confident" feel safe
- LTS 4: Riders that are "strong and fearless" feel safe

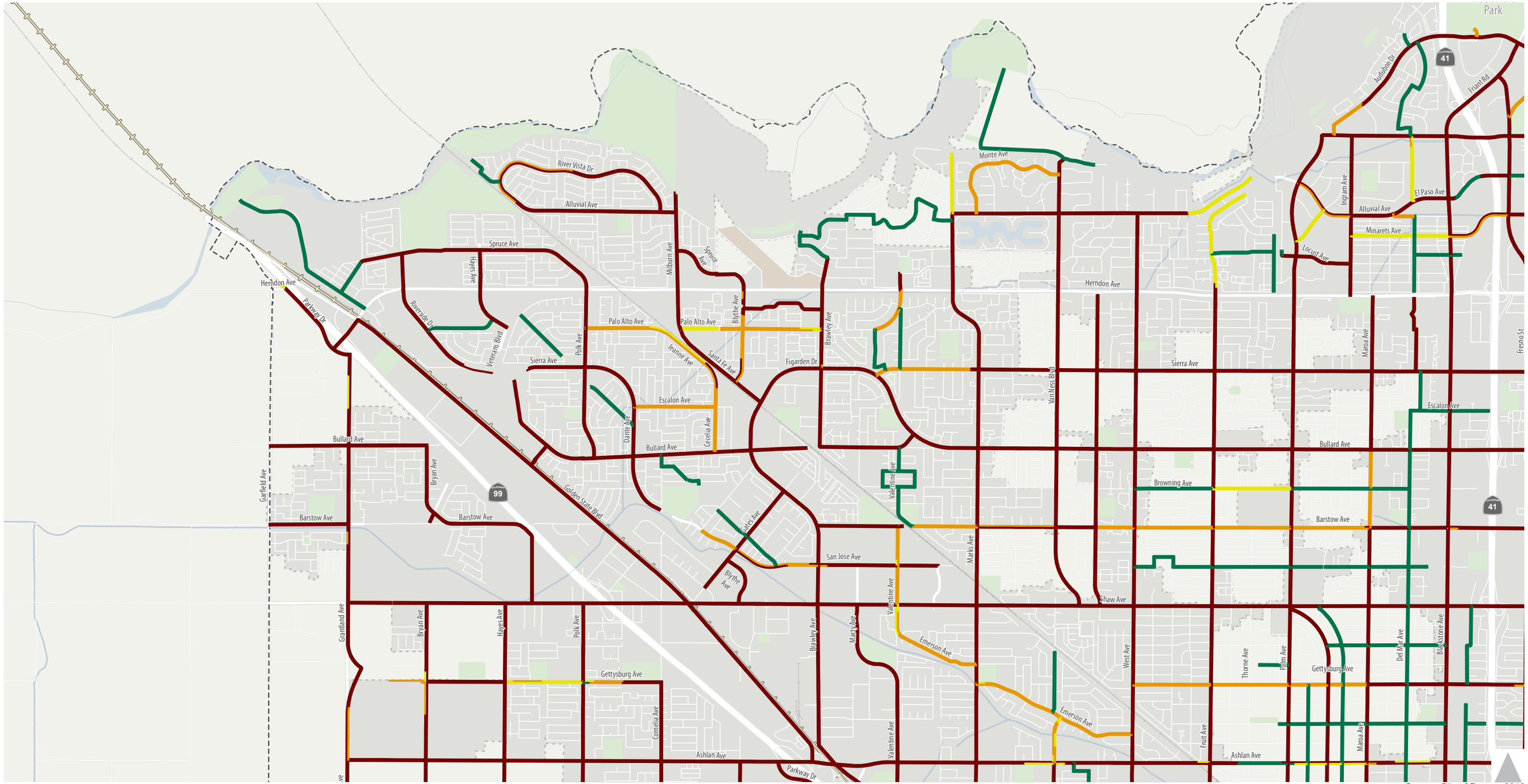
- Rail
- High Speed Rail Alignment
- Canal
- City Sphere of Influence
- Parks

- Airports
- Water
- Cities

City of FRESNO active transportation plan

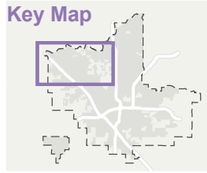
Figure 35

Bicycle Level of Traffic Stress (LTS) - Inset 1



Source: City of Fresno, 2016

Key Map



Level of Traffic Stress (LTS)

- LTS 1: All riders feel safe
- LTS 2: Most adult riders feel safe
- LTS 3: Riders that are "enthused and confident" feel safe
- LTS 4: Riders that are "strong and fearless" feel safe

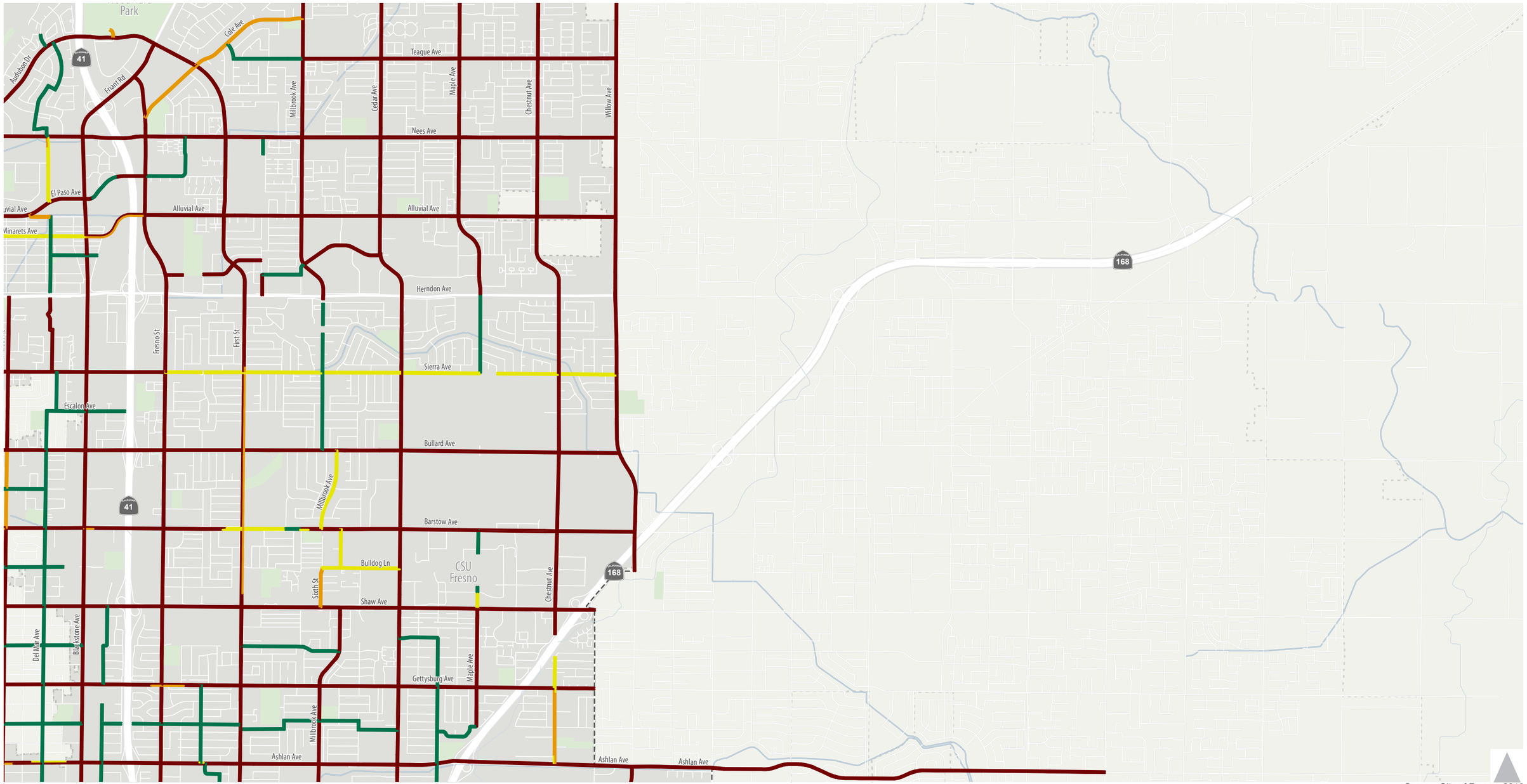
- Rail
- High Speed Rail Alignment
- Canal
- City Sphere of Influence
- Parks

- Airports
- Water
- Cities

City of FRESNO active transportation plan

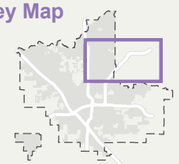
Figure 35

Bicycle Level of Traffic Stress (LTS) - Inset 2



Source: City of Fresno, 2016

Key Map



Level of Traffic Stress (LTS)

- LTS 1: All riders feel safe
- LTS 2: Most adult riders feel safe
- LTS 3: Riders that are "enthused and confident" feel safe
- LTS 4: Riders that are "strong and fearless" feel safe

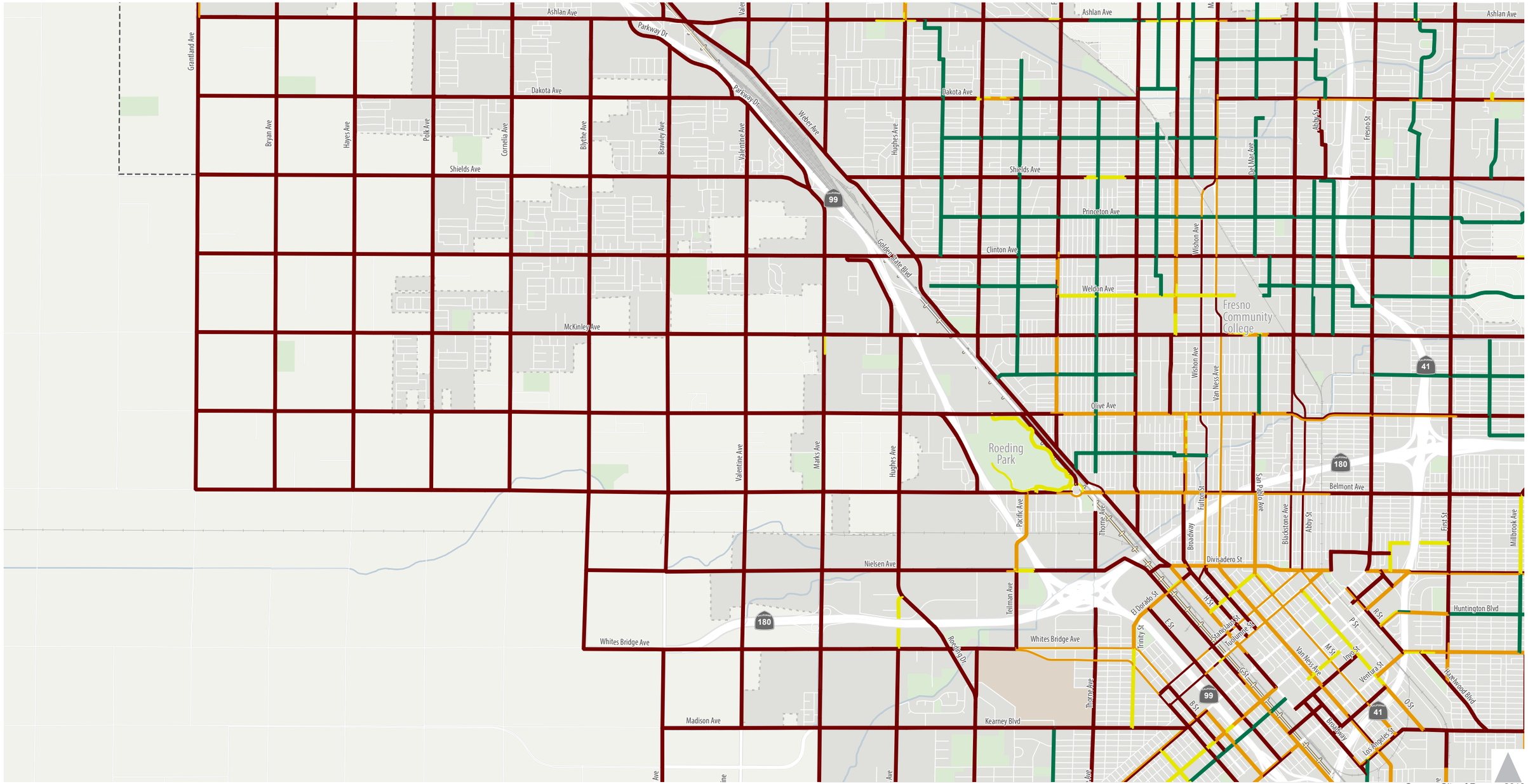
- Rail
- High Speed Rail Alignment
- Canal
- City Sphere of Influence
- Parks

- Airports
- Water
- Cities

City of FRESNO active transportation plan

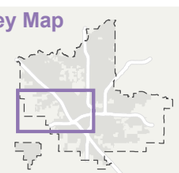
Figure 35

Bicycle Level of Traffic Stress (LTS) - Inset 3



Source: City of Fresno, 2016

Key Map



Level of Traffic Stress (LTS)

- LTS 1: All riders feel safe
- LTS 2: Most adult riders feel safe
- LTS 3: Riders that are "enthused and confident" feel safe
- LTS 4: Riders that are "strong and fearless" feel safe

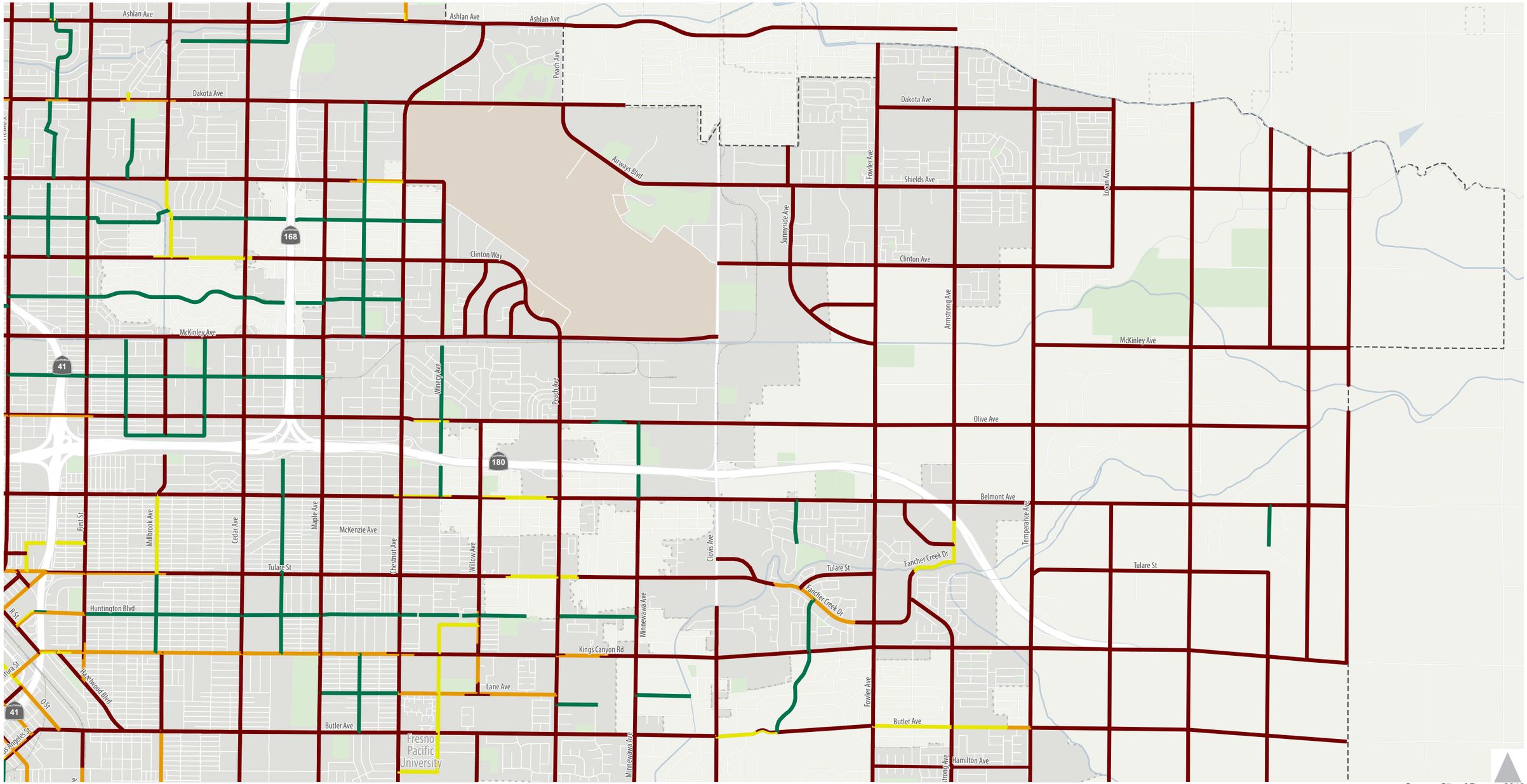
- Rail
- High Speed Rail Alignment
- Canal
- City Sphere of Influence
- Parks

- Airports
- Water
- Cities

City of FRESNO active transportation plan

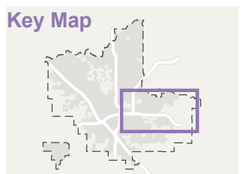
Figure 35

Bicycle Level of Traffic Stress (LTS) - Inset 4



Source: City of Fresno, 2016

Key Map



Level of Traffic Stress (LTS)

- LTS 1: All riders feel safe
- LTS 2: Most adult riders feel safe
- LTS 3: Riders that are "enthused and confident" feel safe
- LTS 4: Riders that are "strong and fearless" feel safe

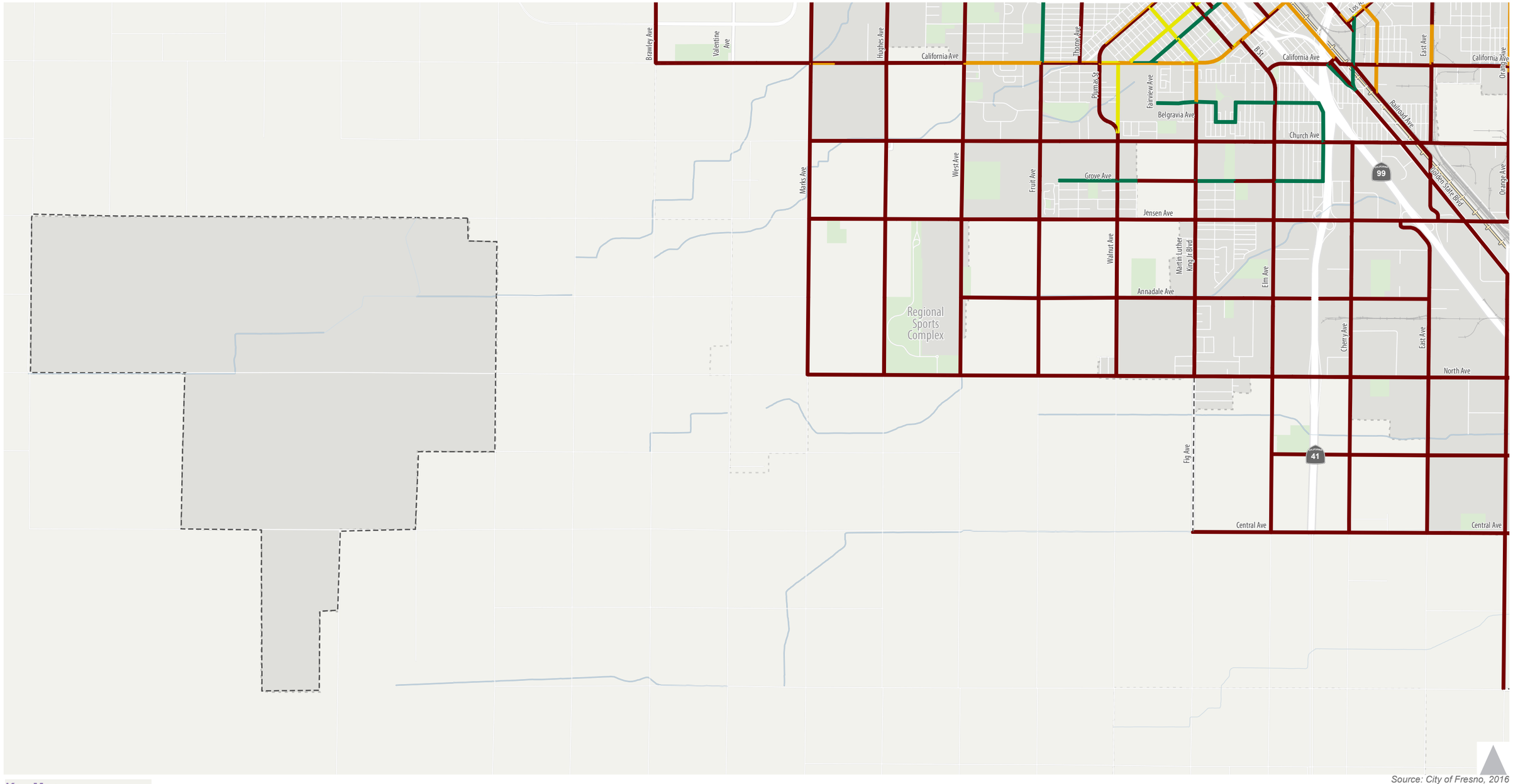
- Rail
- High Speed Rail Alignment
- Canal
- City Sphere of Influence
- Parks

- Airports
- Water
- Cities

City of FRESNO active transportation plan

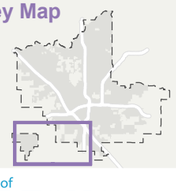
Figure 35

Bicycle Level of Traffic Stress (LTS) - Inset 5



Source: City of Fresno, 2016

Key Map



Level of Traffic Stress (LTS)

- LTS 1: All riders feel safe
- LTS 2: Most adult riders feel safe
- LTS 3: Riders that are "enthused and confident" feel safe
- LTS 4: Riders that are "strong and fearless" feel safe

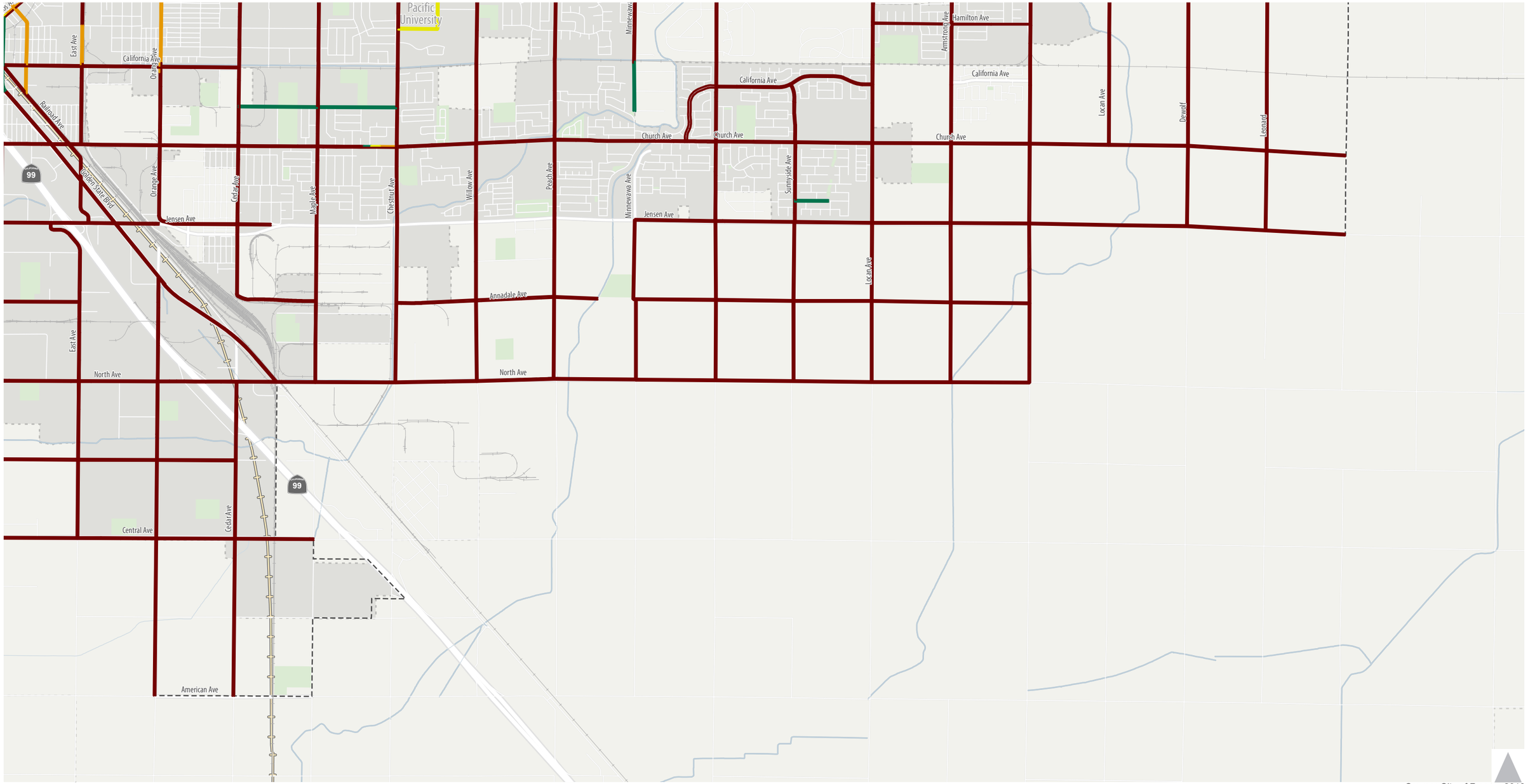
- Rail
- High Speed Rail Alignment
- Canal
- City Sphere of Influence
- Parks

- Airports
- Water
- Cities

City of FRESNO active transportation plan

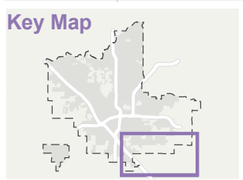
Figure 35

Bicycle Level of Traffic Stress (LTS) - Inset 6



Source: City of Fresno, 2016

Key Map



Level of Traffic Stress (LTS)
- LTS 1: All riders feel safe
- LTS 2: Most adult riders feel safe
- LTS 3: Riders that are "enthused and confident" feel safe
- LTS 4: Riders that are "strong and fearless" feel safe

- Rail
- High Speed Rail Alignment
- Canal
- City Sphere of Influence
- Parks

- Airports
- Water
- Cities

City of FRESNO active transportation plan

Figure 35

Bicycle Level of Traffic Stress (LTS) - Inset 7

[This page intentionally left blank]

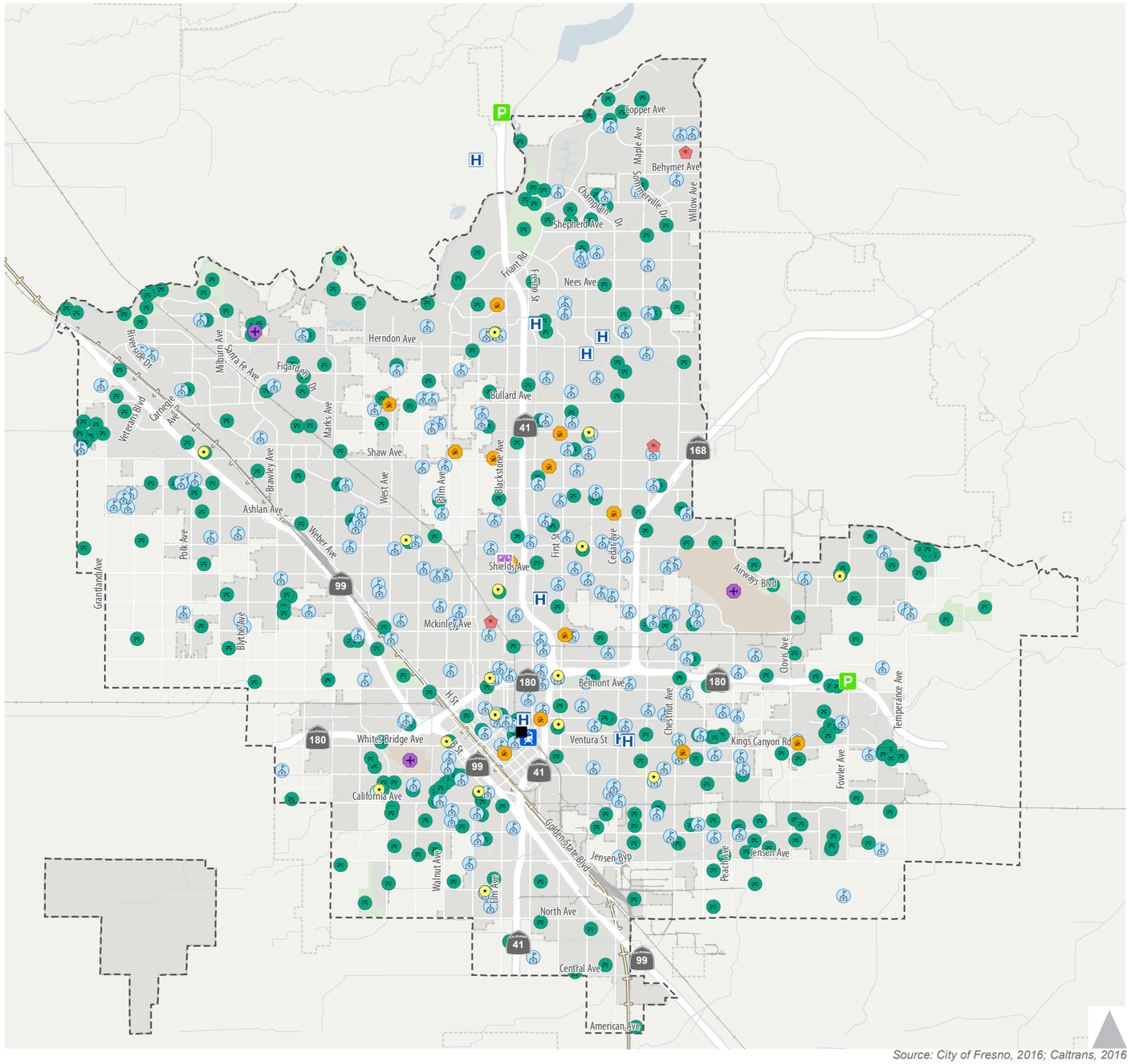
Land Use and Socioeconomics

An important aspect of Fresno's walking and bicycling networks is their relationship to key destinations within the City. Pedestrian and bicycle facilities connecting these destinations will experience higher use than other facilities and provide the most benefit to residents. This is particularly important because most of Fresno is of relatively low density, and an extensive network is required to cover the entire city.

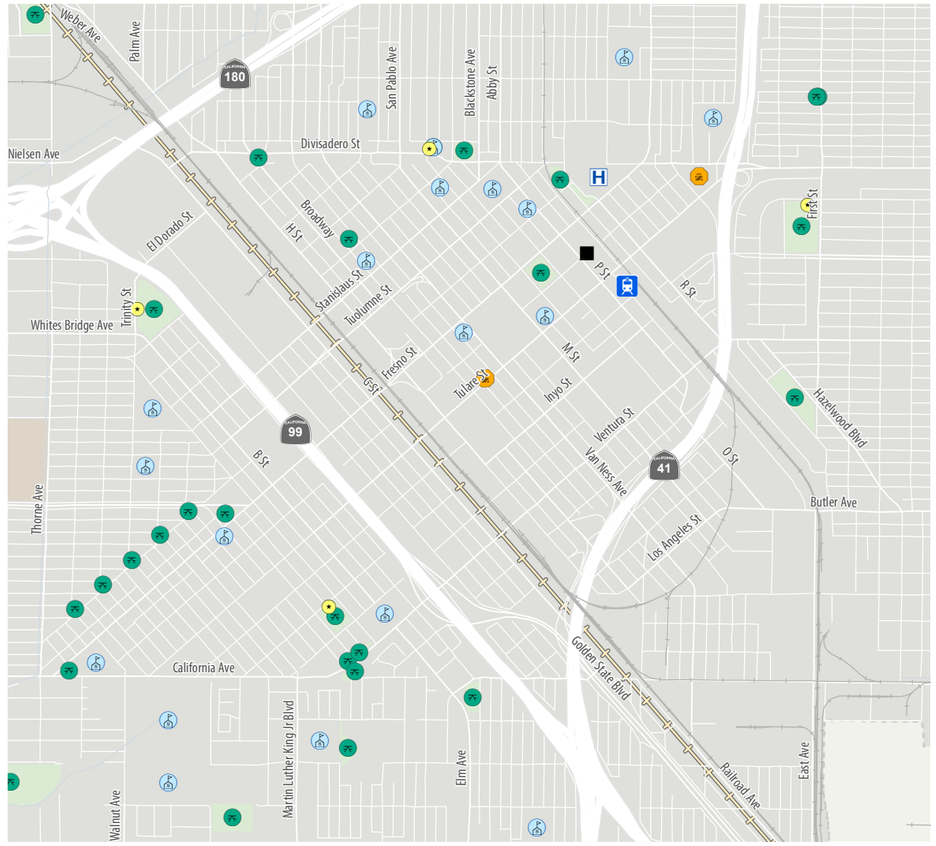
Similarly, the relationship of active transportation facilities is also important. Bicycling and walking networks are useful for all residents of the City, but especially important for disadvantaged communities who may have limited access to automobile travel. With limited funding available, prioritizing networks connecting key destinations and serving disadvantaged communities will also make the best use of funds spent on active transportation facilities.

Figure 36 depicts key locations to which pedestrians and cyclists are likely to travel within the City, including schools and higher education centers, parks and recreational facilities, government and health facilities, and retail and employment centers. Similarly, the General Plan Zoning Map presented in Appendix B depicts the planned land use for all areas of the City.

[This page intentionally left blank]



Source: City of Fresno, 2016; Caltrans, 2016



DOWNTOWN VIEW

Key Destinations

- Higher Education
- Airport
- Shopping
- Hospital
- School
- Park
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-N-Ride
- Rail
- High Speed Rail Alignment
- Parks
- Airports
- Water
- City Sphere of Influence
- City

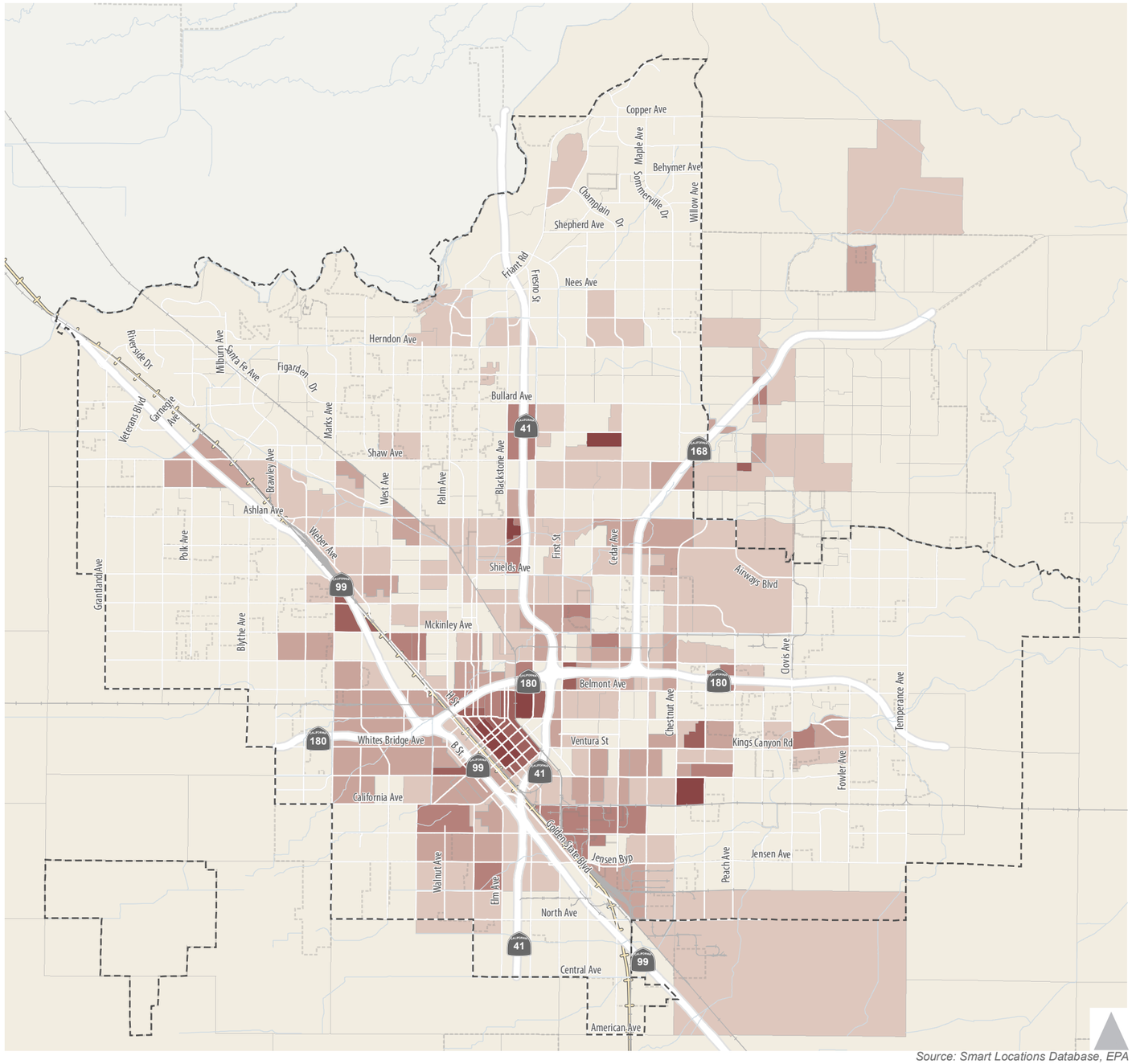
[This page intentionally left blank]

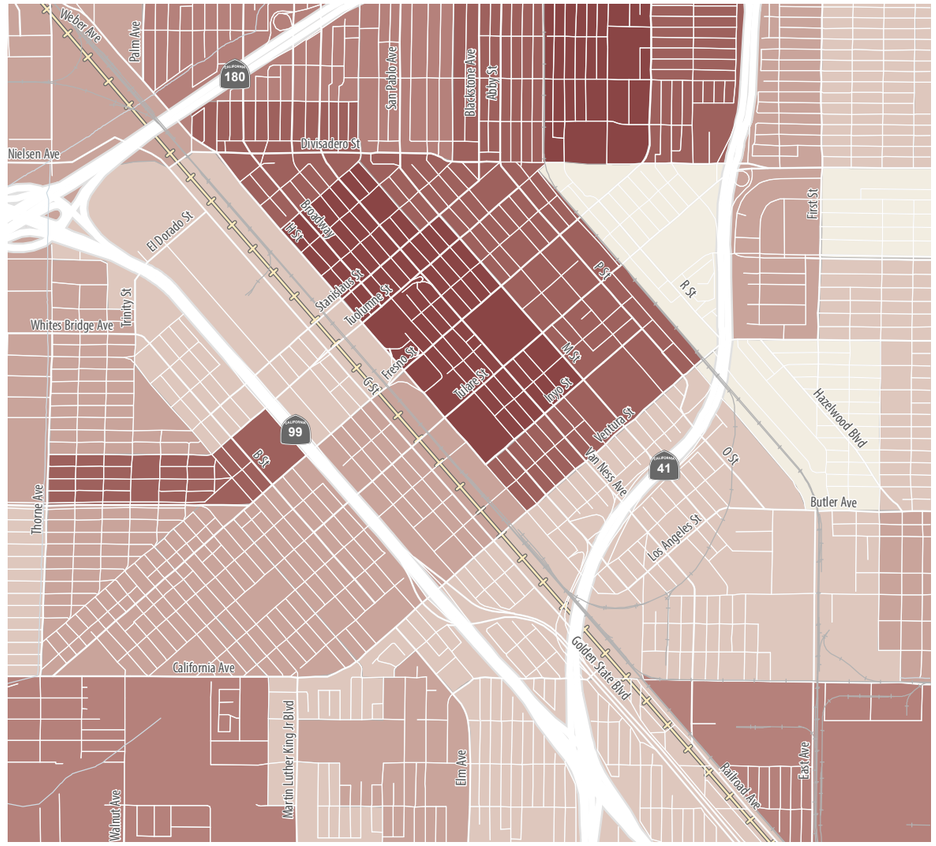
Figure 37 through Figure 40 present four different indicators of disadvantaged communities, often referred to as environmental justice communities:

- Zero automobile households: share of households in each census tract that do not own a car.
- Free or reduced price meal eligibility: the share of students at a school who are eligible for subsidized meals. Schools with higher shares are more disadvantaged.
- CalEnviroScreen 2.0 score percentile: a measure of environmental health by census tract. Inputs include socioeconomic factors, population characteristics, pollution factors, and environmental factors. Tracts with higher percentiles are more disadvantaged. Of the over 8,000 census tracts in California, the City of Fresno has 17 of the 25 worst scoring census tracts.
- Household median income: census tracts with median households under 80% of the statewide median.

These maps indicate that the disadvantaged communities are primarily located in the areas south of Shaw Avenue, with the disadvantaged areas south of SR 180. Acknowledging this fact, the ATP process included specific outreach to disadvantaged groups and representation in the Stakeholder Advisory Committee. Spanish translation services were also offered at public workshops. Outreach was also strengthened through partnership with community organizations which held additional grassroots meetings to collect feedback from disadvantaged residents. Many improvements were prioritized for disadvantaged areas as discussed in Chapter 5, Planned Networks.

[This page intentionally left blank]





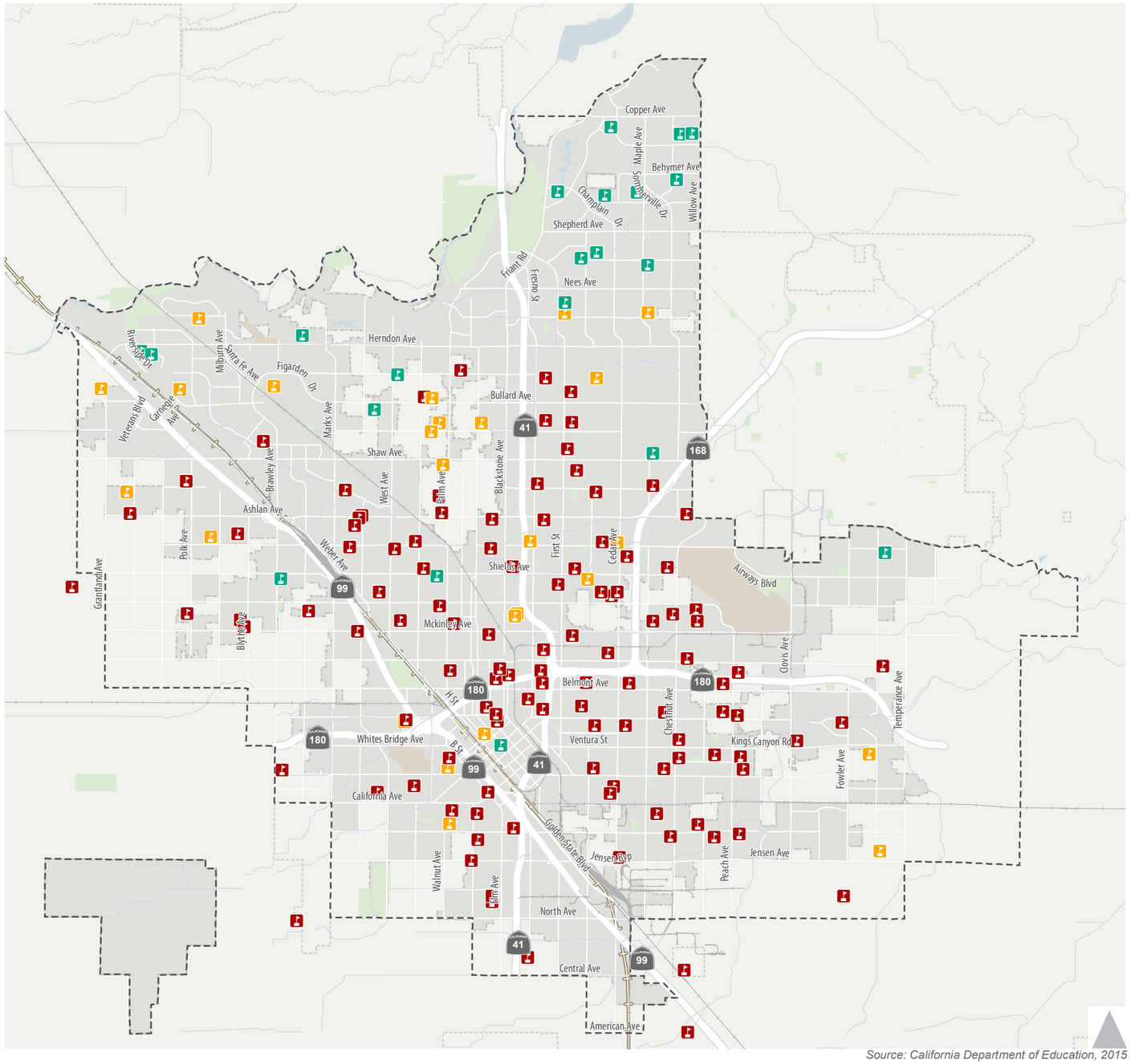
DOWNTOWN VIEW

Percent of Households with Zero Automobiles

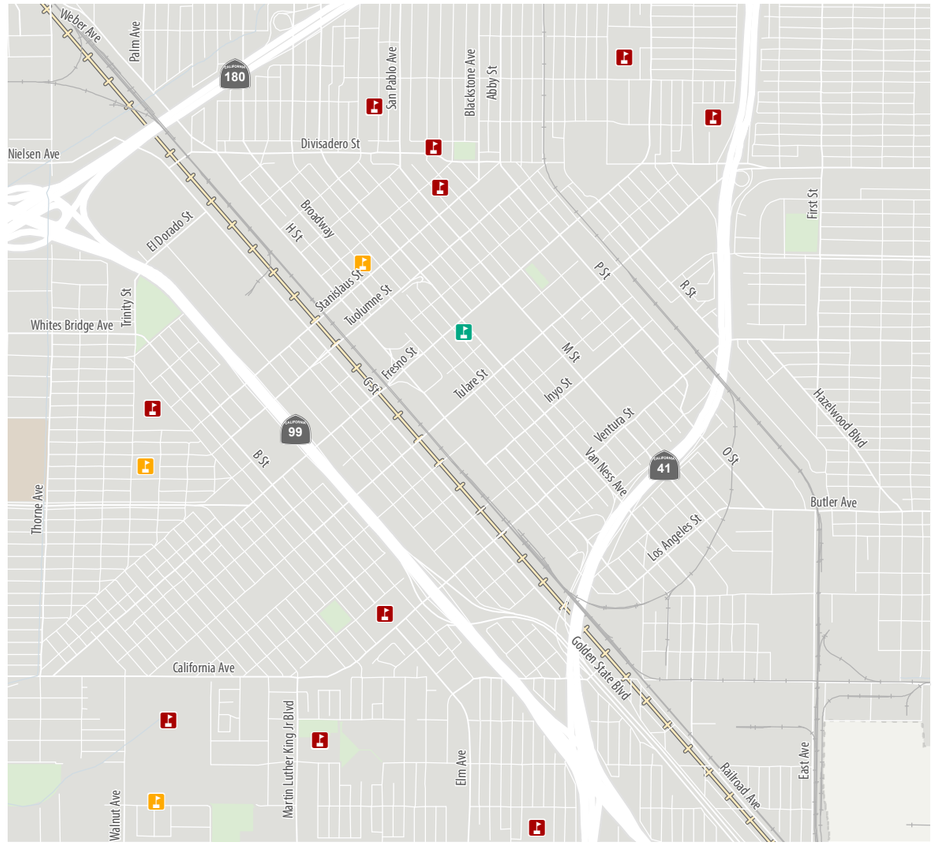
- < 10%
- 10 - 20%
- 20 - 30 %
- 30 - 40%
- 40 - 50%
- > 50%

- Rail
- High Speed Rail Alignment
- City Sphere of Influence
- City

Source: Smart Locations Database, EPA



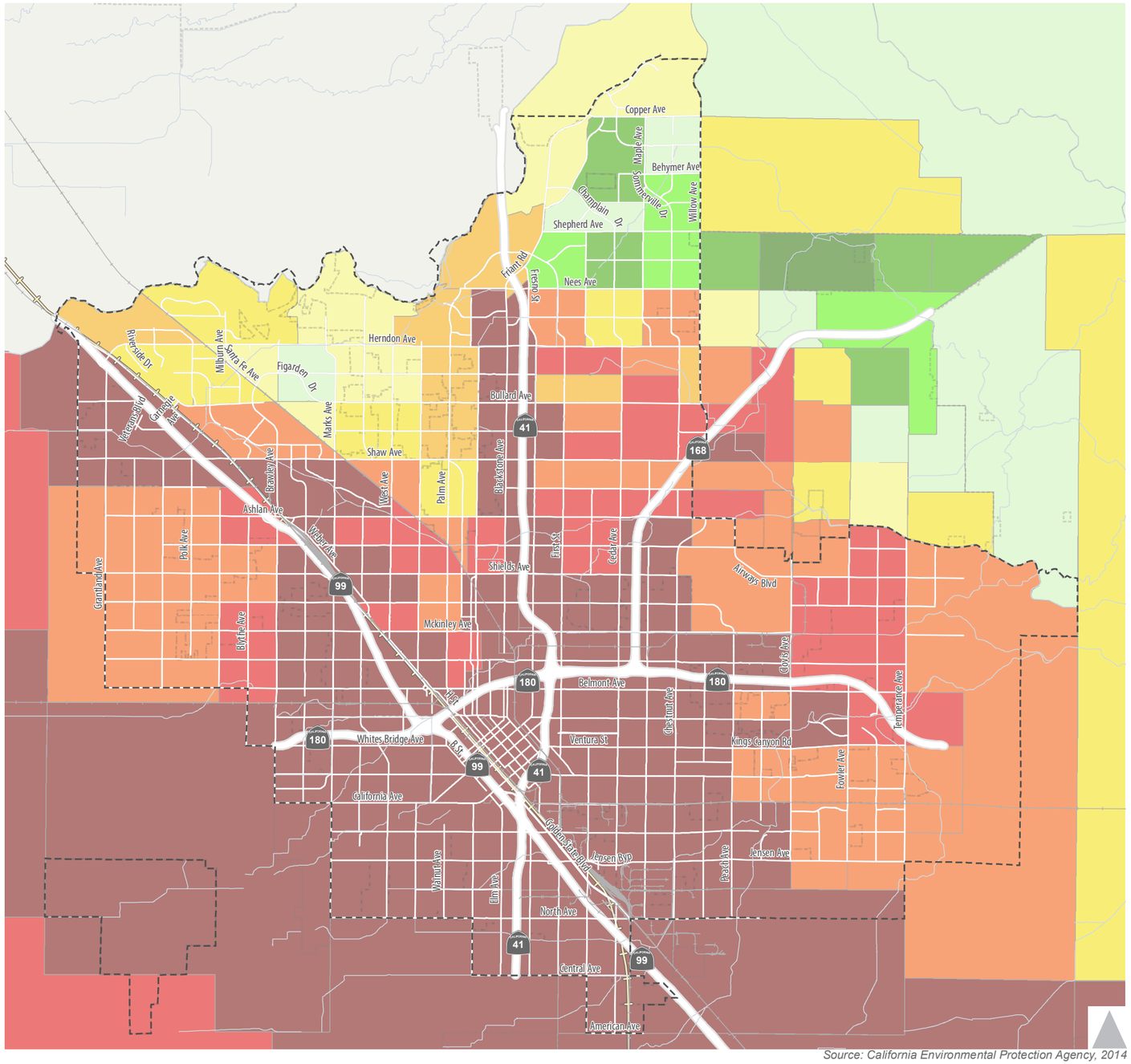
Source: California Department of Education, 2015



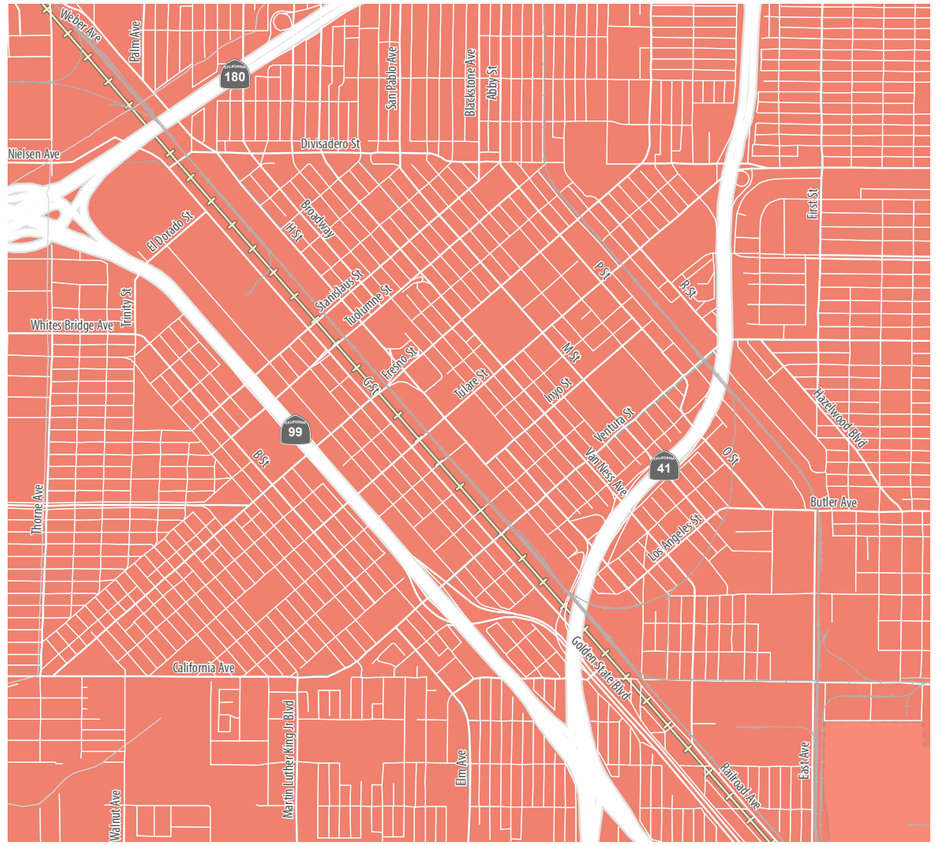
DOWNTOWN VIEW

Percentage of Students Eligible for Free or Reduced Price Meals

- < 50%
- 50- 75%
- > 75%
- Rail
- High Speed Rail Alignment
- Parks
- Airports
- Water
- City Sphere of Influence
- City



Source: California Environmental Protection Agency, 2014

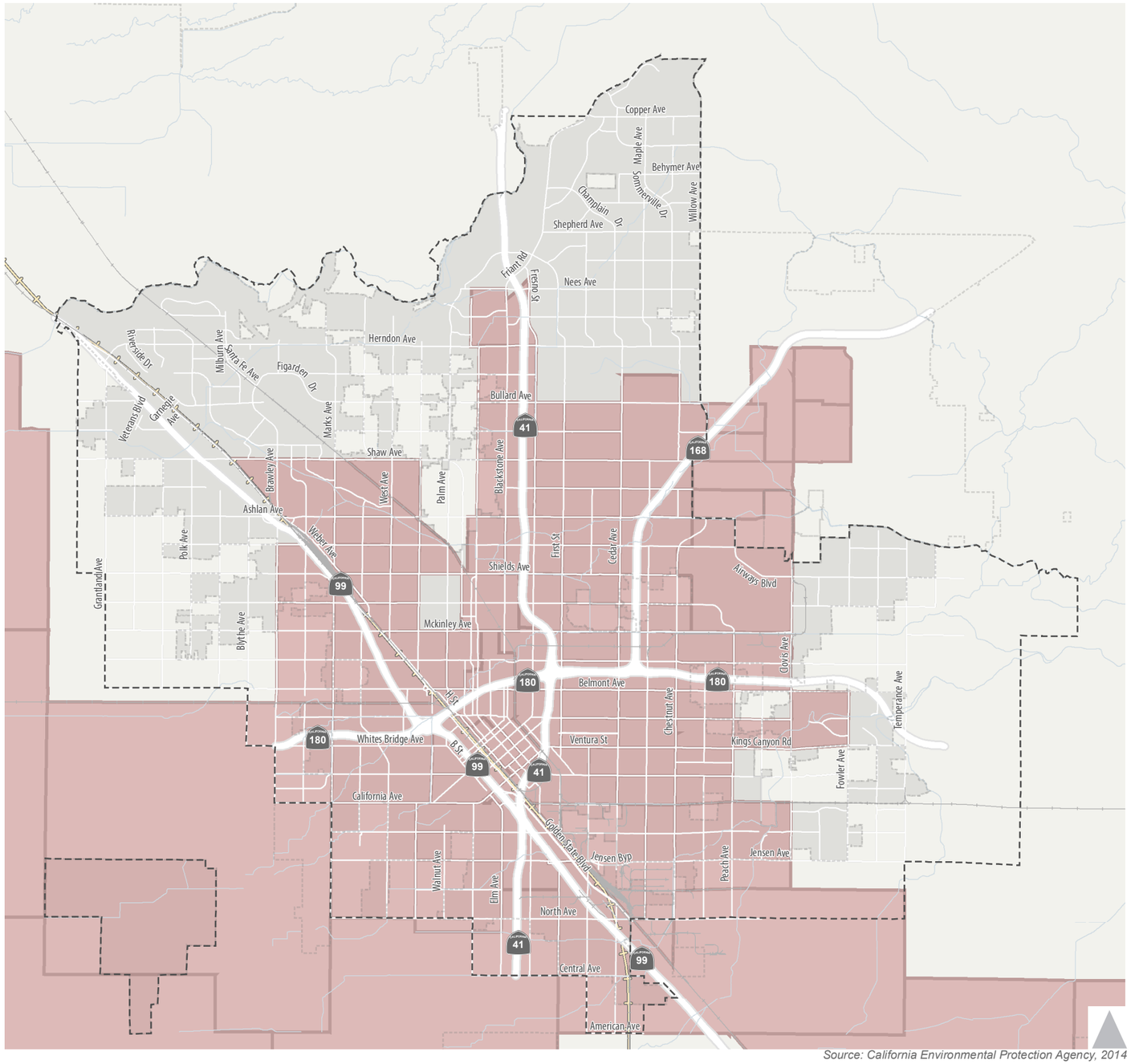


DOWNTOWN VIEW

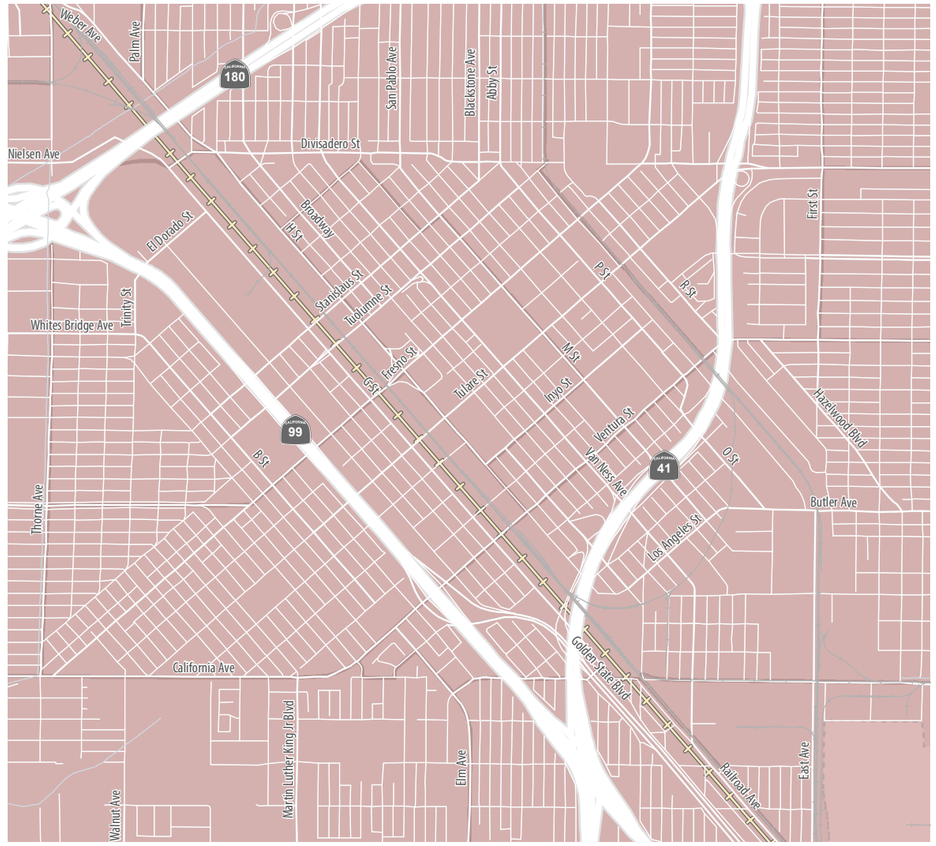
CalEnviroScreen 2.0 Percentile

- 1-10% (lowest scores)
- 11-20%
- 21-30%
- 31-40%
- 41-50%
- 51-60%
- 61-70%
- 71-80%
- 81-90%
- 91-100% (highest scores)

- Rail
- High Speed Rail Alignment
- City Sphere of Influence
- City



Source: California Environmental Protection Agency, 2014



DOWNTOWN VIEW

Census Tracts with Median Households Under 80% of Statewide Median (or less than $49,191)

Rail

High Speed Rail Alignment

City Sphere of Influence

City

City of FRESNO active transportation plan

Figure 40

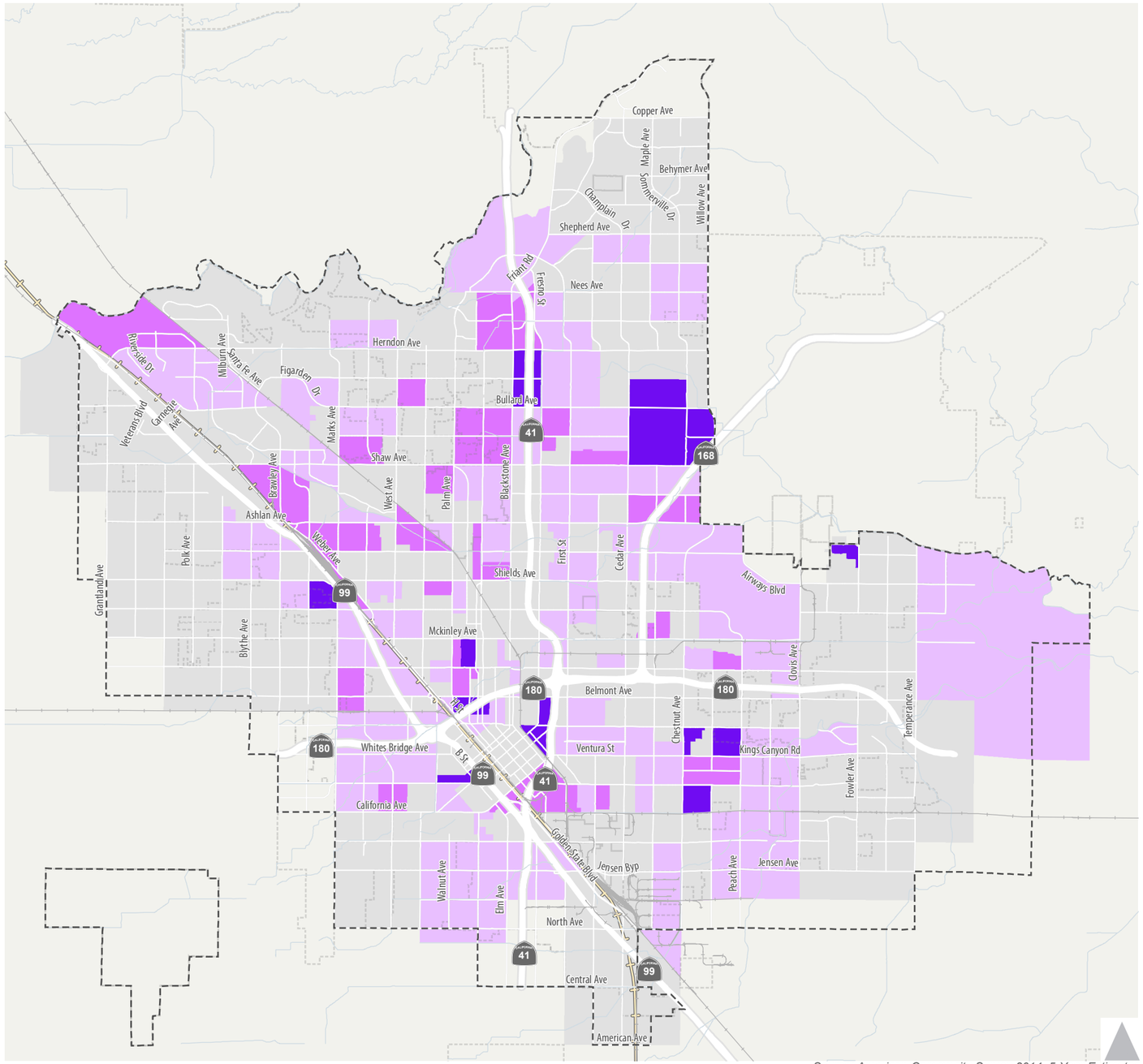
Census Tracts with Median Household Income Under 80% of Statewide Median (less than $49,191)

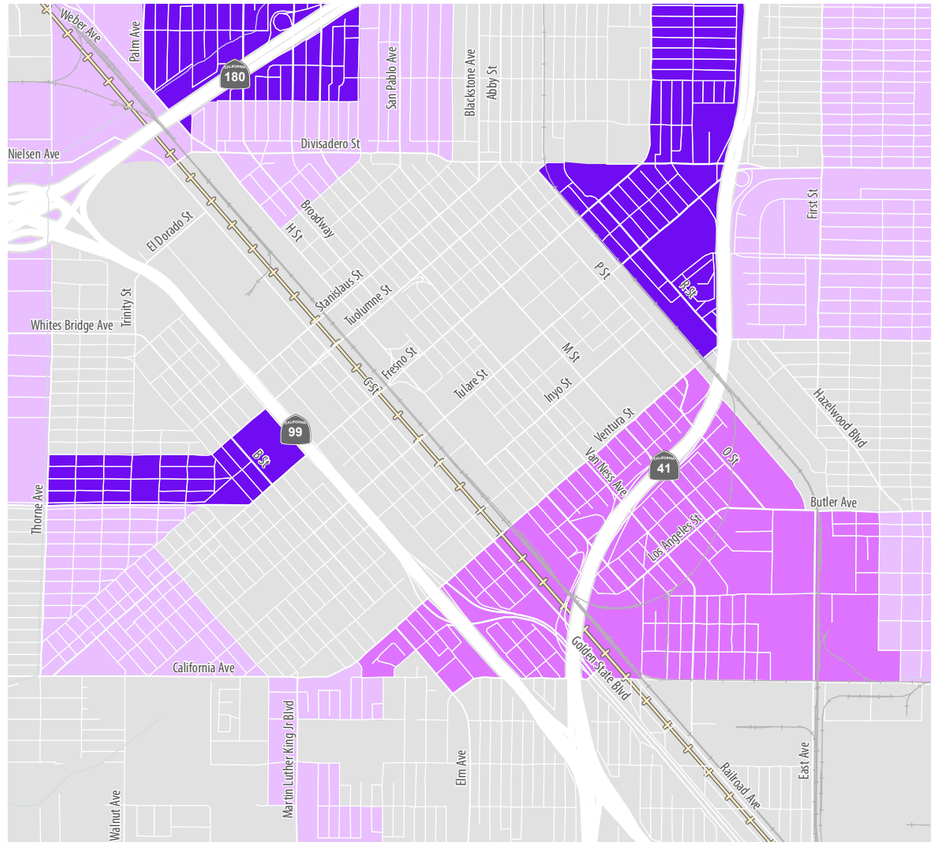
Bicycle and Pedestrian Trips

Based on data from the US Census 2010-2014 American Community Survey, approximately 3,200 or 1.8% of Fresno workers age 16 years and older commuted to work daily by walking. This is less than the 2.9% statewide average. The number of residents commuting to work daily by bicycling was1,900 or 1.1%, nearly equivalent to the statewide average of 1.2% (excluding workers who work at home). These shares represent about 6,400 bike trips and 3,800 walk trips per day. Figure 41 and Figure 42 show these shares by census block group.

These statistics include only a portion of active transportation commuters because they fail to measure people who walk or ride only one or two days per week. They also fail to measure non-commute activities such as trips to stores, to schools, or for recreation. As a percentage of trips, non-commute active transportation trips are generally greater than commute trips because commute trips tend to be longer. Thus, bicycling and walking facilities provide key infrastructure for many trips and are a key amenity for residents, though some uses are often not captured in US Census data. Improving and increasing these facilities is likely to have benefits beyond that suggested by these statistics.

[This page intentionally left blank]





DOWNTOWN VIEW

Percent Pedestrian by Block Group
- Less than 1%
- 1% - 5%
- 5% - 10%
- Greater than 10%

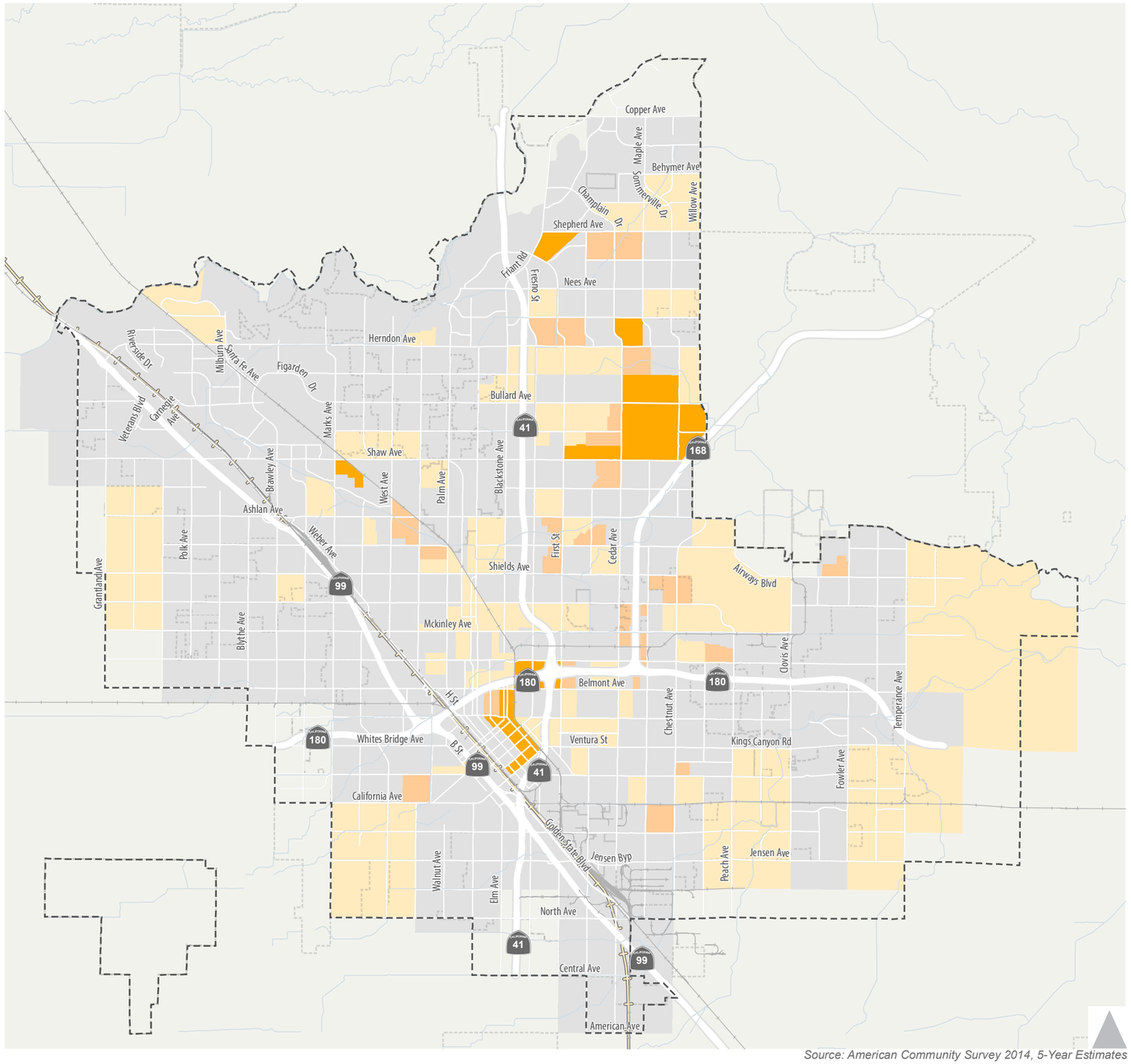
- City Sphere of Influence
- Rail
- High Speed Rail Alignment
- City

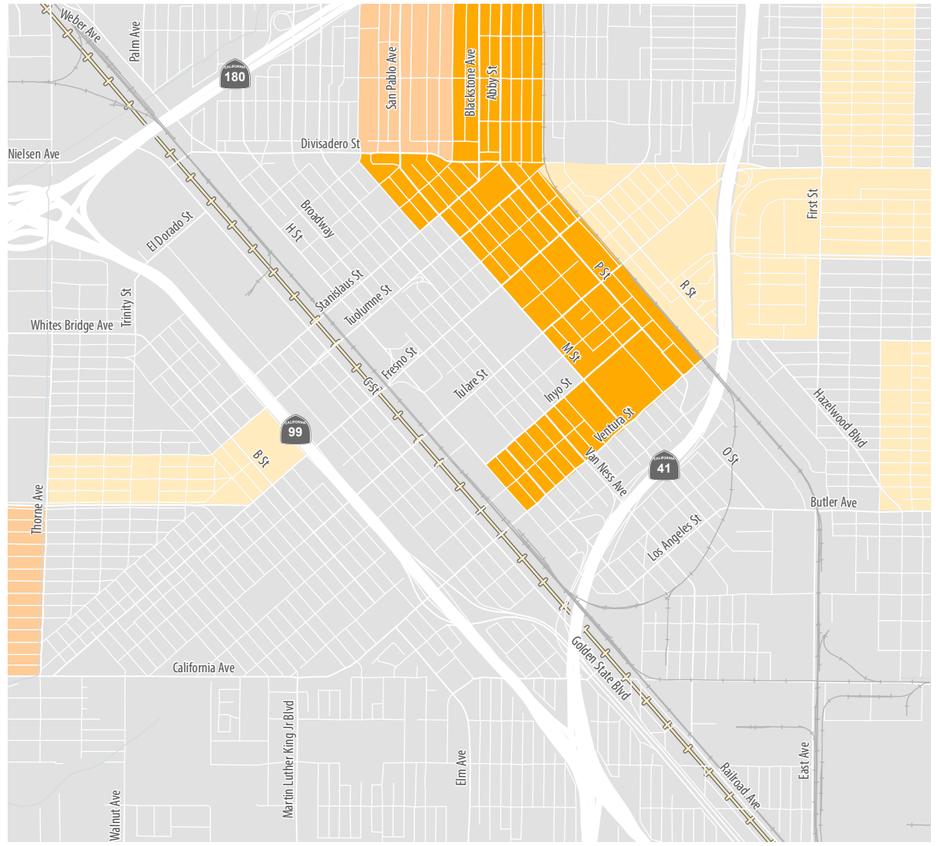
Source: American Community Survey 2014, 5-Year Estimates

City of FRESNO active transportation plan

Figure 41

Walk to Work Share by Census Block Group





DOWNTOWN VIEW

Percent Bicyclist by Block Group
- Less than 1%
- 1% - 5%
- 5% - 10%
- Greater than 10%

- City Sphere of Influence
- Rail
- High Speed Rail Alignment
- City

Source: American Community Survey 2014, 5-Year Estimates

Bicycle and Pedestrian Collisions

Improving the safety of walking and bicycling in Fresno is one of the main goals of the ATP Figure 43 and Figure 44 summarize the collisions by severity for pedestrians and bicyclists, respectively, based on data collected by the Fresno Police Department from 2009-2015.

In 2015, the Federal Highway Administration (FHWA) identified Fresno as a Pedestrian Safety Focus City. Focus cities were selected based on their high pedestrian fatality rates. The FHWA has been working aggressively to reduce pedestrian deaths by focusing extra resources on these cities. As part of this effort, the FHWA offers free technical assistance, courses, and bimonthly webinars to focus cities.

According to data provided by the Fresno Police Department, the primary collision factor in over 59% of collisions was a pedestrian violation. Though less than 1% of collisions were due to pedestrian under the influence, the Fresno police reported that many of these pedestrian violations were due to alcohol or drug impairment or mental illness. Further analysis of pedestrian collisions is provided in Appendix E, Bicycle and Pedestrian Safety Education Plan.

The primary collision factor for bicyclist collisions is more varied, with 23% of collisions reported due to bicyclist on wrong side of road, 17% due to auto right of way violations, and 10% due to traffic signals and signs. Further analysis of bicyclist collisions is provided in Appendix E, Bicycle and Pedestrian Safety Education Plan.

Figure 43 and Figure 44 depict the concentrations of bicycle and pedestrian collisions. The densest bicycle collision areas include:

- Downtown Fresno
- Blackstone Avenue from Ashlan Avenue to Downtown
- Southeast Fresno along Cedar Avenue: SR 180 to Butler Avenue; and Ventura Avenue – Kings Canyon Road: Cedar Avenue to Armstrong Avenue
- Near the intersection of Shields Avenue and West Avenue in northwest Fresno

The densest pedestrian collision areas include:

- Downtown Fresno
- Blackstone Avenue from Nees Avenue to Downtown

- Shaw Avenue along two segments from Brawley Avenue to West Avenue, and Blackstone Avenue to McKinley Avenue
- Southeast Fresno along Cedar Avenue: SR 180 to Ventura Avenue; and Ventura Avenue – Kings Canyon Road: Cedar Avenue to Peach Avenue
- Olive Avenue in the Tower District near the intersections of Wishon Avenue and Van Ness Avenue

Table 3: Pedestrian Collisions by Severity

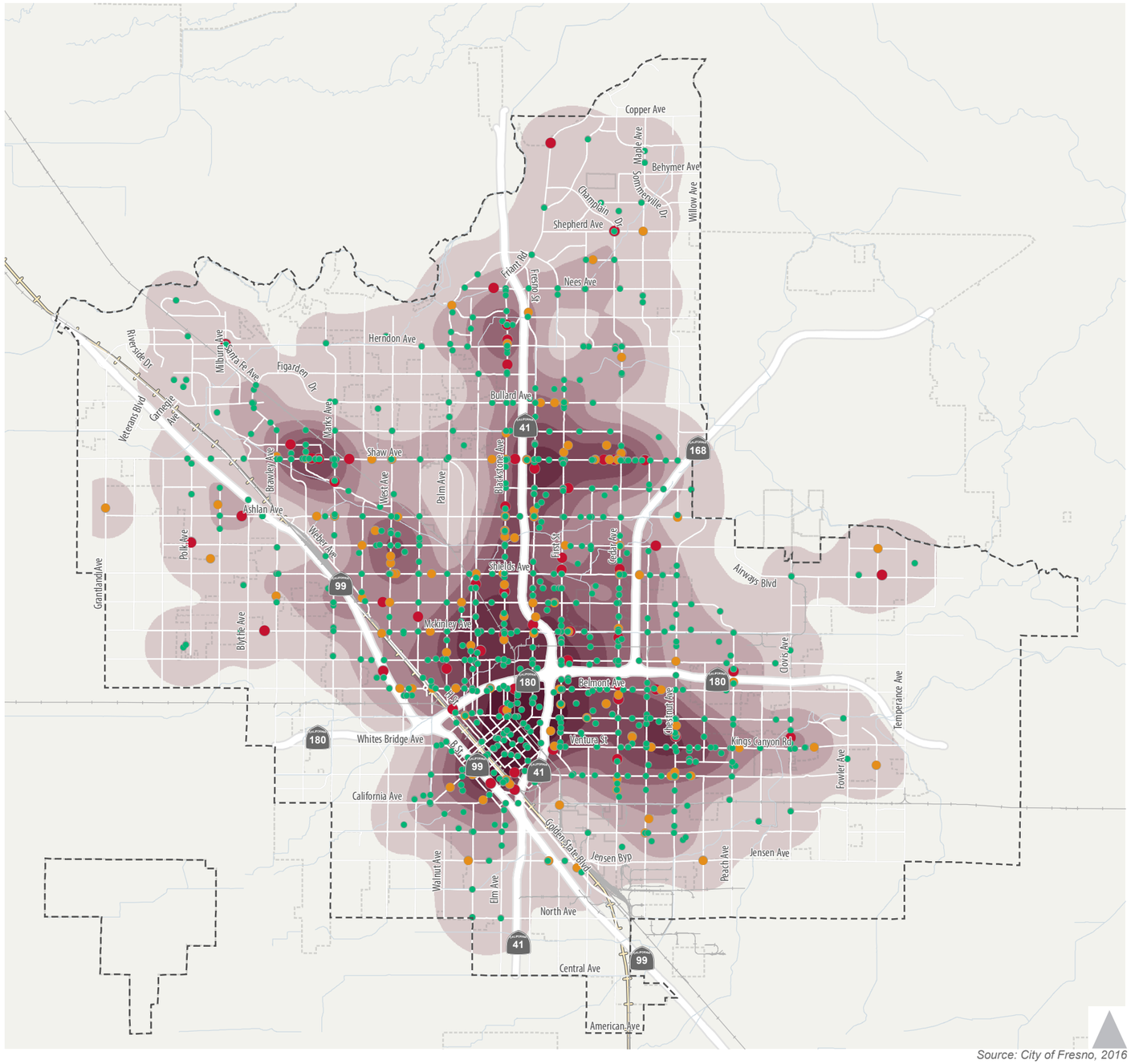
Year	Collisions	Injury	Serious Injury	Fatality
2009	113	84 (74%)	15 (13%)	4 (4%)
2010	120	81 (68%)	19 (16%)	10 (8%)
2011	200	139 (70%)	20 (10%)	15 (8%)
2012	208	136 (65%)	18 (9%)	16 (8%)
2013	200	139 (70%)	21 (11%)	10 (5%)
2014	187	127 (68%)	23 (12%)	17 (9%)
2015	170	120 (71%)	21 (12%)	11 (6%)
Total	**1,198**	**826 (69%)**	**137 (11%)**	**83 (7%)**

Source: City of Fresno 2016, Fehr & Peers 2016

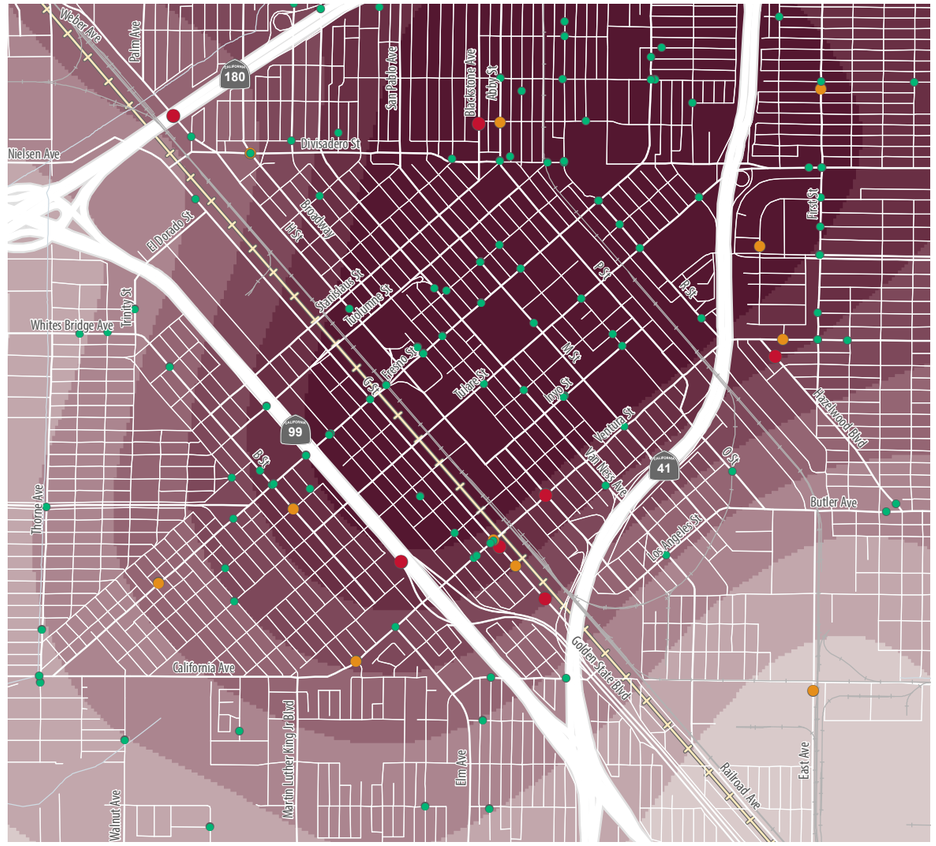
Table 4: Bicyclist Collisions by Severity

Year	Collisions	Injury	Serious Injury	Fatality
2009	80	60 (75%)	2 (3%)	6 (8%)
2010	85	65 (76%)	3 (4%)	2 (2%)
2011	118	85 (72%)	3 (3%)	1 (1%)
2012	124	95 (77%)	7 (6%)	3 (2%)
2013	135	98 (73%)	5 (4%)	5 (4%)
2014	117	91 (78%)	6 (5%)	4 (3%)
2015	135	85 (63%)	10 (7%)	2 (1%)
Total	**794**	**579 (73%)**	**36 (5%)**	**23 (3%)**

Source: City of Fresno 2016, Fehr & Peers 2016



Source: City of Fresno, 2016



DOWNTOWN VIEW

Collisions Involving a Pedestrian

Each dot represents one or more collisions

- Fatal
- Severe Injury
- Non-Severe Injury

Pedestrian Collision Density

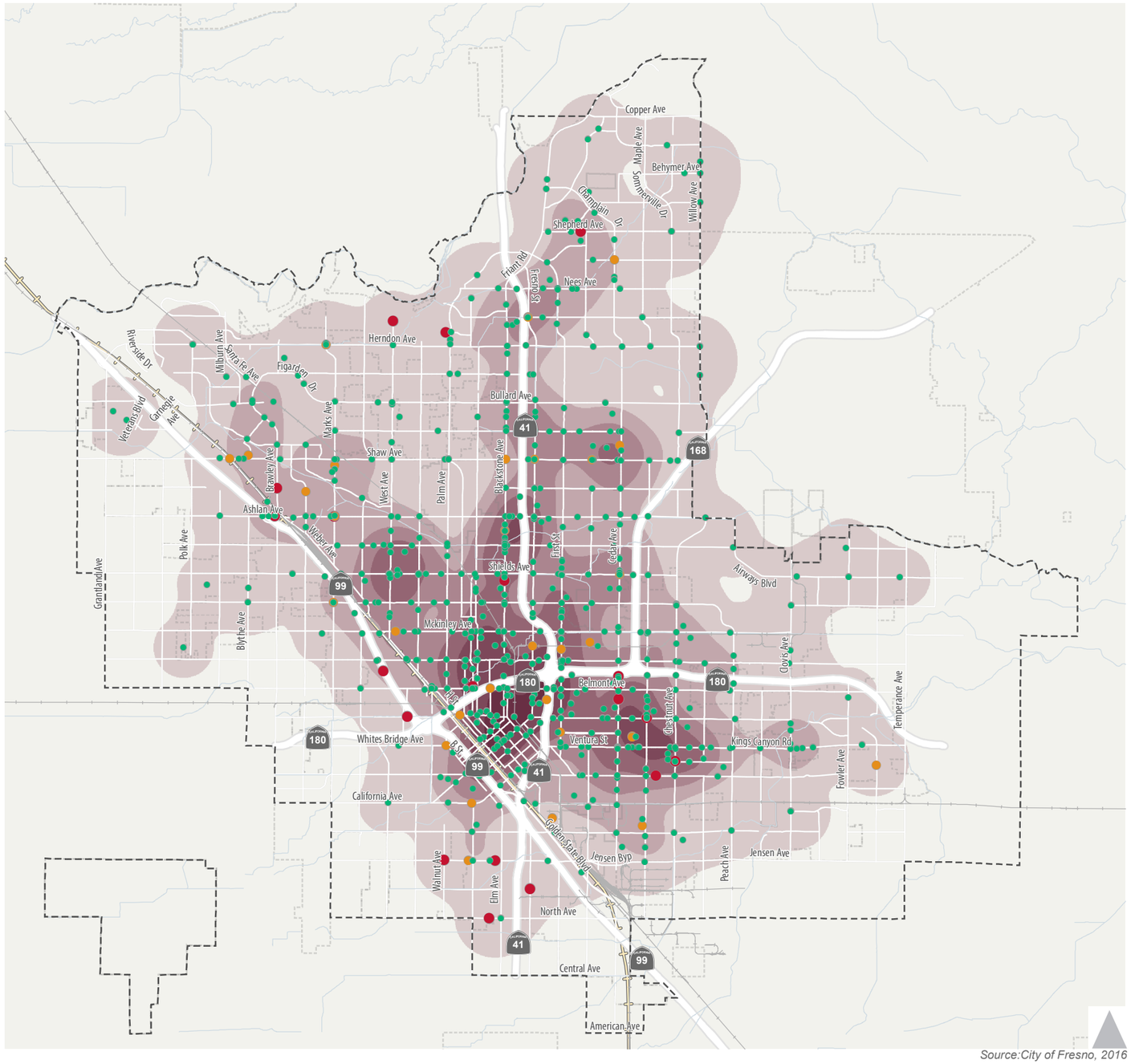
- High
- Low

- City Sphere of influence
- Rail
- High Speed Rail Alignment

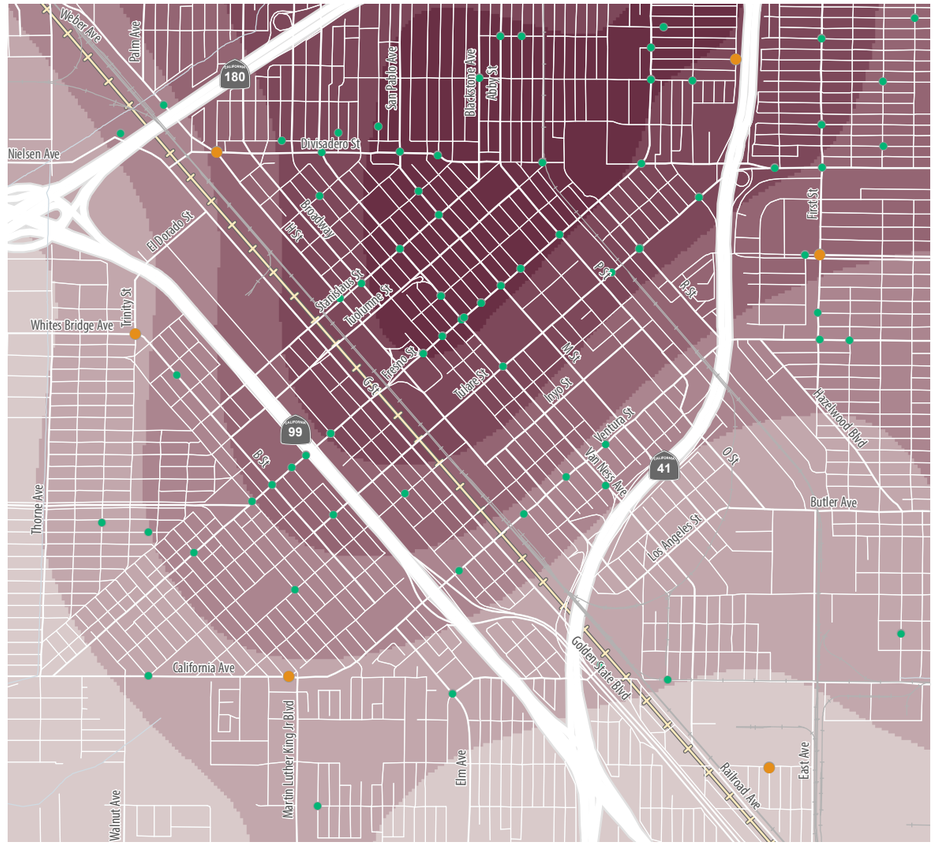
City of FRESNO active transportation plan

Figure 43

Pedestrian Collision Density (2009 - 2015)



Source:City of Fresno, 2016



DOWNTOWN VIEW

Collisions Involving a Bicyclist

Each dot represents one or more collisions

- Fatal
- Severe Injury
- Non-Severe Injury

Bicycle Collision Density

- High
- Low

- City Sphere of Influence
- Rail
- High Speed Rail Alignment
- City

City of FRESNO active transportation plan

Figure 44

Bicycle Collision Density (2009 - 2015)

Bicycle Parking

Safe and secure bicycle parking is an important aspect of bicycle infrastructure. If a bicyclist fears bike theft, they may be less likely to make a bicycle trip. The City of Fresno has bicycle parking at many schools, parks, transit centers, public buildings, and other locations across the City. Figure 46 depicts this parking at these locations.

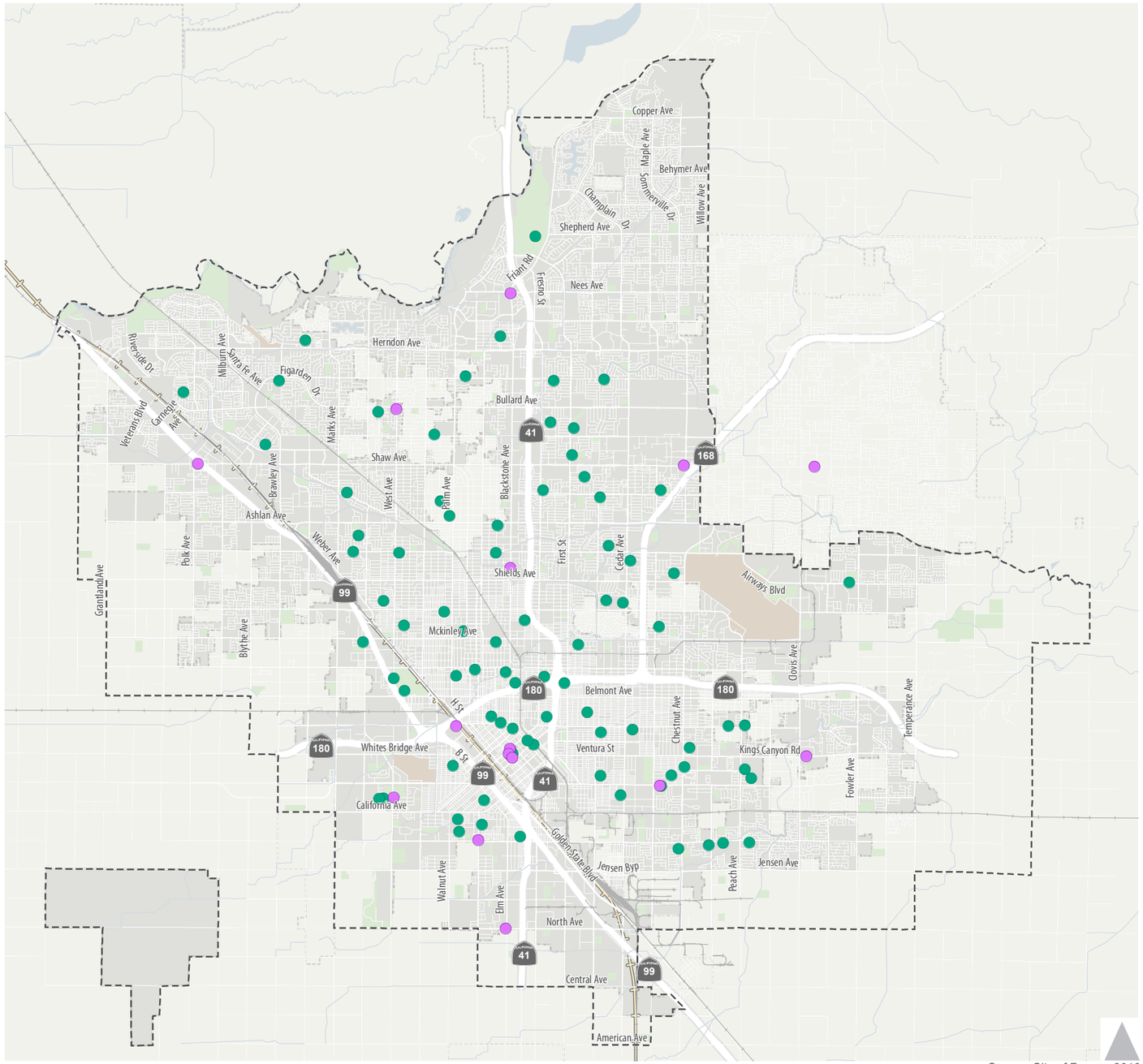
Fresno's Municipal Code has requirements for short-term and long-term bicycle parking for inclusion in new building construction and major renovation. These requirements are described in detail in Appendix C, Relationship to Other Plans and Documents.

Bicycle Connections With Transit

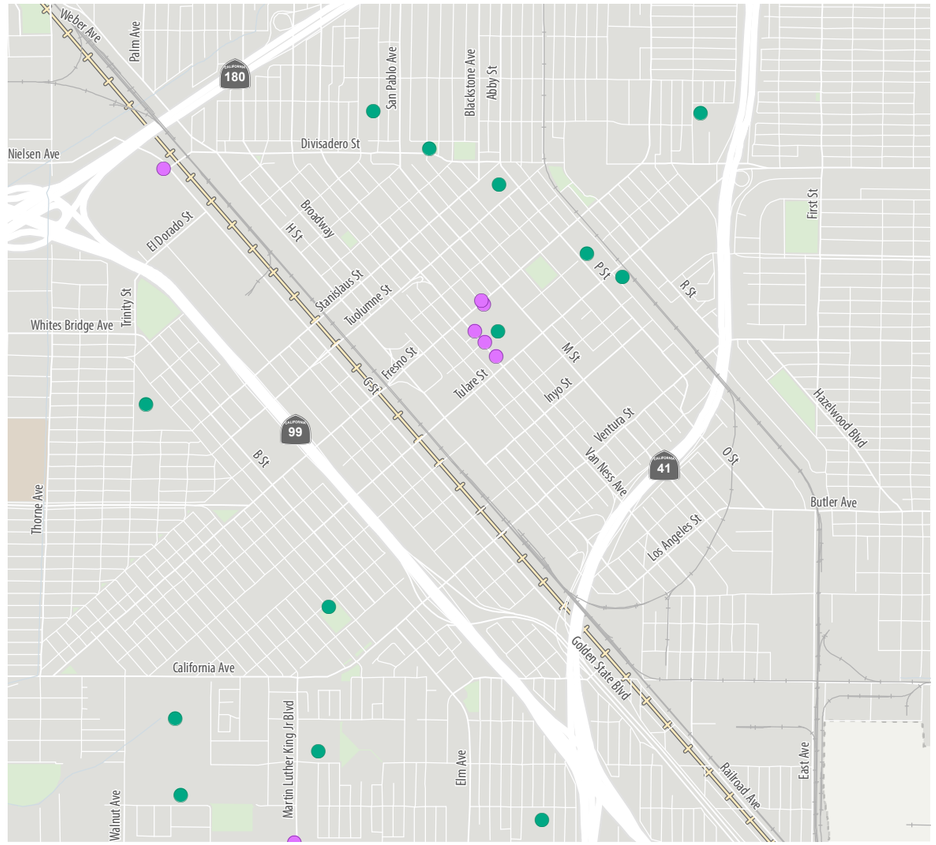
All FAX buses are equipped with front-mounted bike racks that can accommodate at least two bicycles (Figure 45); some buses have racks that can accommodate three bicycles. The bike racks are available on a first-come, first-served basis. Bikes are not allowed inside FAX buses unless it is the last bus on the route that day and the bike rack is full, or by bus driver discretion.

Figure 45: Fresno Area Express (FAX) bus

[This page intentionally left blank]



Source: City of Fresno, 2016



DOWNTOWN VIEW

Note: The city of Fresno does not maintain a list of bike parking locations. Additional bike parking locations exist within the City that are not shown on this map.

- Bike Locker
- Bike Rack
- Rail
- High Speed Rail Alignment
- City Sphere of Influence
- Parks
- Airports
- Water
- City

[This page intentionally left blank]

The City of Fresno has recently begun constructing a bus rapid transit system. This system, named "Q," will provide fast connections along the Blackstone and Ventura-Kings Canyon corridors, running 15.7 miles from River Park Shopping Center to Downtown and Downtown to Clovis Avenue. Twenty-seven stops will be placed approximately 1/2-mile apart and have ten-minute headways during peak periods. Figure 47 shows these corridors as well as the major transit centers in Fresno. Q buses will have designated areas for bicycles at the back door.

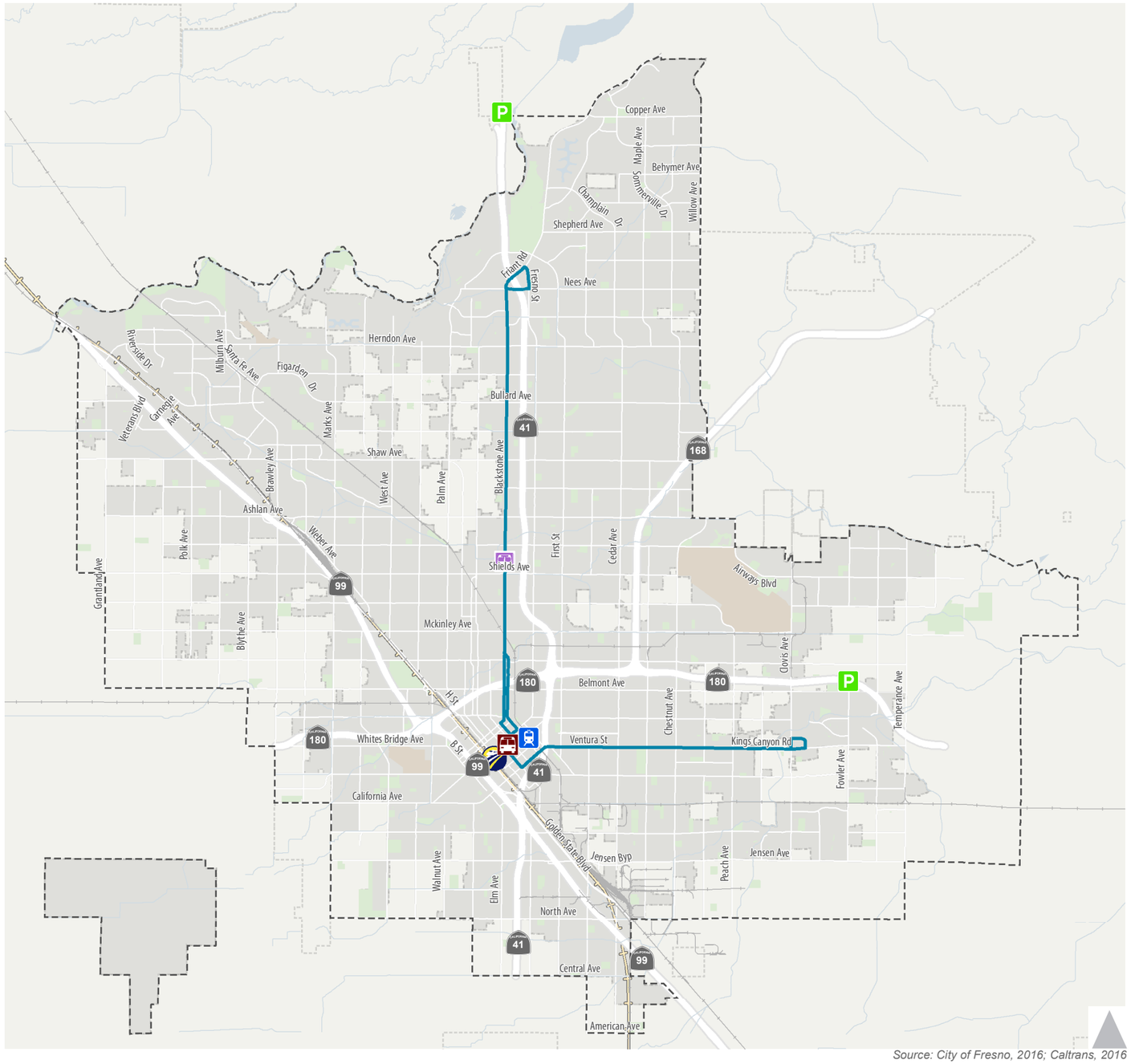
The Amtrak San Joaquin trains accommodate six bicycles per train on a first-come, first served basis. Construction has also begun on the California High Speed Rail (HSR) system, which will have a station in Downtown. Both the Amtrak and HSR stations are shown in Figure 47. The Amtrak Station also is a Greyhound bus stop. Bicycles are treated as regular baggage on Greyhound buses and may be subject to oversize baggage fees.

Bicycle parking is provided at the transit centers and the Fresno Amtrak station as shown in Figure 46.

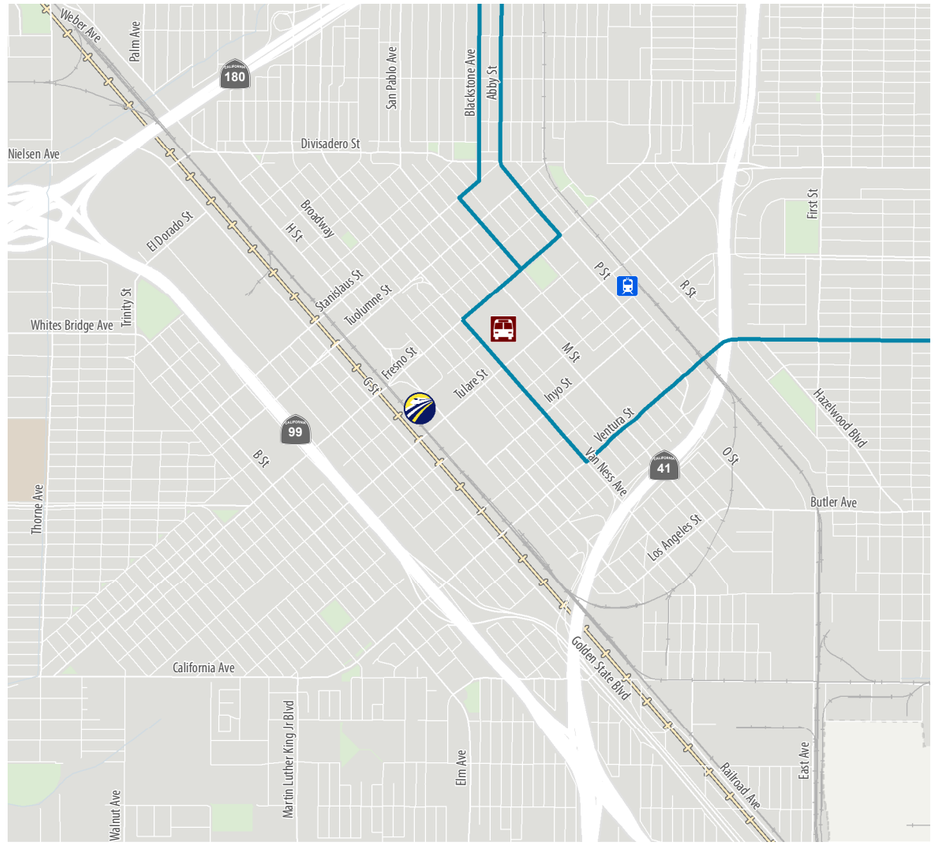
Past Expenditures

The City of Fresno has invested more than $10.1 million to expand and maintain its bicycle and pedestrian networks and to educate bicyclists and pedestrians from 2011 to 2015. Expenditures have included new trails, trail resurfacing and repairs, new sidewalks and sidewalk repairs, bike lane restriping, and other projects. Appendix F Previous Expenditures, provides further details.

[This page intentionally left blank]



Source: City of Fresno, 2016; Caltrans, 2016



DOWNTOWN VIEW

- Downtown Transit Mall
- Future HSR Station
- Manchester Transit Center
- Future BRT Corridors
- Amtrak Station
- Park-N-Ride
- Rail
- High Speed Rail Alignment
- Parks
- Airports
- Water
- City Sphere of Influence
- City

[This page intentionally left blank]

Maintenance

The City of Fresno currently maintains bicycle and pedestrian networks and facilities according to the following guidelines:

- General Plan policy MT-4-j: Street Maintenance for Bicycle Safety. Provide regular sweeping and other necessary maintenance to clear bikeways of dirt, glass, gravel, and other debris and maintain the integrity of the bicycling network
- Bike lane stripe maintenance is performed annually
- Bike lane stencils are refreshed every two years or as needed
- Sidewalks are maintained in accordance with the City of Fresno ADA Transition Plan for the Public ROW (further discussed in Appendix C)
- Most crosswalks are in thermoplastic and maintained every 5-7 years or as needed
- Trail pavement markings are refreshed by request only
- Trails are typically maintained two to three times a year, including weed removal, blowing and sweeping, and minor tree trimming to maintain trail access

Other Supporting Programs

A variety of programs supporting active transportation take place throughout the year in Fresno. Key aspects of these programs are presented below. The "E's" of active transportation are another way to view active transportation efforts in the City. The "E's" include education, encouragement, enforcement, engineering, and evaluation. Equity and enrichment may also be considered. A summary of how all the "Es" are addressed throughout this plan is provided in Appendix G, Comprehensive Programs. Appendix E, Bicycle & Pedestrian Safety Education Plan, also provides further discussion and review of these topics.

Education

The Fresno Police Department and Parks, After School, Recreation, and Community Services (PARCS) Department support several efforts directed at educating local residents about the laws, benefits, and safety considerations when bicycling and walking. Grant funding has been regularly received from the California Office of Traffic Safety to support these efforts. Active Transportation Program funding has also supported educational programming. The City makes annual multimedia presentations in local elementary, middle, and high schools where they discuss safe walking and bicycling practices. For high school students, the presentations also address safe driving practices to prevent collisions with pedestrians

and bicyclists. A key aspect of these presentations is discouraging distracted driving; the ultimate goal is to make distracted driving as socially unacceptable as drunk driving or smoking.

The Fresno Police Department and Public Works Department sponsors billboards, bus placards, and educational cards that discuss how to be safe while walking and bicycling, as well as how to drive safely to avoid collisions with pedestrians and bicyclists. The Police Department has also staffed booths at local street fairs, which have included distribution of this literature and direct interaction with the public. These methods allow educational and safety campaign messages to be shared with a wide audience.

The Bicycle Pedestrian Advisory Committee (BPAC) sponsors public service announcements including radio spots and bus wraps promoting safe active transportation. In the past, the BPAC has also sponsored television public service announcements.

Additionally, the Fresno County Bicycle Coalition offers Traffic Skills 101 courses to teach safe cycling skills.

Encouragement

The Fresno Police Department and PARCS department have sponsored bike rodeos to encourage kids to bicycle and to educate kids on safe bicycling. Local riding is also promoted through the online Fresno Council of Governments Fresno-Clovis Bikeways Map.

In 2016, the BPAC supported CenCalVia, an open-streets event where attendees could walk and ride in streets closed to vehicle traffic for a few hours on Saturday.

Local organizations also sponsor programs to encourage local residents to bike and walk. These programs include, but are not limited to:

- Off the Front, an organization encouraging walking and bicycling to school, sponsors bike repair clinics, and offers disadvantaged elementary schools students the opportunity to earn a bike
- Fresno County Bicycle Coalition , which hosts May is Bike Month activities, including the Mall to Mall Bike Ride
- Central Valley Bike Month, a local group encouraging bicycling during May is Bike Month
- Peds and Pedals, a Facebook group promoting safety among pedestrians and bicyclists
- Cultiva La Salud, a local public health advocacy organization that works to advance active transportation by advocating for equitable policy, system and environmental improvements that support walking and biking. Cultiva engages disadvantaged community members in bicycling and pedestrian education as well as organized group bike rides and safe route to school walks

- Fresno County Bicycle Coalition works with the City of Fresno Development and Resources Management Department to conduct Ride through History events
- Fresno County Bicycle Coalition, Cultiva La Salud, and Fresno Idea Works sponsor occasional bike kitchens to help repair residents' bicycles
- Annual runs and walks such as the Two Cities Marathon, which had approximately 3,000 participants in 2016
- Recreational rides sponsored by the Fresno Cycling Club, including the Climb to Kaiser

Enforcement

The Fresno Police Department has enforcement efforts aimed at preventing collisions with pedestrians and bicyclists. Police officers carry educational literature that they provide to drivers who are observed driving in a manner that may endanger pedestrians or bicyclists. Similarly, recent Police Department efforts have also focused on reducing jaywalking and have included distribution of educational materials to violators.

Engineering

The City of Fresno has an extensive planned bikeway network, as originally described in the 2010 Fresno Bicycle, Pedestrian, and Trails Master Plan and updated in Chapter 5, Planned Networks of this plan. This plan includes recommendations for creating a well-connected bicycling network, shared use trails, and completed sidewalks. This includes a priority bikeway network and priority pedestrian improvement areas for the City to focus on that will provide lower stress and higher quality active transportation infrastructure for bicyclists and pedestrians.

Evaluation

The Fresno Police Department collects data on bicycle and pedestrian collisions. This data is presented in Chapter 4, Existing Conditions.

Bicycle and pedestrian counters are also available from Fresno COG to count bicycle and pedestrians on trails.

The City of Fresno also has a Bicycle Pedestrian Advisory Committee (BPAC) that plays an important role in evaluating and providing feedback on planned changes to bicycling and walking conditions in the city.

Equity

Several measures of disadvantaged communities are presented in Chapter 4, Existing Conditions. These measures were included in the development and prioritization of planned networks as discussed in Chapter 5, Planned Networks.

Enrichment

The recent update to the Fresno General Plan updated and added many policies supporting walking and bicycling, recognizing that active transportation supports a high quality of life. These aspects of the General Plan are discussed extensively in Appendix C, Relationship to Other Plans.

5. PLANNED NETWORKS

This chapter discusses the planned bicycle networks, pedestrian networks, and support facilities for the City of Fresno. As discussed in the Introduction to this plan, the ATP is a long-term vision for walking and bicycling in Fresno and a roadmap for achieving that vision. Thus, both the bicycle and pedestrian plans contain networks with two different scopes: build-out and priority.

The build-out pedestrian and bicycle networks are the long-term vision of the active transportation facilities for Fresno. These networks are a comprehensive, citywide plan for connecting all parts of Fresno by walking and bicycling. They contain many miles of infrastructure that will require many years or decades and much funding to complete.

Because the build-out networks will require such a long time to complete, ad hoc construction may result in small pieces of infrastructure spread across Fresno. Short pieces of trails or bike lanes may provide limited benefits to pedestrians and bicyclists if they do not allow these users to connect easily to destinations or if the networks force users abruptly into motor vehicle traffic when active transportation infrastructure ends. Therefore, this plan also includes a plan for priority networks. The priority networks identify infrastructure to focus development efforts for short-term implementation (less than ten years).

Bicycle Networks

This section discusses the planned bicycle networks for Fresno and the process by which they were created.

Selection and Prioritization

The build-out and priority bikeway networks were developed through a process of updating, prioritization, and refinement.

The first step in this process was to review and update the networks from the 2010 Fresno Bicycle, Pedestrian, and Trails Master Plan (BMP) and General Plan Figure MT-2, Paths and Trails. This plan created a comprehensive map of bike paths, lanes, and routes connecting all parts of the city.

These networks were updated to reflect work that has been completed since creation of that plan. Where specifics were unclear, the networks were refined. For example, some trails in the BMP were located in a corridor but not specifically assigned to a side of the street, which may cause confusion during implementation. In these cases, network maps were updated to specify the side of the street the trail should be located on (see Figure 48 and Table 17 in Appendix H).

In other cases, segments were deleted if infeasible, unnecessary, or did not meet plan goals. For example, some Class III bike routes shown in the BMP were removed if they did not meet the goals of providing connectivity between other types of bikeways or did not help identify routes to major destinations.

Additionally, new bikeways were added and planned bikeways were modified to meet needs that have evolved since the creation of the BMP. For example, the development of High Speed Rail, reconstruction of the Fulton Mall corridor, and new planning processes for incorporated areas such as Downtown and unincorporated areas such as Old Fig Garden all necessitated changes to the networks.

The resulting bikeways comprise the build-out bicycle network. The elements of this network were initially prioritized based on several criteria:

- Proximity to key destinations, including schools, parks, bus stops, and activity centers
- Bicycle collision density
- Employee density
- Population density
- Low household income
- Low vehicle ownership
- High CalEnviroScreen 2.0 score
- Proximity to schools with high share of students eligible for free or reduced priced meals
- Public comment
- Proximity to arterials or collectors
- Level of traffic stress

After this initial round of prioritization was completed, the network was reviewed to create the priority bikeway network, which connected the City via nine east/west or north/south corridors. Facilities identified as part of this network were given the highest priority.

Build-Out Network

The build-out bicycle network is presented in Figure 48 and summarized in Table 5 below. Appendix H: Prioritized Networks, also contains maps identifying each planned bikeway and its priority for implementation.

As noted in Chapter 2 of this plan, Class IV separated bikeways are only shown in locations identified in the Downtown Neighborhoods Community Plan, Fulton Corridor Specific Plan, and on Maroa Avenue and Fresno Street as alternatives to Blackstone Avenue. However, recommendations out of the Fresno COG separated bikeway study may identify additional corridors for Class IV implementation, and some corridors planned for Class II bike lanes in this plan may be considered for Class IV treatment during the project development phases.

Table 5: Build-Out Bicycle Network Facilities

Type	Existing (Miles)	Proposed (Miles)	Total (Miles)
Class I Bike Paths	38	166	204
Class II Bike Lanes (each direction)[1]	431	691	1,122
Class III Bike Routes (each direction)	22	69	91
Class IV Separated Bikeways (each direction)[1]	0	21	21

Notes: [1]Some Class II Bike Lanes may be deemed suitable for Class IV Separated Bikeways during the project development phase.
Source: City of Fresno 2016, Fehr & Peers 2016

Several of the planned facilities in the build-out bicycle network travel through unincorporated County islands or are located in the unincorporated sphere of influence. Any planned facilities identified in unincorporated areas would require County approval prior to installation, unless annexed by the City of Fresno prior to implementation. Furthermore, planned facilities that travel between the incorporated City and unincorporated County will require coordination between the City of Fresno and County of Fresno for implementation.

Bike Paths

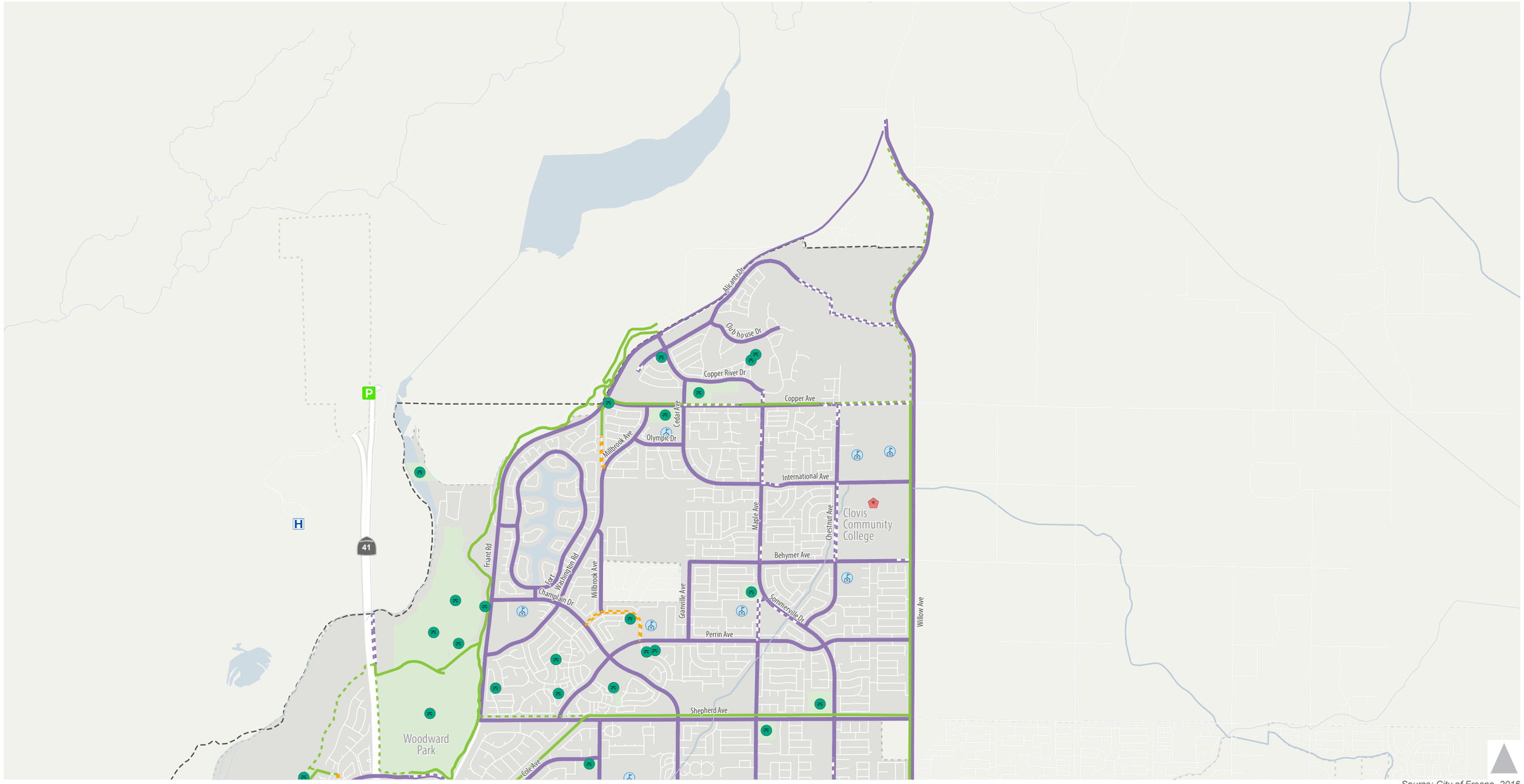
An important part of the build-out network is Class I bike paths, which also serve as shared use trails. Many of these paths are along existing City streets, many of which carry large volumes of traffic. These paths provide a place for bicyclists and pedestrians separated from vehicular traffic, thus increasing the safety

and comfort of the trail users travelling along these busy corridors. Some trails also run diagonal to City streets, providing more direct connections between some destinations. Figure 49 depicts these bikeways.

In cases where the planned Class I paths run along city roadways, they shall be developed on the side of the roadway as shown on Figure 48 and Table 17. Any changes to the trail network would require an amendment to this plan and need to be proposed for a minimum two-mile segment length.

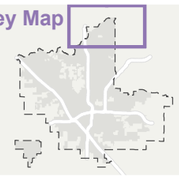
Another portion of these paths are located along existing Fresno Irrigation District (FID) canals. For example, the Midtown Trail being developed along the Herndon Canal. The FID canals are not City of Fresno property. The side of the canal along which the paths will run will be influenced by many factors, including surrounding land use, how the canals intersect with local streets, and FID maintenance needs. Where these factors are not significant, trails may be placed on the side of a canal closest to the center of the City, which is likely to have the most use. Detailed feasibility studies and input from FID, as have already been completed for the Midtown Trail, will be necessary for each of these proposed paths.

Other paths are planned along railroad alignments, many that are still active. These trails are planned to be implemented after railroad operations have ceased. The best location for such trails is usually along the old railroad bed, which avoids interference with other infrastructure that may be located within the railroad right of way. Implementation of these trails are dependent on the future plans of the railroad operators and possible consideration of railroad consolidation. These paths are shown as "Rails to Trails" in the Fresno General Plan and on Figure 48 and Figure 49 of this plan.



Source: City of Fresno, 2016

Key Map



Existing Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route

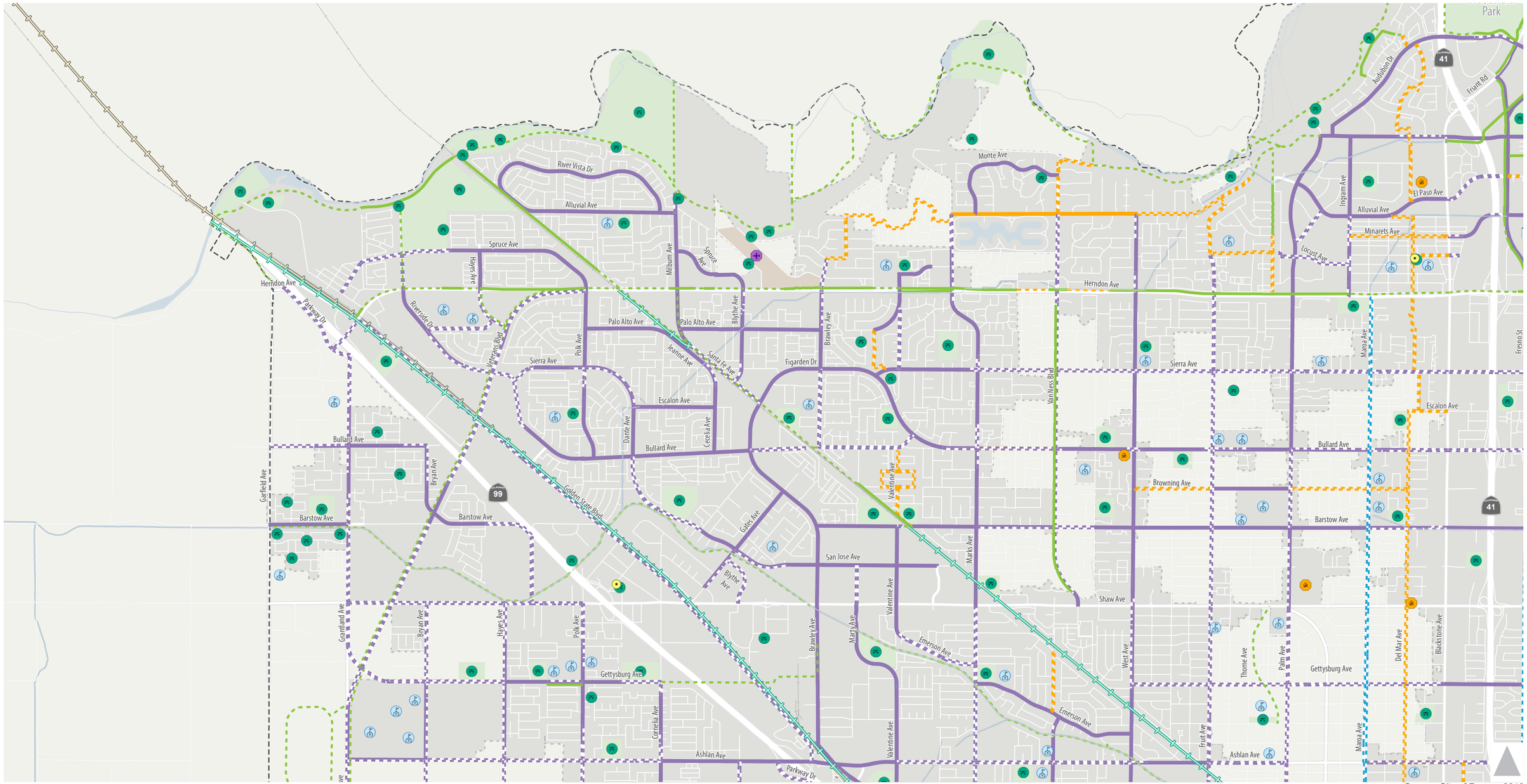
Planned Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route
- Class IV Separated Bikeways

Key Destinations
- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- Rails-to-Trails
- High Speed Rail Alignment
- Canal
- Parks
- Airports
- Water
- City Sphere of Influence
- Cities

City of FRESNO active transportation plan

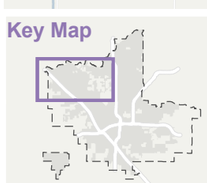
Figure 48

Build-Out Bikeways - Inset 1



Source: City of Fresno, 2016

Key Map



Existing Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route

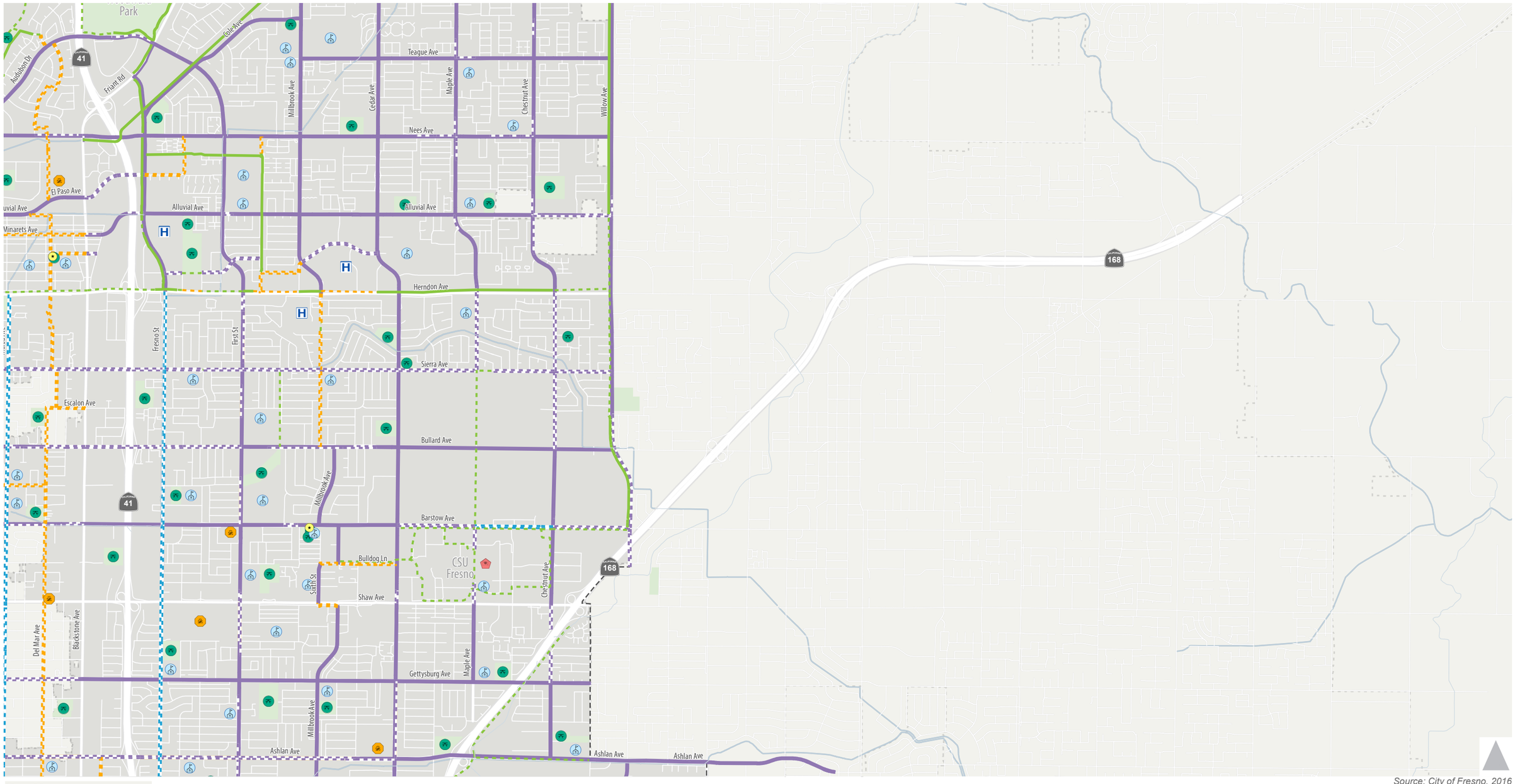
Planned Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route
- Class IV Separated Bikeways

Key Destinations
- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- Rails-to-Trails
- High Speed Rail Alignment
- Canal
- Parks
- Airports
- Water
- City Sphere of Influence
- Cities

City of FRESNO active transportation plan

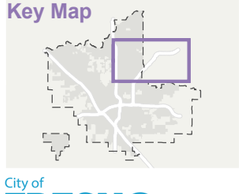
Figure 48

Build-Out Bikeways - Inset 2



Source: City of Fresno, 2016

Key Map



Existing Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route

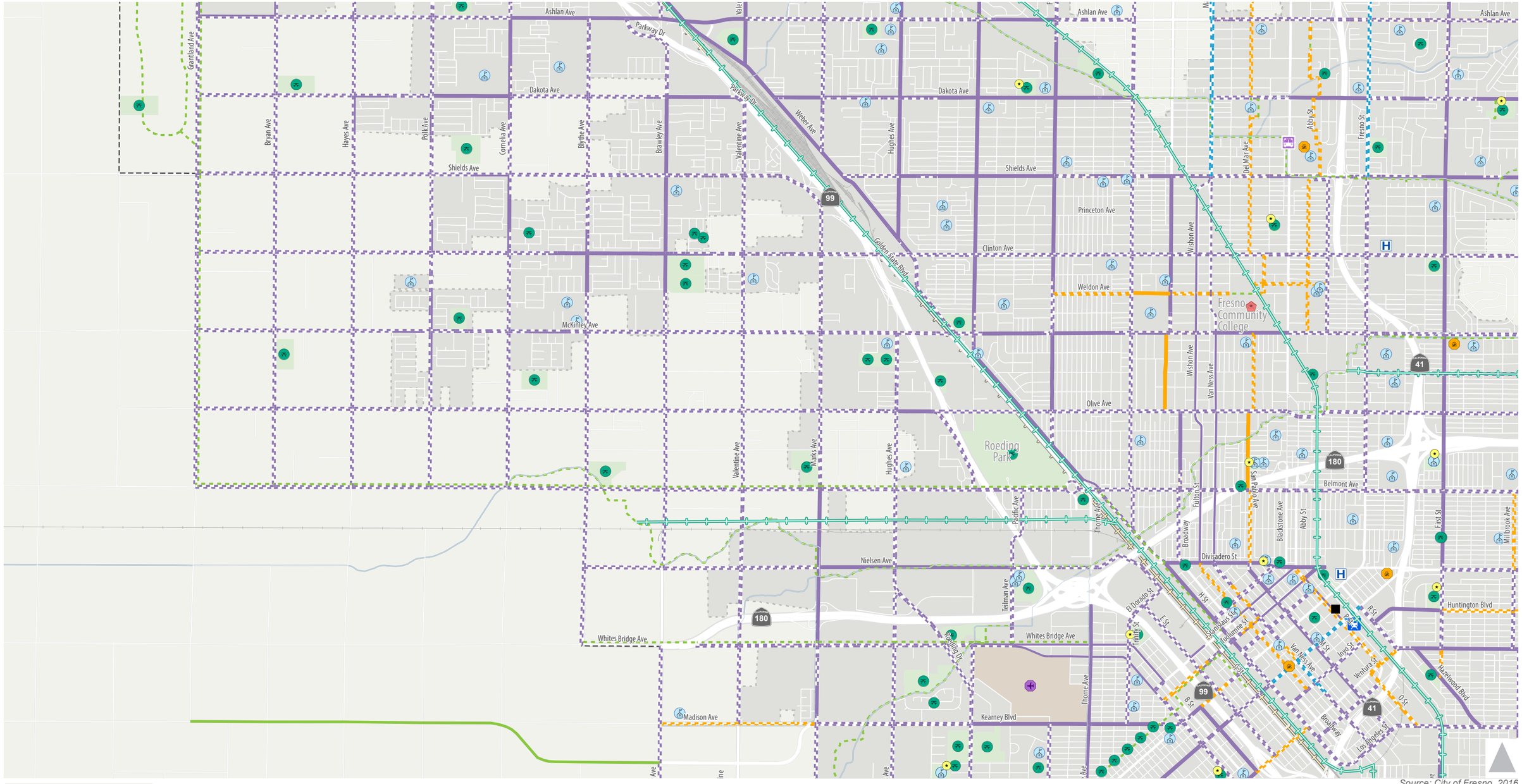
Planned Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route
- Class IV Separated Bikeways

Key Destinations
- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- Rails-to-Trails
- High Speed Rail Alignment
- Canal
- Parks
- Airports
- Water
- City Sphere of Influence
- Cities

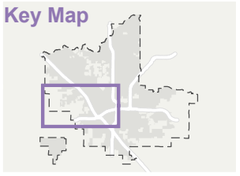
City of FRESNO active transportation plan

Figure 48

Build-Out Bikeways - Inset 3



Key Map



Existing Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route

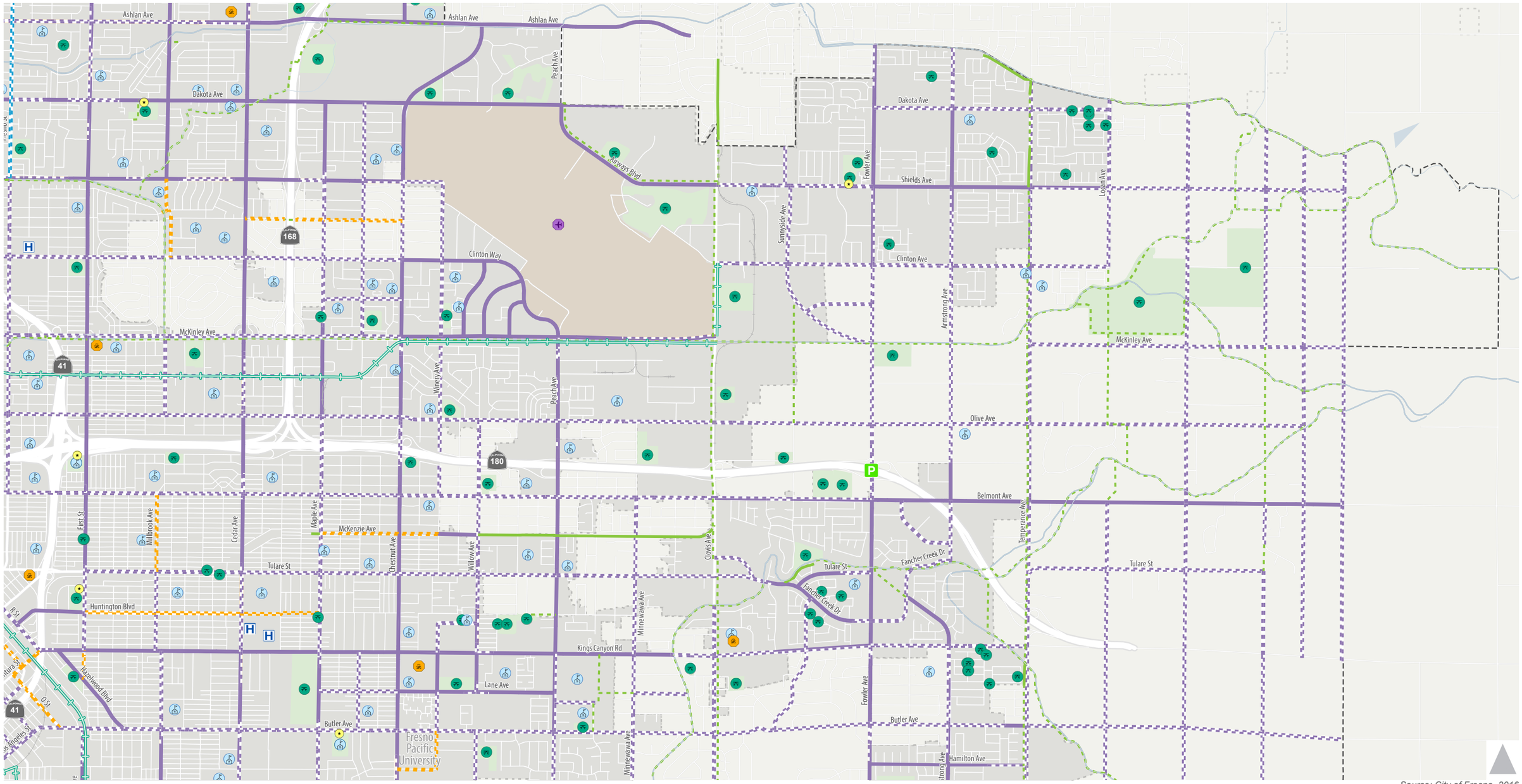
Planned Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route
- Class IV Separated Bikeways

Key Destinations
- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- Rails-to-Trails
- High Speed Rail Alignment
- Canal
- Parks
- Airports
- Water
- City Sphere of Influence
- Cities

City of FRESNO active transportation plan

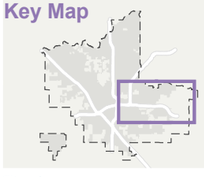
Figure 48

Build-Out Bikeways - Inset 4



Source: City of Fresno, 2016

Key Map



Existing Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route

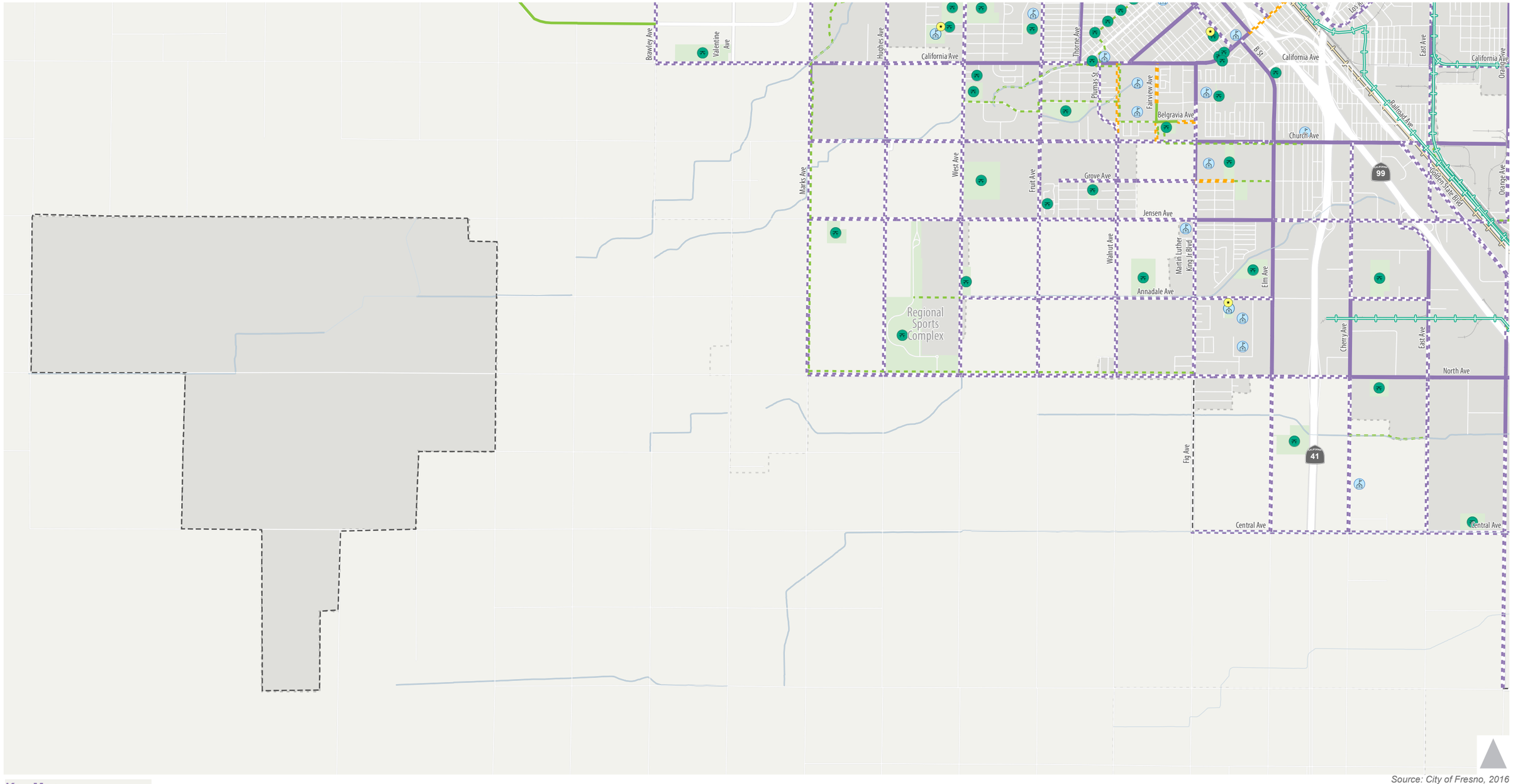
Planned Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route
- Class IV Separated Bikeways

Key Destinations
- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- Rails-to-Trails
- High Speed Rail Alignment
- Canal
- Parks
- Airports
- Water
- City Sphere of Influence
- Cities

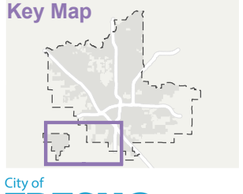
City of FRESNO active transportation plan

Figure 48

Build-Out Bikeways - Inset 5



Source: City of Fresno, 2016



Existing Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route

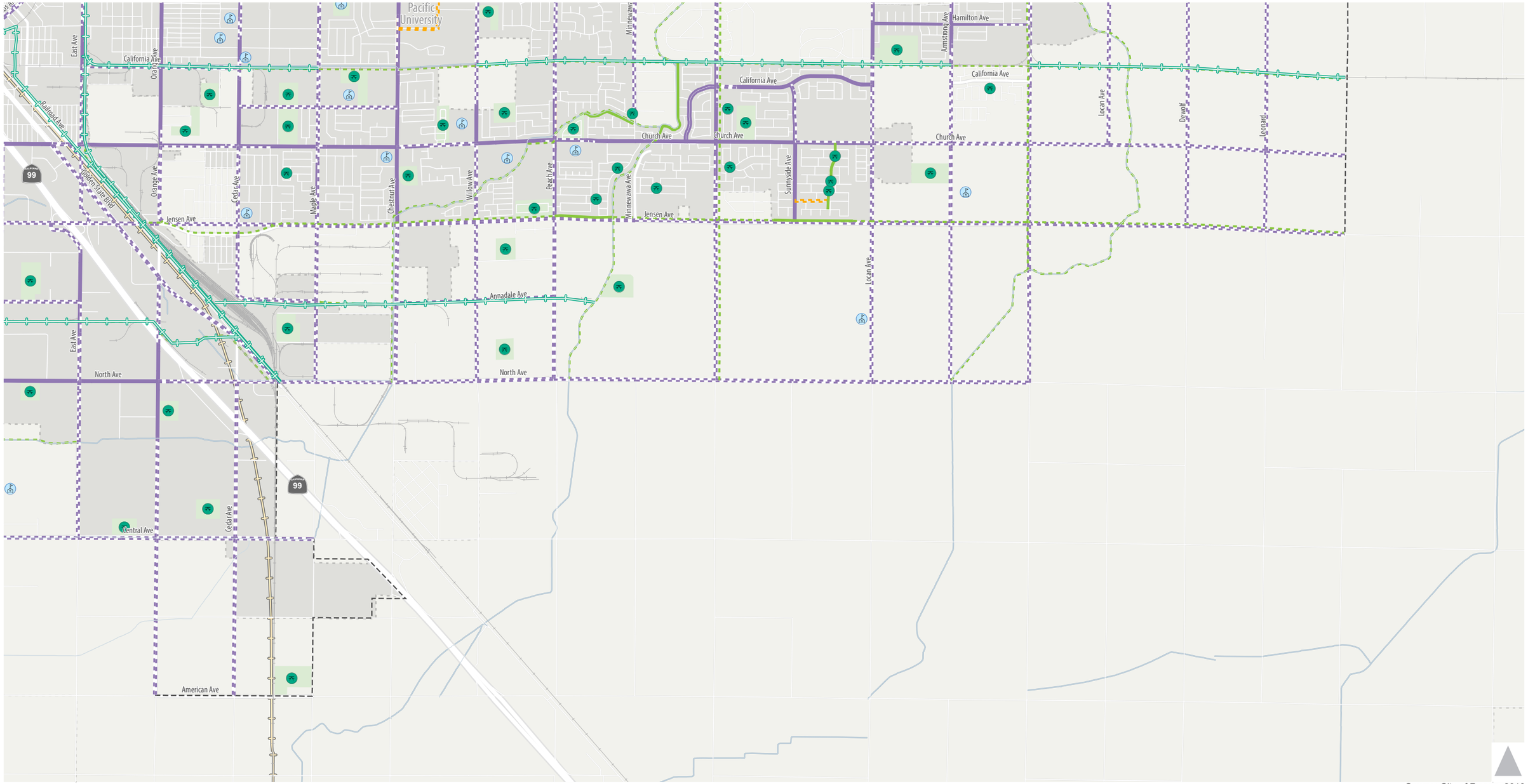
Planned Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route
- Class IV Separated Bikeways

Key Destinations
- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- Rails-to-Trails
- High Speed Rail Alignment
- Canal
- Parks
- Airports
- Water
- City Sphere of Influence
- Cities

City of FRESNO active transportation plan

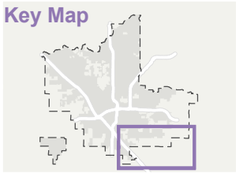
Figure 48

Build-Out Bikeways - Inset 6



Source: City of Fresno, 2016

Key Map



Existing Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route

Planned Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route
- Class IV Separated Bikeways

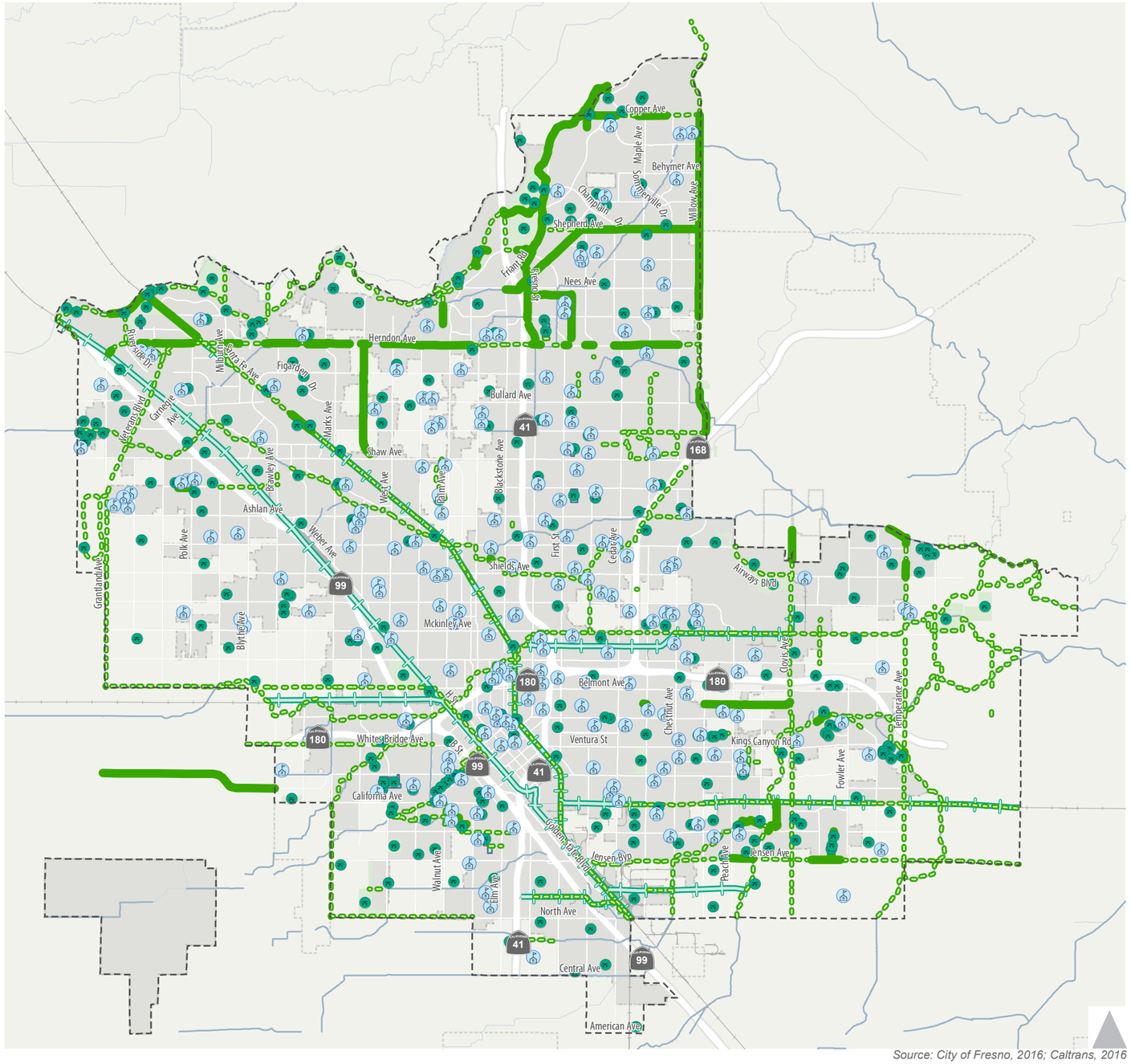
Key Destinations
- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- Rails-to-Trails
- High Speed Rail Alignment
- Canal
- Parks
- Airports
- Water
- City Sphere of Influence
- Cities

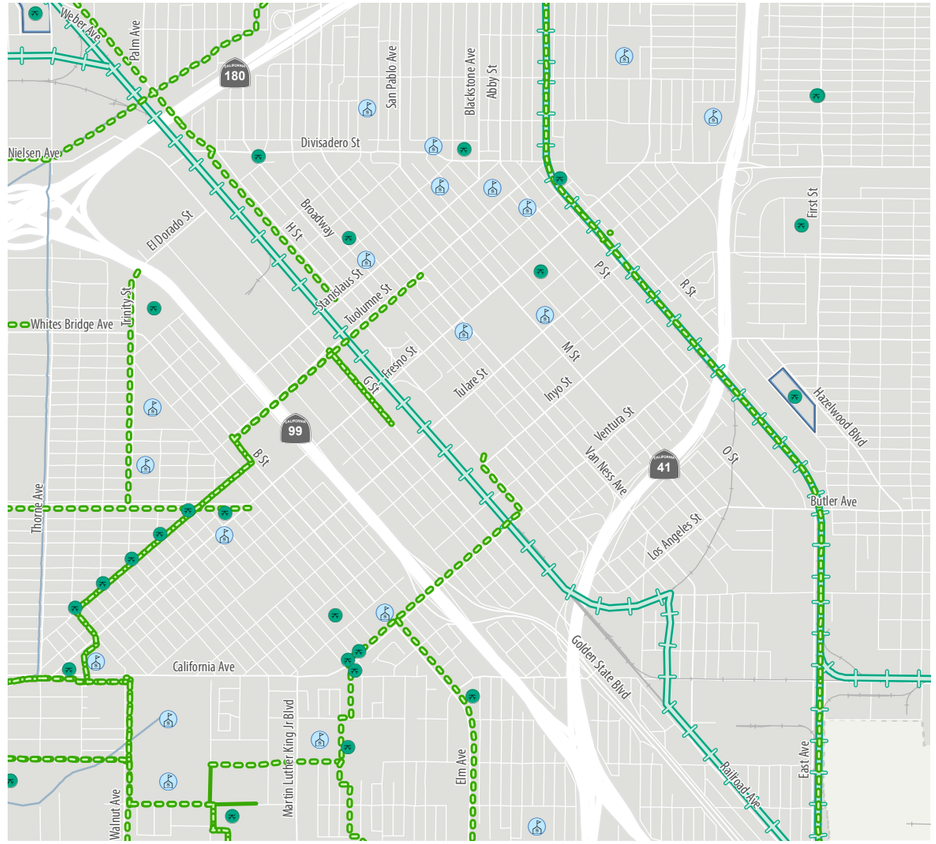
City of FRESNO active transportation plan

Figure 48

Build-Out Bikeways - Inset 7

[This page intentionally left blank]





DOWNTOWN VIEW

- City Sphere of Influence
- School
- Park
- Existing Class I Bike Path
- Planned Class I Bike Path
- Rails-to-Trails
- Ponding Basin
- Rail
- Canal
- Regional Parks
- City

Source: City of Fresno, 2016; Caltrans, 2016

[This page intentionally left blank]

On-Street Bikeways

On-street bikeways, including Class II bike lanes, Class III bike routes, and Class IV separated bikeways, are included in the planned build-out network.

Class IV separated bikeways are new to Fresno. The Downtown Neighborhoods Community Plan and Fulton Corridor Specific Plan are planning the first implementation of this type of bikeway in Fresno. These Downtown locations, where the concentration of bicyclist destinations as well as motor vehicle traffic, make them particularly beneficial. This plan also identifies planned Class IV facilities on Maroa Avenue and Fresno Street from Shields Avenue to Herndon Avenue as parallel alternatives to Blackstone Avenue. Additional studies are underway to determine other locations for implementation. Fresno COG is leading a project to develop guidelines for separated bikeways and recommend potential locations for their implementation in the Fresno Metropolitan Area. This effort will help guide future implementation of separated bikeways within Fresno. The plan is expected to be complete in late 2016 or early 2017.

Further details of how all of these on-street bikeways can be accommodated into the street right-of-way are provided in the cross sections discussion later in this chapter. Some corridors planned for Class II bike lanes in this plan may be determined to be suitable for Class IV treatment during the project development phases.

Bike Boulevards

This plan does not make specific recommendations for implementation of bike boulevards. Proper implementation of bike boulevards requires careful planning of major street crossings and consideration of vehicle diverters, which is beyond the scope of this plan. However, bike boulevards are a good tool to provide alternatives to busy streets that are unlikely to accommodate cyclists seeking lower stress facilities. Corridors that could be considered for future analysis as bike boulevards include Del Mar Avenue and Effie Street (as alternatives to Blackstone Avenue) and San Jose Avenue (as an alternative to Shaw Avenue). These streets have lower vehicular volumes and lower traffic stress than the major roads bicyclists would otherwise travel.

Crossings

In addition to bikeways, the recommended networks include several bicycle and pedestrian overcrossings and undercrossings. The crossings provide a means for bicyclists to traverse barriers such as canals, SR 99, SR 41, SR 168, SR 180, and the Union Pacific and Burlington Northern Santa Fe railroads. These facilities should be approximately 14 feet wide at minimum and usable by both bicyclists and pedestrians. A complete feasibility analysis is necessary prior to the implementation of these facilities. These crossings are

also expensive to construct, and implementation is a long-term objective. Cost estimates for the priority networks provided in Appendix H include several crossings. Other canal and street crossings not listed may also be included in the build-out networks.

Priority Network

The priority network, a subset of the build-out network, is a system of bikeways that create connections across the city, both north/south and east/west, and allow bicyclists to travel to key destinations on a complete system of trails, bike lanes, and bike routes. The priority bicycle network is presented in Figure 50 and summarized in Table 6 below. Where possible, this network has been placed on routes with lower levels of traffic stress, including Class I bike paths, Class IV separated bikeways, and Class II bike lanes on local streets or collectors with lower traffic volumes and speeds (such as Fruit Avenue). The network was also developed to equitably serve all Fresno neighborhoods.

Table 6: Priority Bicycle Network Facilities

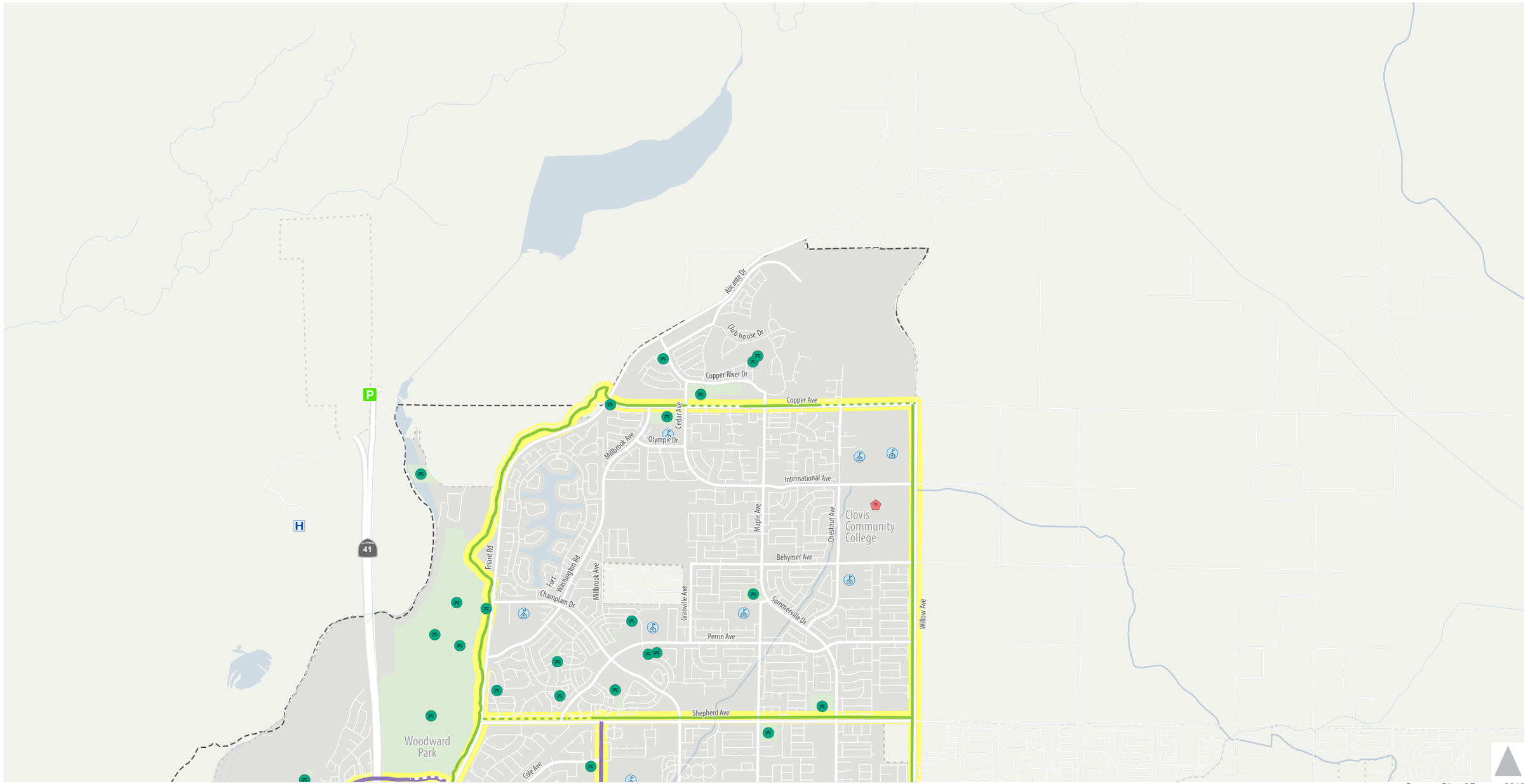
Type	Existing (Miles)	Proposed (Miles)	Total (Miles)
Class I Bike Paths (one direction)	15	28	43
Class II Bike Lanes (one direction)	75	49	124
Class III Bike Routes (one direction)	0	10	10
Class IV Separated Bikeways (one direction)	0	12	12

Source: City of Fresno 2016, Fehr & Peers 2016

Since the existing LTS on collector and arterial streets is high, the following features are recommended for on-street facilities to improve the LTS and make travel more comfortable for the "interested, but concerned" bicyclist:

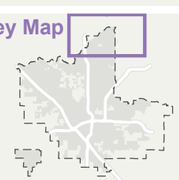
- Traffic calming, such as lane width reductions and bulb-outs, to reduce vehicle travel speeds
- Road diets where traffic volumes will allow implementation
- Buffered bike lanes or separated bikeways to provide a more comfortable distance between cyclists and vehicle traffic (may require the narrowing of travel lanes to 10 feet or 11 feet to accommodate the buffer or physical separation) – see Figure 55 through Figure 58
- Improved traffic control or crossing treatments at high traffic volume, high-speed streets

Wayfinding signage and branding (e.g., route names) as described in Chapter 2 can also be used throughout the priority network to better direct cyclists and inform cyclists of nearby destinations.



Source: City of Fresno, 2016

Key Map



Priority Bikway

Existing Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route

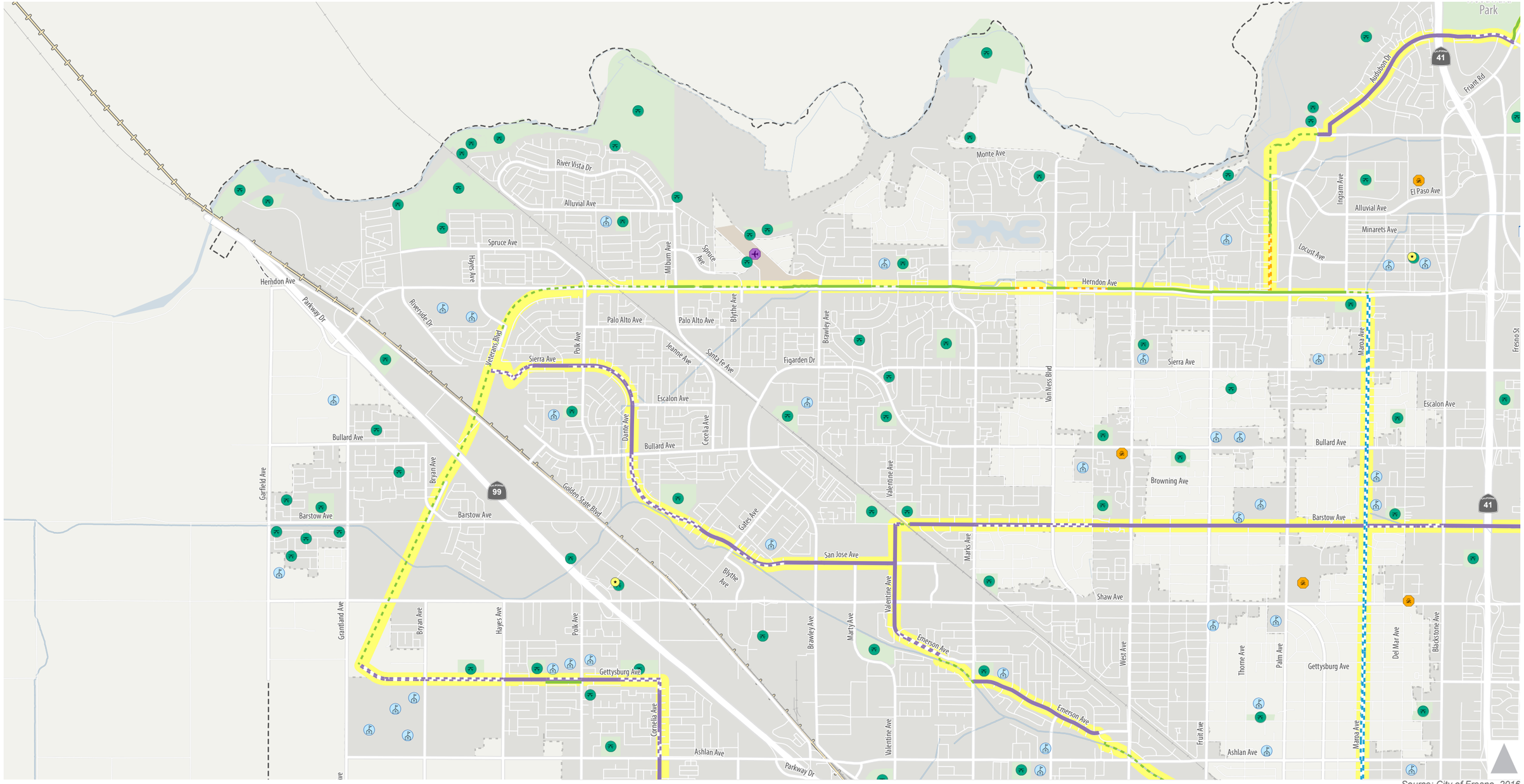
Planned Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route
- Class IV Separated Bikeways

Key Destinations
- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- High Speed Rail Alignment
- Canal
- City Sphere of Influence
- Parks
- Airports
- Water
- Cities

City of FRESNO active transportation plan

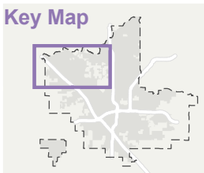
Figure 50

Priority Bikeways - Inset 1



Source: City of Fresno, 2016

Key Map



Priority Bikway

Existing Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route

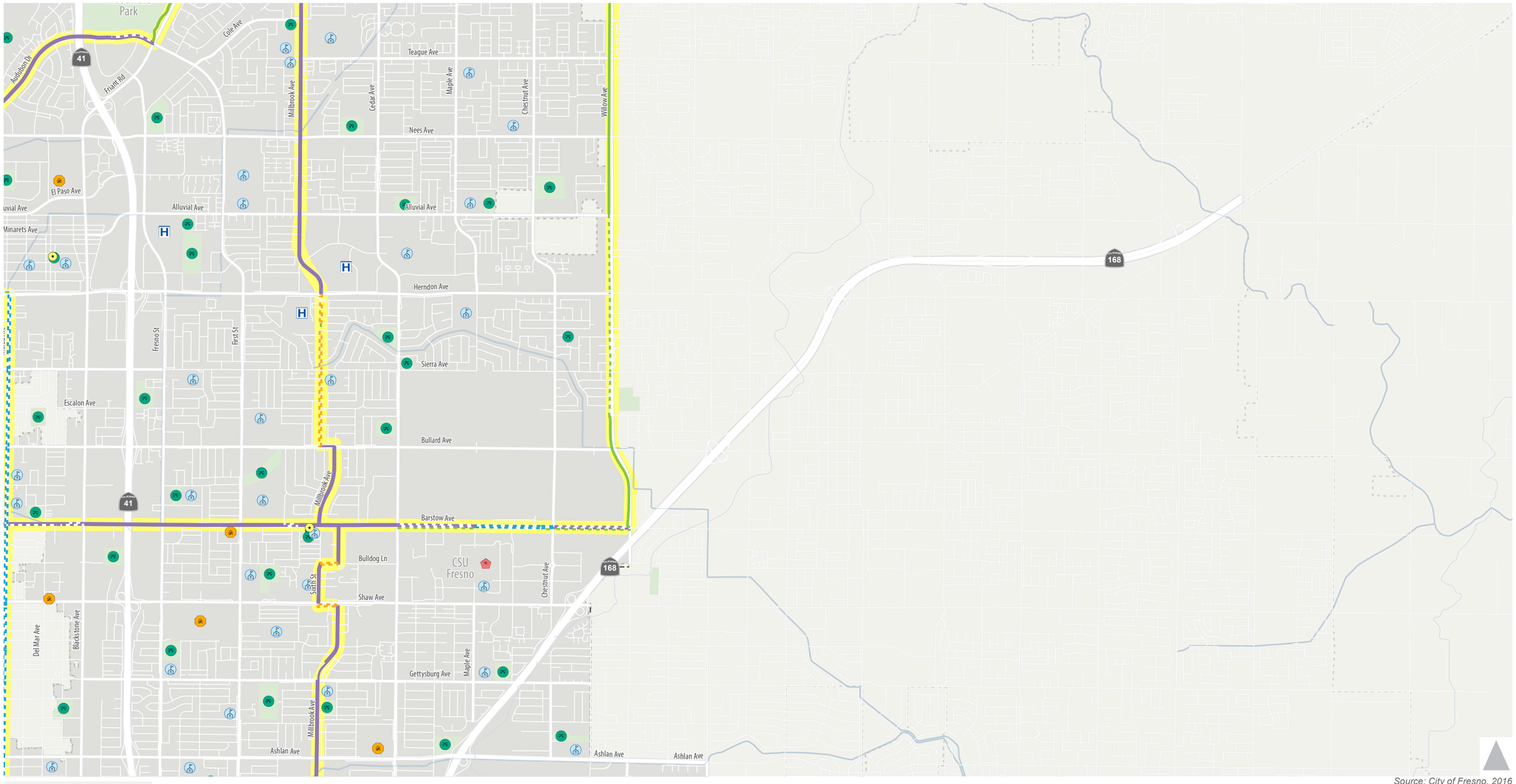
Planned Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route
- Class IV Separated Bikeways

Key Destinations
- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- High Speed Rail Alignment
- Canal
- City Sphere of Influence
- Parks
- Airports
- Water
- Cities

City of FRESNO active transportation plan

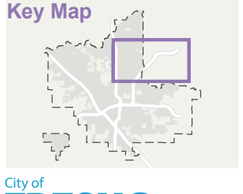
Figure 50

Priority Bikeways - Inset 2



Source: City of Fresno, 2016

Key Map



Priority Bikway

Existing Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route

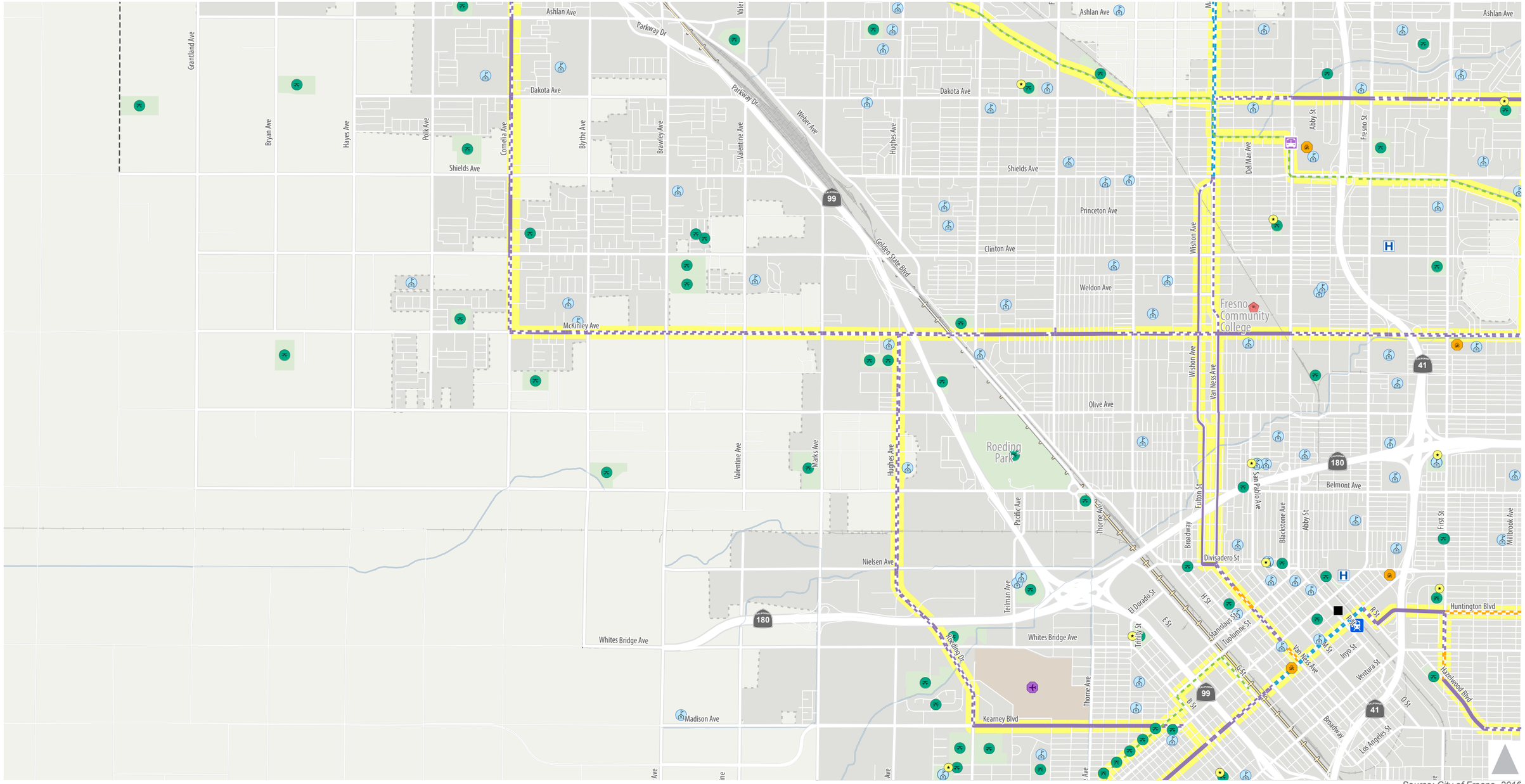
Planned Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route
- Class IV Separated Bikeways

Key Destinations
- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- High Speed Rail Alignment
- Canal
- City Sphere of Influence
- Parks
- Airports
- Water
- Cities

City of FRESNO active transportation plan

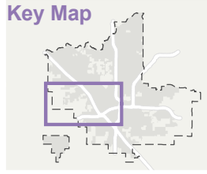
Figure 50

Priority Bikeways - Inset 3



Source: City of Fresno, 2016

Key Map



Priority Bikeway

Existing Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route

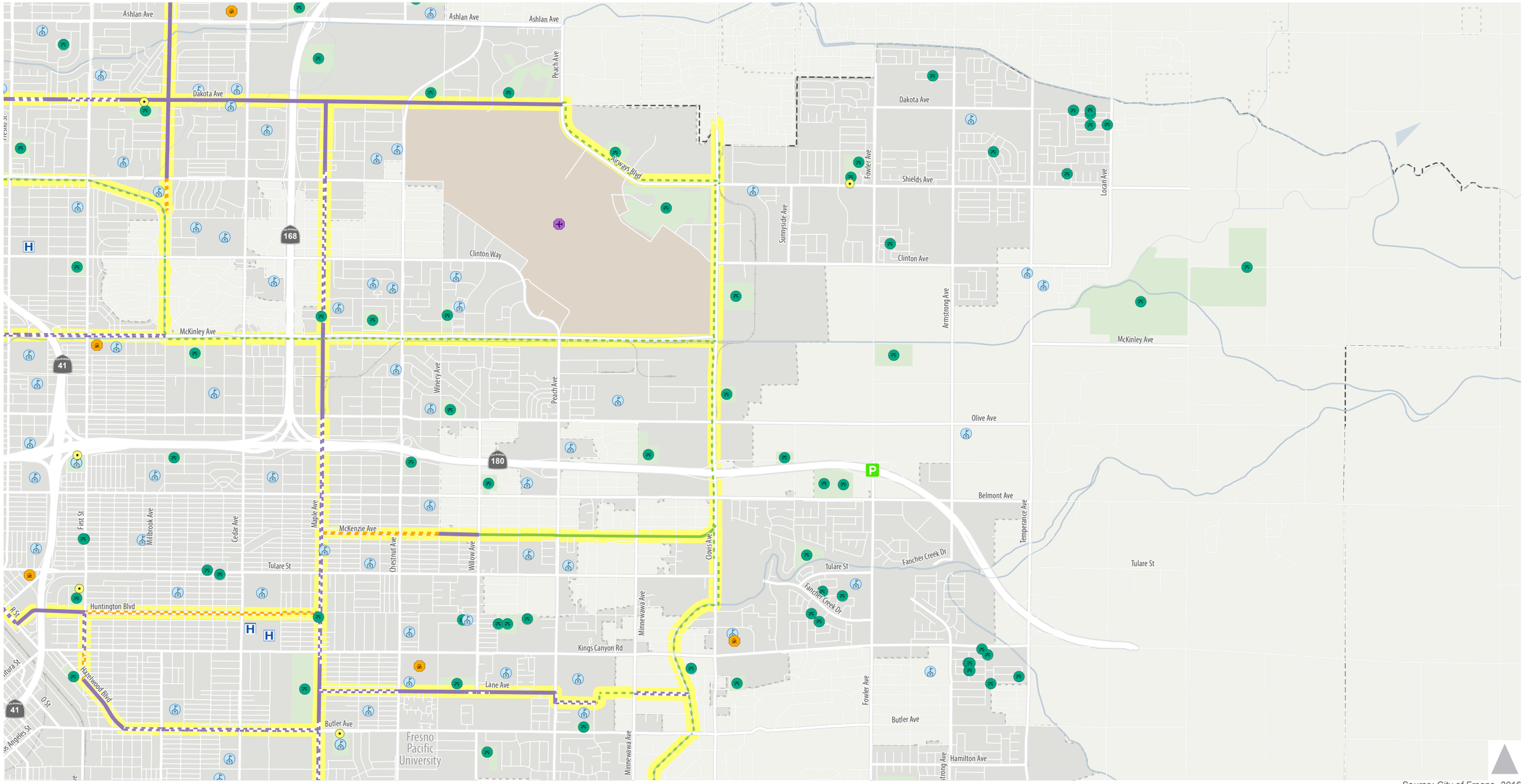
Planned Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route
- Class IV Separated Bikeways

Key Destinations
- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- High Speed Rail Alignment
- Canal
- City Sphere of Influence
- Parks
- Airports
- Water
- Cities

City of FRESNO active transportation plan

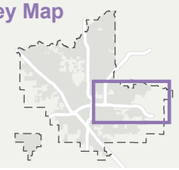
Figure 50

Priority Bikeways - Inset 4



Source: City of Fresno, 2016

Key Map



Priority Bikway

Existing Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route

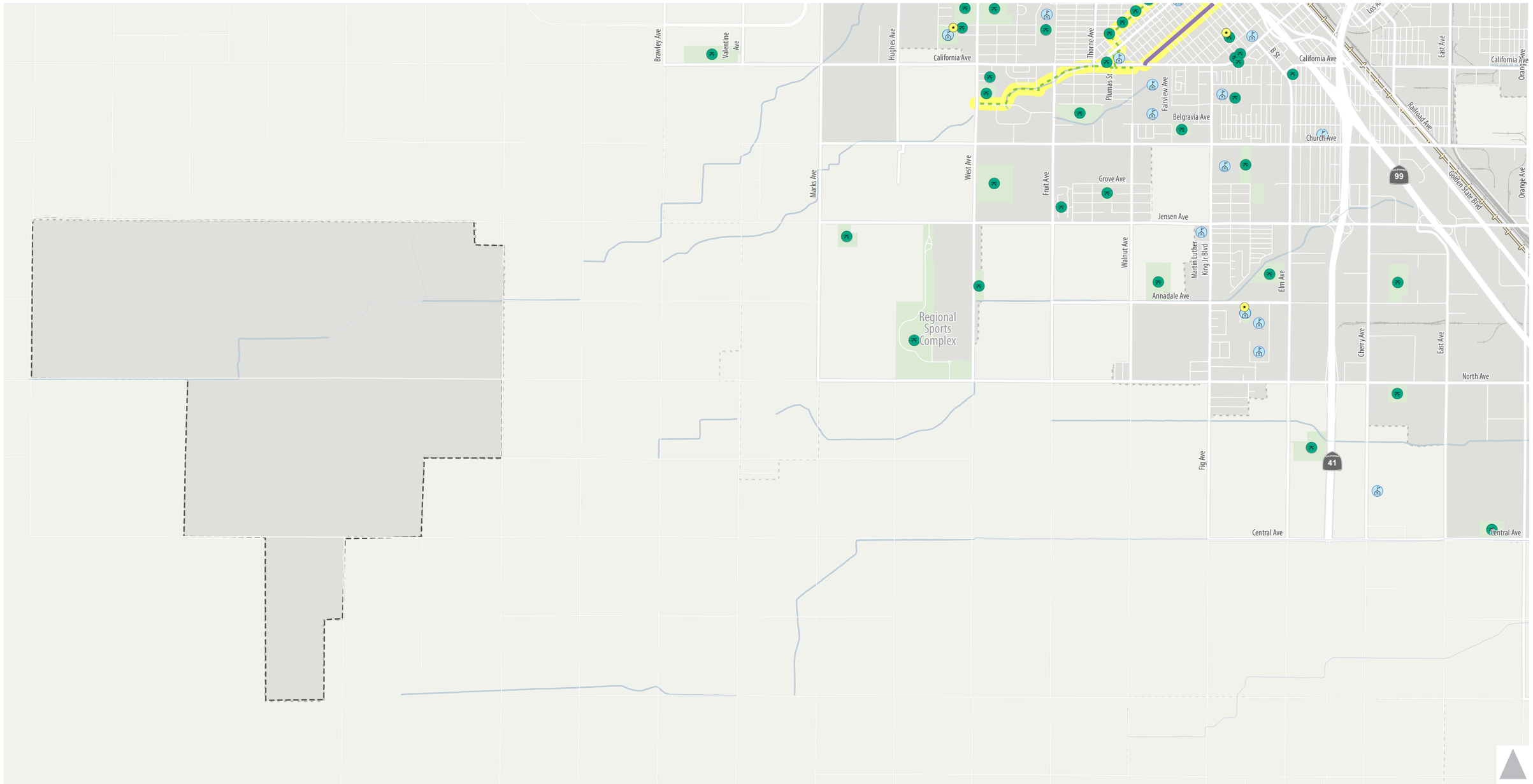
Planned Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route
- Class IV Separated Bikeways

Key Destinations
- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- High Speed Rail Alignment
- Canal
- City Sphere of Influence
- Parks
- Airports
- Water
- Cities

City of FRESNO active transportation plan

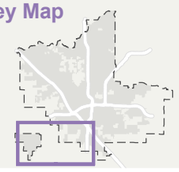
Figure 50

Priority Bikeways - Inset 5



Source: City of Fresno, 2016

Key Map



City of FRESNO active transportation plan

Priority Bikway

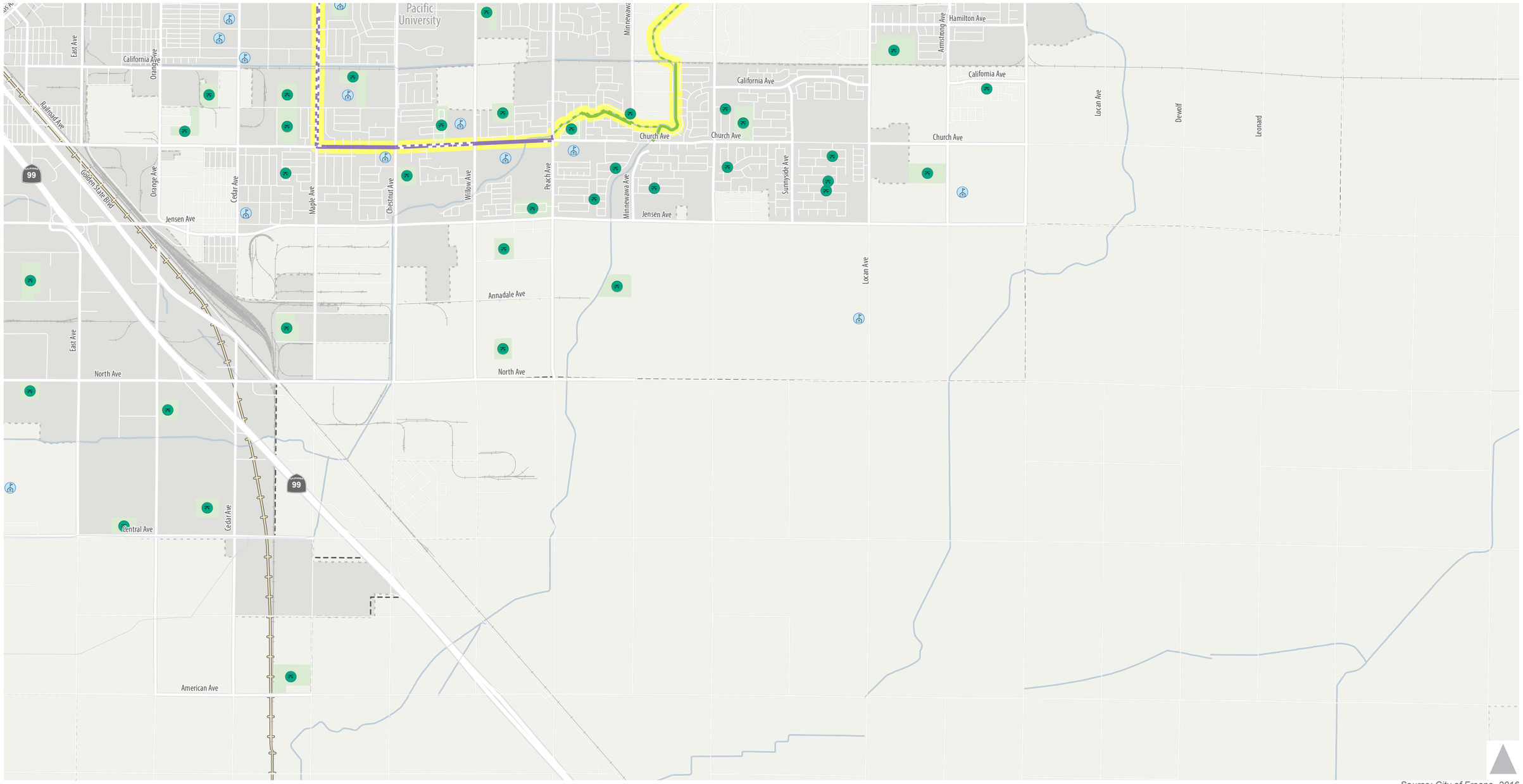
Existing Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route

Planned Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route
- Class IV Separated Bikeways

Key Destinations
- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- High Speed Rail Alignment
- Canal
- City Sphere of Influence
- Parks
- Airports
- Water
- Cities

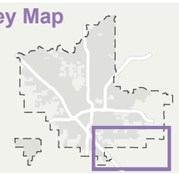
Figure 50

Priority Bikeways - Inset 6



Source: City of Fresno, 2016

Key Map



Priority Bikway

Existing Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route

Planned Bicycle Facilities
- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route
- Class IV Separated Bikeways

Key Destinations
- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- High Speed Rail Alignment
- Canal
- City Sphere of Influence
- Parks
- Airports
- Water
- Cities

City of FRESNO active transportation plan

Figure 50

Priority Bikeways - Inset 7

[This page intentionally left blank]

Pedestrian Networks

This section discusses the planned pedestrian networks for Fresno and the process by which they were developed.

Selection and Prioritization

Although Class I bike paths, which also serve as multi-use trails, are an important part of the pedestrian network, sidewalks comprise the vast majority of the network.

Using the City's sidewalk data, sides of streets without sidewalks were identified. Freeways and freeway ramps were excluded, as were most unincorporated areas. The result of this process was the build-out pedestrian sidewalk network. The planned sections of this network were initially prioritized based on several criteria:

- Proximity to key destinations, including schools, parks, bus stops, and activity centers
- Pedestrian collision density
- Employee density
- Population density
- Low household income
- Low vehicle ownership
- High CalEnviroScreen 2.0 score
- Proximity to schools with a high share of students eligible for free or reduced priced meals
- Public comment
- Proximity to arterials or collectors

To create the priority network, high priority areas were next identified. Because pedestrians travel shorter distances than bicyclists, the priority pedestrian network focuses on areas with the greatest need for infrastructure as determined by the criteria above, additionally considering:

- Disadvantaged and underserved neighborhoods with large sections of missing sidewalks
- High levels of pedestrian activity (major shopping, educational, and entertainment destinations)
- High frequency of pedestrian collisions

The priority areas analysis included a review of City planning efforts, feedback from the community workshops and stakeholders, and the sidewalk priorities discussed above.

Furthermore, considerations identified in Fresno's ADA Transition Plan for the Public Right of Way were reviewed. As discussed in the ADA Transition Plan, the City addresses gaps within the existing pedestrian network primarily through the Development Code, which conditions that sidewalks must be constructed when the property is developed. In instances in which there is little likelihood of future development and gaps within the existing sidewalk system are determined to be barriers to access, the Public Works Director or designee uses the following considerations to prioritize sidewalk construction needs:

- Public complaint of gap in the existing circulation system
- Unlikelihood of future development of the adjacent property
- Absence of alternative accessible path
- Impact on the adjacent community based on proximity to:
    - Government offices and facilities
    - Transportation
    - Public accommodations and employers
- Availability of Right of Way

Per the ADA Transition Plan, those sidewalks with the greatest number of community elements are to be constructed first.

Build-Out Network

The build-out pedestrian network is presented in Figure 51 and summarized in Table 7 below. Appendix H, Prioritized Networks, also contains maps identifying each path and sidewalk and its priority for implementation.

The build out network includes planned sidewalks in most neighborhoods where they are missing, in particular in the older parts of Fresno, which are predominantly in the southern portion of the city. Some of these missing sidewalks meet the definition of a sidewalk gap, as defined in the Fresno ADA Transition Plan. Others fulfill one of the considerations identified in the ADA Transition Plan. Planned sidewalks are also shown for missing sidewalks in neighborhoods identified by the public during the community engagement process, as well as areas that generate more pedestrian activity based on their socioeconomic data and proximity to schools, transportation corridors, and key destinations.

Some streets are specifically excluded from the planned network if the neighborhood was recently developed without sidewalks per the applicable City standards at the time, or if the neighborhood has a known preference not to have sidewalks.

The City of Fresno Development Code permits local residential streets to have sidewalks on one side of the street. Therefore, this plan does not show planned sidewalks in neighborhoods where sidewalks are already provided on one side of the street.

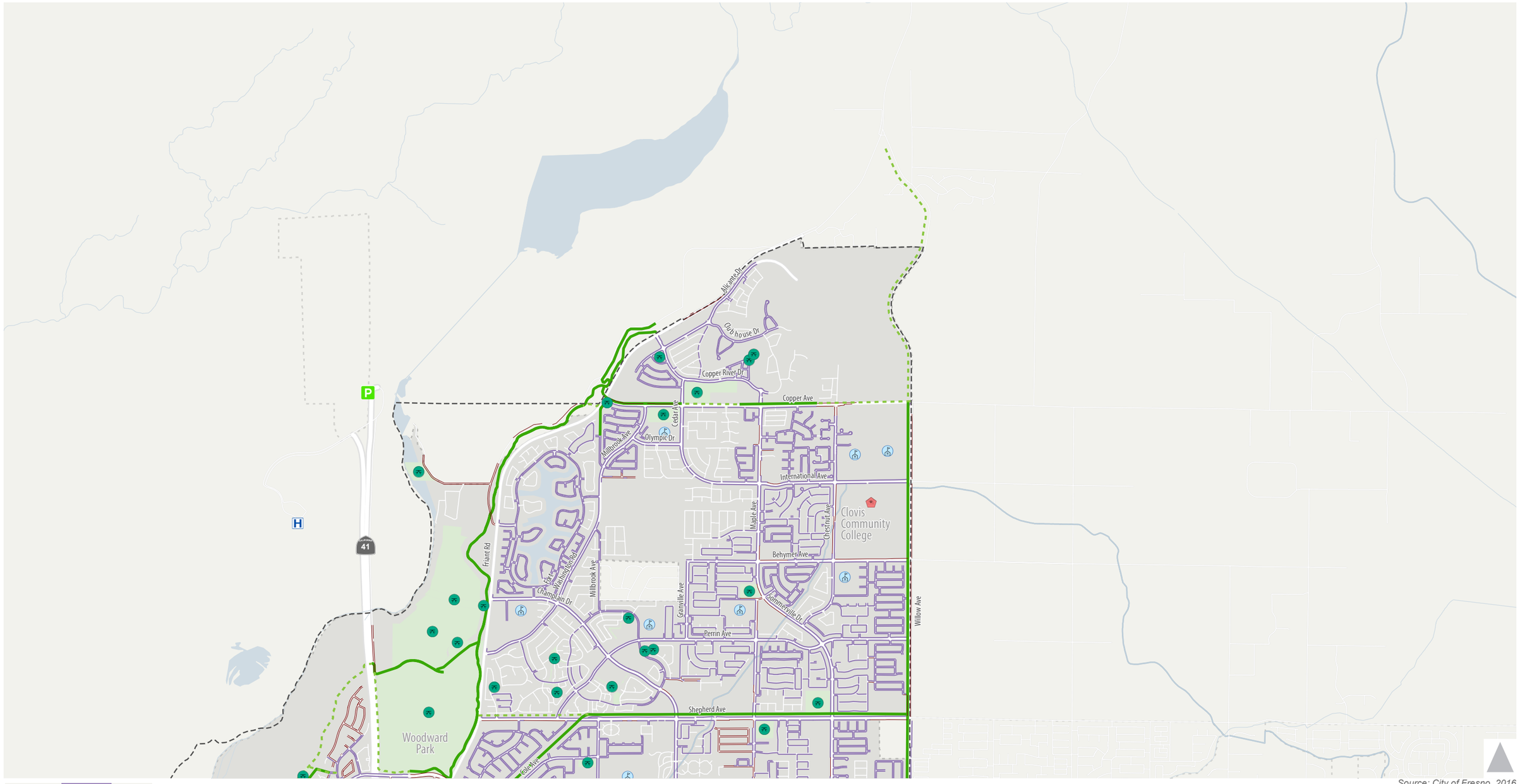
Unincorporated areas under Fresno County's jurisdiction are also excluded, with the exception of pedestrian improvements that were identified in the Old Fig Garden Community Transportation Study. Any improvements identified in unincorporated areas would require County approval prior to installation.

Table 7: Build-Out Pedestrian Network Facilities

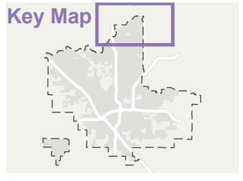
Type	Existing (Miles)	Proposed (Miles)	Total (Miles)
Class I Bike Paths	38	166	204
Sidewalks	1,984	661	2,645

Source: City of Fresno 2016, Fehr & Peers 2016

[This page intentionally left blank]



Source: City of Fresno, 2016



Class I Bike Path
Class I Bike Path
Existing Sidewalk
Planned Sidewalks

Key Destinations
Higher Education
Airport

Shopping
Hospital
Manchester Transit Center
City Hall

Neighborhood/Community Center
Amtrak Station
Park-and-Ride

School
Park
City Sphere of Influence

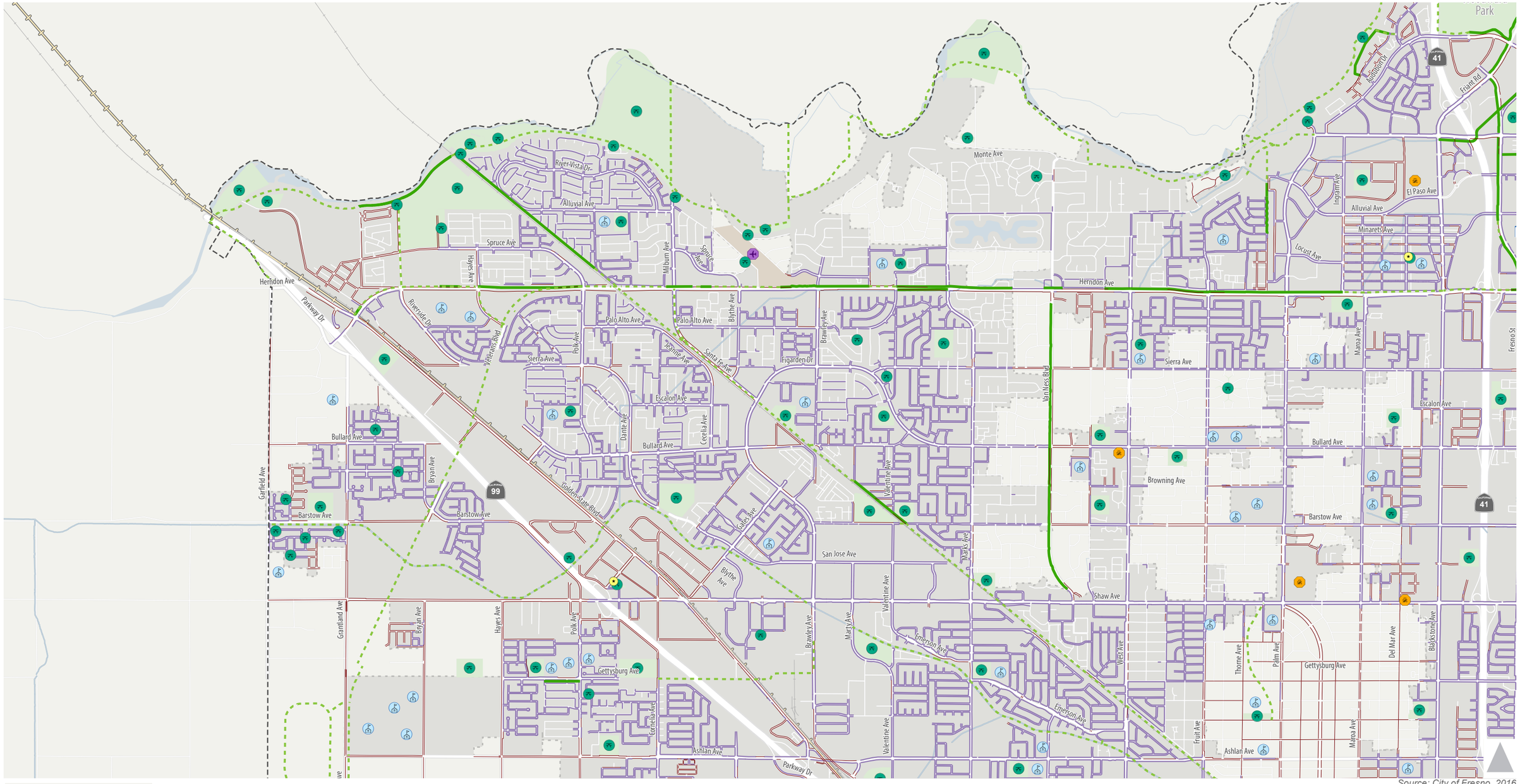
Rail
Water
Canal
High Speed Rail Alignment

Parks
Airports
Water
City

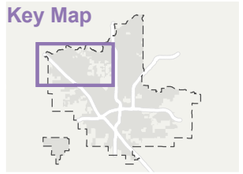
City of FRESNO active transportation plan

Figure 51

Build-Out Sidewalks and Trails - Inset 1



Source: City of Fresno, 2016



Key Map

- Class I Bike Path
- Class I Bike Path
- Existing Sidewalk
- Planned Sidewalks

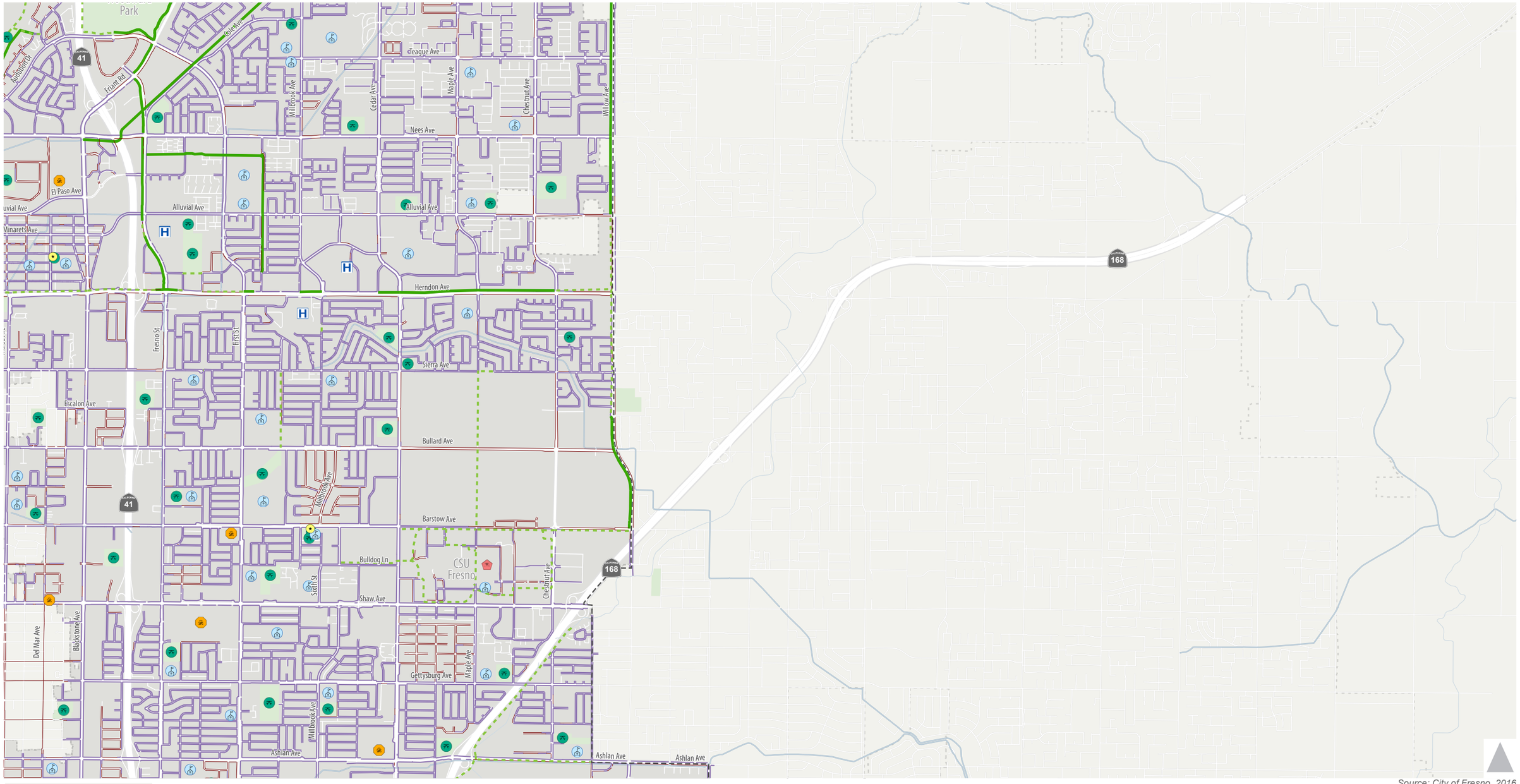
Key Destinations

- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- City Sphere of Influence
- Rail
- Water
- Canal
- High Speed Rail Alignment
- Parks
- Airports
- Water
- City

City of FRESNO active transportation plan

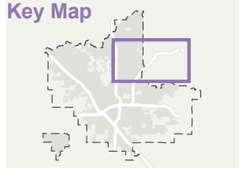
Figure 51

Build-Out Sidewalks and Trails - Inset 2



Source: City of Fresno, 2016

Key Map



- Class I Bike Path
- Class I Bike Path
- Existing Sidewalk
- Planned Sidewalks

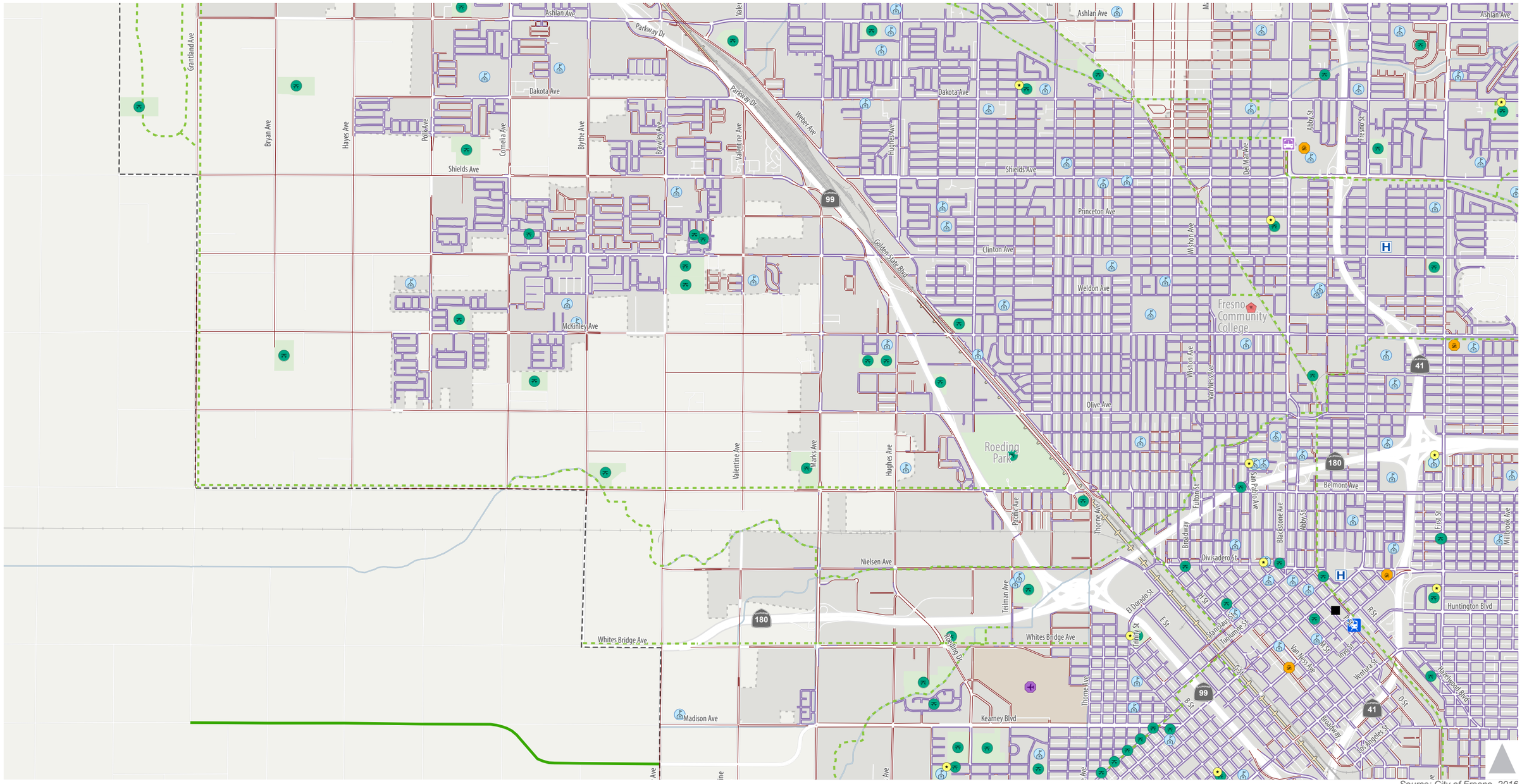
Key Destinations

- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- City Sphere of Influence
- Rail
- Water
- Canal
- High Speed Rail Alignment
- Parks
- Airports
- Water
- City

City of FRESNO active transportation plan

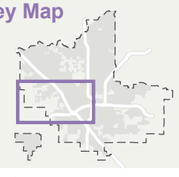
Figure 51

Build-Out Sidewalks and Trails - Inset 3



Source: City of Fresno, 2016

Key Map



- Class I Bike Path
- Class I Bike Path
- Existing Sidewalk
- Planned Sidewalks

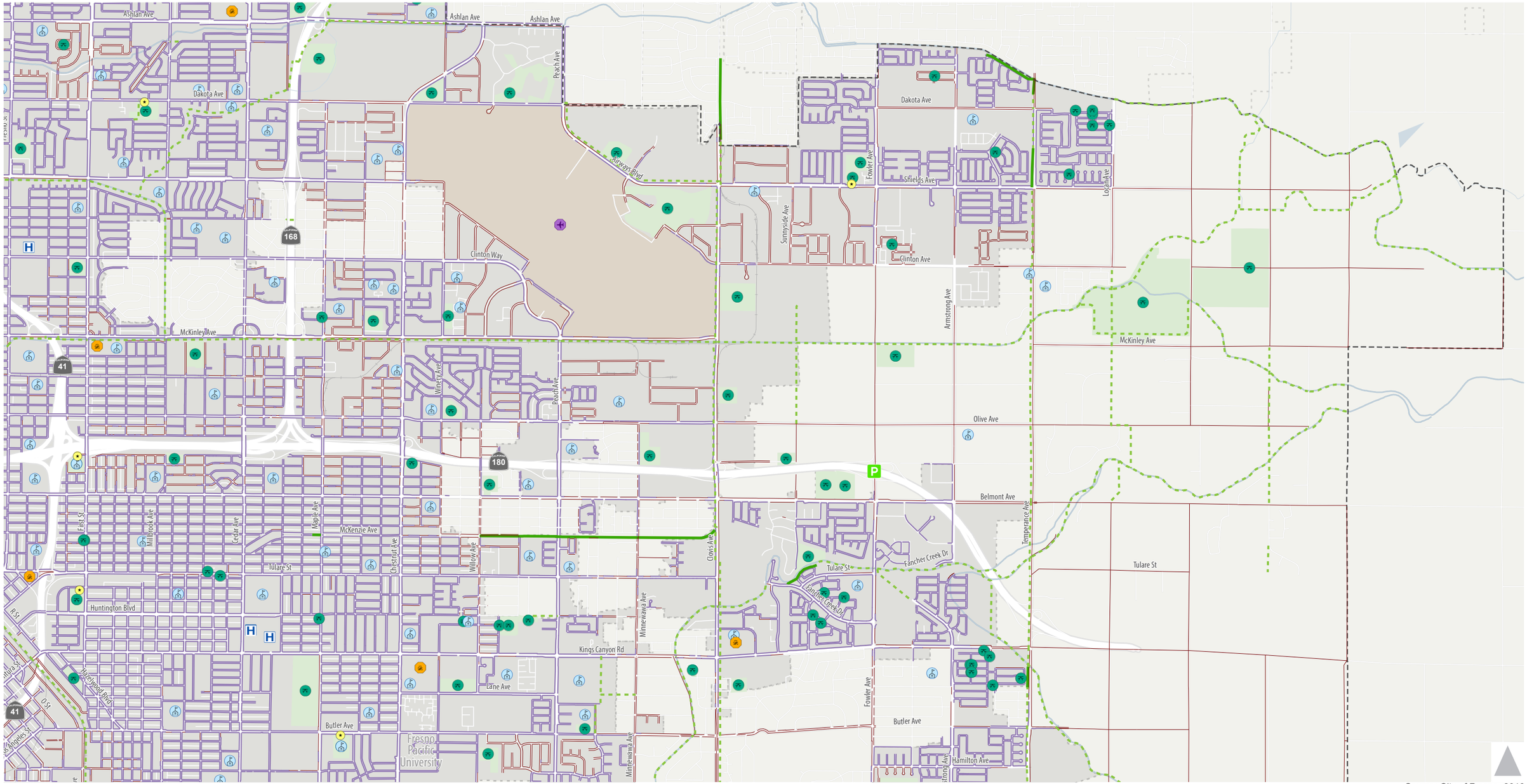
Key Destinations

- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- City Sphere of Influence
- Rail
- Water
- Canal
- High Speed Rail Alignment
- Parks
- Airports
- Water
- City

City of FRESNO active transportation plan

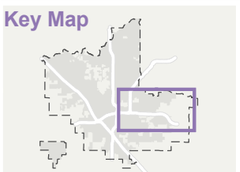
Figure 51

Build-Out Sidewalks and Trails - Inset 4



Source: City of Fresno, 2016

Key Map



- Class I Bike Path
- Class I Bike Path
- Existing Sidewalk
- Planned Sidewalks

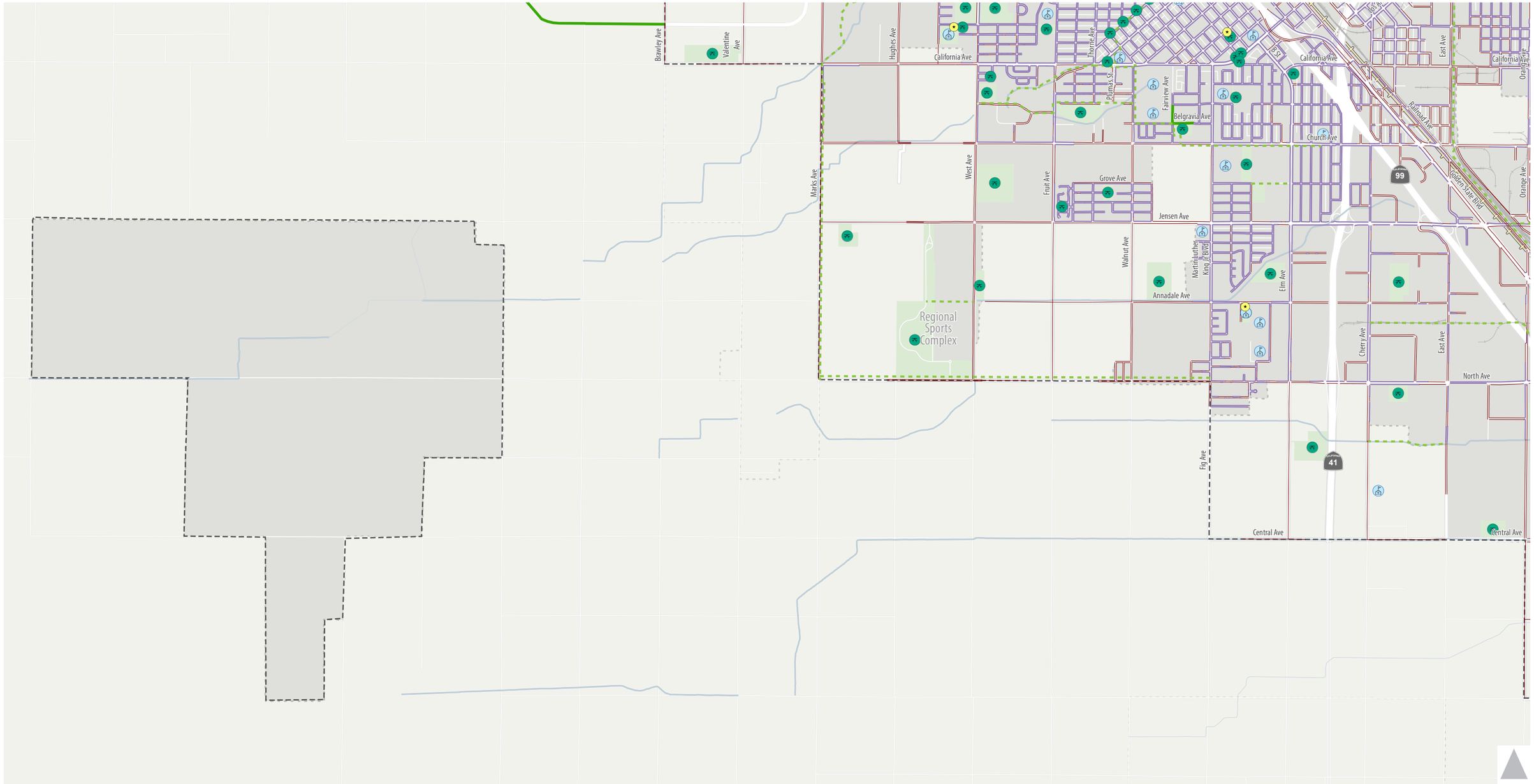
Key Destinations

- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- City Sphere of Influence
- Rail
- Water
- Canal
- High Speed Rail Alignment
- Parks
- Airports
- Water
- City

City of FRESNO active transportation plan

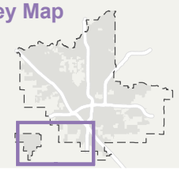
Figure 51

Build-Out Sidewalks and Trails - Inset 5



Source: City of Fresno, 2016

Key Map



- Class I Bike Path
- Class I Bike Path
- Existing Sidewalk
- Planned Sidewalks

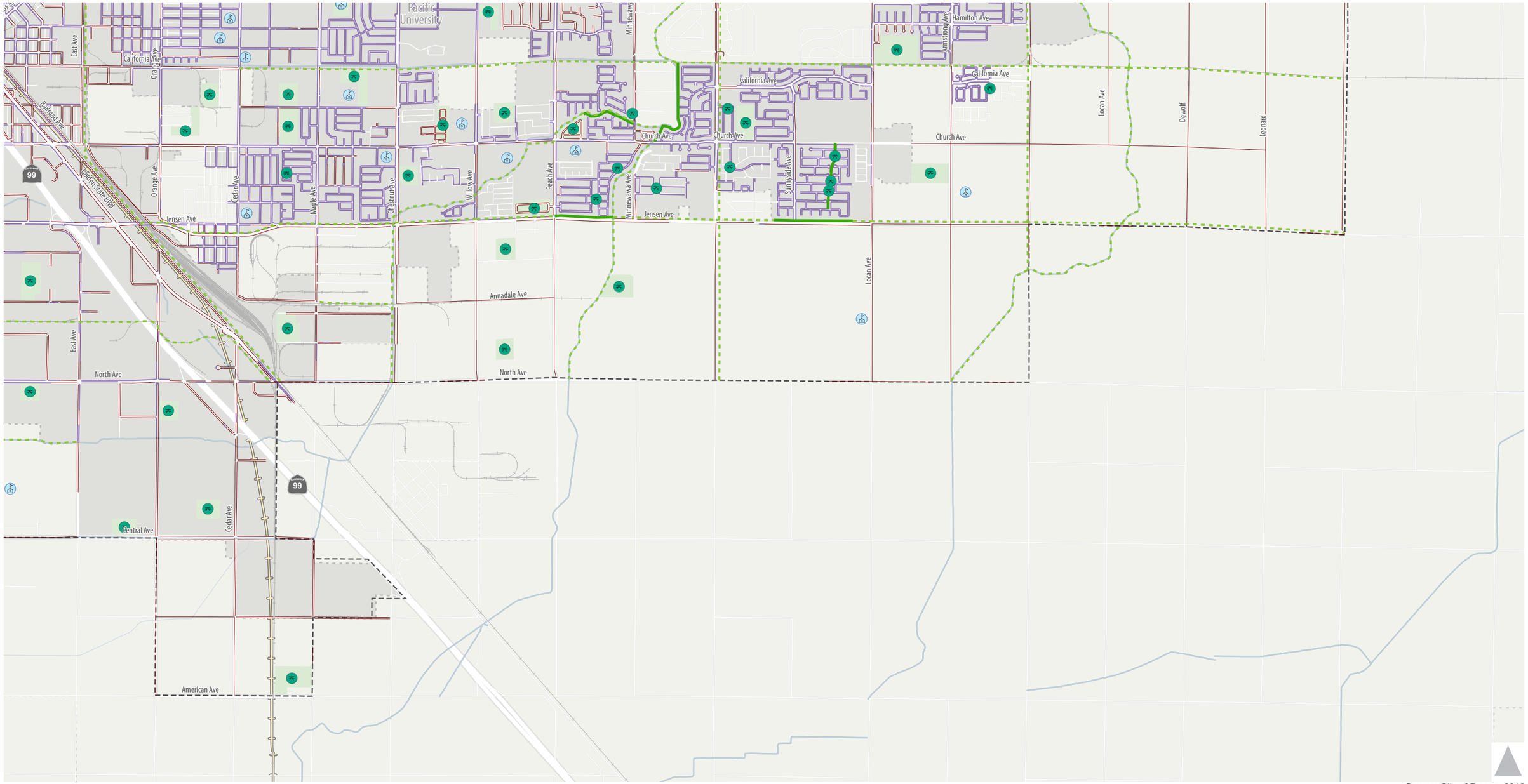
Key Destinations

- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- City Sphere of Influence
- Rail
- Water
- Canal
- High Speed Rail Alignment
- Parks
- Airports
- Water
- City

City of FRESNO active transportation plan

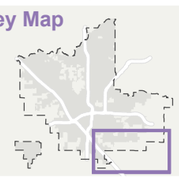
Figure 51

Build-Out Sidewalks and Trails - Inset 6



Source: City of Fresno, 2016

Key Map



Class I Bike Path
Class I Bike Path
Existing Sidewalk
Planned Sidewalks

Key Destinations
Higher Education
Airport

Shopping
Hospital
Manchester Transit Center
City Hall

Neighborhood/Community Center
Amtrak Station
Park-and-Ride

School
Park
City Sphere of Influence

Rail
Water
Canal
High Speed Rail Alignment

Parks
Airports
Water
City

City of FRESNO active transportation plan

Figure 51

Build-Out Sidewalks and Trails - Inset 7

[This page intentionally left blank]

Priority Network

The priority pedestrian network is highlighted in Figure 52 and summarized in Table 8 below.

Table 8: Priority Pedestrian Network Facilities

Type	Existing (Miles)	Proposed (Miles)	Total (Miles)
Class I Bike Paths	15	28	43
Sidewalks	101	45	146

Source: City of Fresno 2016, Fehr & Peers 2016

The pedestrian priority network consists of three types of priority areas:

- Underserved neighborhoods with missing sidewalks
- Pedestrian activity areas
- Pedestrian safety enhancement corridors

Each of these area types is discussed in further detail below.

Underserved Neighborhoods

The following underserved neighborhoods (shown in Figure 52) were prioritized because they currently have a large number of missing sidewalks and received a higher prioritization score in the analysis based on the criteria presented on page 125. Further, most of these areas have one or more of the following characteristics:

- Located in a disadvantaged community based on the socioeconomic data shown in Figure 37 through Figure 40
- Identified as an area needing sidewalks during the community and stakeholder outreach process
- Located near a school or transportation corridor where additional sidewalks would better support walking for students and residents as well as improve pedestrian safety

These areas should be prioritized for constructing sidewalks and improvements to address pedestrian travel and safety.

- Ashlan/41 neighborhood
- Calimyrna neighborhood

- Chestnut/Belmont neighborhood
- Chestnut/Olive neighborhood
- Church/Elm area
- Del Mar neighborhood
- Florence Avenue to Balderas Elementary School
- Herndon/41 neighborhood
- Hidalgo Elementary School neighborhood
- Jane Addams neighborhood
- Maple/Church area
- Muir Elementary School neighborhood
- Norseman Elementary School neighborhood
- North Avenue neighborhood
- Pinedale
- Roeding Park neighborhood
- Scandinavian neighborhood
- West of Edison area
- Yosemite Middle School neighborhood

Pedestrian Activity Areas

The following list of pedestrian activity areas were included because their existing or planned development patterns and land use result in higher levels of pedestrian activity. They include areas with a well-connected, grid network of streets with a mix of uses that generate pedestrian activity, as well as streets with commercial establishments oriented toward the sidewalk and street (as opposed to auto-oriented with large parking lots in front). Streets that are proposed for re-development into mixed-use, multi-modal corridors in the Fresno General Plan were also included in this list. These areas also experience some of the highest frequency of pedestrian collisions.

- Downtown Fresno
- Tower District – Olive Avenue: Palm Avenue to Van Ness Avenue
- Van Ness Avenue – near Fresno City College: Olive Avenue to McKinley Avenue
- Blackstone Avenue/Abby Street: Divisadero Street to Shaw Avenue (BRT corridor)
- Ventura Avenue: Downtown Fresno to Cedar Avenue (BRT corridor)

The following enhancements are recommended for these areas:

- Fill-in sidewalk gaps
- Wide sidewalks
- Landscaping to provide shade for pedestrians
- Narrower travel lanes to calm traffic
- Bulb-outs to reduce crossing distances at intersections and marked crosswalks
- ADA-accessible curb ramps
- Crossing treatments, such as RRFBs, Pedestrian Hybrid Beacons, or traffic signals to assist pedestrians crossing the street at more frequent intervals
- Median refuge islands, where applicable, to assist in two-stage crossing
- Traffic calming measures, where applicable, to reduce vehicle travel speeds
- Pedestrian signal and timing improvements, where needed
- Lighting improvements, where needed

These enhancements will better support pedestrian activity and improve pedestrian safety. Some of these enhancements also encourage slower traffic speeds, which will reduce the likelihood and severity of vehicle-pedestrian collisions.

Pedestrian Safety Enhancement Corridors

In addition to the pedestrian activity areas and corridors, a few auto-oriented arterial and collector corridors currently experience a higher frequency of pedestrian collisions. These locations include:

- Blackstone Avenue: Alluvial Avenue to Sierra Avenue (BRT corridor)
- Shaw Avenue: Brawley Avenue to Marks Avenue
- Shaw Avenue: Blackstone Avenue to Maple Avenue
- West Avenue: Ashlan Avenue to Shields Avenue
- First Street: Dakota Avenue to Ventura Avenue
- Cedar Avenue: Dakota Avenue to Belmont Avenue
- Cedar Avenue: Kings Canyon Road to California Avenue
- Kings Canyon Road: Cedar Avenue to Clovis Avenue (BRT corridor)
- Chestnut Avenue: Tulare Street to Butler Avenue
- Clovis Avenue: Tulare Street to East Park Circle Drive
- Butler Avenue: First Street to Chestnut Avenue

Most of these corridors have the following characteristics in common:

- High vehicle traffic volumes
- High vehicle traffic speeds
- Large commercial centers and/or educational campuses
- Long spacing (¼ mile or more) between controlled crosswalks

This combination of factors results in increased pedestrian and vehicle demand for travel (generated by large commercial centers or educational uses) along corridors with insufficient infrastructure to support pedestrians to cross these high-speed, busy streets.

To address these safety issues, the following improvements are recommended for these areas:

- Additional signage and infrastructure to make vehicles aware of pedestrians, and pedestrians aware of vehicles
- Pedestrian signal and timing improvements, where needed
- Accessible Pedestrian Signals (APS)
- Adequate lighting for pedestrian visibility
- Where feasible, additional controlled crossings of major streets using either pedestrian hybrid beacons or traffic signals to discourage pedestrians from crossing between controlled crosswalks
- Signage and/or physical measures to encourage pedestrians to utilize only controlled crosswalks
- Targeted safety education campaigns

Additional Factors for Prioritization

In addition to the areas and criteria presented above, prioritization of sidewalk implementation should consider the priorities identified in Fresno's ADA Transition Plan for the Public Right of Way. As noted earlier in this section, the City uses the following considerations to prioritize sidewalk construction needs:

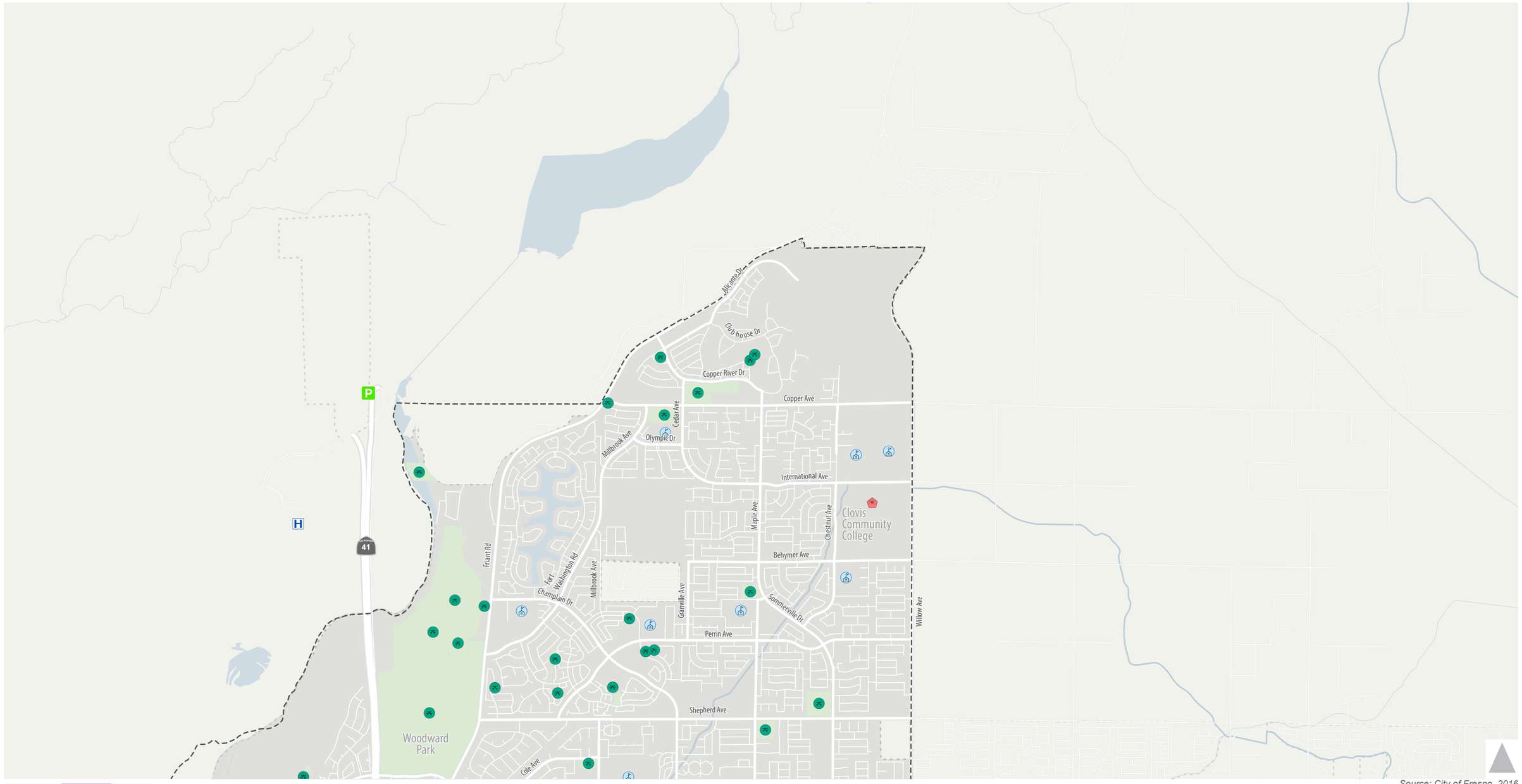
- Public complaint of gap in the existing circulation system
- Unlikelihood of future development of the adjacent property
- Absence of alternative accessible path
- Impact on the adjacent community based on proximity to:
    - Government offices and facilities
    - Transportation
    - Public accommodations and employers

- Availability of Right of Way

The ADA Transition Plan focuses on gaps in the pedestrian network, defined as an area or neighborhood in which there are incomplete or missing segments of sidewalk adjacent to existing sidewalks. The ADA Transition Plan does not consider areas in which there are no sidewalks throughout the entire neighborhood or only on one side of the street to be a gap in the existing pedestrian network.

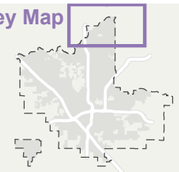
Sidewalk improvements on arterials and collectors with land uses and socioeconomic characteristics that generate higher pedestrian travel demand should also be prioritized. This could include filling in sidewalk gaps where sidewalks are incomplete or missing, as well as widening existing sidewalks that present accessibility issues. For example, sections of Blackstone Avenue south of Clinton Avenue have gaps in the sidewalk network or inadequate sidewalk widths, which impede pedestrian travel. Similarly, gaps along Golden State Boulevard north of McKinley Avenue present a barrier for school children to reach Jane Addams Elementary School.

[This page intentionally left blank]



Source: City of Fresno, 2016

Key Map



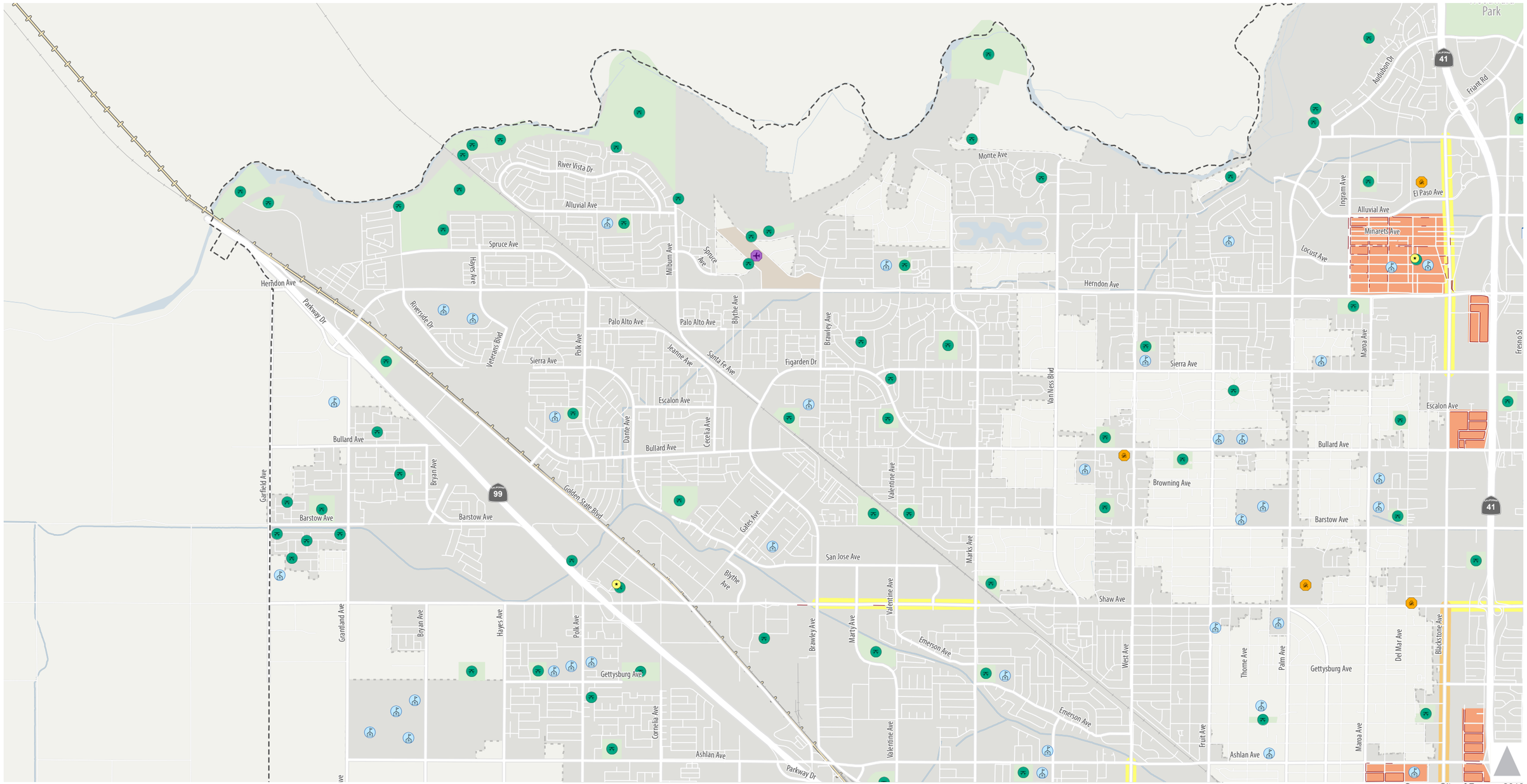
Priority Pedestrian Area
- Pedestrian activity areas: areas with high pedestrian activity
- Safety areas: areas with high frequency of pedestrian collisions
- Underserved neighborhoods: areas with large numbers of missing sidewalks
- Missing sidewalks in underserved areas

Key Destinations
- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- Canal
- High Speed Rail Alignment
- City Sphere of Influence
- Parks
- Airports
- Water
- City

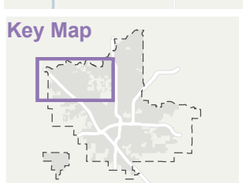
City of FRESNO active transportation plan

Figure 52

Priority Pedestrian Areas - Inset 1



Source: City of Fresno, 2016



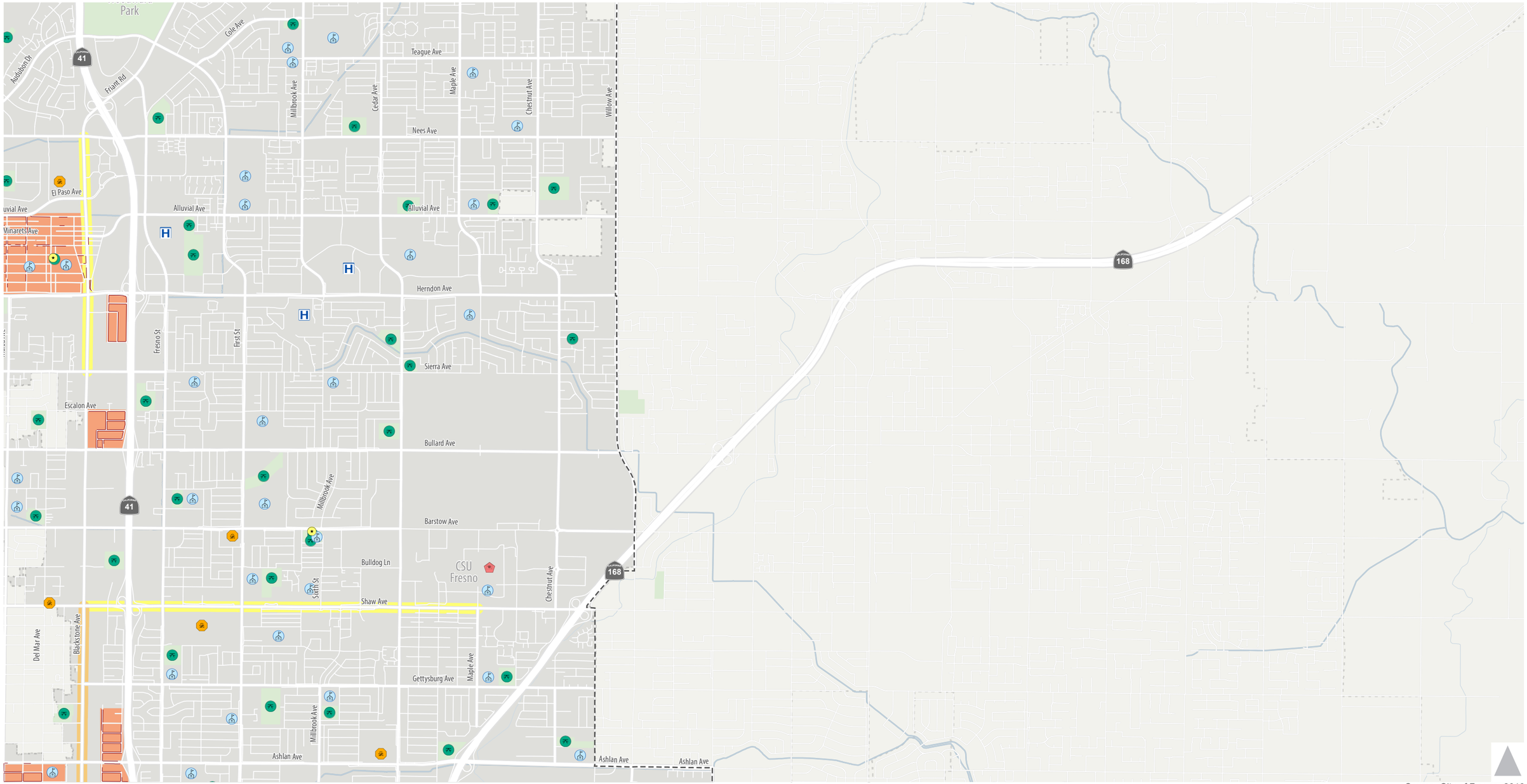
Priority Pedestrian Area
- Pedestrian activity areas: areas with high pedestrian activity
- Safety areas: areas with high frequency of pedestrian collisions
- Underserved neighborhoods: areas with large numbers of missing sidewalks
- Missing sidewalks in underserved areas

Key Destinations
- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- Canal
- High Speed Rail Alignment
- City Sphere of Influence
- Parks
- Airports
- Water
- City

City of FRESNO active transportation plan

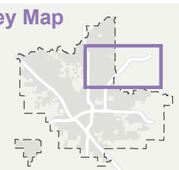
Figure 52

Priority Pedestrian Areas - Inset 2



Source: City of Fresno, 2016

Key Map



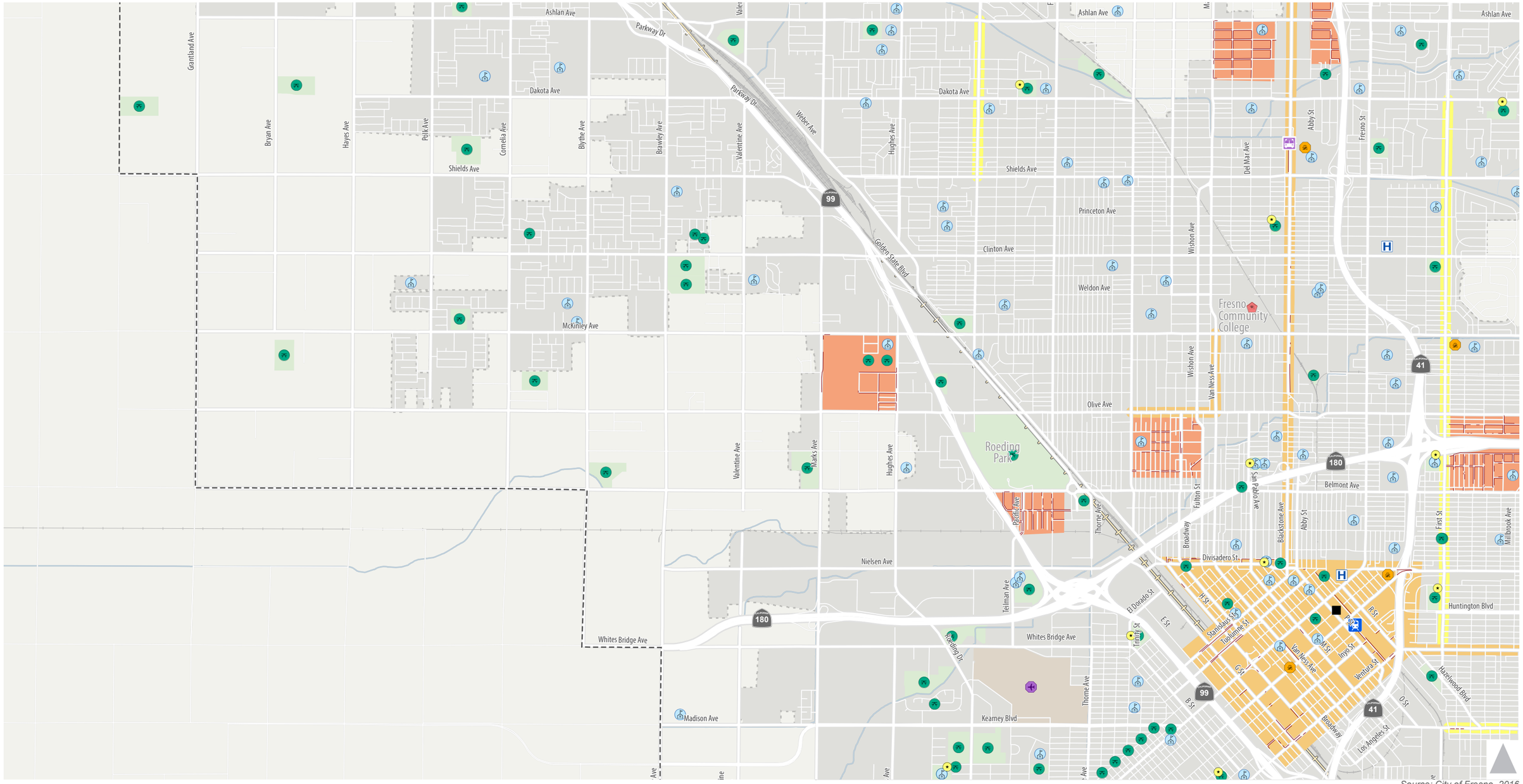
Priority Pedestrian Area
- Pedestrian activity areas: areas with high pedestrian activity
- Safety areas: areas with high frequency of pedestrian collisions
- Underserved neighborhoods: areas with large numbers of missing sidewalks
- Missing sidewalks in underserved areas

Key Destinations
- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- Canal
- High Speed Rail Alignment
- City Sphere of Influence
- Parks
- Airports
- Water
- City

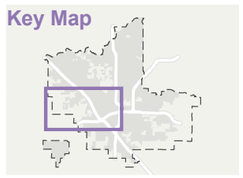
City of FRESNO active transportation plan

Figure 52

Priority Pedestrian Areas - Inset 3



Source: City of Fresno, 2016



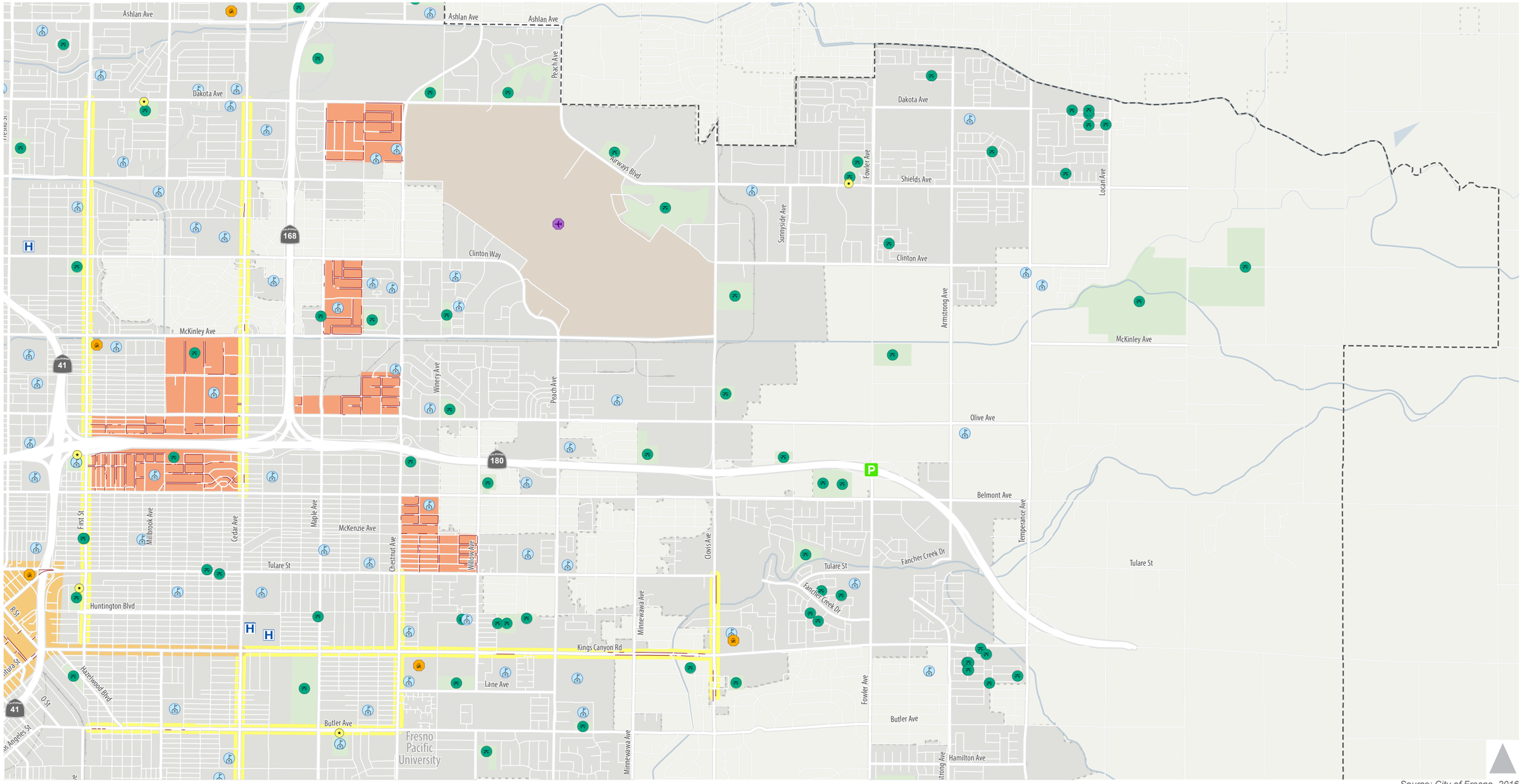
Priority Pedestrian Area
- Pedestrian activity areas: areas with high pedestrian activity
- Safety areas: areas with high frequency of pedestrian collisions
- Underserved neighborhoods: areas with large numbers of missing sidewalks
- Missing sidewalks in underserved areas

Key Destinations
- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- Canal
- High Speed Rail Alignment
- City Sphere of Influence
- Parks
- Airports
- Water
- City

City of FRESNO active transportation plan

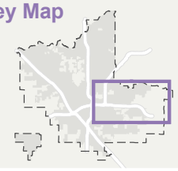
Figure 52

Priority Pedestrian Areas - Inset 4



Source: City of Fresno, 2016

Key Map



Priority Pedestrian Area

- Pedestrian activity areas: areas with high pedestrian activity
- Safety areas: areas with high frequency of pedestrian collisions
- Underserved neighborhoods: areas with large numbers of missing sidewalks
- Missing sidewalks in underserved areas

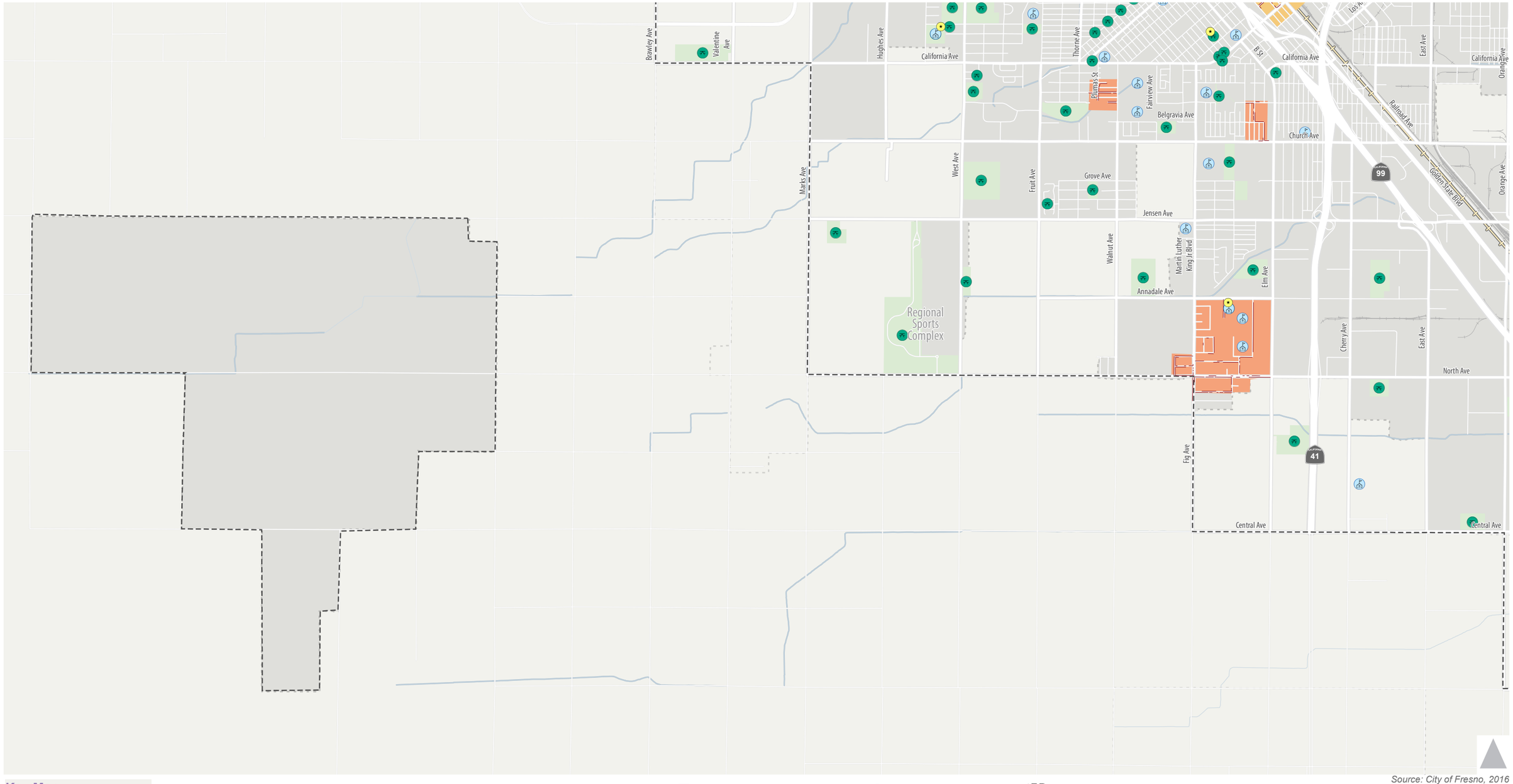
Key Destinations

- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- Canal
- High Speed Rail Alignment
- City Sphere of Influence
- Parks
- Airports
- Water
- City

City of FRESNO active transportation plan

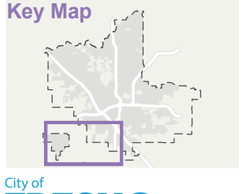
Figure 52

Priority Pedestrian Areas - Inset 5



Source: City of Fresno, 2016

Key Map



Priority Pedestrian Area

- Pedestrian activity areas: areas with high pedestrian activity
- Safety areas: areas with high frequency of pedestrian collisions
- Underserved neighborhoods: areas with large numbers of missing sidewalks
- Missing sidewalks in underserved areas

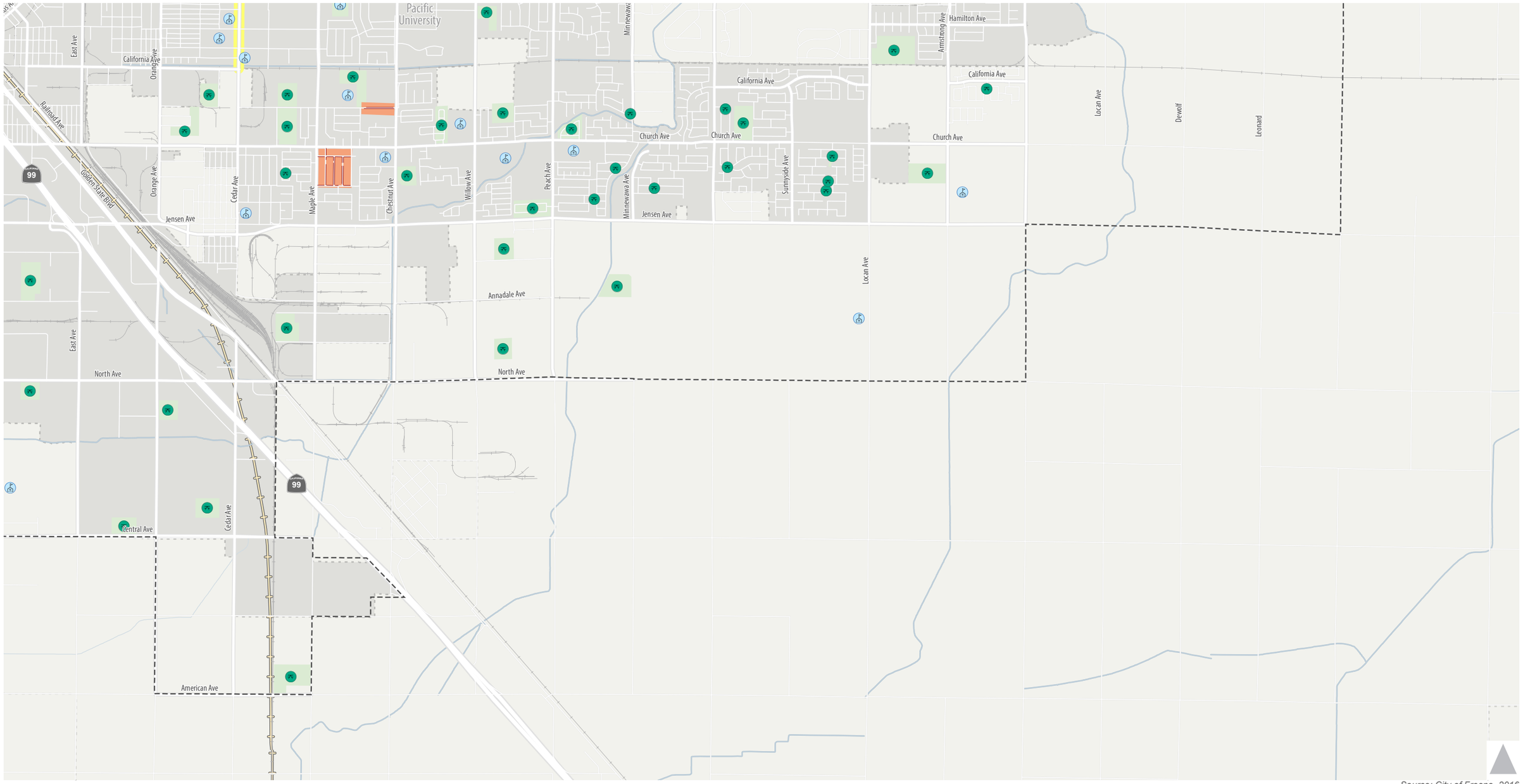
Key Destinations

- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- Canal
- High Speed Rail Alignment
- City Sphere of Influence
- Parks
- Airports
- Water
- City

City of FRESNO active transportation plan

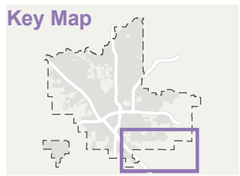
Figure 52

Priority Pedestrian Areas - Inset 6



Source: City of Fresno, 2016

Key Map



Priority Pedestrian Area

- Pedestrian activity areas: areas with high pedestrian activity
- Safety areas: areas with high frequency of pedestrian collisions
- Underserved neighborhoods: areas with large numbers of missing sidewalks
- Missing sidewalks in underserved areas

Key Destinations

- Higher Education
- Airport
- Shopping
- Hospital
- Manchester Transit Center
- City Hall
- Neighborhood/Community Center
- Amtrak Station
- Park-and-Ride
- School
- Park
- Rail
- Canal
- High Speed Rail Alignment
- City Sphere of Influence
- Parks
- Airports
- Water
- City

City of FRESNO active transportation plan

Figure 52

Priority Pedestrian Areas - Inset 7

[This page intentionally left blank]

Cross-Sections and Supporting Infrastructure

The networks described above will allow Fresno residents to travel by bicycle and foot to destinations across the city. This section discusses how these networks may be implemented within road right-of-ways across Fresno and the specific features that will improve the safety and comfort of pedestrians and bicyclists.

Conceptual Cross-Sections

Many of the arterial and collector streets within the areas of Fresno built before 1980 are 64 feet wide, such as Fruit Avenue, Maple Avenue, and McKinley Avenue. This width accommodates either two or four lanes of travel, as shown in the cross sections of typical streets in Figure 53 and Figure 54 below.

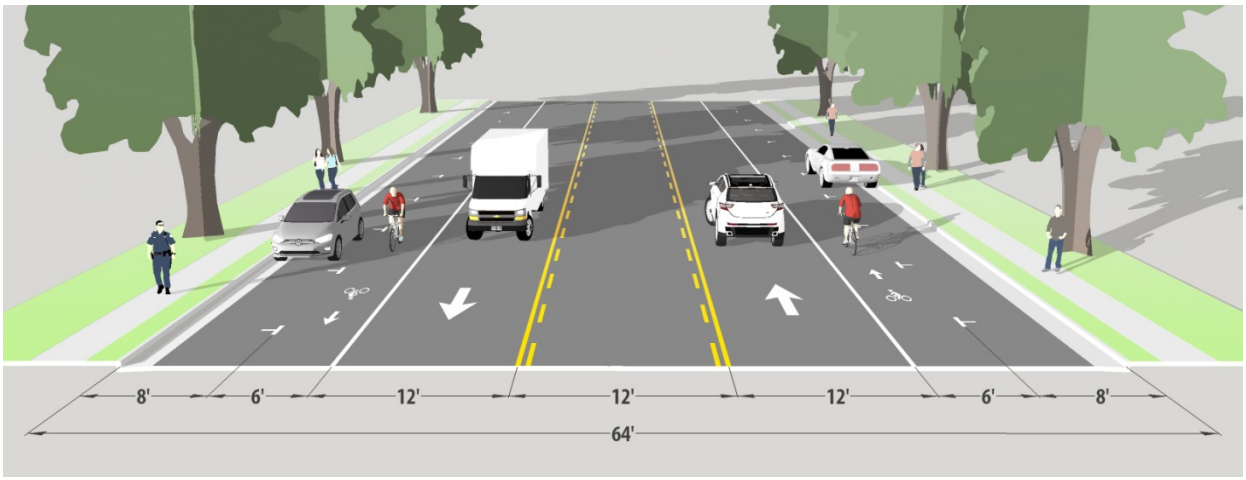


Figure 53: Typical Existing Road with Two Travel Lanes and Two-Way Left-Turn Lane

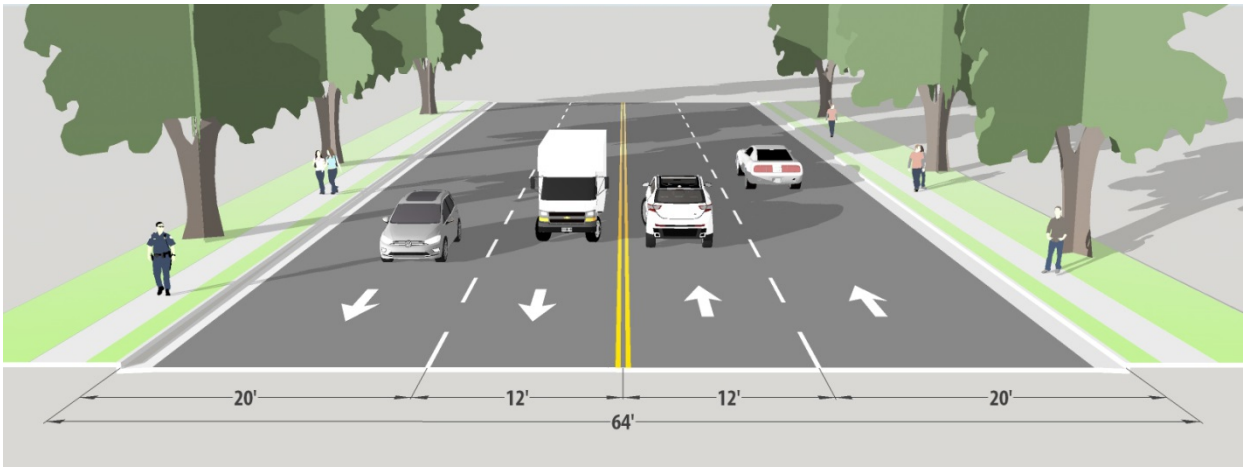


Figure 54: Typical Existing Road with Four Travel Lanes

The two-lane road accommodates both bike lanes and parking, but "interested but concerned" cyclists may find traveling with moving cars on one side and parked cars on the other to be uncomfortable.

These cyclists are even less likely to be comfortable on the four-lane road. The road has a wide shoulder, but without a clearly demarcated bikeway, such cyclists may feel unsafe. Furthermore, the vehicle travel speeds on many of the roadways with these configurations exceed 35 miles per hour, resulting in higher travel stress (LTS 3 and LTS 4) for bicyclists.

These concerns may be addressed within the 64-foot street width in several ways. Examples of each implementation are depicted in Figure 55 through Figure 58 below.

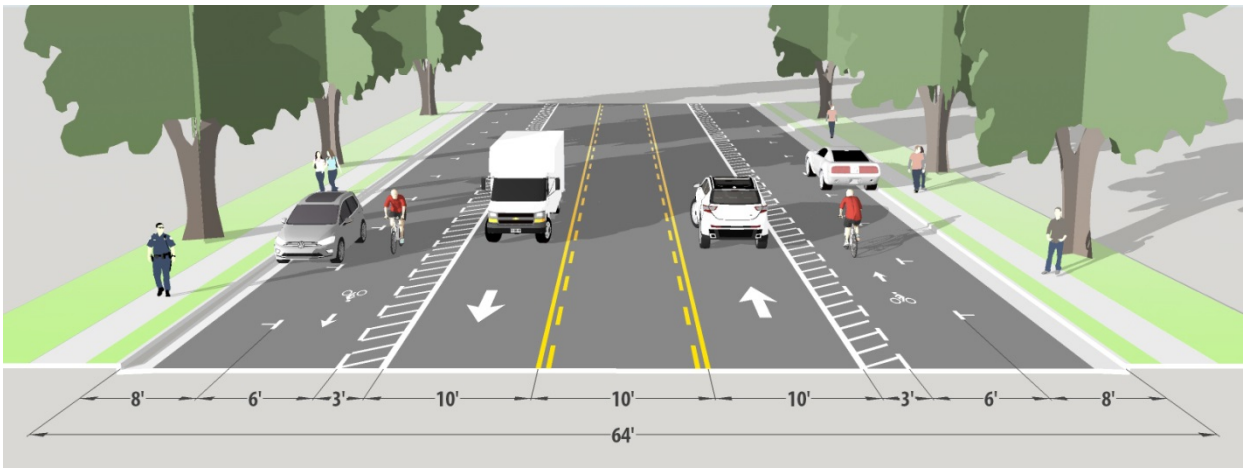


Figure 55: Road with Two Vehicular Travel Lanes and Buffered Bike Lanes

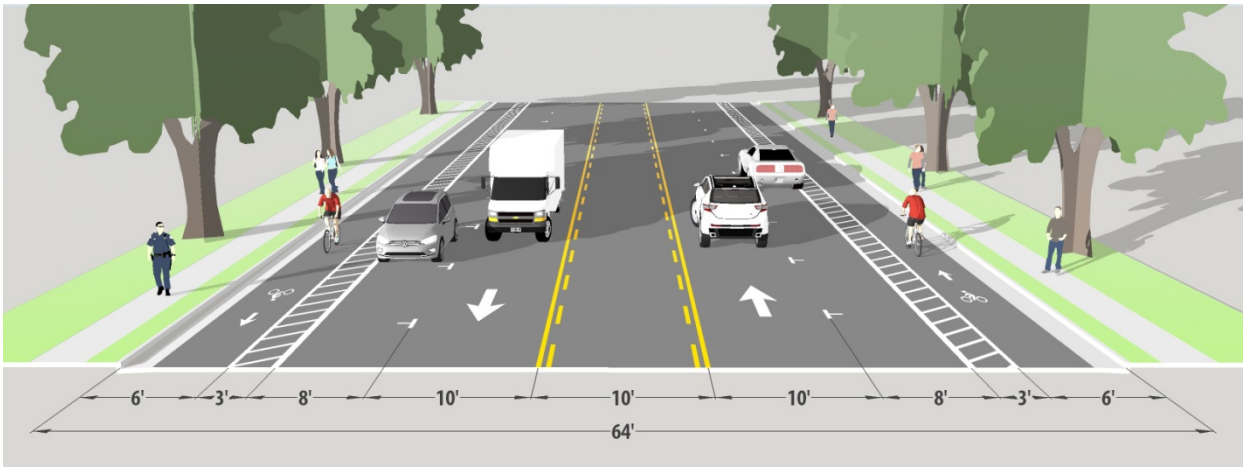


Figure 56: Road with Two Vehicular Travel Lanes and Parking-Protected Bike Lanes

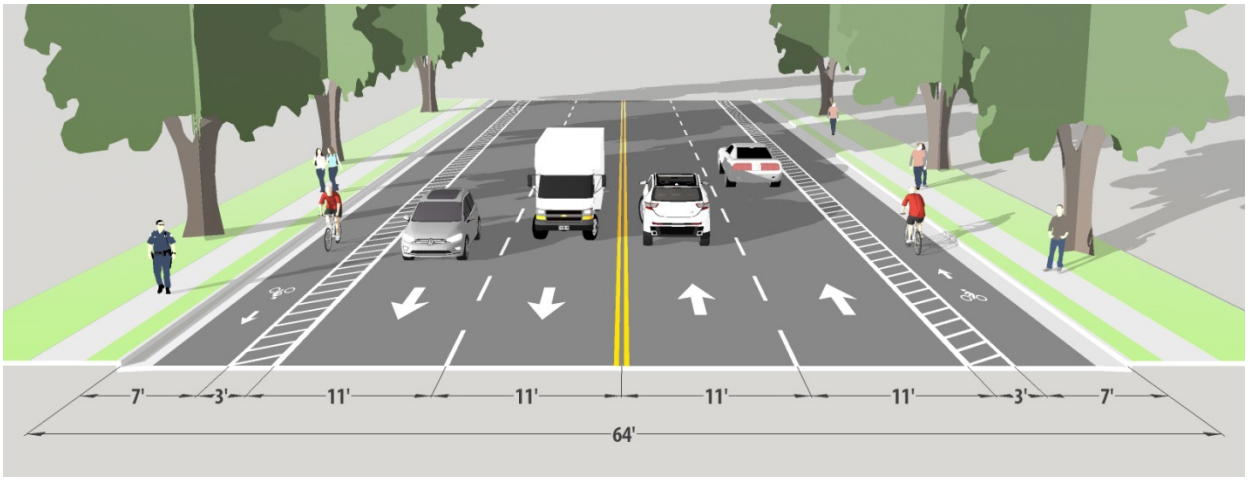


Figure 57: Road with Four Vehicular Travel Lanes and Buffered Bike Lanes

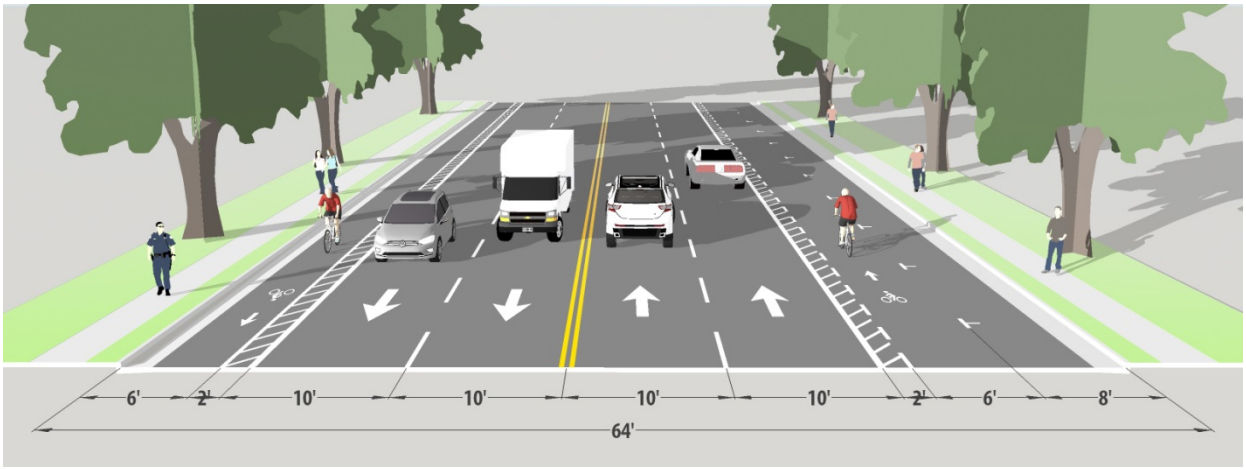


Figure 58: Road with Four Vehicular Travel Lanes, Buffered Bike Lanes, and Parking on One Side

These configurations provide many advantages for bicyclists:

- By slightly decreasing vehicular travel lane widths, additional width is allocated to bike lanes, increasing cyclist comfort. Decreasing travel lane width may also have the benefit of slowing motorist speeds, further increasing cyclist comfort and safety.
- Adding marked buffers provide a clear space between bicyclists and motor vehicles, further increasing cyclist comfort.
- Locating parked cars between the vehicular travel lane and the bike lane provides a physical barrier between moving vehicles and bicyclists, increasing bicyclist safety.

Buffers on streets without parking may be enhanced with posts or other physical barriers to create Class IV separated bikeways, additionally increasing cyclist safety and comfort.

Because each of these cross-sections is the same overall width, the particular treatment most suitable for local traffic volumes, parking needs, and other characteristics may be selected. Notably, if the traffic volumes on a road currently configured for four travel lanes can be accommodated with two travel lanes, space can be reallocated in multiple ways to improve safety and comfort for bicyclists.

Each cross section has different benefits, and the design of a street selected should be based on local land use and community needs. Removal of vehicle lanes (implementation of a road diet) or removal of on-street parking may be appropriate for some streets but not for others. Adjacent land uses, street vehicular volumes, and connections to adjacent facilities are particularly important to consider. Planning and implementation of changes to street configurations should also be done with open communication with the public so that concerns are addressed early in development. The City of Fresno Standard Specifications include guidelines for bike lane projects within existing streets.

Collector and arterial streets identified in the priority bikeway network, such as Maple Avenue and Millbrook Avenue, may be good candidates for initial implementation of these cross sections.

Bicycle Parking

Bicycle parking is available at many key destinations within the area, including at major transit centers and many parks and schools, as described in Chapter 4, Existing Conditions. The City Municipal Code also includes comprehensive requirements for bicycle parking for other development as shown in Appendix C.

However, bicycle parking could not be confirmed at all schools and parks within Fresno. Schools and parks are important destinations for many residents, especially youth who cannot drive. Therefore, this plan proposes a program to survey existing parking at all schools and parks. Where bike parking does not exist, or where it does not meet current standards, plans should be made to add or upgrade bicycle parking.

Crossing Improvements

Many comments received in the public workshops concerned intersections. Many requests were made for upgraded crossing treatments or new crossings, especially at locations near schools. The treatments described in Chapter 2 can be applied to increase the safety and comfort of pedestrians throughout Fresno. The most frequently cited locations include:

- Floradora Avenue corridor from Clark Street to Maple Avenue
- Blackstone Avenue corridor from University Avenue to Tyler Avenue
- Kings Canyon Road at Walling Avenue, Peach Avenue, and Argyle Avenue
- Barton Avenue at Thomas Avenue and White Avenue, near Ann M. Leavenworth Elementary School
- Butler Avenue and 8th Street
- Eighth Street between Lowe Avenue and Liberty Avenue to improve crossing to Winchell Elementary
- First Street and Thomas Avenue to improve crossing to Hidalgo Elementary
- Intersections near Susan B. Anthony Elementary, Jane Addams Elementary, and Sequoia Middle School

This plan proposes a program to review these intersections and determine appropriate improvements, based on study of local conditions and use.

Lighting

The public also requested improvement or addition of lighting in several areas throughout the city. The most frequently cited locations include:

- McKinley Avenue and Hughes Avenue near Jane Addams Elementary School and Valentine Avenue and Brawley Avenue
- Butler Avenue and 8th Street
- Van Buren Avenue at Devlan Drive and Elgin Avenue
- Orange Avenue and Lowe Avenue
- Fruit Avenue from Ashlan Avenue to Shaw Avenue
- Fruit Avenue and Walnut Avenue from Jensen Avenue to California Avenue
- Streets near Hidalgo Elementary, Winchell Elementary, Sequoia Middle School, and Balderas Elementary School

As funds are made available for lighting upgrades and improvements, the City will review these requests against lighting standards and implement necessary changes.

Supporting Programs

As part of the ATP development, the City reviewed best practices for improving pedestrian and bicyclist safety and compared them to current practices. This review is provided in Appendix E, Bicycle and Pedestrian Safety Education Plan. The City will review these recommendations and develop plans for implementing them.

A key concern heard from the public throughout the development of the ATP was loose dogs. All dogs in Fresno County must be on a leash or under the immediate control of a responsible person if they are off the owner's property. However, many attendees at the public workshops commented that unrestrained dogs were a safety issues, and that these dogs frequently deterred them from walking or riding bicycles in Fresno. This plan recommends that the City work with Animal Control to develop an education and enforcement program to increase compliance with leash requirements and thereby support increased walking and bicycling in Fresno.

Potential Outcomes

Following implementation of the planned networks, supporting infrastructure, and supporting programs, substantial improvements may be achieved in active transportation use and safety of active transportation users.

By increasing the facilities available to users, mode share may increase to levels seen in other comparable cities. Sacramento is a city in the Central Valley with a comparable climate and density to that of Fresno. Sacramento's bike mode share is more than double that of Fresno, and its walk mode share is just less than double (Table 9). Outside of California, Tucson is a city in a hot climate that has a walk mode share comparable to that of Sacramento and a bike mode share even higher than that of Sacramento. Though no single city is an exact comparison to Fresno, Sacramento and Tucson provide reasonable mode share comparisons and targets for Fresno to achieve by implementing the ATP.

Table 9: Mode Share of Comparable Cities

Mode	Mode Share		
	Fresno	Sacramento	Tucson
Bicycle	1.1 %	2.4 %	3.1 %
Pedestrian	1.8 %	3.3 %	3.4 %

Source: US Census American Community Survey 2009-2014

Achieving mode share similar to Sacramento would result in approximately 4,400 workers commuting by bike and 6,000 commuting by walking, representing about 8,800 trips by biking and12,000 trips by walking. As discussed in Chapter 4, Existing Conditions, because these number do not include shopping, school, or recreational trips, or commuters who only walk or bike to work part time, the actual number of future trips would be higher.

By implementing this plan, pedestrian and bicyclist safety will also be improved and the number of collisions involving pedestrians and bicyclists reduced. Despite the number of collisions due to pedestrians under the influence or mental illness, the extensive nature of the planned network may still be expected to greatly reduce collisions. Recent progress in collision reduction observed by the City also suggests that a 50% reduction in collisions is reasonable and achievable after improvements are implemented. In addition to these direct health improvements due to collision reduction, implementation will also support increased physical activity by Fresno residents, improving community health by reducing incidence of heart disease, high blood pressure, Type 2 diabetes, mental illness, and obesity.

[This page intentionally left blank]

6. IMPLEMENTATION

This chapter discusses implementation of the planned bicycle and pedestrian networks for the City of Fresno.

Implementation Priority

Implementation of the planned bikeway and pedestrian network is anticipated to occur in multiple ways:

- Active transportation projects pursued to implement this plan
- In conjunction with adjacent land development projects as the City requires new development to construct roadway and sidewalk frontage improvements in accordance with City standards and the planned facilities identified in this plan
- In conjunction with already planned and funded maintenance and capacity enhancement projects, such as slurry seals, pavement reconstruction, roadway widening, trail implementation, or sidewalk rehabilitation projects

Active transportation projects will be implemented based upon the priorities identified in the Planned Networks section of this plan. For example, the planned bikeway facilities identified in the priority bikeway network and the improvements in the priority pedestrian areas are intended to be pursued before other planned improvements identified in the build out network. Further details of these priorities are provided in Appendix H, Prioritized Networks.

Improvements associated with work on adjacent roadways or development of adjacent land uses will provide opportunities for improvements to be implemented relatively easily or at lower cost than if implemented separately. In these cases, lower priority improvements may be implemented before higher-priority improvements, depending on the location of these land development and roadway projects.

Estimated Implementation Costs

The estimated costs to implement each type of facility are summarized in Table 10. On-street bike routes and bike lanes are the least expensive to construct per mile, while separated bikeways, sidewalks and bike paths are most expensive to construct. If land must be acquired to implement any of these facilities, costs will increase. However, many of these facilities may be implemented during development of adjacent land uses or in conjunction with other projects. Therefore, some of these costs will not be directly borne by the City.

Table 10: Build-Out Network Implementation Cost Estimates by Priority

Type	High	Medium	Low	Total
Bikeways (including trails)	$89,796,200	$264,000,000	$602,000,000	$955,796,200
Sidewalks	$24,948,000	$94,000,000	$247,000,000	$365,948,000
Total	$114,744,200	$358,000,000	$849,000,000	$1,321,744,200

Source: Fehr & Peers 2016

For bikeways (including trails) in the high-priority network, these estimates are based on a review by segment. Where applicable, these estimates include the cost of freeway, railway, and canal overcrossings and undercrossings. These priority bikeway cost estimates are summarized in Table 11, and additional details are provided in Appendix I, Implementation Cost Analysis. Note that these are high-level cost estimates, and more detailed study will be required to refine them.

Cost estimates for medium- and low-priority bikeways and trails, and all sidewalks, are based on local unit cost estimates. These estimates were developed based on recent bid results and relevant project experience in the area. Assumptions for each bikeway type and details of these estimates are described in Appendix I.

Table 11: Priority Bikeway Network Cost Estimates

Project Street(s) or Canals	Project Limits	Map Inset	Proposed Class Type(s)	Total Length (Miles, All Classes)	Percentage Complete (All Classes)	Project Cost
E Copper Ave	N Willow Ave to N Friant Rd	1	I	1.98	52%	$620,300
Lewis S. Eaton Trail	E Copper Ave to E Audubon Ave	1,3	I	3.16	100%	$-
N Willow Ave	E Barstow Ave to E Copper Ave	1,3	I	5.50	82%	$1,241,400
W Audubon Ave to W Nees Ave to Gravel Haul Rd to W Alluvial Ave to Harrison Ave	N Friant Rd to W Herndon Trail	2,3	I,II,III	5.54	51%	$1,126,600
E Shepherd Ave	N Willow Ave to N Friant Rd	1	I	2.75	74%	$480,200
N Millbrook Ave [0.1 miles on E Bullard Ave]	E Shepherd Ave to E Barstow Ave	1,3	I, II, III	7.06	44%	$621,200
N Veterans Blvd	W Herndon Ave to W Gettysburg Ave	2	I	3.01	2%	$4,959,500
W Herndon Ave Trail & Frontage Roads	N Maroa Ave to N Polk Ave/W Spruce Ave	2	I,III	5.02	62%	$2,987,700
N Maroa Ave	Herndon Trail to W Dakota Ave	2,4	IV	7.00	0%	$2,186,000
W Bullard Ave to W Sierra Ave to N Dante Ave to W San Jose Ave	Veterans Blvd to N Valentine Ave	2	II	6.85	56%	$3,752,200
W Barstow Ave	N Valentine Ave to N Fruit Ave	2	I,II	3.94	72%	$6,732,000
E Barstow Ave	N Millbrook Ave to N Fruit Ave	2,3	II	5.99	87%	$640,600
E Barstow Ave	N Millbrook Ave to Willow Ave	3	I,II, IV	5.45	26%	$3,722,800
W Gettysburg Ave	N Veterans Blvd to N Cornelia Ave	2	II	3.96	36%	$4,374,700
N Valentine Ave to N Emerson Ave to Herndon No. 39 Canal	W Barstow Ave to N Palm Ave	2,4	I,II	4.97	66%	$1,793,600

Project Street(s) or Canals	Project Limits	Map Inset	Proposed Class Type(s)	Total Length (Miles, All Classes)	Percentage Complete (All Classes)	Project Cost
N Millbrook Ave to E Bulldog Ln to N 6th Ave to E Shaw Ave to N Millbrook Ave	E Barstow Ave to E Shields Ave	3,5	II,III	5.83	89%	$83,700
N Cornelia Ave	W Gettysburg Ave to W McKinley Ave	2,4	II	4.99	43%	$2,975,200
Along Herndon No 39 Canal (section on E Shields Ave) to Mill No 36 Canal (section along E McKinley Ave) to N Clovis Ave	N Palm Ave to just north of E Shields Ave	4,5	I,II	9.22	0%	$14,360,800
E Dakota Ave	N Maroa Ave to N Millbrook Ave	4,5	II	4.01	47%	$1,812,600
E Dakota Ave	N Millbrook Ave to E Airways Blvd	5	II	5.02	100%	$-
E Airways Blvd	E Dakota Ave to N Clovis Ave	5	I	3.79	66%	$823,100
N Maple Ave	E Dakota Ave to E McKinley Ave	5	II	3.00	34%	$544,600
N Maroa Ave/N Van Ness Ave and N Wishon Ave/N Fulton St	E Dakota Ave to E Divisadero St	4	II	6.19	65%	$778,200
W McKinley Ave	N Cornelia Ave to N Hughes Ave	4	II	4.96	5%	$6,690,400
W McKinley Ave	N Hughes Ave to N Van Ness Ave	4	II	4.03	44%	$1,897,600
E McKinley Ave	N Van Ness Ave to N 7th St	4,5	II	3.93	24%	$736,800
N Hughes Ave to S Roeding Dr/S West Ave	W McKinley Ave to W Kearney Blvd	4	II	5.32	0%	$4,886,700
S Maple Ave	E McKinley Ave to E Church Ave	5,7	II	7.00	25%	$3,989,400
E McKenzie Ave	N Maple Ave to N Clovis Ave	5	I,II, III	3.52	57%	$27,000
N Clovis Ave to Fancher No 6 Canal to Central No 23 Canal	E McKinley Ave & N Clovis Ave to E Church Ave	5,7	I	5.04	19%	$4,869,100

Project Street(s) or Canals	Project Limits	Map Inset	Proposed Class Type(s)	Total Length (Miles, All Classes)	Percentage Complete (All Classes)	Project Cost
E Kearney Blvd	S West Ave to Fresno St	4	II	2.68	85%	$659,000
Van Ness Ave	E Divisadero St to Tulare St	4	II,III	1.65	0%	$221,800
Tulare St to R St to Huntington Blvd	E California Ave to S 1st St	4,6	II,IV	4.97	44%	$589,000
G St to Tuolumne St to B St to Merced St to Martin Ave to Fresno St	Tulare St to California Ave	4,6	I	1.70	0%	$1,549,200
Huntington Blvd	S 1st St to Maple Ave	5	III	3.00	0%	$15,900
S 1st St to S Hazelwood Blvd to E Butler Ave	E Huntington Blvd to S Maple Ave	4,5	II	4.30	21%	$2,041,400
E Lane Ave to S Peach Ave to E Lowe Ave to E Lane Ave	S Maple Ave to Fancher No 6 Canal (DeWitt)	5	I,II	4.65	41%	$1,962,400
Fanning Ditch	S West Ave to S Walnut Ave	6	I	1.05	0%	$1,687,200
E Church Ave	S Maple Ave to S Peach Ave	7	II	3.04	66%	$1,356,300
Total				186.61		$89,796,200

Source: Fehr & Peers, 2016

Funding

Federal, state, regional, county, and local organizations provide funding for pedestrian and bicycle projects and programs. The most recent federal surface transportation funding program, Fixing America's Surface Transportation Act (FAST), was signed into law in December 2015. This is the first long-term federal transportation authorization enacted since 2012, and the first long-term funding since the signing of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) in 2005. The new authorization brings changes to typical funding sources and structures.

FAST funding is distributed to federal and state surface transportation funds. Most of these resources are available through Caltrans and Fresno COG.

Measure C, administered by the Fresno County Transportation Authority, is another important source of funding. The measure is a half-cent sales tax aimed at improving the overall quality of Fresno County's transportation system. This Local Transportation Program can be used on pedestrian and bicycle facilities and trails. Funding is allocated to cities and the county based on population.

Table 12 summarizes the applicability of these various funding sources to projects, planning efforts, and programs proposed in this plan. Detailed descriptions of the grant funding sources are presented in Appendix J, Funding Sources. The most applicable funding sources for the improvements proposed by this Plan are the Active Transportation Program and Highway Safety Improvement Program. This appendix includes details about current programs that are used to fund existing scheduled projects and an assessment of upcoming programs as of September 2016. These may change as state and local programs adapt to the new FAST funding.

Table 12: Funding Sources

Funding Source	Class I Bicyde Path	Class II Bicycle Lane	Class III Bicycle Route	Class IV separated Bikeways	Pedestrian Projects	Other Projects	Planning and Programs
Congestion Mitigation and Air Quality Improvement Program (CMAQ)	◒	●	●	●	●	◒	◒
Regional Surface Transportation Program (RSTP)	●	●	●	●	●	●	●
Highway Safety Improvement Program (HSIP) Grants	◒	●	◒	●	●	●	○
Caltrans Transportation Planning Grants	○	○	○	○	○	○	●
Local Transportation Fund (LTF)	●	●	●	●	●	●	○
California State Parks Recreational Trails Program (RTP)	●	○	○	○	○	○	○
Land and Water Conservation Fund (LWCP)	●	○	○	○	○	○	○
Active Transportation Program (ATP)	●	●	●	●	●	●	●
Transportation Development Act (TDA)	●	●	●	●	●	●	●
Affordable Housing and Sustainable Communities Program (AHSC)	◒	◒	◒	◒	◒	◒	◒

Funding Source	Class I Bicycle Path	Class II Bicycle Lane	Class III Bicycle Route	Class IV separated Bikeways	Pedestrian Projects	Other Projects	Planning and Programs
California Office of Traffic Safety Pedestrian and Bicycle Safety Grants	○	○	○	○	○	○	●
FCTA Measure C	●	●	●	○[2]	○[2]	●	●
SJVAPCD Bikeway Incentive Program	●	●	●	○	○	○	○

Notes:

1. ● indicates that funds may be used for this category; ○ indicates that funds may not be used for this category, and ◒ indicates that funds may be used, though restrictions apply.
2. City of Fresno has a pending request to allow funding to be used for Class II and Class IV bikeways

Source: Fehr & Peers, 2016.

Updates to This Plan

As noted in Chapter 5, Planned Networks, many years will be required to implement the planned bicycle and pedestrian networks and supporting facilities. As development and land use evolves within Fresno, this plan will need to evolve as well. The City will update the existing network maps as new facilities are added and publish them on the City website. The City will also update this plan approximately every five years to reflect changing conditions and needs. These updates will also incorporate plans that are under development, as noted in Chapter 3, Goals & Policies, as well as future planning efforts.

APPENDIX A: PLAN CONFORMANCE WITH ATP GUIDELINES

The 2017 Active Transportation Program Guidelines list 17 key elements for active transportation plans. These elements and where they are addressed within this plan are listed in Table 7. The 2016 Fresno Active Transportation Plan satisfies these requirements.

Table 13: 2017 ATP Guidelines Addressed in This Plan

Item	Requirement	Page
1	The estimated number of existing bicycle trips and pedestrian trips in the plan area, both in absolute numbers and as a percentage of all trips, and the estimated increase in the number of bicycle trips and pedestrian trips resulting from implementation of the plan.	Existing: 81 Future: 157
2	The number and location of collisions, serious injuries, and fatalities suffered by bicyclists and pedestrians in the plan area, both in absolute numbers and as a percentage of all collisions and injuries, and a goal for collision, serious injury, and fatality reduction after implementation of the plan.	Existing: 85 Future: 157
3	A map and description of existing and proposed land use and settlement patterns which must include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings, major employment centers, and other destinations.	61
4	A map and description of existing and proposed bicycle transportation facilities, including a description of bicycle facilities that serve public and private schools and, if appropriate, a description of how the five Es (Education, Encouragement, Enforcement, Engineering, and Evaluation) will be used to increase rates of bicycling to school.	Existing: 43 Proposed: 101 5 E's: Appendix G
5	A map and description of existing and proposed end-of-trip bicycle parking facilities.	Existing: 89 Proposed:155

6	A description of existing and proposed policies related to bicycle parking in public locations, private parking garages and parking lots and in new commercial and residential developments.	155
7	A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These must include, but not be limited to, bicycle parking facilities at transit stops, rail and transit terminals, ferry docks and landings, park and ride lots, and provisions for transporting bicyclists and bicycles on transit or rail vehicles or ferry vessels.	Existing: 89 Proposed: 155
8	A map and description of existing and proposed pedestrian facilities, including those at major transit hubs and those that serve public and private schools and, if appropriate, a description of how the five Es (Education, Encouragement, Enforcement, Engineering, and Evaluation) will be used to increase rates of walking to school. Major transit hubs must include, but are not limited to, rail and transit terminals, and ferry docks and landings.	Existing: 97 Proposed: 124 5 Es: Appendix G
9	A description of proposed signage providing wayfinding along bicycle and pedestrian networks to designated destinations.	29
10	A description of the policies and procedures for maintaining existing and proposed bicycle and pedestrian facilities, including, but not limited to, the maintenance of smooth pavement, ADA level surfaces, freedom from encroaching vegetation, maintenance of traffic control devices including striping and other pavement markings, and lighting.	97
11	A description of bicycle and pedestrian safety, education, and encouragement programs conducted in the area included within the plan, efforts by the law enforcement agency having primary traffic law enforcement responsibility in the area to enforce provisions of the law impacting bicycle and pedestrian safety, and the resulting effect on collisions involving bicyclists and pedestrians.	97
12	A description of the extent of community involvement in development of the plan, including disadvantaged and underserved communities.	7

13	A description of how the active transportation plan has been coordinated with neighboring jurisdictions, including school districts within the plan area, and is consistent with other local or regional transportation, air quality, or energy conservation plans, including, but not limited to, general plans and a Sustainable Community Strategy in a Regional Transportation Plan.	31
14	A description of the projects and programs proposed in the plan and a listing of their priorities for implementation, including the methodology for project prioritization and a proposed timeline for implementation.	101
15	A description of past expenditures for bicycle and pedestrian facilities and programs, and future financial needs for projects and programs that improve safety and convenience for bicyclists and pedestrians in the plan area. Include anticipated revenue sources and potential grant funding for bicycle and pedestrian uses.	Past: 93 Anticipated: 160
16	A description of steps necessary to implement the plan and the reporting process that will be used to keep the adopting agency and community informed of the progress being made in implementing the plan.	Implementation: 160 Reporting: 166
17	A resolution showing adoption of the plan by the city, county or district. If the active transportation plan was prepared by a county transportation commission, regional transportation planning agency, MPO, school district or transit district, the plan should indicate the support via resolution of the city(s) or county(s) in which the proposed facilities would be located.	Appendix L

[This page intentionally left blank]

APPENDIX B: PUBLIC PARTICIPATION

Public input to this plan was gathered through four primary methods, as described in the plan Introduction:

- Meetings with stakeholders representing key community constituencies
- Interactive workshops for the general public
- An online interactive crowdsource map tool
- Stakeholder-led grassroots community meetings

This appendix provides additional details of the inputs received via each of those mechanisms.

Stakeholder Advisory Committee Meetings

The City formed a stakeholder advisory committee with representatives from key community constituencies to provide direction for this plan and feedback throughout the planning process. Member organizations included:

- Caltrans
- Central Unified School District
- Centro La Familia
- City of Fresno, Development and Resource Management
- City of Fresno, PARCS
- City of Fresno Police Department
- City of Fresno Bicycle/Pedestrian Advisory Committee
- City of Fresno Disability Advisory Commission
- Clovis Unified School District
- Community Regional Medical Center
- Cultiva La Salud
- Downtown Fresno Foundation
- Fresno Area Express
- Fresno Center for New Americans

- Fresno Cycling Club
- Fresno Council of Governments
- Fresno County Department of Public Health
- Fresno Irrigation District
- Fresno Metro Ministry
- Fresno State University
- Fresno Unified School District
- Peds and Pedals
- San Joaquin Valley Air Pollution Control District
- Southeast Fresno Community Economic Development Association
- The Maddy Institute
- Tree Fresno
- United Learning Foundation
- West Fresno Family Resource Center

Three committee meetings were held:

- April 19, 2016 – developed goals for this plan that were used throughout the plan development
- July 19, 2016 – received feedback on the draft networks and priorities that was incorporated into the networks and plan
- October 7, 2016 – received feedback on the draft plan that was incorporated into the final plan

Summaries of each of these meetings are provided at the end of this appendix.

Public Workshops

Two sets of public workshops were held:

- May 18 and 19, 2016 – obtained input on desires for new facilities and feedback on potential new biking and walking facility treatments that was incorporated into the networks and plan
- August 11 and 18, 2016 – received feedback on proposed biking and walking networks and priorities that was incorporated into the networks

Summaries of these workshops are provided at the end of this appendix.

Online Crowdsourced Interactive Map

An online crowdsourced interactive map was made available to the public prior to development of the draft bicycle and pedestrian networks. A total of 399 comments were received and reviewed in development of the draft networks and plan. A screen shot of the mapped comments is shown in Figure 59. Each of the colors represents a different type of comment.

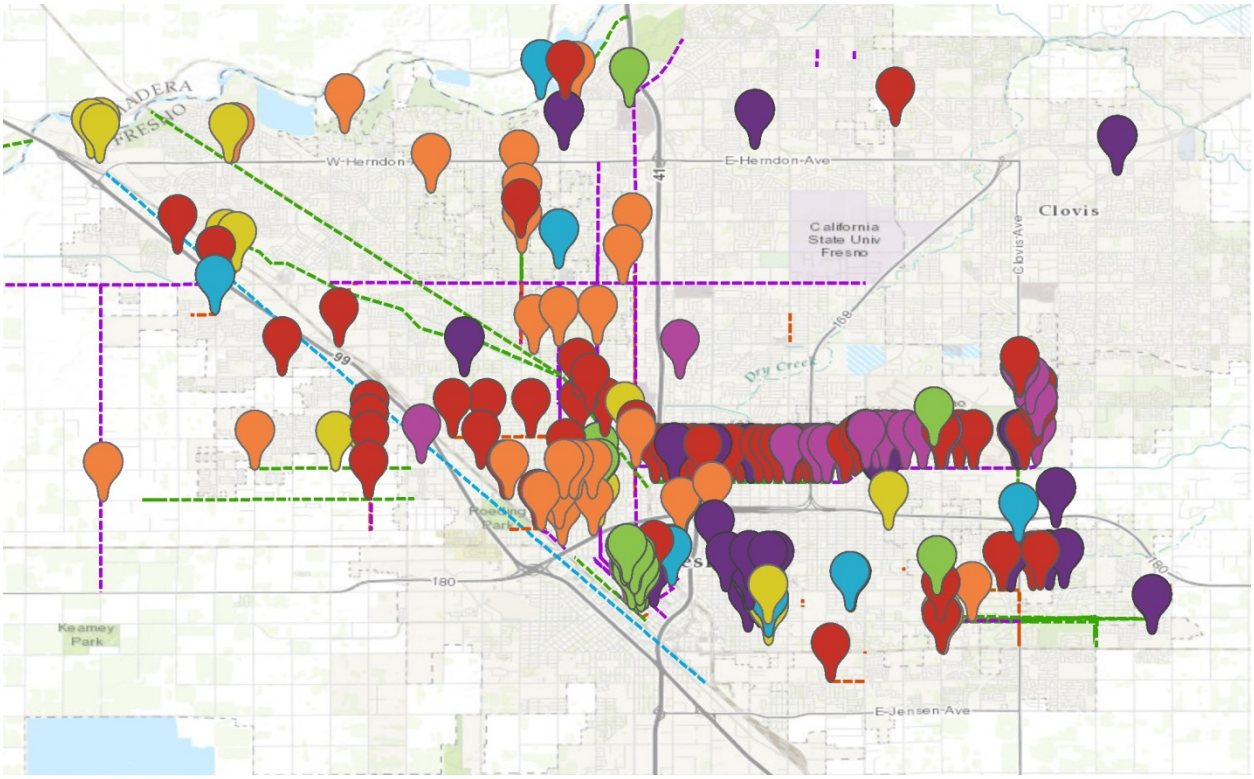


Figure 59: Screenshot of Online Crowdsourced Interactive Map Comments

Comments were received in each of the categories listed in Table 14:

Table 14: Summary of Online Crowdsourced Map Comments

Comment Type	Number of Comments	Percent of Comments
Made Safer to Walk	91	23%
Add Crosswalk	74	19%
Bike Lanes	34	9%
Facility Maintenance	34	9%
Add Bike Parking	32	8%
Make Safer to Bike	32	8%
Sidewalks	27	7%
Lighting	26	7%
Trails	22	6%
Idea	14	4%
Add Your Own Idea	13	3%
Total	**399**	**100%**

Source: Fehr & Peers, 2016

Meeting and Workshop Summaries

Summaries of each of the stakeholder advisory committee meetings and public workshops are provided in the following pages.

City of Fresno
Active Transportation Plan
Stakeholder Advisory Committee Meeting
Meeting Notes

Thursday, April 19, 2016
4:00 – 6:00 PM
Fresno City Hall
2600 Fresno Street, Room 4017
Fresno, CA 93721

Attendees:

Lee Ayres, Tree Fresno
Aaron Blair, Downtown Fresno Foundation
Sophia DeWitt, Fresno Metro Ministry
Chelsea Gonzales, Fresno Council of Governments
Genoveva Islas, Cultiva La Salud
Mark Keppler, The Maddy Institute
Jose Leon-Barraza, Southeast Fresno Community Economic Development Association
John Liu, Caltrans
Jeff Long, Fresno Area Express
Tammy McKinney, Central Unified School District
Anthony Molina, City of Fresno Bicycle/Pedestrian Action Committee
Hilton Osborne, Fresno Cycling Club
Sophia Pagoulatos, City of Fresno Development and Resource Management
Nicholas Paladino, Fresno Cycling Club
David Pomaville, Fresno County Department of Public Health
Tiffany Potter, United Learning Foundation and City of Fresno Disability Advisory Commission
Joe Prado, Fresno County Department of Public Health
Wilma Quan-Schecter, City of Fresno City Manager's Office
Susan Smith, City of Fresno Bicycle/Pedestrian Advisory Committee
Eliana Troncale, Community Regional Medical Center
Mark Van Wyhe, City of Fresno Police Department
Lue Yang, Fresno Center for New Americans
Michelle Zumwalt, City of Fresno Development and Resource Management Department
Project Staff:
Randy Bell, City of Fresno Public Works Department, ATP Project Manager
Jill Gormley, City of Fresno Public Works Department
Shelby MacNab, City of Fresno Public Works Department
Scott Sehm, City of Fresno Public Works Department
Rod Brown, Fehr & Peers, ATP Planner
Rob Hananouchi, Fehr & Peers, ATP Consultant Team Project Manager
Hector Guerra, VRPA Technologies, Inc., Outreach Support
Georgiena Vivian, VRPA Technologies, Inc., Outreach Coordinator

I. Project Introduction

Rob Hananouchi, Fehr & Peers, welcomed everyone and thanked them for attending the first Stakeholder Advisory Committee (SAC) meeting. He then asked everyone to introduce themselves. A list of those in attendance is provided above alphabetically by name and the meeting sign-in sheet is attached.

Wilma Quan-Schecter, City of Fresno Deputy City Manager, explained that the Mayor is requesting development of a comprehensive Active Transportation Plan (ATP) that will be completed and adopted by the end of the calendar year. Ms. Quan-Schecter added that the goal of the ATP is to implement many of the General Plan goals related to non-motorized transportation systems, as well as other initiatives such as Fresno Downtown Plans, the Fresno Bus Rapid Transit (BRT) system, the Ventura-Kings Canyon Corridor Revitalization Project, and others.

City of Fresno
Active Transportation Plan
Stakeholder Advisory Committee Meeting
Meeting Notes

Thursday, April 19, 2016
4:00 – 6:00 PM
Fresno City Hall
2600 Fresno Street, Room 4017
Fresno, CA 93721

II. Meeting Overview & Objectives

Mr. Hananouchi referred to the information packet provided to attendees, and briefly described the items included in the packet. He then provided a brief overview of the meeting agenda.

Georgiena Vivian, VRPA Technologies, Inc., conducted a PowerPoint polling exercise, asking attendees "Which of the following subgroups BEST describes the agency you represent?" Ms. Vivian explained that the purpose of the exercise was to get a better sense of which organization attendees were represented by various subgroups (public agency, health, education, etc.) at the meeting and to more clearly understand results of other polling to be conducted during the meeting considering the industry or subgroup represented. See attachments for polling results.

Mr. Hananouchi then listed the following meeting objectives that the Active Transportation Plan (ATP) project team was hoping to accomplish by the conclusion of the meeting:

- Introduce the ATP project
- Establish the role of the Stakeholder Advisory Committee
- Receive input on project goals and enhanced treatment for pedestrians and bicyclists

III. Project Background

Rod Brown, Fehr & Peers, explained that active transportation is non-motorized transportation, which is mostly focused on walking and bicycling but may also include wheelchairs, walkers, scooters, skateboards, or other forms of transportation that uses the human body and not a power source. Mr. Brown stated that the ATP will build upon the existing Bicycle Master Plan, while also including the pedestrian aspects of active transportation.

Mr. Hananouchi then reviewed the process for developing an ATP, which included:

- Gathering Existing Data and Conduct Initial Outreach
- Develop Draft Plan
- Feedback on Draft Plan
- Final Plan for City Council Adoption

Mr. Hananouchi further explained that during the process of developing the ATP, the SAC and the public at large will have the opportunity to provide input and recommendations through stakeholder meetings, public workshops, and on the ATP project website.

City of Fresno
Active Transportation Plan
Stakeholder Advisory Committee Meeting
Meeting Notes

Thursday, April 19, 2016
4:00 – 6:00 PM
Fresno City Hall
2600 Fresno Street, Room 4017
Fresno, CA 93721

IV. Stakeholder Advisory Committee Roles and Responsibilities

Mr. Hananouchi stated that the ATP team would like SAC members to advocate for their organizational needs, while at the same time thinking of the City's needs as a whole. He explained that there would be multiple opportunities for SAC members to provide direction and feedback during development of the ATP. Mr. Hananouchi stated that that ATP project team wants the community to be engaged throughout the plan development process and to be able to provide as much input as possible at public workshops. He also stated that SAC members are encouraged to assist in informing their constituents of opportunities to participate in the ATP development process.

V. Project Goals Exercise

Mr. Hananouchi shared initial project goals for the ATP developed by the project team. The initial project goals included:

- Improve Safety
- Equitable Implementation of Facilities
- Increase Walking and Biking Trips
- Fill in Key Gaps
- Create a "Model Area" for Active Transportation

Ms. Vivian asked for participation from SAC members to identify additional project goals/objectives for the ATP. Many of the goals/objectives mentioned included:

- Improve health
- Improve air quality and reduce greenhouse gas emissions
- Provide economical choices for travel
- Increase multimodal access to businesses and workplaces
- Identify ways that make Fresno competitive for grant funding
- Reduce Vehicle Miles Traveled (VMT)
- Identify locations that do not have infrastructure for those who are walking or biking
- Reduce injuries and fatalities in locations that have high levels of accidents
- Provide educational opportunities for safe walking and biking
- Incorporate League of American Bicyclist 5 E's (Engineering, Education, Encouragement, Enforcement, and Evaluation & Planning)
- Improve trail access to all part of the City
- Invest in locations that have been neglected
- Create a system of greenways
- Provide bicycle parking and support facilities
- Increase connectivity between transportation modes
- Reduce lane miles for automobiles
- Make our City more accessible for those in mobility devices

- Emphasize user friendliness for pedestrians and bicyclists

Ms. Vivian then conducted a 2nd PowerPoint polling exercise, which asked attendees to rate the revised project goals developed by the SAC. Attendees were asked to prioritize the goals by most important, second most important, and third most important. See attachments for polling results.

VI. Community Engagement Opportunities

Mr. Hananouchi described several ways SAC members and their constituents can be involved during the ATP development process including through the:

- ATP website, which is located at www.fresno.gov/ATP and, which contains additional information about the project, initial resources, and SAC meeting materials
- Online map survey tool, which allows viewers to make comments on the active transportation network in the City of Fresno
- Attendance at open house workshops, which will be taking place during the 2nd week of May and later in the ATP development process

Mr. Hananouchi discussed the potential location of the first set of workshops in May. He indicated that the Team was considering a workshop site in northwest Fresno and another site in southeast Fresno. Following discussion, it was suggested that the project team consider moving the northwest workshop site to a more central location consistent with collision mapping results.

VII. Enhanced Bicycle & Pedestrian Treatment Exercise

Mr. Brown provided a review of bicycle and pedestrian treatments. The treatments reviewed included:

- Pedestrian Bulb-outs
- Pedestrian Refuge Islands
- Pedestrian Hybrid Beacon
- Rectangular Rapid Flashing Beacon
- Bike Boulevard
- Bike Box
- Buffered Bike Lanes
- Cycletracks or Protected Bike Lanes
- Protected Intersections

Ms. Vivian then conducted a 3rd PowerPoint polling exercise, which asked attendees to rate how appropriate each of the treatments would be in the City of Fresno. See attachments for polling results.

City of Fresno
Active Transportation Plan
Stakeholder Advisory Committee Meeting
Meeting Notes

Thursday, April 19, 2016
4:00 – 6:00 PM
Fresno City Hall
2600 Fresno Street, Room 4017
Fresno, CA 93721

VIII. Feedback on 2010 Bicycle Master Plan

Mr. Hananouchi stated that prior to the meeting SAC members should have received an email with a link to the City of Fresno's 2010 Bicycle Master Plan. The ATP project team highly encourages email responses from SAC members with thoughts on what has worked well with the plan and what can be improved.

IX. Next Steps

Two open house workshops will be taking place in the month of May and further information about these workshops will be emailed to SAC members. SAC members are encouraged to contact the ATP project team at r.brown@fehrandpeers.com with any additional thoughts or comments regarding the ATP development process thus far. The next SAC meeting will take place in July and this meeting will allow SAC members to review the recommended networks.

[This page intentionally left blank]

City of Fresno Active Transportation Plan
Stakeholder Advisory Committee Meeting
Polling Results

Thursday, April 19, 2016
4:00 – 6:00 PM
Fresno City Hall
2600 Fresno Street, Room 4017
Fresno, CA 93721

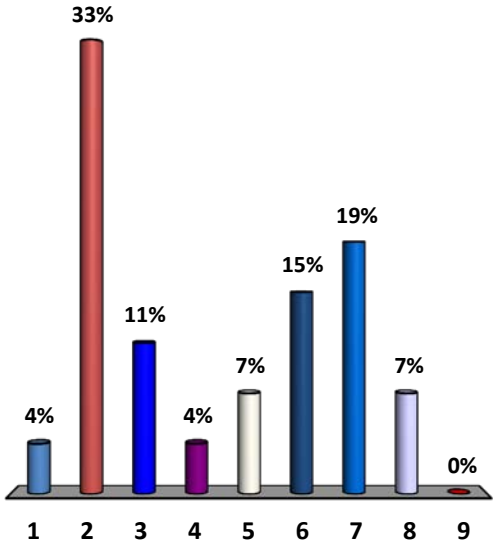
Introduction

The City of Fresno Stakeholder Advisory Committee (SAC) meeting was held on April 19, 2016 between 4:00 and 6:00 PM at Fresno City Hall, Room 4017 located at 2600 Fresno Street. During the session Project Manager Rob Hananouchi and Project Outreach Director Georgiena Vivian guided participants through a series of questions using a PowerPoint slide format related to the City of Fresno's Active Transportation Plan (ATP) efforts and process. Participants were able to provide input on the multiple choice polling questions by utilizing a technology that provided each participant with a clicker with buttons, which represented each of the answer choices. Responses were immediately recorded and displayed on the PowerPoint slides so participants and the Project Team could observe the results, which helped facilitate further discussion on each topic.

Polling Questions

Getting Started

0. Which of the following subgroups BEST describes the agency you represent?
    1. Public Safety Agency
    2. Other Local/Regional or State Public Agency Staff
    3. Community Based or Faith Based Organization
    4. Environmental Agency/Group
    5. Business Community/Development Industry
    6. Health Organization
    7. Bike/Pedestrian Advocacy Group
    8. Educational Institution
    9. Other

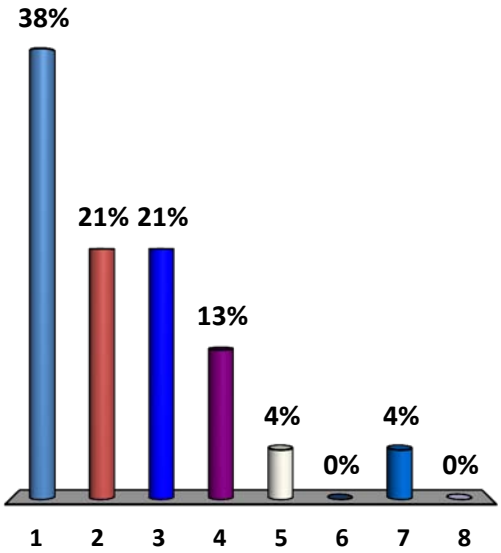


City of Fresno Active Transportation Plan
Stakeholder Advisory Committee Meeting
Polling Results

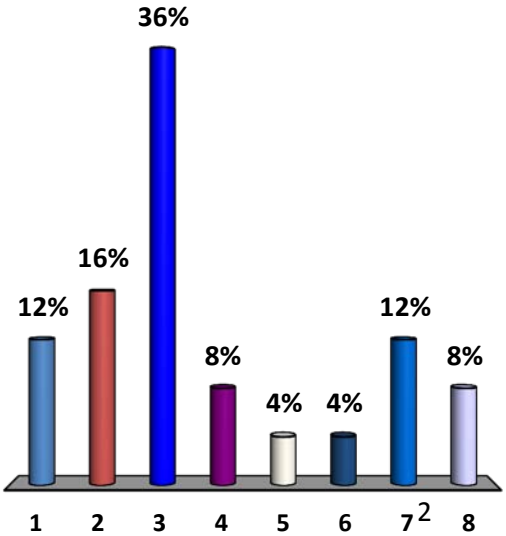
Thursday, April 19, 2016
4:00 – 6:00 PM
Fresno City Hall
2600 Fresno Street, Room 4017
Fresno, CA 93721

Rate the Proposed Goals

1. What is the most important goal?
    1. Improve Safety and Perceived Safety Equitably
    2. Increase Access to Facilities so that it's Geographically Equitable
    3. Increase Walking and Biking Trips, Reduce VMT, & Improve Air Quality (Create User Friendly Attractive Facilities)
    4. Fill in Key Gaps
    5. Create a "Model Area" for Active Transportation
    6. Improve Public Health
    7. Make Fresno Competitive for Funding
    8. Improve Public Awareness & Education



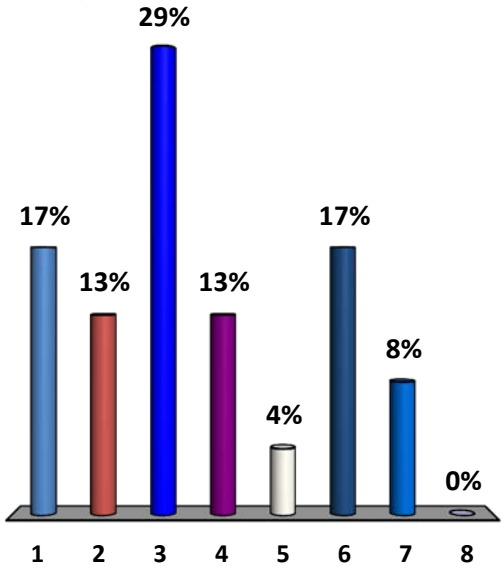
2. What is the second important goal?
    1. Improve Safety and Perceived Safety Equitably
    2. Increase Access to Facilities so that it's Geographically Equitable
    3. Increase Walking and Biking Trips, Reduce VMT, & Improve Air Quality (Create User Friendly Attractive Facilities)
    4. Fill in Key Gaps
    5. Create a "Model Area" for Active Transportation
    6. Improve Public Health
    7. Make Fresno Competitive for Funding
    8. Improve Public Awareness & Education



City of Fresno Active Transportation Plan
Stakeholder Advisory Committee Meeting
Polling Results

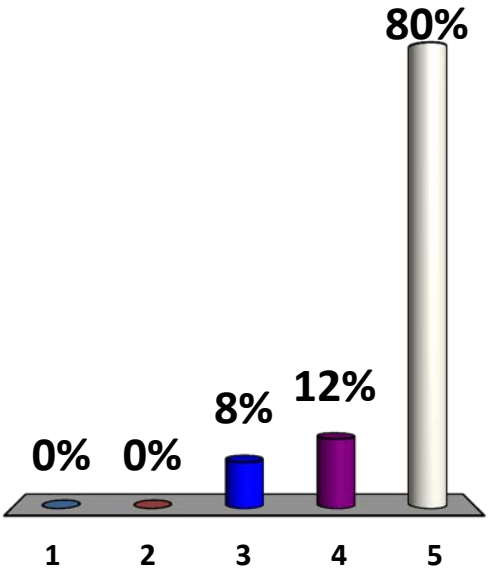
Thursday, April 19, 2016
4:00 – 6:00 PM
Fresno City Hall
2600 Fresno Street, Room 4017
Fresno, CA 93721

3. What is the third important goal?
    1. Improve Safety and Perceived Safety Equitably
    2. Increase Access to Facilities so that it's Geographically Equitable
    3. Increase Walking and Biking Trips, Reduce VMT, & Improve Air Quality (Create User Friendly Attractive Facilities)
    4. Fill in Key Gaps
    5. Create a "Model Area" for Active Transportation
    6. Improve Public Health
    7. Make Fresno Competitive for Funding
    8. Improve Public Awareness & Education



Is this treatment appropriate for Fresno?
Rate from 1 (not appropriate) to 5 (very appropriate)

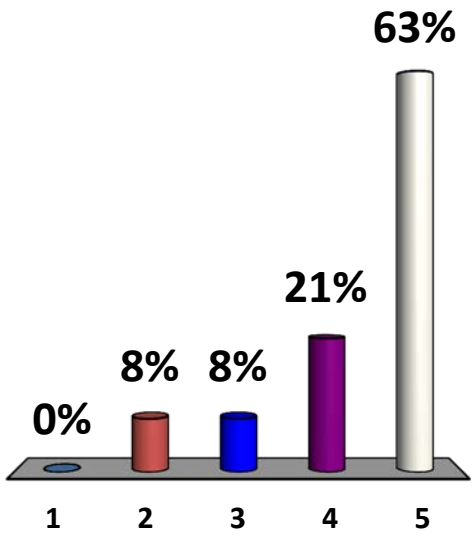
4. Pedestrian Bulb-Outs
    1. Not Appropriate
    2. 2
    3. 3
    4. 4
    5. Very Appropriate



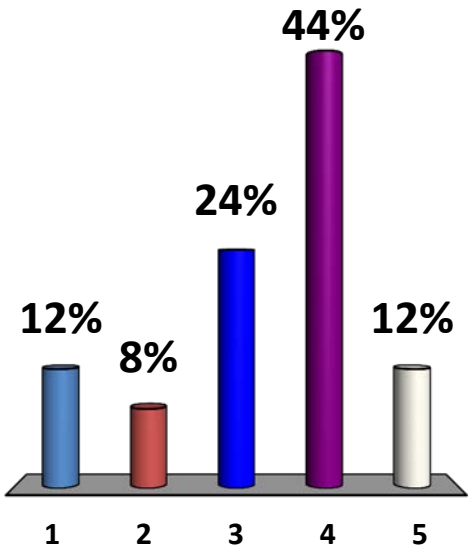
City of Fresno Active Transportation Plan
Stakeholder Advisory Committee Meeting
Polling Results

Thursday, April 19, 2016
4:00 – 6:00 PM
Fresno City Hall
2600 Fresno Street, Room 4017
Fresno, CA 93721

5. Pedestrian Refuge Islands
    1. Not Appropriate
    2. 2
    3. 3
    4. 4
    5. Very Appropriate



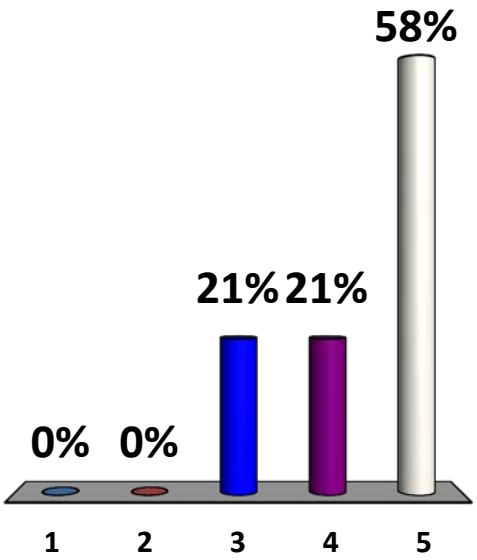
6. Pedestrian Hybrid Beacon
    1. Not Appropriate
    2. 2
    3. 3
    4. 4
    5. Very Appropriate



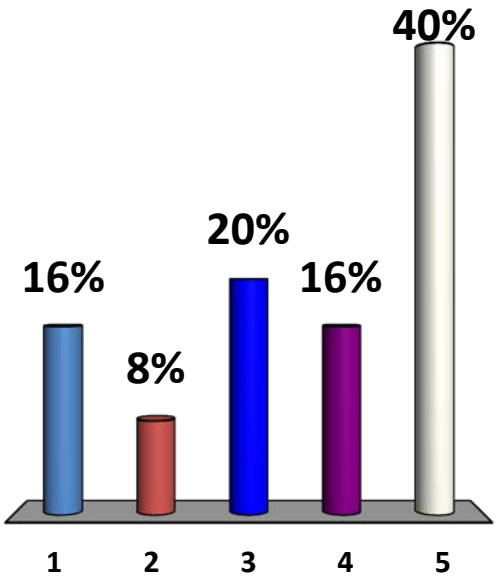
City of Fresno Active Transportation Plan
Stakeholder Advisory Committee Meeting
Polling Results

Thursday, April 19, 2016
4:00 – 6:00 PM
Fresno City Hall
2600 Fresno Street, Room 4017
Fresno, CA 93721

7. Rectangular Rapid Flashing Beacon
    1. Not Appropriate
    2. 2
    3. 3
    4. 4
    5. Very Appropriate



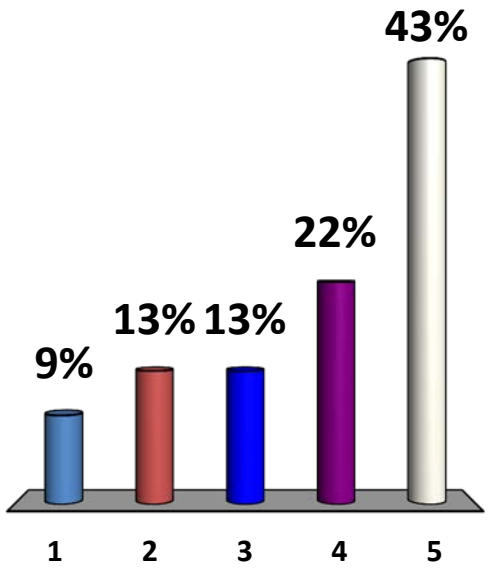
8. Bike Boulevard
    1. Not Appropriate
    2. 2
    3. 3
    4. 4
    5. Very Appropriate



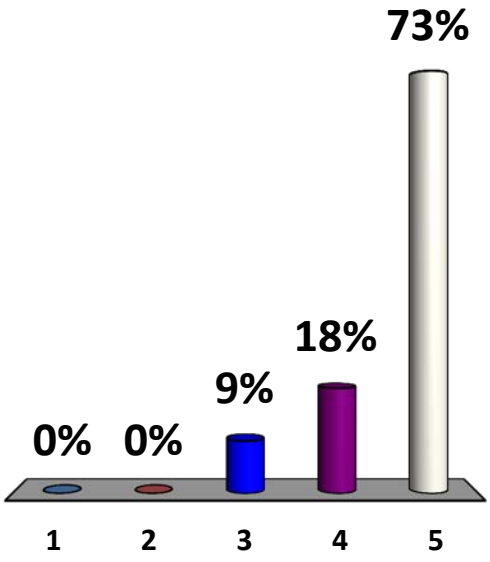
City of Fresno Active Transportation Plan
Stakeholder Advisory Committee Meeting
Polling Results

Thursday, April 19, 2016
4:00 – 6:00 PM
Fresno City Hall
2600 Fresno Street, Room 4017
Fresno, CA 93721

9. Bike Box
    1. Not Appropriate
    2. 2
    3. 3
    4. 4
    5. Very Appropriate



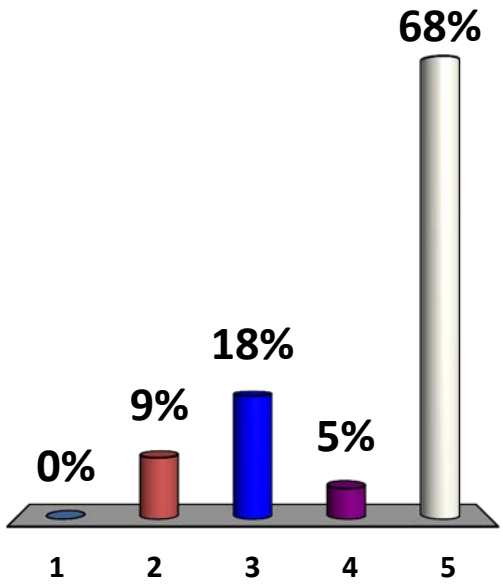
10. Buffered Bike Lane
    1. Not Appropriate
    2. 2
    3. 3
    4. 4
    5. Very Appropriate



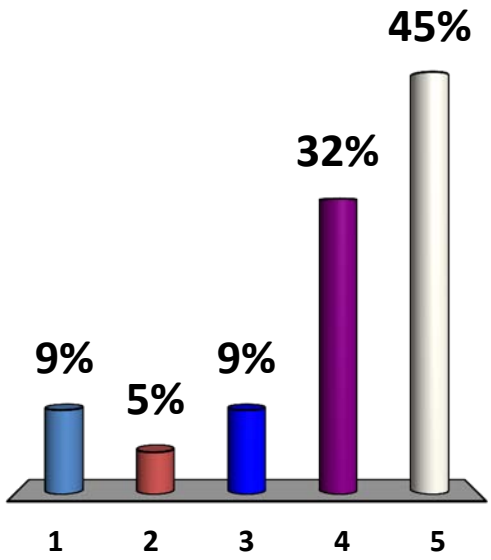
City of Fresno Active Transportation Plan
Stakeholder Advisory Committee Meeting
Polling Results

Thursday, April 19, 2016
4:00 – 6:00 PM
Fresno City Hall
2600 Fresno Street, Room 4017
Fresno, CA 93721

11. Cycletracks or Protected Bike Lanes
    1. Not Appropriate
    2. 2
    3. 3
    4. 4
    5. Very Appropriate



12. Protected Intersections
    1. Not Appropriate
    2. 2
    3. 3
    4. 4
    5. Very Appropriate



[This page intentionally left blank]

Stakeholder Advisory Committee Meeting #2

Meeting Synopsis

Tuesday, July 19, 2016
4:00 – 6:00 PM
Fresno City Hall
2600 Fresno Street, Room 4017
Fresno, CA 93721

Attendees:

Lee Ayres, Tree Fresno
Sophia DeWitt, Fresno Metro Ministry
Chelsea Gonzales, Fresno Council of Governments
Genoveva Islas, Cultiva La Salud
Jose Leon-Barraza, Southeast Fresno Community Economic Development Association
John Liu, Caltrans
Gabriel Lozano, Southeast Fresno Community Economic Development Association
Jeff Long, Fresno Area Express
Anthony Molina, City of Fresno Bicycle/Pedestrian Action Committee
Nicholas Paladino, Fresno Cycling Club
Tiffany Potter, United Learning Foundation and City of Fresno Disability Advisory Commission
Eliana Troncale, Community Regional Medical Center
Michelle Zumwalt, City of Fresno Development and Resource Management Department

Project Staff:

Randy Bell, City of Fresno Public Works Department, ATP Project Manager
Jill Gormley, City of Fresno Public Works Department
Shelby MacNab, City of Fresno Public Works Department
Scott Sehm, City of Fresno Public Works Department
Rod Brown, Fehr & Peers, ATP Planner
Adrian Engel, Fehr & Peers, ATP Technical Advisor
Rob Hananouchi, Fehr & Peers, ATP Consultant Team Project Manager
Hector Guerra, VRPA Technologies, Inc., Outreach Support

I. Introductions

Rob Hananouchi, Fehr & Peers, welcomed everyone and thanked them for attending the second Stakeholder Advisory Committee (SAC) meeting. He then asked the project team and SAC members to introduce themselves. A list of those in attendance is provided above alphabetically by name and the meeting sign-in sheet is attached. Mr. Hananouchi then provided a brief review of the meeting agenda.

II. Meeting Overview & Objectives

Mr. Hananouchi listed the following meeting objectives that the Active Transportation Plan (ATP) project team would try to accomplish by the conclusion of the meeting:

- ✓ Inform the SAC of progress made since the last SAC meeting in April
- ✓ Solicit input from the SAC on proposed networks and priorities for bicyclist and pedestrians

III. Project Status & Review of Project Goals

Mr. Hananouchi reviewed the process for developing the ATP, which included:

- ✓ Gathering Existing Data and Conducting Initial Outreach
- ✓ Develop Draft Plan
- ✓ Feedback on Draft Plan
- ✓ Final Plan for City Council Adoption

Mr. Hananouchi explained that the project team has developed the recommended networks and is seeking input from the SAC on the recommendations. To assist the SAC with their feedback to the project

team, Mr. Hananouchi briefly reviewed project goals previously identified by the SAC and the team, which included:

- ✓ Equitably improve safety and perceived safety of walking and bicycling
- ✓ Increase walking and bicycling trips by creating user-friendly facilities
- ✓ Improve geographic equity of access to walking and bicycling facilities
- ✓ Fill key gaps in walking & bicycling network

IV. Community Workshop Report Back

Rod Brown, Fehr & Peers, provided a review of comments received during the first set of public workshops, which included:

- ✓ Add facilities to major streets/complete planned network
- ✓ Add protective bike lanes
- ✓ Improve lighting
- ✓ Address disparities between North & South Fresno
- ✓ Maintenance issues
- ✓ Concerns with stray dogs
- ✓ Improve narrow sidewalks
- ✓ Make it safer to cross streets, especially near schools
- ✓ Add bicycle parking
- ✓ Add landscaping

V. Process to Develop Draft Networks

Mr. Brown discussed the project team's process for developing the proposed networks, which included:

- ✓ Reflect public input received through workshops and the online map survey
- ✓ Review existing bicycle and pedestrian networks
- ✓ Consider community characteristics, including:
  - Access to transit, schools, parks, and other destinations
  - Community demographics such as auto ownership, income, employment and population density

Mr. Brown added that after developing the proposed networks, the project team made sure to verify that the proposed networks fulfill the goals identified by the community and project team.

VI. Bicycle Planning Overview

Adrian Engel, Fehr & Peers, provided an overview of bicycle planning. Mr. Engel stated that over the last ten (10) years, the methodology for planning bicycle networks has shifted, with more focus placed on the people riding bicycles, and not necessarily the bicycle facilities themselves. Mr. Engel explained that current standard practice is to think about the bicycle rider in four groups:

- ✓ ***Strong and Fearless*** - those willing to ride just about anywhere, regardless of conditions (7% of population)
- ✓ ***Enthused and Confident*** - those who prefer to use bicycle lanes and bicycle friendly streets (5% of population)
- ✓ ***Interested but Concerned*** – those would who would like to ride more, but safety concerns cause them to be very selective in their riding (51% of population)
- ✓ ***No way No How*** - those who don't ride because of an inability, fear for safety, or lack of interest (37% of population)

Mr. Engel explained that in order to increase bicycle ridership, it is important to focus on providing a bicycle network that accommodates the *Interested but Concerned* riders. One metric to evaluate what types of bicycle facilities will attract bicycle rider groups is Level of Traffic Stress (LTS), a measurement

tool that evaluates how stressful the roadway feels to the rider. LTS scores are categorized as the following:

- ✓ LTS 4 – Only the "strong and fearless" will ride on these high stress streets with high speed limits, multiple travel lanes, limited or non-existent bikeways, and long intersection crossing distances
- ✓ LTS 3 – Bike riders who are "enthused and confident" but who still prefer having their own dedicated space for riding will feel safe while traveling on streets of this nature
- ✓ LTS 2 – The mainstream "interested but concerned," adult population will feel safe riding on these streets
- ✓ LTS 1 – Most children can feel safe riding on these streets

Mr. Engel then described the different types of bikeways. He presented them in order of least separation with vehicles to most separation of vehicles, as follows:

- ✓ Class III Bike Routes
  - Designated route for bicyclists
  - Share travel lanes with automobiles
  - Fill in gaps in network where other bicycle lanes or paths may not be feasible or appropriate
  - Provide connectivity to other classes of bikeways

- ✓ Class II Bike Lanes
  - Dedicated on-street space for bicyclists
  - Denoted by white stripe, markings, and signage

- ✓ Class II Buffered Bike Lanes
  - Similar to Class II Bike Lanes with two white stripes to provide additional separation between vehicles and bicycles
  - Can also provide additional space between bicycle lanes and parked cars

- ✓ Class IV Separated Bikeways
  - Fully protected on-street space for bicyclist; protected via raised/vertical element:
    - Parked cars
    - Planter boxes
    - Raised curbs
    - Flexible posts

- ✓ Class I Bike Paths
  - Off-street pathways that allows bicyclists and pedestrians, no automobiles

VII. Recommended Bicycle Network Exercises

Mr. Hananouchi explained that the purpose for providing an overview of the bicycle planning process was to discuss which sort of facilities the study team is looking to implement and which portions of the population are being targeted. When developing the bicycle network, the study set out to:

- ✓ Identify gaps in the existing network
- ✓ Update bike network to reflect:
  - Revised build out network
  - Priority bikeways that better connect the city and existing facilities with low-stress (i.e., LTS 1 and 2) bicycle facilities

Mr. Hananouchi explained that during the meeting, the SAC would be examining two types of proposed networks, which included:

- ✓ Priority Network
  - Key linkages or improvements
  - Focus for investment in the near-term (5-10 years)
  - Focus on connecting city and key destinations
  - Create a backbone network of lower-stress facilities that attract more bicycle riders

- ✓ Full Build Out
  - Complete network
  - Long-term (30+ year) vision
  - Highly connected network that will take years to fully implement
    - Class I bike paths along canals, waterways, rail
    - Class II bike lanes on most arterial & collector streets (half-mile grid)
    - Class III bike routes to fill-in gaps; parallel to high speed, high traffic corridors

As part of the Bicycle Network Exercises, Mr. Hananouchi requested that the SAC divide into two groups to review maps, which outlined the proposed bicycle network. Mr. Hananouchi stated that the exercise would discuss the City of Fresno in four different geographical areas: Southeast, Central, North, and West. The purpose of the exercise was to review the proposed bicycle network and received feedback from the SAC. Comments received from SAC members during this exercise included:

- ✓ Southeast Fresno
  - Prioritize the network near the Fancher Creek area
  - Ensure safety around schools in order to assist children who are walking and biking to school
  - At California Ave. and Peach Ave. there is a 49 acres area that is designated to be a park. This area should have pedestrian and bicycle trails to and from the park
  - Calwa Park should be connected to the trails

- ✓ Central Fresno
  - Focus on Dakota Ave. because of the connections to the canals
  - Would it be possible to access Leaky Acres?
  - Look at the Maple Ave. alignment, with a focus on bring people under SR 168 and towards Fresno State

- ✓ North Fresno
  - Provide direct access to Saint Agnes Medical Center and the surrounding medical offices
  - Connection along Del Mar Ave. as an alternative to the San Joaquin River
  - Connection to the West side as an alternative to Veteran's Blvd.

- ✓ West Fresno
  - Focus on connections to the Fresno Chafee Zoo/Roeding Park
  - On California Ave., having bicycle lanes built as a connection to the schools
  - Have Class II bicycle lanes on Kearney Blvd.
  - Extend the trail connection from the County trail, west of the city, to Marks Ave. and beyond

VIII. Recommended Pedestrian Network Exercises

Mr. Hananouchi explained that during development of the pedestrian network, the study team completed the following:

- ✓ Identified sidewalk gaps and pedestrian needs based on input from public workshops and the online map survey
- ✓ Prioritized areas for investment in pedestrian infrastructure improvements
- ✓ Identified neighborhoods with high priority sidewalk gaps for investment

Mr. Hananouchi then led a group discussion on sidewalk gaps in the City of Fresno. The SAC was referred to the 11x17 map that they had received in their meeting information packets. Mr. Hananouchi explained that this map displayed sidewalk gaps, recommended areas for pedestrian infrastructure investment, and additional investment areas for consideration. The SAC was asked to review the map and let the study team know which areas in Fresno are in need of sidewalks. Comments received from SAC members during this exercise included:

- ✓ Refer to the Ventura-Kings Canyon Corridor Revitalization Project for identified areas that do not have sidewalks
- ✓ Encourage City and County cooperation when addressing sidewalk gaps
- ✓ Blackstone corridor from McKinley Ave. down to Divisadero St. should be considered a priority
- ✓ Explore adding sidewalks along Bus Rapid Transit (BRT) routes
- ✓ Expand the area represented by Box 17, so the territory goes beyond the freeway
- ✓ Clearly display schools on the map
- ✓ Some sidewalks should not be counted as existing sidewalks due to their poor condition

Mr. Hananouchi then led a group discussion on the quality of pedestrian infrastructure in the City of Fresno. SAC members were referred to the Pedestrian Focus Areas & Safety Improvement Corridors maps provided by the study team. Mr. Hananouchi explained that the areas highlighted in the map were identified areas where better pedestrian infrastructure might be necessary to improve safety, or improve and support walking. Comments received from SAC members during this exercise included:

- ✓ Along Blackstone, Kings Canyon, Ventura, it would be helpful if sidewalks were wider, which would make people feel safer
- ✓ The areas surrounding the High Speed Rail (HSR) station should be prioritized
- ✓ For certain streets, explore the idea of reducing the number of lanes in order to encourage walking
- ✓ It may be time to rethink the streetscape in certain parts of the city
- ✓ Are there water/restroom facilities aspects that would be incorporated into the ATP?
- ✓ Explore pedestrian connection between downtown and the Fresno Chaffee Zoo/Roeding Park

Because of the extensive discussion about the bicycle networks, the discussion period for the pedestrian networks was much shorter. Mr. Hananouchi requested that the group email the consultants with any additional comments on the pedestrian networks.

IX. Next Steps

Mr. Hananouchi said that the next ATP public workshop would take place at Fresno City College on Thursday, August 11, 2016 from 5:30 PM to 7:30 PM. SAC members and their constituents were encouraged to attend this public workshop. Mr. Hananouchi also said that the City of Fresno would be hosting an all-day (8:30 AM to 5:30 PM) ATP workshop on Thursday, August 18, 2016 on the first floor of Fresno City Hall. The next SAC meeting will take place in October and this meeting will provide SAC members with the opportunity to review the ATP Draft Plan.

As part of the next round of public workshops, Genoveva Islas of Cultiva La Salud asked about a potential workshop venue in Southeast Fresno. Mr. Hananouchi responded that the project team looked into having the next ATP public workshop at a school site in Southeast Fresno instead of Fresno City College, but were not able to confirm the availability of these locations within the timeframe the team needed. Ms. Islas responded that Cultiva La Salud would be facilitating a meeting for its members, and would appreciate it the project team could attend. Randy Bell and Jill Gormley expressed that City staff would be happy to coordinate with Cultiva La Salud and attend their meeting on behalf of the project team.

Stakeholder Advisory Committee Meeting #3

Meeting Synopsis

Thursday, October 6, 2016
4:00 – 6:00 PM
Fresno City Hall
2600 Fresno Street, Room 4017
Fresno, CA 93721

Attendees:

Genoveva Islas, Cultiva La Salud
Laurence Kimura, Fresno Irrigation District
John Liu, Caltrans
Anthony Molina, City of Fresno Bicycle/Pedestrian Action Committee
Nicholas Paladino, Fresno Cycling Club
Project Staff:
Randy Bell, City of Fresno Public Works Department, ATP Project Manager
Jill Gormley, City of Fresno Public Works Department
Shelby MacNab, City of Fresno Public Works Department
Scott Mozier, Director of Public Works Department
Scott Sehm, City of Fresno Public Works Department
Adrian Engel, Fehr & Peers, ATP Technical Advisor
Rob Hananouchi, Fehr & Peers, ATP Consultant Team Project Manager
Hector Guerra, VRPA Technologies, Inc., Outreach Support

I. Introductions

Rob Hananouchi, Fehr & Peers, welcomed everyone and thanked them for attending the third Stakeholder Advisory Committee (SAC) meeting. He then asked the project team and SAC members to introduce themselves. A list of those in attendance is provided above and the meeting sign-in sheet is attached. Mr. Hananouchi then provided a brief review of the meeting agenda.

II. Meeting Overview & Objectives

Mr. Hananouchi listed the following meeting objectives that the Active Transportation Plan (ATP) project team would try to accomplish by the conclusion of the meeting:

- ✓ Receive SAC input on the Administrative Draft ATP
- ✓ Review the timeline and discuss next steps

III. Project Status & Review of Project Goals

Mr. Hananouchi then reviewed the project process for developing the ATP, which included:

- ✓ Gathering Existing Data and Conducting Initial Outreach
- ✓ Develop Draft Plan
- ✓ Feedback on Draft Plan
- ✓ Final Plan for City Council Adoption

Mr. Hananouchi explained that the project team is at the point of the project process where they are developing the draft plan and receiving feedback on the draft plan. The next steps will be finalizing the plan and presenting the plan to the Planning Commission and City Council. To assist the SAC with their feedback to the project team, Mr. Hananouchi briefly reviewed project goals previously identified by the SAC and the project team, which included:

- ✓ Equitably improve safety and perceived safety of walking and bicycling
- ✓ Increase walking and bicycling trips by creating user-friendly facilities
- ✓ Improve geographic equity of access to walking and bicycling facilities

- ✓ Fill key gaps in walking & bicycling network

IV. Review Administrative Draft ATP

Adrian Engel, Fehr & Peers, explained that he would be reviewing the Administrative Draft ATP with the SAC to discuss components of the draft plan. Mr. Engel also discussed key differences between the draft plan and the 2010 Bicycle Master Plan, which included:

- ✓ Focuses on near term priority bikeway network
- ✓ Pedestrian network
- ✓ Equity is a driving factor

Mr. Engel also listed three ongoing plans that may affect the ultimate build out of transportation improvements:

1. Southwest Fresno Specific Plan
2. Fresno Council of Governments (COG) Fresno-Clovis Metropolitan Area Class IV Separated Bikeway Feasibility Study
3. Parks Master Plan

Mr. Engel then explained that the PowerPoint presentation prepared for the SAC contained slides that would highlight three to four big takeaways from each individual chapter of the draft plan. Mr. Engel encouraged SAC members to provide comments on any of the chapters of the draft plan.

CHAPTER 1 – INTRODUCTION

- ✓ Document aligns with requirements for regional and state ATP funding (Appendix A)
- ✓ Focuses on users rather than facilities
- ✓ Multiple outreach strategies

Comments received from SAC included:

- ✓ Will recommendations from other ongoing plans that the ATP was not able to incorporate be explicit as the ATP is released?
  - o Mr. Hananouchi confirmed the ATP will identify the plans currently under development and that these plans may have recommendations that will be incorporated into future ATP updates
- ✓ There may end up being disconnect between what is being placed in the ATP and what is being proposed by the community putting together the Southwest Fresno Specific Plan

CHAPTER 2 – TYPES OF FACILITIES

- ✓ Traditional bikeway types and introduce Separated Bikeways (Class IV)
- ✓ Focus on intersection treatments
- ✓ Comprehensive approach for support facilities including wayfinding

Comments received from SAC included:

- ✓ Add Scramble Phase
- ✓ Add Green Merge picture to ATP. Which pictures should be included, Fresno or picture from other another city?
  - o Group decided that picture from Fresno is preferred
- ✓ Is wayfinding signage as relevant when there is GPS and other web based guides?
  - o Group discussed the benefit of wayfinding for all modes of travel

CHAPTER 3 – GOALS AND POLICIES

- ✓ Supports Fresno 2035 General Plan
- ✓ Fresno's **Bronze** Bicycle Friendly Community
- ✓ Pedestrian and bicycle assessment
- ✓ Opportunities for improvements

Comments received from SAC included:

- ✓ Include in the ATP all recommendations listed in the *Key Steps to Silver* section of the American Bicyclist 2015 Report Card

CHAPTER 4 – EXISTING CONDITIONS

- ✓ City nearly doubled their bikeway facilities between 2010 and 2016
- ✓ Since 2010 pedestrian and bicycle related collisions increase and has since receded
- ✓ Socioeconomic analysis identified focus areas for improvements

Comments received from SAC included:

- ✓ Some areas identified as bike paths appear to be sidewalks. The south side of Herndon between Brawley and Blythe is one such example. Additional examples include Barstow between Cedar and Millbrook, as well as Sierra between Cedar and Chestnut.
  - o City staff clarified that locations on Barstow and Sierra are included to remain consistent with the Fresno State ATP
- ✓ Include Fresno County Bicycle Coalition (FCBC) and Cultiva La Salud to list on page 78 of draft plan

CHAPTER 5 – PLANNED NETWORKS

- ✓ 2010 planned network was adjusted
- ✓ Trail connectivity to schools and parks highlighted
- ✓ Priority bikeway network about 50% completed
- ✓ Priority pedestrian network focuses on high pedestrian activity, safety, and underserved neighborhoods

Comments received from SAC included:

- ✓ There seems to be a lot of Class III bike routes that may not make sense
  - o Project team informed the SAC that many of the Class III bike routes from the 2010 BMP have been removed for that reason, but welcomed feedback on where other Class III bike routes could be removed
- ✓ Regarding sidepaths, don't build Class I parallel or adjacent to collectors and arterials because the numerous intersections and driveways can result in conflict points
  - o Project team acknowledged this concern, and will include discussion in ATP
- ✓ Recommend the elimination of bike lanes on Princeton because it is a residential street
- ✓ Recommend tossing out several short loop bike lanes
- ✓ Add bike lanes on Veterans Blvd.
- ✓ On Jensen, the bike lanes should begin at Cedar and go east. Right now they are starting further east
- ✓ Do not think Millbrook is feasible as part of the priority network. The south side of Herndon at Herndon and Millbrook is not a normal intersection, the street curves around into a frontage road

- Project team discussed the possible improvements that could be made to Millbrook to address the feasibility concerns

- ✓ On the Priority Pedestrian Network are the red markings (high priority) on the map only located within the City and not in the County Islands?
- ✓ Include text that calls out a few locations where there is a long distance between priority bikeways and provide an explanation of these areas. Text will help show that the City did look at these areas

CHAPTER 6 – IMPLEMENTATION

- ✓ Project costs are being finalized
- ✓ Application funding sources
- ✓ Updates to the plan every 5 years

Comments received from SAC included:

- ✓ No comments received

V. Review Safety Education Plan

Mr. Engel stated that the Safety Education Plan (Appendix E) is a newly created piece of information that focuses on the following areas:

- ✓ Education examples
- ✓ Enforcement priorities
- ✓ Evaluation metrics

VI. Next Steps

Mr. Hananouchi mentioned that the environmental process has started with the City and the Planning Department will be putting together the CEQA document that is associated with the ATP. Mr. Hananouchi explained that October 10th is when the project team would like to receive feedback from stakeholder members. Once comments are received from the SAC, the project team will be incorporating the comments into the draft plan and will make the draft plan available for public review. The public will be able to review the draft plan from October 20th through November 10th. Public comments will need to be received by November 10th and there will be instructions on where the public can send their comments. The ATP will be going to the Planning Commission on December 7th and the City Council on December 15th. Mr. Hananouchi stated that during the Planning Commission and City Council meeting, the project team would like to have the SAC invite their constituents and would appreciate the community voicing their support for the ATP.

City of Fresno Active Transportation Plan
Public Workshop
Workshop Synopsis

Wednesday, May 18, 2016
5:30 – 7:30 PM
Fresno Fairgrounds
Gem and Mineral Building
1121 South Chance Ave
Fresno, CA 93702

I. Welcome & Overview

Rob Hananouchi, Fehr & Peers, welcomed everyone and thanked them for attending the Public Workshop for the City of Fresno's Active Transportation Plan (ATP). He then briefly introduced the ATP project team.

Mr. Hananouchi explained that a PowerPoint presentation was prepared to provide an overview of what an ATP is and what the City of Fresno is hoping to accomplish with this plan. Workshop attendees were encouraged to share their thoughts at any of the workshop stations or write down their thoughts on the comment cards provided.

Mr. Hananouchi added that workshop attendees who were in need of Spanish translation could meet with Reyna Castellanos, VRPA Technologies, Inc. (VRPA) staff, who was located at the translation station. Childcare services were also provided to workshop attendees who had children.

II. PowerPoint Presentation

A. What is Active Transportation

Rod Brown, Fehr & Peers, explained that active transportation is non-motorized, human powered transportation such as walking, bicycling, using a wheelchair, skateboards, roller blades, or a mode that can get someone around without using a motor. Mr. Brown stated that the ATP establishes a set of goals and identifies how it will achieve those goals for the City of Fresno.

B. Why Create an Active Transportation

Mr. Brown explained that the ATP would:

- ✓ Aim to create a well-thought out, complete walking and bicycling network
- ✓ Prioritize implementation of sidewalk, trails, and bike lane improvements that better serve the community
- ✓ Continue to implement the vision of the 2010 Bicycle Pedestrian and Trails Master Plan
- ✓ Expand the walking portion of the 2010 Bicycle Pedestrian and Trails Master Plan
- ✓ Support applications for more funding
- ✓ Increase walking and bicycling in the community and make Fresno safer, healthier, and more connected

C. Project Goals

Mr. Hananouchi stated that the project team has worked with City of Fresno staff and community stakeholders to identify the following 4 specific goals for the ATP plan:

- ✓ Equitably improve the safety and perceived safety of walking and bicycling in Fresno
- ✓ Increase walking and bicycling trips in Fresno by creating user-friendly facilities

- ✓ Improve the geographic equity of access to walking and bicycling facilities in Fresno
- ✓ Fill key gaps in Fresno's walking and bicycling networks

D. Plan Outcomes

Mr. Hananouchi explained that the purpose of the project goals is to remove barriers that typically keep people from walking and biking or make it difficult for those who are already walking or biking. By improving safety, providing user-friendly facilities, and striving for equitable access to these facilities, more people are likely to walk and bike. Increased walking and biking has many beneficial possible outcomes including:

- ✓ Improved Public Health
- ✓ Reduce Vehicle Miles Traveled (VMT)
- ✓ Improve Air Quality
- ✓ Improve Competitiveness for Funding

E. Project Schedule

An overview of the overall schedule for the ATP project by Mr. Hananouchi. The project process includes:

- ✓ Beginning by gathering existing data and receiving initial input from the community
- ✓ Taking feedback from the public workshops and considering comments received as the Draft Plan is prepared
- ✓ Returning to the community for a second public workshop (July/August) to present the recommended networks to the community and to ensure the Draft Plan reflects the input from the community
- ✓ The Draft Plan will be revised during the Fall of 2016
- ✓ The Final Plan will be forwarded to the City Council for adoption by the end of 2016

F. Workshop and Discussion

Mr. Hananouchi stated that feedback from the community is essential for the ATP to be successful and to realize the goals and outcomes.

He also encouraged workshop attendees to visit workshop stations. Attendees were asked to provide their input on what they thought could be done to improve walking and bicycling in Fresno. Attendees were also asked to share their thoughts on the enhanced improvement concepts that other cities are considering to support walking and bicycling and comment on which concepts are most appropriate for Fresno.

G. Stay Connected

Mr. Hananouchi explained that the ATP project team would like the public to stay connected throughout the ATP process. One of the ways the public can stayed connected is by visiting the project website at www.fresno.gov/atp. The website provides the project schedule as well as useful links for additional information. The website also contains an online map survey where the public can share their thoughts or ideas. Please contact the project team with additional thoughts or comments at r.brown@fehrandpeers.com

H. Thank you

Mr. Hananouchi thanked everyone for attending the workshop and invited workshop attendees to visit the various stations throughout the room and provide their feedback.

III. Workshop Stations & Discussion

Several stations were setup around the room so that workshop attendees could provide their feedback to the ATP project team. Each station had displays where workshop participants were able to provide input by placing a sticker next to the option(s) of their preference. The name of each workshop station is listed below in bold and the title of the displays at each station are listed with a checkmark. The selections that workshop attendees made can be found below in blue font.

A. The Big Picture

- ✓ *What is an Active Transportation Plan?*
  - This display outlined the ATP process and explained that the ATP is a vision for Fresno's bicycle and pedestrian network. This display did not have a sticker selection component.
- ✓ *Making Fresno a great place to walk and bike*

1. Which of these GOALS are most important to you?
   - Improve Safety:
     - 9 selections
   - Create user-friendly facilities:
     - 4 selections
   - Better access to walking and bicycling facilities:
     - 6 selections

- Fill the gaps in existing walking and bicycling networks:
  - 10 selections

2. Which of these OUTCOMES are most important to you?
   - Improve Public Health:
     - 19 selections
   - Reduce Automobile Travel:
     - 3 selections
   - Improve Air Quality:
     - 6 selections
   - Grants that support walking and cycling:
     - 19 selections

✓ *Why do you walk & bike in Fresno?*

- To get to work or school:
  - 9 selections for walk, 15 selections for bike
- To get my kids to school:
  - 10 selections for walk, 6 selections for bike
- To exercise:
  - 12 selections for walk, 10 selections for bike
- To run errands at local stores or offices:
  - 7 selections for walk, 3 selections for bike
- To visit or socialize with friends or neighbors:
  - 5 selections for walk, 2 selections for bike
- To enjoy the outdoors:
  - 13 selections for walk, 12 selections for bike
- Other:
  - 0 selections for walk, 0 selections for bike

B. Biking in Fresno

- ✓ *Potential Enhancements for Bicycling*
  - Separated Bikeways or Cycle Tracks:
    - 19 selections
  - Bicycle Boulevards:
    - 7 selections
  - Bike Boxes:
    - 8 selections
  - Buffered Bike Lane:
    - 28 selections
- ✓ *How could BIKING be made better and easier in Fresno?*
  - Add more bike lanes and trails to fill gaps and connect more destinations:
    - 22 selections
  - Make the existing bike lanes and routes safer:
    - 18 selections
  - Add bike lanes and trails in my neighborhood:
    - 7 selections
  - Educate drivers and bike riders about how to be safe with each other:
    - 6 selections
  - Construct a cycletrack (Class IV route) alongside the High Speed Rail through Fresno:
    - 4 selections
  - Paint bike lanes green in areas where traffic lights exist (so that cars know where the bikes belong):
    - 4 selections
  - More bicycle parking and street crossing guards:
    - 34 selections

- ✓ *Mark your concerns, recommendations, and priorities to make biking better*
  - This display was a map of the City of Fresno that allowed workshop attendees to mark their concerns, recommendations, and priorities to make biking better. Results from this display can be found in the mapping exercise summary.

C. Walking in Fresno

- ✓ *Potential Enhancements for Walking*
  - Median Islands:
    - 12 selections
  - Rectangular Rapid Flashing Beacons:
    - 19 selections
  - Bulbouts:
    - 12 selections
  - Pedestrian Hybrid Beacons:
    - 25 selections
- ✓ *How could WALKING be made better and easier in Fresno?*
  - Add sidewalks and trails to fill gaps and connect more destinations:
    - 11 selections
  - Make street crossings safer:
    - 9 selections
  - Add trees to shade sidewalks and trails:
    - 6 selections
  - Add sidewalks and trails in my neighborhood:
    - 10 selections
  - Add more lighting along sidewalks and trails:
    - 15 selections
  - Construct a cycletrack (Class IV route) alongside the High Speed Rail through Fresno:
    - 3 selections

- Focus on the South Fresno area. South Fresno is in need of sidewalks, signs, lights:
  - 11 selections
- Flash light in stop sign:
  - 3 selections

✓ *Mark you concerns, recommendations, and priorities to make walking better*

- This display was a map of the City of Fresno that allowed workshop attendees to mark their concerns, recommendations, and priorities to make walking better. Results from this display can be found in the mapping exercise summary.

[This page intentionally left blank]

City of Fresno Active Transportation Plan
Public Workshop
Workshop Synopsis

Thursday, May 19, 2016
5:30 – 7:30 PM
Fresno City College
Old Administration Building, Room 114
1101 E. University Ave
Fresno, CA 93741

I. Welcome & Overview

Rob Hananouchi, Fehr & Peers, welcomed everyone and thanked them for attending the Public Workshop for the City of Fresno's Active Transportation Plan (ATP). He then briefly introduced the ATP project team.

Mr. Hananouchi explained that a PowerPoint presentation was prepared to provide an overview of what an ATP is and what the City of Fresno is hoping to accomplish with this plan. Workshop attendees were encouraged to share their thoughts at any of the workshop stations or write down their thoughts on the comment cards provided.

Mr. Hananouchi added that workshop attendees who were in need of Spanish translation could meet with Reyna Castellanos, VRPA Technologies, Inc. (VRPA) staff, who was located at the translation station. Childcare services were also provided to workshop attendees who had children.

II. PowerPoint Presentation

A. What is Active Transportation

Rod Brown, Fehr & Peers, explained that active transportation is non-motorized, human powered transportation such as walking, bicycling, using a wheelchair, skateboards, roller blades, or a mode that can get someone around without using a motor. Mr. Brown stated that the ATP establishes a set of goals and identifies how it will achieve those goals for the City of Fresno.

B. Why Create an Active Transportation

Mr. Brown explained that the ATP would:

- ✓ Aim to create a well-thought out, complete walking and bicycling network
- ✓ Prioritize implementation of sidewalk, trails, and bike lane improvements that better serve the community
- ✓ Continue to implement the vision of the 2010 Bicycle Pedestrian and Trails Master Plan
- ✓ Expand the walking portion of the 2010 Bicycle Pedestrian and Trails Master Plan
- ✓ Support applications for more funding
- ✓ Increase walking and bicycling in the community and make Fresno safer, healthier, and more connected

C. Project Goals

Mr. Hananouchi stated that the project team has worked with City of Fresno staff and community stakeholders to identify the following 4 specific goals for the ATP plan:

- ✓ Equitably improve the safety and perceived safety of walking and bicycling in Fresno
- ✓ Increase walking and bicycling trips in Fresno by creating user-friendly facilities

- ✓ Improve the geographic equity of access to walking and bicycling facilities in Fresno
- ✓ Fill key gaps in Fresno's walking and bicycling networks

D. Plan Outcomes

Mr. Hananouchi explained that the purpose of the project goals is to remove barriers that typically keep people from walking and biking or make it difficult for those who are already walking or biking. By improving safety, providing user-friendly facilities, and striving for equitable access to these facilities, more people are likely to walk and bike. Increased walking and biking has many beneficial possible outcomes including:

- ✓ Improved Public Health
- ✓ Reduce Vehicle Miles Traveled (VMT)
- ✓ Improve Air Quality
- ✓ Improve Competitiveness for Funding

E. Project Schedule

An overview of the overall schedule for the ATP project by Mr. Hananouchi. The project process includes:

- ✓ Beginning by gathering existing data and receiving initial input from the community
- ✓ Taking feedback from the public workshops and considering comments received as the Draft Plan is prepared
- ✓ Returning to the community for a second public workshop (July/August) to present the recommended networks to the community and to ensure the Draft Plan reflects the input from the community
- ✓ The Draft Plan will be revised during the Fall of 2016
- ✓ The Final Plan will be forwarded to the City Council for adoption by the end of 2016

F. Workshop and Discussion

Mr. Hananouchi stated that feedback from the community is essential for the ATP to be successful and to realize the goals and outcomes.

He also encouraged workshop attendees to visit workshop stations. Attendees were asked to provide their input on what they thought could be done to improve walking and bicycling in Fresno. Attendees were also asked to share their thoughts on the enhanced improvement concepts that other cities are considering to support walking and bicycling and comment on which concepts are most appropriate for Fresno.

G. Stay Connected

Mr. Hananouchi explained that the ATP project team would like the public to stay connected throughout the ATP process. One of the ways the public can stayed connected is by visiting the project website at www.fresno.gov/atp. The website provides the project schedule as well as useful links for additional information. The website also contains an online map survey where the public can share their thoughts or ideas. Please contact the project team with additional thoughts or comments at r.brown@fehrandpeers.com

H. Thank you

Mr. Hananouchi thanked everyone for attending the workshop and invited workshop attendees to visit the various stations throughout the room and provide their feedback.

III. Workshop Stations & Discussion

Several stations were setup around the room so that workshop attendees could provide their feedback to the ATP project team. Each station had displays where workshop participants were able to provide input by placing a sticker next to the option(s) of their preference. The name of each workshop station is listed below in bold and the title of the displays at each station are listed with a checkmark. The selections that workshop attendees made can be found below in blue font.

A. The Big Picture

- ✓ *What is an Active Transportation Plan?*
  - This display outlined the ATP process and explained that the ATP is a vision for Fresno's bicycle and pedestrian network. This display did not have a sticker selection component.
- ✓ *Making Fresno a great place to walk and bike*

1. Which of these GOALS are most important to you?
   - Improve Safety:
     - 22 selections
   - Create user-friendly facilities:
     - 9 selections
   - Better access to walking and bicycling facilities:
     - 10 selections

- Fill the gaps in existing walking and bicycling networks:
  - 30 selections

2. Which of these OUTCOMES are most important to you?
   - Improve Public Health:
     - 13 selections
   - Reduce Automobile Travel:
     - 11 selections
   - Improve Air Quality:
     - 17 selections
   - Grants that support walking and cycling:
     - 12 selections

✓ *Why do you walk & bike in Fresno?*

- To get to work or school:
  - 15 selections for walk, 20 selections for bike
- To get my kids to school:
  - 7 selections for walk, 5 selections for bike
- To exercise:
  - 14 selections for walk, 18 selections for bike
- To run errands at local stores or offices:
  - 10 selections for walk, 15 selections for bike
- To visit or socialize with friends or neighbors:
  - 7 selections for walk, 8 selections for bike
- To enjoy the outdoors:
  - 12 selections for walk, 14 selections for bike
- Other:
  - 0 selections for walk, 4 selections for bike

B. Biking in Fresno

- ✓ *Potential Enhancements for Bicycling*
  - Separated Bikeways or Cycle Tracks:
    - 39 selections
  - Bicycle Boulevards:
    - 13 selections
  - Bike Boxes:
    - 18 selections
  - Buffered Bike Lane:
    - 24 selections
- ✓ *How could BIKING be made better and easier in Fresno?*
  - Add more bike lanes and trails to fill gaps and connect more destinations:
    - 26 selections
  - Make the existing bike lanes and routes safer:
    - 15 selections
  - Add bike lanes and trails in my neighborhood:
    - 16 selections
  - Educate drivers and bike riders about how to be safe with each other:
    - 11 selections
  - While High Speed Rail is being built, spent ATP money to plan and construct a bike trail or a Class IV cycletrack with a sidewalk for walking and running alongside the High Speed Rail, connecting the E/W bike routes:
    - 6 selections
  - Real consequences for drivers who injure or kill cyclist:
    - 5 selections
  - *Extend "Herndon Trail" across Golden State Boulevard and complete the trail:*
    - 2 selections

- *Animal Control:*
  - *9 Selections*

✓ *Mark your concerns, recommendations, and priorities to make biking better*

- This display was a map of the City of Fresno that allowed workshop attendees to mark their concerns, recommendations, and priorities to make biking better. Results from this display can be found in the mapping exercise summary.

C. Walking in Fresno

✓ *Potential Enhancements for Walking*

- Median Islands:
  - 21 selections
- Rectangular Rapid Flashing Beacons:
  - 20 selection
- Bulbouts:
  - 24 selections
- Pedestrian Hybrid Beacons:
  - 18 selections

✓ *How could WALKING be made better and easier in Fresno?*

- Add sidewalks and trails to fill gaps and connect more destinations:
  - 21 selections
- Make street crossings safer:
  - 20 selections
- Add trees to shade sidewalks and trails:
  - 17 selections
- Add sidewalks and trails in my neighborhood:
  - 23 selections
- Add more lighting along sidewalks and trails:
  - 24 selections

- Real consequences for drivers who injure/kill pedestrians:
  - 0 selections
- Remove mailboxes, poles, etc., from sidewalk:
  - 3 selections
- Animal Control:
  - *18 selections*

✓ *Mark your concerns, recommendations, and priorities to make walking better*

- This display was a map of the City of Fresno that allowed workshop attendees to mark their concerns, recommendations, and priorities to make walking better. Results from this display can be found in the mapping exercise summary.

[This page intentionally left blank]

City of Fresno ATP Workshop

Workshop Synopsis

Thursday, August 11, 2016
5:30 – 7:30 PM
Fresno City College
1101 E. University Ave.
Old Administration Building, Room 114
Fresno, CA 93741

Workshop Description

The City of Fresno Active Transportation (ATP) workshop was held at Fresno City College on August 11, 2016 from 5:30 to 7:30 PM in the Fresno City College Old Administration Building, Room 114. The workshop was held in an open house style format and attendees arrived at various times throughout the night. Workshop attendees were thanked for attendance and asked to sign-in as they entered the room. Attendees were encouraged to visit the stations setup around the room and provide their input on recommended bikeways and pedestrian priority area maps.

ATP project team staff were present at the workshop and available to respond to any questions or comments that attendees had. There was also a comment table in the room where attendees could write down their thoughts on the comment cards. Also present at the workshop were two translators who were available to provided English/Spanish translation for attendees that were in need of these services. The City of Fresno's Parks Master Plan Update consultant was also in attendance and had boards displaying the intent of the Parks Master Plan. In total, approximately thirty-seven (37) people were in attendance at the workshop.

[This page intentionally left blank]

City of Fresno Active Transportation Plan
Public Workshop
Workshop Synopsis

Wednesday, August 18, 2016
8:30 – 5:30 PM
2600 Fresno St, Fresno, CA 93721

On August 18, the City of Fresno hosted a public workshop for community members to provide feedback on proposed networks for the City of Fresno's Active Transportation Plan (ATP). Approximately 35 people attended the workshop that took place at Fresno City Hall. Participants responded to boards with information about the plan, process, and the input gathered so far.

Participants of the workshop were encouraged to provide comments on the following maps:

- ✓ Proposed Bicycle Network – Long Term Vision
- ✓ Proposed Bicycle Network – Priority Network
- ✓ Priority Pedestrian Areas
- ✓ Priority Pedestrian Underserved Neighborhoods

The following key points were among the comments received:

- ✓ Focus first on areas near schools, particularly elementary schools
- ✓ Continue the progress made by the Midtown Trail Project
- ✓ Commit funding and implementation of the Canals to Trails Project
- ✓ Shift priority from Eaton Trail to Alluvial Alignment
- ✓ Improve connections between Eaton Trail and roadway network, including N. Friant Road
- ✓ Improve existing sidewalks and bike lanes to be wider
- ✓ Address ongoing pedestrian gaps on Floradora Avenue between Cedar Avenue and First Street near Addams School
- ✓ Widen bike lanes, such as on Huntington where riders are pushed into the door zone
- ✓ Extend priority pedestrian areas, including Blackstone Avenue between crossings at Nees Avenue and El Paso Avenue to accommodate shoppers, and Ventura Avenue from Peach Avenue to Clovis Avenue on the proposed BRT corridor
- ✓ Add Class I connection on McKenzie Avenue from Maple Avenue to McKenzie cul-de-sac

[This page intentionally left blank]

City of Fresno Active Transportation Plan
Public Workshop
Workshop Synopsis

Monday, August 16, 2016
5:30 – 7:30 PM
Cultiva La Salud

On August 16, the non-profit organization Cultiva La Salud hosted a public workshop for community members to provide feedback on proposed networks for the City of Fresno's Active Transportation Plan (ATP). Participants were mostly residents of disadvantaged communities. Participants responded to boards with information about the plan, process, and input gathered so far.

Participants of the workshop were encouraged to provide comments on the following maps:

- ✓ Proposed Bicycle Network – Long Term Vision
- ✓ Proposed Bicycle Network – Priority Network
- ✓ Priority Pedestrian Areas
- ✓ Priority Pedestrian Underserved Neighborhoods

The following key points were among the comments received:

- ✓ Address maintenance issues regarding trees impacting visibility
- ✓ Prioritize a safe, direct route on Jensen Avenue from the Multisport Park in Southwest Fresno to the proposed park
- ✓ Coordinate with Southwest Fresno Specific Plan
- ✓ Focus first on areas near schools, such as Addams Elementary School
- ✓ Improve lighting in Southwest Fresno
- ✓ Construct sidewalks at intersection corners so that people have a safe place to wait
- ✓ Add priority corridor on Butler Avenue from railroad tracks to Chestnut Avenue

[This page intentionally left blank]

APPENDIX C: RELATIONSHIP TO OTHER PLANS

Many plans, policies, and other documents were reviewed during preparation of the ATP. The ATP is consistent with these documents, as described below.

Fresno General Plan

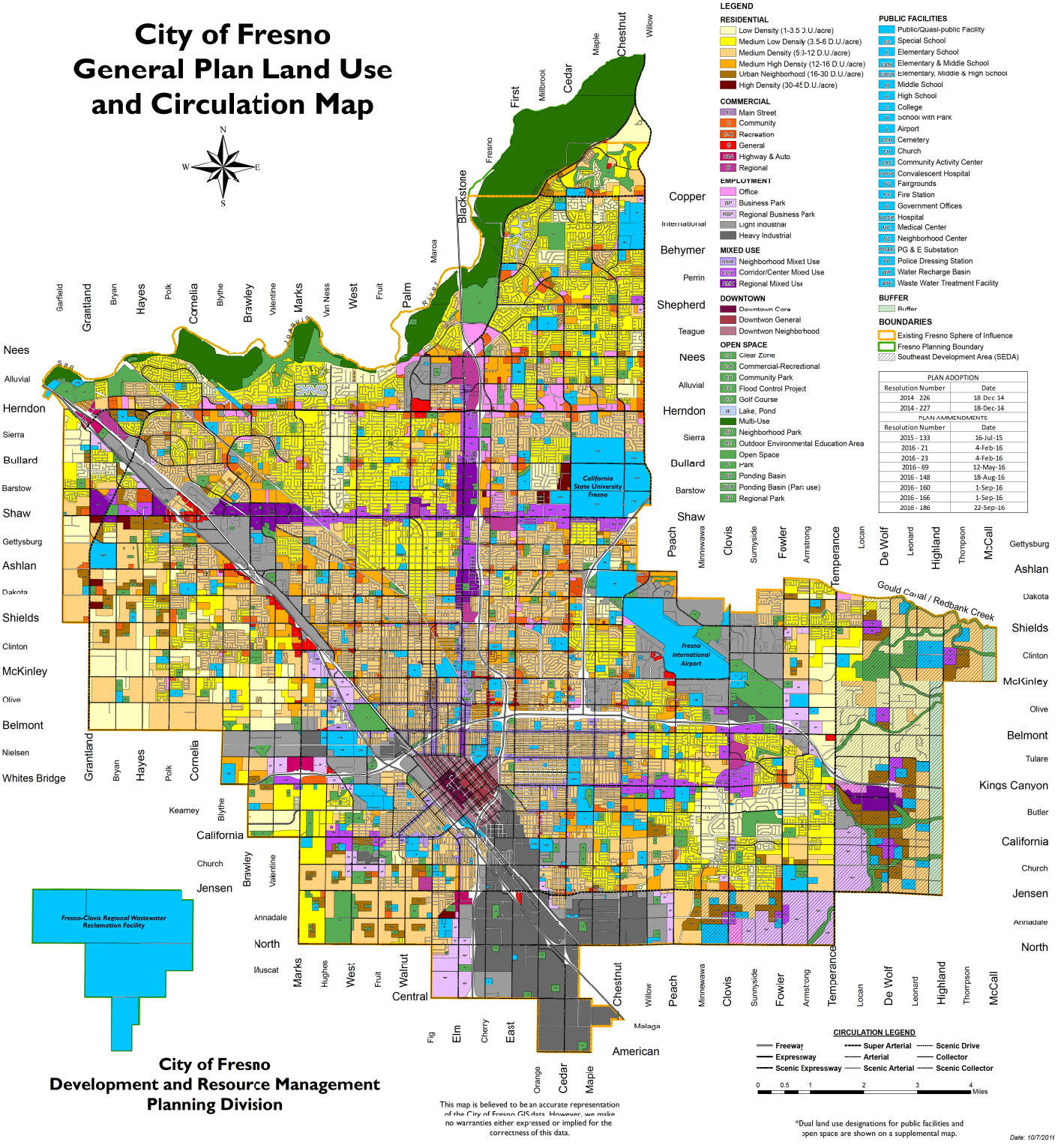
The Fresno City Council adopted the General Plan in December 2014. The General Plan establishes guidance for future planning in the City through 2035 and beyond. Several of the General Plan's goals are related to bicycling and walking and were discussed in Chapter 3.

To accomplish these goals, the General Plan is divided into twelve elements, each of which includes supporting objectives and policies. The most relevant elements to the ATP are the Urban Form, Land Use, and Design Element; the Mobility and Transportation Element; the Parks, Open Space, and Schools Element; and the Healthy Communities Element.

Urban Form, Land Use, and Design Element

The Urban Form, Land Use, and Design Element of the General Plan describes objectives and policies for development in the County. Figure 60 shows the General Plan Land Use and Circulation Map.

[This page intentionally left blank]



City of FRESNO active transportation plan

Figure 60

Fresno General Plan
Land Use and Circulation Map

[This page intentionally left blank]

Several objectives and policies relate to optimizing connectivity, walkability, and pedestrian-oriented design.

UF-12 Objective: Locate roughly one-half of future residential development in infill areas—defined as being within the City on December 31, 2012—including the Downtown core area and surrounding neighborhoods, mixed-use centers and transit-oriented development along major BRT corridors, and other non-corridor infill areas, and vacant land.

- **UF-12-a** BRT Corridors. Design land uses and integrate development site plans along BRT corridors, with transit-oriented development that supports transit ridership and convenient pedestrian access to bus stops and BRT station stops.
- **UF-12-e** Access to Activity Centers. Promote adoption and implementation of standards supporting pedestrian activities and bicycle linkages from surrounding land uses and neighborhoods into Activity Centers and to transit stops. Provide for priority transit routes and facilities to serve the Activity Centers.

UF-14 Objective: Create an urban form that facilitates multi-modal connectivity.

- **UF-14-a** Design Guidelines for Walkability. Develop and use design guidelines and standards for a walkable and pedestrian-scaled environment with a network of streets and connections for pedestrians and bicyclists, as well as transit and autos.
- **UF-14-b** Local Street Connectivity. Design local roadways to connect throughout neighborhoods and large private developments with adjacent major roadways and pathways of existing adjacent development. Create access for pedestrians and bicycles where a local street must dead end or be designed as a cul-de-sac to adjoining uses that provide services, shopping, and connecting pathways for access to the greater community area.

LU-5 Objective: Plan for a diverse housing stock that will support balanced urban growth, and make efficient use of resources and public facilities.

- **LU-5-e** Urban Neighborhood Residential Uses. Promote urban neighborhood residential uses to support compact communities and Complete Neighborhoods that include community facilities, walkable access to parkland and commercial services, and transit stops.
- **LU-5-f** High Density Residential Uses. Promote high-density residential uses to support Activity Centers and BRT Corridors, and walkable access to transit stops.
- **LU-5-g** Scale and Character of New Development. Allow new development in or adjacent to established neighborhoods that is compatible in scale and character with the surrounding area by

promoting a transition in scale and architectural character between new buildings and established neighborhoods, as well as integrating pedestrian circulation and vehicular routes.

- **LU-5-h** Housing Offering Amenities. Support housing that offers residents a range of amenities, including public and private open space, landscaping, and recreation facilities with direct access to commercial services, public transit, and community gathering spaces.
- **LU-5-i** Housing for Seniors. Facilitate the development of senior housing projects that are accessible to public transportation and services.

D-1 Objective: Provide and maintain an urban image that creates a "sense of place" throughout Fresno.

- **D-1-a** Direct Access to Units. Require all new multi-family residential development along BRT and other transit or pedestrian-oriented streets (Collector and Local), including high-rise, townhomes or other units, to provide direct pedestrian street access and to promote walkable connectivity, individualization, family-friendly development, identity, and street safety to the maximum extent reasonably feasible.
- **D-1-b** Active Ground Floor Frontage. Encourage all new development located within Activity Centers and/or along BRT corridors to incorporate active ground floor frontages that engage pedestrians to the maximum extent feasible. Establish pedestrian-oriented design standards in the Development Code for building frontages, transparency, fenestration, and entries to create active streetscapes.
- **D-1-c** Privately Owned Public Spaces. Consider creating and adopting design standards and incentives for providing privately owned public open spaces and plazas for gathering to enhance the pedestrian realm and provide opportunities for social interaction.

D-3 Objective: Create unified plans for Green Streets, using distinctive features reflecting Fresno's landscape heritage.

- **D-3-c** Local Streets as Urban Parkways. Develop local streets as "urban parkways," where appropriate, with landscaping and pedestrian spaces.

D-4 Objective: Preserve and strengthen Fresno's overall image through design review and create a safe, walkable and attractive urban environment for the current and future generations of residents.

- **D-4-b** Incentives for Pedestrian-Oriented Anchor Retail. Consider adopting and implementing incentives for new pedestrian-friendly anchor retail at intersections within Activity Centers and along corridors to attract retail clientele and maximize foot traffic.

Mobility and Transportation Element

The Fresno General Plan Mobility and Transportation Element reinforces the City's role in providing an efficient, multimodal transportation system.

The Roadways and Automobiles section notably discusses all users of roadways and includes discussion of multimodal level of service, which considers the experience of pedestrians, bicyclists, and transit users as well as drivers. Figure 31 depicts the circulation diagram provided in this element, and Table 1 depicts the roadway characteristics corresponding to each roadway classification.

The Bikes and Pedestrians section describes the cities commitment to bicycling and walking and references the 2010 Bicycle, Pedestrian and Trails Master Plan.

Several objectives and policies in the Mobility and Transportation Element are related to walking and bicycling:

MT-1 Objective: Create and maintain a transportation system that is safe, efficient, provides access in an equitable manner, and optimizes travel by all modes.

- **MT-1-c** Plan Line Adoption. Prepare and adopt Official Plan Lines, or other appropriate documentation such as Director Determinations, for transportation corridors, roadways, and bicycle/pedestrian paths/trails, as necessary to preserve and/or obtain right-of-way needed for planned circulation improvements
- **MT-1-e** Ensure Interconnectivity Across Land Uses. Update development standards and design guidelines applicable to public and private property to achieve Activity Centers, neighborhoods and communities which are well connected by pedestrian, bicycle, appropriate public transportation and automobile travel facilities.
- **MT-1-g** Complete Streets Concept Implementation. Provide transportation facilities based upon a Complete Streets concept that facilitates the balanced use of all viable travel modes (pedestrians, bicyclists, motor vehicle and transit users), meeting the transportation needs of all ages, income groups, and abilities and providing mobility for a variety of trip purposes, while also supporting other City goals.

Implementation actions will include:

- Meeting the needs of all users within the street system as a whole; each individual street does not need to provide all modes of travel, but travel by all modes must be accommodated throughout the Planning Area;
- Continuing to adopt refined street cross-section standards as appropriate in response to needs identified;
- Encouraging conversion of one-way streets to two-way streets to improve location circulation, access, and safety;
- Considering the impact of streets on public health by addressing storm water runoff quality, air quality, and water conservation among other factors; and
- Adhering to the water efficient landscape standards adopted by the City for median and streetscape plantings and irrigation methods.

- **MT-1-h** Update Standards for Complete Streets. Update the City's Engineering and Street Design Standards to ensure that roadway and streetscape design specifications reflect the Complete Streets concept, while also addressing the needs of through traffic, transit stops, bus turnouts, passenger loading needs, bike lanes, pedestrian accommodation, and short- and long-term parking.
- **MT-1-j** Transportation Improvements Consistent with Community Character. Prioritize transportation improvements that are consistent with the character of surrounding neighborhoods and supportive of safe, functional and Complete Neighborhoods; minimize negative impacts upon sensitive land uses such as residences, hospitals, schools, natural habitats, open space areas, and historic and cultural resources.

In implementing this policy, the City will design improvements to:

- Facilitate provision of multi-modal transportation opportunities;
- Provide added safety, including appropriate traffic calming measures;
- Promote achievement of air quality standards;
- Provide capacity in a cost effective manner; and
- Create improved and equitable access with increased efficiency and connectivity.

- **MT-1-k** Multi-Modal Level of Service Standards. Develop and use a tiered system of flexible, multi-modal Level of Service standards for streets designated by the Circulation Diagram (Figure MT-1). Strive to accommodate a peak hour vehicle LOS of D or better on street segments and at intersections, except where Policies MT-1-m through MT-1-p provide greater specificity. Establish minimum acceptable service levels for other modes and use them in the development and environmental review process.

- **MT-1-m** Standards for Planned Bus Rapid Transit Corridors and Activity Centers. Independent of the Traffic Impact Zones identified in MT-2-I and Figure MT-4, strive to maintain the following vehicle LOS standards on major roadway segments and intersections along Bus Rapid Transit Corridors and in Activity Centers:
    - LOS E or better at all times, including peak travel times, unless the City Traffic Engineer determines that mitigation to maintain this LOS would be infeasible and/or conflict with the achievement of other General Plan policies.
    - Accept LOS F conditions in Activity Centers and Bus Rapid Transit Corridors only if provisions are made to improve the overall system and/or promote non-vehicular transportation and transit as part of a development project or a City-initiated project. In accepting LOS F conditions, the City Traffic Engineer may request limited analyses of operational issues at locations near Activity Centers and along Bus Rapid Transit Corridors, such as queuing or left-turn movements.
    - Give priority to maintaining pedestrian service first, followed by transit service and then by vehicle LOS, where conflicts between objectives for service capacity between different transportation modes occur.
    - Identify pedestrian-priority and transit-priority streets where these modes would have priority in order to apply a multi-modal priority system, as part of the General Plan implementation.

- **MT-1-n** Peak Hour Vehicle LOS. Maintain a peak-hour vehicle LOS standard of D or better for all roadway areas outside of identified Activity Center and Bus Rapid Transit Corridor districts, unless the City Traffic Engineer determines that mitigation to maintain this LOS would be infeasible and/or conflict with the achievement of other General Plan policies.
- **MT-1-o** LOS Deviations Outside of Activity Centers and Areas Designated for Mixed-Use. Accept vehicle LOS E or F conditions outside of identified multi-modal districts only if provisions commensurate with the level of impact and approved by the City Traffic Engineer are made to sufficiently improve the overall transportation system and/or promote non-vehicular transportation as part of a development project or City-initiated project.
- **MT-1-p** Participate in Sustainable Communities Strategy/ Regional Transportation Plan. Continue to work with the Fresno Council of Governments in developing and updating the Sustainable Communities Strategy and Regional Transportation Plan, consistent with the goals, objectives and policies of the General Plan.

MT-2 Objective: Make efficient use of the City's existing and proposed transportation system and strive to ensure the planning and provision of adequate resources to operate and maintain it.

- **MT-2-d** Street Redesign where Excess Capacity Exists. Evaluate opportunities to reduce right of way and/or redesign streets to support non-automobile travel modes along streets with excess roadway capacity where adjacent land use is not expected to change over the planning period.

MT-4 Objective: Establish and maintain a continuous, safe, and easily accessible bikeways system throughout the metropolitan area to reduce vehicle use, improve air quality and the quality of life, and provide public health benefits.

- **MT-4-a** Bicycle, Pedestrian, and Trails Master Plan. To the extent consistent with this General Plan, continue to implement and periodically update the Bicycle, Pedestrian, and Trails Master Plan to meet State standards and requirements for recommended improvements and funding proposals as determined appropriate and feasible.
- **MT-4-b** Bikeway Improvements. Establish and implement property development standards to assure that projects adjacent to designated bikeways provide adequate right-of-way and that necessary improvements are constructed to implement the planned bikeway system shown on Figure MT-2 to provide for bikeways, to the extent feasible, when existing roadways are reconstructed; and alternative bikeway alignments or routes where inadequate right-of-way is available.
- **MT-4-c** Bikeway Linkages. Provide linkages between bikeways, trails and paths, and other regional networks such as the San Joaquin River Trail and adjacent jurisdiction bicycle systems wherever possible.
- **MT-4-d** Prioritization of Bikeway Improvements. Prioritize bikeway components that link existing separated sections of the system, or that are likely to serve the highest concentration of existing or potential cyclists, particularly in those neighborhoods with low vehicle ownership rates, or that are likely to serve destination areas with the highest demand such as schools, shopping areas, recreational and park areas, and employment centers.
- **MT-4-e** Minimum Bike Lane Widths. Provide not less than 10 feet of street width (five feet for each travel direction) to implement bike lanes for designated Class II bikeways along roadways. Strive for 14 feet of street width (seven feet for each travel direction) for curbside bike lanes where right-of-way is available.
- **MT-4-f** Bike Detection Devices. Include bicycle detection devices when new intersection traffic control signals are installed and strive to retrofit existing traffic control signals to provide bicycle detection and retiming of signal phases to make them more bicycle friendly.
- **MT-4-g** Advocacy for Bike Accommodation. Advocate for the accommodation of bike facilities in new or upgraded State Route interchanges and railroad construction projects, and construction of bicycle crossings of freeways and railroads.

- **MT-4-h** Bicycle Parking Facilities. Promote the installation of bicycle locking racks and bicycle parking facilities at public buildings, transit facilities, public and private parking lots, and recreational facilities. Establish standards for bicycle parking in the Development Code.
- **MT-4-i** Bicycling and Public Transportation. Promote the integration of bicycling with other forms of transportation, including public transit. Continue to provide bike racks or space for bicycles on [Fresno Area Express (FAX)] buses.
- **MT-4-j** Street Maintenance for Bicycle Safety. Provide regular sweeping and other necessary maintenance to clear bikeways of dirt, glass, gravel, and other debris and maintain the integrity of the bicycling network.
- **MT-4-k** Bicycle Safety, Awareness, and Education. Promote bicycle ridership by providing secure bicycle facilities, promoting traffic safety awareness for both bicyclists and motorists, promoting the air quality benefits, promoting non-renewable energy savings, and promoting the public health benefits of physical activity.

MT-5 Objective: Establish a well-integrated network of pedestrian facilities to accommodate safe, convenient, practical, and inviting travel by walking, including for those with physical mobility and vision impairments.

- **MT-5-a** Sidewalk Development. Pursue funding and implement standards for development of sidewalks on public streets, with priority given to meeting the needs of persons with physical and vision limitations; providing safe routes to school; completing pedestrian improvements in established neighborhoods with lower vehicle ownership rates; or providing pedestrian access to public transportation routes.
- **MT-5-b** Sidewalk Requirements. Assure adequate access for pedestrians and people with disabilities in new residential developments per adopted City policies, consistent with the California Building Code and the Americans with Disabilities Act.
- **MT-5-c** New Subdivision Design. Do not approve new single-family residential subdivisions with lots that front and access onto a major roadway, unless the City Traffic Engineer determines that no other feasible alternative means of vehicle access can be provided and that sufficient design measures can be implemented, such as an on-site driveway turnaround, landscaped buffering, or an on-street parking lane to assure a desirable and enduring residential environment.

  Commentary: To make this determination, the City Traffic Engineer may require an evaluation of alternative means of access, including frontage roads, backup treatment, and substantial redesign of the subdivision proposal.

- **MT-5-d** Pedestrian Safety. Minimize vehicular and pedestrian conflicts on both major and non-roadways through implementation of traffic access design and control standards addressing street intersections, median island openings and access driveways to facilitate accessibility while reducing congestion and increasing safety. Increase safety and accessibility for pedestrians with vision disabilities through the installation of Accessible Pedestrian Signals at signalized intersections.
- **MT-5-e** Traffic Management in Established Neighborhoods. Establish acceptable design and improvement standards and provide traffic planning assistance to established neighborhoods to identify practical traffic management and calming methods to enhance the pedestrian environment with costs equitably assigned to properties receiving the benefits or generating excessive vehicle traffic.
- **MT-5-f** Modifications to Street Standards. Continue to evaluate and adopt modifications to City street standards to achieve overall objectives of providing good access and travel opportunities while calming traffic, promoting pedestrian and other transportation options, and reducing the amount of land devoted to streets.

MT-6 Objective: Establish a network of multi-purpose pedestrian and bicycle paths, as well as limited access trails, to link residential areas to local and regional open spaces and recreation areas and urban Activity Centers in order to enhance Fresno's recreational amenities and alternative transportation options.

- **MT-6-a** Link Residences to Destinations. Design a pedestrian and bicycle path network that links residential areas with Activity Centers, such as parks and recreational facilities, educational institutions, employment centers, cultural sites, and other focal points of the City environment.
- **MT-6-b** Multi-Agency Planning for Paths and Trail System. Continue to participate in multi-agency planning and implementation partnerships for the coordinated development of the Fresno-Clovis Metropolitan Area planned path and trail system and with Madera County for the San Joaquin River Parkway trail system.
- **MT-6-c** Link Paths and Trails and Recreational Facilities. Strive to provide path or trail connections to recreational facilities, including parks and community centers where appropriate, and give priority to pathway improvements within neighborhoods characterized by lower vehicle ownership rates and lower per capita rates of parks and public open space.
- **MT-6-d** Link Paths and Trails and Cultural Resources. Strive to designate and implement paths and trails to pass by environmental amenities, historic sites, and other cultural resources, where appropriate, and provide informational signage or other interpretation of those resources to the public.

- **MT-6-e** Utilize Public Rights of Way. Pursue the attainment of path and trail corridors within abandoned railroad rights-of-way, canal alignments, PG&E transmission tower easements, limited access streets (Expressways, freeways), riverbottom/bluff areas, or other such rights-of- ways. Offer existing easements and rights-of-way to local agencies before selling them to private parties.
- **MT-6-f** Path and Trail Designation Process. Develop a network of multipurpose path and trail corridors by using the Official Plan Line process or other processes as provided by the Development Code to obtain appropriate linear rights-of-way along riparian corridors, drainage and irrigation easements, utility easements, abandoned railroad rights-of-way, and major street corridors.
- **MT-6-g** Path and Trail Development. Require all projects to incorporate planned multi-purpose path and trail development standards and corridor linkages consistent with the General Plan, applicable law and case-by-case determinations as a condition of project approval.

  Commentary: This should be done pursuant to Figure MT-2: Paths and Trails, and the adopted BMP, as may amended.

- **MT-6-h** Preference for Public Ownership. Avoid path and trail alignments that involve private ownership of sections of public path or trail right-of-way. Use the Director Determination process, if necessary, to adjust planned path or trail rights-of-way to avoid these situations by realigning along more visible, publicly owned routes.
- **MT-6-i** Path and Trail Design Standards. Designate and design paths and trails in accordance with design standards established by the City that give consideration to all path and trail users (consistent with design, terrain and habitat limitations) and provide for appropriate widths, surfacing, drainage, design speed, barriers, fences, signage, visibility, intersections, bridges, and street cleaning.

  Commentary: Trail improvements and characteristics (e.g. accessibility, continuity, width and location, and surface treatment) within the Fancher Creek water conveyance and riparian corridor, and other alignments immediately adjacent to existing or planned residential land, will be determined by the City Council after providing for appropriate public participation.

- **MT-6-j** Variety in Path and Trail Design. Provide for different levels and types of usable pedestrian and bicycle corridors, including broad, shaded sidewalks; jogging paths; paved and all terrain bicycle paths; through block passageways; and hiking trails. Where a designated multipurpose path route is adjacent to a public right-of-way which accommodates bike lane, allow for flexibility in path design, so that bike lanes may be substituted for the bicycle component of the multipurpose path where it is safe and appropriate to do so.

Commentary: This should be done pursuant to Figure MT-2: Paths and Trails, and the adopted BMP, as may amended.

- **MT-6-k** Path and Trail Buffers. Use landscaping with appropriate and adequate physical and visual barriers (e.g., masonry walls, wrought iron, or square-tube fencing) to screen path and trail rights-of ways and separate paths and trails from mining operations, drainage facilities, and similar locations as warranted.
- **MT-6-l** Environmentally Sensitive Path and Trail Design. Develop paths and trails with minimum environmental impact by taking the following actions:
    - Surface paths and trails with materials that are conducive to maintenance and safe travel, choosing materials that blend in with the surrounding area;
    - Design paths and trails to follow contour lines where the least amount of grading (fewest cuts and fills) and least disturbance of the surrounding habitat will occur;
    - Beautify path and trail rights-of-way in a manner consistent with intended use, safety, and maintenance;
    - Use landscaping to stabilize slopes, create physical or visual barriers, and provide shaded areas; and
    - Preserve and incorporate native plant species into the landscaping.
- **MT-6-m** Path and Trail Crossings. Limit vehicle access, to the extent feasible, where paths or trails are designated parallel and adjacent to roadways, with consideration given to other transportation, land use, and site design priorities and constraints.
- **MT-6-n** Emergency Vehicle Access along Paths and Trails. Provide points of emergency vehicle access within the path and trail corridors, via parking areas, service roads, emergency access gates in fencing, and firebreaks.

MT-7 Objective: Pursue a variety of funding sources to maximize implementation and development of the City's path and trail system.

- **MT-7-a** Urban Path and Trail Development Funds. Continue to seek grants and other funding sources for trail construction and maintenance, and support the enactment of State and federal legislation that will expand urban path and trail development funds.
- **MT-7-b** Supporting Nonprofit Organizations. Support and assist nonprofit organizations whose purpose or charter is to promote and support public path and trail construction and maintenance. Establish an "Adopt a Path/Trail" program that allows private entities to maintain segments.

- **MT-7-c** Citywide Funding Program for Path and Trail Network. Strive to establish an equitable citywide funding program for construction and maintenance of the path and trail network, in order to:
    - Acquire right-of-way needed for paths and trails in already developed neighborhoods and other areas, as identified in community plans, Specific Plans, and neighborhood plans;
    - Reimburse developers for public path and trail development costs that they may incur in excess of the trail cost attributable to the impact of their development project (this may require a citywide nexus study); and
    - Seek funding sources to add to and adequately maintain the citywide path and trail network.

Parks, Open Space, and Schools Element

The Parks, Open Space, and Schools Element discusses guidance for a broad range of open spaces and community facilities in Fresno, including trails, greenways, and parkways. A significant issue addressed by this element is the shortage of parks and recreation space in many areas of the City. Several portions of this element relate to pedestrians and bicyclists.

POSS-3 Objective: Ensure that park and recreational facilities make the most efficient use of land; that they are designed and managed to provide for the entire Fresno community; and that they represent positive examples of design and energy conservation.

- **POSS-3-b** Park Location and Walking Distance. Site Pocket and Neighborhood Parks within a half-mile walking distance of new residential development.
- **POSS-3-c** Link Parks with Walkways. Link public open space to adjacent, schools, and residential uses and Activity Centers through a series of landscaped linear walkways and bikeways that enhance and encourage pedestrian use.
- **POSS-3-d** Sidewalks to Connect Neighborhoods. Sidewalks should be designed for internal neighborhood circulation, and to connect neighborhoods to other residential areas, parks, community trails, shopping, and major streets.

POSS-7 Objective: Support the San Joaquin River Conservancy in its collaborative, multiagency efforts to develop the San Joaquin River Parkway.

- **POSS-7-h** Interlink City and San Joaquin River Parkway Trail Networks. Strive to connect the parkway trail network to other trails in the vicinity, in order to create a community and regional

trail system that offers a variety of different route combinations and enhances public access to the parkway.

Healthy Communities Element

The Healthy Communities Element of the City of Fresno General Plan discusses key issues affecting the health of Fresno citizens. Included in this element is a discussion of the benefits of walking and bicycling to public health.

HC-2 Objective: Create complete, well-structured, and healthy neighborhoods and transportation systems.

- **HC-2-a** Healthy Neighborhoods. Promote the design of Complete Neighborhoods whose physical layout and land use mix allow for walking to local stores and services, biking, and transit use; foster community pride; enhance neighborhood identity; encourage public safety; are family-friendly; and address the needs of residents of all ages and abilities.
- **HC-2-d** Mobility for Carless Population. Improve multi-modal mobility for populations that do not have access to a car by connecting neighborhoods to major destinations, including parks; civic facilities; educational institutions; medical facilities; employment centers; shopping destinations; and recreation areas.
- **HC-2-e** Bike and Pedestrian Network. Continue to promote alternative modes of transportation through development and maintenance of a citywide pedestrian and bicycle network.

HC-6 Objective: Improve access to schools and their facilities for the community.

- **HC-6-a** Safe Routes to Schools. Continue to improve the conditions for youth walking and bicycling in the areas surrounding schools by working with the school districts including Fresno USD, Clovis USD, Central USD, Sanger USD, and Washington Union USD, as well as California State University, Fresno, Fresno Pacific University, and State Center Community College District to implement a safe routes to school program. Prioritize identified safe routes to school infrastructure improvements in annual transportation improvement budgets.

Other City Plans and Documents

Several other City, regional, and state plans and other documents contain goals and policies relevant to the Fresno ATP. These plans are listed below and summarized in Appendix C., Relationship to Other Plans.

City of Fresno Bicycle, Pedestrian, and Trails Master Plan (2010)

The City of Fresno Public Works Department produced the Bicycle, Pedestrian, and Trails Master Plan (BMP) in 2010, updating the 2003 Bicycle Transportation Plan and addressing the implementation of bicycle facilities in accordance with the 2025 Fresno General Plan. The BMP included all of the elements necessary to qualify for Bicycle Transportation Account (BTA) funds as required by the California Streets and Highways Code Section 891.2. The BTA has been superseded by the Active Transportation Program. The Active Transportation Plan builds upon and expands the BMP to meet the requirements of the Active Transportation Program.

City of Fresno Standard Specifications (2016)

City of Fresno Standard Specifications contain specifications for sidewalks and multi-purpose trails and several cross-section standards applicable to on-street bike lanes and striping on City roadways.

- Section 14 provides details of sidewalk construction, including specification of sidewalk pattern by property zoning.
- Section 18 provides guidelines for proposed bike lane projects within existing streets. These guidelines include processes for consideration of elimination of parking, striping, and signage. They also specify that consideration be given to 5-foot minimum width of bike lanes.
- Sections 23-1.18 through 23-1.21 provide details of pedestrian signals, push buttons, and audible signals.

Other sections also include details relevant to sidewalk and bikeway construction. However, not all Standard Specifications for bicycle facilities are included in City of Fresno Standard Specifications and Drawings; there are additional Standard Specifications for bike lanes, signs and markings, and bike lane hazard markings. Chapter 1000 of the Caltrans Highway Design Manual and the Manual on Uniform Traffic Control Devices, California edition, provides guidance regarding Class III (bike routes) and specific details concerning Class I (bike paths) and Class II (bike lanes) not covered in the City Standard Specifications.

City of Fresno Standard Drawings (2016)

The City of Fresno Standard Drawings define standards applicable to sidewalks, Class I bike paths, on-street bike lanes, and striping on City roadways. These drawings include

- P-5: Construction Details for Concrete Sidewalk, Curb & Gutter
- P-7: Curvilinear Sidewalk
- P-24 to P-25: Street Intersections
- P-51 to P-57: Street Cross Sections
- P-58 to P-61: Multi-Purpose Trails
- P-69 to P-70: Street Intersection Detail
- P-78: Major Street Connections for Local Streets and Street Type Approaches [includes bike lane striping]
- P-79: Typical Bike Lane Cross-Sections
- P-80: Bike Lane Signs and Markings
- P-82: High Visibility Crosswalk
- E-14: Signal Lights Loop Detector Placement [includes bicycle loop detectors]

Other sections also include details relevant to sidewalk and bikeway construction. However, not all Standard Specifications for bicycle facilities are included in City of Fresno Standard Specifications and Drawings, as discussed above.

Municipal Code and Charter of Fresno, California (2016)

The *Municipal Code and Charter of Fresno* is a compilation of all of the City of Fresno's ordinances, codified into regulations. In the code, regulations are grouped by subject matter into chapters, each of which is subdivided into articles, which, in turn, are subdivided into sections. With a few minor exceptions, most regulations concerning pedestrian and bicycle planning and riding can be found in Chapter 12, "Land Use Planning and Zoning," Chapter 13, "Sidewalks, Streets, Parkways, and Underground Utility Districts," Chapter 14, "Vehicles and Traffic," and Chapter 15, "Citywide Development Code."

The section with direct applicability to the ATP is 15-2429, Bicycle Parking:

Short-Term Bicycle Parking. Short-term bicycle parking shall be provided in order to serve shoppers, customers, messengers, guests, and other visitors to a site who generally stay for two hours or less.

1. **Requirement Thresholds.** Short-term parking shall be provided when any of the following occur:
    a. New development;
    b. The demolition and reconstruction of a site;
    c. A new building on a developed site when the new building is more than 300 square feet. The 300 square feet shall be cumulative from the date of adoption of this Code;

d. Building additions to existing buildings that expand the existing habitable floor area by at least 20 percent, or 2,500 square feet, whichever is less, not including Single Unit Dwellings or Duplexes. The addition and/or expansion shall be cumulative from the date of adoption of this Code;

e. There is an addition of 10 vehicle parking stalls or more;

f. A Discretionary Permit is required;

g. There is a Change in Occupancy as defined by the Building Code; or,

h. If required per California Green Building Standards Code, as may be amended.

2. **Number of Spaces Required.** Refer to Table 15-2429-D. 3. Location.

a. Short-term bicycle parking shall be located outside of the public right-of-way and walkways and as close to the primary entrance as vehicle parking, excepting Accessible Parking stalls, or within 35 feet of a main entrance to the building it serves, whichever is closer.

b. **Existing Shopping Centers/Multiple Tenants.** In centers with multiple tenants, where bicycle parking becomes required because of a discretionary permit request or a Change in Occupancy, the number of stalls shall be determined by the need of the subject tenant space. Parking shall be conspicuously located and shall be visible from the tenant space.

c. **New Shopping Centers/Multiple Tenants.** In centers with multiple tenants, bicycle parking shall be distributed throughout the center. Parking shall be conspicuously located and shall be visible from tenant spaces. While bicycle parking cannot always be within 35 feet of all tenants, it shall be located as to minimize the distance to tenant spaces to the greatest extent feasible. Satellite pads shall provide separate bicycle parking if necessary.

d. **Mixed-Use Districts or Buildings Built Proximate to the Front Property Line.** Bicycle parking may be located within the public right-of-way with approval from the Public Works Department, provided an unobstructed sidewalk width clearance of six feet is maintained for pedestrians.

4. **Vehicle Parking Reduction.** In an existing development a bicycle parking corral may replace existing vehicle parking stalls. Should a bicycle corral cause a reduction in the number of vehicle parking spaces to less than what is prescribed in this Code, an exemption (i.e., Variance or Deviation) for the reduced vehicle parking shall not be required. This reduction shall not exceed three vehicle parking stalls for centers less than 10 acres in area, and six for centers greater than 10 acres.

5. **Anchoring and Security.**

a. For each parking space required, a stationary, securely anchored rack shall be provided. Racks shall be either an inverted "U", a bike hitch, a swerve rack, or per the City's qualified product list, maintained by DARM. Racks may serve multiple bicycle parking spaces.

6. **Size and Accessibility.**

a. Each bicycle parking space shall be a minimum of 30 inches in width and eight feet in length and shall be accessible without moving another bicycle.

b. At least 30 inches of clearance shall be provided between bicycle parking spaces and adjacent walls, poles, landscaping, street furniture, drive aisles, and pedestrian ways and at least five feet from vehicle parking spaces to allow for the maneuvering of bikes.

c. Overhead clearance shall be a minimum of seven feet.

d. **Multiple Rows.** A minimum five foot aisle between each row of bicycle parking shall be provided for bicycle maneuvering beside or between each row, when multiple rows are proposed.

B. **Long-Term Bicycle Parking.** Long-term bicycle parking shall be provided in order to serve employees, students, residents, commuters, and others who generally stay at a site for longer than two hours.

1. **Requirement Thresholds.** Long-Term Bicycle Parking shall be provided when required by the California Green Building Standards Code, as may be amended.

2. **Number of Spaces Required.** Refer to Table 15-2429-D.

3. **Location.**

a. Long-term bicycle parking must be located on the same lot as the use it serves, unless an alternative agreement is approved to the satisfaction of the Director. The signed statement shall be in the form of a covenant prepared by the City, and shall be recorded with the County Recorder.

b. In parking garages, long-term bicycle parking shall be proximate to the entrance of the garage.

4. **Covered Stalls.** Covered stalls shall be:

a. Inside buildings, in a bike room or clearly designated area;

b. Under roof overhangs or awnings;

c. In bicycle lockers; or

d. Within or under other structures.

5. **Anchoring and Security.** Long-term bicycle parking must be in:

a. A permanently anchored rack or stand inside a building. Racks shall be either an inverted "U", a bike hitch, a swerve rack, or per the City's qualified product list. Racks may serve multiple bicycle parking spaces;

b. An enclosed permanently anchored bicycle locker; or

c. A fenced, covered, locked, or guarded bicycle storage area or room.

6. **Size and Accessibility.**

a. Each bicycle parking space shall be a minimum of 30 inches in width and six feet in length and shall be accessible without moving another bicycle.

b. At least 30 inches of clearance shall be provided between bicycle parking spaces and adjacent walls, poles, landscaping, street furniture, drive aisles, and pedestrian ways and at least five feet from vehicle parking spaces.

7. **Vehicle Parking Reduction.** Should an applicant seek to install bicycle lockers for an existing development, they may reduce vehicle parking to less than the prescribed number in this Code in order to accommodate them. In such an instance, an exemption (i.e., Variance or Deviation) for the reduced vehicle parking shall not be required.

C. **Showers and Changing Rooms.** In the O District, showers and changing room(s) for employees that engage in active modes of transportation are required per the following standards.

1. **Requirement Thresholds.** New office development greater than 20,000 square feet. The 20,000 square foot minimum applies to single buildings.

2. **Number of Showers Required.** Refer to Table 15-2429-C-2.

TABLE 15-2429-C-2: EMPLOYEE SHOWERS REQUIRED FOR NEW CONSTRUCTION

Land Use Classification	Showers and Changing Rooms Required
Office	Less than 20,000 sq. ft.: None More than 20,000 sq. ft.: 1

D. **Number of Spaces Required.** The following table identifies the number of short-term and long-term bicycle parking stalls required per use.

TABLE 15-2429-D: REQUIRED ON-SITE BICYCLE PARKING SPACES

Land Use Classification	Short-Term Spaces	Long-Term Spaces
Residential Use Classifications		
Multi-Family (more than 15 units)	None	1 per 15 units. Not required if units provide individual garages
Dormitory/student housing	None	1 per 4 residents. Not required if units provide individual garages
Public and Semi-Public Use Classifications		
Schools (e.g., public, private, charter)	Per the California Green Building Standards	Per the California Green Building Standards Code
Colleges and Trade Schools, Public or Private (excluding dormitories, see above)	1 per 10,000 sq. ft. of building area	1 per 20,000 square feet of building area

Community and Religious Assembly & Cultural Institutions	2 per 3,000 sq. ft. of assembly area Or Per the California Green Building Standards Code, whichever is greater	Per the California Green Building Standards Code
Stadiums	Per the California Green Building Standards Code	Per the California Green Building Standards
Parks and Open Space (excluding pocket parks)	Per project review	None
Commercial Use Classifications		
Retail Sales and Service	2, or 1 per 10,000 sq. ft. of net building area whichever is greater Or Per the California Green Building Standards, whichever is greater	Per the California Green Building Standards Code
Office	2, or 1 per 25,000 sq. ft. of net building area whichever is greater Or Per the California Green Building Standards Code, whichever is greater	Per the California Green Building Standards
Hotels/Motels	Per the California Green Building Standards Code	Per the California Green Building Standards Code
Parking Structures	None	1 space per 75 vehicle spaces
Employment Use Classifications		
Manufacturing and Production	Per the California Green Building Standards Code	Per the California Green Building Standards Code
Warehousing and Storage	Per the California Green Building Standards Code	Per the California Green Building Standards Code
Personal Storage	None	None

City of Fresno Traffic Impact Study Report Guidelines (2009)

The City of Fresno Traffic Impact Study (TIS) Report Guidelines detail the steps necessary for a traffic impact analysis in the City. The Traffic Engineering Manager determines when a TIS is necessary, but, typically, TIS's are necessary when one of the following criteria is met:

- When project-generated traffic is expected to be greater than one hundred (100) vehicle trips during any peak hour.

- When a project includes a General Plan Amendment (GPA) which changes the land use.
- When the project traffic will substantially affect an intersection or roadway segment already identified as operating at an unacceptable level of service.
- When the project will substantially change the off-site transportation system or connection to it as determined by the Traffic Engineering Manager.

In relation to pedestrians and bicyclists, TIS's should identify any existing and planned facilities. The guidelines require that TIS's identify a project's consistency with general plan policies relating to alternative transportation in addition to those relating to vehicular level of service. Generally, these policies strive to decrease auto-dependence in Fresno through transit-oriented development concepts and to provide safe conditions for pedestrians and bicyclists.

Herndon Avenue Class I Bike Trail Feasibility Study (2015)

The Herndon Avenue Class I Bike Trail Feasibility Study recommended necessary construction improvements, utility impacts, and right-of-way impacts for a new Class I Bike Trail corridor and the rehabilitation of existing trail segments along Herndon Avenue. Measure C projects along Herndon Avenue will widen the expressway while improving and adding bike trails. Costs and feasibility were assessed for 11 trail segments. The total cost estimated for the trail was $18,841,900. The ATP includes this trail.

City of Fresno Americans with Disabilities Act Transition Plan for the Public Right of Way (2016)

The City of Fresno Americans with Disabilities Act (ADA) Transition Plan for the Public Right of Way (ROW) was created to ensure that the City maintains accessible paths of travel in the ROW for people with disabilities. The plan includes requirements for curb ramps during new construction of pedestrian facilities and policies for retrofitting sidewalks with missing or deficient ramps. The plan also includes policies for repairing sidewalks and filling gaps in the sidewalk network as well as retrofitting and maintaining accessible pedestrian signals. The sidewalk discussion is excerpted below:

COF [City of Fresno] has implemented a multifaceted approach to remove obstacles and to improve the accessibility of its existing sidewalks:

- *Immediate (96 working hours) temporary mitigating measures, such as concrete grinding or patching*
- *Assessment and prioritization of locations determined to be the City responsibility*

- *Noticing property owners of their obligation to repair sidewalks*
- *Waiving of permitting fees for property owners repairing sidewalks*
- *Gap fill projects within the existing sidewalk network*
- *Ensuring the correct design and build-out in new construction standards*

DPW addresses sidewalk barriers primarily through responding to public complaints and a modest inspection unit. When DPW receives a report of a barrier to access on the sidewalk, every effort is made to respond to the location within 96 working hours to assess the location and conduct temporary mitigating measures, such as concrete grinding or patching. The responding Concrete Repair crew assesses the condition of the sidewalk and if the location is determined to be the City responsibility under FMC 13-217 it is logged and prioritized for future concrete repair.

The Concrete Repair Program prioritizes areas for repair in accordance with the locations in Title II of the ADA: "priority to walkways serving entities covered by the Act, including State and local government offices and facilities, transportation, public accommodations and employers, followed by walkways serving other areas." Those sidewalks identified with the greatest number of community elements are repaired first.

When sidewalk barriers are determined to be the City responsibility the Public Works Director or designee uses the following considerations to prioritize concrete repair needs:

- *Severity of damage to or non-compliance of the sidewalk surface*
    - *Raises deeper and/or wider than 0.5"*
    - *Less than 4' of accessible pedestrian pathway*
    - *Greater than 0.5" vertical or horizontal displacement/upheaval*
    - *Greater than 2.5% horizontal or vertical slope across the path of travel*
- *Impact on the adjacent community based on proximity to:*
    - *Government offices and facilities*
    - *Transportation*
    - *Public accommodations and employers*
    - *Facilities serving individuals with disabilities*
- *Quantity of damaged or non-compliant sidewalk surfaces within the vicinity*
- *Severity of drainage issues within the gutter*

In such instances that the sidewalks are determined not to be the City's responsibility to repair under FMC 13-217 the COF may provide the property owner with a notice of their obligation to repair. The property owners may obtain a no-fee permit for reconstruction of the sidewalk; work must be conducted by a licensed and bonded contractor.

A gap in the existing pedestrian network is an area or neighborhood in which there are incomplete or missing segments of sidewalk adjacent to existing sidewalks. An area in which there are no sidewalks throughout the entire neighborhood or only on one side of the street is not considered to be a gap in the existing pedestrian network.

COF addresses gaps within the existing pedestrian network primarily through the Development Code, which conditions that sidewalks must be constructed when the property is developed. In instances in which there is little likelihood of future development and gaps within the existing sidewalk system are determined to be barriers to access, the Public Works Director or designee uses the following considerations to prioritize sidewalk construction needs:

- *Public complaint of gap in the existing circulation system*
- *Unlikelihood of future development of the adjacent property*
- *Absence of alternative accessible path*
- *Impact on the adjacent community based on proximity to:*
    - *Government offices and facilities*
    - *Transportation*
    - *Public accommodations and employers*
- *Availability of Right of Way*

The ADA Infrastructure program does not construct new sidewalk or circulation paths. The purpose is solely to remove barriers in the existing pedestrian network. Those sidewalks identified with the greatest number of community elements are constructed first.

City of Fresno Community, Specific, and Neighborhood Plans

The City of Fresno has created community, specific, and neighborhood plans for 22 plan areas within the City. Many include specific recommendations for street and trail improvements for pedestrians and bicycles. Some also include policies regarding cleaning of bikeways, lighting, and bicycle parking, including parking at transit stations and park-and-ride lots. Others encourage pedestrian access to public schools through orientation to public streets and pedestrian pathways connecting to neighborhoods.

Policy D-7-a of the General Plan will change the community plans significantly. The policy states:

Amend or repeal the Community and Specific Plans as listed below. As appropriate, relocate specific street setback requirements found in the various plans to the Development Code. Repeal the Local Planning and Procedures Ordinance (LPPO) after adoption of the General Plan.

To Be Amended:

- Bullard Community Plan (becomes Pinedale Neighborhood Plan)
- Sierra Sky Park Land Use Policy Plan (for consistency with the Airport Land Use Commission's Sierra Sky Park Plan)
- Tower District Specific Plan
- Butler-Willow Specific Plan
- North Avenue Industrial Plan
- Sun Garden Acres Specific Plan
- Hoover Community Plan (becomes El Dorado Park Neighborhood Plan)

To Be Repealed:

- West Area Community Plan
- Roosevelt Community Plan
- Fulton/Lowell Specific Plan
- Woodward Park Community Plan
- Central Area Community Plan
- McLane Community Plan
- Fresno-High Roeding Plan
- Yosemite School Area Specific Plan
- Dakota-First Street Specific Plan
- Edison Community Plan
- Civic Center Master Plan
- Highway City Specific Plan

Pedestrian Safety Assessment

The University of California, Berkeley, Institute of Transportation Studies conducted a Pedestrian Safety Assessment for the City of Fresno in 2009. The assessment analyzed pedestrian-related programs, practices, and policies in Fresno by reviewing relevant data, holding interviews, and conducting site visits. Fresno's programs, practices, and policies were then compared to best practices in cities of comparable size and population. The recommendations from this assessment are categorized into three groups:

- Key strengths (areas where the City is exceeding national best practices)

- Enhancement Areas (where the City is meeting best practices)
- Opportunity Areas (where the City is not meeting best practices).

Across all three areas, additional improvements to policies could benefit pedestrians. Since the time of the assessment, some of the recommendations have been addressed.

The recommendations from the Pedestrian Safety Assessment are included in Appendix X. Those recommendations that have been completed are noted.

Key Strengths

The City exceeded current best practices in many areas. However, there are additional ways to continue to improve pedestrian infrastructure. These key strengths, with potential improvements, are listed below.

Recommended improvements to policies:

- Consider opportunities to improve pedestrian facilities to comply fully with the Americans with Disabilities Act (ADA) requirements and update the ADA transition plan for streets and sidewalks (COMPLETE)
- Adopt requirements and policies for street tree planting

Recommended improvements to programs:

- Establish a formal citywide Safe Routes to School program, conducting ongoing education and enforcement campaigns

Recommended technical and engineering improvements:

- Conduct an inventory of sidewalks, informal pathways, and key pedestrian opportunity areas

Enhancement Areas

The City met current best practices in many areas. These areas, with potential improvements to exceed best practices, are listed below.

Recommended improvements to policies:

- Develop pedestrian-oriented speed limits and speed surveys
- Develop pedestrian-oriented traffic signal and stop sign warrants (COMPLETE)
- Adopt a proactive approach to institutional coordination

- Develop policies to support mixed-uses and pedestrian orientation (COMPLETE)
- Include pedestrian accommodation in Specific Plans, Redevelopment Areas, and Overlay Zones (COMPLETE)
- Adopt a Newspaper Rack Ordinance (IN PROCESS)
- Adopt Street Furniture Requirements
- Adopt Bicycling Parking Requirements (COMPLETE)
- Adopt Open Space Requirements (COMPLETE)
- Accommodate pedestrians in new developments (COMPLETE)
- Adopt a Transit First Policy
- Consider establishing Business Improvement Districts (BID) in emerging pedestrian nodes

Recommended improvements to programs:

- Develop active Pedestrian Safety Program and Walking Audits
- Encourage development of neighborhood-sized schools and neighborhood-focused sports/recreation fields
- Implement sustained enforcement efforts
- Technical and engineering enhancements (ONGOING)
- Perform routine collection of pedestrian volumes
- Include signs as part of the Asset Management Program and continue to replace non-compliant signs (COMPLETE)

Recommended improvements to public involvement and education:

- Develop a specific website and phone number for pedestrian concerns (COMPLETE)
- Coordinate with local health agencies (ONGOING)

Opportunity Areas

The City did not meet current best practices in several areas. These areas, with potential improvements to meet or exceed best practices, are listed below.

Recommended improvements to policies:

- Develop policies for crosswalk installation, removal, and enhancement
- Provide specific provision for pedestrian districts in the General Plan
- Adopt a Pedestrian Master Plan (INCLUDED IN THIS DOCUMENT)

Recommended improvements to programs:

- Develop traffic calming programs and procedures
- Develop a program to provide more accessibility for the City's historic sites
- Consider including a Pedestrian/Bicycle Coordinator position in the City staff
- Implement Transportation Demand Management (TDM) Programs and/or a Commuter Benefits Ordinance
- Create a pedestrian advisory committee (separate from bicycle advisory committee)

Local and Regional Plans and Documents

This section discusses several local documents that will affect the implementation of future pedestrian and bicycle transportation facilities.

Fresno Council of Governments Regional Transportation Plan and Sustainable Communities Strategy (2014)

The plan's bicycle and pedestrian policies are described extensively in the Non-Motorized Transportation Element. An important component of the 2014 RTP/SCS is a commitment to complete streets policies and implementation measures. The plan seeks to have every transportation project make the street network safer for pedestrians and bicyclists as well as transit users and drivers. The plan includes a notable increase in the regional active transportation network, though proposed funding is still a relatively small proportion, 2.52%. Additionally, the Policy Element contains a number of goals, with supporting objectives and policies, relating directly to walking and bicycling. These goals include:

- An efficient, safe, integrated, multimodal transportation system
- Maximize bicycling and walking through their recognition and integration as valid and healthy transportation modes in transportation planning activities
- Safe, convenient, and continuous routes for bicyclists and pedestrians of all types which interface with and complement a multimodal transportation system
- Improved bicycle and pedestrian safety through education and enforcement.
- Increased development of the regional bikeways system, related facilities, and pedestrian facilities by maximizing funding opportunities.

The ATP is consistent with the RTP/SCS.

Bus Rapid Transit Master Plan (2008)

The Bus Rapid Transit (BRT) Master Plan, prepared for the Fresno COG, evaluates several potential BRT corridors throughout Fresno. The BRT Master Plan identifies infrastructure that could be implemented to encourage pedestrian and bicycle access to BRT and to reduce conflicts between BRT and bicyclists and pedestrians, including median transit lanes, two-phase traffic signals, improved crosswalks, enhanced sidewalks, and curb popouts. The plan recommends implementing transportation impact fees that are sensitive to multiple modes such that development that is friendly to alternative modes should have lower impact fees than that which is auto-dominated. The plan also identifies bicycle parking as part of a moderate investment BRT system; although bicycle parking may not be necessary as part of the basic BRT system, the accommodation of bicycles at transit stations is likely to increase ridership.

Fresno Area Express Short-Range Transit Plan (2013)

The Short-Range Transit Plan (SRTP) discusses Fresno Area Express' (FAX) plans for the continuation and expansion of services over the next five years. The SRTP discusses several plans related to bicycling, including:

- Continuing retrofit of three-position bike racks
- Adding bike lockers at CSU Fresno and other locations as funds are available
- Support for integrating transportation and land use to encourage bicycling, walking, and transit

Bicycle and Pedestrian Plans of Adjacent Jurisdictions

The ATP was developed in coordination with and is consistent with the bicycle and pedestrian plans of adjacent jurisdictions, including the City of Clovis Active Transportation Plan that was recently adopted. These plans include:

- City of Clovis Active Transportation Plan (2016)
- Fresno County Regional Bicycle and Recreational Trails Master Plan (2013)
- California State University, Fresno, Active Transportation Plan (2015)

City of Fresno: Downtown Transportation & Infrastructure Study (2007)

The Downtown Transportation and Infrastructure Study examines issues relating to several modes of transportation in Downtown Fresno, including walking and bicycling, and provides recommendations intended to improve the economic and livability conditions of downtown. Its recommendations for pedestrian and bicycle circulation include:

- Improved street crossings
- Signal, enforcement, and infrastructure improvements to increase safety, including traffic calming
- Lighting and wayfinding improvements
- A downtown bicycle network including treatments for safe access into the downtown
- Improved facilities for bike parking providing the preferred type of parking for the intended users (i.e. secure Class 1 facilities, such as lockers for long-term parking by employees and Class 2 bike racks for short-term parking by shoppers and visitors)
- Programs to encourage bicycle use, educate on the benefits and safe practices of bicycling and enforce safe on-street behavior of both bicyclists and motorists

San Joaquin River Parkway Master Plan (2000)

The San Joaquin River Parkway Master Plan, produced by the San Joaquin River Conservancy, acts as a planning document of policies for the San Joaquin River Parkway planning area, an area of approximately 23 miles between State Route 99 and Friant Dam. The Master Plan contains four elements of goals, objectives, policies, and programs: the Natural Resources Element, the Recreational Element, the Mineral Resources Element, and the Plan Implementation Element. The majority of guidelines related to bicycling are located in the Recreational Element. The plan is currently being updated. Key aspects of the plan related to active transportation are discussed below.

Natural Resources Element

The plan indicates that Natural Resources Education and Interpretative Programs should include accommodations for hikers and bicyclists, including interpretive walks and bicycle trails with the appropriate signage since these types of facilities will serve casual visitors to the Parkway. Additionally, programs should include hikes and bicycle rides hosted by agency staff or volunteers.

Recreational Element

The Recreational Element of the San Joaquin River Parkway Master Plan contains several policies related to walking and bicycling:

Recreation Circulation Policies:

- **RCP1:** Participate in and promote coordinated planning efforts by the Conservancy and affected jurisdictions to provide linkages to the regional bicycle and trail systems, and ensure safe conditions for bicyclists on these routes.
- **RCP2:** At such time that individual site improvements are planned, identify the need for bicyclist facilities, including separated bike paths (Class I) and striped bike lanes (Class II), and evaluate impacts of the Parkway improvements on existing and planned bicycle routes and trails in the adjoining urbanized areas. Particular attention should be given to bicycle facility needs and impacts on Friant Road and Herndon Avenue, both of which are high speed expressways along which bicycle routes are planned to be separated from the roadway.

Recreation Design Policies:

- **RDP2:** Provide adequate bicycle locking facilities at key "fixed" recreational and educational facilities for planning area recreational users who man not have a car parked on site for stowing their bicycles.
- **RDP8:** In the event there is not sufficient width to construct a trail as describe above, implement restrictions on vehicular, horse, bicycle, and foot traffic to reduce potential effects from heavy use. Control measures shall include, but would not be limited to, proper trail siting, seasonal trail closures, signage, barriers, and enforcement

Recreation Management

The Recreation Management section provides a number of specifications regarding bikeways and trails within the planning area. This section discusses the perceived role of Class II bike lanes and Class III bike routes in providing continuous access to and from the San Joaquin River Parkway. It identifies the need to address bicycling as a mode of transportation and not just a form of recreation. Finally, it specifies that Parkway trails should be twelve feet wide and include means of communicating appropriate speed control and bicycle dismounting rules.

Fresno County Transportation Authority Measure "C"

Its extension approved by voters on November 7, 2006, Measure "C" is a ½ cent tax applied to retails transactions. Revenues from Measure "C" will go towards transportation improvements in Fresno County until 2027, when it will require a vote of approval for its continuation.

The funding allocation programs specifically finance bicycle facilities through several programs:

- Local Transportation Program
    - The Pedestrian / Trails Facilities Subprogram (3.10% of total Measure "C" funding) provides funding for pedestrian/bicycle trail facilities, signage and striping, Master Plan preparation and updates, and other Program-related facilities and support facilities. Measure "C" specifies certain design criteria for bicycle paths and multi-purpose trails.
    - The Bicycle Facilities Subprogram (0.90% of total Measure "C" funding) provides funding for significant improvements to the existing and planned bicycle system. Eligible projects include Class II bike lanes, signage and striping, Master plan preparation and updates, and other Program-related facilities and support facilities. Measure "C" requires that, to be eligible for Bicycle Facilities Subprogram funds, the City of Fresno prepare a Master Plan for bicycle facilities by January 1, 2012.
    - The Flexible Funding Category of the Local Allocation Subprogram (14.80% of total Measure "C" funding) provides funding for any type of transportation project, including bicycle, trail, and pedestrian projects.
- Alternative Transportation Program
    - The Rail Consolidation Subprogram (6.00% of total Measure "C" funding) specifies that should consolidation of the BNSF tracks occur, the land will revert to the City and County of Fresno for trails, bikeways, and pedestrian facilities.

Additionally, Measure "C" requires that any new highway, expressway, super-arterial, arterial, or collector constructed or reconstructed with Measure "C" funds include accommodations for pedestrian and bicycle travel.

Old Fig Garden Community Transportation Study (2013)

The Fig Garden area is a Fresno County island within the City of Fresno. This study recommended a multimodal transportation framework for the neighborhood, consistent with neighborhood values and priorities. The ATP reflects the bicycle and pedestrian recommendations of this study.

State and Federal Plans and Documents

This section discusses several statewide initiatives and adopted legislation that will affect the implementation of future bicycle transportation facilities.

California Green Building Code

The 2013 California Green Building Standards contain specific requirements for the amount and type of both short-term and long-term bicycle parking. These requirements are referenced by the Municipal Code.

California Assembly Bill 32 & Senate Bill 375

Senate Bill (SB) 375 is the implementation legislation for Assembly Bill (AB) 32. AB 32 requires the reduction of greenhouse gases (GHG) by 28 percent by the year 2020 and by 50 percent by the year 2050. Greenhouse gases are emissions - carbon dioxide chief among them – that accumulate in the atmosphere and trap solar energy in a way that can affect global climate patterns. The largest source of these emissions related to human activity is generated by combustion-powered machinery, internal combustion vehicle engines, and equipment used to generate power and heat. SB 375 tasks metropolitan and regional transportation planning agencies with achieving GHG reductions through their Regional Metropolitan Transportation Plans. The reduction of the use of the automobiles for trip making is one method for reducing GHG emissions. This can be achieved through the use of modes other than the automobile such as walking, bicycling, or using transit.

California Assembly Bill 1358

Assembly Bill 1358 is the Complete Streets Act. It calls for the inclusion of all modes (pedestrian, bicycle, transit, and automobile) into the design of roadways. AB 1358 stipulates that roadways should be accessible by all users.

California Senate Bill 743

Senate Bill 743 changes how transportation impact analysis is performed as part of compliance with the California Environmental Quality Act (CEQA). The new criteria, under development by the Governor's Office of Planning and Research, will promote the development of multimodal transportation networks.

US DOT Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations

In 2010, the United States Department of Transportation (US DOT) issued a policy directive in support of walking and bicycling, encouraging transportation agencies to go beyond minimum standards in fully integrating active transportation into projects. As part of the statement, the US DOT encouraged agencies to adopt similar policy statements in support of walking and bicycling considerations such as:

- Considering walking and bicycling equal with other transportation modes
- Ensuring availability of transportation choices for people of all ages and abilities
- Going beyond minimum design standards
- Integrating bicycling and pedestrian accommodations on new, rehabilitated, and limited access bridges
- Collecting data on walking and bicycling trips
- Setting mode share for walking and bicycling and tracking them over time
- Removing snow from sidewalks and shared use paths
- Improving non-motorized facilities during maintenance projects

US Americans with Disabilities Act

The Americans with Disabilities Act Title III is legislation enacted in 1990 that provides thorough civil liberties protections to individuals with disabilities concerning employment, state and local government services, and access to public accommodations, transportation, and telecommunications. Title III of the Act requires places of public accommodation to be accessible and usable to all people, including those with disabilities. While the letter of the law applies to "public accommodations," the spirit of the law applies not only to public agencies but also to all facilities serving the public, whether publicly or privately funded.

APPENDIX D: BICYCLE ASSESSMENT FINDINGS

The City of Fresno conducted a Bicycle Safety Assessment in 2016. The findings follow the guidance of "A Technical Guide for Conducting Bicycle Safety Assessments for California Communities" published by UC Berkeley Institute of Transportation Studies Technology Transfer Program (2014). Detailed findings are presented below.

Key Strengths

The City exceeded current best practices in many areas. However, there are usually ways to continue to improve. These areas, with potential enhancements, are listed below.

- On-street Bikeway Network Implementation Practices
    - Consider many options when designing bikeways and retrofitting roadways across the City: road diets, parking removal, traffic calming, and level of traffic stress.
- Bike-Friendly Intersections and Interchanges
    - Program signals to bring up walk or bicycle phases automatically.
    - Design loop detectors for bicyclists.
- Bicycling Safety Education Program
    - Hire a dedicated officer to focus on bike safety education for programs such as bike rodeos.
- Sidewalk Bike Riding Ordinance
    - Address children riding on sidewalks and riding the wrong way on sidewalks in sidewalk bike riding ordinance.
- Typical Street Cross Sections and Design Standards
    - Specific recommendations are provided in Chapter 5

- The following areas were identified as strengths, without additional recommended improvements
    - General Plan: Densities and Mixed Use Zones
    - General Plan: Significance Standards for Impact on Bicycling
    - Formal Bicycle Advisory Committee
    - Coordination with Health Agencies
    - Dedications and Improvements Ordinance
    - Complete Streets Policy
    - Bicycle Project Funding

Enhancement Areas

The City met current best practices in many areas. These areas, with potential enhancements to exceed best practices, are listed below.

- Bikeway and Parking Inventory
    - Maintain an inventory of existing bike parking.
    - Keep existing bikeways data up to date
- Existing Bikeway Network
    - Construct bicycle boulevards to divert bicyclists to streets with low vehicle speeds and traffic volumes.
    - Construct buffered bike lanes, cycle tracks, and contra-flow bike lanes to improve the separation between motorists and bicyclists.
- Bike Parking Requirements
    - Currently, bicycle parking is only require to be added to existing developments when new buildings and additions are approved. Develop a program to install parking for existing development or in public right of way.
- Bike-Transit Accommodation
    - Work with FAX to allow people to bring the bike into the bus if rack capacity is full.

- Bike- Supportive Amenities and Wayfinding
    - Install community-wide supportive amenities, such as parking, routing and wayfinding, water fountains, and repair stations.
- Collection of Bicyclist Volumes
    - Collect bicyclist volumes routinely with intersection counts, and develop a GIS database of counts.
- Traffic Calming Program
    - Develop a significant traffic calming program with a dedicated funding source.
- Specific Plans, Overlay Zones, and Redevelopment Zones
    - Develop overlay zones (greenways, bicycle priority areas, etc.).
    - Develop plans that address bicycle access such as park plans, transit plans, or school renovation plans.
- Bicycle Master Plan
    - Update Bicycle Master Plan to address cyclist accommodation on every arterial (PART OF THIS ATP).
- Public Involvement and Feedback Process
    - Bring workshops and materials to public meetings to encourage a wide range of participants in public involvement (PART OF THIS ATP).
- Economic Vitality
    - Develop multiple Business Improvement Districts with progressive downtown or commercial district parking policies to fund bikeway improvements or bike parking such as variable market-based pricing for parking.
- Coordination with Schools
    - Coordinate with existing schools for bicycle improvements and encourage schools to design their sites to encourage biking access.

Opportunity Areas

The City did not meet current best practices in several areas. These areas, with potential enhancements to meet or exceed best practices, are listed below.

- Bicycle Collision History and Collision Reporting Practices
    - Create annual reports, or employ other comprehensive monitoring practices.
- Bicyclist Traffic Control Audit
    - Maintain a full inventory of bicycle facility signs, markings, and signals, preferably in GIS.
- Speed Limits and Speed Surveys
    - Employ comprehensive practices to proactively review speed limits, such a USLIMITS2. Considers traffic calming before raising speed limits on bikeways.
- Development Standards, Site Plan Review, and Traffic Impact Studies
    - Require new developments to consider bicycle access to the site and internal circulation.
- Traffic Impact Fees for Sustainable Transportation
    - Implement traffic impact fee or policy for bicycle infrastructure.
- Bicycle Coordinator
    - Hire a bicycle coordinator on staff.
- Transportation Demand Management (TDM) and Transit Policies
    - Develop a transit-first policy, extensive TDM program, and enforce parking cash-out programs.
- Interagency and Interdepartmental Coordination
    - Identify obstacles to improve interdepartmental coordination.
- Safe Routes to School (SRTS) Program and Grant Funding
    - Develop an ongoing SRTS program and a plan to achieve steady funding for SRTS projects.

- Bike-Oriented Traffic Control
    - Use signals, stop signs, roundabouts, median refuges, or hybrid beacons to help cyclists cross major streets.

Data was not available to fully evaluate the following categories:

- Bikeway facility surfaces
- Bicycle Safety Audits
- Attention to Crossing Barriers
- Bicycle Safety Enforcement
- Coordination with Emergency Response and Transit Providers
- Off-street Bikeway Maintenance and Implementation Process

[This page intentionally left blank]

APPENDIX E: SAFETY EDUCATION PLAN

[This page intentionally left blank]

Bicycle & Pedestrian Safety Education Plan

Prepared for:

City of Fresno

September 2016

RS15-3390

FEHR & PEERS

TABLE OF CONTENTS

Contents

I. INTRODUCTION

The Bicycle and Pedestrian Safety Education Plan is intended to guide the City of Fresno's interactions with the public to make biking and walking safer and more accessible for all residents and visitors. The initial portion of the plan analyzes the city's collision data in order to determine high priority locations and behaviors that need to be addressed to improve safety. This plan also includes specific guidance on implementing safety measures, including stakeholders that should be involved, strategies for outreach, curriculum material, additional resources and opportunities for funding.

II. BICYCLE AND PEDESTRIAN-RELATED COLLISION ANALYSIS

Bicycle Collisions

Figure 1, Figure 2, Figure 3 and **Figure 5** show a breakdown of the collisions in the City of Fresno involving bicyclists between 2009 and 2015. Data was collected from the Transportation Injury Mapping System (TIMS), established by researchers at the Safe Transportation Research and Education Center (SafeTREC). The data presented below reflects collisions occurring within the city limits and does not include collisions in unincorporated areas, such as county islands.

Figure 1 shows the primary cause of collisions involving bicyclists in the City of Fresno, not including unincorporated areas. Bicyclists riding on the wrong side of the road are the number one cause of collisions involving bicyclists, accounting for over ⅓ of collisions. This collision type reveals the following two things about the community:

1. A lack of low-stress roadways for bicyclists, resulting in wrong way riding that increase perceived safety and
2. A lack of educational awareness of bicyclists on safety and rules of the road.

'Wrong side of road' collisions are also common with sidewalk riding, where drivers are not expecting to look in the opposite direction for a conflict when making a turn onto a driveway or side street. Sidewalk riding may also be the result of a lack of proper bicycle facilities and awareness for bicyclists and motorists.

The second most common collision cause, which makes up over ¼ of bicycle-related collisions, is vehicle right of way violations. This may be attributable in large part to a lack of education for motorists on the rights and rules of bicyclists in order to safely share the road.

Figure 2 shows the distribution of collision severity. The majority of bicycle collision result in complaint of pain, with 6% of bicycle collisions, or 18 total collisions, resulting in fatality between 2009 and 2013.

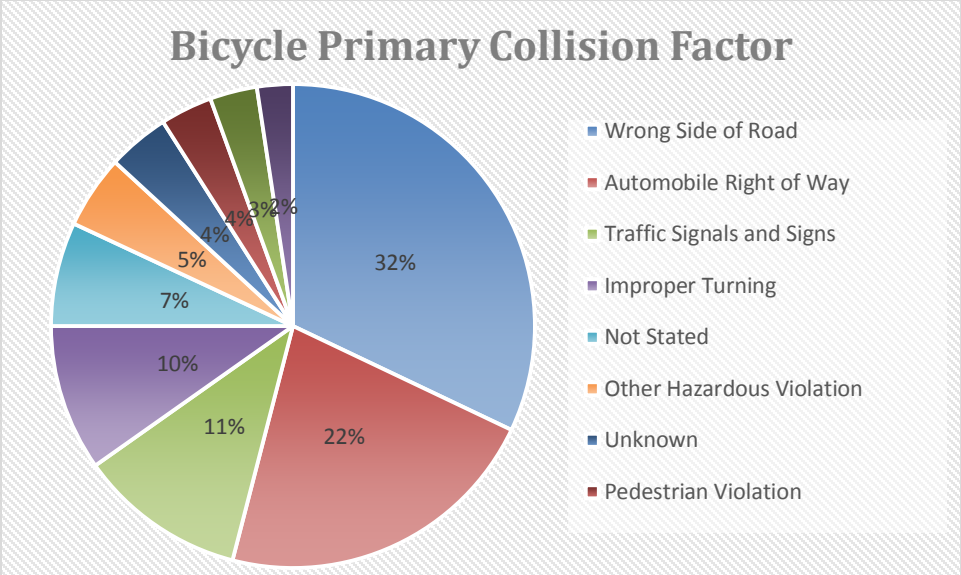


Figure 1: Bicycle- Primary Collision Factor

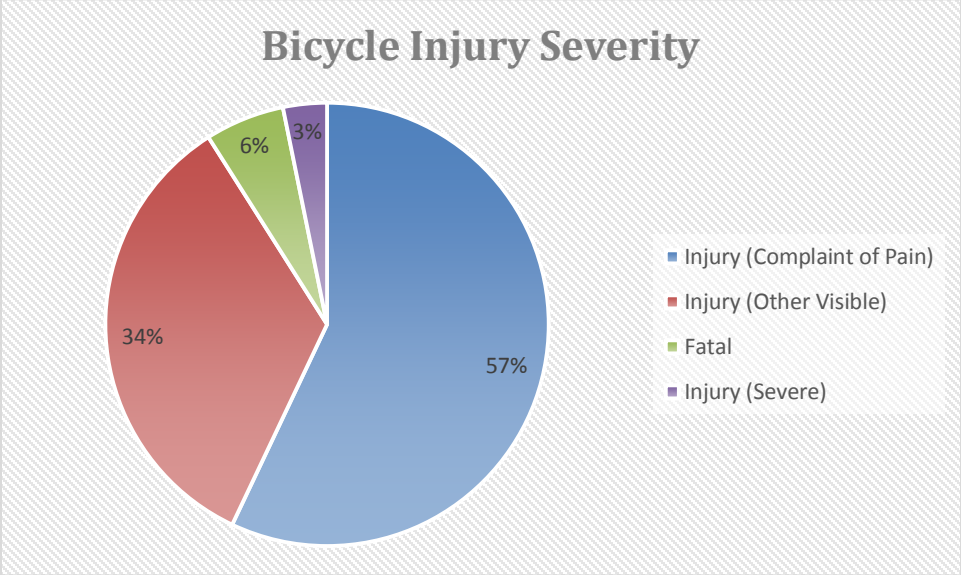


Figure 2: Bicycle- Collision Severity

Figure 3 shows the types of collisions involving bicyclists in the City of Fresno. The most common collision type, a broadside collision, occurs when a motorist collides perpendicularly with a bicycle at an intersection, as graphically displayed in **Figure 4**. Factors that can contribute to this type of collision include poor sightlines, unclear right of way rules such as at four way stops, failure to stop at a signal or stop sign, and misjudgment of speed and distance when looking for gaps in traffic. This type of collision comprises over half of bicycle-related collisions, with the remaining half of collisions divided in small proportions amongst other collision types.

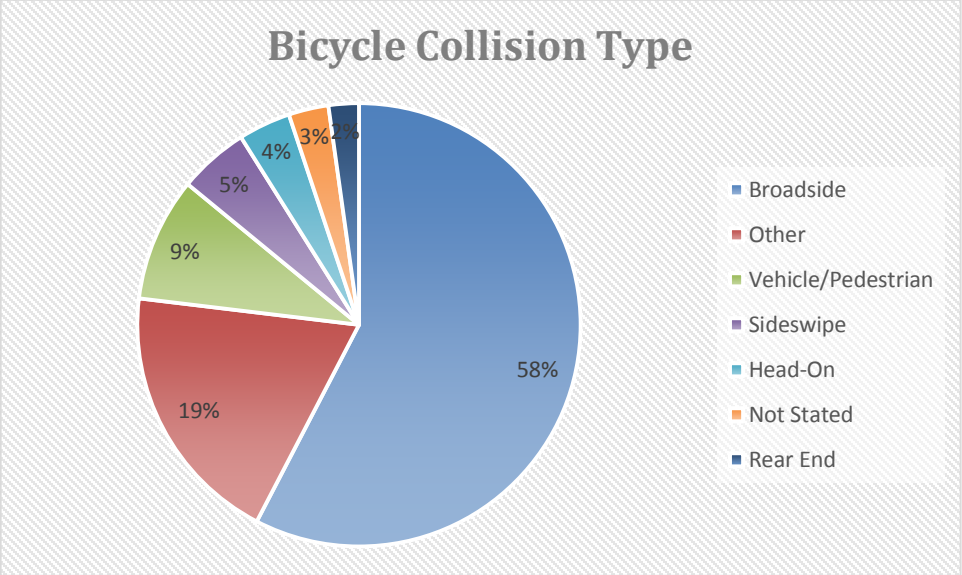


Figure 3: Bicycle- Collision Type

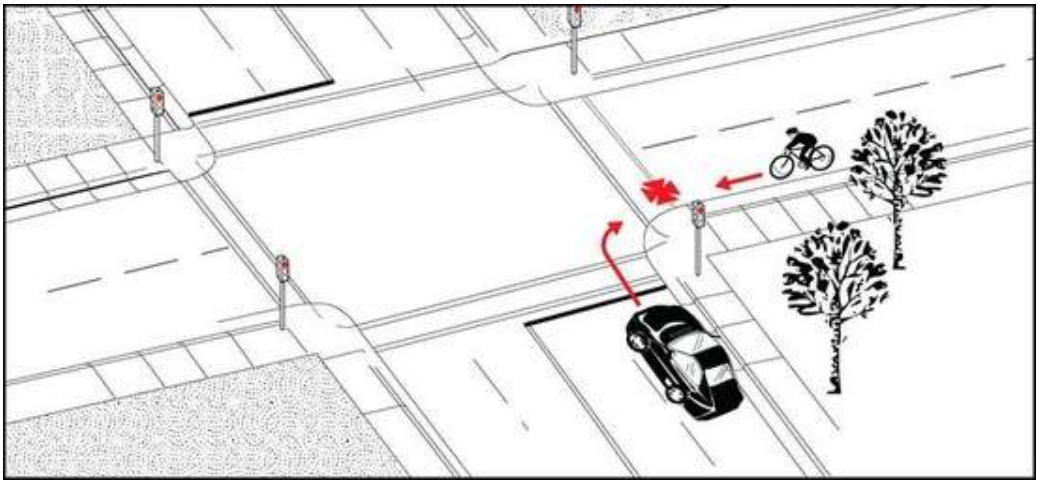


Figure 4: Broadside Collision (FHWA)

http://safety.fhwa.dot.gov/ped_bike/tools_solve/fhwasa12018/

Figure 5 shows the spatial distribution of bicycle-related collisions by severity. Severe injury and fatal collisions are distributed primarily throughout the southern and western portion of the city along State Route (SR) 99. Although severe collisions are not closely clustered, they are generally seen on major arterials including Cedar Avenue, Blackstone Avenue, and Shaw Avenue.

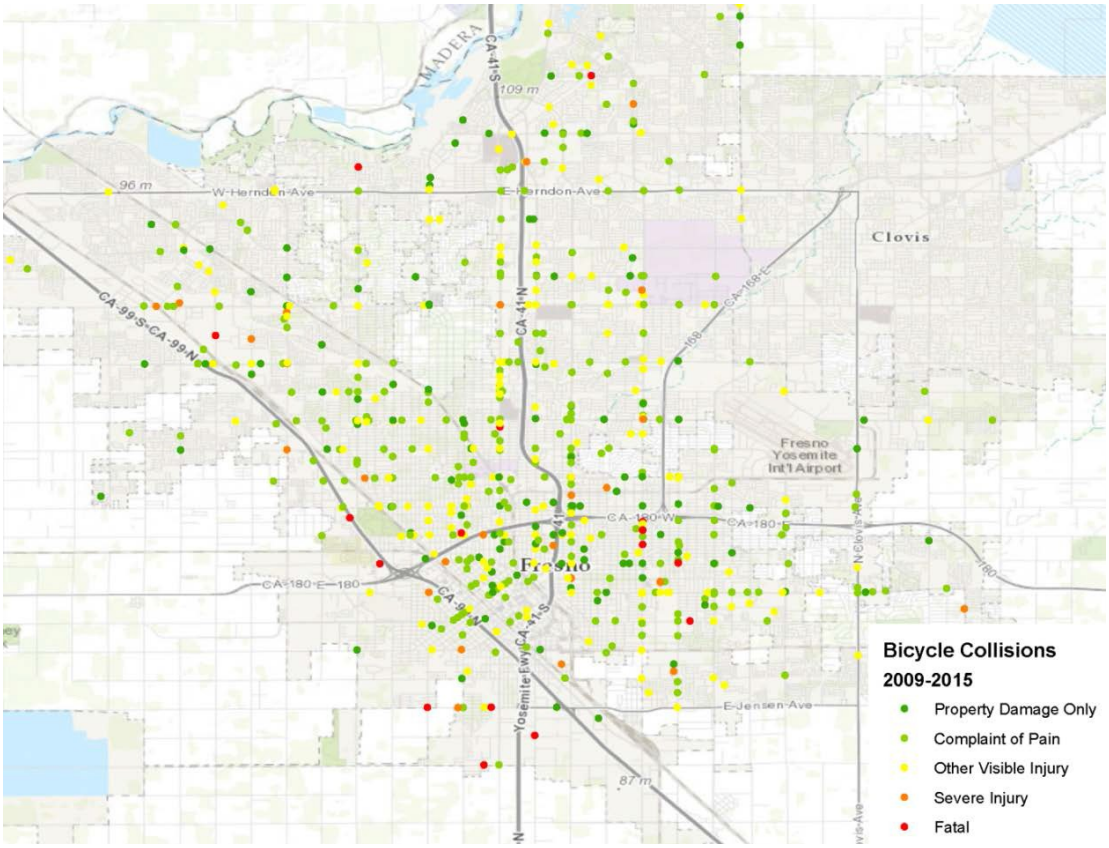


Figure 5: Bicycle Collision Distribution by Severity (Source: Crossroads Traffic Collision Software)

Figure 6 shows Cedar Avenue at the ramp to SR 180. This is an example of long crossings and inconsistent bicycle facilities, which may contribute to speeding behaviors and higher stress conditions for bicyclists to access key destinations. For crossings longer than one lane in either direction (about 24 feet), considering adding a raised median, bulb outs or reducing the curb radii to shorten the pedestrian crossing distance.

Figure 6: Long crossing (134 feet) at Cedar Ave south of SR 180 (Source: Google Maps)

Pedestrian Collisions

Figure 7, **Figure 8**, **Figure 10**, and **Figure 11** show an analysis of pedestrian-related collisions in Fresno.

Figure 7 shows that over ¾ of collisions were reported to be caused by a pedestrian violation. The Fresno Police Department reported that many of these pedestrian violations were due to alcohol or drug impairment or mental health problems.

Multiple strategies are available to reduce pedestrian violations:

- Pedestrian education on safety and rules of the road can teach pedestrians safe behaviors. The Police Department's education programs are discussed in detail later in this document.
- Additional pedestrian facilities including wide sidewalks, marked crosswalks, directional curb ramps, and pedestrian-scale lighting can also improve the safety and comfort for pedestrians, especially on high-volume, high- speed arterials.
- Additional police officer training can help improve categorization of pedestrian-related collisions. Officers categorize pedestrian-related collisions as pedestrian violation because it is the broadest category, but a more specific categorization may be more appropriate. The police have the option to choose between 24 different violation codes. The Fresno Police Department educates officers about proper reporting of such collisions.

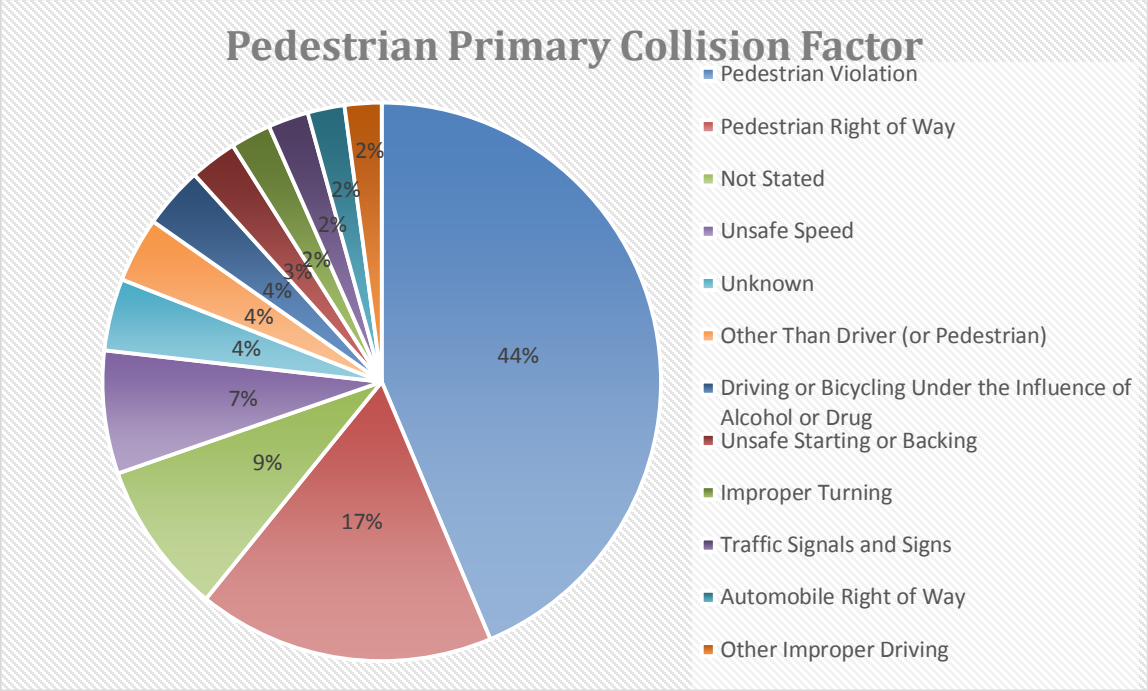


Figure 7: Pedestrian- Primary Collision Factor

The majority of pedestrian-related collisions result in 'complaint of pain' and 'other visible injury,' as shown in **Figure 8**. Lower vehicular speeds can reduce the likelihood of injuries and fatalities from pedestrian-involved collisions. **Figure 9** shows the distribution of pedestrian collisions by severity. **Figure 10** shows the decreased likelihood of injury and fatality as vehicle speed decreases.

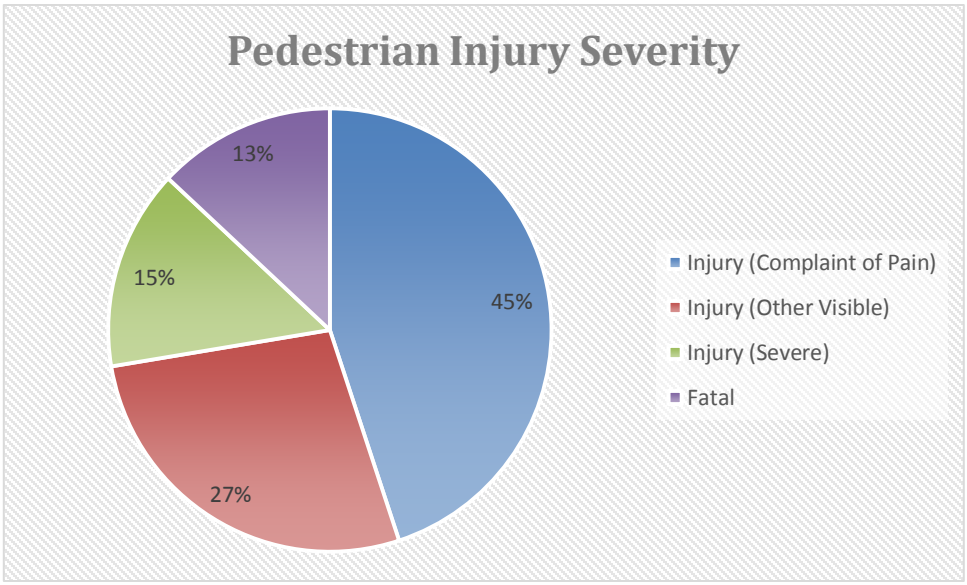


Figure 8: Pedestrian- Collision Severity

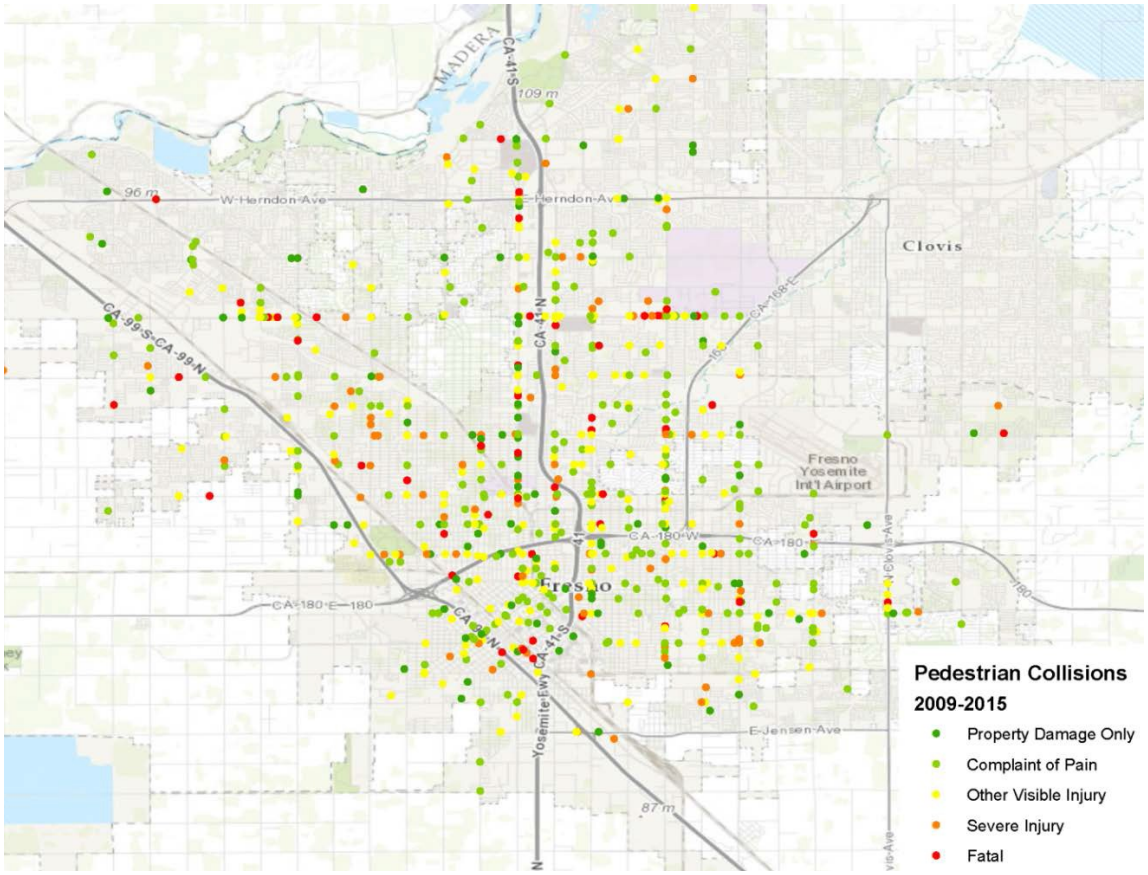


Figure 9: Pedestrian Collision Distribution by Severity (Source: Crossroads Traffic Collision Software)

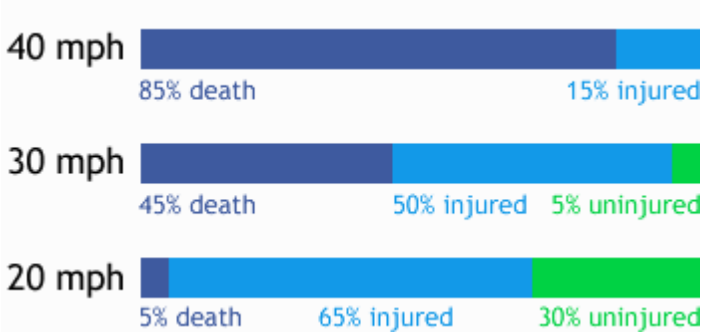


Figure 10: Pedestrian Injuries at Impact Speeds (US DOT, 1987)

The data on collision type for pedestrian-related collisions are not fine-grained enough to provide additional analysis or recommendations. The majority of collisions are categorized only as a vehicle-pedestrian collision.

Similar to bicycle-related collisions, pedestrian-related collisions are scattered throughout the city, with clusters occurring on major arterials including Blackstone Avenue, Shaw Avenue and Cedar Avenue. This is likely due to higher vehicle speeds, poor pedestrian facilities, and increased exposure of pedestrians due to a high concentration of destinations and directness of route relative to more low-traffic residential streets that lack connectivity. Midblock marked crosswalks are also infrequent on these corridors, resulting in pedestrians crossing illegally and unsafely in order to avoid out of direction travel. For example, at the intersection of Kings Canyon Road and Argyle Road, as shown in **Figure 11**, there is no marked crosswalk. However, the location is adjacent to a school, shopping center and dense residential area.

Figure 11: Kings Canyon Road and Argyle Road

III. STAKEHOLDER COORDINATION

The coordination between various public agencies in the City of Fresno, neighboring jurisdictions and organized groups is important to ensure the successful formation and implementation of safety education programs and policies. This partnership and collaboration with key stakeholders through every step of the process will help draft documents and programs that effectively address the needs of the City for all affected user groups. Beginning this collaboration early on in the process will help establish roles and responsibilities and provide the necessary context for involved parties. Defining roles early on will also facilitate the process moving forward.

Stakeholders may include:

- City of Fresno Police Department
- City of Fresno Fire Department
- City of Fresno City Council
- City Council District Representatives
- City Staff
- City of Fresno Parks, After School, Recreation and Community Services (PARCS) Department
- Public Works Department
- Chambers of Commerce
- Fresno Area Express (FAX)
- Fresno Council of Governments (FCOG)
- Community and faith-based organizations
- Fresno County Bicycle Coalition
- Bicycle/Pedestrian Advisory Committee (BPAC)
- K-12 School Districts
- Colleges & Universities
    - California State University, Fresno
    - Fresno Pacific University
    - State Center Community College District
- Neighboring jurisdictions
    - City of Clovis
    - County of Fresno

IV. EDUCATIONAL TOOLS, VENUES, AND EVENTS

Previous community-based planning efforts in the City of Fresno have established a number of effective strategies and tools to engage and educate community members and stakeholders.

The Fresno Police Department supports several efforts directed at educating local residents about bicycling and walking. The Police Department makes annual multimedia presentations in local elementary, middle, and high schools where they discuss safe walking and bicycling practices. For high school students, the presentations also address safe driving practices to prevent collisions with pedestrians and bicyclists. A key aspect of this is discouraging distracted driving; the ultimate goal is to make distracted driving as socially unacceptable as drunk driving or smoking.

The Police Department also sponsors billboards, bus placards, and educational cards that talk about how to be safe while walking and bicycling, as well as how to drive safely to avoid collisions with pedestrians and bicyclists. The Police Department has also staffed booths at local street fairs, which have included distribution of this literature and direct interaction with the public. These methods allow these messages to be shared with a wide audience.

Additional educational tools that have been effective in the community previously include:

- Enlisting community-based and faith-based organizations to disseminate project materials and information to their constituents as well as community members.
- Presentations and handout materials (flyers, brochures) to environmental justice organizations, service organizations, Chambers of Commerce, and Downtown Organizations.
- Surveys at events with participation incentives such as raffles or gift cards for participants.
- Distribution of materials and collection of surveys in conjunction with existing events such as fairs, football games, farmers markets, free summer concerts, or other community gatherings with a large number of participants.
- Public workshops with interactive polling software showing on-demand results. This is an engaging approach to seeking public input that spurs conversation and captures the opinion of those in attendance.
- Face-to-face discussions or intercept surveys asking for top 3 items of interest. This more intimate form of feedback allows for freeform conversation and increased participation.
- Text-based surveys which allow respondents to engage in a text correspondence about the project and vote by text. Advertisements on bus stops, flyers and local businesses reach a captive audience waiting for their bus or coffee. Examples include Textizen, Poll Everywhere, and TXTImpact.
- Social media, including Facebook, Instagram, Twitter or project websites. This form of communication captures the greatest response from residents between 18 and 30 years old.

In a recent transportation campaign, the Fresno Council of Governments and consultants successfully provided information to Fresno residents on the Measure C half-cent sales tax to invest in the overall quality of Fresno County transportation system by attending a number of events and popular locations

in the city. The events that were most effective in the Measure C effort that may be effective for future educational efforts include:

- The Big Fresno Fair
- The Veteran's Day Parade
- California State University, Fresno Vintage Days
- California State University, Fresno football games
- Fresno Grizzlies, special event games such as Taco Truck Throwdown Contest
- Central Valley California Women's Conference at Fresno Convention Center
- CartHop at the Mariposa Plaza
- Cultural events including Cinco de Mayo, Fiestas Patrias, and the Fresno Greek Fest

The following venues throughout the city are effective places to present materials and interact with the public:

- Schools
- City Hall Lobby
- Libraries
- Churches
- Regional Shopping Centers (such as Fashion Fair Mall, Manchester Center, and River Park)
- Community Centers and parks
- Fresno Fairgrounds
- College campuses

V. STRATEGIES FOR EDUCATION, ENFORCEMENT AND EVALUATION

Education

Motorist Education

Motorist education is important to ensure that all users understand the rules of sharing the road. This consists of understanding the rights of bicyclists as vehicles according to the California Vehicle Code (CVC), pedestrian right-of-way at crosswalks, and awareness of speeding.

The CVC states that bicyclists have the same rights and responsibilities as motor vehicles. Motor vehicles are required by state law to share the road with bicyclists and give bicyclists three feet of space when passing. Motorists are also required by state law to yield to a pedestrian crossing at a marked or unmarked crosswalk. Additional enhancements such as Rectangular Rapid Flashing Beacons (RRFBs) can also increase the rate at which motor vehicles yield to pedestrians. Pedestrian Hybrid Beacons (PHBs) require yielding as flashing red and a full stop at solid red.

Napavalleyregister.com

Raising awareness of speeding is important at a neighborhood level and can be achieved through local events and education. Residents are less likely to speed if they know their neighbors. A Pace Car Program is a more formal approach, where volunteers from the community set an example for driving the speed limit.

Speed monitoring programs train residents in using radar detectors which then distribute warnings to speeding vehicles. This type of program helps residents understand that this is a local and personal issue and the importance of driving the speed limit. Pairing education with enforcement by distributing warnings and educational materials before giving tickets provides drivers with a deeper understanding of the law and its value.

Safe Cycling

The League of American Bicyclists has a number of resources to teach safe bicycling including informational packets, curriculums and courses with trained instructors. The Smart Cycling Quick Guide (http://bikeleague.org/quickguide) is an easy-to-read booklet that outlines the basics of a bike, rules of the road, and the knowledge everyone needs to know to ride a bike on a range of facility types safely and confidently. For a "cheat sheet" summary, the League of American Bicyclists has a page of Smart Cycling Tips (http://bikeleague.org/content/smart-cycling-tips-0) for biking safely including maintenance and trail etiquette.

www.bikeleague.org

Bicycle diversion programs provide bicyclists who are cited for certain infractions the option to attend a bicycle safety class rather than paying a ticket. This educational component is associated with a greater degree of lasting behavior change.

> Bicycle Diversion Program Case Study: Jurisdictions Across Arizona
>
> Several jurisdictions throughout Arizona have successfully implemented diversion programs where bicyclists cited for infractions can attend a bicycle safety class instead of paying their ticket. These courses have varying fee structures but all increase bicyclists' education. For more information, visit: http://azbikelaw.org/bicyclist-diversion-programs-around-arizona/

Bicycle Ambassador

Bicycle ambassadors are either volunteers from the community or employees of local advocacy groups that take a leading role in educating, encouraging, and activating the community to be a safer and more comfortable place for bicyclists. Ambassadors have undergone a safety education course and are also supplied with maintenance and educational resources to distribute to the community both formally and informally. This educational model empowers community members through a bottom-up approach to improving bicycle safety and mode share. Some great examples of bicycle ambassador programs include:

- Chicago: http://chicagocompletestreets.org/your-safety/education-encouragement/ambassadors/
- Washington, DC: http://www.waba.org/programs/d-c-bike-ambassador/
- Fort Collins: http://bicycleambassadorprogram.org/
- Missoula: http://www.ci.missoula.mt.us/DocumentCenter/Home/View/4604

> Bicycle Ambassador Case Study: Mayor Daley's Bicycle Ambassadors (Chicago, IL)
>
> Mayor Daley's Bicycle Ambassadors is a program for the City of Chicago, funded jointly by Illinois DOT and Chicago DOT. The program employs eight full-time staff who distribute bicycle safety and road sharing material at public venues, community events, and on the road at high-risk locations. This program has both a bicyclist and motorist component. For each user group, ambassadors demonstrate their expertise personally through demonstrations, high-profile media, and conversations. The Pedestrian and Bicycle Information Center reports the results: "During the five-month season in 2006, Bicycling Ambassadors attended 377 events, spoke to 41,800 people face-to-face, and reached another 2 million through local broadcast media appearances. Forty-six percent of the face-to-face contacts were with children. Junior Ambassadors teaching at 159 Chicago Park District day camps helped educate more than 15,800 children and 3,600 adults in just six weeks. Recently MDBA has also begun to evaluate performance by tracking the results of pre- and post-contact quizzes." For more information, visit: http://www.pedbikeinfo.org/data/details.cfm?id=3972 and http://chicagocompletestreets.org/safety/education/

Chicagocompletestreets.org

Children

Educating school-aged children on safe bicycling is important in establishing the proper habits and travel behaviors early on. There are a number of different programs and approaches, both formal and informal, which are effective in educating kids about safe bicycling. Kidical Mass is one event, which closes sections of roadway to vehicles, usually a route near the local elementary school, to allow families to ride their bikes without traffic. This empowers kids and families to get on their bikes and familiarizes them with the bike route to school. For more information on Kidical Mass, visit: http://kidicalmassdc.blogspot.com/p/abcs-of-family-biking.html

Safe Routes to School programs are effective ways to design a program that is customized to Fresno and the specific needs of the stakeholders in the community. A Safe Routes to School Plan should be developed by a group of stakeholders based on the key issues for school-aged children and geographically centered near schools. This plan should include all five E's—Engineering, Education, Encouragement, Enforcement, and Evaluation. These strategies should be accompanied by a timeline with prioritization and a funding approach. For more information, visit: http://guide.saferoutesinfo.org/steps/index.cfm

Case Study: Marin, California Safe Routes to School Program

Marin initiated the first Safe Routes to School Program that launched the national program in 2000. This program combined education, encouragement and engineering solutions to improve bicycle and pedestrian mode share to schools as well as safety. Components of the program include lesson plans for parents and students, task forces to discuss and prioritize engineering solutions, and encouragement events including Walk and Bike to School Days. The success of the program has been tracked through counts, surveys, and anecdotes that fueled its ongoing funding and implementation. For more information, visit: http://www.saferoutestoschools.org/

Saferoutestoschool.org

Earn-a-bike is a program where kids work to refurbish a donated bicycle and are then able to keep the bicycle. The program teaches them the basics of bicycle maintenance, safe riding and other important skills for healthy living. Off the Front (http://www.offthefront.org/) is a non-profit in Fresno that runs a similar program. This program can be grown and invested in further to broaden its reach.

Bike Rodeos provide an opportunity to teach youth safe bicycling skills and rules of the road in a controlled environment. This activity creates a simulated street network in a closed parking lot. It usually includes a series of bike handling drills and traffic situation simulations. Participants are able to choose a role in the simulated environment including bicyclist or pedestrian. The activity is generally supplemented by a classroom portion that reviews rules of the road, helmet use, and other bicycle safety components. For more information, visit:
http://www.saferoutestoschools.org/pdfs/lessonplans/RodeoManualJune2006.pdf

www.saferoutestoschool.com

After-school bike clubs also instill the skills and knowledge necessary for safe bicycling. These formal afternoon programs teach students proper helmet use, basic bike maintenance, and proper bicycling through drills and rules of the road. These skills are then applied through organized neighborhood rides. For more information, visit: http://ybike.org/programs-2/after-school-enrichment/

Other methods of information dispersion

This includes public service announcements (PSA's), social media, bus ads, information in electric bills, and presence at existing City events.

Enforcement

Proper enforcement is important to ensuring the safety of the street network for bicyclists and pedestrians. This is done through proper training of law enforcement, increasing the safety of bicyclists and pedestrians, theft prevention, and the proper pairing of education and enforcement.

The Fresno Police Department incorporates collision reporting and bicycle and pedestrian rules of the road into their training. There are a number of resources from other communities and national sources that Fresno can use such as this National Highway Traffic Safety Administration video: http://www.nhtsa.gov/multimedia/bicycles/bicycle_safety_LE.wmv

Fresno currently has police officers on bicycles. This fleet of officers improves the relationship between officers and bicyclists, and improves the effectiveness of enforcement for all modes as it affects bicyclists' safety. The International Police Mountain Bike Association has a number of valuable resources on starting a bike unit here: http://ipmba.org/resources/training-materials-merchandise

Safety, as discussed in the Education section, can also be applied within Enforcement as a responsibility of the Fresno Police Department. Fresno officers practice this by distributing literature on safe pedestrian habits as part of enforcement efforts. This can include education on proper helmet use, light giveaways, and targeting infractions. The collision analysis discussed previously in this report provides important data to address the common types, causes, and locations of collisions.

Bike theft data for Fresno is not available for this report, but bike theft is common in all urban areas. The fear and reality of bike theft can be a barrier to bicycling for all users. Recommendations for reducing bike theft include improving locking practices through education, providing adequate bicycle parking facilities, providing bicycle registration, providing recovery resources and programs, and offender detection such as bait bikes.

www.mtbr.com

Enforcement Case Study: Watch for Me NC (North Carolina)

After studying collision data through the state of North Carolina, a steering committee developed an outreach program that included both active and passive enforcement paired with education. A large portion of the program was educating enforcement officers from around the state in varying agencies through a series of classroom courses and hands-on exercises. Surveys conducted before and after training courses showed the dramatic increase in knowledge of bicycle and pedestrian safety best practices. Preceding enforcement with education provided an important awareness of the law and public support which contributed to the success of the program. Funding for this program was provided by the National Highway Traffic Safety Administration (NHTSA) and the North Carolina Department of Transportation (NCDOT). For more information, visit: http://www.pedbikeinfo.org/data/library/details.cfm?id=4912 and http://watchformenc.org/

www.pedbikeinfo.org

Evaluation

Performance metrics are important in tracking progress, setting priorities and distributing resources to improve biking and walking.

Multimodal Level of Service

Measuring the condition and level of comfort of the transportation network and key corridors for bicyclists and pedestrians is important to determine areas in need of improvement and ensure that there is a well-connected, low-stress, safe network for these modes. The Fresno General Plan has a policy to develop Multi-Modal Level of Service (LOS) Standards, as established in Policy MT- 1-k. There are a number of different approaches to determine the multimodal level of service for both bicyclists and pedestrians. These methodologies and their advantages and disadvantages are outlined here and in the Multimodal Level of Service Methodologies table below: http://asap.fehrandpeers.com/mmlos/

Multimodal Level of Service Methodologies

Approach	Advantages	Disadvantages
Pedestrian Environmental Quality Index	- Straightforward application: checklist and index - Simple training required for data collection - Basic software requirements (Microsoft Access, ArcGIS) - Integrated with mapping software - Research-based	- Does not address street connectivity and presence of pedestrian attractors - May not address all relevant design factors - Not designed for use outside urban areas
Bicycle Environmental Quality Index	- Straightforward application: checklist and index - Simple training required for data collection - Integrated with mapping software Research-based	- Requires ArcGIS 3D Analyst software to indicate street slope - San Francisco-specific method. May require significant time investment to transfer to other areas
Highway Capacity Manual (Pedestrian)	- Provides a comprehensive evaluation of pedestrian LOS at different scales - Easy to compare with motor vehicle, bicycle and transit LOS for the same segment/facility - Quantifies the benefits and drawbacks of roadway design alternatives for a single segment - Focused on factors within the public right-of way, which can be addressed through planning and engineering.	- Requires extensive data inputs, many of which must be measured in the field. - May not be feasible as a stand-alone measure (significantly integrated with HCM 2010 Auto LOS measure). - Pedestrian LOS score is heavily influenced by auto traffic volumes, which are difficult to mitigate in a planning or engineering context.
Highway Capacity Manual (Bicycle)	- Easy to compare with motor vehicle, pedestrian and transit LOS for the same segment/facility. - Quantifies the benefits and drawbacks of roadway design alternatives for a single segment. - Derived from extensive research into road user perception of conditions. - Focused on factors within the public right-of-way, which can be addressed through planning and engineering.	- Requires significant data inputs, many of which must be measured in the field. - May not be feasible as a stand-alone measure (reliant on HCM 2010 auto LOS measures). - Heavily biased towards off-street facilities; difficult to get an “A” score for on-street lanes.
Fort Collins (Pedestrian)	- New development achieves connectivity and continuity goals - Reduces City’s capital infrastructure burdens (developments must meet LOS standards to win approval) - Educates developers, engineers and planners; promotes buy-in among professionals	- Harder to enforce when economy, demand for development are weak - Can be difficult to implement in infill areas - Qualitative criteria (for pedestrian LOS) can be inconsistent. Requires defined pedestrian networks, congestion/transportation demand management plan

Approach	Advantages	Disadvantages
	- Creates better interconnectivity between modes, higher modal splits	
Fort Collins (Bicycle)	- New development achieves connectivity and continuity goals - Reduces City's capital infrastructure burdens (developments must meet LOS standards to win approval) - Educates developers, engineers and planners; promotes buy-in among professionals - Creates better interconnectivity between modes, higher modal splits	- Harder to enforce when economy, demand for development are weak - Can be difficult to implement in infill areas - Requires defined bicycling networks, congestion/transportation demand management plan
Charlotte Pedestrian & Bicycle LOS	- Relatively few data inputs required - Focuses on street geometry and design - Intersection-level analysis improves comparison with auto LOS	- Does not address transit LOS - Not all bicycle and pedestrian travel is at intersections
HCM Unsignalized Delay	- Quantifies the benefits and drawbacks of specific crossing treatments - Provides a targeted evaluation of pedestrian LOS at uncontrolled intersections - Easy to compare with motor vehicle LOS for the same intersection	- Method is less accurate in conditions with vehicle platooning or heavy directional bias - Not accurate for undivided streets with more than four through lanes - LOS is heavily influenced by auto traffic volumes, which are difficult to mitigate in a planning or engineering context
Level of Traffic Stress	- Focuses on factors that government planners and engineers can control - Research-based - Uses data that are readily available to local government employees	- May require further adaptation to be used outside San José - Stress mapping and crossing stress evaluation require GIS extensions developed specifically for LTS evaluation - One-way streets difficult to mode
Layered Networks	- Helps mitigate the challenge of accommodating all users on every roadway - Creates flexibility and options with multiple travel routes, accommodating different travel modes on different streets - Allows network layout and roadway design for ideal bicycle or transit networks - Works well with MMLOS methodologies	- May require additional roadway connectivity and redundancy to create the multi-modal network - Less effective if land uses do not support design of layered networks - Requires planning commitment to rethinking transportation networks
Person Delay+	Fehr & Peers developed **PersonDelay+**, a tool that provides a more complete picture of how all users are affected by intersection operations. Instead of just reporting the HCM vehicle delay, PersonDelay+ reports person-delay for each mode. The data needed are routinely collected as part of impact analyses and Complete Streets studies.	

Counts

Bicycle and pedestrian counts are important and allow the City to perform before and after analyses of a project, measure demand, quantify costs and benefits, and explain the behavior of bicyclists and pedestrians. Technology for automated bicycle and pedestrian counters is increasing in presence and accuracy. Fresno Council of Governments (COG) has automated counters available for use. Manual counts can also be performed.

Counts Case Study: Alexandria and Arlington, Virginia

Alexandria, Virginia performed manual counts at ten locations that allowed the City to predict monthly and annual bicycle and pedestrian trips by gender. This data allowed Alexandria to better plan new facilities. For more information, visit: http://www.bikeleague.org/sites/default/files/bikeleague/bikeleague.org/programs/bicyclefriendlyamerica/communities/pdfs/alexandria_bpac_nbpdp_report_final_august_2011.pdf

Arlington, Virginia employs a system of 32 automatic counters and six portable counters. This technology allows the City to monitor and gauge demand. There is an online dashboard with a number of filtering parameters for real time data that is publicly accessible. This data serves to encourage cyclists by creating a sense of community and also informing engineering decisions. For more information, visit: http://www.bikearlington.com/pages/biking-in-arlington/counting-bikes-to-plan-for-bikes/about-the-counters/

Collisions

Tracking bicycle and pedestrian collisions is important to determine safety hot spots and prioritize future needs for bicycle and pedestrian improvement projects. Fresno police officers receive training to accurate record collision details. Components of such documentation include location, cause, severity of injury, and direction of travel of each party.

The Fresno Police Department does not typically issue regular reports analyzing bicycle and pedestrian collisions. A spatial analysis of collisions in the form of a heat map or types of crashes at different locations can provide a more detailed guide to implementing effective safety countermeasures.

VI. POTENTIAL FUNDING SOURCES

There are a number of different funding opportunities for bicycle and pedestrian infrastructure and programs, at the federal, state, and local levels. Being able to effectively navigate these funding sources is valuable in order to implement the facilities and programs recommended in this plan. The following is a sample of common funding sources under the federal, state, and local categories. There are a number of other potential funding sources, but the list below outlines the largest funding pots that cities most commonly apply for to fund bicycle and pedestrian projects.

Federal

The most recent federal surface transportation funding program, *Fixing America's Surface Transportation Act* (FAST), was signed into law in December 2015, replacing the *Moving Ahead for Progress in the 21st Century Act* (MAP-21). FAST funding is distributed to federal and state surface transportation funds. Most of these resources are available through Caltrans and Fresno COG.

Congestion Mitigation and Air Quality Improvement (CMAQ) – CMAQ funding was reauthorized through FAST and is jointly administered by FHWA and Federal Transit Administration (FTA). Funding is provided to areas in air quality nonattainment or maintenance levels for ozone, carbon monoxide, and/or particulate matter. Fresno qualifies for funding due to its nonattainment and maintenance status. Eligible projects include bicycle and pedestrian facilities, non-construction projects related to safe bicycling usage, and State bicycle/pedestrian coordination positions. www.fhwa.dot.gov/environment/air_quality/cmaq/

Surface Transportation Block Grant Program (STBGP) – STBGP provides flexible funding that may be used by states and localities for projects on any Federal-aid highway. In the past this funding was authorized by the Surface Transportation Program (STP) in the Moving Ahead for Progress in the 21st Century Act (MAP-21). Funding for STBGP is now authorized through FAST, with the same goals of STP funding. http://www.fhwa.dot.gov/specialfunding/stp/

Transportation Alternatives Program (TAP) – Housed under STBGP, TAP provides funding for on and off-street bicycle and pedestrian facilities, non-driver access to public transit, recreational trail projects and safe routes to school projects. www.fhwa.dot.gov/environment/transportation_alternatives/

State

Highway Safety Improvement Program (HSIP) – Caltrans administers federal HSIP funding, which aims to reduce traffic fatalities and serious injuries. States can use HSIP funds to address emphasis areas outlined in the Strategic Highway Safety Plan (SHSP). Since bicycle and pedestrian safety is included in California's SHSP, eligible projects can include additional bicycle and pedestrian facilities such as crosswalks, push buttons, bike lanes and signage. http://safety.fhwa.dot.gov/hsip/

Active Transportation Program (ATP) – ATP is the largest source of funds dedicated to increasing biking and

walking in California. The state program includes funds from federal sources About half of the funds are distributed through a competitive grants process, forty percent goes to metropolitan agencies to distribute and ten percent goes to rural areas. At least twenty-five percent of all funds must benefit residents in disadvantaged communities. This funding source also now includes funding for Safe Routes to School. www.dot.ca.gov/hq/LocalPrograms/atp/

California Office of Traffic Safety (OTS), Pedestrian and Bicycle Safety Grant – OTS grants are awarded for programs that increase awareness for biking and walking, increase compliance with traffic laws, and address safer driving, biking and walking for high-risk populations. www.ots.ca.gov/Grants/Pedestrian_and_Bicycle_Safety.asp

Regional Surface Transportation Program (RSTP) – RSTP was established by California State Statute utilizing Surface Transportation Program Funds using Federal funding. This funding can be used for bicycle and pedestrian infrastructure on public roads. http://www.dot.ca.gov/hq/transprog/federal/rstp/Official_RSTP_Web_Page.htm

Local

This section includes details about current programs that are used to fund existing scheduled projects and an assessment of upcoming programs as of May 2016. These may change as state and local programs adapt to the new FAST funding.

Measure C – The measure is a half-cent sales tax aimed at improving the overall quality of Fresno County's transportation system. This Local Transportation Program can be used on pedestrian and bicycle facilities and trails. Funding is allocated to cities and the county based on population.

San Joaquin Valley Air Pollution Control District (SJVAPCD) Bikeway Incentive Program – SJVAPCD provides funds to increase commuter bicycle accessibility and utilization as an alternative transportation measure. Funds may be used for Class I, II, or III bikeways in amounts up to $150,000 (depending on bikeway type).

Community Development Block Grant – This flexible funding source distributed through the Department of Housing and Urban Development (HUD) is intended to improve living conditions for low and moderate-income persons. Bicycle and pedestrian facilities are eligible for these funds. www.hud.gov/cdbg

Private

Private businesses may invest in improving conditions for biking and walking, often in exchange for advertising. For example, large companies such as Walmart may fund bike lanes, helmet distribution, bike share systems, or bus shelters. Other organizations and businesses that have historically provided such grants and donations include Surdna Foundation, REI, Robert Wood Johnson Foundation, and Kresge Foundation.

ADDITIONAL RESOURCES

A variety of additional resources are available for use in bicycle and pedestrian safety and education programs

http://www.bikeleague.org/content/resources – Resources on the 5 E's

http://www.advocacyadvance.org/MAP21/finditfundit – How to fund different types of bicycle and pedestrian projects

https://calbike.org/tools-for-advocates/funding-sources/ – Funding sources for bicycle infrastructure in California

http://www.fhwa.dot.gov/environment/bicycle_pedestrian/funding/funding_opportunities.cfm – Federal bicycle and pedestrian funding opportunities

http://www.pedbikeinfo.org/data/index.cfm – Case studies, fact sheets and compiled resources for bicycle and pedestrian safety

http://www.apbp.org/ – Forums, webinars, workshops, and technical trainings on increasing bicycle and pedestrian mode share

[This page intentionally left blank]

APPENDIX F: PREVIOUS EXPENDITURES

Fresno's expenditures on bicycle and pedestrian infrastructure, maintenance, and education from 2011 to 2016 are summarized in Table 15 below. All values are in dollars.

Table 15: Active Transportation Expenditures, 2011-2016

Project Description	2011	2012	2013	2014	2015	2016	Total
Shields - West to Maple Bike Lane	50,300	28,100	11,300	143,600	1,100		234,400
Gettysburg - Blackstone to Winery Bike Lane	17,000	38,100	428,500	101,600			585,200
Sidewalks - Various Locations	31,100	164,800					195,900
Herndon Multi-Purpose Trail: Valentine to Marks		19,100	23,500	111,100	176,100	49,700	379,500
Sugar Pine Trail: Pedestrian Undercrossing at Shepherd		97,300	67,400	1,664,200	1,500		1,830,400
Sugar Pine Trail: Park & Ride	3,700	25,300	19,600	7,500	18,800	1,000	75,900
Herndon Multi-Purpose Trail: Fruit to Harrison	3,400	17,900	21,700	229,900	90,400		363,300
West - Yale to Fairmont Bike Lane	10,800	286,200	2,800				299,800
Millbrook - Shields to Gettysburg Bike Lane	1,500	14,300	36,600	16,300	437,900	55,900	562,500
Copper Trail: Friant to Chestnut		53,500	66,600	61,600	576,500	358,400	1,116,600
Pinedale Elementary School Area Sidewalks		12,100	9,700	325,300	300		347,400
Pinedale Elementary School Education Program			1,100	8,100	800		10,000
Minor Trail Improvements		4,200	24,800	84,500	169,800	130,900	414,200
Florence - Chestnut to Balderas Sidewalk			800	5,800	105,700	11,900	124,200
Sugar Pine Trail: Drinking Fountains			9,300	34,800	62,500	100	106,700
Eaton Trail: Audubon to Copper Resurfacing			1,600	10,500	5,500	10,700	28,300
Children's Safe Kids Project			14,900				14,900
Bankside Trail: Blackstone to Van Ness					2,500		2,500

Project Description	2011	2012	2013	2014	2015	2016	Total
Active Transportation Plan/Bike Master Plan Update					3,700	71,300	75,000
Veterans Trail - Hayes to Polk					16,600	17,300	33,900
Cedar - Clinton to McKinley Bike Lane					1,600	75,000	76,600
Barstow - Maroa to Blackstone Bike Lane & Sidewalk						6,500	6,500
Herndon Multi-Purpose Trail - Ingram to College						14,600	14,600
Midtown Trail: Shields - Fresno to First						32,900	32,900
Orange - Alta to Lowe Sidewalk					6,200	26,800	33,000
Butler - Hazelwood to Peach Bike Lane						52,700	52,700
Clinton/Thorne Traffic Signal (SRTS)						27,900	27,900
Hughes - Hedges to Floradora Sidewalk						30,300	30,300
Fancher Creek Trail - Clovis to Argyle						20,400	20,400
Fairview Trail Repairs & Reconstruction						12,100	12,100
Melody Park Neighborhood Sidewalks						295,900	295,900
Yearly Total	**1,435,200**	**1,308,600**	**1,000,200**	**2,975,600**	**1,717,600**	**1,352,600**	**9,789,800**

Source: City of Fresno, 2016

APPENDIX G: COMPREHENSIVE PROGRAMS

Fresno has a variety of educational, outreach, and other types of programs supporting active transportation. These efforts can be summarized with the five E's, plus two additional E's, which are a mnemonic for important aspects of transportation planning. Fresno's efforts toward each of these E's are summarized below.

Education

The City's educational efforts are discussed in detail in Chapter 4, Existing Conditions.

Encouragement

The City's encouragement efforts are discussed in detail in Chapter 4, Existing Conditions. Efforts of other local groups encouraging bicycling are also discussed in Chapter 4.

Enforcement

The Fresno Police Department's enforcement efforts are discussed in detail in Chapter 4, Existing Conditions.

Engineering

Proposed networks and supporting infrastructure are discussed in Chapter 5, Planned Networks.

Evaluation

The Fresno Police Department collects data on bicycle and pedestrian collisions. This data is presented in Chapter 4, Existing Conditions.

Counters are available from Fresno COG to count bicycle and pedestrians on trails.

Equity

Several measures of disadvantaged communities are presented in Chapter 4, Existing Conditions. These measures were included in the development and prioritization of planned networks as discussed in Chapter 5, Planned Networks.

Enrichment

The recent update to the Fresno General Plan updated and added many policies supporting walking and bicycling, recognizing that active transportation supports a high quality of life. These aspects of the General Plan are discussed extensively in Appendix C, Relationship to Other Plans.

APPENDIX H: PRIORITIZED NETWORKS

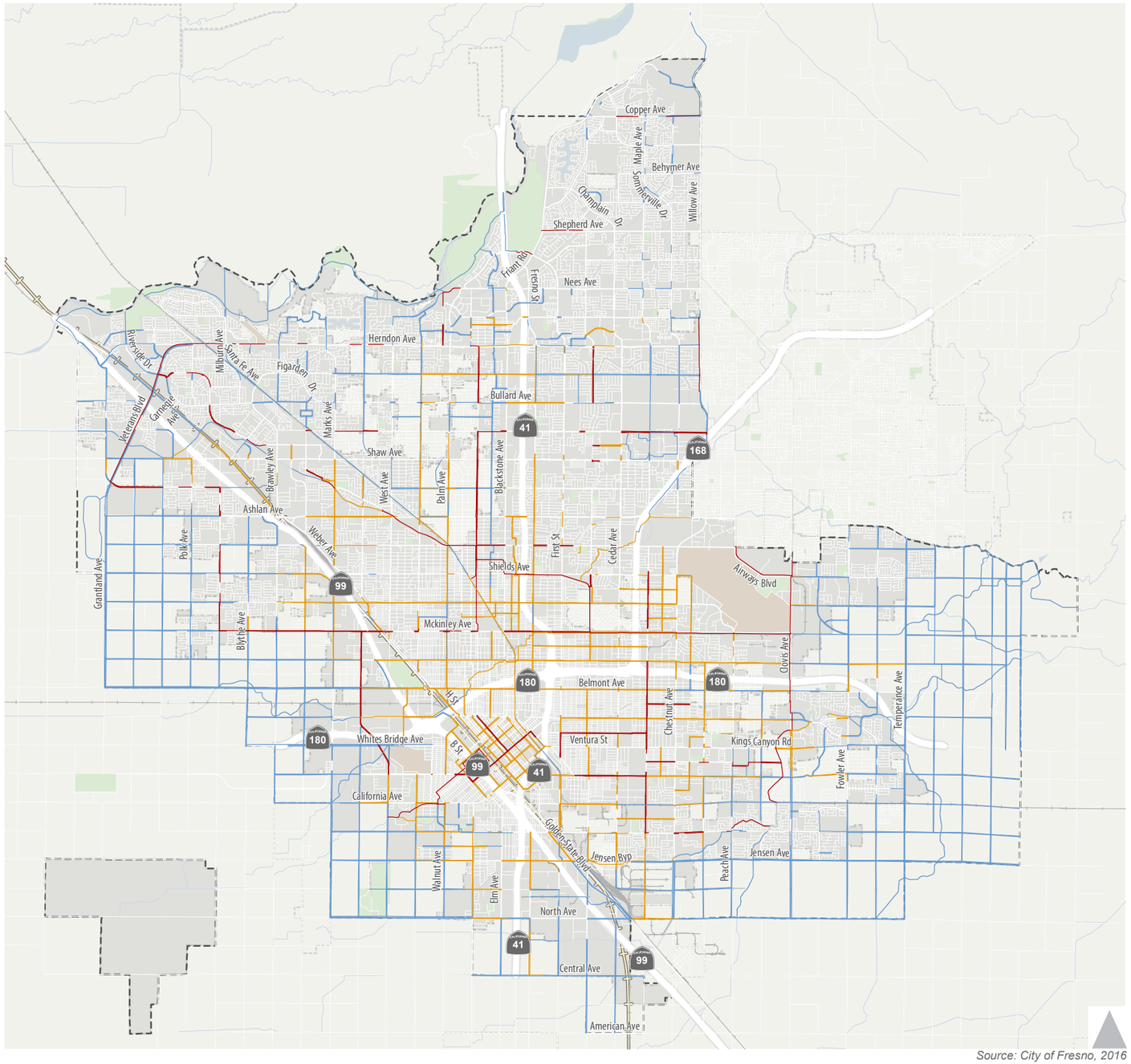
Table 16, Figure 61, and Figure 62 identify proposed projects by priority (high, medium, or low) for each type of network: Class I bike paths, on-street bikeways (Class II bike lanes and Class III bike routes), and sidewalks. Prioritization was based on the factors discussed in Chapter 5, Planned Networks.

Table 16: Planned Networks With Priorities

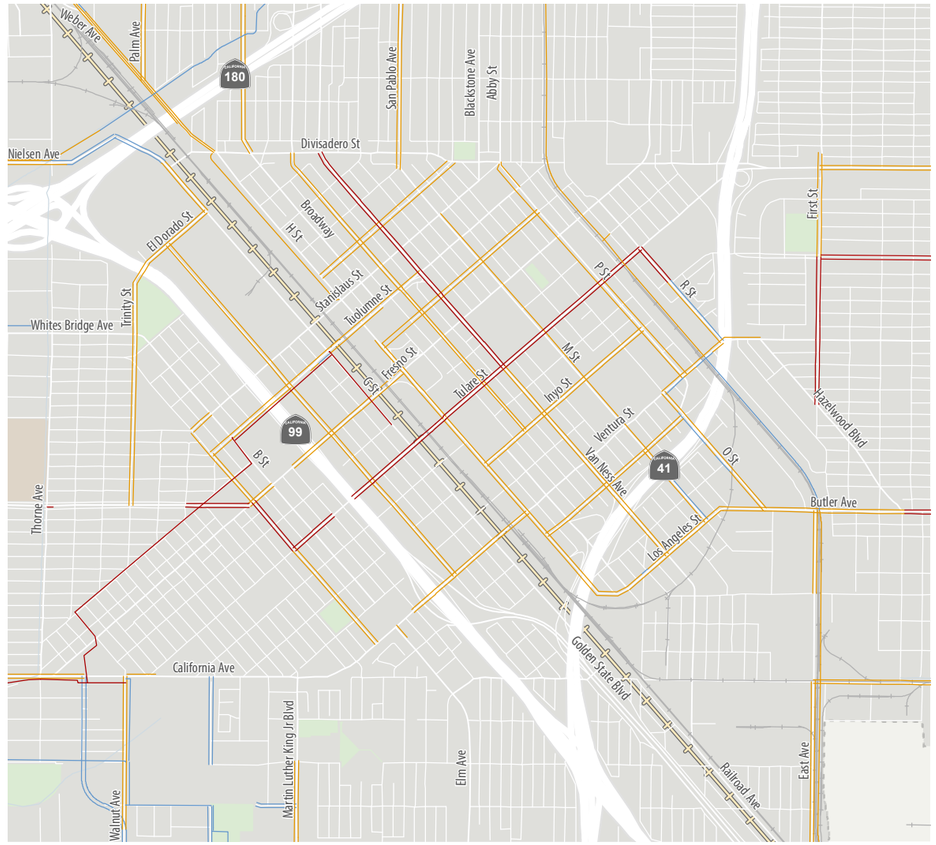
Type	High (Miles)	Medium (Miles)	Low (Miles)	Total (Miles)
Class I Bike Paths	28	21	117	166
Class II Bike Lanes (each direction)	49	214	428	691
Class III Bike Routes (each direction)	10	25	34	69
Class IV Separated Bikeways (each direction)	12	8	1	21
Sidewalks	45	170	446	661

Source: City of Fresno 2016, Fehr & Peers 2016

[This page intentionally left blank]



Source: City of Fresno, 2016



DOWNTOWN VIEW

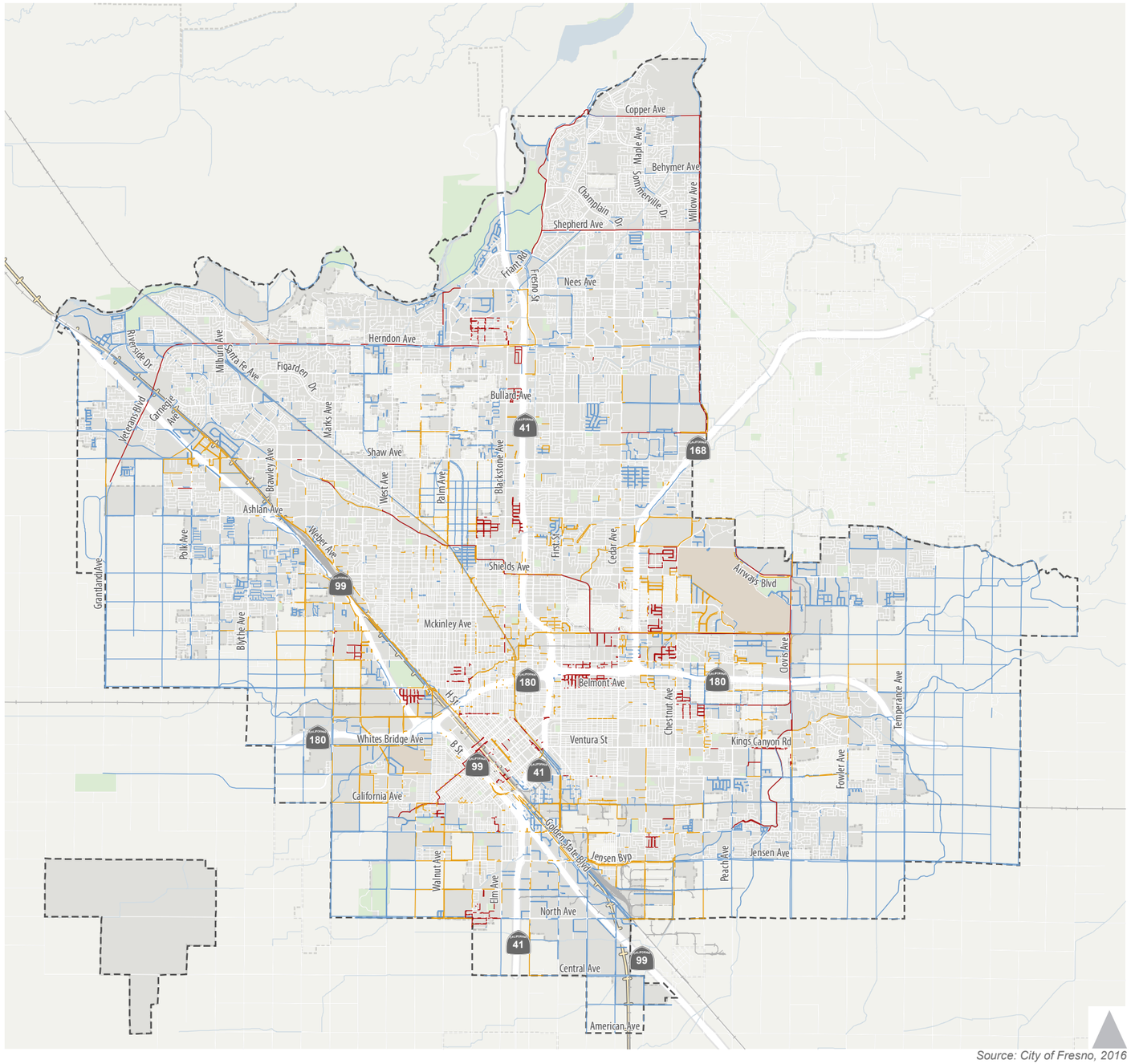
Bicycle Priority Level
- High
- Medium
- Low
- Rail
- High Speed Rail Alignment

- City Sphere of Influence
- Parks
- Airports
- Water
- City

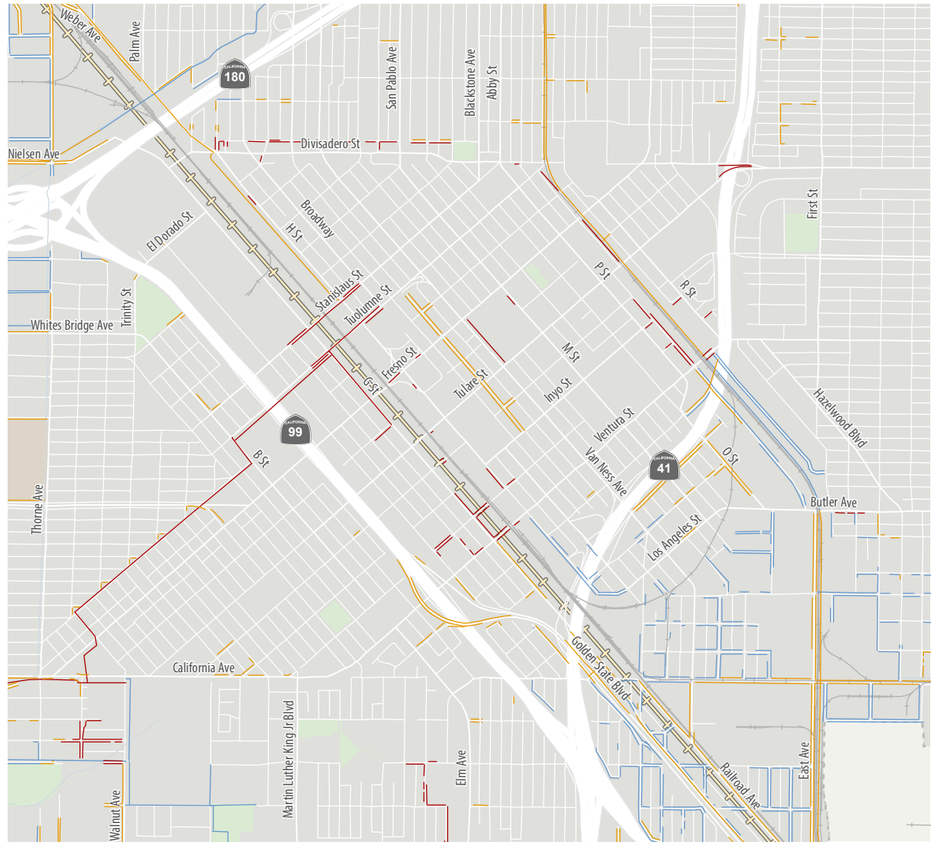
City of FRESNO active transportation plan

Figure 61

Bicycle Priority Level



Source: City of Fresno, 2016



DOWNTOWN VIEW

Gaps in sidewalks (by priority level)
- High
- Medium
- Low
- Rail
- High Speed Rail Alignment

- City Sphere of Influence
- Parks
- Airports
- Water
- City

Table 17 identifies the side of street on which each Class I bike path is located. Trails shall be developed on the side of the roadway as shown on Figure 48 and Table 17. Any changes to the trail network would require an amendment to this plan and need to be proposed for a minimum two-mile segment length.

Table 17: Class I Bike Path Side of Street

Street	Side
Copper Avenue	N
Shepherd Avenue	N
Willow Avenue	W
Friant Road	W
Santa Fe Avenue	NE
Herndon Avenue	N
Veterans Boulevard	NW
Grantland Avenue	E
Gettysburg Avenue	S
Herndon Avenue	N
Herndon Avenue from Valentine Avenue to Marks Avenue	S
Nees Avenue from Blackstone Avenue to La Entrada	S
Harrison Avenue	E
Fresno Street	W
4th Street	W
Bond Street from Alluvial Avenue to Herndon Avenue	E
Bond Street from Nees Avenue to Alluvial Avenue	W
Belmont Avenue	N
Whites Bridge Avenue	N
Dakota Avenue	S
Airways Boulevard	NE
Clovis Avenue from City Limits to Shields Avenue	E
Clovis Avenue from Shields Avenue to Washington Avenue	W

Street	Side
McKinley Avenue	S
Temperance Avenue	W
Marks Avenue	E
North Avenue	N
Jensen Avenue	N
Jensen Bypass	N
Chestnut Avenue	W

Source: Fehr & Peers 2016

APPENDIX I: IMPLEMENTATION COST ANALYSIS

Details of the implementation cost analysis are provided on the following pages.

[This page intentionally left blank]

MARK THOMAS & COMPANY, INC.
Providing Engineering, Surveying and Planning Services

Memorandum

To: Adrian Engel File: FN-16103

Cc:

From: James Loy

Date: October 13th, 2016

RE: City of Fresno Active Transportation Project Estimate Update

---

METHODOLOGY

Fehr and Peers has identified a preferred network of high priority bicycle facilities as part of the City of Fresno Active Transportation Plan (ATP). This network includes Class I bike paths, Class II bike lanes, Class III bike routes, and one Class IV separated bikeway. Mark Thomas & Company, Inc. (MTCo) was tasked with creating planning level cost estimates for the 39 high priority projects identified within the network. The Class I bicycle path is defined as an off street path that prohibits automobile traffic. A Class II bicycle facility is a signed and striped bicycle lane on a city roadway. A Class III bicycle facility is a striped and signed route only on roadways in which bicycles and automobiles share the same pavement. A Class IV facility is a separated bikeway in which bicycle traffic is separated from vehicle traffic with a physical buffer. Due to the complex nature of each of these different classifications, as well as the varied location of these paths, cost assumptions were made in order to create estimates for each of the high priority projects. This memo outlines the methodology and assumptions made for the planning level cost estimates that can be used in the planning and implementation of these ATP facilities.

The Class I trails identified in the high priority network are found in different geographical locations within the City of Fresno. Some of these trails run adjacent to existing City of Fresno canals while others run adjacent to existing roadways. It was determined that the trails that run alongside canals would require a larger pavement section than the conventional Class I Trail to accommodate canal maintenance vehicles. All other Class I Trails assumed within the estimate used a conventional pavement section per City of Fresno standards.

Class II facilities had to be segregated based on the width of the roadway pavement and the level of adjacent development. In areas where the existing pavement width could accommodate a bicycle lane, the only costs included in the estimate were for restriping and slurry seal. In locations where the existing pavement could not accommodate restriping, we assumed roadway widening would have to occur. Widening areas assumed that a 5’ strip of pavement in addition to curb, gutter, sidewalk and other improvements would be constructed.

Class III portions of the network provide continuity of the network in areas where bicycle riders share the same paved area with motor vehicles. They are typically placed along lower speed roadways within the city to connect the more prominent Class I or II facilities. Cost of installing a Class III facility is minimal, and typically only includes the cost for signage and installing sharrow markings along the route.

The Class IV facility is a separated bikeway in which bicycle traffic is separated from vehicle traffic by a buffered area. There is only one Class IV facility in the network which was located in downtown Fresno on Tulare Street. As the existing cross sectional width of Tulare Street is constrained by adjacent buildings it was determined that a road diet would be necessary and the outside vehicle lane of each direction would need to be removed to accommodate the separated bikeway.

Cross sections, as shown in Figure 1 of this memorandum, show these various improvements per class type as described above.

COST DATA

Unit cost assumptions and the applicable percentages that were applied to each of the total costs are shown in the table below. These values were taken from recent bid results and MTCo's relevant project experience in the area. All costs are assumed to be in 2016 dollars.

HMAC	$100/TON
Class II AB	$50/CY
Roadway Ex	$40/CY
Import Borrow	$30/CY
Sidewalk	$4/SF
Curb and Gutter	$21/LF
6" Concrete Curb (2 Total)	$20/LF
Remove Thermoplastic Stripe	$2/LF
Thermoplastic Stripe	$1/LF
Thermoplastic Marking	$50/EA
Slurry Seal	$600/TON
Install Roadside Sign	$350/EA
Lighting Reconstruction	$7500/EA
Drainage Items (8% of Line Items Above)	
Minor Items (10% of Line Items Above)	
Mobilization (10% of Line Items Above)	
Contingency (30% of All Items Above)	
Design Engineering (10% of All Items including Contingency)	
Construction Management (10% of All Items including Contingency)	
Administration (10% of All Items including Contingency)	

***** Unit Costs were derived utilizing the Caltrans Cost data (2015-2016) as well as recent construction cost estimates from projects located in Caltrans District 6 (Fresno, Kern, Kings, Madera, and Tulare Counties)

Class I Projects

Class I Projects were estimated as either a Class I Road Trail or a Class I Canal Trail. If a Class I project had a high cost facility (i.e. undercrossing or overcrossing of existing facilities), that cost was added as a lump sum value to the respective project.

- ***Class I Trails*** were assumed to be constructed on flat or gently sloping terrain. The pavement section for trails alongside a canal was assumed to be 4" of HMAC over 8" of Class II AB and 2" of HMAC over 4" of Class II AB for trails adjacent to existing roadways. A paved width of 12' with two 6" wide concrete retaining curbs was utilized for the estimate per City of Fresno Standard Drawing P-58. The cost of barrier fencing was added to the cost of trails alongside a canal. Signalized intersection modification was accounted for in the total estimates for roadside trial projects. The total assumed unit costs for Class I bicycle trail alongside a canal was $300/LF and $120/LF for all other Class I Trails.

- ***Class I High Cost Facility*** projects include bridges, pedestrian overcrossings, and tunnels. These projects looked at simplified options for crossing major barriers such as freeways, rivers, canals and railroad tracks. The costs were broken down into major cost components that include structure cost and embankment. The costs varied based on location and design features. Further refinement and design will be required to move these specific projects forward for implementation.

Class II Projects

For the purpose of this estimate, it was assumed that each of the Class II projects fell into one of two different types of projects depending on the existing site conditions.

- ***Class II Restriping*** is assumed to occur in areas with sufficient roadway width to accommodate a Class II bicycle lane as well as roadways that could benefit from a "road diet". A Class II Restriping included costs to restripe and slurry seal the existing roadway. In order to simplify the estimate, an average roadway configuration of 4 Lanes was used to calculate the unit cost. The cost to restripe the road was determined to be $65/LF.

- ***Class II Widening*** was determined to be any route that had insufficient roadway width to accommodate a bicycle lane. The estimate includes a cost to widen of the road out 5' on each side utilizing a pavement section of 5.5" of HMAC over 13" of AB. Reconstruction of sidewalk, curb and gutter, as well as drainage and lighting facilities are assumed in this estimate. The $65/LF for restriping is also included in this estimate. The total cost to widen one side of an existing street was determined to be $640/LF.

Class III Projects

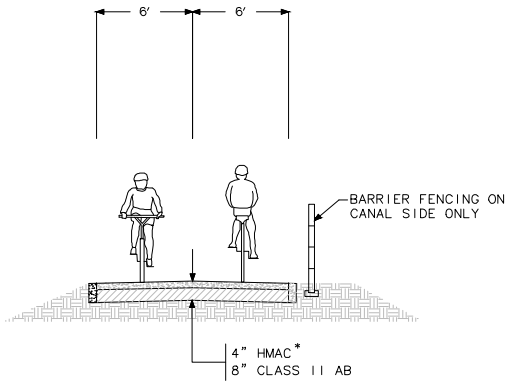
- ***Class III*** projects are defined as a bike route that is signed and striped with sharrow bicycle markings. For the purpose of this estimate, all Class III bicycle paths are assumed to have 1 sign and one marking installed in each direction every 1000'. The total cost is assumed to be $2/LF.

Class IV Projects

- ***Class IV*** projects are defined as a separated bikeway in which bike traffic has a physical buffer from adjacent vehicle traffic. For the purpose of this estimate, the buffer was assumed to be a 3' chevron striped buffer with delineators at 20' spacing based on recommendations found in the FHWA *Separated Bike Lane Planning and Design Guide*. Signal modifications will be required to better accommodate bicycle traffic. A slurry seal was added for the existing paved width. The total cost is assumed to be $75/LF for a Class IV facility.

FIGURE 1

COST ASSUMPTIONS FOR CLASS I FACILITIES

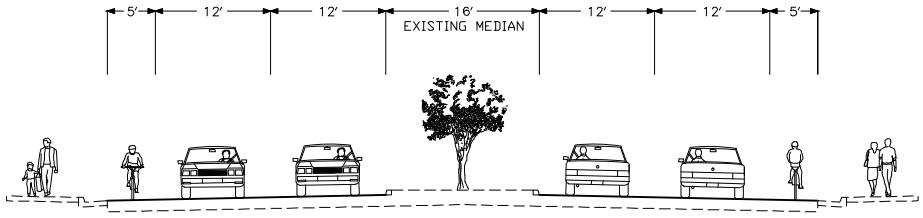


CLASS I TRAIL
$300/LF (CANAL)
$120/LF (ROADSIDE)

ESTIMATE INCLUDES:
-NEW STRUCTURAL SECTION
-6" X 12" CONCRETE CURB
-BARRIER FENCING (CANAL TRAIL ONLY)
-STRIPING
-EARTHWORK

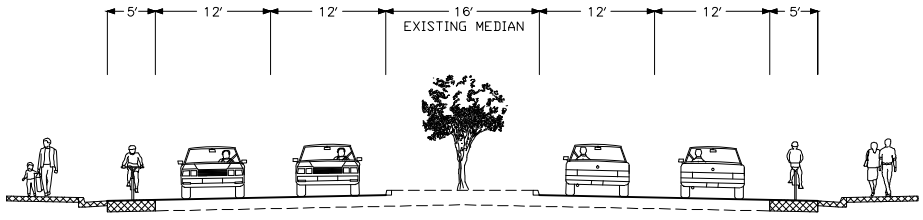
*STRUCTURAL SECTION USED ALONG THE SIDE OF A CANAL. FOR ALL OTHER CLASS I TRAIL SECTIONS, A SECTION OF 2" HMAC OVER 4" CLASS II AB IS ASSUMED.

COST ASSUMPTIONS FOR CLASS II FACILITIES



CLASS II
RESTRIPING
$65/LF

ESTIMATE INCLUDES:
-STRIPE REMOVAL
-SLURRY SEAL
-INSTALLATION OF THERMOPLASTIC STRIPES (TYPES 39, 8, 26, 26, 8, 39)
-SIGNAL MODIFICATION



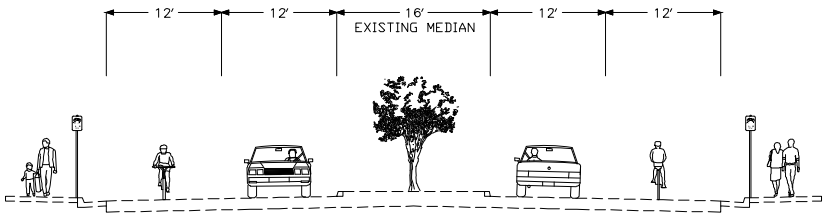
CLASS II WIDENING
$640/LF

ESTIMATE INCLUDES:
-STRIPE REMOVAL
-SLURRY SEAL
-INSTALLATION OF THERMOPLASTIC STRIPES (TYPES 39, 8, 26, 26, 8, 39)
-SIGNAL MODIFICATION
-5' OF PAVEMENT WIDENING ON EACH SIDE
-RECONSTRUCT SIDEWALK, CURB AND GUTTER
-DRAINAGE IMPROVEMENTS
-LIGHTING IMPROVEMENTS
-MISC ITEMS (CONCRETE REMOVAL, LANDSCAPING, CURB RAMPS, DRIVEWAYS)

▩ ROADWAY WIDENING AND RECONSTRUCTION

FIGURE 1

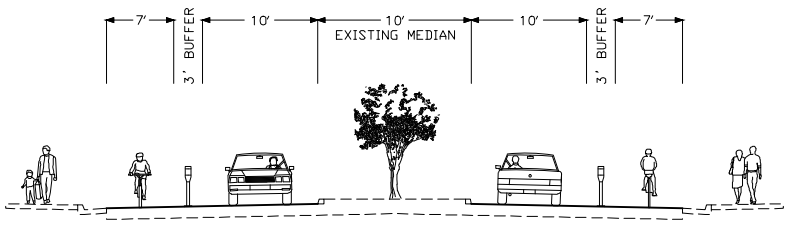
COST ASSUMPTIONS FOR CLASS III FACILITIES



CLASS III
$2/LF

ESTIMATE INCLUDES:
-SIGNAGE
-THERMOPLASTIC MARKINGS

COST ASSUMPTIONS FOR CLASS IV FACILITIES



CLASS IV
$75/LF

ESTIMATE INCLUDES:
-STRIPE REMOVAL
-SLURRY SEAL
-INSTALLATION OF THERMOPLASTIC STRIPES (TYPES 39, 8, 26, 26, 8, 39)
-DELINEATORS
-SIGNAL MODIFICATION

City of Fresno ATP Estimates
November 28th, 2016

Project Number	Project Street(s) or Canals	Project Limits	Project Priority Level	Proposed Class Type(s)	Total Length (All Classes)	Percentage Complete (All Classes)	Length of Proposed Class I	Length of Proposed Class II	Length of Proposed Class III	Length of Proposed Class IV	Canal Length (Class I)	Length Widening (Class II)	Length Re-striping (Class II)	Number of Intersection Reconstruction	Number of Intersection Modifications	Intersection Cost	High Cost Facilities*	Trail Cost (Class I)	Lane Cost (Class II)	Route Cost (Class III)	Bikeway Cost (Class IV)	Total Project Cost
1	E Copper Ave	N Willow Ave to N Friant Rd	High	I	1.98	52%	0.96					0	0	0	1	$ 12,000		$ 608,300	$ -			$ 620,300
2	Lewis S. Eaton Trail	E Copper Ave to E Audubon Ave	High	I	3.16	100%						0	0	0	0	$ -			$ -			$ -
3	N Willow Ave	E Barstow Ave to E Copper Ave	High	I	5.50	76%	1.29							4	2	$ 424,000		$ 817,400	$ -			$ 1,241,400
4	W Audubon Ave to W Nees Ave to Gravel Haul Rd to W Alluvial Ave to Harrison Ave	N Friant Rd to Herndon Trail	High	I,II,III	5.54	51%	0.59	0.32	1.3+.5			0.32	0	2	1	$ 212,000		$ 373,900	$ 540,700			$ 1,126,600
5	E Shepherd Ave	N Willow Ave to N Friant Rd	High	I	2.75	74%	0.72					0	0	0	2	$ 24,000		$ 456,200	$ -			$ 480,200
6	N Millbrook Ave [0.1 miles on E Bullard Ave]	E Shepherd Ave to E Barstow Ave	High	I,II,III	7.06	44%	0.04	2.04	1.82			0	2.04	2	3	$ 236,000		$ 25,400	$ 350,100	$ 9,700		$ 621,200
7	N Veterans Blvd	W Herndon Ave to W Gettysburg Ave	High	I	3.01	2%	2.96					0	0	0	7	$ 84,000	$ 3,000,000	$ 1,875,500	$ -			$ 4,959,500
8	W Herndon Ave Trail & Frontage Roads	N Maroa Ave to N Polk Ave/W Spruce Ave	High	I,III	5.02	62%	1.2		0.61			0	0	0	2	$ 24,000	$ 2,200,000	$ 760,400	$ -	$ 3,300		$ 2,987,700
9	N Maroa Ave	Herndon Trail to W Dakota Ave	High	IV	7.00	0%		0		7				8	0	$ 800,000			$ -		$ 1,386,000	$ 2,186,000
10	W Bullard Ave to W Sierra Ave to N Dante Ave to W San Jose Ave	Veterans Blvd to N Valetine Ave	High	II	6.85	56%		2.99				2.06	0.93	1	1	$ 112,000			$ 3,640,200			$ 3,752,200
11	W Barstow Ave	N Valentine Ave to N Fruit Ave	High	I,II	3.94	72%	0.06	1.06					1.06	0	1	$ 12,000	$ 6,500,000	$ 38,100	$ 181,900			$ 6,732,000
12	E Barstow Ave	N Millbrook Ave to N Fruit Ave	High	II	5.99	87%		0.78				0.26	0.52	1	1	$ 112,000			$ 528,600			$ 640,600
13	E Barstow Ave	N Millbrook Ave to Willow Ave	High	I,II,IV	5.45	26%	1.07	1.98		1		1.58	0.38	1	1	$ 112,000		$ 678,000	$ 2,734,800		$ 198,000	$ 3,722,800
14	W Gettysburg Ave	N Veterans Blvd to N Cornelia Ave	High	II	3.96	36%		2.53				2.53	0	1	0	$ 100,000			$ 4,274,700			$ 4,374,700
15	N Valentine Ave to N Emerson Ave to Herndon No. 39 Canal	W Barstow Ave to N Palm Ave	High	I,II	4.97	66%	1.08	0.62			1.03	0	0.62	0	2	$ 24,000		$ 1,663,200	$ 106,400			$ 1,793,600
16	N Millbrook Ave to E Bulldog Ln to N 6th Ave to E Shaw Ave to N Millbrook Ave	E Barstow Ave to E Shields Ave	High	II,III	5.83	89%		0.41	0.24			0	0.41	0	1	$ 12,000			$ 70,400	$ 1,300		$ 83,700
17	N Cornelia Ave	W Gettysburg Ave to W McKinley Ave	High	II	4.99	43%		2.83				1.64	1.19	0	0	$ -			$ 2,975,200			$ 2,975,200
18	Along Herndon No 39 Canal (section on E Shields Ave) to Mill No 36 Canal (section along E McKinley Ave) to N Clovis Ave	N Palm Ave to just north of E Shields Ave	High	I,II	9.22	0%	9.13	0.09			7.45	0	0.09	0	15	$ 180,000	$ 1,300,000	$ 12,865,300	$ 15,500			$ 14,360,800
19	E Dakota Ave	N Moroa Ave to N Millbrook Ave	High	II	4.01	47%		2.11				0.75	1.36	3	1	$ 312,000			$ 1,500,600			$ 1,812,600
20	E Dakota Ave	N Millbrook Ave to E Airways Blvd	High	II	5.02	100%						0	0	0	0	$ -			$ -			$ -
21	E Airways Blvd	E Dakota Ave to N Clovis Ave	High	I	3.79	66%	1.28					0	0	0	1	$ 12,000		$ 811,100	$ -			$ 823,100
22	N Maple Ave	E Dakota Ave to E McKinley Ave	High	II	3.00	34%		1.99				0.06	1.93	1	1	$ 112,000			$ 432,600			$ 544,600
23	N Maroa Ave/N Van Ness Ave and N Wishon Ave/N Fulton St	E Dakota Ave to E Divisadero St	High	II	6.19	65%		2.15				0.18	1.97	1	3	$ 136,000			$ 642,200			$ 778,200
24	W McKinley Ave	N Cornelia Ave to N Hughes Ave	High	II	4.96	5%		4.72				3.8	0.92	1	1	$ 112,000			$ 6,578,400			$ 6,690,400
25	W McKinley Ave	N Hughes Ave to N Van Ness Ave	High	II	4.03	44%		2.27				0.78	1.49	3	2	$ 324,000			$ 1,573,600			$ 1,897,600
26	E McKinley Ave	N Van Ness Ave to N 7th St	High	II	3.93	24%		3				0	3	0	6	$ 72,000	$ 150,000		$ 514,800			$ 736,800
27	N Hughes Ave to S Roeding Dr/S West Ave	W McKinley Ave to W Kearney Blvd	High	II	5.32	0%		5.32				2.62	2.54	0	2	$ 24,000			$ 4,862,700			$ 4,886,700
28	S Maple Ave	E McKinley Ave to E Church Ave	High	II	7.00	25%		5.28				1.57	3.71	7	0	$ 700,000			$ 3,289,400			$ 3,989,400
29	E McKenzie Ave	N Maple Ave to N Clovis Ave	High	I,II,III	3.52	57%	0.03		1.49			0	0	0	0	$ -		$ 19,100	$ -	$ 7,900		$ 27,000
30	N Clovis Ave to Fancher No 6 Canal to Central No 23 Canal	E McKinley Ave & N Clovis Ave to E Church Ave	High	I	5.04	19%	4.08				2.34	0	0	0	5	$ 60,000		$ 4,809,100	$ -			$ 4,869,100
31	E Kearney Blvd	S West Ave to Fresno St	High	II	2.68	85%		0.39				0.39	0	0	0	$ -			$ 659,000			$ 659,000
32	Van Ness Ave	E Divisadero St to Tulare St	High	II,III	1.65	0%		0.92	0.73			0	0.92	0	5	$ 60,000			$ 157,900	$ 3,900		$ 221,800
33	Tulare St to R St to Huntington Blvd	E California Ave to S 1st St	High	II,IV	4.97	44%		1.27		1.51		0	1.27	0	6	$ 72,000			$ 218,000		$ 299,000	$ 589,000
34	G St to Tuolumne St to B St to Merced St to Martin Ave to Fresno St	Tulare St to California Ave		I	1.70	0%	1.7							4	6	$ 472,000		$ 1,077,200	$ -	$ -	$ -	$ 1,549,200
35	Huntington Blvd	S 1st St to Maple Ave		III	3.00	0%			3							$ -		$ -	$ -	$ 15,900	$ -	$ 15,900
36	S 1st St to S Hazelwood Blvd to E Butler Ave	E Huntington Blvd to S Maple Ave	High	II	4.30	21%		3.48				0.73	2.75	3	3	$ 336,000			$ 1,705,400			$ 2,041,400
37	E Lane Ave to S Peach Ave to E Lowe Ave to E Lane Ave	S Maple Ave to Fancher No 6 Canal (DeWitt)	High	I,II	4.65	41%	0.3	2.44				0.81	1.63	1	2	$ 124,000		$ 190,100	$ 1,648,300			$ 1,962,400
38	Fanning Ditch	S West Ave to Walnut Ave		I	1.05	0%	1.05				1.05				2	$ 24,000		$ 1,663,200	$ -	$ -	$ -	$ 1,687,200
39	E Church Ave	S Maple Ave to S Peach Ave	High	II	3.04	66%		1.04				0.71	0.33	1	0	$ 100,000			$ 1,256,300			$ 1,356,300
															Total Costs		$ 13,150,000				$ 89,796,200

APPENDIX J: FUNDING SOURCES

Table 12, Funding Sources, listed many funding programs available for projects discussed in this plan. These programs are further described below.

Federal Programs

The majority of public funds for bicycle, pedestrian, and trails projects are derived through a core group of federal and state programs. Federal funding is authorized through the Surface Transportation Block Grant Program (STBGP). The STBGP provides flexible funding that may be used by states and localities for projects on any federal-aid highway. In the past this funding was authorized by the Surface Transportation Program (STP) in the Moving Ahead for Progress in the 21st Century Act (MAP-21). Funding for STBGP is now authorized through the Fixing America's Surface Transportation (FAST) Act, with the same goals as STP funding.

FAST continues the Highway Safety Improvement Program (HSIP). These federal funds are allocated by Caltrans and described in further detail below.

The Transportation Alternatives Program (TAP), authorized through MAP-21, provides funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, transit access, mobility, and recreation trails program. This program is now part of the STBGP in FAST instead of a stand-alone program as it was under MAP-21.

The Congestion Mitigation and Air Quality Improvement Program (CMAQ) also authorizes federal funds, including education programs. FAST maintains the existing CMAQ program from MAP-21.

Federal funds from STBGP, TAP, and CMAQ programs are allocated to Fresno COG. Distribution is allocated either competitively or proportionally according to jurisdiction population.

The HUD-DOT-EPA Interagency Partnership for Sustainable Communities periodically offers funding opportunities. Previous programs have included Urban Circulator grants, TIGER grants, and Sustainable Communities Planning grants.

State Programs

There are a number of statewide funding sources and regionally administered funds.

Active Transportation Program

The Active Transportation Program was created by SB 99 / Assembly Bill 101 to encourage increased use of active modes of transportation such as biking and walking. The program consolidates five existing state funded programs: Transportation Alternatives Program, Recreational Trails program, Safe Routes to Schools, Environmental Enhancement and Mitigation Program and the Bicycle Transportation Account. It provides a comprehensive program that improves program planning and flexibility and is more efficient than multiple programs. Another benefit is that funds can be directed to multi-year projects to make greater long-term improvements to active transportation.

The ATP mixes state and federal funds and provides approximately $130 million annually, with a focus on implementing active transportation improvements to support the goals of local SB 375 sustainable community strategies. This program is funded from a combination of federal and state funds from appropriations in the annual state budget act. Forty percent of the funding will go toward metropolitan planning organizations in urban areas with populations greater than 200,000. Ten percent of the funds go to small urban and rural regions. The remaining funds will go to the California Transportation Commission for statewide projects. The ATP ensures that disadvantaged communities fully share in the benefits of the program by requiring that a minimum of 25% of funds be distributed to disadvantaged communities.

In order to maximize the effectiveness of program funds and to encourage the aggregation of small projects into a comprehensive bundle of projects, the minimum request for statewide Active Transportation Program funds that will be considered is $250,000. This minimum does not apply to non-infrastructure projects, Safe Routes to Schools projects, and recreational trails projects.

Project types allowed under the ATP include: new bikeways serving major transportation corridors, new bikeways to improve bicycle commuting options, bicycle parking at transit and employment centers, traffic control devices to improve pedestrian and bicycle safety, improving and maintaining safety on existing bikeways, recreational facilities, Safe Routes to School projects, Safe Routes To Transit projects, education programs, and other improvements to bicycle-transit connections and urban environments.

For a project to contribute toward the Safe Routes to School funding requirement, the project must directly increase safety and convenience for public school students to walk and/or bike to school. Safe

Routes to Schools infrastructure projects must be located within two miles of a public school or within the vicinity of a public school bus stop. Other than traffic education and enforcement activities, non-infrastructure projects do not have a location restriction.

Highway Safety Improvement Program

Caltrans administers the Highway Safety Improvement Program (HSIP) specified as part of the FAST Act. This program uses cost-benefit ratios as a primary factor in the awarding of applications. Because the program focuses on roadway safety, projects with documented collision history – through frequency of collision but particularly collision severity – are typically ranked higher. Roadways with documented bicycle and pedestrian collision history may be well qualified for HSIP applications, particularly since many of the proposed projects would improve bicyclist and pedestrian safety at a lower cost than many of the highway projects also eligible under this funding source.

In its most recent grant cycle (November 2015), Caltrans awarded $160 million to 182 projects. While this funding source is often used for major roadway improvement projects, installation of traffic signals, and most other cost-intensive projects, funding has routinely been awarded to bicycle and pedestrian projects. Successful projects have included:

- Median refuges and curb extensions
- Curb, gutter, and sidewalk
- Paved shoulders
- Upgraded traffic signals with pedestrian countdown signals and pedestrian-scale lighting
- Bicycle lane striping
- Crosswalk striping
- In-pavement flashers and rectangular rapid flashing beacon (RRFB) at crossings

Many of these projects were applied for as standalone bicycle and pedestrian improvement projects; some bicycle and pedestrian improvements were included with a broader package of roadway improvement projects.

More information is available online: http://www.dot.ca.gov/hq/LocalPrograms/hsip.htm

Other Statewide Funding Programs

Caltrans Transportation Planning Grants are available to jurisdictions and can be used for planning or feasibility studies. The Division will award approximately $9.8 million in funding through two Grant Programs for Fiscal Year 2016-17. The maximum funding available per project is $500,000.

Limited amounts (2%) from the Local Transportation Fund (LTF), which is part of the Transportation Development Act (TDA) and derived from a ¼ cent of the general sales tax collected statewide, can be used for bicycle and pedestrian facilities. Article 3 funds for planning and construction of pedestrian and bicycle facilities are administered locally through Fresno COG and are allocated to member agencies based on population and taxable sales.

The California State Parks administers the state's Recreational Trails Program (RTP). The RTP provides funds annually for recreational trails and trails-related projects. Cities are eligible applicants for the annual funding ($8.4 million in 2015). The program requires an applicant match of 12 percent of the total project cost.

The National Park Service and California State Parks administer the Land and Water Conservation Fund (LWCP). The LWCF Program provides matching grants to states and local governments for the acquisition and development of public outdoor recreation areas and facilities. Approximately $6.5 million is available in 2016; grants require a 50 percent local match.

The Affordable Housing and Sustainable Communities (AHSC) Program is administered by the Strategic Growth Council. AHSC funds can be used for projects which demonstrate VMT reduction through fewer or shorter vehicle trips or mode shift to transit use, bicycling or walking within areas lacking high quality transit, with an emphasis on providing disadvantaged community benefits. The project area must be served by at least one transit stop. More information is available at https://www.sgc.ca.gov/s_ahscprogram.php.

The Office of Traffic Safety provides grants for safety outreach to schools and community groups. More information is available at http://ots.ca.gov/Grants/.

Regional Surface Transportation Program (RSTP)

The Surface Transportation Program (STP) block grant provides MAP-21 and FAST funding for transportation projects, including pedestrian and bicycle projects (see above discussion about federal

programs for details). This program is administered by Fresno COG, which can prioritize projects for RSTP funding.

Fresno COG RSTP program information: http://www.fresnocog.org/regional-surface-transportation-program

Fresno County Transportation Authority (FCTA) Measure C

Measure C is a half-cent sales tax aimed at improving the overall quality of Fresno County's transportation system. The Local Transportation Program can be used on pedestrian and bicycle facilities and trails. Funding may also be used for maintenance, with certain conditions. Funding is allocated to cities and the county based on population.

San Joaquin Valley Air Pollution Control District (SJVAPCD) Bikeway Incentive Program

SJVAPCD provides funds to increase commuter bicycle accessibility and utilization as an alternative transportation measure. Funds may be used for Class I, II, or III bikeways in amounts up to $150,000 (depending on bikeway type).

More information is available online: http://valleyair.org/grants/bikepaths.htm.

[This page intentionally left blank]

APPENDIX K: COMMUNITY ENGAGEMENT PLAN

[This page intentionally left blank]

City of FRESNO

Active Transportation Plan and 2010 Bicycle, Pedestrian, & Trails Master Plan Update

Community Engagement Plan

VRPA TECHNOLOGIES, INC.

February 19, 2016

City of Fresno

Active Transportation Plan & 2010 Bicycle, Pedestrian, & Trails Master Plan Update

Preliminary Draft
Community Engagement Plan

Prepared for:

City of Fresno
Randy Bell, Capital Projects Manager
2600 Fresno Street, 4th Floor
Fresno, CA 93721
Phone: (559) 621-8679
Fax: (559) 457-1334

Prepared by:

Fehr & Peers
Rob Hananouchi, Project Manager
2990 Lava Ridge Court, #200
Roseville, CA 95661
Phone: (916) 773-1900
Fax: (916) 773-2015

VRPA Technologies, Inc.
Georgiena Vivian, President
4630 W. Jennifer, Suite 105
Fresno, CA 93722
www.vrpatechnologies.com

February 19, 2016

Contents

INTRODUCTION

In September 2013, Governor Brown signed legislation to encourage increased use of active modes of transportation. The California Department of Transportation (Caltrans) Active Transportation Program is defined by State legislation and Senate Bill 99 and includes the following goals:

- ✓ Increase the proportion of trips accomplished by biking and walking
- ✓ Increase safety and mobility for non-motorized users
- ✓ Advance the active transportation efforts of regional agencies to achieve greenhouse gas reduction goals pursuant to Senate Bill 375
- ✓ Enhance public health, including the reduction of childhood obesity through the use of projects eligible for Safe Routes to Schools Program funding
- ✓ Ensure that disadvantaged communities fully share in the benefits of the program
- ✓ Provide a broad spectrum of projects to benefit many types of active transportation users

Active transportation refers to human-powered transportation that engages people in healthy physical activity while they travel from destination to destination. Human-powered transportation includes walking, bicycling, the use of wheelchairs, strollers, or other mobility devices, skateboarding, and in-line skating. Active transportation supports public transit and is a necessary component in developing and implementing sustainable community strategies, reducing greenhouse gas emissions, increasing public health, and making communities enjoyable places to live, work, and play.

Walkable and bikeable communities are places where it is safe, easy, and comfortable to make active trips. In these communities, streets are connected and integrated with walking and biking trails and paths, busy streets have frequent safe crossings, directional signs make navigation easy, and pedestrian and bicycle routes connect to destination places. With most trips on public transportation including walking or bicycling, active transportation supports public transportation.

The City of Fresno is now in the process of developing an Active Transportation Plan (ATP), which will also include an update of the 2010 Bicycle, Pedestrian, and Trails Master Plan (BMP). The ATP will build upon the goals and policies established in the current BMP as well as the 2035 General Plan. The General Plan covers the entire Fresno Sphere of Influence, which will also be the area covered by the ATP. The ATP will be developed in accordance with State Guidelines enabling the City to qualify for potential project funding under

the Active Transportation Program. Currently, the City is working to provide alternatives modes of transportation in an effort to create a more sustainable, healthy, and economically viable community where bicycling and walking are viable and popular travel choices in a comprehensive, safe, and convenient network. With a goal of a well-developed bicycle and pedestrian facilities system, the City is looking to increase the quality of life for their current and future residents.

COMMUNITY ENGAGEMENT PLAN

Description

Community engagement is a problem-solving approach, which brings together community members to discuss complex community issues. Working together to achieve a common goal, this partnership encourages affected parties to bring forward unique ideas and solutions. As each community member is different, so too are their hopes and aspirations and the ways to implement them. By listening to each other, the decisions generated will reflect the greater community at large.

The process of community engagement is most successful when the process is transparent with access to decisions, services, and information for all interested community members. The active participation of the community ensures that the outcomes are better tuned to meeting the community's needs today and into the future. The Project Team is committed to being responsive to the members of the community, to providing clear and concise informational materials, and to addressing the ideas and concerns raised by the community. The public engagement activities for this decision-making process will be documented and will be considered during development of the ATP.

State and federal transportation laws, regulations, policies, and guidance require and encourage public involvement throughout the planning process, particularly in regard to environmental justice populations and underserved communities, including low-income and minority populations. This Community Engagement Plan (CEP) establishes consistent guidelines to ensure people have meaningful opportunities to be involved in the ATP planning process. The Plan includes examples of the tools and techniques that the Project Team may use to communicate with and receive input from the public.

Purpose

The purpose of conducting public involvement is to involve people and to incorporate their input into the ATP decisions. A comprehensive CEP is crucial to the success of the public involvement process. Thorough and well-thought out plans simplify the engagement process by providing a systematic approach, maximizing the use of available resources, and minimizing delays by ensuring that public engagement activities are coordinated with other ATP tasks and milestones.

There are three specific purposes for this outreach effort:

- ✓ To provide the public multiple opportunities to learn about the ATP, to review the proposed options, and to understand the implications that may result with all options
- ✓ To create and distribute public information that is user-friendly and culturally sensitive to communities that may be potentially affected
- ✓ To provide policy makers with information about the public's opinions and values regarding the ATP

Goals

The ultimate goal of this CEP is to allow the public and other community members opportunities throughout the process to influence the development of the ATP. The CEP reflects ways to identify and contact the community, inform them of the need for the ATP, and involve them in the decision-making process. The CEP includes tasks that will identify the affected public and creates an inventory of neighborhoods and school organizations, businesses, church groups, ethnic organizations, homeowners associations, environmental or cultural organizations, special interest groups and civil rights groups.

The goal of the CEP is to actively seek the participation of communities, agencies, individual interest groups, and the general public throughout the ATP development process. The CEP provides the framework for achieving consensus and communicating the decision-making process between the general public, public agencies, and governmental officials to identify solutions for the ATP. Public involvement provides the public and agencies with continuing opportunities to be involved. Input from affected agencies and the public also lends credibility to key decisions made during the ATP development process. Making timely, accurate, and useful information available to the general public and other community members will help to achieve the following objectives of the engagement process:

- ✓ Conduct an open and transparent public process that: provides up-to-date public information and opportunities for interested members of the public and other community members to comment; and identifies critical issues and problems in need of resolution
- ✓ Create and implement a meaningful public involvement process, and evaluate the public involvement process on a regular basis
- ✓ Provide accurate, timely, and comprehensive documentation on the community engagement process
- ✓ Form the Stakeholder Advisory Committee (SAC) including community leaders and key community groups to assist with development of the ATP
- ✓ Keep elected officials informed of the ATP development process through meetings with City staff and the Project Team and email notices of upcoming SAC meetings and public workshops
- ✓ Create public forums and collateral materials that provide clear, concise, and easy-to-understand information to enable the public to make informed decisions

- ✓ Seek opportunities to involve a broad range of community members, including non-traditional groups, to ensure that the partnering agencies understand the issues from all those who may be impacted by the ATP
- ✓ Address social equity and environmental justice issues, to provide information to comply with relevant regulations, Title VI, Executive Order 12898 on Environmental Justice, and Executive Order 13166 on Limited English Proficiency and the Americans with Disabilities Act (ADA)
- ✓ Educate the public by using language that is easily understood by laypersons
- ✓ Reach out to minority and low-income populations by producing materials in English and other appropriate languages
- ✓ Build awareness about the ATP and its importance to regional mobility among the public, including those the ATP will serve (transit riders, residents, students, and businesses), and the general public
- ✓ Develop a strong list of public and regional benefits that the ATP will generate
- ✓ Develop a partnership with the media to ensure accurate reporting of information

Fresno ATP Project Team

- ✓ Randy Bell, Capital Projects Manager, City of Fresno, Randy.Bell@fresno.gov, Phone: (559) 621-8679
- ✓ Jill Gormley, T.E., Traffic Engineer, City of Fresno, Jill.Gormley@fresno.gov, Phone: (559) 621-8800
- ✓ Robert Hananouchi, ATP Project Manager, Fehr & Peers, R.Hananouchi@fehrandpeers.com, Phone: (916) 773-1900
- ✓ Rodney Brown, Transportation Engineer/Planner, Fehr & Peers, R.Brown@fehrandpeers.com, Phone: (916) 773-1900
- ✓ Georgiena Vivian, President, VRPA Technologies, Inc., Community Engagement Program Lead, gvivian@vrpatechnologies.com, Phone: (559) 259-9257
- ✓ Dena Graham, Outreach Specialist, VRPA Technologies, Inc., Public Engagement Plan Support, dgraham@vrpatechnologies.com, Phone: (707) 263-1735

Target Audiences: Roles, Responsibilities, and Expectations

The targeted audiences for the Project are listed below.

Stakeholder Advisory Committee (SAC)

A list of the Stakeholder Advisory Committee (SAC) members is included at the end of this document as Appendix A. In preparing the SAC, some members were identified as being part of an active bicycle community with a strong interest in the ATP or as agencies and community groups with specific interests and constituencies that will be important to engage in the ATP development process. Other SAC members were identified based on their roles and responsibilities in the study area and their ability to provide critical input, data, and other information to the ATP planning process.

SAC members will be invited to participate in a series of three (3) working sessions. This sessions will include those referenced below under Recommended Activities. SAC members will be provided with summarized versions of technical documents at least one (1) week in advance of these working sessions for review and comment.

Elected Officials, Key Community Members, and Informed Parties

A full list of elected officials, key community members, and other informed parties will be created and maintained throughout the ATP development process. Elected officials, key community members, and informed parties are located within the study area or have an interest in the outcome of the planning process. These groups are generally defined as people that need to be kept up-to-date on the Project status and meetings.

Elected officials, key community members, and other informed parties will be informed of major Project milestones and advised when SAC and public workshops are to be held. Key community members and other informed parties will be encouraged to monitor Project process as materials are posted online. They will also receive Project information through meeting materials and presentations that they attend. If members of this group attend SAC working sessions, they will do so as observers and will be invited to speak during a designated public comment period.

General Public

The general public will be invited to attend two community workshops and/or events. These meetings will be open house style meetings.

Recommended Activities

The following section identifies proposed stakeholder and public engagement activities designed to support development of the ATP.

SAC Working Sessions

SAC working sessions will be held at strategic intervals during the Project to review interim documents.

SAC Working Session	Topic	Schedule
Working Session #1	Review Project purpose and goals, scope, schedule, work products; existing conditions assessment including policy and program review, data collection and mapping, equity analysis, and the identification of priority areas; and a bicycle comfort travel analysis	March 2016 - Prior to first community workshop
Working Session #2	Review and discuss the draft recommended bicycle and pedestrian network and project list affecting the study area and considering recommendations of the upcoming City of Fresno Parks Master Plan update	June 2016 - Prior to second community workshop
Working Session #3	Review and discuss the draft ATP including policy and program recommendations, the bicycle pedestrian and safety plan, cross-section design and policy guidance for key concepts, capitol cost estimates, and maintenance and financing strategies.	August 2016 - Prior to preparation of the Final ATP

Deliverables: SAC working session materials (invitations via email, agendas, PowerPoint presentations, session summary synopsis including action items, comments, and input for City review)
Schedule: March – August 2016

Project Community Member Database

The Project Team will research and create one (1) community member database. Existing databases will be compiled and augmented with additional interested community members. The database will contain the name of the agency or individual, their physical and email addresses, telephone number(s), notes regarding attendance at workshops or events, and comments received. This task will be an on-going task with the database updated throughout the ATP development process including SAC and workshop attendees, webpage commenters, and other community members or individuals requesting notification of upcoming SAC meetings and public workshops.

Deliverables: Project Community Member Database
Schedule: Project Duration

Project Fact Sheet

For each public workshop, a Project Fact Sheet will be developed for distribution highlighting current activities in the ATP development process. The Fact Sheet will be a two-sided sheet with information

provided in English on one side and the same information provided in a non-English language (Spanish or a Southeast Asian language) on the other side. Finalized Fact Sheets will also be provided for dissemination by the City of Fresno, other Project partners, community representatives, and the Project Team. Fact Sheets will also be posted on the Project webpage as noted below.

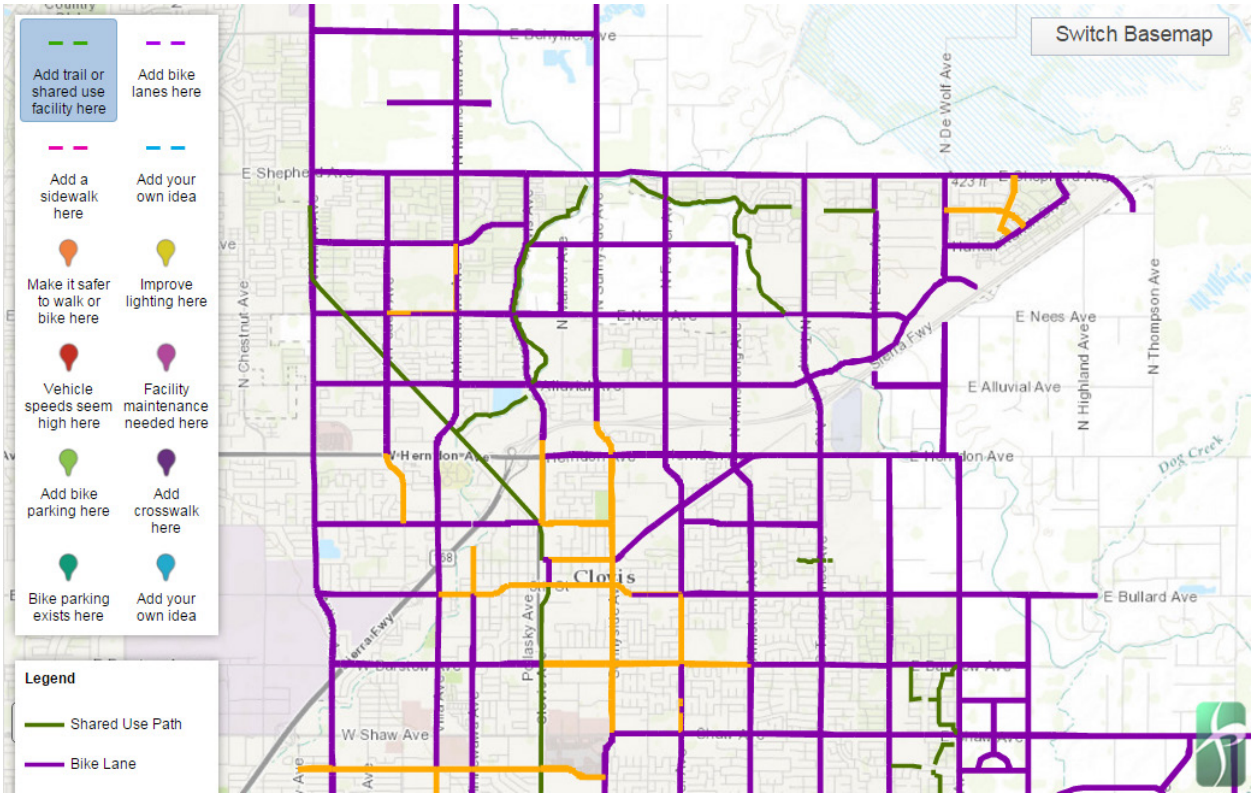
For the first workshop, the Fact Sheet will include highlights associated with the existing conditions assessment including policy and program review, data collection and mapping, equity analysis, and the identification of priority areas; and a bicycle comfort travel analysis. For the second Fact Sheet, the draft recommended bicycle and pedestrian network and project list affecting the study area will be highlighted.

Deliverables: Administrative Draft, Draft, and Final Fact Sheets; 500 full color copies of each factsheet
Schedule: March – June 2016

Project Webpage

A Project webpage will be added the City's website to provide user-friendly, easy Internet access to information about the ATP planning process. The Project Team will coordinate with the City's webmaster regarding webpage design and provide materials for posting.

The webpage will be utilized to keep all interested parties including key community members and the public informed, as well as to provide an opportunity for their input through a comment section and using CrowdSource+, a web-based tool for engaging the community with a project or task and seeking their assistance and knowledge. This tool gives the community an opportunity to play an active role in development of the ATP and share details that may otherwise not be available through other sources. It



also allows members of the community who might not participate in community meetings to participate in the process.

CrowdSource+ will utilize GIS mapping to engage the community by giving them the ability to share their thoughts and input through the mapping of existing bicycle and pedestrian facilities including location, type, and number of bicycle parking spaces. CrowdSource+ will also be available to identify issues or priorities for improvement of the system and related facilities (sidewalk gaps, safety concerns, or maintenance location issues). The link to Crowdsource+ will be provided on the webpage.

The tool will be introduced to the SAC for review and comment and then available to the public prior to the first public workshop. Availability of the tool will be publicized on the webpage, in a press release that the Project Team will draft for the City to provide to the Fresno Bee and other local media, and in an outreach letter that the Project Team will draft for the City to solicit input from local bicycle groups, parent groups, and other key community members and interested parties who can provide input to the process. The Project Team will also create a flyer and business cards that can be placed in local bike shops and other venues to publicize both the CrowdSource+ tool and the ATP Project.

The webpage will provide an opportunity to learn about the ATP online and the ability to register for future email updates. Initially, the webpage will provide general information, including Project scope, schedule and deliverables. Over the duration of the Project, other draft or final Project materials (technical memorandums, mapping, and draft and final ATP documents) will be posted for review and comment. Materials presented on the webpage will be updated as needed. Additional items to be posted to the webpage include, but are not limited to:

- ✓ Two (2) Project Fact Sheets (one (1) for each public workshop)
- ✓ Two (2) PowerPoint Presentations (one (1) for each public workshop)
- ✓ Two (2) Public Workshop invitations (one (1) for each public workshop)
- ✓ Links to existing or other social media sites by the City such as NextDoor, Facebook, Twitter, Instagram, and others

Deliverables: Materials for posting to the Project webpage and CrowdSource+ application
Schedule: March – October 2016

Public Workshops

Public workshops will be held at two (2) key points in the process to review interim documents. The workshops will be a method of listening to the needs and opportunities expressed by city residents, business owners, and other key community members so that the ATP reflects their experience. The workshops may be stand-alone public open house meetings or they may be held at other scheduled events in the study area where a good cross-section of the community is already expected to be in attendance. The Project Team will prepare a list of existing scheduled events within the study area and review the list with the City to determine if there are existing events where ATP outreach can be conducted to maximize community participation and outreach.

It is anticipated that the workshop participants will include residents, workers, business owners, school administrators, school district officials, transit operators, City officials, and members of the bicycle and pedestrian community. Key community members and other informed parties will be notified of these workshops/events through various methods by the City. Notices will be placed in local newspapers by the

City, on the Project webpage, and on social media links such as NextDoor, Facebook, Twitter, Instagram, and others. Notices will also be emailed to the community member database. In addition, the Project Team, in advance of each workshop, will work with City to determine how to best engage members of disadvantaged communities, non-English speaking communities, and disabled communities, and assist in strategizing on how to engage and invite these community members to the workshops. At a minimum, the Project Team, in coordination with the City, will contact Community-Based Organizations (CBOs), Faith-Based Organizations (FBOs), health associations, and youth organizations, and recruit local partners and key cultural institutions to assist with the identification of workshop attendees and participants in the planning process.

The Project Team will coordinate with the City to identify the location of each workshop, the equipment needed to facilitate the workshop, the type and amount of refreshments required, and translation services needed to accommodate non-English speaking attendees.

The workshops will follow an open house format and will include an introductory PowerPoint presentation. Interactive stations will be designed to engage and receive feedback from workshop participants. Interactive exhibits will be presented with Project Team and technical team members available to discuss questions and concerns. Comment cards will be available for comments and feedback. The Project Team will provide stations for registration, comments, and refreshments.

Following each workshop, the Project Team will prepare a written summary of comments and input received, and recommendations for City review.

Workshop	Goal	Schedule
#1	✓ Obtain feedback on the existing bicycle and pedestrian network ✓ Obtain feedback on the 2010 Bicycle and Pedestrian Master Plan ✓ Receive input and recommendations for the new ATP	✓ Following documentation of existing conditions ✓ April 2016
#2	✓ Obtain feedback on the draft recommended network and priorities	✓ Following preparation of the draft recommended network and project list ✓ July 2016

Deliverables: Workshop noticing; workshop materials (invitations, agendas, PowerPoint presentations, sign-in sheets, comment cards, refreshments, session summaries including public comment logs and recommendation for City review)

Schedule: April – July 2016

Expected Outcomes

The following expected outcomes are presented to highlight the resulting impact of the CEP once implemented.

- ✓ Outreach and educational programs will be developed and implemented to increase awareness and understanding of the ATP
- ✓ Underrepresented communities and individuals will be educated about the ATP, its purpose, need, and how it benefits them and their communities
- ✓ Underrepresented communities and individuals will have an increased opportunity to participate in the ATP development process
- ✓ Partnerships will be developed with key community members to disseminate ATP education materials and information
- ✓ Coordinated efforts will be forged with Community-Based Organizations (CBOs), Faith-Based Organizations (FBOs), and other local, state, or regional partners to enhance awareness of the ATP in underrepresented communities
- ✓ Partner agency feedback on the ATP and its options
- ✓ More local support for preferred alternatives
- ✓ Documentation of public concerns and opportunity for input
- ✓ Better use of agency resources as evidenced by effective, results-oriented meetings

Materials Coordination

The Project Team and other partnering agencies will be asked to review, contribute to, and comment on the development of administrative draft, draft, and final Project materials described above. Materials will be approved by the City before broader distribution.

APPENDIX A - SAC MEMBERS LISTING

Stakeholder Advisory Committee Members

Organization	Contact | Alternate
Caltrans	John Liu
Central Unified School District	Bob Morse
	Crystal Garlick
Centro La Familia	Margarita Rocha
	Angelica Perez
City of Fresno, Development and Resource Management	Sophia Pagoulatos
City of Fresno, PARCS	Manuel Mollinedo
City of Fresno Police Department	Mark Van Wyhe
City of Fresno Bicycle/Pedestrian Advisory Committee	Anthony Molina
	Joe Martinez
Clovis Unified School District	Kelly Avants
Community Regional Medical Center	Eliana Troncale
	Lois Blough
Cultiva La Salud	Genoveva Islas
Downtown Fresno Foundation	Aaron Blair
Fresno Area Express	Jeff Long
Fresno Center for New Americans	Lue Yang
Fresno Cycling Club	Nicholas Paladino
	Hilton Osborne
Fresno Council of Governments	Tony Boren
	Chelsea Gonzales
Fresno County Department of Public Health	David Pomaville
Fresno Irrigation District	William Stretch
	Laurence Kimura
	Adam Claes
Fresno Metro Ministry	Keith Bergthold
	Sophia DeWitt
Fresno State University	Tom Gaffery
Fresno Unified School District	Miguel Arias
Peds and Pedals	Joe Martinez
San Joaquin Valley Air Pollution Control District	Tom Jordan
Southeast Fresno Community Economic Development Association	Jose Leon-Barraza
The Maddy Institute	Mark Keppler
Tree Fresno	Lee Ayres
	Dayana Jiselle
United Learning Foundation	Tiffany Potter
West Fresno Family Resource Center	Janice Mathurin

Project Team

City of Fresno, Public Works Department	Randy Bell, Capital Program Manager	Randy.Bell@fresno.gov
City of Fresno, Public Works Department	Jill Gormley, T.E., Traffic Engineer	Jill.Gormley@fresno.gov
Fehr & Peers	Rob Hananouchi, Project Manager	R.Hananouchi@fehrandpeers.com
Fehr & Peers	Rod Brown, Transportation Engineer/Planner	R.Brown@fehrandpeers.com
VRPA Technologies, Inc.	Georgiena Vivian, Outreach	gvivian@vrpatechnologies.com
VRPA Technologies, Inc.	Dena Graham, Outreach	dgraham@vrpatechnologies.com

APPENDIX L: CITY RESOLUTION ADOPTING THIS PLAN

[Add resolution when complete.]