

**CITY OF MCFARLAND**  
**PEDESTRIAN AND BICYCLE**  
**IMPEDIMENT STUDY**



**MAY 2018**



# PEDESTRIAN AND BICYCLE IMPEDIMENT STUDY

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## ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ADA	Americans with Disabilities Act
APS	Alternative Planning Strategy
AASHTO	American Association of State Highway Transportation Officials
ATP	Active Transportation Program
BTA	Bicycle Transportation Account
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Bicycle Coalition
CCC	California Conservation Corps
CDBG	Community Development Block Grant
CEQA	California Environmental Quality Act
CIP	Capital Improvement Program
CMAQ	Congestion Mitigation and Air Quality Program
CNG	Compressed Natural Gas
CTC	California Transportation Commission
CVC	California Vehicle Code
DAR	Dial-A-Ride
DOT	U.S. Department of Transportation
FAST Act	Fixing America's Surface Transportation Act
FHWA	Federal Highway Administration
GHG	Greenhouse Gas
HDM	California Highway Design Manual
HSIP	Highway Safety Improvement Program
IBank	California Infrastructure and Economic Development Bank
ISRF	Infrastructure State Revolving Fund Program
ITE	Institute of Transportation Engineers
ITIP	Interregional Transportation Improvement Plan
LEP	Limited English Proficiency
LTF	Local Transportation Fund
MPO	Metropolitan Planning Organization
MUTCD	California Manual of Uniform Traffic Control Devices
NACTO	National Association of City Transportation Officials
NOFA	Notification of Funding Availability
OTS	Office of Traffic Safety
PTA	Planning and Technical Assistance
RTIP	Regional Transportation Improvement Plan
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
ROW	Right of Way
SAFETEA-LU	Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users Act
SB	Senate Bill

SCS	Sustainable Communities Strategy
SR	State Route
SR2S	Safe Routes to School (Caltrans)
SRTS	Safe Routes to School (Federal)
STBG	Surface Transportation Block Grant
STIP	State Transportation Improvement Program
STP	Surface Transportation Program
SJVAPCD	San Joaquin Valley Air Pollution Control District
SWITRS	Statewide Integrated Traffic Records System
TAP	Transportation Alternatives Program
TDA	Transportation Development Act
TDP	Transit Development Plan
TIGER	Transportation Investment Generating Economic Recovery
VMT	Vehicle Miles Traveled

## **SECTION 1 - EXECUTIVE SUMMARY**

Walking and bicycling provide opportunities for healthful exercise and improve mobility for all members of the community. In addition, these alternative transportation modes benefit a community by reducing impacts on air and noise quality, relieving traffic congestion and vehicle parking demand, and reducing consumption of energy resources. Unfortunately, many communities lack the infrastructure necessary to support these activities. To that end, the principal goal of this *City of McFarland Pedestrian and Bicycle Impediment Study* (Study) is to provide the City of McFarland with a comprehensive analysis intended to help establish a strategic vision for improving walking and bicycling access, connectivity, and safety for residents of the City, through the identification of impediments in the existing Citywide infrastructure, such as substandard or missing sidewalks, accessibility issues related to the Americans with Disabilities Act (ADA), and insufficient street lighting.

The objectives of the Study are described below:

- Provide a comprehensive inventory of existing and currently proposed on- and off-road pedestrian and bicycle facilities in McFarland.
- Improve the City's understanding of how improving walking and bicycling connectivity between residential areas, employment centers, schools, retail centers, recreational centers, and other attractions increases individual mobility, enhances transportation options, and promotes active living.
- Serve as the framework for identifying and selecting pedestrian/bicycle projects for the Regional Transportation Plan (RTP) and the Active Transportation Program (ATP).
- Provide guidance for engineering, education, enforcement, encouragement, and evaluation activities to help improve the safety of walking and bicycling.
- Reduce collision risk by identifying potential conflict points and create solutions to better manage pedestrian and bicycle flow.
- Improve existing infrastructure by identifying strategies to develop and enhance the existing pedestrian and bicycle infrastructure with a focus on access, connectivity, and safety.
- Develop design standards that define pedestrian and bicycle infrastructure standards to guide future development.

This Study includes a comprehensive inventory of existing and proposed pedestrian and bicycle facilities, including streetlights. The inventory was compiled through field observations and calculations, and digital imagery analysis. The following findings were determined through the inventory process:

- Although curb, gutter and sidewalk are required for all new developments within the City, many existing developed areas of McFarland lack continuous and/or unobstructed sidewalks.
- McFarland's existing bikeway system is comprised primarily of Class II bicycle lanes.

- The greatest impediment to bicycling observed was the lack of continuous/linked bikeways within the City.
- The lighting in McFarland is comprised primarily of standard street lights and is insufficient to illuminate the nighttime activities of pedestrians and bicyclists.

This Study also analyzes collision data to identify conflict points and patterns in the occurrence of pedestrian and bicycle-involved collisions which might highlight specific improvements needed in the City of McFarland. Between January 2012 and December 2016, there were 16 total pedestrian and bicycle collisions reported in McFarland; 12 pedestrian-involved collisions and 4 bicycle-involved collisions. The variation of pedestrian and bicycle-related collisions by time of day, day of the week, and season of the year indicate that collisions are likely the result of higher volumes of pedestrian, bicycle, and motor vehicle traffic, as well as lighting/sight factors. Pedestrian and bicycle-involved collisions occurred most often on the west side of the City. Most reported pedestrian collisions occurred when pedestrians were crossing the roadway outside of marked crosswalks. Most reported bicycle collisions occurred when a bicyclist was riding on the wrong side of the road.

Recommended pedestrian and bicycle improvement projects can be found in Section 4. Proposed improvements emphasize safety needs and collision risk reduction and were developed based on the City's priorities for pedestrian and bicycle impediments and improvements. This section also includes cost estimates for each project, and potential funding sources.

- Proposed Pedestrian Improvements (sidewalks and ADA-compliant curb ramps) are shown in Figures 4-1 to 4-4 and listed in Table 4-1.
- Proposed Bicycle Improvements (Class II lanes and Class III routes) are shown in Figure 4-5 and listed in Tables 4-2 and 4-3.
- Proposed Street Light Improvements (installation of additional lights) are shown in Figures 4-6 to 4-7 and listed in Table 4-4.

This Pedestrian and Bicycle Impediment Study also recommends design standards for future pedestrian and bicycle infrastructure based on the most current laws, recommendations, guidance, and best practices, for adoption by City Council. It also contains a number of policies that support the objectives of the study and recommends programs to improve pedestrian and bicycle safety.

## **SECTION 2 - INTRODUCTION**

The City of McFarland (City) received a Notice of Funding Availability (NOFA) in 2015 from the Community Development Block Grant (CDBG) program to prepare this *Pedestrian and Bicycle Impediment Study* (Study) as a qualified Planning & Technical Assistance (PTA) activity. The 2015 CDBG application to request PTA funds for this Study can be found in Appendix A.

This Study is a comprehensive, jurisdiction-wide analysis intended to help establish a strategic vision for improving walking and bicycle opportunities for residents of the City. This vision will be used in conjunction with the *City of McFarland Bicycle Master Plan* (McFarland Bicycle Master Plan) (City of McFarland 2014) and the City's *Complete Street 2035 Circulation Element* (Circulation Element) (City of McFarland 2013). While the McFarland Bicycle Master Plan and Circulation Element provide guidance for infrastructure improvements, they are focused on street design and bicycle facilities and do not identify impediments in the existing Citywide infrastructure related to pedestrian and bicycle travel. Such impediments include substandard or missing sidewalks, accessibility issues related to the Americans with Disabilities Act (ADA), and insufficient street lighting, which can result in unsafe conditions to residents.

### **2.1 - Objective of the Study**

The objectives of this Study are as follows:

- Provide a comprehensive inventory of existing and currently proposed on- and off-road pedestrian and bicycle facilities in McFarland.
- Improve the City's understanding of how improving walking and bicycling connectivity between residential areas, employment centers, schools, retail centers, recreational centers, and other attractions increases individual mobility, enhances transportation options, and promotes active living.
- Serve as the framework for identifying and selecting pedestrian/bicycle projects for the Regional Transportation Plan (RTP) and the Active Transportation Program (ATP).
- Provide guidance for engineering, education, enforcement, encouragement, and evaluation activities to help improve the safety of walking and bicycling.
- Reduce collision risk by identifying potential conflict points and create solutions to better manage pedestrian and bicycle flow.
- Improve existing infrastructure by identifying strategies to develop and enhance the existing pedestrian and bicycle infrastructure with a focus on access, connectivity, and safety.
- Develop design standards that define pedestrian and bicycle infrastructure standards to guide future development.

## **2.2 - Organization of the Study**

This Study is organized by sections as follows:

- Section 1, Executive Summary – This section provides a summary of the Study’s findings and recommendations.
- Section 2, Introduction – This section includes the objectives and organization of the Study, reasons for why it is important to improve pedestrian and bicycle facilities and connectivity, and a description of the regional setting, including the regional location of the Study, and applicable regional regulations. It also contains a description of the Study’s local setting, transportation system, and planning specific to pedestrian and bicycle modes.
- Section 3, Existing Facilities and Impediments Inventory – This section provides a comprehensive inventory of the existing and currently proposed pedestrian and bicycle facilities, including streetlights. The inventory summarizes current impediments to walking and bicycling, such as substandard and missing infrastructure that are not in compliance with current laws (such as the ADA) and regulations. This section also summarizes the City’s preliminary priorities with regards to pedestrian and bicycle impediments.
- Section 4, Proposed and Recommended Facilities and Improvements – This section includes a prioritized list of recommended pedestrian and bicycle facilities improvements emphasizing safety needs and collision risk reduction. This section also provides cost estimates for each recommended improvement.
- Section 5, Recommended Design Standards, Policies, and Programs – This section recommends design standards and policies for future pedestrian and bicycle infrastructure for adoption by City Council. This section also provides guidance for education, enforcement, and evaluation activities to help improve the safety of pedestrians and cyclists.

This Study also includes a table of contents and list of acronyms at the front of the document, and a bibliography at the end, followed by the appendices.

## **2.3 - Why Improve Pedestrian and Bicycle Facilities and Connectivity?**

Walking and bicycling are enjoyable, low-cost, non-polluting, sustainable, and healthy alternatives to the traditional motorized trip. Increasing walking and bicycling access, connectivity, and safety will benefit the community by:

- Improving mobility for all in the community;
- Increasing quality of life for all in the community;
- Providing opportunities for healthful exercise;
- Reducing health care costs;
- Reducing air quality and noise impacts;
- Reducing greenhouse gas (GHG) emissions;
- Relieving traffic congestion and vehicle parking demand;

- Placing fewer demands on local roads; and
- Reducing consumption of fuel resources.

## **2.4 - Regional Setting**

The following provides the regional location of the Study area and regional regulations applicable to existing and future pedestrian and bicycle facilities in the City.

### **2.4.1 - REGIONAL LOCATION**

McFarland is in the valley portion of Kern County, California, and is located at the southern end of California's Central Valley. Figure 2-1 provides a map of the regional location of the City.

### **2.4.2 - REGIONAL REGULATIONS**

The following are summaries of applicable federal and State policies, guidelines, and regulations.

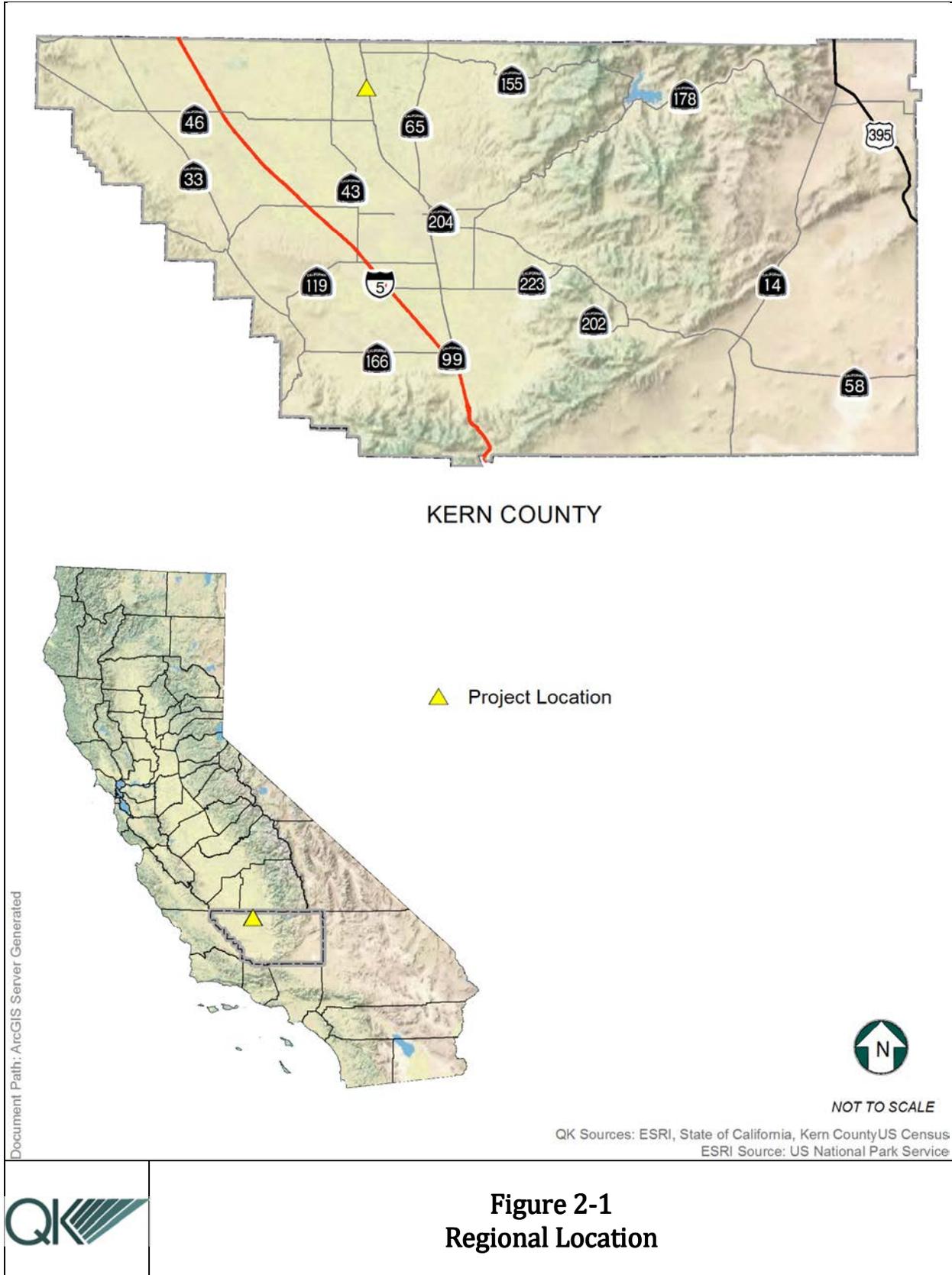
#### **Federal**

##### ***BICYCLE AND PEDESTRIAN POLICY***

The *United States Department of Transportation Policy Statement on Bicycle and Pedestrian Transportation Accommodations Regulations and Recommendations* (U.S. Department of Transportation 2016) supports "fully integrated active transportation networks" that include accommodations for bicyclists and pedestrians. The U.S. Department of Transportation (DOT) encourages all transportation agencies and local governments to adopt similar policies to ensure all users of streets, roads, and highways are taken into consideration when developing new or retrofitting existing transportation systems.

Applicable recommended policies of the DOT regarding accommodations for bicyclists and pedestrians in McFarland are as follows:

- Considering walking and bicycling as equals with other transportation modes – The primary goal of a transportation system is to safely and efficiently move people and goods. Walking and bicycling are efficient transportation modes for most short trips and, where convenient intermodal systems exist, these nonmotorized trips can easily be linked with transit to significantly increase trip distance. Because of the benefits they provide, transportation agencies should give the same priority to walking and bicycling as is given to other transportation modes. Walking and bicycling should not be an afterthought in roadway design.



KERN COUNTY

▲ Project Location

NOT TO SCALE

QK Sources: ESRI, State of California, Kern County US Census  
ESRI Source: US National Park Service



**Figure 2-1**  
**Regional Location**

- Ensuring that there are transportation choices for people of all ages and abilities, especially children – Pedestrian and bicycle facilities should meet accessibility requirements and provide safe, convenient, and interconnected transportation networks. For example, children should have safe and convenient options for walking or bicycling to school and parks. People who cannot or prefer not to drive should have safe and efficient transportation choices.
- Going beyond minimum design standards – Transportation agencies are encouraged, when possible, to avoid designing walking and bicycling facilities to the minimum standards. For example, shared-use paths that have been designed to minimum width requirements will need retrofits as more people use them. It is more effective to plan for increased usage than to retrofit an older facility. Planning projects for the long-term should anticipate likely future demand for bicycling and walking facilities and not preclude the provision of future improvements.
- Integrating bicycle and pedestrian accommodation on new, rehabilitated, and limited-access bridges – DOT encourages bicycle and pedestrian accommodation on bridge projects including facilities on limited-access bridges with connections to streets or paths.
- Collecting data on walking and bicycling trips – The best way to improve transportation networks for any mode is to collect and analyze trip data to optimize investments. Walking and bicycling trip data for many communities are lacking. This data gap can be overcome by establishing routine collection of nonmotorized trip information. Communities that routinely collect walking and bicycling data can track trends and prioritize investments to ensure the success of new facilities. These data are also valuable in linking walking and bicycling with transit.
- Setting mode share targets for walking and bicycling and tracking them over time – A byproduct of improved data collection is that communities can establish targets for increasing the percentage of trips made by walking and bicycling.
- Improving nonmotorized facilities during maintenance projects – Many transportation agencies spend most of their transportation funding on maintenance rather than on constructing new facilities. Transportation agencies should find ways to make facility improvements for pedestrians and bicyclists during resurfacing and other maintenance projects.

### **SAFE ROUTES TO SCHOOLS PROGRAM**

In 2005 the U.S. Congress passed the Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users Act (SAFETEA-LU). This transportation reauthorization bill included funding for the Federal Safe Routes to School (SRTS) program. The objective of the SRTS program is to support the use of safe, active transportation modes (i.e. walking and bicycling) for children to and from schools. The availability of active transportation modes can increase children's activity levels and decrease the likelihood of childhood diseases. This is especially important as childhood obesity rates and other illnesses related to inactivity are rapidly increasing both nationally and throughout California.

The SRTS program is administered by the Federal Highway Administration (FHWA), which distributes program funds to individual state Departments of Transportation. In California, California Department of Transportation (Caltrans) distributes the federal grant funding to eligible cities and counties for local SRTS projects. In addition, Caltrans administers its own Safe Routes to School program, known as SR2S, which includes high schools. The federal program opens eligibility only for K-8 schools. Funds for both programs are available on a competitive basis, with each Caltrans District having a fixed amount available for cities and counties.

Federal and State funding criteria vary slightly, but typically funds are allocated for:

- “The planning, design, and construction of infrastructure-related projects within approximately two miles of a primary or middle school (high schools per Caltrans funding) that will improve the ability of students to walk and bicycle to school;
- Non-infrastructure-related activities that encourage walking and bicycling to school, including awareness campaigns and outreach to the press and community leaders, traffic education and enforcement, student training; and
- SRTS program capacity building including training and hiring of state program volunteers, and managers.

Eligible projects can include pedestrian facilities, traffic calming, traffic control devices, bicycle facilities, and public outreach and education.

Schools are an important node to include in the development of a local multimodal transportation network. Local multimodal transportation networks should address the needs of parents and children by providing safe active transportation options to and from schools. Doing so can reduce vehicle trips, reduce congestion, and improve road safety near schools, and increase children’s activity rates. While the general plan itself is not eligible for funding, Safe Routes to School programs can help implement part of a connected, safe multimodal transportation network.

## **State**

### ***CALIFORNIA COMPLETE STREETS ACT***

On September 30, 2008, Governor Arnold Schwarzenegger signed Assembly Bill (AB) 1358, the California Complete Streets Act, which states:

“In order to fulfill the commitment to reduce greenhouse gas emissions, make the most efficient use of urban land and transportation infrastructure, and improve public health by encouraging physical activity, transportation planners must find innovative ways to reduce vehicle miles traveled (VMT) and to shift from short trips in the automobile to bicycling, walking and use of public transit.”

The legislation impacts local general plans by adding the following language to Government Code (GC) Section 65302(b)(2)(A) and (B):

(A) Commencing January 1, 2011, upon any substantial revision of the circulation element, the legislative body shall modify the circulation element to plan for a balanced, multimodal transportation network that meets the needs of all users of the streets, roads, and highways for safe and convenient travel in a manner that is suitable to the rural, suburban, or urban context of the general plan.

(B) For the purposes of this paragraph, “users of streets, roads, and highways” means bicyclists, children, persons with disabilities, motorists, movers of commercial goods, pedestrians, users of public transportation, and seniors.

### **COMPLETE STREETS POLICY**

The *California Department of Transportation Deputy Directive 64-Revision #1: “Complete Streets: Integrating the Transportation System”* (DD-64-R1) was released on October 2, 2008 (California Department of Transportation 2008). DD-64-R1 directs the California Department of Transportation (Caltrans) staff to support increased mobility and access for all Californians on Caltrans built and maintained roads. DD-64-R1 states that Caltrans will:

- Provide for the needs of travelers of all ages and abilities in all planning, programming, design construction, operations, and maintenance activities and products on the State Highway System;
- View transportation improvements (new and retrofit) as opportunities to improve safety, access, and mobility for all travelers and recognizes bicycle, pedestrian, and transit modes as integral elements of the transportation system;
- Develop integrated multimodal projects in balance with community goals, plans, and values; addressing the safety and mobility needs of bicyclists, pedestrians and transit users in all projects, regardless of funding;
- Facilitate bicycle, pedestrian, and transit travel by creating “complete streets” beginning early in system planning and continuing through project delivery and maintenance and operations; and
- Collaborate among all (Caltrans) department functional units and stakeholders to develop a network of complete streets.

DD-64-R1 is limited to Caltrans owned and maintained streets, roads, and highways and focuses on the planning, construction, and maintenance of complete streets and when possible, on the creation of multimodal networks. The goals of DD-64-R1 provide important guidance for the design of streets that make up a local integrated multimodal transportation network.

### **GENERAL PLAN GUIDELINES**

The *Update to the General Plan Guidelines: Complete Streets and the Circulation Element* was released on December 15, 2010 (California Governor's Office of Planning and Research 2010). The purpose of the update is to provide guidance to local governments on how to plan for multimodal transportation networks in general plan circulation elements.

A “multimodal transportation network” is defined in the update as:

[N]etworks [that] allow for all modes of travel including walking, bicycling, and transit to be used to reach key destinations in a community and region safely and directly. Jurisdictions can use complete streets design to construct networks of safe streets that are accessible to all modes and all users no matter their age or ability.

“Complete streets” is defined in the update as:

Complete streets serve everyone – pedestrians, bicyclists, transit riders, and drivers and they take into account the needs of people with disabilities, older people, and children. The complete streets movement seeks to change the way transportation agencies and communities approach every street project and ensure safety, convenience, and accessibility for all.

Using complete streets best practices, properly designed multimodal transportation networks lead to safer travel for all roadway users. Designing streets and travel routes that consider safe travel for all modes can reduce the occurrence and severity of vehicular collisions with pedestrian and bicyclists. Streets and other transportation facility design considerations that accommodate a variety of modes and user abilities can contribute to a safer environment that makes all modes of travel more appealing.

As required by AB 1358, the following mandatory circulation element issues must be addressed in future circulation elements:

- Require the circulation element to be modified to plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways.
- Consider pedestrian, bicycle, and transit routes, which may not always be located on or along streets, roads, and highways.
- Consider the provision of safe and convenient travel that is suitable to the rural, suburban, or urban context of a local jurisdictions general plan. This could include policies and implementation measures for both retrofitting and developing streets to serve multiple modes and the development of multimodal transportation network design standards based on street types.
- Coordinate circulation element provisions with applicable State and regional transportation plans.

The update also recommends possible policy areas to be included in future circulation elements related to pedestrian and bicycle routes:

- The development of a comprehensive pedestrian and/or bicycle plan. See California Streets and Highways Codes Sec. 891.2 requirements for bicycle transportation plans.
- The development and improvement of pedestrian and bicycle routes, on and off, streets, roads, and highways. Consider special accommodations such as car-free zones, bicycle boulevards, and paths.

- The connectivity of pedestrian and bicycle routes between homes, job centers, schools and facilities, and other frequently visited destinations.
- The development of Safe Routes to School programs that address pedestrian and bicycle safety for a 2-mile radius around all elementary, middle, and high school facilities.
- The development of pedestrian and bicycle facilities along routes that support the use of these routes such as benches, shelters, trees, bicycle parking, etc.
- The dedication and preservation of independent alignments (utility, abandoned waterways, or live rail ROWs) for the development of bicycle paths.
- The development of performance and level-of-service standards for pedestrian and bicycle routes and intersections.
- The development and use of marketing and incentive programs to promote the increase of walking and bicycling.

Additionally, the update recommends other possible policy areas applicable to pedestrian and bicycle connectivity and access:

- The development of transit-oriented development standards, including the appropriate mix of density and intensity of land uses near transit stations, parking requirements, and service and delivery requirements.
- The creation of land use patterns, such as mixed-use overlay districts, that allow frequently visited destinations to be accessible by multiple transportation modes.
- The availability of transportation infrastructure needed to accommodate increased density and transit-oriented development.
- The consideration of flexible performance and level-of-service standards, in areas planned for increased density and mixed uses to increase walking, bicycling, and transit ridership.
- The provision of bicycle parking.
- The development of strategies for the control of parking demand such as improved transit services, amenities for bicyclists, subsidized rideshare vehicles, and the consideration of eliminating minimum parking requirements.
- The development of shade trees, green medians, and landscape standards for streets, roads, highways, and pedestrian and bicycle paths and trails.

The City has prepared a Circulation Element (see “General Plan Circulation Element” in Section 2.5.3) that incorporates the concept of complete streets.

### **ASSEMBLY BILL 32 AND SENATE BILL 375**

The Legislature passed AB 32, The Global Warming Solutions Act, in 2006. AB 32 requires the State of California to reduce its GHG emissions to 1990 levels no later than 2020. Senate Bill (SB) 375 builds on the existing regional transportation planning process undertaken by the state’s 18 Metropolitan Planning Organizations (MPOs) to connect the reduction of GHG emissions from cars and light trucks to regional land use and infrastructure planning. Per the California Air Resources Board (CARB), passenger vehicles are the number one emitter

of GHG emissions in California. SB 375 asserts that “[w]ithout improved land use and transportation policy, California will not be able to achieve the goals of AB 32.”

## **2.5 - Local Setting**

The following provides a description of the location of the Study area, the transportation system, and plans applicable to existing and future pedestrian and bicycle facilities in the City.

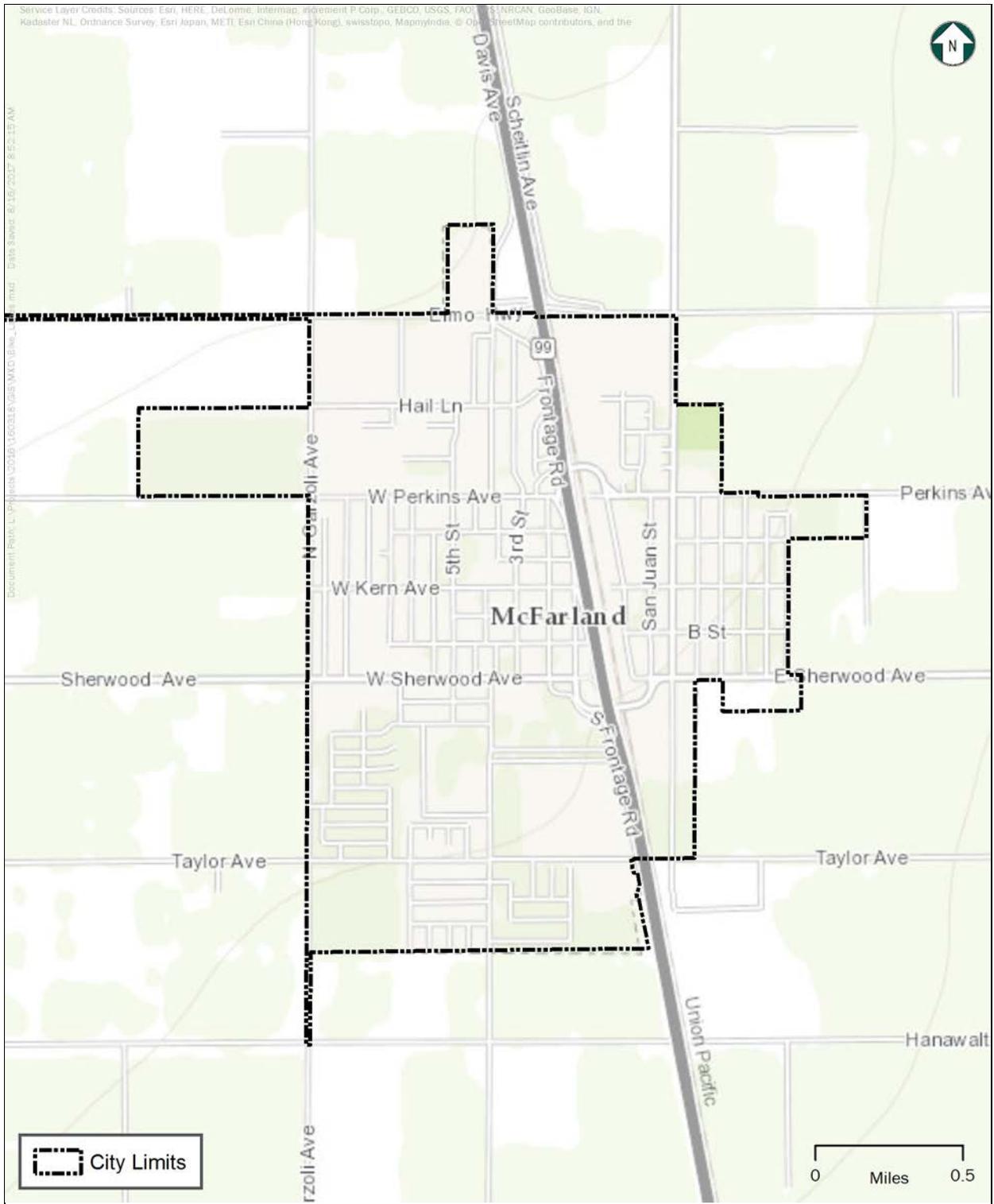
### **2.5.1 - LOCATION**

McFarland is located within the San Joaquin Valley and Kern County along State Route (SR) 99, covering approximately 2.7 square miles. McFarland lies approximately 3 miles south of Delano and 20 miles north of Bakersfield. The city’s Census population was 9,835 in 2000 (City of McFarland 2014). The California Department of Finance estimated the City’s January 2017 population at 14,919 (California Department of Finance 2018), which represents an increase of about 52% in 17 years and a 1.8% increase from the January 2016 population estimate of 14,662 (California Department of Finance 2018).

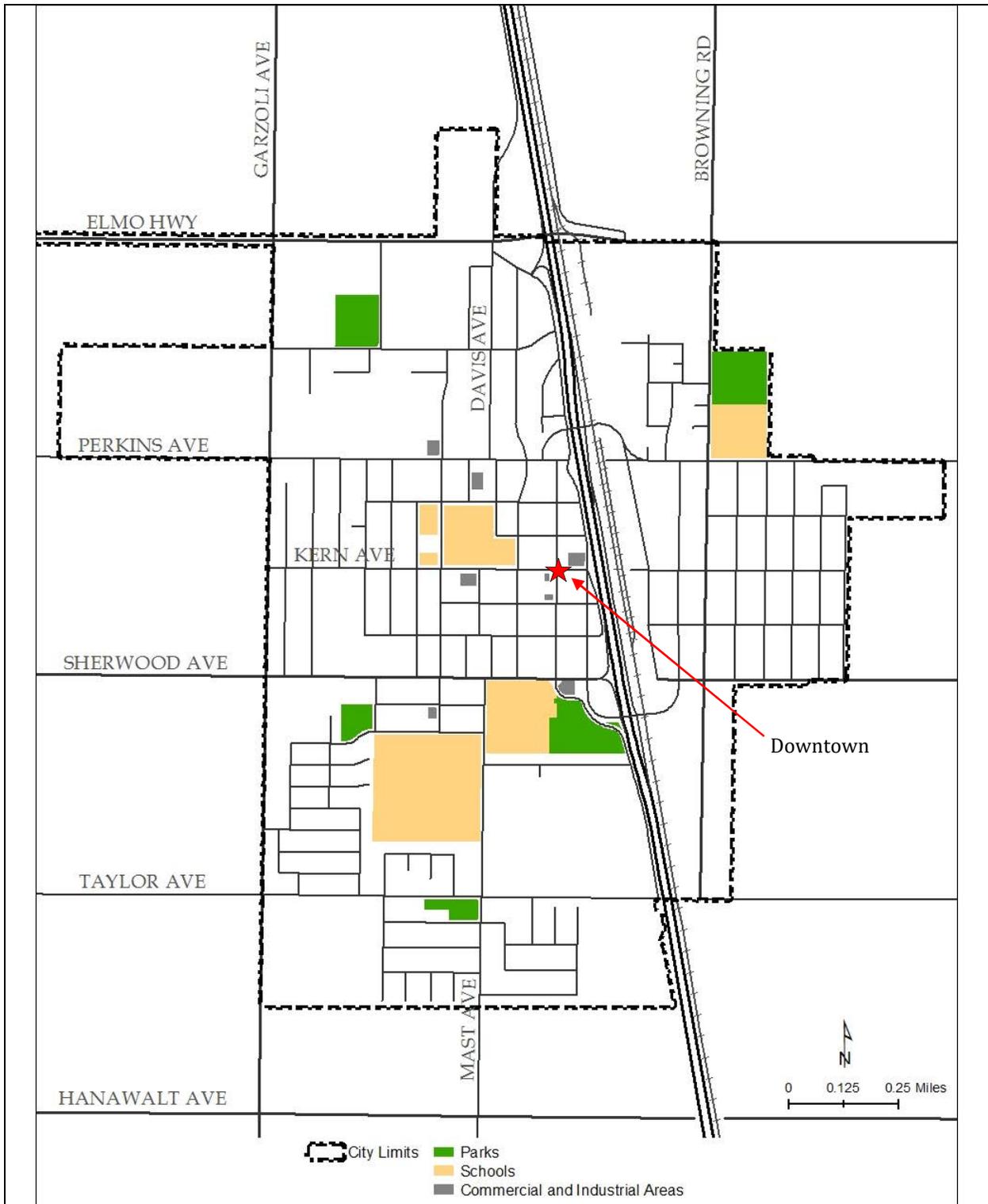
McFarland has an employment base that is largely dependent on agricultural activities and educational or health services, with over 68% of the workforce being employed in these industries (City of McFarland 2014). The City has a small downtown that includes some commercial activity as well as housing the administrative offices for City staff. The Sphere of Influence for McFarland and the City General Plan allow for future expansion of the City to occur in all four directions.

Figure 2-2 provides a map of the City limits and the City’s street system. For purposes of this Study, the portion of the City limits that runs west along Elmo Highway away from the City’s center and includes the City’s wastewater treatment plant and agricultural land associated with the plant to the west of the City’s center has been excluded from this Study. This is because these areas within the City limits do not provide attractors for pedestrian and bicycle trips.

Understanding existing and future land use patterns in McFarland is important to developing a fully interconnected pedestrian and bikeway system. Connections should be provided between trip generators (residential areas) and trip attractors. Activity centers, including downtown businesses, government centers, schools, shopping centers, parks, and other employment areas serve as “attractors” for pedestrian and bicycle trips. Convenient access to these locations from the pedestrian and bicycle network is crucial to the ability of the network to encourage and promote such trips. A map of trip attractors in McFarland is included in Figure 2-3. This map was compiled from review of the Land Use and Circulation Element maps from the City of McFarland General Plan and field observations (City of McFarland 2014).



 **Figure 2-2**  
**City Limits and Street System**



**Figure 2-3**  
**Trip Attractors**

### **2.5.2 - LOCAL TRANSPORTATION SYSTEM**

The City's transportation system includes freeways, arterials, collectors, and local streets. The system is based on a 1-mile square grid pattern of east-west and north-south arterials and collectors. SR-99, which runs through the middle of the City, is a major north-south freeway providing access through the Central Valley between Sacramento and Bakersfield. Through McFarland, SR-99 is located primarily within the central portion of the City, serving as an important local, regional, and statewide commercial transportation corridor. Some state highways are open to bicycle travel, however, within the City, bicycle travel is prohibited on SR-99.

Regional access is provided by two additional State highways, namely SR-43 and SR-65. SR-43 is a State highway running north-south approximately 5.5 miles west of the City. Elmo Highway is the most direct and shortest route to SR-43. SR-43 connects western, rural Kern County to Fresno County, ending in the City of Selma. SR-65 is a north-south highway located approximately 8.5 miles east of the City that connects Bakersfield to Visalia. Sherwood Avenue is the most direct and shortest route to SR-65 from the City.

From a pedestrian and bicyclist's perspective, McFarland is a simple, non-demanding City to travel. The City has a flat topography ideally suited for bicycle use and walkability. The City was developed on a simple grid pattern, which makes navigation very easy, as there are very few dead-end streets or odd directions of travel. The size of the City also makes most areas accessible within a 15- to 30-minute bicycle ride.

The City does face many challenges for developing future pedestrian and bicycle facilities and increasing pedestrian travel and bicycle usage. One of McFarland's most significant barriers is the seasonal temperature extremes, both in the winter and summer, which can make walking and bicycling undesirable for some users. As in most California cities, McFarland's roadways are dominated by the automobile, making a typical ride uncomfortable for some bicyclists. Also, there currently are very few bicycle facilities. Traffic conditions may worsen as the City continues to grow and extreme, seasonal weather conditions will remain. However, the City can increase the number and connectivity of pedestrian and bicycle facilities and thereby, improve the ease and desirability of pedestrian travel and bicycling.

### **2.5.3 - LOCAL PLANNING**

The following are summaries of applicable local plans.

#### ***Regional Transportation Plan***

Each regional transportation planning agency, including federally-recognized MPOs and State-recognized Regional Transportation Planning Agencies (RTPAs), is required to prepare and adopt a regional transportation plan. The Kern Council of Governments (Kern COG), of which McFarland is a member, is both the MPO and RTPA for Kern County.

The RTP's goal is to achieve a coordinated and balanced regional transportation system. The plan should consider all transportation systems, as well as their users and associated facilities and services including, but not limited to, mass transit, highways, railroads, bicycle, walking, goods movement, maritime, and aviation. The plan is meant to be action-oriented and pragmatic and to consider both short-term and long-term system issues. An RTP establishes the region's priorities for funding transportation infrastructure projects and other transportation programs.

The 2010 Regional Transportation Plan Guidelines (RTP Guidelines) approved by the California Transportation Commission and prepared by Caltrans, summarizes RTP requirements in both federal and State law. State law directs the RTP to "present clear, concise policy guidance to local and state officials" and to "consider and incorporate, as appropriate, the transportation plans of cities, counties, districts, private organizations, and state and federal agencies." A RTP must be consistent with the RTP Guidelines.

Although it is not legislatively required, the RTP Guidelines suggest that MPOs and RTPAs include local multimodal transportation policies in their plans. The RTP Guidelines recommend that regional transportation agencies integrate multimodal transportation network policies into their RTPs, identify the financial resources necessary to accommodate such policies, and consider accelerating programming for projects that retrofit existing roads to provide safe and convenient travel by all users. The guidelines also encourage MPOs and RTPAs to work with jurisdictions and agencies within their region to ensure that general plan circulation elements and local street and road standards include the necessary planning, design, construction, operations, and maintenance procedures, to support all transportation system users.

The *Kern Council of Governments 2014 Regional Transportation Plan/Sustainable Communities Strategy* (2014 RTP/SCS) (Kern Council of Governments 2014) includes two non-motorized constrained projects within McFarland. A non-motorized constrained project is a project that does not include facilities to be used for motor vehicles and for which project funding has been identified (i.e., constrained). These two projects are:

- Sherwood Avenue from Stradley Avenue to South Garzoli Avenue (1 mile of Class II bike lanes); and
- Perkins Avenue from Stradley Avenue to South Garzoli Avenue (1 mile of Class II bike lanes).

### ***Sustainable Communities Strategy***

SB 375 requires each of the state's 18 MPOs to include a Sustainable Communities Strategy (SCS) in its RTP. RTPAs are not required to develop a SCS as part of their RTP. SB 375 also directs CARB, in consultation with MPOs, to develop regional GHG emission reduction targets for each MPO. MPO's must develop a SCS as part of its RTP that explains what feasible land use patterns and transportation system improvements would be necessary to meet CARB targets. An SCS must be adopted whether or not it meets CARB targets. However, if an MPO cannot meet these targets through its SCS, it must develop an alternative plan called an

Alternative Planning Strategy (APS). An APS is not required to be part of the RTP and therefore, does not impact RTP transportation funding decisions.

The SCS is expected to set forth a growth strategy that integrates land use, regional housing needs allocations, and the region's transportation infrastructure plan consistent with the goal of meeting CARB's regional GHG reduction targets. The SCS does not supersede a local general plan, specific plan, or zoning ordinance. SB 375 does not require that a local general plan, specific plan, or zoning ordinance be consistent with an SCS. However, an RTP must be internally consistent, so regional transportation funding and policy decisions need to be consistent with the SCS.

An SCS should perform the following tasks:

- Identify the general location of uses, residential densities, and building intensities within the region;
- Identify areas within the region sufficient to house all economic segments of the regional population, considering migration patterns, population growth, etc.;
- Identify areas within the region sufficient to house an eight-year projection of the regional housing need;
- Identify a transportation network to service the transportation needs of the region;
- Gather and consider the best available scientific information regarding the region's resource areas and farmland; and
- When feasible, forecast a development pattern for the region, which when integrated with the transportation network, and other transportation measures and policies, reduces GHG emissions from passenger vehicles to achieve, the CARB GHG emissions reduction targets.

Quantify the GHG emissions reduction projected by the SCS. If the SCS does not achieve the SB 375 targets, the SCS must identify the difference between its projected GHG emissions reduction and the CARB identified target for the region.

By updating general plans to include multimodal transportation network policies, cities and counties can support MPOs in developing a RTP and SCS and reaching regional GHG emission reduction targets. Once an SCS is adopted, establishing multimodal transportation network policies in the general plan that are consistent with the RTP and SCS can potentially increase the likelihood of funding for local priority projects through the RTP process. A city or county whose general plan is consistent with the regional SCS may be better situated to use the California Environmental Quality Act (CEQA) exemption and streamlining included in SB 375. The applicability of the SB 375 CEQA exemption is the sole realm of the city and county. MPOs cannot require a city or county to use an exemption or streamlining provisions for any site or project.

## **Kern County Bicycle Master Plan and Complete Streets Recommendations**

### **VOLUME I: BICYCLE MASTER PLAN**

The *Kern County Bicycle Master Plan and Complete Streets Recommendations, Volume I: Bicycle Master Plan* (Kern County Bicycle Master Plan) (Kern Council of Governments 2012a) focuses on the unincorporated portion of Kern County. This plan proposes bicycle improvements that encourages increased bicycle travel as well as strategies and actions to improve conditions for bicycling throughout the unincorporated communities throughout the county.

The proposed bikeways described in the Kern County Bicycle Master Plan specific to within the City limits are the same as those described above in “Regional Transportation Plan.” The proposed bicycle facilities in the unincorporated Delano-McFarland regional area include:

- Class II bike lanes that begin at the City limits and travel west along Perkins Avenue to Stradley Avenue;
- Class II bike lanes that begin at the City limits and travel west along Sherwood Avenue to Stradley Avenue;
- Class II bike lanes that begin at the Sherwood Avenue/Stradley Avenue intersection and travel north along Stradley Avenue toward Delano and terminates at the Garces Highway/Stradley Avenue intersection; and
- Class II bike lanes that begin at the Pond Road/Stradley Avenue intersection and travel west along Pond Road to Pond Elementary School.

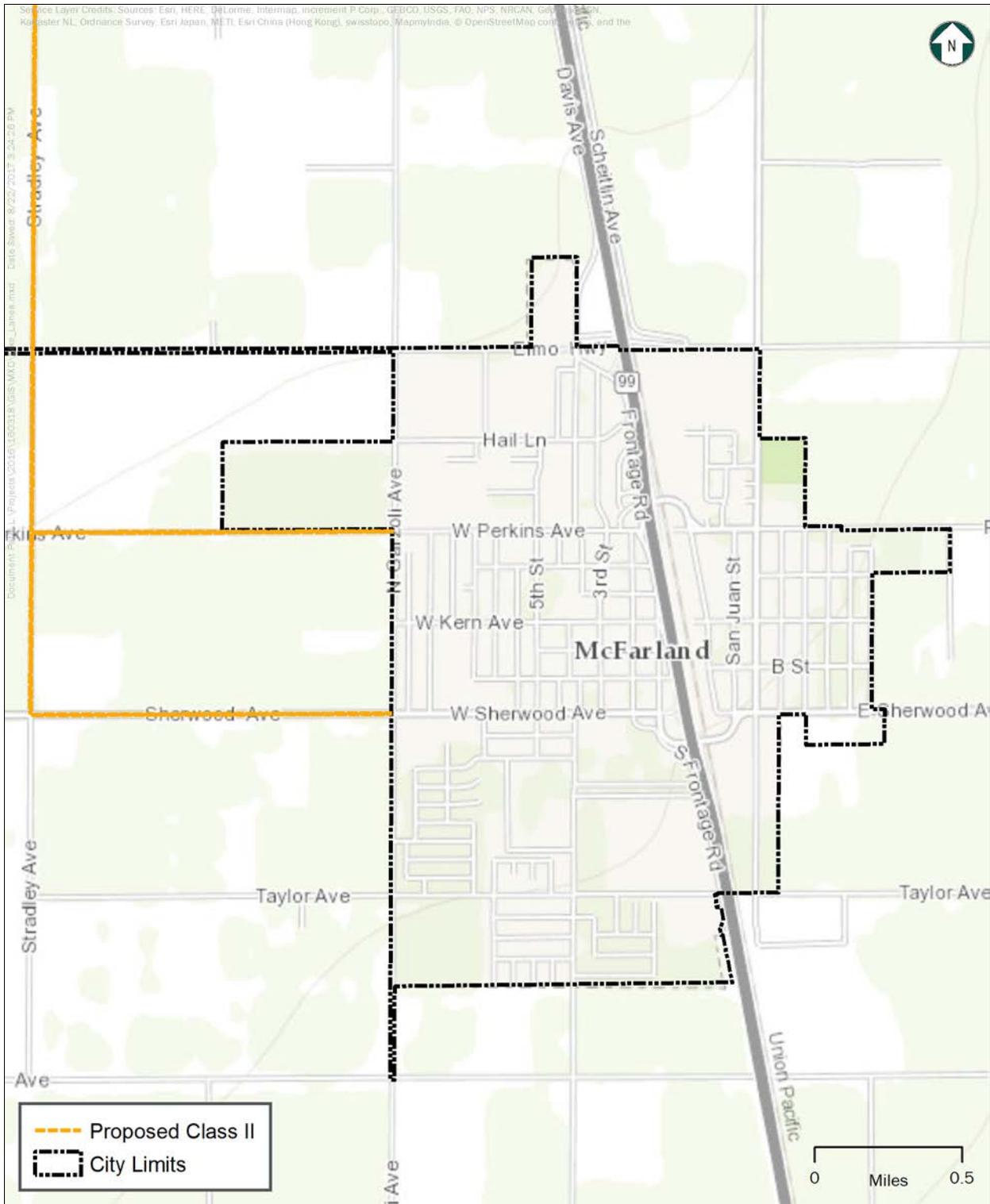
Figure 2-4 shows the proposed Class II bike lanes in the regional area as envisioned in the Kern County Bicycle Master Plan.

### **VOLUME II: COMPLETE STREETS RECOMMENDATIONS**

The *Kern County Bicycle Master Plan and Complete Streets Recommendations, Volume II: Complete Streets Recommendations* (Kern Council of Governments 2012) introduces complete streets and best practices as well as provides recommendations and design guidelines. The document includes an overview of pedestrian and bicycle infrastructure treatments that can be employed at existing roadways to provide better safety and connectivity for multiple modes of transportation.

Pedestrian treatments described in the document include:

- Sidewalks – Separate, well established patch for people to walk, of adequate width, provides access to all users, has landscaping and amenities, and provides safety and comfort.
- High-visibility crosswalks – Crosswalks with highly-visible markings.
- Pedestrian signals – Signalized or controlled crossings that provide further protection for pedestrians.



 **Figure 2-4**  
**Proposed Class II Bike Lanes in the Regional Area**  
**(Kern County Bicycle Master Plan)**

- Street furniture – Furniture on sidewalks that act as a buffer between pedestrians and vehicular traffic.
- Landscaping – Sidewalk landscaping that provides a buffer between pedestrians and vehicular traffic.
- Street lighting – Outdoor lighting that improves security for pedestrians and increases visibility for both pedestrians and bicyclists.
- Limit driveways – Improve design, minimize frequency, reduce driveway width and tighten curb radii of driveways as well as converting driveways to “right-in right-out” design.
- Curb extensions – Portion of sidewalk that is extended to reduce the distance a pedestrian needs to walk across a street, makes pedestrians more visible, and causes drivers to reduce speed by narrowing the roadway. Must be installed with ADA curb ramps.
- Curb ramps – Allow person in wheelchairs, with walkers, with strollers, and with disabilities convenient access to the sidewalk from the street. Must be ADA compliant.
- Pedestrian refuge islands – Elevated median that provides a barricade for pedestrians crossing a street.
- Triangular median islands – Triangular or “porkchop” median island that provides increased safety and convenience for pedestrians crossing right-turn slip lanes.
- Pedestrian push button – Buttons installed at signalized intersections to allow pedestrians to trigger the signal when motor vehicles are not present.
- Pedestrian countdown signal – Display to pedestrians crossing the street when they have enough time to enter a crosswalk and how much time they have left to cross the street.

Table 2-1 provides a summary of the effectiveness of each pedestrian treatment found in the document.

**Table 2-1  
Effectiveness of Pedestrian Treatments**

<b>Treatment</b>	<b>Reduces Vehicle Speed</b>	<b>Safety Increases</b>	<b>Level of Effectiveness</b>	<b>Cost</b>
Sidewalk	No	Moderate	Moderate	Low
High-visibility crosswalks	Yes	Moderate-High	Moderate	Low
Pedestrian signals	Yes	High	High	High
Street furniture	No	Low	Low	Low
Landscaping	Maybe	Low-High	Moderate-High	Low-Moderate
Street lighting	No	Moderate	Moderate	Moderate
Limit driveways	Maybe	Moderate-High	High	Low-High
Curb extensions	Yes	High	High	High
Curb ramps	No	Moderate	Moderate-High	Low-Moderate
Pedestrian refuge islands	Maybe	High	High	Moderate

Treatment	Reduces Vehicle Speed	Safety Increases	Level of Effectiveness	Cost
Triangular median islands	Maybe	High	High	Moderate-High
Pedestrian push buttons	No	Low-Moderate	Moderate	Low-Moderate
Pedestrian countdown signal	No	High	High	Moderate

Bicycle treatments described in the document include:

- Striped and buffered bike lanes – Striped bike lanes are on-way striped travel lanes exclusively for bicycles. Buffered bike lanes are a type of bike lane with a striped or paver delineated buffer either between the bicycle path of travel and the motor vehicle path of travel or a parking lane.
- Cycle tracks – A bicycle facility that functions as a separate bicycle path located within the road ROW that is physically separated from vehicular traffic.
- Shared roadways – Typically used where the existing street does not have available road ROW for a dedicated bike lane and often consists of shared lane markings.
- Shoulder bikeways – Appropriate for roads without curbs and gutters and include striped bike lanes used as a temporary lane until improvements can be made.
- Bicycle detection – Detection at signalized intersections that allows bicyclists to trigger the signal.
- Intersection crossing markings – Pavement markings through intersections that help bicyclists with proper lane positioning and alert motorists to the presence and path of bicyclists.
- Bike boxes – Allow bicyclist to position themselves in front of the traffic queue while waiting for a green light.
- Bicycle signals – Installed in areas with high bicycle traffic volume that allows only bicyclists to enter and exit a bicycle facility without conflicts with motorized vehicles.

Table 2-2 provides a summary of the effectiveness of each bicycle treatment found in the document.

**Table 2-2**  
**Effectiveness of Bicycle Treatments**

Treatment	Reduces Vehicle Speed	Safety Increases	Level of Effectiveness	Cost
Striped bike lanes	Maybe	Moderate	Moderate	Low-Moderate
Buffered bike lanes	Yes	High	High	Moderate
Cycle tracks	Yes	High	High	Moderate-High
Shared roadways	Maybe	Low-Moderate	Moderate	Low-Moderate

Treatment	Reduces Vehicle Speed	Safety Increases	Level of Effectiveness	Cost
Shoulder bikeways	No	Low-Moderate	Low-Moderate	Low
Bicycle detection	No	Moderate	High	Moderate
Intersection crossing markings	Maybe	Moderate-High	High	Moderate
Bike boxes	Maybe	Moderate	High	Low
Bicycle signals	Yes	High	High	High

The document also provides the following policy recommendations:

- Develop a comprehensive bikeway and pedestrian network that is feasible, fundable over the life of the Kern County Bicycle Master Plan, and that serves bicyclist's needs for all trip purposes.
- Prepare and maintain a bicycle master plan that identifies existing and future needs, provides specific recommendations for facilities and programs, and identifies priorities and funding sources for implementation.
- Update the Kern County Bicycle Master Plan to meet requirements of Bicycle Transportation Account (BTA) funding at least every five years.
- Maintain and improve the quality, operation, and integrity of the bicycle and pedestrian network and support facilities.
- Increase public awareness of the benefits of bicycling and of available bicycle and trail facilities and programs.
- Bicycle signage and route maps should be made readily available and accessible to the public.
- As land uses within undeveloped areas of unincorporated communities are developed, bicycle, pedestrian, and transit facilities should be considered as a joint effort between the County and private development.
- These facilities should be required when connecting existing or planned facilities.
- The County should work with development to provide bicycle parking within reasonable walking distances to all destinations within a downtown. Bicycle parking should be as convenient as, or more so than, automobile parking.
- Coordinate roadway and development projects with the transit agency serving each area to provide the necessary amenities prior to construction.
- Incorporate bicycle, pedestrian, and transit improvements into Transportation Impact Fee programs when not solely used for recreation.
- Closure of gaps in pedestrian, bicycle, or transit network.
- Prioritize Complete Streets projects based on the following criteria:
  - Expand existing network;
  - Ease of implementation;
  - Access to activity centers, neighborhoods, or regional network; and
  - Promote alternative travel use.

## **General Plan Circulation Element**

The City's Circulation Element (City of McFarland 2013) includes sections devoted to "Walking" and the "Bicycle Network."

### **WALKING**

The Circulation Element emphasizes that a complete, high-quality pedestrian network makes all aspects of the transportation system function well because all trips begin and end with a pedestrian trip, and that the success of the transit system is dependent upon high-quality walking routes to and from transit stops. It also stresses that there is no single better indicator of public health rates than walking and that the City's streets comprise roughly one quarter of the City's land area and therefore, McFarland sidewalks, paved and unpaved shoulders, and undesignated dirt paths are highly used components of the circulation system. The Circulation Element states that walking is the lowest cost of transportation and that the citizens can save money by walking on an enhanced system, and that the perceived safety of walking is an excellent indicator of a community's overall health.

The Circulation Element highlights some areas of the City where walking opportunities should be enhanced:

- Old Town McFarland Main Streets and Downtown – Main streets serve as important regional connectors and serve the retail and service needs of the City and therefore, the development of a safe and comfortable walking environment is critical.
- Neighborhood Commercial Streets – Areas in the City that feature a mix of residential and commercial uses where the quality of the pedestrian environment is highly important.
- Pedestrian Routes – Locations where pedestrians frequently share the same space as bicyclist, but where it is difficult to walk due to limited right of way (ROW) for pedestrians.
- Pedestrian Paths – Recreational routes for walking as a fitness or social activity.
- Multi-Family Neighborhoods – Require a higher level of sidewalk investment than single-family neighborhoods, and where sidewalks should accommodate two people side-by-side and pedestrian-scale lighting should provide continuous illumination.
- Single-Family Neighborhoods – Should provide continuous sidewalks.
- Shared Streets Neighborhoods – Older neighborhoods where limited ROWs require auto travel to mix with people and therefore, such streets should be redesigned to slow motor vehicles down to walking speeds so that pedestrians and motorists can safely mix.
- Shared Streets Commercial/Industrial – Industrial areas near the railroad comprised of mostly dead-ends streets and little noncommercial activity where sidewalks should be installed, parking should be located behind buildings, and vehicle travel should be slow enough to allow mixing of pedestrians and motorists.
- Investment Focus Area – New investments should emphasize pedestrian connections.

- Future Major Bus Stops – High level of future investment should prioritize major bus stops because transit success is largely dependent on pedestrian access.
- Key Crossings – Difficult to cross locations should be thoughtfully evaluated and prioritized.
- Key Connections – Such connections should be identified and prioritized, such as getting across SR-99, railroad ROW, and future divided arterials/expressways.
- Community Facilities – Community facilities (e.g., schools, parks, and medical centers) located in residential areas should be accessible and have superior pedestrian facilities.

### ***BICYCLE NETWORK***

The Circulation Element states that the largely flat terrain and short distances make the City ideal for the bicycle mode. It also states that bicycling has a clear role in helping improve the economy while protecting the environment, improving public health and quality of life, easing congestion, freeing up parking capacity, and reducing air pollution and noise levels. The Circulation Element emphasizes that a significant increase in bicycling is necessary for the City to reach its goals of reducing auto trips, meeting its GHG emissions reduction commitments and promoting active living.

In addition to discussing the need for additional bike lanes, bike paths, and bike routes (see the following “McFarland Bicycle Master Plan” section for more information), the Circulation Element highlights certain streets and bicycle facilities where bicycling opportunities should be enhanced:

- Bicycle Streets – Primarily minor collectors where motor vehicle speeds and volumes are kept low, so bicyclist can share space with motorist, and should be established on streets that are part of the primary network but lack available ROW for striped bike lanes.
- Share Streets – Primarily local streets in residential neighborhoods with low traffic volume and speed where there is little need for specific bicycle accommodation but highlighting these streets can provide pleasant alternatives for bicyclists.
- Auto/Transit Priority Streets – Highest priority for transit and pedestrian and ROW constraints make dedicated bicycle facilities challenging. Where appropriate, street markings; signage to parallel routes; minimization of stop signs and replaced with treatments to slow vehicles and allocate ROW; and, at major intersections, provide advanced stop lines and bicycle-activated traffic signal detectors.
- Key Bicycling Facility: Priority Investment – Investments should be pursued to create dedicated space for bicyclists and pedestrians to improve safety and usability.
- Future Bicycle Parking – Prioritize secure, weather-protected bicycle parking in new multi-family housing and all major destinations. Provide bicycle information centers with secure parking at regional bus stops and secured storage areas within new residential development, all commercial districts, and large employers and schools.
- Investment Focus Area – At future Transit Village, bicycle access, connectivity, and amenities should be emphasized.

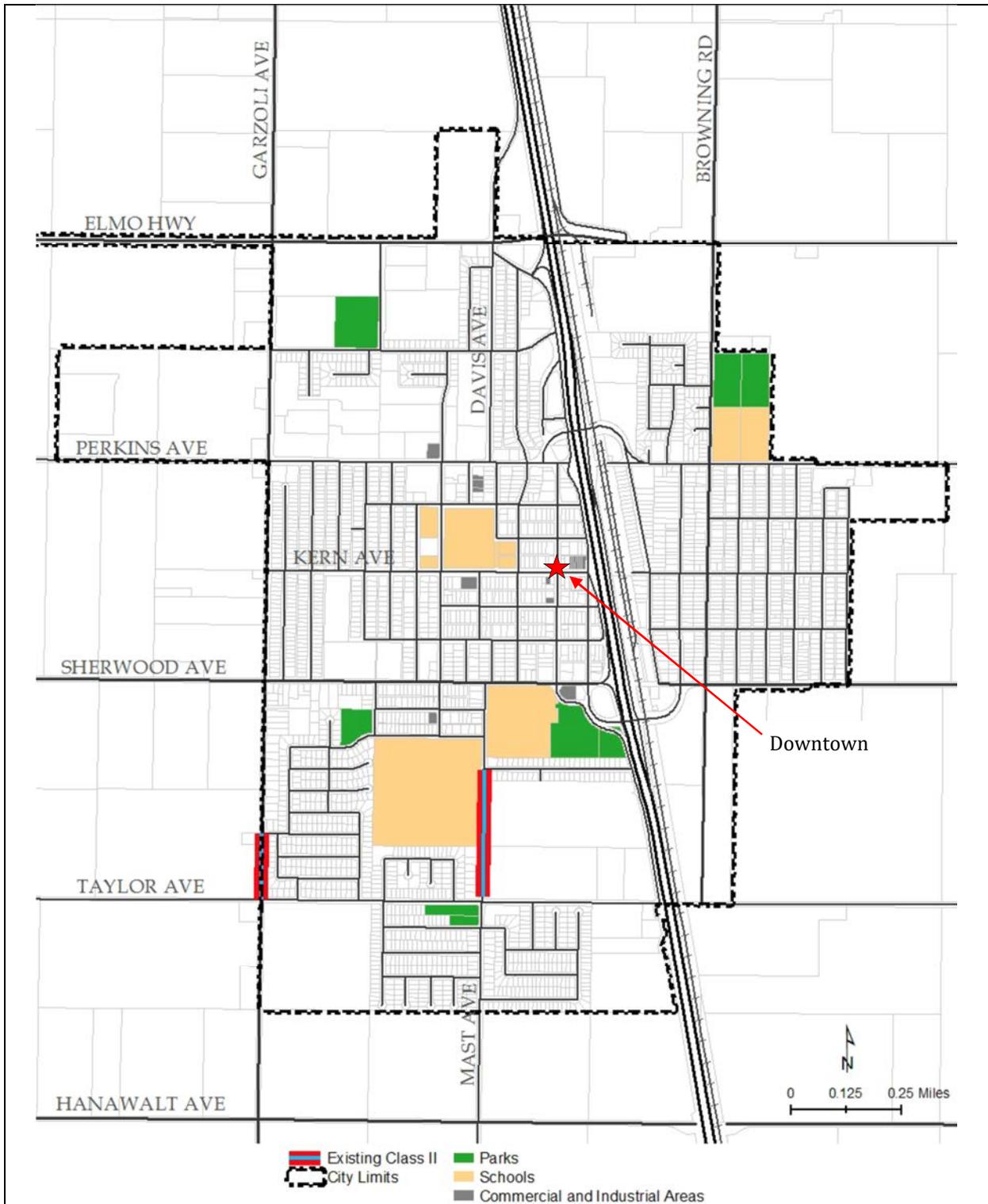
- Bicycle Key Connection – Emphasize key locations in the City where bicycle connectivity is important, but are currently obstructed by topography, physical barriers, or challenging crossing conditions.
- Bicycle-Transit Centers – Strategically place facilities with secure bicycle storage and other amenities.

### ***McFarland Bicycle Master Plan***

The stated principle goal of the McFarland Bicycle Master Plan (City of McFarland 2014) is “[t]o provide the means to support bicycling as an alternative mode of transportation for work, errand, and recreational trips.” The objectives of the McFarland Bicycle Master Plan are to:

- Objective 1 – Prepare and maintain a Bicycle Master Plan that:
  - Identifies existing and future needs;
  - Provides specific recommendations for facilities and programs; and
  - Identifies priorities and funding sources for implementation.
- Objective 2 – Develop a comprehensive bikeway network that:
  - Is feasible;
  - Is fundable over the life of the Plan; and
  - Serves the bicyclist’s needs for all trip purposes.
- Objective 3 – Provide support facilities and amenities that encourage bicycle travel as an alternative mode of transportation and recreation.
- Objective 4 – Maintain and improve bikeway network and support facilities in:
  - Quality;
  - Operation; and
  - Integrity.
- Objective 5 – Improve safety for bicyclists by:
  - Implementing education and promotion programs for residents and
  - Enforcing bicycle and motorist laws that regulate bicycle safety.
- Objective 6 – Increase public awareness of:
  - The benefits of bicycling; and
  - Available bicycle and trail facilities and programs.

As shown in Figure 2-5, there were about 0.45 miles of existing bikeways in the City at the time of the Bicycle Master Plan development. All the bikeways depicted are Class II bike lanes. Class II bike lanes are “[i]ntended to delineate the right of way assigned to bicyclists and motorists, and to provide for more predictable movements by each” (California Department of Transportation 2016). Class I bike paths are “[f]acilities with exclusive right of way, with cross flows minimized” and Class III bike routes are “[a] shared facility which serves either to a) provide continuity to other bicycle facilities, or b) designated preferred routes through high demand corridors” (California Department of Transportation 2016).



**Figure 2-5**  
**Existing Bikeways**  
**(McFarland Bicycle Master Plan)**



Figure 2-6 shows the recommended bikeway network for the City disclosed in the McFarland Bicycle Master Plan. Changes to this recommended network are discussed later in Section 3 of this Study. Figure 2-7 shows the recommended priority of developing certain segments of the network. “High priority” was assigned to segments that were in the City limits, and where the roadway can support the proposed bikeway without major construction. “Medium priority” was assigned to segments that were inside or very near the City limits, but where the roadway cannot support the bikeway without major construction. “Low priority” was assigned to segments outside of the City limits.

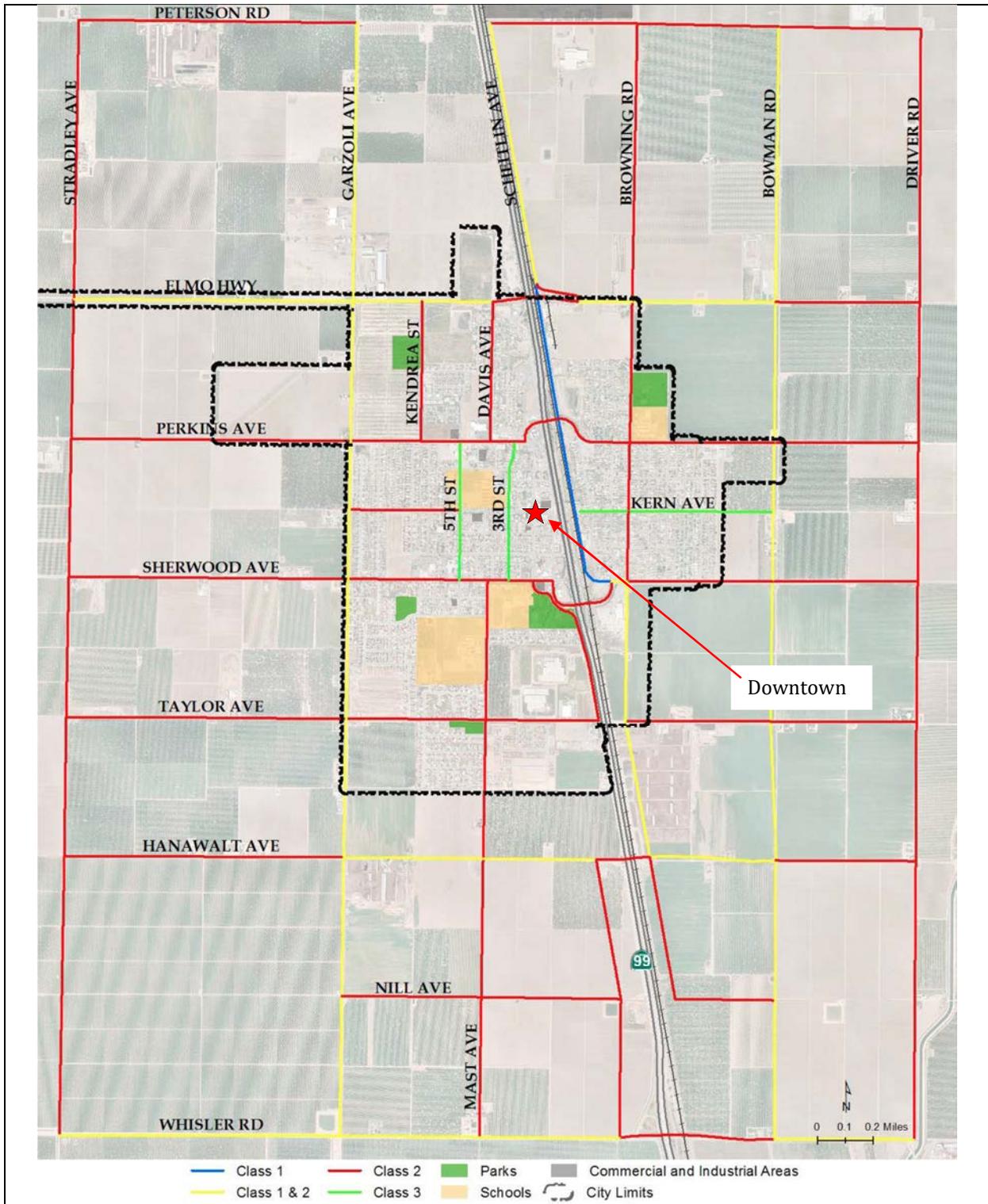
Figure 2-8 shows the existing bicycle support facilities (at the time of the Bicycle Master Plan development), which can include bicycle parking, shower and changing space, and secure storage for bicycle gear. Support facilities are essential because they encourage bicycling and can be the determining factor about whether a bicycle trip is made or not. Bicycle parking, in the form of bicycle racks, are available at some but not all of McFarland’s public schools, parks, and other major trip attractors. Shower and storage facilities located in schools and private facilities are not currently available to the public and therefore, do not represent potential resources.

### ***Transit Development Plan***

The *Kern Council of Governments City of McFarland Transit Development Plan* (TDP) (Kern Council of Governments 2015) provides a blueprint for short-term operational, financial, and capital improvements for McFarland’s transit service. The TDP covers a five-year horizon and includes strategies to increase service efficiency and effectiveness as well as how to finance implementation of those strategies.

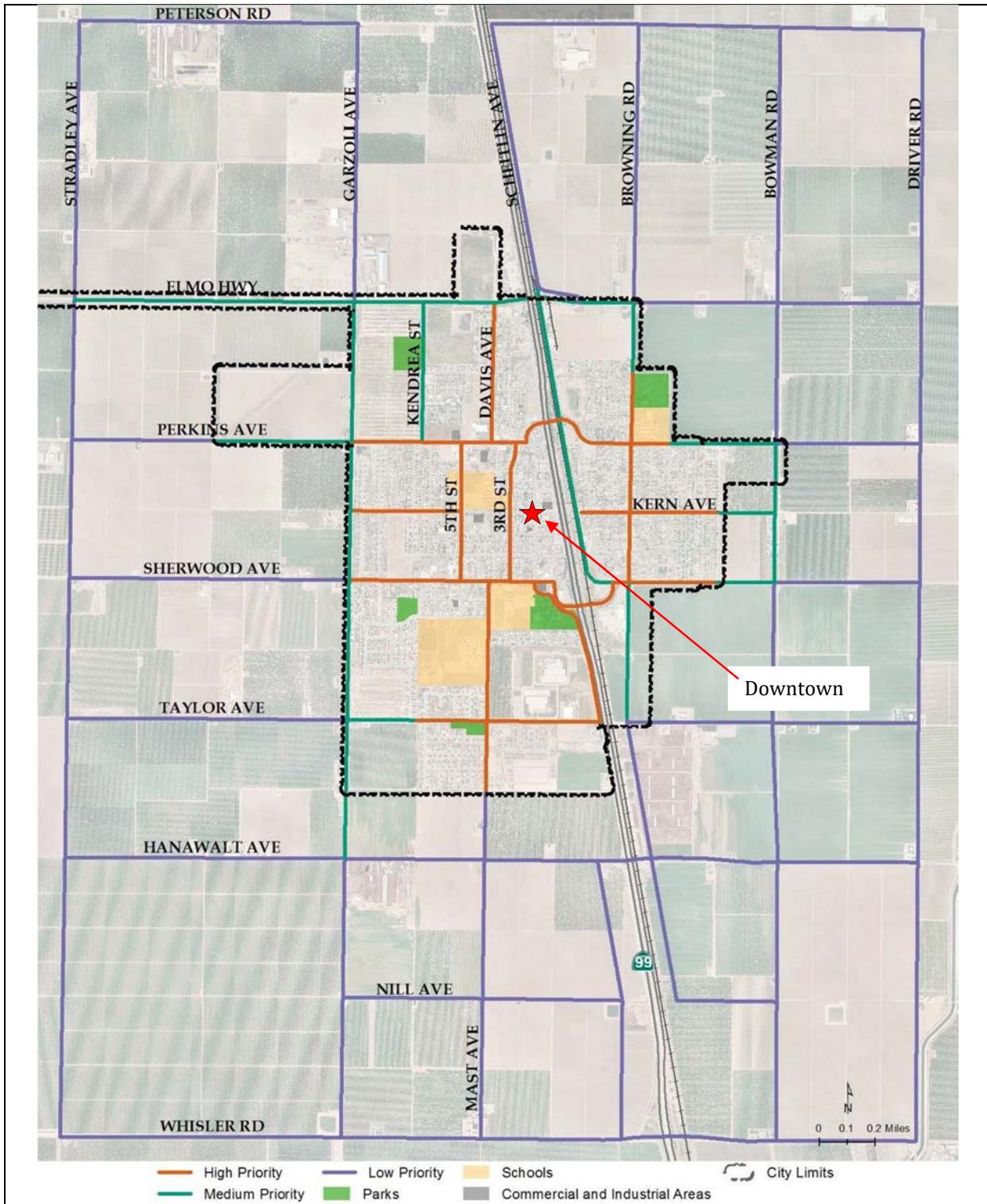
In 2011/12, 18,699 passengers were transported by Kern County transit operators in McFarland (Kern Council of Governments 2014) and therefore, there is a demand for transit service in McFarland. Specific to pedestrian and bicycle transportation modes, the TDP states that the City would benefit from the development of a dedicated transit “hub” which would support consolidated access to all public transit services (including Kern Transit and Delano Area Rapid Transit). The Circulation Element states that pedestrian and bicycle access to a “future Transit Village” should be prioritized (City of McFarland 2013). As part of the capital recommendations, the TDP endorses the development of a “purpose-built central ‘hub’ for transit-related operations, storage/fueling, and customer information.” The TDP goes on to state that an ideal location would be adjacent to the recently developed “KaBoom Park.” Figure 2-9 shows the recommended location for the transit hub.

Developing the transit hub on the east side of the City eliminates the need for seniors and youth to cross SR-99 to access regional services (and any future McFarland fixed-route services). It would also provide a location for the Dial-A-Ride (DAR) vehicles to pick-up and drop-off customers like the bus stop at the Community Center. Additionally, this facility would house transit operations, provide dedicated customer services, and break facilities for drivers and the public. Vehicle storage and fueling capabilities would also benefit not only



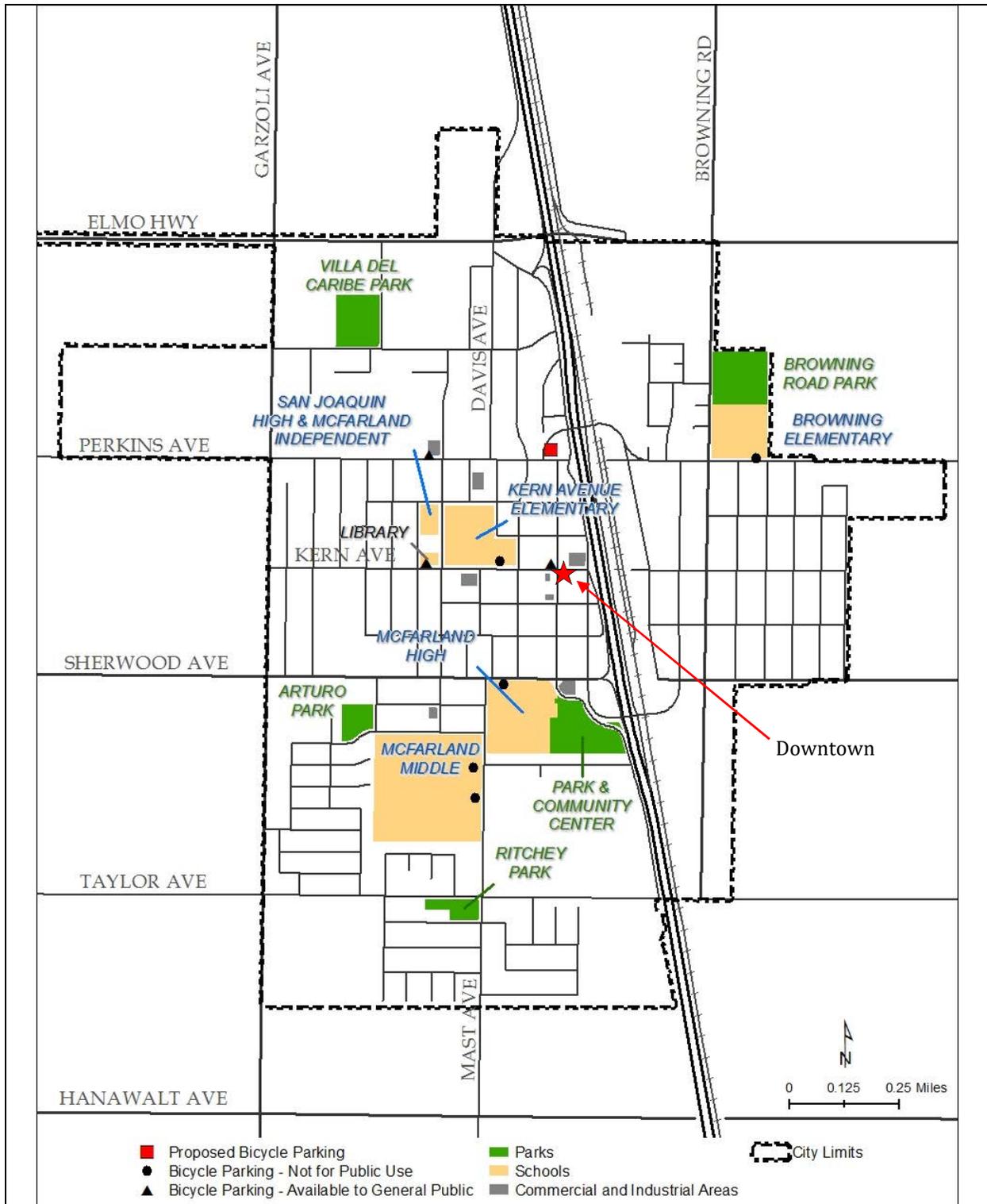
**Figure 2-6**  
**Recommended Bikeway Network**  
**(McFarland Bicycle Master Plan)**





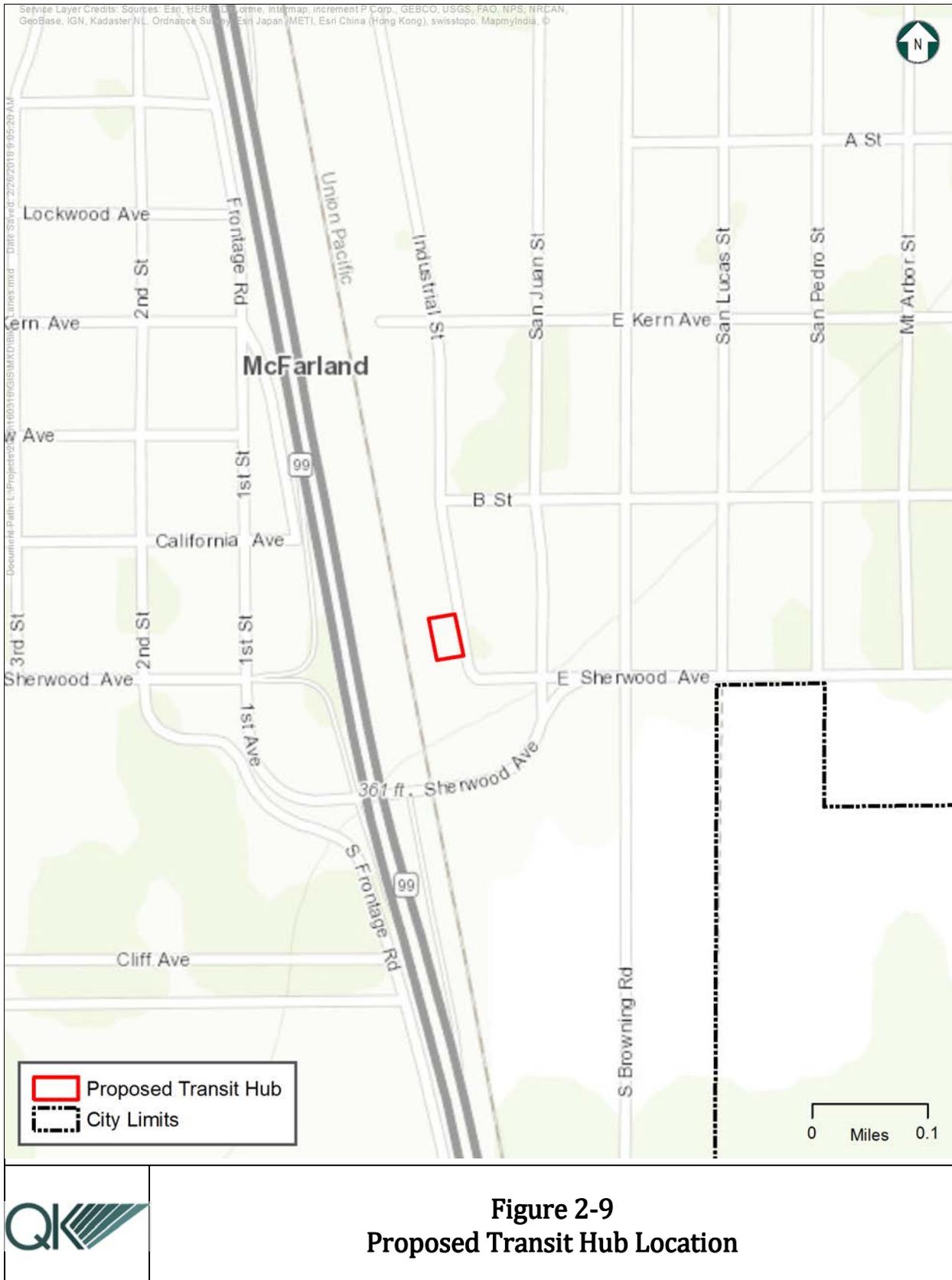
**Figure 2-7**  
**Recommended Priority of Bikeway Network**  
**(McFarland Bicycle Master Plan)**





**Figure 2-8**  
**Existing Bicycle Support Facilities**  
**(McFarland Bicycle Master Plan)**





**Figure 2-9**  
**Proposed Transit Hub Location**

the transit program, but other city vehicles as well, as the City has recently applied for grant funding to complete a transition in fuel type for transit vehicles from gasoline to compressed natural gas (CNG). Limited parking space could be added to facilitate commute trips to Bakersfield or Delano, as well as employment-related ridesharing.

As part of this transit hub's possible development, pedestrian and bicycle access and connectivity should be considered in compliance with the goals of the Circulation Element.

## **2.6 - Equity in Pedestrian and Bicycle Planning**

In the document *Pursuing Equity in Pedestrian and Bicycle Planning* (U.S. Department of Transportation 2016), the DOT defines equity in pedestrian and bicycle planning as:

Equity in transportation seeks fairness in mobility and accessibility to meet the needs of all community members. A central goal of transportation equity is to facilitate social and economic opportunities through equitable levels of access to affordable and reliable transportation options based on the needs of the populations being served, particularly populations that are traditionally underserved.

The document goes on to say:

Concerted efforts to improve the ability of the traditionally underserved to travel by walking and bicycling, and to safely reach transit stops, will help reduce transportation-based inequities and the negative outcomes that impact underserved [populations].

“Underserved populations” include one or more of the following descriptions:

- Low Income – A person whose household income (or in the case of a community or group, whose median household income) is at or below the U.S. Department of Health and Human Services poverty guidelines.
- Minority – Belonging to a minority racial or ethnic group including Black, Hispanic or Latino, Asian American, American Indian and Alaskan Native, and Native Hawaiian, or Other Pacific Islander.
- Older Adults – Defined as 65 years of age and older.
- Limited English Proficiency (LEP) – Individuals who do not speak English as their primary language and who have a limited ability to read, speak, write, or understand English.
- Person with Disabilities – A person with a disability is one who has a physical or mental impairment that substantially limits one or more major life activities of such individual, a record of such an impairment, or being regarded as having such an impairment.

Generally, underserved populations have a greater need for safe pedestrian and bicycle facilities for, but not limited to, these reasons:

- 24% of Americans living in poverty do not own a vehicle;
- Low-income, minority, and LEP individuals often work outside of traditional “9 to 5” jobs where it is frequently dark and transit services are not operating;
- Immigrants and individuals with language barriers travel more frequently by walking or bicycling than non-immigrants and native English speakers, but are often forced by circumstance to do so along roads lacking safe, accessible pedestrian and bicycle facilities;
- Children, older adults, and individuals with physical or cognitive disabilities may be unable to drive and are, thus, more reliant on nonmotorized travel modes; and
- As individuals age, they are increasingly likely to depend on transit as primary transportation and therefore, safe pedestrian access to bus stops and transit stations is a key aspect of accessibility among older adults.

The following strategies, practices, and processes can be used by individuals and organizations, such as the City, to address equity issues related to pedestrian and bicycle planning.

- Examine transportation investment process – Efficiency-based<sup>1</sup> and/or compliant-based<sup>2</sup> prioritization of pedestrian and bicycle facilities alone may not be sufficient to address equity issues because they can unintentionally lead to resources being directed towards the most affluent or well-resourced community members, who have time to use compliant-based systems and are comfortable working within government systems, rather than to communities that may need the improvement the most.
- Make equity a bigger part of the decision-making process – Discuss what “equitable” outcomes mean and would look like, and set goals for equitable outcomes by analyzing different resource distribution scenarios with the thought of who would and would not benefit from each scenario.
- Foster inclusive public involvement – Empower traditionally underserved individuals and communities to participate in the planning process by providing accommodating opportunities for conversation and meet community members where they are and minimize barriers to participation by providing interpreters and having meetings when convenient (such as providing opportunities during weekdays and weekends).
- Leverage data to identify concerns and opportunities – Fully use the many sources of available data to identify where vulnerable groups exist and demand is not met, or where more engagement may be needed. These sources include, but are not limited to, Census, public health, housing, and school/education data.
  - Established indicators, and associated data sources, that relate to potential equity issues include:
    - Percentage of population with access to transit;

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<sup>1</sup> “Efficiency-based” prioritization means that some projects or programs prioritize how well they meet needs for “efficiency” or cost effectiveness with the goal of minimizing cost.

<sup>2</sup> “Compliant-based” prioritization means use of “public request” systems such as 311 numbers or websites to drive investment or maintenance plans.

- Number and/or percentage of jobs located near affordable housing;
- Change in average commuting times;<sup>3</sup>
- Vehicle miles traveled by mode; and
- Percentage of work or all trips by mode.

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<sup>3</sup> Change in average commuting times has been closely linked to transportation equity issues. Per a 2015 New York Times article by Mikayla Bouchard, “In a large, continuing study of upward mobility based at Harvard, commuting time has emerged as the single strongest factor in the odds of escaping poverty. The longer an average commute in a given county, the worse the chances of low-income families there moving up the ladder.”

## **SECTION 3 - EXISTING FACILITIES AND IMPEDIMENTS INVENTORY**

### **3.1 - Overview**

This section provides a comprehensive inventory of the existing and currently proposed pedestrian and bicycle facilities, including streetlights. The inventory summarizes current impediments to walking and bicycling, such as substandard and missing infrastructure that are not in compliance with current laws, such as the Americans with Disabilities Act (ADA), and regulations. This section also summarizes the City's preliminary priorities with regards to pedestrian and bicycle impediments.

Inventory data is presented in geographic subsections (either North-East, North-West, South-East, and South-West, or North and South) within the following tables and figures. The following are descriptions of these sections:

**North-East Section** – Generally includes the area bound by Frontage Road on the west, city limits on the east, city limits on the north, and Kern Avenue on the south.

**North-West Section** – Generally includes the area bound by city limits on the west, SR-99 on the east, city limits on the north, and Kern Avenue on the south.

**South-East Section** – Generally includes the area bound by Frontage Road on the west, city limits on the east (Wiley), Kern Avenue on the north, and city limits on the south.

**South-West Section** – Generally includes the area bound by Frontage Road on the west, SR-99 on the east, Kern Avenue on the north, and city limits (Sherwood) on the south.

**North Section** – Generally includes the study area north of Kern Avenue.

**South Section** – Generally includes the study area south of Kern Avenue.

### **3.2 - City's Priorities**

On December 22, 2016, QK performed an informal windshield survey of the City with City staff to determine the preliminary priorities of the City with regards to pedestrian and bicycle impediments. This informal survey was done prior to going into the field to formally inventory existing facilities and impediments. This process produced an initial list of 17 City priorities. Upon completion of field work and further discussions with the City, this list was refined to 7 priorities. Table 3-1 provides a summary of the City's final priorities, and Figure 3-1 shows the general location of the priorities associated with the table. Priorities are listed in order of importance to the City.

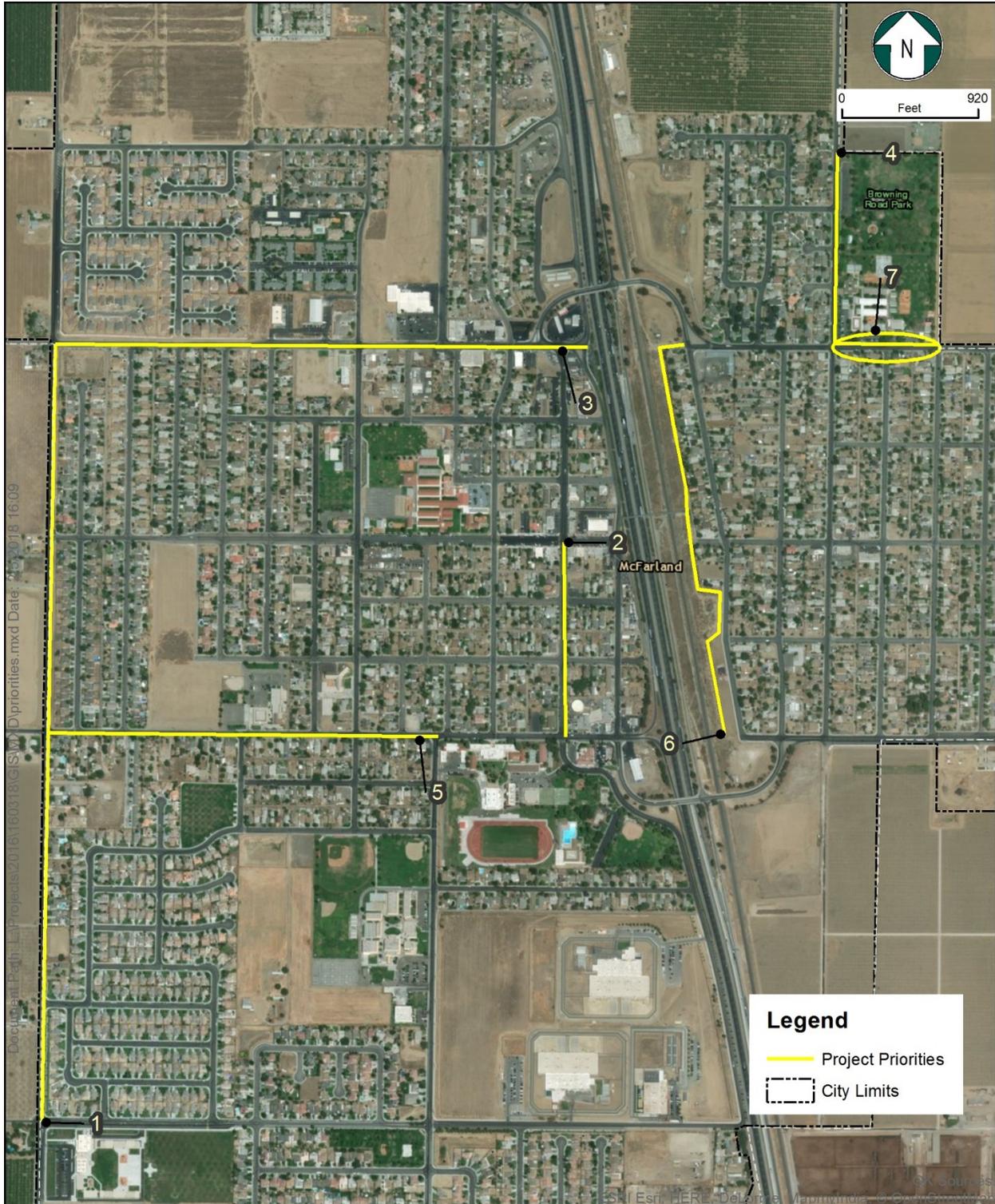
**Table 3-1**  
**City's Pedestrian and Bicycle Impediment Priorities**

No.	Priority
1	Garzoli Avenue from W. Perkins Avenue to Taylor Avenue
2	2 <sup>nd</sup> Street from W. Kern Avenue to W. Sherwood Avenue
3	W. Perkins Avenue from Frontage Road to Garzoli Avenue
4	Access and circulation issues around Browning Road Elementary School
5	W. Sherwood Avenue from Garzoli Avenue to Mast Avenue (McFarland High School)
6	Pedestrian/Bike trail from E. Sherwood Avenue to E. Perkins Avenue (behind existing park)
7	E. Perkins Avenue at Browning Road Elementary School (drainage issues)

### **3.3 - Field Methodology**

To augment our understanding of the existing pedestrian and bicycle facilities, QK performed a comprehensive field inventory of the City's facilities that noted existing conditions with an emphasis on substandard and missing infrastructure that are not in compliance with the ADA. This field study was aimed mainly at assessing the state of the City's sidewalks and ADA ramps. QK set about observing and documenting any impediments to sidewalks and ADA ramps that would interfere with pedestrian travel. Finally, street widths were measured for their suitability for future installation of bicycle routes.

To accomplish these tasks, a two-man crew was sent to the City to observe and assess all the sidewalks, ramps, and streets. This was achieved by driving around the City, street by street, with the non-driving crewmember observing the side of the street closest to him. When an area of non-compliance was observed by the crewmember, steps were undertaken to assess the issue and quantify it for the study. Different processes were used for specific issues of non-compliance. For missing sidewalks, one crewmember measured the length and width of missing sidewalk using a measuring wheel and communicated that number to the other crewmember for collection.



**Figure 3-1**  
City's Pedestrian and Bicycle Impediment Preliminary Priorities

The process for assessing ADA ramps was accomplished primarily using a general rule; absence of warning surface domes on the main ramp surface would immediately fail the ramp as ADA compliant. After that assessment was made, a photograph was taken of the non-compliant ramp, or missing ramp, and the crew continued along the side of the street being studied. When the field crew encountered a ramp with the warning surface domes installed, a more stringent process was adhered to. One crewmember would measure the grade, using a digital level, of the main ramp in two directions - one toward the street and a second perpendicular to the first measurement. The feeder ramps flanking the main ramp were then measured, toward the main ramp direction only. If no visible flow line was observed at the bottom of the main ramp, the grade of the street, five feet (5') from the bottom of the ramp where it blends into the street, was also measured with the level and its grade recorded. Lastly, the length and width of the landing at the top of the ramp was measured with a tape measure to mathematically ascertain its square footage.

Impediments to pedestrians were noted along sidewalks and ADA ramps. Object impediments were observed, generally taking the form of street signs, fire hydrants, power and/or utility poles, and fence encroachments. Non-object impediments mainly took the form of non-ADA compliant driveway approaches. Driveway approaches were deemed non-compliant mainly due to the absence of any sidewalk around the driveway approach. Objects identified along pedestrian routes were deemed impediments if there was not sufficient room on either side of them for pedestrians to safely pass. Four feet (4') was set as the minimum clearance, and all impediments that were not to this standard were noted.

The widths of all streets were measured using a measuring wheel. If parking on either side was observed, the street was measured from the curb to the farthest edge of the stripe denoting parking, whether it was parallel to the curb or diagonal. A measurement from the parking stripe or curb was then made to the centerline of the street, if present, and the same process was repeated on the other side of the street to the same standards. The measurements were taken by one crewmember and the information relayed to the other for documentation. A similar process was used if a bike lane was already present. The bike lane was measured from the curb to the outside stripe, then from stripe to centerline, and the process was repeated on the other side of the street.

### **3.4 - Existing Facilities and Impediments**

#### **3.4.1 - PEDESTRIAN**

Pedestrian facilities include walkways (sidewalks), traffic signals, crosswalks, refuge islands, pedestrian-scale illumination, and benches. As previously stated, this study focuses specifically on the City's sidewalks and ADA ramps, and any impediments to these existing facilities that would interfere with pedestrian travel. Therefore, for the purposes of this study, pedestrian facilities were limited to sidewalks and curb ramps.

Sidewalks are defined as the portion of the public right-of-way that provides a separated area for people traveling on foot (U.S. Department of Transportation FHWA 2017). Sidewalks are located along roadways, separated with a curb and/or planting strip or swale,

and have a hard, smooth surface. Sidewalks in residential areas are sometimes used by bicyclists, but many cities ban bicycle riding on sidewalks.

The principal purpose of a sidewalk is to provide pedestrian safety. The sidewalk gives the pedestrian a place to walk outside of the vehicular travel lanes. Both the FHWA and the Institute of Transportation Engineers (ITE) recommend that sidewalks be at least five feet (5') wide to allow two people to pass comfortably or to walk side-by-side (U.S. Department of Transportation FHWA 2017). ADA standards require a minimum of four feet (4') of unobstructed sidewalk, with five foot (5') passing areas every two-hundred feet (200'). The City's standards for a sidewalk requires a minimum five foot (5') wide sidewalk for residential areas (local streets), and a minimum six foot (6') wide sidewalk for commercial areas and larger streets (collectors and arterials).

Curb, gutter and sidewalk are required for all new developments within the City, but many existing developed areas of McFarland lack continuous and/or unobstructed sidewalks. Figures 3-2 through 3-5 show the location of both existing and missing sidewalks throughout the study area. Sidewalks exists throughout the City, but there are many areas where pedestrian access is impeded by gaps in the existing sidewalk network. This can be seen both within developed commercial corridors, such as along W. Perkins Avenue, between 3<sup>rd</sup> Street and 5<sup>th</sup> Street, and within existing residential areas throughout the City. Many neighborhoods have sidewalks in front of some houses, but not all, forcing pedestrians to walk through yards or in the street. Additionally, sidewalks are frequently obstructed by stationary hazards which encroach on the minimum four-foot (4') sidewalk. Pedestrian impediments included sign posts, transformers and power poles, light posts, fire hydrants, trees, walls, mailboxes and fences, and most were identified within residential areas and along school routes.

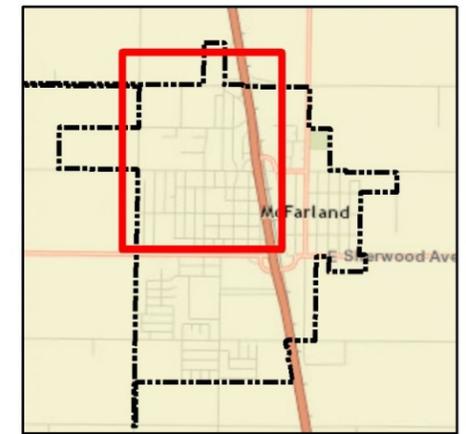
Curb ramps are pedestrian access ramps with flared sides that are graded down from a sidewalk to an adjoining street to facilitate safe transitions from a roadway to curbed sidewalk and vice versa. Title II of the Americans with Disabilities Act (ADA) of 1990 requires that public entities, including state and local governments, ensure that persons with disabilities have access to the pedestrian routes in the public right of way. As part of this requirement, the City is obligated to provide curb ramps for all new street/road projects. Curb ramps allow people with mobility impairments to gain access to the sidewalks and to pass through median islands in streets. Without curb ramps, these individuals would be forced to travel in streets and roadways, where they are in potential conflict with vehicles and/or are prevented from reaching their destination.

ADA standards require a curb ramp at every intersection where a street level pedestrian walkway crosses a curb. The preferred orientation is for two curb ramps per corner that align with the direction of the crosswalks. Sometimes the limited width of a sidewalk makes it necessary to locate one curb ramp in the center of the curb return. However, in locations where space is limited curb extensions should be considered as a method to widen the sidewalk and provide adequate room for curb ramps.

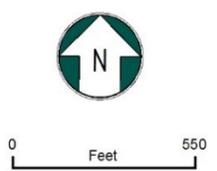


Figure 3-2  
Existing Sidewalks and Pedestrian Impediments  
North-East Section





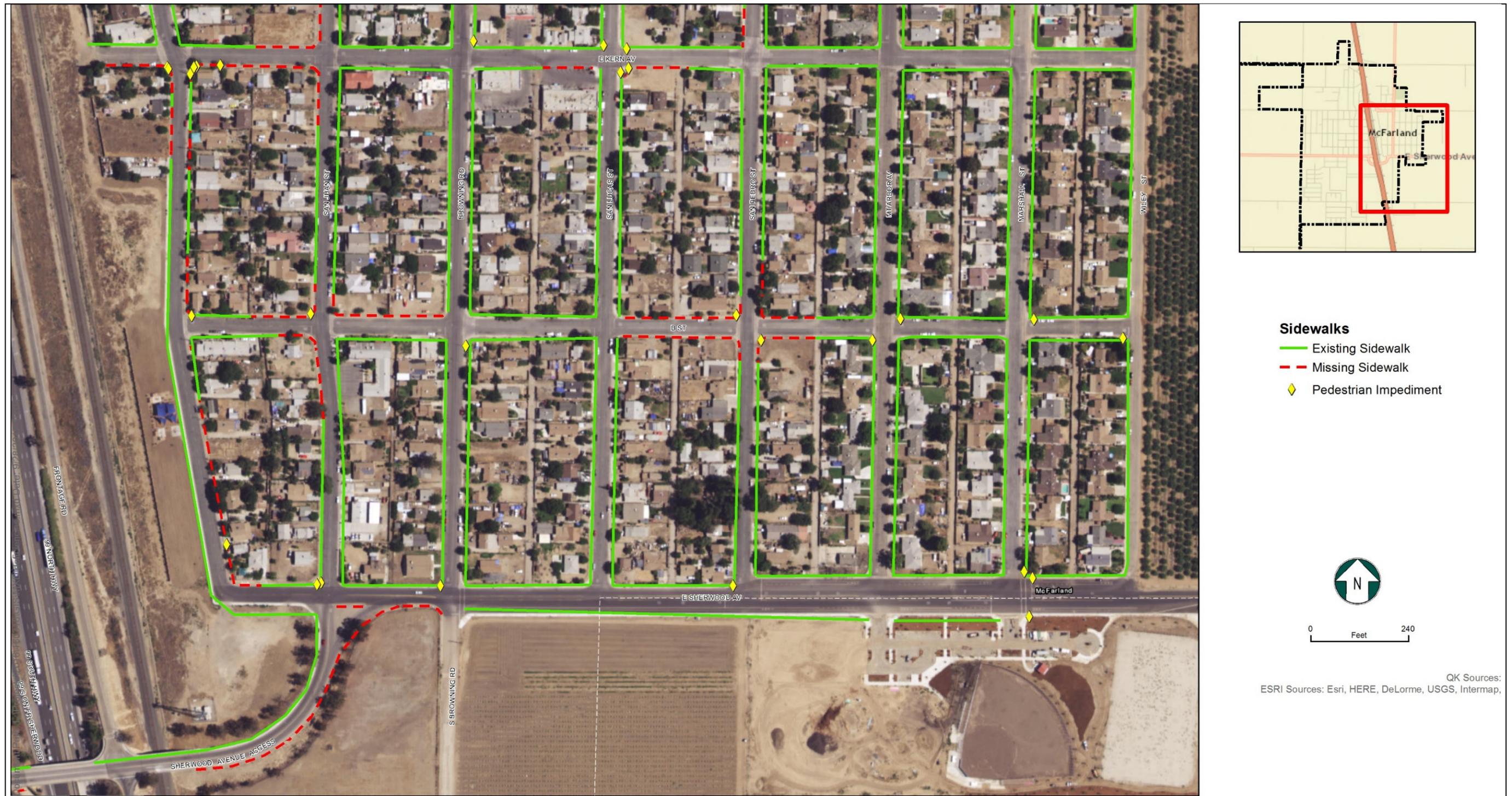
- Sidewalks**
- Existing Sidewalk
  - - - Missing Sidewalk
  - ◆ Pedestrian Impediment



QK Sources  
 ESRI Sources: Esri, HERE, DeLorme, USGS, Intermap

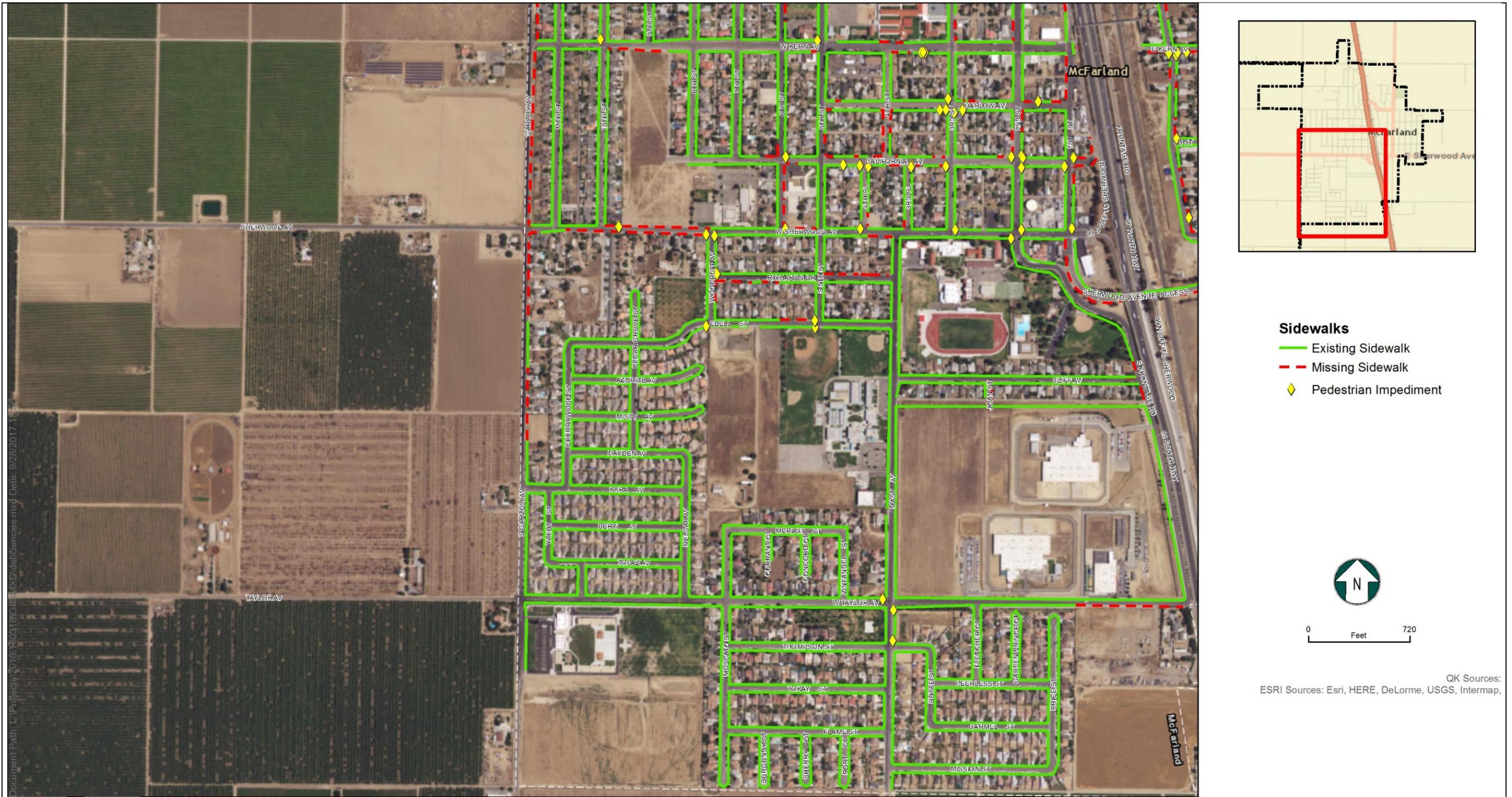


**Figure 3-3**  
 Existing Sidewalks and Pedestrian Impediments  
 North-West Section



**Figure 3-4**  
Existing Sidewalks and Pedestrian Impediments  
South-East Section





**Figure 3-5**  
Existing Sidewalks and Pedestrian Impediments  
South-West Section



Figures 3-6 and 3-7 depict the findings of a curb ramp audit. The figures show the location of both existing and missing curb ramps at all built-out intersections. Existing curb ramps were identified as being either potentially ADA-compliant or not ADA-compliant. Potential ADA-Compliant ramps appear to be compliant with ADA regulations, but have not been field-verified by checking ramp slopes or landing areas. Non ADA-Compliant ramps were visually confirmed to not be in compliance with ADA regulations due to the absence of warning surface domes on the main ramp surface. The lack of accessible curb ramps seen along McFarland's commercial corridors and near schools presents mobility challenges for pedestrians and increases the potential for safety conflicts between pedestrians and motorists.

Table 3-2 lists each of the City's road segments and describes their existing pedestrian facilities and impediments. This table corresponds with Figures 3-2 through 3-5, which show Existing Sidewalks and Pedestrian Impediments and Figures 3-6 and 3-7, which show Existing Curb Ramps.

The following are descriptions of the columns in Table 3-2, Existing Pedestrian Facilities and Impediments:

**Street Name** – Identifies the street segment's name. North-south streets are listed first in order from west to east. Then east-west streets are listed in order from north to south.

**Side of Street** – Identifies the side of the street segment examined.

**Segment From-To** – Identifies the extent of the street segment.

**Number of Drive Approaches** – Lists the number of drive approaches, or driveway ramps, identified in the street segment.

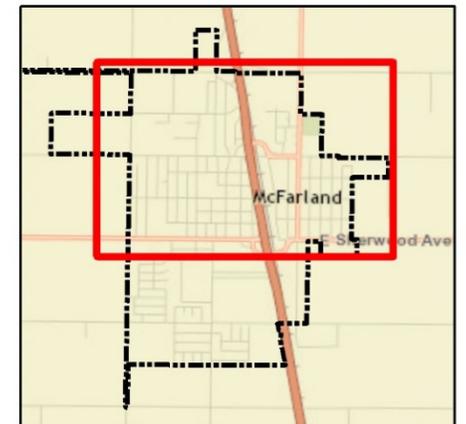
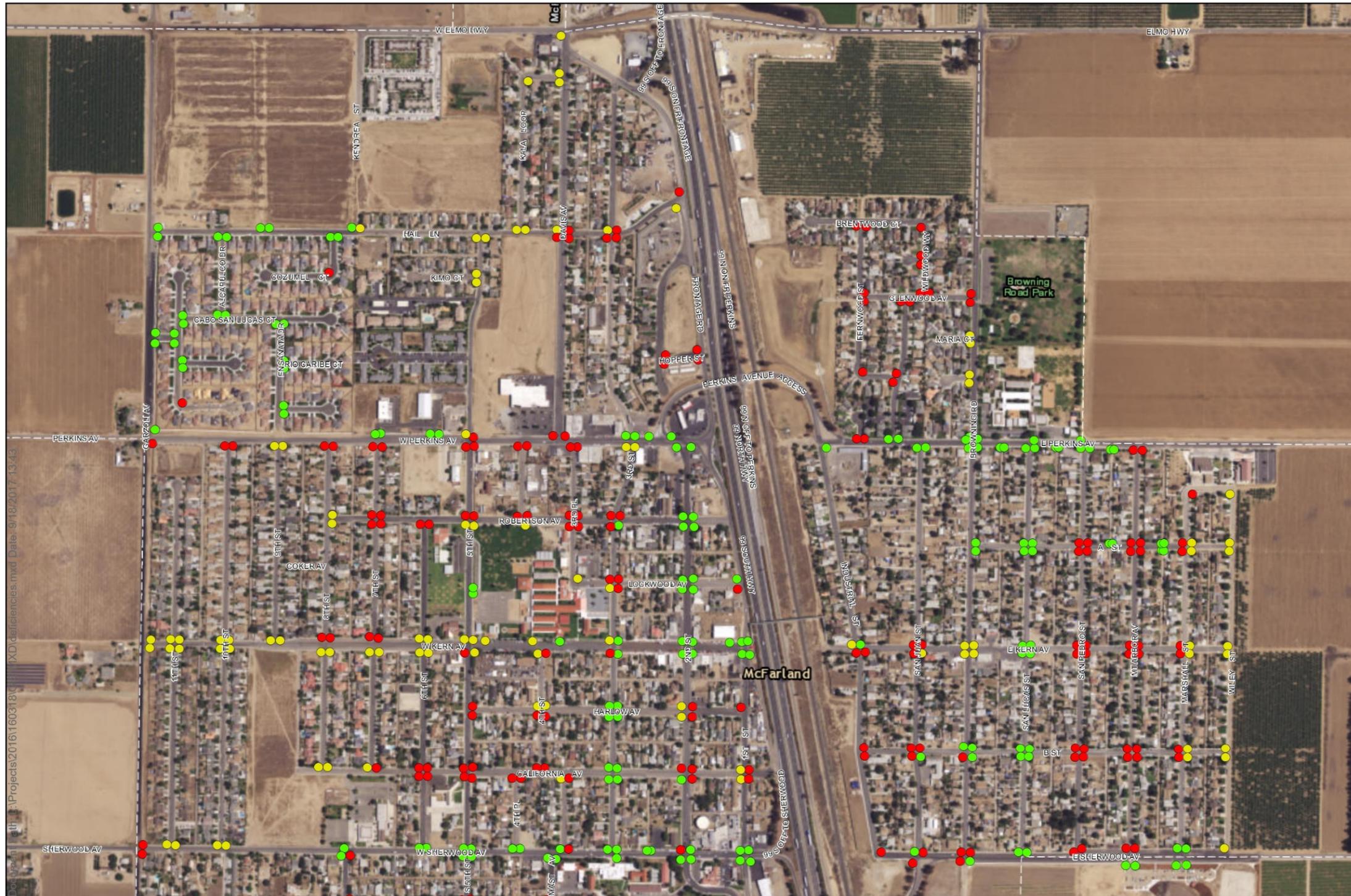
**Number of Alley Approaches** – Lists the number of alley approaches identified in the street segment.

**Missing Sidewalk** – Shows the extent of missing sidewalk in feet, if any. Alternately, lists "Yes" if a street segment was missing sidewalks, but no calculations were obtained and "All" if the street segment was built but had no sidewalks. "End" was used to define street segments that had sidewalks to the end of the City limits, but not outside of the City limits.

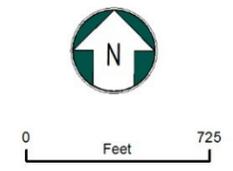
**Number of Curb Ramps** – Lists the number of curb ramps identified in the street segment.

**Number of Impediments** – Lists the number of physical obstructions identified in the street segment along the path of travel.

**Sidewalk Impediment** – Lists the type of physical obstruction identified in the street segment along the path of travel, if any. If more than two impediments were identified within a street segment, the obstructions were listed as "multiple".



- Ramps**
- Potential ADA-Compliant Ramp
  - Non ADA-Compliant Ramp
  - No Ramp



QK Sources:  
ESRI Sources: Esri, HERE, DeLorme, USGS, Intermap,



**Figure 3-6**  
**Existing Curb Ramps**  
**North Section**

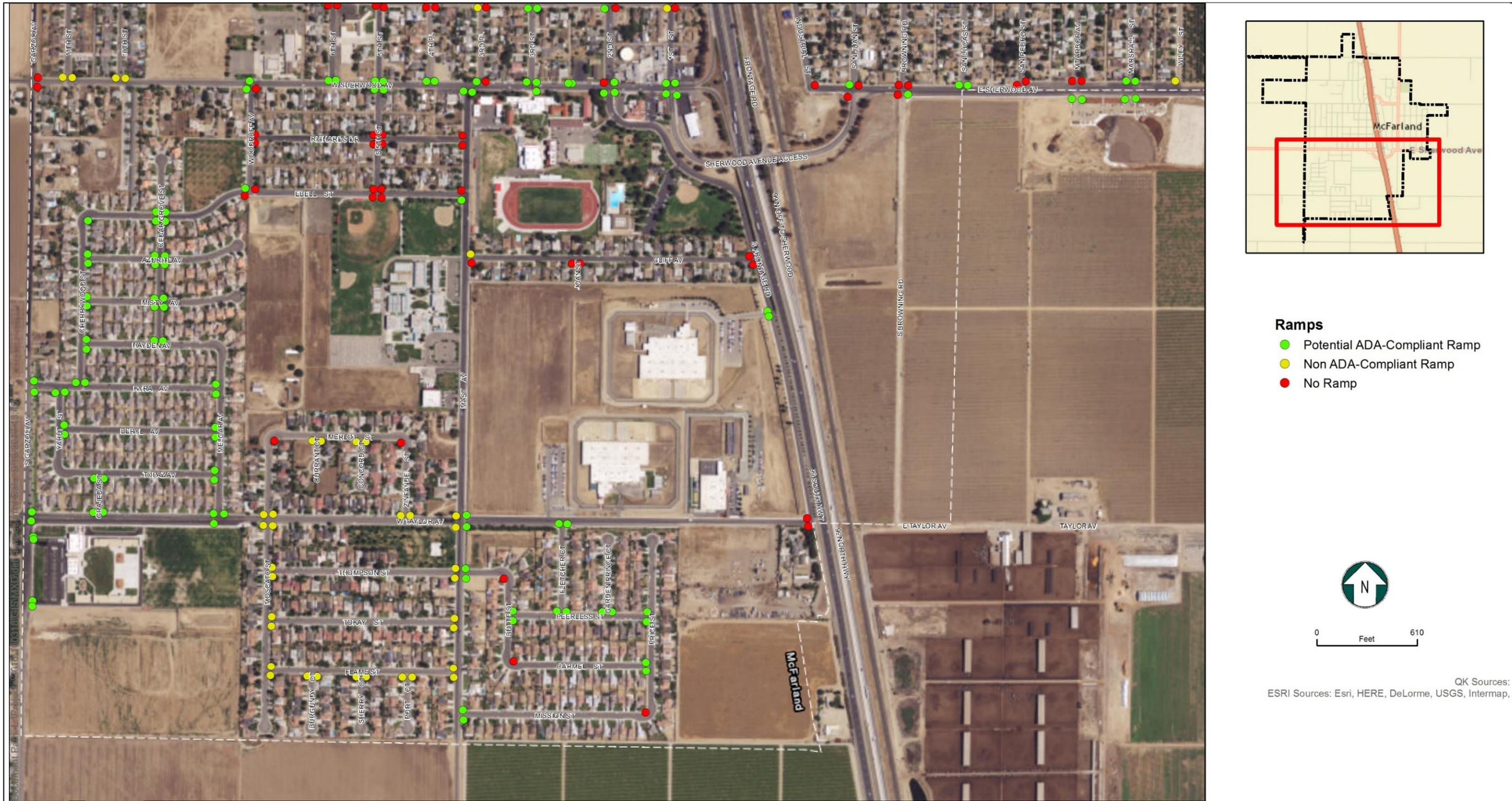


Figure 3-7  
Existing Curb Ramps  
South Section



**Table 3-2  
Existing Pedestrian Facilities and Impediments (page 1 of 18)**

Street Name	Side of Street	Segment		# of Drive Approaches	# of Alley Approaches	Missing Sidewalk (ft)	# of Curb Ramps	# of Impediments	Sidewalk Impediment	Comment
		From	To							
<b>NORTH-EAST SECTION</b>										
<b>NORTH-SOUTH</b>										
Industrial St.	West	Perkins	Kern	25	0	0	1	0		
	East	Kern	Perkins	8	0	130	2	0		
Fernwood St.	West	Brentwood	Fernwood	18	1	0	0	0		
	East	Fernwood	Glenwood	6	0	0	0	0		
		Glenwood	Brentwood	6	0	0	0	0		
San Juan St.	West	Glenwood	Fernwood	6	0	0	0	0		
		Fernwood	Perkins	1	0	0	0	1	Sign	
	East	Perkins	Kern	16	0	250	1	3	Sign	
		Kern	Perkins	12	0	180	2	0		
	Perkins	Glenwood	11	0	0	1	1	Sign		
Wildwood Way	West	Brentwood	Edgewood	1	0	0	0	0		
	East	Edgewood	Glenwood	1	0	0	0	0		
		Glenwood	Brentwood	9	0	0	0	0		
Browning Rd.	West	End	Glenwood	0	0	End	0	0		
		Glenwood	Maria Ct.	1	0	0	1	0		
		Maria Ct.	Isabel Ct.	0	0	0	2	0		
		Isabel Ct.	Perkins	4	0	0	2	0		
	East	Perkins	A St.	19	0	0	2	0		
		A St.	Kern	11	0	0	2	1	Sign	
		Kern	A St.	9	0	0	2	1	Power Pole	
		A St.	Perkins	10	0	0	2	2	Sign	
	Perkins	End	1	0	0	1	0			
San Lucas St.	West	Perkins	A St.	3	0	0	2	0		
		A St.	Kern	5	0	0	2	1	Power Pole	
	East	Kern	A St.	5	0	0	2	0		
	A St.	Perkins	3	0	0	2	0			
San Pedro St.	West	Perkins	A St.	6	0	Yes	1	0		
		A St.	Kern	6	0	Yes	1	1	Sign	
	East	Kern	A St.	5	0	Yes	0	3	Multiple	
		A St.	Perkins	9	0	Yes	1	3	Multiple	
Mt. Arbor St.	West	Perkins	A St.	10	0	0	0	0		
		A St.	Kern	8	0	0	0	1	Sign	
	East	Kern	A St.	8	0	0	0	0		
	A St.	Perkins	8	0	0	1	1	Sign		

**Table 3-2**  
**Existing Pedestrian Facilities and Impediments (page 2 of 18)**

Street Name	Side of Street	Segment		# of Drive Approaches	# of Alley Approaches	Missing Sidewalk (ft)	# of Curb Ramps	# of Impediments	Sidewalk Impediment	Comment
		From	To							
<b>NORTH-EAST SECTION (continued)</b>										
<b>NORTH-SOUTH (continued)</b>										
Marshall St.	West	Robertson	A St.	3	0	0	0	0		
		A St.	Kern	10	0	0	0	0		
	East	Kern	A St.	8	0	0	2	0		
Wiley St.	West	A St.	Robertson	3	0	0	1	0		
		Robertson	A St.	4	0	0	2	0		
	East	A St.	Kern	8	0	0	2	0		
		Kern	Robertson	0	0	All	0	0		Orchard
<b>EAST-WEST</b>										
Brentwood Ct.	South	Cul De Sac	Fernwood	7	0	0	0	0		
		Fernwood	Wildwood	4	0	0	0	0		
	North	Wildwood	Cul De Sac	16	0	0	0	0		
Glenwood Ave.	South	Fernwood	San Juan	2	0	0	0	0		
		San Juan	Browning	6	0	0	0	0		
	North	Browning	Wildwood	3	0	0	0	0		
		Wildwood	Fernwood	5	0	0	0	1	Sign	
Maria Ct.	South	End	Browning	5	0	0	1	0		
	North	Browning	Cul De Sac	5	0	0	1	0		
Fernwood St.	South	San Juan	Fernwood	4	0	0	0	0		
	North	Fernwood	San Juan	2	0	0	0	0		
Isabel Ct.	South	Cul De Sac	Browning	5	0	0	1	0		
	North	Browning	Cul De Sac	6	0	0	1	0		
E. Perkins Ave.	South	99 FWY	Industrial	-	-	-	-	-	-	Street not constructed
		Industrial	San Juan	0	0	0	1	2	Power Pole	
		San Juan	Browning	2	0	0	2	0		
		Browning	San Lucas	2	1	0	2	1	Sign	
		San Lucas	San Pedro	1	1	0	2	1	Sign	
		San Pedro	Mt. Arbor	0	1	0	2	1	Sign	
	North	Mt. Arbor	Bowman	8	1	End	1	1	Sign	
		Bowman	Mt. Arbor	0	0	End	1	0		
		Mt. Arbor	San Pedro	0	0	0	0	0		
		San Pedro	San Lucas	1	0	0	0	2	Light Pole	
		San Lucas	Browning	2	0	0	1	0		
		Browning	San Juan	4	0	0	2	0		
		San Juan	Industrial	0	0	0	1	0		
		Industrial	99 FWY	-	-	-	-	-	-	Street not constructed

**Table 3-2  
Existing Pedestrian Facilities and Impediments (page 3 of 18)**

Street Name	Side of Street	Segment		# of Drive Approaches	# of Alley Approaches	Missing Sidewalk (ft)	# of Curb Ramps	# of Impediments	Sidewalk Impediment	Comment
		From	To							
<b>NORTH-EAST SECTION (continued)</b>										
<b>EAST-WEST (continued)</b>										
A St.	South	Browning	San Lucas	3	1	0	1	1	Sign	
		San Lucas	San Pedro	0	1	300	0	1	Sign	
		San Pedro	Mt. Arbor	4	1	0	0	2	Hydrant, Sign	
		Mt. Arbor	Marshall	2	1	0	0	0		
		Marshall	Wiley	3	1	0	2	1	Sign	
	North	Wiley	Marshall	3	1	0	2	1	Sign	
		Marshall	Mt. Arbor	2	1	0	0	0		
		Mt. Arbor	San Pedro	2	1	0	0	1	Sign	
		San Pedro	San Lucas	2	1	150	0	3	Multiple	
San Lucas	Browning	4	1	150	1	2	Hydrant, Sign			
E. Kern Ave.	North	Wiley	Marshall	3	1	0	2	0		
		Marshall	Mt. Arbor	3	1	0	0	0		
		Mt. Arbor	San Pedro	3	1	0	0	1	Sign	
		San Pedro	San Lucas	2	1	0	1	1	Sign	
		San Lucas	Browning	4	1	0	0	1	Sign	
		Browning	San Juan	4	0	0	0	1	Sign	
		San Juan	Industrial	1	0	0	0	0	Sign	
Industrial	End	1	0	0	0	1	Sign			
<b>NORTH-WEST SECTION</b>										
<b>NORTH-SOUTH</b>										
Costa Alyssa Ct.	West	Cul De Sac	Loreto	8	0	0	1	0		
		Loreto	Quintana	8	0	0	1	0		
	East	Quintana	San Miguel	0	0	0	1	0		
		San Miguel	Cabo San Lucas	0	0	0	2	0		
		Cabo San Lucas	Cul De Sac	6	0	0	1	0		
11th St.	West	Cul De Sac	Kern	20	0	0	1	0		
	East	Kern	Cul De Sac	20	0	0	1	0		
Acapulco Dr.	West	Hail	Cabo San Lucas	6	0	0	2	0		
	East	Cabo San Lucas	Hail	6	0	0	2	0		
10th St.	West	Perkins	Kern	25	0	0	2	0		
	East	Kern	Perkins	25	0	0	2	0		

**Table 3-2**  
**Existing Pedestrian Facilities and Impediments (page 4 of 18)**

Street Name	Side of Street	Segment		# of Drive Approaches	# of Alley Approaches	Missing Sidewalk (ft)	# of Curb Ramps	# of Impediments	Sidewalk Impediment	Comment
		From	To							
<b>NORTH-WEST SECTION (continued)</b>										
<b>NORTH-SOUTH (continued)</b>										
Valencia Dr.	West	Salvador	Rosario	-	-	-	-	-	-	Street not constructed
		Rosario	Lima	-	-	-	-	-	-	Street not constructed
		Lima	Olinda	-	-	-	-	-	-	Street not constructed
	East	Hail	Salvador	-	-	-	-	-	-	Street not constructed
Ensenada Dr.	West	Cabo San Lucas	Perkins	11	0	0	1	0		
	East	Perkins	La Paz	0	0	0	1	0		
		La Paz	Rio Caribe	0	0	0	2	0		
9th St.	West	Perkins	Kern	23	0	0	2	0		
	East	Kern	Perkins	23	0	0	2	0		
8th St.	West	Perkins	Coker	11	0	0	2	0		
		Coker	Kern	7	0	0	2	0		
	East	Kern	Robertson	11	0	0	2	0		
Rio Santana Ct.	West	Hail	Cozumel	0	0	0	1	0		
	East	Cozumel	Hail	2	0	0	1	0		
Kendra St.	West	Elmo HWY	Hail	-	-	-	-	-	-	Street not constructed
	East	Hail	Elmo HWY	-	-	-	-	-	-	Street not constructed
7th St.	West	Perkins	Robertson	7	0	0	0	0		
		Robertson	Kern	12	0	0	0	0		
	East	Kern	Robertson	12	0	0	0	0		
6th St.	West	Robertson	Kern	12	0	10	1	0		
	East	Kern	Robertson	0	0	600	1	0		
5th St.	West	Hail	Kimo	0	1	0	2	0		
		Kimo	Perkins	4	0	0	2	0		
		Perkins	Robertson	1	0	0	0	0		
	East	Robertson	Kern	4	0	0	2	1	Sign	
		Kern	Robertson	2	0	0	2	0		
Kala Loop	West	Robertson	Perkins	2	0	230	0	1	Sign	
	East	Perkins	Hail	6	0	950	1	1	Sign	

**Table 3-2**  
**Existing Pedestrian Facilities and Impediments (page 5 of 18)**

Street Name	Side of Street	Segment		# of Drive Approaches	# of Alley Approaches	Missing Sidewalk (ft)	# of Curb Ramps	# of Impediments	Sidewalk Impediment	Comment
		From	To							
<b>NORTH-WEST SECTION (continued)</b>										
<b>NORTH-SOUTH (continued)</b>										
4th St.	West	Perkins	Robertson	3	0	270	0	1	Sign	
	East	Robertson	Perkins	3	0	200	0	1	Sign	
Davis Ave.	West	Elmo HWY	Kala Loop	2	0	0	2	0		
		Kala Loop	Hail	13	0	0	2	0		
		Hail	Perkins	2	0	880	0	0		
	East	Perkins	Hail	1	1	0	0	0		
		Hail	Frontage	11	0	430	0	1	Sign	
		Frontage	Elmo HWY	0	0	90	0	0		
3rd Pl.	West	Perkins	Robertson	4	0	200	0	3	Multiple	
		Robertson	Lockwood	2	0	60	1	6	Multiple	
	East	Lockwood	Robertson	1	1	150	1	1	Sign	
		Robertson	Perkins	6	0	70	0	0		
3rd St.	West	Frontage	Hail	14	0	0	1	1	Power Pole	
		Hail	Perkins	0	1	0	1	0		
		Perkins	Robertson	7	0	0	1	2	Sign, Pole	
		Robertson	Lockwood	3	1	0	0	0		
		Lockwood	Kern	1	0	0	1	3	Multiple	
	East	Kern	Lockwood	0	1	160	1	0		
		Lockwood	Robertson	2	1	0	1	1	Power Pole	
		Robertson	Perkins	5	0	100	1	0		
		Perkins	Hail	1	1	0	1	0		
		Hail	Frontage	8	0	0	1	0		
2nd St.	West	Frontage	Cul De Sac	8	0	20	0	0		
		Perkins	Robertson	0	0	260	1	0		
		Robertson	Lockwood	7	1	80	1	2	Multiple	
		Lockwood	Kern	1	1	180	2	2	Tree, Pole	
	East	Kern	Lockwood	0	0	0	2	0		
		Lockwood	Robertson	0	1	180	2	2	Power Pole	
		Robertson	Perkins	1	0	200	0	0		
		Cul De Sac	Hopper	0	0	180	0	0		
		Hopper	Frontage	0	0	450	0	0		

**Table 3-2  
Existing Pedestrian Facilities and Impediments (page 6 of 18)**

Street Name	Side of Street	Segment		# of Drive Approaches	# of Alley Approaches	Missing Sidewalk (ft)	# of Curb Ramps	# of Impediments	Sidewalk Impediment	Comment
		From	To							
<b>NORTH-WEST SECTION (continued)</b>										
<b>NORTH-SOUTH (continued)</b>										
Frontage Rd.	West	Davis	3rd St.	0	0	300	0	0		
		3rd St.	Hail	0	0	800	0	0		
		Hail	2nd	2	0	0	0	0		
		2nd	Hopper	0	0	560	0	0		
		Hopper	Perkins	0	0	350	0	0		
		Perkins	Robertson	1	0	380	0	0		
		Robertson	Lockwood	0	0	320	2	0		
	East	Lockwood	Kern	0	1	160	0	2	Pole, Hydrant	No sidewalk in segment
		Kern	Davis	0	0	All	0	0		
<b>EAST-WEST</b>										
Kala Loop	South	Kala Loop	Davis	1	0	0	2	0		
	North	Davis	Kala Loop	4	0	0	1	0		
Hail Ln.	South	Garzoli	Acapulco	6	0	0	2	3	Multiple	
		Acapulco	Rio Santana	11	0	0	2	0		
		Rio Santana	5th	10	1	0	2	3	Multiple	
		5th	Davis	0	0	350	1	1	Power Pole	
		Davis	3rd	2	1	120	0	0		
	North	3rd	Frontage	1	1	250	0	2	Sign, Hydrant	
		Frontage	3rd	2	0	250	0	0		
		3rd	Davis	1	1	0	1	2	Power Pole	
		Davis	Kala Loop	0	0	0	2	0		
		Kala Loop	Kendra	15	0	0	2	1	Sign	
		Kendra	Valencia	0	0	0	2	0		
		Valencia	Garzoli	5	0	0	2	0		
Cozumel Ct.	South	End	Rio Santana	9	0	0	0	0		
	North	Rio Santana	End	9	0	0	0	0		
Kimo Ct.	South	5th	End	8	0	0	1	0		
	North	End	5th	8	0	0	1	0		
Cabo San Lucas St.	South	Costa Alyssa	Ensenada	8	0	0	2	0		
		Ensenada	End	6	0	0	1	0		
	North	End	Acapulco	12	0	0	1	0		
		Acapulco	Costa Alyssa	0	0	0	2	0		
Loreto Way	South	Garzoli	Costa Alyssa	0	0	0	2	0		
	North	Costa Alyssa	Garzoli	0	0	0	2	0		

**Table 3-2**  
**Existing Pedestrian Facilities and Impediments (page 7 of 18)**

Street Name	Side of Street	Segment		# of Drive Approaches	# of Alley Approaches	Missing Sidewalk (ft)	# of Curb Ramps	# of Impediments	Sidewalk Impediment	Comment
		From	To							
<b>NORTH-WEST SECTION (continued)</b>										
<b>EAST-WEST (continued)</b>										
San Miguel Ct.	South	Costa Alyssa	End	6	0	0	1	0		
	North	End	Costa Alyssa	7	0	0	1	0		
Rio Caribe Ct.	South	Ensenada	End	7	0	0	1	0		
	North	End	Ensenada	7	0	0	1	0		
Hopper St.	South	2nd	Frontage	0	0	230	0	1	Sign	
	North	Frontage	2nd	0	0	230	0	1	Sign	
Quintana Ct.	South	Costa Alyssa	End	10	0	0	0	0		
	North	End	Costa Alyssa	7	0	0	0	0		
La Paz Ct.	South	Ensenada	End	7	0	0	1	0		
	North	End	Ensenada	7	0	0	1	0		
W. Perkins Ave.	South	Garzoli	10th	0	1	20	1	1	Transformer	
		10th	9th	2	1	0	2	0		
		9th	8th	1	1	0	1	0		
		8th	7th	0	1	0	0	0		
		7th	5th	1	1	0	0	0		
		5th	4th	1	0	0	0	0		
		4th	3rd Pl.	0	0	300	0	0		
	North	3rd Pl.	3rd St.	1	0	0	1	1	Power Pole	
		3rd St.	2nd	1	0	50	2	0		
		2nd	Frontage	0	0	180	1	1	Power Pole	
		Frontage	3rd St.	0	0	180	1	0		
		3rd St.	Davis	3	0	0	1	1	Multiple	
		Davis	5th	1	0	160	0	0		
		5th	Ensenada	2	0	60	1	0		
Ensenada	Garzoli	0	0	0	0	0				

**Table 3-2**  
**Existing Pedestrian Facilities and Impediments (page 8 of 18)**

Street Name	Side of Street	Segment		# of Drive Approaches	# of Alley Approaches	Missing Sidewalk (ft)	# of Curb Ramps	# of Impediments	Sidewalk Impediment	Comment
		From	To							
<b>NORTH-WEST SECTION (continued)</b>										
<b>EAST-WEST (continued)</b>										
Robertson Ave.	South	8th	7th	0	1	0	0	0		
		7th	6th	0	1	100	0	0		
		6th	5th	0	0	10	1	0		
		3rd Pl.	3rd St.	1	0	0	2	0		
		3rd St.	2nd	4	0	100	1	0		
	North	2nd	Frontage	3	0	40	2	0		
		Frontage	2nd	0	0	120	1	0		
		2nd	3rd St.	6	0	40	1	1	Power Pole	
		3rd St.	3rd Pl.	2	2	10	0	1	Sign	
		3rd Pl.	4th	0	0	200	0	1	Power Pole	
		4th	5th	0	0	280	0	0		
		5th	7th	5	1	0	0	0		
		7th	8th	0	1	0	0	0		
Coker Ave.	South	End	8th	0	0	0	1	0		
	North	8th	End	1	0	0	1	0		
Lockwood Ave.	South	3rd Pl.	3rd St.	2	0	0	2	0		
		3rd St.	2nd	3	0	160	1	0		
		2nd	Frontage	0	0	300	1	0		
	North	Frontage	2nd	0	0	30	2	0		
		2nd	3rd St.	6	0	20	2	1	Power Pole	
		3rd St.	3rd Pl.	1	0	20	0	0		
W. Kern Ave.	North	1st	2nd	0	0	0	3	0		
		2nd	3rd St.	0	0	0	2	0		
		3rd St.	5th	0	0	0	5	1	Power Pole	
		5th	6th	1	0	0	2	1	Power Pole	
		6th	7th	1	1	0	1	0		
		7th	8th	1	1	0	0	0		
		8th	9th	1	1	0	1	0		
		9th	10th	1	1	0	2	0		
		10th	11th	0	1	0	2	0		
		11th	Garzoli	0	0	0	2	0		

**Table 3-2**  
**Existing Pedestrian Facilities and Impediments (page 9 of 18)**

Street Name	Side of Street	Segment		# of Drive Approaches	# of Alley Approaches	Missing Sidewalk (ft)	# of Curb Ramps	# of Impediments	Sidewalk Impediment	Comment
		From	To							
<b>SOUTH-EAST SECTION</b>										
<b>NORTH-SOUTH</b>										
Industrial St.	West	Kern	B St.	6	0	350	1	0		
		B St.	Sherwood	0	0	600	0	1	Wall	
	East	Sherwood	B St.	2	0	150	0	0		
		B St.	Kern	6	0	240	0	0		
San Juan St.	West	Kern	B St.	7	0	210	0	0		
		B St.	Sherwood	5	0	200	1	0		
	East	Sherwood	B St.	4	0	150	2	0		
		B St.	Kern	7	0	70	0	1	Sign	
Browning Rd.	West	Kern	B St.	9	0	0	2	0		
		B St.	Sherwood	9	0	0	1	1	Power Pole	
	East	Sherwood	B St.	9	0	0	2	2	Power Pole	
		B St.	Kern	10	0	0	2	0		
San Lucas St.	West	Kern	B St.	2	0	0	2	1	Power Pole	
		B St.	Sherwood	4	0	0	2	1	Power Pole	
	East	Sherwood	B St.	3	0	0	2	0		
		B St.	Kern	8	0	0	2	1	Tree, Pole	
San Pedro St.	West	Kern	B St.	8	0	160	1	0		
		B St.	Sherwood	6	0	400	0	0		
	East	Sherwood	B St.	4	0	460	1	0		
		B St.	Kern	7	0	340	0	0		
Mt. Arbor St.	West	Kern	B St.	8	0	0	0	0		
		B St.	Sherwood	6	0	0	0	0		
	East	Sherwood	B St.	7	0	0	0	0		
		B St.	Kern	7	0	0	0	0		
Marshall St.	West	Kern	B St.	9	0	0	0	0		
		B St.	Sherwood	9	0	0	1	0		
	East	Sherwood	B St.	8	0	0	2	0		
		B St.	Kern	8	0	0	2	0		
Wiley St.	West	Kern	B St.	8	0	0	2	0		
		B St.	Sherwood	8	0	0	2	0		

**Table 3-2**  
**Existing Pedestrian Facilities and Impediments (page 10 of 18)**

Street Name	Side of Street	Segment		# of Drive Approaches	# of Alley Approaches	Missing Sidewalk (ft)	# of Curb Ramps	# of Impediments	Sidewalk Impediment	Comment
		From	To							
<b>SOUTH-EAST SECTION (continued)</b>										
<b>EAST-WEST</b>										
E. Kern Ave.	South	End	Industrial	0	0	End	1	3	Multiple	
		Industrial	San Juan	0	0	300	0	8	Multiple	
		San Juan	Browning	1	0	110	2	3	Multiple	
		Browning	San Lucas	0	1	280	1	2	Pole, Sign	
		San Lucas	San Pedro	2	1	150	0	5	Multiple	
		San Pedro	Mt. Arbor	1	1	150	1	3	Multiple	
		Mt. Arbor	Marshall	3	1	0	0	0		
		Marshall	Wiley	3	1	0	2	0		
B St.	South	Industrial	San Juan	1	0	End	0	1	Sign	
		San Juan	Browning	1	0	150	1	1	Sign	
		Browning	San Lucas	6	1	0	1	1	Sign	
		San Lucas	San Pedro	4	1	100	0	1	Sign	
		San Pedro	Mt. Arbor	1	1	150	0	1	Sign	
		Mt. Arbor	Marshall	2	1	0	0	1	Sign	
		Marshall	Wiley	3	1	0	2	1	Sign	
	North	Wiley	Marshall	3	1	0	2	1	Sign	
		Marshall	Mt. Arbor	1	1	0	0	1	Sign	
		Mt. Arbor	San Pedro	3	1	150	0	2	Pole, Sign	
		San Pedro	San Lucas	0	1	150	0	3	Multiple	
		San Lucas	Browning	4	1	0	1	1	Sign	
		Browning	San Juan	0	0	150	1	1	Sign	
		San Juan	Industrial	2	0	End	0	2	Sign, Hydrant	
E. Sherwood Ave.	South	Industrial	On Ramp	2	0	180	0	0		
		On Ramp	Browning	0	0	120	0	1	Sign	
		Browning	Wiley	2	0	0	3	0		
	North	Wiley	Marshall	3	1	0	2	0		
		Marshall	Mt. Arbor	2	1	0	1	0		
		Mt. Arbor	San Pedro	1	1	0	0	0		
		San Pedro	San Lucas	3	1	0	1	0		
		San Lucas	Browning	3	1	0	2	0		
		Browning	San Juan	2	0	0	2	1	Sign	
		San Juan	Industrial	2	0	0	1	2	Pole, Sign	

**Table 3-2**  
**Existing Pedestrian Facilities and Impediments (page 11 of 18)**

Street Name	Side of Street	Segment		# of Drive Approaches	# of Alley Approaches	Missing Sidewalk (ft)	# of Curb Ramps	# of Impediments	Sidewalk Impediment	Comment
		From	To							
<b>SOUTH-WEST SECTION</b>										
<b>NORTH-SOUTH</b>										
11th St.	West	Kern	Sherwood	24	0	0	2	0		
	East	Sherwood	Kern	24	0	0	2	1	Sign	
Yahut St.	West	Kyra	Topaz	10	0	0	1	0		
	East	topaz	Beryl	0	0	0	2	0		
Cherrywood St.	West	Ebell	Kyra	17	0	0	1	0		
		Kyra	Hayden	0	0	0	2	0		
	East	Hayden	Misty	3	0	0	2	0		
		Misty	Azurite	3	0	0	2	0		
		Azurite	Ebell	3	0	0	2	0		
10th St.	West	Kern	Sherwood	24	0	0	2	0		
	East	Sherwood	Kern	24	0	0	2	0		
Cedar Grove St.	West	End	Ebell	7	0	0	1	0		
		Ebell	Azurite	0	0	0	2	0		
		Azurite	Misty	0	0	0	2	0		
		Misty	Hayden	0	0	0	2	0		
	East	Hayden	Misty	1	0	0	2	0		
		Misty	Azurite	1	0	0	2	0		
		Azurite	Ebell	0	0	0	2	0		
		Ebell	End	7	0	0	1	0		
8th St.	West	Kern	California	12	0	0	2	0		
	East	California	Kern	12	0	0	2	0		
Melgar Ave.	West	Hayden	Kyra	0	0	0	2	0		
		Kyra	Beryl	0	0	0	2	0		
		Beryl	Topaz	0	0	0	2	0		
		topaz	Taylor	0	0	0	2	0		
	East	Taylor	Hayden	18	0	0	1	0		
Woodruff Ave.	West	Sherwood	Ebell	5	0	0	2	0		
	East	Ebell	Richards	1	1	150	1	0		
		Richards	Sherwood	1	1	115	1	1	Sign	
7th St.	West	Kern	California	12	0	0	2	0		
	East	California	Kern	0	0	0	1	0		

**Table 3-2**  
**Existing Pedestrian Facilities and Impediments (page 12 of 18)**

Street Name	Side of Street	Segment		# of Drive Approaches	# of Alley Approaches	Missing Sidewalk (ft)	# of Curb Ramps	# of Impediments	Sidewalk Impediment	Comment
		From	To							
<b>SOUTH-WEST SECTION (continued)</b>										
<b>NORTH-SOUTH (continued)</b>										
Moscato St.	West	Merlot	Taylor	7	0	0	1	0		
		Taylor	End	24	0	0	1	0		
		End	Flame	6	0	0	1	0		
	East	Flame	Tokay	0	0	0	2	0		
		Tokay	Thompson	0	0	0	2	0		
		Thompson	Taylor	0	0	0	2	0		
		Taylor	Merlot	7	0	0	1	0		
Currant Ct.	West	Merlot	End	2	0	0	1	0		
	East	End	Merlot	3	0	0	1	0		
Burgundy Ct.	West	Flame	End	6	0	0	1	0		
	East	End	Flame	7	0	0	1	0		
6th St.	West	Kern	California	8	0	0	1	0		
		California	Sherwood	2	0	60	1	0		
	East	Sherwood	California	0	0	10	1	0		
		California	Kern	11	0	250	1	0		
Concord Ct.	West	Merlot	End	5	0	0	1	0		
	East	End	Merlot	5	0	0	1	0		
Sherry Ct.	West	Flame	End	7	0	0	1	0		
	East	End	Flame	9	0	0	1	0		
5th St.	West	Kern	California	8	0	137	0	0		
		California	Sherwood	2	0	0	1	0		
		Sherwood	Richards	3	1	0	2	1	Sign	
		Richards	Ebell	1	1	0	1	1	Sign	
	East	Ebell	Richards	2	1	40	1	0		
		Richards	Sherwood	2	1	0	2	1	Sign	
		Sherwood	California	0	0	300	1	0		
		California	Harlow	0	1	180	0	0		
		Harlow	Kern	1	1	0	2	0		
Zinfandel St.	West	Merlot	Taylor	8	0	0	1	0		
	East	Taylor	Merlot	10	0	0	1	0		

**Table 3-2**  
**Existing Pedestrian Facilities and Impediments (page 13 of 18)**

Street Name	Side of Street	Segment		# of Drive Approaches	# of Alley Approaches	Missing Sidewalk (ft)	# of Curb Ramps	# of Impediments	Sidewalk Impediment	Comment
		From	To							
<b>SOUTH-WEST SECTION (continued)</b>										
<b>NORTH-SOUTH (continued)</b>										
Port Ct.	West	Flame	End	6	0	0	1	0		
	East	End	Flame	7	0	0	1	0		
4th Pl.	West	California	Sherwood	5	0	130	1	1	Sign	
	East	Sherwood	California	2	0	250	1	0		
4th St.	West	Kern	Harlow	1	1	0	1	0		Intersection under construction at time of visit
		Harlow	California	0	1	350	0	1	Sign	
	East	California	Harlow	0	1	350	0	1	Sign	
		Harlow	Kern	0	1	160	1	0		Intersection under construction at time of visit
Mast Ave.	West	Sherwood	Richards	2	0	0	0	0		
		Richards	Ebell	3	1	0	2	1	Sign	
		Ebell	Taylor	11	0	0	2	3	Sign, Mailbox	
		Taylor	Thompson	1	0	0	2	0		
		Thompson	Tokay	4	0	0	2	0		
	East	Tokay	Flame	4	0	0	2	0		
		Flame	End	7	0	End	1	1	Sign	
		End	Mission	0	0	End	1	0		
		Mission	Thompson	11	0	0	2	0		
		Thompson	Taylor	0	0	0	2	1	Sign	
3rd Pl.	West	California	Sherwood	5	0	100	0	1	Sign	
	East	Sherwood	California	5	0	200	0	1	Sign	
		Thompson	Cliff	2	0	0	2	1	Sign	
Butte St.	West	Thompson	Carmel	10	0	0	0	0		
	East	Carmel	Peerless	0	0	0	1	0		
		Peerless	Thompson	5	0	0	1	0		
3rd St.	West	Kern	Harlow	3	1	0	2	2	Multiple	
		Harlow	California	2	1	0	2	1	Power Pole	
		California	Sherwood	7	0	0	2	1	Sign	
	East	Sherwood	California	6	0	0	2	0		
		California	Harlow	4	1	0	2	2	Multiple	
		Harlow	Kern	1	1	0	2	0		

**Table 3-2**  
**Existing Pedestrian Facilities and Impediments (page 14 of 18)**

Street Name	Side of Street	Segment		# of Drive Approaches	# of Alley Approaches	Missing Sidewalk (ft)	# of Curb Ramps	# of Impediments	Sidewalk Impediment	Comment
		From	To							
<b>SOUTH-WEST SECTION (continued)</b>										
<b>NORTH-SOUTH (continued)</b>										
Fletcher St.	West	Taylor	Peerless	9	0	0	1	0		
	East	Peerless	Taylor	8	0	0	2	0		
Joan St.	West	Alley	Cliff	1	0	100	0	0		
	East	Cliff	Alley	1	0	100	0	0		
2nd St.	West	Kern	Harlow	0	1	0	2	1	Sign	
		Harlow	California	0	1	160	1	0		
	East	California	Sherwood	4	0	0	2	0	Power Pole	
		Sherwood	California	2	1	60	1	2	Power Pole	
Garden Prince Ct.	West	Taylor	Peerless	8	0	0	2	0		
	East	Peerless	Taylor	8	0	0	1	0		
Price Dr.	West	End	Peerless	8	0	0	1	0		
		Peerless	Carmel	0	0	0	1	0		
		Carmel	Mission	0	0	0	2	0		
	East	Mission	End	23	0	0	2	0		
1st St.	West	Kern	Harlow	0	1	350	1	2	Multiple	
		Harlow	California	4	1	0	1	1	Power Pole	
		California	Sherwood	0	1	0	2	2	Multiple	
	East	Sherwood	Overpass	0	0	0	1	0		
		Overpass	Sherwood	0	0	0	1	0		
		Sherwood	California	2	1	200	1	1	Power Pole	
Frontage Rd.	West	California	Harlow	0	1	180	0	0		
		Harlow	Kern	0	1	250	0	0		
		Kern	California	2	1	400	0	1	Sign	
	East	Sherwood	Cliff	2	0	100	0	0		
Frontage Rd.	West	Cliff	Taylor	1	1	All	1	0		No sidewalk in segment
		Taylor	End	0	0	All	0	0		No sidewalk in segment
	East	End	Kern	0	0	All	0	0		No sidewalk in segment

**Table 3-2**  
**Existing Pedestrian Facilities and Impediments (page 15 of 18)**

Street Name	Side of Street	Segment		# of Drive Approaches	# of Alley Approaches	Missing Sidewalk (ft)	# of Curb Ramps	# of Impediments	Sidewalk Impediment	Comment
		From	To							
<b>SOUTH-WEST SECTION (continued)</b>										
<b>EAST-WEST</b>										
W. Kern Ave.	South	Garzoli	11th	0	0	0	2	0		
		11th	10th	0	1	0	2	0		
		10th	8th	0	2	0	2	0		
		8th	7th	0	1	0	2	0		
		7th	6th	1	1	20	1	0		
		6th	5th	2		60	2	0		
		5th	4th	1	0	120	1	0		
		4th	3rd St.	0	0	0	2	0		
Harlow Ave.	South	3rd St.	2nd	0	0	0	2	0		
		2nd	1st	0	0	0	2	0		
		5th	4th	0	0	10	0	0	Fence, Pole	
		4th	3rd St.	0	0	10	1	1	Fence, Pole	
	North	2nd	1st	4	0	0	0	2	Fence, Pole	
		1st	2nd	3	0	250	0	1	Tree	
		2nd	3rd St.	1	0	100	1	0		
		3rd St.	4th	6	0	0	2	1	Sign	
California Ave.	South	4th	5th	6	0	40	1	0		
		End	6th	3	1	0	0	1	Sign	
		6th	5th	0	0	100	0	0		
		5th	4th Pl.	3	0	0	0	4	Multiple	
		4th Pl.	3rd Pl.	1	0	50	1	0		
		3rd Pl.	3rd St.	0	0	260	1	0		
		3rd St.	2nd	2	1	0	1	0		
		2nd	1st	4	0	0	2	1	Power Pole	
	North	1st	Frontage	0	0	130	0	0		
		Frontage	1st	0	0	110	0	0		
		1st	2nd	5	0	0	0	1	Sign	
		2nd	3rd St.	5	0	100	1	0		
		3rd St.	4th	5	0	100	1	0		
		4th	5th	3	0	150	1	0		
		5th	6th	1	0	0	0	0		
		6th	7th	0	1	150	0	0		
7th	8th	0	1	0	1	0				
8th	End	0	1	0	1	0				

**Table 3-2**  
**Existing Pedestrian Facilities and Impediments (page 16 of 18)**

Street Name	Side of Street	Segment		# of Drive Approaches	# of Alley Approaches	Missing Sidewalk (ft)	# of Curb Ramps	# of Impediments	Sidewalk Impediment	Comment
		From	To							
<b>SOUTH-WEST SECTION (continued)</b>										
<b>EAST-WEST (continued)</b>										
W. Sherwood Ave.	North	On Ramp	1st	1	0	0	1	1	Sign	
		1st	2nd	2	0	0	2	3	Multiple	
		2nd	3rd St.	5	1	0	2	2	Pole, Sign	
		3rd St.	3rd Pl.	2	0	0	2	1	Hydrant	
		3rd Pl.	4th	2	0	0	2	1	Power Pole	
		4th	5th	2	0	0	2	1	Power Pole	
		5th	6th	0	0	250	2	4	Multiple	
		6th	10th	4	2	780	2	3	Multiple	
	South	10th	11th	0	1	0	2	1	Sign	
		11th	Garzoli	2	0	10	1	0		
		Garzoli	Woodruff	14	0	250	1	2	Multiple	
		Woodruff	5th	11	0	100	2	1	Sign	
		5th	Mast	4	1	280	2	0		
	Mast	Frontage	0	0	0	3	1	Sign		
	Frontage	1st	2	0	0	1	0			
Richards Dr.	South	Woodruff	5th	8	0	200	1	1	Power Pole	
		5th	Mast	5	0	100	1	0		
	North	Mast	5th	3	1	300	0	1	Sign	
		5th	Woodruff	11	0	100	0	0		
Ebell St.	North	Mast	5th	3	0	0	1	0		
		5th	Woodruff	7	0	300	0	0		
		Woodruff	Cedar Grove	0	0	0	2	0		
	South	Cedar Grove	Cherrywood	6	0	0	1	0		
		Cherrywood	Cedar Grove	5	0	0	2	0		
		Cedar Grove	Mast	10	0	0	2	0		
Azurite Ave.	South	Cherrywood	Cedar Grove	5	0	0	2	0		
		Cedar Grove	End	9	0	0	1	0		
	North	End	Cedar Grove	8	0	0	1	0		
		Cedar Grove	Cherrywood	5	0	0	2	0		
Cliff Ave.	South	Mast	Joan	8	0	220	0	2	Multiple	
		Joan	Frontage	16	0	460	0	6	Multiple	
	North	Frontage	Mast	26	0	400	1	5	Multiple	

**Table 3-2**  
**Existing Pedestrian Facilities and Impediments (page 17 of 18)**

Street Name	Side of Street	Segment		# of Drive Approaches	# of Alley Approaches	Missing Sidewalk (ft)	# of Curb Ramps	# of Impediments	Sidewalk Impediment	Comment
		From	To							
<b>SOUTH-WEST SECTION (continued)</b>										
<b>EAST-WEST (continued)</b>										
Misty Ave.	South	Cherrywood	Cedar Grove	5	0	0	2	0		
		Cedar Grove	End	8	0	0	1	0		
	North	End	Cedar Grove	8	0	0	1	0		
Hayden Ave.	South	Cherrywood	Cedar Grove	13	0	0	2	0		
		End	Cedar Grove	7	0	0	1	0		
	North	Cedar Grove	Cherrywood	5	0	0	2	0		
Kyra Ave.	South	Garzoli	Yahut	0	0	0	2	1	Sign	
		Yahut	Melgar	20	0	0	2	0		
	North	Melgar	Cherrywood	13	0	0	2	0		
Beryl Ave.	South	Cherrywood	Garzoli	2	0	0	2	1	Sign	
		Yahut	Melgar	15	0	0	2	0		
	North	Melgar	Yahut	15	0	0	2	0		
Merlot St.	South	Moscato	Currant	0	0	0	1	0		
		Currant	Concord	0	0	0	2	0		
	North	Concord	Zinfandel	0	0	0	1	0		
Topaz Ave.	South	Zinfandel	Moscato	16	0	0	0	0		
		Yahut	Grajeda	3	0	0	1	0		
	North	Grajeda	Melgar	11	0	0	2	0		
Taylor Ave.	South	Melgar	Yahut	15	0	0	2	0		
		Garzoli	Moscato	1	0	1400	1	0		
		Moscato	Mast	0	0	0	2	0		
		Mast	Fletcher	0	0	0	2	0		
	North	Fletcher	Frontage	0	0	830	1	1	Sign	
		Frontage	Mast	4	0	420	1	0		
		Mast	Zinfandel	1	0	0	2	2	Pole, Sign	
		Zinfandel	Moscato	15	0	0	2	3	Multiple Sign	
Thompson St.	South	Moscato	Melgar	1	0	0	2	1		
		Melgar	Grajeda	11	0	0	2	0		
	North	Grajeda	Garzoli	5	0	0	2	0		
Thompson St.	South	Moscato	Mast	17	0	0	2	0		
		Mast	Butte	0	0	0	1	0		
	North	Butte	Mast	4	0	0	1	0		
		Mast	Moscato	18	0	0	2	0		

**Table 3-2**  
**Existing Pedestrian Facilities and Impediments (page 18 of 18)**

Street Name	Side of Street	Segment		# of Drive Approaches	# of Alley Approaches	Missing Sidewalk (ft)	# of Curb Ramps	# of Impediments	Sidewalk Impediment	Comment
		From	To							
<b>SOUTH-WEST SECTION (continued)</b>										
<b>EAST-WEST (continued)</b>										
Peerless St.	South	Butte	Price	15	0	0	2	0		
	North	Price	Garden Prince	0	0	0	2	0		
		Garden Prince	Fletcher	0	0	0	2	0		
		Fletcher	Butte	0	0	0	2	0		
Tokay St.	South	Moscato	Mast	17	0	0	2	0		
	North	Mast	Moscato	17	0	0	2	0		
Carmel St.	South	Butte	Price	16	0	0	1	0		
	North	Price	Butte	15	0	0	1	0		
Flame St.	South	Moscato	Burgundy	1	0	0	2	0		
		Burgundy	Sherry	0	0	0	2	0		
		Sherry	Port	0	0	0	2	0		
		Port	Mast	0	0	0	2	0		
	North	Mast	Moscato	17	0	0	2	0		
Mission St.	South	Mast	Price	22	0	0	1	0		
	North	Price	Mast	19	0	0	2	0		

**3.4.2 - BICYCLE**

Bicycle facilities provide for and promote bicycle travel and are classified into three categories: Class I (Bike Paths), Class II (Bike Lanes), and Class III (Bike Routes). McFarland’s existing bikeway system is comprised primarily of Class II bicycle lanes, as shown in Figure 3-8. Currently, there are approximately 1.7 miles of existing bikeways in the City of McFarland. A breakdown of existing bikeways in McFarland is shown in Table 3-3.

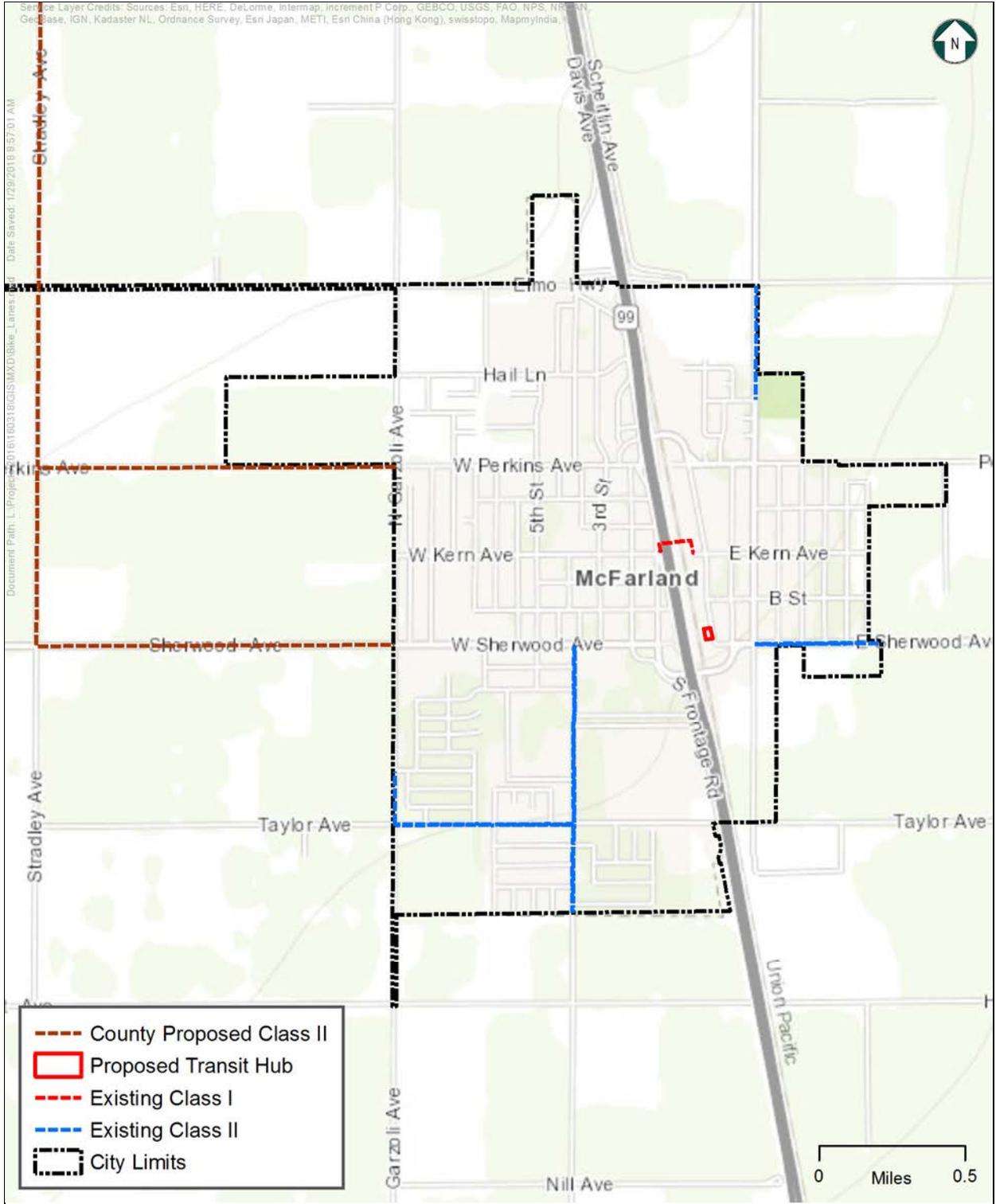
**Table 3-3  
Length and Classification of Existing Bikeways**

Street Name	Street Segment From	Street Segment To	Bikeway Class	Length (miles)
Pedestrian Bridge	N/A	N/A	I	N/A
Garzoli Avenue	Kyra Avenue	Taylor Avenue	II	0.1
Mast Avenue	Sherwood Avenue	City Limits	II	0.7
Taylor Avenue	Garzoli Avenue	Mast Avenue	II	0.5
Sherwood Avenue	Industrial Street	Wiley Street	II	0.4
<b>Total</b>				<b>1.7</b>

Class I bike paths are typically located on separated rights-of-way along walking paths or railroad corridors. They are designed for shared use by bicyclists and pedestrians, and as such, are generally 8-12 feet in width. The McFarland Bridge is a shared-use path that provides for bicycle and pedestrian crossing of SR-99. It is the only bicycle- and pedestrian-only crossing providing east-west connectivity.

Class II bike lanes in McFarland are generally five feet wide and, where located adjacent to a parking lane, are striped with a line on both sides. In some cases, the bike lane is marked by a single line with the curb or shoulder acting as the right boundary. The bike lane is designated by black and white bike lane signage at major intersections and bike lane pavement markings on each block. Existing Class II bike lane corridors are located on Garzoli Avenue, a north-south designated arterial located along the western edge of the City limits, Mast Avenue, a north-south major collector passing by a school and residential land uses, Taylor Avenue, an east-west major collector that connects Garzoli and Mast Avenues, and the eastern portion of Sherwood Avenue, an east-west designated arterial that runs from the western edge of the City limits to the eastern edge. The bike lanes on Taylor Avenue, Sherwood Avenue, and the north portion of the Mast Avenue corridor are recent projects that have been completed since adoption of the 2014 McFarland Bicycle Master Plan.

In addition to the City’s Class II bike lanes, Figure 3-8 shows the location of regional Class II bike lanes along Stradley Avenue, Sherwood Avenue, and Perkins Avenue as envisioned in the Kern County Bicycle Master Plan (as previously discussed in Section 2.5.3). These proposed bicycle facilities will provide improved conditions for bicycling within the unincorporated areas of the county, and provide bikeway connections between McFarland and the City of Delano to the north.



**Figure 3-8**  
**Existing and Previously Proposed (Regional) Bicycle Facilities**

The greatest impediment to bicycling observed was the lack of continuous/linked bikeways within the City. The absence of safe, defined bicycle routes between and within major activity centers is a deterrent to increased bicycle usage. Gaps in the pedestrian system, as identified in the previous section, further complicate safety issues by forcing pedestrians and bicyclists onto unpaved and/or uneven surfaces in competition with one another. To fill connection gaps and link existing bicycle facilities, street widths were measured for their suitability for future installation of bicycle routes.

Table 3-4 lists each of the City's bikeway road segments with existing or previously planned bikeways and then describes their characteristics. This table corresponds with Figure 3-8 which shows Existing Bicycle Facilities, and Figure 2-6 which shows the Recommended Bikeway Network per the McFarland Bicycle Master Plan, with the exception of a segment of Sherwood Avenue, between 1<sup>st</sup> Street and 5<sup>th</sup> Street, that was downgraded to a Class III Bike Route in order to preserve parking in front of the high school.

The following are descriptions of the columns in Table 3-4, Existing Bicycle Facilities:

**Street Name** – Identifies the street segment's name. North-south streets are listed first in order from west to east. Then east-west streets are listed in order from north to south.

**Segment From-To** – Identifies the extent of the street segment.

**General Plan Street Classification** – Identifies the street classification given by the 2035 General Plan Circulation Element. Classifications (from highest level to lowest) are arterial, major collector, collector, and local.

**Existing Motor Vehicle Travel** – Shows the number of lanes (#) and the width of the outside travel lane.

**Existing Bikeway and Parking** – Identifies street segments with existing bikeways and the type of bikeway (Class I or II). Lane width identifies the width of the bike lane. Parking width identifies the width of the designated parking lane, if striped.

**2014 Bicycle Master Plan** – Identifies street segments with bikeways proposed in the 2014 McFarland Bicycle Master Plan (Class II or III). Classes shown in bold identify that the class has changed from the previous recommendation. Lane width identifies the width of the bike lane. Parking width identifies the width of the designated parking lane.

**Table 3-4  
Existing Bicycle Facilities (page 1 of 5)**

Street Name	Segment		General Plan Street Classification	Existing Motor Vehicle Travel		Existing			2014 Bicycle Master Plan			Comment
	From	To		#	Width (ft) (outside lane)	Bikeway		Parking	Bikeway		Parking	
						Class	Lane Width (ft)	Width (ft)	Class	Lane Width (ft)	Width (ft)	
<b>NORTH-EAST SECTION</b>												
<b>NORTH-SOUTH</b>												
Browning Rd.	End Glenwood	Glenwood Maria Ct.	Major Collector	2	12	II	8	-	-	-	-	Bike lane from end of campus to Glenwood
	Glenwood Maria Ct.	Maria Ct. Isabel Ct.	Major Collector	2	20	-	-	-	II	8	-	School Zone
	Maria Ct. Isabel Ct.	Isabel Ct. Perkins	Major Collector	2	20	-	-	-	II	8	-	School Zone
	Isabel Ct. Perkins	Perkins A St.	Major Collector	2	20	-	-	-	II	8	-	School Zone
	Perkins A St.	A St. Kern	Major Collector	2	20	-	-	-	II	8	-	
<b>EAST-WEST</b>												
E. Perkins Ave.	99 FWY	Industrial	Major Collector	2	20	-	-	-	II	8	-	
	Industrial	San Juan	Major Collector	2	20	-	-	-	II	8	-	
	San Juan	Browning	Major Collector	2	20	-	-	-	II	8	-	School Zone
	Browning	San Lucas	Major Collector	2	12	-	-	8	II	8	-	School Zone
	San Lucas	San Pedro	Major Collector	2	12	-	-	8	II	8	-	School Zone
	San Pedro	Alley	Major Collector	2	12	-	-	8	II	8	-	South lane 20' wide, no parking, School Zone
	Alley	Mt. Arbor	Major Collector	2	24	-	-	8	II	8	-	North lane 12' wide, parking both sides, School Zone
Mt. Arbor	Bowman	Major Collector	2	18	-	-	16	II	8	-	North lane 12' wide, unfinished	
McFarland Bridge	W. Kern	E. Kern	Pedestrian/Bike	-	-	I	10	-	-	-	-	CA-99 Pedestrian Bridge
<b>NORTH-WEST SECTION</b>												
<b>NORTH-SOUTH</b>												
Garzoli Ave.	Taylor	Kyra	Arterial	2	25	II	6	-	-	-	-	West travel lane 15' wide
	Kyra	Sherwood	Arterial	2	13	-	-	-	II	8	-	
	Sherwood	W. Kern	Arterial	2	13	-	-	-	II	8	-	
	W. Kern	W. Perkins	Arterial	2	13	-	-	-	II	8	-	
	W. Perkins	Hail	Arterial	2	13	-	-	-	II	8	-	
Hail	Elmo HWY	Arterial	2	13	-	-	-	II	8	-		
Kendra St.	Elmo HWY	Hail	-	-	-	-	-	-	II	8	-	Street not constructed
5th St.	Hail	Kimo	Local	2	20	-	-	-	III	-	-	
	Kimo	Perkins	Local	2	14	-	-	-	III	-	-	
	Perkins	Robertson	Major Collector	2	20	-	-	-	III	-	-	
	Robertson	Kern	Major Collector	2	20	-	-	-	III	-	-	School Zone

**Table 3-4  
Existing Bicycle Facilities (page 2 of 5)**

Street Name	Segment		General Plan Street Classification	Existing Motor Vehicle Travel		Existing			2014 Bicycle Master Plan			Comment
	From	To		#	Width (ft) (outside lane)	Bikeway		Parking	Bikeway		Parking	
						Class	Lane Width (ft)	Width (ft)	Class	Lane Width (ft)	Width (ft)	
<b>NORTH-WEST SECTION (continued)</b>												
<b>NORTH-SOUTH (continued)</b>												
Davis Ave.	Elmo HWY	Kala Loop	Collector	2	28	-	-	-	II	6	8	
	Kala Loop	Hail	Collector	2	28	-	-	-	II	6	8	
	Hail	Perkins	Collector	2	28	-	-	-	II	6	8	
3rd St.	Frontage	Hail	Collector	2	20	-	-	-	-	-	-	
	Hail	Perkins	Collector	2	18	-	-	-	-	-	-	
	Perkins	Robertson	Local	2	20	-	-	-	III	-	-	
	Robertson	Lockwood	Local	2	20	-	-	-	III	-	-	
	Lockwood	Kern	Local	2	19	-	-	-	III	-	-	
<b>EAST-WEST</b>												
Hail Ln.	Garzoli	Acapulco	Local	2	20	-	-	-	II	8	-	
	Acapulco	Rio Santana	Local	2	20	-	-	-	II	8	-	
	Rio Santana	5th	Local	2	20	-	-	-	II	8	-	
	5th	Davis	Local	2	18	-	-	-	II	8	-	
	Davis	3rd	Local	2	18	-	-	-	II	8	-	
	3rd	Frontage	Local	2	18	-	-	-	II	8	-	
W. Perkins Ave.	Garzoli	10th	Major Collector	2	30	-	-	-	II	8	-	North side of street under construction
	10th	9th	Major Collector	2	30	-	-	-	II	8	-	North side of street under construction
	9th	8th	Major Collector	2	30	-	-	-	II	8	-	North side of street under construction
	8th	7th	Major Collector	2	30	-	-	-	II	8	-	North side of street under construction
	7th	5th	Major Collector	2	30	-	-	-	II	8	-	North lane 36' wide
	5th	4th	Major Collector	2	22	-	-	-	II	8	-	North lane 16' wide, no curb (unfinished)
	4th	3rd Pl.	Major Collector	2	23	-	-	9	II	8	-	North lane 15' with 9' parking
	3rd Pl.	3rd St.	Major Collector	2	26	-	-	-	II	8	-	North lane 30' wide
3rd St.	2nd	Major Collector	2	21	-	-	-	II	8	-	12' turn pocket	
	2nd	Frontage	Major Collector	2	22	-	-	-	II	8	-	32' on far north lane

**Table 3-4  
Existing Bicycle Facilities (page 3 of 5)**

Street Name	Segment		General Plan Street Classification	Existing Motor Vehicle Travel		Existing			2014 Bicycle Master Plan			Comment
	From	To		#	Width (ft) (outside lane)	Bikeway		Parking	Bikeway		Parking	
						Class	Lane Width (ft)	Width (ft)	Class	Lane Width (ft)	Width (ft)	
<b>SOUTH-EAST SECTION</b>												
<b>NORTH-SOUTH</b>												
Browning Rd.	Kern	B St.	Major Collector	2	20	-	-	-	II	8	-	
	B St.	Sherwood	Major Collector	2	20	-	-	-	II	8	-	
<b>EAST-WEST</b>												
E. Kern Ave.	End	Industrial	Collector	2	22	-	-	-	III	-	-	
	Industrial	San Juan	Collector	2	20	-	-	-	III	-	-	
	San Juan	Browning	Collector	2	20	-	-	-	III	-	-	
	Browning	San Lucas	Collector	2	20	-	-	-	III	-	-	
	San Lucas	San Pedro	Collector	2	20	-	-	-	III	-	-	
	San Pedro	Mt. Arbor	Collector	2	20	-	-	-	III	-	-	
	Mt. Arbor	Marshall	Collector	2	20	-	-	-	III	-	-	
E. Sherwood Ave.	Marshall	Wiley	Collector	2	20	-	-	-	III	-	-	
	Industrial	San Juan	Arterial	2	20	-	-	-	-	-	-	
	San Juan	Browning	Arterial	2	20	-	-	-	-	-	-	
	Browning	San Lucas	Arterial	2	18	II	6	9	-	-	-	10' median (turn lane), bike lane and parking on south side only
	San Lucas	San Pedro	Arterial	2	18	II	6	9	-	-	-	10' median (turn lane), bike lane and parking on south side only
	San Pedro	Mt. Arbor	Arterial	2	18	II	6	9	-	-	-	10' median (turn lane), bike lane and parking on north and south, westbound lane 28' wide
	Mt. Arbor	Marshall	Arterial	2	18	II	6	9	-	-	-	10' median (turn lane), bike lane and parking on north and south, westbound lane 28' wide
Marshall	Wiley	Arterial	2	18	II	6	9	-	-	-	10' median (turn lane), bike lane and parking on north and south, westbound lane 28' wide	
<b>SOUTH-WEST SECTION</b>												
<b>NORTH-SOUTH</b>												
Garzoli Ave.	W. Kern	Perkins	Arterial	2	13	-	-	-	II	8	-	
	Perkins	Loreto	Arterial	2	13	-	-	-	II	8	-	
	Loreto	Hail	Arterial	2	13	-	-	-	II	8	-	
	Hail	Elmo HWY	Arterial	2	13	-	-	-	II	8	-	
5th St.	Kern	California	Major Collector	2	20	-	-	-	III	-	-	
	California	Sherwood	Major Collector	2	18	-	-	-	III	-	-	
	Sherwood	Richards	Local	2	20	-	-	-	III	-	-	
	Richards	Ebell	Local	2	21	-	-	-	III	-	-	

**Table 3-4  
Existing Bicycle Facilities (page 4 of 5)**

Street Name	Segment		General Plan Street Classification	Existing Motor Vehicle Travel		Existing			2014 Bicycle Master Plan			Comment
	From	To		#	Width (ft) (outside lane)	Bikeway		Parking	Bikeway		Parking	
						Class	Lane Width (ft)	Width (ft)	Class	Lane Width (ft)	Width (ft)	
<b>SOUTH-WEST SECTION (continued)</b>												
<b>NORTH-SOUTH (continued)</b>												
Mast Ave.	Sherwood	Richards	Major Collector	2	18	II	8	-	-	-	-	
	Richards	Ebell	Major Collector	2	18	II	8	-	-	-	-	
	Ebell	Taylor	Major Collector	2	18	II	8	-	-	-	-	
	Taylor	Thompson	Major Collector	2	12	II	11	-	-	-	-	
	Thompson	Tokay	Major Collector	2	12	II	11	-	-	-	-	
	Tokay	Flame	Major Collector	2	12	II	11	-	-	-	-	
Frontage Rd.	Flame	End	Major Collector	2	12	II	11	-	-	-	-	
	Kern	Harlow	Local	2	20	-	-	-	-	-	-	
	Harlow	California	Local	2	20	-	-	-	-	-	-	
	Sherwood	Cliff	Local	2	20	-	-	-	II	8	-	
	Cliff	Taylor	Local	2	20	-	-	-	II	8	-	
Taylor	End	Local	2	18	-	-	-	-	-	-		
<b>EAST-WEST</b>												
W. Kern Ave.	Garzoli	9th	Collector	2	20	-	-	-	II	8	-	North lane 18' wide
	9th	8th	Collector	2	38	-	-	-	II	8	-	
	8th	7th	Collector	2	38	-	-	-	II	8	-	
	7th	6th	Collector	2	38	-	-	-	II	8	-	
	6th	5th	Collector	2	16	-	-	17	II	8	-	North lane 34' wide, no parking
	5th	4th	Collector	2	15	-	-	20	-	-	-	Parking north and south
	4th	3rd St.	Collector	2	15	-	-	20	-	-	-	
	3rd St.	2nd	Collector	2	34	-	-	-	-	-	-	20' parking, not marked on full section
2nd	1st	Collector	2	15	-	-	20	-	-	-	Parking north and south	

**Table 3-4  
Existing Bicycle Facilities (page 5 of 5)**

Street Name	Segment		General Plan Street Classification	Existing Motor Vehicle Travel		Existing			2014 Bicycle Master Plan			Comment
	From	To		#	Width (ft) (outside lane)	Bikeway		Parking	Bikeway		Parking	
						Class	Lane Width (ft)	Width (ft)	Class	Lane Width (ft)	Width (ft)	
<b>SOUTH-WEST SECTION (continued)</b>												
<b>EAST-WEST (continued)</b>												
W. Sherwood Ave.	On Ramp	1st	Local	2	25	-	-	-	III	-	-	
	1st	2nd	Local	2	25	-	-	-	III	-	-	South lane 22' wide
	2nd	3rd St.	Local	2	13	-	-	9	III	-	-	Parking on north and south
	3rd St.	3rd Pl.	Local	2	13	-	-	9	III	-	-	Parking on north side only, south lane 26'
	3rd Pl.	5th	Local	2	21	-	-	-	III	-	-	
	5th	6th	Local	2	21	-	-	-	II	8	-	
	6th	10th	Local	2	21	-	-	-	II	8	-	
	10th	11th	Local	2	21	-	-	-	II	8	-	
Taylor Ave.	11th	Garzoli	Local	2	21	-	-	-	II	8	-	
	Frontage	Mast	Major Collector	2	34	-	-	-	II	6	8	North lane 20', southeast section unfinished
	Mast	Zinfandel	Major Collector	2	19	II	6	-	-	-	-	
	Zinfandel	Moscato	Major Collector	2	13	II	12	-	-	-	-	Parking and bike lane combined
	Moscato	Melgar	Major Collector	2	13	II	12	-	-	-	-	Parking and bike lane combined
	Melgar	Grajeda	Major Collector	2	14	II	6	8	-	-	-	
Grajeda	Garzoli	Major Collector	2	14	II	6	8	-	-	-		

Note: Street Classifications are from the City of McFarland 2035 Circulation Element

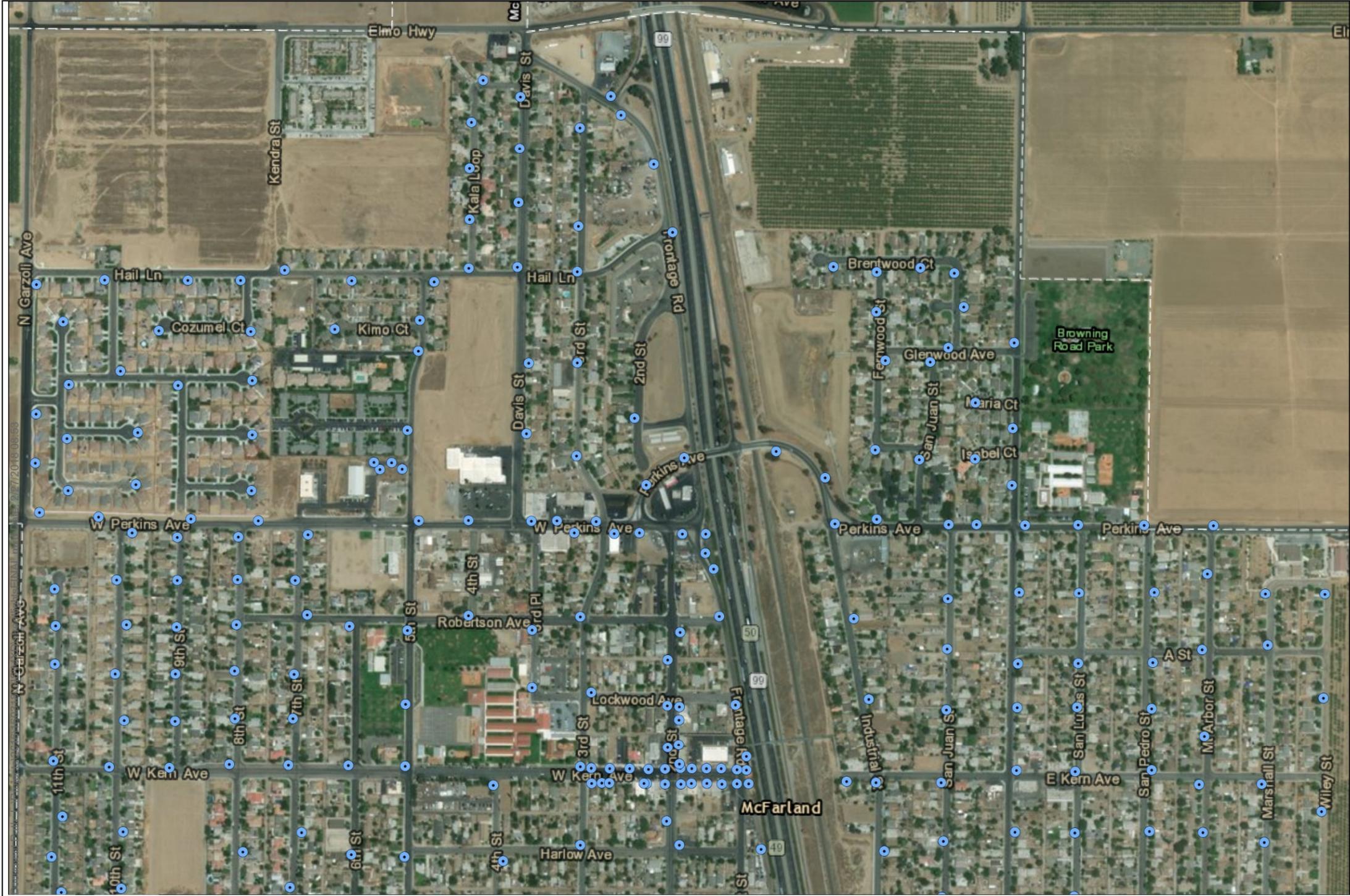
### **3.4.3 - LIGHTING**

Lighting enhances the walkability and bikeability of a city, and contributes to its overall livability. The presence of lighting promotes the use of pedestrian and bicycle facilities after dark by addressing personal safety, as well as increasing the overall perception of safety. Lighting also alerts motorists to the presence of pedestrians and/or bicyclists in an area, and reduces headlight glare.

Street lighting includes standard road lights (streetlights) and pedestrian-scale lights. Pedestrian-scale lights differ from standard lights in that they are generally closer to the ground (typically 15 feet high), closely spaced to avoid areas of alternating light and dark (about 60 feet apart), and provide a mild, white lighting (typically LED lamps) that shields pedestrians from glare. Both street and pedestrian lighting should be considered for pedestrian and/or bicycle corridors, and should be installed on both sides of the street in downtown and commercial areas.

The City of McFarland Municipal Code *Title 16: Subdivisions (16.28.140)* states that “Ornamental street lights shall be installed by the subdivider, at locations approved by the city engineer, at each four-way intersection, at each three-way intersection, at each two-way intersection, at the end of each cul-de-sac and at such other locations as necessary to provide that no point along any street within the subdivision shall be more than two hundred fifty feet from a street light.” The City currently does not have a standard for street light spacing, but is adopting Kern County’s Improvement Standard for street lights which states that in residential areas “street lights shall be located at intersections, at midblock with blocks greater than 600 feet between intersections, at ends of cul-de-sacs greater than 150 feet in length”, and in commercial and industrial areas “at intersections and ends of cul-de-sacs greater than 150 feet in length” (County of Kern 2010).

The lighting in McFarland is comprised primarily of standard street lights, and is insufficient to illuminate the nighttime activities of pedestrians and bicyclists. Field observations indicate that the City is generally dark at night with the exception of new developments. A street light inventory was compiled from a review of current digital imagery of the City. Figures 3-9 and 3-10 show the location of existing street lights throughout the study area.



**Streetlights**  
 ● Existing

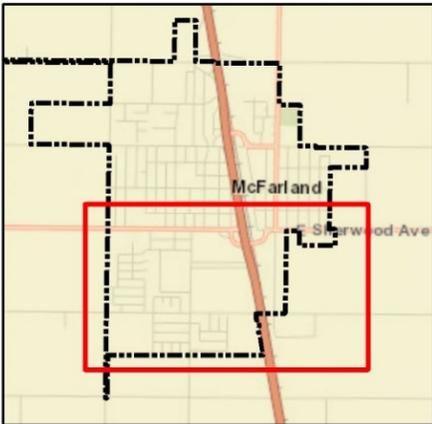


0 Feet 600

ESRI Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT QK Sources:



**Figure 3-9**  
**Existing Street Light Facilities**  
**North Section**



**Streetlights**  
 ● Existing



0 Feet 700

ESRI Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT



**Figure 3-10**  
**Existing Street Light Facilities**  
**South Section**

### **3.5 - Collision Risk**

Collision data was analyzed to identify conflict points and patterns in the occurrence of pedestrian and bicycle-involved collisions which might highlight specific improvements needed in the City of McFarland. This analysis primarily focused on collision location, primary cause, and party at fault. Analysis results will be used to determine not only the need for physical improvements, such as sidewalks, marked crosswalks, bicycle lanes, and streetlights to increase pedestrian and bicycle safety, but also to identify the areas of most concern for education, enforcement, and safety programs.

Pedestrian and bicycle-related collision data was obtained from the Statewide Integrated Traffic Records System (SWITRS) for a five-year period from January 2012 through December 2016. This data represents all reported pedestrian and bicycle-involved collisions occurring in McFarland. Collisions that occur on off-street paths are not included in the data. A summary of total reported pedestrian and bicycle collisions by year and severity are shown in Table 3-5.

**Table 3-5  
Pedestrian and Bicycle-Involved Collision Summary**

<b>Year</b>	<b>Pedestrian Collisions</b>	<b>Bicycle Collisions</b>	<b>Injury</b>	<b>Fatality</b>
2012	3	0	3	0
2013	5	3	8	0
2014	3	0	2	1
2015	1	1	2	0
2016	0	0	0	0
<b>Total</b>	<b>12</b>	<b>4</b>	<b>15</b>	<b>1</b>

Source: California Highway Patrol SWITRS data 2012-2016

Between January 2012 and December 2016, there were 16 total pedestrian and bicycle collisions reported in McFarland; 12 pedestrian-involved collisions and 4 bicycle-involved collisions. One of the pedestrian-involved collisions was fatal, and 3 other collisions resulted in severe injuries (2 pedestrian-involved and 1 bicycle-involved). It should be noted that the bicycle-related collisions reported in 2013, were the first bicycle incidents reported since 2003 (City of McFarland 2014).

The variation of pedestrian and bicycle-related collisions by time of day, day of the week, and season of the year indicate that collisions are likely the result of higher volumes of pedestrian, bicycle, and motor vehicle traffic, as well as lighting/sight factors. Weekdays account for 75% of pedestrian-involved collisions, and 100% of bicycle-involved collisions. The majority of both pedestrian and bicycle collisions (68.8%) occurred in the dark hours before dawn (6:00 AM), or after dusk (5:00 PM), with 58.3% of pedestrian-involved collisions, and 50.0% of bicycle-involved collisions occurring between the dusk hours of 5:00 PM and 8:00 PM. A review of seasonal variations indicates that the incidences of pedestrian-

involved collisions are highest in January and September, while bicycle-involved collisions tend to peak in the summer months of June, July and August.

**3.5.1 - LOCATION**

Tables 3-6 and 3-7 identify the roadways and intersections where pedestrian and bicycle-involved collisions occurred. Intersections typically pose the highest safety hazard for all traffic and the greatest challenge to traffic engineers, but only 6, or 37.5%, of the 16 pedestrian and bicycle-involved collisions reported between 2012 and 2016, occurred at or within 100 feet of an intersection.

**Table 3-6  
Location of Pedestrian and Bicycle-Involved Collisions**

Roadway	Number of Pedestrian Collisions	Number of Bicycle Collisions
5th Street	1	0
10th Street	2	0
11th Street	1	0
Browning Road	0	1
California Avenue	0	1
Frontage Road	1	0
Kern Avenue	1	0
Perkins Avenue	2	0
San Juan Street	0	1
San Lucas Street	1	0
San Pedro Street	2	0
Sherwood Avenue	1	1
<b>Total</b>	<b>12</b>	<b>4</b>

Source: California Highway Patrol SWITRS data 2012-2016

Pedestrian and bicycle-involved collisions occurred most often on the west side of the City, in the developed area bound by Perkins Avenue on the north, Garzoli Avenue on the west, Sherwood Avenue on the south, and Frontage Road on the east. Roughly 69% of collisions occurred in this area; 75% of pedestrian-involved collisions, and 50% of bicycle-involved collisions.

**Table 3-7  
Intersections with Pedestrian and Bicycle-Involved Collisions**

Intersection	Pedestrian Collisions within 100' of Intersection	Bicycle Collisions within 100' of Intersection
5th Street at Robertson Avenue	1	0
Browning Road at Glenwood Street	0	1
Kern Avenue at 6 <sup>th</sup> Street	1	0
Perkins Avenue at 2 <sup>nd</sup> Street	1	0
Perkins Avenue at 3 <sup>rd</sup> Place	1	0
Sherwood Avenue at 4 <sup>th</sup> Place	1	0
<b>Total</b>	<b>5</b>	<b>1</b>

Source: California Highway Patrol SWITRS data 2012-2016

### **3.5.2 - PRIMARY CAUSE**

All reported collisions involved either a vehicle and a pedestrian, or a vehicle and a bicycle, and the primary collision factor for all 16 reported collisions was stated as a vehicle code violation. Table 3-8 summarizes the primary cause (violation category) of the collision as stated in the SWITRS reports.

**Table 3-8  
Collisions by Primary Cause**

Primary Cause of Collision	Number of Pedestrian Collisions	Number of Bicycle Collisions	Percentage of Total
Pedestrian Violation	5	0	31.25%
Wrong Side of Road	1	3	25.00%
Unsafe Starting or Backing	2	0	12.50%
Unsafe Speed	1	0	6.25%
Improper Turning	1	0	6.25%
Pedestrian Right of Way	1	0	6.25%
Unknown	0	1	6.25%
Not Stated	1	0	6.25%
<b>Total</b>	<b>12</b>	<b>4</b>	<b>100%</b>

Source: California Highway Patrol SWITRS data 2012-2016

Of the 12 reported pedestrian collisions, 8 occurred when pedestrians were crossing the roadway outside of marked crosswalks, and 2, including the fatality, occurred when pedestrians were walking in the roadway or on the shoulder.

Of the 4 reported bicycle collisions, a bicyclist riding on the wrong side of the road was determined to be the primary cause in all but one incident. Crash type was identified as “sideswipe” (3) and “broadside” in the SWITRS reports. Broadside accidents usually occur

at intersections and are primarily the result of improperly executed right and left turn movements. This type of collision is greatly exacerbated by the tendency of “wrong way” bicycling.

Vehicle and pedestrian or bicycle interactions can be exacerbated by improper lighting. As stated previously, drivers can have difficulty seeing a pedestrian or bicyclist at night under low light or dark conditions. Vehicle-pedestrian and vehicle-bicycle collisions can often be attributed to improper assessment on the part of a driver as to the speed at which a bicyclist is traveling, and/or a lack of awareness or disregard for the pedestrian or bicyclists right to be on the roadway. Three (3) of the reported collisions (2 pedestrian and 1 bicycle) occurred at night in “dark” areas with “no streetlights”. Collision locations with inadequate lighting were reported as:

- Perkins Avenue and 2<sup>nd</sup> Street;
- Sherwood Avenue and 1<sup>st</sup> Street; and
- Sherwood Avenue and 4<sup>th</sup> Place.

## **SECTION 4 - PROPOSED AND RECOMMENDED FACILITIES AND IMPROVEMENTS**

### **4.1 - Overview**

This section, identifies strategies to develop and enhance the existing bicycle and pedestrian infrastructure with a focus on access, connectivity, and safety. This section includes the identification of proposed pedestrian, bicycle, and lighting facilities and improvements, followed by a prioritized listing of recommended projects, which can be used for identifying and selecting bicycle/pedestrian projects for the Regional Transportation Plan (RTP) and the Active Transportation Program (ATP). This section also provides cost estimates for each recommended project, and potential funding sources.

Proposed improvements are presented in geographic subsections (either North-East, North-West, South-East, and South-West, or North and South) within the following tables and figures. The following are descriptions of these sections:

**North-East Section** – Generally includes the area bound by Frontage Road on the west, city limits on the east, city limits on the north, and Kern Avenue on the south.

**North-West Section** – Generally includes the area bound by city limits on the west, SR-99 on the east, city limits on the north, and Kern Avenue on the south.

**South-East Section** – Generally includes the area bound by Frontage Road on the west, city limits on the east (Wiley), Kern Avenue on the north, and city limits on the south.

**South-West Section** – Generally includes the area bound by Frontage Road on the west, SR-99 on the east, Kern Avenue on the north, and city limits (Sherwood) on the south.

**North Section** – Generally includes the study area north of Kern Avenue.

**South Section** – Generally includes the study area south of Kern Avenue.

### **4.2 - Proposed Facilities and Improvements**

#### **4.2.1 - PEDESTRIAN**

Safe and accessible sidewalk connections are the backbone of creating a pedestrian-friendly city. The following pedestrian facility improvements have been identified to encourage walking; improve the health of McFarland’s citizens; connect residents to places where they can work, shop, play, and go to school; and, explore the City where they live. For the purposes of this study, pedestrian facilities were limited to sidewalks and curb ramps, so proposed improvements focus on sidewalk installation, upgrading or installing ADA-compliant curb ramps, and removal/relocation of pedestrian impediments. Figures 4-1 through 4-4 show the location of proposed sidewalks and curb ramps throughout the study area.

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## **Proposed and Recommended Facilities and Improvements**

While this study does recommend pedestrian improvements aimed at increasing accessibility for people with disabilities, it should not be considered a substitute for an ADA Transition Plan, which identifies all barriers in the public right-of-way that prevent persons with disabilities from access. These barriers include curbs, sidewalks, pedestrian crossings, pedestrian signals, shared use trails, parking lots, and bus stops (Federal Highway Administration n.d.). ADA Transition Plans are required by the Rehabilitation Act of 1973 and the ADA. The City of McFarland will need to prepare an ADA Transition Plan that identifies barriers within the City and provides a specific/scheduled plan to increase accessibility.

Table 4-1 lists each of the City's road segments and describes the proposed pedestrian facility improvements. This table corresponds with Table 3-2 which shows Existing Pedestrian Facilities and Impediments. Proposed pedestrian improvements were prioritized based on access to right-of-way. High priority improvements were deemed to be those that would occur within City-owned right-of-way. Low priority was given to improvements that would occur on undeveloped land. It is assumed that these projects will be installed by a developer(s) at a later date.

The following are descriptions of the columns in Table 4-1, Proposed Pedestrian Facilities and Improvements:

**Street Name** – Identifies the street segment's name. North-south streets are listed first in order from west to east. Then east-west streets are listed in order from north to south.

**Side of Street** – Identifies the side of the street segment examined.

**Segment From-To** – Identifies the extent of the street segment.

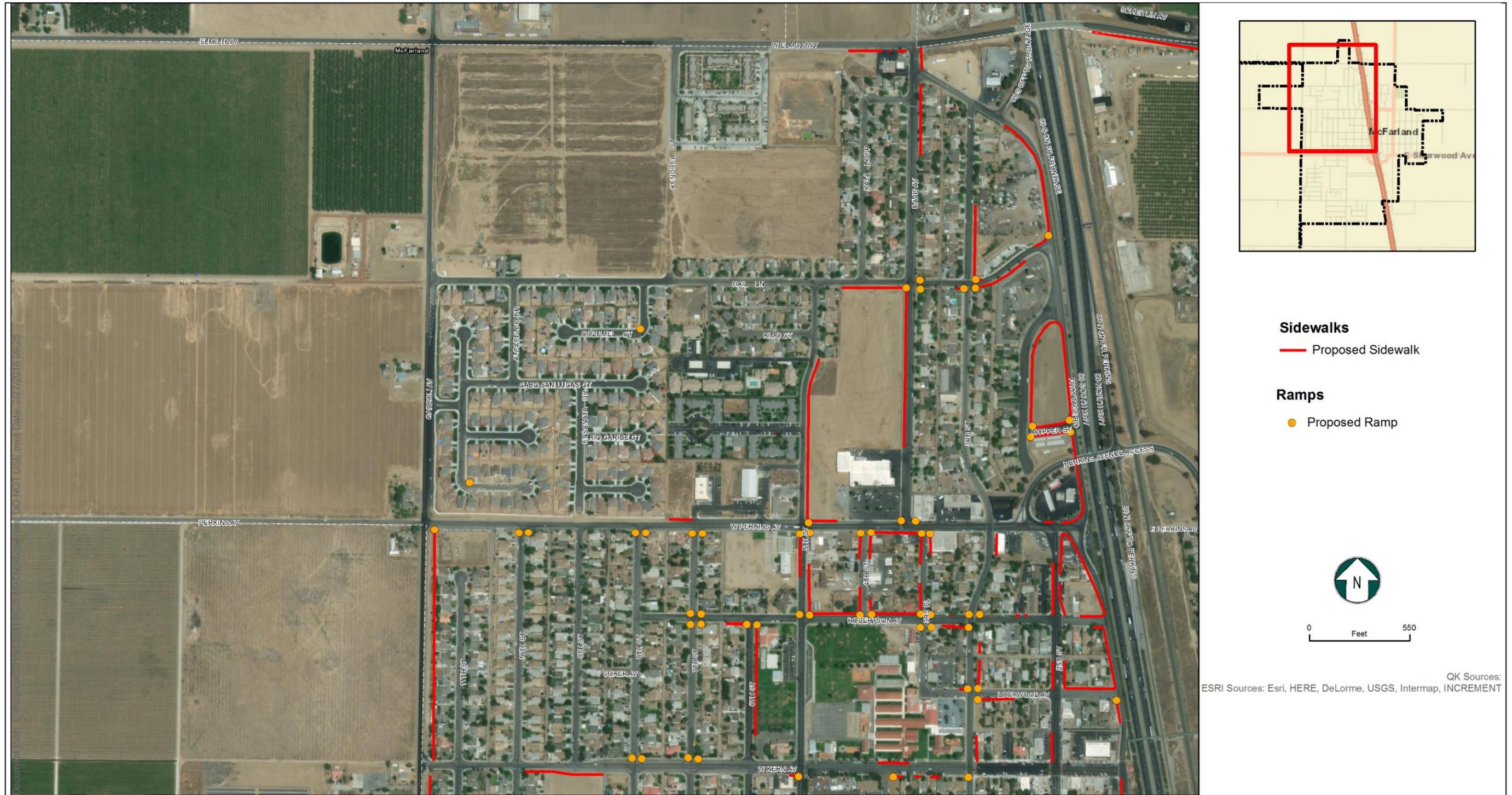
**Priority** – Assigns an improvement priority based on access to right-of-way: (1) = high priority; (2) = low priority

**Improvements** – Lists the proposed improvements.



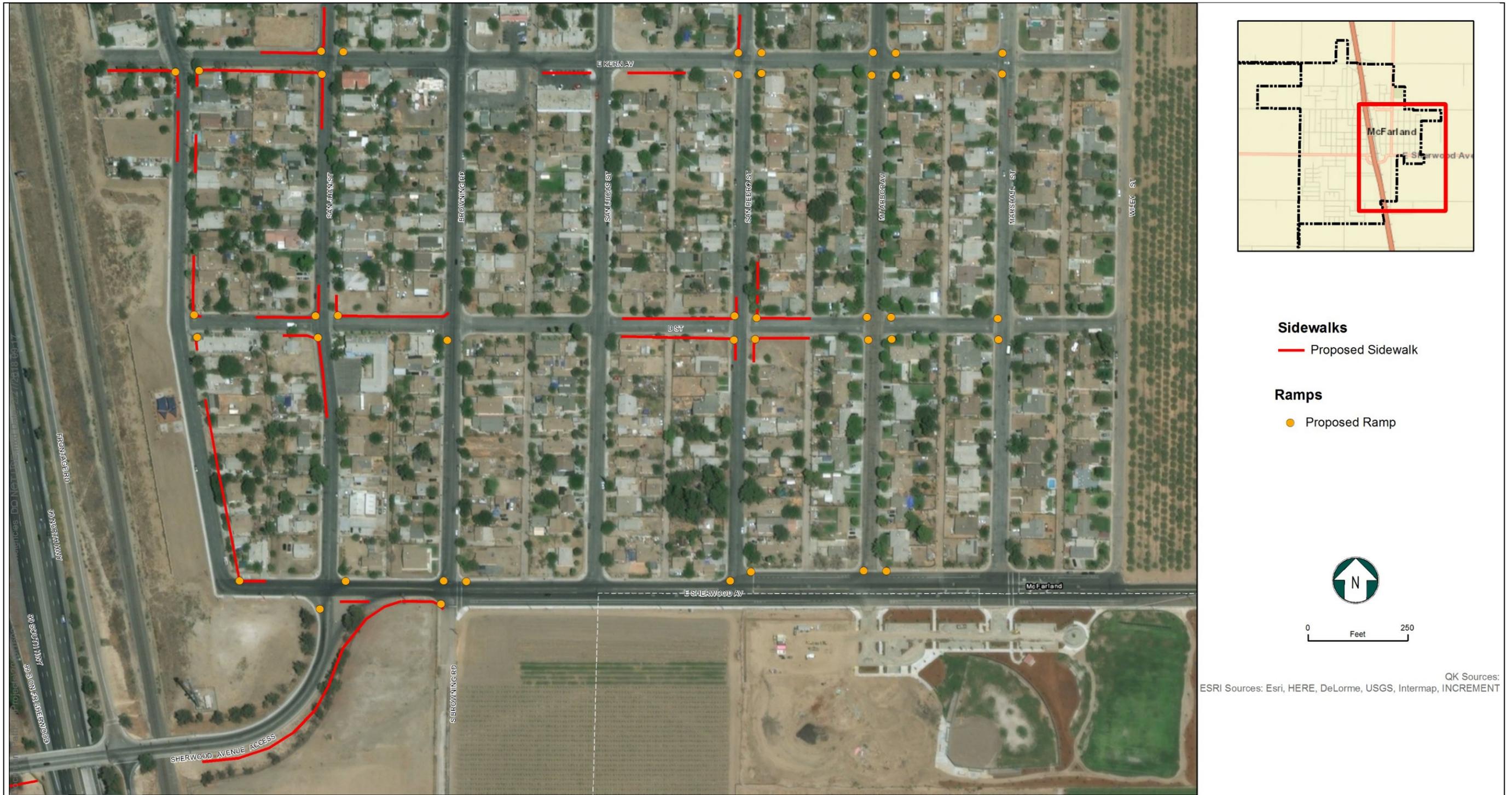
**Figure 4-1**  
**Proposed Pedestrian Facilities and Improvements**  
**North-East Section**





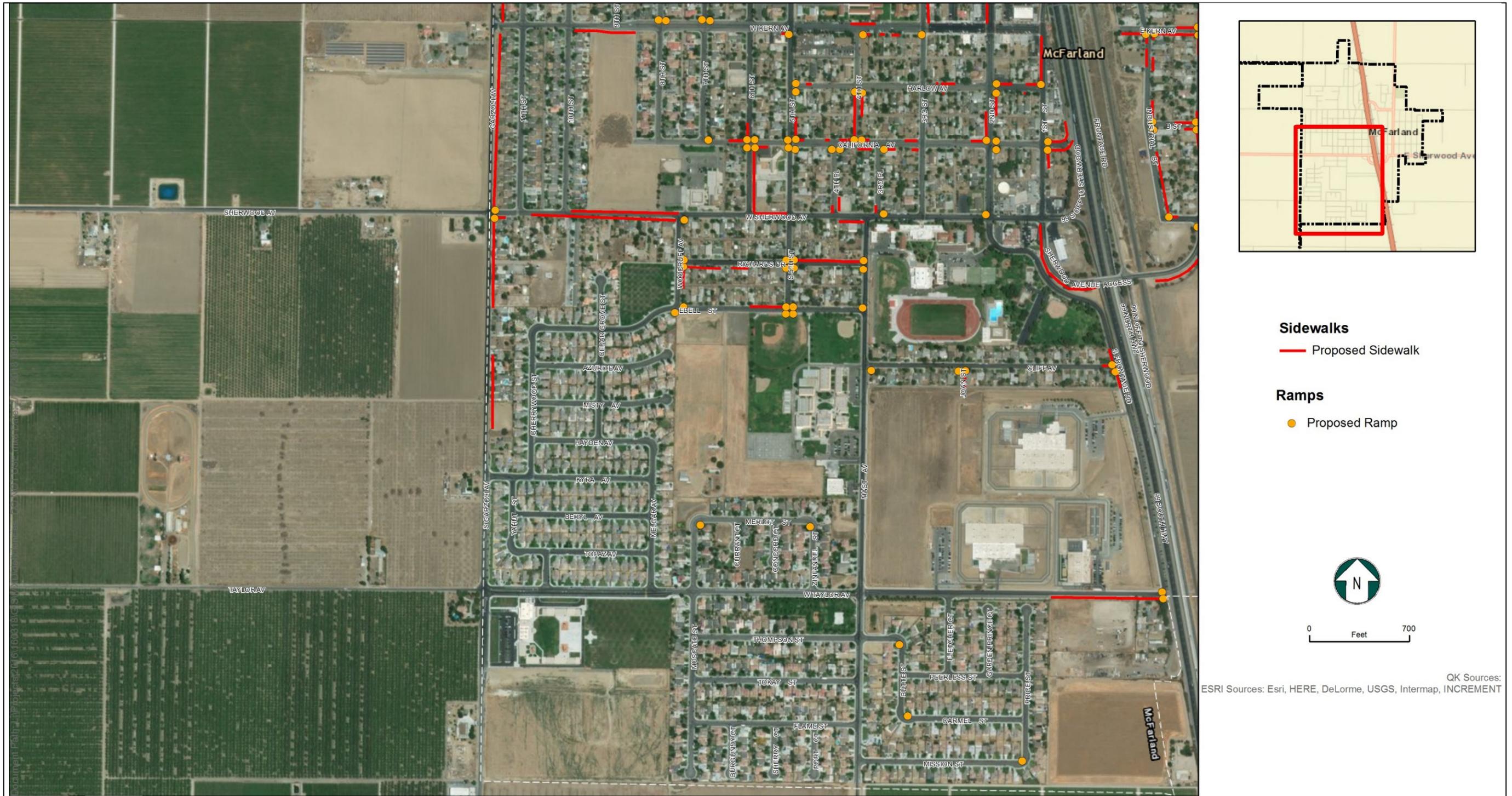
**Figure 4-2**  
**Proposed Pedestrian Facilities and Improvements**  
**North-West Section**





**Figure 4-3**  
**Proposed Pedestrian Facilities and Improvements**  
**South-East Section**





**Figure 4-4**  
**Proposed Pedestrian Facilities and Improvements**  
**South-West Section**



**Table 4-1**  
**Proposed Pedestrian Facilities and Improvements (page 1 of 13)**

Street Name	Side of Street	Segment		Priority	Improvements
		From	To		
<b>NORTH-EAST SECTION</b>					
<b>NORTH-SOUTH</b>					
Industrial St.	West	Perkins	Kern	1	Install Curb Ramp(s)
	East	Kern	Perkins	1	Install Missing Sidewalk
Fernwood St.	West	Brentwood	Fernwood	1	Install Curb Ramp(s)
	East	Fernwood	Glenwood	1	Install Curb Ramp(s)
		Glenwood	Brentwood	1	Install Curb Ramp(s)
San Juan St.	West	Glenwood	Fernwood	1	Install Curb Ramp(s)
		Fernwood	Perkins	1	Install Curb Ramp(s)
		Perkins	Kern	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
	East	Kern	Perkins	1	Install Missing Sidewalk
		Perkins	Glenwood	1	Install Curb Ramp(s), Relocate/Remove Obstruction
Wildwood Way	West	Brentwood	Edgewood	1	Install Curb Ramp(s)
	East	Edgewood	Glenwood	1	Install Curb Ramp(s)
		Glenwood	Brentwood	1	Install Curb Ramp(s)
Browning Rd.	West	End	Glenwood	2	Install Missing Sidewalk, Install Curb Ramp(s)
		Glenwood	Maria Ct.	1	Install Curb Ramp(s)
		Maria Ct.	Isabel Ct.	-	-
		Isabel Ct.	Perkins	-	-
	East	Perkins	A St.	-	-
		A St.	Kern	1	Relocate/Remove Obstruction
		Kern	A St.	1	Relocate/Remove Obstruction
		A St.	Perkins	1	Relocate/Remove Obstruction
San Lucas St.	West	Perkins	A St.	-	-
		A St.	Kern	1	Relocate/Remove Obstruction
	East	Kern	A St.	-	-
		A St.	Perkins	-	-
San Pedro St.	West	Perkins	A St.	1	Install Missing Sidewalk, Install Curb Ramp(s)
		A St.	Kern	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
	East	Kern	A St.	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		A St.	Perkins	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction

**Table 4-1**  
**Proposed Pedestrian Facilities (page 2 of 13)**

Street Name	Side of Street	Segment		Priority	Improvements
		From	To		
<b>NORTH-EAST SECTION (continued)</b>					
<b>NORTH-SOUTH (continued)</b>					
Mt. Arbor St.	West	Perkins	A St.	1	Install Curb Ramp(s)
		A St.	Kern	1	Install Curb Ramp(s), Relocate/Remove Obstruction
	East	Kern	A St.	1	Install Curb Ramp(s)
		A St.	Perkins	1	Install Curb Ramp(s), Relocate/Remove Obstruction
Marshall St.	West	Robertson	A St.	1	Install Curb Ramp(s)
		A St.	Kern	1	Install Curb Ramp(s)
	East	Kern	A St.	-	-
		A St.	Robertson	-	-
<b>EAST-WEST</b>					
Brentwood Ct.	South	Cul De Sac	Fernwood	1	Install Curb Ramp(s)
		Fernwood	Wildwood	1	Install Curb Ramp(s)
	North	Wildwood	Cul De Sac	-	-
Glenwood Ave.	South	Fernwood	San Juan	1	Install Curb Ramp(s)
		San Juan	Browning	1	Install Curb Ramp(s)
	North	Browning	Wildwood	1	Install Curb Ramp(s)
		Wildwood	Fernwood	1	Install Curb Ramp(s), Relocate/Remove Obstruction
Fernwood St.	South	San Juan	Fernwood	1	Install Curb Ramp(s)
	North	Fernwood	San Juan	1	Install Curb Ramp(s)
E. Perkins Ave.	South	99 FWY	Industrial	2	Not Completed/Under Construction
		Industrial	San Juan	1	Install Curb Ramp(s), Relocate/Remove Obstruction
		San Juan	Browning	-	-
		Browning	San Lucas	1	Relocate/Remove Obstruction
		San Lucas	San Pedro	1	Relocate/Remove Obstruction
		San Pedro	Mt. Arbor	1	Relocate/Remove Obstruction
		Mt. Arbor	Bowman	1	Install Missing Sidewalk, Relocate/Remove Obstruction
	North	bowman	Mt. Arbor	1	Install Missing Sidewalk
		Mt. Arbor	San Pedro	1	Install Missing Sidewalk
		San Pedro	San Lucas	1	Install Curb Ramp(s), Relocate/Remove Obstruction
		San Lucas	Browning	-	-
		Browning	San Juan	-	-
		San Juan	Industrial	-	-
Industrial	99 FWY	2	Not Completed/Under Construction		

**Table 4-1  
Proposed Pedestrian Facilities (page 3 of 13)**

Street Name	Side of Street	Segment		Priority	Improvements
		From	To		
<b>NORTH-EAST SECTION (continued)</b>					
<b>EAST-WEST (continued)</b>					
A St.	South	Browning	San Lucas	1	Install Curb Ramp(s), Relocate/Remove Obstruction
		San Lucas	San Pedro	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		San Pedro	Mt. Arbor	1	Install Curb Ramp(s), Relocate/Remove Obstruction
		Mt. Arbor	Marshall	1	Install Curb Ramp(s)
		Marshall	Wiley	1	Relocate/Remove Obstruction
	North	Wiley	Marshall	1	Relocate/Remove Obstruction
		Marshall	Mt. Arbor	1	Install Curb Ramp(s)
		Mt. Arbor	San Pedro	1	Install Curb Ramp(s), Relocate/Remove Obstruction
		San Pedro	San Lucas	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
San Lucas	Browning	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction		
E. Kern Ave.	North	Wiley	Marshall	-	-
		Marshall	Mt. Arbor	1	Install Curb Ramp(s)
		Mt. Arbor	San Pedro	1	Install Curb Ramp(s), Relocate/Remove Obstruction
		San Pedro	San Lucas	1	Install Curb Ramp(s), Relocate/Remove Obstruction
		San Lucas	Browning	1	Install Curb Ramp(s), Relocate/Remove Obstruction
		Browning	San Juan	1	Install Curb Ramp(s), Relocate/Remove Obstruction
		San Juan	Industrial	1	Install Curb Ramp(s)
		Industrial	End	2	Not Completed/Under Construction
<b>NORTH-WEST SECTION</b>					
<b>NORTH-SOUTH</b>					
Valencia Dr.	West	Salvador	Rosario	2	Not Completed/Under Construction
		Rosario	Lima	2	Not Completed/Under Construction
		Lima	Olinda	2	Not Completed/Under Construction
		Olinda	Hail	2	Not Completed/Under Construction
	East	Hail	Salvador	2	Not Completed/Under Construction
Ensenada Dr.	West	Cabo San Lucas	Perkins	2	Not Completed/Under Construction
	East	Perkins	La Paz	2	Not Completed/Under Construction
		La Paz	Rio Caribe	-	-
Kendra St.	West	Elmo HWY	Hail	2	Not Completed/Under Construction
	East	Hail	Elmo HWY	2	Not Completed/Under Construction

**Table 4-1  
Proposed Pedestrian Facilities (page 4 of 13)**

Street Name	Side of Street	Segment		Priority	Improvements
		From	To		
<b>NORTH-WEST SECTION (continued)</b>					
<b>NORTH-SOUTH (continued)</b>					
7th St.	West	Perkins	Robertson	1	Install Curb Ramp(s)
		Robertson	Kern	1	Install Curb Ramp(s)
	East	Kern	Robertson	1	Install Curb Ramp(s)
		Robertson	Perkins	1	Install Curb Ramp(s)
6th St.	West	Robertson	Kern	1	Install Missing Sidewalk, Install Curb Ramp(s)
	East	Kern	Robertson	1	Install Missing Sidewalk, Install Curb Ramp(s)
5th St.	West	Hail	Kimo	-	-
		Kimo	Perkins	-	-
		Perkins	Robertson	2	Install Curb Ramp(s)
		Robertson	Kern	1	Relocate/Remove Obstruction
	East	Kern	Robertson	-	-
		Robertson	Perkins	2	Install Missing Sidewalk, Relocate/Remove Obstruction
4th St.	West	Perkins	Robertson	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
	East	Robertson	Perkins	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
Davis Ave.	West	Elmo HWY	Kala Loop	-	-
		Kala Loop	Hail	-	-
		Hail	Perkins	2	Install Missing Sidewalk, Install Curb Ramp(s)
	East	Perkins	Hail	1	Install Curb Ramp(s)
		Hail	Frontage	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
Frontage	Elmo HWY	2	Install Missing Sidewalk, Install Curb Ramp(s)		
3rd Pl.	West	Perkins	Robertson	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		Robertson	Lockwood	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
	East	Lockwood	Robertson	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		Robertson	Perkins	1	Install Missing Sidewalk, Relocate/Remove Obstruction

**Table 4-1  
Proposed Pedestrian Facilities (page 5 of 13)**

Street Name	Side of Street	Segment		Priority	Improvements
		From	To		
<b>NORTH-WEST SECTION (continued)</b>					
<b>NORTH-SOUTH (continued)</b>					
3rd St.	West	Frontage	Hail	1	Install Curb Ramp(s), Relocate/Remove Obstruction
		Hail	Perkins	1	Install Curb Ramp(s)
		Perkins	Robertson	1	Install Curb Ramp(s), Relocate/Remove Obstruction
		Robertson	Lockwood	1	Install Curb Ramp(s)
		Lockwood	Kern	1	Install Curb Ramp(s), Relocate/Remove Obstruction
	East	Kern	Lockwood	1	Install Missing Sidewalk, Install Curb Ramp(s)
		Lockwood	Robertson	1	Install Curb Ramp(s), Relocate/Remove Obstruction
		Robertson	Perkins	1	Install Missing Sidewalk, Install Curb Ramp(s)
		Perkins	Hail	1	Install Curb Ramp(s)
		Hail	Frontage	2	Install Curb Ramp(s)
2nd St.	West	Frontage	Cul De Sac	1	Install Missing Sidewalk, Install Curb Ramp(s)
		Perkins	Robertson	1	Install Missing Sidewalk, Install Curb Ramp(s)
		Robertson	Lockwood	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		Lockwood	Kern	1	Install Missing Sidewalk, Relocate/Remove Obstruction
	East	Kern	Lockwood	-	-
		Lockwood	Robertson	1	Install Missing Sidewalk, Relocate/Remove Obstruction
		Robertson	Perkins	1	Install Missing Sidewalk, Install Curb Ramp(s)
		Cul De Sac	Hopper	2	Install Missing Sidewalk, Install Curb Ramp(s)
		Hopper	Frontage	2	Install Missing Sidewalk, Install Curb Ramp(s)
Frontage Rd.	West	Davis	3rd St.	1	Install Missing Sidewalk, Install Curb Ramp(s)
		3rd St.	Hail	2	Install Missing Sidewalk, Install Curb Ramp(s)
		Hail	2nd	1	Install Curb Ramp(s)
		2nd	Hopper	2	Install Missing Sidewalk, Install Curb Ramp(s)
		Hopper	Perkins	2	Install Missing Sidewalk, Install Curb Ramp(s)
		Perkins	Robertson	1	Install Missing Sidewalk, Install Curb Ramp(s)
		Robertson	Lockwood	1	Install Missing Sidewalk
		Lockwood	Kern	1	Install Missing Sidewalk, Relocate/Remove Obstruction
	East	Kern	Davis	2	N/A

**Table 4-1  
Proposed Pedestrian Facilities (page 6 of 13)**

Street Name	Side of Street	Segment		Priority	Improvements
		From	To		
<b>NORTH-WEST SECTION (continued)</b>					
<b>EAST-WEST</b>					
Hail Ln.	South	Garzoli	Acapulco	2	Relocate/Remove Obstruction
		Acapulco	Rio Santana	-	-
		Rio Santana	5th	1	Relocate/Remove Obstruction
		5th	Davis	2	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		Davis	3rd	1	Install Missing Sidewalk, Install Curb Ramp(s)
	North	3rd	Frontage	1	Install Missing Sidewalk, Relocate/Remove Obstruction
		Frontage	3rd	2	Install Missing Sidewalk, Install Curb Ramp(s)
		3rd	Davis	1	Install Curb Ramp(s), Relocate/Remove Obstruction
		Davis	Kala Loop	-	-
		Kala Loop	Kendra	1	Relocate/Remove Obstruction
		Kendra	Valencia	-	-
		Valencia	Garzoli	-	-
Hopper St.	South	2nd	Frontage	2	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
	North	Frontage	2nd	2	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
W. Perkins Ave.	South	Garzoli	10th	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		10th	9th	-	-
		9th	8th	1	Install Curb Ramp(s)
		8th	7th	1	Install Curb Ramp(s)
		7th	5th	2	Install Curb Ramp(s)
		5th	4th	1	Install Curb Ramp(s)
		4th	3rd Pl.	1	Install Missing Sidewalk, Install Curb Ramp(s)
		3rd Pl.	3rd St.	1	Install Curb Ramp(s), Relocate/Remove Obstruction
	North	3rd St.	2nd	1	Install Missing Sidewalk
		2nd	Frontage	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		Frontage	3rd St.	1	Install Missing Sidewalk, Install Curb Ramp(s)
		3rd St.	Davis	1	Install Curb Ramp(s)
		Davis	5th	2	Not Completed/Under Construction
		5th	Ensenada	2	Not Completed/Under Construction
		Ensenada	Garzoli	2	Not Completed/Under Construction

**Table 4-1**  
**Proposed Pedestrian Facilities (page 7 of 13)**

Street Name	Side of Street	Segment		Priority	Improvements
		From	To		
<b>NORTH-WEST SECTION (continued)</b>					
<b>EAST-WEST (continued)</b>					
Robertson Ave.	South	8th	7th	1	Install Curb Ramp(s)
		7th	6th	1	Install Missing Sidewalk, Install Curb Ramp(s)
		6th	5th	1	Install Missing Sidewalk, Install Curb Ramp(s)
		3rd Pl.	3rd St.	-	-
		3rd St.	2nd	1	Install Missing Sidewalk, Install Curb Ramp(s)
	North	2nd	Frontage	1	Install Missing Sidewalk
		Frontage	2nd	1	Install Missing Sidewalk, Install Curb Ramp(s)
		2nd	3rd St.	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		3rd St.	3rd Pl.	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		3rd Pl.	4th	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
4th	5th	2	Install Missing Sidewalk, Install Curb Ramp(s)		
5th	7th	1	Install Curb Ramp(s)		
7th	8th	1	Install Curb Ramp(s)		
Lockwood Ave.	South	3rd Pl.	3rd St.	-	-
		3rd St.	2nd	1	Install Missing Sidewalk, Install Curb Ramp(s)
		2nd	Frontage	1	Install Missing Sidewalk, Install Curb Ramp(s)
	North	Frontage	2nd	1	Install Missing Sidewalk
		2nd	3rd St.	1	Install Missing Sidewalk, Relocate/Remove Obstruction
3rd St.	3rd Pl.	1	Install Missing Sidewalk, Install Curb Ramp(s)		
W. Kern Ave.	North	1st	2nd	-	-
		2nd	3rd St.	-	-
		3rd St.	5th	1	Relocate/Remove Obstruction
		5th	6th	1	Relocate/Remove Obstruction
		6th	7th	1	Install Curb Ramp(s)
		7th	8th	1	Install Curb Ramp(s)
		8th	9th	1	Install Curb Ramp(s)
		9th	10th	-	-
		10th	11th	-	-
11th	Garzoli	-	-		

**Table 4-1  
Proposed Pedestrian Facilities (page 8 of 13)**

Street Name	Side of Street	Segment		Priority	Improvements
		From	To		
<b>SOUTH-EAST SECTION</b>					
<b>NORTH-SOUTH</b>					
Industrial St.	West	Kern	B St.	2	Install Missing Sidewalk, Install Curb Ramp(s)
		B St.	Sherwood	2	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
	East	Sherwood	B St.	1	Install Missing Sidewalk, Install Curb Ramp(s)
		B St.	Kern	1	Install Missing Sidewalk, Install Curb Ramp(s)
San Juan St.	West	Kern	B St.	1	Install Missing Sidewalk, Install Curb Ramp(s)
		B St.	Sherwood	1	Install Missing Sidewalk, Install Curb Ramp(s)
	East	Sherwood	B St.	1	Install Missing Sidewalk
		B St.	Kern	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
Browning Rd.	West	Kern	B St.	-	-
		B St.	Sherwood	1	Install Curb Ramp(s), Relocate/Remove Obstruction
	East	Sherwood	B St.	1	Relocate/Remove Obstruction
		B St.	Kern	-	-
San Lucas St.	West	Kern	B St.	1	Relocate/Remove Obstruction
		B St.	Sherwood	1	Relocate/Remove Obstruction
	East	Sherwood	B St.	-	-
		B St.	Kern	1	Relocate/Remove Obstruction
San Pedro St.	West	Kern	B St.	1	Install Missing Sidewalk, Install Curb Ramp(s)
		B St.	Sherwood	1	Install Missing Sidewalk, Install Curb Ramp(s)
	East	Sherwood	B St.	1	Install Missing Sidewalk, Install Curb Ramp(s)
		B St.	Kern	1	Install Missing Sidewalk, Install Curb Ramp(s)
Mt. Arbor St.	West	Kern	B St.	1	Install Curb Ramp(s)
		B St.	Sherwood	1	Install Curb Ramp(s)
	East	Sherwood	B St.	1	Install Curb Ramp(s)
		B St.	Kern	1	Install Curb Ramp(s)
Marshall St.	West	Kern	B St.	1	Install Curb Ramp(s)
		B St.	Sherwood	1	Install Curb Ramp(s)
	East	Sherwood	B St.	-	-
		B St.	Kern	-	-

**Table 4-1**  
**Proposed Pedestrian Facilities (page 9 of 13)**

Street Name	Side of Street	Segment		Priority	Improvements
		From	To		
<b>SOUTH-EAST SECTION</b>					
<b>EAST-WEST</b>					
E. Kern Ave.	South	End	Industrial	2	Not Completed/Under Construction
		Industrial	San Juan	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		San Juan	Browning	1	Install Missing Sidewalk, Relocate/Remove Obstruction
		Browning	San Lucas	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		San Lucas	San Pedro	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		San Pedro	Mt. Arbor	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		Mt. Arbor	Marshall	1	Install Curb Ramp(s)
		Marshall	Wiley	-	-
B St.	South	Industrial	San Juan	2	Not Completed/Under Construction
		San Juan	Browning	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		Browning	San Lucas	1	Install Curb Ramp(s), Relocate/Remove Obstruction
		San Lucas	San Pedro	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		San Pedro	Mt. Arbor	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		Mt. Arbor	Marshall	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		Marshall	Wiley	1	Relocate/Remove Obstruction
	North	Wiley	Marshall	1	Relocate/Remove Obstruction
		Marshall	Mt. Arbor	1	Install Curb Ramp(s), Relocate/Remove Obstruction
		Mt. Arbor	San Pedro	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		San Pedro	San Lucas	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		San Lucas	Browning	1	Install Curb Ramp(s), Relocate/Remove Obstruction
		Browning	San Juan	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		San Juan	Industrial	2	Not Completed/Under Construction
E. Sherwood Ave.	South	Industrial	On Ramp	2	Install Missing Sidewalk, Install Curb Ramp(s)
		On Ramp	Browning	2	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		Browning	Wiley	-	-
		Wiley	Marshall	-	-
	North	Marshall	Mt. Arbor	2	Install Curb Ramp(s)
		Mt. Arbor	San Pedro	1	Install Curb Ramp(s)
		San Pedro	San Lucas	1	Install Curb Ramp(s)
		San Lucas	Browning	-	-
Browning	San Juan	1	Relocate/Remove Obstruction		
San Juan	Industrial	1	Install Curb Ramp(s), Relocate/Remove Obstruction		

**Table 4-1**  
**Proposed Pedestrian Facilities (page 10 of 13)**

Street Name	Side of Street	Segment		Priority	Improvements
		From	To		
<b>SOUTH-WEST SECTION</b>					
<b>NORTH-SOUTH</b>					
11th St.	West	Kern	Sherwood	-	-
	East	Sherwood	Kern	1	Relocate/Remove Obstruction
5th St.	West	Kern	California	1	Install Missing Sidewalk, Install Curb Ramp(s)
		California	Sherwood	1	Install Curb Ramp(s)
		Sherwood	Richards	1	Relocate/Remove Obstruction
		Richards	Ebell	1	Install Curb Ramp(s), Relocate/Remove Obstruction
	East	Ebell	Richards	1	Install Missing Sidewalk, Install Curb Ramp(s)
		Richards	Sherwood	1	Relocate/Remove Obstruction
		Sherwood	California	1	Install Missing Sidewalk, Install Curb Ramp(s)
		California	Harlow	1	Install Missing Sidewalk, Install Curb Ramp(s)
		Harlow	Kern	-	-
4th Pl.	West	California	Sherwood	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
	East	Sherwood	California	1	Install Missing Sidewalk, Install Curb Ramp(s)
4th St.	West	Kern	Harlow	1	Install Curb Ramp(s)
		Harlow	California	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
	East	California	Harlow	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		Harlow	Kern	1	Install Missing Sidewalk, Install Curb Ramp(s)
Mast Ave.	West	Sherwood	Richards	1	Install Curb Ramp(s)
		Richards	Ebell	1	Relocate/Remove Obstruction
		Ebell	Taylor	1	Install Curb Ramp(s), Relocate/Remove Obstruction
		Taylor	Thompson	-	-
		Thompson	Tokay	-	-
		Tokay	Flame	-	-
	East	Flame	End	1	Relocate/Remove Obstruction
		End	Mission	-	-
		Mission	Thompson	-	-
		Thompson	Taylor	1	Relocate/Remove Obstruction
		Taylor	Cliff	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		Cliff	Sherwood	1	Relocate/Remove Obstruction
3rd Pl.	West	California	Sherwood	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
	East	Sherwood	California	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction

**Table 4-1  
Proposed Pedestrian Facilities (page 11 of 13)**

Street Name	Side of Street	Segment		Priority	Improvements
		From	To		
<b>SOUTH-WEST SECTION</b>					
<b>NORTH-SOUTH (continued)</b>					
3rd St.	West	Kern	Harlow	1	Relocate/Remove Obstruction
		Harlow	California	1	Relocate/Remove Obstruction
		California	Sherwood	1	Relocate/Remove Obstruction
	East	Sherwood	California	-	-
		California	Harlow	1	Relocate/Remove Obstruction
		Harlow	Kern	-	-
Joan St.	West	Alley	Cliff	1	Install Missing Sidewalk
	East	Cliff	Alley	1	Install Missing Sidewalk
2nd St.	West	Kern	Harlow	1	Relocate/Remove Obstruction
		Harlow	California	1	Install Missing Sidewalk, Install Curb Ramp(s)
		California	Sherwood	-	-
	East	Sherwood	California	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		California	Harlow	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		Harlow	Kern	1	Install Missing Sidewalk, Install Curb Ramp(s)
1st St.	West	Kern	Harlow	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		Harlow	California	1	Install Curb Ramp(s), Relocate/Remove Obstruction
		California	Sherwood	1	Relocate/Remove Obstruction
		Sherwood	Overpass	-	-
	East	Overpass	Sherwood	-	-
		Sherwood	California	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		California	Harlow	1	Install Missing Sidewalk, Install Curb Ramp(s)
		Harlow	Kern	1	Install Missing Sidewalk, Install Curb Ramp(s)
Frontage Rd.	West	Kern	California	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		Sherwood	Cliff	1	Install Missing Sidewalk, Install Curb Ramp(s)
		Cliff	Taylor	1	Install Missing Sidewalk, Install Curb Ramp(s)
		Taylor	End	1	Install Missing Sidewalk, Install Curb Ramp(s)
	East	End	Kern	2	N/A

Table 4-1  
Proposed Pedestrian Facilities (page 12 of 13)

Street Name	Side of Street	Segment		Priority	Improvements
		From	To		
<b>SOUTH-WEST SECTION</b>					
<b>EAST-WEST</b>					
W. Kern Ave.	South	Garzoli	11th	-	-
		11th	10th	-	-
		10th	8th	-	-
		8th	7th	-	-
		7th	6th	1	Install Missing Sidewalk, Install Curb Ramp(s)
		6th	5th	1	Install Missing Sidewalk
		5th	4th	1	Install Missing Sidewalk, Install Curb Ramp(s)
		4th	3rd St.	-	-
		3rd St.	2nd	-	-
		2nd	1st	-	-
Harlow Ave.	South	5th	4th	1	Install Missing Sidewalk, Install Curb Ramp(s)
		4th	3rd St.	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		3rd St.	2nd	1	Install Missing Sidewalk, Relocate/Remove Obstruction
		2nd	1st	1	Install Curb Ramp(s), Relocate/Remove Obstruction
	North	1st	2nd	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		2nd	3rd St.	1	Install Missing Sidewalk, Install Curb Ramp(s)
		3rd St.	4th	1	Relocate/Remove Obstruction
		4th	5th	1	Install Missing Sidewalk, Install Curb Ramp(s)
California Ave.	South	End	6th	2	Install Curb Ramp(s), Relocate/Remove Obstruction
		6th	5th	1	Install Missing Sidewalk, Install Curb Ramp(s)
		5th	4th Pl.	1	Install Curb Ramp(s), Relocate/Remove Obstruction
		4th Pl.	3rd Pl.	1	Install Missing Sidewalk, Install Curb Ramp(s)
		3rd Pl.	3rd St.	1	Install Missing Sidewalk, Install Curb Ramp(s)
		3rd St.	2nd	1	Install Curb Ramp(s)
		2nd	1st	1	Relocate/Remove Obstruction
		1st	Frontage	1	Install Missing Sidewalk, Install Curb Ramp(s)
	North	Frontage	1st	1	Install Missing Sidewalk, Install Curb Ramp(s)
		1st	2nd	1	Install Curb Ramp(s), Relocate/Remove Obstruction
		2nd	3rd St.	1	Install Missing Sidewalk, Install Curb Ramp(s)
		3rd St.	4th	1	Install Missing Sidewalk, Install Curb Ramp(s)
		4th	5th	1	Install Missing Sidewalk, Install Curb Ramp(s)
		5th	6th	1	Install Curb Ramp(s)
		6th	7th	1	Install Missing Sidewalk, Install Curb Ramp(s)
		7th	8th	1	Install Curb Ramp(s)
		8th	End	1	Install Curb Ramp(s)

**Table 4-1  
Proposed Pedestrian Facilities (page13 of 13)**

Street Name	Side of Street	Segment		Priority	Improvements
		From	To		
<b>SOUTH-WEST SECTION</b>					
<b>EAST-WEST (continued)</b>					
W. Sherwood Ave.	North	On Ramp	1st	1	Install Curb Ramp(s), Relocate/Remove Obstruction
		1st	2nd	1	Relocate/Remove Obstruction
		2nd	3rd St.	1	Relocate/Remove Obstruction
		3rd St.	3rd Pl.	1	Relocate/Remove Obstruction
		3rd Pl.	4th	1	Relocate/Remove Obstruction
		4th	5th	1	Relocate/Remove Obstruction
		5th	6th	1	Install Missing Sidewalk, Relocate/Remove Obstruction
		6th	10th	2	Install Missing Sidewalk, Relocate/Remove Obstruction
		10th	11th	1	Relocate/Remove Obstruction
	11th	Garzoli	1	Install Missing Sidewalk, Install Curb Ramp(s)	
	South	Garzoli	Woodruff	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		Woodruff	5th	1	Install Missing Sidewalk, Relocate/Remove Obstruction
		5th	Mast	1	Install Missing Sidewalk
Mast		Frontage	1	Relocate/Remove Obstruction	
		Frontage	1st	1	Install Curb Ramp(s)
Richards Dr.	South	Woodruff	5th	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		5th	Mast	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
	North	Mast	5th	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		5th	Woodruff	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
Ebell St.	North	Mast	5th	-	-
		5th	Woodruff	1	Install Missing Sidewalk
		Woodruff	Cedar Grove	-	-
	South	Cedar Grove	Cherrywood	-	-
		Cherrywood	Cedar Grove	-	-
		Cedar Grove	Mast	-	-
Cliff Ave.	South	Mast	Joan	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		Joan	Frontage	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
	North	Frontage	Mast	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
Taylor Ave.	South	Garzoli	Moscato	2	Not Completed/Under Construction
		Moscato	Mast	-	-
		Mast	Fletcher	-	-
		Fletcher	Frontage	1	Install Missing Sidewalk, Install Curb Ramp(s), Relocate/Remove Obstruction
		Frontage	Mast	1	Install Missing Sidewalk, Install Curb Ramp(s)
	North	Mast	Zinfandel	1	Relocate/Remove Obstruction
		Zinfandel	Moscato	1	Relocate/Remove Obstruction
		Moscato	Melgar	1	Relocate/Remove Obstruction
		Melgar	Grajeda	-	-
		Grajeda	Garzoli	-	-

**4.2.2 - BICYCLE**

The absence of a safe bicycle network is a deterrent to increased bicycle usage within McFarland. As discussed in Section 3, the greatest impediment to bicycling observed was the lack of continuous/linked bikeways within the City. The continuation of existing facilities is necessary to provide the most inter-connected bikeway network possible. Connections to the regional bicycle network and adjacent communities are also important, since bicycle trips do not always end at the city limits.

Since adoption of the 2014 McFarland Bicycle Master Plan the City has completed several bikeway projects which have provided links to existing facilities. Several other Class II (Bike Lanes) and Class III (Bike Routes) are proposed to provide a safe and efficient bicycle network. The proposed network is consistent with the McFarland Bicycle Master Plan and the Kern County Bicycle Master Plan, with the exception of a segment of Sherwood Avenue, between 1<sup>st</sup> Street and 5<sup>th</sup> Street, that was downgraded to a Class III Bike Route in order to preserve parking in front of the high school. Figure 4-5 shows the location of proposed bicycle facilities within the City, as well as the location of proposed regional Class II bike lanes along Stradley Avenue, Sherwood Avenue, and Perkins Avenue as envisioned in the Kern County Bicycle Master Plan (as previously discussed in Section 2.5.3). Table 3-4 in Section 3 lists the proposed bicycle facilities identified in Figure 4-5 (2014 Bicycle Master Plan column).

The California Streets and Highways Code Section 890.4 define a “Bikeway” as a facility that provides primarily for and promotes bicycle travel. The two types of bikeways proposed within this Study are described below:

**Class II Bike Lane**

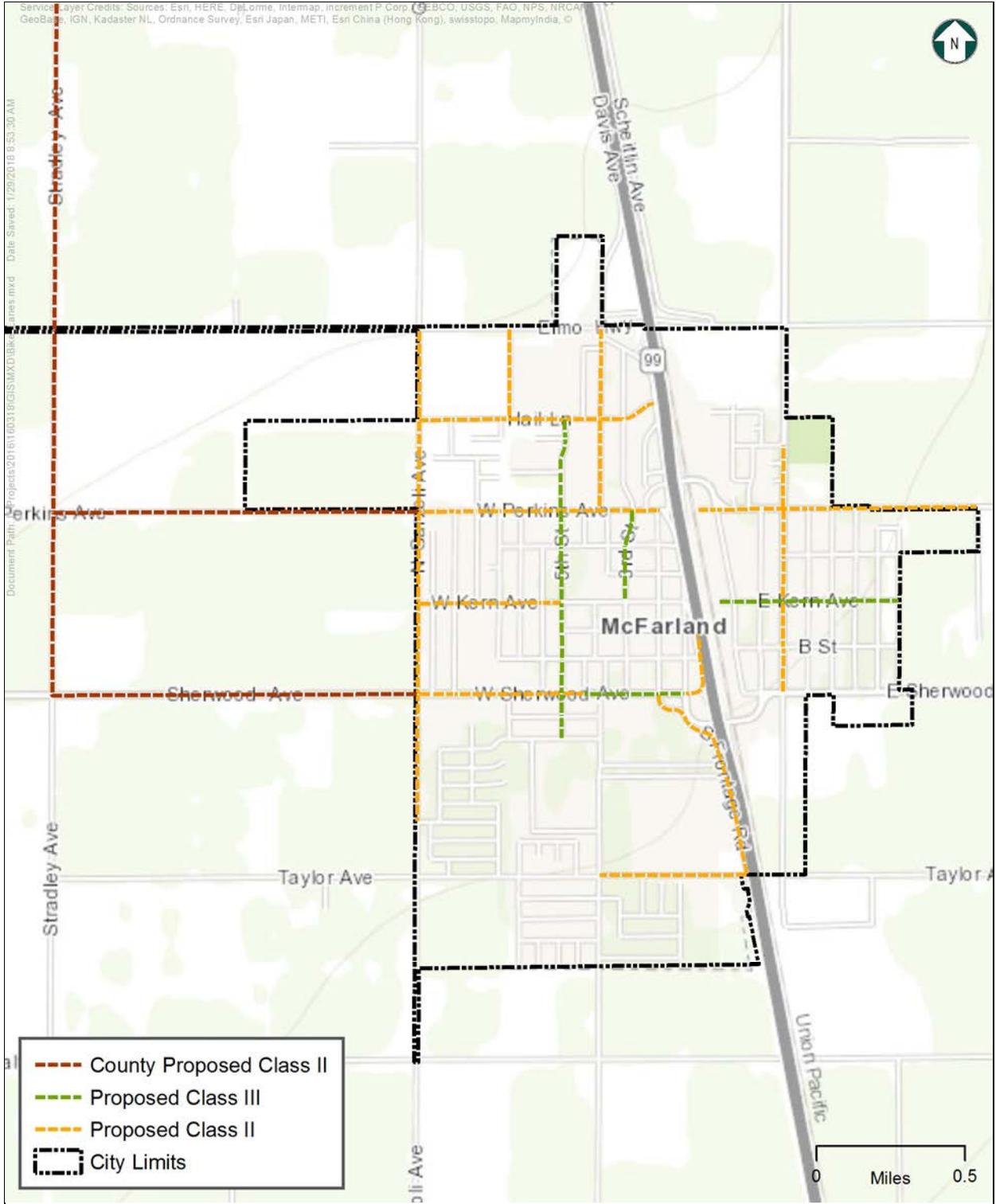
The purpose of a bike lane is to improve conditions for bicyclists within a shared transportation corridor. Bike lanes are intended to delineate the portion of the right-of-way assigned exclusively to bicyclists. The striped bike lane is enhanced by bike lane signs and pavement markings.



Bike lanes should be provided when traffic volumes exceed a certain threshold, such as 4,000 vehicles per day on a two-lane street. Below this traffic volume, there should be adequate gaps in oncoming traffic for motor vehicles to safely pass bicyclists. However, if adequate width is available to separate vehicular from bicycle traffic, without loss to levels of service, the installation of bicycle lanes should still be considered.

Bike lanes are intended for the exclusive use of bicycles, with exceptions. Motorists may drive in a bike lane to park where permitted, to enter or leave the roadway, or to prepare for a right-turn within 200 feet from the intersection.

# Proposed and Recommended Facilities and Improvements



 **Figure 4-5**  
**Proposed Bicycle Facilities and Improvements**

## Proposed and Recommended Facilities and Improvements

The California Manual on Uniform Traffic Control Devices (MUTCD) provides the technical specifications for bike lanes in its Section 9C.04 Markings for Bike Lanes.

In general, bike lanes are to be striped and identified as bike lanes with a BIKE LANE signs and pavement markings. The bike lane is to be placed adjacent to the curb if on-street parking is not allowed or between the parking lane and the motorized travel lane if parking is allowed.

Proposed Class II Bike Lanes are shown below:

**Table 4-2  
Proposed Class II Bike Lanes**

Street Name	Street Segment From	Street Segment To	Street Designation
Garzoli Avenue	City Limits	Kyra Avenue	north-south
Kendra Street	City Limits	Hail Lane	north-south
Davis Avenue	City Limits	Perkins Avenue	north-south
Frontage Road	Sherwood Avenue	Taylor Avenue	north-south
Browning Road	Browning Park	Sherwood Avenue	north-south
Hail Lane	Frontage Road	Garzoli Avenue	east-west
Perkins Avenue	City Limits	Garzoli Avenue	east-west
Kern Avenue	5 <sup>th</sup> Street	Garzoli Avenue	east-west
Sherwood Avenue	5 <sup>th</sup> Street	Garzoli Avenue	east-west
Taylor Avenue	Frontage Road	Mast Avenue	east-west

### **Class III Bike Route**

Class III bike routes provide for shared use with bicycles or motor vehicle traffic without designated bike lanes or paths. McFarland currently does not have any designated Class III bike routes. Class III bike routes are typically provided as connections between bike lane facilities within a City where there is not enough street width to accommodate a designated bike lane.



Bike route signing is used to alert motorists to the presence of bicyclists on the roadway. Signage and pavement markings used on Class III routes to provide additional warning to motorists and bicyclists can include Bicycle Warning (W11-1) signs in conjunction with the Share the Road (W16-1) plaque or the Shared Roadway Bicycle Marking, commonly referred to as 'Sharrow'. The sharrow is used to assist bicyclists with positioning on a shared roadway with on-street parallel parking and to alert road users of the location a bicyclist may occupy within the travel way.

Proposed Class III Bike Routes are shown below:

**Table 4-3  
Proposed Class III Bike Routes**

<b>Street Name</b>	<b>Street Segment From</b>	<b>Street Segment To</b>	<b>Street Designation</b>
5th Street	City Limits	Ebell Street	north-south
3 <sup>rd</sup> Street	Perkins Avenue	Kern Avenue	north-south
Kern Avenue	City Limits	Industrial Street	east-west
Sherwood Avenue	1 <sup>st</sup> Street	5 <sup>th</sup> Street	east-west

Streets that are not yet built to their ultimate width should incorporate recommended bicycle lanes or routes into their design when widened. Garzoli Avenue, while ultimately proposed as a Class II Bike Lane, should be designated as a Class III Bike Route until the street is widened.

**4.2.3 - LIGHTING**

Adequate lighting helps to enhance the walkability and bikeability of a city by providing a sense of safety and well-being for pedestrians, bicyclists, and motorists alike. The following streetlight improvements have been identified to promote the use of pedestrian and bicycle facilities after dark. Figures 4-6 and 4-7 show the location of proposed streetlights throughout the study area.

Table 4-4 lists each of the proposed pedestrian facility improvements. Proposed streetlight improvements were prioritized based on access to right-of-way. High priority improvements were deemed to be those that would occur within City-owned right-of-way. Low priority was given to improvements that would occur on undeveloped land. It is assumed that these projects will be installed by a developer(s) at a later date.

The following are descriptions of the columns in Table 4-4, Proposed Lighting Facilities:

**Proposed Streetlight**

**Location** – Identifies the location of the proposed streetlight.

**Power Pole at Location** – Identifies the presence/absence of an existing power pole.

**Priority** – Assigns an improvement priority based on access to right-of-way: (1) = high priority; (2) = low priority



**Figure 4-6**  
Proposed Street Light Facilities and Improvements  
North Section





**Figure 4-7**  
**Proposed Street Light Facilities and Improvements**  
**South Section**



**Table 4-4  
Proposed Lighting Facilities**

Proposed Streetlight			Nearest Streetlight to Location		
Location	Power Pole at Location	Priority	Location	Direction	Distance (ft)
<b>NORTH SECTION - EAST</b>					
Browning Rd. 630' north of Glenwood Ave.	YES	2	NW corner of Browning Rd. and Glenwood Ave.	South	650
NW Corner of Browning Rd. Park	YES	1	NW corner of Browning Rd. and Glenwood Ave.	South	350
Fernwood St. 250' south of Glenwood Ave.	NO	1	SW corner of Glenwood Ave. and Fernwood Rd.	North	250
San Juan St. 250' south of Glenwood Ave.	NO	1	SW corner of Glenwood Ave. and Fernwood Rd.	North	250
Intersection of E. Perkins Ave. and N. San Juan St.	YES	1	Intersection of E. Perkins Ave. and S. San Juan St.	East	180
E. Perkins Ave. 350' east of Mt. Arbor St.	NO	2	North side of E. Perkins Ave. at Mt. Arbor St.	West	350
E. Perkins Ave. 900' east of Mt. Arbor St.	YES	2	North side of E. Perkins Ave. at Mt. Arbor St.	West	900
Intersection of A St. and Wiley St.	YES	1	Wiley St. between A St. and E. Kern Ave.	South	180
Marshall St. 350' south of A St.	NO	1	NW corner of A St. and Marshall	North	360
Intersection of E. Kern Ave. and Wiley St.	NO	1	Wiley St. between E. Kern Ave. and B St.	South	180
<b>NORTH SECTION - WEST</b>					
Intersection of 2nd St. and Frontage Rd.	NO	2	East side of Frontage Rd. at Hail Ln.	North	350
Intersection of Hopper St. and Frontage Rd.	NO	2	Intersection of 2nd St. and Hopper St.	West	280
11th St. mailbox 250' north of W. Kern Ave.	NO	1	Intersection of 11th St. and W. Kern Ave.	South	250
6th St. 400' south of Robertson Ave.	NO	1	Intersection of 6th St. and Robertson Ave.	North	400
Intersection of W. Kern Ave. and Garzoli Ave.	YES	1	Intersection of W. Kern Ave. and 11th St.	East	200
<b>SOUTH SECTION - EAST</b>					
Intersection of B St. and Wiley St.	YES	1	Wiley St. between B St. and E. Kern Ave.	South	180
Intersection of B St. and Marshall St.	NO	1	Marshall St. Between Kern Ave. and B St.	North	350
<b>SOUTH SECTION - WEST</b>					
Intersection of Taylor Ave. and Melgar Ave.	NO	1	NW corner of Taylor Ave. and Moscato St.	East	320

**Nearest Streetlight to Location**

**Location** – Identifies the location of the nearest streetlight to the proposed streetlight.

**Direction** – Provides the direction of the nearest streetlight from the proposed streetlight.

**Distance** – Provides the distance in feet of the nearest streetlight from the proposed streetlight.

**4.3 - Recommended Facilities and Improvement Projects**

Recommended projects were developed with input from City staff and focus on the City's priorities with regards to pedestrian and bicycle impediments and improvements (see Table 3-1 and Figure 3-1 in Section 3). Project prioritization follows the ranking identified in Table 3-1. Improvements would include, but not be limited to, upgraded ADA-compliant curb ramps, new drive approaches, and the installation of sidewalks, bike lanes, and street lights. Recommended projects include both pedestrian and bicycle improvements, if warranted.

1. Garzoli Avenue from W. Perkins Avenue to Taylor Avenue
2. 2<sup>nd</sup> Street from W. Kern Avenue to W. Sherwood Avenue
3. W. Perkins Avenue from Frontage Road to Garzoli Avenue
4. Access and Circulation issues around Browning Road Elementary School
5. W. Sherwood Avenue from Garzoli Avenue to Mast Avenue (McFarland High School)

**4.4 - Recommended Project Cost Estimates**

The costs to implement the recommended project segments are presented below in Tables 4-5 through 4-9. The estimated costs were developed using construction cost opinions obtained from similar projects in the City of McFarland, Kern County, and surrounding counties. More detailed construction cost estimates should be developed after completion of a feasibility analysis, preliminary engineering, and design. These costs do not include right-of-way acquisition, if needed, or inflation factors.

Although the cost estimates are based on actual costs obtained locally and in various California communities, more detailed cost estimates based on actual recent bids should be developed after preliminary engineering designs are completed for each recommended project. These cost estimates are to be used primarily for project planning and grant applications.

**Proposed and Recommended Facilities and Improvements**

**Table 4-5  
Project 1: Garzoli Avenue Improvements**

<b>Garzoli Avenue from W. Perkins Ave. to Taylor Ave.</b>					
<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>PRICE</b>	<b>AMOUNT</b>
1	Mobilization/Demobilization	1	L.S.	\$37,000	\$37,000
2	Worker Protection	1	L.S.	\$5,000	\$5,000
3	Monument Preservation	1	L.S.	\$7,000	\$7,000
4	Storm Water Management & Dust Control	1	L.S.	\$5,000	\$5,000
5	Prepare and Maintain Traffic Control Plan	1	L.S.	\$12,000	\$12,000
6	Clearing & Grubbing	1	L.S.	\$23,000	\$23,000
7	Earthwork, Grading & Compaction	1	L.S.	\$19,000	\$19,000
8	Drain Inlet Protection	1	L.S.	\$7,000	\$7,000
9	Asphalt Concrete Saw-Cutting	2,450	L.F.	\$1.50	\$3,675
10	Remove Existing AC Pavement	4,900	S.F.	\$2.00	\$9,800
11	Construct Concrete Curb Returns with ADA Ramp	3	E.A.	\$7,500	\$22,500
12	Replace Concrete Curb Returns with ADA Ramp	2	E.A.	\$10,000	\$20,000
13	Concrete Curb & Gutter	2,450	L.F.	\$40.00	\$98,000
14	Concrete Sidewalk	14,640	S.F.	\$8.00	\$117,120
15	Residential Drive Approach	9	E.A.	\$5,000	\$45,000
16	Alley Approach	1	E.A.	\$7,500	\$7,500
17	Roadway Excavation	200	C.Y.	\$75.00	\$15,000
18	Class II Aggregate Base	140	C.Y.	\$95.00	\$13,300
19	Type 'A' Asphalt Concrete Pavement	120	Ton	\$250	\$30,000
20	Striping & Signage	1	L.S.	\$15,000	\$15,000
21	Class II Bike Lane	1.34	Mile	\$40,000	\$53,600
Base Bid Subtotal:					\$565,495
10±% Contingencies:					\$56,505
Total:					\$622,000

**Proposed and Recommended Facilities and Improvements**

**Table 4-6  
Project 2: 2<sup>nd</sup> Street Improvements**

<b>2<sup>nd</sup> Street from W. Kern Avenue to W. Sherwood Avenue</b>					
<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>PRICE</b>	<b>AMOUNT</b>
1	Mobilization/Demobilization	1	L.S.	\$41,000	\$41,000
2	Worker Protection	1	L.S.	\$6,000	\$6,000
3	Monument Preservation	1	L.S.	\$8,000	\$8,000
4	Storm Water Management & Dust Control	1	L.S.	\$6,000	\$6,000
5	Prepare and Maintain Traffic Control Plan	1	L.S.	\$13,000	\$13,000
6	Clearing & Grubbing	1	L.S.	\$26,000	\$26,000
7	Earthwork, Grading & Compaction	1	L.S.	\$21,000	\$21,000
8	Drain Inlet Protection	1	L.S.	\$8,000	\$8,000
9	Asphalt Concrete Saw-Cutting	2,200	L.F.	\$1.50	\$3,300
10	Remove Existing AC Pavement	4,400	S.F.	\$2.00	\$8,800
11	Construct Concrete Curb Returns with ADA Ramp	4	E.A.	\$7,500	\$30,000
12	Replace Concrete Curb Returns with ADA Ramp	2	E.A.	\$10,000	\$20,000
13	Concrete Curb & Gutter	2,200	L.F.	\$40.00	\$88,000
14	Concrete Sidewalk	8,500	S.F.	\$8.00	\$68,000
15	Residential Drive Approach	25	E.A.	\$5,000	\$125,000
16	Commercial Drive Approach	9		\$9,000	\$81,000
17	Alley Approach	1	E.A.	\$7,500	\$7,500
18	Roadway Excavation	200	C.Y.	\$75.00	\$15,000
19	Class II Aggregate Base	140	C.Y.	\$95.00	\$13,300
20	Type 'A' Asphalt Concrete Pavement	120	Ton	\$250	\$30,000
21	Striping & Signage	1	L.S.	\$15,000	\$15,000
22	Class II Bike Lane	0.00	Mile	\$40,000	\$0
Base Bid Subtotal:					\$633,900
10±% Contingencies:					\$63,100
Total:					\$697,000

**Proposed and Recommended Facilities and Improvements**

**Table 4-7  
Project 3: W. Perkins Avenue Improvements**

<b>W. Perkins Avenue from Frontage Road to Garzoli Avenue</b>					
<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>PRICE</b>	<b>AMOUNT</b>
1	Mobilization/Demobilization	1	L.S.	\$40,000	\$40,000
2	Worker Protection	1	L.S.	\$5,000	\$5,000
3	Monument Preservation	1	L.S.	\$8,000	\$8,000
4	Storm Water Management & Dust Control	1	L.S.	\$5,000	\$5,000
5	Prepare and Maintain Traffic Control Plan	1	L.S.	\$13,000	\$13,000
6	Clearing & Grubbing	1	L.S.	\$25,000	\$25,000
7	Earthwork, Grading & Compaction	1	L.S.	\$20,000	\$20,000
8	Drain Inlet Protection	1	L.S.	\$8,000	\$8,000
9	Asphalt Concrete Saw-Cutting	1,000	L.F.	\$1.50	\$1,500
10	Remove Existing AC Pavement	2,000	S.F.	\$2.00	\$4,000
11	Construct Concrete Curb Returns with ADA Ramp	14	E.A.	\$7,500	\$105,000
12	Replace Concrete Curb Returns with ADA Ramp	9	E.A.	\$10,000	\$90,000
13	Concrete Curb & Gutter	1,000	L.F.	\$40.00	\$40,000
14	Concrete Sidewalk	3,800	S.F.	\$8.00	\$30,400
15	Residential Drive Approach	9	E.A.	\$5,000	\$45,000
16	Commercial Drive Approach	10	E.A.	\$9,000	\$90,000
17	Alley Approach	3	E.A.	\$7,500	\$22,500
18	Roadway Excavation	80	C.Y.	\$75.00	\$6,000
19	Class II Aggregate Base	60	C.Y.	\$95.00	\$5,700
20	Type 'A' Asphalt Concrete Pavement	50	Ton	\$250	\$12,500
21	Striping & Signage	1	L.S.	\$15,000	\$15,000
22	Class II Bike Lane	0.70	Mile	\$40,000	\$28,000
Base Bid Subtotal:					\$619,600
10±% Contingencies:					\$62,400
Total:					\$682,000

**Proposed and Recommended Facilities and Improvements**

**Table 4-8  
Project 4: Browning Road Elementary School Improvements**

<b>Access and Circulation Issues around Browning Road Elementary School</b>					
<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>PRICE</b>	<b>AMOUNT</b>
1	Mobilization/Demobilization	1	L.S.	\$59,000	\$59,000
2	Worker Protection	1	L.S.	\$8,000	\$8,000
3	Monument Preservation	1	L.S.	\$11,000	\$11,000
4	Storm Water Management & Dust Control	1	L.S.	\$8,000	\$8,000
5	Prepare and Maintain Traffic Control Plan	1	L.S.	\$19,000	\$19,000
6	Clearing & Grubbing	1	L.S.	\$37,000	\$37,000
7	Earthwork, Grading & Compaction	1	L.S.	\$30,000	\$30,000
8	Drain Inlet Protection	1	L.S.	\$11,000	\$11,000
9	Construct Concrete Curb Returns with ADA Ramp	6	E.A.	\$7,500	\$45,000
10	Replace Concrete Curb Returns with ADA Ramp	4	E.A.	\$10,000	\$40,000
11	Residential Drive Approach	112	E.A.	\$5,000	\$560,000
12	Striping & Signage	1	L.S.	\$15,000	\$15,000
13	Class II Bike Lane	1.10	Mile	\$40,000	\$44,000
14	Install Street Light	5.00	E.A.	\$4,500	\$22,500
Base Bid Subtotal:					\$909,500
10±% Contingencies:					\$90,500
Total:					\$1,000,000

**Proposed and Recommended Facilities and Improvements**

**Table 4-9  
Project 5: W. Sherwood Avenue Improvements**

<b>W. Sherwood Avenue from Garzoli Avenue to Mast Avenue (McFarland High School)</b>					
<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>PRICE</b>	<b>AMOUNT</b>
1	Mobilization/Demobilization	1	L.S.	\$42,000	\$42,000
2	Worker Protection	1	L.S.	\$6,000	\$6,000
3	Monument Preservation	1	L.S.	\$8,000	\$8,000
4	Storm Water Management & Dust Control	1	L.S.	\$6,000	\$6,000
5	Prepare and Maintain Traffic Control Plan	1	L.S.	\$13,000	\$13,000
6	Clearing & Grubbing	1	L.S.	\$26,000	\$26,000
7	Earthwork, Grading & Compaction	1	L.S.	\$21,000	\$21,000
8	Drain Inlet Protection	1	L.S.	\$8,000	\$8,000
9	Asphalt Concrete Saw-Cutting	1,670	L.F.	\$1.50	\$2,505
10	Remove Existing AC Pavement	3,340	S.F.	\$2.00	\$6,680
11	Replace Concrete Curb Returns with ADA Ramp	4	E.A.	\$10,000	\$40,000
12	Concrete Curb & Gutter	1,670	L.F.	\$40.00	\$66,800
13	Concrete Sidewalk	6,680	S.F.	\$8.00	\$53,440
14	Residential Drive Approach	51	E.A.	\$5,000	\$255,000
15	Roadway Excavation	160	C.Y.	\$75.00	\$12,000
16	Class II Aggregate Base	120	C.Y.	\$95.00	\$11,400
17	Type 'A' Asphalt Concrete Pavement	90	Ton	\$250	\$22,500
18	Striping & Signage	1	L.S.	\$15,000	\$15,000
19	Class II Bike Lane	0.75	Mile	\$40,000	\$30,000
Base Bid Subtotal:					\$645,325
10±% Contingencies:					\$64,675
Total:					\$710,000

**4.5 - Funding Opportunities**

The following summaries provide an overview of potential funding sources to implement the projects recommended in this Study. These sources include Federal, State, regional/local, and non-traditional private funding opportunities. These sources were available at the time of writing, but could be modified or made unavailable in the future.

**4.5.1 - FEDERAL FUNDING SOURCES**

**Highway Safety Improvement Program (HSIP).** The purpose of this program is to reduce traffic fatalities and serious injuries on public roads through the implementation of infrastructure-related highway safety improvements. Work on any publicly-owned roadway or pedestrian/bicycle pathway or trail that corrects or improves the safety for its users is eligible. Proposed projects are evaluated based on a benefit/cost ratio and those with the highest ratio will be selected for funding. Therefore, those projects with a higher collision history (both in frequency and severity) and a lower cost will score higher. More information on the HSIP can be found at:

<http://www.dot.ca.gov/hq/LocalPrograms/hsip.htm>

**Congestion Mitigation and Air Quality (CMAQ) Program.** The purpose of the CMAQ Program is to fund transportation projects or programs that will contribute to attainment or maintenance of the national ambient air quality standards reducing congestion and improving air quality. This program will fund the construction of bicycle and pedestrian facilities, as well as bicycle support programs such as brochures, maps, and public service announcements. Kern County is projected to receive over \$9 million a year in CMAQ funds to be distributed to the region. Funds are awarded through Kern COG which announces a call for projects approximately every two years. Additional information can be found at:

[http://www.dot.ca.gov/hq/transprog/federal/cmaq/Official\\_CMAQ\\_Web\\_Page.htm](http://www.dot.ca.gov/hq/transprog/federal/cmaq/Official_CMAQ_Web_Page.htm).

**TIGER Discretionary Grants.** In September 2017, the US Department of Transportation (DOT) announced \$500 million will be made available for transportation projects across the country under a ninth round of the highly successful Transportation Investment Generating Economic Recovery (TIGER) competitive grant program. The FY 2017 TIGER program will give special consideration to projects which emphasize improved access to reliable, safe, and affordable transportation for communities in rural areas, such as projects that improve infrastructure conditions, address public health and safety, promote regional connectivity, or facilitate economic growth or competitiveness. More information about this possible funding source can be found at:

<https://www.transportation.gov/tiger>

**Surface Transportation Block Grant (STBG) Program.** In December 2015, the Fixing America's Surface Transportation Act (FAST Act) amended the Surface Transportation Program (STP) and changed it to the STBG Program. This program provides the most flexible funding among all Federal-aid highway programs to best address state and local transportation needs, including for bicycle and pedestrian facilities. More information can be found at:

<http://www.fhwa.dot.gov/specialfunding/stp/160307.cfm>

### **4.5.2 - STATE FUNDING SOURCES**

**Active Transportation Program (ATP).** The Active Transportation Program (ATP) program was originally enacted in 2013. The ATP consolidates existing federal and state transportation programs, including the Transportation Alternatives Program (TAP), Bicycle Transportation Account (BTA), and State Safe Routes to School (SR2S), into a single program. The program focuses on increasing bicycle and pedestrian trips, health, and safety. The latest project funding recommendations are for approximately \$158,000,000. This is currently the most important funding source for pedestrian and bikeway improvements. The current Active Transportation Guidelines were approved by the California Transportation Commission (CTC) in March, 2016. Funding for the ATP may be used to fund the development of community-wide active transportation plans within or areas specifically encompassing disadvantaged communities. State and federal law segregate the ATP into multiple, overlapping components as identified in Section 2.2.8 – 2017 Active Transportation Program Guidelines. The funds available for each of the programs includes 40% to

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## Proposed and Recommended Facilities and Improvements

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Metropolitan Planning Organizations (MPO) in urban areas with populations greater than 200,000, such as Kern County, and a minimum of 25% of the funds to benefit disadvantaged communities. The City of McFarland is considered a disadvantaged community. More information and application procedures can be obtained at:

<http://www.dot.ca.gov/hq/LocalPrograms/atp/>

**California Infrastructure and Economic Development Bank (IBank).** The mission of IBank is to finance public infrastructure and private development to promote a healthy climate for jobs, contribute to a strong economy, and improve the quality of life in California communities. The Infrastructure State Revolving Fund Program (ISRF) provides low-cost financing to public agencies for a wide variety of infrastructure projects. Funding is available from \$50,000 to \$25,000,000 with loan terms of up to 30 years. Preliminary applications are accepted continuously. Additional information may be found at:

<http://www.ibank.ca.gov/ibank/programs/isrf>

**California Office of Traffic Safety (OTS).** This funding source can be used for pedestrian and bicycle safety projects as well as roadway projects. It can also be used for traffic calming projects and programs and safety and education programs. It is one of the few sources that funds support programs in addition to capital projects. For example, traffic safety rodeos may be funded for elementary, middle, and high schools, and community groups to increase awareness among various age groups. To boost compliance with the law and decrease injuries, safety helmets can be properly fitted and distributed to children in need. Other programs target high-risk populations and areas with multicultural public education addressing safer driving, bicycling, and pedestrian behaviors. Information on available grant programs can be found at:

[http://www.ots.ca.gov/Grants/Pedestrian\\_and\\_Bicycle\\_Safety.asp](http://www.ots.ca.gov/Grants/Pedestrian_and_Bicycle_Safety.asp)

**Local Transportation Fund (LTF).** Under Transportation Development Act (TDA) Article III, LTF allocations include return-to-source funds generated from the sales tax on gasoline. They are returned to the source county for local transportation projects; up to 2% of these funds may be set aside for bicycle and pedestrian projects. These funds can be used for engineering, right of way acquisition, and the construction of projects emphasizing bicycle commuters rather than recreational bicycle users. Projects may include trails serving major transportation corridors, bicycle safety programs, restriping Class II bicycle lanes, secure bicycle parking at employment centers, retrofitting to comply with Americans with Disabilities Act (ADA), and route improvements. Each county establishes its own formula for allocating the funds to the local jurisdictions within that county. More information can be obtained at:

<http://www.dot.ca.gov/hq/MassTrans/State-TDA.html>.

**State Transportation Improvement Program (STIP).** The STIP is a multi-year capital improvement program of transportation projects funded with both Federal and State

monies. The available funding is divided into two programs: the Interregional Transportation Improvement Plan (ITIP) and the Regional Transportation Improvement Plan (RTIP). The City would work through Kern COG to nominate projects for inclusion in the STIP. Additional information can be found at:

<http://www.catc.ca.gov/programs/stip.htm>

**Land and Water Conservation Fund Program.** This program provides grants to plan, acquire, and develop recreation parks and facilities including bikeway and pedestrian trails. The California Department of Parks and Recreation provides reimbursement grant funds of 50% of the total projects costs. More information and application procedures can be obtained at:

[http://www.parks.ca.gov/?page\\_id=21360](http://www.parks.ca.gov/?page_id=21360)

**Mello-Roos Community Facilities District Act of 1982.** This program allows a sponsoring agency to issue a special tax bond for a community facilities district to finance public facilities and services such as parks, recreation areas, parkways, and open spaces. Bicycle and pedestrian projects could be included in any proposed public facility. More information and application procedures can be obtained at:

[http://www.treasurer.ca.gov/cdiac/reports/M-Roos/MR\\_guidelines.pdf](http://www.treasurer.ca.gov/cdiac/reports/M-Roos/MR_guidelines.pdf)

#### **4.5.3 - REGIONAL AND LOCAL FUNDING SOURCES**

**San Joaquin Valley Air Pollution Control District (SJVAPCD) Bikeway Program.** SJVAPCD's grant and incentives program includes a bicycle infrastructure component to assist with the development or expansion of a comprehensive bicycle transportation network. The program provides incentives for construction of Class I, Class II, and Class III bicycle facilities. The program serves to promote bicycling as a viable option of transportation for residents traveling short distances to school, work, and commercial sites. Applications are accepted on an ongoing basis as funds are available. More information for the program can be found at:

<http://valleyair.org/grants/>

The purpose of this program is to assist with the development or expansion of a comprehensive bicycle transportation network. Residents of the San Joaquin Valley can utilize commuter bicycling as an alternative to daily vehicular travel. Therefore, the program serves to promote bicycling as a viable option of transportation for residents traveling short distances (less than five miles) to school, work and commercial sites. Funds are available for eligible projects that meet specific program criteria on a first-come, first-serve basis until the program funds are exhausted.

Projects serving commuters, rather than recreational users are given higher priority for funding. The maximum incentive for a Class I bicycle path is \$150,000 and for Class II bicycle lanes or Class III bicycle routes is \$100,000.

**City of McFarland.** Bicycle and pedestrian projects can be implemented in conjunction with another project including pavement resurfacing, new developments, and frontage development. Local funds to implement projects can also come from a dedication of a certain dollar amount in a City's Capital Improvements Program (CIP). Developers can contribute either directly or indirectly through impact fees.

- **General Fund.** As with any public improvement, local general fund revenues can be used to build and maintain pedestrian and bicycle facilities, or to provide a match for state and federal grants.
- **Developer Fees.** Development fees could be levied and administered by local jurisdictions to provide improvements to accommodate new development.
- **Other Local Programs.** Local agencies may implement other local programs to provide active transportation facilities, including "adopt-a-bikeway" and memorials. These programs require that private individuals or groups donate money, property, or time for the design, acquisition, and construction of the facilities.

### 4.5.4 - PRIVATE FUNDING SOURCES

In addition to the sources listed above, there are several non-traditional funding sources that are available for the implementation of project and program recommendations. The following paragraphs briefly describe several of the innovative ways that communities have funded parts of their bicycle programs.

**California Conservation Corps (CCC).** The program provides emergency assistance and public service conservation work for city, county, state, federal and non-profit organizations. Both urban and rural projects are eligible and are selected based on environmental and natural resource benefits and public use and on-the-job training opportunities. Use of the CCC would be effective at reducing project costs. The Active Transportation Program encourages participation of the CCC and Local Conservation Corps. More information may be found at:

<http://www.ccc.ca.gov>

**Grant and Foundation Opportunities.** Private foundations provide excellent opportunities for funding specific capital projects or single event programs. Generally, to qualify for these types of funds, a bicycle advisory committee or established non-profit group acting in its behalf must exist. Typically, private foundations are initially established for specific purposes, e.g. children and youth needs, promotion of certain professional objectives, educational opportunities, the arts, and community development. An excellent source of information about foundations and their funding potential can be found in the Foundation Directory, available at many public libraries or on-line at:

<http://foundationcenter.org/>

**Memorial Funds.** These programs are advertised as potential donor projects to be funded via ongoing charitable contributions or funds left to a particular project through a will. Most

memorial projects include a memorial plaque at a location specific to the improvement or at a scenic vista point.

**Revenue-Producing Operations.** As part of the development of a trail or bike path, plans can specifically include the location of a revenue-producing operation adjacent to the proposed improvement. For example, bicycle rental facilities, food and drink establishments, bike storage facilities and equipment centers, and/or equestrian centers would be appropriate uses. The on-going lease revenues from these operations could then be used for trail and/or path maintenance

## **SECTION 5 - RECOMMENDED DESIGN STANDARDS, POLICIES, AND PROGRAMS**

This section recommends design standards and policies for future pedestrian and bicycle infrastructure for adoption by City Council. These standards and policies are based on the most current laws, recommendations, guidance, and best practices. This section also provides guidance for education, enforcement, and evaluation activities to help improve the safety of pedestrians and cyclists.

### **5.1 - Recommended Design Standards**

In order to ensure a safe pedestrian and bikeway network, it is important that pedestrian and bicycle facilities meet minimum design standards. Design standards, which contain design criteria as well as specifications, are a reference for project planning, bidding and construction. The City of McFarland's design standards for sidewalks, curb ramps, bicycle facilities and street lights have been reviewed for consistency with state and federal accessibility requirements. The review found that several of the City standard details need to be brought up to current requirements.

McFarland street standards are included in the City's 2035 Circulation Element. In order to ensure that curb ramp designs are consistent with the most current accessibility requirements the City should refer to the Caltrans Accessibility Design information found here:

<http://www.dot.ca.gov/design/stp/accessibility.html>

The City's design standards for bicycle facilities are included in the 2014 McFarland Bicycle Master Plan. Cross-sections of these facilities are shown in Figure 5-1. Their design criteria, including signing, pavement delineation, and intersection treatments, are included in Appendix A of the McFarland Bicycle Master Plan. The bikeway design criteria are based on Chapters 400 and 1000 of the Highway Design Manual (2014), Part 9 of the 2012 California Manual on Uniform Traffic Control Devices (MUTCD) and recognized best practices of communities in California (City of McFarland 2014). The City should reference the following websites for future updates:

Caltrans Highway Design Manual: <http://www.dot.ca.gov/design/manuals/hdm.html>

Caltrans MUTCD: <http://www.dot.ca.gov/trafficops/camutcd/>

As previously discussed in Section 3, the City is adopting Kern County's street light improvement standards to direct the location and spacing of street lights. However, the City recently adopted its own light standard. See Figure 5-2.

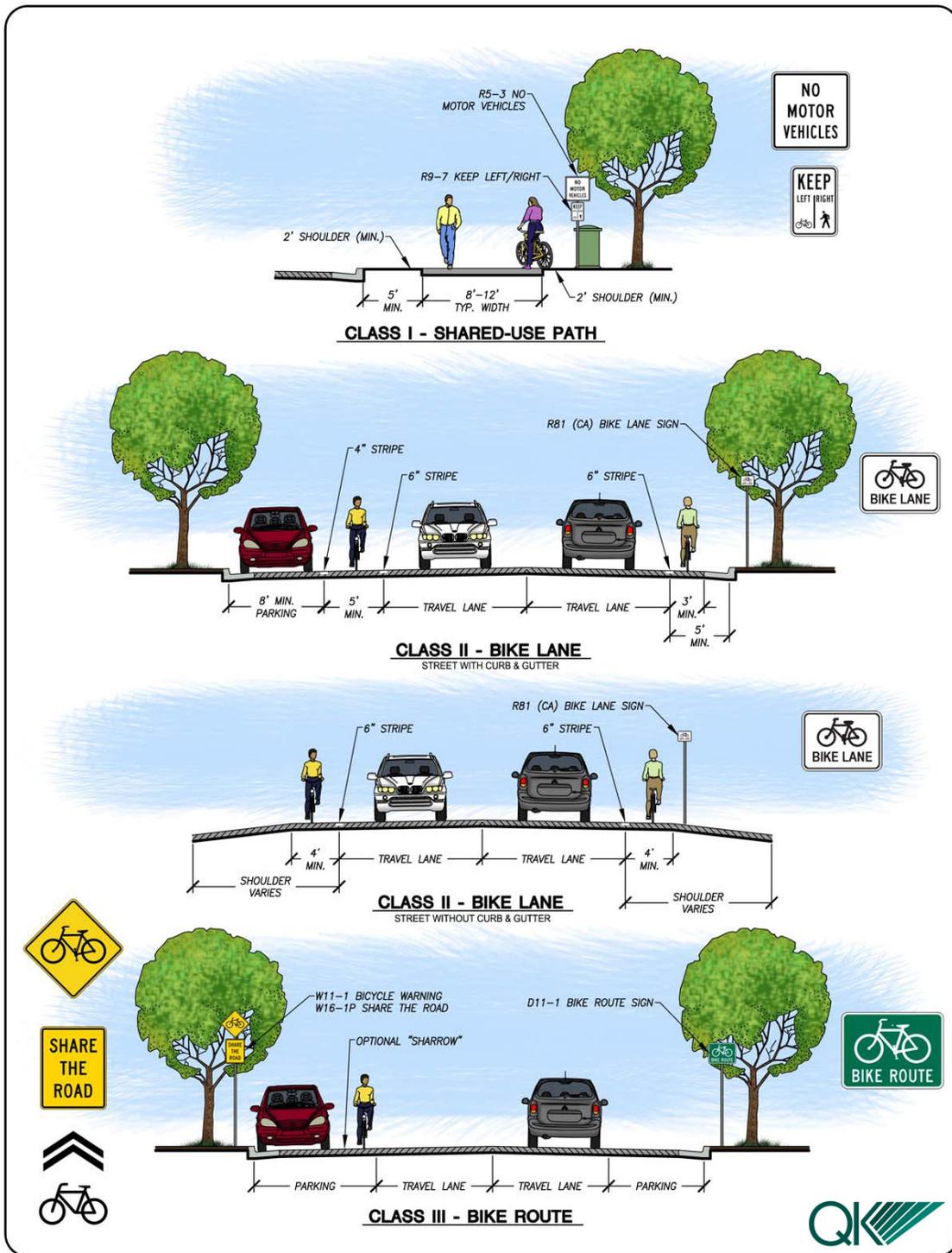


Figure 5-1  
Types of Bicycle Facilities

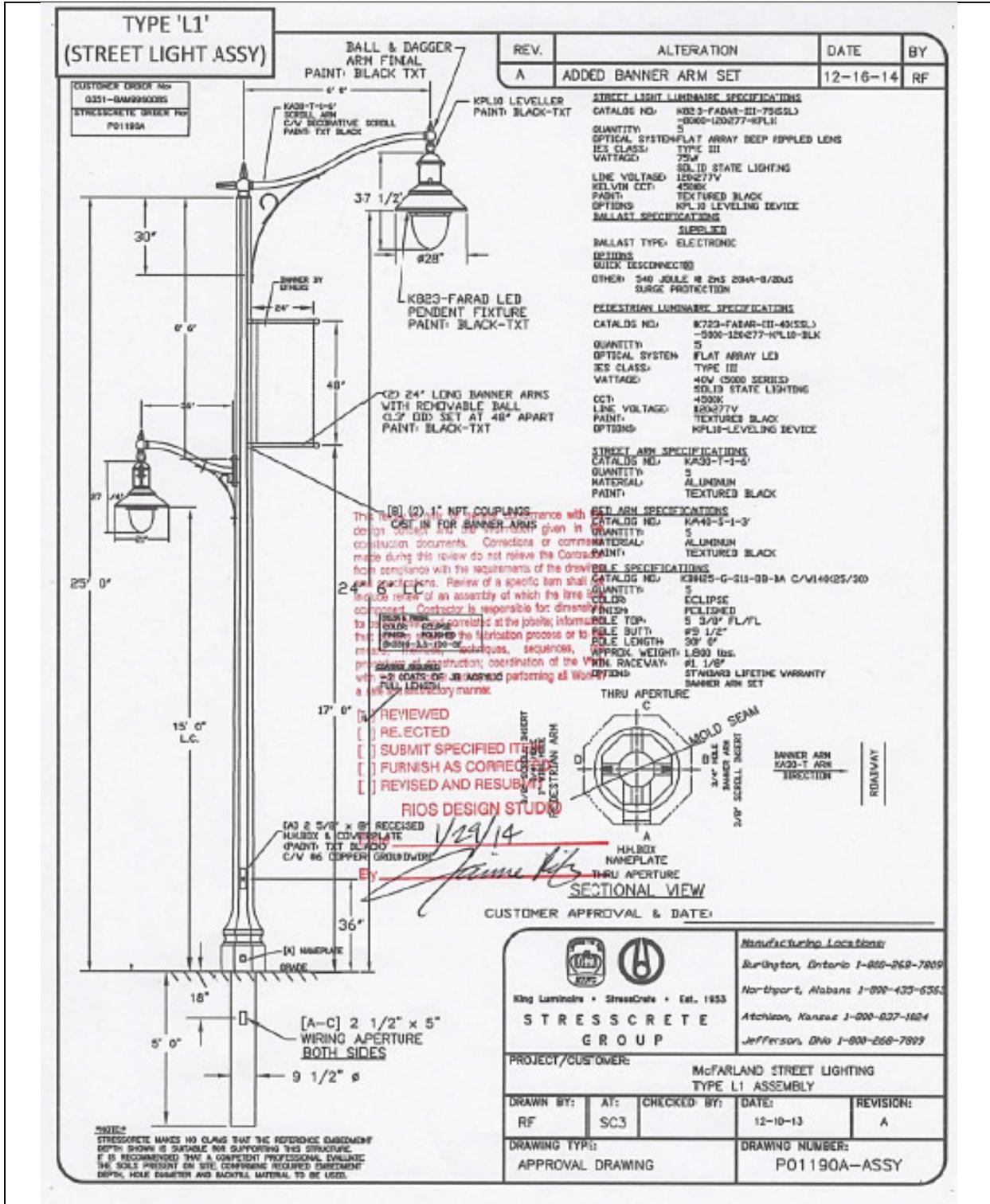


Figure 5-2  
McFarland Street Light Standard

The following section was taken from the Kern County Development Standards: Chapter IV. Design and Construction Standards:

**Sec. 104-6 Street Lights**

The Engineering, Surveying & Permit Services Department strives to find ways to operate as economically as possible to save energy costs and reduce carbon foot print. The Department will entertain the use of lower wattage bulbs, such as light emitting diode (LED) and solar street lights. The developers are encouraged to utilize new technology in order to reduce carbon foot print and reduce energy cost.

Unless otherwise approved by the Director, street lighting to be designed in conformance with these specifications, RP-8, "American National Standards Practice for Roadway Lighting, Illuminating Engineering Society of North America, Kern County Zoning Ordinance and/or other approved design guidelines.

All material and work shall conform to the requirements of the California Electrical Code, National Electrical Code, and other pertinent codes and regulations.

**104-6.01 Residential Areas** - Street lights shall be located at intersections, at midblock with blocks greater than 600 feet between intersections, at ends of cul-de-sacs greater than 150 feet in length, and on curved streets as required by the Director. Street lights on arterial and collector streets or intersections with an arterial street shall be 9,500 lumen. Street lights on local streets shall be 5,800 lumen. Lumin output and light sources may vary depending on new technology. Street lights shall have an acceptable maintenance entity formed and be energized prior to acceptance of the improvements. Street light construction shall be in accordance with Plate R-75 unless approved otherwise by the Director.

**104-6.02 Commercial and Industrial Areas** - Street lights shall be located at intersections and ends of cul-de-sacs greater than 150 feet in length. Luminaires shall be as provided in the above paragraph. On all streets, the pull box shall be installed and the light wired from the pull box at the pole per plate R-76. Electrical service shall be provided to the street light from the adjacent parcel (on either side of the street) as it is developed. Electrical service easements shall be granted as required. Street lights shall be installed per plate R-75.

**104-6.03 Additional Street Lights** - In commercial, industrial, or residential areas, additional street lights shall be installed as required by the Director.

**104-6.04** Street light shall be installed at post office approved community mail boxes.

**104-6.05** Street light shall be installed at all passenger bus loading/unloading zones.

**104-6.06** All County Service Area maintained street lights shall be Rate Schedule LS1 "PG&E - owned street and Highway Lighting". Luminaire shall be full cutoff optics.

**104-6.07** Street light location plan and general plan details shall be submitted for review and approval by the engineer. The plans shall show and identify all street lights to be installed, distance between poles, height of poles, wattage of lamps, lumens, type of luminaire, irrigation pedestals and all other pertinent information. Also, all existing street lights within 400 feet of the project shall be clearly identified and shown on the plans.

## **5.2 - Recommended Policies**

A policy is a deliberate plan of action taken to implement goals and objectives. The overarching goal of this Study is to improve pedestrian and bicycle conditions within the City by identifying strategies to develop and enhance existing pedestrian and bicycle infrastructure and programs, with a focus on access, connectivity, and safety. Objectives were based on those developed for the 2014 McFarland Bicycle Master Plan and updated to support both bicyclist and pedestrian safety and mobility. The following policies are provided to support implementation of project-specific improvements, and to help provide the needed staff directive to keep McFarland a safe, pedestrian- and bicycle-friendly city.

***Objective 1: Prepare and maintain a Pedestrian and Bicycle Master Plan that identifies existing and future needs, provides specific recommendations for facilities and programs, and identifies priorities and funding sources for implementation.***

- Policy 1.1: Implement a combined Pedestrian and Bicycle Master Plan (Active Transportation Plan) which identifies existing and future needs.
- Policy 1.2: Update the Pedestrian and Bicycle Master Plan to meet requirements of funding opportunities approximately every four to five years.
- Policy 1.3: Schedule pedestrian and bicycle network improvements in annual updates to the Capital Improvement Program (CIP).
- Policy 1.4: In the annual staff, operations, and maintenance budgets, include funding for regular facility evaluation, maintenance, and repair, as well as funding to review development and zoning proposals for effect on mobility.
- Policy 1.5: Establish a spot improvement program for low-cost, small-scale improvements, such as pavement maintenance, hazard removal, or bicycle rack installation.
- Policy 1.6: Work with Caltrans on pedestrian and bikeway issues related to the State highways.
- Policy 1.7: Assign a project coordinator to oversee implementation of the Pedestrian and Bicycle Master Plan and coordinate activities between City departments and other jurisdictions.

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## Recommended Design Standards, Policies, and Programs

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- Policy 1.8: Initiate a program to identify and repair unsafe areas along designated bikeways, such as unsafe drainage grates and uneven pavement.
- Policy 1.9: Develop procedures to ensure proper communication between Public Works, Police, and Fire Departments to ensure access to walkways/bikeways, quick response times, and cleanup after special events such as vehicle collisions, severe storms, and other events.
- Policy 1.10: Involve nearby businesses, residents, and appropriate organizations and nonprofits to assist with maintenance responsibilities, watch programs, litter collection days, and similar events.
- Policy 1.11: Require proposed development to implement and develop funding mechanisms to 1) maintain sidewalks, roadway paving, and landscaping 2) implement streetscape design improvements, and 3) accommodate growth with an emphasis on reduced reliance on the automobile.
- Policy 1.12: Consider the California Highway Design Manual (HDM), the California Manual of Uniform Traffic Control Devices (MUTCD), the National Association of City Transportation Officials (NACTO) guidelines, and the American Association of State Highway Transportation Officials (AASHTO) Guidelines when designing pedestrian and bicycle facilities.
- Policy 1.13: Accommodate the needs of bicyclists of all types (commuters, recreational riders, children, and families) in planning, developing, and maintaining a bikeway network that is safe and convenient.

***Objective 2: Develop a comprehensive pedestrian and bikeway network that is feasible, fundable over the life of the Master Plan, and serves the pedestrian's as well as bicyclist's needs for all trip purposes.***

- Policy 2.1: Expand the current bikeway network to fill the gaps in existing routes, provide links to trip attractors, and enhance safety for all roadway users and bicyclists of all abilities.
- Policy 2.2: Develop a pedestrian and bikeway network that includes on-street facilities and shared-use pathways that make use of available rights-of-way along utility alignments and railroad corridors.
- Policy 2.3: Develop a pedestrian and bikeway network that enhances safety and convenience of walking and bicycling to work and to school as a means to reduce dependence on the automobile, improve air quality, and promote healthy exercise.
- Policy 2.4: Include facilities that support walking and bicycling in all new development projects. This should include pedestrian/bicycle connections from contemporary subdivision designs to surrounding arterials and collectors,

bicycle parking at shopping, employment, and recreational centers and bike lanes on new collector roadways.

Policy 2.5: Provide connectivity between the on-street bikeways and shared-use path segments of the proposed system.

Policy 2.6: For schools within the City of McFarland, evaluate and consider opportunities to improve pedestrian and bicycle safety within a quarter mile radius of school grounds, including, but not limited to, crosswalks, lighting, signage, pavement markings, traffic calming, ADA access, crossing supervision, and wide sidewalks.

Policy 2.7: Work with Caltrans on the implementation of recommended bikeway improvements identified for roadways in the State highway system, including interchanges.

***Objective 3: Provide the related support facilities and amenities necessary for bicycle travel to assume a significant role as a local alternative mode of transportation and recreation.***

Policy 3.1: Consider support facilities such as secure bicycle parking, showers, and storage lockers for equipment and clothing for City employees. Encourage other employers to provide similar programs.

Policy 3.2: Provide secure bicycle parking at shopping, employment, and recreational centers.

Policy 3.3: Adopt a bicycle parking ordinance that specifies parking needs for commercial, office, and industrial developments of a certain size.

Policy 3.4: Encourage new commercial, office, and industrial development to provide a variety of support facilities such as secure and convenient bicycle parking and shower/locker facilities.

Policy 3.5: Ensure secure, adequate and easily accessible bike parking at destinations throughout McFarland.

Policy 3.6: Install directional and informational signage, “Share the Road” signs, markers, and stencils on on-street bikeways, local roads, and State Routes to improve “way-finding” for bicyclists, assist emergency personnel, and heighten motorist’s awareness.

Policy 3.7: Encourage the McFarland Unified School District to provide and actively maintain sufficient, convenient, safe, and attractive bicycle racks at all public schools.

***Objective 4: Maintain and improve pedestrian and bikeway network and support facilities, and require that routine maintenance of local roads consider pedestrian and bicycle safety.***

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## Recommended Design Standards, Policies, and Programs

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- Policy 4.1: Include a bicycle infrastructure improvements section in the City's Capital Improvement Program.
- Policy 4.2: Initiate a program to identify and repair unsafe areas along designated walkways and bikeways, such as uneven pavement and unsafe drainage grates.
- Policy 4.3: Develop procedures to ensure proper communication between Public Works, Police, and Fire Departments to ensure access to walkways and bikeways, quick response times, and cleanup after special events such as vehicle collisions, severe storms, and other events.
- Policy 4.4: Involve nearby businesses, residents, and appropriate organizations and nonprofits to assist with maintenance responsibilities, watch programs, litter collection days, and similar events.
- Policy 4.5: Establish a standard for trimming intrusive and obstructive vegetation and clearing of debris from pedestrian and bicycle areas.
- Policy 4.6: Maintain geometry, pavement surface condition, debris removal, markings, and signage on Class II and Class III bikeways to the same standards and condition as the adjacent motor vehicle lanes.
- Policy 4.7: Require that road construction projects minimize their impacts on pedestrians and bicycles through the proper placement of construction signs and equipment, and by providing adequate detours.

***Objective 5: Improve safety for pedestrians and bicyclists by implementing education and promotion programs for all McFarland residents and by enforcing pedestrian, bicycle, and motorist laws and regulations affecting pedestrian and bicycle safety.***

- Policy 5.1: Develop or expand existing pedestrian/bicycle safety materials and education programs for child pedestrians and bicyclists, and develop programs for adult pedestrians, bicyclists and motorists that increase knowledge of safe walking/bicycling practices and encourages individual behavior change with emphasis on pedestrian/bicycle safety and laws related to walking and bicycling.
- Policy 5.2: Continue the enforcement of the California Vehicle Code (CVC) with respect to pedestrian and bicyclists' rights and responsibilities in order to reduce CVC violations that result in collisions.
- Policy 5.3: Develop a schedule of fines applicable to infractions committed by bicyclists within the City of McFarland (allowable under CVC Section 42001 (d)).
- Policy 5.4: Continue the use of bicycle patrol officers within the McFarland Police Department.

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## Recommended Design Standards, Policies, and Programs

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- Policy 5.5: Promote programs that reduce incidences of theft.
- Policy 5.6: Continue to coordinate the delivery of bicycle safety education programs to schools, utilizing assistance from law enforcement agencies, local sports and/or bicycle shops, and other appropriate groups and organizations.
- Policy 5.7: Improve the safety of busy intersection crossings using one or more of the following: routine pedestrian signal cycles, pedestrian push buttons, high-visibility crosswalk markings, signage, and education.
- Policy 5.8: Prioritize safety improvements in the vicinity of schools, public transit, and other high-priority pedestrian destinations.
- Policy 5.9: Improve collection and analysis of collision data. The Public Works Department should review this data to identify problem areas which require immediate attention.
- Policy 5.10: Maximize traffic safety for automobile, transit, bicycle users, and pedestrians.
- Policy 5.11: Restrict parking near intersections to ensure visibility and traffic safety.
- Policy 5.12: Work to reduce the rate of pedestrian and bicycle collisions, injuries, and fatalities.
- Policy 5.13: Identify safety counter measures at areas of high collision activity. Recommend and implement safety improvements.
- Policy 5.14: Driveways and driveway landscaping shall be designed to minimize interference with pedestrians.
- Policy 5.15: Ensure that on-street parking does not conflict with Class II bike lanes.
- Policy 5.16: Implement bicycle detection and timing at existing traffic signals on bikeway facilities on a city-wide basis.
- Policy 5.17: Include bicycle detection and signal timing requirements along with traffic signal installation or modification requirements for new developments. Bicycle detection and timing should be implemented on a City-wide basis, as funding and implementation opportunities occur.

***Objective 6: Increase public awareness of the benefits of available walking and bicycling programs.***

- Policy 6.1: Provide current and easily accessible information and public outreach programs about the pedestrian and bicycle network, bicycle parking, and other related programs.

Policy 6.2: Encourage walking and bicycling through incentive/awareness programs.

Policy 6.3: Develop and promote education and encouragement programs, including, but not limited to, Bike to Work Day, Bike to School Day, Walk to School Day, and Bicycle Safety courses. School programs to encourage walking and bicycling should include the elementary, middle, and high school levels. Promote programs of the Police Department such as Bicycle Rodeos, bicycle and pedestrian pamphlets, and classroom education. Evaluate the success and effectiveness of each program and introduce at least one new initiative each year.

Policy 6.4: Participate in the development and maintenance of a pedestrian and bicycle safety campaign as a tool to deliver comprehensive safety awareness, as well as driver, cyclist, and pedestrian education information.

***Objective 7: Encourage methods to increase pedestrian access and mobility for all ages and abilities.***

Policy 7.1: Encourage the inclusion of amenities, such as benches, landscaping, or art, in pedestrian improvement projects.

Policy 7.2: Update City sidewalk/curb ramp design standards to ensure compliance with requirements of the Americans with Disabilities Act and to better serve pedestrian needs.

Policy 7.3: Consider the use of root barriers to help prevent sidewalk deterioration from street trees.

***Objective 8: Street crossings should be safe and accessible.***

Policy 8.1: Crosswalks should be a minimum of 5 feet in width, and at least 10 feet in business districts.

Policy 8.2: Appropriate pedestrian crossing signage should be displayed in advance of and adjacent to all marked controlled crosswalks in order to enhance visibility of pedestrians by motorists.

Policy 8.3: Controlled pedestrian crosswalks should be well marked with high visibility paint, be adequately lighted, have clear sight distances, and be free from obstructions, such as foliage and poles.

Policy 8.4: Mid-block crosswalks, if supported by an engineering study, should be designated in areas with relatively high pedestrian activity and crossing patterns, mainly in commercial and school areas.

- Policy 8.5: Where feasible, pedestrian crossing islands should be considered where pedestrians are required to cross a wide multi-lane street, especially at uncontrolled locations.
- Policy 8.6: Curb extensions should be considered at intersection corners in highly urbanized areas as a way to minimize the crossing distance of pedestrians and to increase pedestrian visibility.
- Policy 8.7: Identify and mitigate impediments and obstacles to walking to locations that attract pedestrians, such as commercial areas, schools, transit stops, recreational facilities, and senior facilities.
- Policy 8.8: Modify signal timing as needed to provide pedestrians with sufficient crossing time and minimize pedestrian/vehicle conflicts.
- Policy 8.9: Identify locations where lighting should be enhanced to provide better visibility and a more comfortable nighttime environment for pedestrians.
- Policy 8.10: Consider opportunities to upgrade existing pedestrian signals by adding countdown, audible, and tactile/vibrational signals.

***Objective 9: Maximize the amount of funding for pedestrian and bicycle projects and programs throughout McFarland with an emphasis on implementation of a Pedestrian and Bicycle Master Plan.***

- Policy 9.1: Work with federal, state, regional, and local agencies and any other available public or private funding sources to secure funding for the pedestrian and bicycle system.
- Policy 9.2: Encourage multi-jurisdictional funding applications to implement the regional pedestrian and bicycle system.
- Policy 9.3: Seek funding from the Active Transportation Program (ATP) and other grants for alternative transportation.

***Objective 10: Integrate pedestrian and bicycle facilities with public transit.***

- Policy 10.1: Develop and enhance opportunities for pedestrians and bicyclists to easily access other modes of transportation.
- Policy 10.2: Work with Kern Transit and Delano Area Rapid Transit to accommodate bicycles on transit and plan for the need for additional bicycle storage capacity on transit to ensure capacity keeps up with demand.

### **5.3 - Recommended Programs**

Safe pedestrian and bicycle systems are best accomplished by supporting infrastructure projects (Engineering) with non-infrastructure programs (Education, Enforcement, Encouragement, and Evaluation). This “Five E’s” strategy was introduced with the Safe Routes to School initiative and has become the cornerstone of safe and efficient pedestrian and bicycle systems. Engineering projects improve the physical walking and bicycling environment, while Education, Encouragement, and Evaluation programs promote their safe use. More information about each of these programs is provided below, including specific programs that the City can implement to promote and expand pedestrian and bicycling activities. This section reflects and expands upon the bicycle programs that were recommended in the McFarland Bicycle Master Plan.

#### **5.3.1 - EDUCATION PROGRAMS**

Education programs teach the community about walking and bicycling safely, and increase awareness of existing opportunities and facilities. Safety education targeted at all road users is an important means for promoting safe interactions between pedestrians, motorists, and cyclists, by educating pedestrians and bicyclists of the proper rules of the road and by improving their walking and bicycling skills, and by helping motorists understand the rights of pedestrians and bicyclists on the road.

Pedestrian and bicycle education programs face serious challenges; they must compete for funds, public interest, time constraints, and the need to tailor training sessions for groups of varying ages and knowledge needs. In addition, implementing educational programs can put stress on an already overloaded staff. For these reasons, agencies must explore all possible avenues in designing and implementing a bicycle education strategy. The McFarland Recreation and Park District, as well as various City departments, including Community Development, Engineering, Police, and Public Works, should be brought into the effort. Schools, community and civic organizations, employers, local businesses, and cycling clubs should also be tapped as resources. Some of the most successful programs are the result of a public and private coalition working together toward a common goal. The following educational programs should be considered by the City:

**Safe Routes to School (SRTS):** SRTS encompasses a broad array of programs designed to encourage walking and cycling to school. These programs focus on improving traffic safety around schools and promoting the health benefits of increased walking and bicycling. At the same time, SRTS programs benefit non-participating motorists and transit users with reductions in traffic congestion around schools. SRTS programs typically involve partnerships among municipalities, school districts, community volunteers, and law enforcement. The City should work with the school district to implement a SRTS program that includes a formal pedestrian and bicycle safety curriculum to be used in all elementary schools. In addition to safety, the curriculum should promote walking and bicycling as a fun way of getting to school. Getting children accustomed to non-motorized forms of transportation at an early age helps encourage walking and bicycling as an alternative mode of travel in their future.

**Bike Rodeos:** A bicycle rodeo is a bicycle skills event that provides an opportunity for bicyclists to practice and develop skills that will help them to become better bicyclists and avoid typical crashes. Rodeos are outdoor, on-bike events, which may be offered during school or on weekends. Rodeos are usually set up in a parking lot and typically include helmet fitting, equipment safety checks, and several on-bike "skill stations" such as slaloms, spiral courses, and "slowest finisher wins" races. Previous educational efforts by the City include the use of Bike Rodeos (City of McFarland 2014).

**Public Awareness Campaigns:** These campaigns are designed to promote safe behaviors and actions. These campaigns can be implemented in a variety of ways:

- As funding or other opportunities become available, consider using volunteers or City staff to create public service announcements for display on television, the internet, and/or outdoor billboards;
- Utilize home mailings and utility bills to distribute brochures, newsletters, and other safety and education materials. Consider providing different materials depending on the target audience, which might vary by location or age;
- Partner with Kern Transit and Delano Area Rapid Transit to display posters promoting safe interactions between road users on transit vehicles and at bus stops; and
- Partner with other cities to share and obtain traffic safety information and best practices.

### **5.3.2 - ENFORCEMENT PROGRAMS**

Enforcement programs promote the rules and responsibilities of the road through partnerships with local law enforcement. Enforcement programs can help reduce negative behaviors on the part of motorists, pedestrians, and bicyclists alike, such as speeding, double parking, and disobeying traffic signals, crosswalk rules, and right-of-way rules. The McFarland Police Department currently has a Bicycle Enforcement Team comprised of two bicycle patrol officers. These officers build community relations by providing high visibility patrols, and conducting bicycle safety and educational programs for local schools, youth groups, and service clubs (City of McFarland 2017). In addition, the following enforcement programs should be considered by the City:

**Vision Zero Campaign:** Vision Zero is a multi-national road safety initiative that aims to achieve a zero tolerance for fatalities or serious injuries on any road system. Vision Zero programs focus on multidisciplinary collaboration to ensure community priorities are addressed in policies and practice. Local traffic planners and engineers, police officers, policymakers, and advocates work together to create a safer road system through strategies such as lowering speed limits, redesigning streets, and enhancing traffic enforcement technology.

**Enforcement Visibility:** This strategy employs visual enforcement reminders as a way to deter unlawful behavior. Enforcement activities can be undertaken by community members as well as law enforcement. Examples include:

- Post “Slow Down” yard signs in problem neighborhoods;
- Circulate a Safe Driver Pledge through schools and/or neighborhood programs;
- Implement a volunteer Crossing Guard Program;
- Install Speed Trailers along problem roadways, to alert drivers to their travel speed;
- Install automated enforcement (cameras) at high-activity points; and
- Create Patrol Zones, areas of heightened police patrol, in areas that have been identified as unsafe.

**Warning and/or Reward Stops:** Police officers may stop pedestrians and cyclists who are behaving improperly or who lack the required safety equipment such as helmet, or lights. Improper behaviors include unsafe crossing maneuvers (outside of a crosswalk or in the middle of a busy street), failure to stop at stop signs or signals, cycling on the wrong side of the road, cycling at night without lights, or behaving unpredictable while proceeding down the road. If an officer is properly prepared, these stops are opportunities for behavior-targeted education. Violation-specific handouts, ideally available in each language spoken in a jurisdiction, can help to reinforce each message. Bike shops sometimes work with law enforcement to provide free bike lights, or coupons good for discounts on helmets, lights, locks, and accessories.

Some police departments also make “good pedestrian” and “good bicycle driving” stops of youths, rewarding proper pedestrian and bike behavior with coupons for attractions and restaurants. Such programs are usually pre-announced to the community and coupled with other educational outreach and promotion.

### **5.3.3 - ENCOURAGEMENT PROGRAMS**

Encouragement programs get the community excited about walking and bicycling through special events and activities. These programs foster participation and promote walking and bicycling as a viable alternative to the automobile. Some activities can be implemented in conjunction with other community groups; and thereby minimize the cost to the city. The programs described below include possible employee programs as well as activities aimed at the general population. The following encouragement programs should be considered by the City:

**Organized Groups and/or Events:** Monthly community walking/biking days, special-event/fundraising walks and rides, guided walking tours, employer lunchtime walks, and organized walk/ride-to-transit campaigns are all examples of simple initiatives that can conveniently and seamlessly integrate walking into a variety of lifestyles. The formation of walking and bicycle groups can help foster and organize these events. Examples of nationally-sponsored events are listed below.

Walk to School Day began as a movement to restore and improve pedestrian safety and "walkability" in neighborhoods and cities, and has become a worldwide event devoted to encouraging parents to walk with their children to school. This popular event occurs each October, but many communities have expanded this program to a monthly event. For more information contact: <http://www.walktoschool.org>

Bike to School/Work Day began as a way to build upon the energy of National Bike Month. The month of May is National Bike Month, during which Americans are encouraged to ride a bike at least once. The third week is typically when cities and other jurisdictions hold Bike to School/Work Day promotions, often on Friday. California's statewide Bike to Work Day promotion is coordinated by the California Bicycle Coalition (CBC), based in Sacramento ([www.calbike.org](http://www.calbike.org)). Information about Bike to School Day can be found at: <http://www.walktoschool.org>

**Helmet Giveaways:** Many public health agencies and city police departments offer free or discounted helmets to children and parents, often at bicycle rodeos. Another strategy is to offer free helmets as an incentive to sit through a bicycle safety presentation.

**School Incentives:** Incentives are used by schools to promote health through walking and biking, while reducing traffic congestion around school campuses. Individual students or classrooms receive rewards and/or celebrations for the highest number of walkers/bikers, or the most days walked/biked. Other programs incentivize parents to encourage walking and biking through volunteer participation. A Walking School Bus is an organized group of children walking to school under the supervision of one or more volunteer adult. A Bicycle Train is an organized group of children riding to school under adult supervision. Parent volunteers can receive recognition and/or gift cards for their participation.

**Employer Incentives:** Incentives are used by many agencies and employers to lure prospective participant out of his/her single occupant vehicle and encourage them to use other means of transportation, such as carpooling, transit, walking or bicycling for commuting. Incentives can be in the form of cash, discounts at participating businesses, or insurance benefits. These programs should build upon the commute reduction efforts of the San Joaquin Valley Air Pollution Control District's Rule 9410 which requires employers with 100 or more employees traveling during peak traffic hours to encourage the use of alternative forms of transportation in order to reduce air pollution from vehicle emissions ([www.valleyair.org](http://www.valleyair.org)).

### 5.3.4 - EVALUATION PROGRAMS

Evaluation programs help to measure the success of implemented projects. Evaluation activities can help set goals, establish baseline data for planning, and secure additional funding. The following evaluation programs should be considered by the City:

**Pedestrian/Bicycle Counts:** Manual or automated counts of pedestrians and bicyclists at specific locations help determine facility use and create a user profile. They can be used as a justification for facility and/or safety enhancements.

**Pedestrian/Bicycle Audits:** An audit is an evaluation of the walking and bicycling environment. Audits are used to assess safety, access, and convenience of pedestrian and bicycle facilities, and to recommend improvements. Audits are best performed by a multidisciplinary team of professionals (engineers and planners), specialists and users.

**School Surveys:** School districts should administer annual surveys to determine modes of travel to school, and monitor changes over time. These surveys can help determine the effectiveness of current walk/bike campaigns.

**Crash Data:** Local jurisdictions should collect and maintain data on crashes involving pedestrians and bicyclists. Crash analysis can help identify safety issues and potential solutions.

**Establish and Evaluate Performance Measures:** Pedestrian and bicycle planning efforts should include performance measures to help quantify success. Performance measures should be tied to specific benchmarks and the appropriate responsible agency or department, and their progress should be reviewed on a set schedule.

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**APPENDIX A**  
**2015 CDBG APPLICATION**

Planning Only (20AC)  
**Pedestrian & Bicycle Impediment Study**

**2015 CDBG APPLICATION**  
**Planning & Technical Assistance (PTA) Activity – Forms**

- Income survey or HUD Low Income Census data - attach full copy of proper documentation, including Census Tract and Block Group maps, at the end of this activity description section.
- Jurisdiction-Wide
- Targeted Area

**Be sure to add the page numbers for the associated documentation in the Table of Contents above.**

5. **Public Benefit (For ED PTA activities only):** Describe how the planning activity will lead to creation or retention of jobs and low/mod jobs by completing this study:  
 N/A

<b>ED – PLANNING &amp; TECHNICAL ASSISTANCE</b>					
<b>PROPOSED ACTIVITY(S) AND BENEFICIARIES</b>					
<i>Complete and enter the following information:</i>					
1. <i>The projected number of businesses to be assisted; and,</i>					
2. <i>The estimated number of jobs to be created and/or retained by each activity proposed under this application.</i>					
<u>No. of Business Expansions</u>	<u>No. of Business Start-Ups</u>	<u>No. of Jobs Created</u>	<u>No. of Jobs Retained</u>	<u>No. of Low/Mod Jobs*</u>	<u>CDBG National Objective*</u>
					<input type="checkbox"/> Low/Mod

6. **Activity Description:** Provide a complete narrative explaining the need for the study. Describe the scope of work and full process for completing the study with each of the key steps. Check the instructions to make sure you have provided all the required information.

City of McFarland will be doing the first citywide comprehensive Pedestrian and Bicycle Impediment Study that is intended to help establish a strategic vision for improving walking and bicycling opportunities for residents. This strategic vision will feed into the City Bicycle Master Plan and Circulation Element Plan that stress the need to provide goals, principles and polices to facilitate non-vehicular modes of transportation primarily focusing on pedestrians and bicyclists. While these documents provide some guidance for infrastructure improvements they are more geared to street design and installing bicycle facilities and not to identifying impediments such as deteriorated or missing sidewalk, American With Disabilities Act Ramps or insufficient lighting of streets. These impediments expose pedestrians and bicyclists to unsafe conditions.

The study will be working with local government, schools, businesses, non-profit organizations, and the general public of the City of McFarland to conduct the Pedestrian and Bicycle Impediment Study as a mechanism to foster a better understanding of bicycle and pedestrian needs within the city. The Study will also be intended to serve as a means of guiding policies, programs, and investments intended to maximize opportunities for greater walking and biking activity now and in the future within the City of McFarland.

In general, the Pedestrian and Bicycle Impediment Study objectives:

- Provide a comprehensive inventory of existing and currently proposed on and off - road bicycle and pedestrian facilities in the City of McFarland.
- Increase the city's understanding of how improving walking and bicycling connectivity between residential areas, employment centers, schools, retail centers, recreational centers, and other attractions increases individual mobility, enhances transit options, and promotes active living.
- Serve as a framework for identifying and selecting bicycle/pedestrian projects for the Regional Transportation Plan and Transportation Improvement Program.
- Provide guidance for engineering, education, enforcement, encouragement, and evaluation activities to help improve the safety of walking and bicycling.
- Reduce collision risk: Identify potential conflict points and create solutions to better manage bicycle and pedestrian flow.
- Improve existing infrastructure: Identify strategies to develop and enhance the existing bicycle and pedestrian infrastructure with a focus on access, connectivity, and safety.
- Develop design standards: Define bikeway and pedestrian infrastructure standards to guide future development.
- Increase bicycle and pedestrian mode share and safety: Guide development of both marketing and education programs to increase mode share and safety.

The City of McFarland will advertise a Request for Proposal to hire a consultant to conduct a Pedestrian and Bicycle Impediment Study with the aforementioned objectives in mind. The consultant will conduct a field survey to identify areas of the City of McFarland that lack or have deteriorating or inadequate infrastructure as well as conduct a public workshop to determine the areas that the residents of McFarland consider high priorities and include peer review studies of other cities.

7. **Final Product Description:** Provide the title and describe in detail each final product that will be produced from this planning activity.

Once the data has been collected and impediments identification process is complete, the consultant will prepare a study report that will include:

- Survey results, need assessment, methodology, priority list, funding options
- Project Maps and Cost Estimates for sidewalks and bikeways
- Identify areas with High Potential for walking and biking
- Roadway level of service for bicycle and pedestrian project periodization
- City Sidewalk Priority Map

- City Bikeway Priority Map
- A funding toolbox with sources of local, state, Federal, private and non-profit funding sources for bicycle and pedestrian projects and programs.
- A peer review of at least three U.S. Cities each with areas of analysis including bicycle and pedestrian planning, policies, projects, funding, prioritization, programs and procedures.
- A complete set of design guidelines for bicycle and pedestrian infrastructure projects including cutting-edge design trends as well as traditional infrastructure and signage treatments.
- Suggest policies and programs local and regional governments can adopt and implement to encourage and enforce bicycle and pedestrian travel.

Once the study has been approved by City staff, it will be presented to the City of McFarland City Council at a Public Hearing at which time it will be adopted. The Pedestrian and Bicycle Impediment Study will be use to pursue future funding for the projects listed on the prioritization table. These funding sources include Community Development Block Grants, Caltrans Grants, Kern Council of Government's Grant's and any other applicable grants. Additionally the City will use the prioritization table to update the Capital Improvement Project (CIP) and set aside a portion of the yearly Transportation Development Act funds to construct the required improvements.