Patterson
Active Transportation Plan

FINAL PLAN

April 2022

TJKM

City of PATTERSON California

CITY OF PATTERSON
ACTIVE TRANSPORTATION PLAN

This document was funded through a Caltrans Active Transportation Program Grant.

Prepared For:
The City of Patterson

Prepared By:
TJKM Transportation Consultants

ACKNOWLEDGEMENTS

The City of Patterson would like to express our gratitude to the residents, community leaders, community-based organizations, agencies, and other stakeholders who have helped shape this Plan. We appreciate your continued support and commitment to promoting Patterson as a healthy, safe, and vibrant community.

City Council

- Dennis McCord, Mayor
- Shivaugn Alves, Council Member
- Alfred Parham, Council Member
- Dominic Farinha, Council Member
- Cynthia Homen, Council Member

Citizens Advisory Committee

- Shivaugn Alves, Council Member District A
- Joshua Clayton, Chief of Police
- Jeffrey Menge, Assistant Superintendent, PUSD
- Lennox Harris, Bike Advocate/Enthusiast

City Staff

- Tiffany Rodriguez, Capital Projects Manager
- Fernando Ulloa, Director of Engineering, Building & Capital Projects
- David James, Director of Community Development
- Juliene Flanders, Director of Recreation and Community Services
- Gorete Hahn, Administrative Assistant II

TJKM Transportation Consultants

- Ruta Jariwala, Principal
- Dhawal Kataria, Assistant Transportation Planner
- Oliver Castillo, Assistant Transportation Engineer

ENGINEER'S SEAL AND STATEMENT

By signing and stamping this Active Transportation Plan, I am attesting to this report's technical information and engineering data upon which local agency's recommendations, conclusions and decisions are made.

Prepared by:

April 21, 2022

Ruta Jariwala, PE, TE
Professional Civil Engineer, No. C73840 Principal,
TJKM Transportation Consultants

Date

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1. EXECUTIVE SUMMARY

During this period of the global pandemic, economic downturn, the front edge impacts of climate change, a national social justice movement, an ongoing housing crisis, and concerns about affordability and accessibility, a cycling boom has been underway across the nation. This trend has resulted in the need for the Cities to plan for bicycling and walking. Apart from the health benefits, cycling also helps in reducing the burden of household transportation costs, allowing for more sustainable land use patterns and focusing city resources on more cost-effective infrastructure.

The Patterson Active Transportation Plan is a planning effort to enhance non-motorized forms of travel, promote walking and bicycling, understand community needs, propose improvements, and identify potential implementation mechanisms. The Plan complements other citywide and regional plans such as the General Plan, 2010 and the Transportation Infrastructure Master Plan, 2020 as well as the Stanislaus Council of Government (StanCOG) Non-Motorized Transportation Master Plan, 2021.

The Plan began with a preliminary analysis of existing conditions and field observations. It was put on hold in the wake of the pandemic and was resumed in March 2021.

The Active Transportation Plan is for everyone who lives, works, or commutes through Patterson. The City has a population of over 22,000 with 30 percent people under 18 years of age, and 63 percent Hispanic and Latino population. To address the needs of this large and diverse group during the COVID-19 pandemic, the team was posed with a challenge to rethink the entire public engagement process. The study team devised a variety of new and creative approaches to achieve public engagement through virtual platforms, such as a custom video conferencing application and web-based surveys.

After assessing the needs and concerns of local residents through virtual outreach, a community exercise was conducted to formulate a cohesive vision statement for Patterson.

"The City of Patterson envisions creating a safe, connected, vibrant, and well-maintained walking and bicycling network that supports people of all ages and abilities."

To achieve this vision and address the needs of the residents, the plan proposes 41 bicycle projects worth $23 Million and 18 pedestrian projects worth $26 Million. Additionally, supporting infrastructure provisions have been recommended throughout the City of Patterson.

A prioritization exercise was conducted to create a guide for phased investments, ordered by relative impact of each project. Additional funding sources have been identified as a part of this plan.

To make active transportation an integral part of daily life for residents, the City of Patterson and other agency partners should consider organizing educational and promotional events such as Open Streets and Scavenger Hunts.

The Active Transportation Plan is a living document and will be updated periodically as needed.

2. INTRODUCTION

The City of Patterson street network was modeled after Washington D.C., with streets radiating outward from a central hub that served as the center of commerce and local government. The gridded street layout supports bicycling and pedestrian activity.

WHY ACTIVE TRANSPORTATION PLAN?

The Active Transportation Beyond Urban Centers report busts the myth that assumes bicycling and walking are restricted to the big cities. Many small towns and cities like Patterson were developed prior to World War II were originally designed with pedestrians and bicyclists in mind (Rails-to-Trails Conservancy, 2011). The City of Patterson has developed this Plan to revitalize pedestrian and bicycle facilities to benefit both residents and visitors.

The recommendations in this Plan aim to:

- Identify pedestrian and bicycle network deficiencies and develop implementable improvements, with extensive input from members of the community
- Enhance opportunities for walking, bicycling, and other forms of non-motorized transportation.
- Develop a multimodal transportation network that is safe and efficient for all users
- Increase access to public transportation, schools and recreational centers.
- Develop a non-motorized transportation network that focuses on equity and inclusivity to address Patterson's unique needs.
- Identify performance measures to implement adopted goals and policies relevant to bicycling and walking
- Identify short and long-term improvements suitable for future funding and grant applications

SETTING

Known as the "Apricot Capital of the World", Patterson is located in the middle of Stanislaus County within the San Joaquin Valley, roughly 17 miles southwest of Modesto. The I-5 freeway traverses through the west side of the City and provides a major connection to the San Francisco Bay Area. Patterson and the surrounding regional setting are shown in Figure 1. With an area of approximately 8 square miles and a population of 22,524, the City of Patterson is among the fastest-growing cities in Stanislaus County with an annual average population growth rate of 3.4%.

Patterson celebrates its agricultural history during the annual Apricot Festival in June. Patterson provides ample recreational opportunities for its residents due to the proximity to Frank Raines Regional Park and the San Joaquin River (Stanislaus County Environmental Resources, 2018). With average daily temperatures above 85°F for nearly half the year, walking and bicycling can be challenging in the City of Patterson. The presence of several creeks and canals throughout the city provides the opportunity for development of a walking trail network.

ACTIVITY GENERATORS

The City of Patterson is a predominantly residential community comprised of single-family homes. Most of the commercial and industrial land uses are located along Sperry Avenue, Ward Avenue and State Route 33. Figure 2 presents Activity Generators for the City of Patterson. Activity generators are defined as destinations that generates bicycle and pedestrian activity such as schools and retail centers.

Downtown Patterson

Recognized for its unique circle-and-spoke pattern, Downtown Patterson is a hub for community activities and social gatherings. It attracts residents from all parts of Patterson to a variety of restaurants, cafes, retail stores and services. Recent infrastructural investments and streetscape improvements have attracted more residents to the Downtown.

Retail Stores and Major Employers

Beyond the Downtown core, additional commercial vendors and retailers can be found at the intersections of Sperry Avenue and Ward Avenue, and along SR-33 from Ward Avenue to city's edge. Restaurants,

gas stations and hotels are located near the interchange of Sperry Avenue and I-5 serving north- and south-bound travelers. West of Baldwin Road, the majority of the land uses are light industrial, serving as distribution centers for major companies such as Amazon, CVS Pharmacy, Kohl's, Grainger, and several hardware distribution companies. The Amazon distribution center and Patterson Unified School District serve as the largest employers in Patterson.

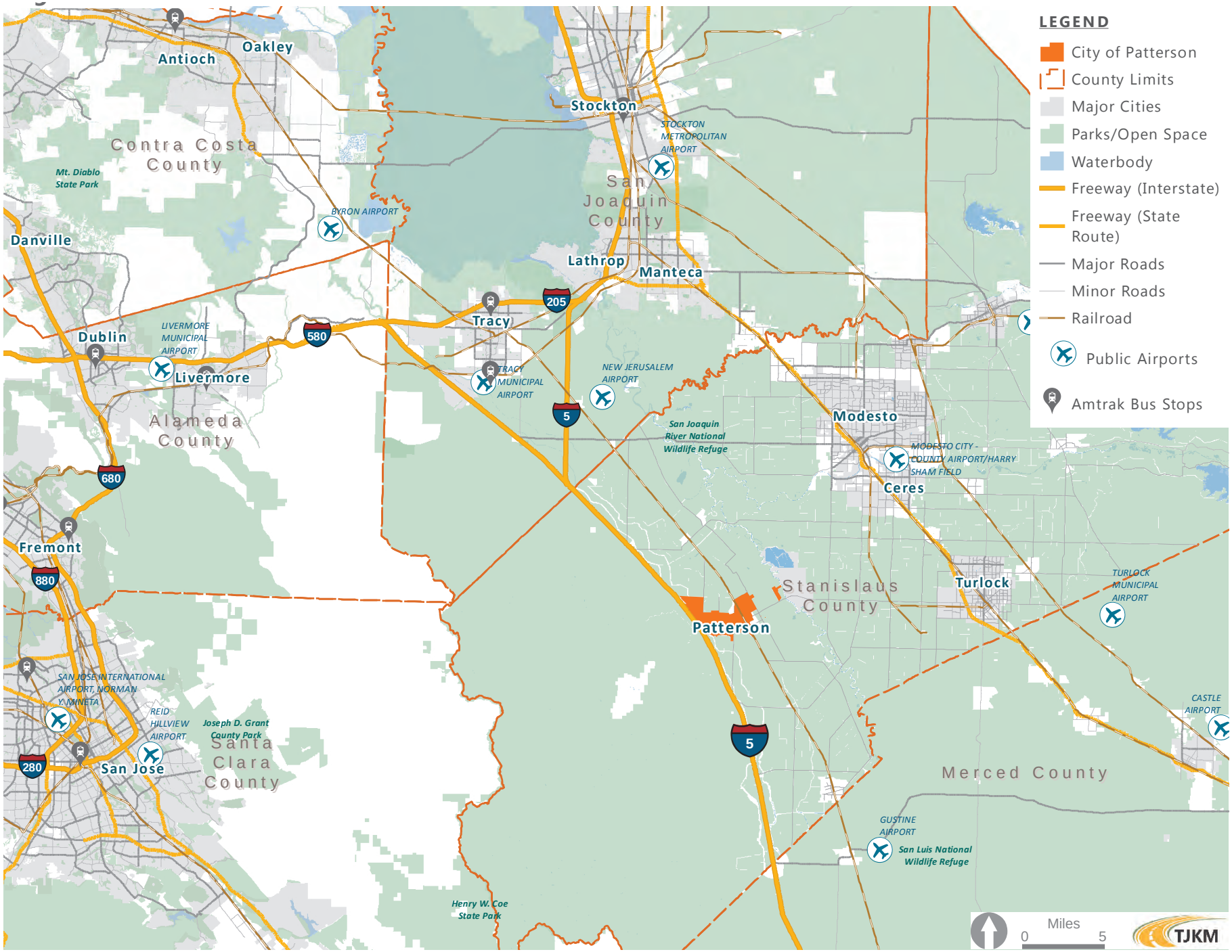
Schools

The Active Transportation Program gives special focus to children walking and bicycling to school. The program awards additional funding through Safe Routes to School (SRTS) grants, which promotes walking and bicycling to school through infrastructure improvements, enforcement, tools, safety education, and incentives. Patterson has 11 schools that are attended by more than 6,000 students from preschool to high school (Patterson Joint Unified School District, 2021).

Parks and Recreation

There are 34 public parks and open spaces located within the City of Patterson. 85 percent of Patterson's residents live within a 10-minute walk of a park. With only two percent of the City's land dedicated for parks and recreation, Patterson provides ample opportunities for the development of the parks system (The Trust for Public Land). The City of Patterson is currently developing a Parks and Recreation Master Plan that will provide a long-term vision for the City's park system and enable multi-year planning for capital investments.

Figure 1: Regional Location



Source: City of Patterson General Plan, 2014; Stanislaus County Geographic Information Systems, ESRI, OpenStreetMap contributors

Date: 10/6/2020

Figure 2: Activity Generators

Source: City of Patterson General Plan, 2014; Stanislaus County Geographic Information Systems, ESRI, OpenStreetMap contributors

Date: 11/29/2021

PATTERSON AT A GLANCE

22,524
Population

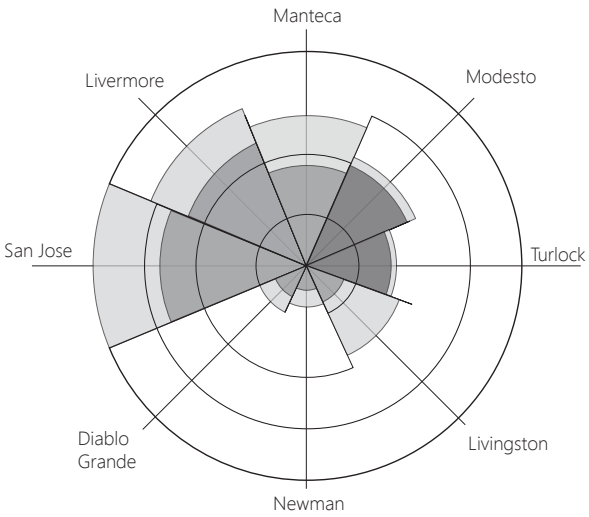
2,816
Population per sq. mile

48:52
Female: Male

3.47
Average Household Size

Source: U.S. Census Bureau, QuickFacts 2019

Distance and Direction for Workers working Outside



Source: U.S. Census Bureau, Center for Economic Studies, LEHD, 2018

73.6%
High School Graduate or Higher

$69,233
Median Household Income

$23,347
Per Capita Income

7.8%
Unemployment Rate

Source: U.S. Census Bureau, QuickFacts 2019

3. COMMUNITY NEEDS ASSESSMENT

EXISTING CONDITIONS

An existing conditions assessment was conducted for the City of Patterson that compiled and organized information on multi-modal travel volumes, collision data, City development standards and regulations, and relevant policy documents, reports and studies. The Existing Conditions Report completed in March 2021 is available in Appendix A.

Street Network

Patterson's street network consists of approximately 83 linear miles of streets including six miles of arterial streets, nine miles of collector streets, and 68 miles of local streets. A map of the existing street network and street classifications in Patterson is presented in Figure 3. The main thoroughfares within Patterson are Sperry Avenue, Baldwin Road, Ward Avenue, Las Palmas Avenue, and Second Street (Highway 33).

Traffic Volumes and Capacities

The provision of excess motor vehicle lanes and/ or excess street widths tends to result in higher than desired motor vehicle speeds. A general guideline for estimating the required number of motor vehicle lanes is based on daily traffic volumes. Each motor vehicle lane on a city street can generally accommodate up to about 10,000 daily vehicles trips (based on peak-hour volumes representing 6 to 10 percent of daily volumes). Thus, a 2-lane arterial or collector street can generally accommodate over 20,000 daily vehicles with left-turn pockets.

Existing traffic volumes on Patterson's 4-lane arterial streets are well below capacity, which provides an excellent opportunity for reallocating portions of roadway space to better accommodate pedestrians and bicyclists:

- Sperry Avenue carries approximately 15,000 daily vehicles travel east of Baldwin Road, and approximately 20,000 daily vehicles west of Baldwin Road (both segments well below the capacity.
- Second Street (Highway 33) carries approximately 10,000 daily vehicles within Patterson, also well below the capacity.

Transit Access

Stanislaus Regional Transit (StaRT) provides public bus transit services throughout Stanislaus County. Four different bus routes run through Patterson, with three operating Monday through Saturday and one route running on weekdays as a Commuter service between Turlock and the East Dublin/ Pleasanton BART Station. Figure 4 provides a map of the transit routes and stops in Patterson. Table 1 summarizes schedule and type of services.

Table 1: Local Bus Routes

Stanislaus Regional Transit (StaRT) Routes	Type	Hours of Operations	Days of Operation
Route 40 (Modesto, Grayson, Westley, Patterson)	Local Route	5:15 a.m. and 9:12 p.m	Monday through Friday
		7:00 a.m. and 6:52 p.m	Saturday Only
Route 45E (Patterson / Turlock)	Local Route	6:15 a.m. and 8:18 p.m	Monday through Friday
		7:15 a.m. and 6:08 p.m.	Satuday Only
Route 45W (Gustine, Newman, Crows Landing, Patterson)	Local Route	5:37 a.m. and 9:21 p.m	Monday through Friday
		6:20 a.m. and 7:56 p.m.	Saturday Only
Commuter	Commuter Route	4:55 am and 6:15 pm	Weekdays Only

Source: Stanislaus Regional Transit

Figure 3: Existing Street Network

Source: City of Patterson General Plan, 2014; Stanislaus County Geographic Information Systems, ESRI, OpenStreetMap contributors

Date: 11/29/2021

Figure 4: Existing Public Transit Routes

Source: City of Patterson General Plan, 2014; Stanislaus County Geographic Information Systems, ESRI, OpenStreetMap contributors

Date: 11/29/2021

CYCLING CONDITIONS

The City presently has 17 miles of bikeway network with most of it being Class III Bicycle Routes. Figure 5 provides a map of the existing bikeway network. The existing bicycle infrastructure is primarily located in residential neighborhoods, connecting residents to schools and recreational facilities.

Summary of Barriers to Cycling

Key barriers to cycling in Patterson under existing conditions include:

- Lack of bicycle accommodations on Sperry Avenue and Second Street (Highway 33) limits access to commercial destinations and job sites located adjacent to Patterson's key east-west and north-south arterials.
- Gaps in existing bicycle lanes including segments of Ward Avenue and Las Palmas Avenue in the heart of Patterson, between Second Street and El Circulo Avenue, and between 9th Street and Ward Avenue.
- Narrow bike lane widths adjacent to on-street parking on segments of Las Palmas Avenue just west of El Circulo Avenue. Adequate bike lane widths can be provided by narrowing the width of the adjacent motor vehicle lanes.
- No provisions for bicycle access to commercial destinations and employment locations west of Baldwin Road including the West Patterson Park sites accessed via Park Center Drive and Keystone Pacific Parkway, as well as the commercial sites bordering Rogers Road.

Class I (Multi-Use Path)

Class II (Bike Lane)

Class III (Bike Route)

Class IV (Separated Bikeway)

Types of Bicycle Facilities

There are four classifications of bikeway facilities in California as defined by the Department of Transportation (Caltrans).

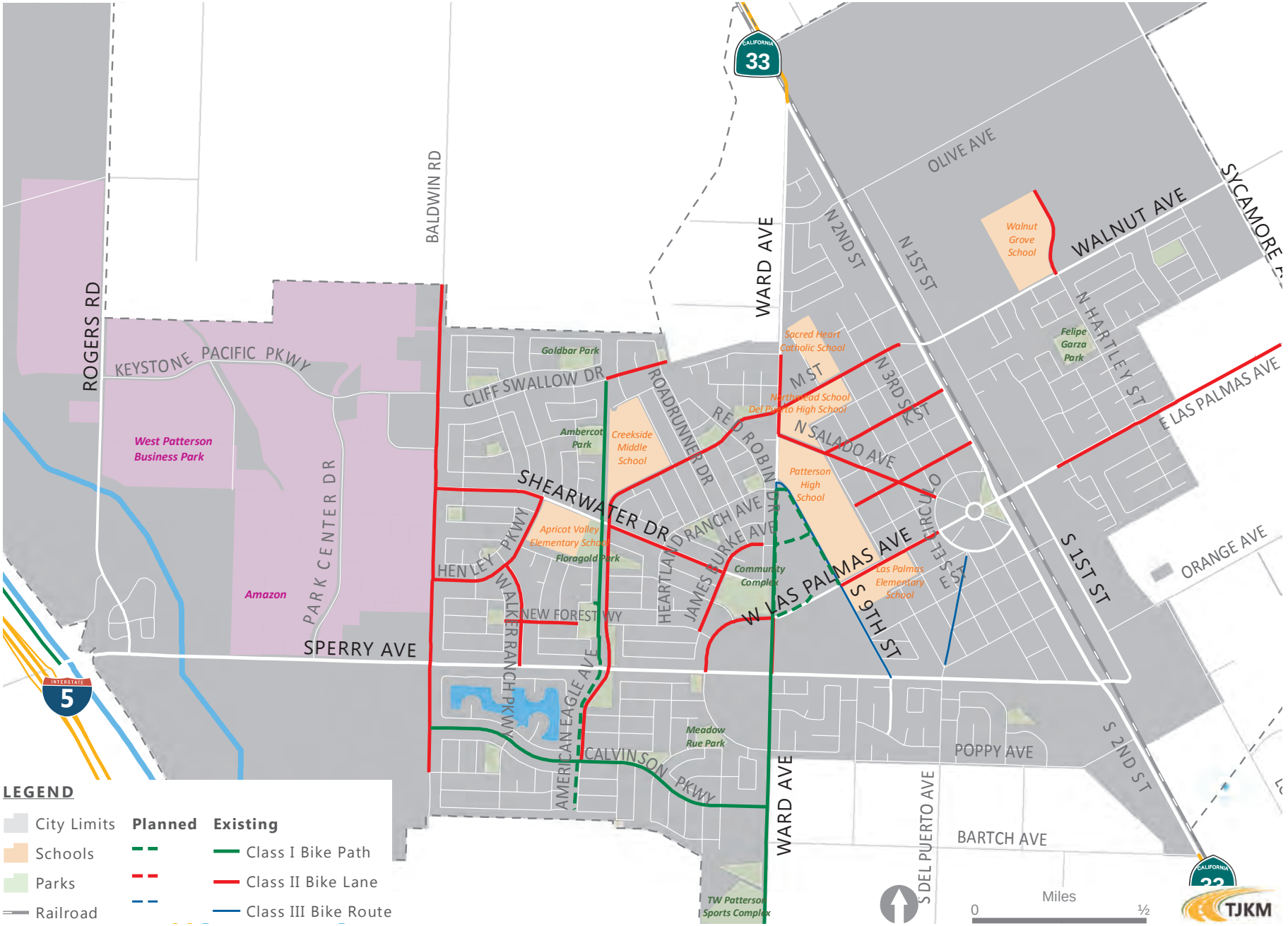
Multi-Use Paths (Class I Bikeways) – a path physically separated from motor vehicle traffic by an open space or barrier, used by bicyclists, pedestrians, joggers, skaters, and other non-motorized travelers. Because the availability of uninterrupted rights-of-way is limited, this type of facility may be difficult to locate and expensive to build relative to other types of bicycle and pedestrian facilities, but inexpensive compared to new roadways. Prime locations for bike paths are areas such as power-line easements, utility easements, canal banks, river levees, drainage easements, railroad or highway rights-of-way, or regional community parks.

Bicycle Lanes (Class II Bikeways) – a travel lane on a roadway that has been set aside by striping and pavement markings for the preferential or exclusive use of bicyclists. Bicycle lanes are intended to promote an orderly flow of bicycle and motor vehicle traffic. This type of facility is established by using the appropriate striping, legends, and signs.

Bicycle Routes (Class III Bikeways) – bicycle routes designated by signage where bicyclists share travel lanes with motor vehicle traffic. Bicycle routes must be of benefit to the bicyclist and offer a higher degree of service than adjacent streets. Class III bikeways are often designated on low-volume local residential streets. Additionally, many cities have installed an enhanced type of Class III Bicycle Route, referred to as a "Bicycle Boulevard." Bicycle Boulevards are generally installed on relatively low-volume streets and often include elements to facilitate bicycle travel, such as reorienting stop signs to reduce delays to cyclists, and/or discouraging use by motorists making through trips, such as through the inclusion of traffic calming measures.

Separated Bikeway (Class IV Bikeways) – a Class IV Bikeway is for the exclusive use of bicycles and includes a separation between the bikeway and adjacent vehicle traffic. The physical separation may include flexible posts, grade separation, inflexible physical barriers or on-street parking. Separated bikeways generally operate in the same direction as vehicle traffic on the same side of the roadway. However, two-way separation bikeways can also be used, usually in lower speed environments (35 miles per hour or less).

Figure 5: Existing Bikeway Network



Source: City of Patterson General Plan, 2014; Stanislaus County Geographic Information Systems, ESRI, OpenStreetMap contributors

Date: 11/29/2021

Bicycle Level of Traffic Stress

The bicycle level of traffic stress analysis was conducted to understand the amount of discomfort experienced by the bicyclists due to the presence of closely moving vehicles. It was observed that the major roads such as Sperry Avenue and North Second Street have the highest level of traffic stress. High volumes and prevailing speeds coupled with narrow bike lanes and the presence of on-street parking make bicycling uncomfortable along the roadway. The detailed bicycle level of traffic stress analysis and methodology is provided in Appendix 1 Existing Condition Report. Figure 6 illustrates the bicycle LTS patterns in Patterson.

Table 2: Level of Traffic Stress

Level of Traffic Stress	Miles
LTS 1	49.8
LTS 2	22.9
LTS 3	4.3
LTS 4	4.9

Bicycle Level of Traffic Stress (LTS)

LTS is an evaluation that quantifies the amount of discomfort that people feel when bicycling near motor vehicle traffic. It assigns a numeric stress level to roadway segments, trails, and intersections based on attributes such as motor vehicle speed, volume, number of lanes, lane blockage, on-street parking, and ease of intersection crossing. The higher the Bicycle LTS, the higher the discomfort. The implication of higher LTS is the possibility of improving bicycle infrastructure to make such bicycle facilities safe and comfortable for all types of users. The four bicycle LTS ratings as generally perceived from the user perspective:

- ***LTS 1 Very low traffic stress***: Most children feel comfortable bicycling.
- ***LTS 2 Low traffic stress***: The mainstream adult population feels comfortable bicycling.
- ***LTS 3 Moderate traffic stress***: Bicyclists who are considered "enthused and confident" but still prefer having their own dedicated space feel comfortable while bicycling.
- ***LTS 4 High traffic stress***: Only "strong and fearless" bicyclists feel comfortable while bicycling. These routes have high-speed limits, multiple travel lanes, limited or non-existent bicycle lanes and signage, and large distances to cross at an intersection.

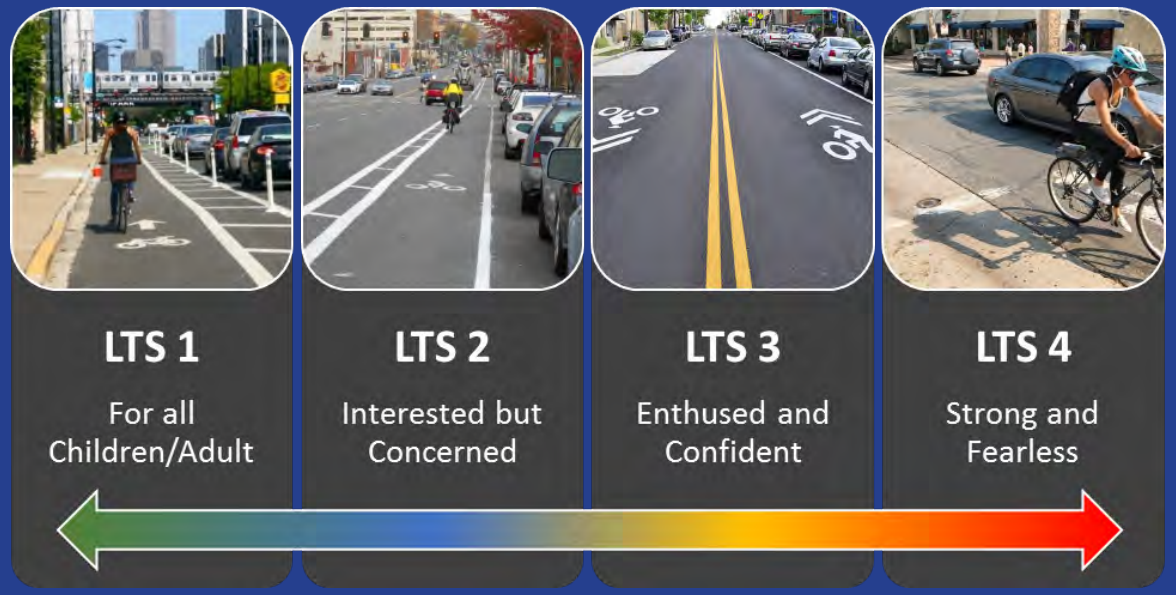
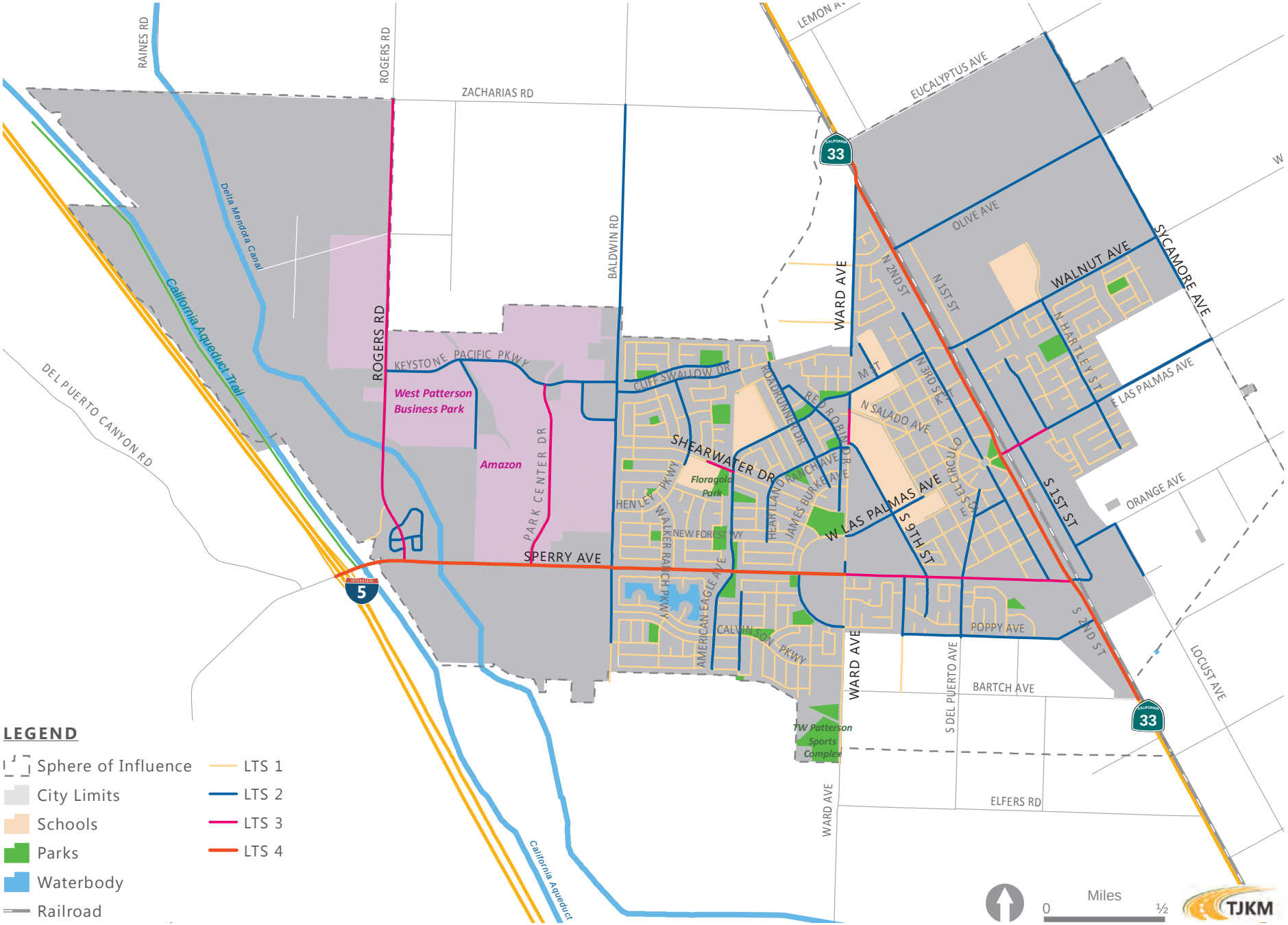


Figure 6: Bicycle Level of Traffic Stress



Source: City of Patterson General Plan, 2014; Stanislaus County Geographic Information Systems, ESRI, OpenStreetMap contributors

Date: 11/29/2021

WALKING CONDITIONS

The majority of the roadways within Patterson have continuous sidewalks which provide access to parks, schools, and shopping centers. Street curbs are the standard barrier curb, which provides a barrier between the roadway and sidewalk. The barrier curbs prevent vehicles from mounting and possibly encroaching onto the sidewalks. During the existing conditions review, it was determined that 8.27 linear miles length of the sidewalk is missing along the roadway. Most of the sidewalk gaps are located near the downtown core of Patterson. Lack of sidewalks may force pedestrians to walk on the roadway alongside motor vehicles and create unsafe situations.

Providing ADA-compliant curb ramps at intersections increases access for residents with mobility issues and allows them to safely reach local parks, schools, and businesses. ADA-complaint curb ramps are currently provided only intermittently throughout the city, particularly in or near West Patterson Business Park, Apricot Valley Elementary School, the Walmart and Save Mart Shopping Center, and the neighborhoods surrounding the downtown core. Approximately 208 locations are identified as missing ADA ramps and 991 existing curb ramps in the city are missing the ADA-compliant truncated domes. Figure 7 illustrates the sidewalk gap locations and street corners lacking ADA-compliant curb ramp gaps in the City of Patterson.

Summary of Barriers to Walking

Summary of key barriers to walking in Patterson under existing conditions include:

- Gaps in the sidewalk network and street corners that lack ADA-complaint curb ramps
- Safety concerns may limit the frequency of walking in Patterson since pedestrians are disproportionately involved in collisions resulting in serious injuries or fatalities (See Appendix A for more information)
- Motor vehicle speeds greater than 35 mph on Sperry Avenue and Second Street (Highway 33) which can create uncomfortable conditions for pedestrians and significantly increases stopping distance
- Few signalized pedestrian crossings on Second Street (Highway 33)
- Lack of "eyes on the street" on Sperry Avenue between Baldwin Road and Las Palmas Avenue (See Appendix A for more information)
- Lengthy pedestrian crossing distances across arterial streets such as Sperry Avenue
- Very few intersections include corner treatments reduce pedestrian crossing distances at key intersections, such as bulbouts, reduced curb radii and high-visibility crosswalks.

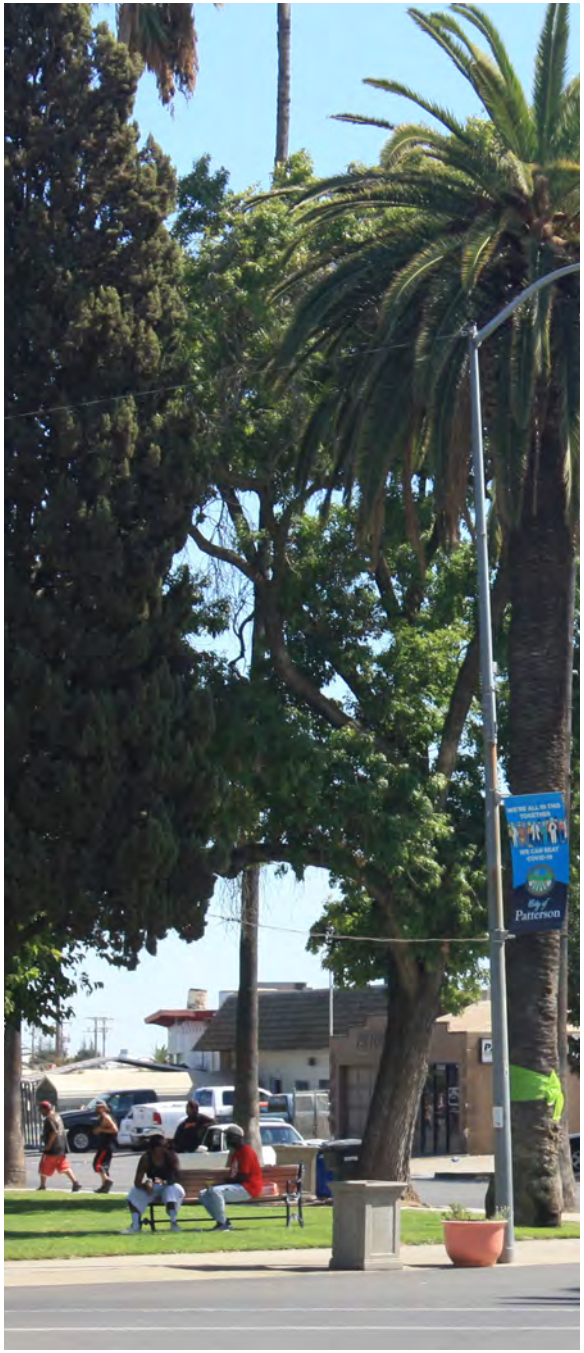


Figure 7: Pedestrian Gaps and Barriers

Source: City of Patterson General Plan, 2014; Stanislaus County Geographic Information Systems, ESRI, OpenStreetMap contributors

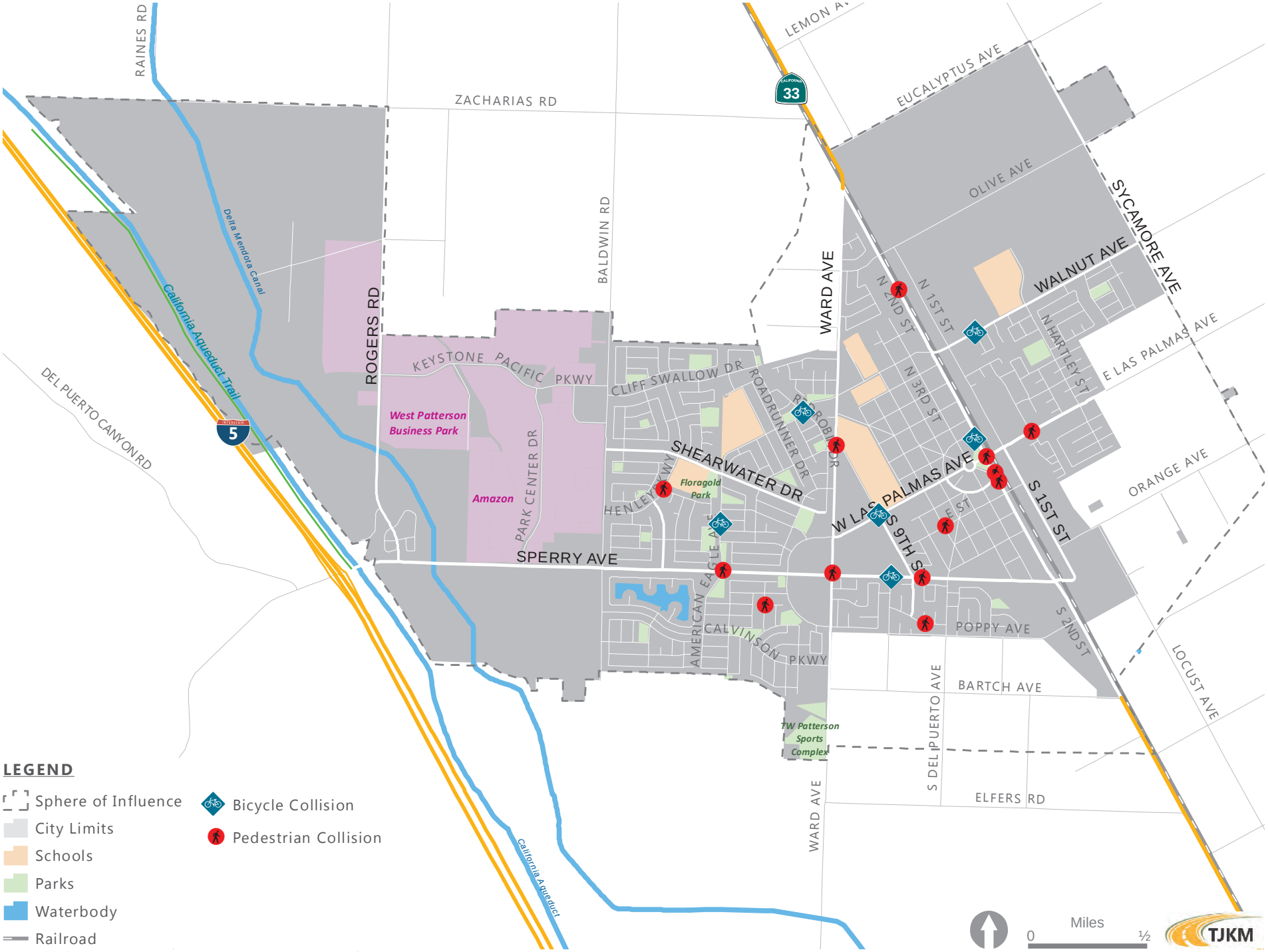
Date: 10/11/202

PEDESTRIAN AND BICYCLE SAFETY

A data review was conducted for collisions occurring within a five-year period from January 1st, 2015 to December 31st , 2019. 131 motor vehicle collisions were reported during the five-year period, including 11 that resulted in severe injuries and six that resulted in fatalities. Figure 7 shows the pedestrian and bicycle collision locations within Patterson from 2015-2019. Key findings are:

- Pedestrians are disproportionately involved in collisions resulting in serious injuries or fatalities. Although just 8% of reported collisions involved a pedestrian, pedestrians accounted for 43% of collisions with serious injuries, and 67% of fatalities during the five-year period from 2015 to 2019.
- Roughly half of the collisions involving pedestrians occurred on Patterson's two major arterial streets, Sperry Road and Second Street.
- Bicyclists were involved in 8% of reported collisions during the five-year period from 2015 to 2019. None of the reported collisions involving bicyclists resulted in serious injuries or fatalities.

Figure 8: Pedestrian and Bicycle Collision Locations (2015-2019



Source: City of Patterson General Plan, 2014; Stanislaus County Geographic Information Systems, ESRI, OpenStreetMap contributors

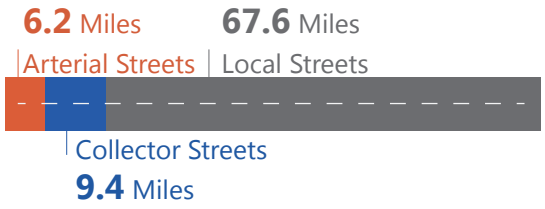
Date: 10/6/2020

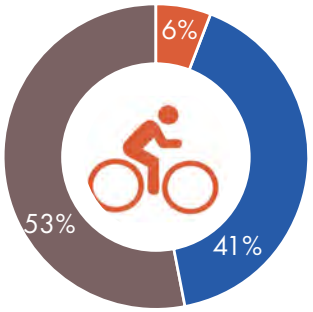
PATTERSON MOBILITY BY NUMBERS

83
Miles of Street Network

17
Miles of Bikeway Network

8.27
Miles of Sidewalk Gaps

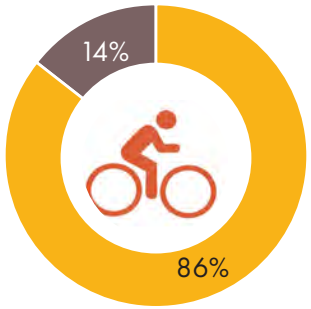




- Class I Bicycle Path
- Class II Bicycle Lanes
- Class III Bicycle Routes

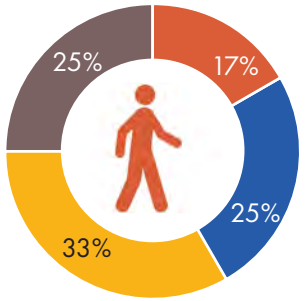
208
Missing ADA Ramps

15%
Area within quarter mile of Transit Stop



Bicycle Collisions

- Fatal
- Severe Injury
- Other Visible Injury
- Complaint of Pain



Pedestrian Collisions

- Fatal
- Severe Injury
- Other Visible Injury
- Complaint of Pain

COMMUNITY ENGAGEMENT

Community engagement plays an important role in the successful development of an active transportation plan. It helps in creating more equitable, effective, and implementable solutions. The community engagement strategy consisted of survey and workshops to provide ample opportunities to the residents to share thier feedback.

Citizen Advisory Committee (CAC)

The CAC members were represented by Patterson City Council Members, Patterson Police Services, Patterson Joint Unified School District, and Bicycling Advocate/Enthusiast. The CAC members were responsible for reviewing the Plan and providing feedback on scope and deliverables. CAC members responsibilities included providing assistance with the articulation of study goals, providing recommendations and key information, and confirming support for the plan. Three CAC meetings were held on April 1, 2021, June 28, 2021 and October 27, 2021.

Project Website

An interactive project website was created at the beginning of the project (activepatterson.com) to provide updates and information about the plan. The website was intended to engage the community and collect feedback on the existing and proposed walking and bicycling facilities. The information about the website was publicized using the City of Patterson website, social media channels, and utility bills. It provided information on project overview, upcoming events, project updates, surveys, and documents. Local newspaper Patterson Irrigator, along with the Patterson Farmers Market social media pages also helped in advertising the plan. Additionally, email reminders (e-blasts) were provided to website subscribers about upcoming events.

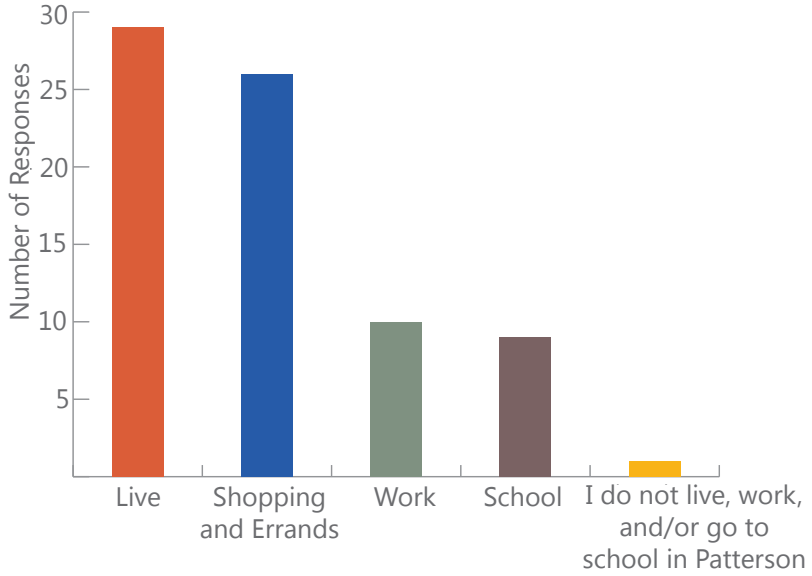
Interactive Map Input

In addition to hosting an online survey, the project website also featured an interactive map input application where residents could mark a location or a segment within the City to express location-based concerns. Residents were provided with training on map navigation at Community Workshop #1. A total of 10 comments were received, summarized in Figure 9.

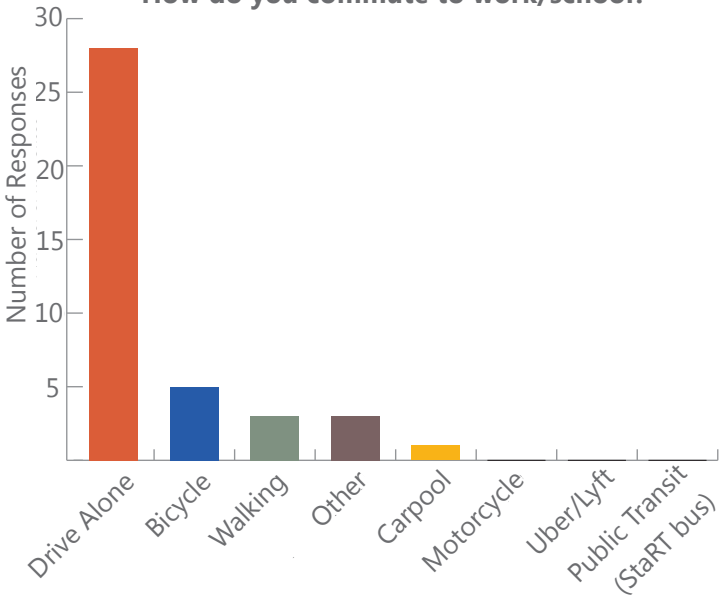
Needs Survey

An online survey was hosted on the website from May 1st, 2021 to July 16th, 2021 which collected feedback on issues and concerns related to walking and bicycling. A total of 33 survey responses were received and the results are summarized on pages from 3-16 to 3-20.

Do you live, work, and/or go to school in Patterson?



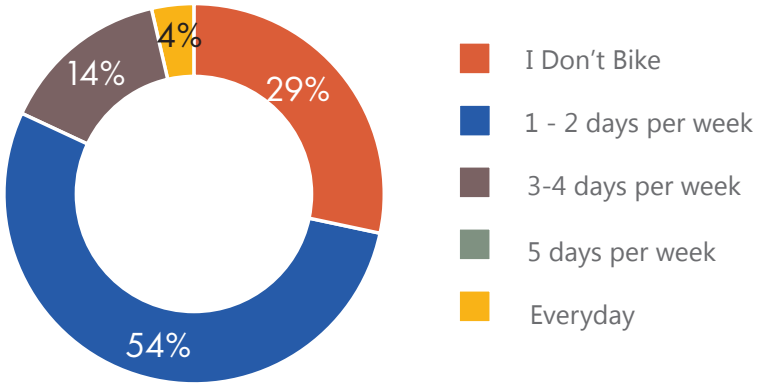
How do you commute to work/school?



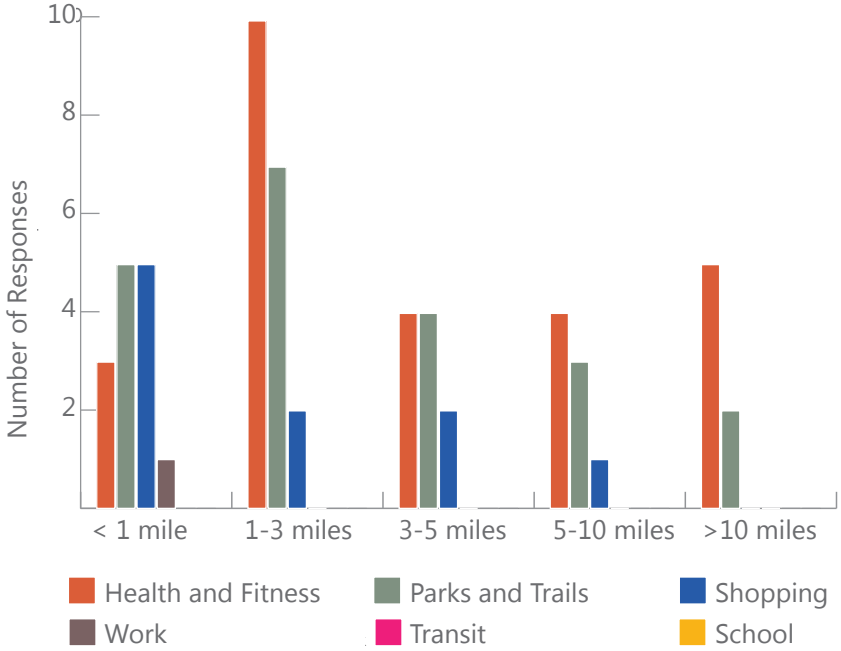
Other (please specify)

- I work in Patterson
- Inline skate
- Work from home

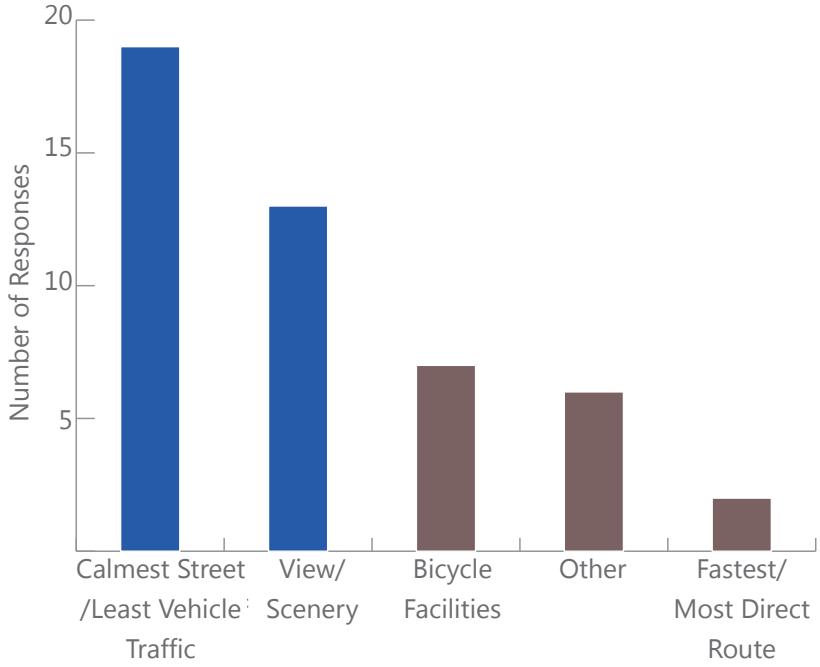
How often do you ride your bike?



For what activities and distances do you ride your bike?



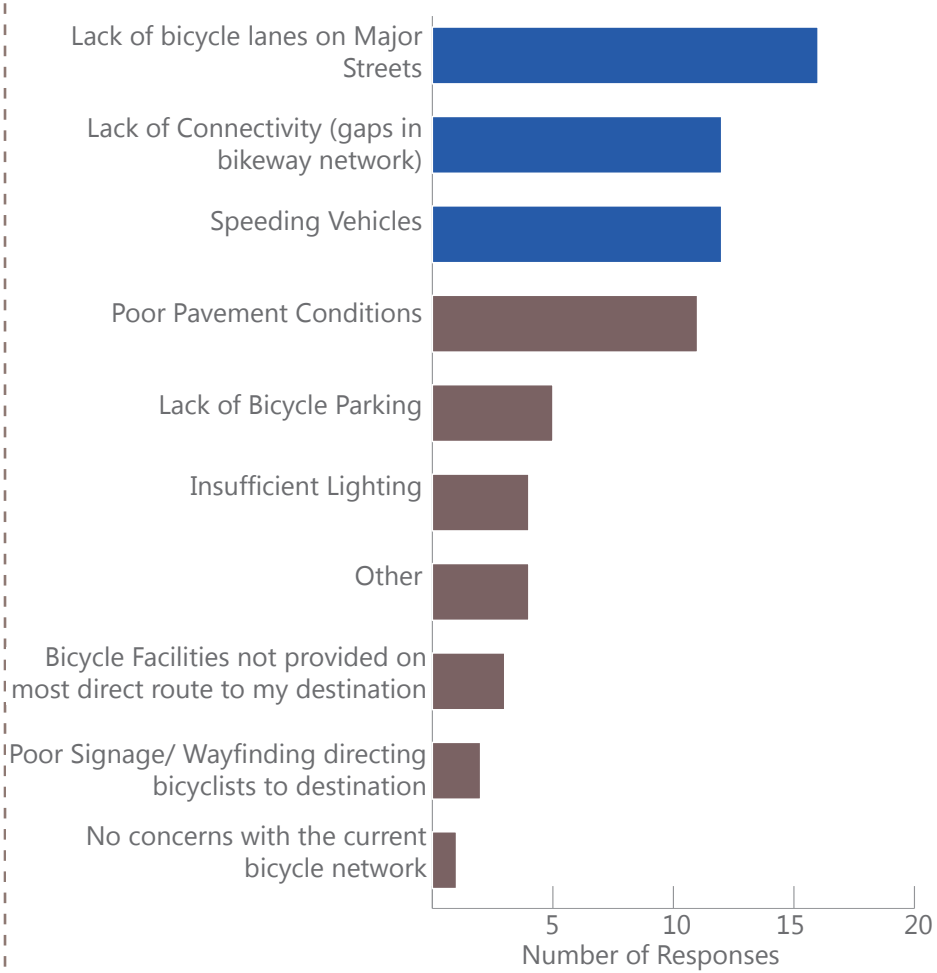
Which factor primarily dictates the route you choose for your bike ride?



Other (please specify)

- Casual/Backstreets.
- Get in some mileage on rides
- Condition of roads
- Wide sidewalks
- Wide sidewalks & bike path
- Safe bike lanes are hard to find in Patterson

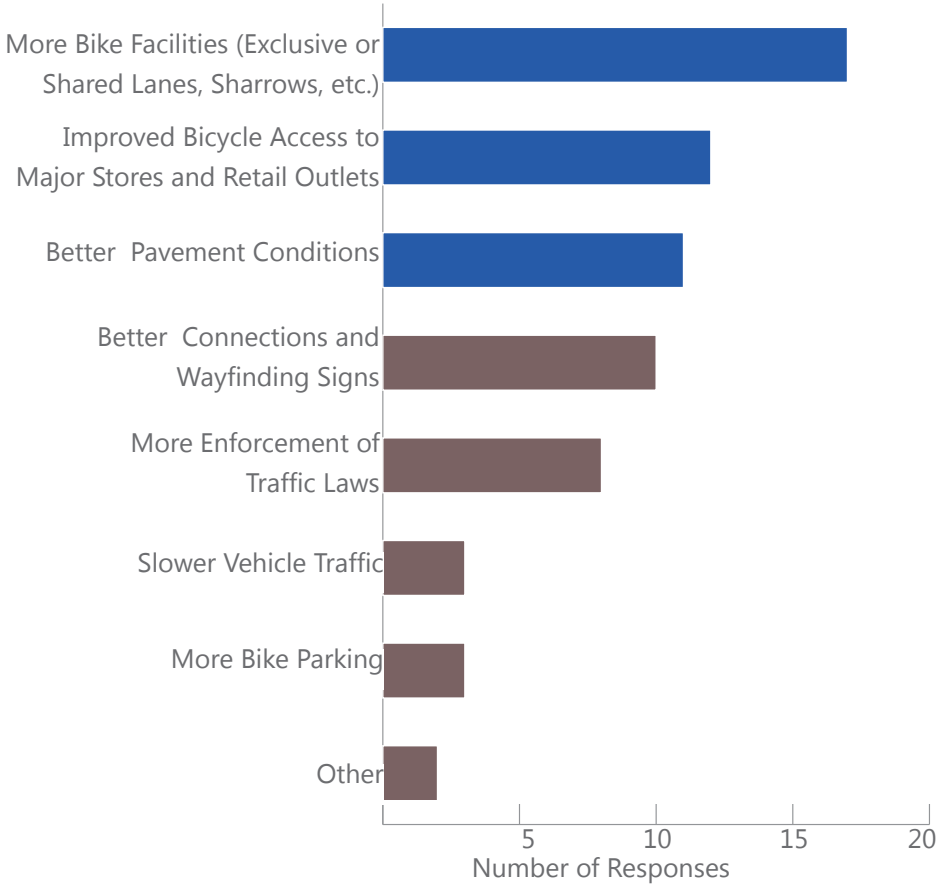
What do you consider the biggest problems/ concerns with Patterson's bicycle network?



Other (please specify)

- Dogs unattended and chase you
- Bike lanes on Sperry, Rogers, Cliff Swallow making a loop around City
- The puncture vine on Ward give me a flat tire nearly every time!
- People parking in bike lanes. Unprotected bike lanes.

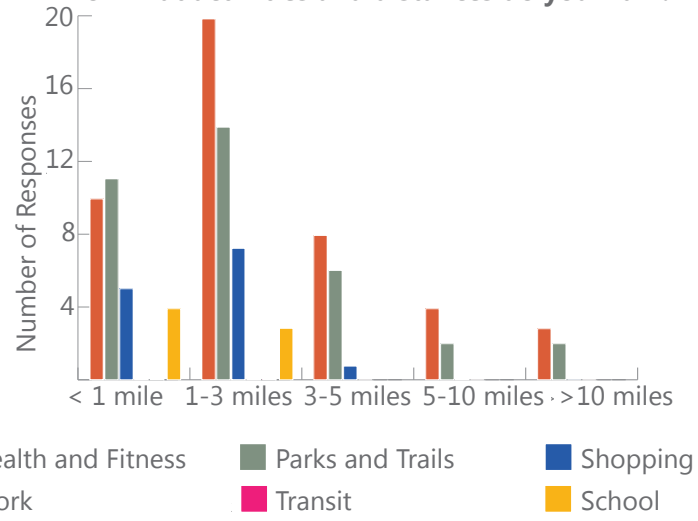
What do you consider as potential solutions for the above problems with Patterson's bicycle network?



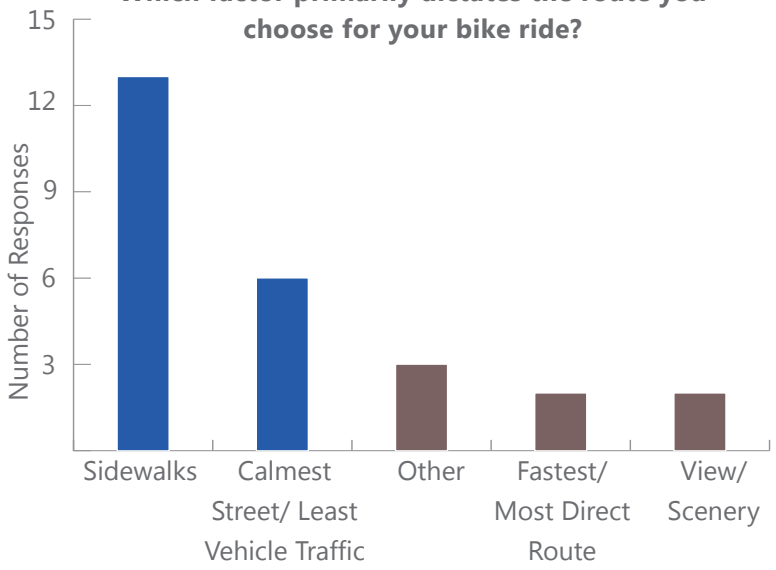
Other (please specify)

- Crack down on loose unattended animals
- Routes to downtown

For what activities and distances do you walk?



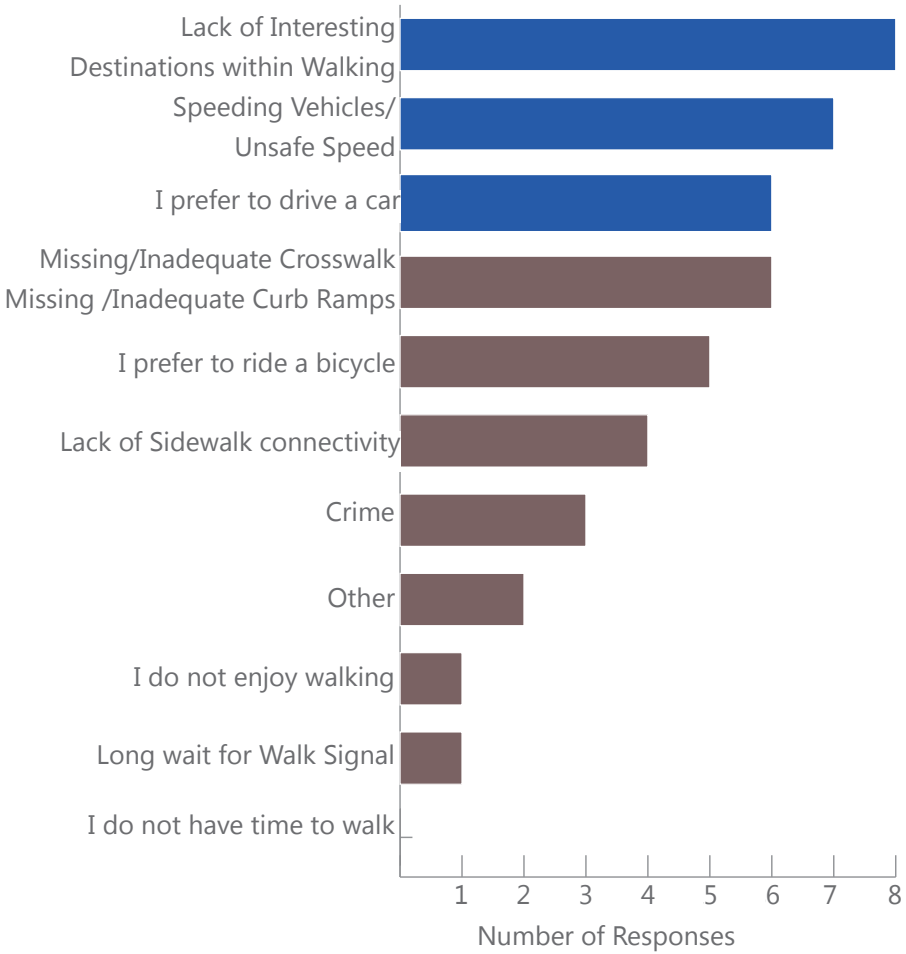
Which factor primarily dictates the route you choose for your bike ride?



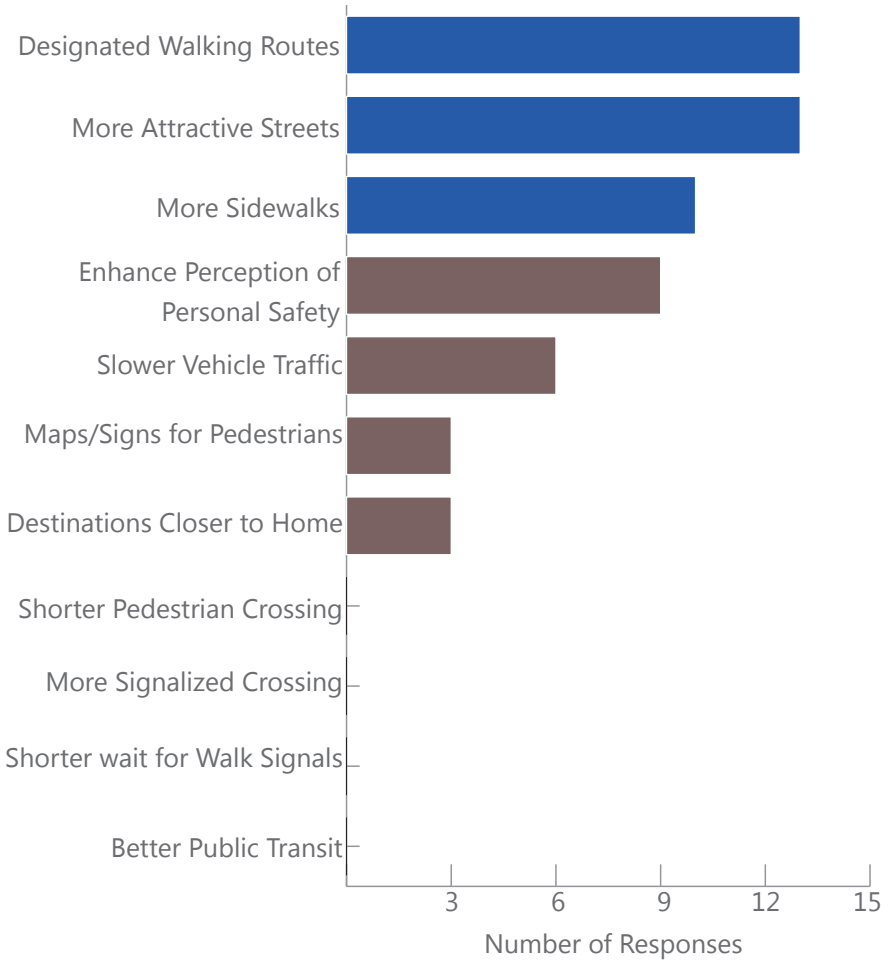
Other (please specify)

- Bike path
- Perceived safety

If you do not walk often, please check the most applicable reasoning.



What changes would encourage you to walk more?



Other (please specify)

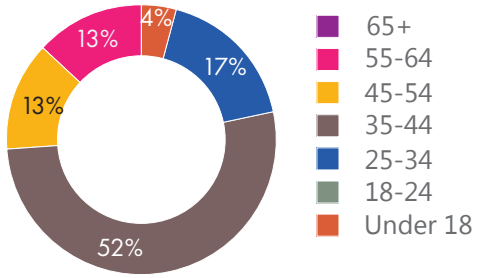
- Unattended dogs
- During summer, high outside temperatures during the day.

Do you have any other comments or suggestions about the walking, biking or transit facilities?

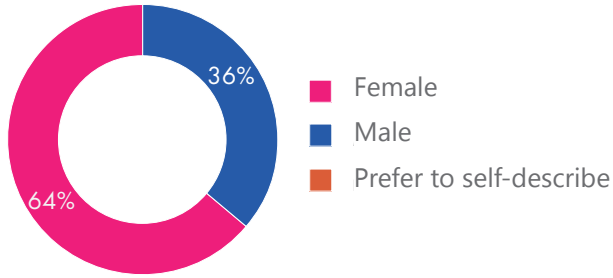
"

- *Modesto has the Virginia Corridor and the bike path along Scenic Ave/River. It would be nice if Patterson had a 5 + mile paved walking/ bike trail around Patterson.*
- *Establish multiple walk/bike paths with unique views of city, nature or art only accessible via pathways with a grand view of interconnectivity.*
- *"Sadly, I had to sell my roller blades when I moved to Patterson because they are simply unusable on these neglected roads. Road condition, connectivity (which includes sidewalks being present and consistent), and scenic routes are the biggest factors for our family in walking/biking vs. driving.*
- *Inadequate curb ramps and uneven sidewalks make even walking with a stroller very challenging around town. "*
- *More paved bike lanes*
- *Trails with shade throughout our town would be great*
- *My family walks and bike rides a lot. It is so unsafe due to crazy drivers running stop signs. They are also driving in bike lanes and driving way to fast. I would love to see more law enforcement on this situation.*
- *We need to fill the gaps in the sidewalk infrastructure. I should be able to walk from one part of town to the other without having to walk in the street or walk around power poles or trees in the middle of where a sidewalk should be. Having a complete sidewalk infrastructure is an important first step in making a more walkable pedestrian friendly community. Also, building or renovating parks in the older parts of town.*
- *Designated bike/walking trails that are safe. Having an obvious homeless problem in this city makes it impossible to keep a created space safe.*
- *More bicycle trails would be nice to see.*
- *There are already some good "trails" in town like the creek path along American Eagle. Signs designating distance i.e. mile markers would be great. A map online showing walking routes of 1,2,3 miles would be helpful. Paths around existing parks like the sports park.*
- *More walking trails that have shade, drinking fountains, and benches. Landscaping with some beautiful trees, gardens, and safe street crossings would be awesome.*
- *See Virginia trail in Modesto. Mile marker, benches, workout activity within trail*
- *I've noticed a lot of people loitering and littering on bike paths and sidewalks, especially near people's homes. A shrub barrier or tree barrier between homes and paths would be effective.*
- *The inconsistencies with connecting bike lanes, and access to the crosswalk buttons at intersections that don't have traffic sensors is a big problem for consistent and safe cycling in Patterson.* "

Respondent's Age



Respondent's Gender



Respondent's Council District

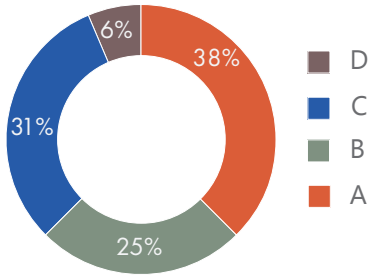
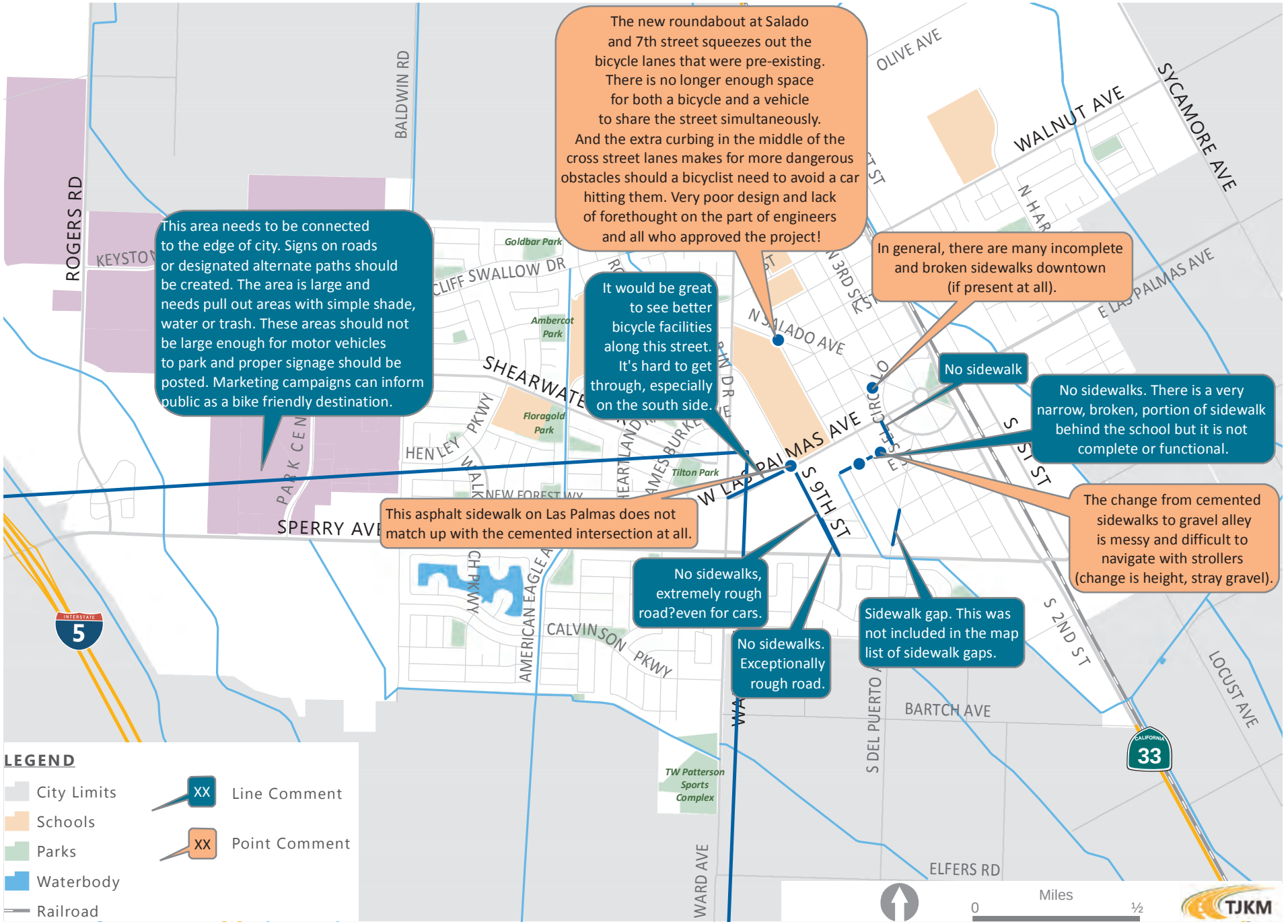


Figure 9: Map Input



Source: City of Patterson General Plan, 2014; Stanislaus County Geographic Information Systems, ESRI, OpenStreetMap contributors

Date: 7/21/2021

Community Workshop 1

The first community workshop for the Patterson Active Transportation Plan was organized virtually on Wednesday, May 26, 2021 using the Zoom video-conferencing application. Workshop event details were broadcasted using the City of Patterson social media outlets, project website, and e-mail blasts. The virtual workshop was attended by three residents.

The purpose of Community Workshop #1 was to introduce the plan and the scope to the community, present existing conditions, and seek input from the community members. The poll results from the workshop are summarized in Table 3.

Community Workshop 2

The second community workshop for the Plan was organized virtually and took place on September 08, 2021. The workshop was attended by four residents and the recording was made available on the project website.

Community Workshop #2 provided an update on the community engagement efforts. The participants were asked to express their level of overall satisfaction with the community survey results. Common themes and focus areas were identified based on the engagement efforts. These themes assisted in the development of the Plan's Vision Statement.

The purpose of this workshop was to collect feedback on the proposed improvements and active transportation projects. The presentation included the process of project identification and methods for resolving inconsistencies between various other plans. The presentation concluded with the next steps for plan development. Participants found the content helpful and were satisfied with the City's efforts on this Plan, according to feedback received during the workshop. The poll results from the workshop are summarized in Table 4.

Table 3: Community Workshop 1 Poll Results

How did you hear about the workshop?	Counts
City of Patterson Website	1
Social Media (Facebook, Instagram, etc.)	2
Utility Bill	0
Other (News, Friends or Neighbors)	0
In general, how easy/difficult do you feel it is to bike in Patterson?	**Counts**
Very Easy	0
Somewhat Easy	1
Neutral	1
Somewhat Difficult	0
Very Difficult	0
In general, how easy/difficult do you feel it is to walk in Patterson?	**Counts**
Very Easy	1
Somewhat Easy	1
Neutral	0
Somewhat Difficult	0
Very Difficult	0
Please select the three aspects of walking and bicycling that you think are most important for this plan.	**Counts**
Access	1
Safety	2
Connectivity	1
Equity	1
Health	1
Environment	0

Table 4: Community Workshop 2 Poll Results

How satisfied or dissatisfied are you with the community survey results?	Counts
Very satisfied	2
Somewhat satisfied	1
Neither satisfied or dissatisfied	0
Somewhat dissatisfied	0
Very dissatisfied	0
How satisfied or dissatisfied are you with the vision statement?	**Counts**
Very satisfied	4
Somewhat satisfied	0
Neither satisfied or dissatisfied	0
Somewhat dissatisfied	0
Very dissatisfied	0
How helpful was the content presented at the community workshop?	**Counts**
Extremely helpful	4
Very helpful	0
Somewhat helpful	0
Not so helpful	0
Not at all helpful	0

4. VISIONING

VISION

The City conducted a community visioning exercise to formulate a cohesive vision statement for Patterson. Residents and stakeholders were actively engaged in discussions related to the walking and bicycling in Patterson. The City of Patterson Active Transportation Plan is guided by the following vision:

"The City of Patterson envisions creating a safe, connected, vibrant, and well-maintained walking and bicycling network that supports people of all ages and abilities."

GOALS AND OBJECTIVES

Goal 1: Promote Walking and Bicycling

1.1: Education: Provide an educational program for local residents explaining the benefits of active transportation.

1.2: Conduct group skills rides, walking and bicycling audits, and other community events to encourage walking and bicycling.

1.3 Provision of Active Transportation Infrastructure: Identify and work to implement a complete and convenient active transportation network.

1.4: Conduct activities such as classroom/ physical education lessons, mock cities and traffic gardens, bicycle rodeos, and field trips to promote bicycling and walking among students.

Goal 2: Safety

2.1: Adopt a Vision Zero policy that eliminates all pedestrian and bicycle collisions by 2040.

2.2: Adopt a Local Roadway Safety Plan (LRSP) that focuses on the safety of pedestrians and bicyclists by using effective safety countermeasures.

2.3: Prioritize improvements that support walking and bicycling to school.

2.4: Evaluate the bicycle and pedestrian safety annually.

2.5: Promote safe roadway behavior through roadway design, education, and enforcement.

Goal 3: Connectivity

3.1: Identify and fill existing gaps in the walking and biking network.

3.2: Design active transportation projects that are accessible and comfortable for people of all ages and abilities.

3.3: Utilize state-of-the-practice and emerging designs included in this plan as well as national manuals such as the NACTO Urban Bikeway Design Guide and AASHTO Guide for the Development of Bicycle Facilities, 2nd Edition.

Goal 4: Health

4.1: Promote an active lifestyle that includes walking and biking.

4.2: Provide walking and bicycling facilities that connect parks and schools.

4.3: Implement or support programs and events, such as Bike or Walk to Work Month.

Goal 5: Equity

5.1: Encourage the provision of comfortable walking, bicycling, and transit facilities in disadvantaged communities.

5.2: Engage low-income communities and underserved populations during all stages of the planning and implementation process.

5.3: Consider walking and bicycling infrastructure as a tool for community revitalization and economic growth.

Goal 6: Accessibility

6.1: Develop a walking and bicycling network that provides comfortable access to people of all ages and abilities.

Goal 7: Environment

7.1: Implement a citywide vehicle miles traveled (VMT) policy and Transportation Demand Management (TDM) Program that includes strategies such as bike share, transit passes, and carpooling.

Goal 8: Implementation

8.1: Require developers to fund and install pedestrian and bicycle facilities in the vicinity of new developments.

8.2: Coordination with Other Agencies: Collaborate with the Patterson Joint Unified School District and Patterson Recreation and Community Services Department to conduct educational activities to teach students about pedestrian and bicycle safety.

8.3: Work with the School District to actively pursue Safe Routes to School (SRTS) grants to fund programs that facilitate safe bike routes.

8.4: Pursue funding opportunities for the design, development, and maintenance of walking and biking projects and programs.

PERFORMANCE MEASURES

Pedestrian and bicycle projects and program recommendations were formulated specifically to meet the goals and objectives within the Plan, created through a process of extensive community outreach. Performance measures were developed for these projects and programs that will help City of Patterson staff to track progress over time. Future active transportation planning efforts can utilize these performance tracking metrics to identify potential priorities moving forward.

Table 5: Performance Measures

Goal	Performance Measure	Source of Information	Baseline Current Performance
Promote Walking and Bicycling	Number of active transportation education and promotional events conducted annually	Patterson Healthy Walks	**01**
Safety	Number of Pedestrian and Bicycle Collisions	Statewide Integrated Traffic Records System (SWITRS, 2019)	**Pedestrian - 03** **Bicycle - 04**
Connectivity	Number of Active Transportation Projects completed annually	City of Patterson	**06**
Health	Walking and Bicycling mode share percentage	American Community Survey (ACS) 5-year estimates	**Walked - 0.3%** **Bicycled - 0.0%**
Equity	Number of bicycle and pedestrian projects implemented in disadvantaged communities.	City of Patterson	**01**
Accessibility	1. Miles of new bicycle facilities (multi-use paths, side paths, separated bicycle lanes, or bicycle boulevards) 2. Miles/number of new pedestrian facilities (Sidewalks, walkways, curb ramps, crosswalks).	City of Patterson	**NA**
Environment	Evaluate reduction in VMT per capita	To be calculated after adoption of VMT policy	**NA**

5. PROJECT AND PROGRAM RECOMMENDATION

A list of bicycle and pedestrian projects and programs have been developed based on the community needs assessment, which will be used to create a safe, connected, vibrant, and well-maintained walking and bicycling network that supports people of all ages and abilities. A total of 41 bicycle and 18 pedestrian projects are recommended for the City of Patterson.

PROJECT PRIORITIZATION

Considering the realities of finite financial and staffing resources, it will likely be necessary to implement projects gradually over time. Prioritizing projects can help guide investments toward projects that provide the greatest benefits. In addition, a project's relative priority can be a factor in some grant applications.

Project prioritization criteria were developed based on Plan goals and objectives. The prioritization criteria scores and weighting system were devised to identify the projects that best support the Plan's vision. The detailed project prioritization methodology and supporting materials are provided in Appendix 2.

Projects have been classified into near-term, mid-term, and long-term phasing based on the final priortization scores as shown in Table 6.

Table 6: Project Prioritization Phase

Implementation Phase	Scoring Criteria	Definition
Near Term	Total Score < 75	Less than 5 years
Mid Term	Total score between 75 and 90	Between 5 and 10 years
Long Term	Total Score > 90	More than 10 years

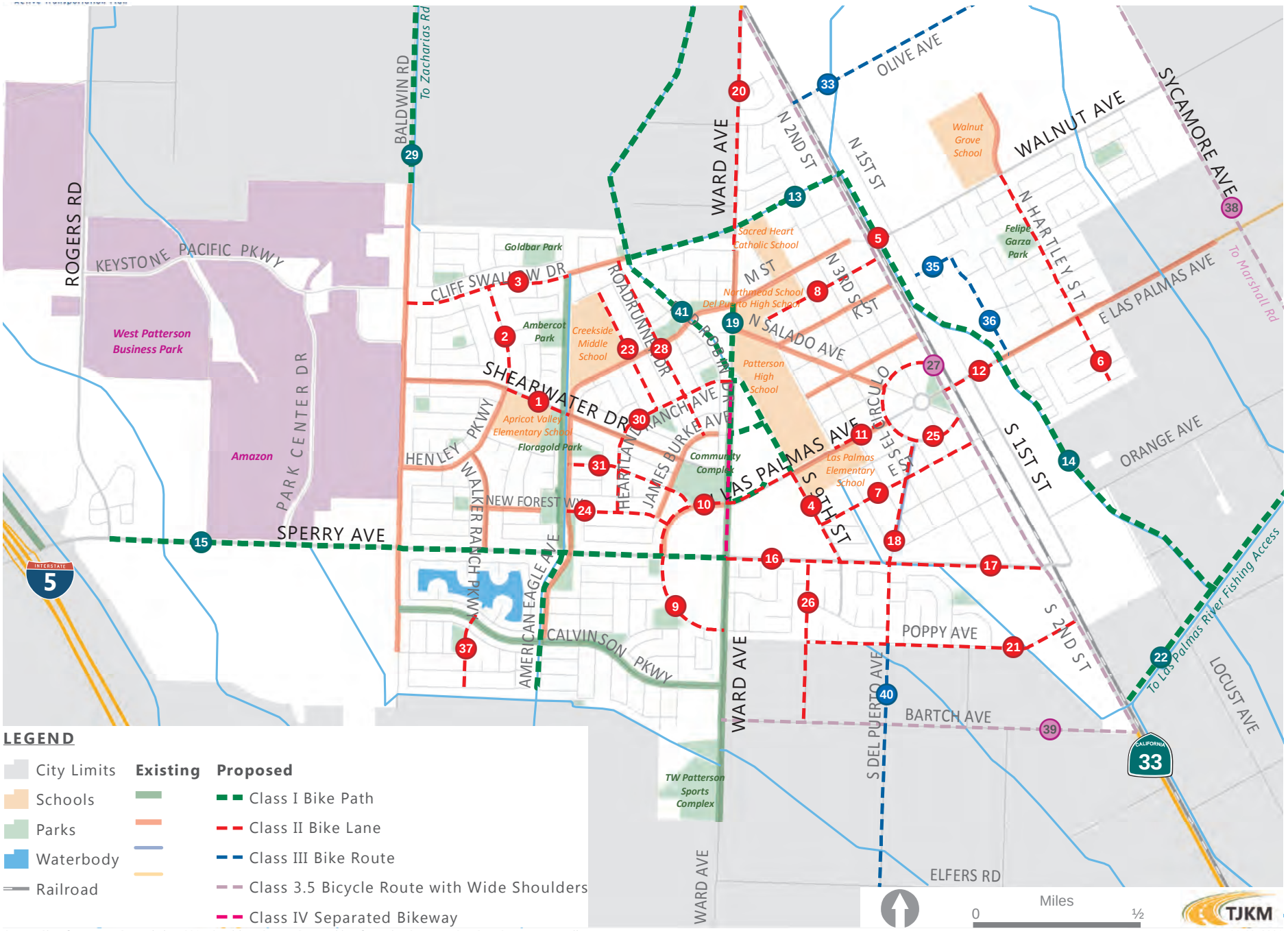
BICYCLE PROJECTS AND RECOMMENDATIONS

Figure 10 shows the location of all 41 proposed bicycle projects. Project are classified by facility type. Table 7 provides a summary of proposed projects by type of facility. Out of the proposed 41 projects, 31 projects were referenced from the Transportation Infrastructure Master Plan, 2020 and four projects from the StanCOG Non-Motorized Transportation Master Plan, 2021. Six new projects were proposed as a part of this plan. Table 8 summarizes the list of recommended bicycle projects, including project description, implementation phasing, and planning level cost estimates.

Table 7: Proposed Bicycle Projects by Type of Facility

Facility Type	Number of Projects	Total (Miles)	Within City Limits (Miles)
Class I	7	10.5	4.3
Class II	25	11.2	11
Class III	6	5.7	3.7
Class 3.5 Bicycle Route with Wide Shoulders	3	10.1	4.1
Grand Total	**41**	**37**	**23**

Figure 10: Proposed Bicycle Projects



Source: City of Patterson General Plan, 2014; Stanislaus County Geographic Information Systems, ESRI, OpenStreetMap contributors

Date: 11/29/2021

Table 7: Proposed Bicycle Projects

Id	Roadway Name	Project Limits	Description	Source	Facility Type	Length (Miles)	Planning Level Cost Estimate
1	Shearwater Dr	American Eagle Ave to Henley Parkway	Bridging the gap between existing facilities at Shearwater Dr; Crossing Improvements at American Eagle Trail and Creekside Dr; ADA Ramps	TIMP 2020	Class II	0.21	$31,425
2	Henley Pkwy	Cliff Swallow Dr to Shearwater Dr	Extending the existing class II bike lane facilities on Henley Pkwy	TIMP 2020	Class II	0.33	$54,945
3	Cliff Swallow Dr	Baldwin Rd to Skimmer Dr	Extending the existing class II bike lane facilities on Cliff Swallow Dr and connecting it to Baldwin Rd	TIMP 2020	Class II	0.51	$77,425
4	9th St	Las Palmas Ave to Sperry Ave	Upgrade the existing Class III bike route to class II bike lanes.	TIMP 2020	Class II	0.31	$66,800
5	Walnut Ave/M St	N 1st St to SR 33	Extending the existing class II bike lanes on Walnut Ave. Railroad crossing and N 2nd St crossing will have to be paid special attention.	New	Class II	0.08	$97,625
6	N Hartley St	Walnut Ave to E Las Palmas Ave	Connecting two major routes (E Las Palmas Ave and Walnut Ave). The project is also in the vicinity of Walnut Grove School and Felipe Garza Park.	TIMP 2020	Class II	0.72	$242,880
7	E St	S 2nd St to 9th St	Proposed Bike Facility in TIMP 2020	TIMP 2020	Class II	0.53	$125,565
8	L St	N 2nd St to 7th St	Proposed Bike Facility in TIMP 2020	TIMP 2020	Class II	0.39	$93,790
9	W Las Palmas Ave	Ward Ave/ Mackihaffy to Sperry Ave	Extending the services on the south of Sperry Avenue to Parks and Walmart.	TIMP 2020	Class II	0.35	$236,810
10	W Las Palmas Ave	Sperry Ave to N 9th St	2021 STANCOG NMTP: Identified as a top 25 route in the County for Improvement. The project helps in connecting neighborhoods in west Patterson to downtown. The proposed recommendations for this route would address barriers such as sidewalk gaps, installing and upgrading curb ramps, and gaps in the bicycle network.	NMTP 2021	Class II	0.52	$260,505

Id	Roadway Name	Project Limits	Description	Source	Facility Type	Length (Miles)	Planning Level Cost Estimate
11	W Las Palmas Ave	N 7th St to S El Circulo Ave	2021 STANCOG NMTP: Identified as a top 25 route in the County for Improvement. The roadway is next to Patterson High School, Veterans Memorial Park and SRT bus stop. The proposed recommendations for this route would address barriers such as sidewalk gaps, installing and upgrading curb ramps, and gaps in the bicycle network.	NMTP 2021	Class II	0.19	$71,345
12	W Las Palmas Ave	N 2nd St to Weber Ave	Filling the gap	TIMP 2020	Class II	0.20	$208,585
13	Cliff Swallow Trail	Cliff Swallow Dr to N 1st St	Trail Connection	TIMP 2020	Class I	0.72	$1,864,360
14	Canal Trail	N 1st St to Main Canal	This trail connection can be explored as an option. Further research on right-of-way availability will be undertaken during the planning stage.	New	Class I	1.79	$1,983,145
15	Sperry Ave	Ward Ave to Rogers Rd	Existing sidewalk on Sperry Avenue will be upgraded to a Class I trail at locations where there is adequate Right-of-Way (ROW) such as the segment between Ward Avenue and Baldwin Road. All other sections of the roadway will require additional study mostly due to ROW constraints.	New	Class I	1.90	$247,900
16	Sperry Ave	Del Puerto Ave to Ward Ave	Proposed Bike Facility in TIMP 2020	TIMP 2020	Class II	0.51	$324,555
17	Sperry Ave	N 2nd St to Del Puerto Ave	Additional Study Required (Class II)	TIMP 2020	Class II	0.47	$155,575
18	S Del Puerto Ave	Plaza Cir to Poppy Ave	Upgrade TIMP 2020; Provides connection to the Downtown; Upgrading existing Class III bike routes to Class II bike lanes	TIMP 2020	Class II	0.64	$271,800

Id	Roadway Name	Project Limits	Description	Source	Facility Type	Length (Miles)	Planning Level Cost Estimate
19	Ward Ave	M St to to North 9th St	2021 STANCOG NMTP: Identified as a top 25 route in the County for Improvement. The project is along Patterson High School, Northmead School and Tilton Park. Recommendations include sidewalk infill, curb ramp improvements, high visibility crosswalks, advance stop lines at crosswalks, and extending bike facilities.	NMTP 2021	Class I	0.24	$247,900
20	Ward Ave	SR 33 to Barros St	Proposed Bike Facility in TIMP 2020	TIMP 2020	Class II	0.75	$135,125
21	Poppy Ave	N 2nd St to Clover Ave	Class II connection south	TIMP 2020	Class II	0.85	$113,215
22	Main Canal	SR 33 to Las Palmas River Fishing Access	The Stanislaus County Parks and Recreational Master Plan proposes improvements at this location along with a walking path. The City could coordinate with the County Parks and Recreation Department to explore opportunities for providing bicycle trail connections to this location.	New	Class I	3.33	$3,465,815
23	Peregrine Dr	Flicker Ln to Heartland Ranch Ave	Proposed Bike Facility in TIMP 2020	TIMP 2020	Class II	0.41	$58,815
24	Pipit Dr	American Eagle Ave to W Las Palmas Ave	Proposed Bike Facility in TIMP 2020	TIMP 2020	Class II	0.32	$65,110
25	S El Circulo	All	Proposed Bike Facility in TIMP 2020	TIMP 2020	Class II	0.55	$239,315
26	Clover Ave	Sperry Ave to Bartch Ave	Proposed Bike Facility in TIMP 2020	TIMP 2020	Class II	0.50	$1,270,210
27	N 2nd St	Bartch Ave to Eucalyptus Ave/ Magnolia Ave	2021 STANCOG NMTP: Regional connector	NMTP 2021	Class 3.5 Bicycle Route with Wide Shoulders	3.73	$1,006,370

Id	Roadway Name	Project Limits	Description	Source	Facility Type	Length (Miles)	Planning Level Cost Estimate
28	Roadrunner Dr	Cliff Swallow Dr to Heartland Ranch Ave	Proposed Bike Facility in TIMP 2020	TIMP 2020	Class II	0.60	$93,825
29	Baldwin Rd	Zachariad Rd to Patterson City Limit	Proposed Bike Facility in TIMP 2020	TIMP 2020	Class I	0.87	$910,665
30	Heartland Ranch Ave	Pipit Dr to Ward Ave	Proposed Bike Facility in TIMP 2020	TIMP 2020	Class II	0.62	$181,545
31	Kestrel Dr	American Eagle Ave to W Las Palmas Ave	Proposed Bike Facility in TIMP 2020	TIMP 2020	Class II	0.42	$87,000
32	Eucalyptus Ave	SR 33 to Sycamore Ave	TIMP 2020; Downgrade to Class III Share the road	TIMP 2020	Class III	1.00	$4,000
33	Olive Ave	SR 33 to Poplar Ave	TIMP 2020; Downgrade to Class III Share the road	TIMP 2020	Class III	2.53	$8,335
34	Poplar Ave	Olive Ave to Las Palmas Ave	TIMP 2020; Downgrade to Class III Share the road	TIMP 2020	Class III	0.98	$3,915
35	Washburn St	1st to Weber Ave	TIMP 2020; Downgrade to Class III Share the road	TIMP 2020	Class III	0.12	$2,360
36	Weber Ave	Washburn St to E Las Palmas Ave	TIMP 2020; Downgrade to Class III Share the road	TIMP 2020	Class III	0.35	$3,840
37	Scarlett Ln	Horizon Ln to Daisy Dr	Proposed Bike Facility in TIMP 2020	TIMP 2020	Class II	0.24	$65,550
38	Sycamore Ave	Marshall Rd to Walnut Ave	TIMP 2020; Downgrade to Class 3.5 wide shoulders	TIMP 2020	Class 3.5 Bicycle Route with Wide Shoulders	5.05	$5,187,805

Id	Roadway Name	Project Limits	Description	Source	Facility Type	Length (Miles)	Planning Level Cost Estimate
39	Bartch Ave	Ward Ave to SR 33	TIMP 2020; Downgrade to Class 3.5 wide shoulders	TIMP 2020	Class 3.5 Bicycle Route with Wide Shoulders	1.28	$1,362,200
40	S Del Puerto Ave	Poppy Ave to Elfers Rd	TIMP 2020; Downgrade to Class III Share the road	TIMP 2020	Class III	0.75	$3,480
41	Unknown	Ward Ave to Cliff Swallow Dr	Direct connection to High School; Paseo	TIMP 2020	Class I	1.63	$1,694,645

Photosimulations

Existing

Proposed

Class I Multi-use path near Patterson High School

Class II Bicycle LaneS Del Puerto Ave between Plaza Circle and Poopy Ave

Class III Bicycle Route Weber Ave between Washburn St and E Las Palmas Ave

PEDESTRIAN PROJECTS AND RECOMMENDATIONS

Figure 11 shows the locations of the 18 proposed pedestrian projects. Some of the pedestrian projects are meant to be completed in conjunction with bicycle facility projects or other roadway projects. Pedestrian projects are listed in Table 9 to ensure that they are included during the roadway improvements. Consequently, the implementation phases listed below are for planning purposes only.

Table 9 provides a summary of proposed projects by type of facility. Out of the 18 proposed projects, 4 projects were referenced from the Transportation Infrastructure Master Plan 2020. 12 new projects were proposed as a part of the Plan. Table 10 summarizes the list of recommended bicycle projects, along with a description of each project, implementation phasing information, and cost estimates.

Table 9: Proposed Pedestrian Facility Type

Facility Type	Count
High Visibility School Crossing	4
High Visibility Crossing	1
New Signal	4
Stripped Crosswalk and Pedestrian Activated Crosswalk Flashers	1
Sidewalk Gaps	8.27 Miles
Missing ADA Ramps	208
Upgrading ADA Ramps	991
Trail Crossing - subject to trail approval	5

Figure 11: Proposed Pedestrian Projects

LEGEND

- City Limits
- Schools
- Parks
- Waterbody
- Railroad
- Existing Signal
- Sidewalk Gaps
- Missing ADA Ramps
- Not Meeting Standards
- High Visibility Crossing
- High Visibility School Crossing
- Stripped Crosswalk and Pedestrian Activated Crosswalk Flashers
- Trail Crossing-Subject to Trail Approval
- New Signal or Signal Upgrade

Miles 0 ½

TJKM

Source: City of Patterson General Plan, 2014; Stanislaus County Geographic Information Systems, ESRI, OpenStreetMap contributors

Date: 11/29/2021

Table 10: Proposed Pedestrian Projects

Id	Project Name	Location	Description	Source	Implementation Phase	Planning Level Cost Estimate
1	High Visibility Crossing	Las Palmas Ave near Meadow Rue Park/Walmart	High Visibility Crossing	New	Short-term	$6,145
2	High Visibility School Crossing	Henley Pkwy and Mendocino Creek Dr	High Visibility School Crossing	New	Short-term	$5,765
3	High Visibility School Crossing	Shearwater Dr and Creekside Dr	High Visibility School Crossing	New	Short-term	$5,765
4	High Visibility School Crossing	Shearwater Dr and Urban Green Trail Crossing	High Visibility School Crossing	New	Short-term	$5,860
5	High Visibility School Crossing	W Las Palmas Ave and S 9th St	High Visibility School Crossing	New	Short-term	$13,230
6	Trail Crossing-Subject to Trail Approval	At Cliff Swallow Dr (end)	Trail Crossing-Subject to Trail Approval	New	Long-Term	$5,240
7	Trail Crossing-Subject to Trail Approval	At Ward Ave near Rose Dr	Trail Crossing-Subject to Trail Approval	New	Long-Term	$5,240
8	Trail Crossing-Subject to Trail Approval	At American Eagle Ave near Red Robin Dr	Trail Crossing-Subject to Trail Approval	New	Long-Term	$5,240
9	Trail Crossing-Subject to Trail Approval	At N 2nd St near El Solyo Dr	Trail Crossing-Subject to Trail Approval	New	Long-Term	$5,265
10	Trail Crossing-Subject to Trail Approval	At Las Palmas Ave near Weber Ave	Trail Crossing-Subject to Trail Approval	New	Long-Term	$5,375
11	Citywide Sidewalk Infill	Throughout the City. Total = 8.27 Miles	Citywide Sidewalk Infill	New	NA	$12,977,645
12	Citywide ADA Ramps Addition	Throughout the City. Missing ADA Ramps = 199	Citywide ADA Ramps Addition. Installing and upgrading ADA ramps. Most upgrades are related to missing DWS.	New	NA	$3,044,700
		Not Meeting Standards = 947	Adding truncated domes	New	NA	$5,795,640

Id	Project Name	Location	Description	Source	Implementation Phase	Planning Level Cost Estimate
13	Signal Upgrade	Sperry Avenue and 9th Street	The existing crosswalk at Sperry Ave/9th St will be upgraded with mast arms, pedestrian activated crosswalk flashers, new paint striping, and ADA ramps	New	Mid-term	$1,107,760
14	Stripped Crosswalk and Pedestrian Activated Crosswalk Flashers	Ward Avenue and Mackilhaffy Drive.	A new crosswalk will be constructed on Ward Ave/Mackilhaffy Drive with pedestrian activated crosswalk flashers	New	Short-term	$198,900
15	New Signal	S 2nd St and Sperry Avenue	New Signal proposed in TIMP 2020. Provision of pedestrian signal heads, crosswalk striping, and installation of ADA ramps could be included in this project.	TIMP 2020	Mid-term	$1,210,920
16	New Signal	Ward Avenue and N Salado Avenue	New Signal proposed in TIMP 2020. Provision of pedestrian signal heads, crosswalk striping, and installation of ADA ramps could be included in this project.	TIMP 2020	Mid-term	$1,054,935
17	New Signal	Rogers Road and Keystone Pacific Pkwy	New Signal proposed in TIMP 2020. Provision of pedestrian signal heads, crosswalk striping, and installation of ADA ramps could be included in this project.	TIMP 2020	Mid-term	$1,211,150
18	New Signal	West Las Palmas Avenue and Poplar Avenue	New Signal proposed in TIMP 2020. Provision of pedestrian signal heads, crosswalk striping, and installation of ADA ramps could be included in this project.	TIMP 2020	Mid-term	$1,280,860

SUPPORTING INFRASTRUCTURE

Supporting facilities are are critical to attract and retain active transportation users. The following recommendations provide support to the Parks and Recreation Master Plan:

Trailhead Locations: Trailheads are places that serve as starting, ending, or interim points along a trail which provides information and/or additional facilities potentially, facilities to the trail user. The level and type of facilities at a trailhead shall be determined by the current and anticipated amount of use, type of use, and proximity to other trailheads in the park. The siting process for new trailheads should consider environmental conditions near the the trail site to minimize environmental degradation. The design of the trailhead should reflect the desired trail class experience, and cultural landscapes. (National Park Service, 2012).

Trail Parking: An appropriate amount of vehicle and bicycle parking should be provided near trails. To encourage people to walk and bike to the trail, the number of vehicle parking spaces should be based upon the use anticipated on an average weekend during the peak season of use. Parking area designs should follow the sustainable guidelines provided by the National Park Service. Bicycle parking should be provided at all designated trailheads.

Benches: Benches should be located along trails and at sidewalks at regular intervals benefiting senior residents.

The 6 E's of Active Transportation is an effective strategy to further the goals of the Active Transportation.

Education: Education activities teach walking and bicycling safety skills and promote the benefits of active transportation. These activities can be adapted for different ages, abilities, settings and contexts.

Encouragement: Encouragement activities generate excitement and enthusiasm for walking and biking.

Enforcement: Enforcement activities aim to deter unsafe behaviors and reinforce safe behaviors.

Engineering: Engineering strategies change the built environment to create safer and more comfortable places to walk and/or bicycle.

Evaluation: Evaluation activities measure both program outputs (deliverables) and program outcomes. Evaluation helps address whether a program is doing what it intended to do.

Equity: Equity in transportation invests resources in disadvantaged communities which are most dependent on active transportation and transit.

For more information, visit Active Transportation Resource Center

Water Stations: Potable drinking water facilities should be provided, if feasible, along the trail at an adequate distance.

Wayfinding Signs: A wayfinding and signage plan should be created by the City. A mobile application can be developed to help trail users navigate routes and locate facilities.

Bicycle Parking and Storage Facilities: Ensure the availability of adequate bicycle parking at public facilities, schools, commercial areas, major transit stops, and other locations according to current or future bicycle parking demands.

Pedestrian Countdown Signals: Install pedestrian countdown indicators at traffic signals.

Tree Shades: Functional landscaping and tree shades can lower the temperatures by 6-to-8 degrees.

The City of Patterson is also developing a Parks and Recreation Master Plan that will provide more details on the supporting infrastructure.

Walk & Roll Stanislaus is a regional bicyclist and pedestrian safety and education campaign in Stanislaus County. The Stanislaus Council of Governments (StanCOG) is teaming up with community leaders and advocates to improve road safety, increase awareness of and empathy toward active transportation users, and boost walking and bicycling rates throughout the county.

For more information, visit www.walkandrollstanislaus.com

Patterson Healthy Walks is an event organized by the Patterson Recreation and Community Services department on the third Saturday of every month. A different location is selected for each event and the registration is available onsite.

For more information, visit https://www.ci.patterson.ca.us/845/Patterson-Healthy-Walks

6. IMPLEMENTATION

The City of Patterson will continue to build a strong and connected active transportation network using a variety of implementation strategies. The Plan will be built over a number of years depending on funding and staffing resources, focusing first on the near-term projects that have the highest potential to increase walking and biking. Throughout the implementation process, staff will continue to work with critical partners and the community to gather input. Implementation of the Plan will be incremental but is guided by established policy to continue to prioritize funding to support the City's goals for increasing bicycling and walking.

POTENTIAL FUNDING SOURCES

To implement the bicycle and pedestrian projects, the city will need to identify additional funding sources beyond the city's general funds. Most funding for the improvements recommended in this plan is likely to come from federal, state, and regional grant programs. These grant programs are often competitive and will require the city to compete against other municipalities for funding. To help identify the eligible competitive grants, common federal, state, and regional grant funding programs have been summarized below.

Federal Funding Sources

Transportation Alternatives Set-Aside

The Transportation Alternatives (TA) Set-Aside under the Fixing America's Surface Transportation (FAST) Act authorizes funding for programs and projects defined as transportation alternatives, including but not limited to on- and off-road pedestrian and bicycle facilities; infrastructure projects for improving non-driver access to public transportation and enhanced mobility; recreational trail projects, and; safe routes to school projects.

Matching Requirements: Federal share is typically 88.5%; however, some safety projects allow for 100% federal share. Local match is about 11.5%.

Congestion Mitigation and Air Quality (CMAQ)

The CMAQ Improvement Program funds transportation projects to improve air quality and reduce traffic congestion in areas that do not meet air quality standards. The program has been a key mechanism for implementing non-motorized projects that reduce greenhouse gas emissions. The CMAQ program is administered jointly by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). Funds are directed to transportation projects and programs which contribute to the attainment or maintenance of National Ambient Air Quality Standards (NAAQS). Funds may be used for transportation projects or programs that are likely to contribute to the attainment or maintenance of national ambient air quality standard. Please see StanCOG's current transportation plan and Federal Transportation Improvement Program (FTIP) for more details (Stanislaus Council of Governments, 2021).

About $2.5 Billion was allocated to the CMAQ program in 2020 under the federal Fixing America's Surface Transportation (FAST) Act. It is important to note that CMAQ operates on a reimbursement schedule; funds are not distributed until work is completed.

Matching Requirements: Federal share is typically 80%; however, some safety projects allow for 100% federal share.

Highway Safety Improvement Program

The Highway Safety Improvement Program (HSIP) funds projects that reduce collisions and vehicular fatalities and improve road safety. Applicable projects include improvements for bicyclists and pedestrians, safety education, training, and traffic calming. Like CMAQ funds, HSIP funds are allocated to every state to carry out approved projects and programs. In California, HSIP is managed by the Caltrans Division of Local Assistance. In 2019, California programmed $14 million

towards non-infrastructure safety projects with more than $6.5 million directed to the Pedestrian and Bicyclists improvement category. The maximum reimbursement for a single project is $10 million, and the minimum is $100,000. Federal refund is typically 90%, but in some scenarios can be the full project cost. Applications for Cycle 10 were due in Fall 2020, and the Cycle 11 call for projects is anticipated in April of 2022.

Matching Requirements: Federal share is typically 90%.

State Funding Sources

Active Transportation Program

In 2013, Governor Brown created the Active Transportation Program (ATP), which consolidated other existing federal and state active transportation funding programs to support infrastructure and non-infrastructure projects. The purpose of the ATP is to increase biking and walking trips, increase safety and mobility for non-motorized users, enhance air quality and public health, and ensure disadvantaged communities fully share the benefits of the program. Each year, the program allocates 50% of its funds to projects on a competitive basis, 40% to regional agencies, and 10% specifically to rural areas. Exact funding amounts fluctuate from cycle to cycle. Roughly $440 million is expected to be available for 2021 ATP Cycle 5. The minimum award amount is $250,000; there is no maximum award amount. This plan is funded through an ATP grant.

Matching Requirements: The Commission does not require a funding match for ATP.

Solutions for Congested Corridors Program

The purpose of the Solutions for Congested Corridors Program (SCCP) is to reduce congestion and expand transportation choices for road users. In addition to mitigating congestion, the program seeks to improve safety, improve air quality, and generate economic development and job creation opportunities. Projects include improvements to bicycle and pedestrian facilities, and updates to local streets and roads. $494 million was allocated for fiscal year 2021-2022 and 2022-2023, and seven projects received funding throughout the state. For more information about the program, visit the California Transportation Commission's program site.

Matching Requirements: None; leveraged funds are desirable.

Local Partnership Program

California Senate Bill 1 (SB 1) includes the Local Partnership Program (LPP), which is a funding source for local and regional transportation agencies that have passed a sales tax measure, developer fee, or other transportation fee for the purpose of improving transportation and mobility. $200 million of SB 1 funds are allocated to LLP annually and provides funding opportunities to improve active transportation, health, and safety benefits, as well as other opportunities related to aging infrastructure and road conditions. The program is two-pronged; 40% is through a statewide competitive process and 60% is through a formulaic program. 2020 applications were due in June of 2020; new funding cycles will be programmed every two years.

Matching Requirements: 1-to-1 match for both Formulaic and Competitive Program

Clean Mobility Options Voucher Pilot Program

The Clean Mobility Options Voucher Pilot sponsored by California Air Resources Board (CARB) distributes cap-and-trade dollars (up to $20 million) for shared mobility projects including car share, bike share, and on-demand programs to disadvantaged, low-income communities. Public agencies, tribal governments, and nonprofit organizations are eligible. Each new mobility project can receive up to $1,000,000; a project expanding an existing mobility service can receive up to $600,000, and community Transportation Needs Assessment projects could receive up to $50,000.

Matching Requirements: Varies; look for more details on CARB website (ww2.arb.ca.gov).

Office of Traffic Safety Grants

The California State Transportation Agency's Office of Traffic Safety (OTS) funds programs that promote safe behaviors and the use of roadways when walking or biking. Programs target all age groups to raise awareness about traffic rules, rights, and responsibilities for all roadway users. Specifically, programs are designed to teach safer driving, bicycling, and walking behaviors to high-risk populations, including youth and older community members. Grants for FY 2022 opened in December 2020 and were due by January 30, 2021.

Matching Requirements: No matching requirement

Sustainable Transportation Planning Grants

Caltrans' Sustainable Transportation Grants provide funding to support regional sustainable community strategies that can help to achieve the State's greenhouse gas reduction targets of 40 and 80 percent below 1990 levels by 2030 and 2050, respectively.

The Sustainable Transportation Planning Grant Program is composed of two broad grant programs, within which there are two award and eligibility categories: Sustainable Communities Grants, and Sustainable Partnerships Grants. The projects recommended in this plan are likely to be eligible for Sustainable Communities Grants. The Sustainable Communities Grants encourage local and regional planning that furthers state goals, including, but not limited to, the goals and best practices cited in the Regional Transportation Plan Guidelines adopted by the California Transportation Commission.

Eligible projects include land use and transportation planning documents, feasibility studies for active transportation, complete streets and safe routes to school plans, and active transportation master plans. The latest cycle of funding opened in December 2020 and applications were due in February 2021.

Matching Requirements: 11.47% for Competitive, Formula, and SP – Transit; 20% for Strategic Partnerships

Sustainable Transportation Equity Project

The Sustainable Transportation Equity Program (STEP) is a new pilot in 2020. The intent is to address community residents' transportation needs and increase access to key destinations while reducing greenhouse gas emissions by funding, clean transportation and supporting projects. The pilot has two grant types: Planning and Capacity Grants ($1.75M) and Implementation Grants ($17.75M). Eligible programs include establishing bike share programs, implementing voucher programs, and increasing access to transit. Funding for the program is $19.5 million.

Matching Requirements: Applicants are required to contribute a minimum of 20% of the project cost.

Affordable Housing Sustainable Communities

The Affordable Housing Sustainable Communities (AHSC) Program gives grants and loans to affordable housing developers and transportation agencies to increase access between housing, employment centers, and essential services. Funded by auction proceeds from California's Cap-and-Trade emissions reduction program, AHSC is administered by the Strategic Growth Council and implemented by the California Department of Housing and Community Development. There are three project types: Transit-Oriented Development Project Areas, Integrated Connectivity Project Areas, and Rural Innovation Project Areas. Awarded projects have included improvements to the pedestrian environment, amenities like bus shelters and benches, and programs that encourage public transit use.

The AHSC program has invested more than $1 Billion in projects across the state, 70% of which have been allocated to disadvantaged communities. The maximum and minimum awards across all project types are $30 million

and $1 million, respectively. The application deadline for the most recent round of AHSC (Round 6) funding was February 11, 2021. The estimated available funding is $375 million.

Matching Requirements: Project must have enough committed additional funding at time of application to meet 90% of the following formula: (AHSC funds requested + Enforceable Funding Commitments (EFCs) – Deferred Costs) / (Total Development Cost – Deferred Costs).

Regional Funding Programs

Measure L

In 2016, Stanislaus County residents voted to implement Measure L, a half-cent sales tax to fund regional and local transportation projects. The funds can be used for all project phases, including planning, permitting, design, and construction. Bicycle and pedestrian improvements account for 5% of Measure L revenues, which are projected to result in approximately $48 million in project funding over the measure's 25-year life. Since the program was enacted, funds have been utilized to support the installation of Class I and Class II bike lanes and the introduction of safety elements such as flashing beacons and high-visibility crosswalks. StanCOG, as the Local Transportation Authority (LTA), is responsible for the administration of the Measure L.

Local Funding Programs

Local revenue sources to fund active transportation programs include development impact fees, the state gas tax, transit fares, and local transportation funds. Development impact fees collect funds from new developments to offset their construction impact. Fees are requested by the local government agency. Fees are often utilized towards improvement of bicycle and pedestrian facilities, lighting and street safety elements, and educational programs for residents, employees, and community members.

There are various other funding sources available in addition to those listed above, such as private/ foundation/ nonprofit funding opportunities. Nationally, organizations such as the American Association of Retired Persons (AARP), Safe Routes National Partnership, and America Walks have small grant programs supporting active transportation. Within California, organizations such as the California Endowment and the California Wellness Foundation have grant programs that focus on community health.

MAINTENANCE

The City of Patterson maintains its street infrastructure in an effort to keep bicycle and pedestrian facilities comfortable and free of hazards. This includes making sure traffic control devices, streetlights, signs, and pavement surfaces are in good working order. Facilities with cracked pavement, vegetation, broken glass and other debris are a hazard and a barrier to walking and biking. The City will develop a plan to ensure the proactive maintenance of bicycle and pedestrian facilities.

7. REFERENCES

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APPENDIX

PROJECT PRIORTIZATION

Project priortization methodology was developed based on the priortization criteria identified during community engagement. The project priortization methodology has been summarized in Table A-1. Final scores for bicycle and pedestrian projects are tabulated in Table A-2 and Table A-3 respectively.

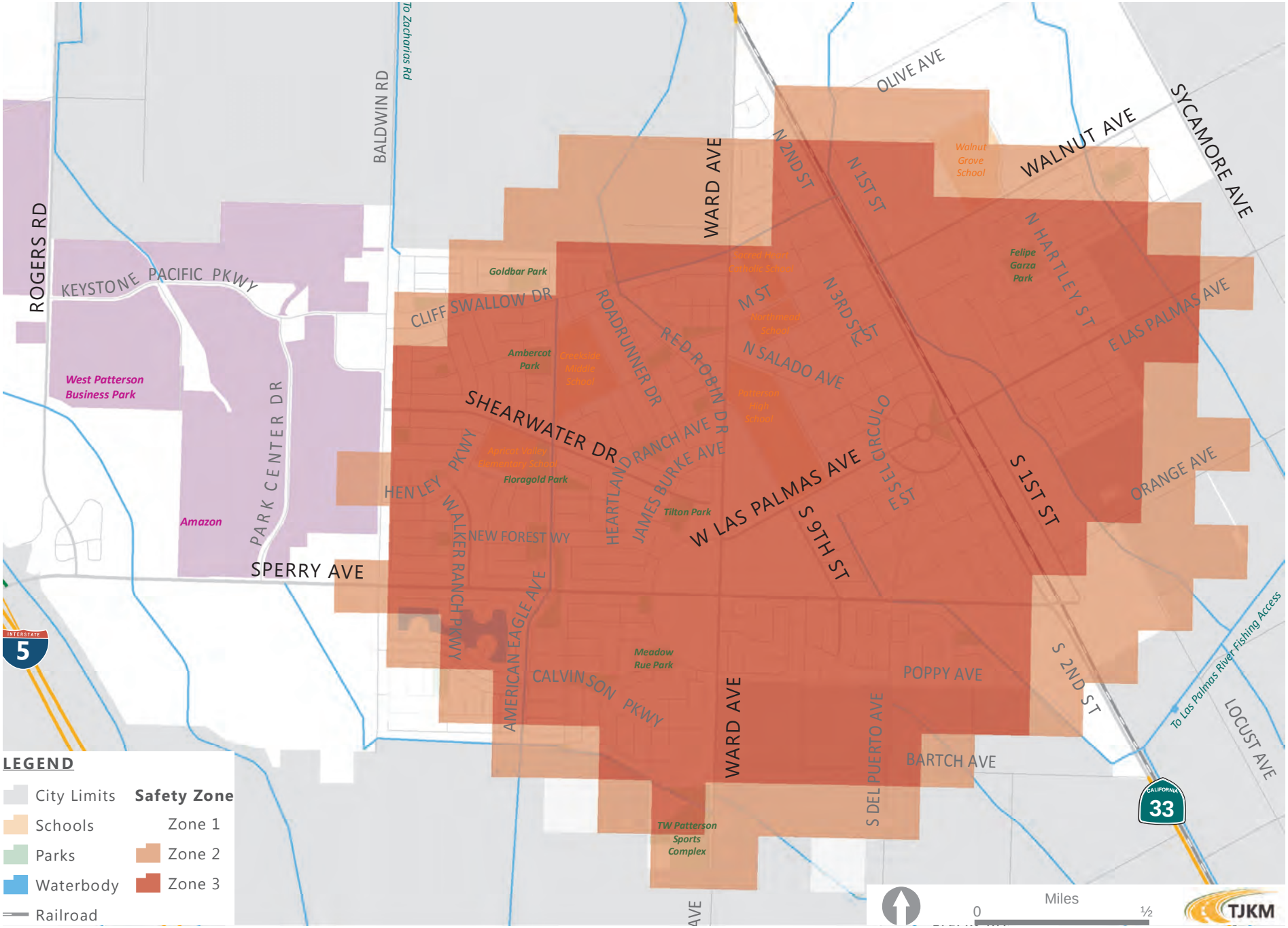
Table A-1: Project Priortization Methodolgy

Priority	Measure	Description	Weightage	Score	Criteria
1	Safety[1]	Potential for reducing the number and/or rate of pedestrian and bicyclist fatalities and Injuries. Scoring is based on the proximity to existing collisions. See map A-1.	3	1 5 10	Zone 1 Zone 2 Zone 3
2	Connectivity	The project closes a gap, provides connections to, or addresses a deficiency in an active transportation network or meets an important community need.	3	1 5 10	New facility along the corridor/Upgrading the facility; New facility near existing built environment; Filling the gap along existing facility
3	Ease of Implementation	The project is relatively easy to implement (limited acquisitions and low cost).	2	1 5 10	More than $1,000,000 Between $100,000 to $1,000,000 Less than $100,000
4	Equity	The project serves disadvantaged residents. See map A-2.	2	1 5 10	CalEnviroScreen 3.0 Percentile <80% Between 80% and 85% > 85%
5	Health	Proximity to parks and schools. See Map A-3.	2	1 5 10	Zone 1: 100 feet from School or Park Zone 2: 500 feet from School or Park Zone 3: Above 500 feet
6	Environment	The project reduces VMT and greenhouse gas emissions. It is anticipated that providing facilities along major corridors will result in significant mode shift.	1	1 5 10	Local Streets Collector Arterial
7	Access	The project is in proximity to transit station or service. See map A-4.	1	1 5 10	Zone 1: 0.25 mile from transit stop Zone 2: 0.5 mile from transit stop Zone 3: Above 0.5 mile

[1] *If the project is in two zones, we select the zone with the higher score.*

[2] *More information about CalEnviroScreen 3.0 can be found here: https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30*

Map A-1 Safety



Source: City of Patterson General Plan, 2014; Stanislaus County Geographic Information Systems, ESRI, OpenStreetMap contributors

Date: 9/28/2021

Map A-2 Equity

Source: City of Patterson General Plan, 2014; Stanislaus County Geographic Information Systems, ESRI, OpenStreetMap contributors

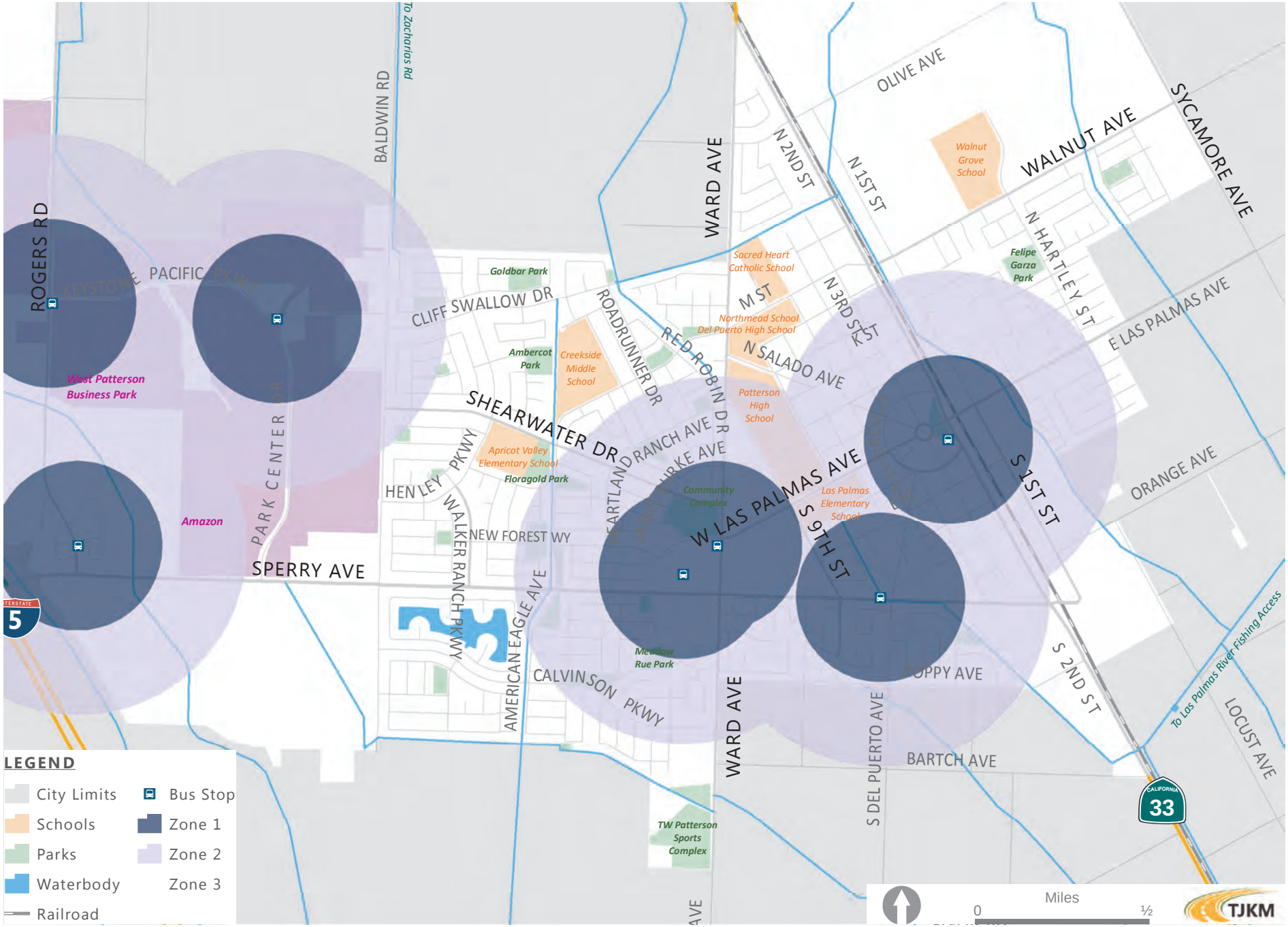
Date: 11/29/2021

Map A-2 Health

Source: City of Patterson General Plan, 2014; Stanislaus County Geographic Information Systems, ESRI, OpenStreetMap contributors

Date: 11/29/2021

Map A-4 Access



Source: City of Patterson General Plan, 2014; Stanislaus County Geographic Information Systems, ESRI, OpenStreetMap contributors

Date: 11/29/2021

Table A-2: Bicycle Projects Priortization Scoring

Id	Roadway Name	Limits	Term	Total Score	Safety (x3)	Connectivity (x3)	Ease of Implementation (x2)	Equity (x2)	Health (x2)	Environment	Access
12	W Las Palmas Ave	N 2nd St to Weber Ave	Near-Term	120	30	30	10	10	20	10	10
1	Shearwater Dr	American Eagle Ave to Henley Parkway	Near-Term	108	30	30	20	2	20	5	1
5	Walnut Ave/M St	N 1st St to SR 33	Near-Term	98	30	30	20	10	2	5	1
11	W Las Palmas Ave	N 7th St to S El Circulo Ave	Near-Term	98	30	30	20	2	10	1	5
20	Ward Ave	M St to to North 9th St	Near-Term	98	30	30	10	2	20	5	1
2	Henley Pkwy	Cliff Swallow Dr to Shearwater Dr	Near-Term	94	30	30	20	2	10	1	1
3	Cliff Swallow Dr	Baldwin Rd to Skimmer Dr	Near-Term	94	30	30	20	2	10	1	1
4	9th St	Las Palmas Ave to Sperry Ave	Near-Term	92	30	15	20	2	10	5	10
9	W Las Palmas Ave	Ward Ave/Mackihaffy to Sperry Ave	Mid-Term	88	30	15	10	2	20	1	10
31	Heartland Ranch Ave	Pipit Dr to Ward Ave	Mid-Term	83	30	15	10	2	20	1	5
10	W Las Palmas Ave	Sperry Ave to N 9th St	Mid-Term	82	30	15	10	2	10	5	10
17	Sperry Ave	N 2nd St to Del Puerto Ave	Mid-Term	82	30	15	10	2	10	10	5
25	Pipit Dr	American Eagle Ave to W Las Palmas Ave	Mid-Term	80	30	15	20	2	2	1	10
8	L St	N 2nd St to 7th St	Mid-Term	79	30	15	20	2	10	1	1
16	Sperry Ave	Del Puerto Ave to Ward Ave	Mid-Term	79	30	15	10	2	2	10	10
29	Roadrunner Dr	Cliff Swallow Dr to Heartland Ranch Ave	Mid-Term	79	30	15	20	2	10	1	1
15	Sperry Ave	Ward Ave to Rogers Rd	Mid-Term	78	30	15	10	2	10	10	1
6	N Hartley St	Walnut Ave to E Las Palmas Ave	Mid-Term	77	30	15	10	10	10	1	1
24	Peregrine Dr	Flicker Ln to Heartland Ranch Ave	Mid-Term	77	30	3	20	2	20	1	1
38	Scarlett Ln	Horizon Ln to Daisy Dr	Mid-Term	77	30	3	20	2	20	1	1

28	N 2nd St	Bartch Ave to Eucalyptus Ave/Magnolia Ave	Mid-Term	76	30	3	2	20	10	10	1
32	Kestrel Dr	American Eagle Ave to W Las Palmas Ave	Mid-Term	75	30	15	20	2	2	1	5
26	S El Circulo	All	Long-Term	74	30	15	10	2	2	5	10
36	Washburn St	1st to Weber Ave	Long-Term	71	30	3	20	10	2	1	5
37	Weber Ave	Washburn St to E Las Palmas Ave	Long-Term	71	30	3	20	10	2	1	5
7	E St	S 2nd St to 9th St	Long-Term	70	30	15	10	2	2	1	10
18	S Del Puerto Ave	Plaza Cir to Poppy Ave	Long-Term	70	30	15	10	2	2	1	10
19	Ward Ave	North 9th St to Sperry Ave	Long-Term	70	30	3	10	2	10	5	10
41	S Del Puerto Ave	Poppy Ave to Elfers Rd	Long-Term	59	30	3	20	2	2	1	1
14	Canal Trail	N 1st St to Main Canal	Long-Term	58	30	3	2	10	2	1	10
22	Poppy Ave	N 2nd St to Clover Ave	Long-Term	53	30	3	10	2	2	1	5
27	Clover Ave	Sperry Ave to Bartch Ave	Long-Term	53	30	3	10	2	2	1	5
21	Ward Ave	SR 33 to Barros St	Long-Term	50	15	15	10	2	2	5	1
33	Eucalyptus Ave	SR 33 to Sycamore Ave	Long-Term	50	3	3	20	20	2	1	1
34	Olive Ave	SR 33 to Poplar Ave	Long-Term	50	3	3	20	20	2	1	1
35	Poplar Ave	Olive Ave to Las Palmas Ave	Long-Term	50	3	3	20	20	2	1	1
13	Cliff Swallow Trail	Cliff Swallow Dr to N 1st St	Long-Term	49	30	3	2	2	10	1	1
40	Bartch Ave	Ward Ave to SR 33	Long-Term	41	30	3	2	2	2	1	1
42	Unknown	Ward Ave to Cliff Swallow Dr	Long-Term	41	30	3	2	2	2	1	1
30	Baldwin Rd	Zachariad Rd to Patterson City Limit	Long-Term	40	3	3	10	20	2	1	1
39	Sycamore Ave	Marshall Rd to Walnut Ave	Long-Term	32	3	3	2	20	2	1	1
23	Main Canal Trail	SR 33 to Las Palmas River Fishing Access	Long-Term	22	3	3	2	10	2	1	1

Table A-3: Pedestrian Projects Priortization Scoring

ID	Project Name	Location	Description	Term
1	High Visibility Crossing	Las Palmas Ave near Meadow Rue Park/Walmart	High Visibility Crossing	Near-Term
2	High Visibility School Crossing	Henley Pkwy and Mendocino Creek Dr	High Visibility School Crossing	Near-Term
3	High Visibility School Crossing	Shearwater Dr and Creekside Dr	High Visibility School Crossing	Near-Term
4	High Visibility School Crossing	Shearwater Dr and Urban Green Trail Crossing	High Visibility School Crossing	Near-Term
5	High Visibility School Crossing	W Las Palmas Ave and S 9th St	High Visibility School Crossing	Near-Term
14	Stripped Crosswalk and Pedestrian Activated Crosswalk Flashers	Ward Avenue and Mackilhaffy Drive.	A new crosswalk will be constructed on Ward Ave/Mackilhaffy Drive with pedestrian activated crosswalk flashers	Near-Term
13	Signal Upgrade	Sperry Avenue and 9th Street	The existing crosswalk at Sperry Ave/9th St will be upgraded with mast arms, pedestrian activated crosswalk flashers, new paint striping, and ADA ramps	Mid-term
15	New Signal	S 2nd St and Sperry Avenue	New Signal proposed in TIMP 2020. Provision of pedestrian signal heads, crosswalk striping, and istallation of ADA ramps could be included in this project.	Mid-term
16	New Signal	Ward Avenue and N Salado Avenue	New Signal proposed in TIMP 2020. Provision of pedestrian signal heads, crosswalk striping, and istallation of ADA ramps could be included in this project.	Mid-term
17	New Signal	Rogers Road and Keystone Pacific Pkwy	New Signal proposed in TIMP 2020. Provision of pedestrian signal heads, crosswalk striping, and istallation of ADA ramps could be included in this project.	Mid-term

18	New Signal	West Las Palmas Avenue and Poplar Avenue	New Signal proposed in TIMP 2020. Provision of pedestrian signal heads, crosswalk striping, and istallation of ADA ramps could be included in this project.	Mid-term
6	Trail Crossing-Subject to Trail Approval	At Cliff Swallow Dr (end)	Trail Crossing-Subject to Trail Approval	Long-Term
7	Trail Crossing-Subject to Trail Approval	At Ward Ave near Rose Dr	Trail Crossing-Subject to Trail Approval	Long-Term
8	Trail Crossing-Subject to Trail Approval	At American Eagle Ave near Red Robin Dr	Trail Crossing-Subject to Trail Approval	Long-Term
9	Trail Crossing-Subject to Trail Approval	At N 2nd St near El Solyo Dr	Trail Crossing-Subject to Trail Approval	Long-Term
10	Trail Crossing-Subject to Trail Approval	At Las Palmas Ave near Weber Ave	Trail Crossing-Subject to Trail Approval	Long-Term
11	Citywide Sidewalk Infill	Throughout the City. Total = 8.27 Miles	Citywide Sidewalk Infill	NA[1]
12	Citywide ADA Ramps Addition	Throughout the City. Missing ADA Ramps = 208	Citywide ADA Ramps Addition. Installing and upgrading ADA ramps. Most upgrades are related to missing DWS.	NA
		Not Meeting Standards = 991	Adding truncated domes	

[1] Sidewalk and ADA ramps will be constructed over multiple phases.

[2] Sperry Avenue and I-5 interchange traffic signals are not included in the ATP project list. Information regarding new traffic signals and phasing is referred from TIMP 2020.

Appendix - ADA Ramps Zones

Source: City of Patterson General Plan, 2014; Stanislaus County Geographic Information Systems, ESRI, OpenStreetMap contributors

Date: 11/29/2021

Zone	Missing ADA Ramps	Not Meeting Standards
Zone 1	6	30
Zone 2	0	4
Zone 3	0	213
Zone 4	0	65
Zone 5	8	187
Zone 6	0	104
Zone 7	4	61
Zone 8	147	113
Zone 9	5	26
Zone 10	29	144
Total	**199**	**947**
Total Cost	**$3,044,700**	**$5,795,640**
Cost per ramp	$15,300	$6,120


PATTERSON
PATTERSON

Existing Conditions Report

March 2021

TJKM

City of PATTERSON California

CITY OF PATTERSON
ACTIVE TRANSPORTATION PLAN

Existing Conditions Report

March 2021

Prepared For:
The City of Patterson

Prepared By:
TJKM Transportation Consultants

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1. INTRODUCTION

The Patterson Citywide Active Transportation Plan (ATP) is being developed by the City of Patterson, with the help of an Active Transportation Grant awarded by Caltrans and California Transportation Commission (CTC).

This report is divided into the following sections:

1. Introduction describes the purpose, key goals & objectives of the Citywide Active Transportation Plan

2. Relevant Plans, Policies & Standards describes adopted plans and standards relevant to bicycling and walking in Patterson, and describes adopted goals and policies that the Citywide Active Transportation Plan aims to support.

3. Setting summarizes relevant aspects of Patterson's built environment including population, employment, street network characteristics, traffic volumes and transit service.

4. Cycling Conditions summarizes existing characteristics of the Patterson's street network relevant to bicycling, describes existing bikeways well as currently proposed bikeways.

5. Walking Conditions describes the existing sidewalk and path network in Patterson, summarizes pedestrian safety data, and identifies key gaps and barriers to walking.

PURPOSE & KEY GOALS

The Citywide ATP will provide a master plan for development of a citywide bikeway network and improvements to the citywide pedestrian network.

The ATP will complement adopted City plans including the General Plan Circulation Element, adopted in 2010, and the Transportation Infrastructure Master Plan (TIMP) approved in 2020, as well as the Stanislaus Council of Government (StanCOG) Non-Motorized Transportation Master Plan (NMTMP), adopted in 2013. The ATP will also:

- Support the City in reaching its goals to plan and develop a multimodal transportation network that is safe and efficient for all users
- Identify measures to implement adopted goals and policies relevant to bicycling and walking described in the NMTMP and TIMP
- Provide an overall framework plan depicting Patterson's future citywide cycling and walking network
- Identify pedestrian and bicycle network deficiencies, and develop implementable improvement options, with extensive input from members of the community
- Prepare conceptual designs for short and long-term improvements suitable for Future CIP funding programming and grant applications
- Specify recommended changes to street deign design standards to enhance walking and bicycling, and to incorporate recommended improvements
- Develop a phasing plan and funding strategy for prioritized projects, programs, and action steps

Key goals of the ATP are to support adopted policies at providing complete streets, increasing mobility, enhancing safety, improving public health, and increase the rate of bicycling and walking for every day transportation in Patterson.

BENEFITS OF ACTIVE TRANSPORTATION

Providing design amenities to create integrated transportation networks that include walkable and bikeable streets and neighborhoods produces multiple benefits including:

- Enhanced mobility: Most daily trips in most communities, including Patterson, are within bicycling or walking distances, including local trips to shopping, schools, local services, parks and public transit. Provision of a complete street network and elimination of barriers to walking and bicycling, including provisions for transit access will result in increased transportation options for all age groups.
- Improved public health: Rates of obesity and other public health risks associated with reduced physical activity increased dramatically in recent decades, for children as well as adults. Provision of active transportation networks is increasingly identified as a recommended component of local public health programs.
- Reduction in greenhouse gas emissions: Successful investments in walking and bicycling lead to reductions in local greenhouse gas emissions.
- Increased property values: Bikeable and walkable neighborhoods help to attract and retain a talented and youthful workforce[1].
- More retail dollars spent at local businesses: Studies in other cities have found that residents who walk and bike to visit local businesses spend more money than customers that drive[2].

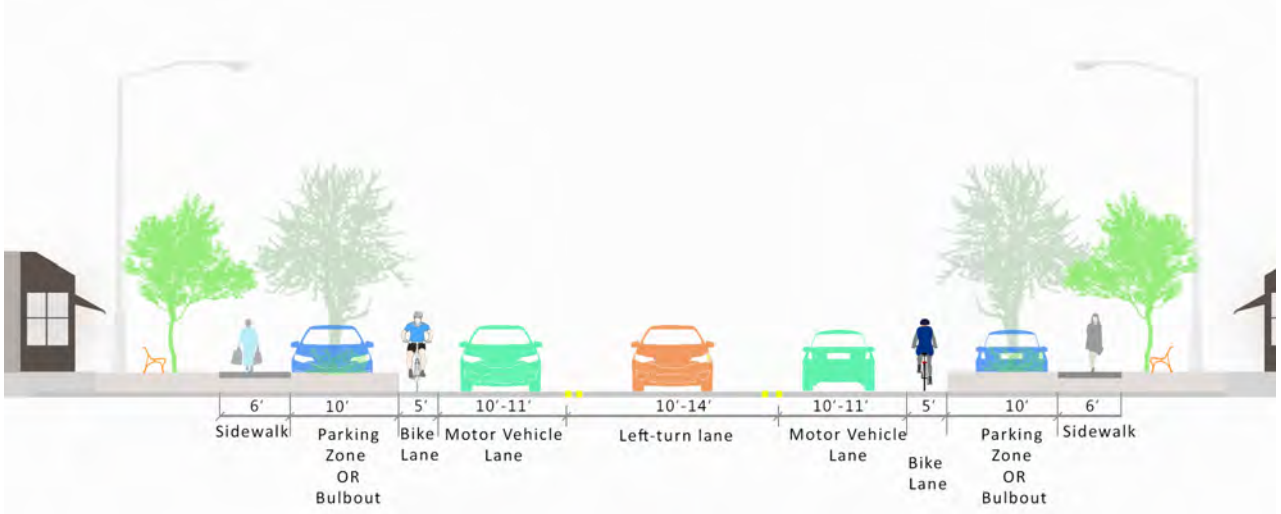
[1]Cortright, Joe for CEOs for Cities. (2009). *Walking the Walk: How Walkability Raises Home Values in US Cities.*

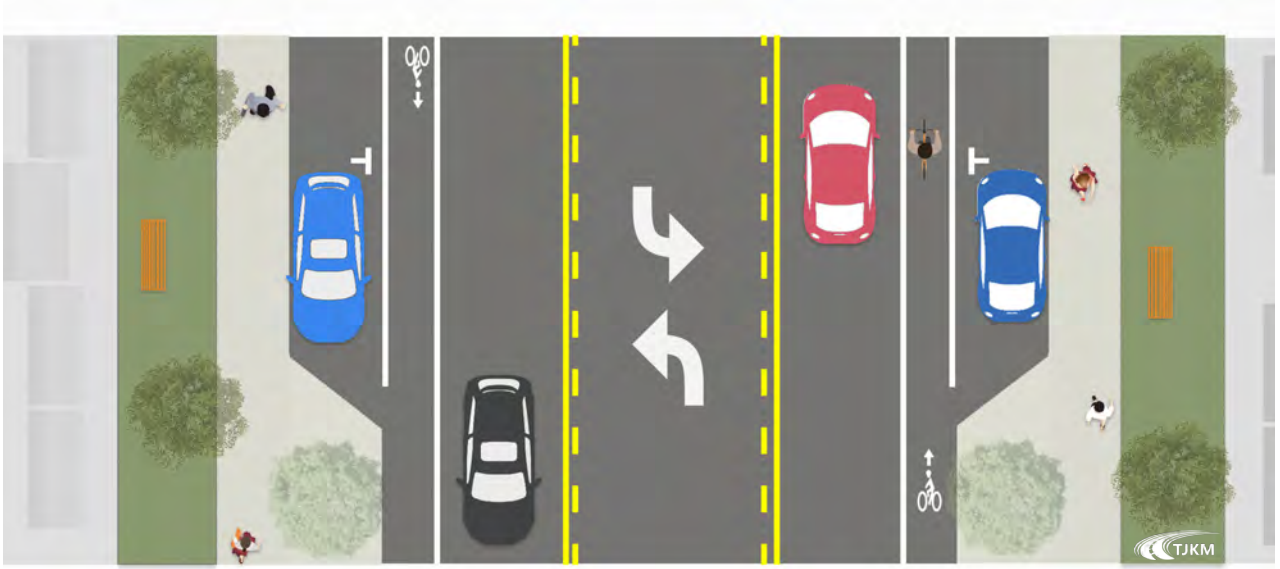
[2]The Clean Air Partnership. (2009). *Bike Lanes, On-Street Parking and Business: A Study of Bloor Street in Toronto's Annex Neighborhood.*

WHAT ARE COMPLETE STREETS?

A complete street is a street that accommodates mobility for all modes of transportation. There is no one design, or "one size fit all" solution for a complete street. It is a street design that enables safe, comfortable access for users of all ages and abilities, no matter how they travel.

- The term "Complete Streets" refers to a balanced, multimodal transportation network that meets the needs of all users of streets -- including bicyclists, children, persons with disabilities, motorists, movers of commercial goods, pedestrians, public transportation, and seniors. A "Complete Street" is one that provides safe and convenient travel in a manner that is suitable to the local context.
- The California Complete Streets Act (AB 1358) adopted in 2008, requires that cities and other public agencies incorporate "Complete Street" policies when updating their General Plan Circulation Element. Complete Streets make travel safe for all users, including bicyclists, pedestrians, motorists, transit vehicles, and people of all ages and abilities. Each and every street does not need to provide dedicated space to all users, but the network must accommodate the needs of all users.
- Design guidance relevant to providing complete streets are provided by various sources including the National Association of City Transportation Officials (NACTO) Urban Street Design Guide.





2. RELEVANT PLANS, POLICIES & STANDARDS

This section summarizes relevant adopted plans, policies or standards that include policies or recommendations relevant to the citywide bicycle and pedestrian networks. Documents relevant to the Citywide ATP include the City of Patterson General Plan, Transportation Infrastructure Master Plan (TIMP) and Parks and Master Plan, as well as the Stanislaus Council of Governments (StanCOG) Non-motorized Transportation Master Plan (NMTMP) and Regional Transportation Plan/ Sustainable Communities Strategy (RTP/SCS).

GENERAL PLAN CIRCULATION ELEMENT

The City of Patterson General Plan and its Circulation Element were adopted in November 2010. The purpose of the Circulation Element is to provide goals and policies aimed at meeting the transportation needs of the City. The Circulation Element has identified roadway deficiencies, as well as improvements to achieve and maintain established City standards.

The following is a list of adopted General Plan goals and policies relevant to the citywide pedestrian and bicycle networks:

General Plan Goal T-7: To promote pedestrian, bicycle and rail travel as alternatives to automobile use.

- Policy T-7.1: Safe Pedestrian and Bike Pathways: The City shall create and maintain a safe and convenient system of pedestrian and bicycle pathways that encourages walking and bicycling as an alternative to driving. New development shall be required to pay its fair share of the costs for development of this pathway system.
- Policy T-7.2: Pedestrian Access: All new development shall be reviewed to ensure safe pedestrian access is provided from the street, within parking areas and between new development and surrounding neighborhoods.
- Policy T-7.3: Bike Routes: The City shall establish a safe and convenient network of identified bicycle routes connecting new residential areas by the shortest possible routes with recreation, shopping, and employment areas within the city. The City shall cooperate with surrounding jurisdictions in designing and implementing an area-wide bikeway system.
- Policy T-7.4: Separation of Bike Routes from Motor Vehicles: Bicycle routes shall emphasize paths separated from vehicle traffic (Class I) to the maximum extent possible, but shall also include bicycle lanes within public streets (Class II and III). The City shall limit on-street bicycle routes to those streets where the available roadway width and traffic volumes permit safe coexistence of bicycle and motor vehicle traffic.
- Policy T-7.5: Include Pathways in Open Space: To the extent practicable, bicycle and pedestrian pathways shall be included within open space areas.
- Policy T-7.6: Bike Storage: The City shall require the inclusion of bicycle parking facilities at all new major public facilities and commercial and employment sites and shall encourage large employers to provide showers for employees.
- Policy T-7.7: Bicycle-Automobile Conflicts: The City shall promote the safe "sharing" of roads between automobiles and bicyclists.
- Policy T-7.8: Bike Safety: Bicycle safety shall be considered when implementing improvements for automobile traffic operations
- Policy T-7.9: Coordination with Schools: The City shall collaborate with the School District to promote bike use and shall actively pursue Safe Route to School grants to fund programs that facilitate safe bike routes.
- Policy T-7.10: Coordination with Other Agencies: The City shall coordinate with Stanislaus County, the Stanislaus Council of Governments, Caltrans and other agencies to improve bicycle and pedestrian circulation region-wide.

TRANSPORTATION INFRASTRUCTURE MASTER PLAN (TIMP)

The City Patterson TIMP was prepared in March 2020 and provides transportation infrastructure recommendations based on two future scenarios:

- 10-year near-term scenario based on a future population of 28,900 residents in Patterson (an increase from 22,524 residents in 2019), and 21,980 jobs in Patterson.
- Master Plan Buildout Scenario, to accommodate a buildout population of 66,300 residents and 81,300 jobs in Patterson. The number of jobs in the Master Plan buildout scenario would greatly exceed the size of the local labor force (approximately 30,000 Patterson residents would be part of the working-age population at buildout). Therefore, the majority of the jobs in Patterson would be held by over 50,000 commuters that would travel from other communities to jobs in Patterson.

The TIMP is intended to be used as a tool to help the City plan for anticipated growth in the future. The TIMP recommends to "establish and provide 'Complete Street' policies for all future roadways.

Relevant TIMP policies are listed below:

- Encourage future commercial development to provide bicycle access to surrounding residential areas.
- Require future commercial development to place bike racks near entrances for employees and customers.
- As appropriate require future development to construct bikeways included in the proposed system as a condition of development.
- Meet the requirements of the Americans with Disabilities Act when constructing facilities contained in the proposed system, where applicable.
- Encourage future development to consider schools as important destinations for bicyclists when designing circulation systems within new developments.
- Establish and provide Complete Street policies for all future roadways. Adopt recommended bike facilities plan and provide future funding for its construction. Creation of more continuous bike lanes at key destinations would encourage more people to use bikes instead of autos.
- Focus on redesign of downtown streets based walkable and livable principles.

PARKS AND RECREATION MASTER PLAN

Although not formally adopted by the City yet, the Parks and Recreation Master Plan will guide the City in expanding, improving, and protecting the parks and recreational facilities as the City continues to grow. As the City improves and builds upon its park and facility network, it will be important to improve and build upon the multimodal network as well so that residents of all ages may access the parks and facilities in order to maintain a healthy lifestyle. Relevant guidelines and goals are highlited below:

Planning & Design Guidelines

- Parks should be programmed and designed to appeal to multiple user groups from toddler to senior, and to provide both active and passive, as well as individual and group recreation opportunities.
- Wherever possible, highlight and strengthen connections between the park and other public spaces and community destinations.
- Provide logical, integrated, safe and ADA compliant access and circulation throughout the park.

Goals

- Including parks as “important” and “key” destinations when considering bicycle and pedestrian circulation;
- Prioritizing parks and recreation facilities as well as schools as key destinations when designing Complete Streets;
- Providing a sufficient number of conveniently located bicycle racks at all parks and recreation facilities; and
- Expanding the system of multi-use paths that function as linear parks.

ZACHARIAS AND BALDWIN MASTER PLAN

The City plans to annex approximately 1,227 acres of land just outside the City Limits. Proposed development will consist of residential, mixed-use, commercial, industrial, schools, parks, and open space uses.

The potential build-out will consist of approximately 5,086 dwelling units and 7,765,000 square feet of non-residential uses. According to the study, the neighborhood streets would be constructed with traffic calming measures to provide pedestrian and bicycle safety.

As part of the proposed TDM measures, the project should designate pedestrian and bike lanes to encourage walking and biking, provide secure bicycle parking, and provide adequate street lighting, sidewalks, and pedestrian/bicycle paths. Proposed strategies are listed below:

Proposed Access and Circulation

- Neighborhood streets designed with traffic calming geometric features.

Transportation Demand Management Strategies

- A clearly designated pedestrian circulation network within the site that links to the City of Patterson roadway network. Currently there are Class II on-street bike lane on Baldwin Road and Ward Avenue. Class II bike lane should be provided on both streets in the project area. The existing site plan shows pedestrian routes that connect to adjacent local roadways. Clearly designated bike lanes should be provided that connects to employment centers and downtown areas.
- Secure bicycle parking in safe, strategic locations within the site.
- Safety amenities such as lighting, sidewalks, and off-street pedestrian / bicycle paths.

CITY OF PATTERSON STANDARD SPECIFICATIONS

The City of Patterson Standard Specifications were last updated in 2011 and contain specifications and typical drawings for improvements that intends to aid all persons engaged in the construction of public works within the City limits. The document includes but is not limited to:

- Typical roadway cross sections
- Cul-de-sac geometry, roundabout details,
- Sidewalk cross sections
- Curb ramp details
- Landscaping, and lighting standards

The Active Transportation Plan will include street design recommendations that could result in updates to the City's standard specifications.

STANCOG NON-MOTORIZED TRANSPORTATION MASTER PLAN (NMTMP)

The Stanislaus Council of Governments (StanCOG) updated and adopted the NMTMP in 2013 with the goal of improving the bicycle and pedestrian network in Stanislaus County. The NMTMP has been prepared so that cities may prioritize investments in bicycle and pedestrian infrastructure and increase grant funding opportunities. Planning efforts included an outreach process with stakeholders to identify policy and network recommendations.

Regional NMTMP Facilities within Patterson

Proposed bikeway and pedestrian facilities recommended by the NMTMP within Patterson are described in Chapters 4 and 5.

NMTMP Policy Recommendations for the City of Patterson

The NMTMP includes the following policy recommendations for the City of Patterson:

- Consider revising bicycle parking requirements in Zoning Code based on Section 9-4 of the NMTMP
- Adopt policy language in the next General Plan update that is focused on Complete Streets and balancing the need of all roadway users.
- Consider adoption of a "Complete Streets" policy or "Routine Accommodation" type of policy to encourage accommodation of bicyclists and pedestrians of all ages and experience levels with new construction or improvements to the public right-of-way.
- Prepare, adopt, and implement an ADA Implementation Plan to guide inventory accessibility needs and future improvements.
- Adopt citywide policy of constructing ADA curb ramps and any other accessibility measures routine practice in any new construction or improvement project within the public right-of-way.
- When completing traffic analysis, collect bicycle and pedestrian volumes at each study location to address safety and circulation issues for those modes.

NMTMP Goals and Policies

Goals and policies of the NMTMP are discussed below:

NMTMP Goal 1: Increase Bicycle And Pedestrian Access And Safety. Expand bicycle and pedestrian facilities and access in and between local destinations such as neighborhoods, employment centers, shopping areas, schools, and recreational sites as well as throughout the region to increase the number of bicycling trips to five percent of all trips by 2030.

Objective 1.A: Implement the StanCOG Countywide Bicycle and Pedestrian Master Plan, which identifies existing conditions and planned networks, and provides specific short-term and long-term recommendations for countywide priority facilities and programs, including near-term (five to ten-year) priority projects.

Policy Actions:

- Maximize coordination between all municipalities, schools, and community organizations to review and comment on bicycle and pedestrian issues of mutual concern.
- Implement the recommendations to regularly monitor bicycle- and pedestrian-related collision levels, and seek a reduction in these collision levels on a per capita basis over the next twenty years.
- Update the Plan periodically as required by Caltrans to reflect new policies and/or requirements for bicycle and pedestrian funding.
- Establish a countywide bicycle/pedestrian coordinator who would help implement the county and local bicycle and pedestrian improvements.

Objective 1.B: Complete a continuous network of bikeways and pedestrian facilities that are feasible, fundable, and serve the needs of bicyclists and pedestrians, especially for travel to employment centers, schools, commercial districts, transit stations, and institutions.

Policy Actions:

- Seek funding for the priority bicycle and pedestrian projects through current local, regional, state, and federal funding programs

and encourage multi-jurisdictional funding applications.

- Complete existing gaps in the pedestrian network, especially in the vicinity of land use attractors such as schools, parks, and neighborhood commercial areas as well as over major barriers such as railroad tracks, highways, and water bodies.
- Codify the existing practice of providing wide shoulders or bicycle lanes during overlay and widening projects as roadway space allows through the adoption of a "Complete Street" policy to encourage construction of bikeways as a part of any roadway project, where feasible and appropriate.
- Provide opportunities for bicycling for recreational purposes, especially to access parks and open space.

Objective 1.C: Address immediate and future safety needs for all roadway users, particularly bicyclists and pedestrians, who are the most vulnerable roadway users.

- Policy Actions:
- Secure funding for and implement priority bikeways and priority pedestrian projects identified in the Plan, many of which are located on corridors with high numbers of bicycle and pedestrian collisions.
- Develop adult and youth bicycle and pedestrian education, encouragement and safety programs aimed at youths, adult cyclists, pedestrians, and motorists.
- Objective 1.D: Improve access and integration with transit for bicycling and walking trips.

Policy Actions:

- Assist transit providers in providing and promoting secure, covered bicycle racks and lockers at transit centers and along key bus routes to facilitate multi-modal trips.
- Support and promote transit facility enhancements, such as bus stop access improvements, that will encourage increased bicycle and pedestrian access to transit.
- • Require future transit service in Stanislaus County to provide adequate bicycle and pedestrian access, bus mounted bicycle racks, and secure bicycle parking.
- • Conduct bicycle and pedestrian counts at regular intervals and include bicycle and pedestrian counts as part of vehicle traffic counts to evaluate usage and demand, and assist in the prioritization of project funding.

NMTMP Goal 2: Increase Bicycle and Pedestrian Trips. Make bicycling and walking a viable option for shopping, school, and work trips in Stanislaus County and other trips of fewer than five miles by implementing and maintaining a bikeway network, providing end-of-trip facilities for bicyclists, improving access and integration with transit, and making walking and biking convenient and safer.

Objective 2.A: Include bikeways and pedestrians facilities in all appropriate future development projects to facilitate on-site circulation and connections to the proposed system.

Policy Actions:

- Require future development to construct bikeways, sidewalks, and/or other pedestrian facilities included in the proposed system as a condition of development.
- Encourage future commercial development to provide bicycle and pedestrian access to surrounding residential areas.
- Require future commercial development to place bicycle racks near entrances for employees and customers.
- Meet the requirements of the Americans with Disabilities Act when constructing facilities contained in the proposed system, where applicable.
- Encourage future development to consider schools as important destinations for bicyclists and pedestrians when designing circulation systems within new developments.
- Work with transit authorities to ensure that pedestrian and bicycle concerns are addressed in the design of transit stops.

Objective 2.B: Provide secure, covered short- and long-term bicycle parking in employment and commercial areas, in multi-family housing, at schools, and at transit facilities.

Policy Actions:

- Develop a bicycle parking policy, as described in this Plan, to encourage or require the inclusion of bicycle parking in new development projects.
- Encourage the installation of short- and long-term bicycle parking in the public right-of-way, particularly adjacent to transit stops.
- Encourage the installation of short- and long-term bicycle parking at local elementary, middle, and high schools to promote bicycle commuting.

NMTMP Goal 3: Improve Regional & Local Connections. Increase accessibility within neighborhoods and cities as well between Stanislaus County cities, serving utilitarian, commute, and recreational trips.

Objective 3.A: Complete a network of bikeways that allow for intercity travel between Stanislaus County communities.

Policy Actions:

- Complete countywide priority bikeway network, as detailed in this Plan.
- Focus on development of Class 3 Bicycle Routes with wide shoulders as a lower-cost solution to regional bicycling needs than Class 1 paths, particularly in the near-term.

Objective 3.B: Align countywide bikeways through Stanislaus County cities such that local needs and destinations are served.

Policy Actions:

- Complete existing gaps in the countywide bicycle network, especially in the vicinity of schools, transit stops, neighborhood commercial centers, and major barriers such as railroad tracks, highways, and water bodies.

REGIONAL TRANSPORTATION PLAN

The Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) for Stanislaus County was developed so that transportation improvements and future land development will be coordinated with each other.

The RTP/SCS identifies policies, projects, and programs over 25 years to enhance the region's transportation network. The RTP/SCS was developed in accordance with state and federal guidelines, and supports California's climate goals.

One of the key RTP/SCS improvement projects is to place "emphasis on bicycle/pedestrian improvements along central corridors, Class I multi-use trails, and complete street improvements." Relevant regional goals include:

RTP/SCS Goal 1: Mobility & Accessibility

Improve the ability of people and goods to move between desired locations, and provide a variety of modal and mobility options.

RTP/SCS Goal 6: Health & Safety

Operate and maintain the transportation system to ensure public safety and security; improve the health of residents by improving air quality, and provide more transportation options.

3. SETTING

Known as the "Apricot Capital of the World", Patterson is located in the middle of Stanislaus County within the San Joaquin Valley, roughly 17 miles southwest of Modesto. The City is approximately six square miles in size. Interstate 5 lies immediately west of the City. Figure 1 provides a map showing Patterson's regional location. Due to its location, the City of Patterson provides plenty of recreational opportunity for residents. Patterson takes pride in its agricultural history, culminating in the annual Apricot Fiesta that takes place each June.

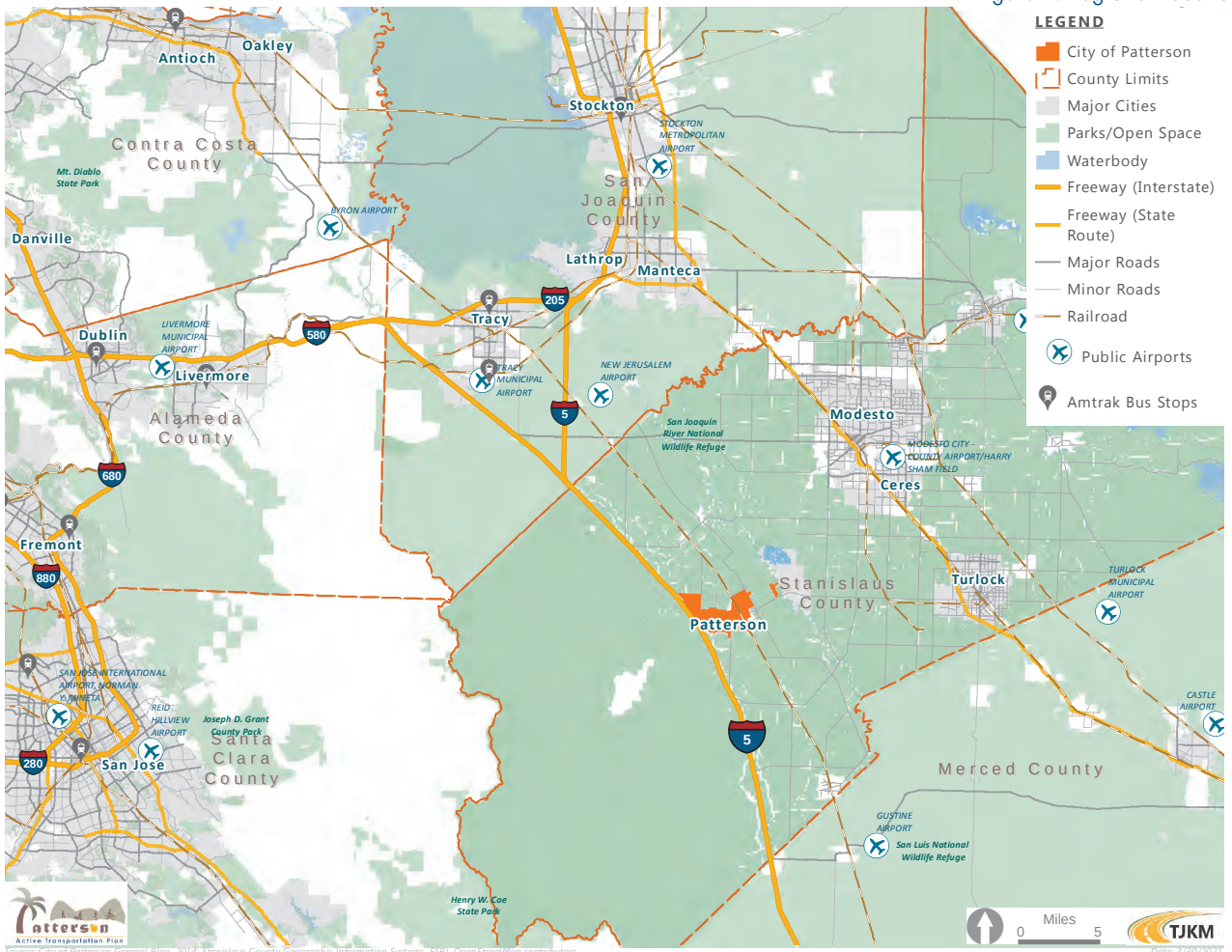
POPULATION AND EMPLOYMENT

In 2019, Patterson's population was estimated by the US Census Bureau to be approximately 22,524. Since 2010, the total population has grown by approximately 9.2%, a rate of roughly one percent annually. There is an approximate 52:48 ratio of male to female residents with over 60% of the population falling into the age range of 18 to 65 years, and 30% under the age of 18. Patterson represents approximately four percent of the population in Stanislaus County estimated at 550,660. Table 1 presents Patterson's population by age.

Table 1: Population by Age

Age Range	2019 Estimate	Percentage
Under 18	6,667	30%
18-65	13,740	61%
Over 65	2,117	9%
Total	**22,524**	**100%**

Figure 1: Regional Location



Patterson's current population of 22,524 residents consists of approximately 6,000 households and includes an estimated labor force of 9,800 workers according to the U.S. Census Bureau.

22,524
Population

$69K
Median Household Income

3.47
Average Household Size

LAND USES AND TRAVEL DESTINATIONS

Patterson is a predominantly residential community with single-family homes throughout the City. Most of the commercial and industrial land uses are present along Sperry Avenue, Ward Avenue and State Route 33. Figure 2 presents land use designations for the City of Patterson from the City's General Plan.

Commercial Destinations

Patterson's commercial destinations are primarily located at the shopping centers at the intersections of Sperry Avenue and Ward Avenue and along State Route 33 from Ward Avenue to City Limits. Some commercial areas are also located near the Sperry Avenue and Interstate 5 interchange. West of Baldwin Road, majority of the land uses are light industrial, serving as distribution centers for major companies such as Amazon, CVS Pharmacy, Kohl's Department Store, Grainger, and several other hardware distribution companies.

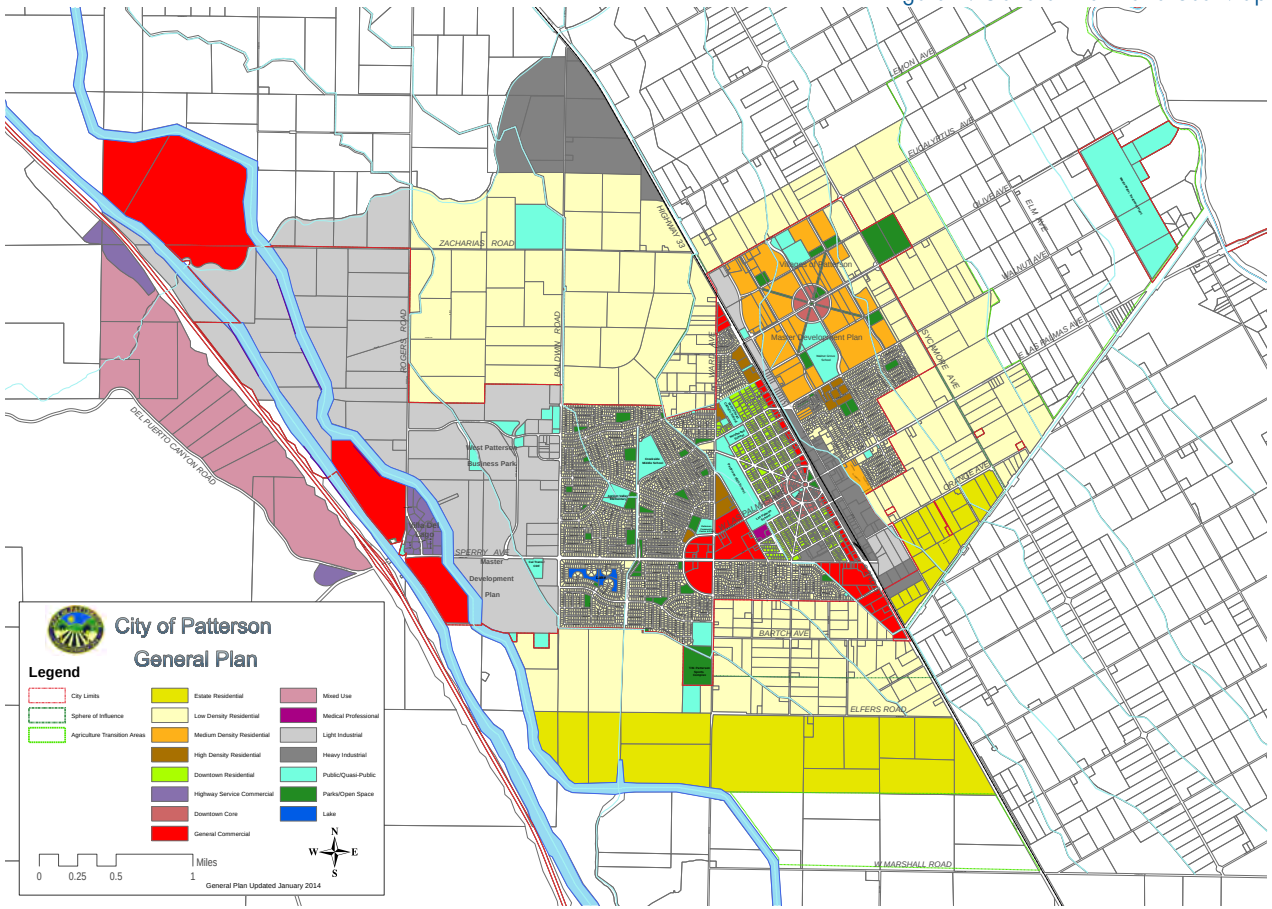
School Destinations

As identified in Table 2, there are 11 schools within Patterson, primarily located west of State Route 33.

Table 2: School Locations

School	Address
Apricot Valley Elementary School	1320 Henley Parkway
Central Valley Art Academy	505 Baldwin Road
Creekside Middle School	535 Peregrine Drive
Del Puerto High School	640 M Street
Las Palmas School	642 W Las Palmas Avenue
Northmead Elementary School	625 L Street
Patterson High School	200 N 7th Street
Patterson Preschool Academy	610 N Hartley Street
Sacred Heart Catholic School	505 M Street
Walnut Grove School	775 N Hartley Street
West Valley Learning Center	610 N Hartley Street

Figure 2: General Plan Land Use Map



Parks and Recreation Destinations

There are 34 public parks/open space locations within the City of Patterson available for recreational activities.

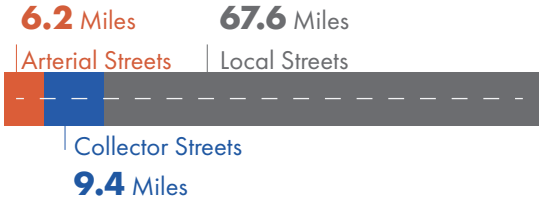
- Amaryllis Park: Located at American Eagle Avenue and Sperry Avenue, this park offers an open lawn, paved pathway and picnic tables and benches under a gazebo.
- Ambercot Park: Located at Creekside Drive and Alpine Creek Drive, this park offers shelters, tables, a playground, a multi-use field, and restrooms.
- Aprigold Park: Located at Hackney Street and New Forest Way, this park provides a playground, shelter and tables, multi-use fields, and shade trees.
- Aurora Park: Located at Roadrunner Drive and Cliff Swallow Drive, this park provides barbecue pits and tables, and open lawn
- Autumn Royal Park: Located along Heartland Ranch Avenue and Peregrine Drive, this park provides a playground, shelter and tables,

a barbecue pit, a multi-use field, basketball court, open lawn, and shade trees.

- Blenheim Park: Located at the corner of American Eagle Avenue and Pipit Drive, this park provides a playground, shelter and tables, and an open lawn.
- Blue Fiesta Park: Located along Hyacinth Drive, this park provides a water spray play area, shelter and tables, and an open field.
- Camas Lily Park: Located at American Eagle Avenue and Sperry Avenue, this park provides shelter and tables, a multi-use field and open lawn.
- Castlebirte Park: Located along the Damara Court cul-de-sac, this park provides a playground for young children, picnic tables, and an open lawn.
- City Park: Located at Las Palmas Avenue and Ossie Street, this small park provides a picnic table and bench.
- Del Puerto Park: Located at Del Puerto Avenue and S 5th Street, this park provides an open lawn, benches, and trees that provide shade.
- Early Gold Park: Located at Jersey Lane and New Forest Way, this park provides a playground for young children, shelter, barbecues, tables, a basketball court, and an open lawn.
- El Pescadero Park: Located along Walnut Avenue, this park provides benches and an open lawn.
- Floragold Park: Located at Shearwater Drive and American Eagle Avenue, this park provides a playground, tables, a multi-use field, and open lawn, and restrooms.
- Garza Park: Located at Hartley Street, this park provides a playground, a baseball field, multi-use field, restrooms, on-site parking, and a concession stand.
- Goldbar Park: Located at Amantha Creek Drive and Gold Creek Drive, this park provides a climbing wall, a swing set, shelter and tables, a multi-use field, and an open lawn.
- Golden Amber Park: Located at Red Robin Drive and Heartland Ranch Ave, this park provides a playground for young children, shelter, barbecues, tables, basketball, and an open lawn.
- Meadow Rue Park: Located at Garden Patch Way and Las Palmas Avenue, this park provides tables, a multi-use field, fitness equipment, and an open lawn.
- Mustang Clover Park: Located at Calvinson Parkway and Garden Patch Way, this park provides shelter and tables, a playground, multi-use field, sand volleyball court, and an open lawn.
- Newcastle Park: Located at Red Robin Drive and American Eagle Avenue, this park provides a playground, shelter, barbecue and tables, a multi-use field, basketball court, and an open lawn.
- Noble Park: Located at Noble Park Circle, this park provides a playground and benches.
- North Park: Located at Las Palmas Avenue and N Del Puerto Avenue, this park provides a playground, large picnic shelter, barbecue pits, tables, restrooms, concession stand, and open lawn.
- Rosette Park: Located at Las Palmas Avenue and N Del Puerto Avenue, this park provides a playground, shelter and tables, basketball court, and an open lawn.
- Sorensen Park: Located at American Eagle Avenue and Ward Avenue, this park provides a playground for young children, tables and an open lawn.
- South Park: Located at Las Palmas Avenue and Salado Avenue, this park provides horseshoe pits, Veteran's Memorial, and an open lawn.
- Sunflower Park: Located at Sunflower Drive and Nicastro Drive, this park provides a basketball court and an open lawn.
- Sungiant Park: Located at Samantha Creek Drive and Placer Creek Drive, this park provides a playground, tables, basketball court, benches and an open lawn.
- Sunglow Park: Located at American Eagle Avenue and Gannet Lane, this park provides a playground for young children, picnic shelter, barbecue, a multi-use field, and an open lawn.
- Tilton Park: Located at James Burke Avenue and Kestrel Drive, this park provides a playground, shelter and tables, a multi-use field, open lawn, and benches.
- Trigem Park: Located at Steel Creek Drive and Placer Creek Drive, this park provides a playground, shelter and tables, basketball court, a music panel, and climbing rocks.
- Valley Lupine Park: Located at Las Palmas Avenue and Sperry Avenue, this park provides a playground, shelter, multi-use field, benches, and open lawn.
- Wilding Park: Located at Ashwood Lane and Oakwood Lane, this park provides a playground, tables, multi-use field, basketball court, and an open lawn.
- Woodland Star Park: Located at Marigold Drive and Scarlet Lane, this park provides a playground, shelter and tables, multi-use field, and an open lawn.
- T.W. Patterson Sports Complex: Located along Ward Avenue, this complex provides a playground, shelters, barbecues and tables.

STREET NETWORK

Patterson's street network consists of approximately 83 miles of streets including six miles of arterial streets, nine miles of collector streets, and 68 miles of local streets. A map of the existing street network and street classifications in Patterson is presented on Figure 3. The main thoroughfares within Patterson are Sperry Avenue, Baldwin Road, Ward Avenue, Las Palmas Avenue, and Second Street (Highway 33).



Arterial Streets

Sperry Avenue is Patterson's main east-west arterial that connects Interstate 5 with Second Street (Highway 33), and is one of the longest roadways in the city. Classified as an arterial, it connects Interstate 5 and State Route 33 in an east-west orientation. Majority of land uses surrounding Sperry Avenue are commercial, residential and open space. From Interstate 5 to Baldwin Road, Sperry Avenue is primarily a two-lane roadway bordering commercial uses. East of Baldwin Road to South 9th St, Sperry Avenue is a four-lane divided roadway bordering residential subdivisions, before it transitions to a two-lane roadway from S 9th St to State Route 33. Signalized intersections provide marked crosswalks. The speed limit along Sperry Avenue ranges from 35 to 45 mile per hour (mph).

Las Palmas Avenue is an east-west arterial east of Second Street (Highway 33) to the City limits, and a two-lane collector street west of Second Street to Ward Avenue and south to Sperry Avenue. Los Palmas Avenue passes directly through the heart of downtown, while the segment east of the city limits is a key regional route, connecting with Turlock. Along the collector portion of Las Palmas Avenue, it is primarily a two-lane roadway surrounded by open space, schools, residential and commercial land uses. At the signalized intersection of Las Palmas Avenue and Ward Avenue, ADA-compliant curb ramps, marked crosswalks and pedestrian signal heads are provided. Majority of land uses along the arterial portion are industrial and residential land uses. Signalized intersections along this section provide marked crosswalks and pedestrian signal heads. The posted speed limit is 25 mph west of Second Street, and 35 mph east of Second Street.

Second Street (Highway 33) is a north-south arterial that runs through the eastern portion of Patterson including the downtown core, primarily bordering commercial and industrial land uses. Most of the intersections along Second Street are side-street stop controlled. The two signalized intersections, with Walnut Avenue and Las Palmas Avenue, provide marked crosswalks and pedestrian signal heads. The posted speed limit is 40 mph.

Collector Streets

Rogers Road is a north-south collector street from city limits to Sperry Avenue that primarily has one lane in each direction. Near Sperry Avenue, there are gas stations, fast-food restaurants, a hotel, and RV Park. Majority of land along Rogers Road is undeveloped, but there are distribution centers located on the northern portion of this roadway. The speed limit ranges from 25 to 35 mph.

Shearwater Drive is classified as an east-west two-lane collector street. This corridor is primarily surrounded by single-family homes, Apricot Valley Elementary School and Floragold Park. Class II bike lanes are provided on both sides of Shearwater Drive for a majority of the corridor. The roundabouts provide marked crosswalks for pedestrians. The posted speed limit is 25 mph.

Walnut Avenue is an east-west two-lane collector street from State Route 33 to city limits. This roadway is surrounded by residential land uses on the south side of the roadway. On the north side of the roadway, there are two schools and undeveloped land. The signalized intersections provide pedestrian signal heads and marked school crosswalks. The posted speed limit is 25 mph.

Ward Avenue is a north-south two-lane collector to State Route 33 and the southern city limits. Ward Avenue provides connectivity to T.W. Patterson Complex, shopping centers, residential neighborhoods and Patterson High School. There are bike lanes present near Patterson High School. The speed limit along Ward Avenue ranges from 25 to 35 mph.

South 1st Street is a north-south two-lane collector from Las Palmas Avenue to Sperry Avenue. Majority of the land uses along South 1st Street are industrial land uses. The posted speed limit is 25 mph.

Traffic Volumes and Capacities

The provision of excess motor vehicle lanes, and/or excess street widths, tends to result in higher than desired motor vehicle speeds. A general rule of thumb for estimating the required number of motor vehicle lanes is based on daily traffic volumes. Each motor vehicle lane on a city street can generally accommodate up to about 10,000 daily vehicles (based on peak-hour volumes representing 6 to 10 percent of daily volumes). Thus, a 2-lane arterial or collector street can generally accommodate roughly 20,000 daily vehicles if left-turn pockets are provided, while a 4-lane arterial can accommodate over 36,000 daily vehicles.

Existing traffic volumes on Patterson's 4-lane arterial streets are well below capacity, which could provide opportunities for reallocating portions of roadway space to better accommodate pedestrians and bicyclists:

- Sperry Avenue carries approximately 15,000 daily vehicles travel east of Baldwin Road, and approximately 20,000 daily vehicles west of Baldwin Road (both segments well below the capacity of over 36,000 daily vehicles for 4-lane arterials.
- Second Street (Highway 33) carries approximately 10,000 daily vehicles within Patterson, also well below the capacity of over 36,000 daily vehicles for 4-lane arterials.

Figure 3: Street Network Map

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Miles of Street Network

PUBLIC TRANSIT

Stanislaus Regional Transit (StaRT) provides public bus transit services throughout Stanislaus County. Four different bus routes run through Patterson, with 3 operating Monday through Saturday and 1 route running on weekdays only as a Commuter service between Turlock and the East Dublin/Pleasanton BART Station. Table 3 presents the available bus routes, direction, and days of operation. Figure 4 provides a map of the transit routes in Patterson.

Figure 4: Public Transit Routes

Source: City of Patterson General Plan, 2014; Stanislaus County Geographic Information Systems, ESRI, OpenStreetMap contributors

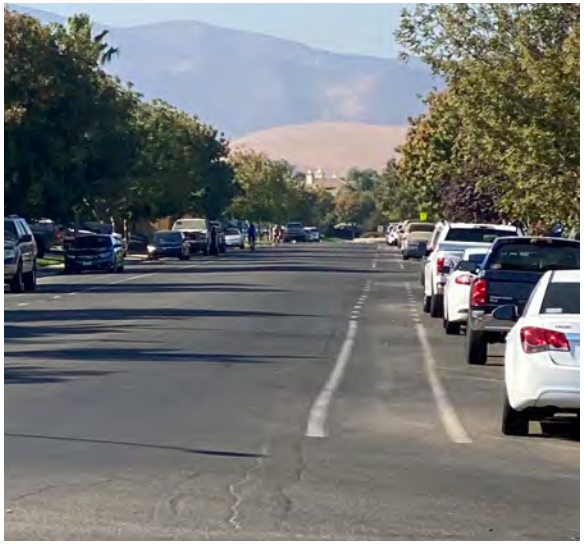
Table 3: Local Bus Routes

Stanislaus Regional Transit (StaRT) Routes	Type	Hours of Operations	Days of Operation
Route 40 (Modesto, Grayson, Westley, Patterson)	Local Route	5:15 a.m. and 9:12 p.m	Monday through Friday
		7:00 a.m. and 6:52 p.m	Saturday Only
Route 45E (Patterson / Turlock)	Local Route	6:15 a.m. and 8:18 p.m	Monday through Friday
		7:15 a.m. and 6:08 p.m.	Satuday Only
Route 45W (Gustine, Newman, Crows Landing, Patterson)	Local Route	5:37 a.m. and 9:21 p.m	Monday through Friday
		6:20 a.m. and 7:56 p.m.	Saturday Only
Commuter	Commuter Route	4:55 am and 6:15 pm	Weekdays Only

Patterson Active Transportation Plan

4. CYCLING CONDITIONS

This section describes existing bicycle facilities and conditions affecting cyclists within the City of Patterson. Facilities to enhance bicycle travel include designated bikeways as well as bicycle parking facilities.



TYPES OF BIKEWAY FACILITITIES

There are four classifications of bikeway facilities in California as defined by the Department of Transportation (Caltrans) and illustrated on Figure 5:

Multi-Use Paths (Class I Bikeways) – a path physically separated from motor vehicle traffic by an open space or barrier, used by bicyclists, pedestrians, joggers, skater, and other non-motorized travelers. Because the availability of uninterrupted rights-of-way is limited, this type of facility may be difficult to locate and expensive to build relative to other types of bicycle and pedestrian facilities, but inexpensive compared to new roadways. Prime locations for bike paths are areas such as power-line easements, utility easements, canal banks, river levees, drainage easements, railroad or highway rights-of-way, or regional community parks.

Bicycle Lanes (Class II Bikeways) – a travel lane on a roadway that has been set aside by striping and pavement markings for the preferential or exclusive use of bicyclists. Bicycle lanes are intended to promote an orderly flow of bicycle and motor vehicle traffic. This type of facility is established by using the appropriate striping, legends, and signs.

Bicycle Routes (Class III Bikeways) – bicycle routes designated by signage where bicyclists share travel lanes with motor vehicle traffic. Bicycle routes must be of benefit to the bicyclist and offer a higher degree of service than adjacent streets. Class III bikeways are often designated on low-volume local residential streets.

Bicycle Boulevard: addition, many cities have installed an enhanced type of Class III Bicycle Route, referred to as a "Bicycle Boulevard." Bicycle Boulevards are generally installed on relatively low-volume streets and often include elements to facilitate bicycle travel, such as reorienting stop signs to reduce delays to cyclists, and/or discouraging use by motorists making through trips, such as through inclusion of traffic calming measures.

Separated Bikeway (Class IV Bikeways) – a Class IV Bikeway is for the exclusive use of bicycles and includes a separation between the bikeway and adjacent vehicle traffic. The physical separation may include flexible posts, grade separation, inflexible physical barriers or on-street parking. Separated bikeways generally operate in the same direction as vehicle traffic on the same side of the roadway. However, two-way separation bikeways can also be used, usually in lower speed environments (35 miles per hour or less).

Figure 5: Types of Bikeways

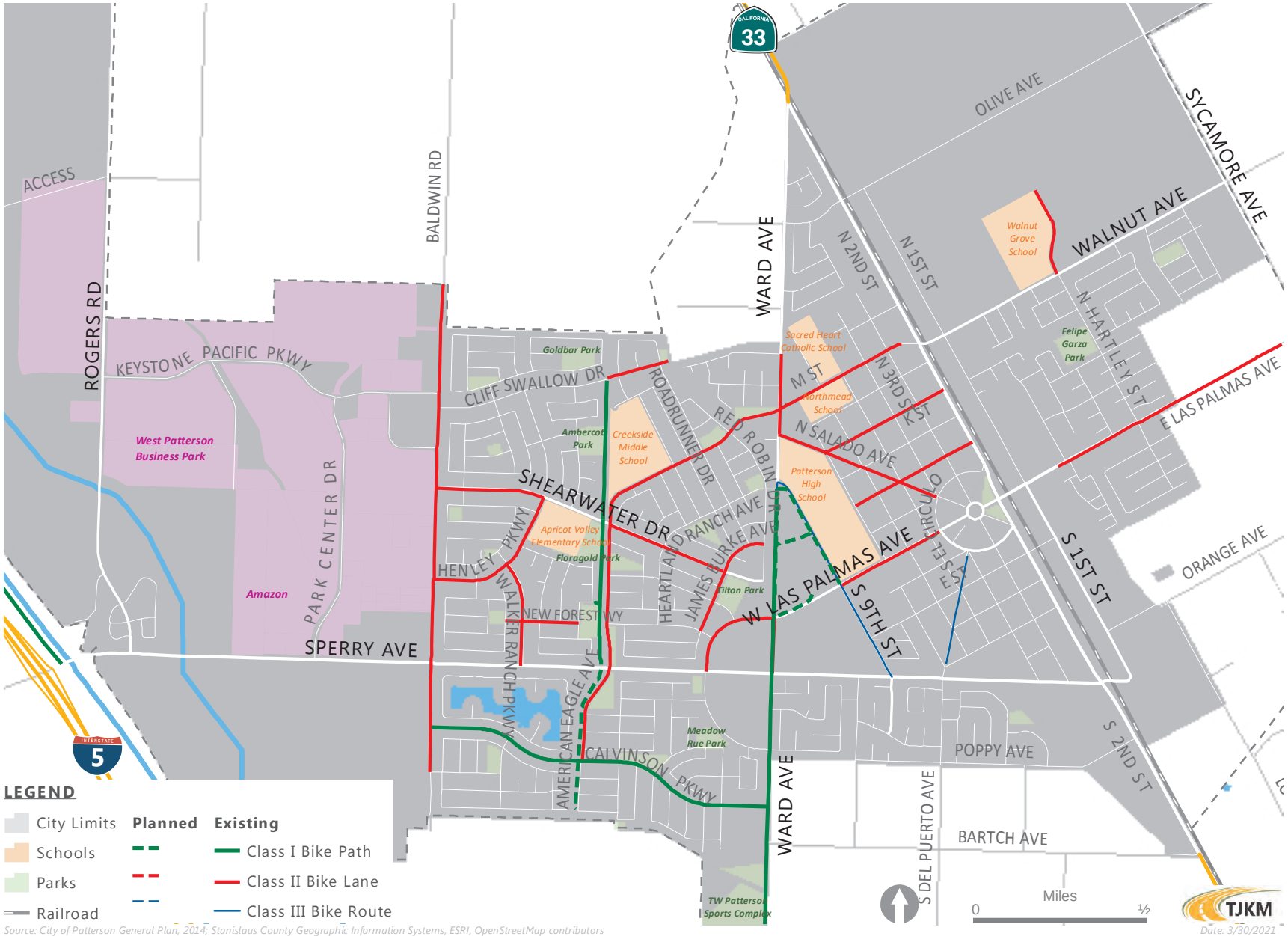
Multi-Use Path (Class I Bikeway)

Bicycle Lane (Class II Bikeway)

Bicycle Route (Class III Bikeway)

Separated Bikeway (Class IV Bikeway)

Figure 6: Existing & Currently Planned Bikeway Network



Patterson Active Transportation Plan

EXISTING BIKEWAY NETWORK

Figure 6 provides a map of the existing bikeway network in Patterson, as well as planned future bikeways that are already funded.

- The existing bicycle infrastructure is primarily located in residential neighborhoods, connecting residents to schools and recreational facilities.
- Bicyclists were involved in eight percent of reported collisions during the five-year period from 2015 to 2019, based on collision data described in the following chapter (see Table 5 and Figure 10).
- None of the reported collisions involving bicyclists from 2015 to 2019 resulted in serious injuries or fatalities.

Existing bikeways in Patterson include:

- Las Palmas Avenue: Bicycle lanes east of First Street to the city limits, west of El Circulo Avenue to Ninth Street, and west of Ward Avenue to Sperry Avenue.
- American Eagle Avenue: Bicycle lanes from Calvinson Parkway to Third Street, terminating just west of Second Street (Highway 33).
- Baldwin Road: Class II bicycle lanes from the northern city limit to Sperry Avenue, and a northbound bicycle lane on the east-side of Baldwin Avenue south of Sperry Avenue.
- Shearwater Drive: Intermittent bicycle lanes from Baldwin Road and Ward Avenue.
- Henley Parkway: bicycle lanes from Baldwin Road to Shearwater Parkway, providing school and park access.
- Salado Avenue: Bicycle lanes from Ward Avenue to El Circulo Avenue.
- 9th Street: Class III bicycle route from Sperry Avenue to Ward Avenue.
- Del Puerto Avenue: Class III bicycle route from Sperry Avenue to El Circulo Avenue.
- Patterson Bicycle Trail: Intermittently paved multi-use path from Cliff Swallow Drive to Sperry Avenue.

A key goal of the ATP is to improve bicycle connectivity throughout the City to encourage an increase in bicycling. Provision of bicycle facilities will improve connection between existing facilities. Bicycle facility designation through signage and striping tends to increase community awareness among roadway users. With improvements, bicycle rider safety and comfortability can be enhanced with minimal impacts to vehicular traffic.

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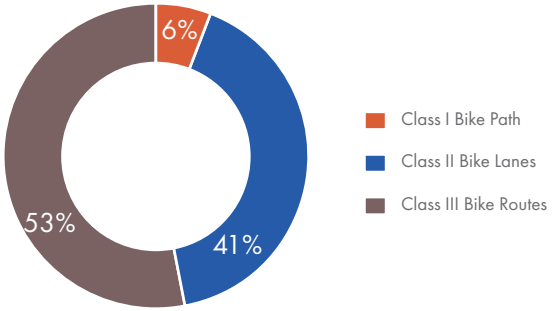
Miles of Bikeway Network



BARRIERS TO CYCLING

Key barriers to cycling in Patterson under existing conditions include:

- Lack of bicycle accommodations on Sperry Avenue and Second Street (Highway 33) limits access to commercial destinations and job sites located adjacent to Patterson's key east-west and north-south arterials.
- Gaps in existing bicycle lanes including segments of Ward Avenue, and on Los Palmas Avenue in the heart of Patterson, between Second Street and El Circulo Avenue, and between 9th Street and Ward Avenue.
- Narrow bike lane widths adjacent to on-street parking on segments of Los Palmas Avenue just west of El Circulo Avenue. Adequate bike lane widths could be provided by narrowing the width of the adjacent motor vehicle lanes.
- No provisions for bicycle access to commercial destinations and employment locations west of Baldwin Road including the West Patterson Park sites accessed via Park Center Drive and Keystone Pacific Parkway, as well as the commercial sites bordering Rogers Road.
- Bicycle lane markings have worn off on some segments.

BICYCLE LEVEL OF TRAFFIC STRESS

Bicycle Level of Traffic Stress (LTS) is an evaluation that quantifies the amount of discomfort that people feel when bicycling near motor vehicle traffic. It assigns a numeric stress level to roadway segments, trails, and intersections based on attributes such as motor vehicle speed, volume, number of lanes, lane blockage, on-street parking, and ease of intersection crossing. The higher the Bicycle LTS, the higher the discomfort. The implication of higher LTS is the possibility for improving bicycle infrastructure to make such bicycle facility safe and comfortable for all types of users. Figure 7a summarizes the four bicycle LTS ratings as generally perceived from the user perspective:

- LTS 1: Very low traffic stress. Most children feel comfortable bicycling.
- LTS 2: Low traffic stress. The mainstream adult population feels comfortable bicycling.
- LTS 3: Moderate traffic stress. Bicyclists who are considered "enthused and confident" but still prefer having their own dedicated space feel comfortable while bicycling.
- LTS 4: High traffic stress. Only "strong and fearless" bicyclists feel comfortable while bicycling. These routes have high-speed limits, multiple travel lanes, limited or non-existent bicycle lanes and signage, and large distances to cross at an intersection.

The bicycle LTS analysis evaluates street segments and intersections based on the roadway characteristics and provided bicycle facility. The analysis is based on the following factors:

- Posted Speed Limit
- Number of Travel Lanes
- Typical Traffic Volume or Roadway Classification
- Presence and Characteristic of bicycle facilities
- Presence of On-Street Parking & Width of Parking Lane

Tables 4a to 4c describes the additional criteria for evaluating the Bicycle LTS score based on street characteristics including average daily traffic (ADT) volume, number of through traffic lanes and automobile parking lane width. Markings and signs give bicyclists more perceived safety and warn drivers about bicycles potentially being in the roadway, which tends to lower overall speeds. Street segment criteria is based on the speed limit or the prevailing speed if different, and the number of lanes by direction, and the two-way average daily traffic (ADT).

Figure 7b provides a map showing the bicycle LTS patterns in Patterson, to help identify stress corridors and opportunities for infrastructure improvements.

Figure 7a: Bicycle Level of Traffic Stress (LTS) Definitions

Patterson Active Transportation Plan

Table 4a: Bicycle LTS Criteria for Roadway Segments

Number of Lanes	ADT (vpd)	Functional Class	Posted or Prevailing Speed (mph)				
			25	30	35	40	>45
1 through lane per direction	≤750	Local	LTS 1	LTS 2	LTS 2	LTS 3	LTS 3
	750 - ≤1,500	Local/ Collector	LTS 2	LTS 2	LTS 3	LTS 3	LTS 4
	1,500 - ≤3,000	Collector	LTS 3	LTS 3	LTS 3	LTS 4	LTS 4
	>3,000	Arterial	LTS 3	LTS 3	LTS 3	LTS 4	LTS 4
2 through lane per direction	≤8,000	Arterial	LTS 3	LTS 3	LTS 3	LTS 4	LTS 4
	>8,000	Arterial	LTS 3	LTS 4	LTS 4	LTS 4	LTS 4
3+ through lanes per direction	Any ADT	Arterial	LTS 3	LTS 4	LTS 4	LTS 4	LTS 4

Table 4b: Bicycle LTS Criteria for Bike Lanes Adjacent to On-Street Parking

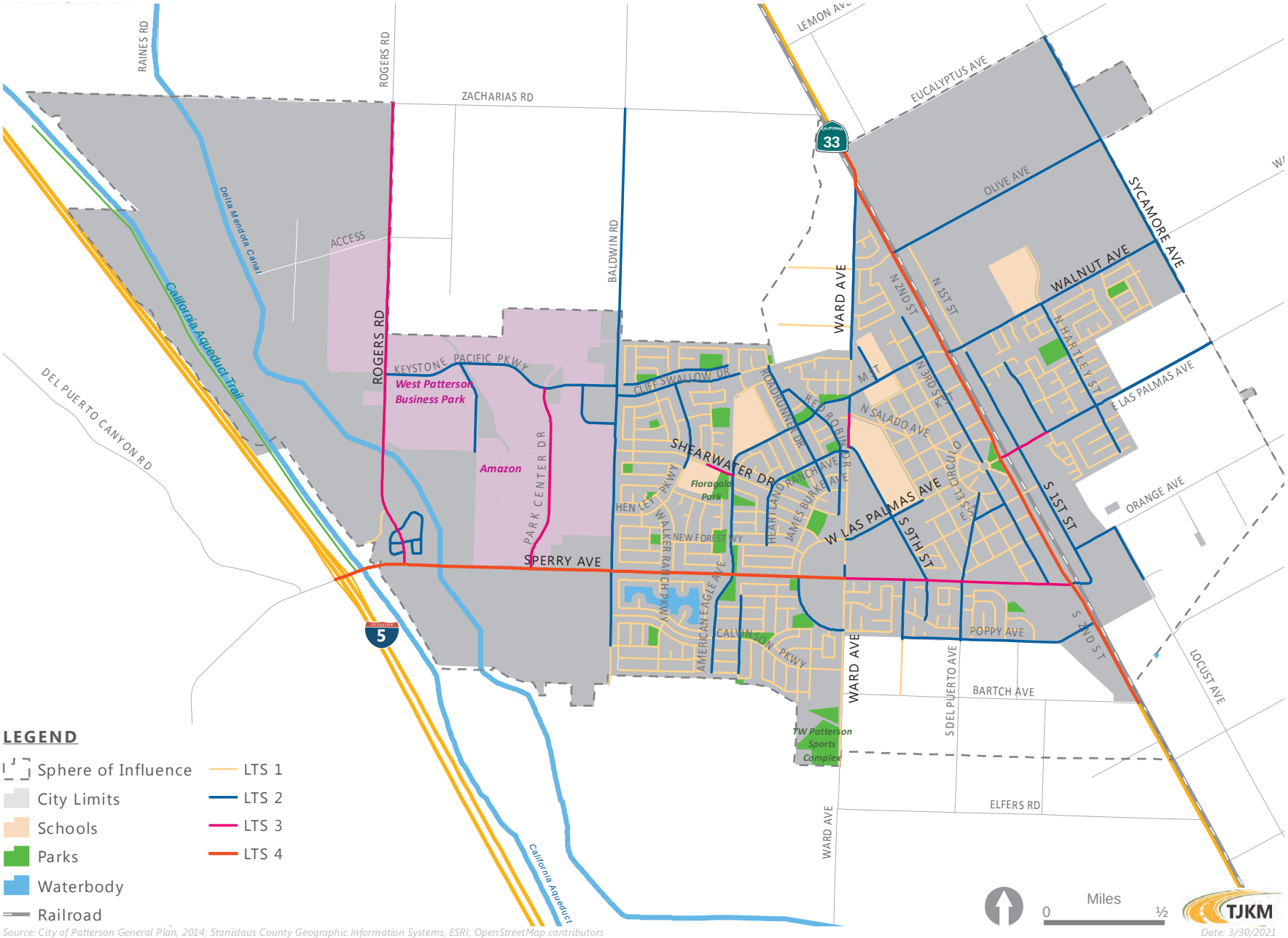
Prevailing or Posted Speed	Combined width of parking lane & bicycle lane				
	1 automobile lane per direction			≥ 2 automobile lanes per direction	
	≥ 15′	14′ – 14.5′	≤ 13′ or Frequent blockage	≥ 15′	≤ 14.5′ or Frequent blockage
≤ 25 mph	LTS 1	LTS 2	LTS 3	LTS 2	LTS 3
30 mph	LTS 1	LTS 2	LTS 3	LTS 2	LTS 3
35 mph	LTS 2	LTS 3	LTS 3	LTS 3	LTS 3
≥40 mph	LTS 2	LTS 4	LTS 4	LTS 3	LTS 4

Table 4c: Bicycle LTS Criteria for Bike Lanes with No Adjacent On-Street Parking

Prevailing or Posted Speed	1 automobile lane per direction				≥ 2 automobile lanes per direction	
	≥ 7′ Buffered bike lane	5.5′ – 7′ Bike lane	≤ 5.5′ Bike lane	Frequent bike lane blockage	≥ 7′ Buffered bike lane	<7′ bike lane or frequent blockage
≤30 mph	LTS 1	LTS 1	LTS 2	LTS 3	LTS 1	LTS 3
35 mph	LTS 2	LTS 3	LTS 3	LTS 3	LTS 2	LTS 3
≥40 mph	LTS 3	LTS 4	LTS 4	LTS 4	LTS 3	LTS 4

Source: Oregon Department of Transportation. (2020). Analysis Procedures Manual. Chapter 14 Multimodal Analysis

Figure 7b: Bicycle Level of Traffic Stress



Source: City of Patterson General Plan, 2014; Stanislaus County Geographic Information Systems, ESRI, OpenStreetMap contributors

Patterson Active Transportation Plan

PROPOSED REGIONAL BIKEWAYS

The Stanislaus County Non-motorized Transportation Master Plan (NMTMP) specifies the following proposed regional bikeways that would serve Patterson, as illustrated on Figure 8a and Figure 8b:

- Las Palmas Avenue is identified by the NMTMP as a first-tier priority location for a regional east-west bikeway connecting Patterson and Turlock. Within Patterson, the NMTMP envisions continuous bicycle lanes from the city limits, extending westward through downtown Patterson to Ward Avenue, and south from Ward Avenue to Sperry Avenue.
- Second Street (Highway 33) is identified as a second-tier priority location for a north-south bikeway south of Eucalyptus Avenue that would extend through Patterson and connect with communities to the south.
- Class II Bicycle Lanes are proposed by the NMTMP on Sperry Avenue, E Street and Walnut Avenue.
- Class I Multi-use Path is proposed by the NMTMP for an east-west alignment north of Cliff Swallow Drive that would connect the existing Patterson Bicycle Trail with Ward Avenue.

Figure 8a: Priority Bikeways (StanCOG NMTMP)

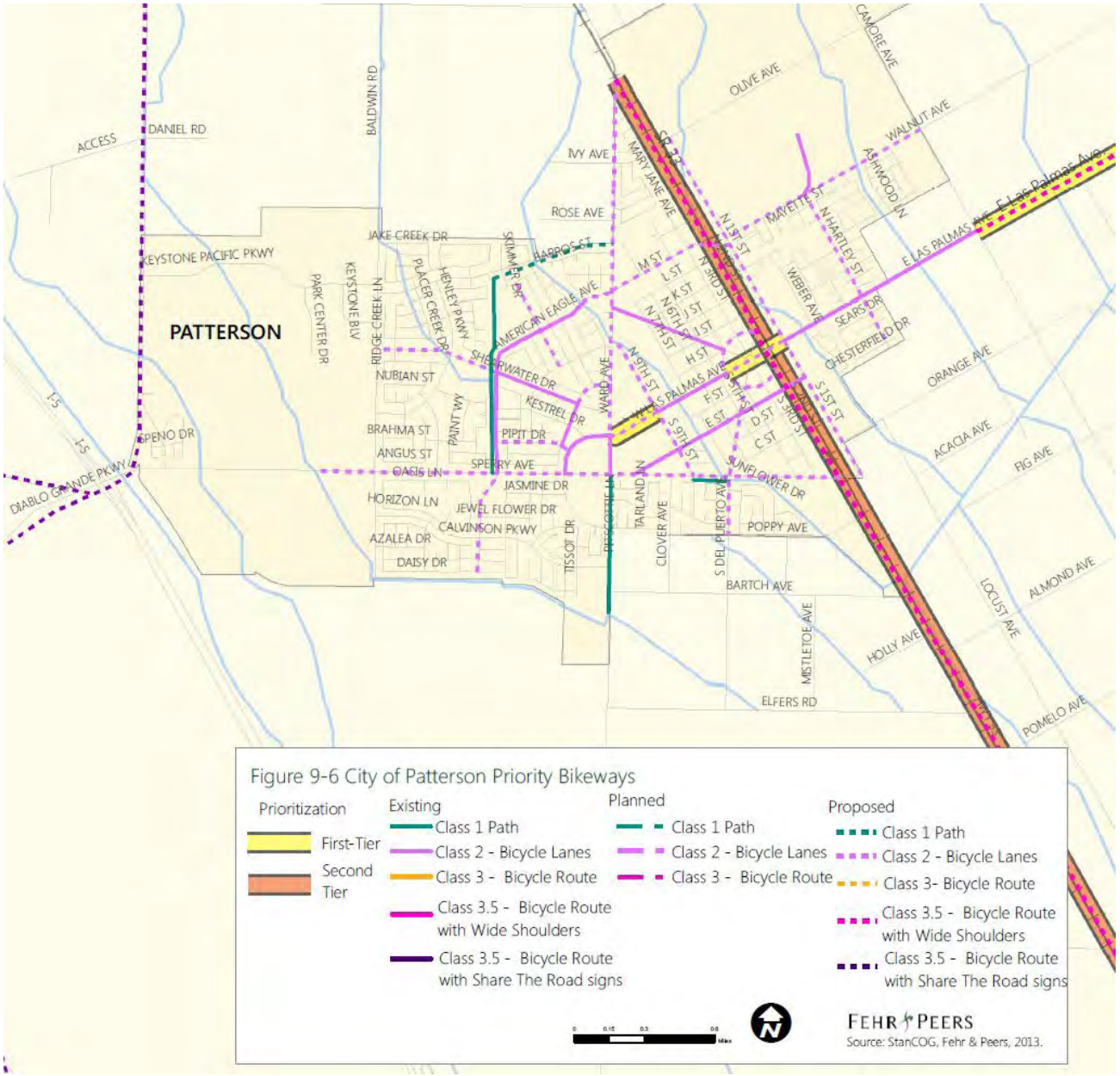
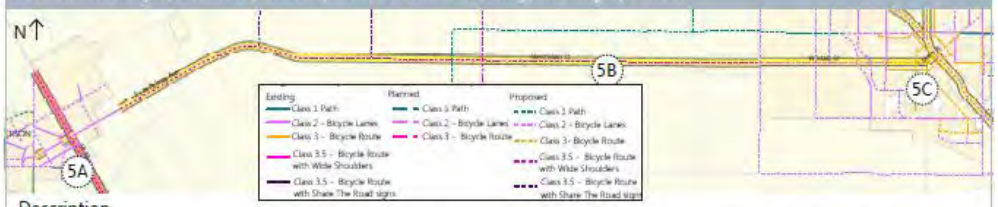


Figure 8b: Tier-one Priority Regional Bikeway – Las Palmas (StanCOG NMTMP)

5. Las Palmas Street - Main Street

Jurisdictions: City of Patterson, Unincorporated Stanislaus County, and City of Turlock



Description

This east-west bikeway connects Las Palmas Avenue in Patterson through the unincorporated County to Main Street in the City or Turlock, connecting to Downtown Turlock and the priority bikeway on Golden State Boulevard (#8).

Proposed Improvements

5A. Class 2 on Las Palmas Avenue between Ward Avenue and 9th Street and El Circulo and 1st Street
5B. Class 3.5 with wide shoulders on Las Palmas Avenue/Main Street between Sycamore Avenue and Walnut Road
5C. Class 3 on Main Street between Walnut Road and Golden State Boulevard

Design Requirements

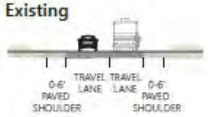
5A Class 2 Bicycle Lanes
- Widen roadway between Ward Avenue and 9th Street
- Stripe within existing right of way from El Circulo to 1st Street

Existing

Proposed

5B Class 3.5 with Wide Shoulders
- Widen shoulder to 4' minimum
- Existing shoulders are 0-6'
- Install Class 3 signs each 1/4 mile

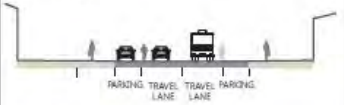
Existing



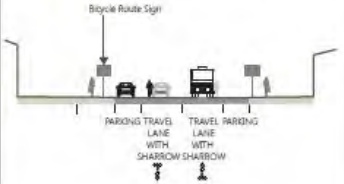
Proposed

5C Class 3.5 Bicycle Route with Sharrows
- Install Class 3 bicycle route signage
- Stripe sharrows 14' from face of curb
- Install Class 3 signs each 1/4 mile

Existing



Proposed



Implementation and Funding

- 4 pedestrian-auto collisions, 4 bicyclist-auto collisions on West Las Palmas Avenue/Main Street corridor between 2008-2010
- May be candidates for SJVAQD Remove II, CMAQ competitive funding, and HSIP funding
- Total project cost, including design, environmental, and contingency, is approximately $5,150,000

5. WALKING CONDITIONS

This section describes the existing sidewalk and ADA-compliant curb ramp network within Patterson.

SIDEWALK NETWORK

Majority of the roadways within Patterson have continuous sidewalks, providing access to parks, schools, and shopping centers.

Majority of the curbs in Patterson are the standard barrier curb, which provides a barrier between the roadway and sidewalk. Having barrier curbs prevents vehicles from mounting and possibly encroaching on to the sidewalks.

Providing ADA-compliant curb ramps at intersections increases access for residents with mobility issues to parks, schools, and locally-owned business. ADA-complaint curb ramps are provided intermittently through the city, particularly in or near West Patterson Business Park, Apricot Valley Elementary School, the Walmart and Save Mart Shopping Center, and the neighborhoods surrounding the downtown core. Most of the curb ramps in the city are missing the ADA-compliant truncated domes.

SIDEWALK GAPS & ADA CURB RAMP DEFICIENCIES

There are various intermittent segments that lack sidewalks on one or both sides of:

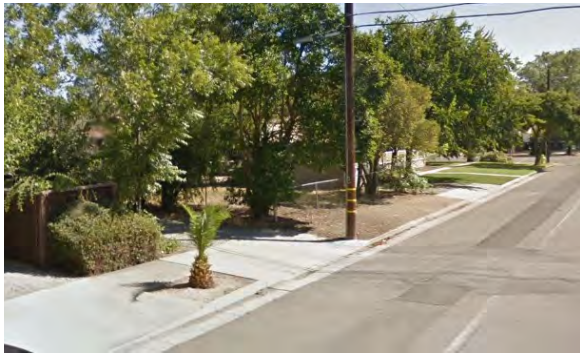
- Second Street (Highway 33)
- Sperry Avenue
- B Street
- C Street
- D Street
- I Street
- M Street
- 4th Street
- 5th Street
- 6th Street
- 7th Street.

Most of the sidewalk gaps are located near the downtown core of Patterson. Lack of sidewalks may force pedestrians to walk on the roadway alongside motor vehicles and create unsafe situations.

In addition, many of the street corners lack ADA-compliant curb ramps. Figure 9 illustrates the sidewalk gap locations, and corners lacking ADA-compliant curb ramp gaps in the City of Patterson.

Standard Curb along 4th Street

ADA-Compliant Curb Ramp



Sidewalk Gap in the Downtown Core

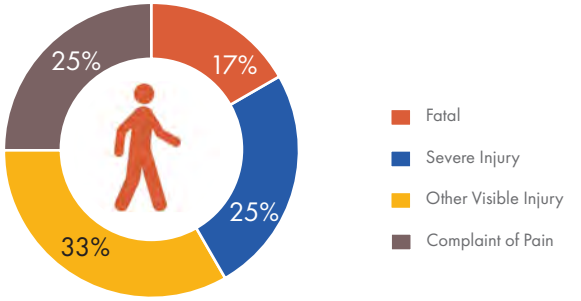
Figure 9: Pedestrian Gaps and Barriers

Patterson Active Transportation Plan

PEDESTRIAN SAFETY

Available collision data was reviewed for a five-year period from January 1, 2015 to December 31, 2019. The data review indicates 131 reported motor vehicle collisions, including 11 that resulted in severe injuries and six fatalities. Figure 10 shows the pedestrian collision locations within Patterson from 2015-2019. Key findings are that:

- Pedestrians are disproportionately involved in collusions resulting in serious injuries or fatalities. Although just 8% of reported collisions involved a pedestrian, pedestrians accounted for 43% of collisions with serious injuries, and 67% of fatalities
- Roughly half of the collisions involving pedestrians occurred on Patterson's two major arterial streets, Sperry Road and Second Street.



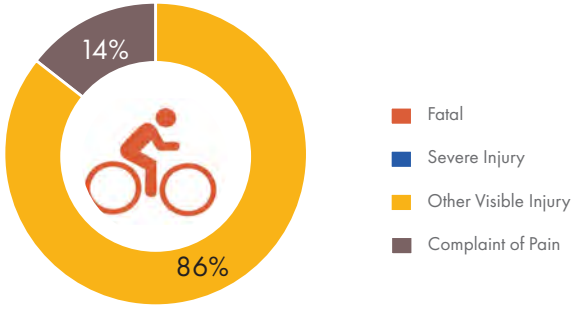


Figure 10: Pedestrian & Bicycle Collision Locations (2015-2019)

Speed is especially lethal for vulnerable users like pedestrians and people biking. The risk of injury and death increases as speed increases.

Patterson Active Transportation Plan

Street design guidelines tailored towards city streets typically aim to encourage speeds not to exceed 35 miles per hour (mph), while speeds of 20 to 25 mph are desirable in many cases.

Speed limits in California are based on 85th percentile travel speeds. The speed limits on Patterson's arterial streets exceed 35 mph on some segments:

- Sperry Avenue: 35 to 45 mph speed limit
- Second Street: 40 mph speed limit

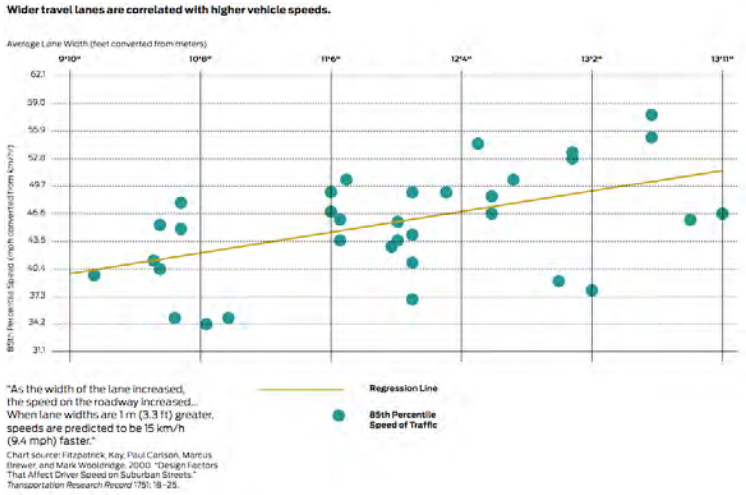
Travel speeds tend to correlate with the width of travel lanes and roadways: Figure 11 shows the effect of lane width on typical 85th percentile speeds.

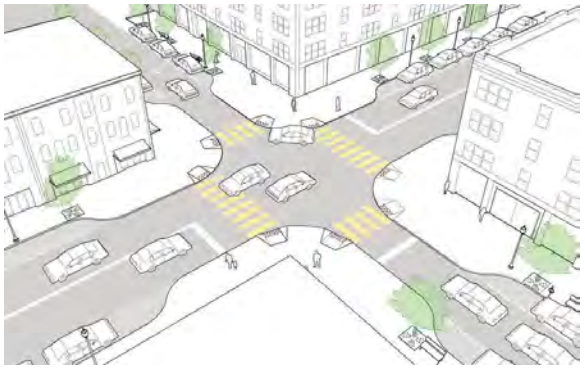
- Travel lane widths greater than 10 feet tend to result in 85th percentile speeds exceeding 35 mph (and often exceeding 40 mph).

SUMMARY OF KEY BARRIERS TO WALKING

Incorporating the topics described on the preceding pages, key barriers to walking in Patterson under existing conditions include:

- Gaps in the sidewalk network and corners that lack ADA-complaint curb ramps
- Safety concerns may limit the frequency of walking in Patterson, since pedestrians are disproportionately involved in collusions resulting in serious injuries or fatalities
- Motor vehicle speeds greater than 35 mph on Sperry Avenue and Second Street (Highway 33)
- Few signalized pedestrian crossings on Second Street (Highway 33)
- Lack of "eyes on the street" on Sperry Avenue between Baldwin Road and Las Palmas Avenue
- Lengthy pedestrian distances across arterial streets such as Sperry Avenue
- Very few intersections include corner treatments to enhance pedestrian crossings and reduce pedestrian crossing distances at key intersections, such as bulbouts, reduced curb radii and high-visibility crosswalks. Examples of such treatments are shown on Figure 11





Source: National Association of City Transportation Officials (NACTO) Urban Street Design Guide, 2013.

Figure 11: Pedestrian Bulbout & High-visibility Crosswalk Treatment Examples

PEDESTRIAN PRIORITY AREAS & IMPROVEMENT PROJECTS (NMTMP)

The Stanislaus County Non-motorized Transportation Master Plan (NMTMP) identified the following two areas within Patterson as Pedestrian Priority Areas:

- Neighborhood Commercial areas along Ward and Sperry Avenues
- Residential Areas/School zones west of Ward Avenue

As envisioned by the NMTMP: each priority area would be prioritized for pedestrian improvements and investments.

The NMTMP recommended several potential pedestrian improvement projects as shown on Figure 12. These improvements would include:

- Modifying corners to reduce pedestrian crossing distances with bulbouts (curb extensions) and tightened curb radii
- Providing directional ADA curb ramps whenever feasible
- Widening medians on Sperry Avenue to provide pedestrian refuges to mitigate the effect of the long crossing distances
- Installing high-visibility crosswalk treatments, advanced yield markings, and flashing beacons where appropriate
- Proposed pedestrian priority projects on Sperry Avenue also included installation of Class II bicycle lanes

Figure 12: Pedestrian Priority Area Projects (StanCOG NMTMP)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