February 2023

Manteca Downtown Transit Connectivity & Enhancement Plan

Prepared by

FEHR & PEERS

Acknowledgments

Project Team:

Fehr & Peers
CivicWell
Mark Thomas
De Novo Planning Group
City of Manteca
Catholic Charities Diocese of Stockton

Thank you to the Stakeholder Advisory Group and the residents, business owners, and students of Manteca for their contributions to this project.

Table of Contents

CHAPTER 1

Introduction

1.1 Purpose of this Plan

The Manteca Downtown Transit Connectivity & Enhancement Plan will serve as a roadmap to enhance safety and multimodal connections between the Manteca Transit Center, Downtown Manteca, and nearby residences and schools.

This Plan, the first of its kind for Manteca, presents a major opportunity for the City to enhance the existing multimodal transportation network in east Manteca by integrating bicycle, pedestrian, safe routes to school, and accessibility improvements using a Complete Streets approach. The Plan builds upon many elements that help make the City an exciting destination for residents and businesses, as well as the many visitors to the region.

Just as many factors influence how travelers behave, numerous factors influence what actions an agency can take. While this effort is focused on bicycle, pedestrian, ADA, and safe routes to school planning, considerations have been made related to economic vitality, efficient movement of goods/people, public health, and ecological challenges.

Facilitating an increase in walking and biking can confer a variety of benefits such as reduced congestion, improved safety, comfort, health, air quality, economic vitality, and quality of life. These benefits are further enhanced when connected to public transportation. Increased walking, bicycling, and transit ridership will also support the City's requirements under new regulatory frameworks, including mandates to reduce greenhouse gases and vehicle miles traveled (VMT).

1.2 About Manteca

Manteca is generally suburban and rural in character. The City has grown significantly in the past several years, from a population of 67,749 in 2010 to 83,948 in 2020 (a 24% increase) according to the U.S. Census Bureau.

The east Manteca neighborhood, generally the area east of Main Street and north of the Union Pacific Railroad, is home to a variety of residences, businesses, and schools. A demographic assessment of east Manteca (which for the purposes of this data summary is Census Tract 51.09) reveals the following:

- East Manteca is racially diverse: 53% of the population identifies as Hispanic or Latino, 6% as Asian, and 3% as Black.[1]
- East Manteca has high income inequality: The median income within east Manteca is $46,900, as opposed to $69,300 for Manteca as a whole, highlighting significant income disparity. Additionally, 83.0% of Lincoln Elementary School students and 52.4% of Manteca High School students are eligible to receive free or reduced-price meals, an indicator of student poverty.[2]
- Many east Manteca residents get around by car: In east Manteca, 93% of households have access to an automobile and 92% of workers use a vehicle to commute to work. Only 4% of workers use public transportation, walk, or bike to work. 29% of commuters have a travel time of less than 15 minutes, indicating potential latent demand for active transportation.

[1] U.S. Census 2020 ACS 5-Year Estimates.
[2] California Department of Education Free or Reduced-Priced Meal Data: https://www.cde.ca.gov/ds/ad/filessp.asp

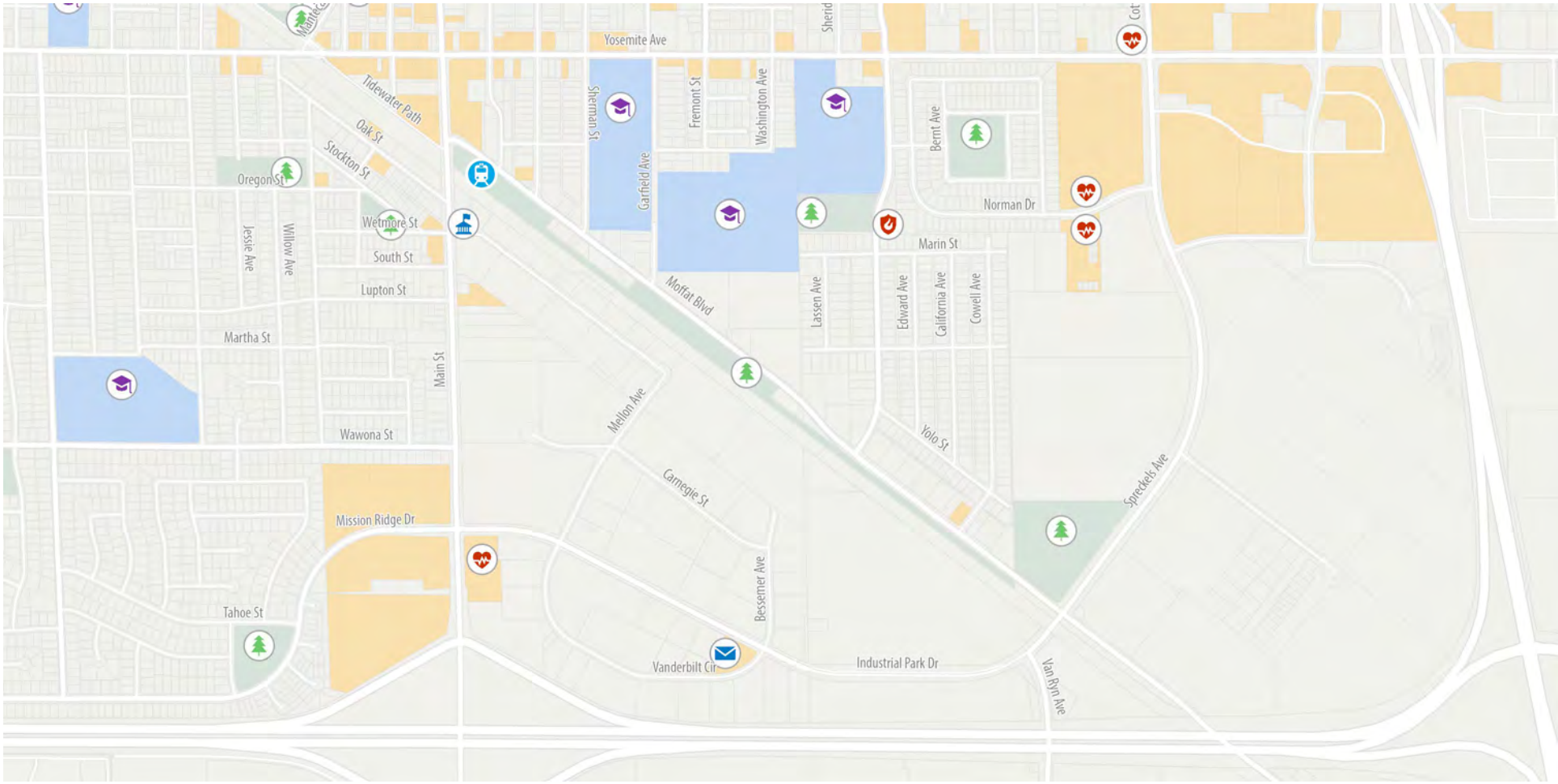


Figure 1
Key Destinations

1.3 Key Destinations and Land Uses

Figure 1 shows key destinations in downtown Manteca, including schools, parks, libraries, post offices, City Hall, retail areas, and medical facilities. As seen in the figure, two schools are located just northeast of the Manteca Transit Center: Manteca High School and Lincoln Elementary School. Numerous neighborhood parks liven the study area, notably Tidewater Park that straddles the Tidewater multi-use trail.

1.4 Impacted Communities

Service to historically marginalized and underserved communities is a key factor in many grant funding programs such as California's Active Transportation Program (ATP). This plan presents three different indicators of impacted communities, often referred to as environmental justice communities, defined as low-income areas that are disproportionately affected by environmental pollution and other hazards that can lead to negative health effects, exposure, or environmental degradation.

Household median income – census tracts with median household income less than 80% of the statewide median of $60,188 (American Community Survey (ACS) 2016-2020) (Figure 2).

CalEnviroScreen 4.0 score percentile – a measure of environmental health by census tract. Inputs include socioeconomic factors, population characteristics, pollution factors, and environmental factors. Tracts with higher percentiles are more disadvantaged. The worst scoring 25% are considered disadvantaged by the ATP guidelines (Figure 3).

California Healthy Places Index – a measure of the community conditions shaping health outcomes. Factors include economic, education, transportation, social, neighborhood, housing, clean environment, and healthcare access. Census tracts in the worst scoring 25% are considered disadvantaged by the ATP guidelines (Figure 4).

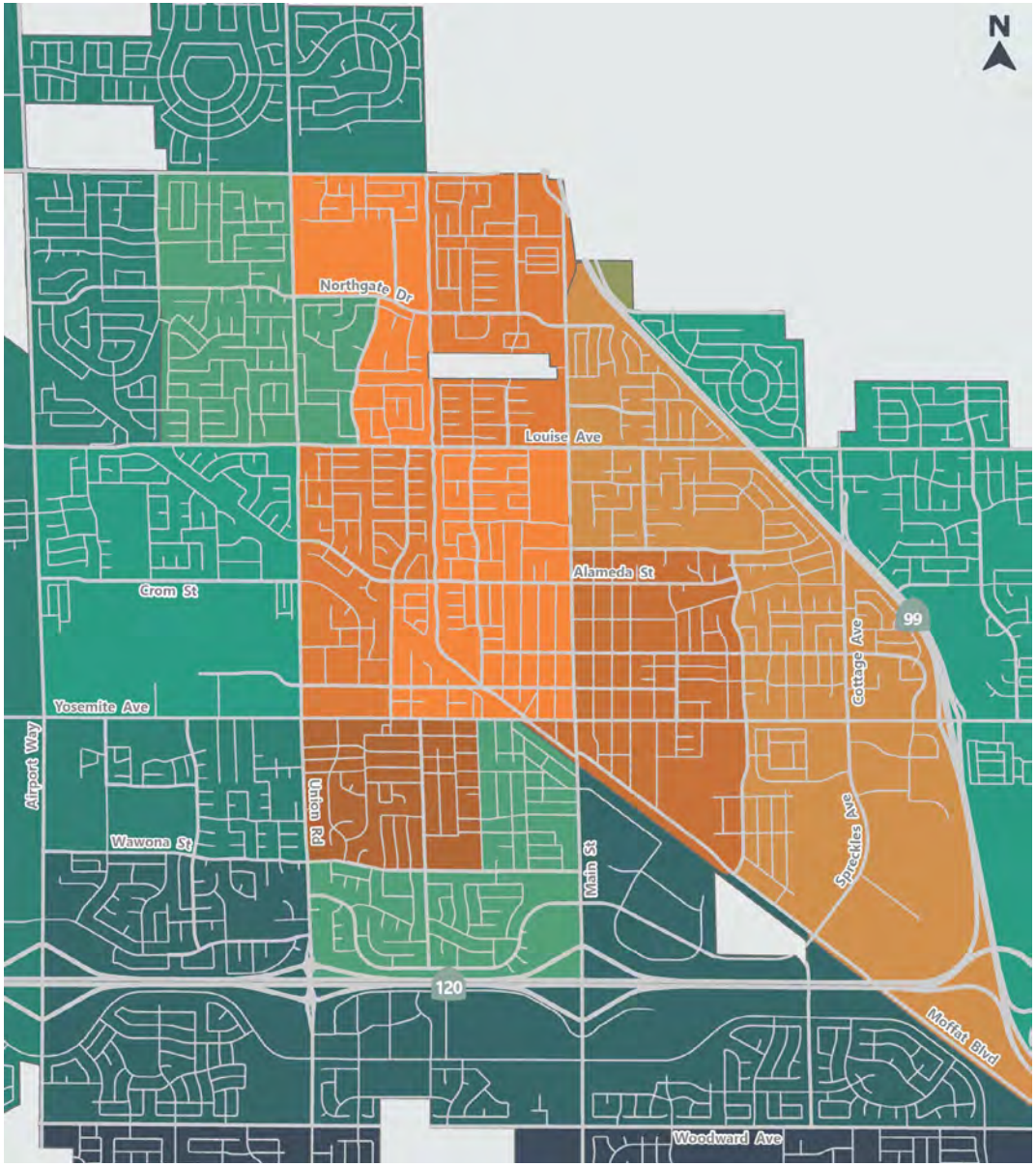


Figure 2
Household Income

- More than 160% of state median income
- 151%-160% of state median income
- 141%-150% of state median income
- 131%-140% of state median income
- 121%-130% of state median income
- 111%-120% of state median income
- 101%-110% of state median income
- 91%-100% of state median income
- 81%-170% of state median income
- 71%-80% of state median income
- Less than 70% of state median income

Source: American Community Survey (ACS) 2015-2019

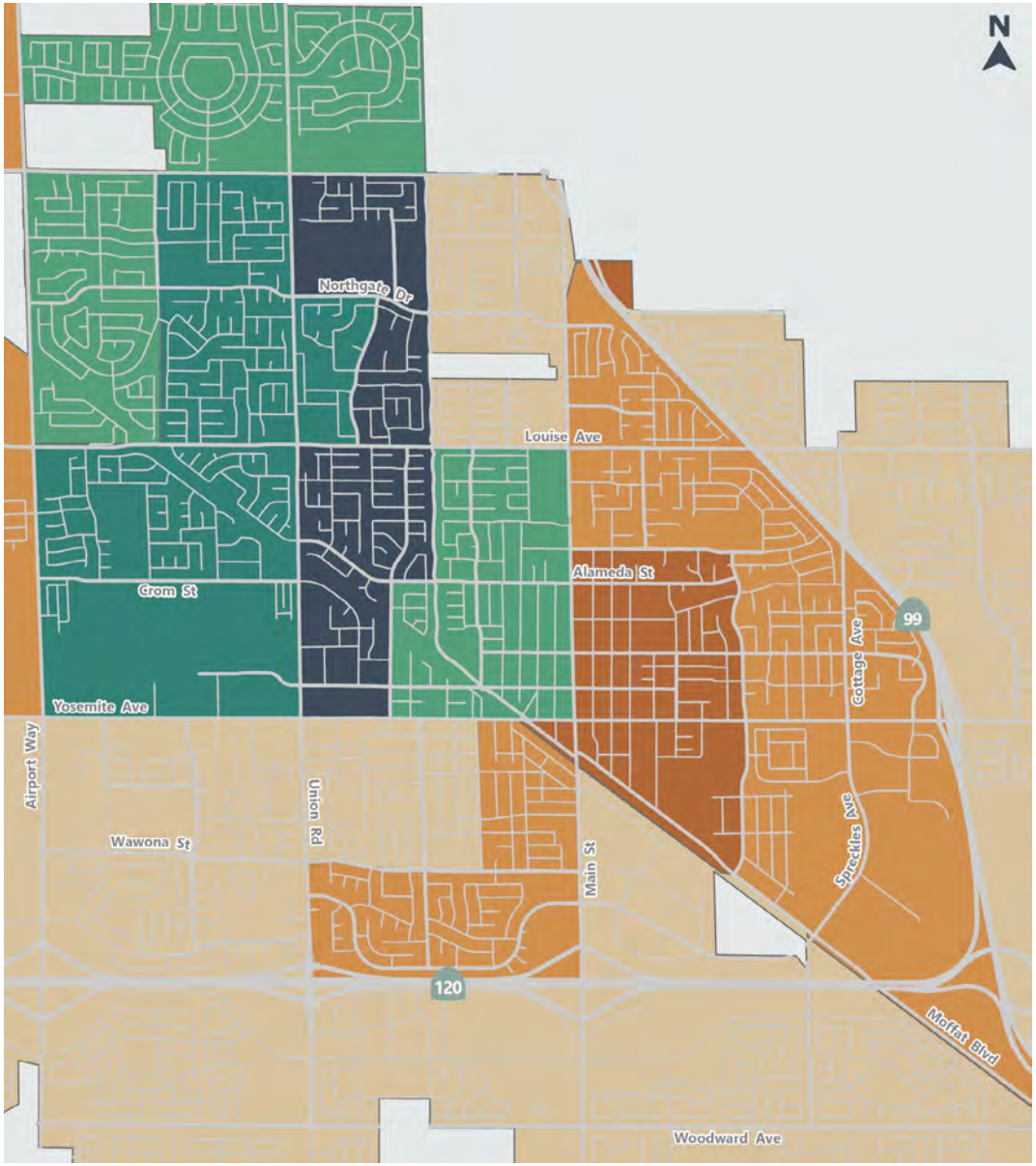


Figure 3
CalEnviroScreen 4.0 Score Percentile

- 0-50th Percentile (Best)
- 50-60th Percentile
- 60-70th Percentile
- 70-80th Percentile
- 80-90th Percentile
- 90-100th Percentile (Worst)

Source: California Office of Enviromental Health Hazard Assessment

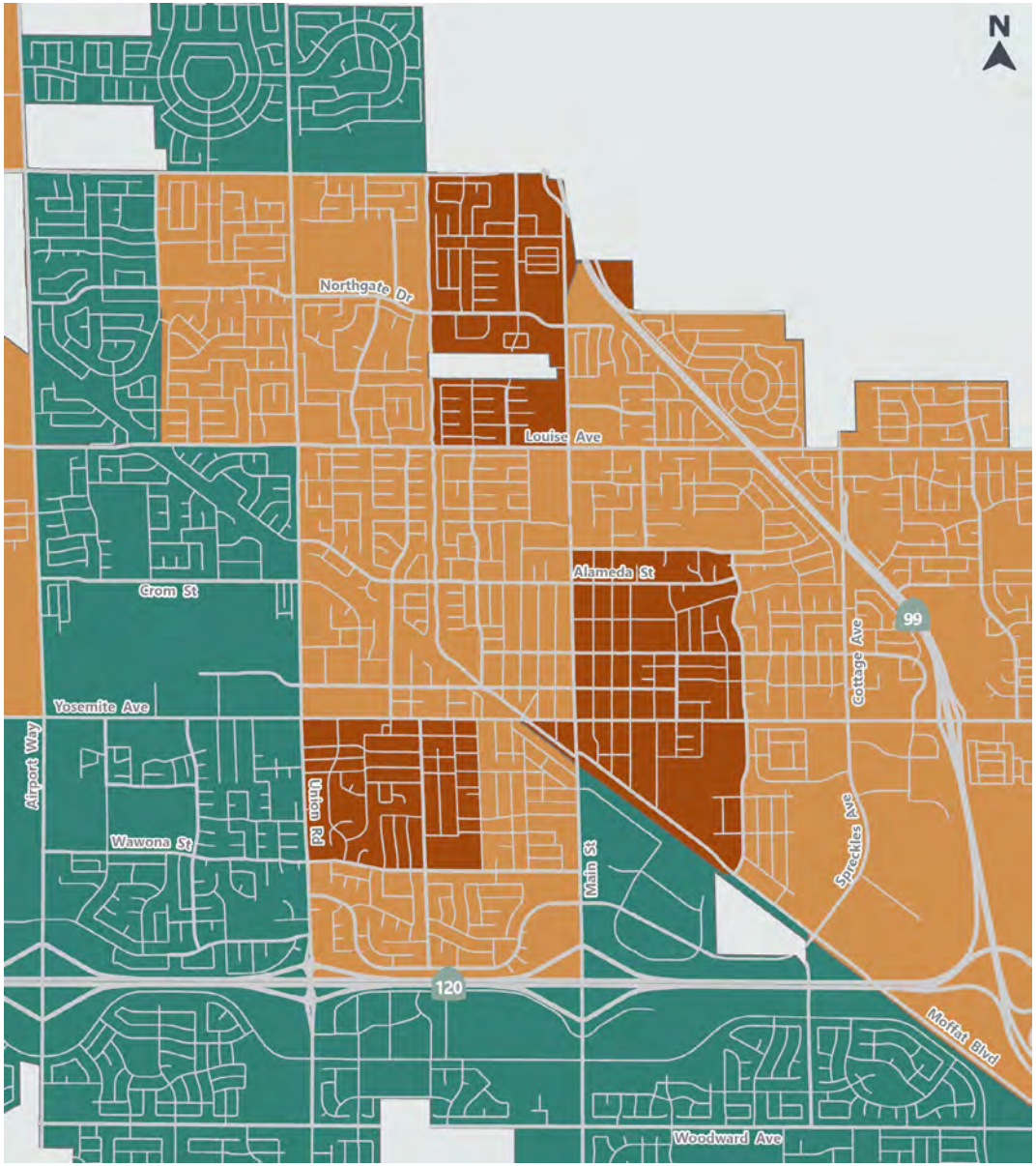


Figure 4
California Healthy Places Index by Census Tract

- 0-25th Percentile (Worst)
- 25th-50th Percentile
- 50-75th Percentile
- 75-100th Percentile (Best)

Source: Public Health Alliance of Southern California

CHAPTER 2

Vision & Goals

2.1 Vision

Make downtown and east Manteca safer, more accessible, and more inviting to residents, employees, students, and visitors. Increase opportunities for walking, bicycling, and transit use in Manteca, especially as the new ACE station is developed. With these multimodal connections, Manteca's downtown can grow into a more mixed-use environment with housing, offices, shops, and schools.

The goals for this plan were developed in support of this Vision and with consideration of other local and state plans and policies, desires of local residents, and emerging best practices and opportunities in transportation and land use planning. The City's General Plan and Active Transportation Plan have goals supporting increases in bicycling, walking and transit ridership.

2.2 Goals

This plan was created to help facilitate the following goals.

1 Improve the experience of walking and biking to the Manteca Transit Center to and from Downtown Manteca, local schools, and the Moffat Boulevard Gateway Opportunity site.

Action 1-1: Pursue improvements via placemaking, enhancing personal safety and comfort, addition of wayfinding, and new sidewalk and bikeway access points

Action 1-2: Support neighborhood retail and local business vitality through projects that connect to and through key destinations

Action 1-3: Fill key gaps in the network by providing first/last mile connections to transit and reducing the stress level at crossings

Action 1-4: Prioritize active transportation investments based on factors such as systemic risk, location near key destinations, and funding opportunities.

2

Plan infrastructure improvements to support the changing nature of Downtown and east Manteca.

Action 2-1: Identify modifications to Moffat Boulevard to shift it from an industrial corridor to a bike, pedestrian, and transit-friendly corridor

Action 2-2: Support future infill opportunities in east Manteca and Downtown

Action 2-3: Evaluate opportunities to mitigate impacts on the residential neighborhood and transit center that may arise from new development

Action 2-4: Enable children to walk and bike to local schools by providing safe and accessible routes to school

Action 2-5: Collaborate with key City stakeholders for larger funding efforts to complement infrastructure with non infrastructure projects.

CHAPTER 3

Existing Conditions

The full Existing Conditions reports are available in Appendix A.

Downtown Manteca has been going through a period of rapid infrastructure change. Recent improvements to the study area include the following:

- Addition of Class II bike lanes on Moffat Boulevard from Main Street to Spreckels Avenue
- Expanded footprint of Manteca High School and a partial closure of Garfield Avenue, creating two dead-end sections of Garfield Avenue from Yosemite Avenue and Moffat Boulevard
- Replacement or addition of ADA-accessible curb ramps at five intersections and addition of four high-visibility crosswalks near Manteca High School
- Class II bike lanes on Yosemite Avenue from Main Street to Cottage Avenue/ Spreckels Avenue
- Crossing improvements on Yosemite Avenue

An initiative to offer free transit rides to high school students has successfully increased ridership on some routes, with plans to extend free service to middle school students.

Manteca High School recently closed Garfield Avenue to through traffic and expanded its parking lot. The high school is planning several major improvements, including realigning the main entrance of the high school to be along Moffat Boulevard rather than Yosemite Avenue, and reducing the points of entry to the campus from 14 to 3.

3.1 Pedestrian & Bicycle Facilities

Sidewalks are present on both sides of all key arterials and in most residential neighborhoods in the Downtown and east Manteca near the Transit Center area, as seen in Figure 5. Pedestrian connectivity is generally high, though there are several noticeable sidewalk gaps, such as on S. Grand Avenue south of Yosemite Avenue. Additionally, pedestrian crossing issues persist on several major corridors in the project area, including lack of high-visibility crossings, long crossing distances, and lack of driver yielding behavior at existing crossing treatments.

The bicycle network (shown in Figure 6) in east Manteca has a strong backbone with the Tidewater Trail, a multi-use path that runs parallel to Moffat Boulevard through central and east Manteca. Bicycle lanes were recently constructed on Moffat Boulevard from Main Street to Spreckels Avenue. Bicycle lanes are also present on segments of Main Street, Yosemite Avenue, and Powers Avenue, creating a cohesive connection. However, direct links between key destinations are still lacking, and existing bicycle facilities have high exposure to traffic, making them unappealing to bicyclists.

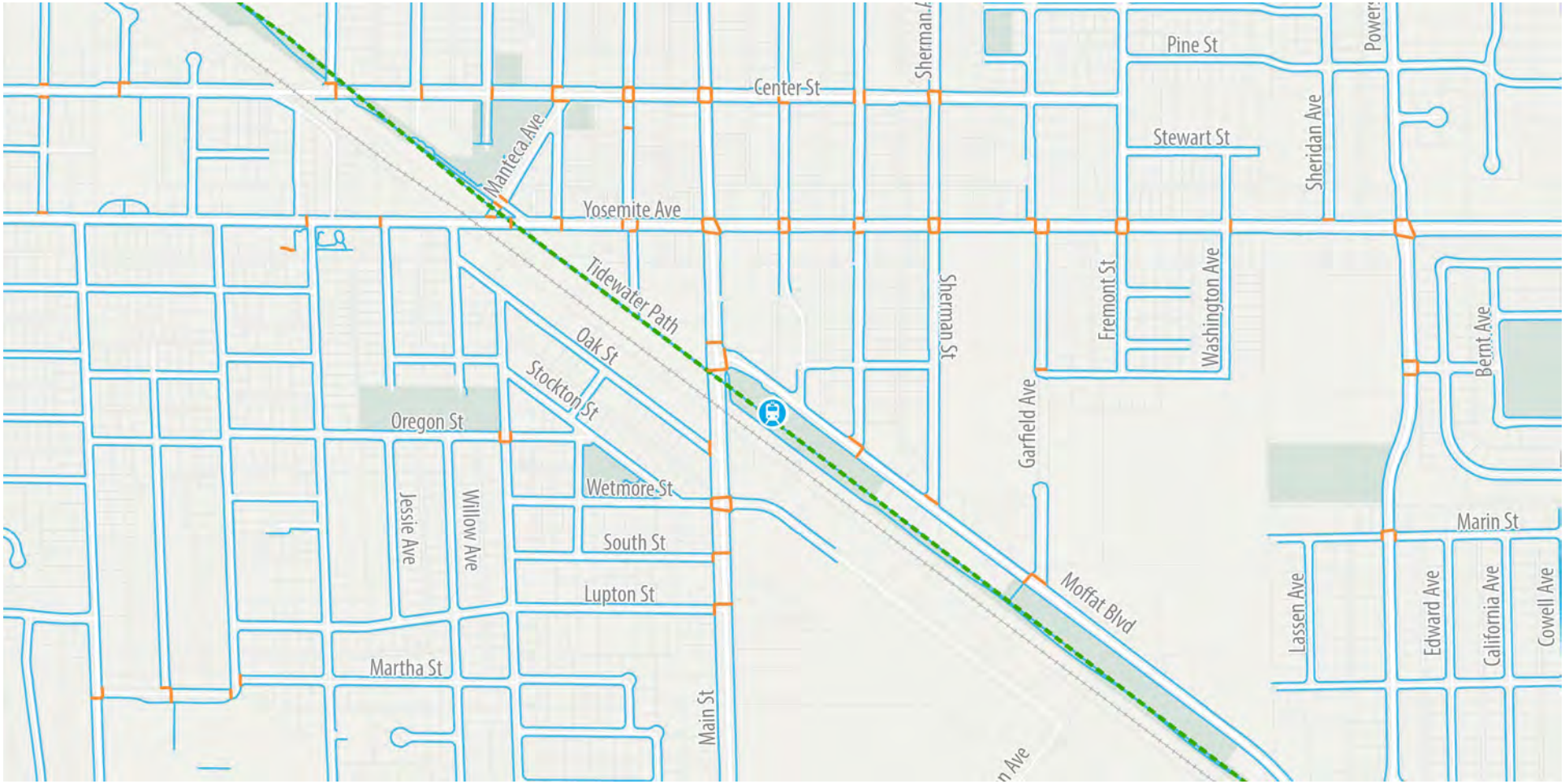


Figure 5
Existing Pedestrian Facilities

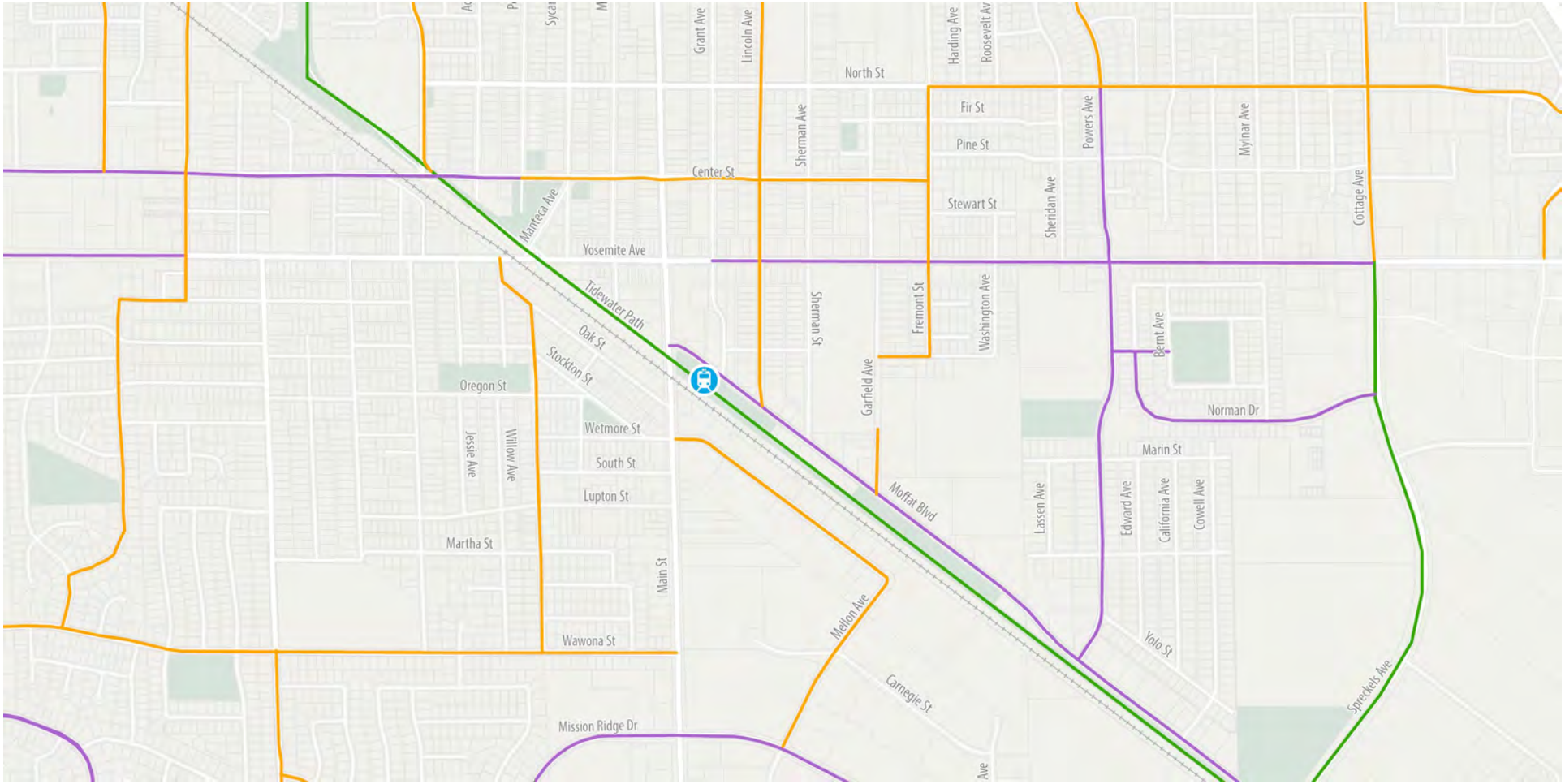


Figure 6
Existing Bicycle Facilities

- Class I - Multi-Use Path
- Class II - Bicycle Lane
- Class III - Bicycle Route
- Manteca Transit Center

3.2 Vehicle Operations

The arterials of Main Street, Yosemite Avenue, and Moffat Boulevard all experience traffic heavily reliant on peak activity. The Yosemite Avenue and Moffat Boulevard corridors are busiest before and after classes are in session at Manteca High School and Lincoln Elementary School. Staggered school schedules encourage consistent traffic flow, but after-school vehicle queues on Moffat Boulevard can extend from Main Street to west of Garfield Avenue, exacerbated by passing freight trains.

3.3 Transit Facilities & Service

The Manteca Transit Center is the main hub of public transit in the City, with all bus routes operating from the Center. The station currently has five operational bus bays and over 100 parking spaces. Bus service from the San Joaquin Regional Transit District, Stanislaus Regional Transit Authority, and Altamont Corridor Express shuttle routes also serve the Transit Center, as shown in Figure 7. The upcoming Altamont Corridor Express (ACE) train platform will be constructed approximately 650 feet southwest of the Transit Center.

Manteca Transit runs four main bus routes that connect residences to schools, shopping, and other services:

- Route 1 runs east-west, primarily running along Yosemite Avenue and Airport Way, with deviations onto Wawona Street and Fishback Road in west Manteca and Spreckels Avenue, Pestana Avenue and Vasconcellos Avenue in east Manteca.
- Route 2 primarily serves west and south Manteca, running along S. Main Street, E. Woodward Avenue, Atherton Drive, S Union Road, Daniels Street, and several other residential collector streets.
- Route 3 primarily serves north Manteca, running along N. Main Street, Louise Avenue, Northgate Drive, N Union Road, Yosemite Avenue, and several other residential collector streets.
- Route 4 runs along the perimeter of west Manteca, generally along Main Street, W. Woodward Avenue, Airport Way, and Northgate Drive.

After-school vehicle queuing on Moffat Boulevard

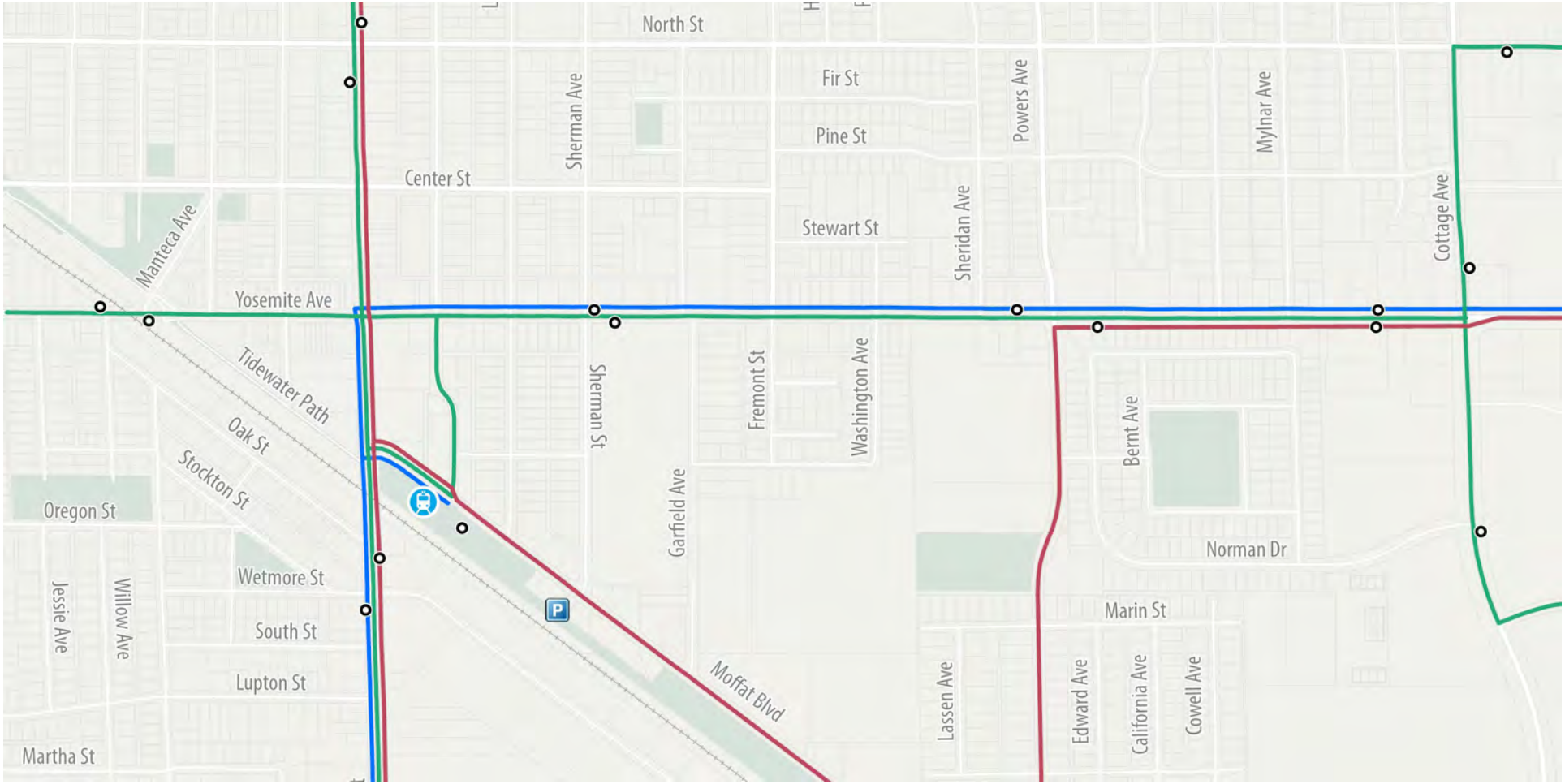


Figure 7
Existing Transit Facilities

3.4 Safety Analysis

Data from the Transportation Injury Mapping System (TIMS) developed by UC Berkeley's Safe Transportation Research & Education Center (SafeTREC) was pulled for the area highlighted in Figure 8. Vehicular, bicycle, and pedestrian collisions that occurred between January 2015 through December 2020 were analyzed. Analysis of collision data of this six-year period in the study area revealed the following:

- Over the six-year period, a total of 103 collisions occurred, for an average of 17 collisions per year.
  - Of these, four resulted in a victim being seriously injured and none resulted in fatality.
- The most common primary collision factors were:
  - Unsafe speed (27%)
  - Vehicle right of way violation (24%)
  - Traffic signals and signs (12%)
- The most common types of collision were:
  - Rear end (33%)
  - Broadside (34%)
- 9% of collisions involved a pedestrian
- 82% of collisions occurred at an intersection
- 34% of collisions occurred during the PM peak period (3 PM to 7 PM)

Almost one third of all collisions studied were reported to be caused by unsafe speed, commonly associated with rear-end collisions. Another one fourth of collisions were caused by vehicle right of way violations, commonly associated with broadside collisions. Engineering countermeasures can assist with reducing driver speeds and maintain orderly operations at intersections, which can help reduce the frequency and severity of these collisions.

During the study period, crashes steadily increased from 2015 to 2019. A sharp decrease in collisions occurred during the beginning of the COVID-19 pandemic associated with decreases in vehicle travel. Provisional data from 2021 showed a slight uptick in collisions, with increases in traffic along the study corridors. Collisions from 2021 generally followed the same collision factor and type trends as those from before 2020.

3.5 Infill Opportunities Assessment

An assessment of land use, development, and demographics in Downtown and east Manteca was used to evaluate opportunities for infill development (see Appendix A for the full report from De Novo Planning Group).

The Manteca Draft General Plan envisions growth with a range of uses in the Downtown Planning Area. As Figure 9 shows, several vacant and underutilized opportunity sites exist in the Downtown Manteca Planning Area, including parcels along Grant Avenue and Yosemite Avenue. These sites provide opportunities for residential, mixed-use, commercial, and industrial development in the Planning Area. Approximately 749 new dwelling units would be accommodated under the proposed Draft General Plan, including 41 single family units and 708 multifamily units in residential, mixed use, commercial and industrial designations. An increase in housing availability and new residents would enhance the need to provide transportation amenities so as to not worsen congestion.

Notably, the unincorporated "opportunity zone" bounded by Bessemer Avenue, Moffat Boulevard, and Industrial Park Drive has the potential to become a transit-oriented development through the creation of a pedestrian-oriented, mixed-use community to those hoping to regularly utilize ACE train service.

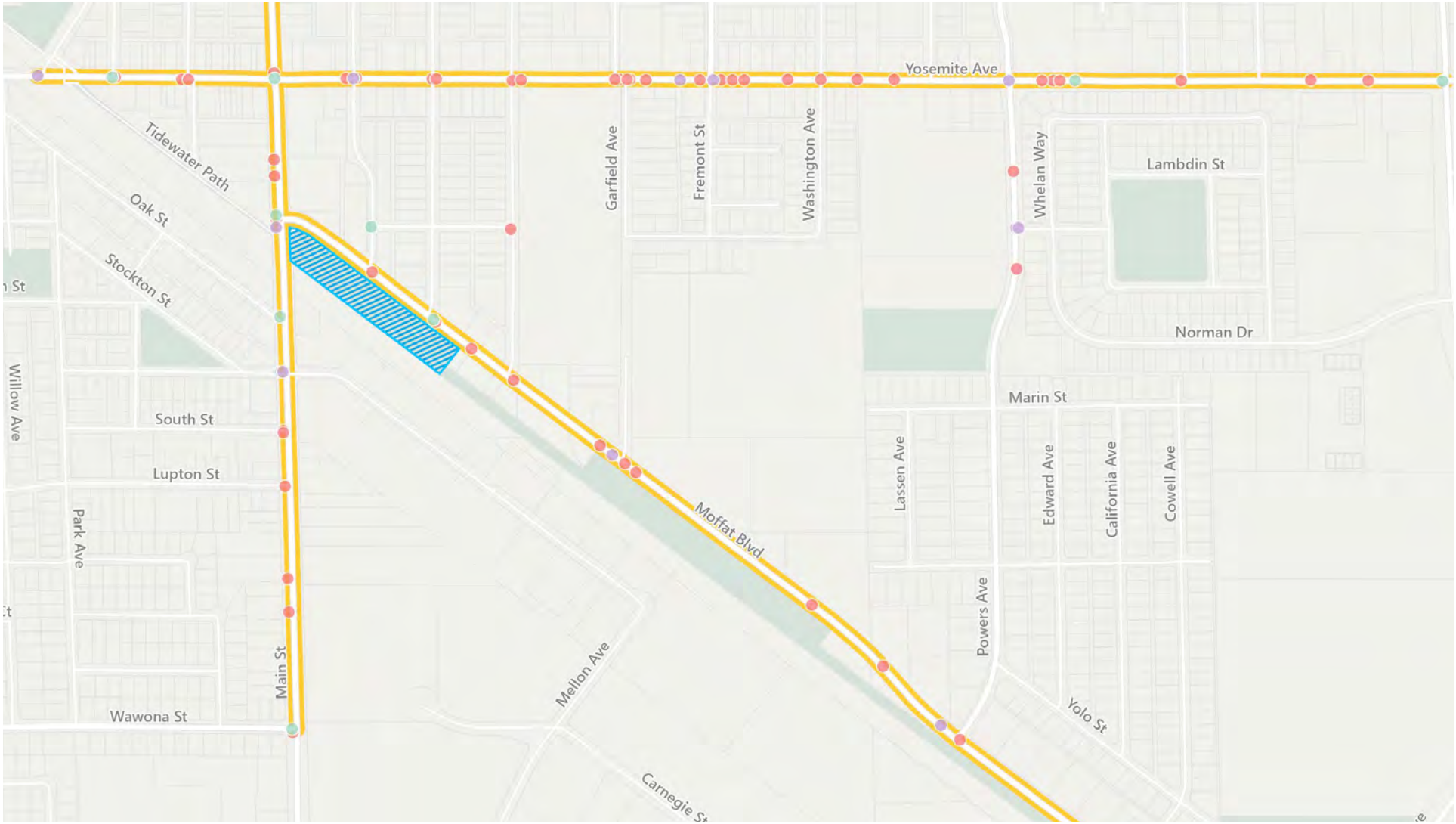


Figure 8
Vehicle, Bicycle, and Pedestrian Collisions, 2015-2020

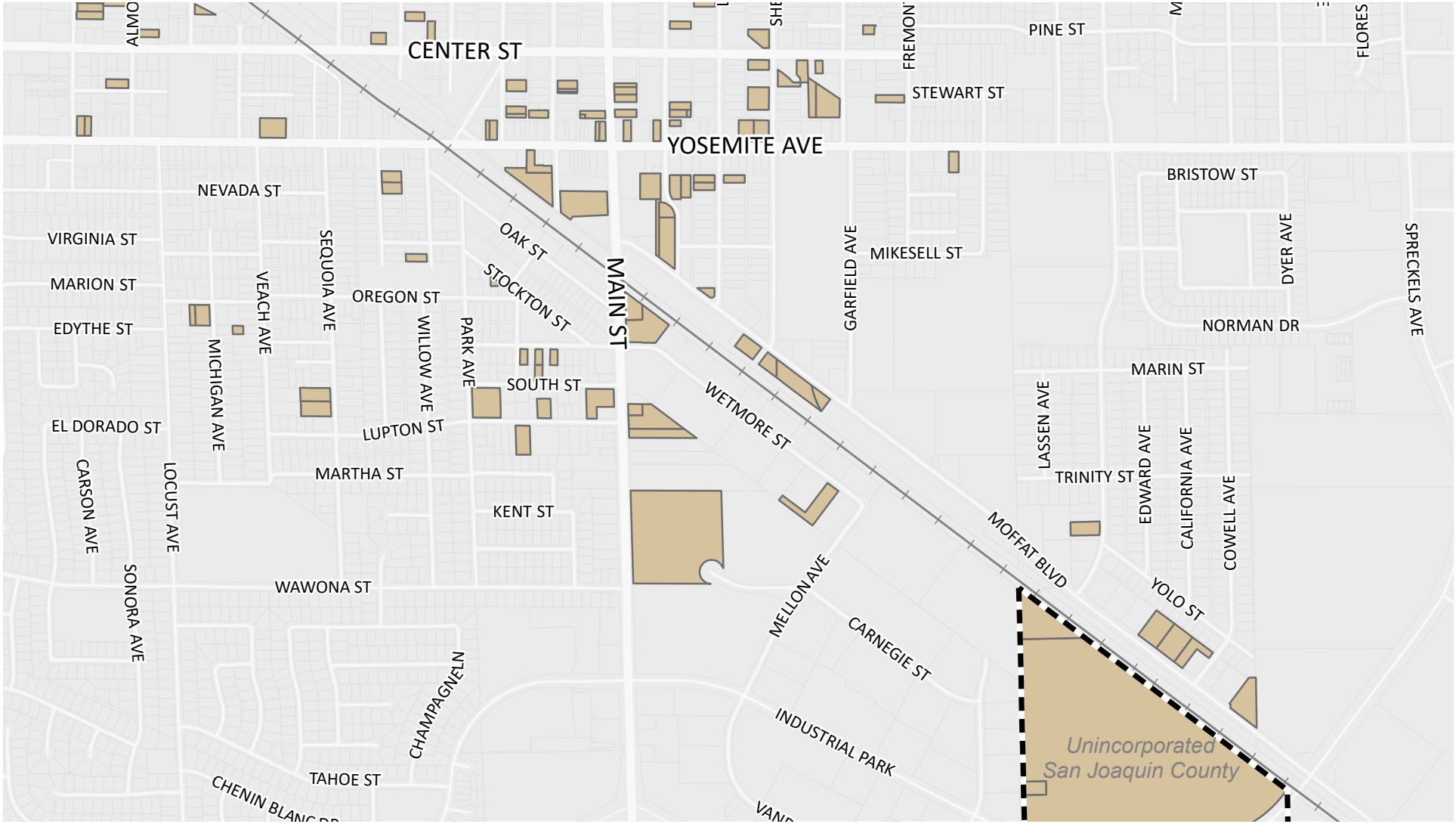


Figure 9
Vacant and Underutilized Opportunity Sites
(De Novo)

Connection to Tidewater Trail at Garfield Avenue

Manteca Transit Center bus bays

Tidewater Trail crossing Yosemite Avenue

Moffat Boulevard near S. Lincoln Avenue

Vacant lot across from Manteca Transit Center

Moffat Boulevard & Sherman Avenue Crossing

CHAPTER 4

Relationship to Other Plans & Programs

This Plan builds on various existing plans and programs. Key takeaways of these other plans and programs, including supporting goals, policies, and projects, are included below.

Notably, the Manteca Public Facilities Implementation Plan (PFIP) and Manteca General Plan do not include any plans to widen Main Street, Yosemite Avenue, and Moffat Boulevard within the study area.

4.1 City of Manteca Active Transportation Plan

The Manteca Active Transportation Plan (ATP) (2020) demonstrates the desire for low-stress facilities for pedestrians and bicyclists in Manteca and identifies transportation facility improvements throughout the City. The Plan proposes crossing and intersection improvements, wayfinding, lighting, and other programs to encourage active transportation, as well as the prioritization, costs, and funding of implementation.

A full map of planned facilities from the Manteca ATP is shown in Figure 10. In east and central Manteca, bike lanes are recommended on segments of Center Street, Main Street, Yosemite Avenue, and Garfield Street. Crossing improvements are recommended along Moffat Boulevard, Yosemite Avenue, and Center Street. New sidewalks are recommended on segments of Spreckels Avenue, Grant Avenue, and in the industrial area south of the UPRR tracks. This Plan updates and expands upon many of the facilities planned in the ATP.

4.2 City of Manteca Traffic Calming Program

The main goals of the Manteca Traffic Calming Program (2018) are to define a process for neighborhoods to sponsor traffic calming plans and identify funding sources, and provide guidance for the types of traffic calming measures that may be considered. Recommended traffic calming measures include lane striping, speed limit signs, high-visibility crosswalks, speed humps/lumps, raised crosswalks, bulb-outs, traffic circles, pedestrian islands, chicanes, and street closures. Several roadway segments within the study area are likely eligible for the Traffic Calming program.

4.3 East Manteca Neighborhood Improvements Memorandum

The East Manteca Neighborhood Improvements Memorandum (November 2021) recommends enhancements to the walking, biking, and rolling environment in the study area through changes in intersection geometry, bicycle and pedestrian facilities, and traffic calming infrastructure. Intersection crossing recommendations relevant to the study corridors of Main Street, Yosemite Avenue, and Moffat Boulevard were as follows:

Upgrade crosswalk markings, install leading pedestrian interval (LPI), and/or consider right-turn-on-red restrictions at Main St & Alameda St, Main St & Center St, Main St & Yosemite Ave, and Yosemite Ave & Powers Ave

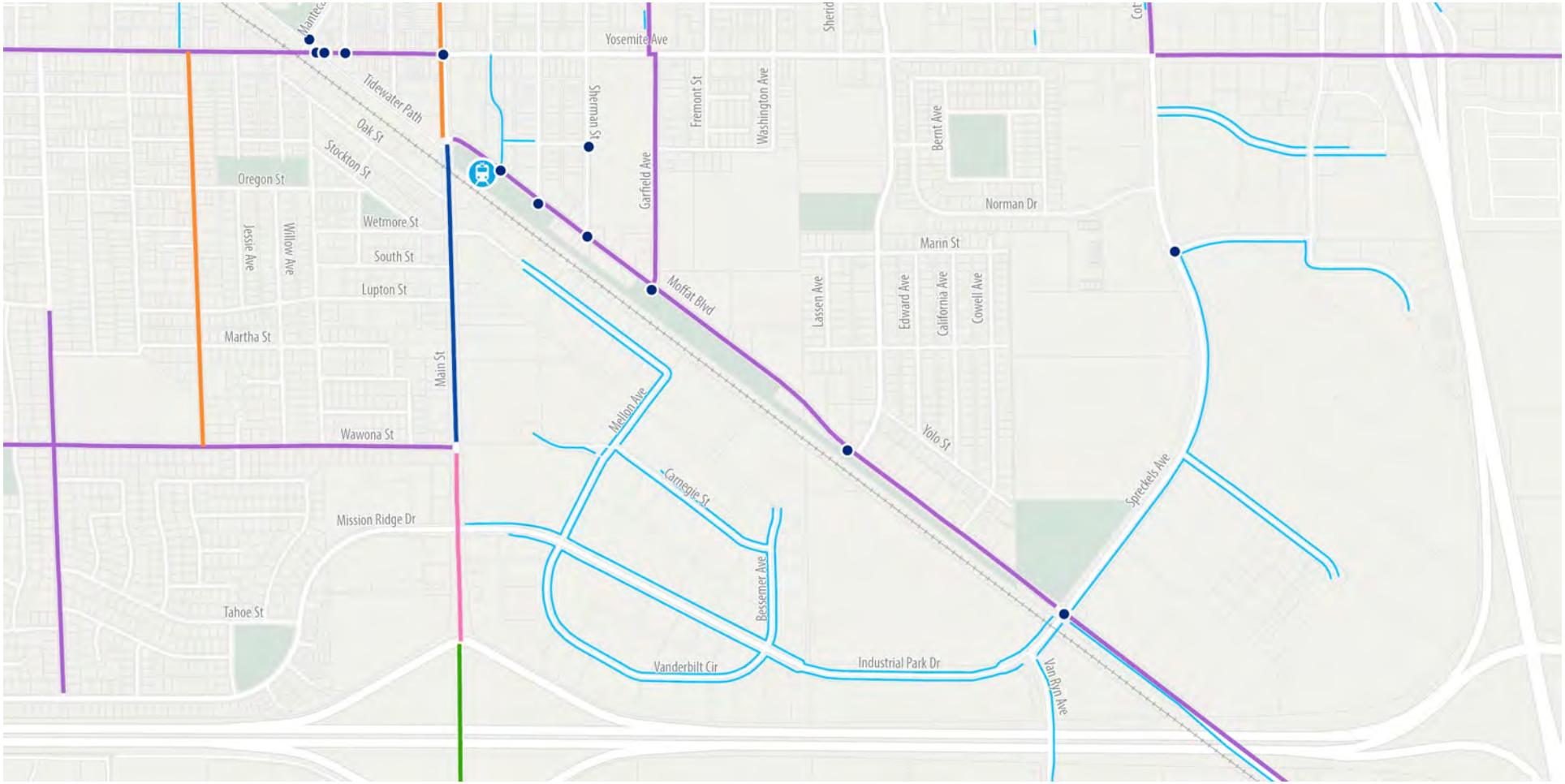


Figure 10
Planned Bicycle and Pedestrian Facilities

Source: Manteca Active Transportation Plan

Upgrade or install pedestrian crosswalk markings and advanced yield signs at Yosemite Ave & Grant Ave, Yosemite Ave & Sherman Ave, Yosemite Ave & Garfield Ave, Yosemite Ave & Washington Ave, Yosemite Ave & Sheridan Ave, Moffatt Blvd & Grant Ave, Moffatt Blvd & Lincoln Ave, Moffatt Blvd & Sherman Ave, Moffatt Blvd & Garfield Ave, Moffatt Blvd & Powers Ave

Install rectangular rapid flashing beacons (RRFB) and advanced stop/yield lines at Moffatt Blvd & Garfield Ave, Moffat Blvd & Powers Ave

Tidewater Bikeway access connections at Moffat Blvd & Sherman Ave, Moffatt Blvd & Powers Ave

Improve streetscaping – widen sidewalks, add trees and landscaping to separate pedestrians from vehicle traffic at Moffatt Blvd, on the north side from Main St to Garfield Ave and south side from east of Lincoln Ave to Garfield Ave

Road diet (reduce travel lanes from four to three) at Main St from Louise Ave to Wetmore St

Areawide recommendations for the east Manteca Neighborhood included safe routes to transit, pedestrian scale lighting, ADA improvements, school zone signing and striping, bicycle racks, and shade trees and maintenance. A variation of most of the intersection improvements and streetscaping recommendations from this memorandum are incorporated into this Plan.

4.4 ACE Extension Projects and the Manteca ACE Station

The Altamont Corridor Express (ACE) has several current projects under its Valley Rail Program, with the overarching plan of extending ACE service northward to Sacramento and southward to Merced, as well as the expansion of the San Joaquins train service between the San Joaquin Valley and Sacramento. Projects include the ACE Extension Lathrop to Ceres/Merced Project and the Valley Rail Sacramento Extension Project. A map of the ACE extension to Ceres and Merced is shown in Figure 11.

As of August 2022, a 30% design plan for the Manteca ACE Station has been completed. The station/platform is scheduled to be constructed in 2023 with one train in each direction stopping at the station daily after opening. Additional trains will be incrementally added.

The proposed site plan of the Manteca ACE station and platform includes the following design features:

- The ACE train platform, including a concrete pad between tracks for the southbound train and a landscaped outcropping with pedestrian paths for the northbound train
- Continuation of the Tidewater Trail, diverted for the train platform
- A total of 152 parking stalls, 34 on city property and 118 on San Joaquin Regional Rail Commission property
- Vehicular connection to the Manteca Transit Center parking lot

Figure 11
Map of ACE Extension to Ceres and Merced
Source: https://acerail.com/wp-content/uploads/Project-Map-04212021.pdf

CHAPTER 5

Community Input & Collaboration

5.1 Introduction

From March 2022 to December 2022, the City of Manteca, in partnership with CivicWell, Catholic Charities Diocese of Stockton (CCDS), and Fehr & Peers engaged community members and leaders, businesses, and decision-makers from the City, regional, and technical agencies to inform this study. Together, the Project Team conducted extensive stakeholder and community engagement to identify strategies to improve safety and promote active modes of transportation, support first/last-mile connections to transit, and promote infill development and revitalization in the area in the vicinity of the Transit Center. Engagement Activities included the following:

- Advisory Group Meetings:
  - March 30, 2022
  - August 10, 2022
  - November 9, 2022
- Community Design Charrette: August 9 – 11, 2022
  - Community Workshop
  - Focus Group Meetings and Presentations
  - Audit of the Manteca High School Student Drop-off
- Pop-Up Activities:
  - Watermelon Fair: June 2022
  - Coffee Hour with Manteca Chamber of Commerce: August 2022
  - Pumpkin Festival: October 2022
  - Manteca High School and Buffalo Brigade: November 2022
- Draft Plan Workshop and Planning Commission Meeting: January 19, 2023
- Council Meeting Approval: *TBD*

5.2 Advisory Group Meetings

Community engagement kicked off with the formation of an Advisory Group, comprised of City of Manteca staff, Manteca Transit staff, Caltrans, Manteca Unified School District, Stanislaus Regional Transit Authority (StanRTA), San Joaquin Council of Governments (SJCOG), San Joaquin Bicycle Coalition, San Joaquin Regional Transit District (SJRTD), and Altamont-Corridor Express/San Joaquin Regional Rail Commission (ACE/SJRRC). Although community-based organizations Love Inc. Manteca, the Manteca Mural Society, the Millennial Advisory Committee, and Happy Wheelers were invited to advisory group meetings, they did not attend. Alternatively, Project Team staff reached out via email, phone calls, during the charrette and through pop-up events to engage and obtain feedback from community-based organizations. The information below further describes community stakeholder meetings and engagement activities throughout the project. Advisory group meetings included the following:

- *March 30, 2022*: Virtual Meeting: Reviewed draft existing conditions findings and the outreach and engagement strategy for feedback.
- *August 10, 2022*: In-Person Meeting: City and regional agency staff reviewed draft recommendations coming from community engagement to-date and day one of the charrette. The Advisory Group strategized ways in which ACE station improvements could be better aligned with the needs of community members, particularly adjacent residents and Manteca High School students.
- *November 9, 2022*: Hybrid In-Person and Virtual Meeting: Preliminary improvements and strategies for project implementation were presented for feedback.

5.3 Community Design Charrette

The Project Team hosted a Community Design Charrette that took place from August 9 – 11, 2022 at the Manteca Transit Center. Approximately 50 people attended the charrette representing local agencies, business owners, emergency services, local community-based organizations, and nearby residents. The charrette focused on building upon community engagement to-date to gather feedback that would shape preliminary recommendations. Preliminary recommendations would later be used to gather additional community feedback through additional pop-up events and in the third Advisory Group Meeting. Key community engagement activities during the Community Design Charrette included the following:

Day 1

- Focus group meeting with the Chamber of Commerce Board
- Observations of Manteca High School student drop-off traffic conditions
- Community Design Workshop featuring a presentation, activities, and discussions with the broader public

Presentation to community members at the Community Design Workshop

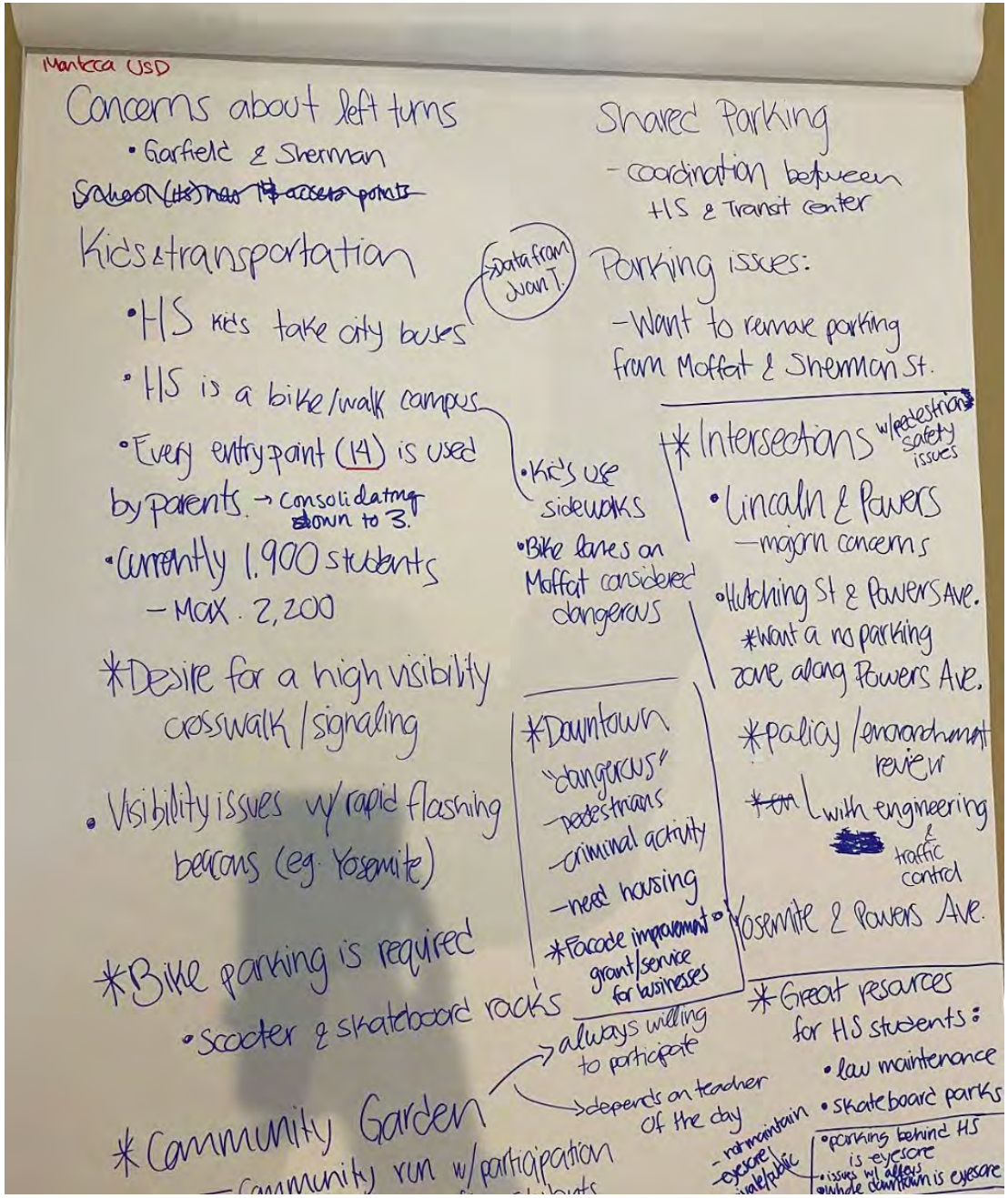
Focus group meeting with the Chamber of Commerce Board

Day 2

- Project team working session to develop preliminary recommendations
- Focus group meetings with Manteca Unified School District and City of Manteca Staff including the Planning, Engineering, Public Works, Police, and Fire Departments

Day 3

- Focus group meeting with Manteca High School Principal and other staff
- Presentation and focus group meeting with the Manteca Rotary Club



Notes from Focus Group brainstorming

Community Design Workshop Flier

5.4 Publicity

All public events were advertised in both English and Spanish and advertised through the project website, flyering at public locations, door-to-door outreach to residents and business owners in the downtown area, emails to advisory group members, and outreach to social media.

5.5 Pop-Up Activities

The Project Team led a series of pop-up activities at key community events that attracted diverse stakeholders from the local community and those who live outside Manteca who visit or conduct business in Downtown Manteca. Generally, two phases of pop-up activities were conducted—the first to gather general feedback, the second to collect feedback on preliminary recommendations before finalizing recommendations in the Draft Plan.

General Feedback

Watermelon Fair – June 2022

Community members marked-up a large aerial map and filled out a brief survey. The Project Team provided further context about the Project, collected contact information to distribute future materials, and gave out freebies.

Coffee Hour with Manteca Chamber of Commerce – August 2022

The Project Team brought informational flyers, talked about the Project, and received feedback from participants.

Manteca High School and Buffalo Brigade – November 2022

The Project Team led a presentation and preference online polling activity with student leadership. Four students participated in video interviews, further described below.

Feedback on Preliminary Recommendations

Pumpkin Festival – October 2022

The Project Team had posters of major recommendations in the downtown area and community members were asked to provide feedback. Large images of potential improvements at the Moffatt Opportunity Site were displayed including recreational amenities, gateways, different housing densities and mix of uses. Community members could vote on their preferred improvements using dots.

Manteca High School Buffalo Brigade students taking an online poll

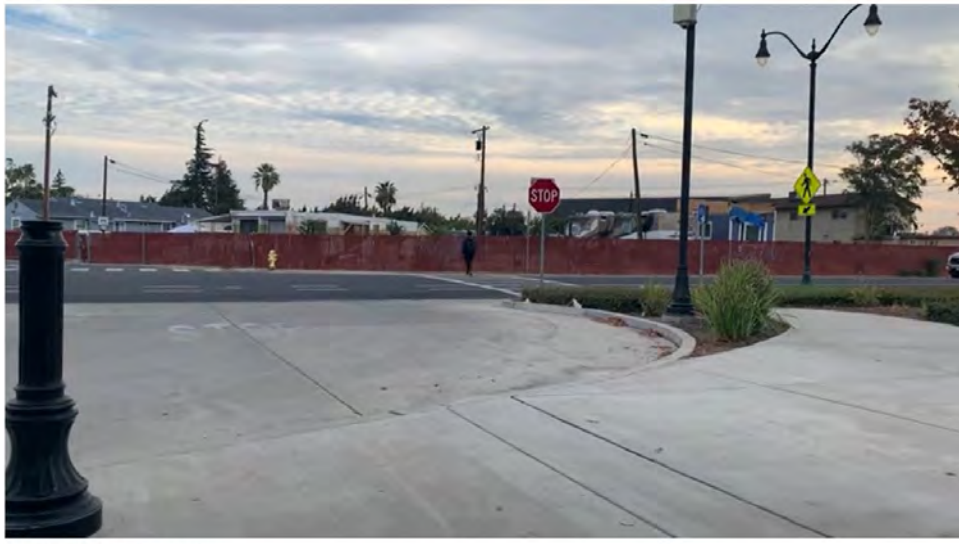
5.6 Videos

CCDS developed a series of videos that documented existing conditions and community feedback. Videos included the following:

- A virtual walking audit of the project area, particularly near Downtown Manteca, the Manteca Transit Center, and Manteca High School
- Traffic congestion and hazards to students walking and bicycling near Manteca High School during student drop-off
- Community engagement activities
- Interviews of high school students during the Manteca High School Buffalo Brigade pop-up event

Interviews with the Manteca High School Buffalo Battalion

Manteca High School Buffalo Brigade student interviews video
https://www.youtube.com/watch?v=5LZZoY-y0iQ



Downtown Manteca Walk Audit

Downtown Manteca walk audit video
https://www.youtube.com/watch?v=POLOek-i46I

5.7 Major Themes

As a result of the community engagement process across all events and activities, major themes heard from stakeholders included the following:

- Safety concerns for pedestrians walking along and crossing major corridors such as Grant Avenue, Moffat Boulevard and Yosemite Avenue.
- Lack of amenities in the Downtown area and along the Tidewater Trail such as art, trees, and lighting.
- Perception of safety issues in the Downtown area and along the Tidewater Trail, particularly as a result of the nearby unhoused population. Desire was expressed for improved services for the unhoused population at Sycamore Avenue near the Manteca Public Library to discourage camping closer to Downtown Manteca.
- Desire for more diverse businesses and amenities to attract more visitors to Downtown Manteca. Particularly;
  - Encourage diversity in businesses, restaurants, and entertainment venues to activate the community and create 'night life.' Currently, there are similar businesses such as tattoo shops, daytime-only businesses, automotive shops, etc.
  - Create a sense of place through improvements to Downtown. Create a Local Businesses assistance or "revitalization program" for facade improvements. This could include activating and beautifying areas currently considered 'eyesores' such as alleyways, parking lots, etc. around Downtown and near Manteca High School. Improvements should be low maintenance and allow for passive or active spaces with recreational features, parks, and temporary event space.
  - Desire for gateway features to the Downtown area such as beautification or gateway arches installed at key entry ways to the Downtown area such as at Yosemite Avenue and Main Street or along Moffat Boulevard near the Manteca Transit Center.
  - Desire for bicycle amenities such as bicycle lockers in Downtown Manteca and the Manteca Transit Center.
- Concerns regarding traffic congestion and lack of parking impacting Manteca High School and residential areas as a result of the new ACE train station at the Manteca Transit Center.
- Manteca High School students seldom walk or bike to school due to distance from their homes and safety concerns, particularly at key locations:
  - The intersection of Moffat Boulevard and Sherman Avenue
  - The intersection of Moffat Boulevard and Garfield Avenue
  - Spreckels Avenue (between Yosemite Avenue & Norman Drive) is too wide
  - The intersection of Lincoln Avenue and Powers Avenue
  - The intersection of Yosemite Avenue and Powers Avenue

CHAPTER 6

Project Development

The plan was developed to implement the goals outlined in Chapter 2; namely, to increase connectivity and close gaps in the network, improve access to schools and local businesses, enhance safety in a community disproportionately impacted by collisions, and foster collaboration between key stakeholders to create projects. Projects included in this plan were developed based on a variety of factors including the following:

- Recommendations from previous local efforts identified in plans from the City of Manteca
- Feedback from key stakeholders and the community
- Proximity to key destinations such as the Manteca Transit Center, Manteca High School, Lincoln Elementary School, the Tidewater Trail, etc.
- Collision history
- Location within impacted communities as identified by the Healthy Places Index, CalEnviroScreen, American Community Survey data, and the California Department of Education
- Ease of constructability of project

Each of these factors were identified by the project team, key stakeholders, and the public as criteria needing to be met when identifying a robust project list that includes five near-term priority projects. The planned bicycle and pedestrian networks and associated projects were shared for public review during a second phase of outreach activities (detailed in Chapter 5) and subsequently updated based on the community feedback received.

6.1 Overview of Improvements

Future walking, bicycling, and transit trips will depend on a number of factors such as the availability of well-connected facilities, location, density, and type of future land development. With appropriate facilities in place, the number of people walking, biking, or taking transit to work, school, or to shop could increase above its current rate.

Once recommendations are implemented, the network will provide safer and more direct travel paths throughout the City. Improvements are in line with the following criteria:

Connection to Activity Centers:
Manteca High School, Lincoln Elementary School, Manteca Transit Center, the Manteca Public Library, parks, open space, and neighborhood commercial districts should be accessible by a combination of transit, foot, and bicycle. Residents should be able to walk or bike from home to local destinations.

Comfort & Access:
The system should provide safe and equitable access from all areas of the City to both commute and recreation destinations and should be designed for people of all levels of ability.

Purpose:
Each link in the system should serve one or a combination of these purposes: encourage bicycling or walking for recreation, improve facilities for commuting, and provide a connection to transit service (Manteca Transit and ACE train service). On street bicycle facilities should be continuous and direct, and off-street facilities should have a minimal number of arterial crossings and uncontrolled intersections.

Crossing and Intersection Improvements

Several crossing improvements are recommended, either as standalone spot improvements or as part of broader projects to increase safety and comfort for pedestrians, as well as bicyclists at Tidewater trail crossings. The decision to install a marked crosswalk at an uncontrolled location should be based on engineering judgement, engineering study, or other considerations as appropriate for each individual case. Some of these considerations may include the following:

- Pedestrian travel demand, typically 20 pedestrians per hour or more
- Service of a facility or use that generates higher pedestrian travel or serves a vulnerable population (e.g., children, elderly, or persons with disabilities). This may include schools, recreation/community centers, libraries, parks, and trails. Service of such facilities can justify pedestrian improvements to areas with a demand of fewer than 20 pedestrians per hour.
- Sight distance requirements, using appropriate stopping sight distance guidance from AASHTO's A Policy on Geometric Design for Highways and Streets or Caltrans' Highway Design Manual
- Delay to pedestrian movements
- Distance to nearest crossing
- Guidance of the California Manual on Uniform Traffic Control Devices (MUTCD)

Additional improvements for crossings at uncontrolled locations, such as the use of high-visibility markings, median refuges, and curb extensions, should be considered as appropriate. Further design guidance on the determination of crossing treatments can be found in the Federal Highway Administration Safe Transportation for Every Pedestrian (STEP) Guide[3].

Signalized intersections are typically large with multiple lanes of traffic in each direction, especially where arterial and/or collector roadways meet. At these locations, crosswalks are typically marked, but have long crossing distances. In some cases, intersections may have slip lanes, further lengthening crossing distances for pedestrians and bicyclists; these slip lanes are not signalized, allowing vehicles to make these turns at higher speeds. At all-way stop controlled intersections, vehicles stop and give the right-of-way to pedestrians and bicyclists crossing the street.

Some all-way stop controlled intersections do not have marked crosswalks. Vehicles may encroach into the intersection at these locations, impeding the pedestrian travel way and cause sight distance issues for those crossing.

Recommendations to enhance safety for pedestrians and bicyclists at controlled crossings include the following:

- Ensuring pedestrian walk speeds of 3.5 feet/second at signalized crossings, and walk speeds as low as 2.5 feet/second at select locations, such as near schools, parks, and senior centers
- Installing countdown signals at signalized intersections, where missing
- Installing advanced stop bars in advance of each crosswalk
- Enhance accessibility with directional curb ramps (two per corner) instead of diagonal ramps and ensuring that all are ADA compliant
- Marked crosswalks on all legs of the intersection that serve a key desire line

[3] Federal Highway Administration. Safe Transportation for Every Pedestrian (STEP). https://safety.fhwa.dot.gov/ped_bike/step/resources/

Tidewater Trail

- Median refuge islands and thumbnails, as width and path of turn maneuvers allow
- Unobstructed sightlines
- Far-side bus stops, instead of locations on the near-side of the intersection
- Minimized cycle lengths at signalized intersections
- Protected turn phasing across marked crosswalks
- Installing pedestrian and traffic pre-emption
- Installing bike boxes at signalized intersections, cohesive with surrounding bicycle facilities

Supportive Infrastructure and Programs

To ensure comfortable trips for bicyclists and pedestrians, supporting infrastructure is needed at intersections and along roadways to make the trip safe and comfortable for all users, wayfinding is needed to help users reach and identify destinations, and for bicyclists, secure bicycle parking is needed at destinations.

Wayfinding

Wayfinding signage can be used on both bicycle and pedestrian facilities to guide users to connecting facilities and destinations. Good wayfinding signs can also encourage bicyclists and pedestrians to visit local businesses. These signs provide the most value when installed at trail junctions, intersections of key bicycling and walking routes, and at navigation decision points. Chapter 9B of the California MUTCD provides guidance on sign design and installation. Wayfinding signage has been installed along the Tidewater Trail, though much of it is currently in disrepair. The City should work to update existing signage or install additional signage directing users to transit facilities, businesses districts, schools, and community facilities. The City could partner with local businesses or art groups to sponsor signage. Including the distance in miles to nearby destinations on signs can encourage additional walking and bicycling to those destinations.

Street Amenities

Sidewalk amenities such as benches, shade structures (man-made or street trees), parklets, public art, and other landscaping features make a location more inviting and comfortable. These amenities allow pedestrians and

bicyclists to take breaks throughout their journey, provide shade throughout the trip, and create a welcoming space. Potential locations for these treatments include at the Yosemite Avenue/Manteca Avenue/Pierce Avenue intersection, along S. Grant Avenue, and along Moffat Boulevard, as discussed in more detail below.

The Manteca Chamber of Commerce could consider a program to encourage business façade updates through small grants, which could also make downtown streets more inviting and encourage more walking.

Bicycle Parking

Having a secure location to store your bike once you reach your destination is an important part of making a bicycle trip feasible. Bicycle parking is typically installed by developers as part of residential and commercial projects. The City's Municipal Code outlines bicycle parking requirements for multi-family, public and civic facilities, and retail commercial, office, and industrial land uses. Bicycle parking should be highly visible and conveniently located. They can also be considered as an opportunity for public art.

Near bicycle parking locations at major hubs (such as the Manteca Transit Center and Library Park), the installation of "fix-it" stations would allow bicyclists to quickly repair their bicycle if needed. Repair stations promote bicycle commuting and provide cyclists with amenities to make their experience safer and more comfortable.

Bike corral with mural

Source: SFMTA, https://www.sfmta.com/blog/our-newest-bike-corral-work-art

CHAPTER 7

Recommended Projects

Given the scope of projects within this plan, implementation will take several years to complete. Implementation of each project is dependent upon the availability and acquisition of funding.

Projects requiring land acquisition, utility relocation, or substantial drainage modifications may require extra time to implement. Detailed feasibility and design studies based on local conditions will also be necessary for the implementation of many projects.

Implementation of the major infrastructural aspects of this plan is expected to occur

- through active transportation projects and grants pursued to implement this plan;
- in conjunction with maintenance and improvement projects, such as pavement reconstruction or sidewalk rehabilitation projects; and
- in conjunction with adjacent land development projects.

Lower-cost, non-large infrastructure projects like façade improvements, street tree plantings, or bike rack installation program could be funded and implemented via other funding sources in the nearer term.

Future phases of projects in this plan will be reported by staff to the City Council and on the City's website.

Costs and Funding

This plan includes a wide range of projects with varying degrees of cost. Planning level estimates of probable infrastructure costs were developed to give a general idea of the anticipated magnitude of funding for each proposed project. The cost estimates were based solely on anticipated construction costs and do not include other typical soft costs associated with project development, environmental clearance, and design. See Appendix B for cost estimates.

Multiple federal, state, regional, and local organizations provide funding for pedestrian and bicycle projects and programs. A summary of funding sources is provided in the Implementation section below.


6209
RTD

PROJECT

1

Multimodal Downtown Connections and Placemaking

Project Background

Downtown Manteca serves as the central business district of the City and is home to local business, restaurants, and public facilities. The main arterial through downtown Manteca is Yosemite Avenue. The corridor has two vehicle lanes, street parking, street trees, furniture, and ADA-compatible curb ramps, making it a relatively comfortable place to walk, despite some areas with narrow sidewalks. Many people also access downtown via Main Street, a three- to five-lane north-south arterial with sidewalks. Despite existing sidewalks, the pedestrian and bicyclist environment can be uncomfortable due to the high volume and speed of vehicle traffic.

Just south of Yosemite Avenue along Main Street, the Manteca Transit Center serves as the main hub for fixed route bus service in Manteca. Grant Avenue, a low-traffic corridor with direct connection to the Manteca Transit Center, is a prime candidate for active transportation improvements. Infill development and placemaking opportunities along Grant Avenue could also enhance the environment for pedestrians and bicyclists.

This project would update pedestrian crossings, sidewalks, and bicycle access for people walking and biking to and from Downtown using the S. Grant Avenue corridor and the intersection of Manteca Avenue/Pierce Avenue/Yosemite Avenue.

Key Challenges

- People walking and biking between the Manteca Transit Center, the future Ace Train Station and Downtown Manteca lack low-stress, direct routes.
- S. Grant Avenue between Yosemite Avenue and Moffat Avenue, a key corridor for access between the transit and downtown, features disconnected sidewalks and no bicycle facilities.
- Existing crosswalks at uncontrolled locations lack safety enhancements and do not correspond with pedestrian desire lines between Shields-Reid Community Center and Verde Elementary.
- Existing narrow bike lanes alongside high-speed traffic are uncomfortable and present safety concerns, especially for children and less experienced bike riders. A high level of exposure to vehicle traffic results in a harsh and challenging environment for people walking and biking to neighborhood destinations.
- Many existing sidewalks are narrow and do not provide a comfortable walking experience for pedestrians.
- At the Tidewater Trail/Yosemite Avenue intersection, the continuity of the Tidewater Trail is disrupted due to the triangular intersection configuration.

Project Features

- On Grant Avenue, transform the road into a bike boulevard with shared-lane markings (“sharrows”). Construct a shared use path on west side of the street. Provide shade trees and landscaping to mitigate summer heat and provide a more pleasant walking environment. Improve lighting to enhance perceived safety. Add a crosswalk and stop sign at the approach from Otis Street to prioritize pedestrians traveling on Grant Street. Consider the addition of a stop sign at the Mikesell Street approach.
- Reconstruct the intersection of Manteca Avenue, Pierce Avenue, Yosemite Avenue, and the Tidewater Trail. Provide a high-visibility multi-use trail crossing on the east and north legs. Transform Pierce Avenue into a pedestrian plaza and realign the Tidewater Trail.
- Provide additional wayfinding signage to direct the public toward the Manteca Transit Center from Downtown Manteca and the new ACE train station.
- Add more street amenities and placemaking elements throughout the area southeast of Downtown such as public art, shade trees, benches, and gateway arches to create a more inviting and attractive atmosphere.
- Upgrade or provide new street lighting to improve nighttime visibility.

Along with street and intersection improvements, updates to the surrounding land uses would help connect transit with downtown. For example, in the short-term, the empty parcel across from the Transit Center along Grant could transform into a weekly food truck hub with picnic benches and tents. Long term, the site would be another prime location for a mixed-use, transit-oriented development.

Construction Cost Estimates

Yosemite Ave & Manteca Ave Improvements

Subtotal = $615,000

Contingency = $185,000

Grand Total = $800,000

Construction Cost Estimates

Grant Ave & Moffat Blvd Improvements

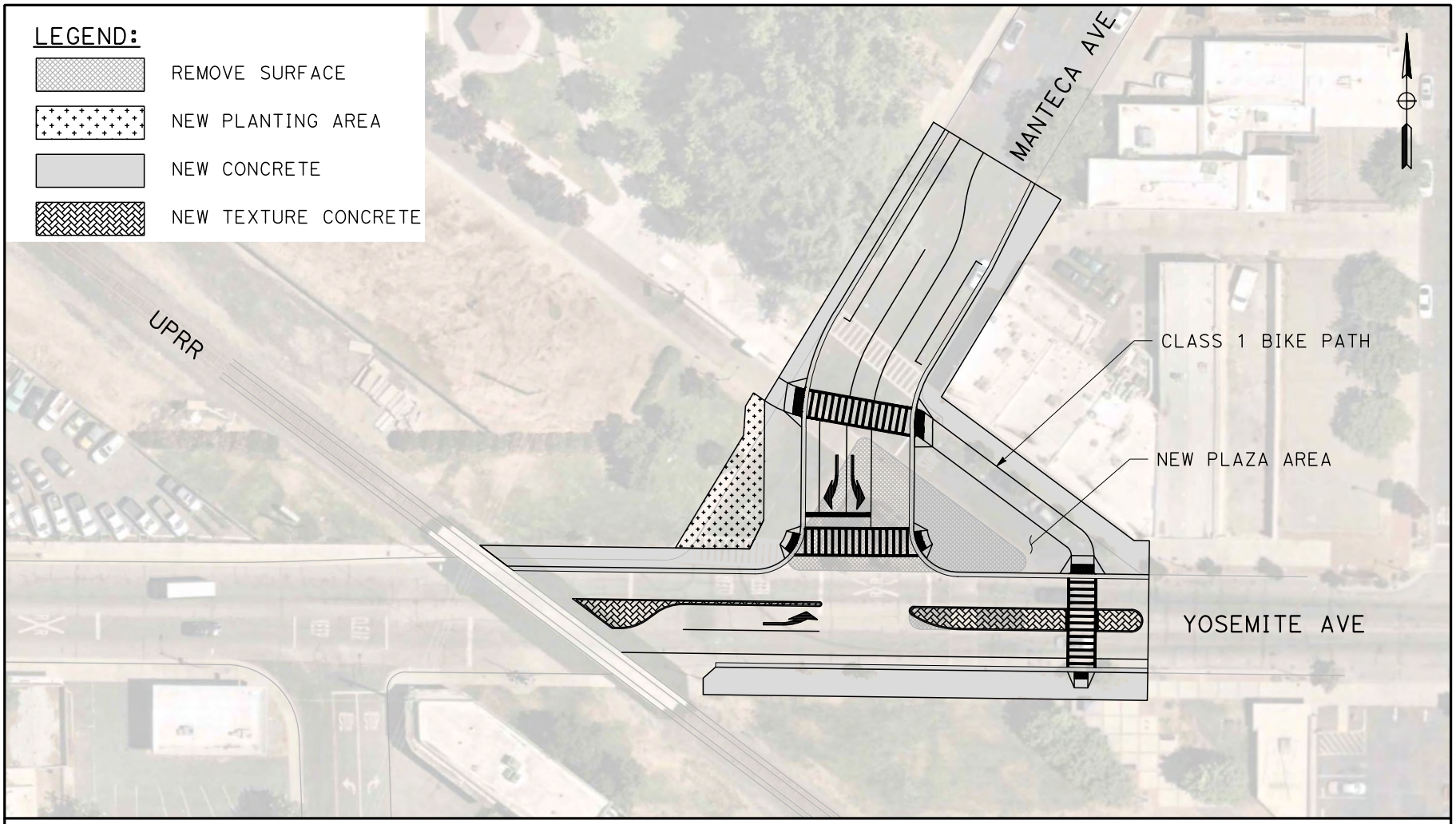
Subtotal = $675,000

Contingency = $200,000

Grand Total = $875,000

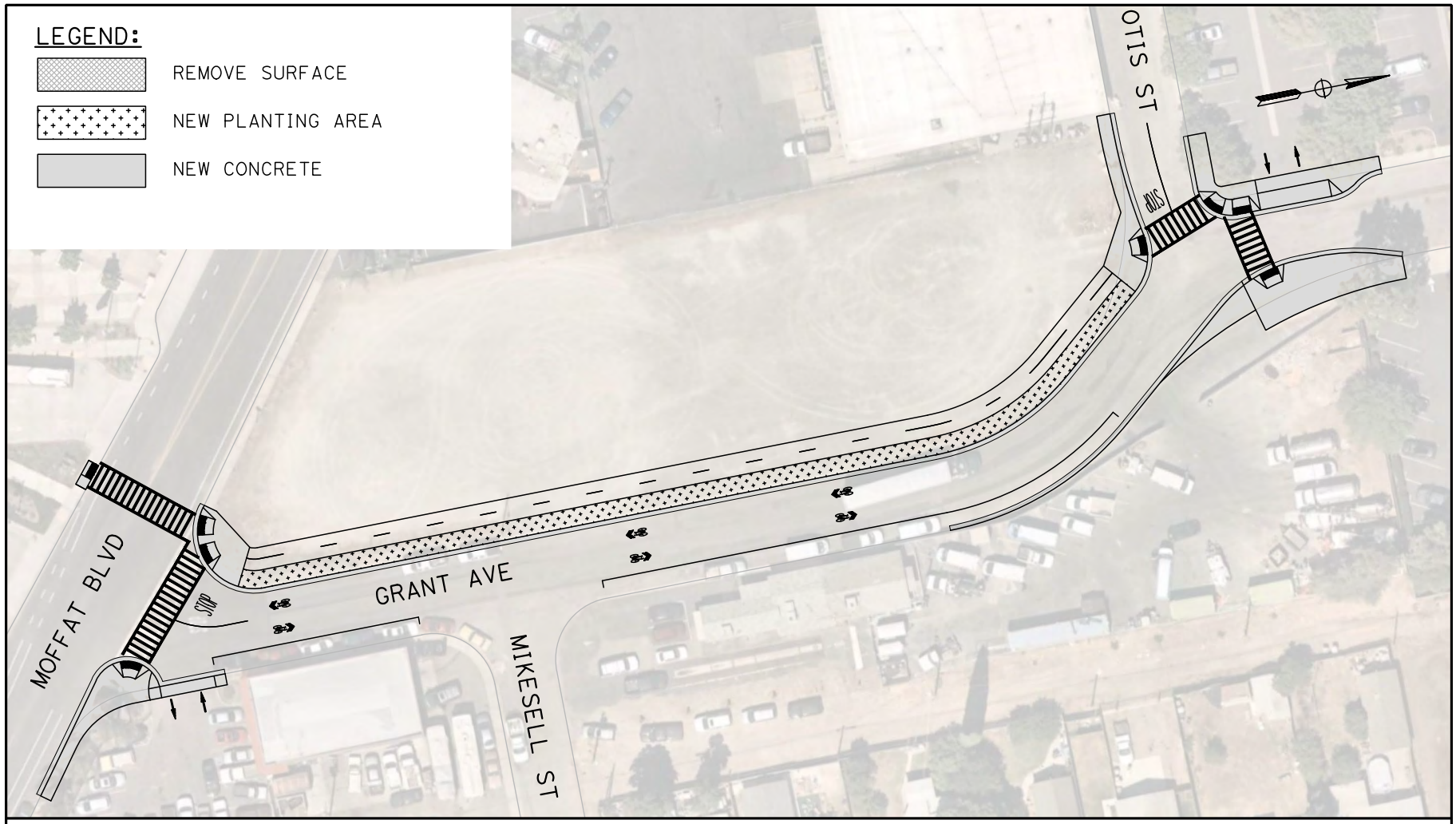
Example food truck 'pod' and outdoor seating

Source: Tidbit Food Farm and Garden
https://www.chicagotribune.com/travel/ct-portlands-best-food-carts-travel-0319-20170301-story.html



MARK THOMAS

Figure 12
Yosemite Avenue & Manteca Avenue Intersection Improvements



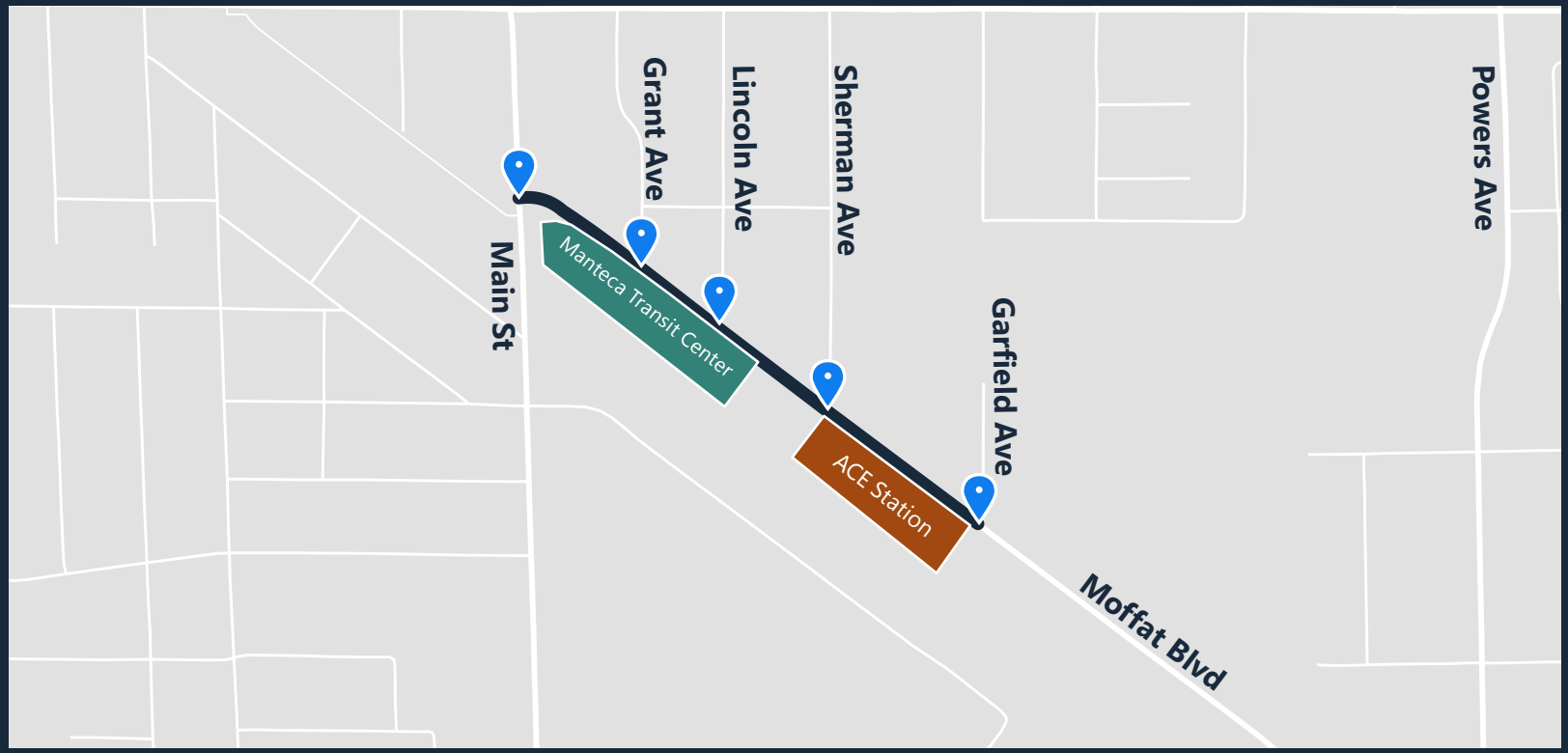
MARK THOMAS

Figure 13
Grant Avenue Roadway Improvements

PROJECT

2

Moffat Boulevard Enhancements



Project Background

A key corridor in central Manteca, Moffat Boulevard connects Main Street to State Route 99, providing access to Downtown, the Manteca Transit Center, multiple schools, the Tidewater Trail, and industrial uses. Manteca High School is planning to change its main entry points from Yosemite Avenue to Moffat Boulevard which will provide more direct access for Manteca High School students that ride Manteca Transit buses. The planned Manteca ACE Station will be located just southeast of the existing Transit Center, with a driveway at Sherman Avenue across from the high school. Bike lanes were recently added to the two-lane corridor, but are rarely used due to the high volume and speed of the traffic.

A road reconfiguration should be implemented to upgrade existing bike lanes to a low-stress bicycle facility. Pedestrian crossings along the corridor should be improved to create a comfortable environment to access transit, schools, residences, businesses, and recreational opportunities.

Key Challenges

- Long stretches of the street do not have traffic controls, allowing vehicles to pick up speed and do not support a comfortable walking and biking environment.
- Due to the skewed intersections along the corridor, visibility for turning vehicles can be poor.
- There are a high number of existing driveways along the corridor.
- Students, parents, and administrators have indicated traffic safety concerns. This has been reinforced by several bicycle and pedestrian collisions in the past decade, with hot spots at intersections and uncontrolled crosswalk locations.
- Narrow bike lanes near high-speed traffic are stressful for bicycling and may not be appropriate for children or new bike riders. Students who bike report feeling unsafe on the designated lanes and prefer to use sidewalks or the Tidewater Trail.
- Truck traffic from neighboring industrial land uses creates a high stress environment for walking and bicycling.
- At the Moffat Boulevard/Main Street intersection, long crossing distances and significant conflicts with turning vehicles exist at signalized crosswalks, presenting safety concerns.
- Poor sight distances at intersections, as well as the mix, volume, and speed of traffic create unsafe crossing conditions, such as for students utilizing the Transit Center to get to Manteca High School.
- The driveway for the new ACE Station will be located at the Moffat Boulevard/Sherman Avenue intersection. The heightened level of traffic may create more stressful and unsafe conditions for all road users.

Project Features

- In the near-term, reconfigure Moffat Boulevard between Main Street and Spreckels Avenue to provide buffered bikeways by removing the underutilized street parking. Long-term, consider adding a two-way left turn lane to reduce left-turn conflicts between drivers and those using bicycle and pedestrian facilities.
- Provide traffic calming measures along the corridor for speed reduction, such as speed feedback signs or chicanes at mid-block locations between Grant Avenue and Powers Avenue.
- On both sides of the street, add street trees, landscaping, and other public amenities to enhance the walking and biking environment.
- At the Moffat Boulevard/Main Street intersection, square the westbound approach, shorten crossing distances and upgrade the signal to include leading pedestrian intervals. Consider the addition of protected intersection elements on the south leg for the Tidewater Trail crossing.
- Enhance existing uncontrolled marked crosswalk locations at Lincoln Avenue, Garfield Avenue, and Powers Avenue by constructing curb extensions to decrease crossing distances. Add high visibility crosswalks, clear sightlines, and restrict parking near intersections to increase pedestrian visibility. Consider the addition of Rapid Rectangular Flashing Beacons (RRFB).

S. Sherman Avenue & Moffat Boulevard Intersection

- Convene with San Joaquin Regional Rail Commission (SJRRC) to select appropriate intersection control and design at the Sherman Avenue intersection. Ensure pedestrian and bicyclist access and crossing needs are met.
- Because Garfield Avenue was closed to through traffic, there may be a future need for a bike facility and pedestrian access improvements on Sherman Avenue. This should be addressed as Manteca High School continues planned updates to its campus.

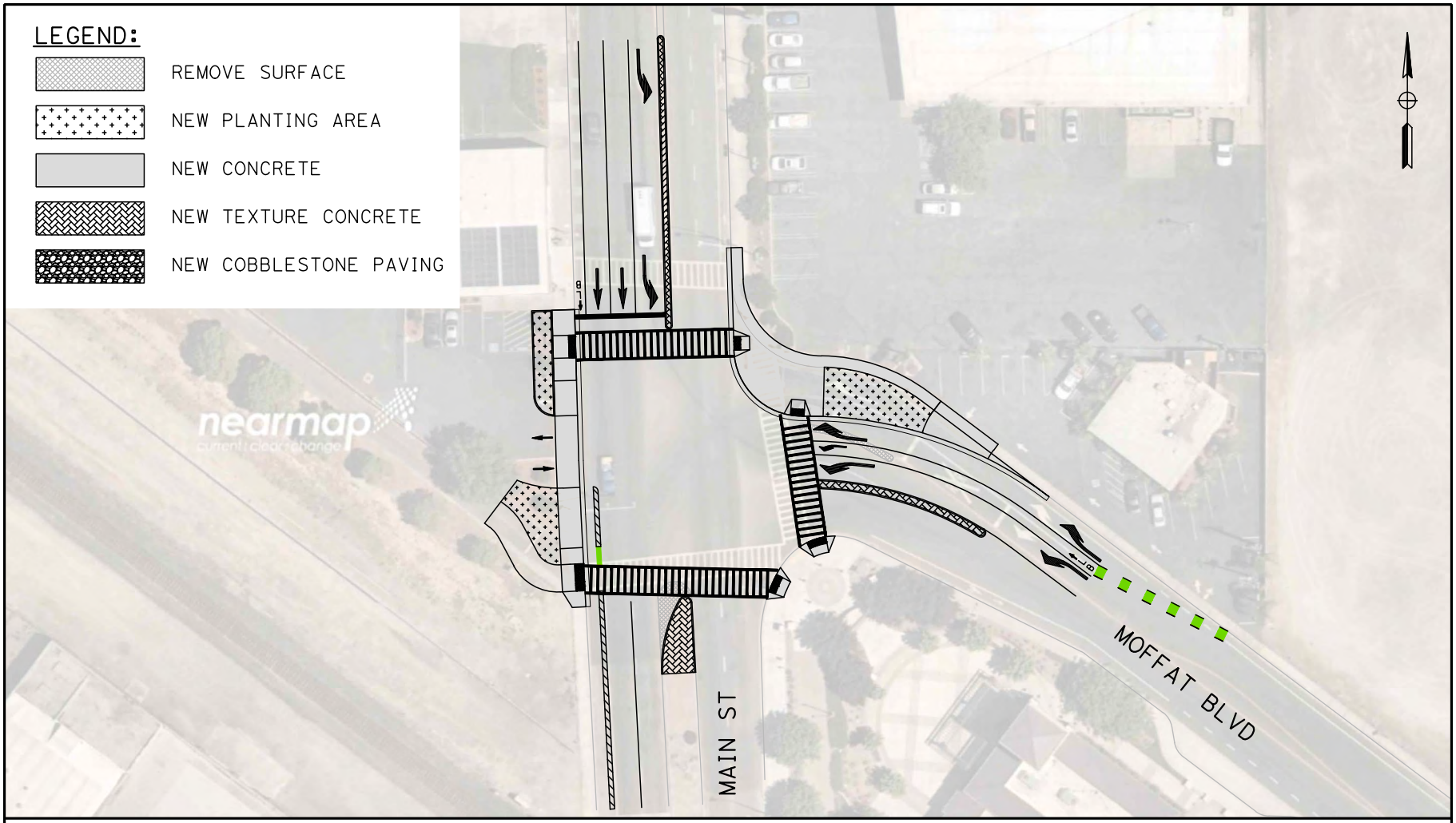
Construction Cost Estimates

Main St & Moffat Blvd Improvements

Subtotal = $580,000

Contingency = $175,000

Grand Total = $755,000



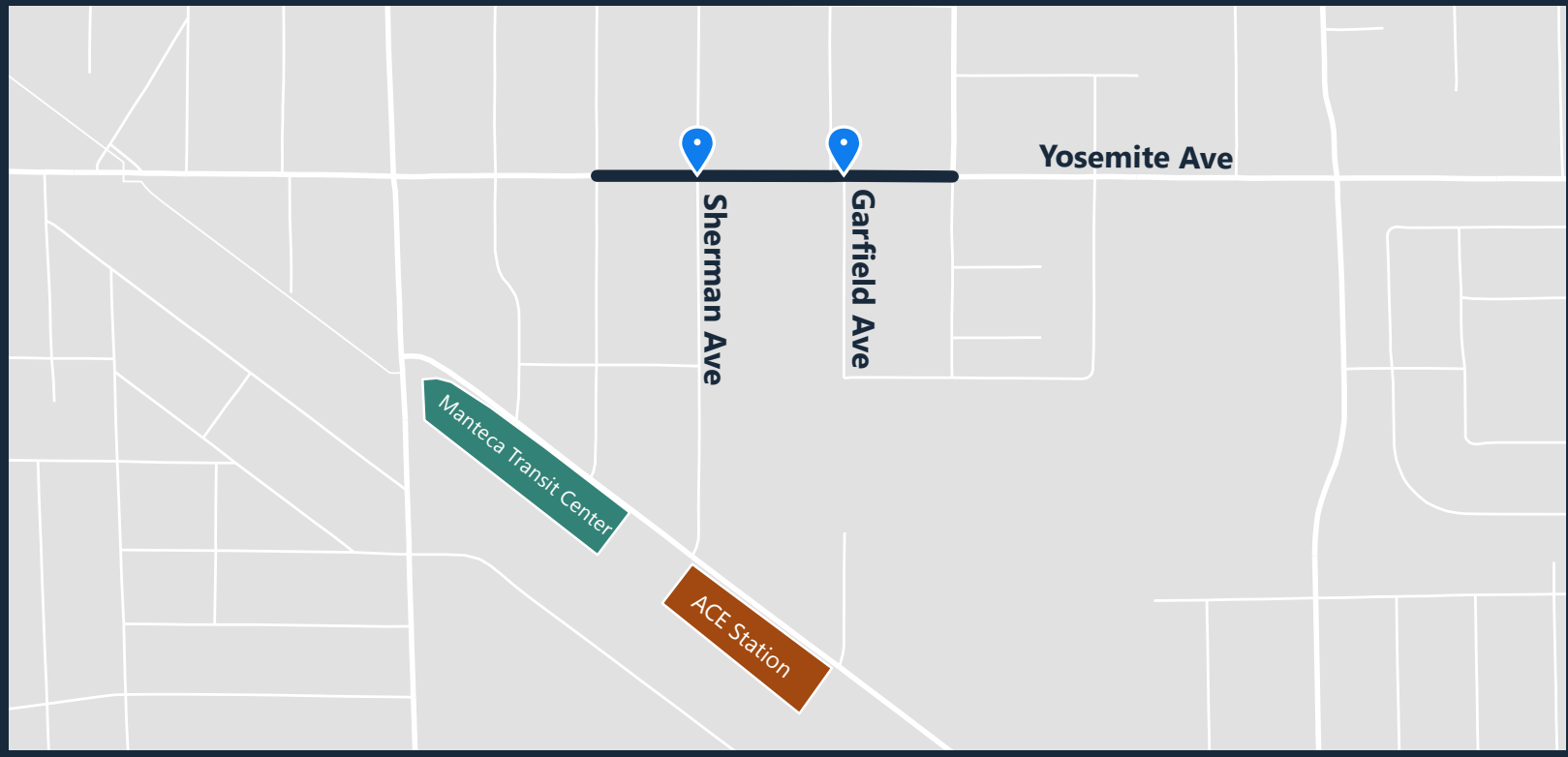
MARK THOMAS

Figure 14
Moffat Boulevard & Main Street Intersection Improvements

PROJECT

3

Yosemite Avenue Safety Improvements



Project Background

Yosemite Avenue is a main east-west arterial spanning the entire City of Manteca. It is the main transit and commercial corridor in Manteca. East of downtown Manteca, Yosemite Avenue serves Manteca High School and Lincoln Elementary School. Near these schools, Yosemite Avenue is a highly traveled corridor with two vehicle travel lanes, a two-way left-turn lane, on-street parking, bike lanes, sidewalks, and curb ramps. It is a high-injury corridor for both pedestrians and bicyclists, with a history of severe injury collisions. Rapid Rectangular Flashing Beacons (RRFBs) are installed at Sherman Avenue and Garfield Avenue, but driver yielding has decreased since their original installation.

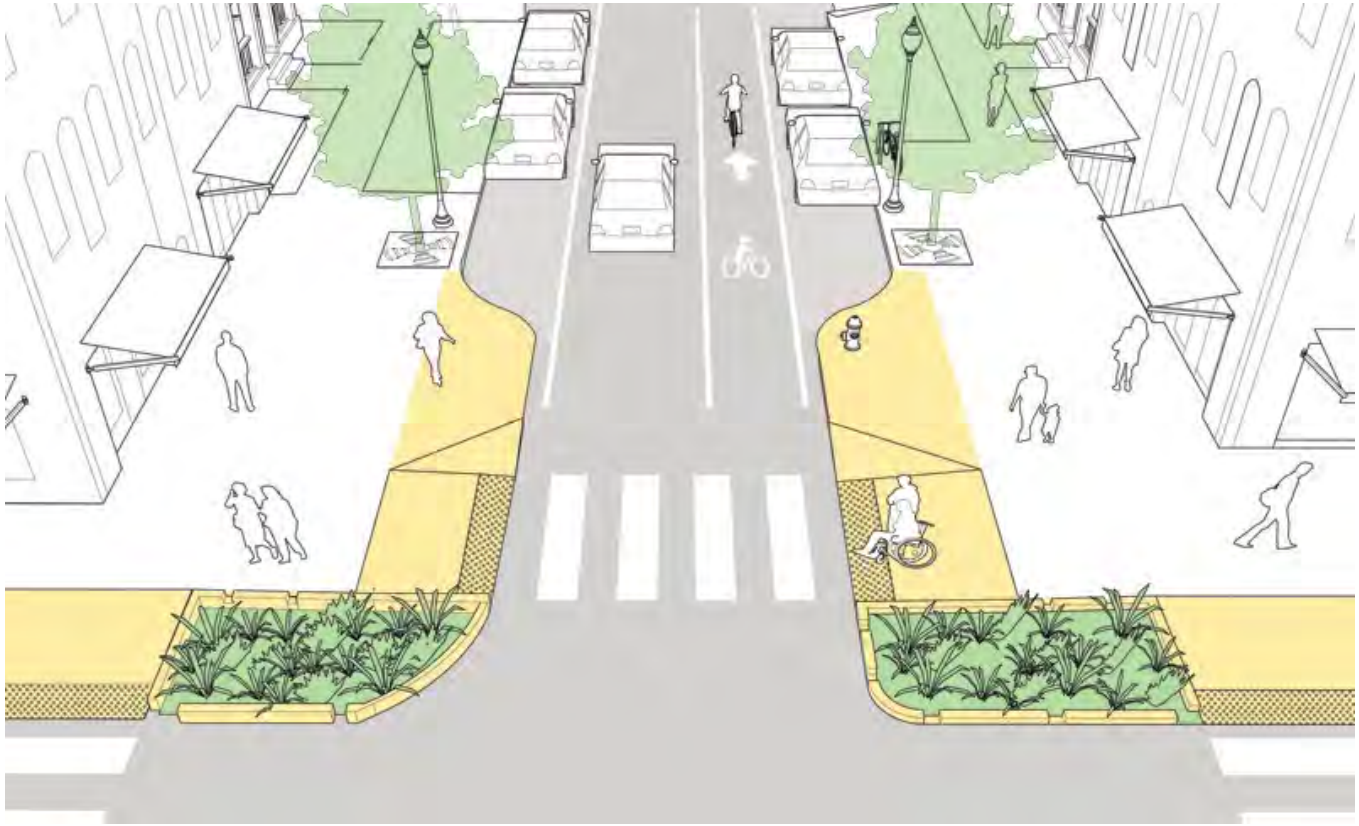
The project would include multimodal intersection improvements to increase safety and comfort at intersections near Manteca High School for people walking, biking, taking the bus, and driving. Upgrade existing bike lanes on Yosemite Avenue to a low stress bicycle facility and provide improved pedestrian crossings.

Key Challenges

- Yielding behavior is low for the existing RRFBs in front of Manteca High School.
- There are a high number of existing driveways along the corridor.
- Existing bike lanes on Yosemite Avenue alongside high-speed traffic are uncomfortable and present safety concerns, especially for students and less experienced bike riders.
- Long crossing distances across Yosemite Avenue impede access to and from school.

Project Features

- At the S. Sherman Avenue intersection, construct curb extensions onto Yosemite Avenue to decrease pedestrian crossing distance. If volumes on Sherman Avenue grow, a traffic signal should be evaluated to decrease delay and improve yielding behavior to pedestrians.
- East of Sherman Avenue, move the Manteca Transit bus stop closer to the intersection and extend the no-parking red curb to 120 feet in length to create an easier pull-in for buses.
- At the S. Garfield Avenue intersection, construct curb extensions onto Yosemite Avenue to decrease pedestrian crossing distance. Make southbound Garfield Avenue right-turn only.



Example curb extension

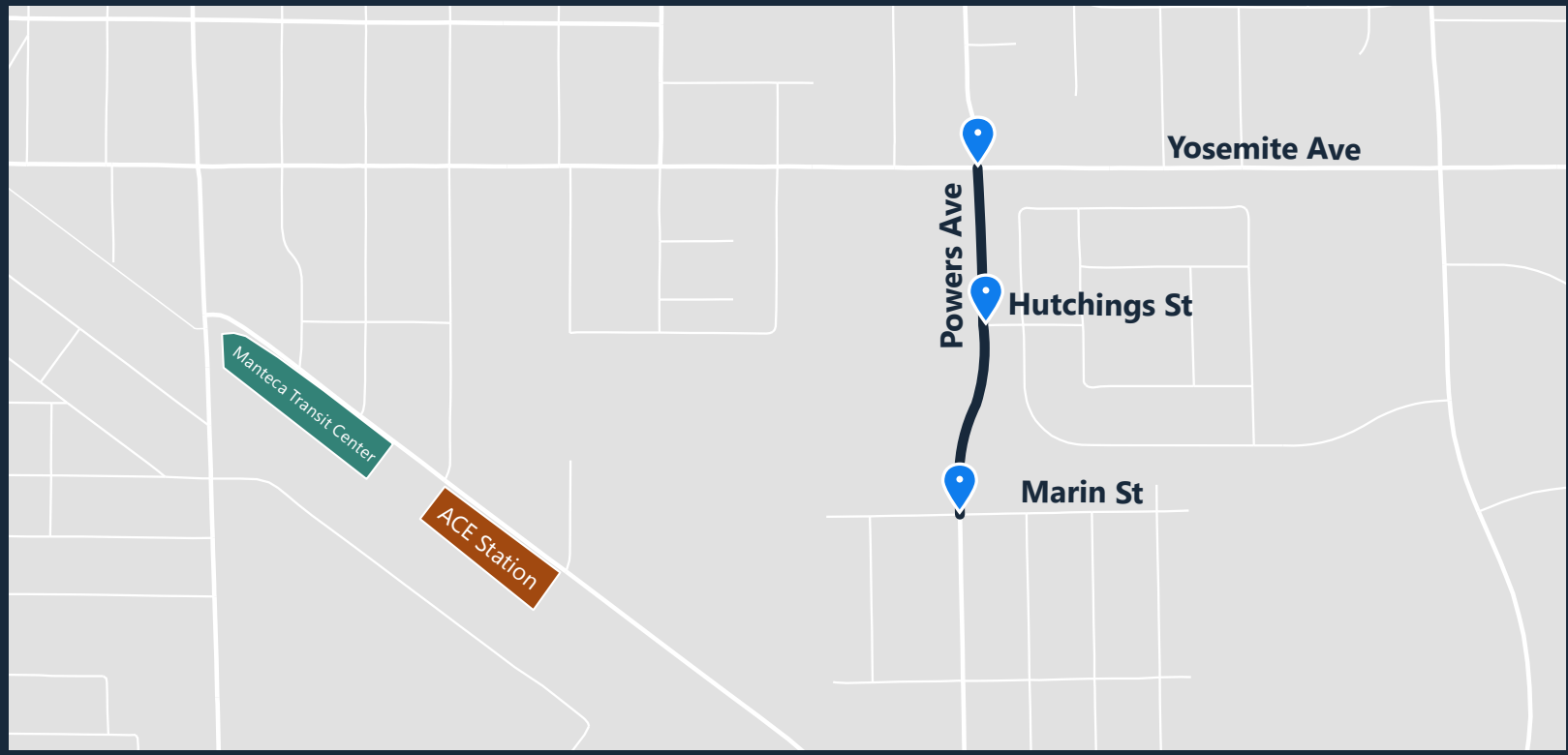
Source: https://nacto.org/publication/urban-street-design-guide/street-design-elements/curb-extensions/

Figure 15
Yosemite Avenue & Sherman Avenue and Yosemite Avenue & Garfield Avenue Intersection Improvements

PROJECT

4

Powers Avenue Safety Improvements



Project Background

Powers Avenue is a major collector street in East Manteca, providing access to multiple schools, residences, community amenities, emergency services, and the Tidewater Trail. South of Yosemite Avenue, Lincoln Elementary School is on the west side of Powers Avenue. With two lanes, narrow bike lanes, and long stretches with no crosswalks, Powers Avenue can be an uncomfortable place for children to walk and bike.

The Powers Avenue Complete Streets project would upgrade pedestrian crossings to improve access between Lincoln Elementary School and surrounding residential neighborhoods.

Key Challenges

- Existing crosswalks at uncontrolled locations lack safety enhancements and do not correspond with pedestrian desire lines between Lincoln Elementary, Lincoln Pool, and residences.
- Children biking to Lincoln Elementary School lack a low-stress bicycle facility.
- Congestion and erratic driving behavior during school pick-up and drop-off times creates unsafe conditions for pedestrians and bicyclists.

Project Features

- Enhance existing uncontrolled marked crosswalk locations, including Hutchings Street and Marin Street, by constructing curb extensions to decrease crossing distances. Add high-visibility crosswalks, advanced stop bars, clear sightlines, and restrict parking near intersections to increase pedestrian visibility.
- At the Hutchings Street intersection, extend the curb on the west side of Powers Avenue to the school parking lot exit driveway. Add a painted median on the south leg to delineate vehicle traffic.
- Consider the installation of rapid rectangular flashing beacons at marked crossings based on speed and yielding conditions.
- At the Powers Avenue/Yosemite Avenue intersection, construct curb extensions on the northeast, southwest, and southeast corners to shorten crossing distances for pedestrians and bicyclists. Reconfigure the vehicle lanes for the northbound and westbound approaches to combine the through and right lanes. Paint red curbs on the west side of Powers Avenue between driveways to reinforce that no parking is allowed.
- Utilize dashed green paint in bike-vehicle conflict areas, such as at driveways and intersections, to increase bicyclist visibility.

Construction Cost Estimates

Yosemite Ave & Powers Ave Improvements

Subtotal = $225,000

Contingency = $65,000

Grand Total = $290,000

Construction Cost Estimates

Hutchings St & Powers Ave Improvements

Subtotal = $225,000

Contingency = $70,000

Grand Total = $295,000

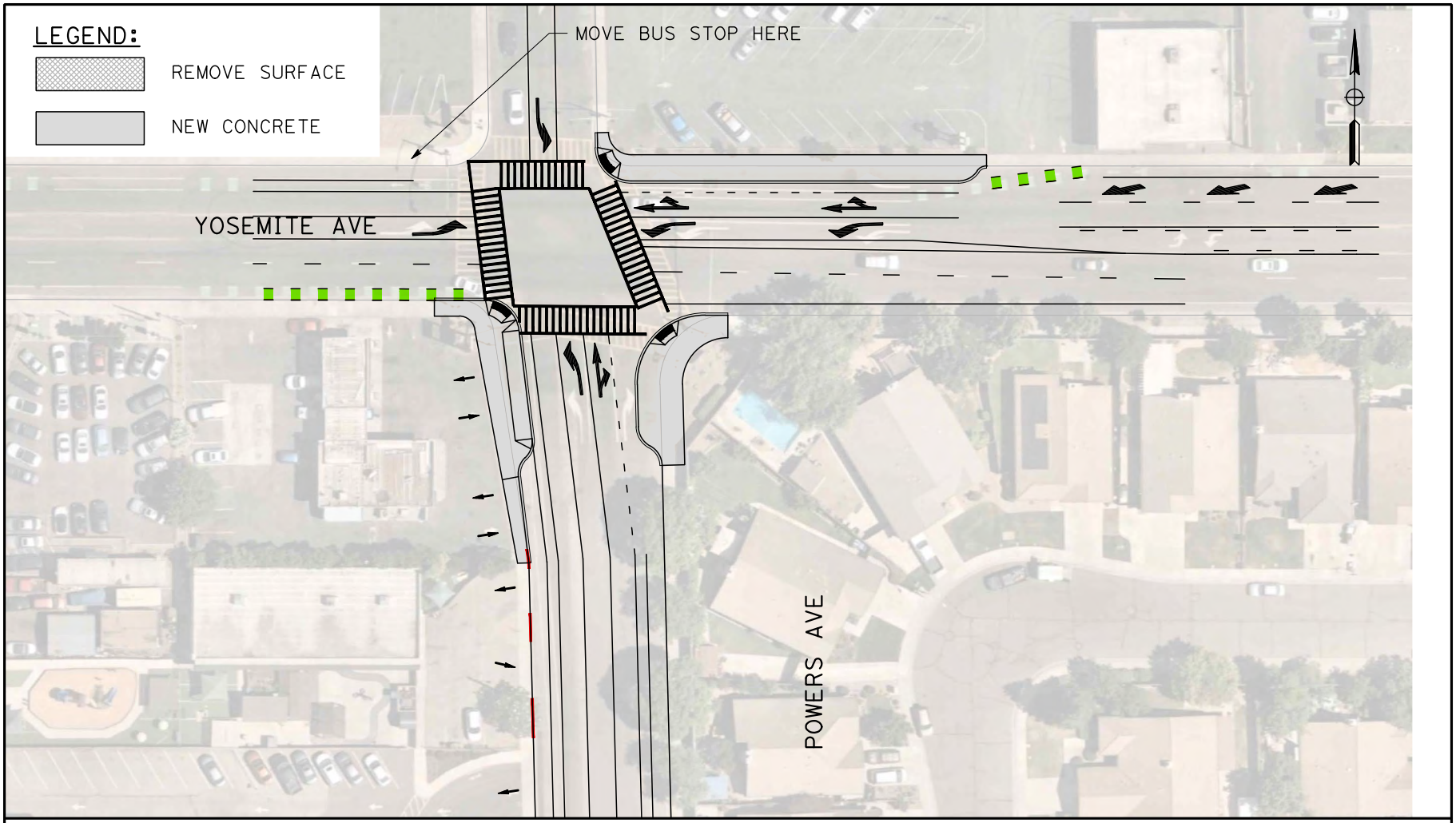
Construction Cost Estimates

Marin St & Powers Ave Improvements

Subtotal = $180,000

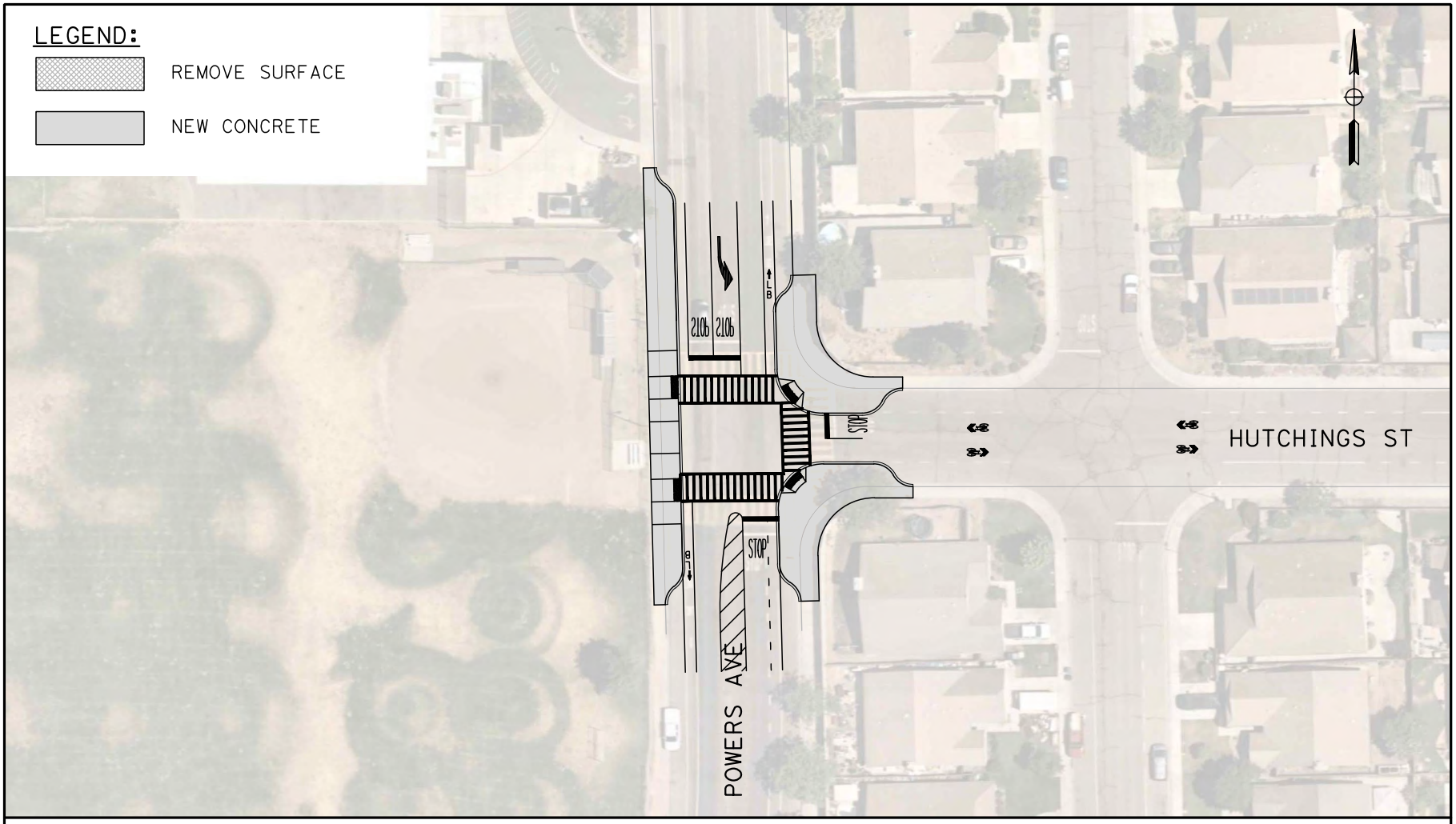
Contingency = $55,000

Grand Total = $235,000



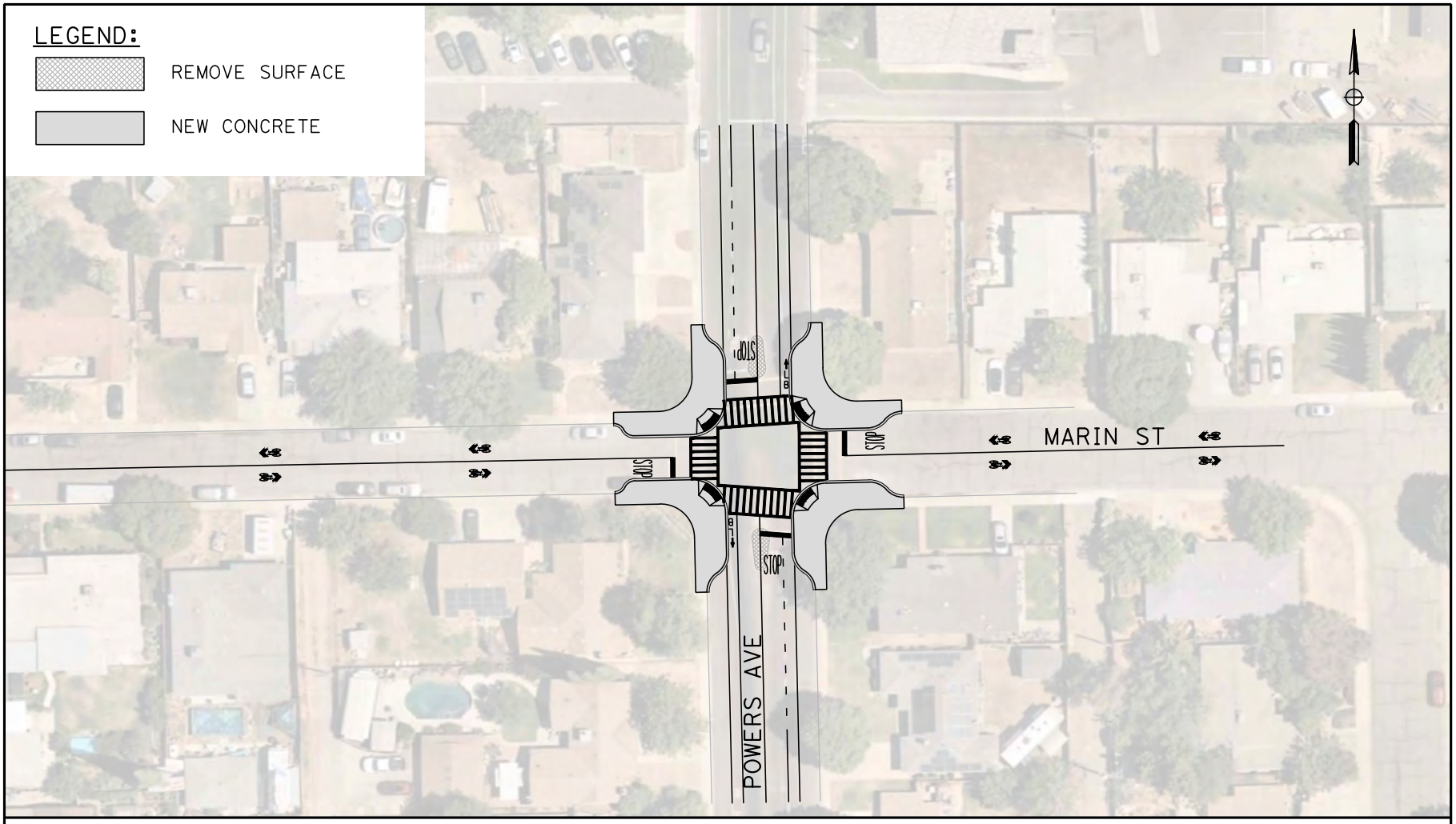
MARK THOMAS

Figure 16
Yosemite Avenue & Powers Avenue Intersection Improvements



MARK THOMAS

Figure 17
Hutchings St & Powers Ave Intersection Improvements



MARK THOMAS

Figure 18
Marin Street & Powers Ave Intersection Improvements

CHAPTER 8

Moffat Gateway Site Land Use Concepts

The purpose of this chapter is to examine different approaches to accommodate future development, including a range of housing opportunities, that encourage economic and employment growth and fiscal sustainability for the Moffat Gateway site. The Moffat Gateway site is located southwest of the intersection of Moffat Boulevard and Industrial Park Drive and is bounded by the Union Pacific Railroad along the north/northeastern portion of the site, Industrial Park Drive to the south, and industrial uses to the west.

Three different land use concepts for the Moffat Gateway site are presented with analysis of the land use and growth in terms of residential and non-residential development. This information is intended to be used as a tool to facilitate discussion regarding land use scenarios and is the first step in developing a more detailed site-specific development plan.

LAND USE CONCEPTS

Land Use Districts

Land use districts describe what uses may develop, and at what density and/or intensity of development, on the Moffat Gateway site. Collectively, the three land use concepts incorporate seven land use districts. One residential district and one mixed use district provide for a range of housing types and densities, accompanied by neighborhood-serving commercial uses. Two commercial and industrial districts provide for a range of income- and employment-generating businesses. Three other designations support publicly owned facilities, parks and recreation, and infrastructure.

A description of the devlopment characteristics of each land use district, such as density and intensity of uses, can be found in Appendix C, Table 1.

Land Use Concepts

The three land use concepts envision varied approaches to the development of the Moffat Gateway site. Each concept is described below.

Land Use Concept A: Urban Village

The Urban Village concept introduces a mixed use character, with a mix of urban uses extending from the Moffatt Gateway along the railroad, residential uses along the eastern and central portions of Industrial Park Drive with public/quasi-public uses along the eastern portion of Industrial Park Drive, and employment-generating uses in the northwest area of the site. Concept A accommodates the most, and broadest range of, residential uses, with a master-planned community envisioned with access to services, transit, and/or employment opportunities. Residential uses are anticipated at 35 units/acre in the Urban Core and 18 units per acre in the Residential Village.

Residential uses are buffered from the railroad by park/greenbelt and commercial uses. The residential uses and densities support an urban village environment, while also increasing households in the proximity of Downtown. This concept supports the intent of enlivening the Downtown and provide additional residents to support shopping, dining, and businesses, continuing the revitalization and enhancement of the City's historic center.

Concept A provides for an Urban Village with community-serving retail, service, and office uses as well as employment uses to provide jobs and revenues. This concept would allow for a continuation of industrial uses, through the Employment designation while transitioning to an urban mixed use environment in the central and western portion of the site

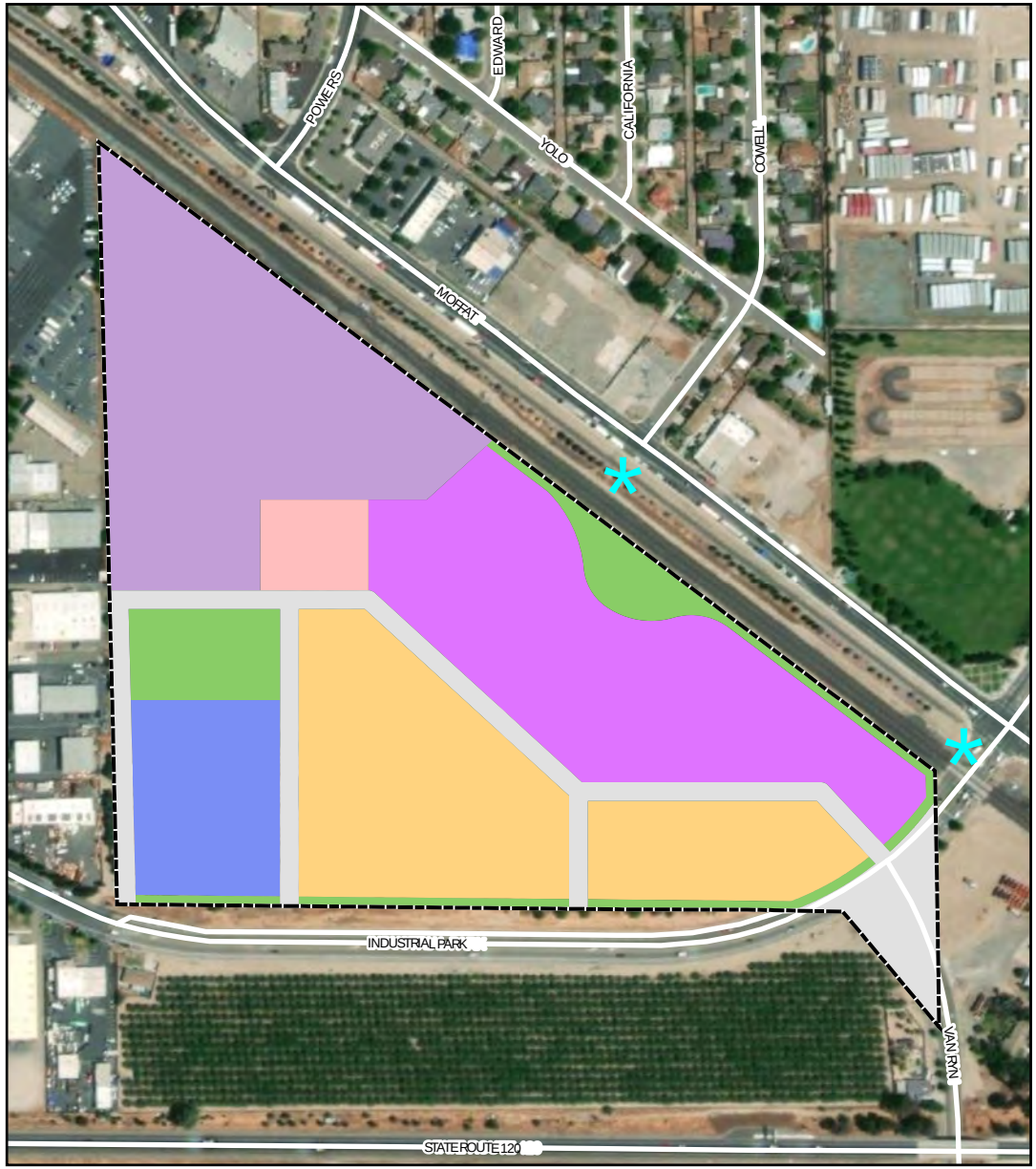


Figure 19
Concept A: Urban Village Land Use Plan

Project Boundary

Conceptual Land Use Designation

- Residential Village
- Commercial
- Employment Center
- Public/Quasi-Public
- Urban Core
- Park/Greenbelt
- ROW

Sources: San Joaquin County GIS. Map date: December 21, 2022.

N

0 100 200
Feet

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

to provide for residential growth to support the viability of on-site commercial and the retail, restaurant, and transit-oriented uses envisioned for the greater Downtown area.

This land use concept provides for a greenway and neighborhood park along the northeastern portion of the site and greenways along Industrial Park Drive. The greenways buffer the residential uses from adjoining railroad and roadways, while also providing bicycle/pedestrian opportunities. This concept includes two bicycle/pedestrian connections from the site to the neighborhood north of the site in order to connect the site to the Tidewater Trail adjacent Moffat Boulevard and sidewalks along Moffat Boulevard to improve connectivity to the Downtown area and Transit Center.

Figure 19 shows the Concept A Land Use Plan with an aerial view of surrounding uses.

Land Use Concept B: Employment-Focused Growth

The Employment-Focused Growth concept identifies potential changes in land use and development intensity to accommodate a significant amount of new employment-generating development, with a continued emphasis on industrial development as well as a mix of urban uses, including high density residential, retail, restaurants, and services.

Concept B broadly applies the Employment Center district to encourage jobs- and revenue-generating growth and high quality employment opportunities, including research and technology, office, manufacturing, warehousing, and similar employment-generating uses. This concept would provide for a continuation of industrial uses from the eastern edge through the central portion of the site, with a mix of uses located at the Moffat Ave/Industrial Park gateway portion of the site.

Under this scenario, a residential density of 30 units/acre anticipated for Urban Core. The residential density is reduced in comparison to Concepts A and C in order to provide for more of a transition between the more intensive non-residential uses accommodated under this concept.

This concept provides for greenways along Industrial Park Drive, as well as a bicycle/pedestrian connection to the Tidewater Trail and to Moffatt Boulevard. This concept also provides for a park in the central section of the site to provide a buffer between residential and community-serving uses and more intensive employment-generating and potential industrial uses.

Figure 20 shows the Concept B Land Use Plan with an aerial view of surrounding uses.

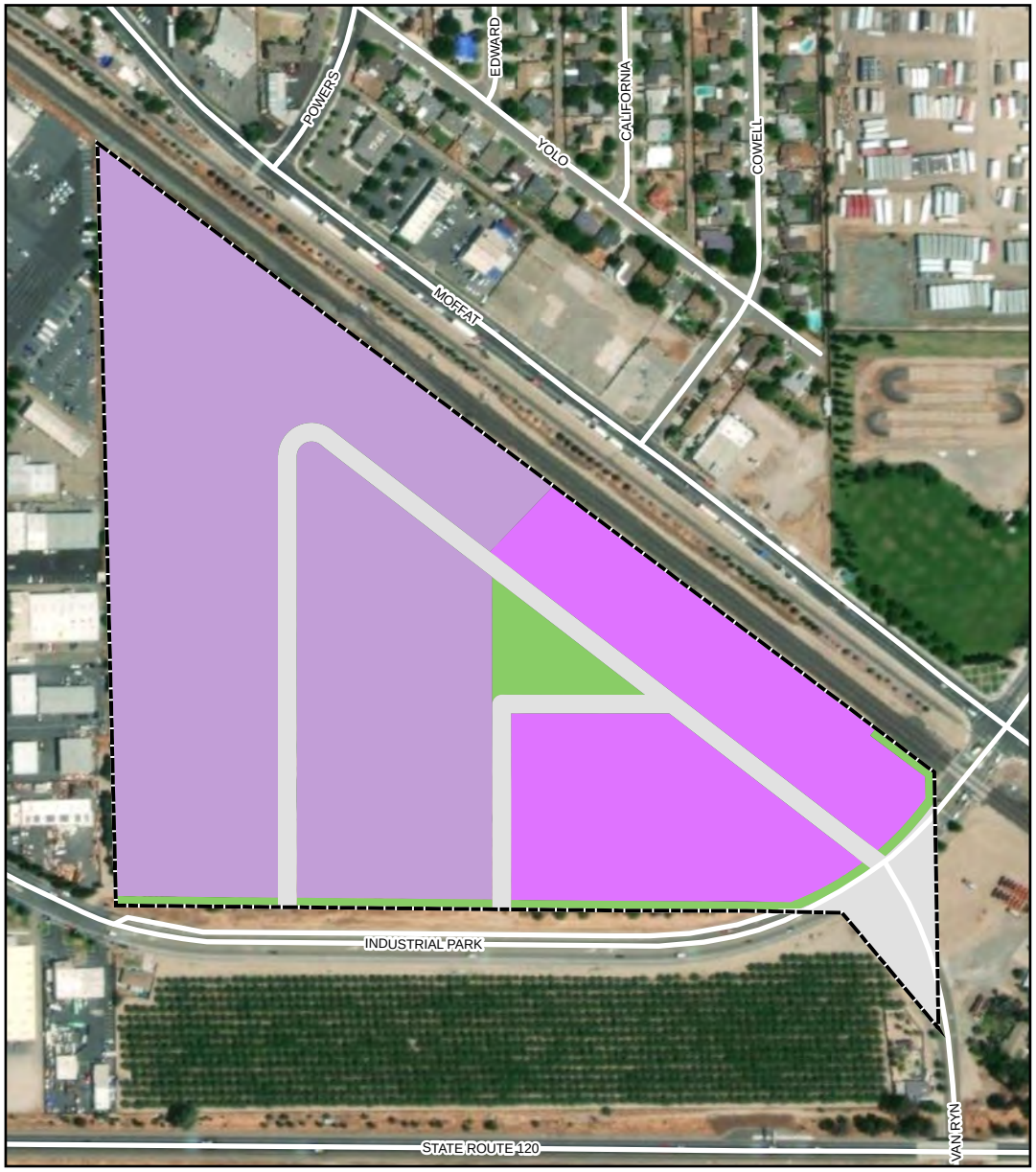


Figure 20
Concept B: Employment Focused Growth Land Use Plan

Project Boundary

Conceptual Land Use

- Urban Core
- Employment
- Park/Greenbelt
- ROW

Sources: San Joaquin County GIS. Map date: December 21, 2022.

N

0 100 200
Feet

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

Land Use Concept C: Moderate Residential and Employment Growth

The Moderate Residential and Employment Growth concept provides for a range of employment-generating uses, while accommodating residential and mixed uses. This concept includes opportunities to increase industrial, technology, commercial, and service uses, along with accommodating a range of residential densities and types. A residential density of 35 units per acre is proposed for the Urban Core and 18 units per acre for the Residential Village district.

Similar to Concepts A and B, this concept strengthens the community's economic and employment-generating uses, with increased commercial, industrial, office, and other non-residential uses and increased flexibility in siting a variety of employment- and economic-supporting uses, providing for more extensive growth of local employment opportunities with the intent of providing residents increased opportunities to live and work in their community. The inclusion of residential uses in the Urban Core and Residential Village districts provides for residential uses adjacent to the Downtown area with the intent to enliven the Downtown and provide residents to support shopping, dining, and businesses.

A focal point of this concept is a community park located at the Moffat Ave/Industrial Park gateway portion of the site. Concept C provides for two pedestrian/bicycle connections to the Tidewater Trail and Moffat Boulevard, increasing connectivity to the greater Downtown area and providing access to the Manteca Transit Center.

Figure 21 shows the Concept C Land Use Plan with an aerial view of surrounding uses.

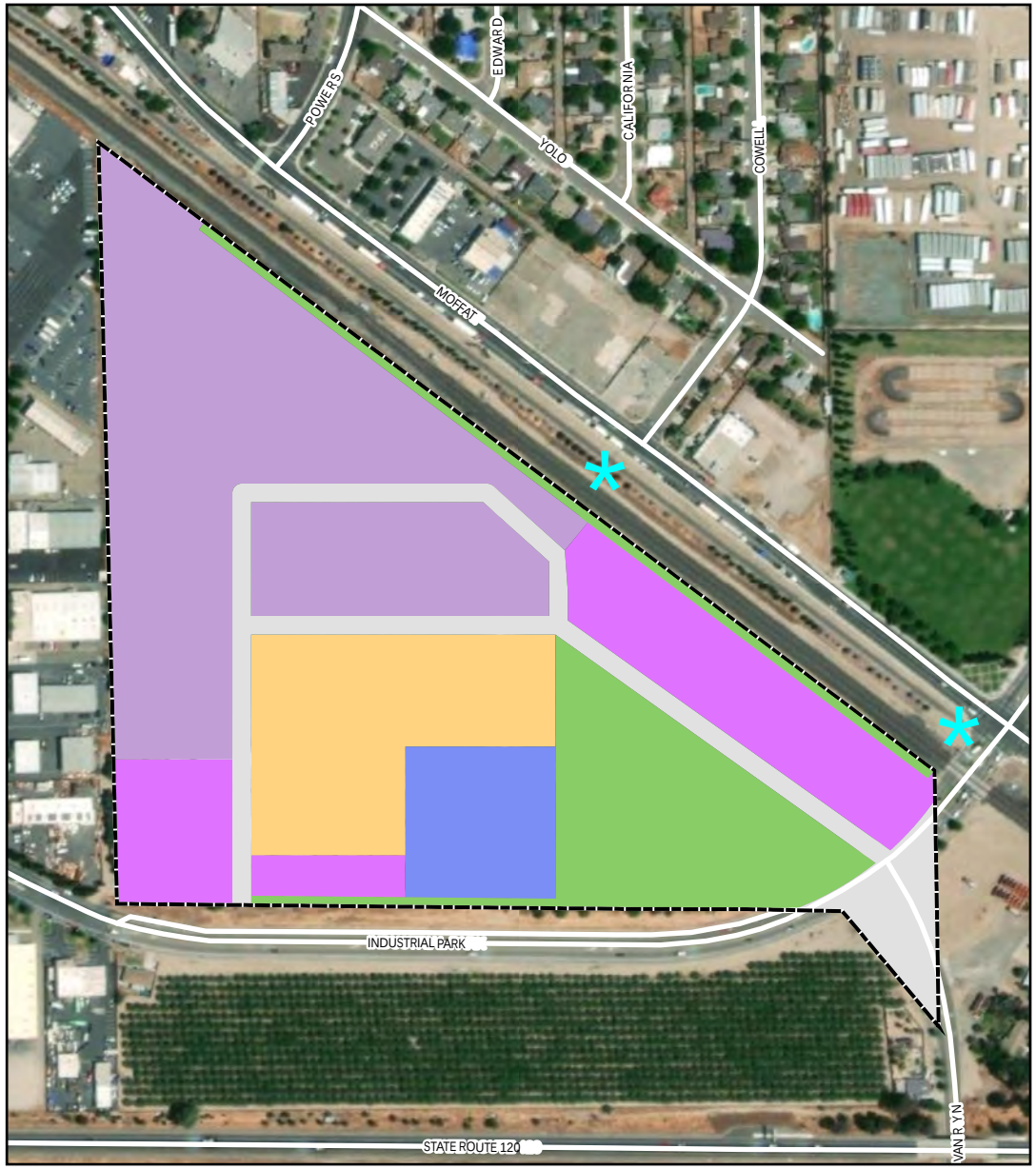


Figure 21
Concept C: Moderate Residential and Economic Growth Land Use Plan

Project Boundary

Conceptual Land Use

- Residential Village
- Urban Core
- Employment Center
- Public/Quasi-Public
- Park/Greenbelt
- ROW

Sources: San Joaquin County GIS. Map date: December 21, 2022.

N

0 100 200
Feet

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

LAND USE CONCEPTS COMPARISON

Land Use Designations by Acreage Comparison

Table 1 provides a comparison between the three land use concepts' acreage allocations by land use designation and overlay.

Table 1: Land Use Acreage Allocations

Land Use District	Concept A		Concept B		Concept C	
	Acres	%	Acres	%	Acres	%
Urban Core	9.1	23%	10.0	25%	6.4	16%
Residential Village	8.8	22%	0.0	0%	5.3	14%
Employment	9.7	25%	23.3	59%	14.7	37%
Commercial	1.0	3%	0.0	0%	0.0	0%
Parks/Greenbelt	3.4	9%	1.8	5%	6.4	16%
Public/Quasi-Public	3.0	8%	0.0	0%	2.4	6%
ROW	4.3	11%	4.3	11%	4.2	11%
Total	**39.4**	**100%**	**39.4**	**100%**	**39.5**	**100%**

Source: De Novo Planning Group, 2022

Housing, Non-Residential Development, and Jobs Capacity Comparison

As outlined in Table 2 below, each land use concept envisions a substantial increase in residential and non-residential development potential. It is anticipated that this development would occur as a result of a master plan or specific plan effort.

Concept A would accommodate approximately 475 dwelling units, 431,242 s.f. of non-residential uses, and 370 jobs. Non-residential uses include approximately 30,000 s.f. of retail, 30,000 s.f. of services, 17,000 s.f. of office, 322,000 s.f. of industrial, and 33,000 s.f. of public/quasi-public. Concept A has the highest residential development of the three concepts and the lowest ratio of jobs per housing unit.

Concept B would accommodate approximately 300 dwelling units, 1,093,355 s.f. of non-residential uses, and 903 jobs. Non-residential uses include approximately 39,000 s.f. of retail, 39,000 s.f. of services, 51,000 s.f. of office, and 964,000 s.f. of industrial uses. Concept B has the highest jobs-creating uses of the three concepts, with the most non-residential development and the least residential development. Concept B has the highest jobs per housing unit ratio.

Concept C would accommodate approximately 318 dwelling units, 566,932 s.f. of non-residential uses, and 472 jobs. Non-residential uses include approximately 14,000 s.f. of retail, 14,000 s.f. of services, 26,000 s.f. of office, 488,000 s.f. of industrial, and 26,000 s.f. of public/quasi-public uses. Concept C would result in slightly more residential units than Concept B but less than Concept A and would result in mid-range jobs creation, with 1.48 jobs per housing unit. Concept C would result in the highest amount of parks/greenbelt (6.4 acres), followed by Concept A at 3.4 acres.

Table 2: Growth Projections by Concept

Concept	Dwelling Units	Non-Residential S.F.	Jobs	Jobs / Housing Ratio
Concept A: Urban Village	475	431,242	370	0.78
Concept B: Employment - Focused Growth	300	1,093,355	903	3.01
Concept C: Moderate Residential and Economic Growth	318	566,932	472	1.48

Sources: De Novo Planning Group, 2022; jobs estimates based on US Department of Energy Commercial Buildings Energy Consumption Survey, 2016

CHAPTER 9

Implementation

Next Steps

To maintain momentum from this project, and bring the recommendations in this document from planned to constructed, several near term next steps are recommended:

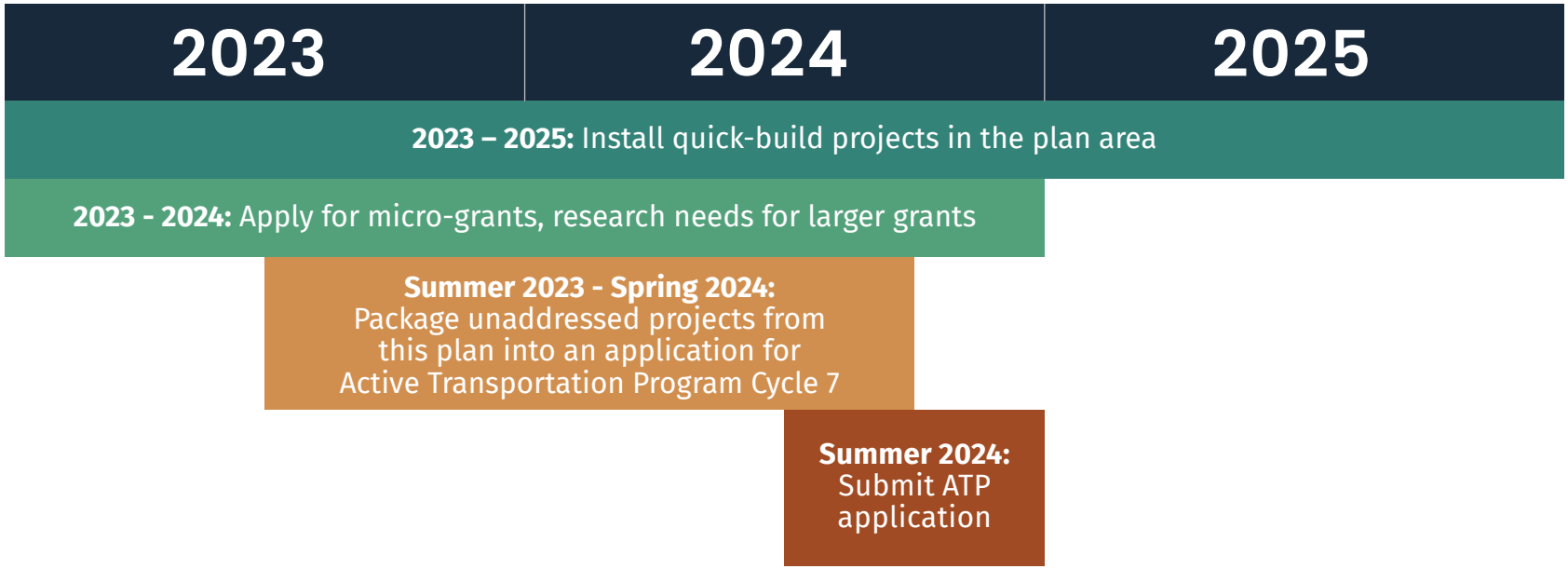
Communication: Convene regular meetings of executive-level departmental representatives to coordinate efforts in the Transit Center area.

Quick Build Projects: Install low-cost safety improvements at project locations, including new road markings, signs, and minor signal modifications over the next two years.

Transit Fare Program: Explore opportunities to expand free or subsidized transit fares for students, the elderly, during holidays, and for special events.

The projects in this plan have been developed with the goal of applying for implementation funding in upcoming statewide and local calls for projects.

Project Phasing & Timing



Example of quick-build curb extension

Source: Ulupono Initiative, City and County of Honolulu, https://ulupono.com/project-list/quick-build-projects/

Funding Sources

Several statewide and regional funding sources may be utilized for varying aspects of the projects proposed in this plan.

Active Transportation Program

The Active Transportation Program (ATP) was created by SB 99 / Assembly Bill 101 to encourage increased use of active modes of transportation such as walking and biking. It provides a comprehensive program that improves program planning and flexibility, with funds able to be directed to multi-year projects to make greater long-term improvements to active transportation.

The ATP is funded from a combination of federal and state funds from appropriations in the annual state budget act. Forty percent of the funding goes toward metropolitan planning organizations in urban areas with populations greater than 200,000. Ten percent of the funds go to small urban and rural regions. The remaining funds will go to the California Transportation Commission for statewide projects. The ATP ensures that disadvantaged communities fully share in the benefits of the program by requiring that a minimum of 25% of funds be distributed to disadvantaged communities. All successful applications in 2022 were in disadvantaged communities.
In order to maximize the effectiveness of program funds and to encourage the aggregation of small projects into a comprehensive bundle of projects, the minimum request for statewide Active Transportation Program funds is $250,000. This minimum does not apply to Safe Routes to Schools projects.

Project types allowed under the ATP include bikeways serving major transportation corridors, bikeways to improve bicycle commuting options, bicycle parking at transit and employment centers, traffic control devices to improve pedestrian and bicycle safety, improving and maintaining safety on existing bikeways, recreational facilities, Safe Routes to School projects, Safe Routes to Transit projects, and other improvements to bicycle-transit connections and urban environments.

For a project to contribute toward the Safe Routes to School funding requirement, the project must directly increase safety and convenience for public school students to walk and/or bike to school. Safe Routes to Schools infrastructure projects must be located within two miles of a public school or within the vicinity of a public school bus stop.

The call for projects for Cycle 7 of the ATP is expected in March 2024, with the grant application deadline in June 2024. ATP grants are highly competitive, with the number of requests far exceeding the amount of available funding. Demonstrating the project's ability to reduce crashes, close a gap, or create new routes for biking and walking, showing clear community support and outreach in development of the project, and providing direct benefits to disadvantaged communities are critical factors for a successful application. This Plan has been developed to align with ATP guidance and criteria.

The Safe Route Partnership has a Guide to the Application Process available at https://www.saferoutespartnership.org/sites/default/files/resource_files/californias_active_transportation_program_-_a_step-by-step_guide_to_the_application_2022.pdf

More information on the Active Transportation Program is available at https://dot.ca.gov/programs/local-assistance/fed-and-state-programs/active-transportation-program

San Joaquin Council of Governments Measure K

The SJCOG Measure K Renewal Ordinance and Expenditure Plan was passed by the voters of San Joaquin County in 2006. The Measure K Expenditure Plan includes a Bicycle, Pedestrian, and Safe Routes to School Funding Program and specifies that 60% of the funds will be allocated according to a competitive process. Other funds are available for infrastructure improvements that will assist local agencies in better integrating transportation and land use, such as street calming, walkable community projects, transit amenities, and alternative modes of transportation.

As part of the adoption of the 2017 Measure K Strategic Plan, the SJCOG Board conducted a Call for Projects for the Measure K Bicycle, Pedestrian, and Safe Routes to School Competitive Program and the Smart Growth Incentive Program, with over $11 million made available for the Bicycle, Pedestrian, and Safe Routes to School Competitive Program and Smart Growth Incentive Program.

The most recent Measure K Strategic Plan released in 2019 maintains that 30% of the net sales tax revenues generated in the Measure K Renewal program is to be allocated for passenger rail transit, bus transit, and pedestrian/bicycle projects. SJCOG frequently augments local ATP funds from the state with Measure K funding.

Other Funding Programs

While the Active Transportation Program and Measure K should be two key sources of funding, additional sources may be used to augment certain parts of the project.

Urban Greening Program

Signed into law on September 2016, Senate Bill 859 created the California Natural Resources Agency's Urban Greening Program, funded by the Greenhouse Gas Reduction Fund. In 2021, SB 170 allocated $50 million from the General Fund to the CRNA for its Urban Greening Program, specifically for urban greening and urban forestry projects that reduce GHG emissions.

Calls for proposals are anticipated to take place in early Spring of each year.

More information on the Urban Greening Program is available at https://resources.ca.gov/grants/urban-greening/

Community Development Block Grant

The US Department of Housing and Urban Development (HUD) administers the Community Development Block Grant (CDBG) Program, which provides annual grants to develop viable urban communities by expanding economic opportunities, principally for low- and moderate-income persons.
Under the State CDBG Program, states award grants to counties, cities, or other units of general local government. Annually, each State develops funding priorities and criteria for selecting projects. Eligible activities for grant funding in California include housing, homeowner assistance, public improvements, community facilities, public services, direct assistance to businesses, and the creation or retention of jobs for low-income workers.

Applications are typically available each year in the late summer and due in the fall. More information is available at https://www.hcd.ca.gov/grants-and-funding/programs-active/community-development-block-grant

Affordable Housing and Sustainable Communities (AHSC) Program

The Global Warming Solutions Act of 2006 (AB 32) directed the California Air Resources Board (ARB) to institute programs to reduce greenhouse gas (GHG) emissions. The Cap-and-Trade Program, a key element of the ARB's plan to reduce emissions, funds several programs that support the goals of AB 32 and specifically relate to transportation and mode shift. One of these programs, the Affordable Housing and Sustainable Communities Program (AHSC) provides funding for affordable housing developments (new construction or renovation) and transportation infrastructure, such as new transit vehicles, sidewalks, and bike lanes; transportation-related amenities, such as bus shelters, benches, or shade trees; and other programs that encourage residents to walk, bike, and use public transit.

The AHSC Program includes three eligible Project Area Types: Transit-Oriented Development, Integrated Connectivity, and Rural Innovation. All projects, regardless of Project Area Type, must demonstrate VMT reduction through fewer or shorter vehicle trips or through mode shift to transit use, bicycling or walking within transit areas, with an emphasis on integrating or developing affordable housing, and with an emphasis on providing benefits to Disadvantaged Communities or Low-Income Communities. In Round6 of funding (Fiscal Year 2019-2020), over $303 million dollars was provided for transit oriented developments.
AHSC Program resources are available at https://sgc.ca.gov/programs/ahsc/resources/

Highway Safety Improvement Program

Caltrans administers the Highway Safety Improvement Program (HSIP) specified as part of the Fixing America's Surface Transportation Act.

This program uses cost-benefit ratios as a primary factor in the awarding of applications. Because the program focuses on roadway safety, projects with documented collision history – through frequency of collision but particularly collision severity – are typically ranked higher. Roadways with documented bicycle and pedestrian collision history may be well qualified for HSIP applications, particularly since many of the proposed projects would improve bicyclist and pedestrian safety at a lower cost than many of the highway projects also eligible under this funding source.

While this funding source is often used for major roadway improvement projects, installation of traffic signals, and most other cost-intensive projects, funding has routinely been awarded to bicycle and pedestrian projects. Successful projects have included:

- Median refuges and curb extensions
- Curb, gutter, and sidewalk
- Upgraded traffic signals with pedestrian countdown signals and pedestrian-scale lighting
- Bicycle lane striping
- Crosswalk striping
- In-pavement flashers and rectangular rapid flashing beacons (RRFB) at crossings

Many of these projects were applied for as stand-alone bicycle and pedestrian improvement projects; some bicycle and pedestrian improvements were included with a broader package of roadway improvement projects.

More information is available at https://dot.ca.gov/programs/local-assistance/fed-and-state-programs/highway-safety-improvement-program

Other SB 1 Programs

Local Partnership Program (LPP): The purpose of the Local Partnership Program is to provide local and regional transportation agencies that have passed sales tax measures, developer fees, or other imposed transportation fees, with a funding of $200 million annually from the Road Maintenance and Rehabilitation Account to fund aging infrastructure, road conditions, active transportation, and health and safety benefits projects. LPP funds are distributed through a 50% statewide competitive component and a 50% formulaic component. Both programs are eligible to jurisdictions with voter approved taxes, tolls, and fees dedicated solely to transportation, as is the case of Measure K in San Joaquin County.

The next application cycle is expected in Fall 2024.

Local Streets and Roads Program (LSRP): California has dedicated approximately $1.5 billion per year to cities and counties for basic road maintenance, rehabilitation, and critical safety projects on local streets and roads. Cities and counties must submit a proposed projects list adopted at a regular meeting by their board or council that is then submitted to the California Transportation Commission (CTC). Once reviewed and adopted by the CTC, eligible cities and counties receive funding from the State Controller and an Annual Project Expenditure Report is sent to the Commission to be transparent with program funding received and expended.

Safe Routes to School (SRTS) Funding: Safe Routes to School (SRTS) is a program promoting walking and bicycling to school through infrastructure improvements, tools, safety education, and incentives to encourage these modes of travel. Nationally, 10% to 14% of car trips during the morning rush hour are for school travel. SRTS can be implemented at the state, community, or local school district level. Competitive federal funding is available through the Fixing America's Surface Transportation Act (FAST Act). Depending on the existing infrastructure, SRTS may require that education, transportation, public safety, and city planning agencies coordinate their effort.

Transportation Development Act (TDA) / Local Transportation Fund (LTF)

The Transportation Development Act (TDA) is perhaps the most readily available source of local funding for bicycle projects. TDA funds are derived from a statewide quarter-cent retail sales tax. This tax is returned to the county of origin and distributed to the cities and county on a population basis. In San Joaquin County, SJCOG administers the Local Transportation Fund (LTF) pursuant to the Transportation Development Act (TDA). In February of each fiscal year, the SJCOG board must adopt an LTF revenue estimate and apportionment schedule for the following fiscal year. Under TDA Article 3, two percent of each entity's TDA allocation is set aside for pedestrian and bicycle projects. Eligible projects include the design and construction of walkways, bicycle paths and bicycle lanes, and safety education programs.

California Office of Traffic Safety (OTS) Grant Programs

OTS administers traffic safety grants for public entities in the following priority program areas: alcohol impaired driving, distracted driving, drug-impaired driving, emergency medical services, motorcycle safety, occupant protection, pedestrian and bicycle safety, police traffic services, public relations, advertising, and roadway safety and traffic records. The application should be supported by local crash data that demonstrates a need for funding. Grant applications are due at the end of each January.

Safe Streets and Roads for All Grant Program

The Bipartisan Infrastructure Law (BIL) established the new Safe Streets and Roads for All (SS4A) discretionary program with $5 billion in appropriated funds over the next 5 years. The SS4A program funds regional, local, and Tribal initiatives through grants to prevent roadway deaths and serious injuries.

There are two types of SS4A grants:

- Action Plan Grants, to develop or update a comprehensive safety action plan
- Implementation Grants to conduct planning, design, and development activities in support of an Action Plan or carry out projects and strategies identified in an Action Plan.

Manteca's Local Road Safety Plan qualifies as an Action Plan and would allow the City to apply for Implementation Grants.

The 2023 Notice of Funding Opportunity (NOFO) is expected to open in spring for the second round of SS4A grants.

More information on the SS4A Grant Program is available at https://www.transportation.gov/grants/SS4A

Clean California Local Grant Program

The Clean California Local Grant Program (CCLGP) is a competitive statewide program created to beautify and clean up local streets and roads, tribal lands, parks, pathways, transit centers, and other public spaces. Assembly Bill 149 created the CCLGP of 2021 and was codified under Streets and Highway Code §91.41 et al. The Program is one part of the nearly $1.1 billion Clean California initiative that takes direct aim at the continuous trash generation that has overwhelmed Caltrans and its partners. Other parts of the Clean California initiative include state beautification and safety projects and public education campaigns. Significant investments in time and resources are needed to collect, recycle, and dispose of litter and hazardous waste. Approximately $100 million was added to the CCLGP to be made available in the FY 2023-2024 State budget. This funding will be used to implement a second cycle of funding for the program. These guidelines describe the policies, criteria, and procedures for the development, adoption, and management of the CCLGP. The guidelines were developed in consultation with representatives from Caltrans and through stakeholder workshops that included participation from local government agencies, transit agencies, and tribal governments, among other stakeholders.


MANTECA