CITY OF PARLIER

TRAFFIC CALMING & SAFETY ENHANCEMENT PLAN

FEBRUARY 2021

TRAFFIC CALMING & SAFETY ENHANCEMENT PLAN

FEBRUARY 2021

Prepared For:

City of Parlier
1100 E. Parlier Ave.
Parlier, CA 93648

Prepared By:

Provost & Pritchard Consulting Group

EST. 1968
PROVOST& PRITCHARD
CONSULTING GROUP

Funding Provided By:

Caltrans Sustainable Communities Planning Grant

Cover Parlier Logo Mural By:

@TALKSICKMIND

TABLE OF CONTENTS

Section I: Introduction & Background **1**
Report Organization 1
Land Use & Zoning Analysis 2
Street Design Goals & Concepts 2
Increased Connectivity 3
Increased Safety 3
Increased Walkability 3
Increased Placemaking 4
Section II: Existing Conditions **5**
Data Collection & Mapping 5
Observational Information 6
Manning Avenue Existing Conditions 12
Methodology & Mapping 12
Section III: Areas of Concern **18**
Selection Process 18
Qualitative Analysis & Field Assessments 18
Countermeasures 20
Section IV: Community Outreach **22**
Public Workshop No. 1 22
Public Workshop No. 2 22
Public Workshop No. 3 22
Section V: Implementation Strategy **23**
Benefit to Cost Analysis 23
Recommended Amendments to Policies, Regulations, & Standards 26
Parlier General Plan 26
Parlier Zoning Ordinance 26
Parlier Subdivision Ordinance 27
Parlier Standard Specifications 27
Funding Opportunities 28
Federal & State Funding Sources 28

Local Funding Sources 30
Section VI: Manning Avenue Design Concepts **31**
Applying Design Concepts 31
Interim Design Strategies 31
Zone Descriptions 32
Gateway Zone 32
Transition Zone 32
Pedestrian Zone 33
Conceptual Street Designs 33

LIST OF FIGURES

Figure 1: Intersection Collisions 7
Figure 2: Collision Types 8
Figure 3: Collision Severity 9
Figure 4: Entities Involved 10
Figure 5: Collision Intensity 11
Figure 6: Active Transportation Infrastructure 14
Figure 7: Pedestrian and Cyclist Safety 15
Figure 8: Planned Land Use and Transportation Connections 16
Figure 9: Development Potential 17
Figure 10: Areas of Concern 19
Figure 11: Manning Avenue Zone Diagram 34
Figure 12: Gateway Zone 35
Figure 13: Transition Zone 36
Figure 14: Pedestrian Zone 37
Figure 15: Mid-Block Crossing 38

LIST OF TABLES

Table 1: Street Design Goals and Associated Improvements 4

Table 2: Summary of Areas of Concern Countermeasures 20

Table 3: Prioritized List of Improvements by Area of Concern 24

APPENDICES

Appendix A: Land Use & Zoning Analysis

Appendix B: Street Improvement Descriptions

Appendix C: Stakeholder Interview Summaries (Observational Information)

Appendix D: Traffic Safety Studies (Qualitative Analysis & Field Assessments)

Appendix E: Public Workshop Summaries

Appendix F: Benefit to Cost (B/C) Ratio Calculation Methodology

SECTION I: INTRODUCTION & BACKGROUND

The City of Parlier was awarded a Caltrans Sustainable Communities Planning Grant to develop a Traffic Calming & Safety Enhancement Plan with Land Use Updates. The purpose of this Plan is to introduce design elements addressing challenging transportation conditions in the City of Parlier, such as excessive speed, irregular intersections, and accident-prone areas. This Plan evaluates existing conditions, identifies specific areas of concern, makes recommendations to increase safety and connectivity for all road users in Parlier, and proposes design concepts to improve pedestrian and cyclist mobility along Manning Avenue.

REPORT ORGANIZATION

The Traffic Calming & Safety Enhancement Plan (Plan) builds upon previously completed research and is organized around key phases in the plan development process. The sections of this Plan include:

I: Introduction. The introduction summarizes the plan's purpose, organization, and relevant background information, including a summary of street design concepts, a review of a land use and zoning analyses and existing planning documents that informed the recommendations set forth in the Plan. The introduction also includes an overview of urban planning and design principles which inform the improvements proposed under Section IV of this Plan.

II: Existing Conditions. The existing conditions section summarizes a series of data sets relevant to understanding safety issues in Parlier. Data addressed in this section includes historic traffic collision data collected through the Statewide Integrated Traffic Records System (SWITRS), observational data collected through stakeholder interviews, and an existing conditions survey of Manning Avenue.

III: Areas of Concern. The areas of concern section summarizes the selection process for identifying the Citywide areas of concern, the qualitative analyses and field assessments conducted for each of the areas, and a set of location specific countermeasures.

IV: Community Outreach. The community outreach section summarizes a series of public workshops completed throughout the plan development process. This section also identifies how public comments and feedback helped inform the identification of areas of concern and recommendations set forth in this Plan.

V: Implementation Strategy. The implementation strategy identifies a priority listing of the areas of concern and related countermeasures based on a benefit cost analysis. This section also summarizes a list of recommended amendments to local plans and standards and identifies potential funding opportunities for the countermeasures identified under Section III of the Plan.

VI: Manning Avenue Design Concepts. This section proposes street design concepts to improve safety, walkability, connectivity, and placemaking along Manning Avenue.

LAND USE & ZONING ANALYSIS

The Land Use & Zoning Analysis was conducted early in the plan development process and evaluates how existing policies and regulations influence pedestrian and bicyclist safety and infrastructure development within the City of Parlier. The goal of this review was to identify both potential obstacles and pathways to the development of safe pedestrian and bicyclist infrastructure which, if implemented, would increase road safety for all users. While many of the observations made within the Land Use & Zoning Analysis are applicable to Parlier on a broad geographic scale, the geographic focus of the analysis was the Manning Avenue corridor. The Land Use & Zoning Analysis has been included in **Appendix A**.

This analysis reviewed and summarized previous reports and policy documents including:

- *Recommendations to Improve Pedestrian Safety in the City of Parlier* (2014)
- *Fresno County Comprehensive Economic Development Strategy* (2016)
- *Parlier Active Transportation Plan* (2018)
- *Regional Transportation Plan* (2018)
- *Parlier General Plan* (2010)

These documents typically culminate in recommendations to improve road safety. Report documents are helpful for identifying relevant background information, safety data, and community experiences. Policy documents are helpful for identifying gaps in policy that will need to be addressed to effectively improve pedestrian and bicyclist safety in Parlier. Review of these reports and policy documents helped identify current conditions in the City, as well as what documents, policies, and resources already exist to help improve road safety for all users. The analysis also evaluated several implementation documents including the Zoning Ordinance, Subdivision Ordinance, and Public Works Standard Specifications.

The Land Use & Zoning Analysis resulted in a series of recommended amendments to the Parlier General Plan, Zoning Ordinance, Subdivision Ordinance, and Standard Specifications. The recommendations were focused on collectively increasing road safety for all users with a specific focus on increasing connectivity for pedestrians and bicyclists and improving walkability. Recommendations identified in the Land Use & Zoning Analysis have been incorporated into **Section IV: Implementation Strategy** of this Plan.

STREET DESIGN GOALS & CONCEPTS

There are four main aspects of street design that contribute to mobility: connectivity, safety, walkability, and placemaking. Recent development patterns have greatly favored private vehicles, often in ways that are detrimental to alternative transportation modes such as walking, biking, or taking public transit. For some, these alternative modes may be the only feasible transportation options, while others decide which transportation mode to use based on what is most convenient or pleasant. These transportation methods can provide co-benefits for each other as well. For example, a robust transit system can make walking more feasible, can provide an alternative to driving for those who cannot afford or operate a car, and can result in lower road traffic as people opt to take transit.

The recommendations in this Plan reflect the following street design goals, which address various aspects of walkability and, when implemented, can create an environment that increases the safety of all users and improves connectivity within a community. See **Table 1** for a list of improvements typically associated with implementation of these street design goals. Descriptions of each associated street improvement are included in **Appendix B.**

INCREASED CONNECTIVITY

Connectivity, or the degree to which transportation networks intersect to provide access, can be addressed by ensuring that residential uses and commercial and other destinations, like schools or parks, are in close-enough proximity to promote walking. The distance people are willing to walk to reach their destination is referred to as their walkshed. A typical walkshed is approximately a quarter-mile, which equates to approximately 5-7 minutes of walking.[1] While a quarter-mile walkshed is average, it should also be noted that the distance people are willing to walk is influenced by factors such as the destination and available pedestrian infrastructure. While providing important facilities within the typical quarter-mile walkshed will be the goal, a slightly larger walkshed may be more feasible for Parlier.

Infrastructure for additional transportation modes, including biking and public transit, further increase connectivity and can make all alternative transportation options more feasible. People do not need to rely on private vehicles when public transit to multiple, walkable areas is available.

INCREASED SAFETY

Pedestrian and bicyclist safety increases when cars are traveling at lower speeds and when pedestrians and cars are physically separated. Bike paths, street parking, and street trees can all help put distance and physical barriers between pedestrians and moving cars, as well as provide a designated space for bicyclists on the road. The speed at which cars move directly affects the risk of fatality to pedestrians and bicyclists if struck by the vehicle. Fatality risk for pedestrians increases with speed relatively slowly until the vehicle hits speeds of 30 miles per hour. After that point, risk of fatality increases much more rapidly: fatality rates may be up to 5.5 times higher at 40 mph than at 30 mph.[2] The impact of vehicle speed on fatality risk operates similarly for bicyclist collisions.

INCREASED WALKABILITY

An area's walkability is a measure of how safe, pleasing, and functional it is to walk in the area. Walking has demonstrated health and environmental benefits, and for many is a primary mode of transportation. Building walkable spaces also benefits non-pedestrians. The same aspects that improve walkability also increase the safety and enjoyment for bicyclists. Supporting walkability in a way that makes it a desirable and efficient mode of transportation is one method of increasing the safety of all road users and increasing connectivity within a community.

---

[1]Plater-Zyberk, J. S. (2017, February 7). Great idea: Pedestrian shed and the 5-minute walk. (R. Steuteville, Interviewer)

[2]London Department for Transport. (2010). *Relationship between Speed and Risk of Fatal Injury: Pedestrians and Car Occupants.* London: London Department for Transport.

INCREASED PLACEMAKING

Placemaking is an important part of creating spaces that are inviting and exciting for all potential users of the space. It considers a community's assets and creates public spaces that enhance existing infrastructure to promote health and well-being for individuals and a vibrant community.

Placemaking utilizes urban design principles to reimagine and reinvent public spaces and facilitate creative patterns of use. It does so by focusing on the creation of quality public spaces that enhance people's health, happiness, and well-being. Placemaking also pays particular attention to the physical, cultural, and social identities that define a place and support its evolution over time.

Table 1: Street Design Goals and Associated Improvements

Improvement	Associated Street Design Goal			
	Increased Safety	Increased Walkability	Increased Connectivity	Increased Placemaking
Tighter curb radii	●	◑		
Narrow lane widths	●	◑		
Pedestrian leading signal intervals	●	◑		
Street trees (and/or bollards)	●	◑		◑
Bike boxes	●		◑	
Short crosswalks	◑	●		
Bulb-outs/curb extensions	◑	●		
Smaller block sizes		●	◑	
Mid-block crossings		●	◑	
Flashing crosswalk beacons	◑	●		
Raised crosswalks	◑	●		
Directional pedestrian ramps	◑	●		
Pedestrian push buttons		●	◑	
Alternative crosswalk materials		●		◑
Visible and/or protected bike lanes	◑		●	
Transit priority	◑	◑	●	
Frequent transit routes	◑	◑	●	
Human scale signage		◑		●
Landscaping improvements				●
Public realm design standards	◑			●
Entry monumentation				●
Infill/development of vacant property			◑	●

● = *Primary Goal*
◑ = *Secondary Goal*

SECTION II: EXISTING CONDITIONS

In order to evaluate existing conditions, the consultant team conducted a series of research efforts, including data collection, mapping, and stakeholder interviews related to pedestrian, cyclist, and automobile safety. Upon completing these tasks, it became clear that while collisions had occurred throughout the City, there seemed to be a concentration of accident hot spots along Manning Avenue. As a result, Citywide research efforts were supplemented with a Manning Avenue specific existing conditions survey. The results of this survey assisted in the analysis of acute conditions on Manning Avenue contributing to lack of safety and hindered mobility along the corridor. Each effort related to evaluating existing conditions is summarized in the sections that follow.

DATA COLLECTION & MAPPING

Using historical crash data from the Statewide Integrated Traffic Records System (SWITRS) for 2010 through 2019, five maps of occurrences within the City of Parlier were created detailing intersection collisions, collision types, collision severity, entities involved, and an intensity heat map. Each map is summarized below and can be seen in **Figures 1** through **5.**

Intersection Collisions (Figure 1). The intersection collisions map shows the number of collisions occurring at each intersection. On Manning Avenue, there were between 23 and 30 collisions at each intersection with Academy, Mendocino, Madsen, and Newmark Avenues. The intersection of Zediker and Manning Avenues had 16 collisions. Three smaller streets, Ort Avenue, K Street, and J Street, each had fewer than seven collisions at their intersection with Manning Avenue.

Collision Types (Figure 2). The most common types of collisions throughout Parlier were rear ends and sideswipes with 43 and 24 occurrences, respectively. There were 12 head on collisions. Additionally, there was an equal number of collisions between vehicles and pedestrians or stationary objects, with 11 instances each. There were eight collisions reported directly on Manning Avenue, with rear ends remaining the most common collision type with five such instances. There were two broadside collisions and one head-on collision on Manning Avenue. No collisions between an automobile and a pedestrian were reported on Manning Avenue.

Collision Severity (Figure 3). The collision severity map shows that there were five fatal collisions in Parlier. Two of these collisions occurred at the intersection of Madsen and Manning Avenues. All other collisions on Manning Avenue caused either injury, property damage, or both. Two fatal collisions occurred at Academy and Parlier Avenues with one additional fatality occurring at Eva Donna Street and Madsen Avenue. Collisions resulting in injury or property damage occurred consistently in all areas of the City.

Entities Involved (Figure 4). The entities involved map shows that pedestrians were involved in 21 collisions and bicyclists were involved in five collisions throughout the City. While pedestrian involved collisions occurred throughout the City, there was a consistent occurrence along Manning Avenue at the

intersections of Manning Avenue with Mendocino, Madsen, Ort, and Newmark Avenues. All other collisions involved objects and motor vehicles. Bicyclist involved collisions mainly occurred along Parlier Avenue.

Collision Intensity (Figure 5). The collision intensity heat map rates collision intensity, based on all other data inputs such as frequency and severity, from low to high for all reported collisions. The intersections of Manning Avenue at Academy, Mendocino, Madsen, and Newmark Avenues were rated high in collision intensity. The intersection of Zediker and Manning Avenues was rated moderately high in collision intensity. There were no other highly rated collision intensity intersections in Parlier, though there were three additional moderately high intersections: Fresno and J Streets, Parlier and Whitener Avenues, and Parlier and Mendocino Avenues.

OBSERVATIONAL INFORMATION

In May of 2020, the consultant team conducted interviews with the Parlier Police and Public Works Departments to gain a better understanding of historical observations and problem areas in the City limits. Full summaries of these interviews may be seen in **Appendix C.** Problem areas and common themes identified during these interviews include the following.

Manning Avenue between Academy and Zediker. There is a high volume of east/west bound traffic along Manning Avenue traveling at high speeds. Automobile traffic accessing businesses along Manning occurs at median cuts, allowing motor vehicles to cut across multiple lanes of traffic. In addition, there is an observed issue with jay walking, resulting from pedestrian traffic generated by residential uses along the south side of Manning accessing services on the north side of Manning.

School Sites. School sites were commonly referenced as having several issues contributing to safety concerns. Common items to be addressed include congestion at nearby intersections and school frontages associated with student drop-off and pick-up; lack of parking facilities which further congest busy streets; jay walking; and either lack of, or ineffective, adjacent pedestrian and bicyclist facilities.

Common Themes. Several concerns were noted regarding the need for better signage, street parking restrictions to improve access and/or lines of site, additional crosswalks and bicycle lanes throughout the City, and additional parking facilities on or around school campuses.

Figure 1: Intersection Collisions

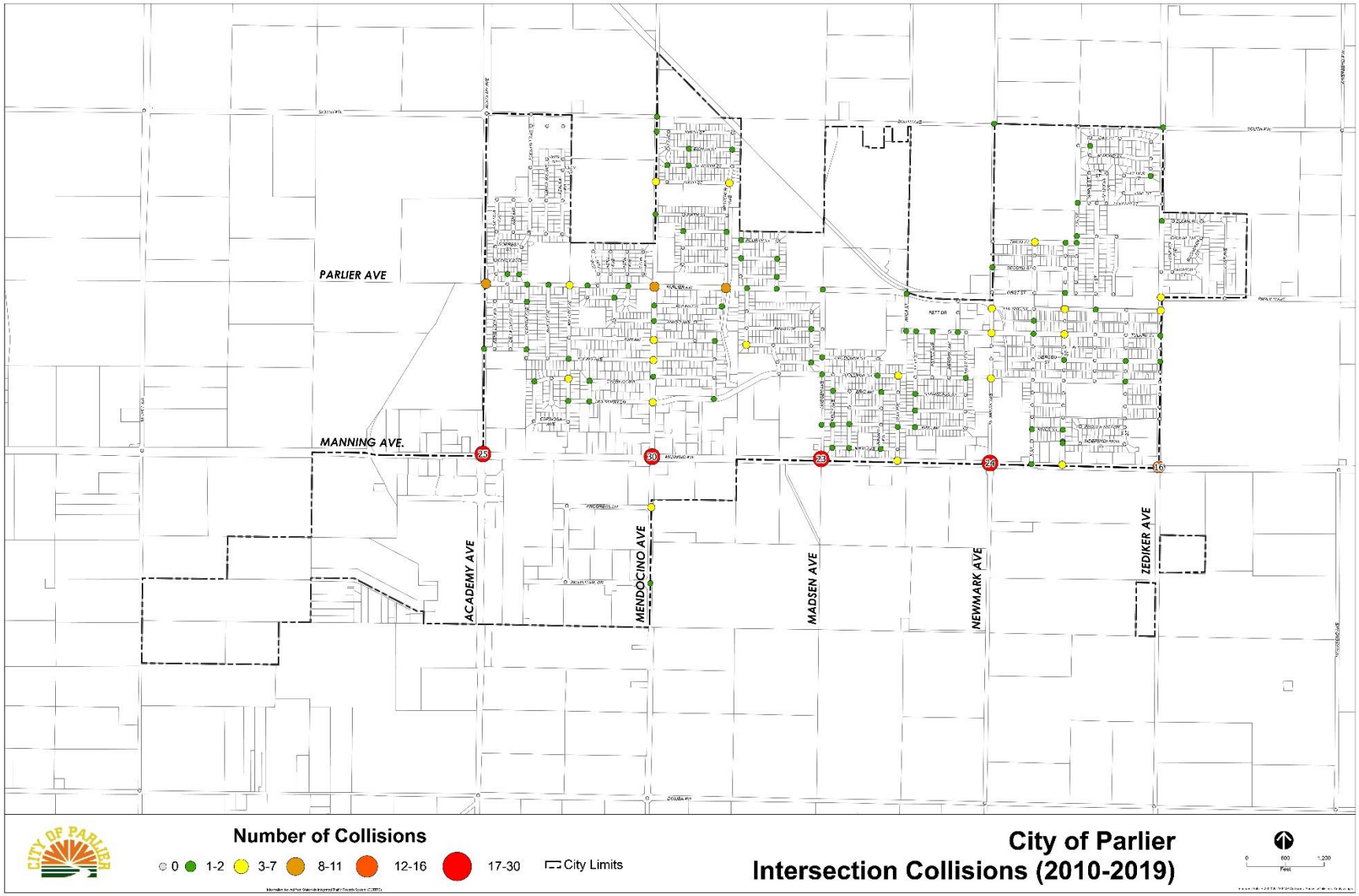


Figure 2: Collision Types

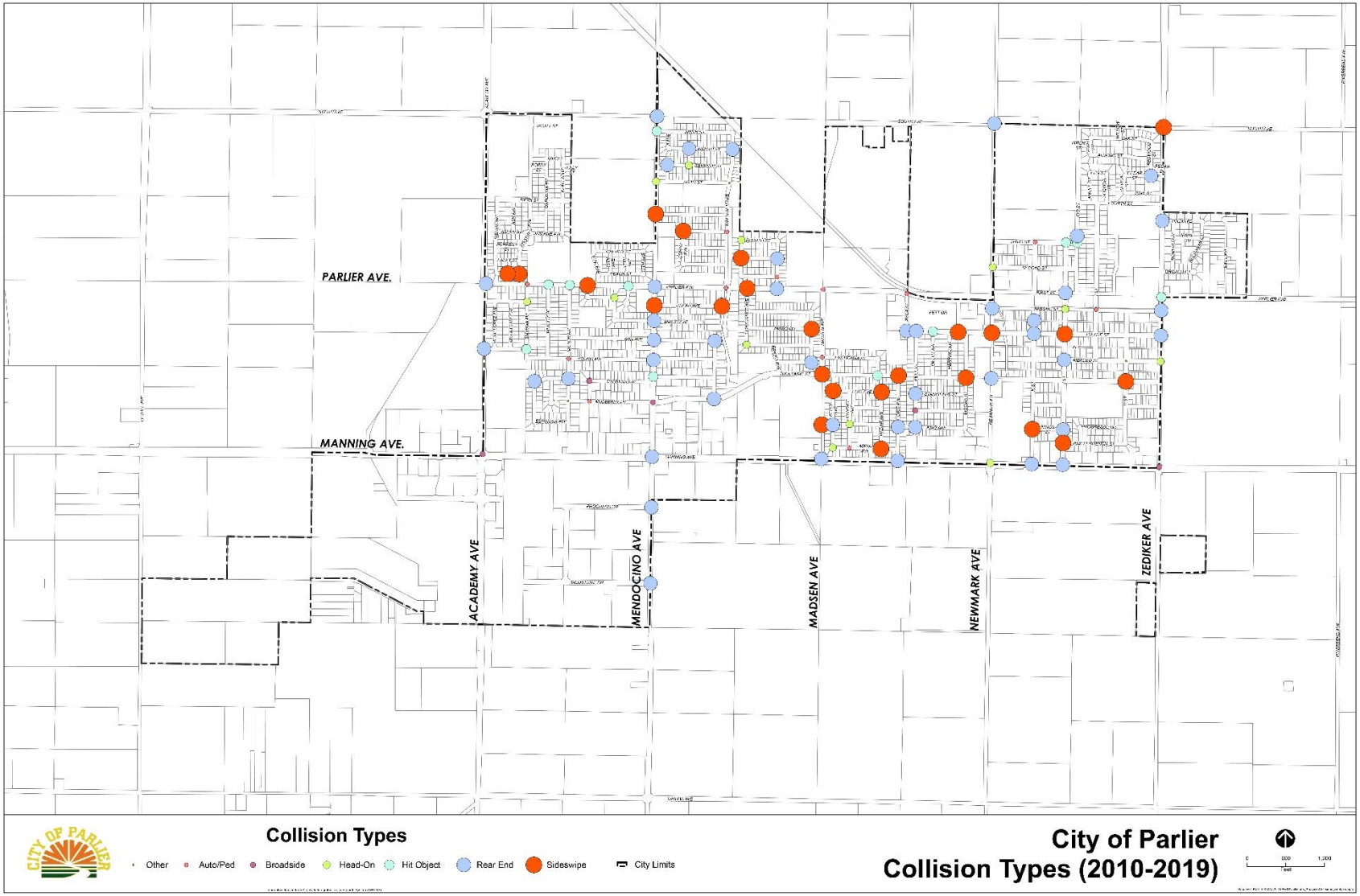


Figure 3: Collision Severity

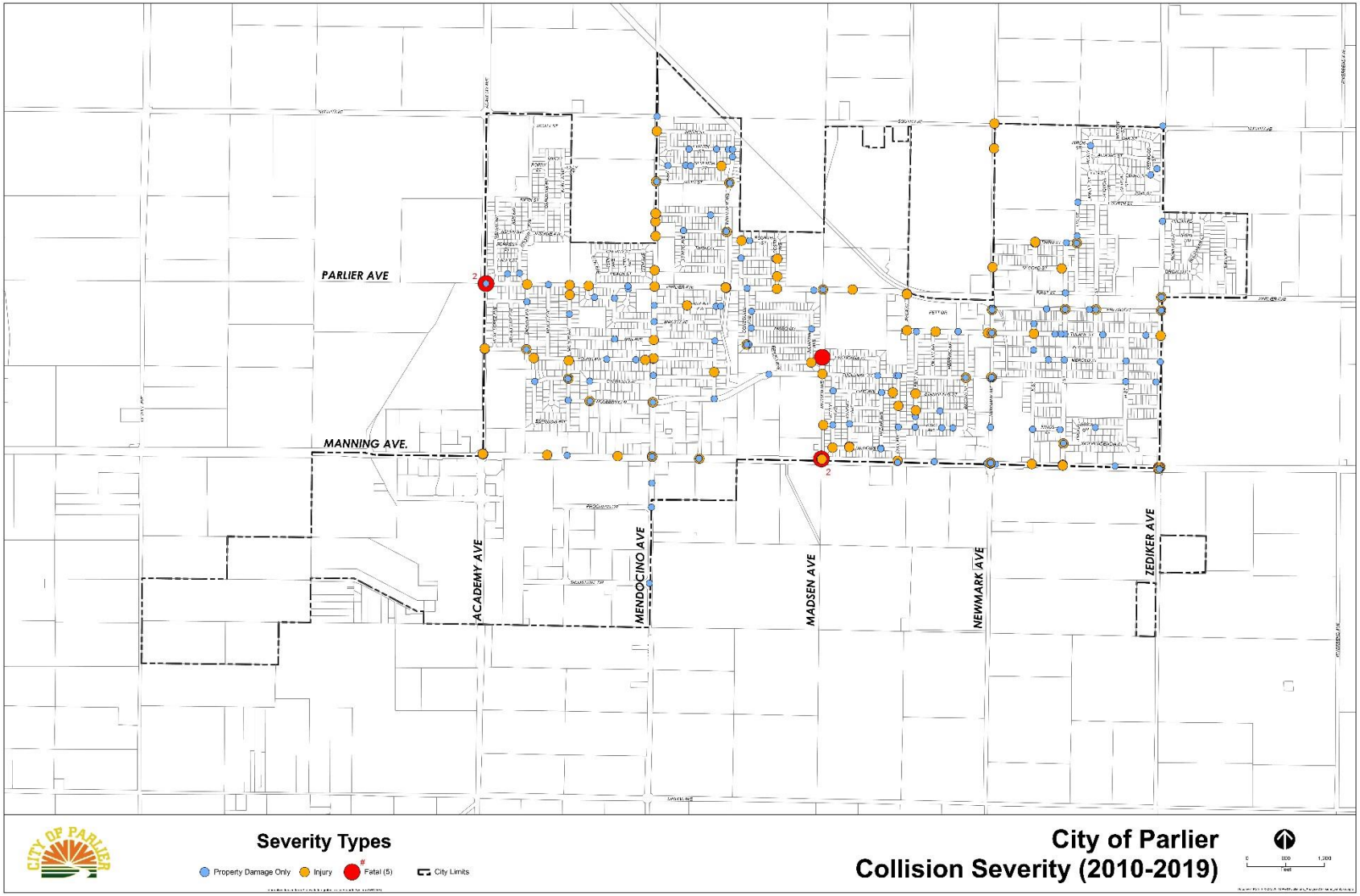


Figure 4: Entities Involved

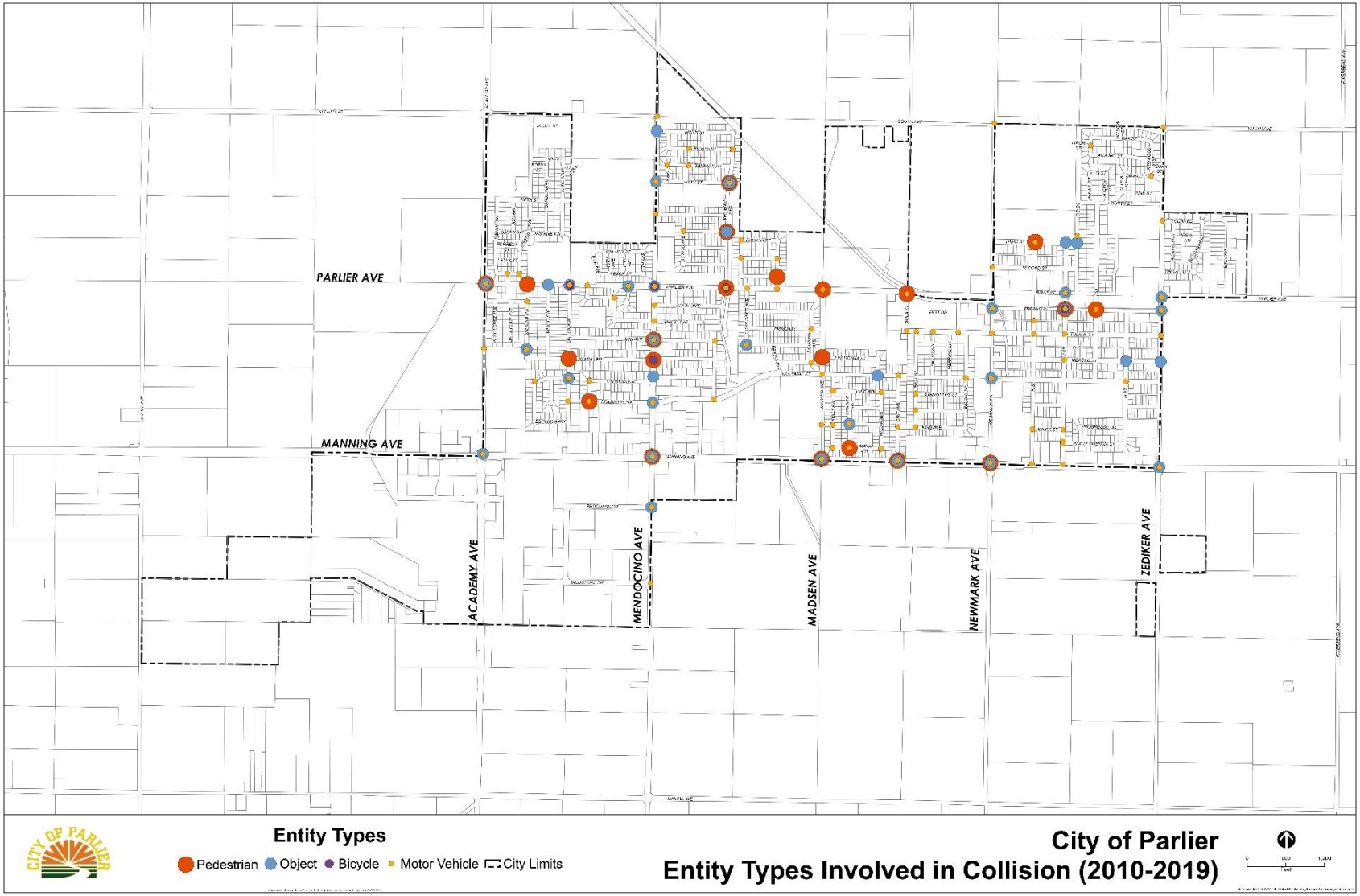
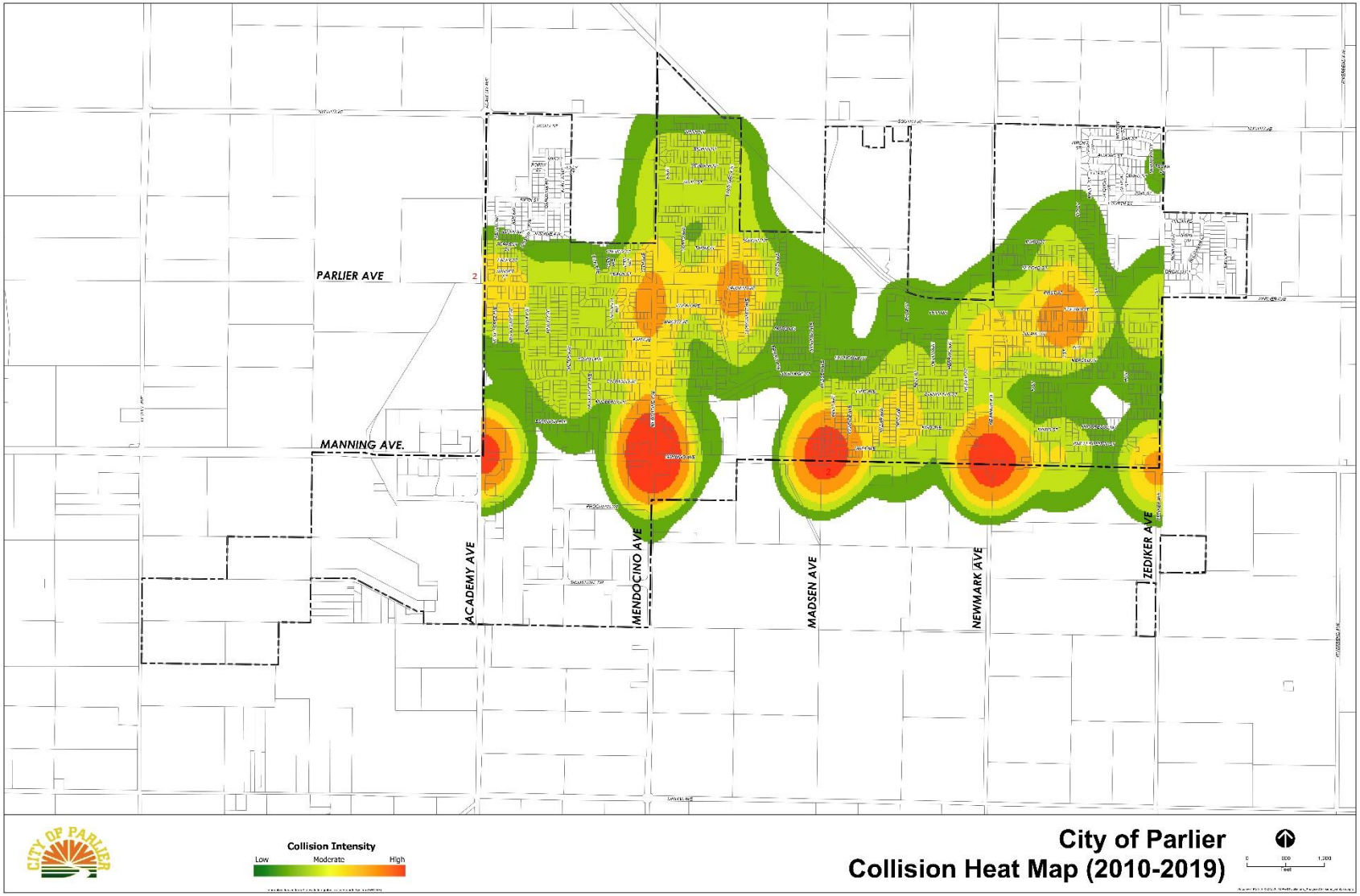


Figure 5: Collision Intensity



MANNING AVENUE EXISTING CONDITIONS

During analysis of the SWITRS data and stakeholder interviews, many potential areas of concern and were identified throughout the City, with a concentration occurring along Manning Avenue. In addition, Manning Avenue was identified as a major physical barrier between the north and south areas of the City which contributes to connectivity issues community wide. Connectivity is hindered due to a general lack of pedestrian and bicyclist infrastructure, high travel speeds, as well as the designation of Manning Avenue as an arterial, local truck route, and regional roadway.

Connectivity and safety concerns on Manning Avenue were also confirmed by residents during a public outreach event (see Public Workshop No. 2 in **Section IV: Community Outreach**). Participants were asked to mark locations on a map of the City where they felt unsafe walking or bicycling, with most participants identifying a location on Manning Avenue.

Recognition of Manning Avenue as a source of safety and connectivity issues is also well documented in other planning efforts, including:

- *Parlier Active Transportation Plan* (2018),
- *Regional Transportation Plan* (2018),
- *Parlier General Plan* (2010),
- *Recommendations to Improve Pedestrian Safety in the City of Parlier* (2014) by Safe Transportation Research Center and California Walks,
- *Fresno County Comprehensive Economic Development Strategy* (2016) by the Fresno County Economic Development Corporation, and
- *Eastside Transportation Corridor Improvement Study (ETCIS)* completed by the Fresno Council of Governments (FCOG) in 2020.

As a result, an existing conditions survey was conducted along Manning Avenue between Academy and Zediker Avenues to provide a more focused analysis of safety conditions specific to the corridor.

METHODOLOGY & MAPPING

The survey was conducted using a Geographic Information Systems (GIS) based survey which captured data related to existing pedestrian and bicyclist infrastructure. Additionally, aerial imagery was used to evaluate vacant properties along the Manning Avenue corridor to identify parcels with the greatest development potential. Finally, land use and transportation connections were mapped based on a review of the General Plan. Each map is summarized below and can be seen in **Figures 6 through 9**. Together, the results of the existing conditions survey and mapping efforts were used to help determine conceptual design improvements that could be most beneficial for increasing traffic safety along the route. Design concepts identified for Manning Avenue are discussed in more detail in **Section VI: Manning Avenue Design Concepts**.

Active Transportation Infrastructure (Figure 6). The active transportation infrastructure map shows the location of pedestrian and bicyclist infrastructure along Manning Avenue. This map illustrates where pedestrian and bicyclist infrastructure already exist, as well as locations lacking such infrastructure.

Infrastructure types inventoried for this effort include sidewalks, shade trees, crosswalks, bicycle lanes, pedestrian push buttons, and pedestrian ramps.

Pedestrian and Cyclist Safety (Figure 7). The pedestrian and cyclist safety map shows an inventory of street conditions which have an impact on the safety of pedestrians and bicyclists along Manning Avenue. Infrastructure impacting pedestrian and bicyclist safety include the location and type of interruptions in the sidewalk such as driveways and street approaches, the presence of streetlights, and the location of controlled and uncontrolled intersections.

Planned Land Use and Transportation Connections (Figure 8). The planned land use and transportation connections map represents current general plan land use designations for parcels adjacent to Manning Avenue. The Land Use Element primarily designates parcels along the north and south sides of Manning Avenue for commercial uses, including Neighborhood Commercial, Community Commercial, and General Commercial designations. Additionally, there are sections of High Density Residential land uses planned on the north side of Manning, west of Academy Avenue and on the south side of Manning between Mendocino and Madsen Avenues. These residential uses, especially on the south side of Manning Avenue, face significant connectivity issues. Services, including schools, are overwhelmingly located north of Manning Avenue. The lack of pedestrian and bicyclist infrastructure, including features such as sidewalks, pedestrian street crossings, and bicycle paths and parking, further contribute to the difficulty of navigating this area of Parlier without a personal vehicle.

Figure 8 also shows the local circulation system along the Manning Avenue corridor. Manning Avenue is designated an arterial street but also functions as a regional roadway, serving as the principal roadway for cross-town traffic flow and regional through-traffic originating in other communities. Academy Avenue is also considered to be a regional roadway in the Parlier General Plan.

Madsen, Mendocino, Newmark, and Zediker Avenues are designated as collector streets, which provide for traffic movement between arterials and smaller local streets, between neighborhoods, and between major activity centers. Academy, Manning, Mendocino, Newmark, and Zediker Avenues are also designated truck routes.

Development Potential (Figure 9). The development potential map shows parcels and existing building footprints for the lands adjacent to Manning Avenue, illustrating the proportion of land to built structures. Substantial vacancies along Manning Avenue exist where development has yet to occur, and the proportion of built structures to land is relatively low when development is present. This is likely due to a combination of large off-street parking lots and building setbacks along Manning Avenue. Figure 9 also illustrates where development has the most potential to impact conditions along Manning Avenue. There is a substantial proportion of vacant parcels along the south side of Manning and along the north side of Manning between Academy and Madsen Avenues. Land uses planned in these areas primarily consist of commercial, with some high density residential uses. As land is developed in these locations, there is a high potential for development-related street improvements.

Figure 6: Active Transportation Infrastructure

Figure 7: Pedestrian and Cyclist Safety

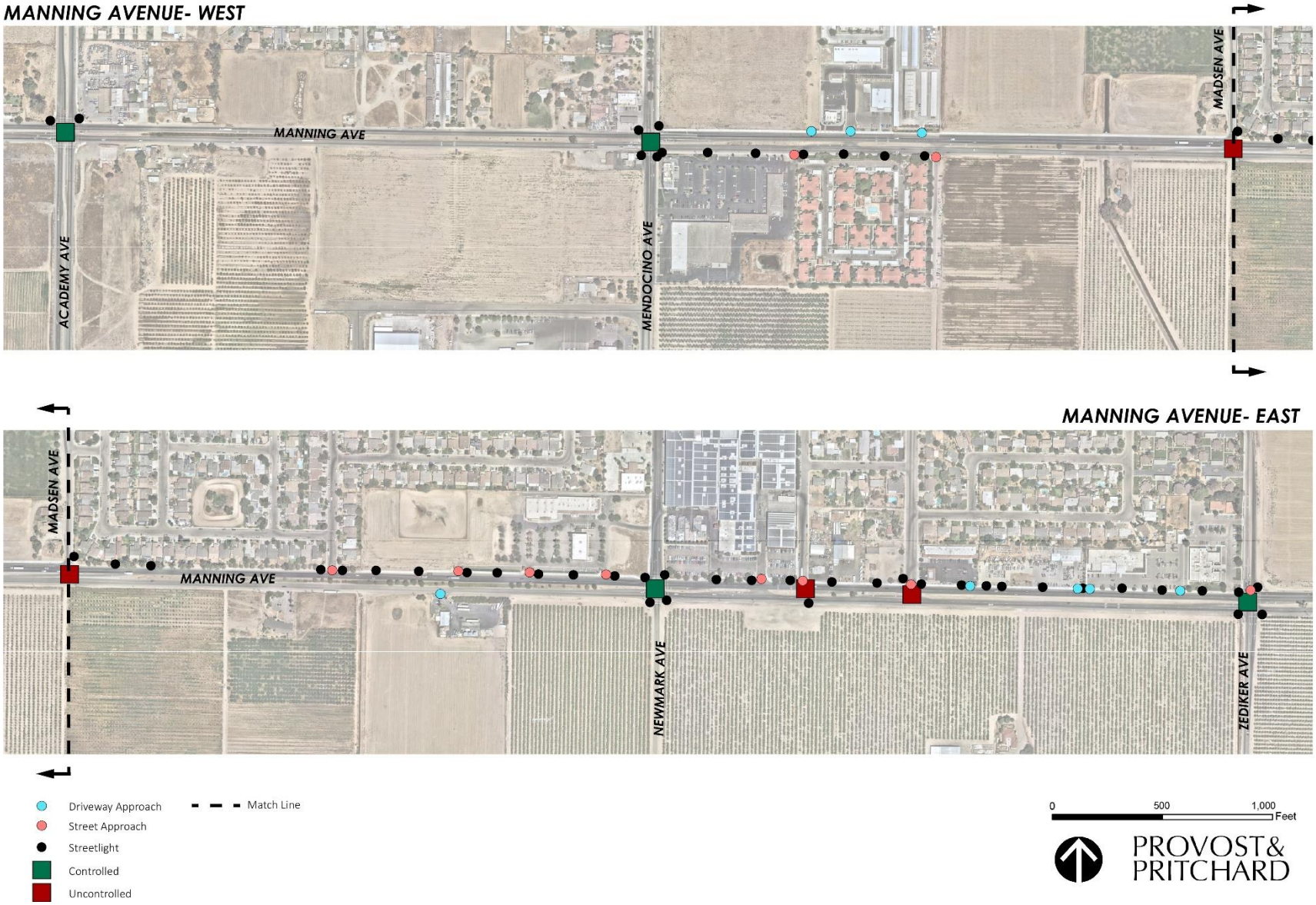
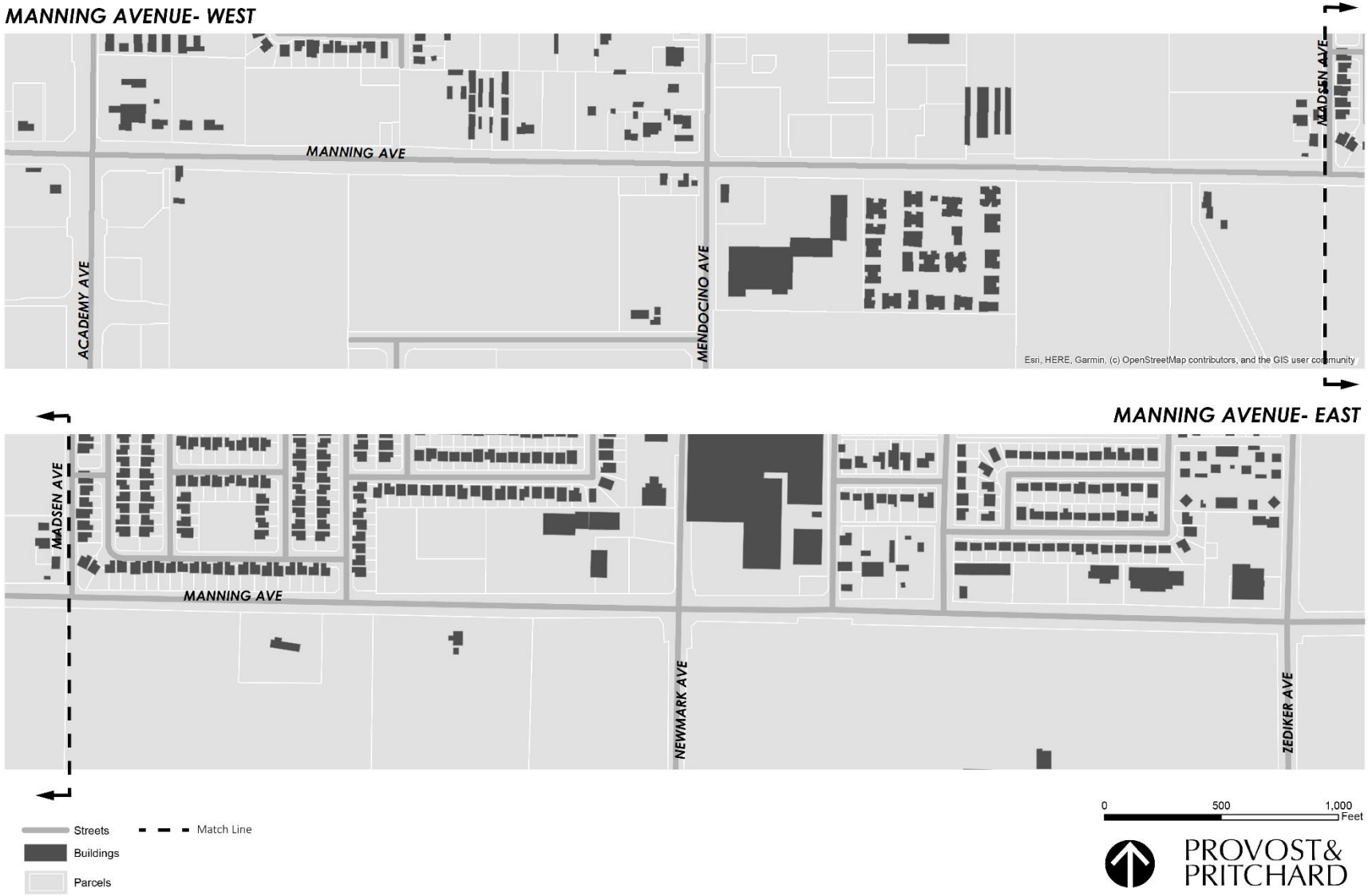


Figure 8: Planned Land Use and Transportation Connections

Figure 9: Development Potential



SECTION III: AREAS OF CONCERN

To help focus recommendations for improving traffic safety in Parlier, the consultant team identified locations throughout the City which would benefit from safety improvements. These locations are identified as "areas of concern". Qualitative analyses and field assessments were conducted for each area of concern to identify at least two improvements, or countermeasures, to address the observed safety concerns at that location.

SELECTION PROCESS

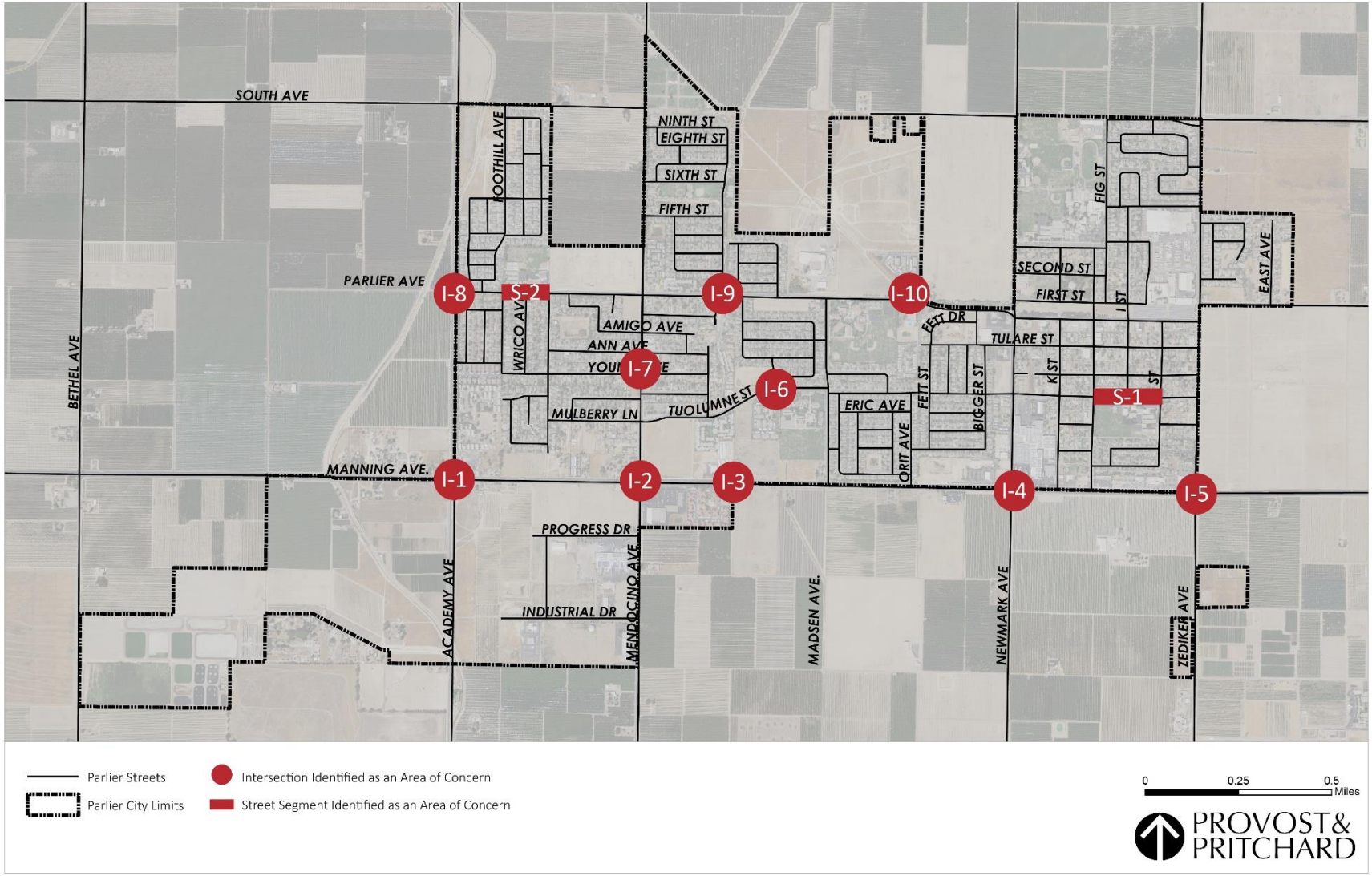
Ten intersections and two street segments were identified as areas of concern based on a variety of factors, including information gathered during the data collection, observational data, and community outreach phases of the planning process. Each area of concern was confirmed through the qualitative analyses and field assessments conducted as part of this plan development.

During the data collection process, SWITRS data was used to create a series of maps illustrating traffic safety issues in Parlier between 2010 and 2019. These maps are summarized in the Data Collection & Mapping portion of Section II: Existing Conditions. Locations with the most frequent and severe collisions were included as areas of concern, focusing primarily on pedestrian and cyclist involved collision sites as well as sites where fatal collisions had occurred. Interviews with key stakeholders, summarized under the Observational Information portion of Section II, identified anecdotal evidence which supplemented the SWITRS data and helped identify additional of areas of concern, such as intersections with multiple "close-calls" that would not be represented in collision data. Additional consideration in the selection process was given to evidence collected during community outreach events. Through analysis of this data, the consultant team was able to identify certain streets or intersections as areas of concern, as shown in Figure 10.

QUALITATIVE ANALYSIS & FIELD ASSESSMENTS

To confirm the validity of each area of concern, it was necessary to ensure the results of the data collection and mapping analysis reflected current street conditions. This confirmation process was carried out through a qualitative analysis and field assessment conducted at each identified area of concern. To complete this assessment, the consultant team conducted site visits to verify safety concerns and took photographs documenting conditions present during the site visit. This information was used to produce a series of traffic safety studies which provide a visual overview of conditions at each area of concern, including aerial imagery with street labels and location specific photographs. These traffic safety studies are included in Appendix D.

Figure 10: Areas of Concern



COUNTERMEASURES

Countermeasures are improvements or actions designed to increase traffic safety and have been identified for each area of concern. Generally, these countermeasures consist of increasing signage, adjusting signals, adding new striping and crosswalks where appropriate, and conducting specified studies where more data collection is necessary. It should be noted that some countermeasures will require coordination with the County of Fresno. Additionally, some areas of concern have undergone recent improvements. These locations should continue to be monitored to gauge effectiveness of recent safety measures and adjust if necessary. **Table 2** provides a high-level summary of these countermeasures, along with corresponding street design goals, as described in the Street Design Goals & Concepts portion of **Section I: Introduction & Background** of this plan. Each countermeasure is described in more detail in the Benefits to Cost Analysis discussion in **Section V: Implementation Strategy**. Concurrently, the Fresno Council of Governments (Fresno COG) is developing an Eastside Transportation Corridor Improvement Study, which focuses on Manning Avenue and Academy Avenue. The recommendations of this Traffic Calming & Safety Enhancement Plan have been coordinated with that effort.

Table 2: Summary of Areas of Concern Countermeasures

Intersection or Street Segment ID	Intersecting Streets	Safety Concerns	Countermeasures	Related Street Design Goals
I-1	Manning Ave. and Academy Ave.	25 collisions with 9 due to running of red light and 6 rear end collisions due to speeding.	• Traffic signal improvements • Speed reduction measures	Increased Safety
I-2	Manning Ave. and Mendocino Ave.	30 total collisions with 1 auto/pedestrian accident resulting in injury and 22 rear end collisions.	• Traffic signal improvements • Striping improvements • Speed reduction measures • Upgrade pedestrian push buttons	Increased Safety Increased Walkability
I-3	Manning Ave. and Whitener Ave.	Northbound vehicles make left turns through high-volume Manning Avenue spanning approximately 53 feet.	• Median improvements	Increased Safety
I-4	Manning Ave. and Newmark Ave.	26 total collisions at this intersection with 15 rear ends, 7 sideswipes mainly due to speeding and running of red light.	• Striping improvements • Signal improvements • Speed reduction measures	Increased Safety
I-5	Manning Ave. and Zediker Ave.	16 total collisions with 10 rear ends, mainly due to speeding and running of red light.	• Continue to monitor efficacy of recent signal improvements • Speed reduction measures	Increased Safety
I-6	Tuolumne St. and Erica Ave.	Concerns regarding school pedestrian crossings. Existing parking along the north and south sides of Tuolumne Street causes sight distance issues for children, compounded by the horizontal curve alignment of the eastbound approach.	• Crosswalk improvements with potential parking restrictions • Update existing school zone traffic controls, signage, and striping	Increased Safety Increased Walkability

Intersection or Street Segment ID	Intersecting Streets	Safety Concerns	Countermeasures	Related Street Design Goals
			• Install solar powered pedestrian crossing assembly	
I-7	Young Ave. and Mendocino Ave.	4 total collisions at this intersection with 2 pedestrian involved accidents and 2 rear end collisions due to improper turns.	• Perform a sight distance triangle study and restrict parking accordingly • Clear or modify median landscaping within sight distance triangle	Increased Safety
I-8	Academy Ave. and Parlier Ave.	12 total collisions at this intersection with 2 fatal pedestrian-involved accidents. Other collisions consist of rear ends (5), broadside (1), head-on (1), sideswipe (2), and hit object (1). Causes of these accidents were mainly due to right-of-way conflicts or improper turns.	• Traffic signal installation • Pedestrian push button installation	Increased Safety Increased Walkability
I-9	Parlier Ave. and Whitener Ave.	10 collisions at this intersection with 5 pedestrian-involved and 5 rear ends, mainly due to speeding or right-of-way conflicts.	• Striping improvements • Speed reduction measures	Increased Safety
I-10	Parlier Ave. and Avila Ave.	2 collisions at this intersection with 1 pedestrian-involved accident and 1 broadside collision.	• Striping improvements • Speed reduction measures	Increased Safety
S-1	Tuolumne St. from J St. to H St.	Concerns regarding existing school pedestrian crossing at Tuolumne Street and I Street. Existing parking along the north and south sides of Tuolumne Street causes sight distance issues for children entering and crossing the road.	• Crosswalk improvements with potential parking restrictions • Update existing school zone traffic controls, signage, and striping	Increased Safety Increased Walkability
S-2	Parlier Ave. from Sunnyside Ave. to Milton Ave.	6 collisions with 2 pedestrian-involved accidents. The segment is along the frontage of John C. Martinez Junior High School and there are concerns for student/pedestrian safety.	• Crosswalk improvements • Update existing school zone traffic controls, signage, and striping • Install solar powered pedestrian crossing assembly. • Remove existing crosswalk at Milton Ave. and consolidate with the high visibility crosswalk at Wrico Ave.	Increased Safety Increased Walkability

SECTION IV: COMMUNITY OUTREACH

Two community workshops were held to gather feedback about safety and connectivity concerns in Parlier. These workshops were helpful for both determining areas of concern and identifying the specific considerations relevant to traffic safety concerns in Parlier. One additional workshop was held to present the draft plan content to the community for review and comment. Updates to the City Council have also been provided throughout the plan development process.

PUBLIC WORKSHOP NO. 1

The first public workshop was conducted as a virtual workshop held on July 20th, 2020, in conjunction with the Eastside Transportation Corridor Improvement Study efforts undertaken by Fresno Council of Governments (FCOG). At the meeting, polls were used to identify priorities for the Manning Avenue and Academy Avenue corridors. Increased safety and increased connectivity received at least 80 percent of the votes for both corridors. Additionally, comments were received about future hopes for the corridors and where efforts should be focused. Poll results, along with an expanded summary of Workshop No. 1 can be seen in Appendix E.

PUBLIC WORKSHOP NO. 2

The second public workshop was conducted as a pop-up workshop in front of R-N Market on October 17th, 2020. Participants were asked to mark locations on a map of the City where they felt unsafe walking or bicycling. Overall, 23 different locations were marked by participants, with all but five occurring along the Manning Avenue corridor. Participants noted the need for additional street lighting, for sidewalks and shoulders to be kept clear of debris, for enforcement of vehicles yielding to pedestrians particularly at a crosswalk on Mendocino Avenue between Manning and Tuolumne, and for increased connectivity and trails in relation to new homes on the north end of Zediker Avenue. A full description of Workshop No. 2 along with photos of the event can be found in Appendix E.

PUBLIC WORKSHOP NO. 3

The third and final workshop was held on January 21st, 2021 at Parlier's City Council Chambers. The workshop was conducted as an open session before the regularly held City Council meeting. Meeting topics included a summary of project objectives, project status, and a summary of the Traffic Calming & Safety Enhancement Plan, including areas of concern, proposed enhancements, and design concepts for Manning Avenue. The community also had an opportunity to comment, ask questions, and provide feedback. Following the meeting, the Traffic Calming & Safety Enhancement Plan was made available for a two-week public review period ahead of the City Council acceptance hearing, scheduled on February 18th, 2021.

SECTION V: IMPLEMENTATION STRATEGY

The purpose of the implementation strategy is to help guide the development of capital improvements recommended by this Traffic Calming & Safety Enhancement Plan, including a priority listing of the recommended countermeasures based on a benefit to cost analysis and consistency with the purpose of the Plan. The implementation strategy also summarizes amendments to existing policies, regulations, and standards, as recommended in the Land Use & Zoning Analysis. Finally, the implementation strategy summarizes a list of funding opportunities that may assist the City in implementing the countermeasures identified for each area of concern and the design concepts outlined in ***Section VI: Manning Avenue Design Concepts****. Additional strategies may also be considered, such as establishing baseline traffic counts or travel patterns, which may serve as a resource when evaluating, designing, and prioritizing capital improvements within Parlier.*

BENEFIT TO COST ANALYSIS

Benefit to cost (B/C) ratio calculations are based on the methodology used in the Health and Safety Improvement Program (HSIP)of the Local Roadway Safety Manual (LRSM) and the Highway Safety Manual. The formula used under this methodology can be seen in Appendix F. The B/C of a project considers the number of accidents, severity of accidents, accident-related cost due to severity, accident reduction due to countermeasures, and the cost of the project. Each area of concern, as identified in Figure 10, has been ranked in priority order based on their resulting B/C ratio. Table 3 lists the areas of concern in priority order, based on the B/C ratio.

A B/C ratio greater than 1 indicates positive benefits in respect to cost. A B/C ratio below 1 indicates that costs outweigh project benefits. While the B/C ratio is the main method for determining the priority of each countermeasure, overall priority should be adjusted, as needed, should funding sources or opportunities to collaborate with partner agencies become available.

Table 3: Prioritized List of Improvements by Area of Concern

Priority (Based on B/C Ratio)	Intersection or Segment ID	Benefit/Cost (B/C) Ratio	Location	Safety Concern(s)	Countermeasures Description	Estimated Cost
1	I-8	59.5 (Two pedestrian fatalities but signal may not be currently warranted)	Academy Ave. and Parlier Ave.	• 12 total collisions at this intersection. • 2 pedestrian involved accidents, both fatal. • Other collisions consist of rear ends (5), broadside (1), head-on (1), sideswipe (2) and hit object (1). • Causes of these accidents were mainly due to right of way conflicts or improper turns.	• According to the proposed Traffic Impact Analysis for the Proposed GP Amendment and Sphere of Influence Expansion to the City of Parlier study performed in March 8, 2009 this intersection is projected to meet Warrant 3 for traffic signals in 2030. A traffic signal will help with the high frequency of right of way and turning related collisions. • A new traffic signal should provide APS push buttons for pedestrian phases.	$550,625
2	I-4	13.5	Manning Ave. and Newmark Ave.	• 26 total collisions at this intersection. • 15 rear end collisions. • 7 sideswipe collisions. • Collisions mainly due to speeding and running of red light.	• Strip "SIGNAL AHEAD" for Manning Avenue EB approach lanes. • Update/improve signal timing with emphasis on yellow change time and red clearance times. • Install vehicle speed feedback signs.	$63,150
3	I-2	9.1	Manning Ave. and Mendocino Ave.	• 30 total collisions at this intersection. • 1 auto/pedestrian accident resulting in injury. • 62 year old Pedestrian at fault entering during conflicting vehicle phase. • 22 rear end collisions . • 4 rear ends due to running of red light. • 13 rear ends due to speeding.	• Install W3-3 Signal Ahead signage for Manning Avenue EB and WB approaches. • Strip "SIGNAL AHEAD" for lane #1 of Manning Avenue WB approach. Refresh existing lane #2 "SIGNAL AHEAD" striping. • Update/improve signal timing with emphasis on yellow change time and red clearance times. • Install vehicle speed feedback signs. • Upgrade existing pedestrian push buttons to current Audible Pedestrian Signal (APS) standards.	$93,875
4	I-1	6.4	Manning Ave. and Academy Ave.	• 25 total collisions at this intersection. • 9 Collisions due to running of red light. • 6 rear end collisions due to speeding.	• Install W3-3 Signal Ahead signage for Manning Avenue WB approach. • Update/improve signal timing with emphasis on yellow change time and red clearance times. • Coordinate with the County of Fresno to install W3-5(45MPH) or W3-5a(45MPH) speed reduction signs for the EB approach of Manning Avenue. (Note: This countermeasure may not apply if EB Manning Ave is 50 MPH and not 45 MPH like the WB approach). • Install vehicle speed feedback signs.	$58,850
5	S-2 (Option 2)	51	Parlier Ave. from Smyrna Ave. to Milton Ave.	• 6 collisions reported for this segment. • 2 were pedestrian involved accidents. • The segment is along the frontage of John C. Martinez Junior High School and there are concerns for student/pedestrian safety.	• Construct bulb out at both sides of the cross walk. • Update all existing school zone traffic control signage and striping to current CAMUTCD standards.	$127,175
6	I-9	2.4	Parlier Ave. and Whitener Ave.	• 10 total collisions at this intersection. • 5 pedestrian involved accidents. • 5 rear end collisions. • Majority of collisions due to speeding or right-of-way conflicts.	• Add "STOP AHEAD" striping for the NB and SB approaches. • Add W3-1 advance warning signs to all approaches. • Install vehicle speed feedback signs.	$72,050
7	I-5	1.8	Manning Ave. and Zediker Ave.	• 16 total collisions at this intersection. • 10 rear end collisions mainly due to speeding running of red light. • 2 right of way accident.	• New traffic signal improvements have been installed recently. The intersection should continue to be monitored to assess any changes to its crash frequency and crash types. • Coordinate with the County of Fresno to Upgrade existing Manning Avenue WB approach "REDUCED SPEED AHEAD" signs to W3-5(45MPH) or W3-5a(45MPH) signs. • Coordinate with the County of Fresno to Upgrade existing Manning Avenue WB approach W3-3 signs to Type 1 pole mounted W3-3 flashing beacon signs similar to EB approach at Manning Avenue and Academy Avenue. (S10) • Install vehicle speed feedback signs.	$159,325
8	I-3 (Option 2 Single LT)	0.7	Manning Ave. and Whitener Ave.	• 3 accidents recorded for this intersection for this study period involving right-of-way conflicts. • There have been safety concerns regarding NB vehicles making left turns through a high-volume Manning Avenue. The total width crossed to make this movement is approximately 53 feet (two through lanes, one left turn and a median width).	• Modify existing median a single direction left turn for WB Manning Avenue only.	$154,358

Priority (Based on B/C Ratio)	Intersection or Segment ID	Benefit/Cost (B/C) Ratio	Location	Safety Concern(s)	Countermeasures Description	Estimated Cost
9	I-3 (Option 1 Dual LT)	0.5	Manning Ave. and Whitener Ave.	• 3 accidents recorded for this intersection for this study period involving right-of-way conflicts. • There have been safety concerns regarding NB vehicles making left turns through a high-volume Manning Avenue. The total width crossed to make this movement is approximately 53 feet (two through lanes, one left turn and a median width).	• Modify existing median to a dual direction (major only EB & WB) left turn design similar to that at Manning Avenue and Madsen Avenue.	$195,753
10	I-7	0.5	Young Ave. and Mendocino Ave.	• 4 total collisions at this intersection. • 2 pedestrian involved accidents. • 2 rear end collisions due to improper turns.	• Perform a sight distance triangle study and restrict parking on both sides of the road accordingly with no parking signs and painted red curbs. Clear or modify median landscaping within sight distance triangle.	$30,000
11	I-10	0.4	Parlier Ave. and Avila Ave.	• 10 total collisions at this intersection. • 5 pedestrian involved accidents. • 5 rear end collisions. • Majority of collisions due to speeding or right-of-way conflicts.	• Add "STOP AHEAD" striping for the NB and SB approaches. • Add W3-1 advance warning signs to all approaches. • Install vehicle speed feedback signs.	$72,050
N/A	I-6	N/A	Tuolumne St. and Erica Ave.	• No collisions reported for this intersection for this study period. • Concerns on existing school pedestrian crossing at this intersection. Existing parking along the north and south sides of Tuolumne Street causes sight distance issues for children entering and crossing the road. The existing horizontal curve alignment of the eastbound approach compounds the sight distance issue.	• Crosswalk Option 1: Perform a sight distance triangle study and restrict parking on both sides of the road accordingly with no parking signs and painted red curbs. • Crosswalk Option 2. Construct bulb out at the south side of the cross walk. • Update all existing school zone traffic control signage and striping to current CAMUTCD standards. • Install solar powered RRFB pedestrian crossing assembly. • Upgrade curb ramps at the intersection (3 total).	(Option 1) $10,000 (Option 2) $103,005
N/A	S-1	N/A	Tuolumne St. and Erica Ave.	• No collisions reported for this intersection for this study period. • Concerns on existing school pedestrian crossing at this intersection. Existing parking along the north and south sides of Tuolumne Street causes sight distance issues for children entering and crossing the road. The existing horizontal curve alignment of the eastbound approach compounds the sight distance issue.	• Crosswalk Option 1: Perform a sight distance triangle study and restrict parking on both sides of the road accordingly with no parking signs and painted red curbs. • Crosswalk Option 2. Construct bulb out at the south side of the cross walk. • Update all existing school zone traffic control signage and striping to current CAMUTCD standards. • Install solar powered RRFB pedestrian crossing assembly. • Upgrade curb ramps at the intersection (3 total).	(Option 1) $10,000 (Option 2) $103,005

RECOMMENDED AMENDMENTS TO POLICIES, REGULATIONS, & STANDARDS

As summarized in **Appendix A: Land Use and Zoning Analysis** there are some City policies which prioritize vehicular speed and efficiency over the goal of pedestrian and bicyclist safety. Specific amendments to City documents will help increase road user safety. All recommendations have been organized by document and are included below. The following recommendations should be considered by the City of Parlier as opportunities for amendment to the various documents that are presented.

PARLIER GENERAL PLAN

The following actions are recommended to help increase connectivity for pedestrian and bicycle users and improve road user safety:

1. Reassess the land use plan to ensure pedestrians and bicyclists are not separated from necessary goods and services by allowing commercial and service uses in proximity to residential uses and planning for sufficient, connected pedestrian and bicycle infrastructure.
2. Consider identifying areas of high pedestrian activity, such as areas around school sites, parks, or specific commercial areas (e.g., Fresno Street, portions of Manning Avenue) and develop policies that focus on prioritizing design features that promote pedestrian and bicyclist safety.

PARLIER ZONING ORDINANCE

The following amendments to the Zoning Ordinance are recommended to help increase road user safety:

1. Adopt a Boulevard Overlay along Manning Avenue that enhances the primary entrances to the City and requires a higher standard of bicycle and pedestrian amenities. Reevaluate the allowed use table to promote auto-oriented uses, such as gas stations and drive-throughs, at the entrances to the City. Focus uses that generate higher pedestrian activity, such as retail uses, in certain areas, such as the central portion of the Manning Avenue corridor.
2. Require multifamily residential developments to comply with the voluntary residential standards of the California Green Code for bicycle parking.
3. Provide allowances in the Zoning Ordinance for bicycle parking stalls in excess of minimum standards in-lieu of vehicle parking stalls.
4. Reduce and/or limit parking requirements for projects in areas where high pedestrian activity is expected or desired.
5. Amend commercial zone district setbacks to establish maximum front yard building setbacks where on-street parking is available, especially where wider sidewalks are appropriate and where high pedestrian-generating activity is concentrated.
6. Update the findings of approval required for land use permits so they equally weigh vehicular, bicycle, and pedestrian modes and focus on the safety of all users.
7. Require non-residential uses to provide for pedestrian connections within the development and to surrounding parcels and/or public rights-of-way.

PARLIER SUBDIVISION ORDINANCE

The following amendments to the Subdivision Ordinance are recommended to help increase and walkability:

1. Establish maximum block lengths of 1,320 feet for arterials and collectors and 440 feet for residential local streets.
2. Require justification for residential cul-de-sacs and blocks in excess of typical block lengths.
3. Require cul-de-sacs to provide a pedestrian connection when feasible, to an adjacent street.
4. Encourage street design that facilitates connections with existing and future streets.
5. Allow for alleys to be integrated into subdivision designs.
6. Consider implementing standards outlined in *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach*, published by the Institute of Transportation Engineers. The document includes specific standard recommendations related to street width, block length, and more.
7. Consider establishing an optional pre-application review process for subdividers to submit a proposal for planning staff to review consistency with General Plan policies and connectivity requirements.
8. Facilitate more direct pedestrian connections between residential planned land uses and the following land uses, where feasible:
    a. Commercial and office
    b. Schools
    c. Parks

    These connections help shorten the overall length of trips as traffic is dispersed on local streets rather than directed entirely onto main thoroughfares.

PARLIER STANDARD SPECIFICATIONS

The following amendments to the Standard Specifications are recommended to help increase road user safety and walkability, specifically for non-vehicular modes:

1. Consider implementing standards outlined in *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach*[3], published by the Institute of Transportation Engineers. The document includes both process considerations, such as testing designs, as well as specific standard recommendations related to target speeds, street width, block length, and more.
2. Add street standards that accommodate planter strips or tree wells between the sidewalk and the paved area to buffer the pedestrian area from vehicular traffic.
3. Provide an exceptions process that can facilitate pedestrian-friendly designs that are not otherwise accommodated by the standard drawings.
4. Modify tree well standards to establish minimum and maximum spacing requirements to provide for a continuous tree canopy when fully mature.

[3] *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach* was developed by the Institute of Transportation Engineers to provide practical guidelines for the design of major urban streets in a way that promotes their use by all road users, including pedestrians and bicyclists. It focuses on how to find context specific design solutions that consider the local context.

5. Modify streetlight standards to require lamps with a Color Rendering Index (CRI) value of at least 80, as they produce more accurate colors, aiding in nighttime visibility as promoted by guidelines on Crime Prevention Through Environmental Design (CPTED).
6. Modify streetlight standards to require lamps with a Color Correlated Temperature (CCT) of approximately 2,700 to 3,000 Kelvin.
7. Adopt a streetlight standard that includes the provision of pedestrian-scale lighting, for use in Boulevard Overlay areas or other pedestrian activity areas where pedestrian activity is greatest. These streetlights should be mounted at a pedestrian-scale height and spaced accordingly.
8. Modify curb return standards, where appropriate, to provide for bulb-outs to reduce pedestrian crossing length where on-street parking is required. Where on-street parking is not provided, reduce curb radius to increase turning radius to reduce vehicle turning speeds.
9. Implement a speed table standard to allow pedestrians to cross mid-block without the need of ramps, in high-pedestrian, low-vehicular speed areas, or for extraordinarily long blocks.
10. Allow angled back-in parking stalls on public streets to reduce vehicle collisions when exiting and allowing easy trunk access.
11. Include a standard for directional pedestrian ramps.
12. Establish an industrial street standard and require sidewalks on both sides of the street.

FUNDING OPPORTUNITIES

Implementation of the identified countermeasures and design recommendations will require funding beyond the City's current resources. Various federal, State, and local grant programs that focus on increasing the use of active transportation and improving road safety conditions are available. While not an exhaustive list, an overview of select grant programs is included below. In addition to grant funding, there may also be opportunities for implementation of identified improvements as adjacent properties are developed.

FEDERAL & STATE FUNDING SOURCES

Highway Safety Improvement Program (HSIP) Funding

The Fixing America's Surface Transportation Act (FAST) was signed into law on December 4, 2015. Under FAST, the Highway Safety Improvement Program (HSIP) was codified as Section 148 of Title 23, United States Code (23 U.S.C §148) to provide federal aid to states for the purpose of achieving significant reduction in fatalities and serious injuries on all public roads.

Various traffic safety countermeasures have been selected by Caltrans from the Countermeasures Clearing House database, which contains over 2,900 countermeasures based on their systemic approach, opportunity, effectiveness, and crash reduction modifiers (CRM) for various crash types to facilitate a fair and accurate comparison of project applications. The full HSIP countermeasures list and a more detailed breakdown of said countermeasures can be found in the Caltrans Local Roadway Safety Manual (LRSM).

Funding amounts range from $100,000 at a minimum to $10 million at a maximum.

To meet the criteria of the minimum $100,000 reimbursement amount, similar countermeasures suggested in the Plan from different intersection or roadway segments may be combined into a single systemic improvement project.

The Active Transportation Program (ATP)

The Active Transportation Program (ATP) is a state grant program that was created by Senate Bill (SB) 99 and Assembly Bill (AB) 101 to advocate for increased use of active modes of transportation. The ATP consolidates existing federal and state transportation programs, including the Transportation Alternatives Program (TAP), Bicycle Transportation Account (BTA), and State Safe Routes to School (SRTS), into a single program. SRTS encourages bicycling and walking, especially for children traveling to school and for residents of disadvantaged communities. SRTS considers projects that directly increase safety and convenience for public school students to walk and/or bike to school. SRTS infrastructure projects and traffic education and enforcement activities must be located within two miles of a public school or within the vicinity of a public-school bus stop. Funding priority opportunities are also available for areas qualifying as a Disadvantaged Community.

DISADVANTAGED COMMUNITIES

For a project to qualify for priority funding, the project must clearly demonstrate a benefit to a community that meets any of the following criteria:

The community's median household income is less than 80 percent of the statewide median.

An area identified as among the most disadvantaged 25 percent in the state according (CalEnviroScreen) scores.

At least 75 percent of public-school students in the project area are eligible to receive free or reduced-price meals under the National School Lunch Program.

Road Repair and Accountability Act of 2017 (SB1))

Senate Bill (SB) 1, also known as the Road Repair and Accountability Act of 2017, was signed into law on April 28, 2017. The legislation invests $54 billion over the next decade to improve road conditions, freeways, and bridges across California. Revenues collected through SB1 funding program address the maintenance backlog on the State's road system and improve road conditions while fairly distributing the economic impact of increased funding. Of these revenues, approximately $26 billion is allocated for cities and counties.

Surface Transportation Block Grant (STBG)

Surface Transportation Block Grant (STBG) funds are reimbursable federal aid funds, subject to the requirements of Title 23 of the United States code. STBG provides flexible funding that may be used for projects to preserve and improve conditions on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals.

Eligible costs include preliminary engineering, right-of-way acquisition, capital costs, and construction costs associated with an eligible activity.

Transportation Development Act (TDA) Article 8 and/or Article 3.

The Transportation Development Act (TDA) consists of two major sources of funding for public transportation: the Local Transportation Fund (LTF) and the State Transit Assistance Fund (STA). As the Regional Transportation Planning Agency (RTPA), Fresno COG administers the funding. These funds are allocated to member agencies based on population, taxable sales, and transit performance.

LOCAL FUNDING SOURCES

Measure C (Pass-Through)

Measure C was originally passed by voters in 1986 and established a half-cent sales tax with funds allocated for improving Fresno County's transportation system. In 2006, Fresno County voters passed a 20-year extension of this program. Planning and implementation of the Measure C program is carried out by Fresno Council of Government (FCOG) while the Fresno County Transportation Authority (FCTA) oversees program implementation. Funds from Measure C are allocated to the following programs:

- Local Transportation Program ($593.6 million). This program maintains and improves local street and roads by paving sidewalks and repairing potholes.
- Regional Transportation Program ($520.8 million). This program's goal is to expand mass transit programs, reduce reliance on automobiles, and improve air quality.
- Regional Public Transportation System ($412.1 million). This program improves freeway interchanges, add lanes, increases safety, and improves major commute corridors.
- Alternative Transportation Program ($102.5 million). This program has assisted in consolidation of county rail lines.
- Environmental Enhancement Program ($59.8 million). This program's goal is to improve air quality and the environment. Project have included school bus replacement and transit-oriented infrastructure for infill development.
- Administration and Planning Program ($59.8 million). Tis funding provides the resources necessary to administer the programs under Measure C.

City of Parlier General Funds

For those improvements that are not eligible for a specific funding program or that would not be implemented in conjunction with a proposed development project, the City may allocate dollars from the general fund.

SECTION VI: MANNING AVENUE DESIGN CONCEPTS

Manning Avenue functions as both a regional roadway and arterial within the City of Parlier. The Parlier General Plan directs much of the City's future growth and development to occur south of Manning Avenue, increasing the need for adequate and safe connections across the roadway. As such, design concepts in support of enhanced pedestrian and bicyclist safety must balance the needs of both motorists and non-motorist road users while reducing overall travel speeds.

APPLYING DESIGN CONCEPTS

The design concepts presented serve as a basis for future improvements; however, they are not an exhaustive list of all options available. The design concepts proposed under this section serve as guidelines for potential improvements and do not reflect implementation-ready recommendations. Many of the recommendations identified can be implemented individually or as a group. However, it is important to consider that individual improvements constructed in isolation may be less effective than those implemented in conjunction with other improvements working toward the same goal. Potential improvements not covered in this document that are in alignment with the street design goals and concepts set forth by the Plan and the community goals for the City of Parlier should not be precluded from future consideration.

While the concepts and diagrams included in this Plan are not implementation-ready designs, they may serve as a resource when developing plans for future street improvements, ensuring that public works projects enhance the safety, connectivity, walkability, and placemaking of the community.

INTERIM DESIGN STRATEGIES

Capital construction projects often require a lengthy and complex implementation process. Securing financing, ensuring regulatory compliance, and construction timetables are challenges that may hinder successful implementation. It can also be difficult for cities to meet the needs of a community as quickly as those needs develop. Small-scale, interim measures can often be implemented more quickly and be more flexible in their ability to meet changing needs. In addition, cities can also use interim strategies to test and evaluate the effectiveness of their longer-term goals in real time, thereby ensuring a better final product.

Interim measures, such as those identified in **Figures 12** through **15**, may be considered as attainable, viable improvements which can be developed in the short-term prior to designing and fully implementing a longer-term strategy. Interim measures, if applicable, should be considered based on the overall objective for the improvement and appropriateness for the specific location.

ZONE DESCRIPTIONS

To facilitate a balanced approach to future improvements, Manning Avenue has been divided into three primary zones: a Gateway Zone, a Transition Zone, and a Pedestrian Zone. Each zone prioritizes varying modes of transportation differently, in alignment with planned and existing land uses, development potential, and roadway function. A key goal with all proposed enhancements is to reduce the travel speed in support of safety, connectivity, walkability, and placemaking. See **Figure 11** for the proposed locations of each zone along Manning Avenue.

GATEWAY ZONE

The Gateway Zone focuses on Manning Avenue as the main traffic corridor into and out of the City. It is characterized by auto-serving land uses balanced with walkable and bikeable infrastructure promoting active transportation methods. This zone is proposed for the areas on Manning Avenue between Academy and Milton Avenues and between J Street and Zediker Avenue. The target travel speed in this zone is 45 miles per hour.

Compatibility between land uses, pedestrians, bicyclists, and automobile traffic is facilitated through proposed roadway enhancements, including 12-foot sidewalk widths, street trees planted at approximately 60 feet on center, and controlled intersections with enhanced pedestrian signals. In this zone, north/south pedestrian crossings would be enhanced with directional pedestrian ramps to reduce the crossing distance and increase visibility. To increase bicyclist safety, a class II bike lane with striping and signage would be introduced. Additionally, prominent gateway signage on Manning west of Academy and east of Zediker are also proposed and will serve as the primary visual indicator that automobile users are entering the City of Parlier. This signage is already planned for construction and will welcome people to Parlier as well as signal an increase in bicyclist and pedestrian activity ahead.

TRANSITION ZONE

The Transition Zone bridges the Gateway and Pedestrian Zones and starts at the intersection of Manning and Milton Avenues and extends approximately one-half block past Mendocino Avenue. On the eastern portion of Manning, the Transition Zone is located between Oritt Avenue and J Street. It is characterized by commercial uses and includes additional pedestrian safety features compared to the Gateway Zone. Target travel speeds in this zone are 40-45 miles per hour.

Improvements in this zone include 12-foot sidewalk widths, 11-foot shared bike and on-street parking lanes, and directional pedestrian crossing ramps. Street trees should be planted approximately 45 feet on center to improve shade cover. Other roadway enhancements may include tighter curb radii (45 feet) to require drivers to slow down as they make right-turn movements. Finally, using alternative materials or painted designs for crosswalks can draw attention to areas of higher pedestrian activity.

PEDESTRIAN ZONE

The Pedestrian Zone is characterized by residential, commercial, entertainment, and recreation uses, such as shops, restaurants, and cafes. It encourages active transportation methods and provides enhanced features for increased pedestrian and bicyclist safety. The Pedestrian Zone starts one-half block east of Mendocino Avenue and extends to Oritt Avenue. Target travel speeds in the Pedestrian Zone are 35-40 miles per hour.

Proposed design enhancements include 12-foot sidewalk widths, which provides space for pedestrian traffic in both directions and accommodates street furnishings and trees for added comfort and convenience. In this zone, street trees should be planted approximately 25 to 30 feet on center to further increase shade cover and contribute to placemaking. In addition to added comfort and convenience, street furnishings provide enhanced safety for pedestrians and contribute to a pleasant walking environment that encourages active transportation methods. Clearly distinguished bike lanes and bike boxes at major intersections further protect bicyclists and bring increased visibility to non-motorized road users. Street crossings prioritize pedestrians with directional ramps, pedestrian-leading signals, and automatic pedestrian crossing signals. Enhanced alternative materials or painted designs in the crosswalks draw attention to and increase awareness of pedestrian activity. On-street parking lanes also help visually narrow the right of way, making lanes appear smaller, thereby reducing travel speeds.

CONCEPTUAL STREET DESIGNS

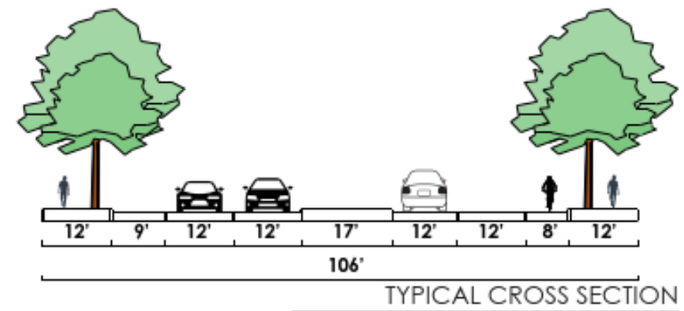
Figures 12 through **15** illustrate how the enhancements described in the Gateway Zone, Transition Zone, and Pedestrian Zone could be integrated into the existing right-of-way. An additional concept for a mid-block crossing has also been included to align with potential long-term improvements. The addition of mid-block crossings focuses on facilitating safe pedestrian and bicyclist crossings at key locations, regardless of which zone it is placed in. Each figure includes a typical intersection plan and street section with appropriate dimensions along with a description of each proposed enhancement. Additional background and examples of the street design elements proposed can be reviewed in **Appendix B: Street Improvement Descriptions.**

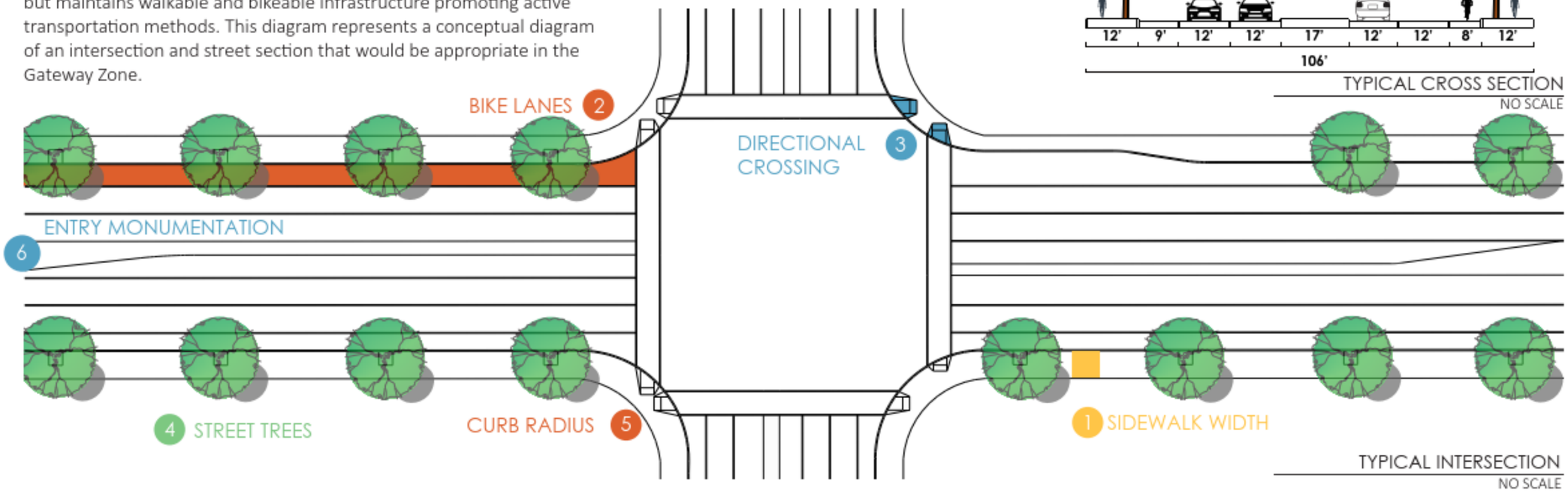
Figure 11: Manning Avenue Zone Diagram

Figure 12

GATEWAY ZONE

The Gateway Zone serves as the entrance and exit to the City of Parlier. It is characterized by commercial uses oriented towards vehicle traffic, but maintains walkable and bikeable infrastructure promoting active transportation methods. This diagram represents a conceptual diagram of an intersection and street section that would be appropriate in the Gateway Zone.





1 SIDEWALK WIDTH

Increased sidewalk width, in this instance 12', provides ample space for pedestrian traffic in both directions and street furnishings and trees that increase safety and enjoyment of the area.

2 BIKE LANES

Designated and striped bike lanes provide a space on the road for bicyclists and brings attention to the bicycle activity in the area. Signs also note the beginning and end of the bike lane in Parlier.

3 DIRECTIONAL CROSSING

Directional pedestrian ramps consist of two ramps, each one pointing directly into the street that will be crossed, reducing the distance of the crossing and increasing visibility.

4 STREET TREES

Trees placed between the sidewalk and the street provide shade cover and contribute to place-making. In this instance, trees placed 60' apart improve shade cover and provide a buffer between street traffic and pedestrians.

5 CURB RADIUS

A tighter curb radius, in this instance 45', requires drivers to decrease speed to make the turn.

6 ENTRY MONUMENTATION

Distinct entry monumentation signals the entry to Parlier and the increased pedestrian and bicyclist activity that accompanies the services and residences along Manning Avenue.

ADDITIONAL SAFETY FEATURES

A PEDESTRIAN SIGNALS

Consistent and automatic pedestrian signals promote active transportation. Pedestrian signals should also provide auditory feedback.

B ADDITIONAL SIGNAGE

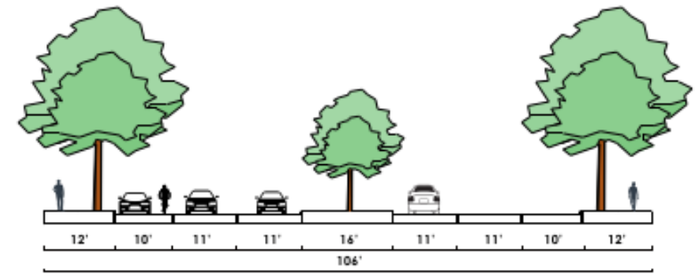
"Signal ahead", "reduced speed ahead", and vehicle speed feedback signage alerts drivers to upcoming traffic features.

vectors from Vecteezy.com

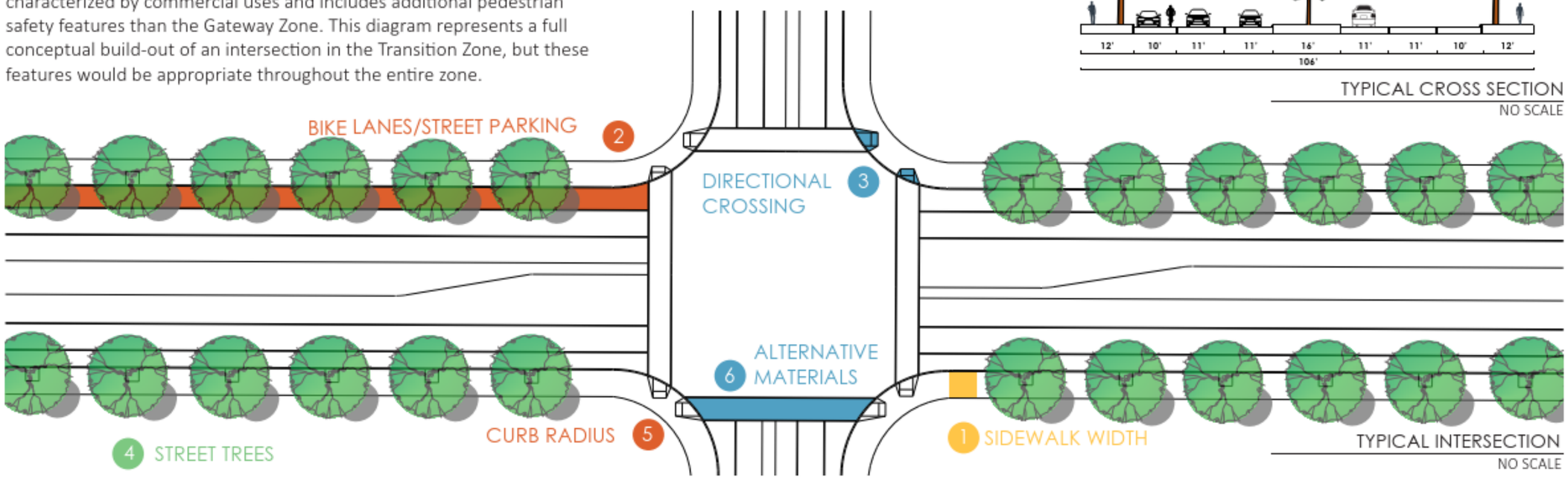
Figure 13

TRANSITION ZONE

The Transition Zone bridges the gateway and pedestrian zones. It is characterized by commercial uses and includes additional pedestrian safety features than the Gateway Zone. This diagram represents a full conceptual build-out of an intersection in the Transition Zone, but these features would be appropriate throughout the entire zone.



TYPICAL CROSS SECTION
NO SCALE



TYPICAL INTERSECTION
NO SCALE

1 SIDEWALK WIDTH

Increased sidewalk width, in this instance 12 feet, provides ample space for pedestrian traffic in both direction and street furnishings and trees that increase safety and enjoyment of the area.

2 BIKE LANES/STREET PARKING

Wide shared bike and street parking lanes narrows the visual lane for drivers, reducing driving speeds. They also provide space for bicyclists and bring attention to the high volume of bicycle activity in the area.

3 DIRECTIONAL CROSSING

Directional pedestrian ramps consist of two ramps, each one pointing directly into the street that will be crossed, reducing the distance of the crossing and increasing visibility.

4 STREET TREES

Trees placed between the sidewalk and the street provide shade cover and contribute to place-making. In this instance, trees placed 45' apart improve shade cover and provide a buffer between street traffic and pedestrians.

5 CURB RADIUS

A tighter curb radius, in this instance 45', requires drivers to slow down further to make the corner turn.

6 ALTERNATIVE MATERIALS

Using alternative materials or creatively-painted designs for crosswalks can draw attention to areas of higher pedestrian activity.

ADDITIONAL SAFETY FEATURES

A PEDESTRIAN SIGNALS

Consistent light signal timings and automatic pedestrian signals promote active transportation. Pedestrian signals should also provide auditory feedback.

B ADDITIONAL SIGNAGE

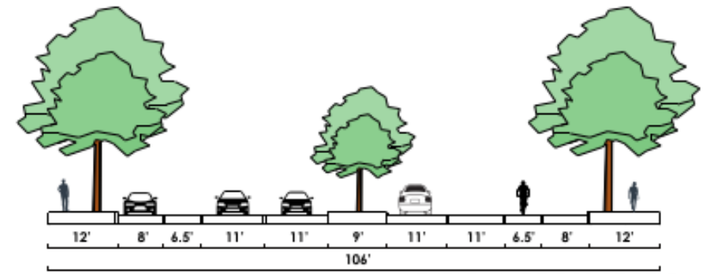
"Signal ahead", "reduced speed ahead", and vehicle speed feedback signage alerts drivers to upcoming traffic features.

vectors from Vecteezy.com

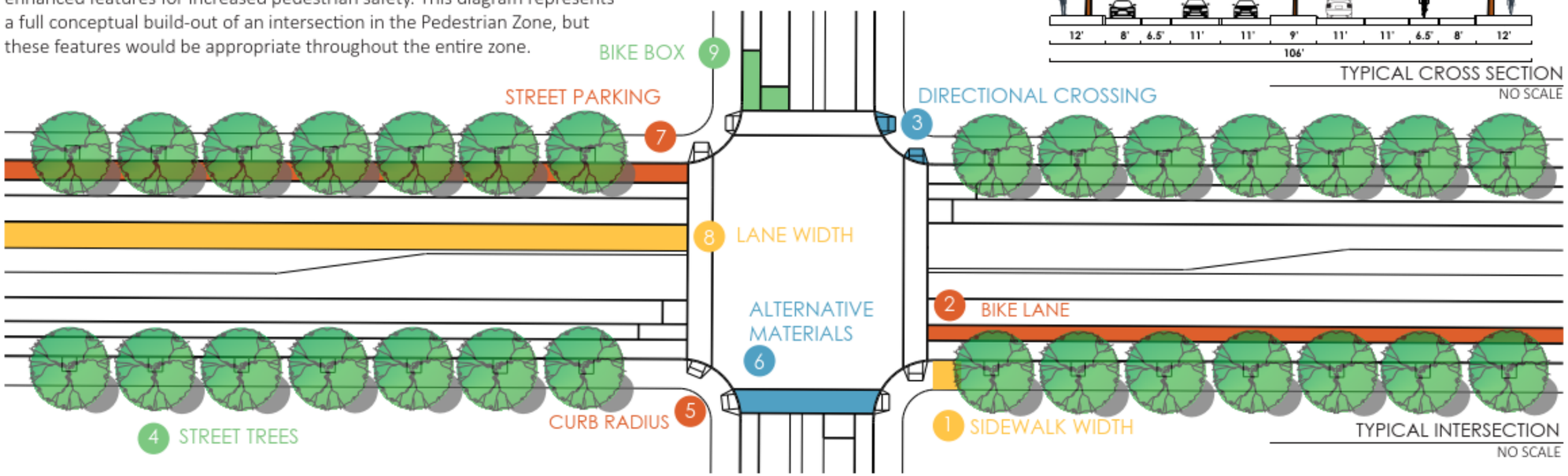
Figure 14

PEDESTRIAN ZONE

The Pedestrian Zone is characterized by commercial, entertainment, and recreation uses. It encourages active transportation methods and provides enhanced features for increased pedestrian safety. This diagram represents a full conceptual build-out of an intersection in the Pedestrian Zone, but these features would be appropriate throughout the entire zone.



TYPICAL CROSS SECTION
NO SCALE



TYPICAL INTERSECTION
NO SCALE

1 SIDEWALK WIDTH

Increased sidewalk width, in this instance 12', provides ample space for pedestrian traffic in both directions and street furnishings and trees that increase safety and enjoyment of the area.

2 BIKE LANES

Designated and striped bike lanes provide a space on the road for bicyclists and brings attention to the bicycle activity in the area. Signs also note the beginning and end of the bike lane in Parlier.

3 DIRECTIONAL CROSSING

Directional pedestrian ramps consist of two ramps, each one pointing directly into the street that will be crossed, reducing the distance of the crossing and increasing visibility.

4 STREET TREES

Trees placed between the sidewalk and the street provide shade cover and contribute to place-making. In this instance, trees placed 25' apart improve shade cover and provide a buffer between street traffic and pedestrians.

5 CURB RADIUS

A tighter curb radius, in this instance 25', requires drivers to decrease speed to make the turn.

6 ALTERNATIVE MATERIALS

Using alternative materials or creatively-painted designs for crosswalks can draw attention to areas of higher pedestrian activity.

7 STREET PARKING

On-street parking narrows the visual lane width for drivers, making lanes appear smaller, thereby reducing travel speeds.

8 LANE WIDTH

Narrow lanes promote slower driving speeds. In the pedestrian zone, 10-11' lane widths may be appropriate to encourage slower speeds.

9 BIKE BOX

Bike boxes allow bicyclists to move to the front of the intersection and move at the beginning of the light cycle, prior to motor vehicle movement.

ADDITIONAL SAFETY FEATURES

A PEDESTRIAN SIGNALS

Consistent and automatic pedestrian signals promote active transportation. Pedestrian signals should also provide auditory feedback.

B VEHICLE FEEDBACK SIGNS

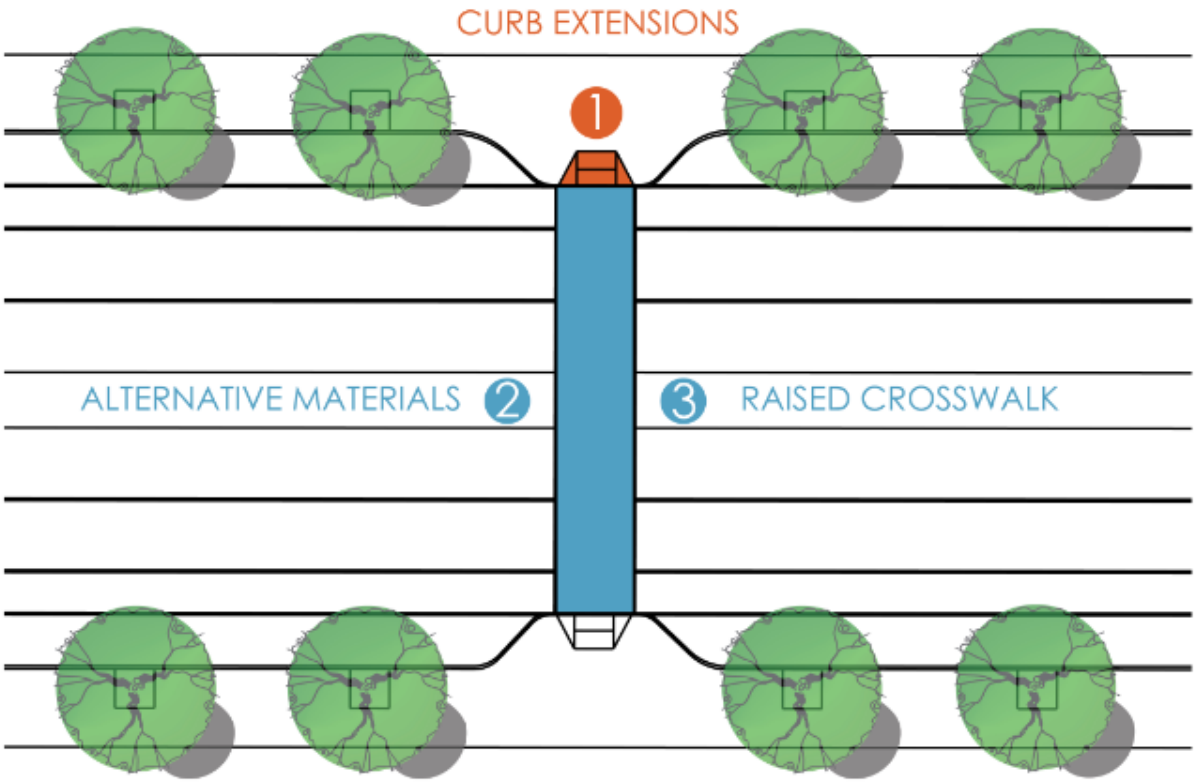
Install signs that relay speed information to drivers.

vectors from Vecteezy.com

Figure 15

MID-BLOCK CROSSING

Located within the Pedestrian Zone, the mid-block crossing splits the lengthy blocks and allows pedestrians to safely cross the street without being required to move to an intersection.



1 CURB EXTENSIONS

Curb extensions, or bulb-outs, extend the pedestrian ramp past the parking lane so pedestrians are more visible drivers and have a better line of sight of road traffic.

2 ALTERNATIVE MATERIALS

Using alternative materials or creatively-painted designs for crosswalks can draw attention to areas of higher pedestrian activity.

3 RAISED CROSSWALK

Raising the crosswalk to curb height removes the need for pedestrian ramps and acts as a speed bump, further slowing vehicle traffic.

ADDITIONAL SAFETY FEATURES

A PEDESTRIAN SIGNAGE

Flashing light beacons that can be activated by pedestrians with a push button alert drivers to pedestrian activity at the mid-block crossing.

B ADDITIONAL SIGNAGE

Vehicle speed feedback signage alert drivers when exceeding appropriate speeds.