COMPLETE STREETS UNVEILED:
CITY OF GUADALUPE COMPLETE STREETS PLAN

A Senior Project
presented to
the Faculty of the City and Regional Planning Department
California Polytechnic State University, San Luis Obispo

In Partial Fulfillment
of the Requirements for the Degree
Bachelor of Science

by

Sara J. Muse

June, 2014

© 2014 Sara J. Muse

APPROVAL PAGE

TITLE:	Complete Streets Unveiled: The History of Transportation in the United States and the City of Guadalupe Complete Streets Plan
AUTHOR:	Sara J. Muse
DATE SUBMITTED:	June 2014

Chris William Clark
Senior Project Advisor

Signature: _____ date: 6.4.14

Hemalata C. Dandekar
Department Head

Signature: _____ date: _____

APPROVAL PAGE
(with grade)

TITLE:	Complete Streets Unveiled: The History of Transportation in the United States and the City of Guadalupe Complete Streets Plan
AUTHOR:	Sara J. Muse
DATE SUBMITTED:	June 2014
GRADE:	A

Chris William Clark
Senior Project Advisor

Signature

6.4.14
date

Hemalata C. Dandekar
Department Head

Signature

date

Table of Contents

List of Figures

List of Tables

List of Charts

Chapter 1: Acknowledgements

I wish to express my sincere appreciation to all those who helped me pursue my passion for transportation planning and successfully conduct this study. I would like to mention the following persons:

Chris William Clark, Lecturer at Cal Poly San Luis Obispo, for his unconditional support, humor, and assistance with this project.

Aleida Andrino-Chavez, Transportation Planner at the City of Albany, for introducing me to transportation planning and encouraging me to pursue the field as a career path.

Kittelson and Associates, for believing in my passion for transportation planning and extending the invitation to be a Transportation Analyst in the Sacramento office.

This page is intentionally left blank.

Chapter 2: Executive Summary

Streets are avenues for everyone. They are how we get from place to place; they are areas where people do business; they are places where communities congregate; and they are where children and families play. Streets should aim to serve as connective tissue from one amenity to another by prioritizing all modes of transportation. Complete streets advocate safe, consistent, and compact street networks that serve all members of the street. This professional report will unveil the secrets behind the street network by exposing the trend of complete streets and their influence in the future of transportation planning in the United States.

Guadalupe, California is in need of a transportation network face-lift. The City, located in northern Santa Barbara County, is a small 1.31 square mile town with 7,080 residents. The Circulation Element, which was last updated in 2002, has identified the network of streets and highways as the City's most important transportation facility. In order to fulfill the vision in the Bicycle and Pedestrian Master Plan (2012), I crafted the Guadalupe Complete Streets Plan to mandate the safety of all transit modes and transform Guadalupe into a sustainable and bicycle-pedestrian friendly environment.

This expository report is based on my interest to pursue my passion for transportation methodology, planning, and engineering. The City of Guadalupe, California was chosen because of its close proximity to San Luis Obispo and need for a sustainable transportation plan that promotes the safety of non-motorized travelers. The Complete Streets Plan for the City of Guadalupe, located in Appendix A, is intended to serve as a guidebook for any transportation-related projects or programs in the future to

mandate the safety, convenience, and amenities of all users of the streets, including bicyclists, pedestrians, children, and those with disabilities.

This senior project report includes four chapters: Introduction, Literature Review, Case Studies, and Background Information on the City of Guadalupe. The City and Regional Planning Graduate Students from the Community/Regional Planning Studio (CRP-554) prepared the City of Guadalupe General Plan update, which included a Field Survey of all streets in Guadalupe. This report, located in Appendix B, was a vital factor in creating the Complete Streets Plan.

The Literature Review chapter provides a timeline of transportation trends in the United States that led to the idea of Complete Streets. It also graphically lays out the faults in engineering that caused urban sprawl and the consequences of living in suburban environments that prioritize automobile dependency.

The subsequent section focuses on four case studies that demonstrate effective, unique, and innovative Complete Streets Plans. The City of Albany, City of Indianapolis, Town of Littleton, and the Grand Boulevard Initiative have been successful in crafting complete streets policies to make their communities safer for non-motorized travelers in all transportation-related projects. Located at the end of each case study is a table that outlines elements from the respective plans to be included in the Guadalupe Complete Streets Plan.

The final chapter dives into the history of Guadalupe and exposes its agricultural roots and disproportionate amount of low-income households. The chapter provides a detailed overview of the 2002 General Plan, focusing primarily on the Land Use and Circulation Elements.

Chapter 3: Introduction

Complete streets are commonly known as safe, comfortable, and accessible streets for everyone, including the elderly, those with disabilities, children, and all users of transportation. Complete streets policies and ordinances are guidebooks to planning for design of all future transportation-related projects for a city or county.

The popularity of the automobile has caused a gap between convenience and necessity in the United States. In a study conducted by Smart Growth America, "in the decade from 2003 through 2012, more than 47,000 people died while walking on our streets. That is 16 times the number of people who died in natural disasters during the same ten years" (Dangerous by Design, 2014, pg. 1). This is a human-induced epidemic that already has a solution: complete streets design. Complete streets reduce this gap by prioritizing alternative forms of transportation and inviting people to explore the world outside of their cars.

Complete streets save lives by requiring local jurisdictions and states to prioritize the needs of all street users. There is not an official federally mandated complete streets policy/ordinance; however, Caltrans adopted Deputy Directive-64-R1 in 2008, which states, "The Department provides for the needs of travelers of all ages and abilities in all planning, programming, design, construction, operations, and maintenance activities on the State Highway System" (Ratekin, 2012, pg. 2).

Other than encouraging people to get out of their cars, complete streets have a variety of additional benefits. Complete streets design reduce pedestrian and bicyclist deaths, eliminate greenhouse gases, improve human health, and strengthen the overall environment of a city. According to Smart Growth America, nearly 53 percent of the

45,284 pedestrian deaths over the past decade occurred on arterial roadways (Dangerous by Design, 2014, pg. 11). The United States Department of Transportation published a statement in response to this statistic: “The establishment of well-connected walking and bicycling networks is an important component for livable communities, and their designs should be a part of federal-aid project developments”. By proposing road diets, lower speed limits, bicycle lanes and wider sidewalks, complete streets design improves safety. By recognizing this fact, those communities that wish to promote health and safety hire planners and engineers to construct complete streets plans to mandate safer streets. This study exposes the faults in the history of United States transportation planning and unveils the benefits of complete streets design.

Chapter 4: Review of Existing Literature

Transportation makes distant sites more accessible and creates more opportunities for developable land. Households and businesses are able to purchase outer land more cheaply since not many people live in the area; therefore, the land value in sprawled areas is more affordable than inner-city establishments. People began moving outward because of the cheap prices that resulted in competition for suburban land. Agglomeration economies appear among complimentary land uses, causing land prices to further. Eventually these agglomerated communities take on the characteristics of central cities, except their failure to provide non-motorized transit options.

Transportation and land use are completely intertwined and influence one another in almost all respects. Jobs-housing balance, low transportation costs, changing lifestyle, and government policies demonstrate the relationship between transportation and land use (Nuworsoo, 2011). Jobs-housing balances proves the need for a sufficient number of jobs and housing in close proximity to one another. Low transportation costs are the total percentage of daily wages spent on work trip. Those commuting from sprawled areas to metropolitan cities have a higher transportation cost than those who use alternative forms of transportation. Changing lifestyle explains the desire some individuals have to live far from metropolitan cores. These people are willing to give up accessibility to jobs and other urban activities to obtain preferred housing. Government policies are the regulations that shape metropolitan patterns such as zoning, standards that call for wide streets, parking provisions, and fiscally motivated practices that limit development.

The strong relationship between transportation and land use has changed in the past few centuries due to advanced technological discoveries. There are four eras in the

history of United States transportation: Walking/Horse car Era, Electric Streetcar Era, Recreational Automobile Era, and Freeway Era. The Walking/Horse car Era (1800-1890) is best characterized by a circular city near-access in all directions. All city residents live within a 30-minute walk from the city center because walking is the dominant form of transportation. This dense environment makes it easy for people and activities to be in close proximity to one another. The next era is Electric Streetcar Era (1890-1920) which is most recognized by the creation of the electric traction model by Frank Sprague in 1888 (Nuworsoo, 2011). The streetcar created a swift transformation form the dense environment in the Walking/Horse car Era to a modern metropolis. The low fares made easy access possible for all residents and allowed people to distance themselves from downtown areas. The Recreational Automobile Era (1920-1945) made it possible to develop large parcels of cheap land away from trolley lines, resulting in urban sprawl and dispersed land uses. The last era, Freeway Era (1940-present), represents the advanced technological world we live in today where automobiles are a necessity for daily activities. These eras demonstrate how transportation has evolved over time due to technological advances and changes in human behavior. Although the current freeway era represents a sense of freedom and achievement, it poses the serious problem of urban sprawl.

Urban sprawl is a human-induced epidemic. The over-whelming abundance of shopping centers, suburban development, and congested highways in far proximity to one another are common factors of urban sprawl. Frumkin Howard, Lawrence Frank, and Richard Jackson, co-authors of the novel *Urban Sprawl and Public Health* describe sprawl as a problem that could permanently damage human health and natural

environment (Frumkin, Frank and Jackson, 2004, pg. 11). Urban sprawl is a subset of World War II due to the increased population and economic prosperity.

World War II is the father of urban sprawl. Things returned normal after the war; soldiers came home and found jobs, the Baby Boomer population was formed, and the economy was vibrant. Families of all income levels made the decision to leave metropolitan centers to reside in single-family suburban neighborhoods. These suburbs were attractive to many from their exclusivity, large lot size, and low crime rates. Prior to World War II, the Federal Government advocated the expansion of suburban development by creating the Federal Housing Administration (FHA) in 1934 (Nuworsoo, 2011). The FHA prioritized single-family development over mixed-use since single-family homes generated more tax revenue. The government's support for suburban form created urban sprawl. Additionally, the City Beautiful Movement provoked the expansion of "the winding street" that is common in suburban areas (see Figure 1). This street type prioritizes automobiles and minimizes pedestrian and bicycle safety due to lack of signage, visibility, and crossings. Frederick Olmstead, the architect of urban sprawl, designed thousands of suburban cities in the late 1940's, all of which included curve roads, large lots, and automobile-friendly roads. Millions of American families

Figure 1: Winding Street

Source: Google Images

found suburban lots desirable to raise children and live a more secluded and private lifestyle.

William Manchester, a United States Historian, described life in the suburbs as prosperous and inviting for all families. “Families moving in [to suburban developments] found that their new friends were happy to help them get settled. Children in the suburbs exchanged toys and clothes almost as though they were group property. If little Bobby out-grew his clothes, his mother gave them to little Billy across the street” (Jarmul, 2006, pg. 1). In the 1960’s, more than half of the United States population lived in the suburbs (Nuworsoo, 2011). The popularity increased with the world-class transportation technologies that allowed people to travel into the city from their suburban homes. The transportation methods, although proved to be very effective, contributed to the biggest fault of suburban development: urban sprawl.

The downfall of the white-picket fence can be blamed on American’s dependence on motorized vehicles. In suburban developments, land uses are separated and require a car to get from one amenity to another. Suburban neighborhoods rarely have a continuous grid network to allow for the construction of complete streets. In order to minimize urban sprawl in these developments, complete streets are necessary. The term “complete street” is any road that prioritizes all forms of transportation, including pedestrian, bicycle, multi-modal, elderly persons, those with disabilities, and children. Local governments are responsible for promoting complete streets policies in their communities by purchasing right of ways and re-constructing streets to advocate alternative forms of transportation. Suburban developments have many opportunities to limit automobile usage due to their wide range of open space for construction.

Many large metropolitan centers were once sprawled, suburban environments that made the choice to limit automobile usage and promote complete streets. San Francisco and Toronto were once suburban developments that promoted urban sprawl; however, with planner's awareness to the detrimental health and environmental effects of sprawl, these metropolitan areas were transformed into areas with complete streets. Other large cities, such as Curitiba, Brazil, caught onto this trend as well.

In the 1700's, Curitiba was one of the most populated cultural, political, and economic centers in South America. The transformation from a suburban, cattle-grazing destination to a metropolitan core with 1,760,500 residents was only possible with a variety of transportation options (Friberg, 2000, pg. 3). In 1964, Mayor Ivo Azura discovered urban sprawl in Curitiba was becoming a problem too large to ignore any longer. Azura created the five "structural axes" for transportation methods to radiate from the center of Curitiba (Nuworsoo, 2011). The Bus Rapid Transit (BRT) line was created in Curitiba in 1974, known as the Rede Integrada de Transporte, with dedicated bus-only lanes, signal priority, and speeds reaching 30 mph (see Figure 2). The five axes allow residents in areas outside of the city to utilize the BRT line and abandon their cars. The rapid increase in public transportation from the BRT has contributed to a population increase of 500% and a decrease in automobile usage of 30% from 1964 (Nuworsoo,

Figure 2: BRT in Curitiba

Source: Google Images

2011). Providing an accessible and high-speed public transportation system not only limits urban sprawl, but also boosts economic growth and promotes dense housing and commercial development through mixed-use and live-work units. Curitiba's revolutionary transformation is an example for all suburban areas to consider. By providing public transportation and re-designing streets to be less auto-dependent and promoting alternate forms of transportation, cities become sponsors for sustainability and improved human and environmental health.

Sprawl produces asthma, cancer, and other fatal respiratory and cardiovascular diseases. "Sprawl leads to more driving, which increases overall vehicle emissions, which degrades air quality, with threatens [human] health" (Frumkin, 2004, pg. 65). Anthropogenic emissions, which are caused from emission omitted from vehicles, are human-induced greenhouse gases. These emissions are from a variety of sources, including lawn mowers, cars, and factories. Not only are these gases detrimental to the atmosphere, but also to human health. Anthropogenic gases have a direct influence on respiratory and cardiovascular diseases, including asthma, cancers, and premature mortality. Zoning standards limit the amount of land and reduces the amount of anthropogenic emissions – such as ozone particulate matter, nitrogen oxides, carbon monoxide, volatile organic compounds, and chemical pollutants – produced into the atmosphere (66). Suburban communities can become more environmentally-friendly by re-zoning commercial and single-family housing developments into mixed-use corridors.

Zoning and complete streets promote dense environments with reduced rates of anthropogenic gases. "The major impact of land use patterns on air pollution relates to mobile source emissions. Driving increases with sprawl and decreases with denser, more

compact development" (67). Since it has been proven that sprawl increases driving, it can be inferred that dense communities with complete streets would lower rates of driving. According to Smart Growth America, 73% of Americans feel they have no choice but to drive as much as they do because of the way their community is designed (2013, pg. 5). Fortunately there is a solution to this type of restrictive community design: complete streets. Complete streets provide a safe environment for all users of the street, including pedestrians, bicyclists, motorists, and public transportation users. From their emergence in the early 1970's, 48 States have established some type of complete streets language (Seskin, 2012). The trend is only improving and looking towards a brighter future for non-motorized transit users.

Transportation planning in the United States is in transition. Suburban development influenced engineers to prioritize the automobile, move traffic as rapidly as possible, and plan minimally for pedestrians and bicyclists. Things have changed. According to Michelle Ernst, more than 700,000 pedestrians were injured in the past decade, which is equivalent to a pedestrian being struck by a car or truck every seven minutes" (Ernst, 2011, pg. 2). Suburban developments made alternative forms of transportation expensive, unattractive and dangerous. In the 1970's, small groups began to advocate "routine accommodation", which considers the needs of cyclists and pedestrians in all transportation-related projects (Vorhees, 2013, pg. 1).

The increase in pedestrian and bicycle fatalities caused researchers to produce astounding statistics. From 2000-2009, more than 47,700 pedestrians were killed in the United States (Michelle, 2011, pg. 2). Nationwide, pedestrians account for 12% of total traffic deaths (2). Pedestrian fatalities are the third leading cause of death for children 15

and younger (21). These statistics have caused organizations, such as Smart Growth America, to advocate for complete streets policies that reduce the pedestrian and bicycle epidemic caused by the automobile addiction.

Cities are places where people congregate and do business together; thus, producing economic vitality and community cohesiveness. By being more space-efficient, dense cities have more opportunities for economic growth and prosperity. On the other hand, sprawled environments require transportation (i.e. cars or BRT lines) to get shoppers from one destination to another. A survey produced by Planetizen in Victoria, B.C., Canada found that 31% of users walked, 26% took public transit, 23% drove, and 17% biked to downtown (Litman, 2014, pg. 1). The study also found 74% of walkers, 68% of bicyclists, 67% of bus riders, and 65% of motorists spend more than $100 downtown in a typical month. This study demonstrates automobile users are among the minority in urban centers. The article also concluded that "money spent on vehicles and fuel generates fewer regional jobs and local business activity than expenditures on other goods, particularly restaurant meals, entertainment and professional services provided by downtowns and commercial districts" (Litman, 2014, pg. 2). By prioritizing alternative forms of transportation, cities not only become more sustainable, but also produce economic vitality and encourage residents to interact with the natural environment.

A federal complete streets policy is the net and final step to promoting the safety of non-motorized users. This policy would require each state to establish language promoting alternative forms of transportation in every transportation-related project. Advocacy groups, such as Smart Growth America, were created to promote complete

streets policies at all levels of government. Smart Growth America aims to show the United States government how adopting a complete streets policy would be beneficial for every American. Although there is no federally sponsored complete streets program, a number of organizations, such as the American Bikes and League of American Bicyclists, Transportation Equity Act of the 21st Century, and Caltrans have been working to create a federal policy. At a local level, complete streets policies require staff members to "routinely design and operate the entire right of way to enable safe access for all users, regardless of age, ability, or mode of transportation. This means that every transportation project will make the street network better and safer for drives, transit users, pedestrians, and bicyclists" (2013, pg. 28). Alternative modes of transportation create economic opportunities, make roads safer, and influence smart growth.

Caltrans adopted a complete streets policy in 2001 and 2008 and is working to promote a federally sponsored complete streets program. AB 1358 is also known as the Complete Streets Act of 2008 and requires "cities and counties, upon any substantial revision to their circulation elements, to plan for balanced multi-modal transportation network that meets the needs of all users of streets, roads, and highways, including motorists, pedestrians, bicyclists, persons with disabilities, seniors, movers of commercial goods, and users of public transportation" (Damien, 2008, pg. 1). Additionally, Caltrans Deputy Directive (DD-64) mandates the safety of pedestrians and bicyclists on all state highway projects in planning, construction, and maintenance. DD-64 and AB 1358 are successful measures that the federal government should reference to create a federal complete streets policy.

The United States Department of Transportation produced MAP-21 in 2012 to lower the amount of pedestrian and bicycle accidents on roadways. This policy is the closest USDOT has gotten to promoting a complete streets policy. MAP-21 requires agencies to account for safety on all city-wide roads, not just main arterials. Additionally, the policy encourages agencies to produce data explaining the cause of pedestrian and bicyclist deaths; thus, making people more aware of ways to minimize traffic accidents. Most importantly, the law mandates cities do more to promote safety for all transit users. The law is a step in the right direction; however, there are a number of ways it could be more effective. According to Stefanie Seskin, the law "fails to set performance targets for reducing deaths among non-motorized users separate from motorized users; requires agencies to meet only half of the four target; and permits [agencies] to set 'pass' levels that could allow deaths and injuries to increase" (Seskin, 2014, pg. 1). Fortunately, there are already members from Smart Growth America encouraging Congress to beautify and improve MAP-21 to make performance measures more effective. The future looks bright for a federal complete streets policy, and with the improvements added to MAP-21, the transportation industry in the United States could be one of the only to mandate non-motorized safety on all roads.

Chapter 5: Statement of Objectives & Methodology

5.1 Statement of Objectives

The history of transportation engineering outlined in Chapter 3 proves urban sprawl is caused by automobile dependency and can be fixed by adopting complete streets policies. Complete streets design have been proven to decrease the number of pedestrian and bicyclist deaths while improving community cohesiveness and reducing greenhouse gas emissions. To better understand the benefits of complete streets, this project will briefly examine four case studies to better understand the process of creating a complete streets plan. After careful review, the Complete Streets Plan for the City of Guadalupe was created. Each case study has unique elements that have already been included in Guadalupe's plan. This professional report will unveil the secrets behind the street network by exposing the trend of complete streets and their influence in the future of transportation planning in the United States.

5.2 Methodology

This project uses four case studies, one that focuses on community education and the other three representing appropriate language to craft a Complete Streets Plan. The Cal Poly San Luis Obispo Master in City & Regional Planning Community/Regional Planning Studio (CRP-554) General Plan Update for the City of Guadalupe complements the City of Guadalupe's Complete Streets Plan.

This page is intentionally left blank.

Chapter 6: Case Studies

The best complete streets policies are ones that incorporate community engagement, innovative design, clear vision for future development, and implementation measures. The National Complete Streets Coalition has identified 10 elements that are mandatory in comprehensive complete streets policy documents: 1) Includes a vision for how and why the community wants to complete its streets; 2) Specifies that "all users" includes pedestrians, bicyclists, and transit passengers of all ages and abilities, as well as automobile drivers and transit-vehicle operators; 3) Encourages street connectivity and aims to create a comprehensive, integrated, connected network for all modes; 4) Is adoptable by all relevant agencies to cover all roads; 5) Applies to both new and retrofit projects, including design, planning, maintenance, and operations, for the entire right-of-way; 6) Makes any exceptions specific and sets a clear procedure that requires high-level approval of expectations; 7) Directs the use of the latest and best design standards while recognizing the need for flexibility in balancing user needs; 8) Directs that complete streets solutions will complement the context of the community; 9) Establishes performance standards with measureable outcomes; 10) Includes specific next steps for implementing the policy. The City of Albany, City of Indianapolis, the Town of Littleton, and the Grand Boulevard Initiative have been successful in crafting complete streets policies to make their communities safer for non-motorized travelers in all transportation-related projects. This chapter is an overview of four case studies, including the City of Albany's Complete Streets Plan, the City of Indianapolis' Complete Streets Ordinance, the Town of Littleton Complete Streets Ordinance, and the Grand Boulevard Initiative Complete Streets Program.

6.1: City of Albany Complete Streets Plan

Albany, California is a small urban village in the East San Francisco Bay Area. The city is best known for its impressive educational system and geographic range of one and a half square miles. Home to 18,539 residents, the Albany has three arterial routes: San Pablo Avenue, Buchanan Avenue, and Solano Avenue (2010 Census). Albany has always stood out as a small town with immeasurable sustainability and safety.

Albany is a dense urban town with an active young and multimodal population. According to the Complete Streets Plan, one quarter of residents are under 18 years of age, 65% are between 20 and 64, and 10% are over 65 years of age. The community is extremely active and sustainable with 22% of work trips using public transportation (12). There are nearly 8,000 housing units with an average household size of 2.49 persons. Out of the 8,000 housing units, 7,401 are occupied.

The City is in the process of updating their 1992 General Plan for a 2035 vision. The 1990-2010 General Plan was adopted December 7, 1992 in consultation with Newman Planning Associates. The plan includes the following elements: Land Use, Circulation, Housing, Conservation, Recreation & Open Space, Community Health and Safety, and Implementation. The plan encompasses a 20-year time frame and lay out policies and programs to achieve the city's planning visions and goals. The plan assumes Albany will remain a predominately residential community, high prices for housing and buildable sites will remain, low and moderate housing supply will remain low, Solano and San Pablo Avenue will serve as Albany's commercial areas, and traffic on Interstate 80 and 580 will continue to increase by as much as 46% by 2000 (General Plan, 2005, pg. 5). The document has outdated language and standards; therefore, Barry Miller, FAICP

was hired in 2012 to update the General Plan. The 2035 General Plan will include expectations and ambitions for future development by leveraging existing civic infrastructure, and gaining input from residents and stakeholders through large community workshops and public forums.

Albany has been busy providing new and exciting plans for its residents and stakeholders, especially the Active Transportation Plan and Climate Action Plan. The ATP was developed by Fehr & Peers and approved April 2012. The policy aims to reduce emissions 25 percent below 2004 levels by 2020 (Active Transportation Plan, 2012, pg. 13). Additionally, the Climate Action Plan was adopted in April 2010, which aims to reduce greenhouse gas emissions by providing innovative transportation and land use strategies that support walking and bicycling. Objective TL-1 "Facilitate Walking and Biking" of the CAP aims to expand and enhance bicycle infrastructure throughout the City by adopting a Complete Streets Plan (23). Goal 2 of the Active Transportation Plan aims to "provide the citizens of Albany with a citywide network of trails and routes that are accessible to a wide variety of users including pedestrians, bicyclists, and the physically disabled" (89). The first action of this goal is to establish a Complete Streets Policy to mandate all transportation-related improvements include complete streets design.

In order to achieve the vision of the Active Transportation Plan, the City of Albany's Complete Streets Plan was adopted in June 2013. The goal of Albany's Complete Streets Plan (CSP) is "to help create safer, more comfortable, and aesthetically pleasing environment along San Pablo Avenue and Buchanan Street in the City of Albany, to accommodate all users and abilities" (Complete Streets, 2013, pg. 11). The

plan includes four detailed chapters: Background and Study Process, Public Design Charrette, Recommendations, and Implementation. According to an article written by Jay Holick in *The Examiner*, "The City of Albany Common Council finds that the mobility of freight and passengers and the safety, convenience, and comfort of motorists, cyclists, pedestrians – including people requiring mobility aids, transit riders, and neighborhood residents of all ages and abilities should be considered when planning and designing Albany's streets" (Holick, 2013, pg. 1). This shows Albany's commitment to providing safe and accessible routes for non-motorized travelers, including elderly and disabled. Prioritizing multimodal transportation by fulfilling the vision of the ATP shows Albany's desire to provide safe and convenient streets that are mandated by the complete streets plan.

The Background and Study Process chapter explains the purpose of the project, project timeline, existing conditions, and planning background. This project is intended to provide laypersons with the appropriate background information on complete streets in order for staff to effectively communicate in the public design and charrette process. Not only are complete streets used to provide comfortable access and travel for all users, but also to promote "an active, defined, retail-oriented, mixed-use neighborhood district; well-designed building facades and a mix of uses that help achieve a pedestrian-friendly environment; and appropriate transactions between public spaces such as sidewalks, and privately owned plazas, courtyards, and entries" (Complete Streets, 2013, pg. 11). Aesthetically pleasing streets with convenient access for all modes of transportation is an ideal goal for any complete streets policy.

The project timeline is broken up into five phases: design refinement, report draft, report second draft, final report, and final design and implementation (see Figure 3).

Figure 3: Albany Complete Streets Timeline

Source: City of Albany Complete Streets Plan

The project began December 2012 with a community design charrette, which was funded by the California Department of Transportation Planning Grant. The grant provided Albany with the Local Government Commission (LGC), Dan Burden of the Walkable and Livable Communities Institute, Nelson/Nygaard Consulting Associates Inc. and Wallace Roberts & Todd Design (WRT) to provide community planning and design experience to the document. Ban Burden and Nelson/Nygaard presented at the December community design charrette, three Traffic and Safety Commission meetings, and the final City Council meeting.

The CSP focuses on two important gateways in Albany: San Pablo Avenue and Buchanan Street. San Pablo Avenue (SR-123) runs north-south and Buchanan Street runs east-west (see Figure 4). San Pablo Avenue is part of the California state highway system and serves the majority of vehicle traffic in Albany. The corridor extends 1.07 miles within Albany and continues in neighboring cities including Berkeley, El Cerrito, and Oakland. Although San Pablo's posted speed limit is 30 mph, the 85th percentile is 40.1 mph. The corridor has two lines in each direction, sidewalks ranging between 10-13 ft, and no bicycle lanes. "The roadway is auto-oriented in nature, with numerous off-street parking lots; there are 88 driveways in this one-mile segment of roadway, approximately one every 115 feet" (13). This creates an unsafe and inconvenient environment for pedestrians and bicyclists. Figure 5 shows the unsignalized crosswalks, driveways, and bicycles utilizing sidewalks along San Pablo Avenue. There were 414 collisions on San Pablo Avenue in the last decade. The combination of the wide street with large travel lanes, lack of pedestrian crossings and signage, mature sidewalk foliage, and uneven sidewalks creates an unsafe and aesthetically unappealing environment on both streets (see Figure 6).

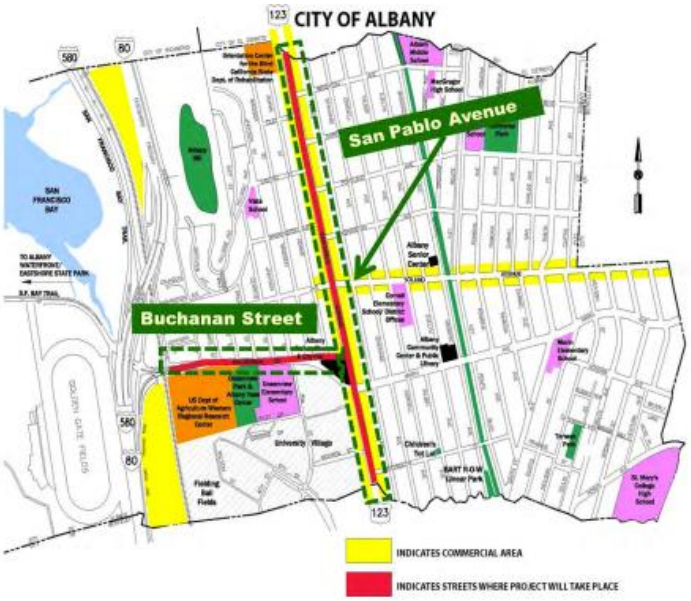


Figure 4: City of Albany Map

Source: City of Albany Complete Streets Plan

Figure 5: San Pablo Avenue in Albany

Source: City of Albany Complete Streets Plan

Figure 6: Width of San Pablo Avenue

Source: City of Albany Complete Streets Plan

Buchanan Street is the primary gateway into Albany from Interstate 80 and 580. The roadway carries over 30,000 vehicles per day, and despite its 25 mph speed limit, the 85th percentile is 30.4 mph (15). Unlike San Pablo, Buchanan serves a variety of land uses, including single-family homes, the United States Department of Agriculture (USDA), one park, one elementary school, and City Hall. The one-mile street has two lanes in each direction with three signalized intersections. Although the street is slightly smaller than San Pablo Avenue, there were 153 bicycle collisions in the past decade. The narrow sidewalks, poor paving conditions, and high traffic speeds contribute to the need to improve traffic conditions and provide multimodal amenities.

The Public Design Charrette chapter explains the three public outreach events, values, and general priorities gathered from residents and stakeholders. LGC and the City of Albany identified key leaders from the community to form the Community Advisory group to lead discussions in the charrette events. The first 'Kickoff' meeting was held Thursday, December 6, followed by the Walking and Design workshop on Saturday, December 8, and the Presentation of Plan Concepts meeting on Wednesday, December 12. These events allowed LGC and city staff to gain valuable input and ideas from participants. The result of these charrette events was community values and priorities:

values included community and neighborhood, child-friendly, families, schools, education, walkable, assessable streets; general priorities included trees, connections to regional bicycle trails, traffic calming, and cafes and outdoor places (23). The community engagement process allowed LGC/Albany staff to come up with a common vision for San Pablo Avenue and Buchanan Street.

Intersections for both streets emphasize safe, comfortable, and convenient pedestrian and bicycle improvements. In order to provide a single identity for each street, treatments include "paving for sidewalks and crosswalks, street lights, and street trees consistently along each corridor" (31). This is achieved by narrowing vehicle travel lanes to 11', installing curb extensions (bulb-outs), raised medians, signalized intersections, crosswalks at unsignalized locations, and providing unique gateway elements.

Both recommendations for San Pablo Avenue increase non-motorized traveler's sense of convenience and safety. Option 1 includes 13' sidewalks; 8' parking lanes on both sides; 11' shared bicycle-vehicle lane; 11' through vehicle lane; 10' turning lane and 4' median (see Figure 7).

Figure 7: Option 1 on San Pablo Avenue

Source: City of Albany Complete Streets Plan

The shared bicycle-vehicle lane would serve to provide parking for local business on San Pablo Avenue and includes green paint to increase visibility. The main difference between option 1 and 2 is the Class II bike lanes provided with option 2. Option 2 includes 13’ sidewalks; 7’ parking lanes on both sides; 5’ Class II bike lanes; two 11’ vehicle travel lanes; and 6’ medians. The recommendations also include a parking demand and change study, parking loss estimates, street specifics by intersection, and bicycle/pedestrian counts.

One of the important steps before adopting a complete streets plan is allocating funding sources for design and implementation. Albany identified nearly 15 programs to apply for funding, including the Alameda County Transportation Commission Sustainable Communities Technical Assistance Program (ACTC SC-TAP), Safe Routes to School Programs, and Measure B and Vehicle Registration Fee Funds. As it turns out, Albany recently received funding for all three programs listed above; therefore, design and implementation have been carried out in recent months.

The City of Albany has been successful in crafting a complete streets plan that fulfills goals from the Active Transportation Plan and Climate Action Plan while also creating a vision for all future transportation projects. The plan allows streets in the city to serve as a strong sense of place by providing consistent bike lanes, sidewalks, landscaping, and motor travel lanes. Albany went above and beyond in their community outreach by educating residents and stakeholders, creating community advisory groups, and hiring Dan Burden and Nelson Nygaard and Associates. The final recommendations for Buchanan and San Pablo help to build "regional connectivity, foster economic revitalization, promote community identity, and create a strong sense of place that serves both ecological and social functions" (Complete Streets, 2013, pg. 1). This effort demonstrates the city's commitment to providing safe and accessible routes for all future transportation-related projects.

Albany and Guadalupe are both small and ambitious cities that aspire to create an aesthetically pleasing environment for residents and travelers. Chart 1 below illustrates the elements from the City of Albany's Complete Streets Plan that should be considered when crafting the City of Guadalupe's Complete Streets Plan.

Albany Complete Streets Plan Elements	Relationship to Guadalupe Complete Streets Plan
1. Goal of Complete Streets Plan: To create safer, more comfortable, and aesthetically pleasing environment along San Pablo Avenue and Buchanan Street in the City of Albany, to accommodate all users and abilities	Guadalupe needs to establish effective language similar to Albany's Plan in order to demonstrate why Complete Streets are necessary and how they will benefit the community.
2. Chapter layout in Complete Streets Plan: Background and Study Process, Public Design Charrette, Recommendations, and Implementation	Guadalupe's Complete Street Plan should have a similar layout in order to cover all aspects of a Complete Streets Plan.
3. Community engagement events: Kickoff meeting, walking and design workshop, presentation of plan concepts	Although there will be no community events before the Guadalupe Complete Streets Plan is finished, there will be recommendations from Albany's engagement efforts.
4. Establishment of Community Advisory Committee	The Guadalupe Complete Streets Plan should establish a Community Advisory Committee to lead discussions in community engagement events.
5. Multiple recommendations for Complete Streets design	The Guadalupe Complete Streets Plan should establish at least two alternatives for Complete Streets design by utilizing streetscape improvements from Albany's Complete Streets Plan.
6. Identification of 15 programs for funding	Guadalupe's Implementation chapter should identify a number of funding sources for construction by researching organizations similar to the ones proposed for Albany.

Chart 1: Albany Compete Streets Plan Elements

Source: Sara Muse

6.2: City of Indianapolis Complete Streets Policy

Indianapolis, Indiana, also known as 'Indy', is the twelfth largest city in the United States, most recognized for its livability, and number one spot on Smart Growth

America's Complete Streets Policies of 2012. Home to 844,220 residents, this large metropolitan area has set the bar high for complete streets policy implementation measures. The city strives to be a livable community and a "well balanced and connected transportation system that allows for safe walking and biking and efficient public transportation" (Ordinance, 2012, pg. 1). Indy's Complete Streets Ordinance exhibits comprehensive policy language and serves as a model for cities considering complete streets programs and effective implementation measures.

Indianapolis went above and beyond in complete streets implementation and reporting measures. Smart Growth America recommends cities should establish unique ways to measure the success of policies and Indiana sets the bar high in this category. Not only does the ordinance mandate an annual report on ways the ordinance is successful in coordinating with the Public Works Department and Office of Sustainability, but also creates seven performance measures. These performance measures are evaluated four times a year with quarterly reports posted on-line. According to Section 431-806, the city shall measure the success of the Complete Streets policy using the following performance measures (Ordinance, 2013, pg. 3):

- Total miles of bike lanes
- Linear feet of new pedestrian accommodation
- Number of new curb ramps installed along city streets
- Crosswalk and intersection improvements
- Percentage of transit stops accessible via sidewalks and curb ramps (beginning June 2014)
- Rate of crashes, injuries, and fatalities by mode
- Rate of children walking of bicycling to school (beginning June 2014)

The performance measures are an effective tool to double-checking the ordinance is being implemented in the correct way. After six months of adoption, the City is required to post quarterly, six month, and annual reports on each of the above performance

measures to ensure transparency and overall public understanding of the street improvements. Similar to the City of Albany's public engagement process, Indy's Ordinance requires "every complete streets project shall include an educational component to ensure that all users of the transportation system understand and can safety utilize Complete Streets project elements" (4). Not only are these performance measures for the public, but the ordinance also requires an annual report for the City-County Council reporting overall progress. These benchmarks ensure the success of complete streets throughout the city and serves as a guide for cities considering innovative implementation measures.

Indianapolis Complete Streets Ordinance Elements	Relationship to Guadalupe Complete Streets Plan
1. Example of a Complete Streets Ordinance	When crafting the Guadalupe Complete Streets Plan, the language in the Indianapolis Complete Streets Ordinance should be considered
2. City goal to become a "well balanced and connected transportation system that allows for safe walking and biking and efficient public transportation"	This effective language should be used in the Guadalupe Complete Streets goal
3. Seven performance measures for implementation	Indianapolis is most recognized for its effective performance measures, such as total miles of bike lanes. Guadalupe should utilize these measures to create a strong implementation chapter
4. Quarterly, six month, and annual reports on performance measures	Guadalupe should measure the success of the performance measures by mandating quarterly, six month, and annual check-in reports for the City Council
5. Educational component to each Complete Streets project	When a new aspect of the Complete Streets Plan is implemented, Guadalupe should educate the community

Chart 2: Indianapolis Complete Streets Ordinance Elements

Source: Sara Muse

6.3: Town of Littleton Complete Streets Policy

The smaller, the better is an appropriate slogan for Littleton, Massachusetts. Awarded the number one spot on Smart Growth America's "Best Complete Streets Policies of 2013" it is no surprise that Littleton has some of the most impressive policy language in complete streets history. The Town of Littleton is home to 8,924 residents and is located approximately 25 miles northwest of Boston along Interstate 495 (2010 Census). The town prides itself on arts and culture, community cohesiveness, and safe streets. According to the 2010 Census, 27.1% of the population is under the age of 18, which inspired the Public Works Department to provide safe and consistent routes for people of all ages, especially children.

The Complete Streets Policy for the Town of Littleton is most recognized for its implementation and impressive language compared to its geographic size. There are two public high schools, two public elementary schools, and two private Montessori schools in Littleton. The Public Works Department recognized the inbalance between number of schools and unsafe routes children were using to access their educational facilities. The Massachusetts Bay Transportation Authority's (MBTA) train line runs through Littleton, providing residents with the option to travel outside of the town; however, this line is not commonly used by the youth. The policy identifies a vision to provide safe and accessible streets for all users of the roadway. "Furthermore, Complete Streets principles contribute toward the safety, health, economic viability, and quality of life in a community by providing accessible and efficient connections between home, school, work, recreation and retail destinations by improving the pedestrian and vehicular environments throughout communities" (Complete Streets Policy, 2013, pg. 1). This demonstrates Littleton's commitment to creating an environment where all users of all ages feel comfortable and safe using roadways within the town.

In addition to providing safe streets for all ages, Littleton plans to focus on developing a connected network through its implementation steps. According to the policy, Littleton plans to revise all planning documents including "zoning and subdivision codes, master plans, open space and recreation plan, etc." to include complete streets principles in all transportation-related projects" (Seskin et. al, 2013, pg. 25). Littleton plans to create a committee of stakeholders appointed by the Town Administrator to see these plans are updated to include complete streets language. Additionally, Littleton plans to create an inventory of new pedestrian and bicycle

infrastructure, reevaluate Capital Improvement Projects to encourage complete streets construction is being implemented, educate the community on best complete streets practices, and will seek out appropriate sources of funding and grant opportunities (26). This direct language ensures the implementation of the Complete Streets Policy will be effectively carried out in order to provide safe and consistent streets for all travelers of all ages.

Littleton recognized that implementation steps are the key to creating an effective policy. Implementation sets performance measures, goals, and visions to fulfill the intent of complete streets policies. Although a small town of less than 9,000 residents, Littleton has set the bar high for complete streets policies and serves as a model for cities from its implementation steps and vision statement.

Littleton Complete Streets Ordinance Elements	Relationship to Guadalupe Complete Streets Plan
1. Small town with large population under the age of 18	Both Guadalupe and Littleton have populations under 9,000 and a large population under the age of 18; therefore, Littleton shows it is possible to provide an effective Complete Streets Policy in a small area
2. Littleton's vision: Complete Streets principles contribute to the safety, health, economic viability, and quality of life in a community by providing accessible and efficient connections between home, school, work, recreation and retail destinations by improving the pedestrian and vehicular environments throughout communities	The vision for Guadalupe's Complete Streets Plan should be similar to this since there is a large population under the age of 18, the plan needs to provide safe connections between home and school, as well as promote economic viability and quality of life
3. Littleton will amend all zoning and subdivision codes and specific plans to include complete streets principles in all future projects	This is a great implementation measure that Guadalupe should utilize to make sure complete streets are included in all future development
4. Littleton will establish a committee of stakeholders to see plans are updated	Guadalupe should use this element to make sure plans are updated and show their commitment to community education and involvement
5. Littleton will update inventory of new pedestrian and bicycle infrastructure, reevaluate Capital Improvement projects, and seek out appropriate forms of funding	Another great performance measure Guadalupe should include in the Implementation chapter of the Complete Streets Plan

Chart 3: Littleton Complete Streets Ordinance Elements

Source: Sara Muse

6.4: Grand Boulevard Initiative

Grand Boulevard Initiative aims to transform the California State Route 82 into a livable, complete and sustainable street. The Initiative is a coalition of 19 cities within San Mateo and Santa Clara County, two transit agencies, and Caltrans. The vision for this project is to reconfigure El Camino Real Corridor, a 43-mile boulevard, to "achieve its full potential as a place for residents to work, live, shop, and play, creating links between

communities that promote walking and transit and an improved and meaningful quality of life" (Grand Boulevard, 2013, pg. 6). In additional to prioritizing development and job opportunities, the Grand Boulevard Initiative TIGER II phase aims to create a more aesthetically pleasing environment that is safe for pedestrians, bicyclists, motorists, and transit users.

The TIGER II Complete Streets Project is funded by a grant by the US Department of Transportation under the "Removing Barriers to Sustainable Communities" grant. The project aims to establish a complete street on El Camino Boulevard to enhance livability and promote economic vitality through the following goals (9):

- Test the Grand Boulevard Initiative and Caltrans complete streets and sustainable streets design process on an urban State Highway
- Explore issues and challenges relevant to multimodal and sustainable design
- Identify lessons learned as to how the design process can be improved for future projects in other jurisdictions

El Camino Real is an arterial road lacking connectivity, sustainability, and livability; therefore, creating a complete street faces many difficulties. The design team developed five complete street design elements from case study research: lane narrowing, intersection crossing improvements, frontage improvements, enhanced medians, and expanded transit stops and amenities (16).

The first step to creating a complete street is to narrow the travel lanes to make room for multimodal improvements, such as bike lanes and wider sidewalks. Figure 8

Figure 8: Road Dieting Example

Source: Grand Boulevard Initiative

illustrates a road diet that accommodates for multimodal improvements. The next step is intersection crossing improvements in order to enhance the travel experience for pedestrians. These improvements include, but are not limited to: high-visibility crosswalks, curb extensions at each intersection, pedestrian median refuges, and traffic signal upgrades with pedestrian countdown signals. These improvements enhance pedestrian visibility and safety by prioritizing their movements at any given intersection. Other frontage improvements include sidewalk lighting, planter strips, and narrow shoulders (21). Buffering sidewalks with landscaped planter strips (e.g. street trees or shrubs) creates a barrier between the automobile and pedestrians; thus, enhancing the aesthetics of the street. This improvement could easily accommodate parking requirements by taking out the planting strips and replacing them with parking spaces. Another tool to create more aesthetically pleasing streets is to enhance medians. Raising medians up to six feet creates pedestrians refuges where crosswalks are unavailable. “Enhanced landscaping

will be incorporated into the medians, with high-branching canopy trees and low-growing plantings. This [approach] maintains frontage and pedestrian-level visibility, while maximizing shade and amenity" (24). Lastly, the final element to is expanding transit stops and amenities. This includes bus bulbouts, wayfinding signage, benches, and trash receptacles for all stops (25). These five complete streets design guidelines attack every fault a street that prioritizes the automobile exhibits by enhancing pedestrian visibility, maximizing amenity, increasing multimodal speeds, and improving the overall experience of traveling along a street. Although these improvements seem easy to complete, they are costly and require Caltrans review and design approval.

Any roadway construction to a State Highway must follow the following steps Caltrans requires to developing a project. There are three phasing, which include: Project Initiation Document, Project Approval and Environmental Document, Plans, Specifications and Estimates (29). The first phase requires the developer to provide project scope, cost, and schedule. In the Project Approval and Environment Document phase, the developer must obtain environmental review clearance, preferred design alternatives, and get both approved by Caltrans before beginning the final phase. The last phase mandates the developer obtain a Caltrans-approved Encroachment Permit. This process is very tedious, timely, and costly. Fortunately, the long-term benefits of transforming a State Highway into a complete street outweigh the Caltrans approval process.

Complete streets improve economic development, develop accessibility for all modes of transportation, and increase aesthetics. "Complete street improvements make a corridor more attractive and functional for existing and new residents alike, by

facilitating bicycling, walking, and transit ridership. These types of improvements will bring more people onto the street, providing a better economic base for the businesses. Streetscape improvements promote new development by providing [an] attractive environment" (38). Figure 9 demonstrates the ways in which communities can easily construct complete streets, including street trees, building setbacks to create sidewalks, street lighting, bicycle access, and bulb-outs.

Figure 9: Complete Streets Elements

Source: Grand Boulevard Initiative

The Grand Boulevard Initiative is a unique project that transforms a State Highway into a boulevard with complete streets elements to promote economic vitality, provide housing and job opportunities, and increase the number of pedestrians and bicyclists. By balancing the needs of all users, this Initiative is a successful design that should be utilized by other cities considering a similar process.

Grand Boulevard Initiative Elements	Relationship to Guadalupe Complete Streets Plan
1. Grand Boulevard is an example of a State Highway being transformed into a complete and sustainable street	The main arterials in Guadalupe are State Highway 1 and 166. The language in the Grand Boulevard Initiative should be considered when explaining why it's efficient to convert State Highways into complete streets
2. Grand Boulevard vision: To achieve El Camino Real's full potential as a place for residents to work, live, shop, and play [and promoting] walking and transit and an improved and meaningful quality of life	Guadalupe's vision should be similar in that transforming State Highway 1 and 166 into complete streets would allow the arterial to reach its full potential
3. Grand Boulevard identifies ways to create a complete street: narrowing travel lanes, intersection crossing improvements, frontage improvements, enhancing medians, and expanding transit stops and amenities	Guadalupe should use these steps to transform Highway 1 and 166 into complete streets
4. The Complete Streets Plan for El Camino Real includes pictures of before/after improvements	To avoid tedious design work, Guadalupe should use the pictures in the Grand Boulevard document to show streetscape improvements
5. Grand Boulevard's document identifies Caltrans approval steps: Project Initiation Document, Project Approval and Environmental Document, Plans, Specifications, and Estimates	Guadalupe's Complete Streets Plan should reference these approval steps to communicate the necessary measures to completing the project

Chart 4: Grand Boulevard Initiative Elements

Source: Sara Muse

This page is intentionally left blank

Chapter 7: Review of Guadalupe, California

The City of Guadalupe, California is located in northern Santa Barbara County 10 miles west of Santa Maria and 22 miles south of San Luis Obispo. It is generally recognized for its rectangular shape defined by the Santa Maria River, which intersects the counties of Santa Barbara and San Luis Obispo (see Figure 10 below).

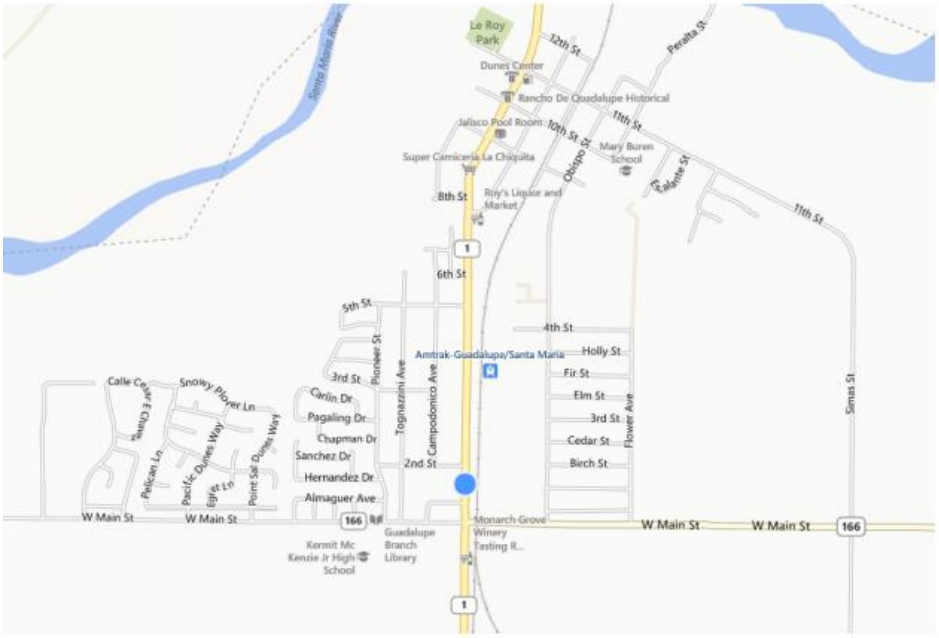


Figure 10: Guadalupe, CA

Source: Google Maps

The California scenic Highway 1 runs through Guadalupe and intersects with the Union Pacific Railroad at the southeast tip of the city. State Highway 166 extends from the US-101 Highway in Santa Maria and reaches Highway 1 in Guadalupe. According to the 2010 Census, Guadalupe is a city of 7,080 residents and is predicted to reach a population of 9,400 by 2020. The small 1.31 square mile city has roughly 5,400 people per square mile with a predominately single-family residential land use composition. The City of Guadalupe embraces its roots as an agricultural settlement founded in 1841 by exporting crops to nearby counties.

The City of Guadalupe was once known as Rancho Guadalupe, an area utilized for grazing and cattle ranching by Spanish farmers. The establishment of the Union Pacific Railroad in 1901 allowed Guadalupe and Santa Maria to become agricultural-havens and home to many Spanish immigrants. Additionally, the construction of the US-101 Highway in the 1920's allowed trucks to export goods from the two cities, expanding the agricultural land composition. Due to the exponentially larger population, available land, and close proximity to the US-101, Santa Maria captured many of Guadalupe's agricultural activity. The diverse City of Guadalupe was incorporated in 1946 and has maintained its small-town feel with primarily single-family homes and farmers inhabiting the area.

Pursuant to the Local Agency Formation Commission's orders, the City of Guadalupe revised its General Plan in 1989. The Plan was compiled by Crawford, Multari & Clark Associates and projected a need for an additional 900 dwelling units in the next 25 years to accommodate for farming families. All land surrounding Guadalupe is subject to Williamson Act contracts; therefore, the sphere is influence is relatively constrained. In 2002, the General Plan was updated to accommodate new environmental, economic, and demographic information. The 2002 update identified the City's lack of sales tax due to dominance of Santa Maria's economy and low-income representation in Guadalupe. The 2010 Census reported 6% of the population earns less than $10,000 per year; 23% of the population earns less than $25,000 per year; and 53% of the population earns less than $50,000 per year. This immense gap between low-income households and population count is one of the lowest in Santa Barbara County. Guadalupe is faced with a

serious challenge to improve the number of non-farming jobs and provide a variety of housing options to meet the needs of residents.

The disproportionate amount of low-income households in Guadalupe has a potential solution identified in the 2002 General Plan update. According to the document, "the approach to improving this gap is to allow new development which will increase the overall population, helping to support local businesses and reducing leakage; providing better paying jobs for the population than is provided by farm labor; and providing a wider mix of housing, including a more balanced amount of higher cost units, which will increase average incomes and bring in higher property taxes" (General Plan, 2002, pg. 38). This solution is only possible if city staff works diligently to identify potential funding sources and work with residents to communicate the extreme need to improve this inconsistent gap.

7.1: Land Use Element

The 2002 Guadalupe General Plan includes nine elements including: Land Use, Housing, Economic Development/Redevelopment, Community Design and Historic Preservation, Circulation, Public Facilities, Conservation and Open Space, Safety, and Noise.

City staff and the public reference the Land Use Element out of any other element because it determines the existing and proposed zoning within city limits. The Land Use Element establishes the following land use categories: Industrial, Commercial, Residential, Agriculture, Open Space, Public Facility, and under certain circumstances, Specific Plans. Guadalupe is mandated by the State of California to include in their Land

Use Element specific standards of population and buildout potential for all land use categories (see Table 1 below). In example, a 4,000 square foot lot with a FAR of 1.00 will allow a building of 4,000 gross square feet, regardless of the number of stories in the building.

LAND USE CATEGORY	MAXIMUM BUILDING INTENSITY
Neighborhood Residential	6 units/acre
Medium Density Residential	7-10 units/acre
High Density Residential	11-20 units/acre
Commercial	FAR of 0.35
Industrial	FAR of 0.3
Public/Institutional	FAR of 0.2

Table 1: Land Use Categories in Guadalupe

Source: Guadalupe Background Report

The land use designations in the City of Guadalupe are as follows (see Table 2 and 3):

- Commercial
  - General Commercial District
  - General Commercial
- Industrial
  - General Industrial
  - Light Industrial
- Residential
  - Low Density Residential
  - Medium Density Residential
  - Residential Planned Development
- Open Space/Public Facilities
- Specific Plan

As seen in Table 2, out of 750 acres, Single Family Residential is the dominant land use at 26% followed by Agriculture at 23%, Vacant/Unoccupied at 19%, Industrial at 11%, and Multi-Family Residential and Industrial, both at 6%.

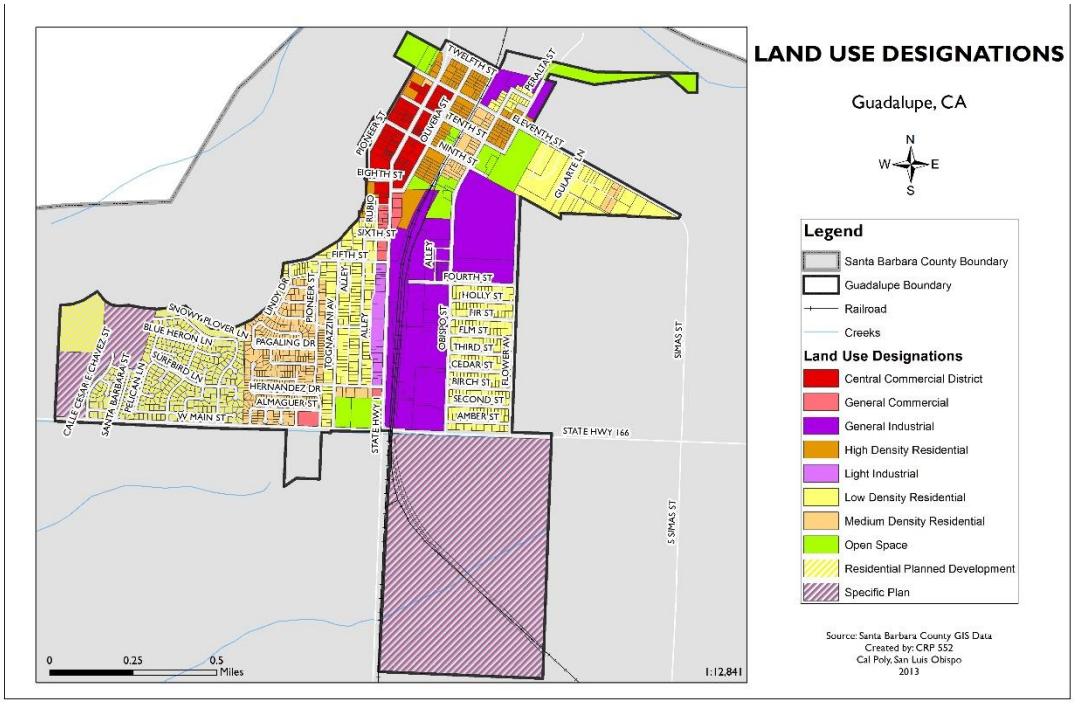


Figure 11: Land Use Designations

Source: Guadalupe Background Report

LAND USE DESIGNATION	ZONING DESIGNATION WITHIN LAND USE	NUMBER OF PARCELS	TOTAL ACRES	PERCENT OF TOTAL ACRES
General Commercial District	G-C	96	22.81	3%
General Commercial	G-C	31	9.33	1%
General Industrial	G-I	48	112.412	15%
Light Industrial	M-C	21	8.1835	1%
Low Density Residential	R-1	546	108.9064	15%
Medium Density Residential	R-2, R-1-M	437	54.97	7%
High Density Residential	R-3	209	26.58	4%
Residential Planned Development	PF-CZ, R-1-SP, R/N-SP-CZ	307	69.21	9%
Open Space/Public Facilities	O	19	42.422	6%
Specific Plan	DJ Farms. R/N-SP-CZ	6	251.12	33%
Unknown	N/A	9	44.58	6%
TOTAL		1728	750.5239	100%

Table 2: Land Use Designations by Acre

Source: Guadalupe Background Report

LAND USE INVENTORY	AMOUNT OF PARCELS	TOTAL ACRES	PERCENTAGE OF TOTAL ACRES
Agriculture	7	174	23%
Commercial	36	11.41	2%
Industrial	51	83.848	11%
Multi-Family Residential	173	46.58	6%
Mixed-Use	5	1.14	0%
Open Space	14	22.41	3%
Parking	14	3.17	0%
Public Facilities	27	48	6%
Railroad	4	20.82	3%
Single Family Residential	1298	194.9264	26%
Vacant/Unoccupied	97	143.0495	19%
Unknown	2	1.17	0%
TOTAL:	1728	750.5239	100%

Table 3: Land Use Inventory by Acre

Source: Guadalupe Background Report

Residential

Over 200 acres in Guadalupe are designated as Single Family and Multi-Family Residential units. These types of houses are located throughout the City as seen in Figure 12 below. According to the 2002 General Plan, there are four residential land uses: Low Density Residential, Medium Density Residential, High Density Residential, and Residential Planned Development (see Table 4 below).

- *Low Density Residential* is defined in the General Plan as any establishment up to 6 units per acre and is most recognized as 'Single Family Residential'.
- *Medium Density Residential* is up to 10 units per acre. These are typically duplexes, townhomes, and multi-unit residential units.
- *High Density Residential* is up to 20 units per acre. The types of units in this category include apartments, townhomes, and other structures less than three stories.
- *Residential Planned Development* encourages creative development that is out of Guadalupe's typical single-family home character.
  The western portion of the City includes large subdivisions of single-family homes.

Medium Density and High Density Residential are located throughout the City, but are mostly concentrated in the north end. There are 242 total acres of residential parcels that accommodate 1,471 establishments.

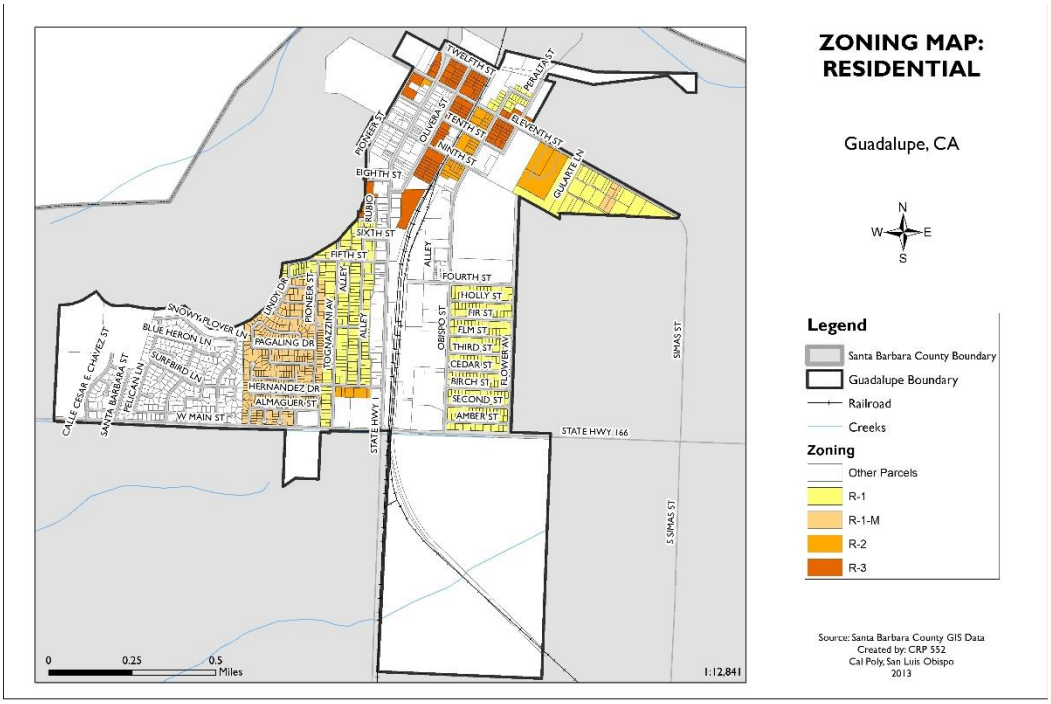


Figure 12: Residential Zoning in Guadalupe

Source: Guadalupe Background Report

There are four zoning designations in Guadalupe's residential development: Single Family Low Density (R-1), Single Family Medium Density (R-1 M), Multiple Dwelling Medium Density (R-2), and Multiple Dwelling High Density (R-3). Single Family Low Density includes single-family homes that are limited to one dwelling unit and one accessory building per parcel. These properties vary between 0.08 acres to 0.50 acres and may not exceed two stories or 35 feet in height. Single Family Medium Density uses are denser and allow for up to ten dwellings per acre. There are approximately 45.3 acres of R-1 M in Guadalupe, all which may not exceed two stories or 35 feet in height. Multiple Dwelling Medium Density aims to provide housing in attached dwelling units, including duplexes, condominiums and apartments, all which may reach ten units per acre. There are 45 parcels in Guadalupe zoned as R-2, some including public park or playground space. Multiple Dwelling High Density is the most dense land use in Guadalupe allowing for 20 dwelling units per acre. There are 211 parcels zoned as R-3 in the City. See Figure Table 4 below for acreage of the above zoning designations.

ZONE	DENSITY (NUMBER OF UNITS PER ACRE)
R-1	5.4
R-1 M	8.7
R-2	14.6
R-3	18.1

Table 4: Zoning by Density

Source: Guadalupe Background Report

Agriculture

Since its discovery by the Spanish farmers in the 1800's, Guadalupe has been a primarily agricultural town. The fertile soil in the heart of Santa Barbara County contributes to the success of DJ Farms, which occupies 67% of Guadalupe's agricultural use. According to the Santa Barbara County Farm Bureau 2011 studies, Santa Barbara County ranked 14th overall in the State of California for producing almost $1.2 billion in agricultural production. Strawberries are the most common commercial crop, followed by broccoli, vegetable crops, cut flowers, and wine grapes.

There are approximately 175 acres of agricultural land in Guadalupe, and when combined with DJ Farms, there are almost 400 acres (Background Report, 2014, pg. 34). DJ Farms is zoned under the Specific Plan to provide new commercial and residential units; therefore, Guadalupe will lose over 200 acres of prime agricultural land when this transformation takes place.

The precious agricultural land is protected under the Williamson Act of 1965. The Williamson Act is a joint agreement between the government and farmers in which farmers are given property tax breaks for their agreement to produce crops for at least ten years. The Williamson Act may seem like a strong asset to Guadalupe's agricultural production; however, it reduces the City's options for new development. As seen in Figure 13 below, the Williamson Act protects all of the available land surrounding Guadalupe.

In addition to the Williamson Act, Guadalupe's agriculture is protected from any new development by the Santa Barbara agricultural buffer. This ordinance was adopted in

April 2013 and restricts agricultural land from being re-zoned or developed by providing a clear permitting process.

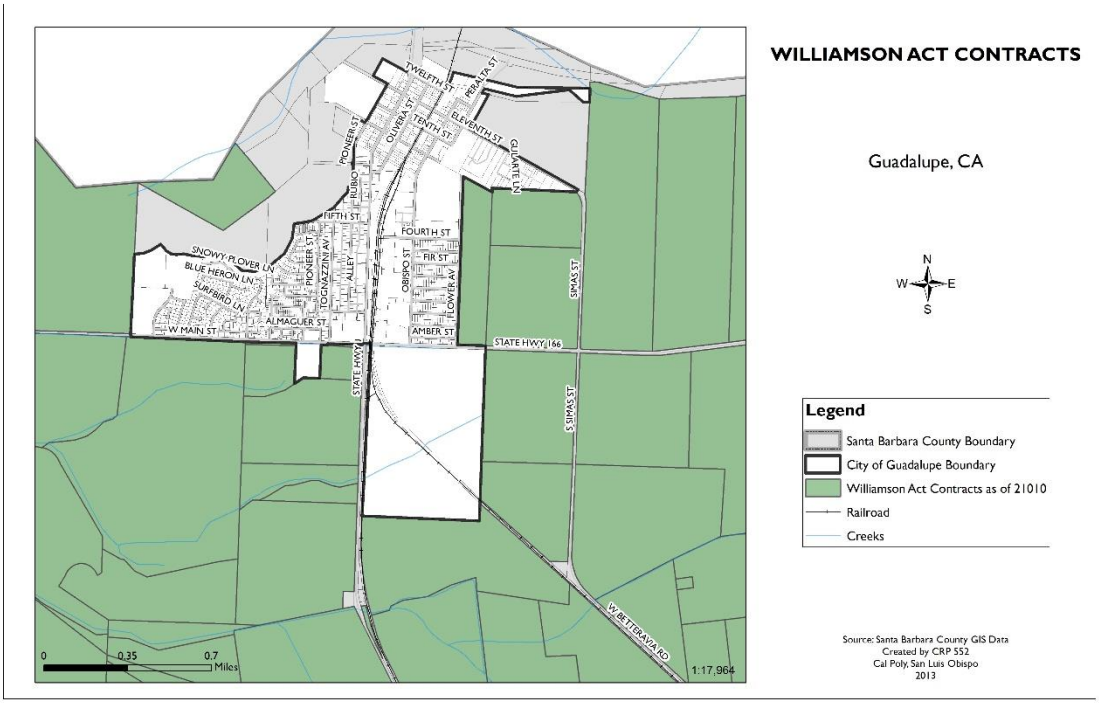


Figure 13: Williamson Act Contracts

Source: Santa Barbara County GIS Data, 2014

Open Space

According to the 2002 General Plan, Guadalupe has over 34 acres of land dedicated to parks and recreational uses, 52 acres of unimproved space, three community parks, and four mini/pocket parks. The unimproved space encompasses parcel on the northeast side of the City lacking facilities and includes 18 acres of dense woodlands and a half acre pond. The three community parks provide residents with recreational facilities for local school, sports teams, and community events. These parks provide 20 acres of park space and include: Jack O'Connell Community Park on W. Main Street and 8th Street, Leroy Park on the end of 11th Street, and Central Park located off of Pacheco Street on 9th Street. The mini/pocket parks provide nearly 2 acres of recreational space

and include 7th Street Park, Paco Pereyra Park, Tognazzi Avenue Park, and Pioneer Street Park. These small area parks include native plant gardens, picnic areas, and small children's play structures. See Table 5 below for park designations in Guadalupe by type and acre.

PARK	TYPE	ACRES
Jack O'Connell Community Park	Community	14.53
Leroy Park	Community	4
Central Park	Community	1.38
Mini/Pocket Parks	Mini/Pocket	1.58
Total		21.49

Table 5: Park Designations

Source: Guadalupe Background Report

Public Facilities

Public Facilities land use category in Guadalupe includes water, sewer treatment, other governmental uses, and schools. There is one Fire Department, Police Department, Senior Center, wastewater treatment plan, and water storage and pumping facility. There are three schools in the City: Bonita Migrant Head Start on 11th Street, Kermit McKenzie Junior High School on West Main Street and Mary Buren Elementary School on Peralta Street.

7.2 Specific Plans

Point Sal Dunes Specific Plan

The Guadalupe/Nipomo Dunes Reserve is located three miles west of the City limits and serves as a popular recreational destination and is home to many unique animal species. The Dunes County Park consists of 22,000 acres, or just over 34 square miles (Dunes Center Conservation, 2008). The Point Sal Dunes specific plan was approved in 1990 and protects nearly 60 acres of land for residential development. The Plan designates 250 residential units and zones a small portion of land along the Santa Maria River for open space and parks. See Figure 14 below.

DJ Farms Specific Plan

DJ Farms Specific Plan was adopted in 1993 and approved in November 2012. The controversial project includes 209 acres at the southeast end of Guadalupe off of Highway 166. The rectangular-shaped parcel is currently undeveloped but has been zoned for a variety of uses, including 802 residential units, 250,000 square feet of commercial, industrial, and open space/recreation.

APPROVED DJ FARMS SPECIFIC PLAN USES	Units
Number of Residential Units	802 Units
Commercial Square Footage	250,000 square feet
School Site Acreage	12.5 Acres
Parks Acreage	15.9 Acres
Rail Crossing	1 overhead crossing, 1 at grade crossing for emergency only
Agriculture Buffer (Feet)	100 Feet
Water and Wastewater Supply	City Supplies
Storm water Drainage	Detention System

Table 6: DJ Farms Specific Plan Uses

Source: Guadalupe Background Report

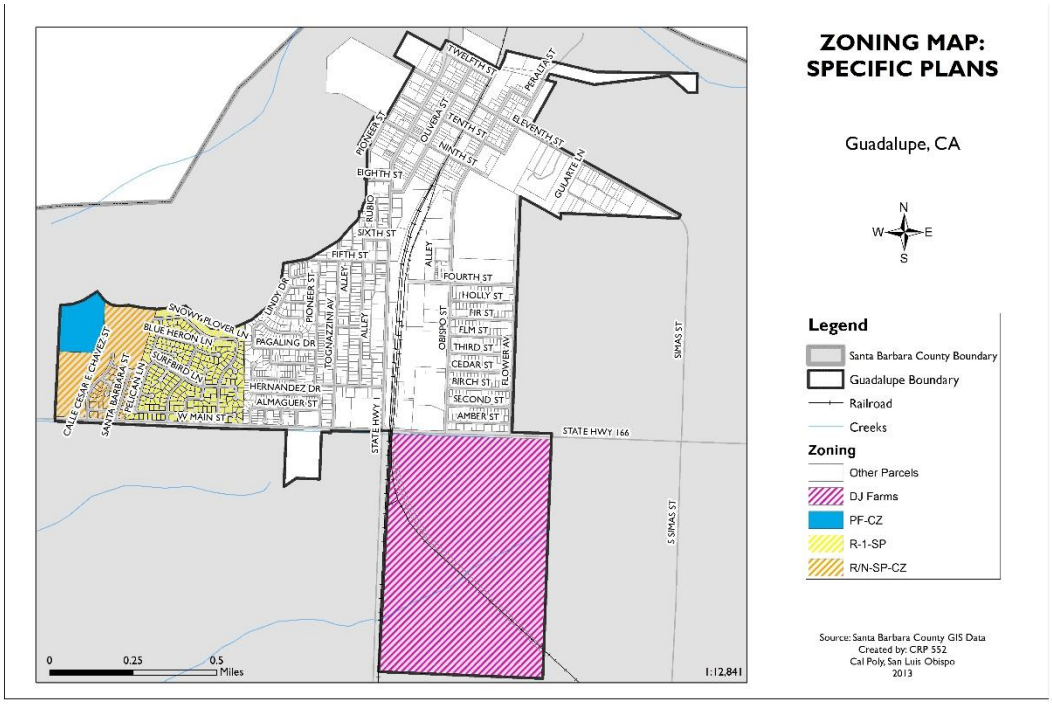


Figure 14: Specific Plan Zoning Map

Source: Guadalupe Background Report

7.3 Circulation Element

According to the 2002 General Plan, the Circulation Element includes the general location and network of existing and proposed major thoroughfares that are correlated with the Land Use Element. Circulation is defined as the means of transporting people and goods in a safe and effective manner. A City's transportation network, which includes all streets, arterials, freeways, highways, and railroads, determines the ease and connectivity of all transportation methods.

The Guadalupe Circulation Element has identified the network of streets and highways as the City's most important transportation facility. This includes highways, arterials, collector and local streets. State Highways, such as Highway 1 and Highway 166 are within Caltrans control. The necessary measures and steps to transforming State Highways can be found in the Case Studies Chapter (INCLUDE PAGE).

Highways

There are two California State Highways in Guadalupe that serve as arterial routes in the City. State Highway 1 or Guadalupe Street bisects the City and is designated as a scenic Highway; thus, any future development must preserve the existing aesthetics of the route. This street runs through downtown Guadalupe and is a two-lane highway with Class II bike lanes on both sides. The highway extends as far north as Grover Beach in San Luis Obispo County and south to Lompoc in Santa Barbara County. The speed limit of Highway I in City limits is 25 mph; however, outside of City limits the speed increases to 55 mph.

Highway 166 is a local road running through Guadalupe and Santa Maria. The seven-mile road is known as West Main Street within Guadalupe City Limits; however, in Santa Maria the name changes to East Main Street. Highway 166 is the main connection to Guadalupe off of Highway 101 in Santa Maria and is the most traveled route in Guadalupe. Less bicycle and pedestrian friendly than Highway 1, Highway 166 is a two-lane route with no medians and 8-10 foot shoulders. According to the Santa Barbara County Association of Governments (SBCAG), the average annual daily traffic count in 2012 was 5,520 for Highway I and 7,210 for Highway 166. The average annual daily traffic counts on Table 7 below demonstrate the high counts on Highway 166 compared to Highway 1.

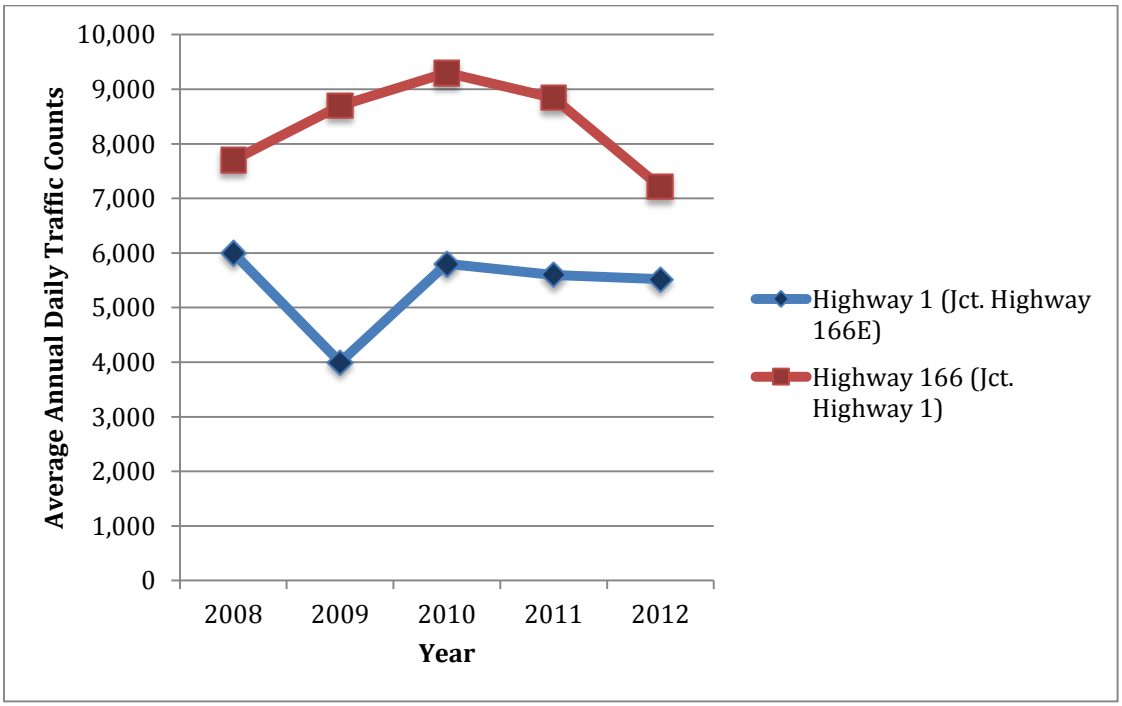


Table 7: AADT for Highway 1 and 166

Source: SBCAG 2030 Travel Forecast for Santa Barbara County

Although Highway 1 has significantly fewer traffic counts than Highway 166, according to the 2030 Travel Forecast for Santa Barbara County, traffic on Highway 1 will increase 50% from 2000 traffic volume of 6,000 AADT to 11,700 AADT in 2030

	2000 DAILY COUNTS	2000/2001 COUNTS		2000 MODELED VOLUME			2030 MODELED VOLUME			% PM CHANGE 2000-2030
		AMPH	PMPH	DAILY	AMPH	PMPH	DAILY	AMPH	PMPH	
Highway 166 East of Simas St.	7,100	514	661	7,600	560	660	11,700	820	1,050	59.1%
Highway 1 South of SLO County line	4,800			6,500	400	570	11,200	550	1,730	203.5%
Highway 1 South of Highway 166	1,900			2,000	140	170	10,600	570	1,090	541.2%
Highway 1 North of Highway 166	6,000	307	493	5,100	350	440	15,200	860	1,480	236.4%
Highway 1 South of Eleventh St.	4,800			3,000	180	260	12,200	850	1,430	450.0%
Eleventh St. East of Highway 1				3,500	220	300	5,400	140	840	180.0%

Table 8: Travel Forecast for Santa Barbara County

Source: SBCAG. The 2030 Travel Forecast for Santa Barbara County

Collector Streets

Collector streets are streets that lead residential traffic to and from various destinations. These roadways are used to transition between highways and local streets. (Background Report, 2014, pg. 88). There are five collector streets in Guadalupe:

- **West Main Street** (Highway 166): Located on the south-end City limits and serves to direct traffic from the Guadalupe-Nipomo Dunes and in and out of Santa Maria
- **Eleventh Street**: Located west of Highway 1, 11th Street is an alternate route between Highway 1 and Highway 166
- **Simas Road**: Located north of Highway 166, and like 11th Street, is an alternate route between the two arterial highways. This road collects traffic from northern City limits and leads it towards Highway 1 or 11th Street.
- **Obispo Street**: Located north of Highway 166 and is recognized as an industrial collector for agricultural trucks and collectors. Obispo Street leads traffic from the agricultural land uses in the south-end of City limits to Highway 166.
- **Pioneer Street**: Located north of West Main Street and collects mostly residential traffic from northern City limits to Highway 1.

Local Streets

Different than collector streets, local streets are low-speed designed streets providing access to adjacent properties, utilities, and fire breaks. Heavy trucks are excluded from these streets to mandate the low-speed rule. These streets propose an excellent opportunity for complete streets design. Local streets in Guadalupe can be found on Figure 15 below.

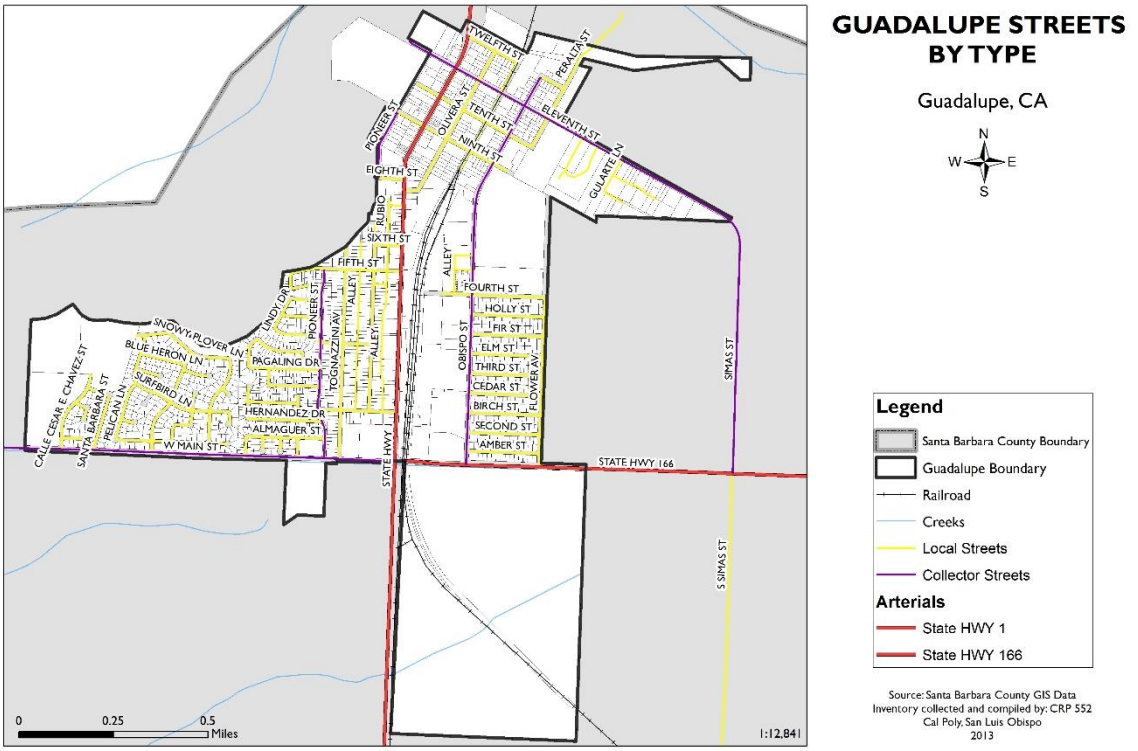


Figure 15: Guadalupe by Street Type

Source: Guadalupe Background Report

Southern Pacific Railroad

The Union Pacific Railroad runs through Guadalupe and provides service to residents and industrial areas. The three main users to the rail lines include Union Pacific Railroad, Amtrak, and the Santa Maria Valley Railroad. Although the railroad is essential to exporting agricultural goods in Guadalupe, it poses a unavoidable noise concern for residents.

In June 2005, the Federal Railroad Administration (FRA) proposed new horns that will contribute to the noise problem associated with the cargo trains. According to the report, the sound levels may reach 80 dB(A) as close as 50 feet from the rail tracks. Since the tracks in Guadalupe are located off of Highway I and Highway 166, this poses

a major disturbance for residents and many local businesses. City officials are addressing this issue and mitigation measures may include increasing vegetation and building walls near the railroad tracks.

The 2002 General Plan recommends a number of policies to improve circulation in Guadalupe (General Plan, 2002, pg. 75):

- Goal: To develop circulation routes to promote efficient transportation, reduce hazards and pollution, and conserve energy.
- Goal: To provide a street system which will adequately serve homes, businesses, industry, recreation, and other uses as they develop according to the Land Use Element
    - Policies: Traffic should be routed around, rather than through, residential neighborhoods.
        - The circulation system shall be consistent with adjacent uses.
        - Landscape amenities should be provided to enhance the overall City image.

Bus Network

The Guadalupe Flyer is the only bus route within Guadalupe. The line runs along Highway 166 and has 12 stops throughout the City. The Guadalupe Flyer provides services between Santa Maria and Guadalupe and stops at each location once per hour. The fare price for the Flyer is fixed as $1.00 for students, seniors, and persons with disabilities. Since 28% of Guadalupe's population is under the age of 14, there is a large percentage of youth passengers along the Flyer.

Bicycle and Pedestrian Networks

According to the 2002 Guadalupe General Plan, the City should provide bicycle transportation facilities wherever feasible, and where possible, bicycle routes should be developed to lead to schools, shopping centers, and recreational facilities. Highway 1 is the only street in Guadalupe that designates space for Class II bicycle lanes. This is a step in the right direction; however, there are no local or collector streets that include bike paths.

The lack of bicycle furniture is also a problem in Guadalupe. As seen in Table 9, there are nine bike racks in the City: two located near City Hall and Mary Buren Elementary School, one of Leroy Park, and one at Kermit McKenzie Junior High School. Guadalupe has secured funding for a Bicycle/Pedestrian Master Plan and the proposed plan includes Class II and III bicycle routes along Highway 166, Obispo Street, 11th Street, and 4th Street.

Less than one percent of residents use their bicycles to get to work in Guadalupe. According to the 2003 Omnibus Survey, the rate of riding a bicycle in Guadalupe is one of the lowest percentages in data collected for Santa Barbara County. The large percentage of low-income households in Guadalupe poses a positive asset to providing bicycle and pedestrian facilities: those with low-incomes are less likely to afford driving; therefore, they will bike and walk to school, work, or to reach amenities.

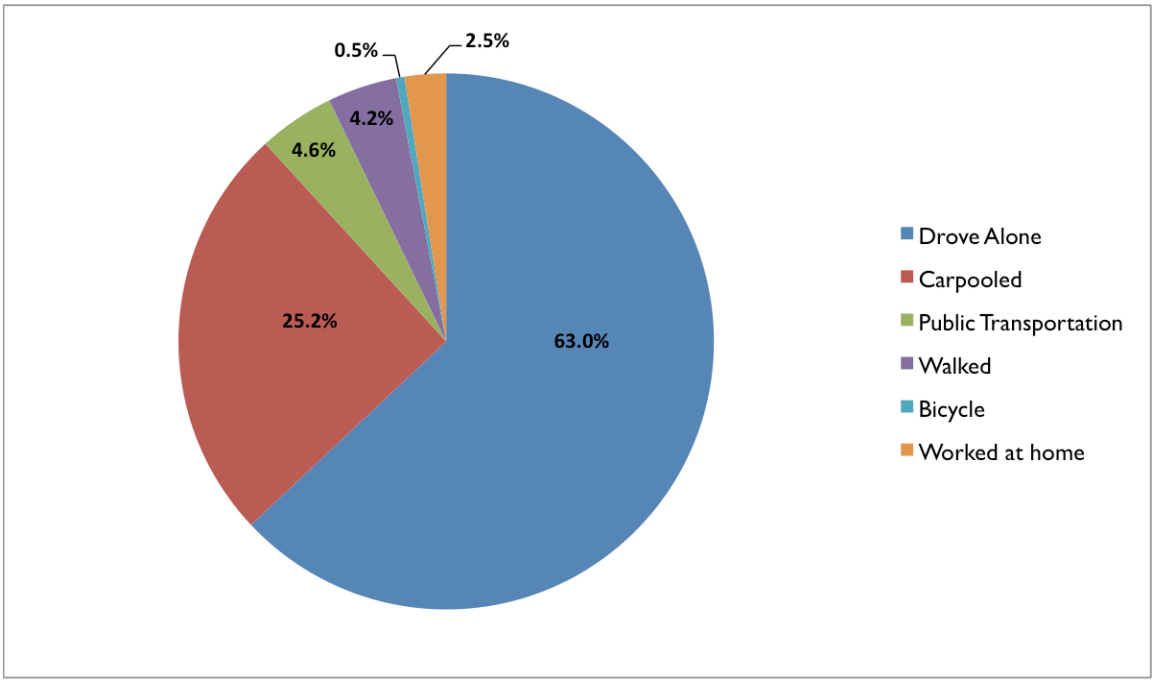


Table 9: Means of Transportation to Work in Guadalupe

Source: U.S. Census Bureau, 2007-2011 American Community Survey, Table S0801

The short and local commute for Guadalupe residents should encourage City staff to improve the bicycle and pedestrian network to provide other commute options besides driving. According to the 2012 US Census, the average commute time in Guadalupe between 15 and 24 minutes. Nearly 50% of residents travel to Santa Maria-Orcutt Area; 17% stay within Guadalupe City limits; and 14% travel to other unincorporated areas in Santa Barbara County (see Table 10). This data shows there should be bicycle and pedestrian facilities located along Highway 166, as well as other arterial and collector streets, such as Highway 1, 11th Street, and Obispo Street to provide residents with a range of mobility options.

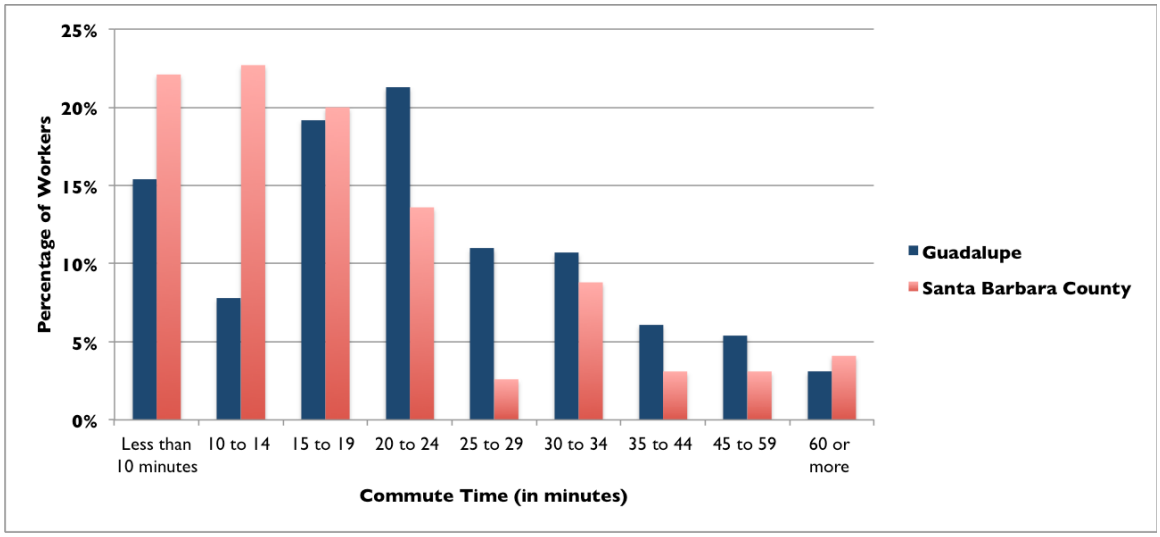


Table 10: Means of Transportation to Work by Gender

Source: North County Regional Transit Plan, SBCAG, 2006

The Guadalupe General Plan must be updated to comply with Assembly Bill 1358, the California Complete Streets Act. The Act states: "In order to fulfill the commitment to reduce greenhouse gas (GHG) emissions, make the most efficient use or urban land and transportation infrastructure, and improve public health by encouraging physical activity, transportation planners must find innovative ways to reduce vehicle miles traveled (VMT) and to shift from the short trips in the automobile to biking, walking, and use of public transit." Implementing a complete streets plan/ordinance has many benefits, including promoting healthier, active transportation, encouraging walking and bicycling, and improving air quality. According to Smart Growth America, if each resident of an American community of 100,000 replaced one car trip with one bike trip just once a month, it would cut carbon dioxide (CO2) emissions by 3,764 tons per year in the community (Background Report, 2014, pg. 78). By re-designing Guadalupe's streets, especially Highway 1 and Highway 166, to include bicycle, pedestrian, multimodal, and

other amenities for people of all ages, Guadalupe can turn all streets into safe, sustainable, and convenient streets.

7.4 Land Use Survey

The Graduate City & Regional Planning Community/Regional Planning Studio (CRP-554) conducted the field data collection in the City of Guadalupe during Fall and Winter Quarter of the 2013-2014 school year. The field data collection includes existing conditions of all streets in the City. The data includes physical characteristics and geometry (i.e. number of lanes, driveways, lengths and widths), traffic and signal data (AADT's, left/right turn percentage, heavy vehicle percentage, and pedestrian volume), and transit data (frequency, load factor, bus on-time performance, and scheduled speeds). See Appendix B for field data collection. The data is detailed below for highways and collector streets:

- **State Highway 166:** Highway 166 is located in the southeast corner of Guadalupe and is one of two arterials in the City. State Highway 166 has three intersections within the City: Fourth Street, Obispo Street, and Highway I. There is an average of 17 driveways per intersection along Highway 166 with a 35 mph speed limit. There is one bus stop located at Fourth Street and Highway 166. There are no sidewalks from Flower Avenue to Obispo Street on Highway 166. From Obispo to Highway 1 there are 10' sidewalks.
- **West Main Street:** Highway 166 turns into West Main Street after the Highway I intersection. West Main Street extends approximately one mile at the southwest corner of Guadalupe. This street has nine intersections:

Tognazzini Avenue, Pioneer Street, Julia Drive, Montez Circle, Masatani Circle, Nelson Drive, Point Sal Dunes Way, Pacific Dunes Way, Santa Barbara Street, and Calle Cesar E. Chavez (City Limits). There are no driveways located on this street or bike lanes. There is a small four-foot sidewalk and one bus stop located at the Santa Barbara Street intersection.

- **State Highway 1:** Highway 1 runs approximately 1.2 miles north south through Guadalupe from 12th Street to Highway 166. The arterial road has nine intersections within the City: 12th Street, 11th Street, 10th Street, 9th Street, 8th Street, Olivera Street, 6th Street, 5th Street, 2nd Street, and Highway 166. The street is composed of 4-11 foot sidewalks; 0-8' buffer lane; 10' shoulder parking; 5' bike lanes in both directions and 11' travel lanes in both directions. There are no medians and only one driveway located at the intersection of Highway 166. Highway 1 is a 25 mph zone.
- **Obispo Street:** Obispo Street runs parallel to State Highway 1 from 12th Street to Highway 166 for one mile. The collector street has fourteen intersections within the City: 12th Street, 11th Street, 10th Street, 9th Street, 4th Street, Holly Street, Fir Street, Elm Street, 3rd Street, Cedar Street, Birch Street, 2nd Street, Amber Street, and Highway 166. The street is composed of no sidewalks from Highway 166 to 9th Street; 6'-7' sidewalks from 9th to 11th Street; 0' buffer from Highway 166 to 9th Street, 5' buffer from 9th Street to 11th Street; unmarked shoulder parking; and two 17-23' travel lanes in both directions. The speed limit along Obispo Street is 35 mph and there is an average of 11 driveways per intersection.

- **Eleventh Street:** Eleventh Street runs perpendicular to Highway 1 from the western city limit to Simas Road for one mile. The collector street has seven intersections within the City: Highway 1, Olivera Street, Pacheco Street, Obispo Street, Peralta Street, Escalante Street and Gularte Lane. The street is composed of 6' sidewalks in both directions from 12th Street to Peralta Street, where the sidewalk only continues on the south side of the street. The speed limit along Eleventh Street is 35 mph with 22' travel lanes in both directions.

This page is intentionally left blank

Chapter 8: Conclusion

The future is, and always has been, in the hands of planners and engineers. Engineers have prioritized the convenience of the automobile by creating freeways and arterial roads with high vehicle speeds since the 1940's. By minimizing the number of small local and collector streets, planners and engineers crated urban sprawl. Recent years have called for a change. City officials, along with planners and engineers, have introduced the idea of Smart Growth development, which promotes dense land uses, mixed-use development and the idea of complete streets.

Complete streets are comprehensive, flexible, and unique to each situation. They come in two similar forms: complete streets policies and complete streets plans. Complete streets policies are shorter and less detailed because they simply state the city/jurisdiction will prioritize the needs of all users of the street in any future transportation-related projects. On the other hand, complete streets plans are detailed documents that provide specific recommendations based on land use surveys, community education, and General Plan and Specific Plan background information.

This professional report has three major components: history of transportation planning and engineering in the United States, four case studies, and the City of Guadalupe Complete Streets Plan. In order to completely understand the concept of complete streets, it is imperative to illustrate the faults behind the history of transportation planning in the United States, and how complete streets solve the problems we face as a result. The unsafe automobile dependent environment that was created after the freeways were established in the mid 20th's century created an increase in pedestrian and bicyclist fatalities. Nationwide, pedestrians account for 12 percent of total traffic

deaths and are the leading cause of death for children 15 and younger. By promoting the safety of these underserved streets users, complete streets solve the problem.

The case studies were chosen based on their overall effectiveness, language and efforts to involve the community and stakeholders. The City of Albany created its Complete Streets Plan in 2013 to reach the goals in the Active Transportation Plan. Albany's document does an excellent job of reaching out of community members to educate them on complete streets design and gain their input to come up with a variety of recommendations. The City of Indianapolis' Complete Streets Ordinance was awarded the number one spot on Smart Growth America's Complete Streets Policies of 2012 for its innovative implementation policies. The plan recommends seven performance measures that are evaluated four times a year with quarterly reports posted online. The Town of Littleton was awarded the number one spot on Smart Growth America's Best Complete Policies of 2013 for its implementation and impressive language for its geographic size. Littleton recommends rezoning all planning documents to include complete streets design in all future projects. Additionally, the town plans to create a committee of stakeholders to oversee these plans are updated. Finally, the Grand Boulevard Initiative articulates specific ways to incorporate complete streets design into a State Highway. The plan identifies ways to create a complete streets including narrowing travel lanes, intersection crossing improvements, and expanding transit stops and amenities. Chapter 6 of the report outlines specific elements from each case study that were very useful when crafting the Guadalupe Complete Streets Plan.

Guadalupe is in the process of updating their 2002 General Plan to become a sustainable, economically vibrant and aesthetically appealing city. The Complete Streets

Plan compliments the General Plan update by serving as a guide for the future of any transportation-related projects in the City of Guadalupe to provide a safe, convenient, and consistent transportation network for all users of the streets. The Complete Streets Plan complies with Smart Growth America's guidelines and follows the recommendations in the Case Studies chapter. It is complete and ready to be adopted by the City of Guadalupe.

The main goal of this professional report is to expose the ways transportation in the United States has hindered the safety of pedestrians and bicyclists and propose a feasible solution. The Complete Streets Plan for the City of Guadalupe will improve economic development, health, safe transportation, accessibility, safety, and the overall environment. People of all ages are guaranteed to feel safer and comfortable traveling the streets by foot or transit rather than in their cars. The plan includes recommendations for arterials and local streets that are consistent with the Bicycle and Pedestrian Master Plan. Finally, it recommends specific workshops, surveys and proposes to elect a Citizen Advisory Committee in order to include the public in the planning process.

Beyond the scope of this project, there are myriad opportunities to unveil complete streets. Smart Growth America produces an annual report on the most creative and effective policies and the American Planning Association published *Complete Streets: Best Policy and Implementation* in 2010. These reports should be utilized by cities and jurisdictions looking to adopt complete streets policies and effective implementation measures. In the coming years, it is possible there will be a federally mandated complete streets policy that would completely change the transportation world as we know it.

Sources

Friberg, Lars. (2000). Innovative Solutions for Public Transport; Curitiba, Brazil. *Uppsala University, Sweden*.

Frumkin, H., Frank, L., and Jackson, R. (2004, June). *Urban Sprawl and Public Health*. Centers for Disease Control.

Iwasaki, Randell H. (2008, October 2). Deputy Directive-64-R1. *Caltrans*.

Jarmul, David. (2006). American History: Life in the US After World War Two. *Voice of America.*

Litman, Todd. (2014, March 10). Economically Successful Cities Favor Space-Efficient Modes. *Planetizen*.

McCann, Barbara & Rynne, Suzanne. (2010). Complete Streets: Best Policy and Implementation Practices. *American Planning Association*.

Ratekin, Christine. (2012, April). Complete Streets: Implementation of Deputy Directive-64-R1. *Caltrans*.

Seskin, Stefanie. (2014, March 19). USDOT's proposed safety rule gives agencies a pass on progress. *Smart Growth America*

Seskin, Stefanie & Murphy, Colin. (2014, February). The Best Complete Streets Policies of 2013. *Smart Growth America.*

(February, 2002). City of Guadalupe General Plan. *City of Guadalupe, California*.

(2010). Albany City, California. *American Fact Finder*.

(2010, March). Complete Streets Implementation Action Plan. *Caltrans*.

(2012, April). Albany Active Transportation Plan. *The City of Albany, California*.

(2013). Complete Streets: Conceptual Design and Plan for San Pablo Avenue and

Buchanan Street. *The City of Albany, California*.

(2013, December). *Tiger II Complete Streets Project*. Grand Boulevard Initiative.

(2013, December 16). *Town of Littleton Complete Streets Policy*. Smart Growth America.

(2014). City of Guadalupe Background Report Draft. *City & Regional Planning Department.*

This page is intentionally left blank

Appendices

Appendix A: Guadalupe Complete Streets Plan

I. INTRODUCTION

Purpose of Project:

The purpose of this Complete Streets Plan is to guide the future of any transportation-related project in the City of Guadalupe to provide a safe, convenient, and consistent transportation network for all users of the street, which includes but is not limited to, pedestrians, bicyclists, users of public transit, children, elderly, and disabled.

Vision Statement:

Create a comprehensive, safer, and more accessible interconnected transportation network for all users of the streets, including pedestrians, bicyclists, and transit passengers of all ages and abilities. Guadalupe's Complete Streets Plan will serve as a guide for all future transportation-related projects to ensure complete streets concepts are understood by laypersons and stakeholders and implemented by City staff.

What are Complete Streets:

Complete Streets are safe, comfortable, and accessible streets for everyone, including the elderly, those with disabilities, children, and all other users of the street. Complete streets policies and ordinances are guidebooks to planning for all future transportation-related projects.

Transportation in the United States has prioritized the automobile since the creation of the United States Highway system in 1940. Freeways made it possible to develop large parcels of cheap land away from downtown areas, resulting in urban sprawl

and dispersed land uses. City planners and Engineers have shifted their focus to Smart Growth principles, which includes denser land uses, mixed-use development, and complete streets.

Cities have begun paying attention to the users of their streets. Nationwide, pedestrians account for 12% of total traffic deaths and are the leading cause of death for children 15 and younger. This alarming statistic has caused local jurisdictions, including the City of Guadalupe, to reconsider their transportation networks to provide safe and cohesive streets for all users of the street no matter their age or abilities.

Complete Streets Plans are most effective when they incorporate community education and engagement techniques, innovative design recommendations, clear vision for future development, and implementation measures. The design for complete streets goes beyond providing large sidewalks and bike lanes. An effective complete streets design will typically include the following elements:

- **Narrow Vehicle Traveling Lanes, or "Road Diets":** Arterial roads tend to have wide vehicle traveling lanes that allow cars to exceed speed limits. By creating consistent 10'-12' travel lanes, cars are forced to lower speeds to accommodate for lost space. The concept of "road diets" includes reducing the total number of vehicle travel lanes to make space for bicycle and pedestrian improvements
- **Small Corner Radii, or raised pedestrian bulb-outs, to reduce turning speeds:** Drivers tend to have a difficult time seeing pedestrians when turning with a large corner radii. Implementing small corner radii or raised pedestrian bulb-outs will reduce turning speeds and make pedestrians more visible to the driver.

- **Continuous raised medians:** Raised medians are a form of road dieting, reduce vehicle traveling speeds, provide a pedestrian refugee or "safe spot", and increase the aesthetics of a street. Medians can range anywhere between 4' and 20' depending on street dimensions. Continuous medians provide consistent streetscape design and reduce vehicle traveling speeds for a longer period of time.
- **Signalized intersections with bicycle and pedestrian count-downs:** Intersections provide pedestrians and bicyclists a sense of safety when crossing the street, and therefore, should be included wherever possible. Going a step further, bicycle and pedestrian signals to "recall to walk" should be implemented to avoid collisions with turning vehicles. Where signals do not include the recall to walk, pedestrian and bicycle pushbuttons should be placed before the crosswalk.
- **Streetscape Elements**: Rain garden planter strips; pervious concrete pavement; canopy street trees; LED Street Lighting should be incorporated on all arterial, connector, and possible local streets in the City of Guadalupe.
- **Increased Transit Stops and Amenities:** Public transportation should be convenient and easy to navigate for any layperson. The City of Guadalupe should increase the number of transit stops along Highway 166 and Highway 1 to increase transit ridership for residents traveling to school, work, or to reach local amenities. Transit amenities, such as wayfinding, signage, and increased bus stops, should be improved as well.

Smart Growth America:

Smart Growth America is an advocacy group that promotes complete streets policies at all levels of government. Smart Growth America aims to show the United States government how adopting a complete streets policy would be beneficial for a number of reasons such as economic vitality, public health, and community cohesiveness. Smart Growth America publishes an annual report on the best complete streets by comparing documents, legislation, resources, executive orders, and local policies. In 2014, SGA published "The Best Complete Streets Policies of 2013". The Guadalupe Complete Streets Plan utilizes the following elements in Smart Growth America's document in order to craft a strong and appropriate policy:

- Includes a vision for how and why the community wants to complete its streets
- Specifies that 'all users' includes pedestrians, bicyclists and transit passengers of all ages and abilities, as well as trucks, buses and automobiles
- Applies to both new and retrofit projects, including design, planning, maintenance, and operations, for the entire right of way
- Makes any exceptions specific and sets a clear procedure that requires high-level approval of exceptions
- Encourages street connectivity and aims to create a comprehensive, integrated, connected network for all modes
- Is adoptable by all agencies to cover all roads
- Directs the use of the latest and best design criteria and guidelines while recognizing the need for flexibility in balancing user needs

- Directs that Complete Streets solutions will complement the context of the community
- Establishes performance standards with measureable outcomes
- Includes specific next steps for implementation of the policy

Benefits of Complete Streets

Complete Streets have a wide variety of benefits for everyone. Complete streets reduce the rate of bicycle and pedestrian collisions, create safe routes to school, work, and local amenities and create community cohesiveness. Additionally, complete streets improve economic development, health, safe transportation, accessibility, safety, and the environment.

- **Economic Development:** Complete streets encourage dense and mixed-use environments with local amenities, housing, and utilities in close proximity to one another. This dense environment promotes economic vitality because residents and visitors can reach goods in a time-efficient manner. Complete streets designs are typically composed of large sidewalks, bicycle lanes, and minimal setbacks for commercial, retail, and residential developments. The larger sidewalks and minimal setbacks composition encourages people to "window shop"; thus, increasing the likelihood people will explore new shops and businesses. Allotting space for bicycle lanes creates a safe environment for those traveling to work, school, or commercial establishments.
- **Health:** It has been proven that sprawled environments damage human health and the natural environment due to the lack of pedestrian, bicycle, and transit amenities. Vehicle emissions severely degrade air quality through anthropogenic

emissions, such as carbon dioxide. Complete streets encourage streets users to get out of their cars and enjoy the outdoors. Additionally, bicyclists, pedestrians, and transit users produce significantly less greenhouse gasses than vehicle emissions.

- **Safety:** More than 700,000 pedestrians were injured in the past decade due to lack of signage, street design, and high automobile speeds. Complete streets incorporate a variety of safe transportation elements include wide sidewalks, bicycle lanes, medians, lighting, wayfinding, and additional intersection improvements. Reconfiguring streets to prioritize the safety of bicyclists and pedestrians will reduce the number of fatalities for these street users and increase the rate of those utilizing alternative forms of transportation.
- **Accessibility:** Complete streets design not only prioritizes safety for pedestrians and bicyclists, but also for those who choose to use public transit. Public transit amenities can be improved by increasing the number of bus stops, improving wayfinding and signage, reduced on-street parking, and providing residents with education on how to navigate the transit system.
- **Environment:** Complete Streets improve the likelihood residents will utilize alternate forms of transportation; thus, reducing vehicle miles driven and lowering air pollution and greenhouse gas emissions. Additionally, improving landscaping and promoting mixed use development increases overall streetscape aesthetics.

Public Demand for Complete Streets

Although there is no federal policy to implement Complete Streets, Caltrans and the State of California have adopted a number of policies that promote Complete Streets design.

- **Caltrans Deputy Directive (DD-64):** Adopted in 2008 and mandates the safety of pedestrians and bicyclists on all state highway projects in planning, construction, and maintenance.
- **United States Department of Transportation MAP-21**: This is the closest the federal government has gotten to promoting a complete streets policy. MAP-21 requires agencies to account for safety on all city-wide roads, not just arterials or collector streets. This policy also encourages agencies to produce data explaining the cause of pedestrian and bicyclist deaths; thus, making people more aware of ways to minimize traffic accidents.
- **AB 1358**: Adopted in 2008 and requires that when cities and counties are making a substantial revision to their General Plan, to update their Circulation Elements to plan for multi-modal and alternative forms of transportation.
- **AB 32**: The Global Warming Solutions Act was adopted in 2006 and requires cities and counties to provide measures to reduce air pollution and improve energy efficiency. This assembly bill sets a major goal for California to reduce statewide greenhouse gas emissions 80 percent below 1990 levels by 2050.
- **SB 375**: Passed in 2008 and supports AB 32 by planning a new vision for land use planning. The three major components of SB 375 are as follows: use the State of California's transportation planning process to reduce greenhouse gas emissions, provide cities and counties with California Environmental Quality Act incentives to establish commercial, retail, industrial, and residential developments that are environmentally-friendly and sustainable, and coordinate with the Regional

Housing Needs Allocation (RHNA) process to provide adequate housing for all income types.

II. COMMUNITY EDUCATION AND INVOLVEMENT

Public outreach is essential to the success of any planning project. It is unlikely public outreach will occur on its own; therefore, it is the responsibility of City staff to provide innovative, unique, and educational opportunities to get residents and stakeholders involved. There is no correct type of public outreach because the type of event depends on the specific problem at hand. This chapter explains the different ways Guadalupe can reach out its residents and key stakeholders to represent the opinions of minorities, ethnic groups, and individuals with low incomes.

The City of Guadalupe is home to 7,080 residents within 1.31 square miles of prime agricultural land. Guadalupe is faced with a serious challenge to improve the number of non-farming jobs and provide a variety of housing options to meet the needs of residents. The 2010 Census reported 6% of the population earns less than $10,000 per year; 23% earns less than $25,000 per year and 53% earns less than $50,000. It is essential to the success of planning complete streets in Guadalupe that these low-income residents are represented and attend public outreach events.

It is recommended the City of Guadalupe host a number of public design charrettes and workshops to fully understand the values and priorities of residents and stakeholders.

- Bus stop surveys
    - City staff or a hired consultant shall participate in bus stop surveys to reach out to residents traveling in and out of Guadalupe. Approximately 5% of Guadalupe residents ride the bus to work and the opinions of this small portion of transit riders is essential to the success of the Complete

Streets Plan. See Appendix C for bus stop surveys to be utilized by City staff.

- Park surveys
    - Representatives from the City shall visit Leroy Park, Jack O'Connell Community Park, and Central Park to administer surveys to nearby residents and those utilizing parks. See Appendix C for park surveys to be utilized by City staff.
- School surveys
    - City staff shall visit Mary Buren Elementary School and Kermit McKenzie Junior High School and administer surveys to staff, parents, and students. See Appendix C for school surveys to be utilized by City staff.
- Public Workshops
    - The City should hire a consultant to assist with the three workshops to introduce Guadalupe residents and key stakeholders to the concept of complete streets. After the first workshop, the City should create a Citizen Advisory Committee to serve as an informed group of 5-10 individuals that are passionate about improving the transportation network in Guadalupe by educating other Guadalupe residents and stakeholders. The first workshop will be a general public workshop to introduce attendees to the concept of complete streets. The second workshop will consist of a walking tour of Guadalupe followed by a design session. The final workshop will be a presentation of residents' plan concepts.

- Guadalupe Public Workshop: Introduction to Complete Streets
    - This workshop should be held at a general gathering place, which could be the City Hall or Kermit McKenzie Elementary School. Guadalupe Staff should advertise the event on local papers, online, and send out announcement to all residents and businesses. Depending on the number of attendees, City staff will break people into small groups to discuss ideas.
    - The agenda of the workshop is as follows:
        - Welcome and Introductions
        - Project Overview
        - Group Discussion
            - What do you like about Guadalupe?
            - What are your concerns about walking and biking in Guadalupe?
            - What would you like the proposed transit design in Guadalupe to become in the future?
        - Group Reporting
        - Concluding Remarks
        - Elect the Citizen Advisory Committee
- Walking tour and design workshop

- This workshop should begin at the same place as the first workshop and should be advertised the same way. City staff, the consultant, and the Citizen Advisory Committee will lead workshop attendees on a "walking audit" of the existing pedestrian, bicycle and transit environment in Guadalupe.
- The workshop should focus on identifying areas that residents like and areas residents feel could be improved
- After the tour is finished, participants should meet at the original meeting place to mark up maps with what they took away from the walking tour, which includes but is not limited to, values, concerns, and visions

▪ Presentation of Plan Concepts

- City Staff, the consultant, and the Citizen Advisory Committee should meet after the walking audit to come up with a draft design and present it to residents and stakeholders at the final workshop
- The design team will obtain input from residents after presenting the draft design, and after an appropriate amount of time, a final design will be presented to the City Council

III. RECOMMENDATIONS

The four main streets within Guadalupe have been identified as Highway 1, Highway 166/West Main Street, Obispo Street and 11th Street. The recommendations from this street are specific and include existing and proposed improvements based on site analysis surveys and the City of Guadalupe Bicycle of Pedestrian Master Plan of 2012. Recommendations for the remainder of the streets in Guadalupe are included under the General Citywide Recommendations portion of this chapter.

HIGHWAY 1/GUADALUPE STREET

Existing:

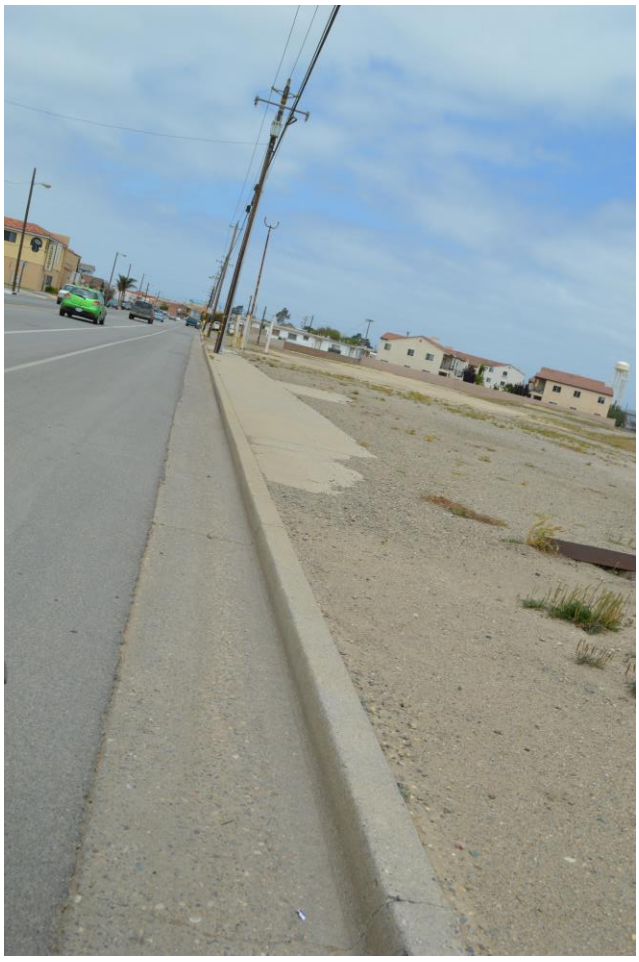
- From the intersection of Highway 166 to Sixth Street, the composition of Highway 1 is approximately 66'-70'
- There are 5' bike lanes in both directions; however, there is no signage indicating the lane is exclusively for bicyclists
- The travel speed along Highway 1 is 35mph
- There is no sidewalk from the intersection of Highway 166 to Holly Street, where the Guadalupe Amtrak station is located. The sidewalk is small and discontinues from 4th Street to Olivera Street.
- Figure 1 – Existing Highway 1 below (approximately at 2nd Street) shows the wide street with no sidewalks on the north-east side. There is too much pavement on Highway 166, which could be broken up by additional landscaping elements, such as street trees.

Figure 1: Existing Highway 1

Figure 2: Highway 1 North East Side

This picture shows the automobile dependency on Highway 1. There is one 11’ lane on each side of the street, 5’ bike lanes, and 10’ shoulder parking. The parking is relatively underutilized since many businesses have parking lots located adjacent to their establishments.

Figure 3: Underutilized Sidewalk



The parking along Highway 1 on the North East side is very underutilized as seen in this picture adjacent to a vacant lot.

Figure 4: Existing Highway 166

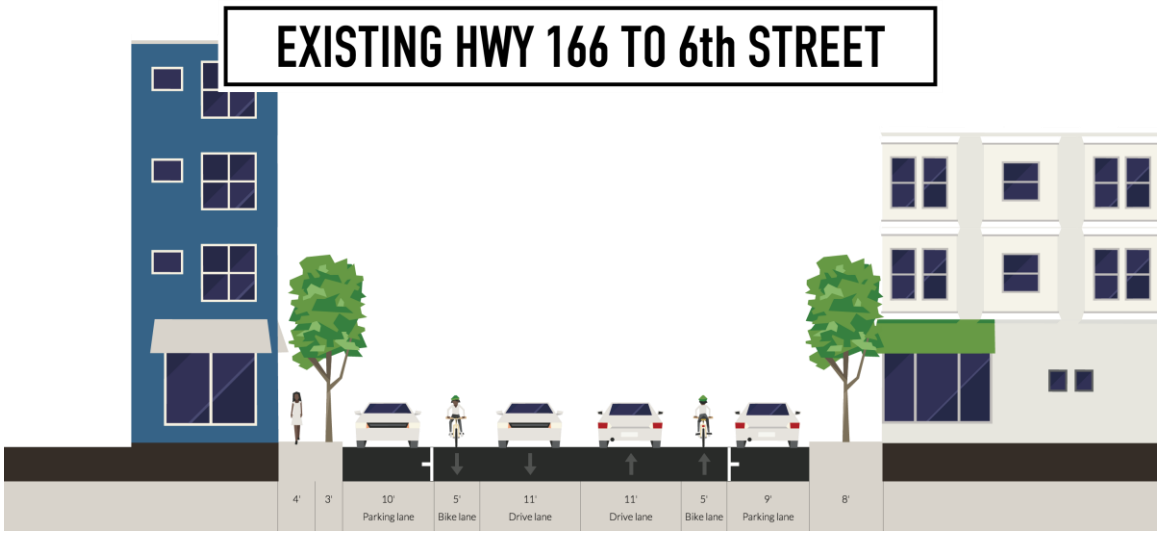
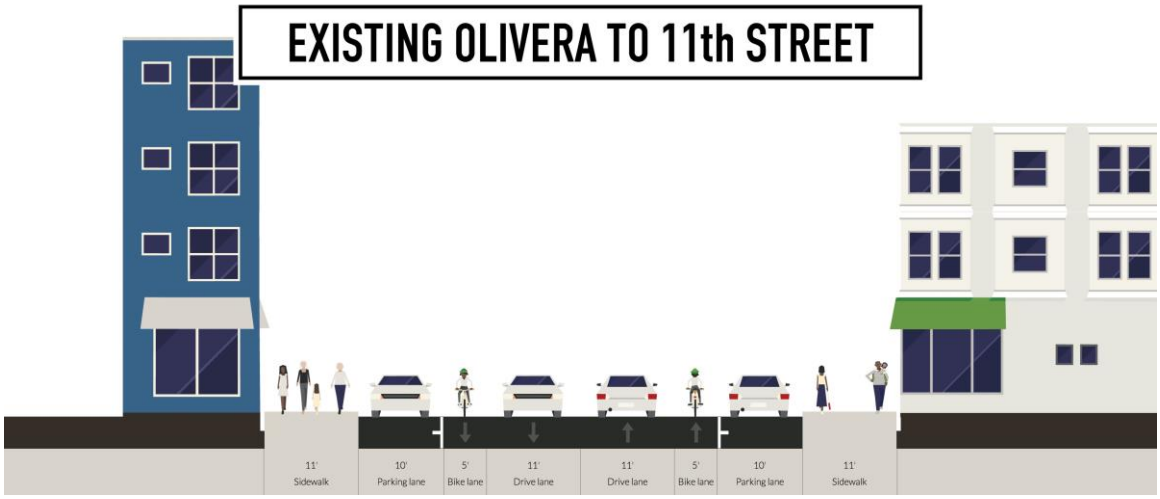


Figure 5: Existing Olivera to 11th Street

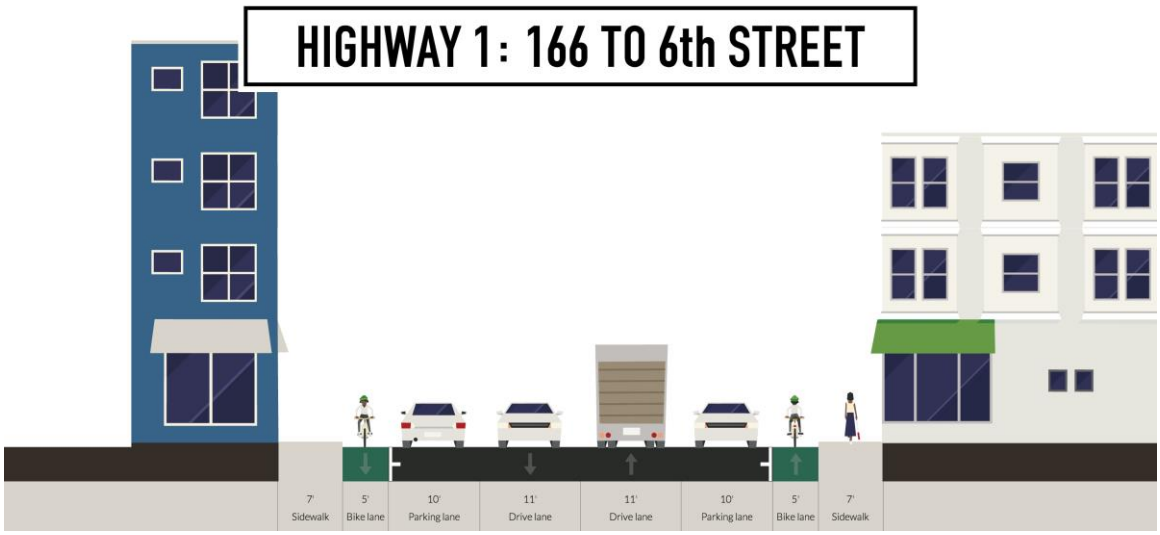


Recommendations:

HIGHWAY 1: 166 to 6th Street

- This proposal is a complete street in that it prioritizes fluid transportation for all forms of travel
- According to the City of Guadalupe Bicycle and Pedestrian Master Plan, Proposed Improvement B.1 states "Re-stripe existing Class II bike lanes and pavement markings along Guadalupe Street/Highway 1.
- Bicycle parking should be added in downtown and Amtrak station
- Directional way-finding signage should be implemented throughout Highway 1
- Highway 1 is a Pacific Coast Bicycle Route, extending from the Mexican border to California/Oregon state line. In order to respect the service of this road, all bicycle lanes should be highlighted in green to increase visibility.
- The most noticeable improvement from Highway 166 to 6th Street along Highway 1 includes 7' consistent sidewalks. These sidewalks will serve as an alternate route to driving downtown, where there is no parking. Since there is parking allowed on this segment of Highway 1, people are encouraged to park and walk downtown, utilizing the improvement sidewalks.
- The majority of single family homes in Guadalupe are located west of Highway 1; therefore, increasing pedestrian amenities will motivate people to travel to school, work, and downtown by foot

Figure 6: Highway 1 from 166 to 6th Street



Highway 1: 6th Street to 11th Street

- Recognized as the downtown area of Guadalupe
- People will not be allowed to park downtown to increase the overall pedestrian and bicycle experience. There are perpendicular streets to downtown, such as 10th Street, 8th Street, and 9th Street where people with disabilities or in a hurry can find parking
- The sidewalk will be increased to approximately 10’ in most locations to make room for sidewalk furniture, such as benches and trash receptacles
- Class II bike lanes with green paving are proposed to increase visibility
- Parklets are also recommended where feasible
- To increase the aesthetics of downtown Guadalupe, 4’ sidewalks with trees and native foliage are proposed. This will increase the amount of shade for pedestrians

and bicycles, which may motivate people to get out of their cars and enjoy the historic downtown Guadalupe

- There is a 9’ median/pedestrian refugee proposed for this section of Highway 1. This reduces traffic speeds by breaking up traffic. The medians will not be included on important intersections, such as Highway 1/11th Street
- Improvements should follow the existing crosswalk design located at 9th Street/Highway 1 and 11th Street/Highway 1. All crossings located from 6th Street to 11th Street should have crosswalks, and wherever feasible, crosswalks with permeable paving and hybrid flashing beacons.
-

Figure 7: Highway 1 from Olivera to 11th Street

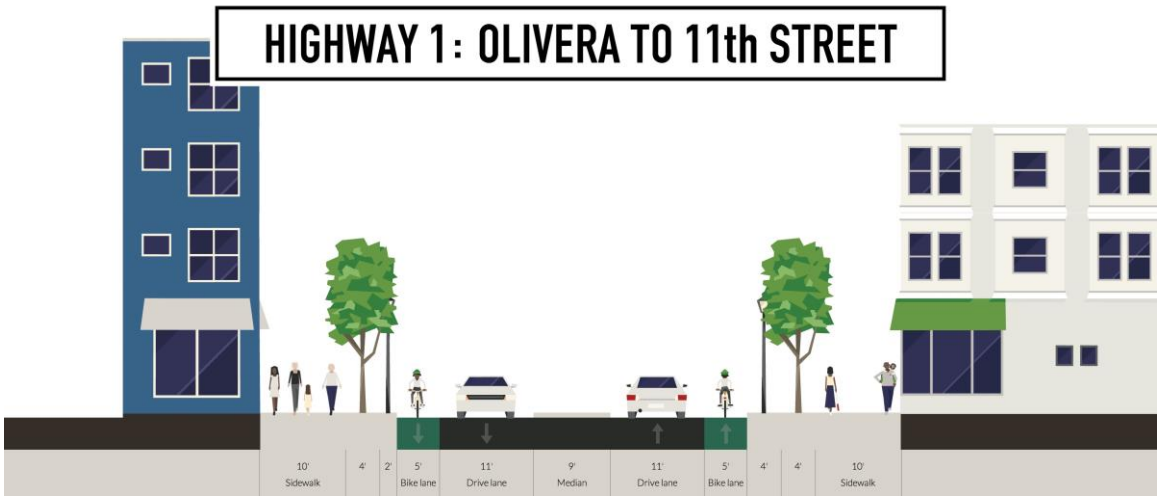


Figure 8: Highway 1 from Olivera to 11th Street

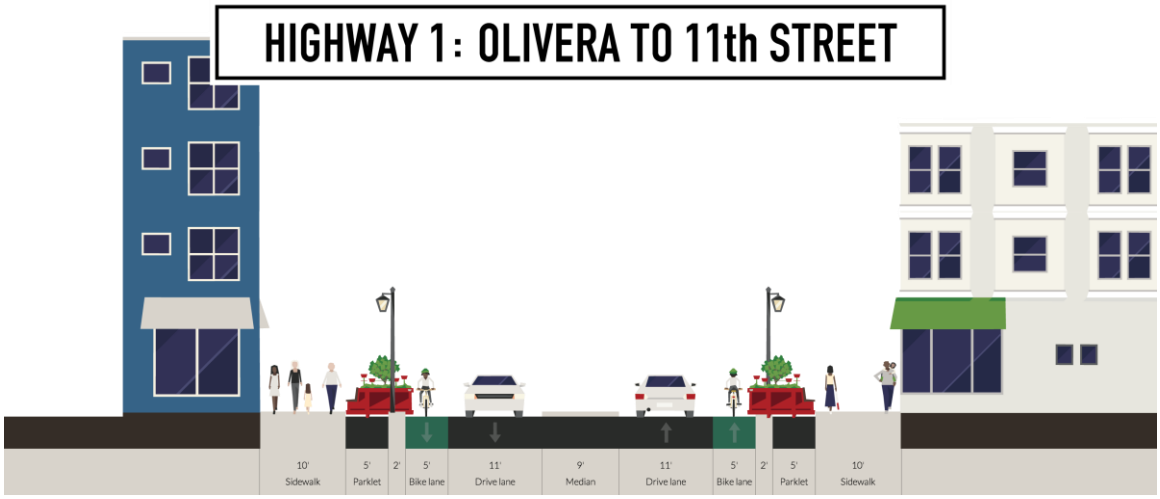


Figure 9: 11th Street and Highway 1 Intersection

Figure 10: Existing Bulbout in Downtown Guadalupe

Figure 11: Exiting Bike Lane in Downtown Guadalupe

Figure 12: Existing Downtown Guadalupe

Figure 13: Hybrid Flashing Beacons to be Implemented on 9th Street

HIGHWAY 166/WEST MAIN STREET

Existing:

- Include description from Guadalupe Chapter about Highway 166
- Highway 166 in Guadalupe begins at Flower Avenue and extends to the intersection of Highway 1. The street changes to West Main Street and continues west until 8th Street
- From Flower Avenue to Highway 1, there is one 12’ travel lane and 6’ shoulders in each direction, for a total 36’ roadway
- The travel speed along West Main Street is 35mph

- There is a 8’ sidewalk on the north side of the street and no sidewalk on the south side of the street
- Figure 14: Existing West Main Street shows the wide travel lanes with no sidewalks on the south side or bike lanes on either side. Similar to Highway 1, there is too much pavement, which could be broken up by adding landscaping elements.

Figure 14: Existing West Main Street from Highway 1 to 8th Street

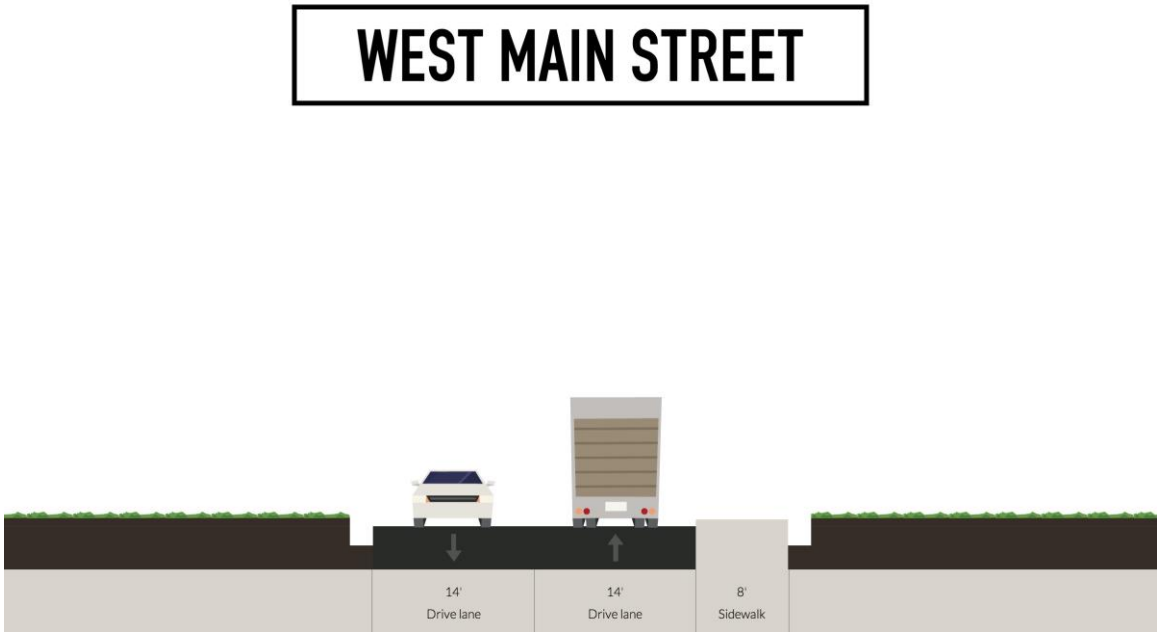


Figure 15: Existing Highway 166 from Flower Avenue to Highway 1

The above graphic shows there are 6’ sidewalks on the south side of the street; however, it is a shoulder. There are only sidewalks on this portion of Highway 166 from Obispo Street to the intersection of Highway 1 and Highway 166. Where there are no sidewalks on the north side, there are 6’ shoulders

Figure 16: Existing Highway 166 between Simas and Flower Avenue

This picture demonstrates the excessive amount of pavement along Highway 166. There are no landscaping elements, bike lanes, sidewalks, crosswalks, or wayfinding signage.

Recommendations:

HIGHWAY 166: Flower Avenue to Highway 1

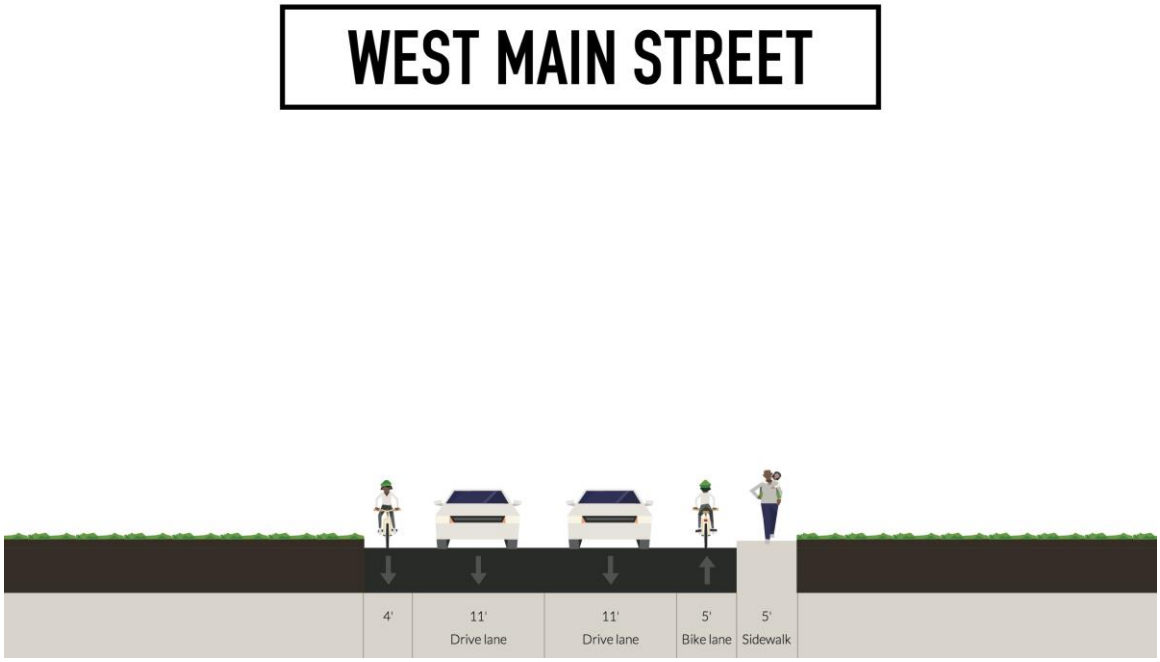
- Guadalupe's Bicycle and Pedestrian Master plan calls for Class II bike lanes and appropriate signage along both sides of Main Street/Highway 166 within City limits (Improvement B.2)
- Class II bike lanes will be included on both sides of the street to achieve this goal. Due to the small street dimensions, there will be 4.5' bike lanes along the south side of Highway 166 and 5' bike lanes along the north side of the street. If Guadalupe partners with the City of Santa Maria to add bicycle lanes from Flower

Avenue to Santa Maria, there will be many more commuters that choose to ride their bicycles to work along Highway 166

- The existing travel lanes will experience a road diet, decreasing from 12’ to 11’ on both sides of the street
- There is only a sidewalk proposed on the north side of Highway 166 because nearly all land south of Highway 166 is either agricultural or vacant; therefore, a sidewalk is not a priority.
- Paved crosswalks, and if possible hybrid flashing beacons, should be included at the Obispo Street intersection and Flower Avenue intersection
-

Figure 17: Proposed Highway 166 in Guadalupe from Flower Street to Highway 1

Figure 18: Proposed West Main Street from Highway 1 to 8th Street



- Class II bike lanes are included in this proposal with 4’ bike lanes on the south side of West Main Street and 5’ bike lanes on the north side
- There will be a one foot reduction from the existing 12’ roads to 11’ travel lanes
- Similar to Highway 166, West Main Street will include 5’ sidewalks on the north side of the street to accommodate for pedestrians walking to and from school, especially Kermit McKenzie Junior High School
- Hybrid flashing beacons and pervious concrete paving will be included at the intersection of Tognazzini Avenue and West Main Street to ensure children are safely crossing the street. It is also recommended the City hire crossing guards at this intersection
- The proposal recommends the City purchase part of the agricultural/vacant lot adjacent to Kermit McKenzie Junior High School to make room for a 10’ sidewalk on the south side of West Main Street

Figure 19: Pervious Pavement to be Implemented on West Main Street

OBISPO STREET

Existing:

- Obispo Street begins at Peralta Street and extends to the intersection of Highway 1
- From Highway 166 to Fourth Street, the sidewalk is 0’ with 0’ buffer on the west side of the street and the sidewalk is 4’ with 5’ buffer on the east side of the street. This demonstrates the lack of continuous design on Obispo Street
- The rest of Obispo Street, from Ninth Street to 12th Street includes 5’ sidewalks, 5’ buffers on both sides of the street and one 21’ travel lane in each direction
- The travel speed along Obispo Street is 35 mph

Figure 20: Existing Obispo Street from Ninth Street to 12th Street. This graphic illustrates the extensively wide travel lanes, lack of bicycle lanes or median.

Figure 21: Angled Parking at City Hall on Obispo Street

The parking located at 10th Street and Obispo on the east side should be re-striped as parallel parking to allow more space for bicyclists

Figure 22: Existing Landscaping

Although there are buffers along Obispo Street used for landscaping, the foliage is dead and unaesthetically appealing. This can be fixed by planting new trees and small shrubs

Figure 23: Obispo Street

The wide travel lanes along Obispo Street present some positives, but mostly contribute to the unaesthetically appealing environment along this route. The wide streets serve as an opportunity to promote road dieting; however, this street is a good example of the current automobile dependency and poor striping in Guadalupe

Recommendations:

OBISPO STREET: 12th Street to Highway 166

- The current makeup of Obispo Street is inconsistent and incomplete. The recommendations make Obispo Street a safe and dependable route for bicyclists and pedestrians who do not feel comfortable traveling on Highway 1 and provides another reliable choice to reaching amenities, City Hall, and school

- Obispo Street will be reconfigured to be a complete street with 6’ sidewalks, 10’ parking lanes, 5’ Class II bike lanes with striping and one 11’ drive lane in each direction
- The existing 21’ travel lanes will experience a dramatic road diet and will decrease to 11’
- Paved crosswalks, and if possible, hybrid flashing beacons, should be included at the intersections of 9th Street and Obispo and Highway 166.
- Covered bus shelters with benches should also be installed on Obispo Street between Holly Street and First Street to achieve P.24 Proposed Improvement in the Bicycle and Pedestrian Master Plan. At locations where there is a bus stop, Obispo Street will be reconfigured to the following: 6’ sidewalks, 9’ transit shelters, 5’ bike lanes and 11’ drive lanes

Figure 24: Proposed Obispo Street

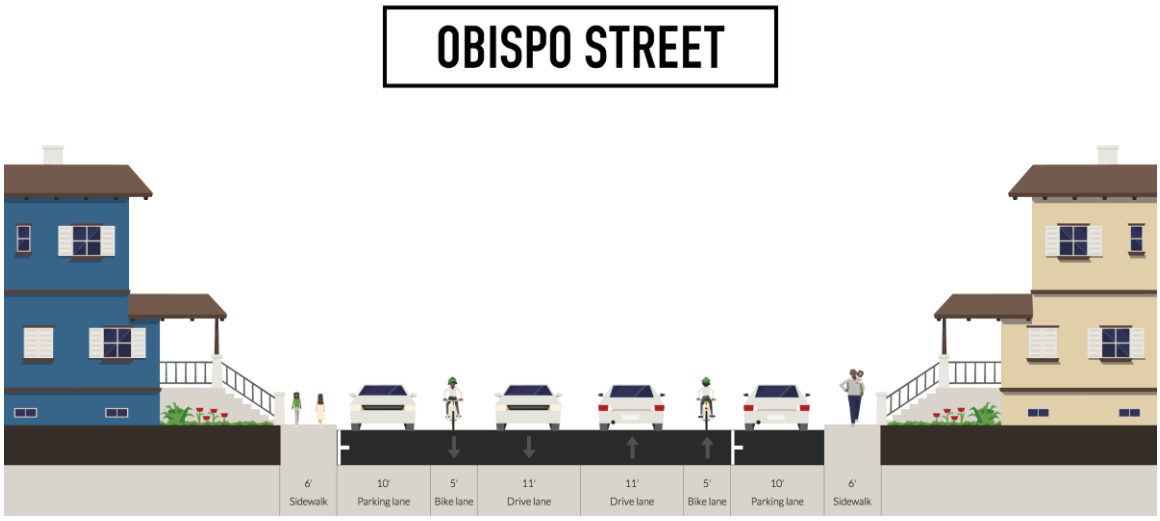
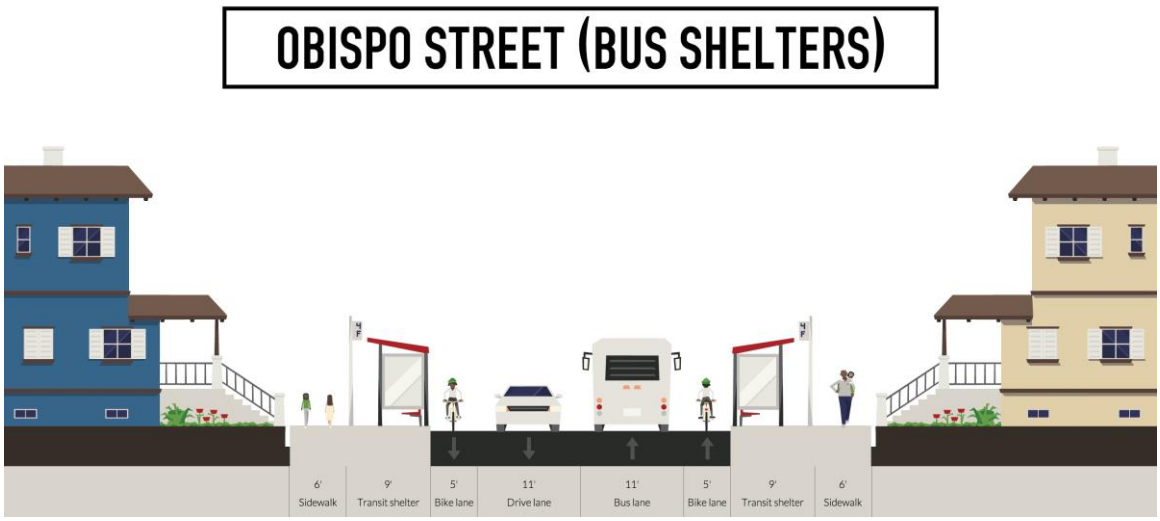


Figure 25: Proposed Obispo Street with Bus Shelters



11th STREET

Existing:

- 11th Street extends east-west approximately one mile through Guadalupe until Simas Road
- From 8th Street to Peralta Street, 11th Street includes one 5' sidewalk in each direction, one 20' travel lane in each direction, unpaved parking shoulders, and no bicycle lanes
- The rest of 11th Street from Peralta Street to Simas Road includes a 5' sidewalk on the south side of the street and one 20' travel lane in each direction
- The speed along 11th Street is 25mph beginning at the intersection of Escalante Street

Figure 26: Existing 11th Street from 8th Street to Peralta Street

Figure 26: Existing 11th Street with Wide Travel Lanes and Unmarked Shoulder Parking

Recommendations:

11th STREET: 8th Street to Peralta Street

- The Bicycle and Pedestrian Plan Proposed Improvement B.5 states "Add Class II bike route and appropriate signage along the entire length of Eleventh Street within the city limits"
- The existing 20' travel lanes will experience a road diet and be reduced to 11' in both directions to reduce vehicle traveling speeds and provide more space for bicycle and pedestrian signage
- There will be two 11' travel lanes in each direction that are shared lanes with bicyclists. There will be appropriate signage to make sure vehicles share the road. This is done to accommodate space for all modes of transit while preserving the existing 8' parking lanes by adding markings
- The paved sidewalks that exist at the intersection of Highway 1 and 11th Street (see Figure 28 below) should be included at the following intersections along 11th Street: 8th Street, Olivera Street, Pacheco Street, Obispo Street, and Peralta Street
- The 6' sidewalks should include small street trees as seen in Figure 30

Figure 27: Proposed 11th Street from 8th Street to Peralta Street

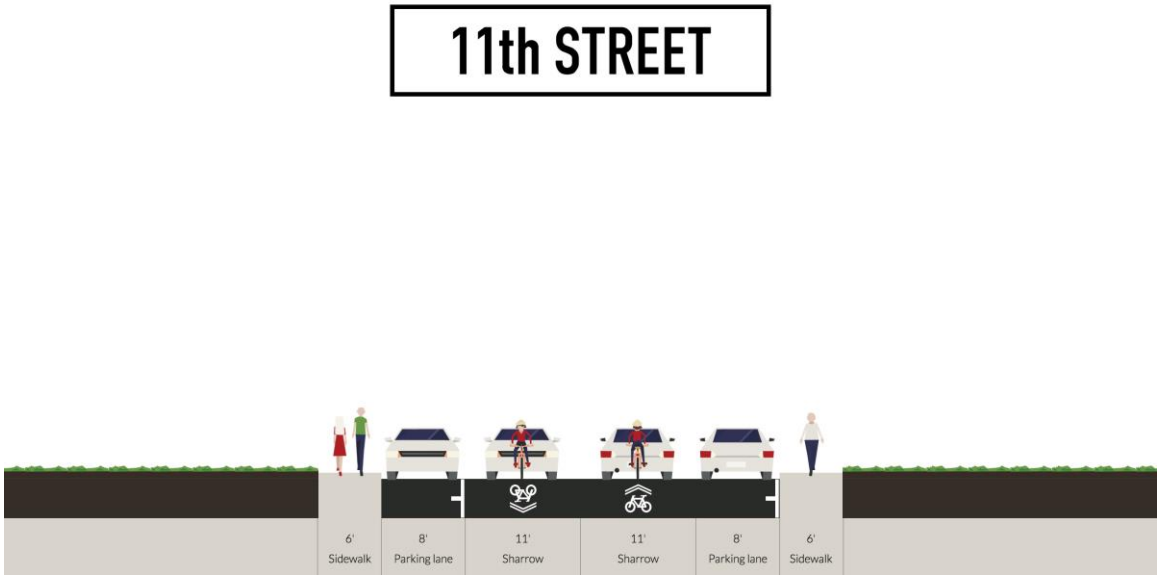


Figure 28: Shared Bicycle Lanes

Figure 29: Existing intersection of Highway 1 and 11th Street with Paved Crosswalks

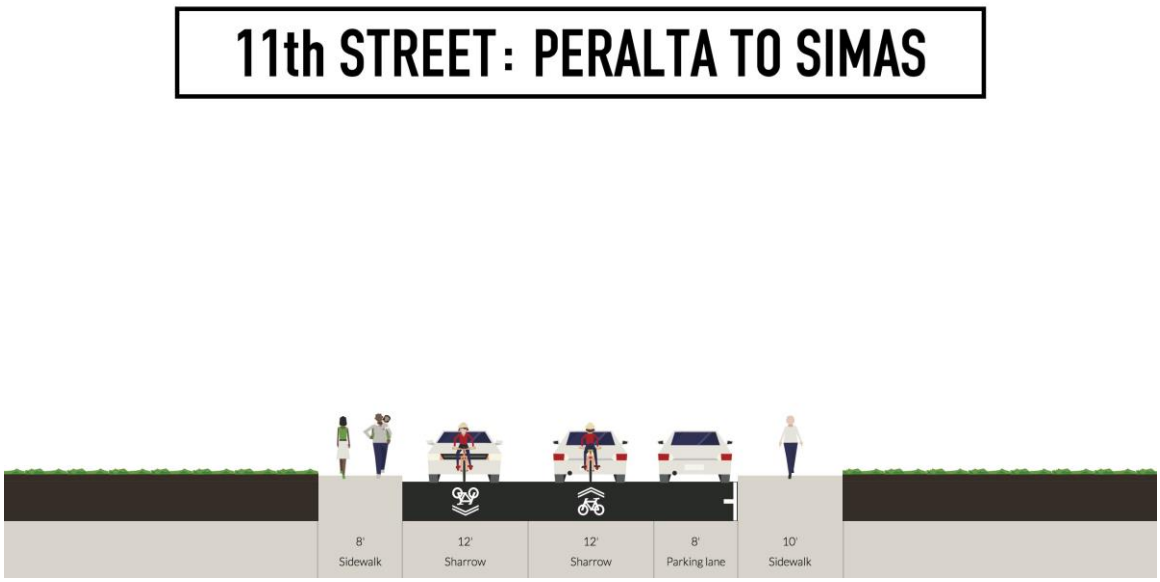
Figure 30: Sidewalk With Trees

11th STREET: Peralta Street to Simas Road

- The existing streetscape of 11th Street from Peralta to Simas is a 45’ road with one 20’ travel lane in each direction and a 5’ sidewalk on the south side of the street

- The adjacent land uses on the north side of 11th Street are large agricultural lots; therefore, it's not essential to have parking on this segment of 11th Street
- The proposed 11th Street from Peralta Street to Simas Road includes a 8' sidewalk on the north side of the street, one 12' shared travel lane with bicycle signage in each direction, a 8' parking lane on the south side of the street, and a 10' sidewalk
- Similar to the proposed 11th Street from 8th to Peralta, the sidewalks should include trees and other landscaping elements where appropriate
-

Figure 31: 11th Street from Peralta to Simas



GENERAL CITYWIDE IMPROVEMENTS

Bicycle Improvements

Objective 1.1: Provide a consistent, fluid and sustainable bicycle network by including Class II bike lanes, signage and pavement markings throughout the City of Guadalupe.

Policy 1.1.1: Provide Class III bike lanes on the following streets: Pioneer Street, Tognazzini Avenue, Olivera Street and any other streets where feasible and practical (see Figure 32)

Figure 32: Shared Bicycle Lane Example

Policy 1.1.2: Add bicycle signage on all streets where bicycle amenities are placed, including bicycle parking, bicycle route signs and yield to bike lanes (see Figure 33 below)

Figure 33: Bicycle Wayfinding Signage

Policy 1.1.3: Implement bicycle parking at the following locations: Community Park at West Main Street and 8th Street, Kermit McKenzie Junior High School, City Hall, Guadalupe Amtrak, Pioneer Street and Hernandez Drive and Mary Buren Elementary (see Figure 34 below for examples)

Policy 1.1.4: Pursuant to the Bicycle and Pedestrian Plan, there should be a do-it-yourself bicycle repair station in the downtown

Figure 34: Bicycle Parking

Pedestrian Improvements

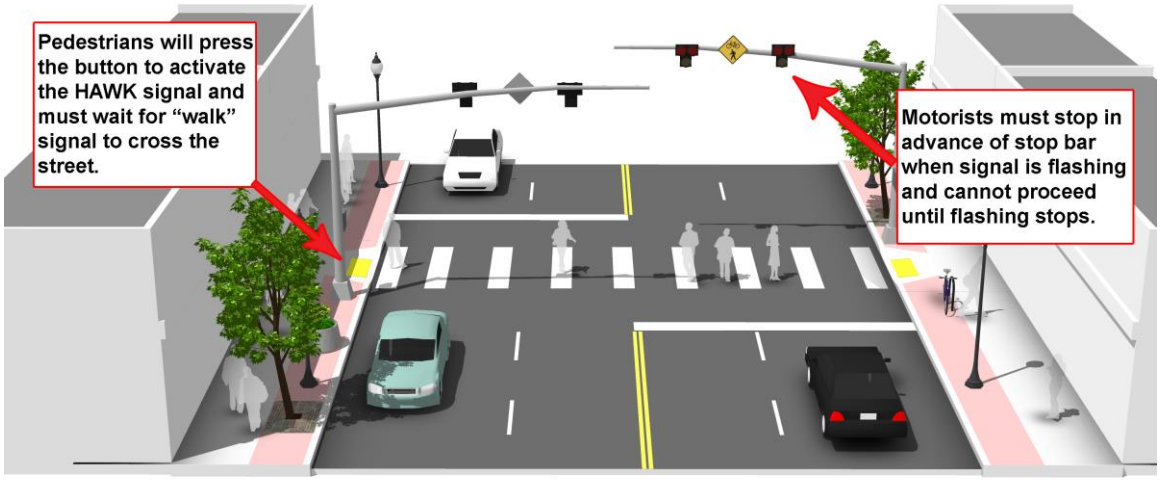
Objective 1.1: Guadalupe should become a pedestrian-friendly environment to encourage healthy lifestyles for people of all ages by repaving sidewalks, implementing pedestrian signage and providing crosswalks throughout the city.

Policy 1.1.1: Add bulbouts on all corners of the Highway 1 and West Main Street/Highway 166 intersection (see Figure 35)

Figure 35: Pedestrian Bulbouts

Policy 1.1.2: Add hybrid flashing beacons at the intersections of Highway 1 and West Main Street/Highway 166 and Highway 1 and Olivera Street

Figure 36: HAWK Signal



Policy 1.1.3: Mandate that all future transportation-related projects will repave existing sidewalks as part of the proposal

Policy 1.1.4: Add painted crosswalks and sidewalks on all streets in Guadalupe

Figure 37: Painted Crosswalks with Pedestrian Signage

Policy 1.1.5: The City shall purchase the land adjacent to Kermit McKenzie Junior High School to provide 10' sidewalks on the south side of West Main Street

Policy 1.1.6: Sidewalks should include decorative landscaping elements such as trees and native foliage

Policy 1.1.7: Sidewalks located near all schools, parks, and downtown should include trash receptacles and recycling bins

Multimodal Improvements

Objective 1.1: Transform the existing transit system into a high-quality and convenient system for Guadalupe residents and visitors.

Policy 1.1.1: Seek funding from regional, state, and federal agencies to provide additional transit stops

Policy 1.1.2: Provide one bus stop at each park and school

Policy 1.1.3: Include a bus stop at the following locations: 8th Street and Highway 1, Obispo and 9th Street, and Highway 1 and Highway 166

Policy 1.1.4: All new developments should promote the public transit system

Objective 1.2: Increase the current 4.6% of residents who use public transit to get to work to 20% by providing additional transit stops throughout the city

Policy 1.2.1: Provide additional connections with nearby cities such as San Luis Obispo and Lompoc

Policy 1.2.2: Partner with cities such as Santa Maria, Lompoc, and San Luis Obispo to provide additional routes

Figure 38: Proposed Bicycle Improvements

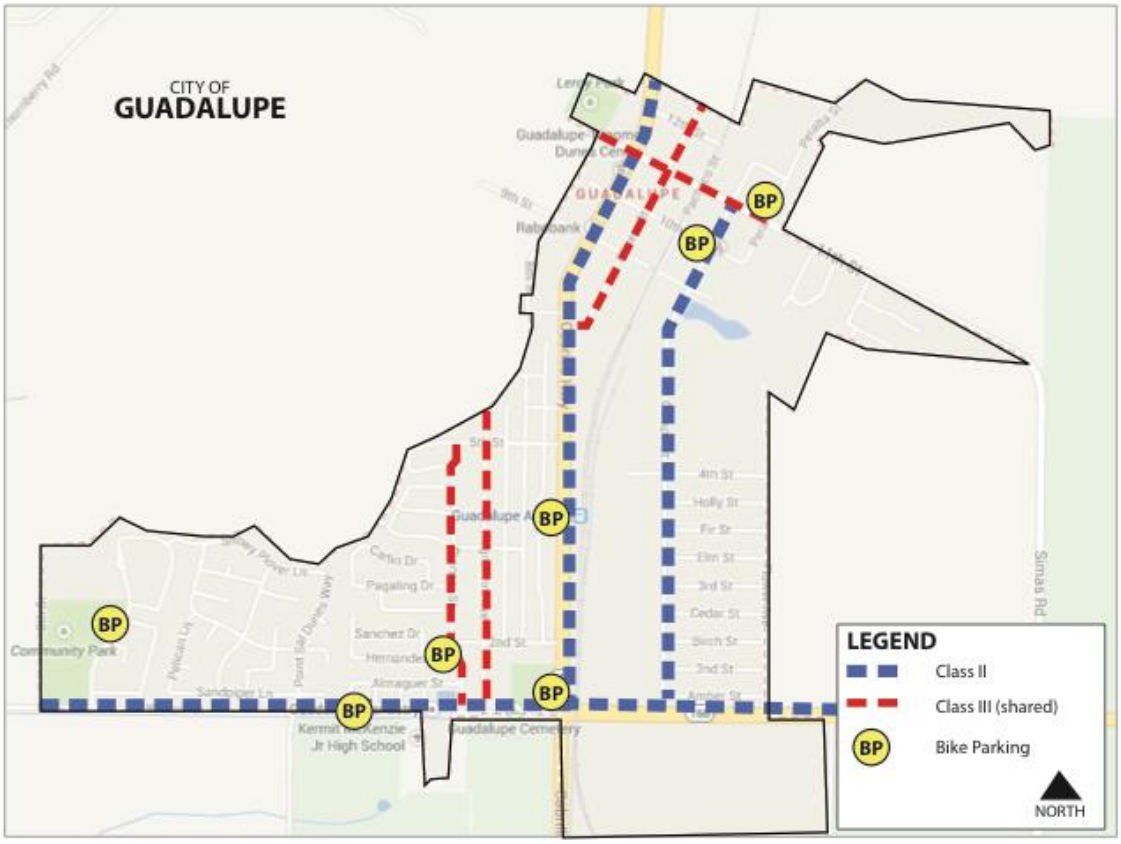
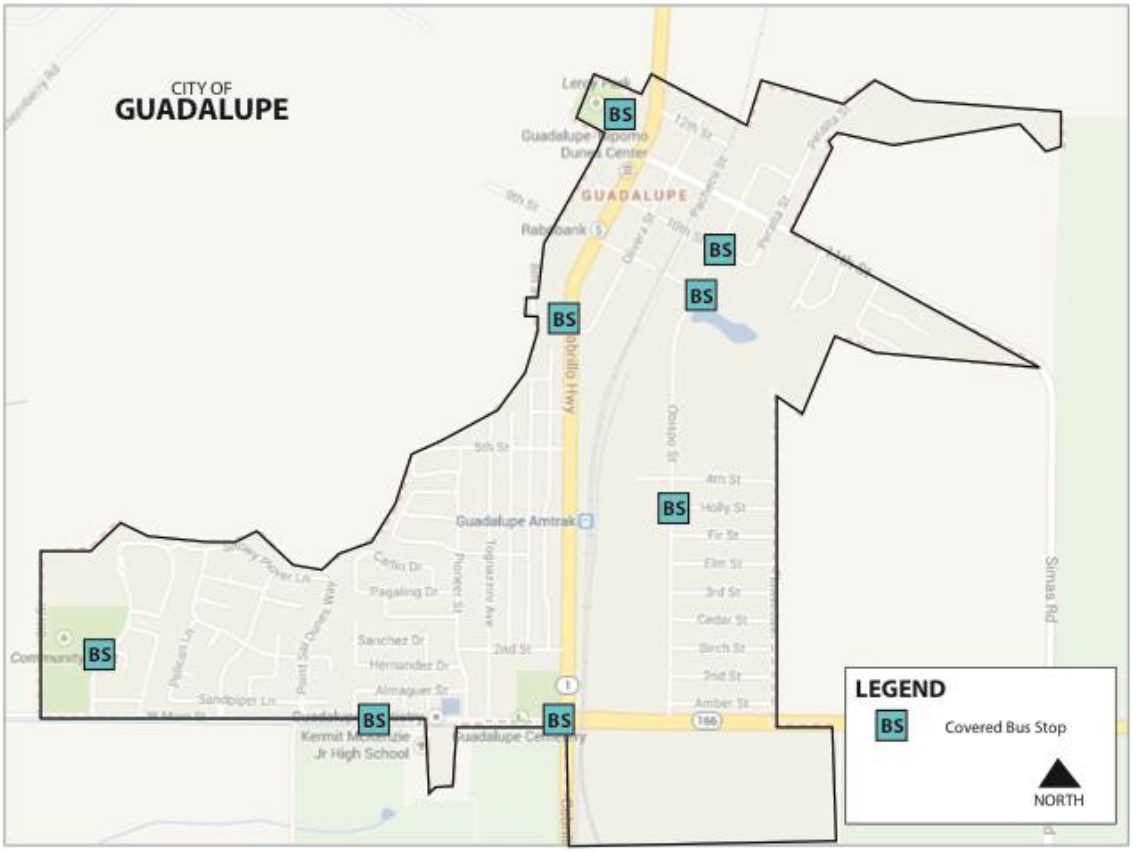


Figure 39: Proposed Pedestrian Improvements

Figure 40: Proposed Multimodal Improvements



IV. IMPLEMENTATION

The implementation process for the Guadalupe Complete Streets Plan will not happen overnight. It will involve patience, collaboration, and innovation from all relevant parties. The most important part for implementing the plan will be identifying funding sources for the proposed improvements. The next step will be setting performance measures to chart the success of the Complete Streets Plan.

Potential funding sources have been identified below. The Caltrans Transportation Planning Grant Program, Moving Ahead for Progress in the 21st Century Act, State Transportation Improvement Program, Recreational Trails Program, Congestion Mitigation and Air Quality Improvement Program, Highway Safety Improvement Program, Active Transportation Program, Measure A, and Transportation Development Act have been identified as the top potential funding sources on a local, state, and federal level.

Caltrans Transportation Planning Grant Program

Each year Caltrans creates a grant opportunity for three different transportation planning grant programs: partnership planning for sustainable transportation, transit planning for sustainable communities, and transit planning for rural communities. The City of Guadalupe should apply for the fiscal year 2015-26 transit planning for rural communities since the population is substantially less than the required 100,000. Projects for this grant typically include short-range transit development plans, ridership surveys, and student internships.

Moving Ahead for Progress in the 21st Century Act (MAP-21)

President Obama signed MAP-21 on July 6, 2012 which aims to make roads the safe and comfortable for all transit modes. The law provided $572 million in grant funding in FY 2014. The program's three principles are as follows:

1. Raise the bar to enter the industry and operate on our roads;
2. Hold motor carrier and drivers to the highest safety standards to continue operations; and
3. Remove the highest risk drivers, vehicles, and carriers from our roads and prevent them from operating

State Transportation Improvement Program (STIP)

STIP is funded by the California Transportation Commission to provide funding for state highway improvements, intercity rail, and transit improvements. It is update biennially and includes two new program years, 2017-18 and 2018-19. The City of Guadalupe is qualified to apply for both fiscal years for fund the recommendations in the Complete Streets Plan.

Recreational Trails Program

The RTP is funded by the US Department of Transportation's Federal Highway Trust Fund. RTP was reauthorized by the Moving Ahead for Progress in the 21st Century Act (MAP-21). This program supports bicycling and other types of recreational activities that are applicable to the recommendations located in the Guadalupe Complete Streets Plan.

Congestion Mitigation and Air Quality Improvement Program

Funded by the Federal Highway Administration, the Congestion Mitigation and Air Quality Improvement Program (CMAQ) supports projects and programs that reduce transportation related emissions. All projects for CMAQ are required to come from a transportation plan, such as a Complete Streets Plan, and be consistent with the Clean Air Act and Transportation Conformity Rule Projects. Project types considered eligible for CMAQ typically include traffic flow improvements, transit projects and bicycle and pedestrian facilities programs.

Highway Safety Improvement Program

The Highway Safety Improvement Program (HSIP) was enacted by MAP-21 in October 2012. HSIP funds projects that strive to reduce traffic fatalities on all public roads for pedestrians and bicyclists. HSIP was allotted $2.41 billion in estimated funding in 2014.

Active Transportation Program

Governor Brown approved the Active Transportation Program (ATP) on September 26, 2013 in the Department of Transportation (SB 99 and AB 101). The ATP funds state and federal transportation projects, including the Transportation Alternatives Program (TAP), Bicycle Transportation Account (BTA), and State Safe Routes to School (SR2S) in a single document to make California a national leader in active transportation. The ATP aims to increase the proportion of trips accomplished by biking and walking, improve safety for non-motorized users, enhance public health, reduce greenhouse gas emissions, and ensure that disadvantaged communities fully share in the benefits of the program.

Measure A

Measure A is a transportation measure administered by the Santa Barbara Association of Governments (SBCAG) that was approved November 2008. Measure A provides more than $1 billion in sales tax for transportation projects in Santa Barbara County over the next 30 years. Projects funded by Measure A include U.S. 101 South Coast Widening HOV Project, Highway 101 Santa Maria River Bridge and Highway 101 Union Valley Parkway Interchange.

Transportation Development Act

The Transportation Development Act (TDA) provides funding for the Local Transportation Fund (LTF) and the State Transit Assistance fund (STA). These funds support public transportation needs in California relating to transit, bicycle, pedestrian, and streets and roads. Article 3 of the TDA supports projects related to the planning and construction of bicycle and pedestrian facilities including right-of-way acquisition, retrofitting bicycle and pedestrian facilities, and route improvements.

Figure 41: Cost for Complete Streets Improvements

Project Type	Construction Cost Only	Total Cost (including incidentals and contingency)
Bicycle Network		
Class II bike lane (striping, stenciling, and signage; 2-way)	$36,600/mile	$60,390/mile
Class III bike route (signs only, 2-way)	$2,500/mile	$4,125/mile
Restripe Class II bike lane (2-way)	$16,000/mile	$26,400
Bicycle racks	$700 each	$1,155 each
Bicycle lockers	$1,200/bike	$1,980/bike
Do-it-yourself bicycle repair station	$1,000/station	$1,650/station
Pedestrian Network		
ADA compliant sidewalk (5 feet wide)[1]	$185,000/mile	$305,250/mile
Painted crosswalk	$1,500/each; $5,000/4-leg	$2,475/each; $8,250/4-leg
Flashing crosswalk	$20,000/each	$33,000/each
Advanced flashing pedestrian warning signs	$16,000/each	$26,400/each
Other		
Directional way-finding signage	$300 each	$495 each
Street lights	$4,000/light	$6,600/light
Railroad overcrossing	$3,000,000 each	$4,950,000 each
Covered transit stop shelters	$20,000 each	$33,000 each
Restrooms	$75,000/modular	$123,750/modular
Street trees	$60-$100/tree	$99-$165/tree
Landscaping (plant material and edge treatment)	$21-50/square foot	$35-83/square foot

[1] Does not include cost of curb and gutter (estimated additional $127,000/mile).

Guadalupe should utilize the seven performance measures from the City of Indianapolis' Complete Streets Ordinance to evaluate the success of the project. The City should assess the performance measures twice a year by presenting findings at City Council meetings and online for the public to view.

Indianapolis, Indiana landed the number one spot on Smart Growth America's Complete Streets Policies of 2012 for its impressive implementation chapter. Smart Growth America recommends cities should establish unique ways to measure the success of policies and Indiana sets the bar high. Not only does the ordinance mandate an annual report on ways the ordinance is successful in coordinating with the Public Works Department and Office of Sustainability, but also creates seven performance measures

that are evaluated four times a year with quarterly reports posted online. The performance measures are as follows:

- Total miles of bike lanes
- Linear feet of new pedestrian accommodation
- Number of new curb ramps installed along city streets
- Crosswalk and intersection improvements
- Percentage of transit stops accessible via sidewalks and curb ramps
- Rate of crashes, injuries, and fatalities by mode
- Rate of children walking and bicycling to school

These seven performance measures are applicable to Guadalupe and will help City staff and residents gauge whether the Complete Streets Plan is effective in reducing pedestrian and bicycle fatalities, implementing intersection improvements, and improving the overall transportation network. After six months after the adoption of the Complete Streets Plan, the City of Guadalupe will be responsible for producing the first Complete Streets Plan Implementation Report. Not only are these performance measures beneficial for the public, but it will help City staff keep track of improvements are successful and those that aren't. Finally, each time a new aspect of the Complete Streets Plan is approved for construction, City staff should host a focus group meeting to educate the community on the benefits of the new development.

Field Data Collection Print-Outs

CompleteStreetsLOS

Street:	Date of data collection:	Observer(s):
Highway 1 -		
Limits:	**Time of data collection:**	**Analysis direction**

It is recommended that the data is collected while following the analysis direction (NB, SB, EB, WB, etc.), so that the data to be collected is always located on the right hand side.

Cross Street Names:	X-St. Width:		Cross Street: Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Hwy 1606	N/A					
		Segment #1: 680 ft				
Second	32 ft		~~Signal~~	2	25	✓
		Segment #2: 1,960 ft				
Fifth	33 ft		~~Signal~~	2	25	✓
		Segment #3: 358 ft				
Sixth	33 ft		~~Signal~~	2	25	✓
		Segment #4: 784 ft				
Olivera	42 ft		~~Signal~~	2	25	✓
		Segment #5: 155 ft				
Eighth	34 ft		~~Signal~~	2	25	✓

Notes

"X-St Width" (blue) refers to the curb-to-curb widths of the cross street, measured in feet

Segment lengths (orange) should be entered for the distance between signalized intersections, measured in feet

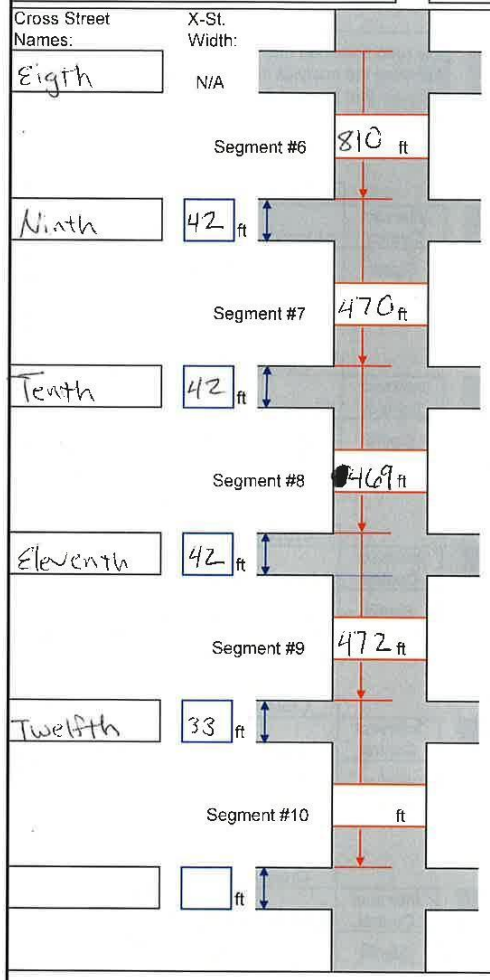
Layout - Segments 1 to 5

Field Data Collection Print-Outs

CompleteStreetsLOS

Street:	Date of data collection:	Observer(s):
Highway 1 (cont.)		
Limits:	**Time of data collection:**	**Analysis direction**

It is recommended that the data is collected while following the analysis direction (NB, SB, EB, WB, etc.), so that the data to be collected is always located on the right hand side.



Cross Street	Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Ninth	Signal	2	25	/
Tenth	Signal	2	25	/
Eleventh	Signal	2	25	
Twelfth	Signal		25	/
	Signal			/

Notes

"X-St Width" (blue) refers to the curb-to-curb widths of the cross street, measured in feet

Segment lengths (orange) should be entered for the distance between signalized intersections, measured in feet

Layout - Segments 6 to 10

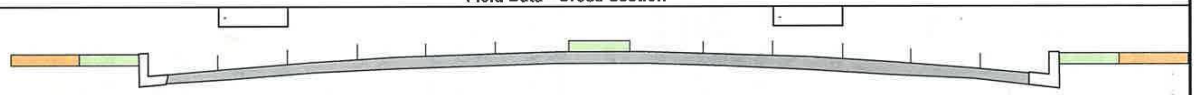
Field Data Collection Print-Outs

Street:	Date of data collection:	Observer(s):
Highway 1		
Limits:	**Time of data collection:**	**Analysis direction**
		South to North

Field Data - Cross Section, Traffic, and Transit

	Extent		Cross Section					Traffic				Transit			
Segment	From	To	# Trees/ Barrier	Park'g Occ (%)	Park'g Unstriped	Pavem't Cond	Mid-Seg Xing Diff	Speed Limit	Median Type	# Drwys	# Unsig Ints	# Bus Stops	Shelters (% Stops)	Benches (% Stops)	CBD (Yes/No)
1	Hwy 166	Second						25	—	3					
2	Second	Fifth						25	—						
3	Fifth	Sixth						25	—						
4	Sixth	Olivera						25	—						
5	Olivera	Eigth						25	—						
6	Eighth	Ninth						25	—						
7	Ninth	Tenth						25	—						
8	Tenth	Eleventh						25	—						
9	Eleventh	Twelfth						25	—						
10	[redacted]														

Field Data - Cross Section



Segment	Clear Sidewalk	Buffer	Shouldr Park'g	Bike Lane	Travel Lane	Travel Lane	Travel Lane	Travel Lane	Median	Travel Lane	Travel Lane	Travel Lane	Travel Lane	Bike Lane	Shouldr Park'g	Buffer	Clear Sidewalk
1	4'	3'	10'	5	11'	—						—	11'	5'	9'	8'	—
2	4'	3'	10'	5	11'	—						—	11'	5'	9'	8'	—
3	[redacted]	—	10'	5'	11'	—						—	11'	5'	9'	8'	—
4	9'	—	10	5'	11'	—						—	11'	5'	9'	—	10'
5	11'	—	10'	5'	11'	—						—	11'	5'	11	—	11'
6	11'	—	10'	5'	11'	—						—	11'	5'	11'	[redacted]	11'
7	11'	—	10'	5'	11'	—						—	11'	5'	11'	—	11'
8	11'	—	10'	5'	11'	—						—	11'	5'	10	—	11'
9	9'	—	10'	5'	11'	—						—	11'	5'	9'	—	9'
10																	

Cross Section, Traffic, and Transit

Field Data Collection Print-Outs

CompleteStreetsLOS

Data is collected in the analysis direction for one side of the street, unless otherwise specified

Layout			
	Intersect Control	Intersection control	Segments should be determined on the analysis corridor by signalized intersections
	# Lanes	Number of lanes	Count number of cross street lanes on your right in the analysis direction
	Speed (mph)	Approach or limit	Approach speed of cross street vehicles in miles per hour, if possible. If not, speed limit.
	App vph/ln	Approach vehicles per hour per lane	Volume of approach vehicles on the cross street per lane, maybe collected from previous counts
	# Right Turn Isl	Number of channelized right turn islands	Count the number of channelized right turn islands on your right in the analysis direction
Field Data - Cross Section, Traffic, and Transit			
Cross Section	# Trees/ Barrier	Number of physical barriers between traffic and pedestrians	Count the number of trees, large bushes, bollards, and any other significant vertical barriers separating traffic from pedestrians. For continous barriers, match the number to the segment length
	Park'g Occ (%)	On-street parking occupancy percent	For the analysis time period, indicate the approximate occupancy of parked vehicles
	Park'g Unstriped	On-street parking spaces unstriped	Indicate yes or no if the parking area is striped
	Pavem't Cond	Pavement condition	Pavement condition ranges from 1 (gravel) to 5 (new). 3 is average.
	Mid-Seg Xing Diff	Mid-segment street crossing difficulty factor	Indicate yes or no if you would like to include the calculations for pedestrians crossing the street between signalized intersections
Traffic	Speed Limit	Speed limit	Posted speed limit along corridor in miles per hour
	Median Type	Median Type	0 = none, 1 = one-way street, 2 = two-way left turn lane, 3 = raised median
	# Drwys	Number of driveways	Count number of commercial or busy residential driveways on your right in the analysis direction.
	# Unsig Ints	Number of unsignalized intersections	Count the number of unsignalized intersections on your right for each segment
Transit	# Bus Stops	Number of bus stops	Count the number of bus stops for each segment

Definitions

Field Data Collection Print-Outs

Shelters (% stops)	Percent of shelters	Indicate the percent of bus stops in the segment that have shelters
Benches (% stops)	Percent of benches	Indicate the percent of bus stops in the segment that have benches
CBD (Yes/No)	Central business district	Indicate yes or no if bus stops are located in the central business district

Field Data - Cross Section

Widths are collected in feet for both sides of the roadway

Clear Sidewalk	Clear width of sidewalk	Sidewalk where pedestrians have a clear width for walking. You may choose an average width or choke points.
Buffer	Sidewalk buffer	The width of a linear area that provides separation of the sidewalk from the roadway, often contains landscaping, utilities, or street furniture
Shouldr Park'g	Shoulder or parking lane	Measure width if there's a parking lane or shoulder, if not leave blank.
Bike Lane	Bike Lane	Measure width if there's a bike lane lane, if not leave blank.
Travel Lane	Travel Lane	Measure each vehicle travel lane width, does not need to include turn pockets.
Median	Median	Measure median width. If none, leave blank.

Definitions


Marisa & Evan
City of Guadalupe
Obispo & Peralta
N
0
0.125
0.25
0.5
Miles
1:2,500

CompleteStreetsLOS

Data Requirements Sheet

This sheet provides tips and shortcuts to reduce the data collection effort when performing a full corridor multimodal analysis in the CompleteStreetsLOS software. These tips are based on Dowling Associates' experience working with public agencies applying CompleteStreetsLOS to over 25 arterials in 10 cities.

Using these tips, a single mile-long street can be coded from scratch in one day. A site visit is the most accurate way to gather most of the required data, but significant savings can be achieved with minor loss in precision by using data readily available on the internet.

Data	Tip
Physical Characteristics and Geometry	
• Number of Lanes, driveways, unsignalized intersections, right turn islands and trees	Google™ earth or maps, just make sure photo date is current.
• Lengths, Widths (median, lanes, parking, sidewalk, buffer, etc.)	Google™ earth provides sufficient precision (nearest foot is good enough)
• Bus stops, shelters, benches	Google™ earth/ maps. Streetview for uncertainties.
• Speed Limits	Google™ maps streetview to spot speed limit signs.
• Pavement Condition	Only critical to spot "bad" pavement conditions (1 or 2). Use "3" as default for all other conditions.
Traffic and Signal Data	
• AADT's or peak hour turning movements	Traditional traffic counts
• Number of RTOR and Permitted Lefts	Estimate as percentage of lefts or rights.
• Left/Right Turn Percentage	Use turn counts or estimate at 10% of flow
• Parking Occupancy Percentage	Estimate to nearest 25%, no need to count.
• Pedestrian Volume	Can neglect unless exceeds 1000peds per hour
• Heavy Vehicle Percentage	Estimate to nearest 5%
• K, D, Peak Hour factors	Use 10%, 60%, 0.92 for K, D, peak hour factors
• Through Adjusted Saturation Flow Rate	Use 1800 unless better information available.
• Cycle Lengths	Use 100 seconds unless better info available.
• g/C Ratio for the Through Movement	Use 42% unless better info available.
• Pedestrian Walk Time	Use 7 seconds unless better info available.
• Arrival Types	Use "4" if coordinated, "3" otherwise.
Transit Data	
• Frequency	Published schedules on the internet.
• Load Factor	Estimate if over 80% full, otherwise, neglect.
• Bus On-Time Performance (OTP)	Use system wide OTP reported by agency or MPO. Typical range is 70% to 95%.
• Scheduled Speed	Compute from published schedule time points.
• Average Passenger Trip Length	Use national average 3.7 miles (APTA 2004)

CompleteStreetsLOS
A Multimodal Level of Service Toolkit

Field Data Collection Print-Outs CompleteStreetsLOS

Street:	Date of data collection:	Observer(s):
Obispo		
Limits:	**Time of data collection:**	**Analysis direction**
		Northbound

It is recommended that the data is collected while following the analysis direction (NB, SB, EB, WB, etc.), so that the data to be collected is always located on the right hand side.

Cross Street Names:	X-St. Width:		Cross Street: Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Hwy 166	N/A					
		Segment #1: 2,351 ft				
Fourth	42 ft		Signal	2	35	—
		Segment #2: 1874 ft				
Ninth	43 ft		Signal	2	35	—
		Segment #3: 458 ft				
Tenth	47 ft		Signal	2	35	—
		Segment #4: 475 ft				
Eleventh	50 ft		Signal	2	35	—
		Segment #5: 467 ft				
Twelfth	40 ft		Signal	2	35	—

Notes

"X-St Width" (blue) refers to the curb-to-curb widths of the cross street, measured in feet

Segment lengths (orange) should be entered for the distance between signalized intersections, measured in feet

Layout - Segments 1 to 5

Field Data Collection Print-Outs CompleteStreetsLOS

Street:	Date of data collection:	Observer(s):
Peralta		
Limits:	**Time of data collection:**	**Analysis direction**

It is recommended that the data is collected while following the analysis direction (NB, SB, EB, WB, etc.), so that the data to be collected is always located on the right hand side.

Cross Street Names:	X-St. Width:		Cross Street: Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
	N/A					
		Segment #6 ft				
Tenth [redacted]	52 ft		Signal	2	25	—
		Segment #7 473 ft				
Eleventh	48 ft		Signal	2	25	—
		Segment #8 468 ft				
Twelfth	39 ft		Signal	2	25	—
		Segment #9 136 ft				
	ft		Signal			
		Segment #10 ft				
	ft		Signal			

Notes

"X-St Width" (blue) refers to the curb-to-curb widths of the cross street, measured in feet

Segment lengths (orange) should be entered for the distance between signalized intersections, measured in feet

Layout - Segments 6 to 10

Field Data Collection Print-Outs

Street: Obispo, Peralta

Date of data collection:

Observer(s):

Limits:

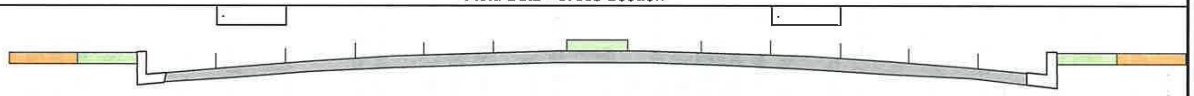
Time of data collection:

Analysis direction: Northbound

Field Data - Cross Section, Traffic, and Transit

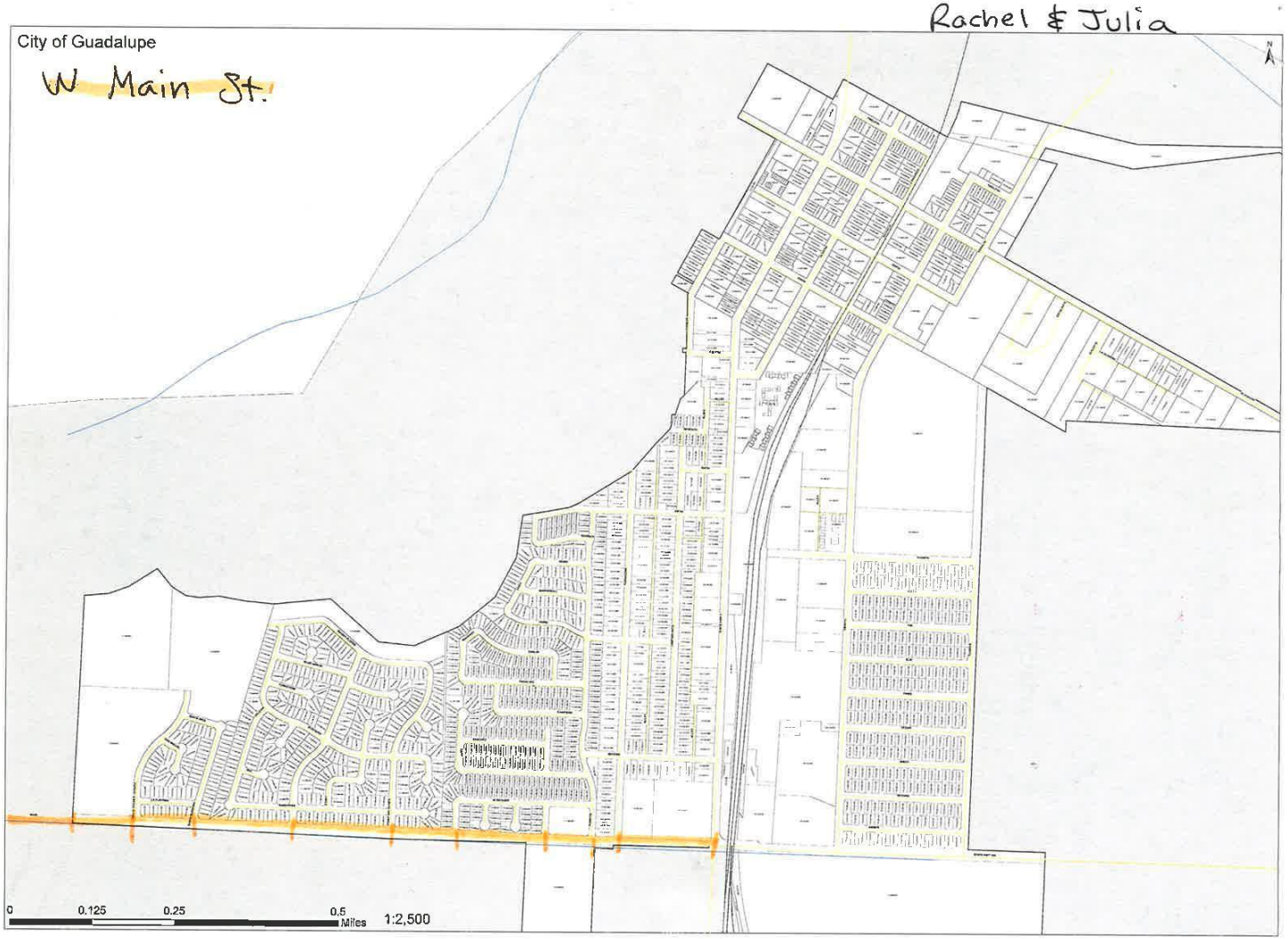
	Segment	From	To	Cross Section: # Trees/ Barrier	Park'g Occ (%)	Park'g Unstriped	Pavem't Cond	Mid-Seg Xing Diff	Traffic: Speed Limit	Median Type	# Drwys	# Unsig Ints	Transit: # Bus Stops	Shelters (% Stops)	Benches (% Stops)	CBD (Yes/No)
Obispo	1	Hwy 1606	Fourth	4	10%	Yes	3	NO	35	—	24	8	0			N
	2	Fourth	Ninth	2	10%	Yes			35	—	8	0	0			N
	3	Ninth	Tenth	3	60%	NO			35	—	6	0	0			N
	4	Tenth	Eleventh	4	50%	Yes			35	—	11	0	0			N
	5	Eleventh	Twelfth	9	10%	Yes	↓	↓	35	—	5	0	0			N
	6															
Peralta	7	Tenth	Eleventh		90%	Yes	3	NO	25	—		0	0			N
	8	Eleventh	Twelfth		20%	Y	3		25	—		0	0			N
	9	Twelfth	End		0	Y	3	↓	25	—	2	0	0			N
	10															

Field Data - Cross Section



	Segment	Clear Sidewalk	Buffer	Shouldr Park'g	Bike Lane	Travel Lane	Travel Lane	Travel Lane	Travel Lane	Median	Travel Lane	Travel Lane	Travel Lane	Travel Lane	Bike Lane	Shouldr Park'g	Buffer	Clear Sidewalk
Obispo	1	~~NO~~ 4	~~NO~~ 5	unmarked	X	22				X				22	X	unmarked	5	4
	2	0	0	↓	X	20				X				20	X	↓	0	6
	3	7	5		X	20				X				17		16	0	6
	4	6	5		X	22				X				22		unmarked	4	5
	5	6	0		X	22				X				22		-	0	8
	6															↓		
Peralta	7	5	5			22								22		unmarked	0	7
	8	0	0			23								23		unmarked	0	0
	9	0	0	↓		22								22		↓	0	0
	10																	

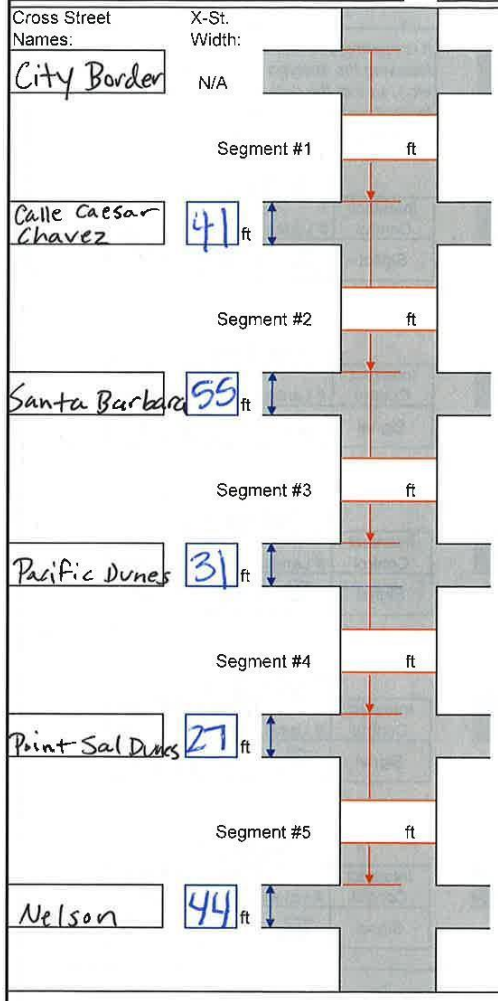
Cross Section, Traffic, and Transit


Rachel & Julia
City of Guadalupe
W Main St.
0
0.125
0.25
0.5
Miles
1:2,500

Field Data Collection Print-Outs CompleteStreetsLOS

Street:	Date of data collection:	Observer(s):
N Main St		
Limits:	**Time of data collection:**	**Analysis direction**
		Eastbound

It is recommended that the data is collected while following the analysis direction (NB, SB, EB, WB, etc.), so that the data to be collected is always located on the right hand side.



Cross Street Names:	X-St. Width:	Segment	Cross Street: Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
City Border	N/A					
		Segment #1 ft				
Calle Caesar Chavez	41 ft		Signal	2	35	0
		Segment #2 ft				
Santa Barbara	55 ft		Signal	2	35	0
		Segment #3 ft				
Pacific Dunes	31 ft		Signal	2	35	0
		Segment #4 ft				
Point Sal Dunes	27 ft		Signal	2	35	0
		Segment #5 ft				
Nelson	44 ft		Signal	2	35	0

Notes

"X-St Width" (blue) refers to the curb-to-curb widths of the cross street, measured in feet

Segment lengths (orange) should be entered for the distance between signalized intersections, measured in feet

Layout - Segments 1 to 5

Field Data Collection Print-Outs

CompleteStreetsLOS

Street: W. Main St (cont.)

Date of data collection:

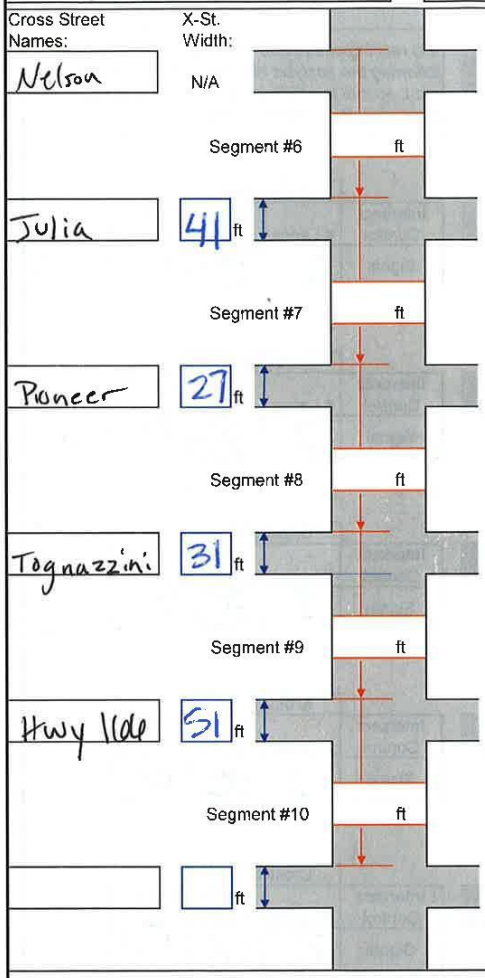
Observer(s):

Limits:

Time of data collection:

Analysis direction

It is recommended that the data is collected while following the analysis direction (NB, SB, EB, WB, etc.), so that the data to be collected is always located on the right hand side.



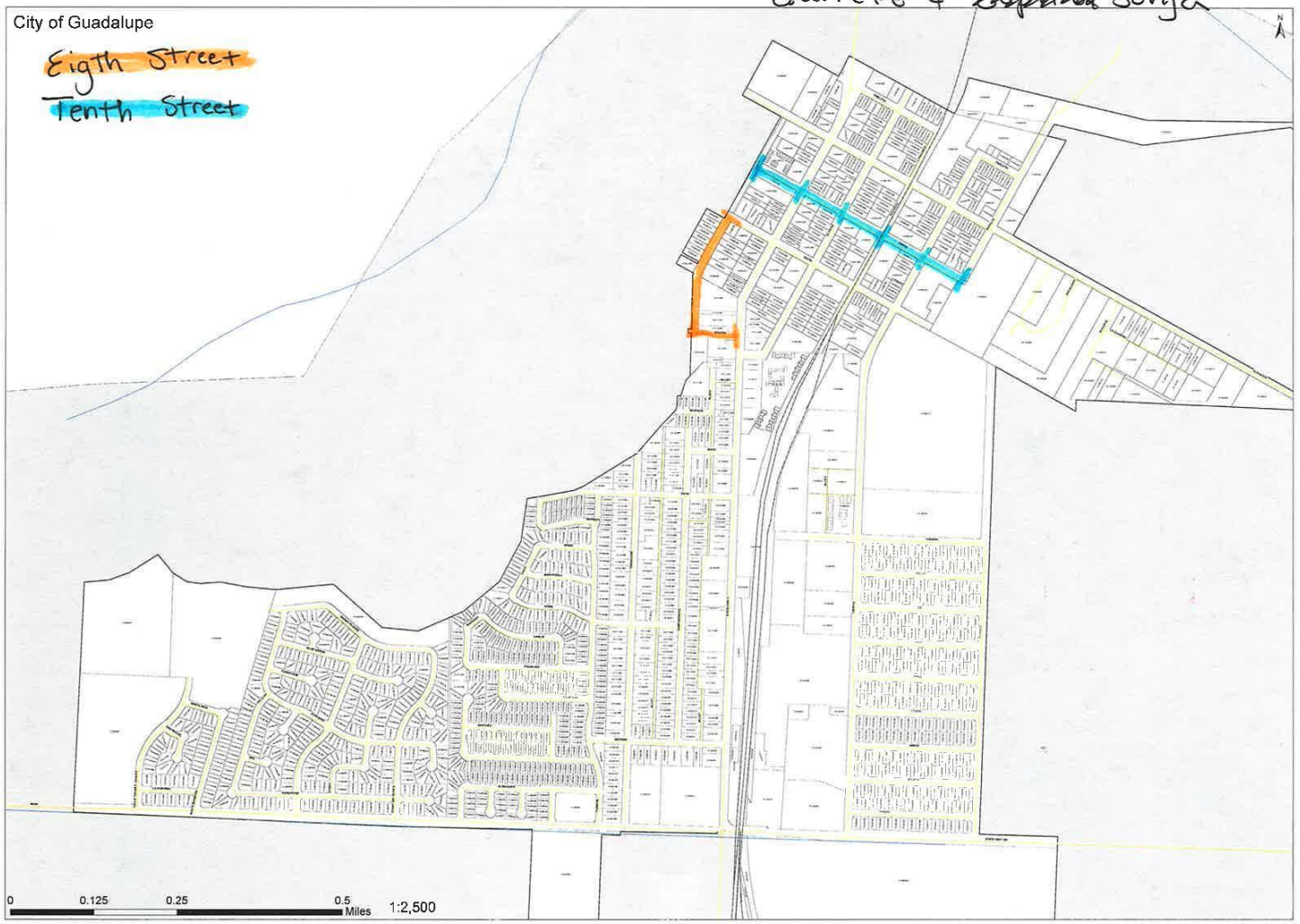
Cross Street Names:	X-St. Width:		Cross Street		
			Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Nelson	N/A	Segment #6 ft	Signal	2	35	0
Julia	41 ft	Segment #7 ft	Signal	2	35	0
Pioneer	27 ft	Segment #8 ft	Signal	2	35	0
Tognazzini	31 ft	Segment #9 ft	Signal	2	35	0
Hwy 116	51 ft	Segment #10 ft	Signal	2	35	0
	ft		Signal	2	35	0

Notes

"X-St Width" (blue) refers to the curb-to-curb widths of the cross street, measured in feet

Segment lengths (orange) should be entered for the distance between signalized intersections, measured in feet

Layout - Segments 6 to 10


Garrett & Sonja
City of Guadalupe
Eigth Street
Tenth Street
0
0.125
0.25
0.5
Miles
1:2,500

Field Data Collection Print-Outs

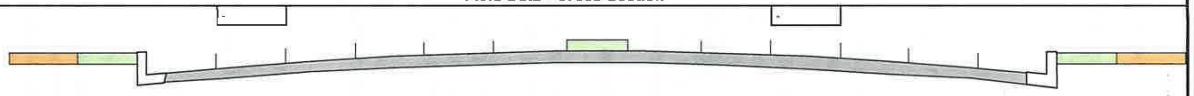
CompleteStreetsLOS

Street:	Date of data collection:	Observer(s):
W Main St.		
Limits:	**Time of data collection:**	**Analysis direction**

Field Data - Cross Section, Traffic, and Transit

Extent			Cross Section					Traffic				Transit			
Segment	From	To	# Trees/ Barrier	Park'g Occ (%)	Park'g Unstriped	Pavem't Cond	Mid-Seg Xing Diff	Speed Limit	Median Type	# Drwys	# Unsig Ints	# Bus Stops	Shelters (% Stops)	Benches (% Stops)	CBD (Yes/No)
1	City Border	Calle Caesar Ch	0	0	0	3	N	35	0	0	1	0	0	0	N
2	Caesar Chavez	Santa Barbara	0	0	0	3			0	0	1	1	0	0	N
3	Santa Barbara	Pacific Dunes	0	0	0	3			0	0	1	0	0	0	N
4	Pacific Dunes	Point Sal Dunes	0	0	0	3			0	0	1	0	0	0	N
5	Point Sal Dunes	Nelson	0	0	0	3			0	0	1	0	0	0	N
6	Nelson	Julia	0	0	0	3			0	0	1	0	0	0	N
7	Julia	Pioneer	0	0	0	3			0	0	1	0	0	0	N
8	Pioneer	Tognazzini	0	0	0	3			0	0	1	0	0	0	N
9	~~Main~~ Tognazzini	Hwy 166	0	0	0	3			0	0	1	0	0	0	N
10															

Field Data - Cross Section

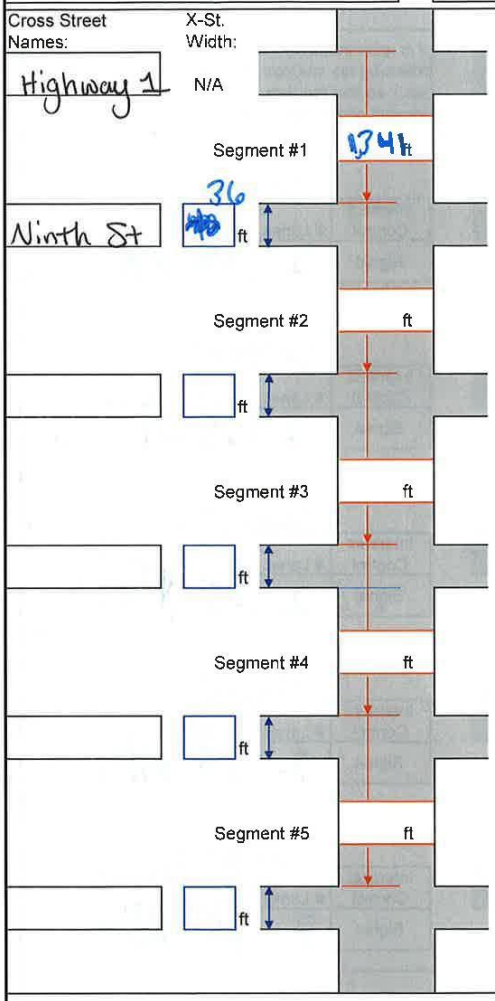


Segment	Clear Sidewalk	Buffer	Shouldr Park'g	Bike Lane	Travel Lane	Travel Lane	Travel Lane	Travel Lane	Median	Travel Lane	Travel Lane	Travel Lane	Travel Lane	Bike Lane	Shouldr Park'g	Buffer	Clear Sidewalk
1		0	0	0	0	0	0	0	0ft	0ft	0	0	0	0ft	0ft	0	4ft
2				0													
3				0													
4				0													
5				0													
6				0													
7				0													
8				0													
9				0													
10																	

Cross Section, Traffic, and Transit

Field Data Collection Print-Outs CompleteStreetsLOS

Street:	Date of data collection:	Observer(s):
Eighth St		
Limits:	**Time of data collection:**	**Analysis direction**



It is recommended that the data is collected while following the analysis direction (NB, SB, EB, WB, etc.), so that the data to be collected is always located on the right hand side.

Cross Street			
Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Signal	2	25	X

Cross Street			
Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Signal			

Cross Street			
Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Signal			

Cross Street			
Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Signal			

Cross Street			
Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Signal			

Notes

"X-St Width" (blue) refers to the curb-to-curb widths of the cross street, measured in feet

Segment lengths (orange) should be entered for the distance between signalized intersections, measured in feet

Layout - Segments 1 to 5

Street:	Date of data collection:	Observer(s):
Tenth St		
Limits:	**Time of data collection:**	**Analysis direction**
		Eastbound

It is recommended that the data is collected while following the analysis direction (NB, SB, EB, WB, etc.), so that the data to be collected is always located on the right hand side.

Cross Street Names:	X-St. Width:	Segment	Intersect Control	Cross Street # Lanes	Cross Street Speed (mph)	# Right Turn Isl.
City Limit	N/A					
		Segment #6: 357 ft				
Highway 1	40 ft		Signal	2	25	N/A
		Segment #7: 362 ft				
Olivera St	40 ft		Signal	2	25	N/A
		Segment #8: 379 ft				
Pacheco St	40 ft		Signal	2	25	N/A
		Segment #9: 361 ft				
Obispo St	40 ft		Signal	2	25	N/A
		Segment #10: 363 ft				
Peralta St	40 ft		Signal	2	25	N/A

Notes

"X-St Width" (blue) refers to the curb-to-curb widths of the cross street, measured in feet

Segment lengths (orange) should be entered for the distance between signalized intersections, measured in feet

Layout - Segments 6 to 10

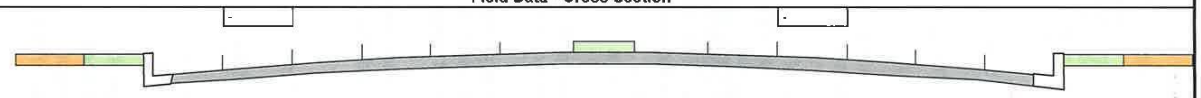
Field Data Collection Print-Outs

Street:	Date of data collection:	Observer(s):
Limits:	**Time of data collection:**	**Analysis direction**

Field Data - Cross Section, Traffic, and Transit

	Segment	Extent: From	Extent: To	Cross Section: # Trees/ Barrier	Cross Section: Park'g Occ (%)	Cross Section: Park'g Unstriped	Cross Section: Pavem't Cond	Cross Section: Mid-Seg Xing Diff	Traffic: Speed Limit	Traffic: Median Type	Traffic: # Drwys	Traffic: # Unsig Ints	Transit: # Bus Stops	Transit: Shelters (% Stops)	Transit: Benches (% Stops)	Transit: CBD (Yes/No)
Eighth St	1	Highway 1	Ninth St	5	25%	100%	3	No	25		15	2	0	0	0	No
	2															
	3															
	4															
	5															
Fourth St	6	City limit	Highway 1	0	25%	100%	3	YES	25		8	1	0	0		Yes
	7	Highway 1	Olivera St	4	35%	100%	3	YES	25		5	2	0	0	0	Yes
	8	Olivera St	Pacheco St	6	25%	100%	3	No	25	0	7	2	0	0	0	No
	9	Pacheco St	Obispo St	1	35%	100%	3	No	25	0	2	2	0	0	0	No
	10	Obispo St	Peralta St	7	25%	100%	3	No	25	0	5	1	0	0	0	No

Field Data - Cross Section



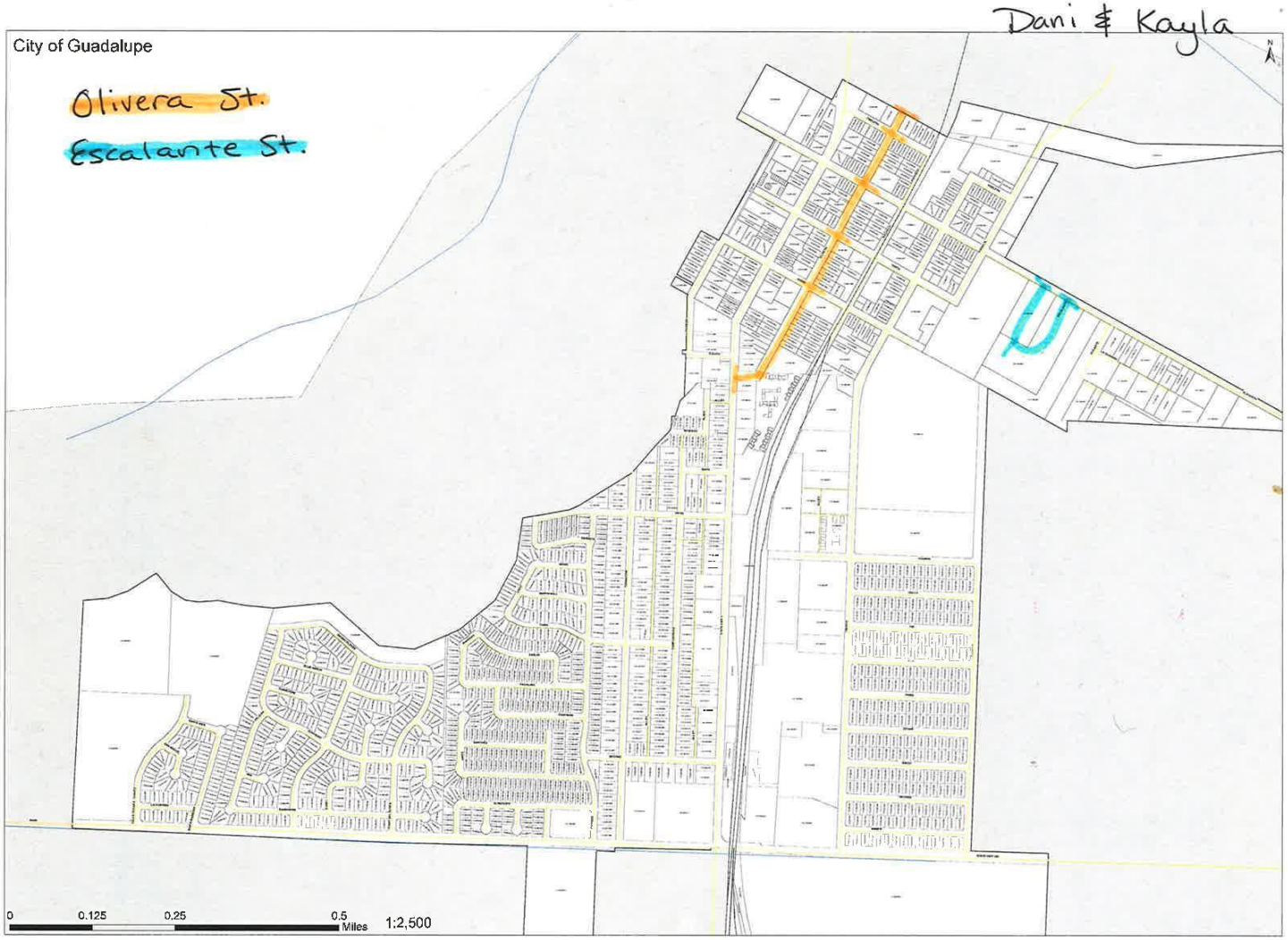
Looking South

Segment	Clear Sidewalk	Buffer	Shouldr Park'g	Bike Lane	Travel Lane	Travel Lane	Travel Lane	Travel Lane	Median	Travel Lane	Travel Lane	Travel Lane	Travel Lane	Bike Lane	Shouldr Park'g	Buffer	Clear Sidewalk
1	4ft	0	8ft	0	10ft								10	0	8	0	4
2																	
3																	
4																	
5																	

Looking North East

	4ft	0	8ft	0	10ft								10ft	0	8ft	0	4ft
	4ft	2	8ft	0	10ft								10ft	0	8ft	0	6ft
8	4ft	2	8ft	0	10ft								10ft	0	8ft	2ft	6ft
9	4ft	3ft	8ft	0	10ft								10ft	0	8ft	0	8ft
10	4ft	3ft	8ft	0	10ft								10ft	0	8ft	0	8ft

Cross Section, Traffic, and Transit


Dani & Kayla
City of Guadalupe
Olivera St.
Escalante St.
0
0.125
0.25
0.5
Miles
1:2,500

Field Data Collection Print-Outs

CompleteStreetsLOS

Street: Escalante

Date of data collection:

Observer(s):

Limits:

Time of data collection:

Analysis direction

Cross Street Names: Eleventh St

X-St. Width: 47' N/A

It is recommended that the data is collected while following the analysis direction (NB, SB, EB, WB, etc.), so that the data to be collected is always located on the right hand side.

Segment #6: 35 ft (west)

Eleventh St ft

Cross Street			
Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Signal	1	25	0

Segment #7: 24 ft (east)

ft

Cross Street			
Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Signal			

Segment #8: ft

ft

Cross Street			
Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Signal			

Segment #9: ft

ft

Cross Street			
Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Signal			

Segment #10: ft

ft

Cross Street			
Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Signal			

Notes

"X-St Width" (blue) refers to the curb-to-curb widths of the cross street, measured in feet

Segment lengths (orange) should be entered for the distance between signalized intersections, measured in feet

Layout - Segments 6 to 10

Field Data Collection Print-Outs

CompleteStreetsLOS

Street:	Date of data collection:	Observer(s):
Olivera St	12/4/13	Kayla + Dan
Limits:	**Time of data collection:**	**Analysis direction**
		Northbound

It is recommended that the data is collected while following the analysis direction (NB, SB, EB, WB, etc.), so that the data to be collected is always located on the right hand side.

Cross Street Names:	X-St. Width:	Segment	Segment Length	Cross Street: Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Hwy 1	N/A						
		Segment #1	44 ft				
Ninth St	47 ft			Signal	1	25	0
		Segment #2	43 ft				
Tenth St	41 ft			Signal	1	25	0
		Segment #3	44 ft				
Eleventh St	44 ft			Signal	1	25	0
		Segment #4	43 ft				
12th St	42 ft			Signal	1	25	0
		Segment #5	~~43~~ ft				
city limit	0 ft			Signal	0	?	0
"dirt parking lot"							

Notes

"X-St Width" (blue) refers to the curb-to-curb widths of the cross street, measured in feet

Segment lengths (orange) should be entered for the distance between signalized intersections, measured in feet

Layout - Segments 1 to 5

Field Data Collection Print-Outs

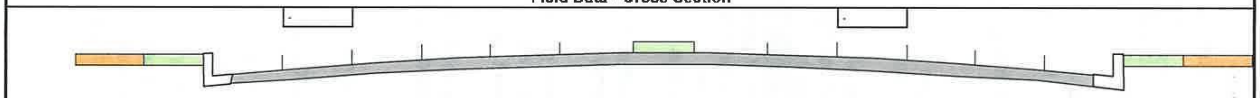
CompleteStreetsLOS

Street:	Date of data collection:	Observer(s):
Limits:	**Time of data collection:**	**Analysis direction**

Field Data - Cross Section, Traffic, and Transit

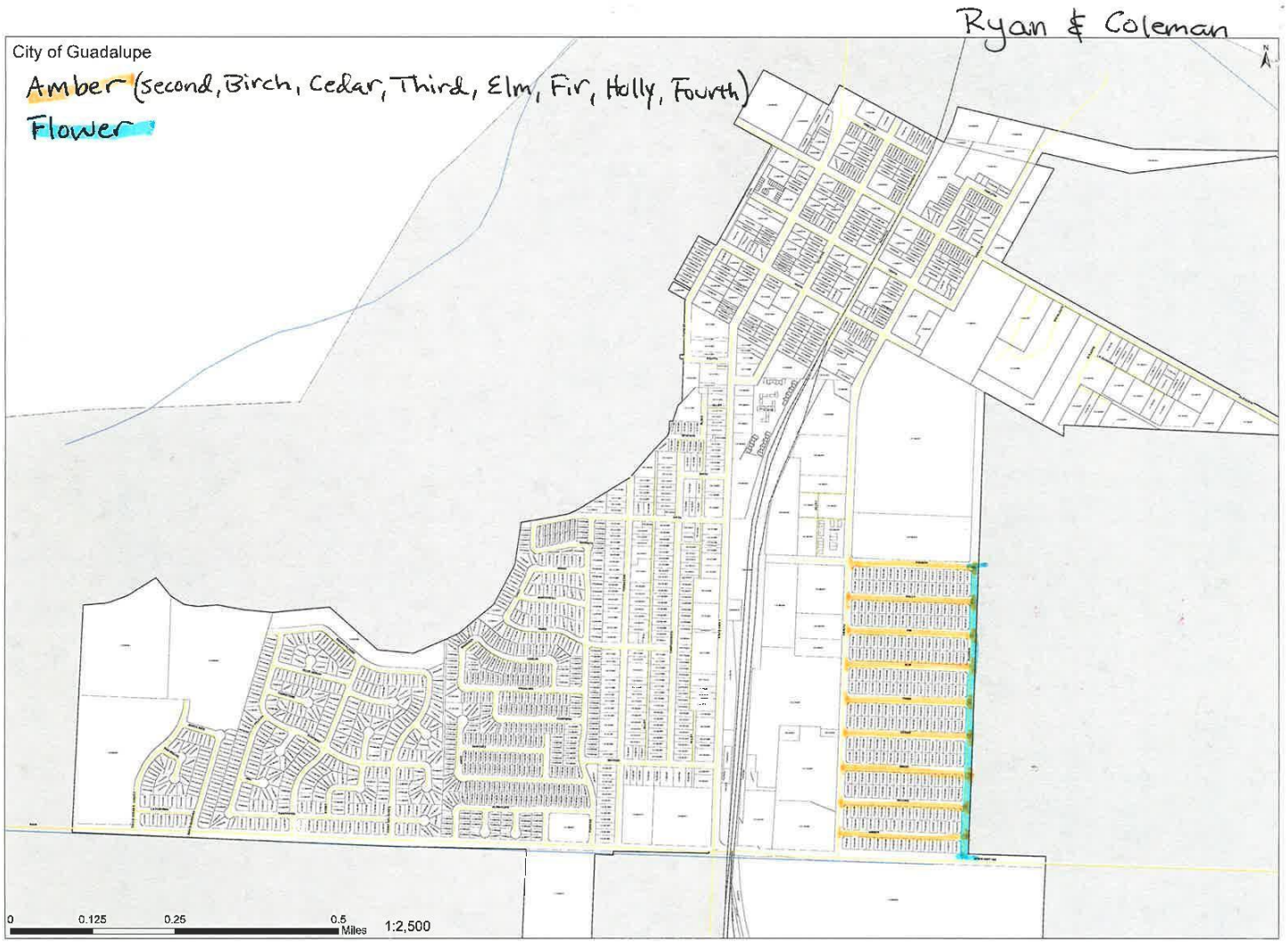
	Extent			Cross Section					Traffic					Transit			
	Segment	From	To	# Trees/ Barrier	Park'g Occ (%)	Park'g Unstriped	Pavem't Cond	Mid-Seg Xing Diff	Speed Limit	Median Type	# Drwys	# Unsig Ints	# Bus Stops	Shelters (% Stops)	Benches (% Stops)	CBD (Yes/No)
Olivera St	1	Hwy 1	Ninth St	0	10%	NO	3	[illegible]'	25	0	7	1	0	0	0	0
	2	Ninth St	Tenth St	1	5%	NO	3		25	0	5	0	0	0	0	0
	3	Tenth St	Eleventh St	0	30%	NO	3		25	0	4	0	0	0	0	0
	4	Eleventh St	Twelfth St	0	0%	NO	3		25	0	3	0	0	0	0	0
	5	Twelfth St	City limit	0	0%	NO	2		25	0	0	0	0	0	0	0
	6					[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]				
Escalante St	7	Eleventh St	Eleventh St	1	20%	NO	3		15	0	10	1	0	0	0	0
	8															
	9															
	10															

Field Data - Cross Section



	Segment	Clear Sidewalk	Buffer	Shouldr Park'g	Bike Lane	Travel Lane	Travel Lane	Travel Lane	Travel Lane	Median	Travel Lane	Travel Lane	Travel Lane	Travel Lane	Bike Lane	Shouldr Park'g	Buffer	Clear Sidewalk
	1	0'	0'			22'								22'			4'	6'
	2	6'	4'			22'								22'			4'	6'
	3	10'	4'			22'								22'			0'	8'
	4	6'	3'			21'								21'			3'	6'
	5	0	0'			0'								0'			0'	0'
	6																0'	6'
	7	6'	0'			12'								12'				
	8																	
	9																	
	10																	

Cross Section, Traffic, and Transit


Ryan & Coleman
City of Guadalupe
Amber (second, Birch, Cedar, Third, Elm, Fir, Holly, Fourth)
Flower
0
0.125
0.25
0.5
Miles
1:2,500

Field Data Collection Print-Outs CompleteStreetsLOS

Street:	Date of data collection:	Observer(s):
Amber		
Limits:	**Time of data collection:**	**Analysis direction**
		Eastbound

It is recommended that the data is collected while following the analysis direction (NB, SB, EB, WB, etc.), so that the data to be collected is always located on the right hand side.

Cross Street Names:	X-St. Width:		Segment	Cross Street	Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Obispo	N/A		Segment #1					
		40 ft						
Flower	40 ft		Segment #2		Signal	2	25	0
		ft						
Obispo	40 ft		Segment #3		Signal	2	25	0
		ft						
	ft		Segment #4		Signal			
		ft						
	ft		Segment #5		Signal			
		ft						
	ft				Signal			

Notes

"X-St Width" (blue) refers to the curb-to-curb widths of the cross street, measured in feet

Segment lengths (orange) should be entered for the distance between signalized intersections, measured in feet

Amber is equivalent to → Second, Birch, Cedar, Third, Elm, Fir, Holly, & Fourth

Layout - Segments 1 to 5

Field Data Collection Print-Outs CompleteStreetsLOS

Street:	Date of data collection:	Observer(s):
Flower		
Limits:	**Time of data collection:**	**Analysis direction**
		Northbound

It is recommended that the data is collected while following the analysis direction (NB, SB, EB, WB, etc.), so that the data to be collected is always located on the right hand side.

Cross Street Names:	X-St. Width:			Cross Street: Intersect Control	Cross Street: # Lanes	Cross Street: Speed (mph)	Cross Street: # Right Turn Isl.
Hwy 166	N/A	Segment #6	ft				
~~Another~~ Fourth	40 ft			Signal	2	25	0
		Segment #7	ft				
Hwy 166	60 ft			Signal	2	55	0
		Segment #8	ft				
	ft			Signal			
		Segment #9	ft				
	ft			Signal			
		Segment #10	ft				
	ft			Signal			

Notes

"X-St Width" (blue) refers to the curb-to-curb widths of the cross street, measured in feet

Segment lengths (orange) should be entered for the distance between signalized intersections, measured in feet

Layout - Segments 6 to 10

Field Data Collection Print-Outs

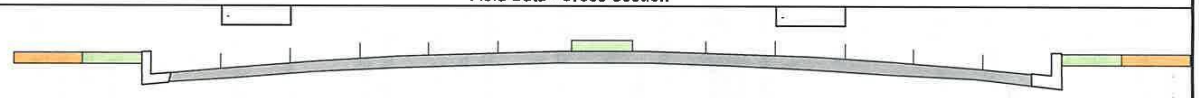
CompleteStreetsLOS

Street:	Date of data collection:	Observer(s):
Amber & Flower		
Limits:	**Time of data collection:**	**Analysis direction**

Field Data - Cross Section, Traffic, and Transit

	Extent			Cross Section					Traffic				Transit			
	Segment	From	To	# Trees/ Barrier	Park'g Occ (%)	Park'g Unstriped	Pavem't Cond	Mid-Seg Xing Diff	Speed Limit	Median Type	# Drwys	# Unsig Ints	# Bus Stops	Shelters (% Stops)	Benches (% Stops)	CBD (Yes/No)
Amber	1	Obispo	Flower	0	~15%	NO	4	NA	25	NA	30	2	NA	NA	NA	NO
	2															
Flower	3	Hwy 166	Fourth	0	<5%	NO	4	NA	25	NA	16	10	1	100%	100%	NO
	4															
	5															
	6															
	7															
	8															
	9															
	10															

Field Data - Cross Section



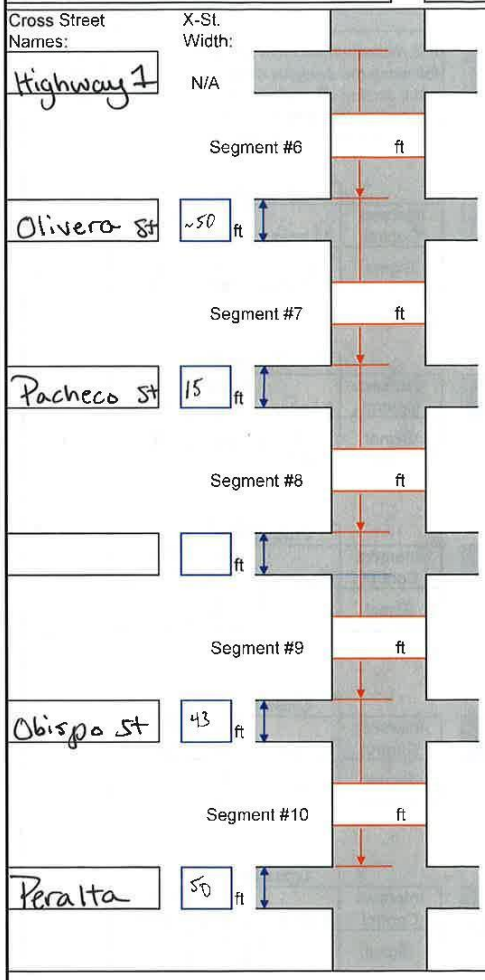
	Segment	Clear Sidewalk	Buffer	Shouldr Park'g	Bike Lane	Travel Lane	Travel Lane	Travel Lane	Travel Lane	Median	Travel Lane	Travel Lane	Travel Lane	Travel Lane	Bike Lane	Shouldr Park'g	Buffer	Clear Sidewalk
Amber S N	1	6'	NA	9'	NA	11'				NA				11'	NA	9'	NA	6'
	2																	
Flower W E	3	10'	NA	9'	NA	11'				NA				11'	NA	9'	NA	NA
	4																	
	5																	
	6																	
	7																	
	8																	
	9																	
	10																	

Cross Section, Traffic, and Transit

Field Data Collection Print-Outs CompleteStreetsLOS

Street:	Date of data collection:	Observer(s):
Twelfth St		SCRTMDT
Limits:	**Time of data collection:**	**Analysis direction**
	12/11/13	eastbound

It is recommended that the data is collected while following the analysis direction (NB, SB, EB, WB, etc.), so that the data to be collected is always located on the right hand side.



Cross Street Names:	X-St. Width:	Segment	Cross Street: Intersect Control	Cross Street: # Lanes	Cross Street: Speed (mph)	Cross Street: # Right Turn Isl.
Highway 1	N/A					
		Segment #6 ft				
Olivera St	~50 ft		Signal	2	25	0
		Segment #7 ft				
Pacheco St	15 ft		Signal		25	0
		Segment #8 ft				
	ft		Signal	2	25	0
		Segment #9 ft				
Obispo St	43 ft		Signal	2	25	0
		Segment #10 ft				
Peralta	50 ft		Signal	2	25	0

Notes

"X-St Width" (blue) refers to the curb-to-curb widths of the cross street, measured in feet

Segment lengths (orange) should be entered for the distance between signalized intersections, measured in feet

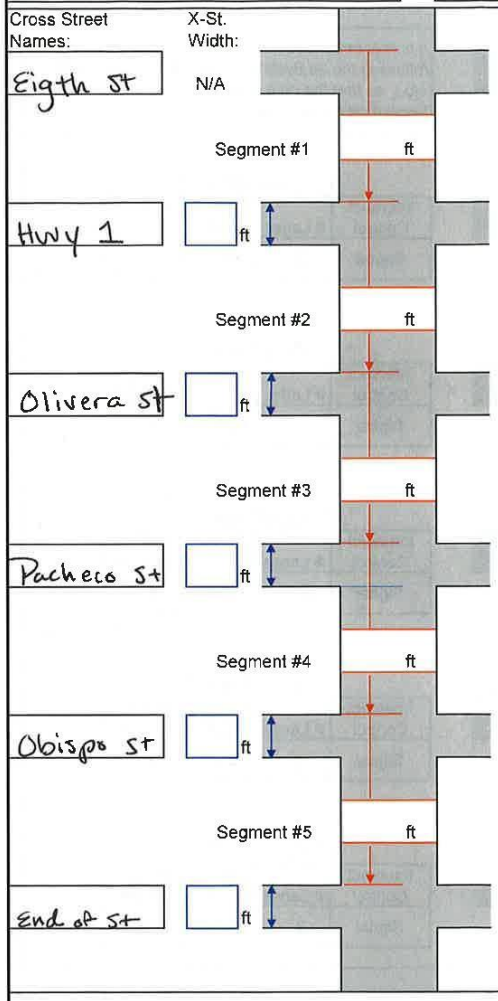
Layout - Segments 6 to 10

Field Data Collection Print-Outs

CompleteStreetsLOS

Street:	Date of data collection:	Observer(s):
Ninth Street	12/12/13	Yeni
Limits:	**Time of data collection:**	**Analysis direction**
	3p	Eastbound

It is recommended that the data is collected while following the analysis direction (NB, SB, EB, WB, etc.), so that the data to be collected is always located on the right hand side.



Cross Street	Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Eighth St	Signal	~~3~~ 2	35	0 5
Olivera St	Signal	2	30	1 2
Pacheco St	Signal	2	25	0
Obispo St	Signal	2	25	0
End of St	Signal	2	25	0

Notes

"X-St Width" (blue) refers to the curb-to-curb widths of the cross street, measured in feet

Segment lengths (orange) should be entered for the distance between signalized intersections, measured in feet

Layout - Segments 1 to 5

Field Data Collection Print-Outs

Street:

Date of data collection:

Observer(s):

Limits:

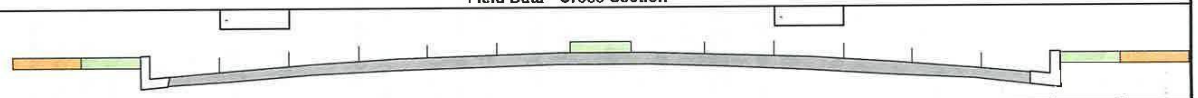
Time of data collection:

Analysis direction

Field Data - Cross Section, Traffic, and Transit

	Extent			Cross Section					Traffic				Transit			
	Segment	From	To	# Trees/ Barrier	Park'g Occ (%)	Park'g Unstriped	Pavem't Cond	Mid-Seg Xing Diff	Speed Limit	Median Type	# Drwys	# Unsig Ints	# Bus Stops	Shelters (% Stops)	Benches (% Stops)	CBD (Yes/No)
Ninth St	1	Eighth St	Hwy 1	~~5~~	~~100~~ 0	~~N~~ Y	3 ~~5~~	Y	~~25~~	N/A	4	0	1	1	1	Y
	2	Hwy 1	Olivera St	2	0	Y	2	Y	25	0	1	0	0	0	0	N
	3	Olivera St	Pacheco St	0	20%	Y	2	Y	25	0	7	1	0	0	0	N
	4	Pacheco St	Obispo St	3	20%	Y	2	N	25	0	4	0	0	0	0	N
	5	Obispo St	End of St	4	60%	N	3	N	25	0	3	0	0	0	0	N
12th	6	Highway 1	Olivera St	5	30%	not	~~good~~ 3	N	25	–	2	0	0	–	–	–
	7	Olivera St	Pacheco	1	5%	not	~~good~~ 3	N	25	–	5	0	0	–	–	–
	8	Break in Street														
	9															
	10	Obispo St	Peralta St	2	5%	not	~~good~~ 3	N	25	–	7	0	0	–	–	–

Field Data - Cross Section



Segment	Clear Sidewalk	Buffer	Shouldr Park'g	Bike Lane	Travel Lane	Travel Lane	Travel Lane	Travel Lane	Median	Travel Lane	Travel Lane	Travel Lane	Travel Lane	Bike Lane	Shouldr Park'g	Buffer	Clear Sidewalk
1	8'	–	6'	0	–	–	–	–	–	8'	–	–	–	0	0	–	8'
2	12'	–	–	6'	–	–	–	–	–	12'	–	–	–	6'	0	–	12'
3	8'	–	6'	6'	–	–	–	–	–	8'	–	–	–	6'	0	–	8'
4	8'	–	6'	0	–	–	–	–	–	8'	–	–	–	0	6'	–	8'
5	8'	–	6'	0	–	–	–	–	–	8'	–	–	–	0	0	–	8'
6	(Yes) 4'	None	–	–	–	–	–	~20'	–	~20'	–	–	–	–	–	~~4'~~	4'
7	4'	None	–	–	–	–	–	~22'	–	~22'	–	–	–	–	–	4'	4'
8																	
9																	
10	6'	–	–	–	–	–	–	~20'	–	~20'	–	–	–	–	–	–	6'

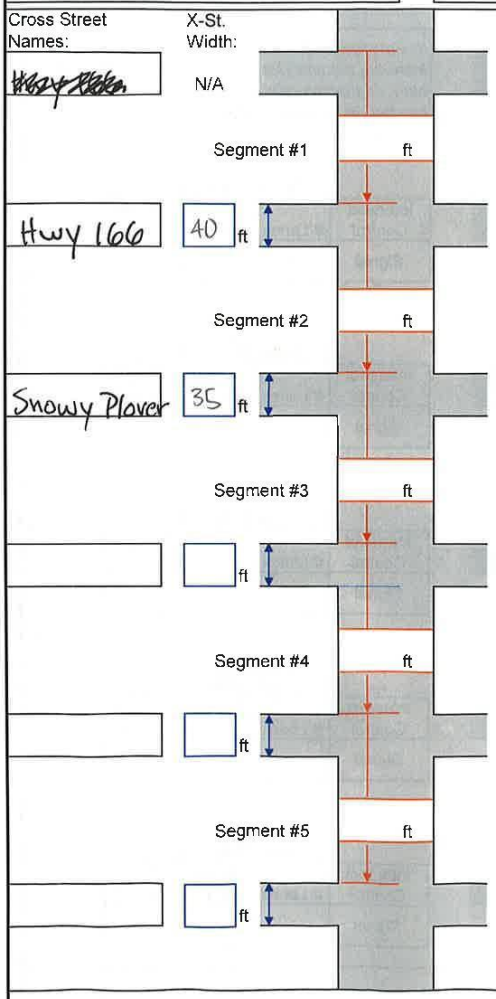
Cross Section, Traffic, and Transit


Sara & Sophia
City of Guadalupe
Point Sal Dunes (Sandpiper, Snowy Plover, Blue Heron, Pelican, Ibis, Surfbird, Egret, Turnstone, Pacific Dunes,
Almaguer (Nelson, Masatani, Montez, Julia, Hernandez, Sanchez, Mills, Camp, Chapman, Pagaling, Carlin, Mahoney, 3rd, Lindy, Mary Knoll, Wong, Garrett, Degasparis, Fifth, Pioneer)
0 0.125 0.25 0.5 Miles
1:2,500

Field Data Collection Print-Outs

CompleteStreetsLOS

Street:	Date of data collection:	Observer(s):
Point Sal Dunes		
Limits:	**Time of data collection:**	**Analysis direction**
		Northbound



It is recommended that the data is collected while following the analysis direction (NB, SB, EB, WB, etc.), so that the data to be collected is always located on the right hand side.

	Cross Street		
Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Signal	2	25 mph	0

	Cross Street		
Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Signal	2	25 mph	0

	Cross Street		
Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Signal			

	Cross Street		
Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Signal			

	Cross Street		
Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Signal			

Notes

"X-St Width" (blue) refers to the curb-to-curb widths of the cross street, measured in feet

Segment lengths (orange) should be entered for the distance between signalized intersections, measured in feet

Layout - Segments 1 to 5

Field Data Collection Print-Outs

CompleteStreetsLOS

Street: Almaguer

Date of data collection:

Observer(s):

Limits:

Time of data collection:

Analysis direction: ~~EB~~ Eastbound

Cross Street Names: | X-St. Width:

N/A

It is recommended that the data is collected while following the analysis direction (NB, SB, EB, WB, etc.), so that the data to be collected is always located on the right hand side.

Segment #6 ft

Nelson | 40 ft

Cross Street			
Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Signal	2	25 mph	0

Segment #7 ft

Pioneer | 40 ft

Cross Street			
Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Signal	2	25 mph	0

Segment #8 ft

ft

Cross Street			
Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Signal			

Segment #9 ft

ft

Cross Street			
Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Signal			

Segment #10 ft

ft

Cross Street			
Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Signal			

Notes

"X-St Width" (blue) refers to the curb-to-curb widths of the cross street, measured in feet

Segment lengths (orange) should be entered for the distance between signalized intersections, measured in feet

Layout - Segments 6 to 10

Field Data Collection Print-Outs

CompleteStreetsLOS

Street: Point Sal Dunes & Almaguer

Limits:

Date of data collection:

Time of data collection:

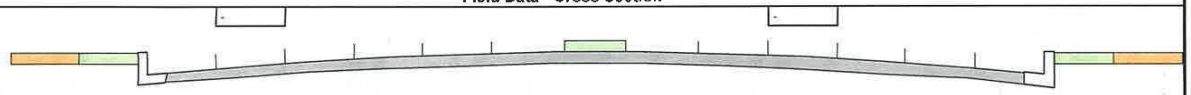
Observer(s):

Analysis direction

Field Data - Cross Section, Traffic, and Transit

	Extent			Cross Section					Traffic				Transit			
	Segment	From	To	# Trees/ Barrier	Park'g Occ (%)	Park'g Unstriped	Pavem't Cond	Mid-Seg Xing Diff	Speed Limit	Median Type	# Drwys	# Unsig Ints	# Bus Stops	Shelters (% Stops)	Benches (% Stops)	CBD (Yes/No)
	1															
PSD	2	Hwy 166	Snowy Plover	0	5%	yes	4	No	25	0	40	6	0	0	0	NO
	3															
	4															
	5															
	6															
Almaguer	7	Nelson	Pioneer	0	5%		4	No	25	0	5	5	0	0	0	NO
	8															
	9															
	10															

Field Data - Cross Section



	Segment	Clear Sidewalk	Buffer	Shouldr Park'g	Bike Lane	Travel Lane	Travel Lane	Travel Lane	Travel Lane	Median	Travel Lane	Travel Lane	Travel Lane	Travel Lane	Bike Lane	Shouldr Park'g	Buffer	Clear Sidewalk
	1	8ft	—	9ft	—	11ft	—	—	—	—	—	—	—	11ft	—	9ft	—	8ft
PSD	2																	
	3																	
	4																	
	5																	
	6																	
Almaguer	7	7ft	—	9 ft	—	11ft	—	—	—	—	—	—	—	11ft	—	9ft	—	7ft
	8																	
	9																	
	10																	

Cross Section, Traffic, and Transit

Patrick & Philip
(Same as Third St/Fifth St)
Please double check.
0.5
Miles
1:2,500

Field Data Collection Print-Outs

CompleteStreetsLOS

Street: Campodonico Avenue

Date of data collection:

Observer(s): PHILIP

Limits:

Time of data collection:

Analysis direction: Northbound

It is recommended that the data is collected while following the analysis direction (NB, SB, EB, WB, etc.), so that the data to be collected is always located on the right hand side.

Cross Street Names:	X-St. Width:		Segment	Cross Street	Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Second ~~Street~~	N/A		Segment #1					
			900 ft					
Third Street	34 ft		Segment #2		Signal	2?		0
			1,020 ft					
Fifth St	35 ft		Segment #3		Signal	2		0
			362 ft					
Sixth St	30 ft		Segment #4		Signal	2?		0
			305 ft					
Seventh St	~~39~~ ft		Segment #5		Signal	2		0
			ft					
	ft				Signal			

Notes

"X-St Width" (blue) refers to the curb-to-curb widths of the cross street, measured in feet

Segment lengths (orange) should be entered for the distance between signalized intersections, measured in feet

Layout - Segments 1 to 5

Field Data Collection Print-Outs CompleteStreetsLOS

Street:	Date of data collection:	Observer(s):
Second St.		PHHP
Limits:	**Time of data collection:**	**Analysis direction**
		Eastbound

Cross Street Names:	X-St. Width:
Pioneer St	N/A
Hwy 1	146 ft

It is recommended that the data is collected while following the analysis direction (NB, SB, EB, WB, etc.), so that the data to be collected is always located on the right hand side.

	Segment		Cross Street			
			Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
	Segment #6	1,059 ft	Signal	2	25	0
	Segment #7	ft	Signal			
ft						
	Segment #8	ft	Signal			
ft						
	Segment #9	ft	Signal			
ft						
	Segment #10	ft	Signal			
ft						

Notes

"X-St Width" (blue) refers to the curb-to-curb widths of the cross street, measured in feet

Segment lengths (orange) should be entered for the distance between signalized intersections, measured in feet

Layout - Segments 6 to 10

Field Data Collection Print-Outs

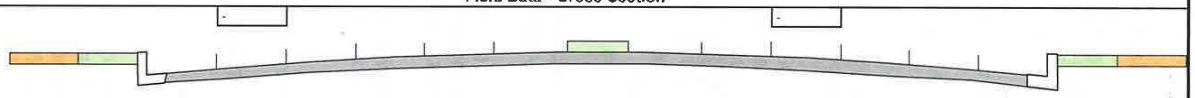
CompleteStreetsLOS

Street:	Date of data collection:	Observer(s):
Limits:	**Time of data collection:**	**Analysis direction**
		NB & EB

Field Data - Cross Section, Traffic, and Transit

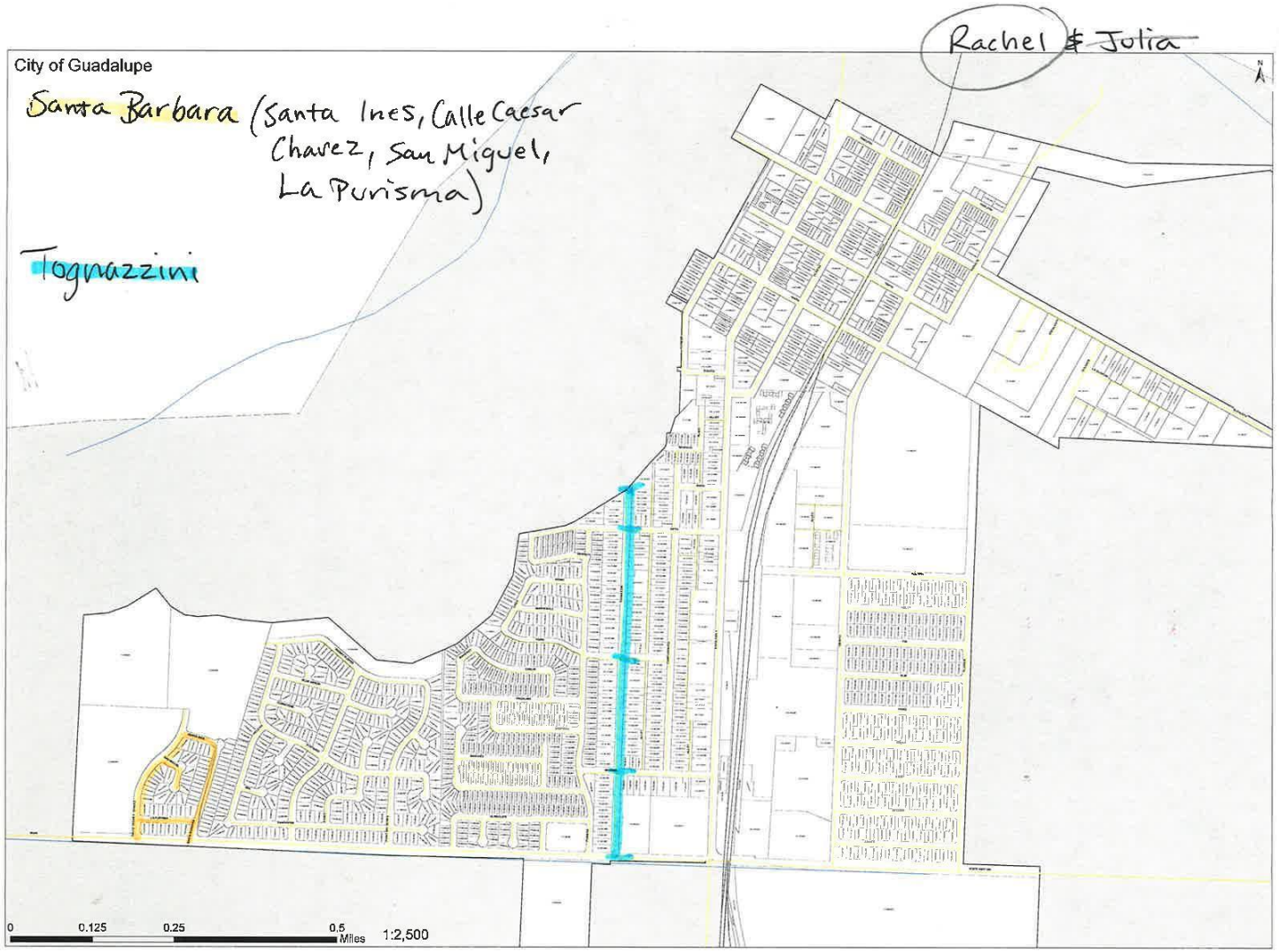
	Extent			Cross Section					Traffic				Transit			
	Segment	From	To	# Trees/ Barrier	Park'g Occ (%)	Park'g Unstriped	Pavem't Cond	Mid-Seg Xing Diff	Speed Limit	Median Type	# Drwys	# Unsig Ints	# Bus Stops	Shelters (% Stops)	Benches (% Stops)	CBD (Yes/No)
Campodonico Ave	1	Second St	Third St	24	30%	Yes	3	Yes	N/A	0	15	1	0	0	0	NO
	2	Third St	Fifth St	17	45%	Yes	3	Yes	N/A	0	15	1	0	0	0	NO
	3	Fifth St	Sixth St	10	35%	Yes	3	Yes	N/A	0	4	1	0	0	0	NO
	4	Sixth St	Seventh St	26	15%	Yes	3	Yes	N/A	0	1	1	0	0	0	NO
	5															
	6															
Second St	7	Pioneer St	Hwy 1	14	10%	Yes	3	Yes*	N/A	0	10	2	0	0	0	NO
	8							*(WOULD NOT FEEL COMFORTABLE CROSSING HWY 1)								
	9															
	10															

Field Data - Cross Section



	Segment	Clear Sidewalk	Buffer	Shouldr Park'g	Bike Lane	Travel Lane	Travel Lane	Travel Lane	Travel Lane	Median	Travel Lane	Travel Lane	Travel Lane	Travel Lane	Bike Lane	Shouldr Park'g	Buffer	Clear Sidewalk
Campodonico Ave	1	884	457	620		~16								~16		620	538	884
	2	947	474	~700		~16								~16		666	361	1,027
	3	361	335	313		~16.5								~16.5		222	238	310
	4	155	138	110		~16	~15							~16		135	139	155
	5																	
	6																	
Second St	7	939	408 FT	595		~15								~15		732	561 FT	944
	8																	
	9																	
	10																	

Cross Section, Traffic, and Transit


City of Guadalupe
Rachel & Julia
Santa Barbara (Santa Ines, Calle Caesar Chavez, San Miguel, La Purisma)
Tognazzini
N
0
0.125
0.25
0.5
Miles
1:2,500

Field Data Collection Print-Outs CompleteStreetsLOS

Street:	Date of data collection:	Observer(s):
Santa Barbara		
Limits:	**Time of data collection:**	**Analysis direction**

Cross Street Names:	X-St. Width:	
HWY 166	N/A	
	Segment #1	823 ft
Santa Ines	360 ft	
	Segment #2	ft
	ft	
	Segment #3	ft
	ft	
	Segment #4	ft
	ft	
	Segment #5	ft
	ft	

It is recommended that the data is collected while following the analysis direction (NB, SB, EB, WB, etc.), so that the data to be collected is always located on the right hand side.

	Cross Street		
Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Signal	2	25	0

	Cross Street		
Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Signal			

	Cross Street		
Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Signal			

	Cross Street		
Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Signal			

	Cross Street		
Intersect Control	# Lanes	Speed (mph)	# Right Turn Isl.
Signal			

Notes

"X-St Width" (blue) refers to the curb-to-curb widths of the cross street, measured in feet

Segment lengths (orange) should be entered for the distance between signalized intersections, measured in feet

Layout - Segments 1 to 5

Field Data Collection Print-Outs CompleteStreetsLOS

Street:	Date of data collection:	Observer(s):
Tognazzini		
Limits:	**Time of data collection:**	**Analysis direction**
		Northbound

It is recommended that the data is collected while following the analysis direction (NB, SB, EB, WB, etc.), so that the data to be collected is always located on the right hand side.

Cross Street Names:	X-St. Width:		Segment	Cross Street: Intersect Control	Cross Street: # Lanes	Cross Street: Speed (mph)	Cross Street: # Right Turn Isl.
Hwy 166	N/A		Segment #6 ft				
Second	31 ft		Segment #7 928 ft	Signal	2	25	0
Third	35 ft		Segment #8 1024 ft	Signal	2	25	0
Fifth	31 ft		Segment #9 343 ft	Signal	2	25	0
City border	ft		Segment #10 ft	Signal	n/a		0
	ft			Signal			

Notes

"X-St Width" (blue) refers to the curb-to-curb widths of the cross street, measured in feet

Segment lengths (orange) should be entered for the distance between signalized intersections, measured in feet

Layout - Segments 6 to 10

pavement 1-3
3-good

Field Data Collection Print-Outs

CompleteStreetsLOS

Street:	Date of data collection:	Observer(s):
Limits:	**Time of data collection:**	**Analysis direction**

Field Data - Cross Section, Traffic, and Transit

	Segment	Extent: From	Extent: To	Cross Section: # Trees/ Barrier	Cross Section: Park'g Occ (%)	Cross Section: Park'g Unstriped	Cross Section: Pavem't Cond	Cross Section: Mid-Seg Xing Dist	Traffic: Speed Limit	Traffic: Median Type	Traffic: # Drwys	Traffic: # Unsig Ints	Transit: # Bus Stops	Transit: Shelters (% Stops)	Transit: Benches (% Stops)	Transit: CBD (Yes/No)
Santa Barbara	1	Hwy 166	Santa Ines	3	25%	no	3		25	3	/	2	Ø	Ø	Ø	no
	2															
	3															
	4															
	5															
Tognazzini	6	Hwy 166	Second	0	25%	no	3		25	n/a	11	0	0	0	0	no
	7	Second	Third	9	25%	no	3		25	n/a	23	0	0	0	0	no
	8	Third	Fifth	21	25%	no	3		25	n/a	22	0	0	0	0	no
	9	Fifth	City Border	10	25%	no	3		25	n/a	9	0	0	0	0	no
	10															

Field Data - Cross Section

	Segment	Clear Sidewalk	Buffer	Shouldr Park'g	Bike Lane	Travel Lane	Travel Lane	Travel Lane	Travel Lane	Median	Travel Lane	Travel Lane	Travel Lane	Travel Lane	Bike Lane	Shouldr Park'g	Buffer	Clear Sidewalk
Santa Barbar	1	8	0	8	n/a				18	6	18				n/a	8	0	8
	2																	
	3																	
	4																	
	5																	
Tognazzini	6	6		8	n/a				15	n/a	15				n/a	8		6
	7	6	4	8	n/a				17	n/a	17				n/a	8	4	6
	8	6	4	8	n/a				15	n/a	15				n/a	8	4	6
	9	6	4	8	n/a										n/a	8	4	6
	10																	

Cross Section, Traffic, and Transit

Appendix C: Complete Streets Plan Surveys for City Staff

Guadalupe Park Survey

Thank you for taking the time to complete this survey. Your results will be anonymous and will be used in the Guadalupe Complete Streets Plan, compiled by Sara Muse and the City of Guadalupe.

1. What is your primary mode of transportation?

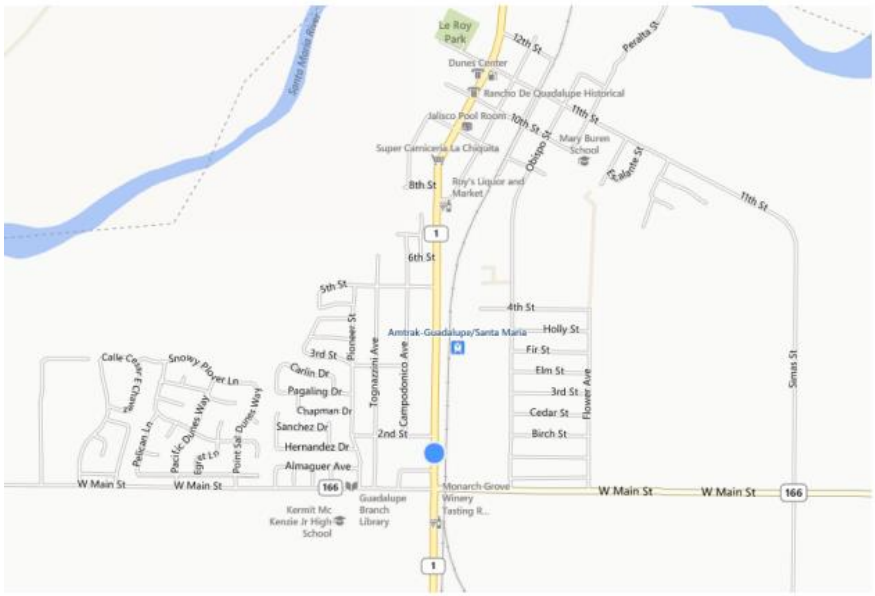
2. How did you get to the park today?

3. What do you do for fun in Guadalupe? Where do you go?

4. How would you change the current bus line in Guadalupe? Are there any areas you feel are underutilized? Please make any marks on the map on the next page.

5. How safe you do feel walking and biking in Guadalupe? Which streets do you feel safest and which do you feel the least safe?

6. Any additional comments you may have:



Guadalupe School Survey (Student)

Thank you for taking the time to complete this survey. Your results will be anonymous and will be used in the Guadalupe Complete Streets Plan, compiled by Sara Muse and the City of Guadalupe.

1. How did you get to school today?

2. How do you usually get to school?

3. What do you do for fun in Guadalupe? Where do you go?

4. How safe do you feel walking and biking in Guadalupe? Which streets do you feel safest and which do you feel the least safe?

5. Any additional comments you may have:

Guadalupe School Survey (Staff)

Thank you for taking the time to complete this survey. Your results will be anonymous and will be used in the Guadalupe Complete Streets Plan, compiled by Sara Muse and the City of Guadalupe.

1. What is your primary mode of transportation?

2. How did you get to work today?

3. What do you do for fun in Guadalupe? Where do you go?

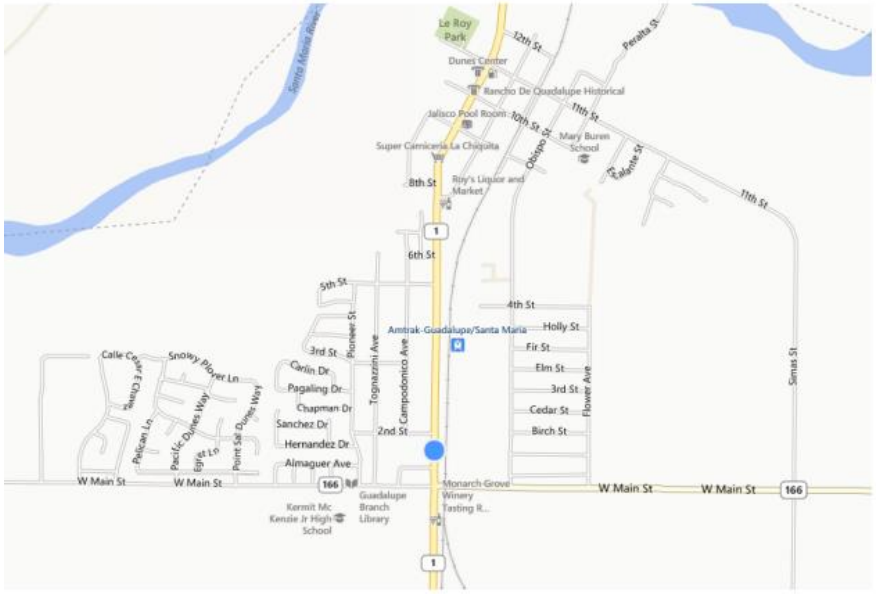
4. How would you change the current bus line in Guadalupe? Are there any areas you feel are underutilized? Please make any marks on the map on the next page.

f

5. How safe you do feel walking and biking in Guadalupe? Which streets do you feel safest and which do you feel the least safe?

6. What is your opinion on adding a 10’ sidewalk adjacent to Kermit McKenzie Elementary School?

7. Any additional comments you may have:



Guadalupe Bus Survey

Thank you for taking the time to complete this survey. Your results will be anonymous and will be used in the Guadalupe Complete Streets Plan, compiled by Sara Muse and the City of Guadalupe.

1. What is your primary mode of transportation?

2. What do you do for fun in Guadalupe? Where do you go?

3. What do you not like about Guadalupe? What would you change?

4. How would you change the current bus line in Guadalupe? Are there are areas you feel are underutilized? Please make any markings on the map on the next page.

5. How safe do you feel walking and biking in Guadalupe? Which streets do you feel safest and which do you feel the least safe?

6. Any additional comments you may have: