

Santa Ana downtown complete streets plan

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What Are Complete Streets?

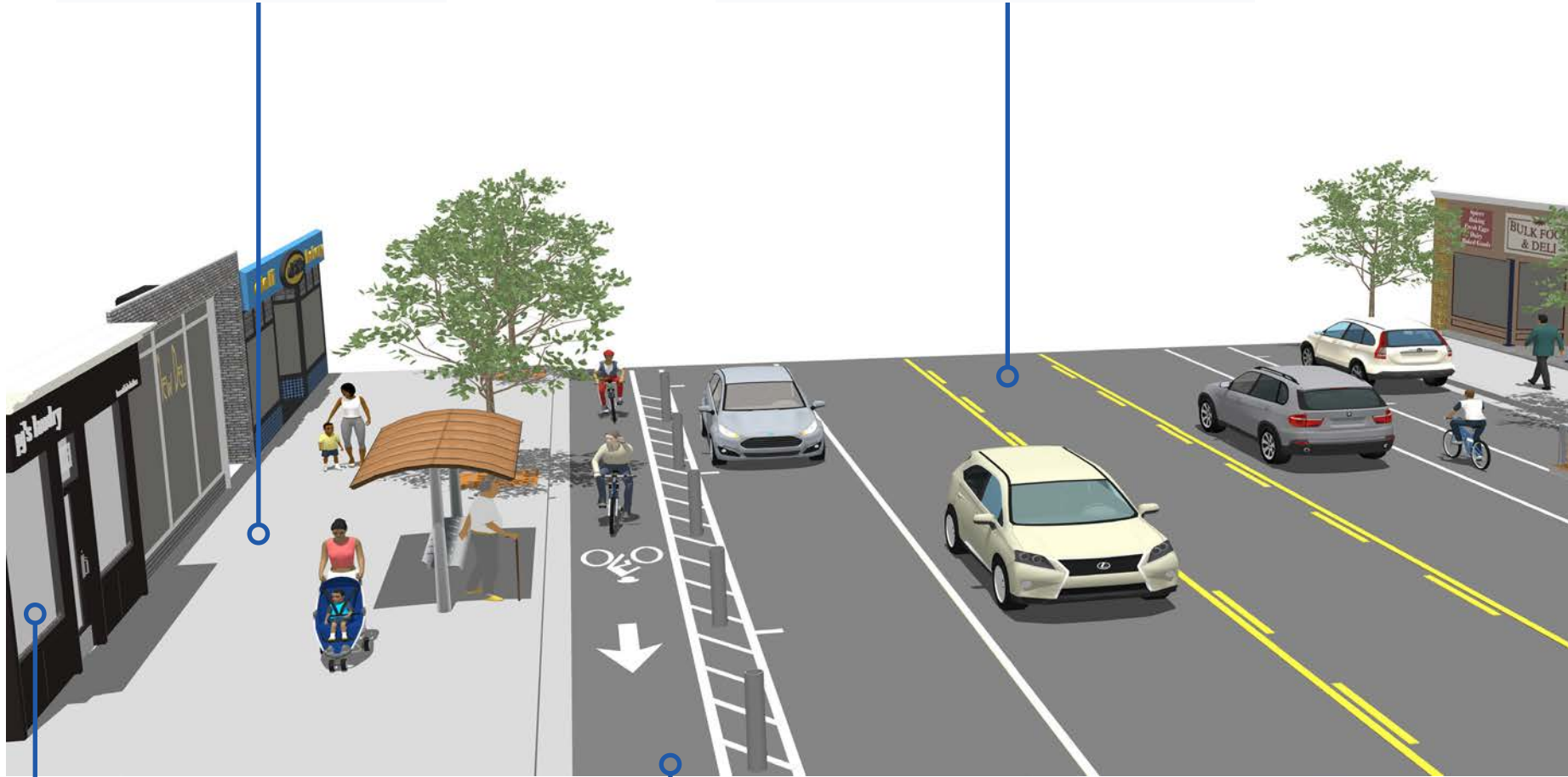


Pedestrian Zone

Area of the sidewalk corridor that is specifically reserved for pedestrian travel. Must be free from obstructions and allow free pedestrian movement.

Travel Zone

Public right of way between curbs that includes parking lanes, travel lanes, bicycle facilities and transit. Intersections are characterized by high activity levels, multimodal interaction and complex movements.



Building Fronts

Building fronts along Complete Streets are encouraged to be pedestrian and bicyclist friendly. Outdoor cafe seating, sidewalk sales, merchandise displays and bicycle racks attract people.

Bicycle Facilities

The bicycle facilities within travel zones can vary from protected bikeways to shared bikeways. Many factors determine the right facility for the travel way such as adjacent land use, speed, vehicle traffic volumes and available right of way.

Greenscape/Furnishing Zone

The area between the curb and the Pedestrian Zone. This zone is where items such as street trees, street lights, signage, hydrants, benches, bicycle racks, public art, trash, recycling receptacles, parking meters, transit stops, signals and lighting are located.



Placemaking

Parklets can help redistribute space at intersections and enliven the public realm. They can be designed as permanent or modular for street sweeping and maintenance.

What are Complete Streets?

Complete Streets are roadways that are designed for everyone. They enable safe, comfortable and attractive access for users of all ages and abilities. Complete Streets make it easy to walk to:

- Walk to schools, shops and restaurants or work;
- Bicycle to work a variety of Downtown or nearby community destinations;
- Bicycle or walk to recreation and health; and
- Access transit stations by bicycling or walking

Not only do Complete Streets create safer and more attractive spaces, they naturally improve social interaction and the community's economic and environmental health.

Conventional Bicycle Facility Types

There are three conventional bicycle facilities types in California. These facilities are recognized by the CA Department of Transportation and details of their design, wayfinding and pavement markings can be found in the CA MUTCD and CA Highway Design Manual.

Class 1: Multi-Use Paths

Class 1 multi-use paths (frequently referred to as “bicycle paths”) are physically separated from motor vehicle routes, with exclusive rights-of-way for non-motorized users like cyclists and pedestrians.



Class 2: Bicycle Lanes

Bicycle lanes are one-way facilities that carry bicycle traffic in the same direction as the adjacent motor vehicle traffic. They are typically located along the right side of the street, between the adjacent travel lane and curb, road edge or parking lane.



Class 3: Bicycle Routes

A bicycle route is a suggested bicycle route marked by signs designating a preferred route between destinations. They are recommended where traffic volumes and roadway speeds are fairly low (35 mph or less).



Enhanced Bicycle Facility Types

While the conventional bicycle facility types can be found throughout the country, there has been a shift towards enhancing these facilities. Just recently, the CA MUTCD has approved the installation of buffered bicycle lanes, while Shared Lane Markings or “Sharrows” have been around since 2008.

These enhancements are low cost, easy to install, and provide additional awareness to the location of cyclists. In many instances, installation of these bicycle facility enhancements can be coordinated with street resurfacing projects. The use of green paint has also become a simple and effective way to communicate the presence of bicyclists.

Buffered Bicycle Lanes

Buffered bicycle lanes are additional space between the bicycle lane and traffic lane, parking lane or both provide a more protected and comfortable space for cyclists than a conventional bicycle lane.



Shared Lane Markings (“Sharrows”)

The shared lane marking is commonly used where parking is allowed adjacent to the travel lane. It is now common practice to center them within the typical vehicular travel route in the rightmost travel lane to ensure adequate separation between cyclists and parked vehicles.



Bike Boxes

A bike box is a designated area at the head of a traffic lane at a signalized intersection that provides bicyclists with a safe and visible way to get ahead of queuing traffic during the red signal phase.



Low Stress Bicycle Facility Types

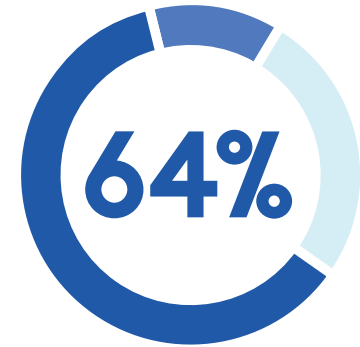
There are a number of other non-conventional facilities that the City may find useful in specific situations. In many cases, the conventional bicycle facilities may not meet the safety perceptions of the bicycling community. Protected bicycle lanes, low-stress streets, bicycle prioritized routes are an ever-evolving, ever-improving state of practice.

The facilities in this section have been implemented in other countries with great success and are quickly being implemented in the US. Cycle tracks and bicycle boulevards can be found throughout California since they are proven to improve bicycling safety and increase bicycle mode share.

Details of these facilities and other treatments can be found in the NACTO *Urban Bikeway Design Guide* or AASHTO *Guide of the Development of Bicycle Facilities*.

Protected Bike Lanes / Cycle Tracks

A cycle track is an exclusive bike facility that combines the user experience of a separated path with the on-street infrastructure of a conventional bike lane. They can be either one-way or two-way depending on the street network, available right-of-way and adjacent land use. A cycle track is physically separated from motor traffic and distinct from the sidewalk. There are a variety of physical protection measures that range from reflective bollards to parked vehicles.



"Of people who would like to bike more say that protected bike lanes would make a difference to their transportation choices."

*PeopleForBikes Program, 2015



Bicycle Boulevards

Bicycle boulevards provide a convenient, low-stress cycling environment for people of all ages and abilities. They are installed on streets with low vehicular volumes and speeds and often parallel higher volume, higher speed arterials as an alternative. Bicycle boulevard treatments use a combination of signs, pavement markings, traffic calming measures that discourage through trips by motor vehicles and create safe, convenient bicycle crossings of busy arterial streets.



Signage and Wayfinding

The purpose to signage and wayfinding on bicycle boulevards is to identify routes to both bicyclists and motorists, provide destination information, branding and inform about changes in road conditions and users of the street.



Traffic Calming

Traffic calming involves changes in street alignment, installation of barriers, and other physical measures to reduce traffic speeds and/or cut-through volumes. The intent of traffic calming is to alter motorist behavior and for street safety, livability, and other public purposes. Other techniques consist of operational measures such as police enforcement and speed displays.

The following examples identify traffic calming measures that apply to the Downtown area.

Traffic Circle

A traffic circle is an example of a traffic calming measure on bicycle boulevards. They slow traffic on each approach and reduce right-of-way conflicts, and tends not to divert traffic to nearby streets. They are appropriate for usage on low volume local residential streets with alternative access points.



Signals and Warning Devices

Pedestrian Hybrid Beacons (PHB) and Rectangular Rapid Flashing Beacons (RRFB) are a special signals and warning devices used to warn and control traffic at an unsignalized location to assist pedestrians in crossing a street or highway at a marked crosswalk



Speed Tables/Raised Crosswalk

Speed tables, are flat-topped road humps, often constructed with brick or other textured materials on the flat section. Speed tables and raised crosswalks reduce vehicle speeds and enhance pedestrian safety.



Speed Displays

Speed display contribute to increased traffic safety. Speed displays measure speed of approaching vehicles by radar and inform drivers of their speeds using a LED display. They are particularly effective in reducing the vehicular speeds traveling ten or more miles-per-hour over the speed limit.



Chicanes

Chicanes are a series of narrowing or curb extensions that alternate from one side of the street to the other forming S-shaped curves.



On-Street Edge Friction

A combination of vertical elements such as on-street parking, bicycle facilities, chicanes, site furnishings, street trees and shrubs that reduce the apparent width of the street.



Pedestrian Facility Enhancements

The pedestrian environment is the heart of Downtown Santa Ana. With a grid street system, urban forestry and land use and demographics that support walking, enhancing this form of transportation will only increase safety and accessibility throughout Downtown. Many of the streets already have sidewalks, especially through the neighborhoods and commercial areas.

However, there are major streets to cross such as Civic Center Drive, Santa Ana Boulevard and First Street. While many of the intersections are signalized and crosswalks exist, there are some segments with long blocks without places to cross. Providing crossing treatments will help reduce the jaywalking and mid-block crossings occurring in Downtown.

The following examples identify crossing treatments that apply to the Downtown area.

Pedestrian Refuge

Refuge islands provide pedestrians and bicyclists a refuge area within intersection and mid-block crossings. Refuge islands provide a location for pedestrians or bicyclists to wait partially through their crossing.



Mid-block Crossings

Mid-block crossings provide convenient locations for pedestrians to cross urban thoroughfares in areas with infrequent intersection crossings or where the nearest intersection crossing creates substantial out-of-direction travel.



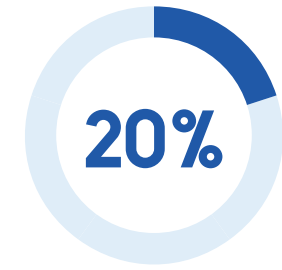
Curb Extensions

Also called bulb-outs or neck-downs, curb extensions extend the line of the curb into the travel way, reducing the width of the street. Typically occurring at intersections, they reduce the length a pedestrian has to cross.



Placemaking

The inclusion of urban elements such as parklets, and community gardens encourage walking and provide usable space for all ages. These elements can range in cost depending on the extent of the design and materials. In many cities, these urban elements have helped transform urban villages and downtowns into world-class cities and destinations. Coordinating with local business and organizations already present in Santa Ana can provide collaborative design and funding efforts between the City, its businesses and residents.



“Owners reported a 20 percent increase in sales in the two weeks following a parklet installation.”

*University City District, 2015

Parklets

Parklets are small, outdoor seating areas that often take over one or two existing parking spots, temporarily reclaiming the space for pedestrians and improving the aesthetics and streetscape of the urban environment.



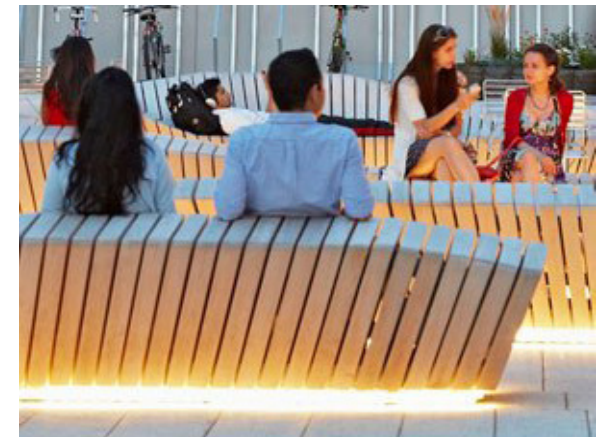
Community Gardens

Community gardens provide fresh produce, plants and inherently assist in neighborhood improvement, sense of community and connection to the environment. They are typically managed by local governments or non-profit associations.



Furnishings and Public Art

Transit shelters, lighting, bike racks, seating and public art provide important amenities for functionality, design and vitality of the urban environment. They announce that the street is a safe and comfortable place to be and provide visual detail and interest.





MAX TV

KALI BO...NICA LATINA

CASA... TODO PARA SU EVENTO 714-640-0275

Salones, Vestidos, Limosinas, tuxedos, Fuente de chocolate, Etc.

LEE CAR...

OPEN

CLOSED

TERRAZA

60-9997

BOOKING AT 634

Introduction

Where Are We Going? What's the Plan?

2

Project Scope

Imagine a walkable, bikeable and transit friendly Downtown in the heart of Orange County. A destination that people of all ages can enjoy and – more importantly – have multiple options on how to get there. Want to ride your bike from the transit station? Hop on the protected bike lanes? Want to grab lunch? Follow the tree lined streets and wide walkways to Downtown restaurants? Providing transportation choices, increasing park space and contributing to the revitalization of Downtown Santa Ana is the primary vision of this plan.

The Transit Zone area in the City of Santa Ana is located between the Santa Ana Regional Transportation Center (SARTC) and the Downtown and has various land uses including: transit oriented development, high density housing, schools, churches, recreational centers, parks, and commercial facilities. This area is truly accessible by walking, biking, transit, or from the automobile. The co-mingling of different transportation modes in the study area present both issues and opportunities.

Issues include high vehicle speeds and traffic volumes, wide roadway crossings, a lack of dedicated bicycle facilities and a large number of uncontrolled pedestrian crossings.

Opportunities the plan would like to take advantage of includes:

- Increasing safe routes to school.
- Supporting increased access to retail centers of downtown.
- Improving access to transit.

- Creating public spaces.
- Providing healthy and safe mobility options.

To address these challenges, the City has envisioned a Downtown Complete Streets Plan. The study area includes the areas between Downtown and the SARTC. The goal is to improve access and mobility for all modes including: walking, bicycling, transit and motor vehicles. The plan looks at Complete Streets methods and designs to improve these modes within and around the Downtown.

A large public outreach component included surveys, community advisory meetings and a Neighborhood Workshop. This workshop consisted of a consecutive three day workshop where walking tours and a bike tour was conducted to gather input and experience Downtown Santa Ana. The results were many grass roots ideas and priorities that included recommendations for physical changes to streets, sidewalks and intersections that support safe, active transportation for this study area. Through the public input process, stakeholder collaboration and the Neighborhood Workshop, five priority projects were identified. These can be found in Chapter Six. The concepts include planning level designs, 3D illustrations and costs estimates. Preliminary designs can be found in Appendix C.

The five projects will be the basis for grant funding applications that the City will pursue to create engineering plans that supports implementation.

Complete Streets and Placemaking Objectives

- Identify conditions of the study area that make it unsafe or uncomfortable for users including pedestrians, cyclists, transit users and motorists.
- Identify locations in the study area that are challenging to walk or ride a bicycle.
- Identify streets that are difficult to cross as a pedestrian.
- Identify locations where high speed traffic creates stressful or unsafe use by pedestrians and cyclists.
- Identify primary routes to school and methods for improving safety.
- Integrate the planned Light Rail Fixed Guideway project with bicycle and pedestrian improvements.
- Recommend infrastructure and aesthetic treatments to improve conditions for walking (e.g. separated sidewalks, curb extensions, crosswalks, art, etc.) in the study area.
- Recommend bicycle facilities and treatments in the study area that can increase neighboring connections.
- Identify short and long-term projects for implementation.
- Utilize Street Guidelines that are relevant to Santa Ana including the Institute of Transportation Engineers' *Recommended Practice for Designing Walkable Urban Thoroughfares*, the National Association of City Transportation Officials' *Urban Street Design Guide and Urban Bikeway Design Guide*; and LA County's *Model Design Manual for Living Streets*.

Outreach Objectives

- Engage the residents and stakeholders through a series of meetings, workshops, open street events and surveys.
- Meet the needs of the varying demographics within and around the study area by providing different input strategies and options.
- Collect and summarize the needs of the residents, visitors and business owners and integrate this input into the design.

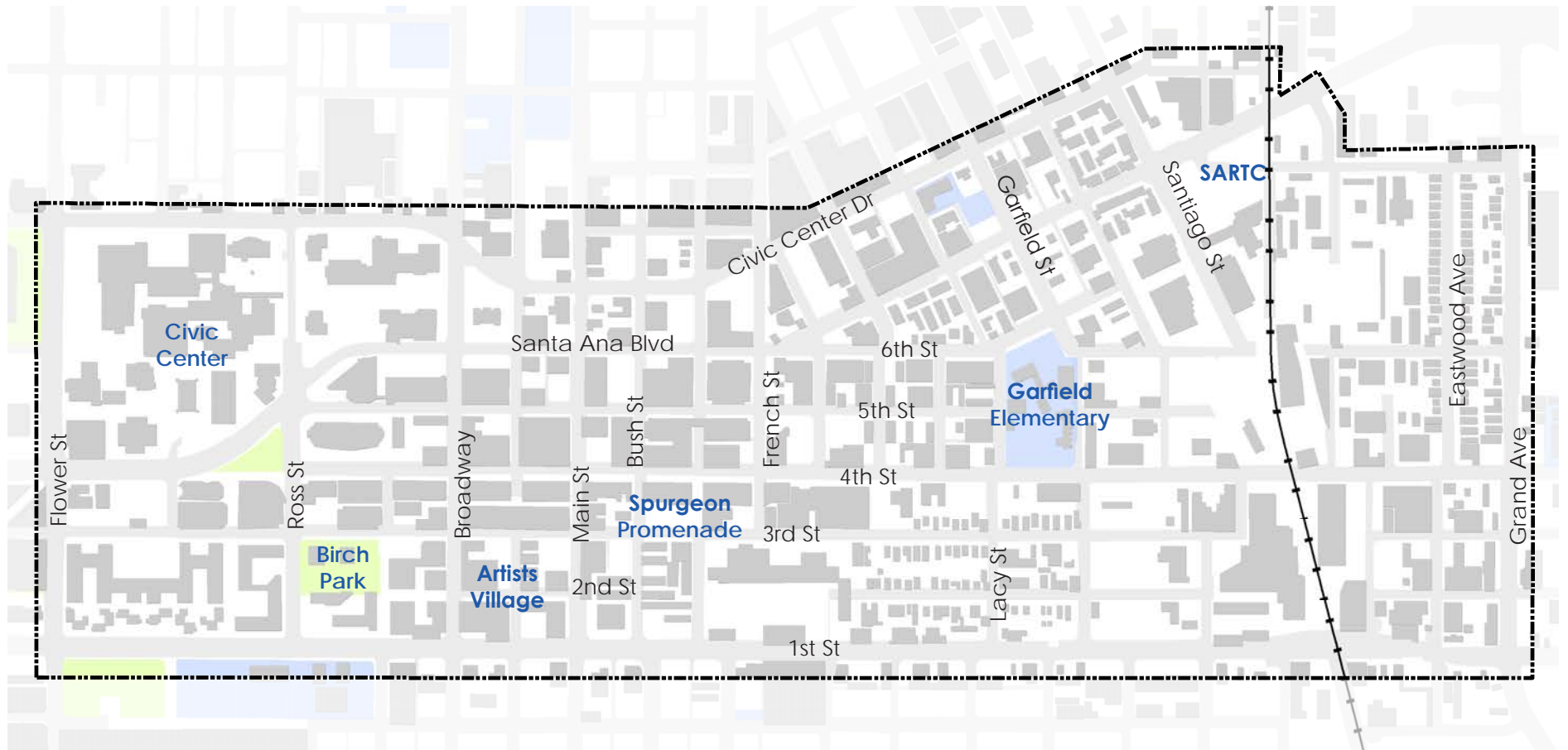
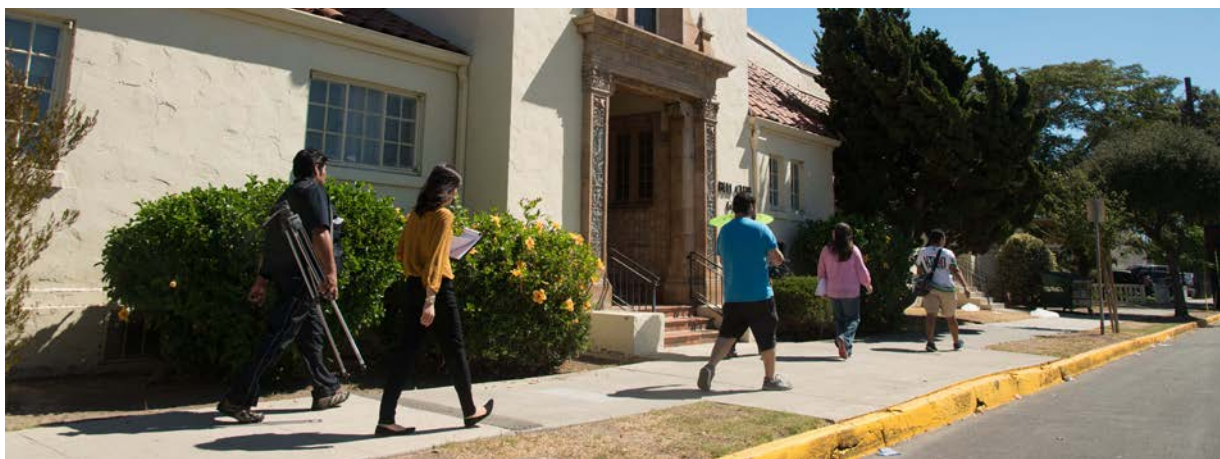


Figure 2-1: Study Area

Study Area

The Santa Ana Downtown Transit Zone is the heart of Santa Ana and hub of Orange County operations. The study area is bounded by Flower Street to the west, Civic Center Drive on the north, First Street on the south and Grand Avenue to the east. This three-quarter square mile study area has an estimated population of 10,672 people according to the US Census American Community Survey, 2013 . Estimated employment population is at 7,543 people. The largest age category are children nine years old and younger which makes providing safe and connected bicycle and pedestrian facilities even more important for access to schools and parks.



"The largest age category are children nine years old and younger."





3

Existing Conditions

Where Did We Start?

Document Summary

A review of several documents was completed to make sure previous efforts were built upon and conditions better known. Previous studies provided guidance on street design, future development and transportation corridors. The following is a list of the documents that were reviewed. Summaries of these documents can be found in Appendix A.

- General Plan
 1. Circulation Element
 2. Growth Management Element
 3. Land Use Element
 4. Open Space, Parks and Recreation Element
 5. Urban Design Element
- Transit Zoning Code
- SCAG
 1. Regional Transportation Plan
 2. Sustainable Communities Strategy
 3. Active Transportation Plan
- OCTA
 1. OCTA Commuter Bikeways Strategic Plan (CBSP)
 2. Districts 1 and 2 Bikeways Strategy
 3. Guidance for Administration of the Orange County Master Plan of Arterial Highways
 4. OCTA MetroLink
- OCCOG
 1. Complete Street Initiative
- Santa Ana Regional Transportation Center (SARTC) Master Plan
- Santa Ana and Garden Grove Fixed Guideway Corridor EIR
- Santa Ana Strategic Plan 2014-15 to 2018-19
- Citywide Speed Surveys
- Average Daily Trips from 2007-2013
- Suggested Routes to Garfield Elementary School
- Walkability Audit: Garfield Elementary School

"Create **public spaces**, parks, parklets
and other public use areas in public right of way"

Examples of Common Constraints and Opportunities

Constraints



High volumes streets adjacent to sidewalks (Civic Center Drive)



Wide, high-volume, high speed streets without amenities for pedestrians to cross (First Street)



Lack of bicycle facilities (study area wide)

Opportunities



High traffic volume streets adjacent to sidewalks (Santa Ana Boulevard)



Wide, high-volume, high speed streets without amenities for pedestrians to cross (Third Street)



Low-volume, low stress streets conducive for bicyclists and pedestrian travel (Fourth Street)

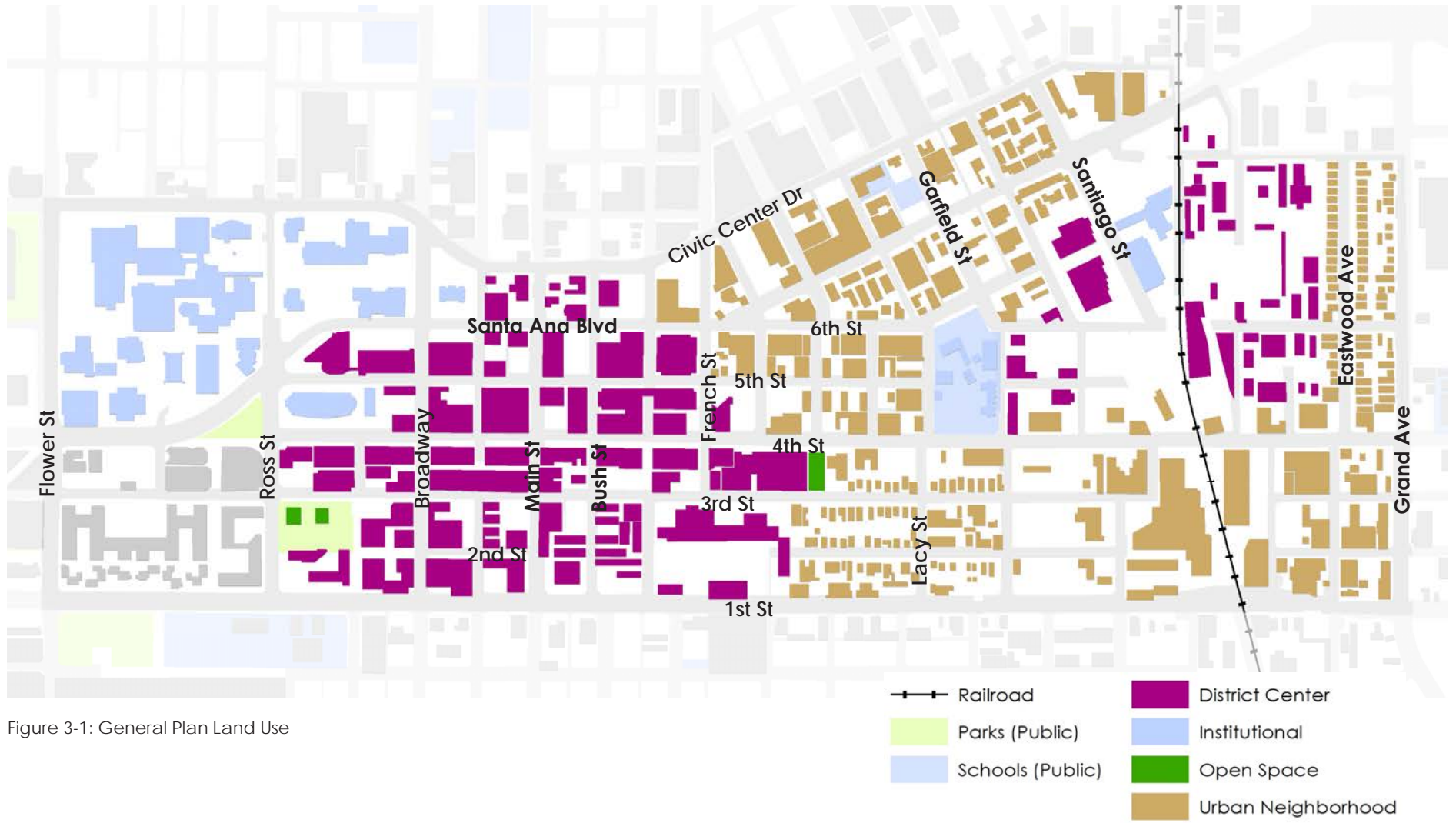


Figure 3-1: General Plan Land Use

Land Use and Activity Centers

Santa Ana is a built-out city. A complete street approach is key to sustain the demand of new development and for providing travel mode choices. Within the study area, there are many different existing and proposed land uses. Streets are laid out as a more traditional grid system that is conducive to make multi-modal connections to these various destinations. Garfield Elementary is the only public school within the study area with Santa Ana High School and Roosevelt Elementary School just south of First Street. The Orange County High School of the Arts and Willard Middle school are a few blocks north of Civic Center Drive. Private elementary schools and child care centers are also located in the study area. The proximity of these schools to the residential and commercial districts has been analyzed to ensure that connections and improvements are made. The City's General Plan Land Use Element identified a vision for further growth and development in the City. The following land use designations are included in the study area.

District Center

District Center is a land use designation designed to serve as an anchor to the City's commercial corridors, and to accommodate major development activity. Buildings within the District Center are to be developed with an urban character that includes a mixture of high-rise office, commercial, and residential uses, including mixed-use development. This type of development provides shopping, business, cultural, education, recreation, entertainment, and housing opportunities. This area serves as major retail and employment centers that support the downtown neighborhoods as well as the broader region. Projects in these areas should include development which promotes the City as a regional activity center while creating an environment conducive to business on a regional scale.

Institutional

The Institutional designation includes the Civic Center, governmental facilities, City facilities and public institutions, as well as schools such as Garfield Elementary. These institutional facilities are the major employment and transportation hubs of the Downtown area. They include Santa Ana City Hall, Orange County offices which include the Municipal and Superior Courts, Assessor and Health Departments, the Santa Ana Public Library, Orange County Public Law Library and the Santa Ana Regional Transportation Center.

Open Space

The Open Space designation is applied to parks, water channels, cemeteries and other open space uses. Birch Park and Sasscer Park are within the study area as is the railroad right-of-way. Smaller linear parks can be found along Fourth Street west of Broadway and at the Old Courthouse Museum.

Urban Neighborhood

This land use designation applies to primarily residential areas with pedestrian oriented commercial uses, schools and small parks.

The Urban Neighborhood allows for a mix of residential uses and housing types, such as mid to low rise multiple family, townhouses and single family dwellings; with some opportunities for live-work, neighborhood serving retail and service, public spaces and use, and other amenities. Either vertical or horizontal integration of uses is permitted based on zoning standards, with an emphasis on tying together the uses with pedestrian linkages and street frontages.

Street connectivity is desirable, allowing for a high degree of walkability, transit options, and other forms of transportation including pedestrian and bicycle travel.

"Transform Downtown into a
family oriented
place with places to shop and relax"

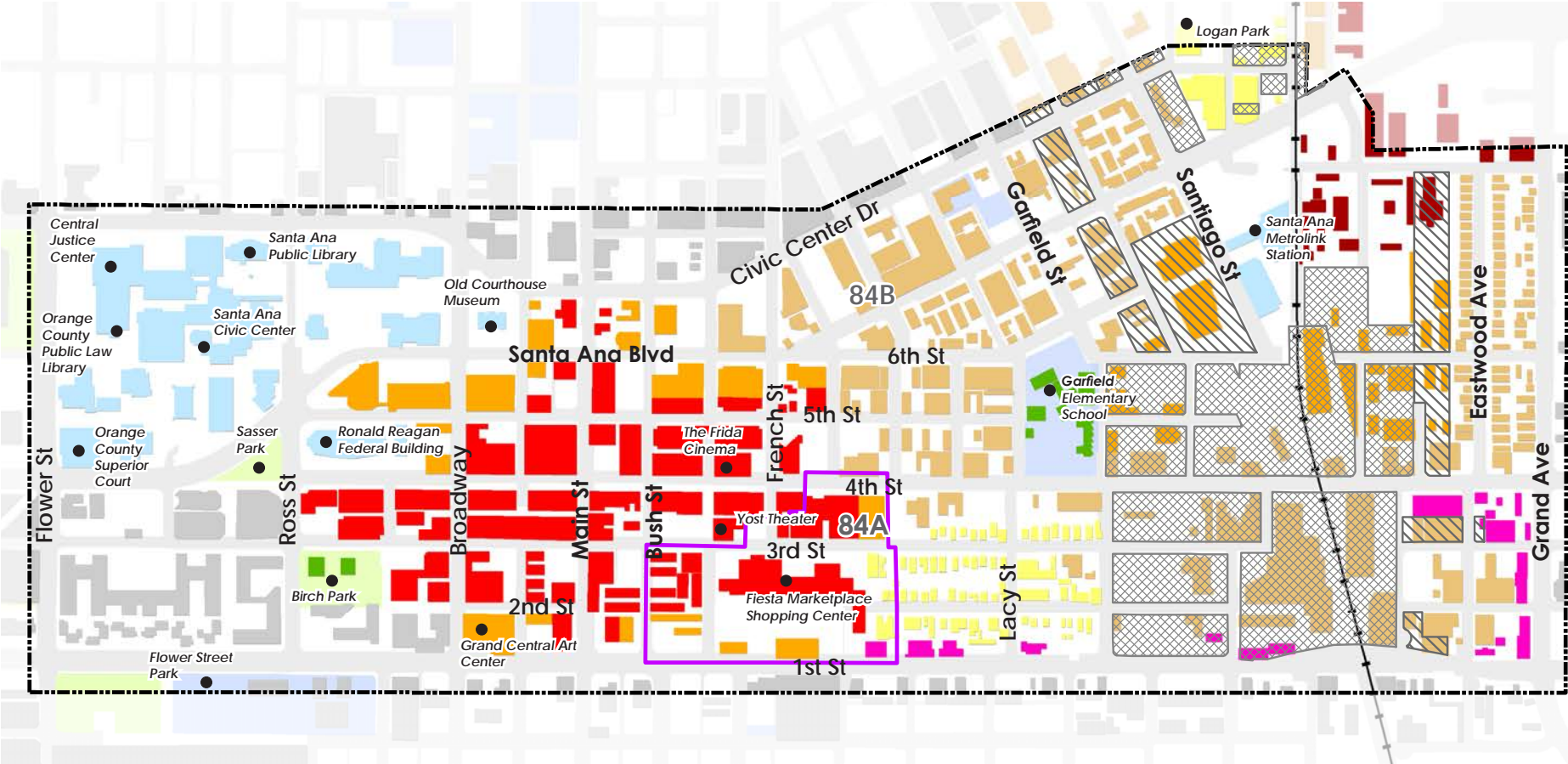


Figure 3-2: Activity Centers



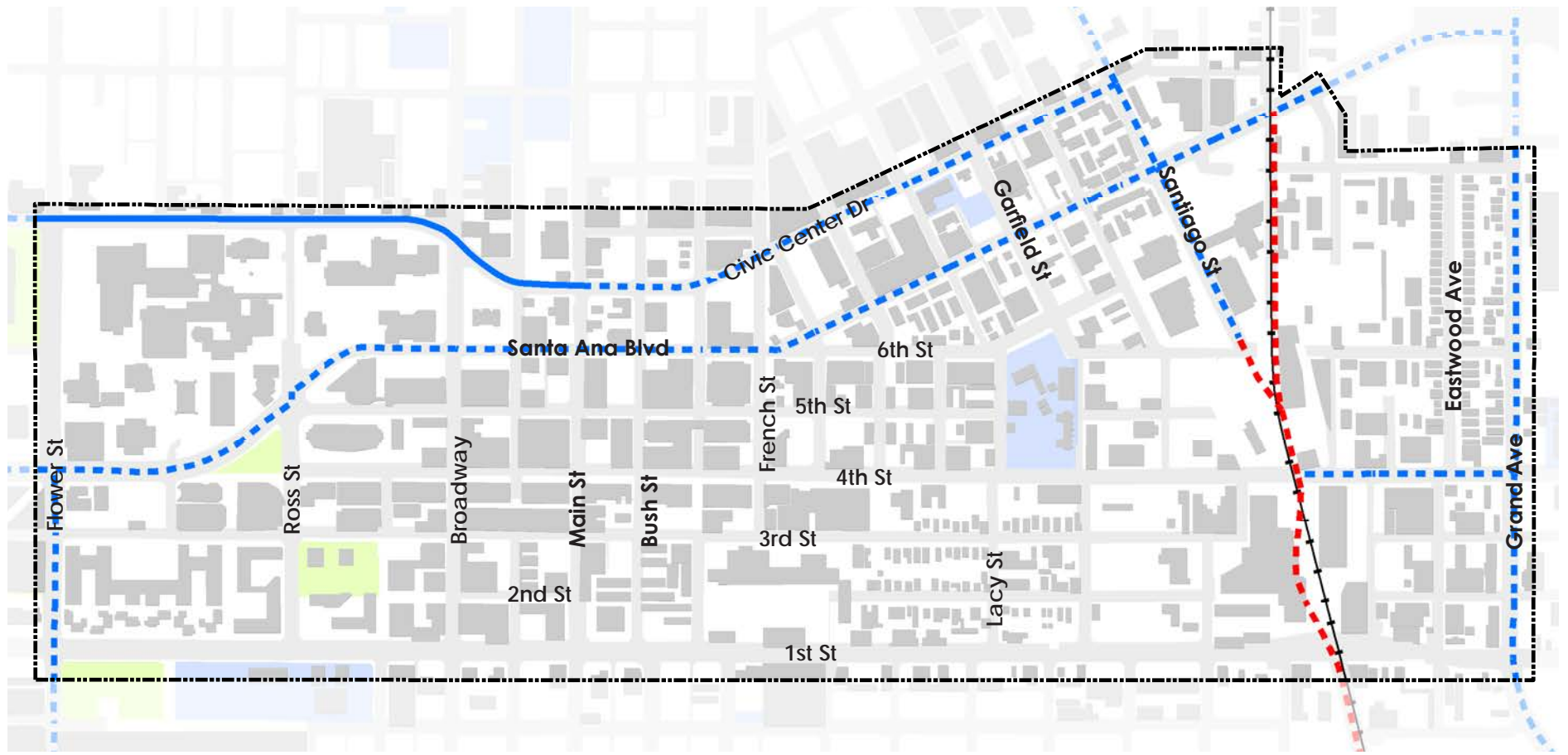


Figure 3-3: Existing and Proposed Bicycle Facilities

Existing and Proposed Bicycle Facilities

At the start of this project, bicycle facilities did not exist in the study area. In 2015, bicycle lanes were striped on Civic Center Drive between Flower Street and Main Street. At the time of this project, the City’s Bicycle Master Plan was underway with the intent of having routes from this project eventually integrated into the final Master Plan. According to the City’s General Plan, bicycle lanes and multi-use paths are to be built throughout the study area. Figure 2-3 illustrates their planned locations. These facilities were taken into consideration during the design phase, however the inclusion of the Fixed Guideway on Santa Ana Boulevard and the latest in bicycle design and best practices superseded many of the planned facilities.

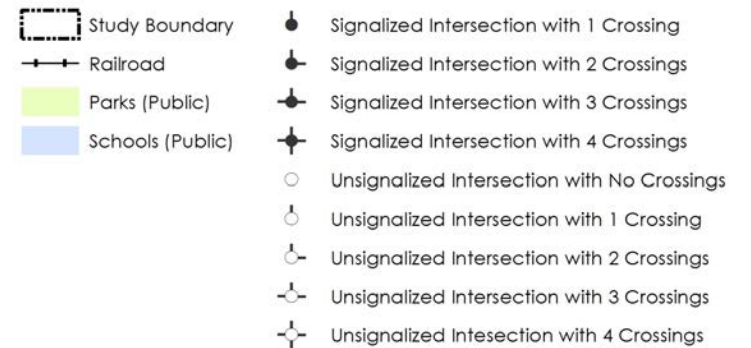




Figure 3-4: Intersections

Intersections

An inventory of all intersections helped identify if they were signalized, have crosswalks and how many pedestrian crossings legs were allowed. This data provided information for the development of intersection treatments and additional crossings needed.



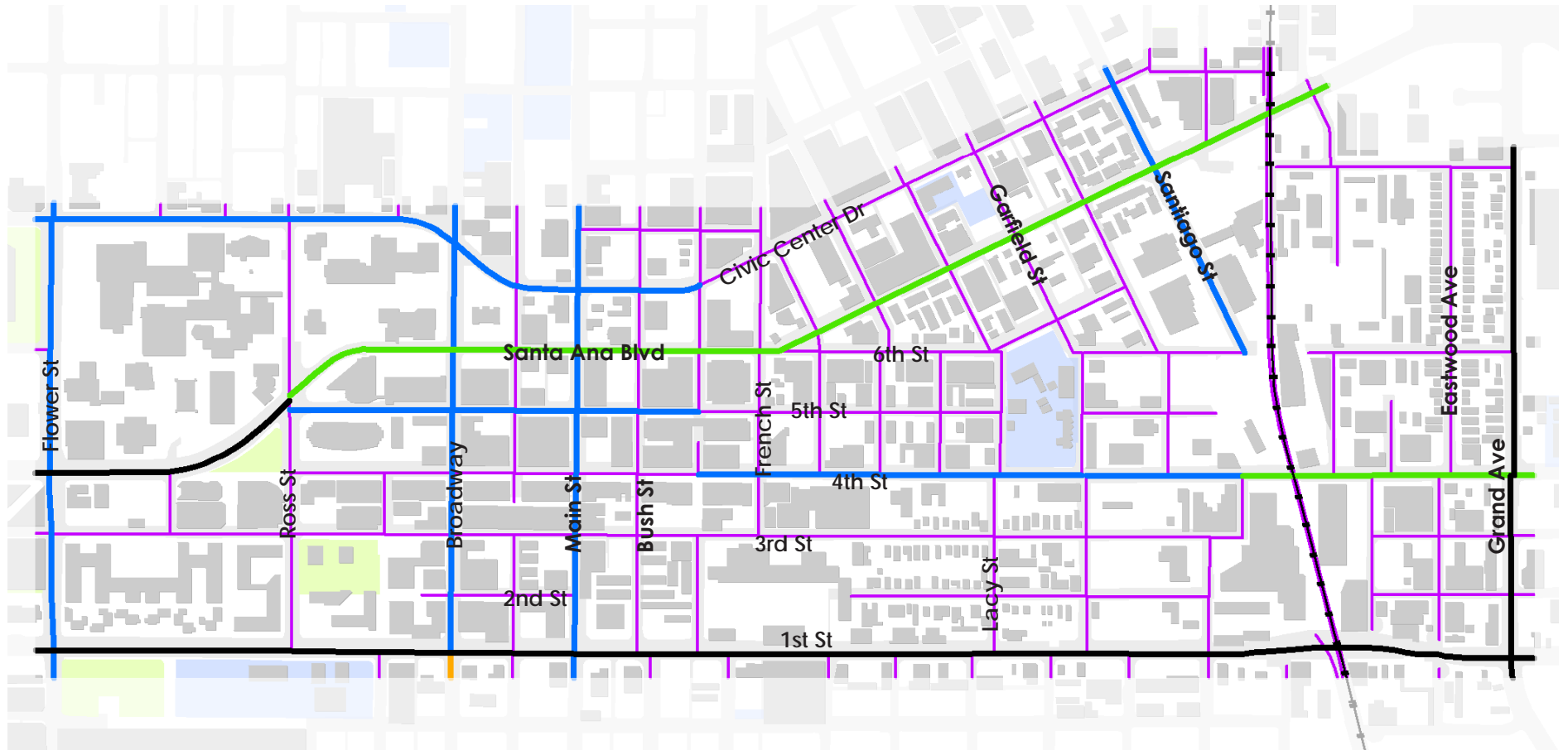


Figure 3-5: Street Classifications

- +— Railroad
- Parks (Public)
- Schools (Public)
- Major Arterial
- Primary Arterial
- Secondary Arterial
- Commuter
- Local

Street Classifications

The City's Master Plan of Streets and Highways (MPSH) is illustrated in Figure 2-5. This functional classification serves to categorize roadways based upon their use and identifies the existing circulation system, and the circulation related issues for the various modes of transportation. Furthermore, the Orange County Transportation Authority (OCTA) designates in its Master Plan of Arterial Highways (MPAH) roadways are:

“Countywide transportation plan administered by the Authority defining the ultimate number of through lanes of arterial streets, and designating the traffic signal synchronization street routes in Orange County.”

The MPAH establishes a system of countywide arterial highways: a key factor in defining Orange County's long-range transportation planning and policy objectives. OCTA's role as the administrator of the MPAH is to coordinate with cities and the County to develop a consensus-based, consistent, and inter-community arterial highway system that effectively balances regional mobility and local access for existing and future land uses. Within the study area, First Street, Grand Avenue and Santa Ana Blvd west of Ross St., are identified as major arterials. Santa Ana Blvd. between French Street and Grand Avenue, and Fourth Street between the railroad tracks and Grand Avenue, are identified as primary arterials. These have been designated to accommodate their Average Daily Trips (ADTs) respectively and cannot have their capacity reduced without OCTA approval.

Major Arterial

This generally consists of six-travel lanes, and is also divided. Typically, the right-of-way width for this type of roadway is 120 feet. A major arterial is designed to accommodate between 33,900 and 50,600 vehicle trips daily.

Primary Arterial

This generally consists of a four-lane, divided roadway. Typically, the right-of-way width is 100 feet. A primary arterial is designed to accommodate between 22,500 and 33,800 vehicle trips daily.

Secondary Arterial

This generally is a four-lane, undivided roadway. The typical right-of-way width for this category of roadway is 80 feet. A secondary arterial is typically designed to accommodate between 15,000 and 22,500 vehicle trips daily.

Commuter Street

A two-lane, undivided roadway carrying less than 10,000 vehicle trips per day. The right-of-way width for this roadway classification is 60 feet. Collectors are also two-lane undivided roadways with a right-of-way width of 56 feet.

Local Commercial Street

A two-lane, undivided roadway carrying up to 6,000 vehicle trips per day. Parking may be allowed on both sides of the street, businesses are located on both sides of the street. The right-of-way width for this roadway classification is 60 feet.

Local Street

A typical local street primarily travels through residential neighborhoods with lower vehicle trips per day and slower speeds. They are two-lane undivided roadways with varying right-of-way widths between 40-60 feet, depending on the adjacent residential landuse.

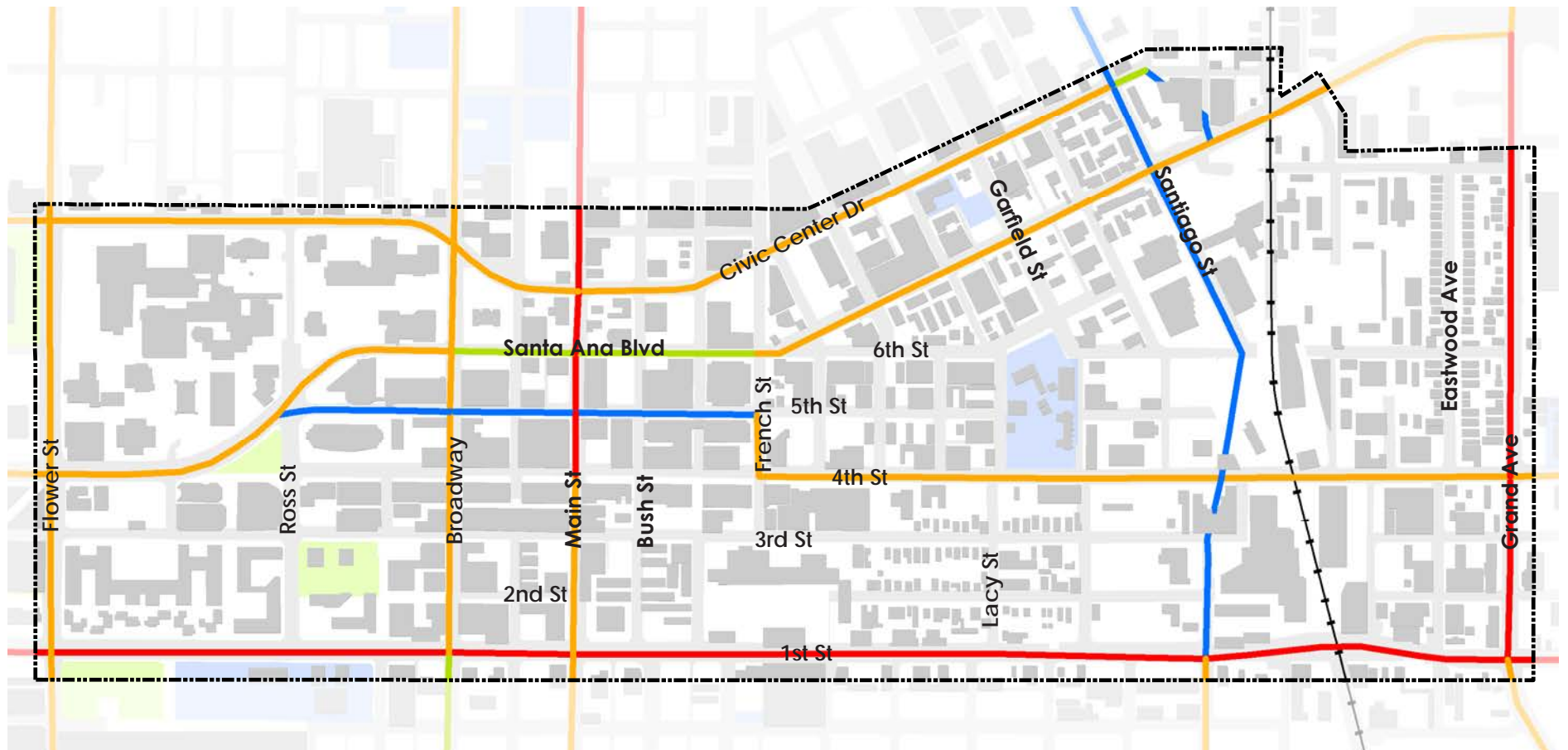


Figure 3-6: Average Daily Trips (Vehicles)

Average Daily Trips (Vehicles)

Average Daily Trips were analyzed to identify the high volume streets for inclusion or exclusion of bicycle facility types and enhanced amenities for pedestrians. Major arterials such as First Street, Main Street and Grand Avenue have the highest vehicular volumes with over 30,000 daily trips. Many of the other secondary arterials have volumes between 10,000-30,000 daily trips. Some of these secondary arterials are being considered for road diets such as Santa Ana Boulevard. For the most part, there has been a decrease in traffic between 2007 and 2013.



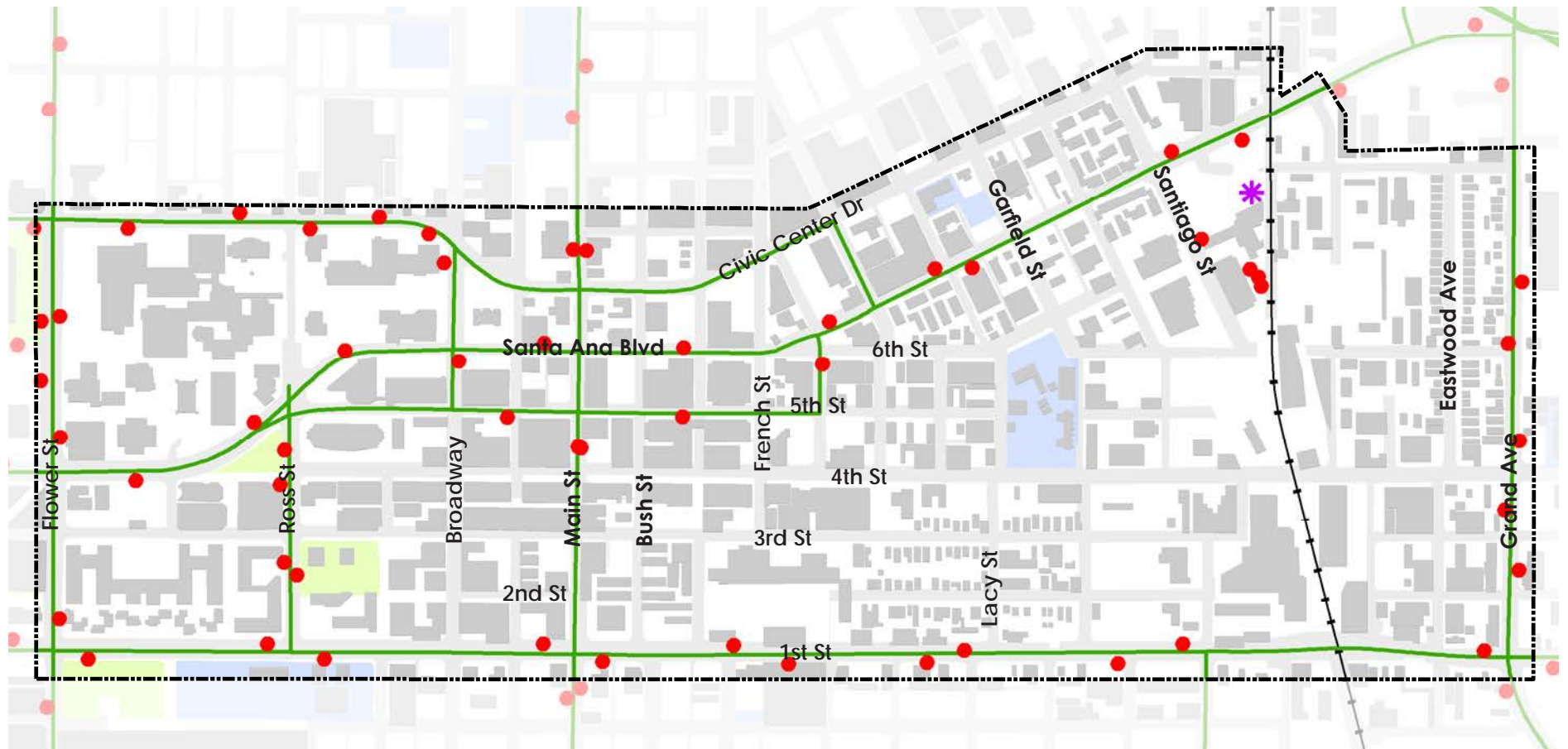


Figure 3-7: Transit Routes

Transit Routes

There are 12 bus routes and 54 bus stops within the study area. The transit services include Fixed Routes, Community Shuttles, Intra-county Express Routes, and Metrolink Feeder Routes. As part of the analysis, these routes and stops were collected to ensure they were integrated into the plan as major destinations for improving access to.



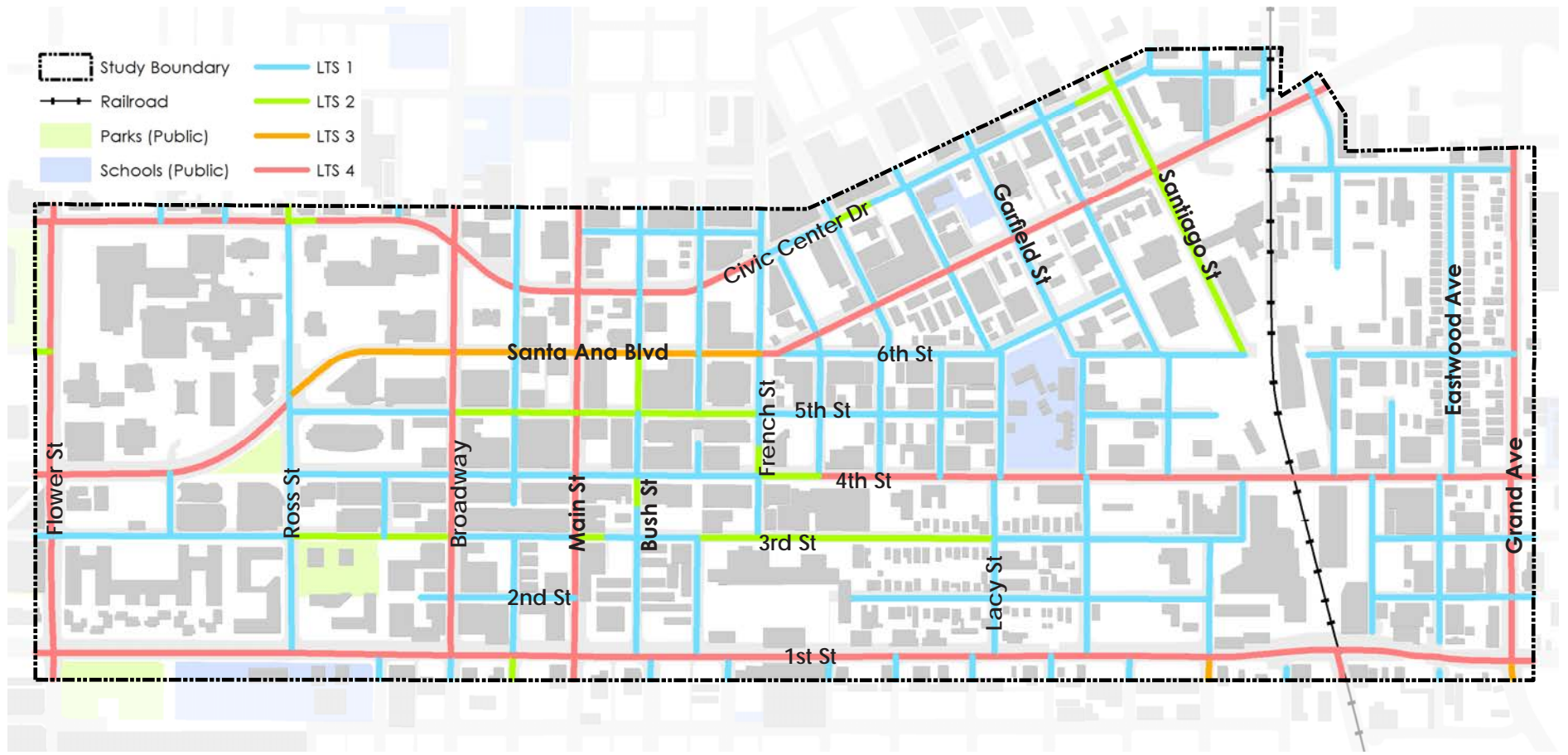


Figure 3-8: Bicycle Level of Comfort

Level of Comfort (Level of Traffic Stress)

Bicycle

Level of Traffic Stress (LTS) addresses the perceived safety related to traffic speed, number of lanes and existing bikeway facility type. An LTS analysis was performed to highlight streets that provide high stress levels for cyclists, particularly for children and seniors. Due to the emphasis on safe routes to school, this particular project gives bicycle projects on low stress streets a higher priority to meet the needs of children. While high speed streets tend to have large issues and costs for improvements, low cost implementation on low stress streets that connect to schools and parks are given a high score to meet the needs of the residents. This analysis is derived from the *Mineta Transportation Institute: Low-Stress Bicycling and Network Connectivity, 2012*.

LTS 1 – Presenting little traffic stress and demanding little attention from cyclists.

LTS 2 - Presenting little traffic stress and therefore suitable to most adult cyclists but demanding more attention than might be expected from children.

LTS 3 - More traffic stress than LTS 2, yet markedly less than the stress of integrating with multi-lane traffic, and therefore welcome many people currently riding bikes in American cities.

LTS 4 – High stress level beyond LTS 3.

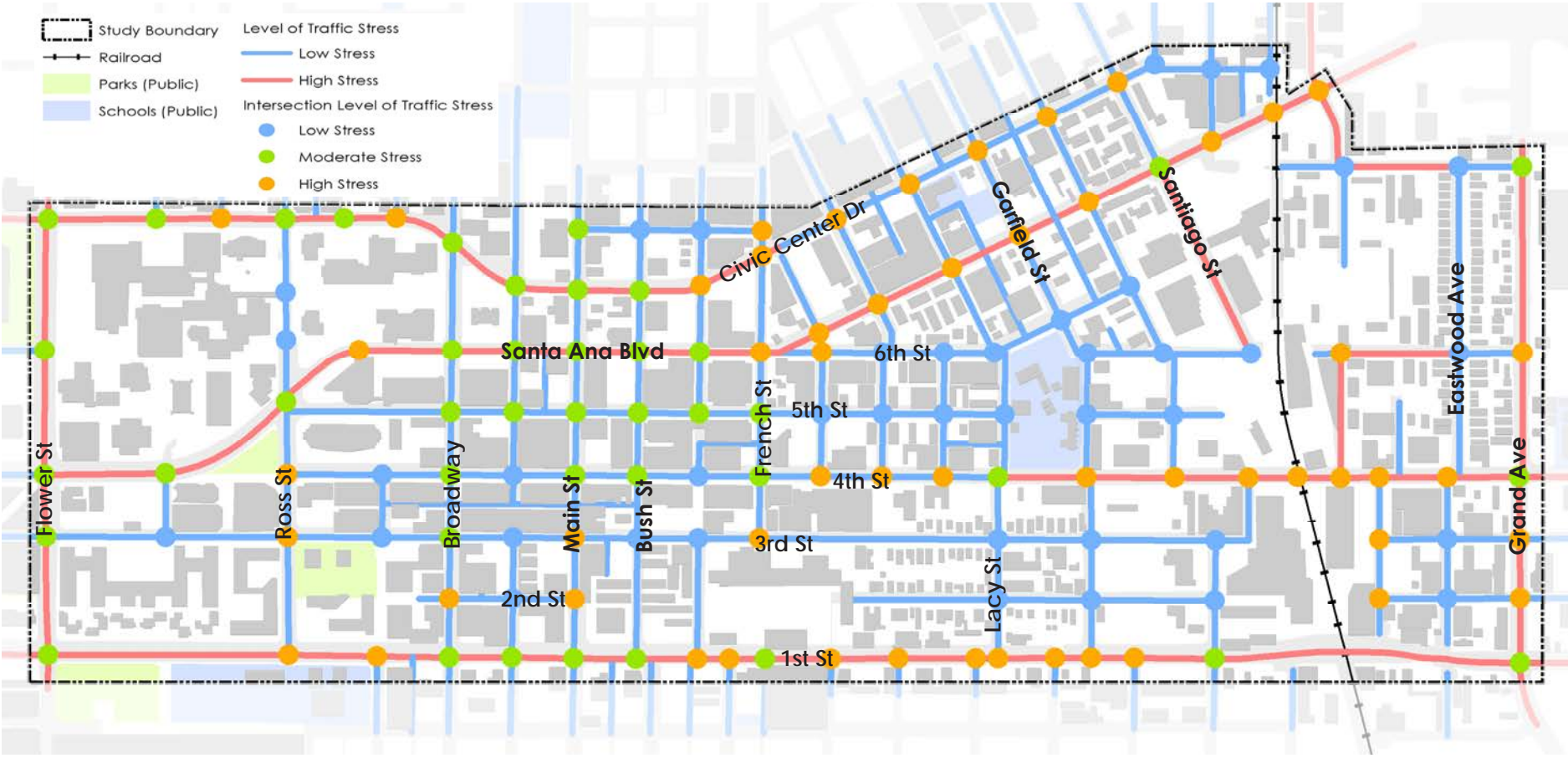


Figure 3-9: Pedestrian Level of Comfort

Pedestrian

While an LTS has been developed for bicycle facility planning, none yet exists for pedestrian planning. Due to the small size of the study area and the data collected, a preliminary LTS analysis was performed to highlight areas that are perceived as stressful for pedestrians based on existing conditions. This analysis provided insight to spots around the study area that should be considered for further enhancements.

The Intersection Level of Traffic Stress utilized traffic volume data and intersection data. By categorizing the data between traffic volumes and the presence of signals, a low to high score was developed.

Low: Low ADT with signals and/or signs

Moderate: Moderate/High ADT with signal

High: High ADT, no signals

Additionally based on walk audits conducted for this project.

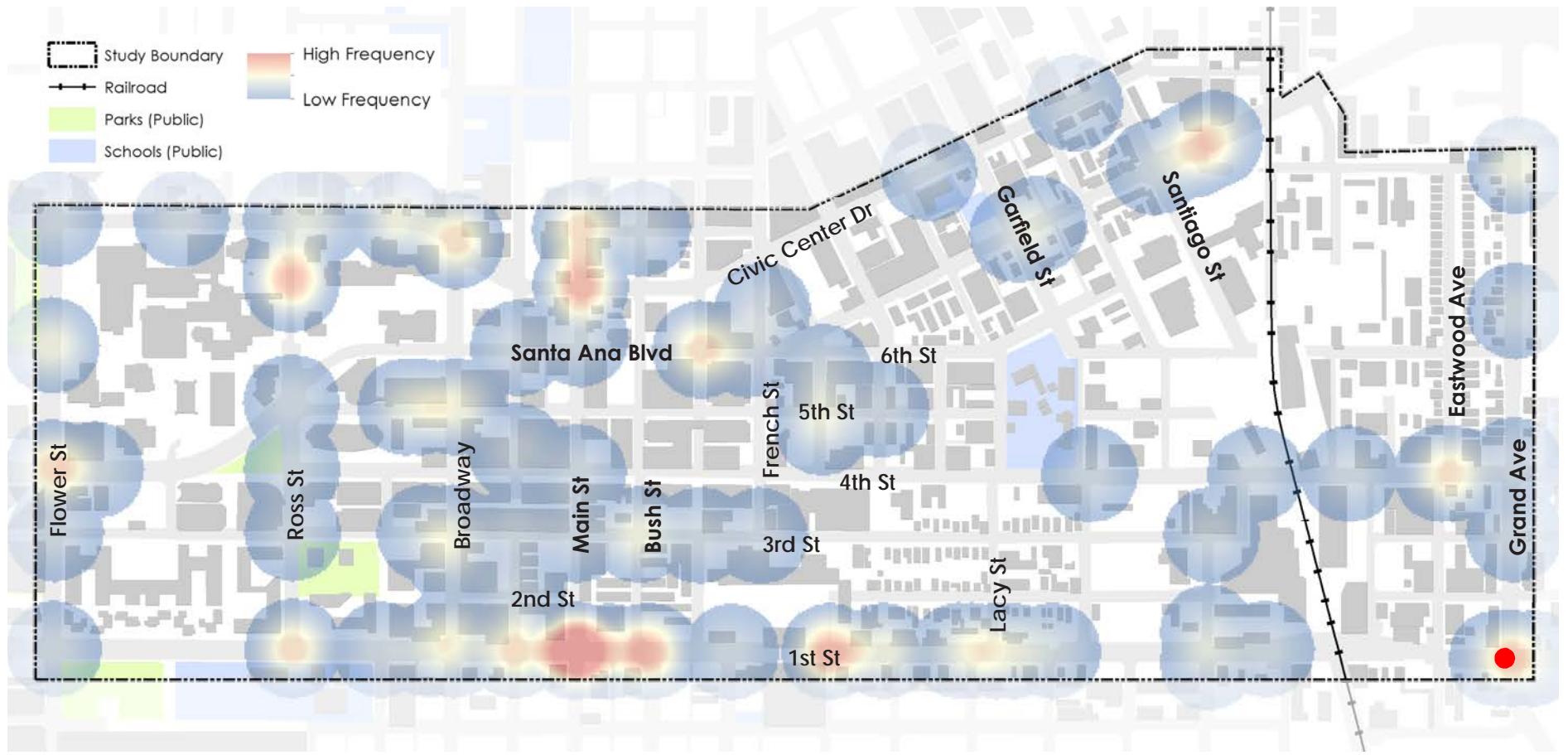


Figure 3-10: Bicycle Collisions

Safety Analysis

Collision data is typically analyzed for the most recent five-year span. Data used for this study was provided by the City of Santa Ana. Since the project area is fairly small and has been largely unchanged over the past decade, a ten-year span was used to identify any trends. This dataset represents all reported bicycle/vehicle, pedestrian/vehicle, and bicycle/pedestrian related collisions between January 2004 and December 2013. Collisions involving cyclists,

whether they involve vehicles, other cyclists, or pedestrians, are generally under-reported, so bicycle collisions are likely to have occurred that were not included as part of this data.

During this ten-year period, there were 144 bicycle/vehicle-related collisions and 156 pedestrian related collisions. Of these reported collisions, there was one fatality each. The data was reviewed in terms of volume of collisions that occurred at intersections and on road segments.

Bicycling and walking collisions were also summarized to identify other trends that may help to determine where and what kind of physical treatment can be recommended.

Bicycle Collisions

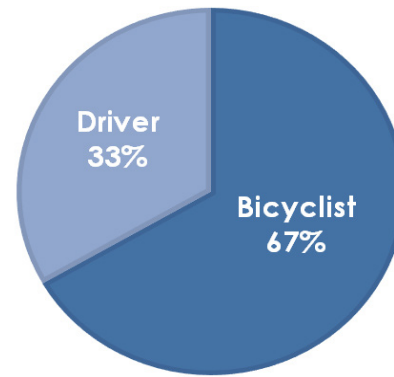
Bicycle collisions were more evenly distributed within the study area, likely due to the ability to travel greater distances by bicycle. The highest concentrations of bicycle related collisions occurred on First Street, Main Street and Civic Center Drive.



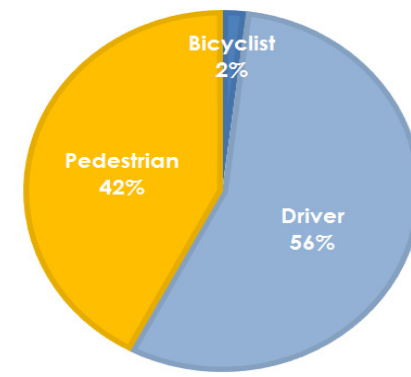
Figure 3-11: Pedestrian Collisions

Pedestrian Collisions

Pedestrian collisions primarily concentrated on the western half of the study area. The highest incidents of pedestrian related collisions occurred along Broadway, First Street, Fourth Street and Main Street.



At Fault in Bicyclist/
Vehicle collisions



At Fault in Pedestrian/
Vehicle & Pedestrian/
Bicyclist collisions



eastend
santa ana

DUST
SHOWS IN
COLOR

eastend
santa ana
ca

Outreach Plan and Process

Who Is This For?

4

Outreach Overview

According to the 2010 US Census, Santa Ana's population is 78% Hispanic or Latino and 21% of the City's population is below the poverty line. Because of these known demographics, Spanish translation was provided for all outreach material and events. Special attention was given to the needs of people that walk, bicycle or use public transit as their primary mode of transportation. Many of the residents in and around Downtown rely on these modes due to lack of car ownership and low incomes. Their input on non-motorized routes they take to school, work or to frequent the local businesses proved essential.

Stakeholders included residents, local advocacy and health organizations such as Latino Health Access, Kidworks, Orange County Transportation Authority, County of Orange Health Care Agency, Caltrans, Santa Ana Building Healthy Communities and Santa Ana Business Council, Santa Ana Active Streets and the Bicycle Tree.

As part of the community involvement plan, the City and consultant team reached out to stakeholders, local businesses and residents encouraging them to become project champions and part of the Community Advisory Committee. By delivering the following project goals, responses to participate in the committee was quick and encouraging.

- Walking and bicycling around downtown Santa Ana can be safe and fun! You can make it happen!
- A primary focus of the project will be enhancing conditions and creating options that balance driving with walking, bicycling and transit.
- The project improvements will make it easier to move from the Transportation Center to downtown Santa Ana on foot as well as by bus and bicycle.
- It is important to connect destinations such as schools, workplaces, shopping, dining and other places of interest so they can be accessed by walking or bicycling.
- Project improvements will elevate the attractiveness of the community and promote the cultural, economic and artistic qualities of neighborhoods and businesses.

“Strengthen the **Connection**
between Civic Center and Downtown”

Community Advisory Committee (CAC)

The Community Advisory Committee was comprised of local agency representatives, City staff, stakeholders and residents. This group was the driving force behind the outreach activities, project selection and design processes. They provided valuable insight on the day-to-day issues within the study area and became a voice for the community.

The CAC meetings were regularly attended by 12-16 CAC members. The CAC group included members from the following organizations:

- City of Santa Ana
- Santa Ana Unified School District
- Orange County Transportation Authority (OCTA)
- Health Care Agency
- Latino Health Access (LHA)
- Santa Ana Active Streets (SAAS)
- Santa Ana Building Healthy Communities
- Lacy Neighborhood Association
- French Park Neighborhood Association
- Logan Neighborhood Association
- Downtown Inc.
- Santa Ana Business Council
- Bike It Santa Ana, Kidworks
- Downtown Restaurant Association
- CSUF Grand Central
- The Bicycle Tree
- NeighborWorks
- Wellness Corridor Steering Committee
- Santa Ana Collaborative for Responsible Development
- Southern California Association of Governments (SCAG)



The Community

The three day Neighborhood Workshop was identified as the primary input opportunity for this project. To ensure the representation of a broad cross section of interests, the Neighborhood Workshop was advertised to as many constituents throughout the City and region as possible. The City and project team used a flyers, posters and e-mail blasts to reach all the businesses and residents within and adjacent to the Downtown. The organizations that were contacted include:

- Davis Elementary School
- Willard Intermediate
- Storybook Preschool
- El Sol Academy
- Orange County High School of Art (OCHSA)
- Orange County Educational Arts Academy (OCEAA)
- Saint Joseph Elementary School
- Garfield Elementary School
- Remington Elementary School
- Edward Cole Academy
- Heninger Elementary School
- Santa Ana High School
- Roosevelt Elementary School
- Churches
- Orange County Hispanic Chamber of Commerce
- Chamber of Commerce
- Downtown Neighborhood Association
- Santa Ana Downtown Business Association
- Council Member (Ward 2)
- Council Member (Ward 3)
- Southern California Association of Governments
- Downtown Residents
- Artist Community
- Major Employers
- Orange County Bicycle Coalition
- Representatives of key downtown destinations, such as the Bowers Museum
- Orange County and State and Federal representatives
- California Department of Transportation, District 12
- Orange County Transportation Authority (OCTA)
- County of Orange Bike & Trails
- County of Orange Office on Aging
- Safe Routes to School National Partnership
- Santa Ana Community Linkages
- Latino Health Access (LHA)
- Downtown Lofts
- Santiago Lofts
- Manager of Artists Village Apartments
- Manager at Spectrum Condominiums
- OC Parking Administration
- Artist Related Group
- French Park Neighborhood Association
- Logan Neighborhood Association
- Santa Ana Active Streets (SAAS)
- Neighborhood Works OC
- All CAC members
- Library Youth Group

Outreach Planning Process

CAC Meetings

The CAC functioned as a sounding board and preliminary feedback loop to the consultant team. The three CAC meetings were strategically spread out through the process to provide feedback on the outcome of events and guidance on how and what to move forward with.

CAC #1: Project Introduction

The purpose of the first CAC meeting was for the project team to get acquainted with the CAC members and for the CAC members to get acquainted with the project. The project team provided an overview of Complete Streets and introduced the project. The team outlined the Public Outreach Plan (including the Three-Day Charrette) and Schedule. Overviews of the Crowdbrite online engagement tool, Project Vision and Goal Statements and the online survey were also provided. The meeting concluded with a discussion of next steps.

The project team received valuable feedback from this first CAC meeting. They learned that the community affected by this plan had undergone several planning efforts and were eager to see project implementation. The CAC also offered insights on the accessibility of the outreach materials and the outreach approach itself. They advised the team to offer Spanish translation in written materials and at workshops. They also advised the team to schedule the workshops during dates and times convenient for working people and those with families. Lastly, they cautioned against calling the three day event a "Charrette," as it is less approachable than "workshop."



Three-Day Neighborhood Workshop (Fall 2014)

The three-day Neighborhood Workshop was held from September 25-27, 2014. The Workshop collaborated with residents, businesses, and other key stakeholders to develop a community-driven plan for improving access and mobility within the study area. The Workshop included three walk audits, a bike tour and design exercises to identify implementable complete street projects in Downtown Santa Ana.

Recommendations Workshop (Fall 2014)

This follow up workshop was scheduled a week after the Neighborhood Workshop. The project team collected, summarized and developed recommendations based on the input provided from the Neighborhood Workshop to present back to the public. At this workshop, participants were asked to review the 18 projects developed, provide any additional comments but more importantly, vote on their favorite ten.



CAC Meeting #2 (Fall 2014)

This second CAC meeting reviewed the events and recommendations that were derived from the Neighborhood and Recommendations Workshop. The projects were tallied up and the Top 10 Projects were pared down from the previous 18. The project team conducted a voting exercise to pare down the projects even further from ten to the Top 5 Projects. These Top 5 Projects would move on to further preliminary designs.

CAC Meeting #3 (Spring 2015)

This final CAC meeting was the review of preliminary designs for the Top 5 projects. Participants were able to review detailed designs and provide additional feedback.

Figure 4-1 shows the process and associated time frame that each meeting and outreach event occurred.





Figure 4-1: Project Planning Process


Outreach Materials

As part of the outreach process, a project website, flyers and surveys were developed to spread the word and to gather information. Flyers were produced, in Spanish and English and distributed throughout the study area and adjacent neighborhoods.

For those that could not participate in the Neighborhood or Recommendations Workshop, surveys were available in both hard copy and online versions. The online survey was also available at all the workshops in both formats. The Santa Ana On Main Open Street (SOMOS) event was another opportunity to distribute the surveys and announce the Recommendations Workshop.

The SOMOS event occurred the weekend after the Neighborhood Workshop and the day before the Recommendations Workshop provide further exposure and outreach opportunity for the project.

Downtown/Transit Zone Complete Streets Plan



Do you want safer, more beautiful streets? Help shape the future of Downtown Santa Ana

We invite you to join us at a series of public workshops.
While we encourage you to attend all sessions, you can commit as much or as little time as you like. Make a day of it or simply stop by. We want to hear from you!

Community Workshop: Sept 25 to Sept 27, 2014 at Garfield Community Center, 501 N. Lacy Street, Santa Ana (See right for times). Friday Workshop activities include:

- Walk & Talk, 1-3 pm. Provide input on pedestrian related topics in the downtown area
- Bike Tour, 1-3 pm. Ride corridors and discuss bicycling related topics throughout downtown (Requires RSVP)

Community Recommendations Workshop: Oct. 6, 2014 6-8pm. 1000 E Santa Ana Blvd, Santa Ana (Santa Ana Regional Transportation Center, Suite 100)

About the Project
The Santa Ana Downtown/Transit Zone Complete Streets Plan is a planning project intended to create a more walkable, bikeable, and livable Downtown Santa Ana. By linking a regional transportation hub to regional destinations; this plan can capitalize on existing investments, identify opportunities for new investments, and serve as an example to other cities. The project area is within the Downtown/Transit Zone and extends east-west from Grand Avenue to Flower Street and north-south between Civic Center Drive and First Street.

For more information and to RSVP for the bike tour, contact Cory Wilkerson: 714-647-5643 or cwilkerson@santa-ana.org

Please visit <http://www.santa-ana.org/completestreets> for more information.

Community Workshop

Thurs.
9/25
6-8 PM

Fri
9/26
1-7 PM

Sat.
9/27
9 AM-12 PM

Community Recommendations

Mon.
10/6
6-8 PM

Plan de Calles Completas del Centro de Santa Ana/Zona de Tránsito



¿Desea calles más seguras, más hermosas? Ayude a dar forma al futuro del centro de la ciudad de Santa Ana

Le invitamos a una serie de talleres públicos
Le invitamos a asistir todas las sesiones, pero puede comer tanto o tan poco tiempo como usted desee. Haga un día de ello o simplemente deténgase brevemente. ¡Queremos saber de usted!

Taller comunitario: del 25 al 27 de septiembre de 2014 en el Centro Comunitario de Garfield, 501 N. Lacy Street, Santa Ana (véase a la derecha para las horas). Las actividades del taller del viernes:

- Caminar y conversar, 1-3pm. Proporcione sugerencias en temas relacionados con los peatones en el área del centro de la ciudad.
- Recorrido en bicicleta 1-3pm. Recorra los corredores y discuta temas relacionados con andar en bicicleta a lo largo del centro de la ciudad (por favor confirme su asistencia)

Taller de recomendaciones de la comunidad: 6 de octubre de 2014 6-8pm. 1000 E Blvd. Santa Ana, Santa Ana (Santa Ana Regional Transportation Center, Suite 100)

Sobre el Proyecto
El plan de Calles Completas del centro de Santa Ana/zona de tránsito es un proyecto de planificación destinado a crear un centro para Santa Ana más transitable, más amigable para andar en bicicleta, y habitable. Vinculando un centro regional de transporte a destinos regionales, este plan puede aprovechar las inversiones existentes, identificar oportunidades para nuevas inversiones y servir de ejemplo a otras ciudades. El área del proyecto está dentro del centro/zona de tránsito de la ciudad y se extiende este-oeste de la avenida Grand a la calle Flower y norte-sur entre Civic Center Drive y la calle First.

Para obtener más información y para confirmar su asistencia para el recorrido en bicicleta, póngase en contacto con Cory Wilkerson: 714-647-5643 o cwilkerson@santa-ana.org

Por favor visite <http://www.santa-ana.org/completestreets> para obtener más información.

Taller Comunitario

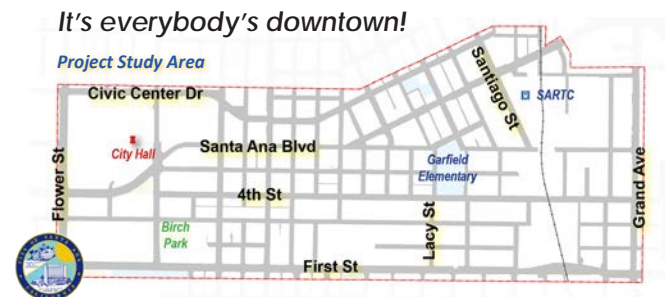
Juev.
9/25
6-8 PM

Vier.
9/26
1-7 PM

Sáb.
9/27
9 AM-12 PM

Taller de Recomendaciones de la comunidad

Lun.
10/6
6-8 PM



Online Survey Results

The intent of the survey was to get a general sense of people’s reasons for visiting Downtown, their means of travel and what they would like to see improved in terms of mode choice and placemaking.

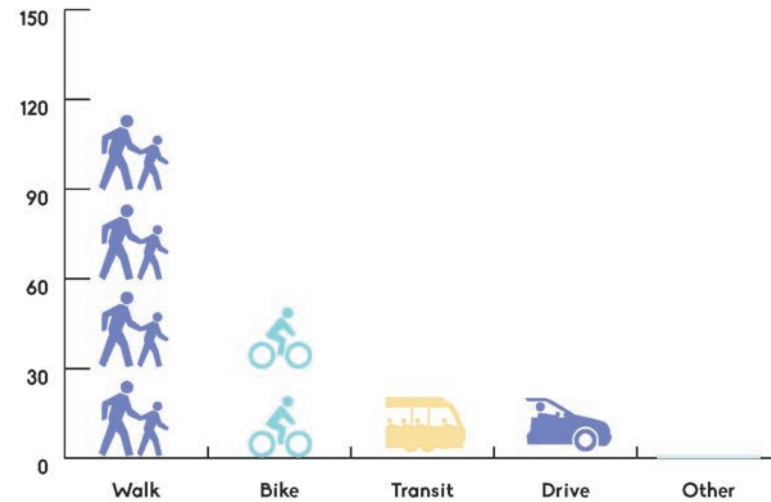
While the results of the online survey show most people traveling by car to, from and within Downtown, their biggest concerns was safety for bicycling and walking. Most people frequent Downtown for work, dining and shopping since Downtown is now a vibrant hub of activity for all ages.

A majority of the survey respondents were residents Downtown which correlates with their concerns over walking and bicycling safety in their neighborhood.

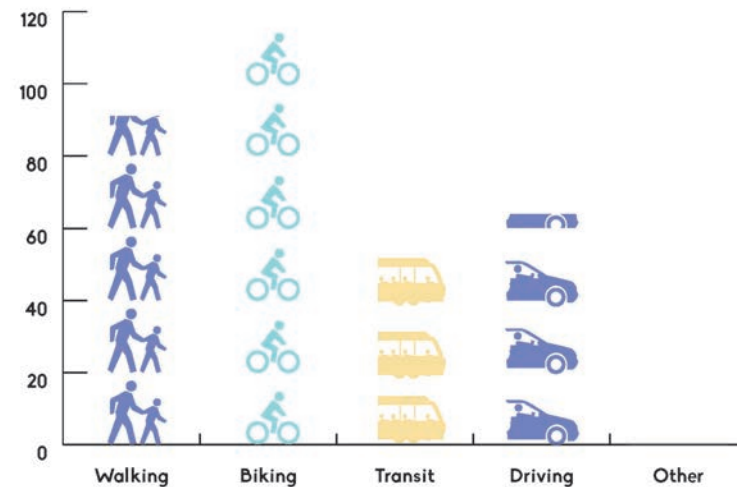
See *Appendix B* for a summary of the survey results.

“promote **healthy** lives for everyone”

How do you currently get around downtown ?



How concerned are you about safety for the following transportation modes? (Answered “A lot”)



Examples of results from the project survey



From Participation to Projects

How Do We Get There?

5

Complete Street Development

Collaboration with the community was truly integral to this planning process. As discussed in Chapter 4, input from the public was solicited and integrated at specific points in the planning process. This chapter serves to summarize and highlight the various input events, including those with the general public and the CAC.

Neighborhood Workshop

The Neighborhood Workshop provided the vast majority of input used to develop this plan's project recommendations. All subsequent project developments and refinements can ultimately be traced to this early outreach event. Held at Garfield Elementary School, the workshop was attended by 20-25 people daily. A handful of residents and stakeholders attended all three days. In order to accommodate families with children, kid-friendly activities – such as coloring and mapping exercises – were provided. A computer station was available for attendees to fill out the online survey and hardcopy versions were also provided. Summaries and highlights from each of the three days follow.

Figure 5.1 highlights the activities for this event.

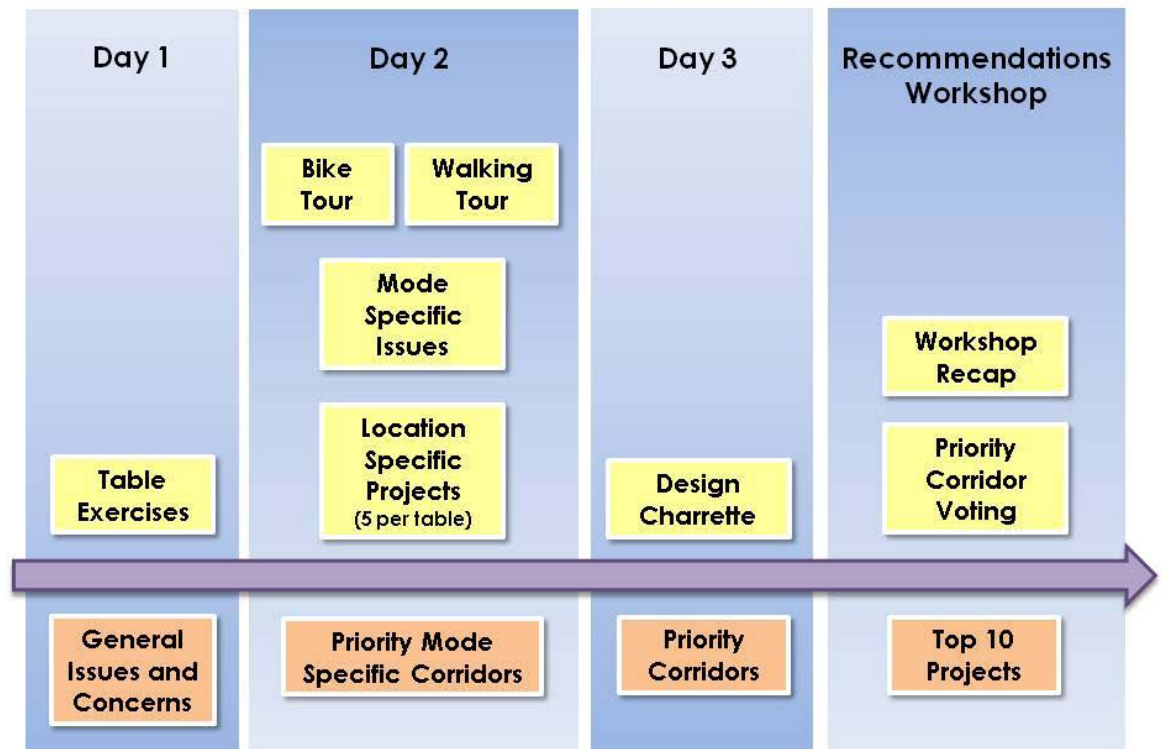


Figure 5-1: Neighborhood Workshop Schedule

Day One: Issues and Opportunities

Day one of the Neighborhood Workshop was a brief evening event that provided an overview of Complete Streets and a table top exercise to gather initial comments. Attendees were asked for information regarding general issues and opportunities, but were not dissuaded from making location specific comments.

Highlights from the evening included many "Bright Ideas" and unusually high degree of consensus on issues and opportunities for the City of Santa Ana. The community spoke in favor of traffic calming, protected bikeways, safer pedestrian crossings, shade trees and reclaiming underused asphalt for higher public uses (e.g. plazas, parks, and sports facilities for community youth).

"I'd like more pedestrian safety"



Figure 5-2: Two-Day Results for the Neighborhood Workshop



Day Two: Priority Routes

Day two consisted of three walking tours and one bike tour to experience and collect data on existing conditions and opportunities in the Downtown area. Routes were determined by reviewing the previous day's map comments. On the bike tour, special consideration was given to cyclists' abilities and comfort levels so the tour traveled on First Street for only two blocks due to high vehicle speeds and volumes. Due to slower travel speed, walking tours were split into three groups, each covering a different territory. Due to quicker travel speed, the single bike tour covered most of the Downtown and stopped at specific intersections to discuss issues and potential solutions.

Length of walking and bike tour in miles:

Tortoises: 1.3

Coyotes: 1.6

Rabbits: 2

Mountain Lions (bike): 3.5

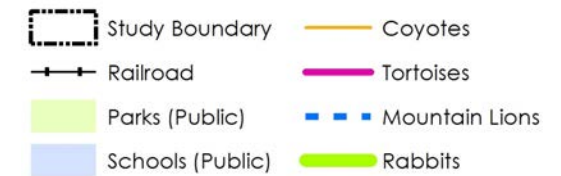


Figure 5-3: Walk and Bike Tours

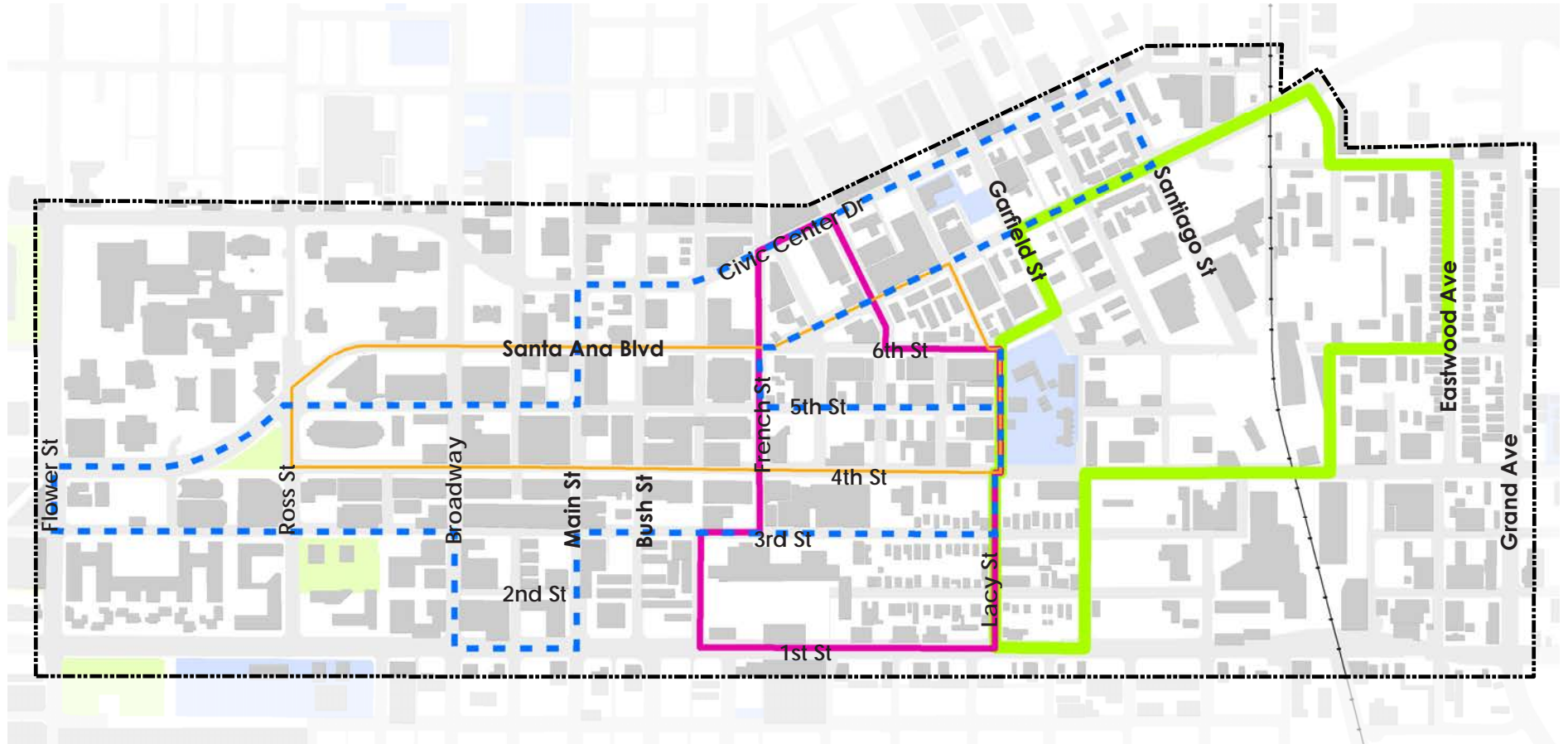




Table top exercises relating to specific topic areas such as transit, walking, bicycling, placemaking and traffic calming were then conducted to pin down 4-5 priority routes for each focus topic. A few groups were creative and began branding projects, allowing them to take a sense of ownership. This helped the groups support each of their projects and provided a fun way to remember what each project was about.

The groups had no trouble generating routes for their topic. Priority routes (and projects) for each topic area, in order of priority, are as follows:

Transit:

- Downtown Fixed Guideway
- Mobility Hubs/Shuttles

Walking:

- Fourth Street, between French Street and Terminal Street
- First Street, between Spurgeon Street and Grand Avenue
- Third Street, between Broadway and Lacy Street
- Santa Ana Boulevard, between Broadway and Poinsettia Street
- Second Street, between Broadway and Spurgeon Street
- Civic Center Drive and Fourth Street (area connections)

Bicycling:

- Santa Ana Boulevard, between Flower Street and Terminal Street
- Fifth Street, between Ross Street and Lacy Street

- Third Street, between Flower Street and Lacy Street
- Fourth Street, between Ross Street and Garfield Street
- Ross Street, between Civic Center Drive and First Street
- Bush Street, between Civic Center Drive and First Street

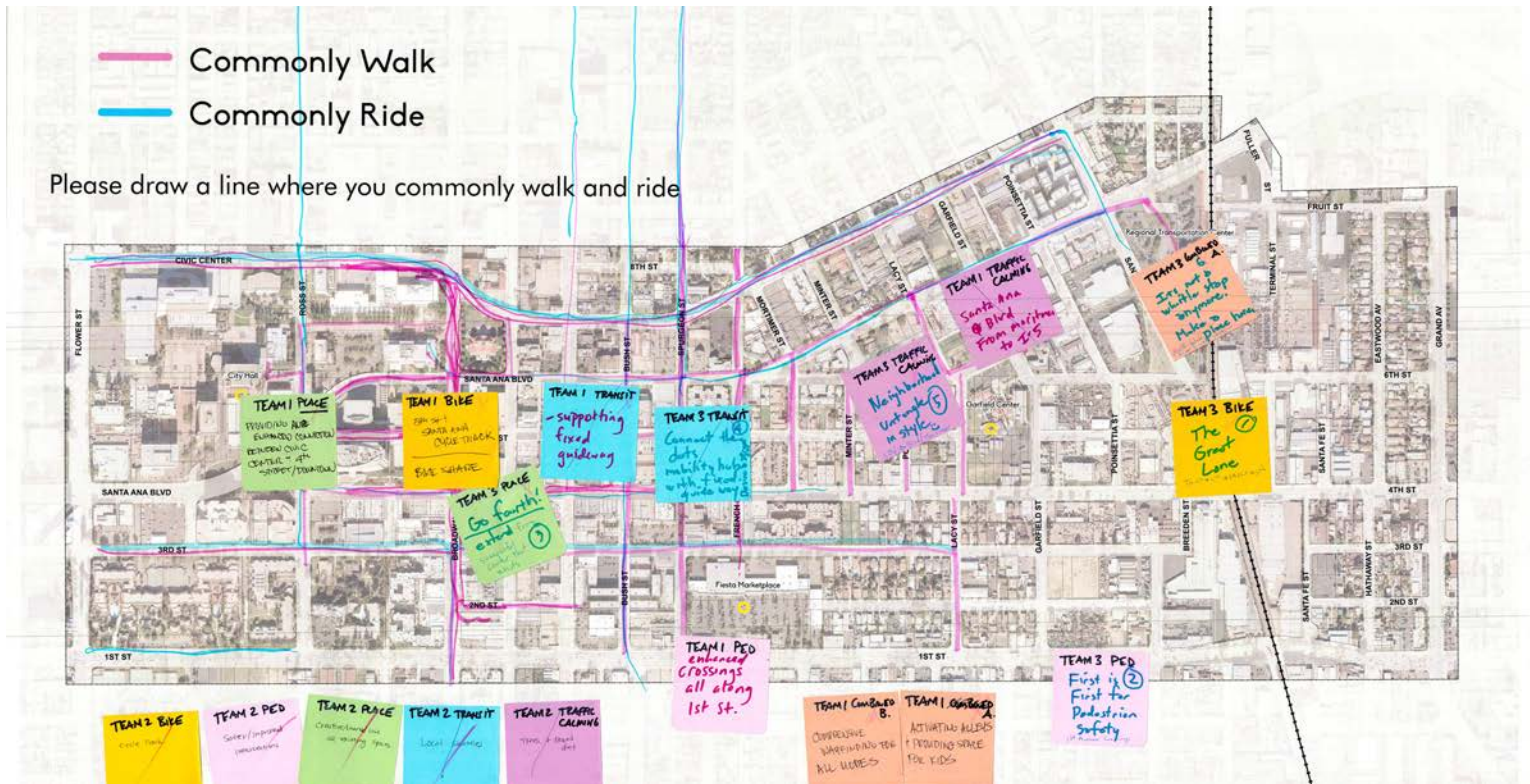
Placemaking:

- Church Parking Lot
- Fourth Street, east of French Street
- The “Walk of Honor”
- “Triangle Convergence”
- General Wayfinding

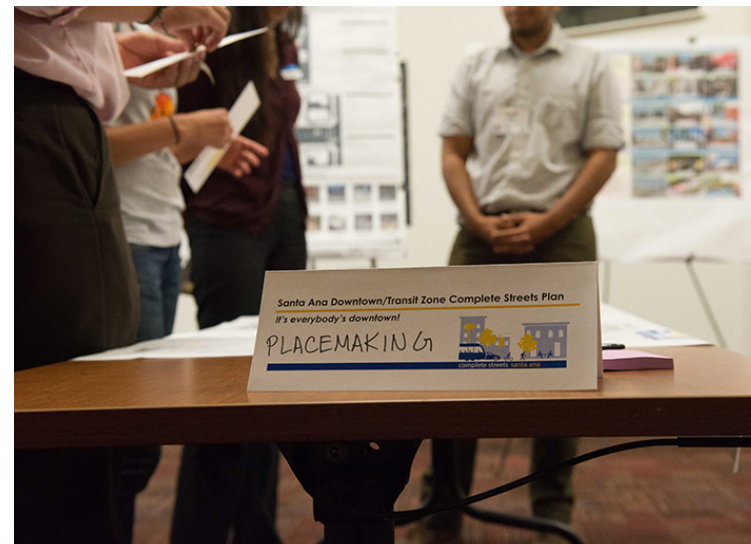
Traffic Calming

- “Untangle Neighborhood Intersections” - Intersection improvements
- “Go Fourth” - Enhance walking and bicycling on Fourth Street
- “Tame the Boulevard” - Traffic calming along Santa Ana Boulevard
- “First is First” - Improve pedestrian and bicycling on First Street
- Directing Traffic
- Complete the Streets

“Need **safe access**
to parks”



Summary map of the priority topics after Day 2



Day Three: Priority Project Recommendations

Day three involved further development of the priority routes (and projects) identified on day two. Specifically, attendees were asked to identify improvements for the selected routes. Through the process of developing actual projects, attendees started to see the potential for several corridors to serve multiple modes. This breakdown of the rigid topic areas (i.e. Walking, Transit, etc) and shift towards a more Complete Streets approach is reflected in a new topic type: Combined Projects. The priority projects, listed and branded below, were summarized, reformulated and presented to the community as draft recommended projects, at a workshop the following week.

The priority projects included:

Transit

- Supporting the Fixed Guideway along the planned route
- “Connecting the Dots” - Creating mobility hubs along Fixed Guideway routes
- Providing local shuttles (study area-wide)

Walking

- Providing enhanced pedestrian crossings all along First Street
- Safer/improved intersections (study area-wide)

Bicycling

- Cycle track along Santa Ana Boulevard and Fifth Street
- “The Great Lane” – Transit, Sixth Street, Santa Ana Boulevard and Fifth Street
- Implement bikeshare (study area-wide)

Placemaking

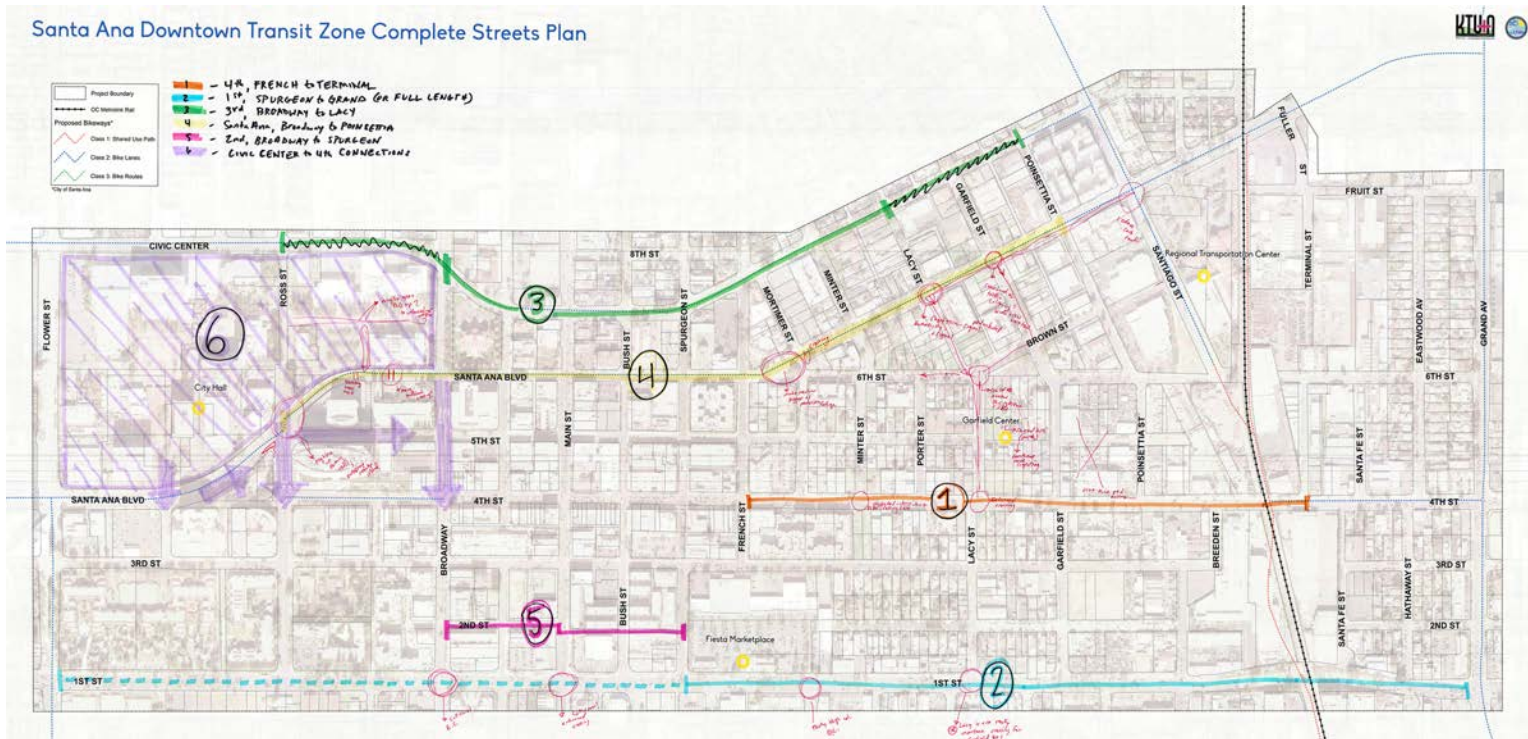
- Providing an enhanced connection between Civic Center Drive and Fourth Street/Downtown
- “Go Fourth” - Extend from successful existing (Fourth Street retrofit project)
- Creative, shared use of existing spaces (study area-wide)

Traffic Calming

- “Neighborhood Untangle, In Style” - Sixth Street, Santa Ana Boulevard and Mortimer Street
- Santa Ana Boulevard, from Mortimer Street to I-5
- Trees and road diets (study area-wide)

Combined

- “It’s not a whistle stop anymore” (multi-block area around the train station)
- Activating the alleyways and providing a space for kids (study area-wide)
- Comprehensive wayfinding for all modes (study area-wide)
- Closing a vehicle lane for combined bicycle/pedestrian access (study area-wide)



Summary map of the priority projects after Day 3



Top 18 Selection Process: Draft Recommended Projects

Through a highly collaborative process, the consultant team translated the priority projects generated on the third day of the Neighborhood Workshop into 18 Recommended Projects.

Combined Complete Street Projects (4 projects)

- "Go Fourth" - Extending the success of the Fourth Avenue Central Business District to the east and west
- "Tame the Boulevard" - Diversifying street uses through a calmed and connected Santa Ana Boulevard
- "Neighborhood Hub" - Creating a hub that is centered on the Logan neighborhood that also untangles and reclaims the street network
- "Downtown Hub" - Reestablishing Ross and Santa Ana Boulevard as Downtown's "Ground Zero" by accommodating all modes

Biking Focus Street or Area (4 projects)

- "Cycle Track Square" - Creating one-way cycle tracks primarily on Santa Ana Boulevard / Fifth and Sixth Streets
- "Who's on Third" - Shifting bike traffic to a lower volume / lower stress street
- "Shaking the Bush" - Improve bike use on a north / south connector street
- "Ross is Boss" - Threading the needle for cyclists through Santa Ana Boulevard and Ross Street improvements

Walking Focus Street or Area (4 projects)

- "Civic Minded" - Reconnecting the Super Blocks of the Civic Center Drive with the Downtown Business Districts (Fourth and Second Streets)
- "Civic Duty" - Pedestrian crossing improvements to Civic Center Drive
- "First on First" - Making First Street a top priority for calming traffic and improving safety for pedestrians
- "2nd to None" - Improving the promenades, walkways and street crossings along Second Street

Placemaking & Business Focus Street or Area (3 projects)

- "Close It Up and Alley Up" - Close Fourth Street to vehicles to create a pedestrian promenade and extend the success of the Fourth Avenue Central Business District through alleyway connectors and small public parklets
- "Gateways" - Improving wayfinding throughout downtown using district design concepts, lighting, street trees and signage
- "New Neighbors" - Establishing new neighborhoods on the east and west side of the tracks at the east end of downtown

Traffic Calming/Transit Focus Street or Area (3 projects)

- "Getting all Synced Up" - Synchronized lighting, pedestrian crossing timing, radar info with even flow traffic speed encouragement
- "Getting Back on the Grid" - New development at the east end of town will need new street networks
- "Connecting the Dots" - Establishing three new mobility hubs and connecting them with shuttles

"Bicycle safety and infrastructure is highly needed in our city"

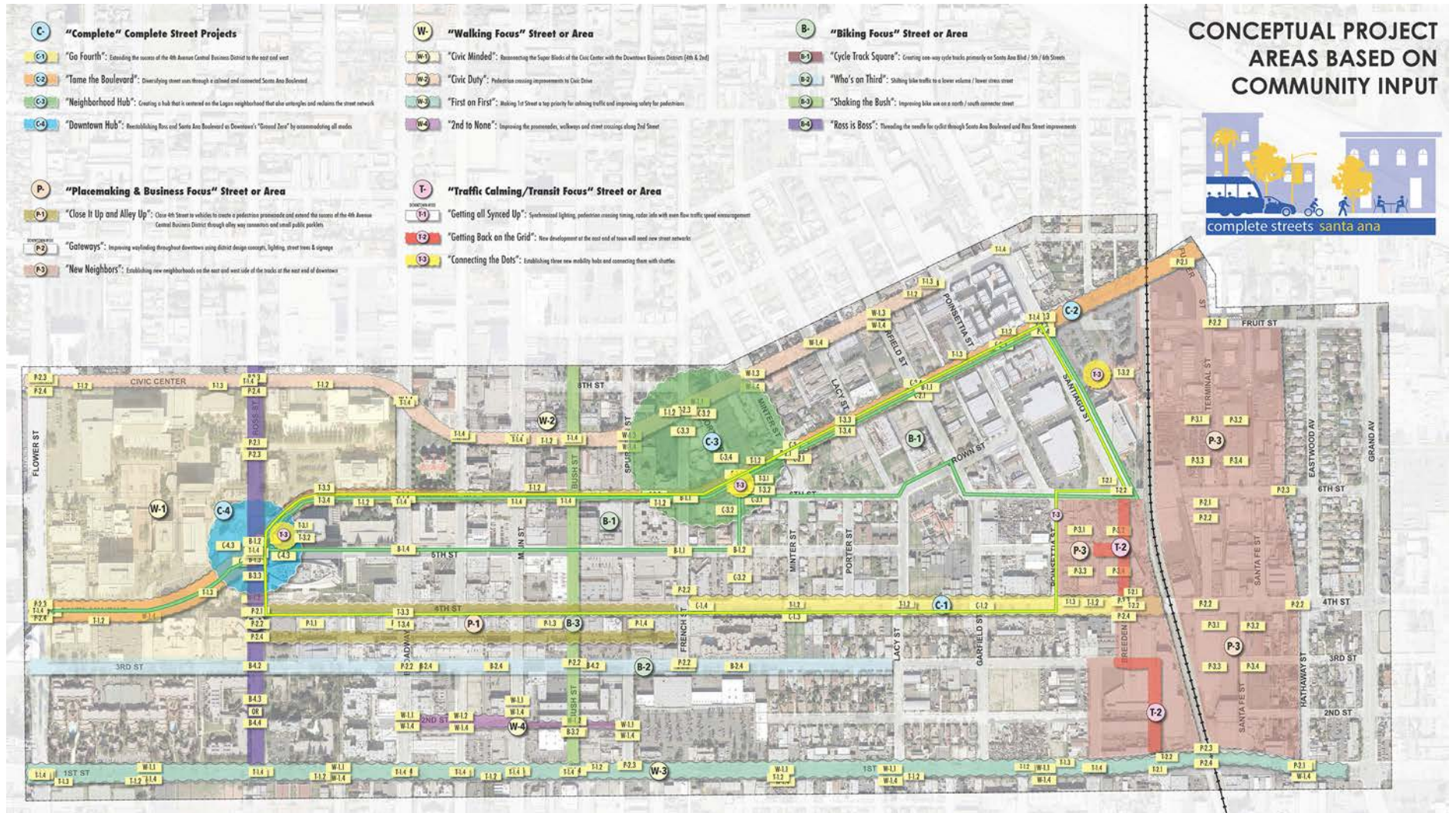


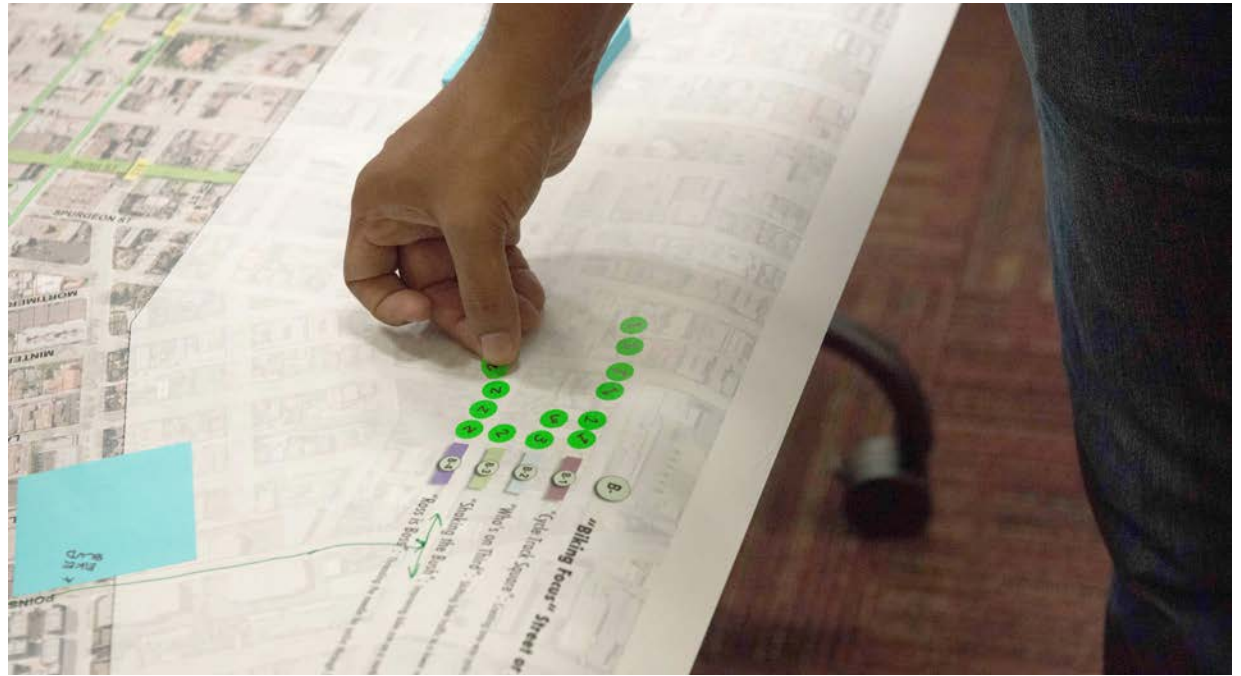
Figure 5-4: Summary of the 18 projects

Recommendations Workshop: Top 10 Projects Selection Process

The purpose of the Recommendations Workshop was to summarize the results of the Neighborhood Workshop, present the 18 Recommended Projects and vote on projects, to pare the 18 down to ten.

The Top 10 projects selected by the community were as follows:

1. Cycle Track Square
2. First on First
3. Ross is Boss
4. Getting Back on the Grid
5. Go Fourth
6. Close it Up and Alley Up
7. Gateways
8. Downtown Hub
9. Civic Minded
10. Who's on Third



"Need **traffic calming**
on Santa Ana between
Minter and Mortimer"



CAC #2: Top 5 Projects Selection

The purpose of this second advisory group meeting was to summarize the Neighborhood and Recommendations Workshops, provide an overview of project progress to date, and receive further input. The project team explained how they derived 18 Draft Recommended Projects from the many projects generated during the Neighborhood Workshop and how the community helped distill these to the Top 10 Projects.

The project team sought CAC member assistance in selecting five top projects from the ten selected by voting at the Recommendations Workshop. These Top 5 Projects would be further developed, ultimately designed at the preliminary engineering level. Due to the physical proximity of some of the Top 10 Projects, a few were combined. The meeting concluded with a discussion of next steps. The CAC member vote – and consolidation – resulted in the following Top 5 Projects, in order of priority:

1. First on First
2. Cycle Track Square & Tame the Boulevard
3. Who's on Third
4. Civic Duty
5. Ross is Boss & Downtown Hub

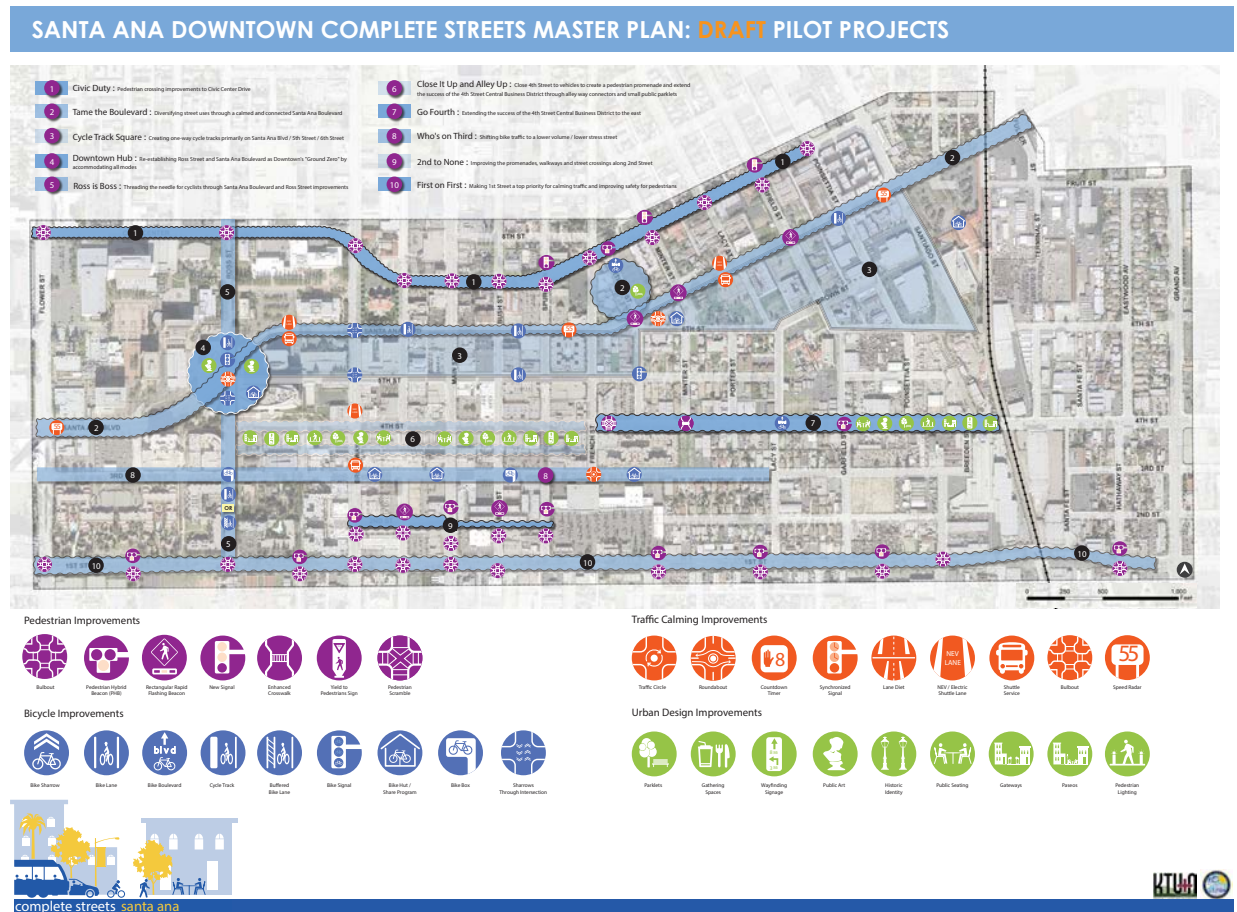


Figure 5-5: Summary of the Top 10 projects

CAC #3: Top 5 Projects Review and Input

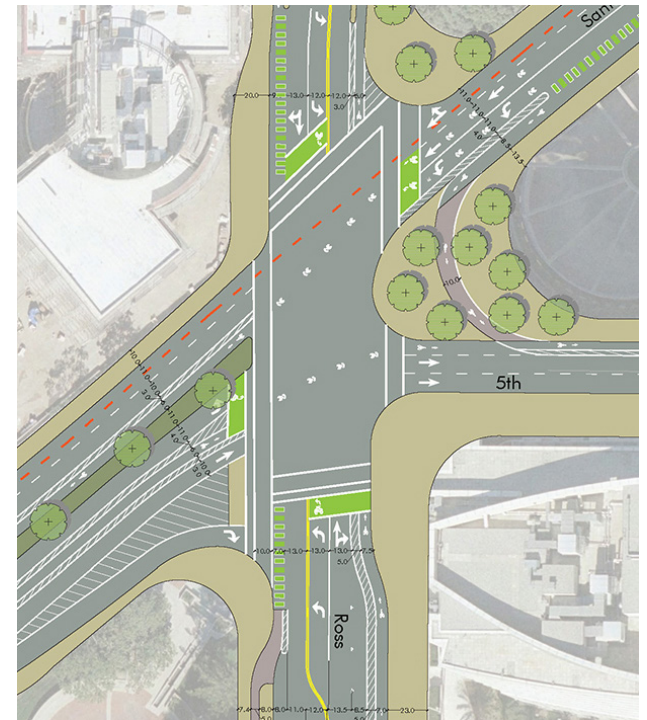
The purpose of the second advisory group meeting was to provide an update on project progress, in particular, the Top 5 Projects. By the third CAC meeting, the exact extent of each project, as well as the preferred design elements, had been determined. The project team solicited input from the CAC members on the general approaches and treatments before commencing detailed preliminary engineering drawings. The meeting concluded with next steps, which included a final public review opportunity and the preparation cost estimates and a draft report.

This final outreach event was presented as an occasion to celebrate the project and community accomplishments and to submit any final comments for inclusion in the report. Brief presentations were made for each project, followed an by open house format, wherein attendees were encouraged to study each project board closely, leave final comments and endorse each project by ringing a celebratory bell.

The attendees were very pleased with the final projects as the bell was rung several times, but some final improvements were noted. For example, a request was made for the report to include the community's desire to see a future bicycle facility on First Street. The meeting concluded with the project team giving thanks to the CAC and the community for being true champions of the project and with the community thanking the team for employing a truly collaborative planning process.



Initial concept for Ross Street and Santa Ana Boulevard





Recommendations

What Do We Build?

6

Top Five Projects Summary

The top five projects were uniquely branded during the workshops with playful names such as:

- "Who's on Third" (Third Street)
- "First on First" (First Street)
- "Cycle Track Square" (Downtown to SARTC connection)
- "Civic Duty" (Civic Center Dr) and
- "Ross is Boss" (Ross St)

The preliminary designs include protected bike lanes, bicycle boulevards, wider sidewalks, enhanced pedestrian crossings, traffic calming, and creating additional park space.

Preliminary illustrations have been developed to illustrate concepts and garner enthusiasm and additional input for these projects. This chapter summarizes the design concepts for each of the Top 5 Projects. Design details and cost estimates for each project can be found in Appendix C.



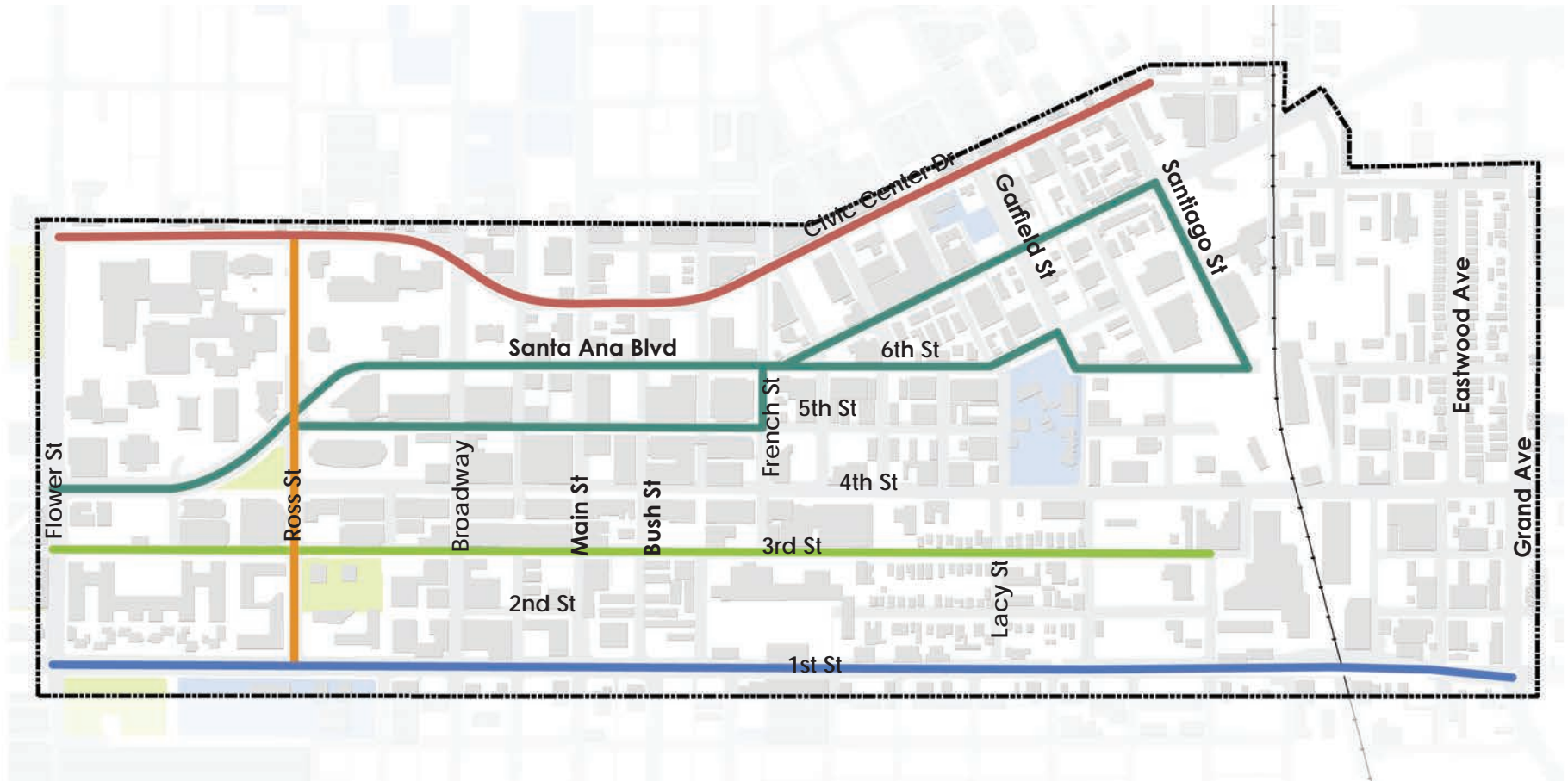


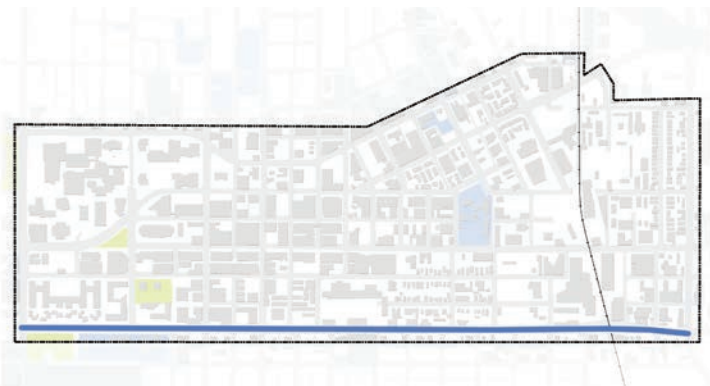
Figure 6-1: Top 5 Projects

- First On First
- Cycle Track Square
- Who's On Third
- Ross Is Boss
- Civic Duty

“First on First”: Existing Conditions

First Street is a high volume arterial fronted primarily by industrial and commercial land uses. There is a high number of pedestrian collisions along First Street due to people crossing mid-block or at legal but uncontrolled intersections. Some of the blocks are quite long without any crossings. For example, between the Downtown Plaza entrance and Standard Way, there is no pedestrian crossing for this half-mile segment.

A landscaped median exists from Standard Avenue to Flower Street. Pedestrian and bicyclists can be seen crossing mid-block along First Street, seeking refuge in the median before proceeding. Bicyclists are observed riding on the sidewalk due to a narrow curb-side travel lane and lack of bicycle facilities. Sidewalks are adjacent to the street and provide very little separation between the street.



Landscaped median at Hickory Street



Bicyclist crossing mid-block through landscaped median



Narrow curb lanes



Lack of marked crosswalks at many of the intersections



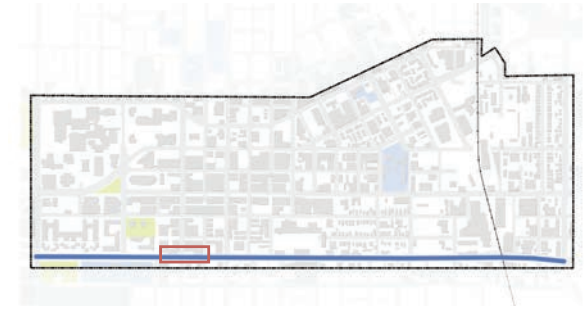
Bicyclists riding on the sidewalk



Pedestrians crossing mid-block near the Downtown Plaza

“First on First”: Recommendations

The “First on First” project focuses on pedestrian improvements and enhanced crossings along First Street. The primary issues are high vehicular speeds and long blocks without crosswalks. It’s normal to see pedestrians crossing mid-block along First Street between Flower Street and Grand Avenue to access the stores and restaurants along this segment. In some instances, bicyclists ride across and at times against traffic. While both the walking and bicycling environment is important for this project, it was agreed that improving the walking environment and identifying another route for bicyclists due to high vehicular speeds was the best option at this time. Bicycle improvements such as bike lanes or cycle tracks maybe considered for future opportunities.



Improvements along First Street include enhanced pedestrian crossings at Santa Ana High School, Birch Street and Oak Street. The Oak Street mid-block crossing is intended to allow access to the Maple Street Bike Path. These mid-block crossings are designed to be offset two-staged crossings. Rectangular Rapid Flashing Beacons (RRFB) are also recommended to stop vehicular traffic and allow pedestrian to cross.

1. Enhanced pedestrian crossings
2. Offset two-stage mid-block crossings
3. Rectangular rapid flashing beacons
4. Wider sidewalks



Widening sidewalks on First Street by an additional three feet (from eight feet to eleven feet) whenever possible is also a recommendation to allow additional separation between pedestrians and fast moving vehicles. Due to the amount of retail and a high school, along First Street, additional pedestrian space allows for the possibility of installing a planting buffer between the travel lanes and sidewalk. Enhancing the striping at existing crosswalks and adding crosswalks are recommended along First Street. Other treatment options include speed displays, synchronizing signals and additional edge friction such as street trees.

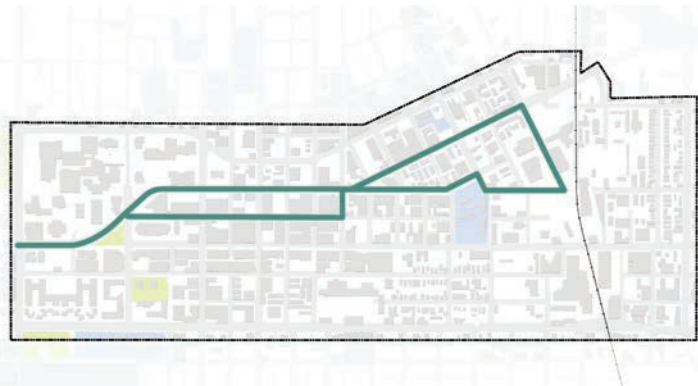
Estimated Total Cost:
\$5,458,585

“Cycle Track Square”: Existing Conditions

“Cycle Track Square” is the largest and most complex of the Top 5 Projects. This projects travels through seven streets; Santa Ana Boulevard, Fifth Street, French Street, Sixth Street, Brown Street, Garfield Street and Santiago Street. Fifth Street is one-way eastbound street between Ross Street and Mortimer Street. Santa Ana Boulevard is a one-way westbound street between Ross Street and French Street.

Land uses along this projects varies from single family residential, commercial, industrial, schools and office parks. The Civic Center which includes Santa Ana City Hall, County courthouses and Orange County operation is located on the western edge of the project. Garfield Elementary School and the SARTC to the east.

The western half of the project is primarily commercial and office and then transitions to multi-family and single-family residential as it travels east. A planned Fixed Guideway, or street car system, is planned along Santa Ana Boulevard and Fourth Street. The tracks for this street car is planned on the northern most lane of Santa Ana Boulevard starting at the SARTC and into Garden Grove.



Santiago Street at the SARTC



Westbound lanes through multi-family and industrial land uses. Tree lined landscape buffers on the eastern half of Santa Ana Boulevard.



Santa Ana Boulevard at Minter St



One-way travel along the Civic Center



Santa Ana Boulevard and Sixth Street converge at French Street

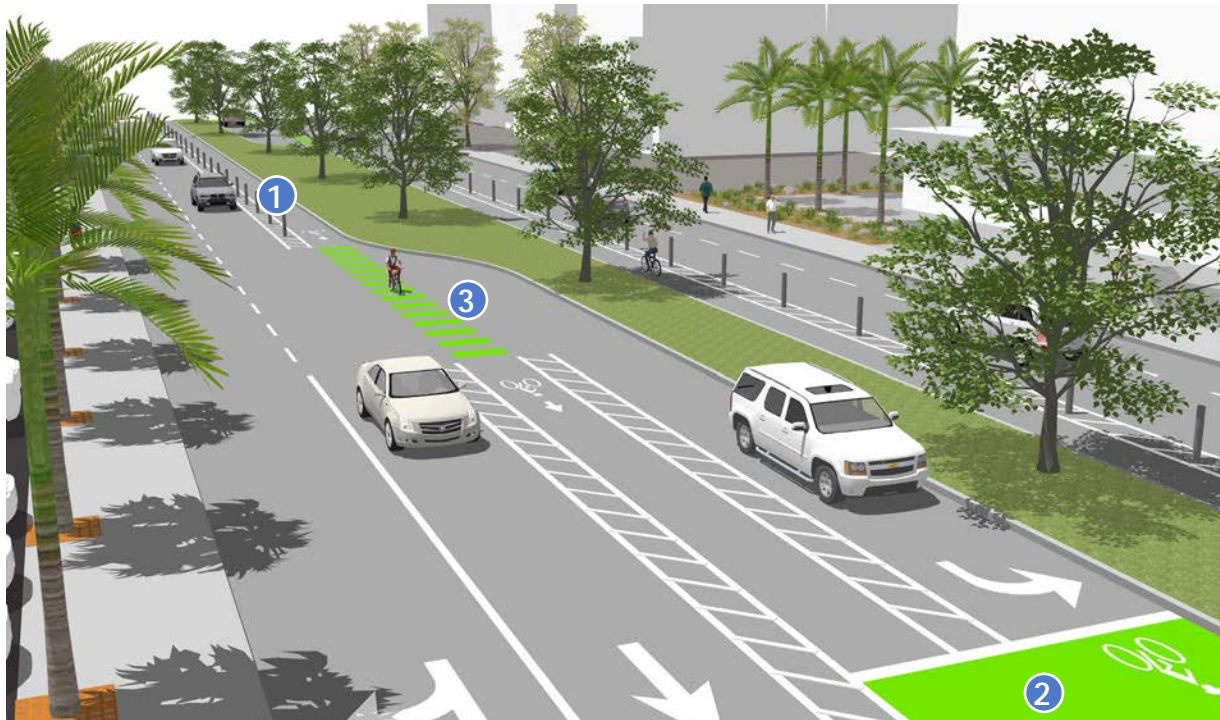
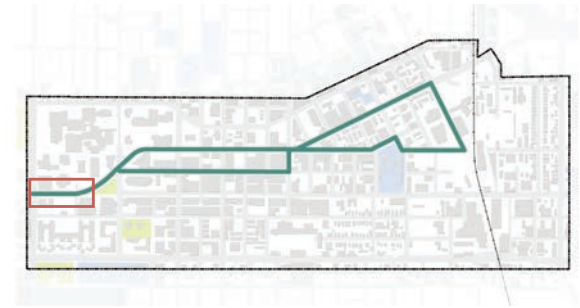


Ross Street at Santa Ana Boulevard

“Cycle Track Square”: Recommendations

“Cycle Track Square” aims to improve the bicycle connection between the SARTC, Downtown and the Civic Center. Currently, bicyclists can travel between these destinations via Santa Ana Boulevard or a combination of neighborhood streets, all devoid of bicycle facilities. The project was actually conceived during the bike tour and is an amalgamation of routes typically ridden by those present on the tour.

“Cycle Track Square” consists of a combination of protected bike lanes and bicycle boulevards, with facility types changing according to context. In the more urbanized areas around the Civic Center and Fifth Street, protected bike lanes are proposed. In the more residential areas nearer the transit center, bicycle boulevards are proposed. In some instances, changes in street geometry and roadway narrowing create a natural transition from cycle track to bike boulevard. In other instances (e.g. along Garfield Street and Brown Street) the streets would be natural bike boulevards, were it not for the wide street widths. These streets are artificially constrained and narrowed – through the creation of street-side park space – to create more suitable bike boulevards (i.e. green, traffic calmed neighborhood streets, with short crossing distances). The Fixed Guideway – a rail line planned for Santa Ana Boulevard, between Flower Street and Santiago Street – created a few challenges such as the mixing of cars, streetcars and bicycles.



To prevent conflicts between cyclists and streetcar rails, special alignments and alternative routes were developed. Where cyclists and streetcars must share the same alignment on Santa Ana Boulevard, the two were separated as much as possible: east of Ross St, the cycle track is on the south side and the rail line is on the north; west of Ross St, the cycle track runs down a center median, flanked by the rail line to the north and south. The project also utilizes routes on Fifth Street, Sixth Street and Garfield Street to complete the circuit. In addition to mitigating bike and rail conflicts, these streets offer a lower stress cycling experience.

1. Center median protected bicycle lane
2. Bicycle boxes
3. Conflict zone enhanced markings



Santa Ana Boulevard between Flower Street and Ross Street has been designed with a median running cycle track to provide a connection with the one-way directions of Santa Ana Boulevard and Fifth Street. By incorporating bike boxes, cyclists can utilize the existing signalization to get through Ross Street. This design allows the existing medians to remain and to reduce the number of travel lanes in this section.

Estimated Total Cost:
\$5,296,836

“96 percent of people using protected bike lanes believe they increased safety on the street.”
“Lessons Learned from Green Lanes”, Portland State University, National Institute for Transportation and Communities, 2014

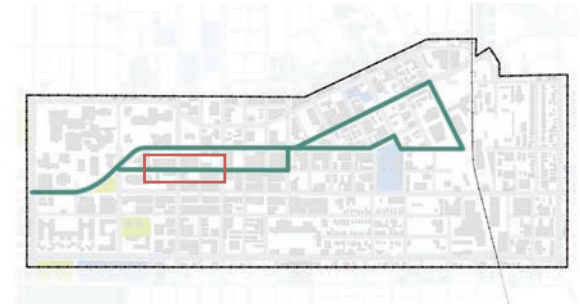


96%

After New York City installed a protected bike lane on 8th and 9th Ave, the region experienced up to **49% increase in retail sales** (Locally-based businesses on 9th Ave from 23rd to 31st Sts., compared to 3% borough - wide) *New York City Department of Transportation, 2011*

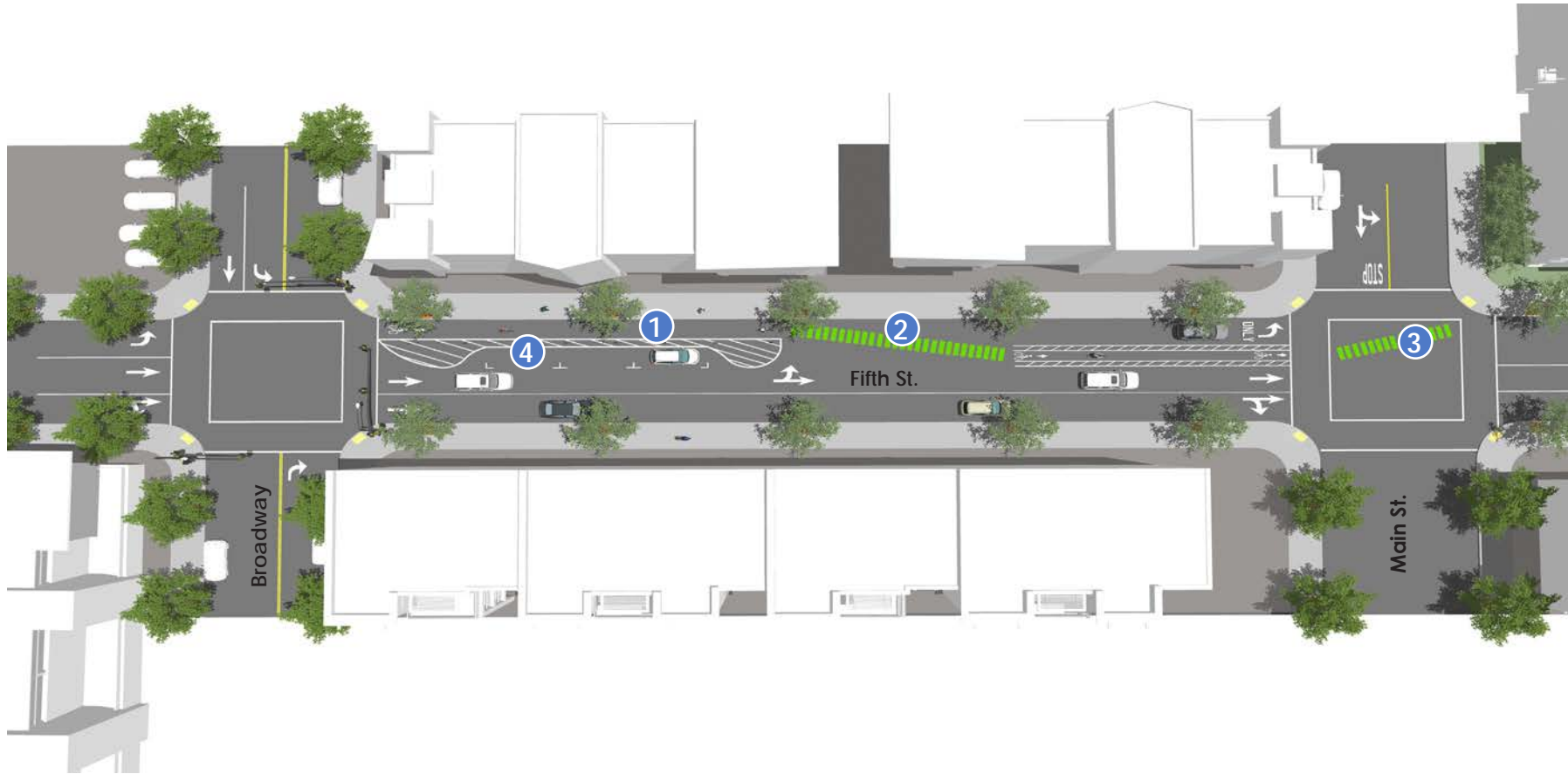


Fifth Street is designed with a cycle track on the north side of the street. The cycle track is protected by on-street parking and converts to a through lane via a merge with vehicles. This design is similar to the existing standard bike lanes at intersections and allows the use of existing traffic signalization.

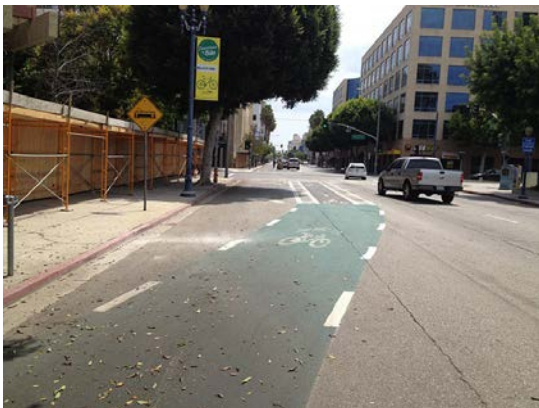


1. One-way cycle track
2. Conflict zone enhanced markings
3. Intersection crossing markings
4. Parking buffer





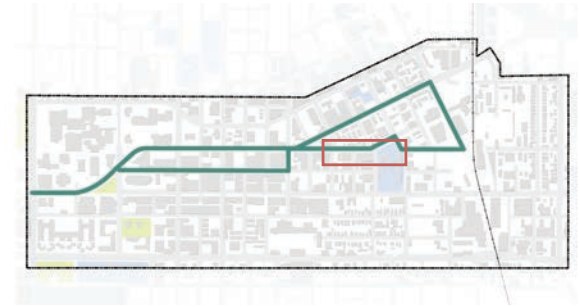
Cycle Track Square



Examples of similar cycle track designs in Long Beach, CA

What Do We Build?

Along Sixth Street, Brown Street and Garfield Street, Cycle Track Square transitions into a bicycle boulevard between French Street and the continuation of Sixth Street. This facility is designed through this section due to the lack of available right-of-way for a cycle track, the presence of on-street parking and due to the adjacent residential land uses. The Garfield Elementary park space has been expanded into the right-of-way to allow Brown Street and Garfield Street to be narrowed for traffic calming, additional green space, and shorter pedestrian crossings all while keeping on-street parking.

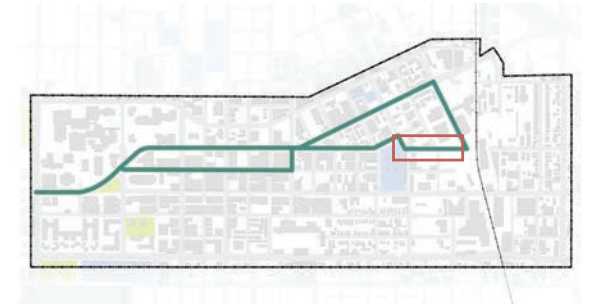




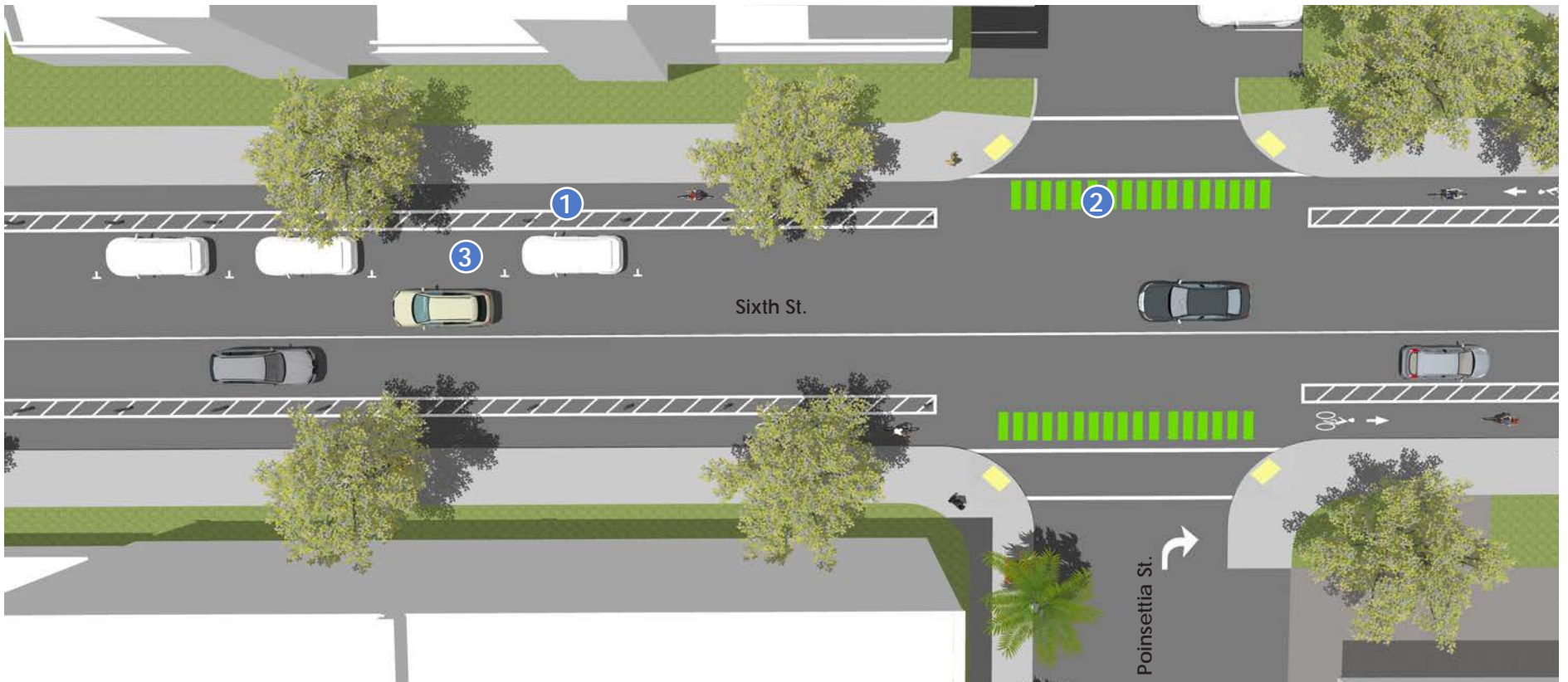
1. Bicycle boulevard street marking

What Do We Build?

Sixth Street transitions back into a one-way cycle track through this primarily industrial area. The west bound cycle track will be protected by on-street parking.



1. One-way cycle track
2. Intersection crossing markings
3. Parking buffer



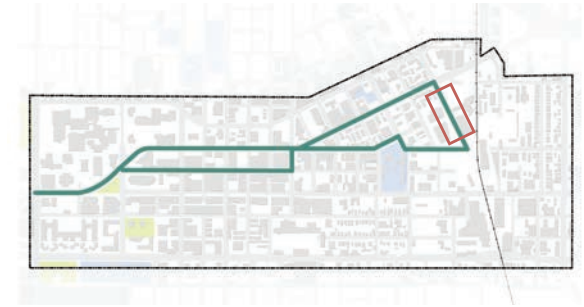


80 percent of people who live near a protected bike lane project believe it increased safety on the street;

Lessons Learned from Green Lanes, Portland State University, National Institute for Transportation and Communities.

What Do We Build?

Santiago Street becomes a two-way cycle-track along the northbound lanes to connect to the Santa Ana Regional Transportation Center. It was recommended to transition to a two-way cycle track along this segment due to the planned cycle tracks that connect beyond the study area. A separated bicycle and pedestrian crosswalk is planned to assist in the transition from one-way to two-way bicycle travel at Santiago Street and Sixth Street.



1. Two-way cycle track
2. Conflict zone enhanced markings
3. Intersection crossing markings





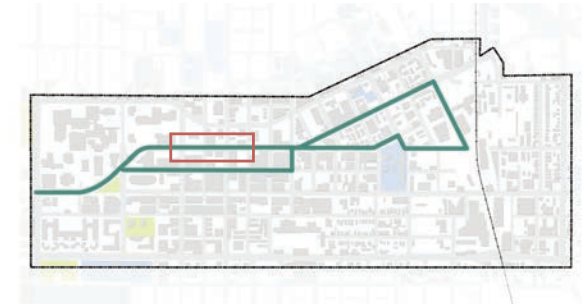
Cycle Track Square



Examples of two-way cycle track designs in Seattle, WA

What Do We Build?

Santa Ana Boulevard is a combination of one-way and two-way segments. Starting from Santiago Street traveling west to French Street, it's a two-way street. Between French Street and Ross Street it is a one way westbound segment. Between Santiago Street and Ross Street, the Fixed Guideway is planned on the north side. Between Santiago Street and French Street, there are no bicycle facilities planned due to the facilities being planned along Sixth, Brown, Garfield and Santiago Streets. However, enhanced pedestrian crossing have been recommended at Lacy Street and Garfield Street.



1. One-way cycle track
2. Intersection crossing markings



Example of a one-way cycle track on the left side of the travel lanes with bike signals in Long Beach, CA



From French Street to Ross Street, the cycle tracks are recommended on the south side of the one-way street, opposite the Fixed Guideway to avoid bicycling along street car tracks. In addition, it allows a connection back to the Fifth Street without having to cross Santa Ana Boulevard or Fifth Street. Bicycle specific signals are recommended at Broadway, Main Street and Bush Street to allow left turning movements before vehicles. This design also allows continuity onto the median cycle tracks through Ross Street.

Cycle Track Square

“Who's on Third”: Existing Conditions

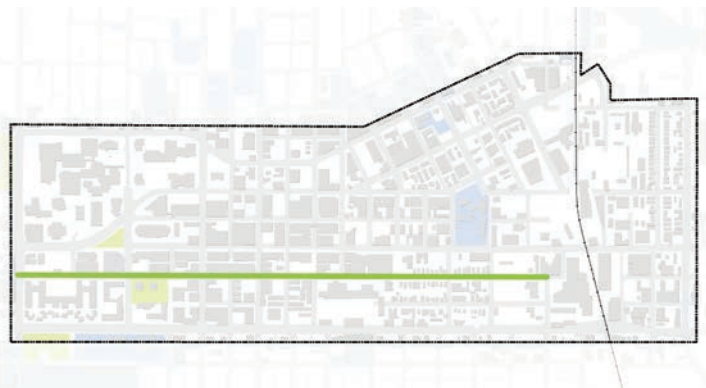
Third Street is a low-volume, low-speed street that travels east-west through Downtown. A majority of Third Street contains commercial land uses with office buildings and senior housing west of Broadway. East of Spurgeon Street, multi-family and single-family residential land uses dominate. Third Street already provides a low-stress bicycling environment. Sidewalks are present throughout with crosswalks between Broadway and Spurgeon Street. Birch Park and the Spurgeon Promenade are along this route.



Third Street at Flower Street



Bicycling on the sidewalk near Broadway





Low traffic volumes east of Broadway



Wide sidewalks with pedestrian buffers at Spurgeon Promenade



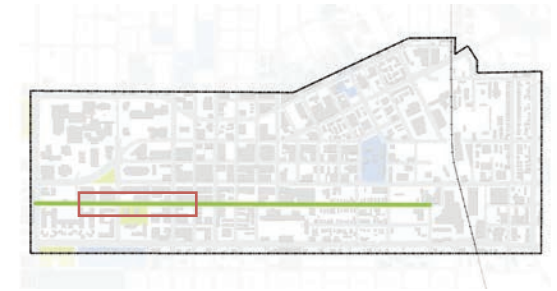
Bicycle and pedestrian friendly streets



Single-family residential east of Spurgeon Street

“Who's on Third”: Recommendations

The result of the alternative bicycle route off of First Street is “Who’s on Third.” “Who’s on Third” is a bicycle boulevard project that incorporates traffic calming, wayfinding and bicycle priority features along Third Street. While protected bicycle lanes, or cycle tracks, were also suggested, the lack of right-of-way widths, lower traffic volumes and low speeds make it conducive for a bicycle boulevard, or bicycle priority street. Removal of on-street parking is a common constraint through the Downtown area so this project aims to retain the parking while addressing the needs of bicyclist and pedestrians. Third Street already has a very good walking environment so providing additional traffic calming measures will only enhance this street.



1. Bicycle boulevard street markings
2. Curb extensions





Bike boulevard in San Luis Obispo, CA



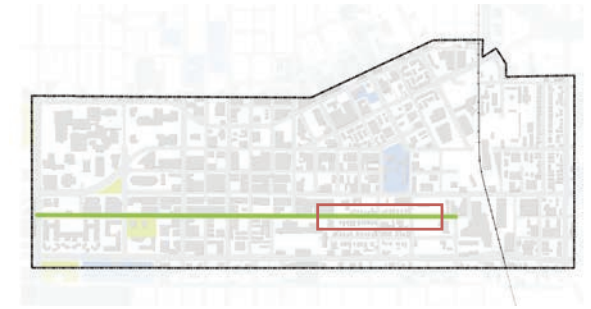
Estimated Total Cost:
\$1,077,191

Third Street has been designated as part of the Wellness Corridor Project to provide a safe walking and bicycling route through Downtown. Other amenities that have been recommended are interval stops for access to restrooms, water and shade. A series of healthy messages and are planned to be displayed through a series of street amenities such as sidewalks, fences and walls and windows. A unique look should be coordinated between signage, branding and wayfinding to bring all the messages of healthy choices to Downtown.

The design of the "Who's on Third" bicycle boulevard would be a continuous shared facility with special wayfinding and pavement markings. Enhancements would entail widening sidewalks whenever possible in addition to curb extensions at some of the intersections. A traffic circle is recommended at Bush street to allow continuous movement between Lacy Street and Main Street.

What Do We Build?

In addition to curb extensions, wayfinding and traffic circle, a speed table is recommended mid-block between French Street and Lacy Street. This feature provides a connection to the neighborhood park.



1. Bicycle boulevard street markings
2. Mid-block curb extension
3. Speed table





This mid-block design incorporates curb extensions to shorten the crossing distance and provides a level ADA-accessible crossing. This raised speed table also acts as a traffic calming device.



"Today the city considers the bicycle boulevards the 'backbone' of the bicycle network". (Berkeley, CA)



Wayfinding signs guide users and brand the network.

“Ross is Boss”: Existing Conditions

Ross Street serves as a north-south connection along the western half of the study area. North of Santa Ana Boulevard, angled parking existing on the northbound lanes with civic offices on both sides. There are two enhanced pedestrian crossings along this segment. On-street parking is prohibited on some sections of the east side. Access to City Hall and County courthouses can be accessed from Ross Street.

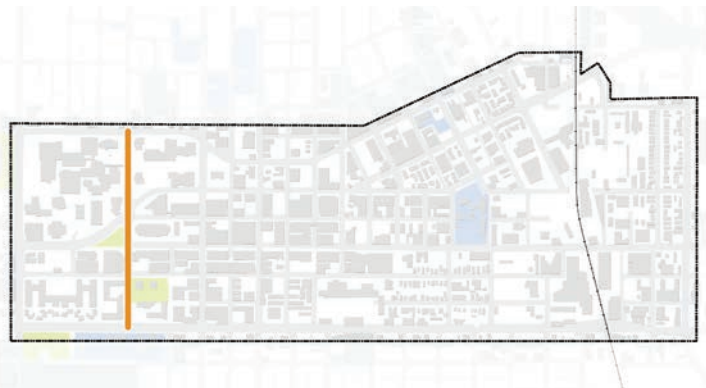
South of Santa Ana Boulevard are a mix of office and multi-family residential land uses with two bus stops along this stretch. Ross Street terminates into Santa Ana High School at First Street.



Angled parking and wide sidewalks between Santa Ana Boulevard and Civic Center Drive



Enhanced crosswalk with pedestrian flashers at the Walk of Honor





Enhanced crosswalk with pedestrian flashers at City Hall



Two-phased pedestrian crossings at Santa Ana Boulevard



Wide sidewalks and some restricted on-street parking exists



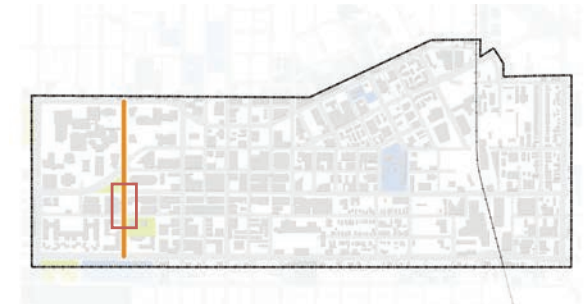
Curb extensions and decorative paving in crosswalk at Fourth Street

“Ross is Boss”: Recommendations

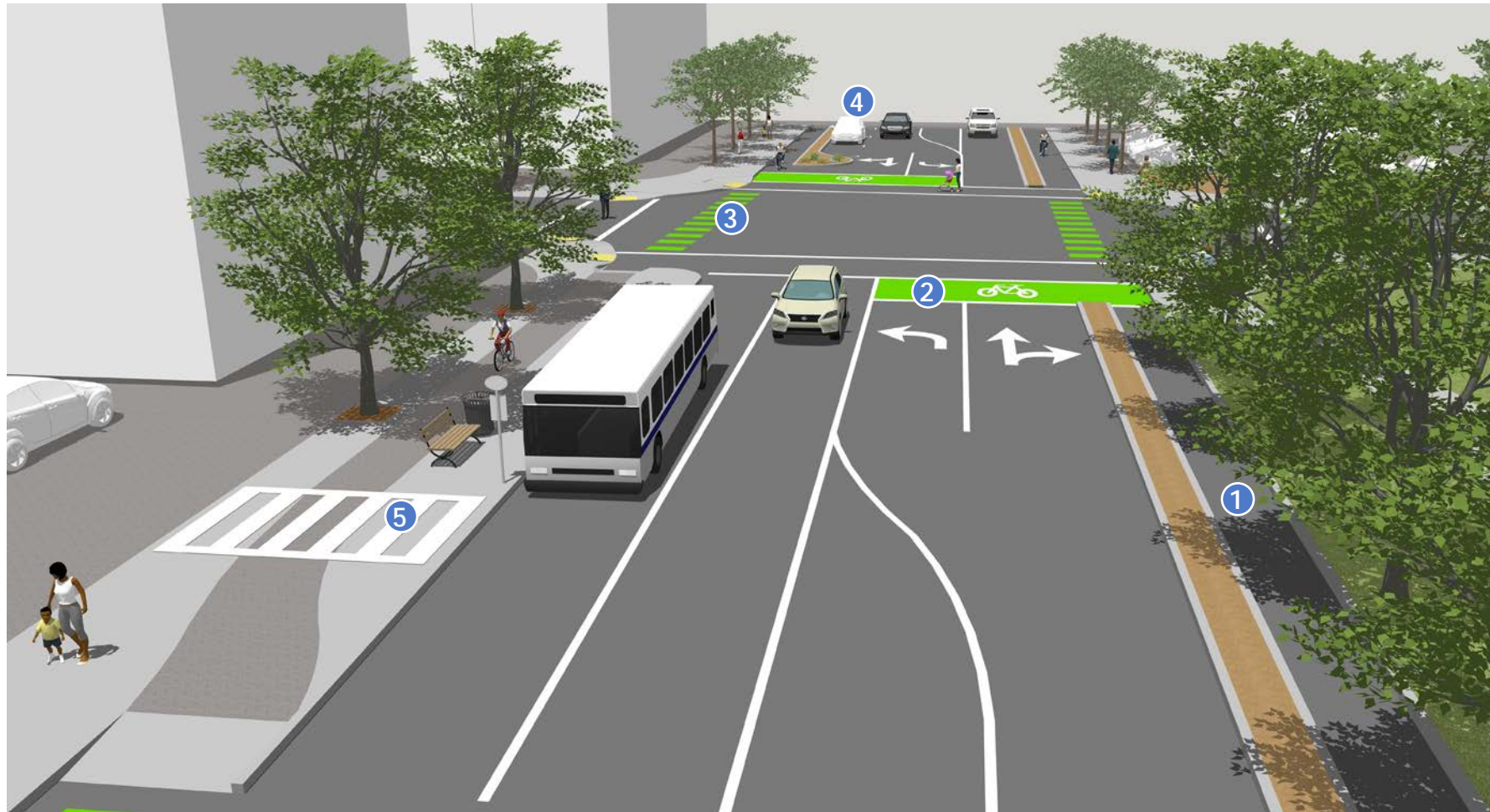
This project includes a protected bike lane on Ross Street between First Street and Civic Center Drive. This segment is important to provide a gateway to Downtown from the Civic Center. It also serves as a connection to Santa Ana High School just south of First Street. The intent of this project is to utilize the excess asphalt at the Ross Street and Santa Ana Boulevard intersection for protected bike lanes, enhanced pedestrian crossings and reallocation to park space. A more pleasant walking environment between these destinations will encourage jurors and employees around the Civic Center to frequent the Downtown area for lunch and for exercise. Details of this design can be found in Appendix B.

Recommendations along Ross Street include converting the angled parking north of Santa Ana Boulevard into parallel parking and providing additional width for cycle tracks. Two existing mid-block crossings will be enhanced with Rapid Rectangular Flashing Beacons (RRFB) and widened sidewalks throughout.

The protection of the cycle tracks will be from a combination of reflective bollards and on-street parking. Green striping is recommended at driveways, transition area and bike boxes. Bike boxes are planned at Santa Ana Boulevard and Third Street.



1. One-way cycle track
2. Bicycle boxes
3. Intersection crossing markings
4. Parking buffer
5. Enhanced transit stop



South of Santa Ana Boulevard, the cycle track continues until First Street. Due to right-of-way constraints, southbound cycle tracks are protected by on-street parking while northbound would be protected by reflective bollards. The cycle tracks are designed to travel behind the transit stops at curb level to provide ADA and pedestrian access. This design also allows for a wide and level platform for all users and removes the roadway interaction with buses.

Ross Street is the easternmost boundary of the Wellness Corridor. Wayfinding, branding should be coordinated to provide a unique and consisted look through the Wellness Corridor routes and Downtown.

Estimated Total Cost:
\$2,181,330

“Civic Duty”: Existing Conditions

Civic Center Drive is the northernmost east-west connection through the study area. Office, Civic Center and commercial land uses front west of Spurgeon Street. East of Spurgeon Street is a mix of churches, multi-family and single-family residential.

Civic Center Drive east of Minter Street is a two-lane street which converts to four lanes west of Minter Street. There is a lack of pedestrian crossings between Minter Street and Bush Street for nearly a quarter-mile segment.

There are two enhanced pedestrian crossings, Parton Street and one mid-block east of Ross Street.

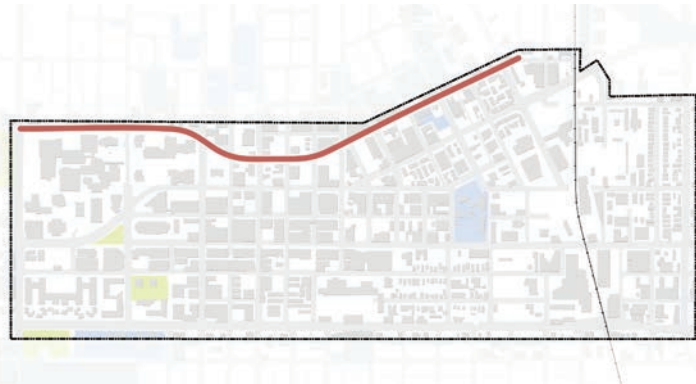
Bike lanes exist between Flower Street and Main Street.



Civic Center Drive along residential land use



Enhanced crosswalk with pedestrian flashers at Lacy Street





Lack of pedestrian buffers from travel lanes



Signalized mid-block crossing east of Ross Street



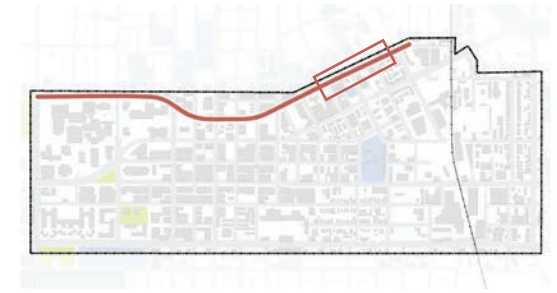
High volume, multi-lane east of Main Street



Pedestrian refuge for two-phased crossing at Broadway

“Civic Duty”: Recommendations

The northern boundary of the study area is Civic Center Drive. Similar to First Street, the priority for this project is enhancing the walking environment with enhanced crossings and traffic calming. Residents have indicated they would like to see better crossing options and ways to slow down traffic, especially on the eastern half of the study area. This half is primarily residential and changes to commercial as it travels west.



1. Enhanced crosswalks
2. Traffic circle
3. Curb extensions



Curb extensions at intersections, enhanced crosswalks, including in-ground pedestrian flashers or Rectangular Rapid Flashing Beacons (RRFB) and traffic circles are options being explored.



Neighborhood traffic circle in Long Beach, CA



Estimated Total Cost:
\$3,462,291

