Artesia Active Transportation Plan

Prepared for the City of Artesia, California
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Special Thanks

A special thanks to the Advisory Group and all community members that participated in the planning process!

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Chapter 1
Introduction

1.1 Purpose

This Active Transportation Plan (ATP) will assist the City of Artesia on their mission to provide safer and enjoyable streets for all residents and visitors. Special attention is placed on improving the existing infrastructure for people that are dependent on active transportation to meet their daily needs. The recommended projects, programs, and actions in this ATP are meant to support Artesia's short, mid, and long-term goals as they relate to transportation, land use, and population growth. This ATP includes an existing conditions analysis, community outreach summary, and a list of recommended projects and programs that will support future grant applications for implementation.

1.2 Study Area

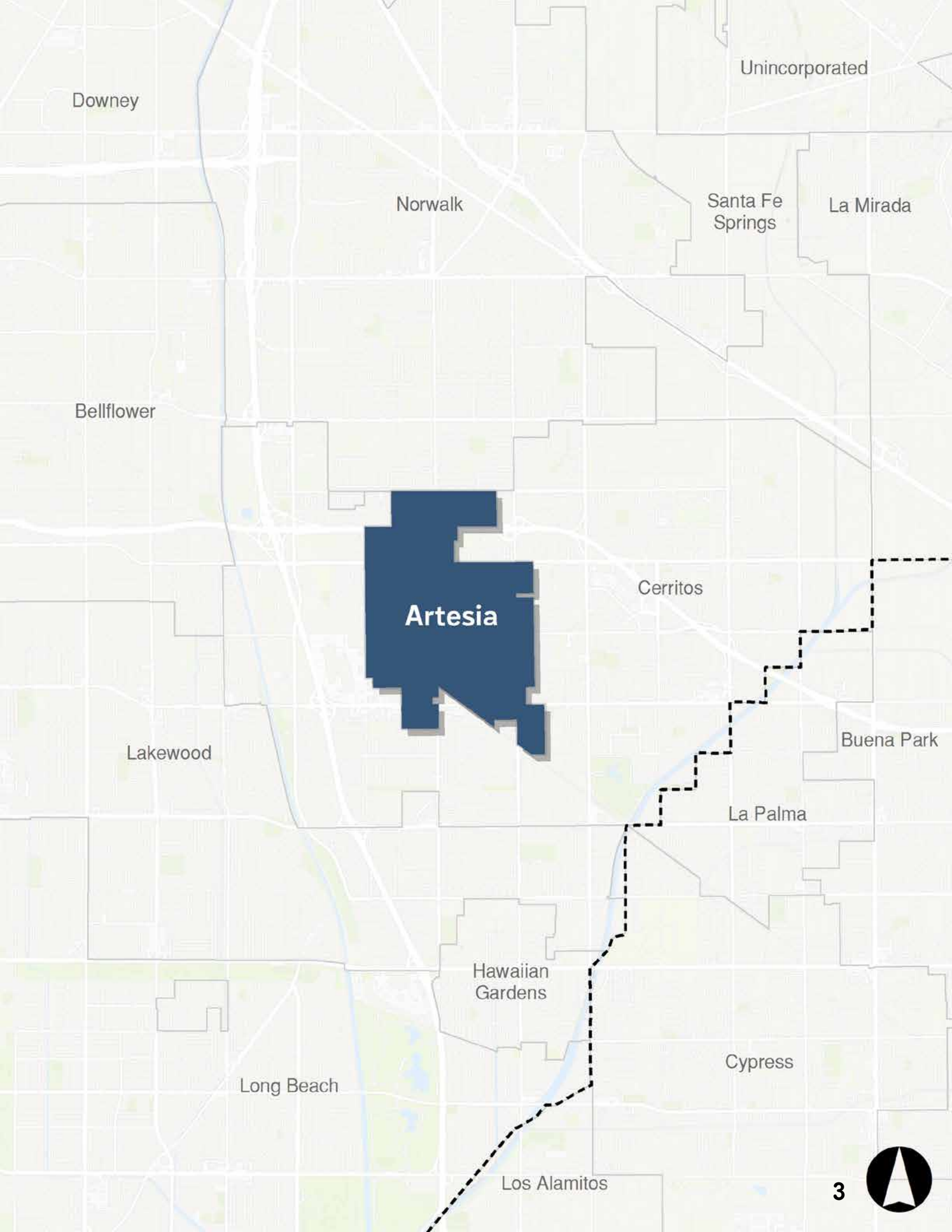
The City of Artesia is located in Los Angeles County, nineteen miles southeast of the City of Los Angeles, and ten miles northwest of the City of Anaheim. Artesia is bordered by the City of Norwalk to the north and the City of Cerritos to the south, east and west. California State Route (CA SR) 91 is the only major highway running through Artesia, connecting it to other regions in Southern California.

According to 2019 ACS 5-Year Estimates, Artesia has a population of 16,758 within its 1.62 square mile City boundary. The City has a population density of 10,344 people per square mile and has approximately 4,460 households. The ATP recognizes the importance of removing barriers to encourage more active transportation trips, especially for households with young or underserved residents who may not be able to afford or operate a vehicle.

1.3 Scope and Vision

This ATP will guide the development of active transportation infrastructure projects and programs for Artesia. The following objectives will guide the planning process to ensure a successful plan that leads to project implementation:

1. Identify gaps and barriers, both perceived and actual, in the existing pedestrian and bicycling network.
2. Engage with the community to gather local knowledge on existing challenges and opportunities.
3. Analyze the existing infrastructure around activity centers such as parks, schools, employment, and commercial centers to determine appropriate solutions.
4. Develop a list of prioritized projects that encourage walking and bicycling as viable transportation modes.
5. Provide the City a usable and implementable document they can use to pursue future grant and funding opportunities.


Unincorporated
Downey
Norwalk
Santa Fe Springs
La Mirada
Bellflower
Artesia
Cerritos
Lakewood
Buena Park
La Palma
Hawaiian Gardens
Cypress
Long Beach
Los Alamitos

1.4 Active Transportation Trends

Many American cities were built on a foundation of auto-centric infrastructure, programs, and policies, but many of those same cities are embracing active transportation as a viable alternative to driving. Some of them are making minor improvements to support cycling and walking, while others are working hard to undo decades of planning that privileged motor vehicle throughput and speed above all else. Environmental, health, and economic benefits reinforce the task of retrofitting American cities to make them bicycle and pedestrian friendly. The movement to make cycling and walking viable transportation options is also supported by several recent pieces of California legislation.

Recent active transportation statistics and trends depict steps both forward and backward. For example, the Alliance for Biking and Walking released a Benchmarking Report in 2018 which communicated the importance of the distance between home and school. In the report, it is stated that while 35% of students who live less than a mile from school walk or bike to school on most days, only two percent of students living two miles from school usually bike or walk to school.

Empty nesters, particularly as the number of baby boomers reaching retirement age accelerates, are also showing a strong preference for communities that support walking. The American Association of Retired Persons (AARP) surveys found that 70% of respondents age 65 and older agreed that living near where they want to go, such as grocery stores, health care providers, libraries and social or religious organizations, was extremely or very important. Additionally, 51% agreed that it was extremely or very important to be able to walk easily in their community.

There has also been a growing preference for new facility types that enhance pedestrian and bicyclist safety, particularly protected bicycle lanes physically separated from motor vehicle traffic. In addition, acknowledging that most trips Americans make are within one mile, it is important to assess the infrastructure and make a genuine effort to entice people to walk or bike to their destinations through enhanced facilities.

Since the COVID-19 pandemic and the stay-at-home order, commuting shifted from long distance home-to-work trips to room-to-room trips. This change has resulted in many people using alternative transportation for shorter trips and an increase in opportunity for outdoor recreation. This trend is seen in many cities and some have closed roads for pedestrian and bicycle access only. With many people utilizing biking as an option for their commute, we may see electronic bikes and other bike-sharing programs arrive to cities to help people with farther commutes post-COVID-19.

1.5 Bicycling and Walking Benefits

Numerous environmental, health, and economic benefits are attributed to bicycling and walking, especially as substitutes for travel by motor vehicles. This section summarizes these benefits, some from research by the Pedestrian and Bicycle Information Center (PBIC).

1.5.1 ENVIRONMENTAL BENEFITS

Active transportation via walking and biking results in decreased usage and dependency on motor vehicles and non-renewable resources, which can result in reduced greenhouse gas emissions and air pollution. According to the United States Environmental Protection Agency (EPA), the transportation sector accounted for the largest portion of greenhouse gas emissions (28%) in the United States in 2018. Building infrastructure for vehicles, such as streets and parking lots, increases the impervious surface of an area which leads to stormwater runoff, urban flooding, and the urban heat island effect. Encouraging pedestrian and bike infrastructure provides an opportunity to integrate green infrastructure into street design and mitigate the urban heat island effect, stormwater runoff, and flooding as well as promote pedestrian health and safety.

1.5.2 HEALTH BENEFITS

Despite dramatic strides in recent decades through regulations and technological improvements, vehicle emissions still pose a significant threat to human health. Vehicle-generated air pollution contains harmful greenhouse gas emissions including carbon dioxide, carbon monoxide, methane, nitrous oxide, and volatile organic compounds. These pollutants and irritants can cause asthma, bronchitis, pneumonia, and decreased resistance to respiratory infections. Taking steps to reduce these emissions is particularly important in the United States, which leads the world in petroleum consumption. The conversion of driving to bicycling or walking offers a great opportunity to reduce emissions and improve public health.

In addition to the universal public health benefit, such as improved air quality, bicycling and walking have the potential to positively impact personal health. A significant percentage of Americans are overweight or obese and projections indicate 42% of the population will be obese by 2030. To combat this trend and prevent a variety of diseases and their associated societal costs, the Center for Disease Control (CDC) suggests a minimum of thirty minutes of moderate-intensity physical activity five days per week. Not only do cycling and brisk walking qualify as "moderate-intensity activities," but they can also be seamlessly integrated into daily routine, especially if chosen for utilitarian purposes like commuting or running errands.

In a study published in the Journal of the American Medical Association, researchers found that the number of steps a person takes each day was associated with lower mortality risk from all causes[1]. Other health benefits associated with moderate activity like bicycling or walking include improved strength and stamina through better heart and lung function. Regular exercise also reduces the risk of high blood pressure, heart attacks, and strokes. In addition to heart disease, regular exercise can help to prevent other health problems such as non-insulin dependent diabetes, osteoarthritis, and osteoporosis. Exercise has also been shown to improve mental health by relieving depression, anxiety, and stress. More importantly, in rural or low-income areas, many individuals may lack the opportunity to access gyms or fitness centers. Due to this, well-designed and located sidewalks, bike facilities, and shared use paths become even more critical in supporting community health.

1.5.3 ECONOMIC BENEFITS

Bicycling infrastructure and programs have increasingly been shown to deliver economic benefits to both individuals and society at large. The benefits of bicycling may outweigh its costs. Bicycling offers obvious cost savings to individuals. Beyond the upfront cost of operating a vehicle are additional maintenance, insurance, and often parking expenses. In 2019, according to the American Automobile Association (AAA), the average annual cost of vehicle ownership comes out to $9,282, or $773.50 per month. That is the highest cost associated with new vehicle ownership since AAA began tracking expenses. The remaining costs of owning a vehicle extend far beyond maintenance and fuel.

[1]Journal of the American Medical Association, March 24, 2020.

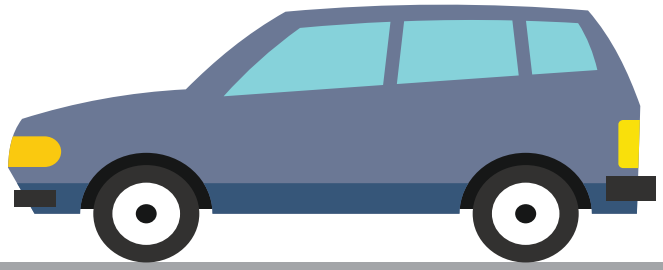
Vehicle-generated air pollution is harmful and can cause:

- Asthma

- Bronchitis

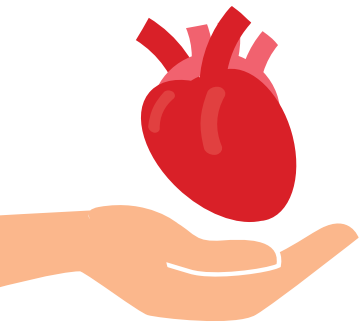
- Pneumonia

- Decreased resistance to respiratory infections



28% **of GHG emissions in the US came from the transportation sector in 2018**

Regular exercise also reduces the risk of:



- High blood pressure

- Heart attacks

- Strokes

- Non-insulin dependent diabetes

- Osteoarthritis

- Osteoporosis

Converting even a fraction of automobile trips to bicycling or walking trips can generate transportation-related savings, including reduced vehicle traffic congestion. Increased bicycling and walking also translates to health-related savings, for both individuals and taxpayers, in the form of less need for preventative care. More bicycling and walking has also been tied to increases in commercial and residential property values and retail sales. Shoppers who reach their destination by bicycle have been shown to make smaller purchases, but shop more often and to spend more money overall. Shoppers who arrive by bicycle or on foot, because of their more limited range, are also more likely to support local businesses and do not require the space for parking a motor vehicle compared to those who drive.

Perhaps more compelling than reducing greenhouse gas emissions or combating the obesity epidemic, are the benefits bicycling has to offer in terms of quality of life. Bicycling is increasingly seen as a fun, low-cost, healthy, and sustainable way of getting around.

1.5.4 EQUITY

Historically, many low-income communities and underserved populations have been excluded from the transportation planning process and due to this, pedestrians and bicyclists are over-represented in crashes. An equitable transportation system promotes justice and helps facilitate access to opportunities for all residents. In order to achieve transportation equity, communities must participate in outreach so that they are able to address the inequalities of access and prioritize equity during all stages of the planning and implementation processes. This encompasses building an accessible, affordable, and reliable transportation network that effectively serves all users.

Transportation equity requires understanding the unique needs and safety concerns of different community backgrounds and providing enough resources to these communities. Numerous studies have shown that enhancing the ability of traditionally underserved populations to travel via non-motorized modes can possibly lead to improved outcomes in public health, safety, and economic development. In addition, this can also promote economic development and resource efficiency, strengthen neighborhood relationships, and encourage public transit services.

1.6 Planning Context

The ATP incorporates regional and local planning efforts that are directly related to walking, biking, and trails. These efforts range from long-range regional planning to neighborhood-specific plans. The following information summarizes the planning documents that were evaluated as part of ATP development.

The following list of regional and local transportation plans can impact the ATP planning process. They include a variety of land use and transportation planning projects that can contribute to a holistic understanding of Artesia's existing and future transportation conditions.

1.6.1 CITY OF ARTESIA GENERAL PLAN 2030

The Artesia General Plan is a document designed to guide the growth and development of Artesia through 2030. The document provides goals and policies which will assist the City in achieving its economic and community development objectives. The General Plan describes Artesia's goals and strategies regarding Cultural and Historic Resources; Economic Development; Intellectual Infrastructure; Land Use; Housing; Circulation and Mobility; Bikeways and Trails; Community Facilities and Infrastructure; Air Quality and Climate Change; Conservation and Natural Resources; Open Space; Parks and Recreation; Community Safety; and Noise.

1.6.2 GATEWAY CITIES STRATEGIC TRANSPORTATION PLAN

The Gateway Cities Strategic Transportation Plan (STP) combines all elements of the transportation system in the Gateway Cities — freeways, arterial highways, transit, bikeways, pedestrian facilities, technology, and goods movement — into a unified vision for the future. The STP evaluates air quality impacts, storm water treatment strategies, and presents preliminary freeway and arterial roadway designs for future consideration. It builds upon prior transportation studies conducted for the Gateway Cities Subregion. The STP provides a truly integrated, multi-modal strategy for the 21st century.

1.6.3 WEST SANTA ANA BRANCH TRANSIT ORIENTED DEVELOPMENT STRATEGIC IMPLEMENTATION PLAN

The West Santa Ana Branch Transit Oriented Development Strategic Implementation Plan (TOD SIP) serves the many communities along the planned West Santa Ana Branch Transit Corridor (WSAB) and assists the local jurisdictions in planning for the future of their WSAB station areas. The TOD SIP addresses the area within a ½ mile radius from the proposed WSAB corridor stations, along the 20-mile route, from downtown Los Angeles to the City of Artesia. This rail corridor will serve customers in these communities with high quality transit that will link them to Metro's expanding regional transit network.

This plan provides an overarching vision and strategic guidance for local jurisdictions to draw on as they develop and implement plans, policies, and strategies for economic development and mobility in their station areas. The goal is to ensure that station areas transform equitably and sustainably, and are safe and accessible via multiple modes of transportation. The plan also provides the local jurisdictions with a suite of specific actions, tailored to their station areas, that will realize policy objectives and implement both urban and active transportation design.

1.6.4 CITY OF NORWALK BICYCLE MASTER PLAN

The City of Norwalk is completing their first ever Bicycle Master Plan as of the development of this ATP. Ongoing communication between Artesia and Norwalk is vital to successfully implementing active transportation projects that benefit these two neighboring cities, especially along shared boundaries.

1.6.5 REGIONAL PLANNING EFFORTS

A review of several regional planning documents was completed to make sure previous efforts were built upon and conditions better known. The following is a list of the documents that were reviewed:

- SCAG Regional Transportation Plan (RTP)
- SCAG Sustainable Communities Strategy

1.7 State of Practice

Active transportation continues to permeate people's everyday lives as we explore ways to live healthier, more active, and affordable lives. Ensuring that basic infrastructure needs, such as sidewalks, curb ramps, lighting, bike lanes, etc., are met will always be a priority for every city. The state of practice continues to encourage city leaders, local advocates, and everyday citizens to advocate for safe, comfortable, and attractive mobility options. The recent COVID-19 pandemic created a heightened sense of awareness for our outdoor environment as people sought ways to leave their homes to catch a breath of fresh air, exercise, or reach their essential workplaces. This has led to a greater sense of responsibility for local, state, and federal agencies to make it easier to assess and/or re-imagine our streets to ensure they equitably serve the needs of the community.

While active transportation design guidance has traditionally come from the State, especially the California Department of Transportation (Caltrans) and the California Manual on Uniform Traffic Control Devices (CA MUTCD), cities are increasingly turning to national organizations for guidance on best practices. Primary organizations include the National Association of City Transportation Officials (NACTO), American Association of State Highway and Transportation Officials (AASHTO), and the Federal Highway Administration (FHWA).

Fortunately for California cities, there is increased flexibility in design guidance offered by both Caltrans and the FHWA. In 2014, Caltrans officially endorsed the NACTO Urban Street Design Guide and Urban Bikeway Design Guide as valuable toolkits for designing and constructing safe, attractive local streets. California cities may also apply for experimental designation from the FHWA for projects not in conformance with the CA MUTCD. Furthermore, Caltrans issued a complete streets directive in December 2021 stating the following:

"*The California Department of Transportation (Caltrans) recognizes that walking, biking, transit, and passenger rail are integral to our vision of delivering a brighter future for all through a world-class transportation network. Additionally, Caltrans recognizes that streets are not only used for transportation but are also valuable community spaces. Accordingly, in locations with current and/or future pedestrian, bicycle, or transit needs,* ***all transportation projects funded or overseen by Caltrans will provide comfortable, convenient, and connected complete streets facilities for people walking, biking, and taking transit or passenger rail*** *unless an exception is documented and approved.*"

The guidance provided by these manuals supports the creation of more Complete Streets. The guid-

ance is also supported by several pieces of important legislation. The following section provides a review of the state of practice for bicycle facilities, drawing on the AASHTO and NACTO guides. It also includes a discussion on Complete Streets/Routine Accommodation, as well as summaries of the relevant legislation at the local, regional, state, and national levels.

1.8 Primary Guidance

In 2014, the California Department of Transportation (Caltrans) updated the CA MUTCD to provide uniform standards and specifications for all official traffic control devices in California. This update is meant to implement Caltrans's 2014 mission to provide a safe, sustainable, integrated, and efficient transportation system to enhance California's economy and livability. The purpose of the CA MUTCD is to improve safety and mobility for all travellers by setting minimum standards and providing guidance intended to balance safety and convenience for everyone in traffic, including drivers, pedestrians, and bicyclists.

The CA MUTCD contains the basic principles that govern the design and use of traffic control devices that aim to promote highway safety and efficiency by providing for the orderly movement of all road users on streets, highways, bikeways, and private roads open to public travel. Multimodal policies for safer crossings, work zones, and intersections are integrated as part of the CA MUTCD, with improvements including:

- Crosswalks Enhancements Policy
- Temporary Traffic Control Plans
- Work Zone and Higher Fines Signs and Plaques
- Traffic Control for School Areas

Additionally, NACTO guidance was analyzed to ensure flexibility and innovation in the design and operations of streets and highways in California. Much of the guidance provided in the CA MUTCD is consistent with the NACTO Urban Bikeway Design Guide.

Detailed information regarding the following list of guidance documents can be found in Appendix A.

- Caltrans Highway Design Manual, Chapter 1000: Bicycle Transportation Design
- FHWA Bike Lane Planning and Design Guide
- FHWA Bikeway Selection Guide
- Massachusetts Department of Transportation (MassDOT) Separated Bike Lane Planning & Design Guide
- AASHTO Guide to Bikeway Facilities
- NACTO Urban Bikeway & Street Design Guides
- NACTO Transit Street Design Guide
- NACTO Urban Street Stormwater Guide
- Complete Streets and Routine Accommodation
- Caltrans DD-64-R2 on complete streets (revised directive as of December 2021)

1.9 Applicable Legislation and Policies

There are several pieces of legislation and adopted policies that support active transportation in the State of California. Topics such as increasing safety, reducing GHG emissions, increasing infrastructure, and addressing inequities in planning and construction of active transportation elements have been made priorities. This ATP also addresses the goals and call to action of the California Transportation Plan 2050 (CTP 2050). This long-range plan was completed in 2021 to provide a common framework for transportation decisions and investments throughout the state. It aims to meet the growing needs of California residents as it relates to travel accessibility, emissions, and economic impacts.

The following section lists applicable State and Federal legislation and policies. Descriptions for each piece of legislation can be found in Appendix A.

State

- AB-32 California Global Warming Solutions Act
- SB-127 Complete Streets Bill
- SB 1000 Planning for Healthy Communities Act
- SB-375 Redesigning Communities to Reduce Greenhouse Gases
- AB-1358 Complete Streets Act
- AB-1581 Bicycle and Motorcycle Traffic Signal Actuation
- AB-1371 Passing Distance/Three Feet for Safety Act
- SB-743 CEQA Reform
- CEQA for Bicycle and Pedestrian Plans
- AB-1193 Bikeways
- Design Information Bulletin 89-01
- SB-1 Transportation Funding
- SB-672 Traffic-Actuated Signals: Motorcycles and Bicycles
- SB-760 Transportation Funding: Active Transportation: Complete Streets
- AB-1218 California Environmental Quality Act Exemption: Bicycle Transportation Plans
- Caltrans' Deputy Directive 64-R2
- AB 902 Traffic Violations and Diversion Programs
- AB 1096 Electric Bicycles as Vehicles
- AB-390 Pedestrian Crossing Signals
- AB-285 Forecast Impacts of Emerging Technologies
- AB-1266 Bicycle Guidance Signs Through an Intersection
- SB-400 Clean Cars 4 All Program
- Executive Order N-19-19

Federal

- Safe Streets Act (S-2004/HR-2468)
- Interim Approval for Optional Use of an Intersection Bicycle Box (IA-18)

Chapter 2
Existing Conditions

2.1 Existing Conditions Overview

Understanding the existing roadway conditions and other context-sensitive information in Artesia is critical for the ATP's planning process. This chapter uses various datasets collected from GIS resources such as SCAG and the U.S. Census Bureau.

Topics discussed in the following sections include Artesia's land use, bicycle and pedestrian collision history, and various elements of the existing roadway infrastructure. 2019 data from the U.S. Census Bureau is also summarized and used to analyze the demographic and commuting characteristics of the City's residents. The datasets in this chapter provide valuable information and help create meaningful discussions on how each of the topics supports or impedes active transportation development within the City.

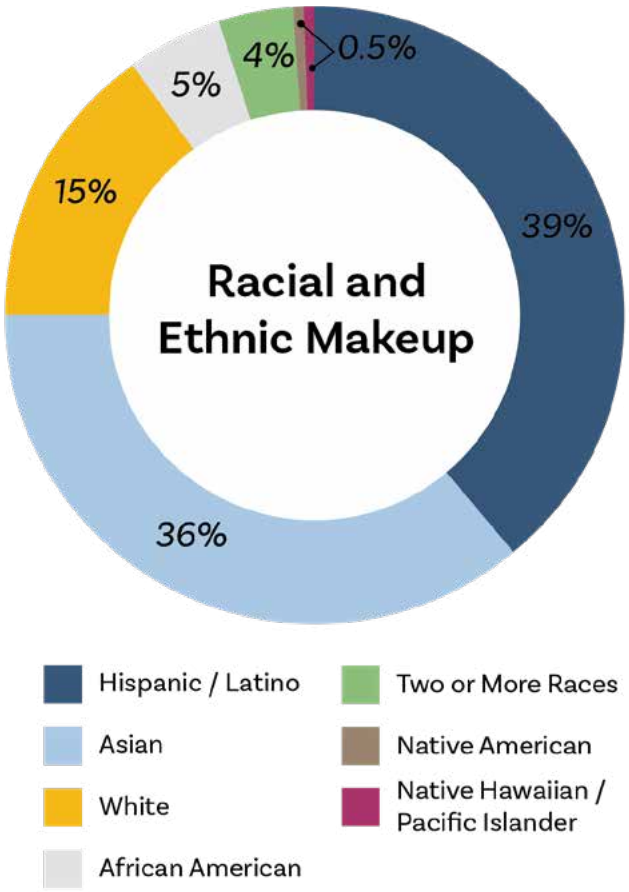
2.2 Demographics

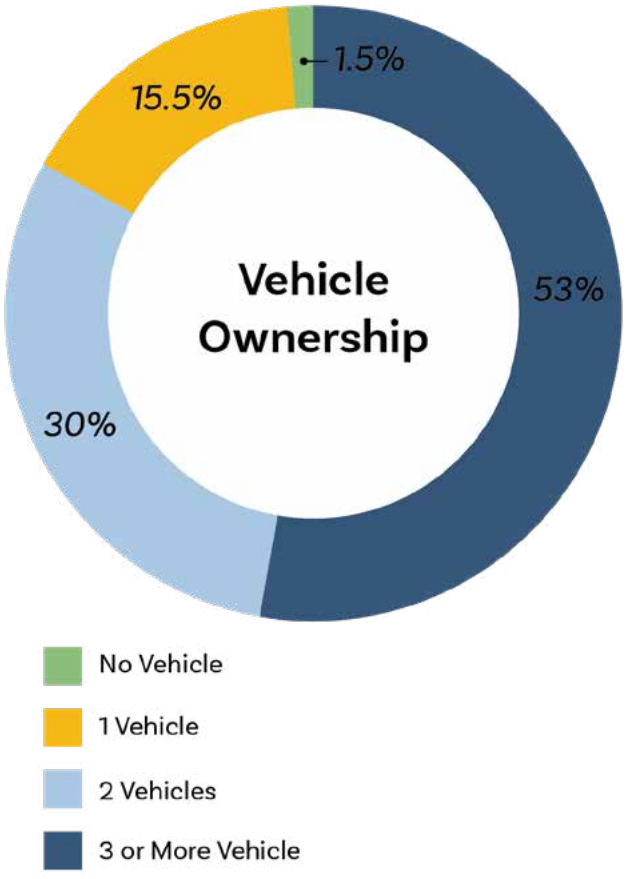
According to 2019 ACS 5-Year Estimates, Artesia has a population of 16,758 within its 1.62 square mile City boundary. The City has a population density of 10,344 people per square mile and has approximately 4,460 households.

The population of Artesia is diverse. The City can be categorized as a family-oriented or "young" community based on the age distribution. People under the age of 18 make up 21 percent and people ages 20-44 make up 39 percent, totalling approximately 60 percent of the City's total population. People ages 44-64 make up 25 percent and people over the age of 65 (seniors) make up 15 percent of the total population.

The racial and ethnic makeup in Artesia is 28.6 percent White, 5.1 percent African American, 36.7 percent Asian, 0.4 percent Native American, 0.3 percent Native Hawaiian or other Pacific Islander, and 4 percent two or more races. 40 percent of the population identify as Hispanic or Latino.

The median household income is $67,647. Of the households surveyed in 2019, a majority of households have access to one or more vehicles, with only 1.3 percent reporting lacking access to a vehicle.





2.3 Transportation Mode Share

According to the 2019 U.S. Census, there are an estimated 13,809 workers in Artesia. Mode splits for workers' commute trips are:

- Car (drive alone): 74.7 percent
- Carpool: 11.2 percent
- Transit: 0.8 percent
- Walk: 5.2 percent
- Bicycle: 2.7 percent
- Work from Home: 3.2 percent
- Other Means: 2.1 percent

Approximately 85.9 percent of workers in Artesia drive to work. This suggests that investments in transit and other mobility choices should be done to reduce employee commuter trips and reduce traffic congestion throughout the City.

2.3.1 WALKING MODE SHARE

The walking mode share measures the percentage of workers aged 16 years and over who commute to work by foot. Mode share reflects how well infrastructure and land-use patterns support travel to work by foot. In the City, walking mode share patterns are connected to the relative proximity of housing to employment centers.

2.3.2 BICYCLING MODE SHARE

Similar to the walking mode share, bicycling mode share measures the percentage of resident workers aged 16 years and over who commute to work by bicycle.

2.3.3 PUBLIC TRANSIT MODE SHARE

Transit mode share measures the percentage of workers aged 16 years and over who commute to work by transit. This mode share reflects how well first mile-last mile infrastructure, transit routes, and land-use patterns support travel to work by transit.

2.4 Existing Land Use

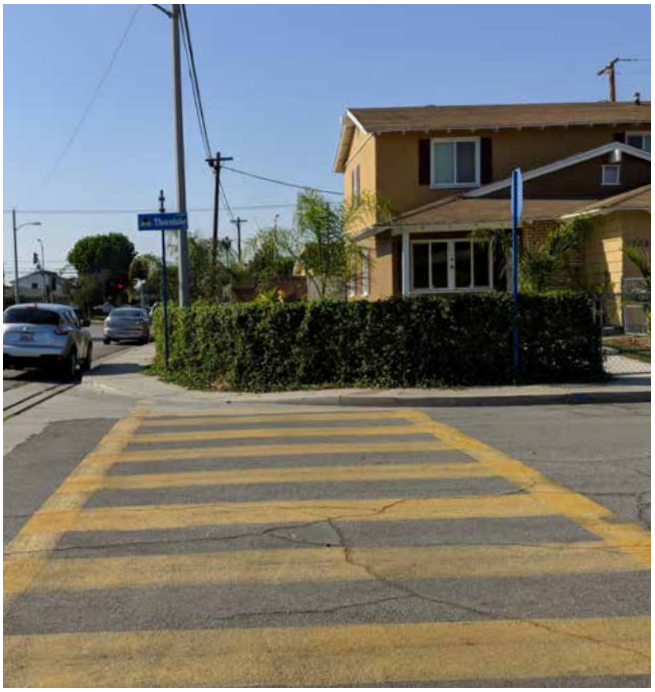
Artesia is a small city in Los Angeles County. The City is bordered by the City of Norwalk to the north and the City of Cerritos to the east, west, and south.

Existing land use patterns in Artesia are typical of many Southern California communities. Figure 2-1 shows that commercial land uses primarily occur along major thoroughfares such as Pioneer Boulevard, South Street, and Artesia Boulevard. Multi-family residential land uses are also found along major corridors such as Pioneer Boulevard. The majority of the City's land is designated for single family residential use which is generally well-distributed within the City's total land area.

The City's Downtown is centrally located on Pioneer Boulevard. This major commercial and dining destination, alongside the local schools and parks, are key land use areas that draw both residents and visitors.

In order to be eligible for State funding, a city's bicycle and pedestrian plan must address connections between specific activity center types. Identifying these centers, and their draw for the community, is essential to creating useful bicycle and pedestrian networks. It is important to site facilities that connect the places people actually want to frequent.

Commercial land uses



Residential and educational land uses

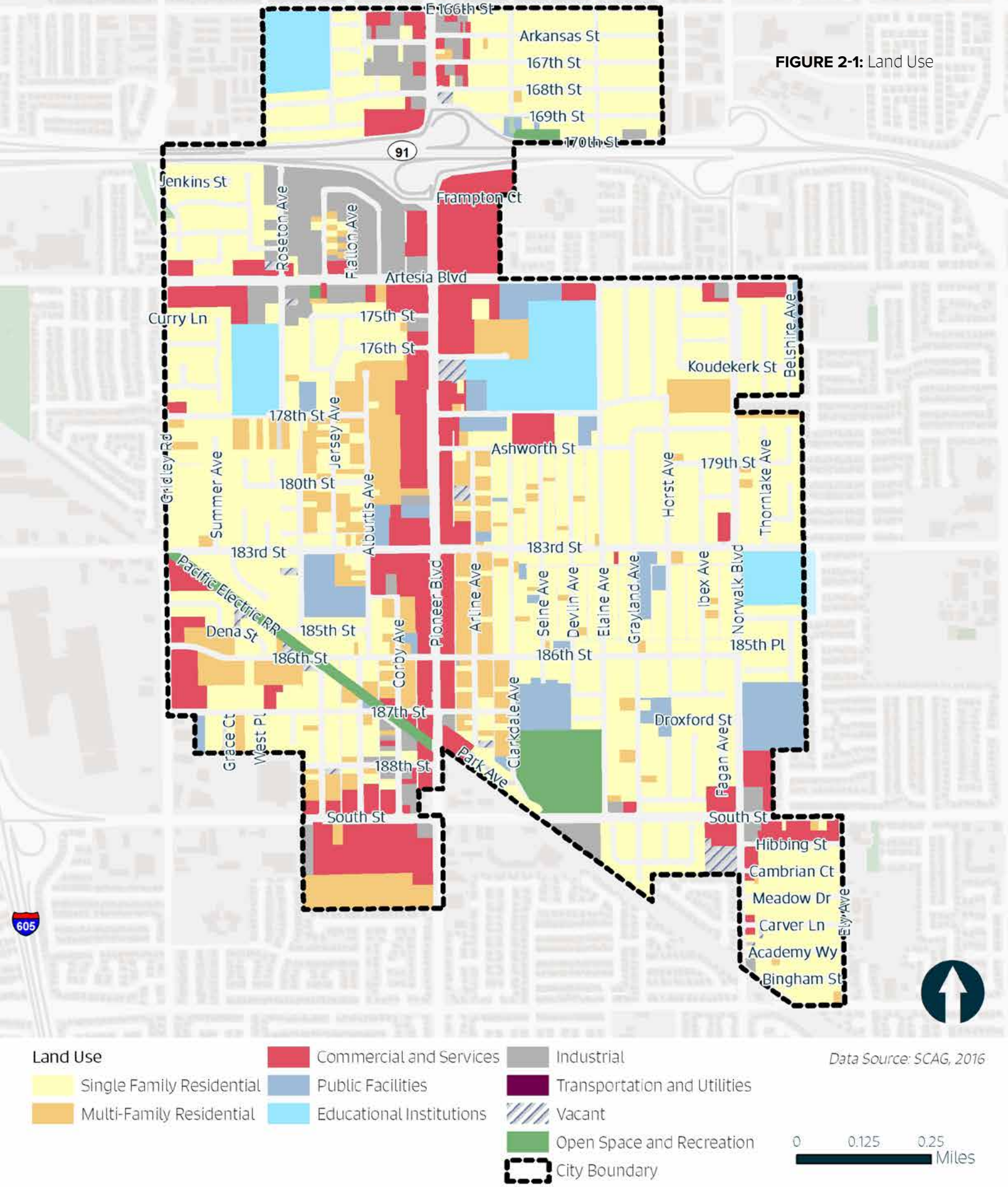


FIGURE 2-1: Land Use

Land Use

- Single Family Residential
- Multi-Family Residential
- Commercial and Services
- Public Facilities
- Educational Institutions
- Industrial
- Transportation and Utilities
- Vacant
- Open Space and Recreation
- City Boundary

Data Source: SCAG, 2016

0 0.125 0.25 Miles

2.5 Street Classification

Figure 2-2 depicts the streets in Artesia and how they are classified into the following categories per LA County's definitions: primary arterial, secondary arterial, and minor streets. Regional access to Artesia is provided by CA SR-91 and Interstate 605. Local access to major destinations throughout the City is provided by the primary arterial roadways including Pioneer Boulevard, Artesia Boulevard, South Street, and Norwalk Boulevard. The remaining secondary and minor streets provide access to residential, school, park, and other smaller destinations.

Knowing that the primary arterial roadways within the City provide access to important local destinations underscores the need for active transportation facilities that safely and comfortably accommodate non-motorized form of travel along these multi-lane, high volume, car-oriented corridors.

The City's roadways are analysed further in the recommendations chapter to determine recommendations that are feasible within the streets' right-of-ways and that address the community's desires.

Pioneer Blvd., a major arterial street

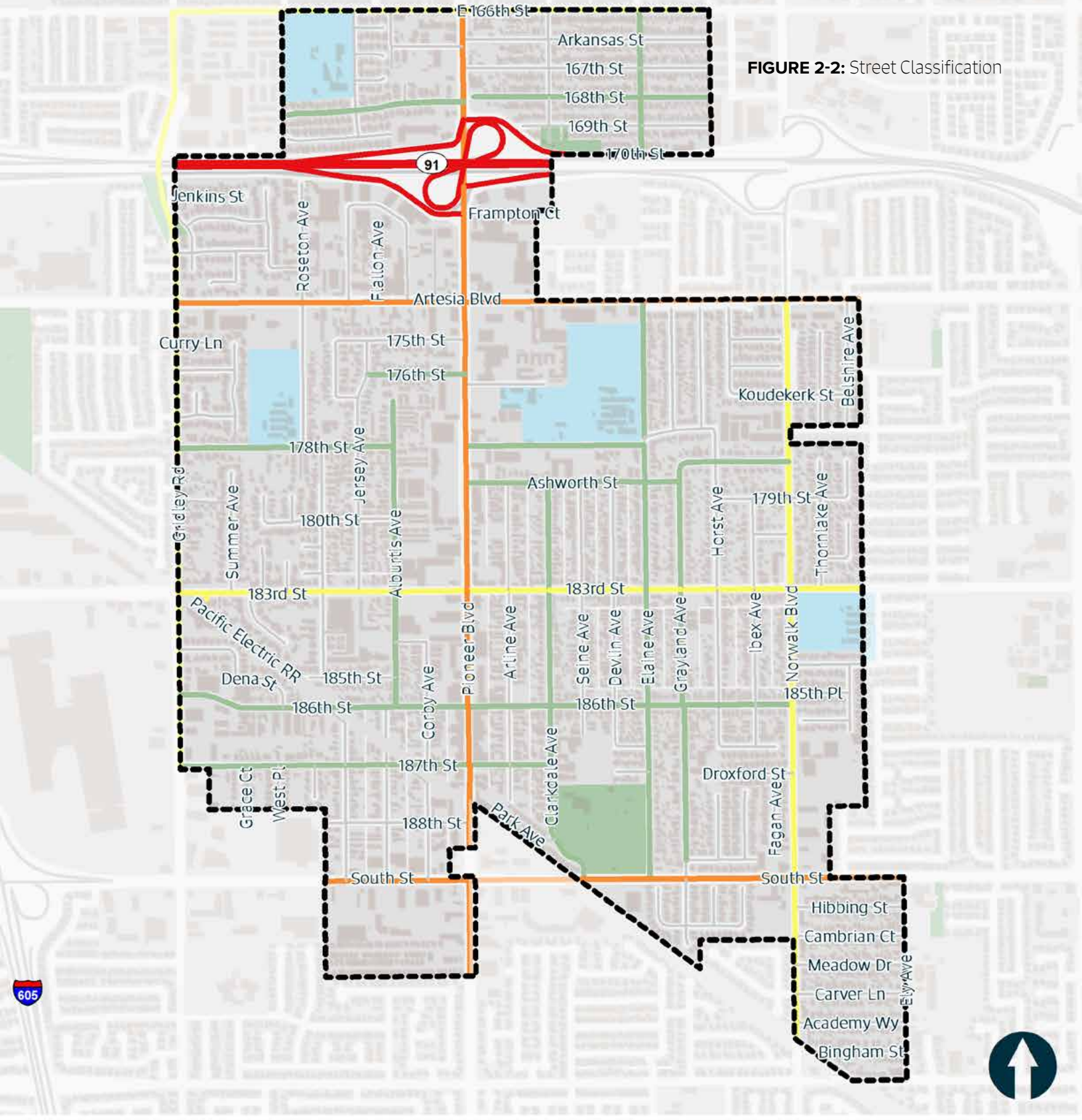


FIGURE 2-2: Street Classification

Street Classification

- Freeway
- Primary
- Secondary
- Collector
- Local
- City Boundary

Data Source: General Plan Street Classification, 2030

0 0.125 0.25 Miles

2.6 Posted Speed Limit

Artesia's high-volume corridors include Pioneer Boulevard, Artesia Boulevard, 186th Street, 183rd Street, Norwalk Boulevard, and South Street as shown in Figure 2-3. The posted speed limits for these corridors vary between 35 and 40 miles per hour (mph).

None of the surface streets within Artesia have posted speeds of 50 mph or above. All of the City's minor streets have a posted speed limit of 25 mph, which make them viable for potential ATP recommendations such as bicycle boulevards or shared bicycle routes. Posted speed limits along primary and secondary corridors will play an important role in the development of enhanced recommendations appropriate for these larger streets.

Norwalk Blvd., a primary arterial street with posted speed of 40 MPH

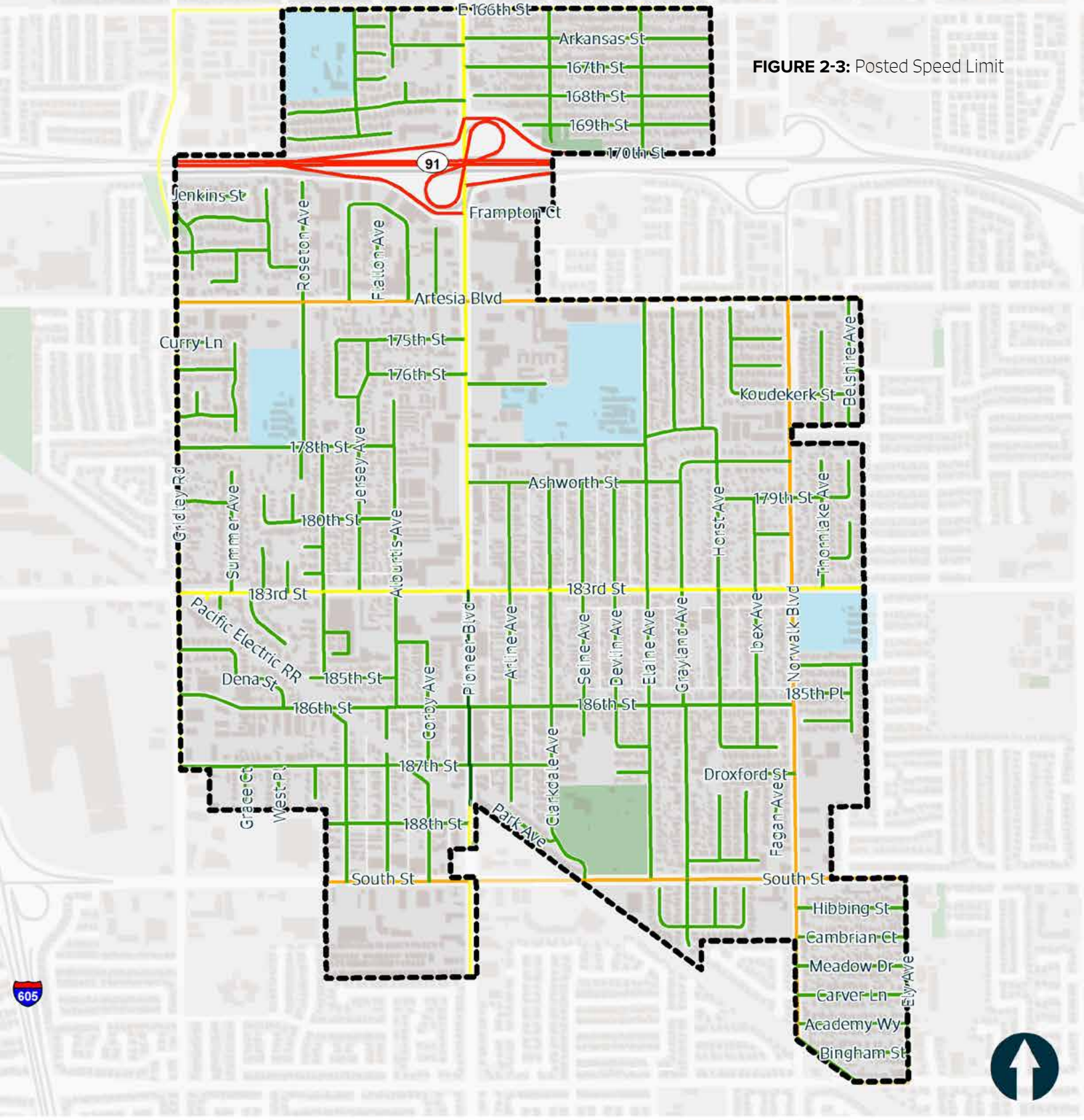


FIGURE 2-3: Posted Speed Limit

Posted Speed Limit
15
25
35
40
65
City Boundary

Data Source: KTUA, 2021

0 0.125 0.25 Miles

2.7 Existing and Previously Proposed Bike Facilities

The existing bicycle facility network in Artesia is comprised of one multi-use path and three bicycle lane corridors, making up 3.1 miles of existing bikeways, as shown in Figure 2-4.

This network was analyzed for connectivity as part of the community and stakeholder engagement process. It was used to gather additional input on routes people feel are important and which should move forward as recommendations. Although the City does not have a substantial bicycle facility network, this ATP Plan identifies new routes that will connect people with their destination within city boundaries, with the neighboring cities of Norwalk and Cerritos, and with other major multi-modal destinations such as the San Gabriel River Trail.

Bike lane and speed feedback sign on Norwalk Blvd.

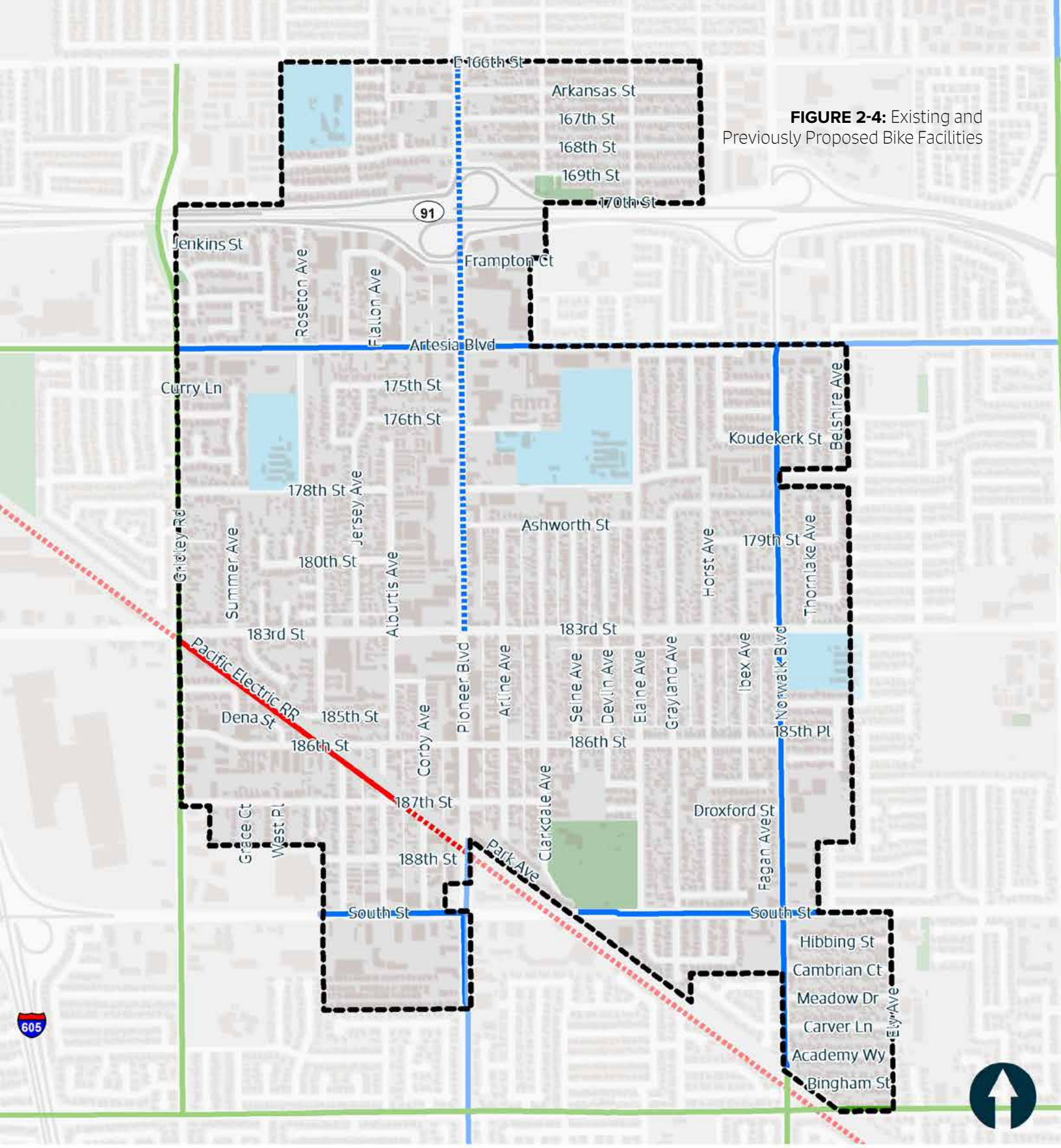


FIGURE 2-4: Existing and Previously Proposed Bike Facilities

2.8 Transit Routes

Figure 2-5 depicts the transit service in the City provided by Los Angeles Metro, Norwalk Transit System (NTS), and Orange County Transportation Authority (OCTA). Local bus routes provide service along Pioneer Boulevard, 183rd Street, and South Street.

There are no existing passenger rail lines through the City of Artesia. However, the West Santa Ana Branch Transit Corridor will bring a light rail transit stop to the City in the near future. This 19-mile corridor project will connect Artesia residents to Downtown Los Angeles when fully implemented.

There are 20 bus stops in Artesia. These routes and stops were identified to ensure improving access to them was integrated into the plan as major destinations and as part of First Mile-Last Mile planning principles. Approximately 0.8 percent of workers in Artesia use public transit as their primary mode of transportation.

Artesia City Transit Bus

Artesia City Transit

The Artesia City Transit is the City's newest local bus system. The service is designed as a continuous loop that is operated by an all-electric bus. The bus service is free to residents to encourage people to reach their local destinations in a more sustainable manner.

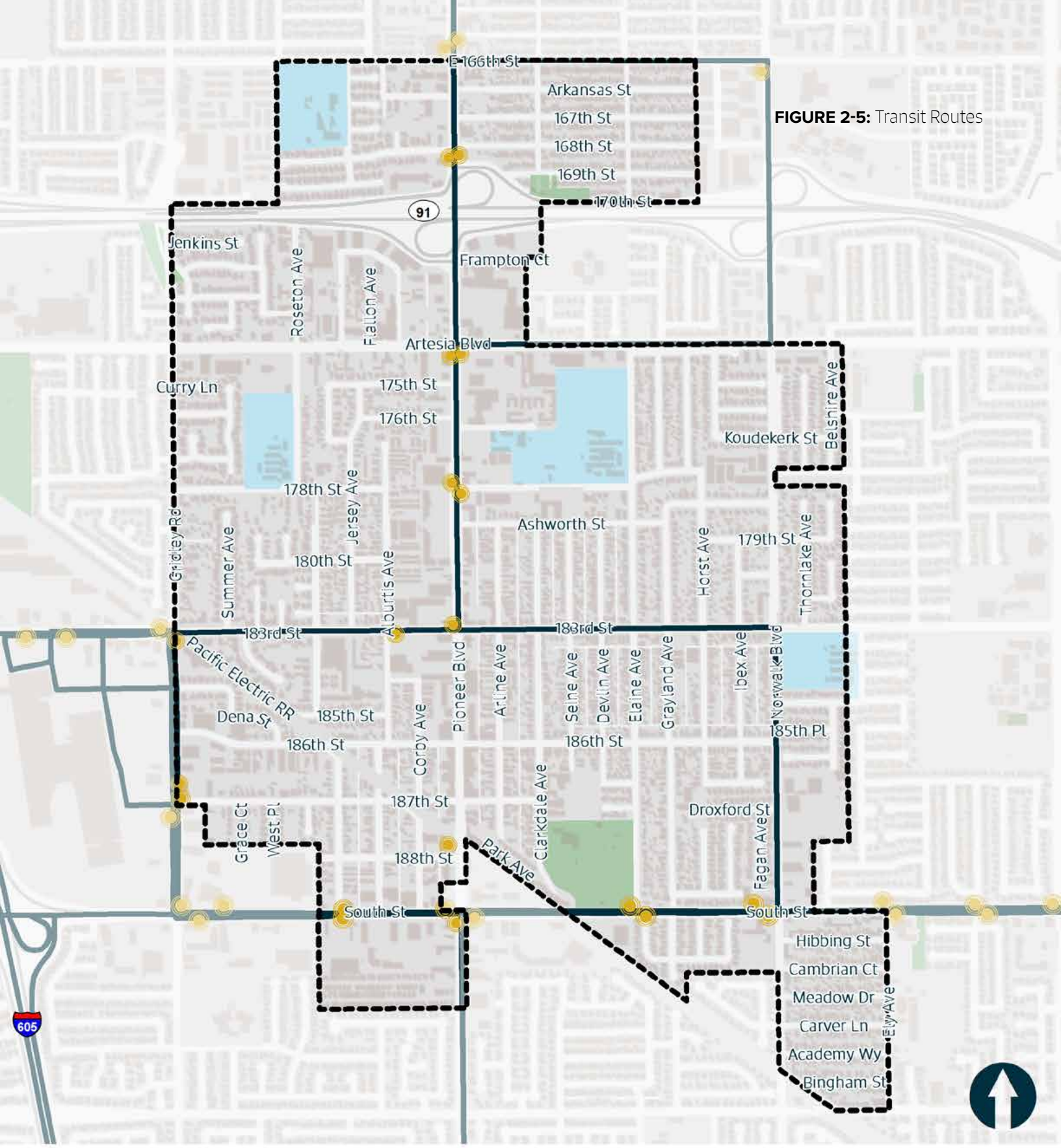
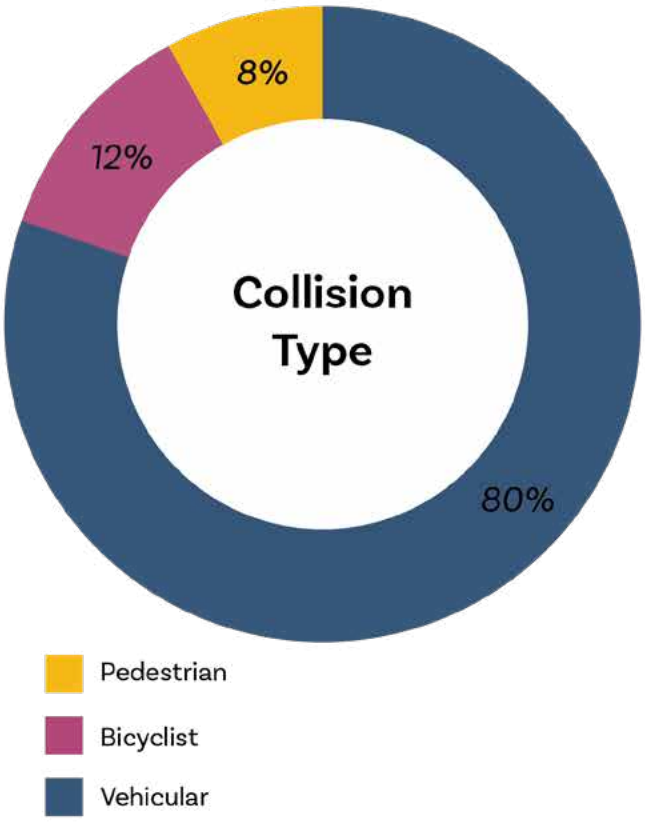


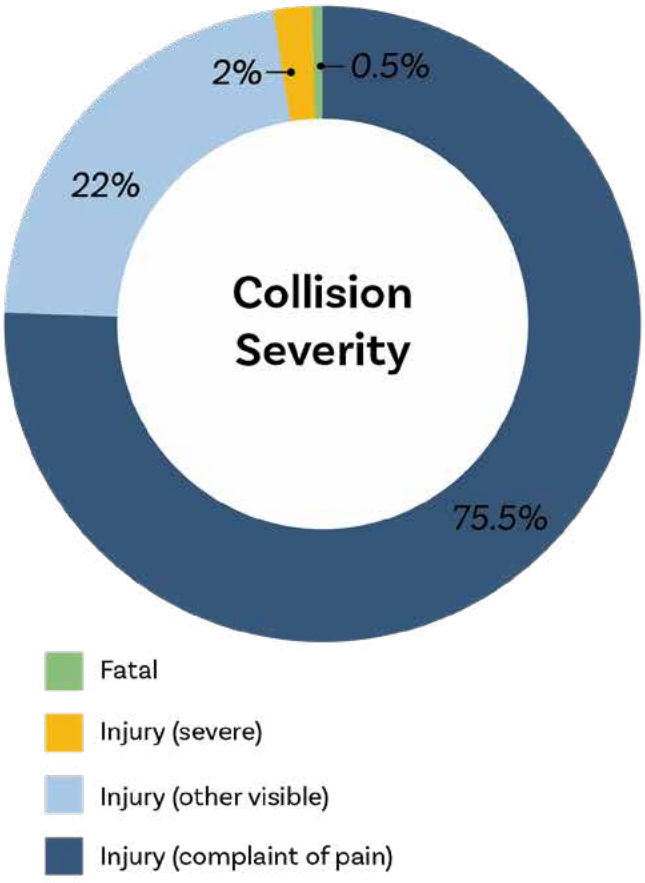
FIGURE 2-5: Transit Routes

2.9 Collision History

Bicycle and pedestrian collision data was obtained from the Transportation Injury Mapping System (TIMS) collision dataset, which captures reported bicycle-vehicle, pedestrian-vehicle, and bicycle-pedestrian collisions that resulted in injury or property damage in Artesia in the five-year period of 2014 through 2018. Collision density and locations data are displayed on Figure 2-6. Collisions on off-street paths are not reported in the dataset. It is important to note that collisions involving bicyclists and pedestrians are known to be under-reported, and therefore such collisions are likely under-represented in this analysis.

Between 2014 and 2018, there were 24 bicycle-related collisions, 16 pedestrian-related collisions, and 165 vehicle-related collisions. The bulk of these collision types resulted in complaints of pain (75.6%) and visible injury (22%). Only one vehicular collision resulted in a fatality. According to the map, areas of high collision density occur along Pioneer Boulevard, the CA SR-91 on and off-ramps, and along 183rd Street.





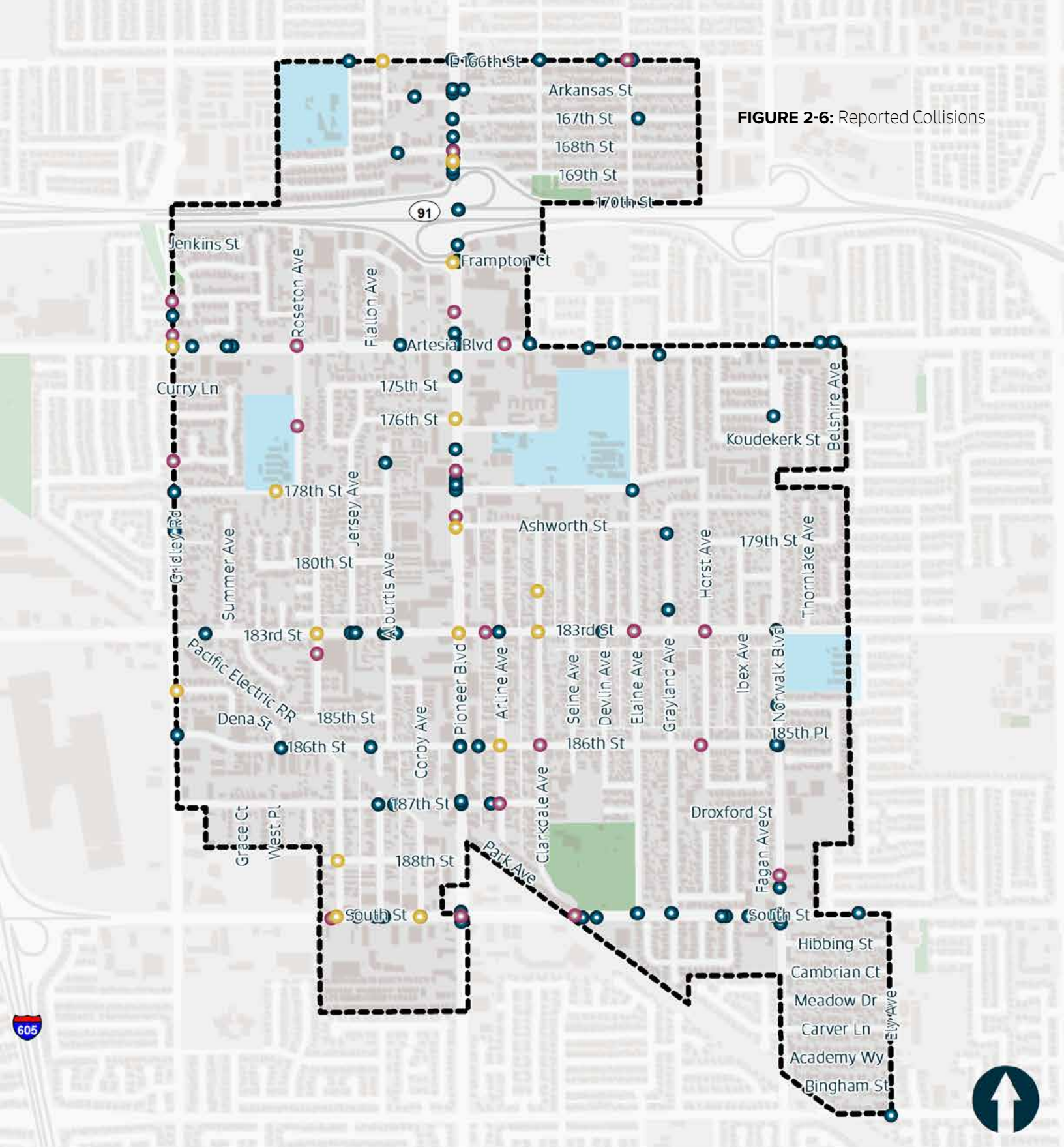


FIGURE 2-6: Reported Collisions

2.10 Propensity Model

To help define study focus areas, a Geographic Information Systems (GIS) model was created to reveal relationships between the many factors analyzed. A Bicycle-Pedestrian Propensity Model (BPPM) was developed, considering all of the previously discussed analysis inputs, to establish where bicyclists and pedestrians are most likely to be, either currently or if improvements were to be made. The BPPM is comprised of three sub-models: Attractor, Generator, and Barrier Models. These three sub-models are then combined to create the composite BPPM.

Attractors are activity centers known to attract bicyclists and pedestrians. Examples are schools, transit stops, and shopping centers. Generators are developed from demographic data and address potential pedestrian and bicyclist volume based on how many people live and work within the study area. Examples of generators are population density, employment density, primary mode of transportation to work, and vehicle ownership. Barriers are features likely to discourage or detract people from bicycling or walking. These are generally physical limitations, such as areas with high numbers of bicycle and pedestrian-related collisions, high vehicle volumes and speeds, and missing sidewalks.

The resulting map displayed in Figure 2-7 was employed to aid in developing general recommendations and to help select priority projects described in the following chapters.

The BPPM map shows highest likely use along major corridors, especially along Pioneer Boulevard, 183rd Street, and 186th Street. In addition to these corridors, the BPPM depicts regions within the City that should be considered such as the area north of CA SR-91 and the central region of the City around Downtown Artesia.

Artesia Multi-Use Path

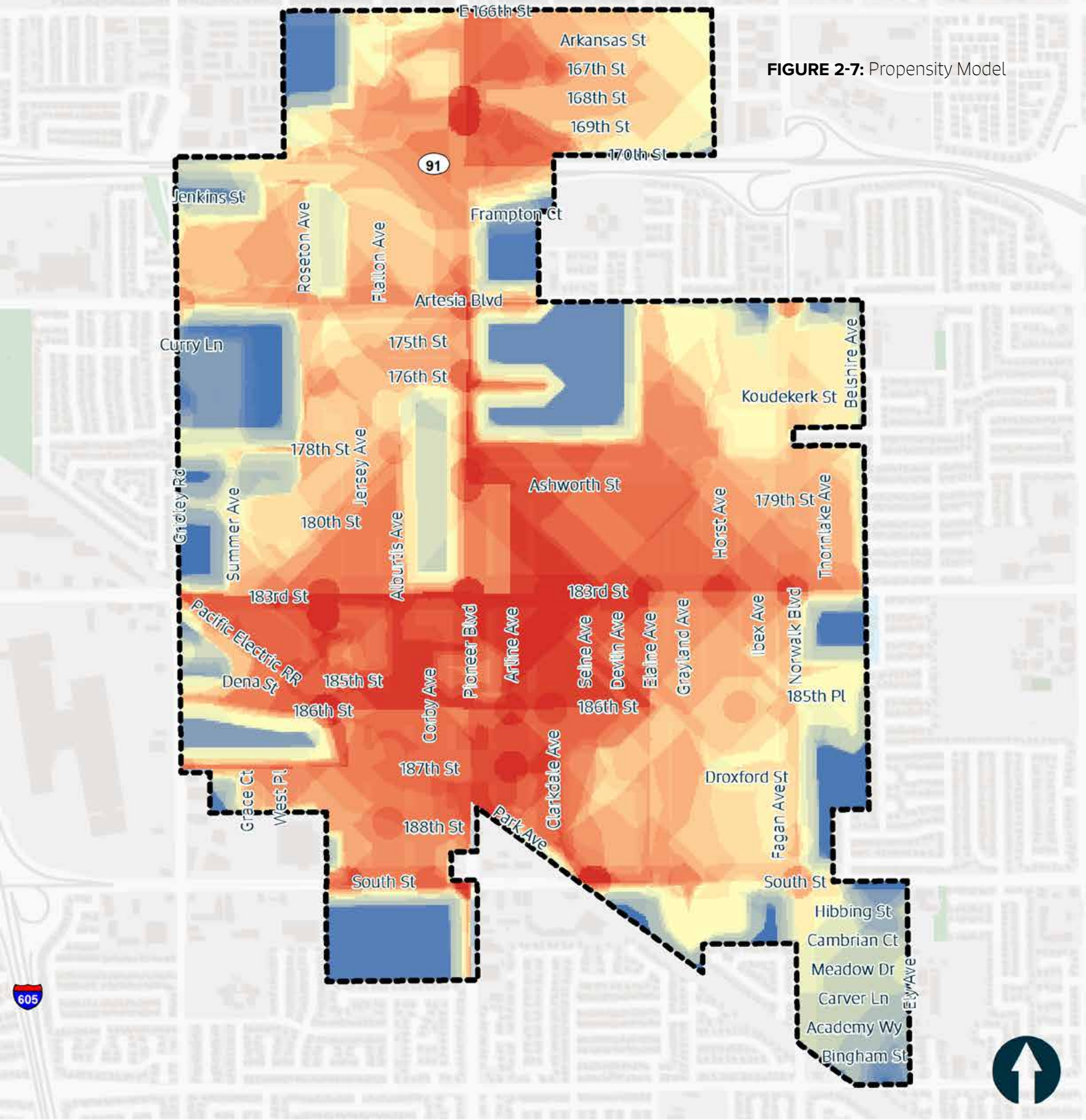


FIGURE 2-7: Propensity Model

Bicycle/Pedestrian Propensity

High Propensity

Low Propensity

City Boundary

Data Source: KTUA, 2021

0 0.125 0.25 Miles

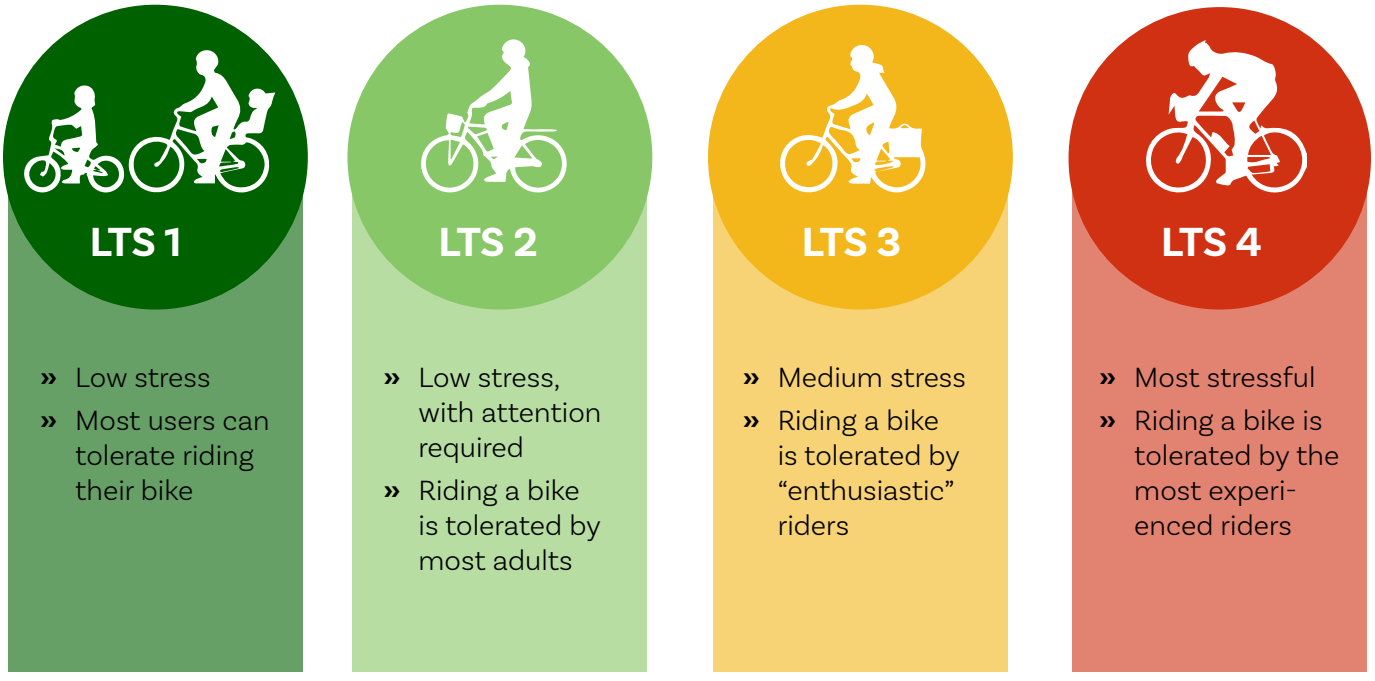
2.11 Bike Level of Traffic Stress Analysis

The Bicycle Level of Traffic Stress (LTS) analysis is a GIS-based tool used to quantify a bicyclist's perception of comfort given specific roadway conditions. Because different bicyclists have different tolerances for stress created by volume, speed, and proximity of automobile traffic, the LTS method identifies four levels of stress, from the most comfortable scenario to the least tolerable conditions. Bicycle Level of Traffic Stress (LTS) criteria span from one to four, with one being the least stressful or most comfortable, and four being the most stressful. The analysis was applied to Artesia's entire street network, as shown in Figure 2-8.

Artesia's existing bikeways are located along Artesia Boulevard, Norwalk Boulevard, South Street, and the Historic District Recreational Trail (multi-use path). Of these, only the multi-use path show a low level of traffic stress (LTS 1).

The analysis shows Pioneer Boulevard, Artesia Boulevard, 166th Street, 183rd Street, and Norwalk Boulevard, all main corridors, with a high level of traffic stress (LTS 4). This means that only the most confident, experienced, and capable bicyclists are willing to ride on these facilities, while the other users may not feel safe and comfortable riding on the larger thoroughfares, as shown below in the Bicycle User Classification System developed by the City of Portland. These classifications can be helpful in understanding the characteristics and infrastructure preferences of different cyclists.

Bicycle facility planning should use a wide variety of options, from shared roadways to separated facilities to accommodate as many user types as possible and to provide a comfortable and safe experience for the greatest number of cyclists.



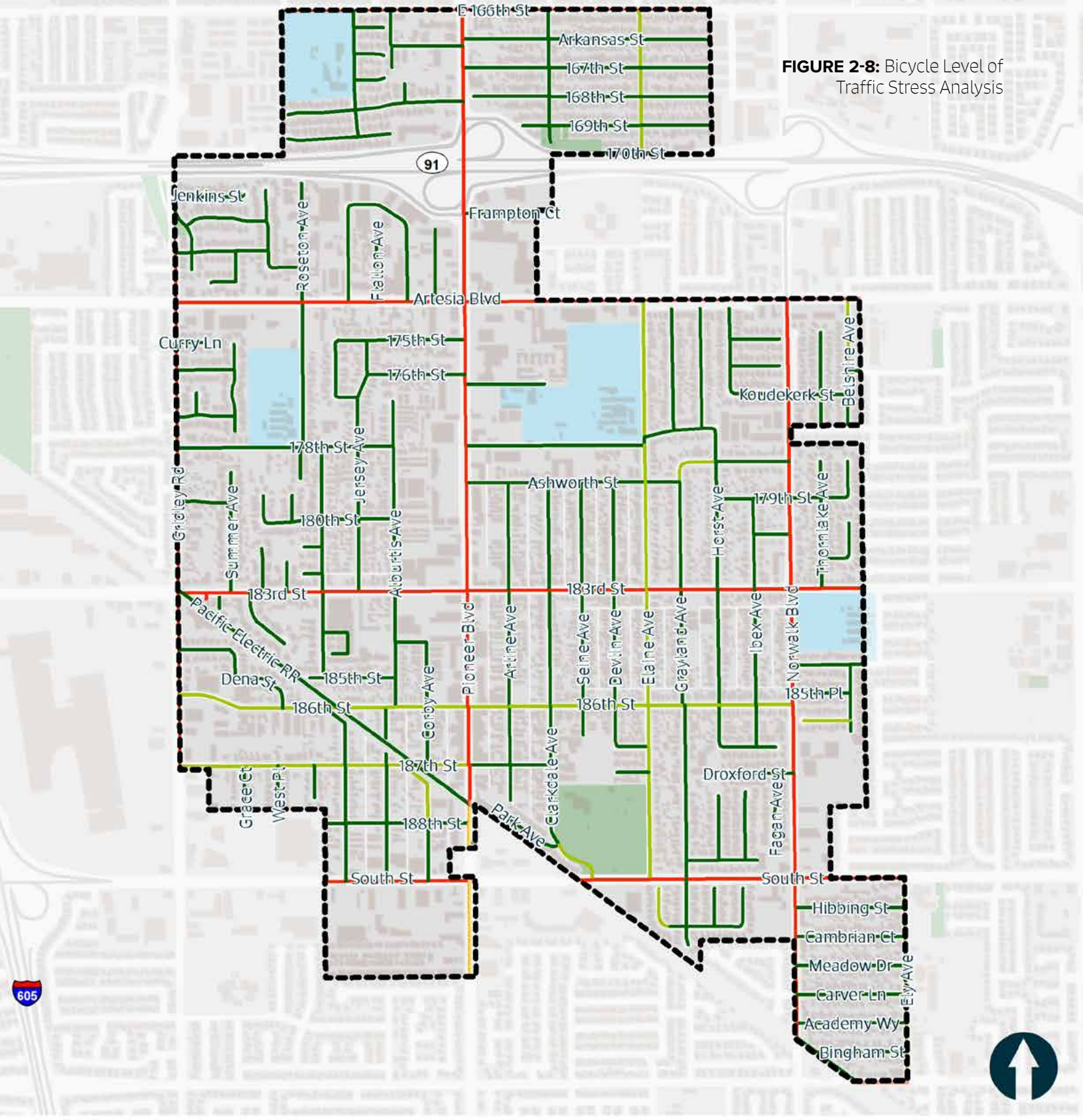


FIGURE 2-8: Bicycle Level of Traffic Stress Analysis

2.12 CalEnviroScreen 3.0

CalEnviroscreen 3.0 is a mapping tool that can be used to help identify California communities that are disproportionately burdened by pollution and where people are most vulnerable to its effects. It uses environmental, health, and socioeconomic information to produce scores for every census tract in the state. The online tool allows users to download GIS-based data to study environmental impacts on particular communities. The tool depicts the area's scores: a high score means a higher pollution and environmental burden compared to areas with lower scores.

The City of Artesia's three census tracts are depicted in Figure 2-9. The CalEnviroscreen results show that the northernmost census tract is most heavily impacted by negative environmental effects. This is likely due to the proximity to CA SR-91 and other major corridors such as Pioneer Boulevard.

The results from this analysis can help the planning team and the City make informed decisions during the recommendations and prioritization process. Agencies that distribute grants value an ATP process that prioritizes projects located in underserved areas.

Existing street and sidewalk conditions in the northern Census tract

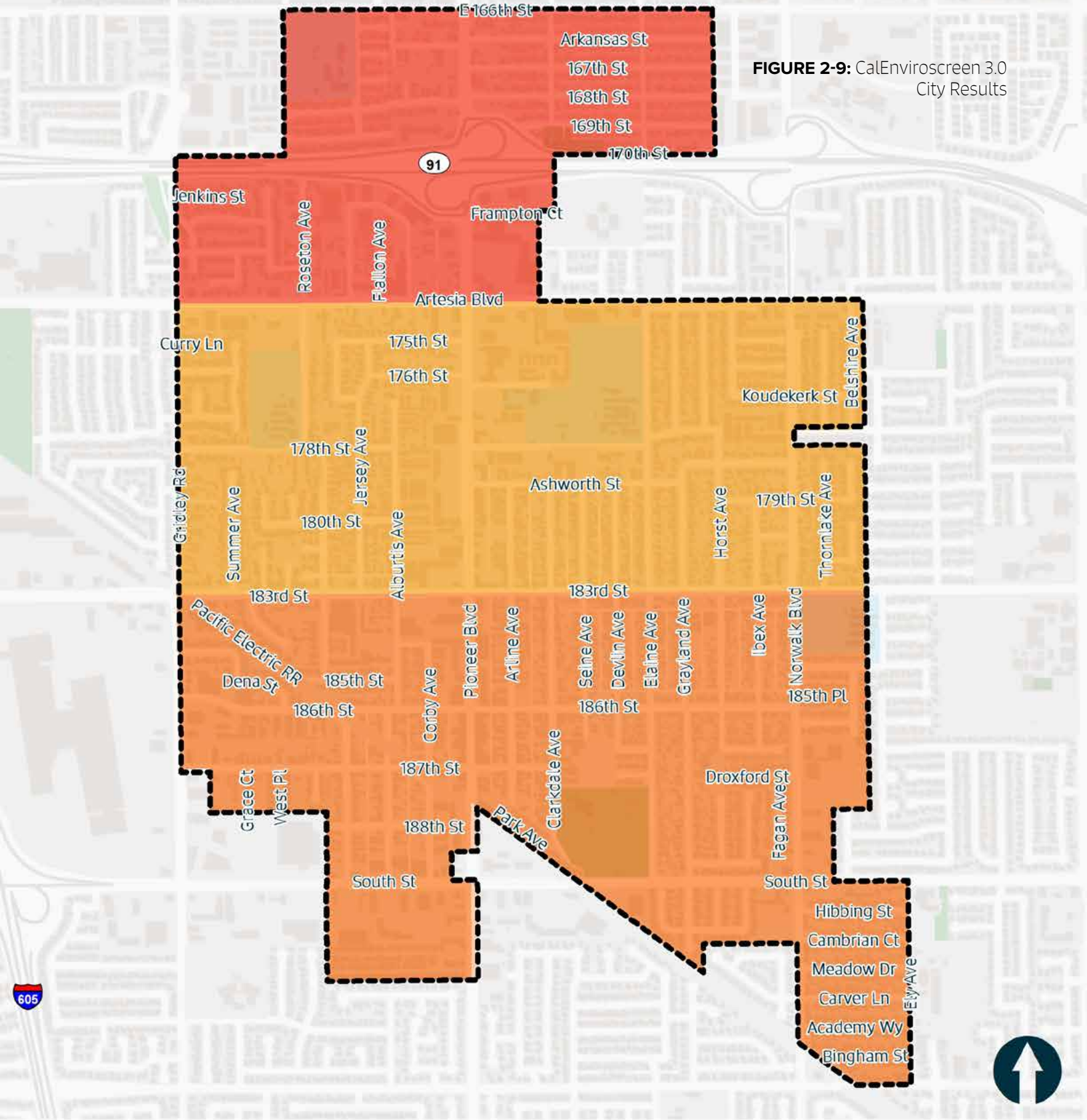


FIGURE 2-9: CalEnviroscreen 3.0 City Results

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Chapter 3

Community Outreach

3.1 Community Outreach Overview

The outreach approach aimed to maximize stakeholder participation, community engagement, and social equity in the project planning and design process. This effort included a sequence of virtual and in-person public participatory planning events and activities to develop community-based solutions for Artesia through an iterative process.

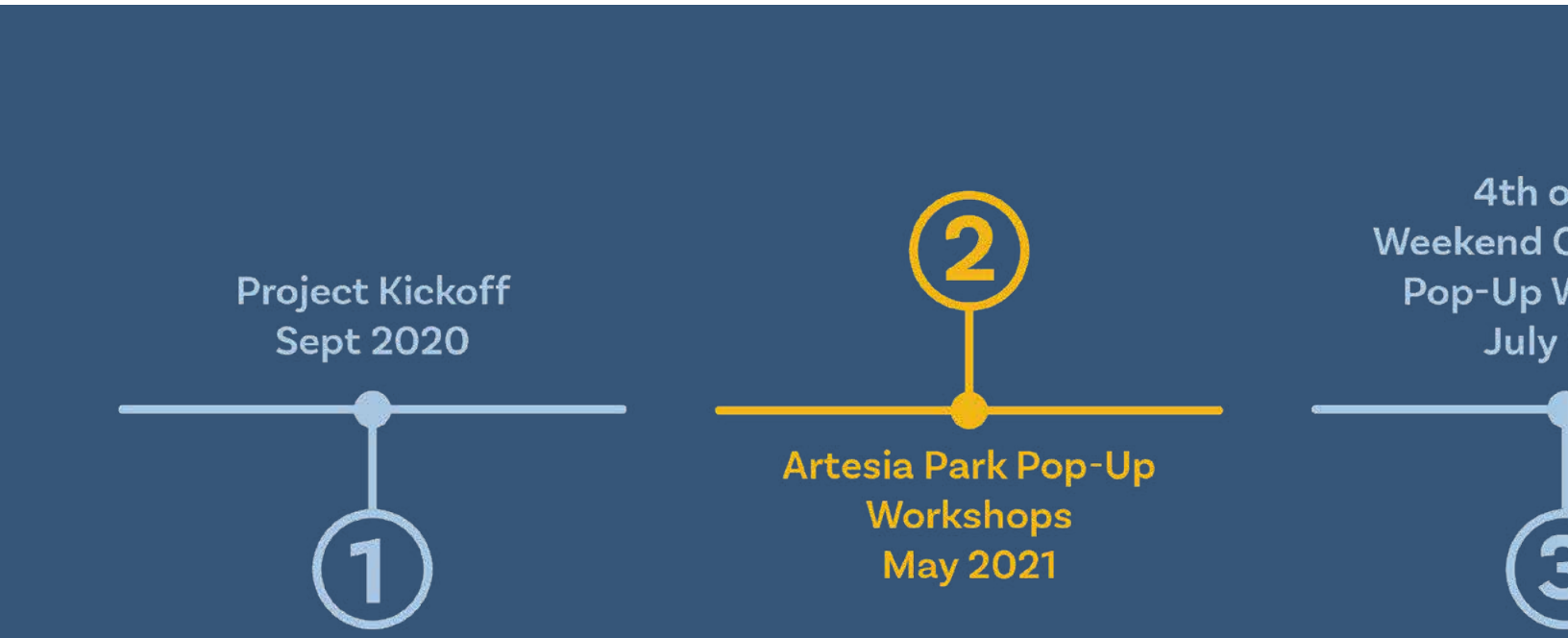
Impact of the COVID-19 Pandemic

The pandemic and declaration of the statewide shelter-in-place order on March 19, 2020, had a major impact on project timing and means of community engagement, as well as the availability and capacity of individuals to participate. Local government and agency leadership, staff, businesses, and community-based organizations were confronted with the extra challenges of operating remotely while addressing the pandemic and maintaining essential services. Amid in-person gathering restrictions and social distancing requirements, the project team quickly adapted and converted site visits, meetings, and community outreach activities to online platforms and virtual engagement as described below.

3.1.1 ADVISORY GROUP

The City, with support from LGC, convened an Advisory Group of representatives from the community to provide project guidance during Winter and Spring 2021. Participants included public library staff, school district staff, City staff, and business and other stakeholder representatives that reflect the community's demographics and perspectives. They were consulted for the following:

- To develop ideas, format, and timing for community input activities;
- To identify leading issues and themes to address;
- To identify stakeholders to engage and potential implementation resources;
- To identify strategies to engage all segments of the community and promote participation; and
- To identify opportunities for coordination and synergy with other initiatives impacting the community.



3.1.2 NEIGHBORHOOD LISTENING SESSIONS

LGC convened several virtual listening sessions during Spring and Summer 2021 to hear directly from community members about their interests and concerns regarding walking, bicycling and other transportation-related and community identity issues in Artesia. Participants included long-time residents, frequent visitors, runners, pedestrians, and bicyclists.

To promote the project and the listening sessions, LGC assembled an outreach contact list with input from members of the Advisory Group and reached out via email and phone calls. Outreach materials, including flyers produced in both English and Spanish, were circulated and posted on the Artesia Active Transportation Plan website, the City's website and Instagram account, and at the County Library. Additionally, LGC set up a dedicated email address for residents to reach out and schedule a group listening session.

Main Takeaways:

- Residents and visitors don't feel comfortable walking and biking in some areas of Artesia.
- Drivers tend not to respect bicyclists or runners.
- Residents desire the installation of improved safety and traffic controls, including signage and signals for pedestrians and bicyclists.
- Both Artesia residents and visitors enjoy the diversity of food and shops in the City.
- There is a lack of connectivity of the bikeways, walking paths, and other mobility infrastructure within the City.
- The neighborhoods north of CA SR-91 are cut off and marginalized from the rest of the community.

3.2 Virtual Engagement and Pop-up Events

As previously noted, the ongoing pandemic required in-person activities to be conducted virtually. An online community workshop was held but attracted low attendance. As a result, following the partial lifting of restrictions that enabled renewal of certain types of outdoor gatherings, the project team focused on obtaining input from community members through a series of pop-up tables and booths at standing events during the spring, summer and fall. The pop-up events engaged community members that were unable to attend listening sessions or uncomfortable with attending indoor or virtual workshops and meetings.

3.2.1 POP-UP EVENTS

LGC organized three pop-up events in May, following State and County safety protocols to avoid the spread of COVID-19. City staff, with support from KTUA, hosted additional pop-ups at events throughout the summer, including:

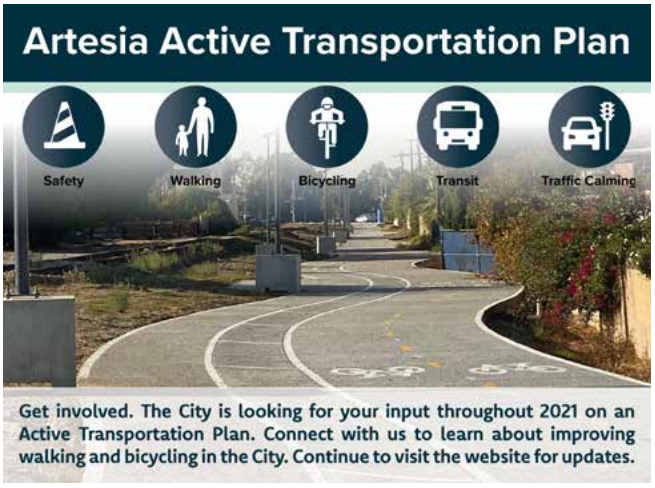
- The 4th of July Weekend Celebration
- Movies at the Park: Artesia Park
- Movies at the Park: AJ Padelford Park
- National Night Out

Residents discussed their interests and priorities with members of the project team, filled out surveys, provided comments, and marked up large maps with areas of concern and ideas for change.

KTUA combined the community input with findings in their analysis of existing conditions to generate citywide pedestrian and bicycle network maps with proposed improvements to support community walkability, bikeability, and connectivity for residents, businesses, and visitors. A series of posters illustrating existing conditions, proposed changes and recommendations, and design tools and strategies for visualizing types of improvements and amenities was created for City staff and public review.

LGC, KTUA, and City staff organized an interactive booth with these materials at the October Artesia International Street Fair and Diversity Festival, an annual event attended by thousands of residents and visitors. People that visited the booth generally agreed with the proposed routes for bicycle facilities and focus areas identified for pedestrian enhancements. Additional themes that emerged include:

- The importance of Pioneer Boulevard as a focal point and walkable Main Street.
- The need for street trees and shade.
- Sidewalk gap closures and repairs.
- Improved crosswalk visibility.
- More emphasis on maintenance and cleanliness of streets and alleys.
- Emergency access needs.



Project website flyer

Virtual community workshop flyer


Typical Active Transportation Improvements


Artesia Active Transportation Plan


GRILL


Visit the Project Website!
Visite nuestro sitio web del proyecto!
Scan here!
Escanee aquí


Visit the Project Webs

3.2.2 ATP SURVEY

Two ATP surveys were developed, one focused on the community and the other focused on businesses.

Artesia ATP - Community Survey Results

LGC received answers from a total of 21 respondents, of those, 81% identified as Artesia residents, 24% as property owners, and 5% as students as shown in Figure 3-1.

A total of 57% of the respondents indicated that there are students in the household. According to the responses, students attend the following schools: Gonsalves ES, Cerritos HS, Orange County School of the Arts, Mary Bragg ES, Cerritos College, Ross MS, Benito Juarez ES, and Nixon Academy.

Which of the following groups includes your age?

Of the 21 participants that answered this question, young and middle-aged adults, between the ages of 25 and 45 years, represented 57% of the respondents, followed by senior citizens of 65+ which accounted for 24%.

When asked, how do you get to work/school/facilities, a staggering 95% indicated that they drive; 24% walk, 19% take the bus, and only 14% uses bikes.

Do you visit city parks or recreation facilities? If so, how do you get there?

74% indicated that they drive; 53% walk; 21% bike; and only 5% take the bus.

Where would you like to see better pedestrian and bicycling routes to?

84% selected parks; 58% schools; 37% shopping centers; 32% community centers, 26% transit and bus stops; and 5% indicated that there's was no need, since streets narrow when driving.

How often do you walk in Artesia?

56% of them indicated that they walk daily, while 17% indicated that they only walk a few times a year.

FIGURE 3-1: How would you best describe your relationship with Artesia?

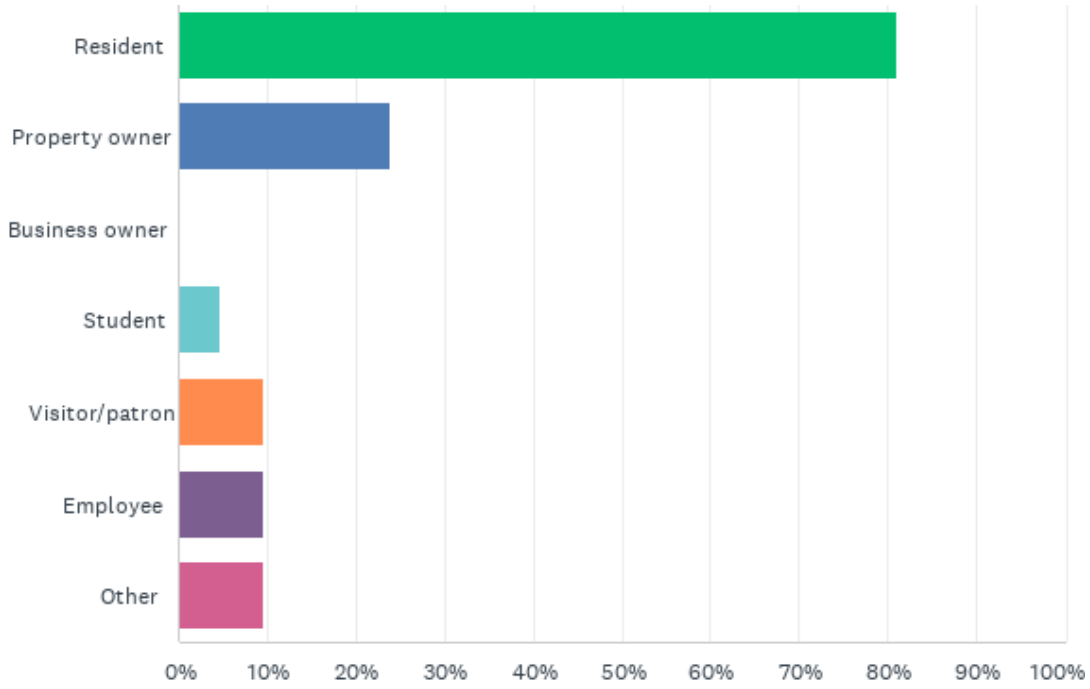
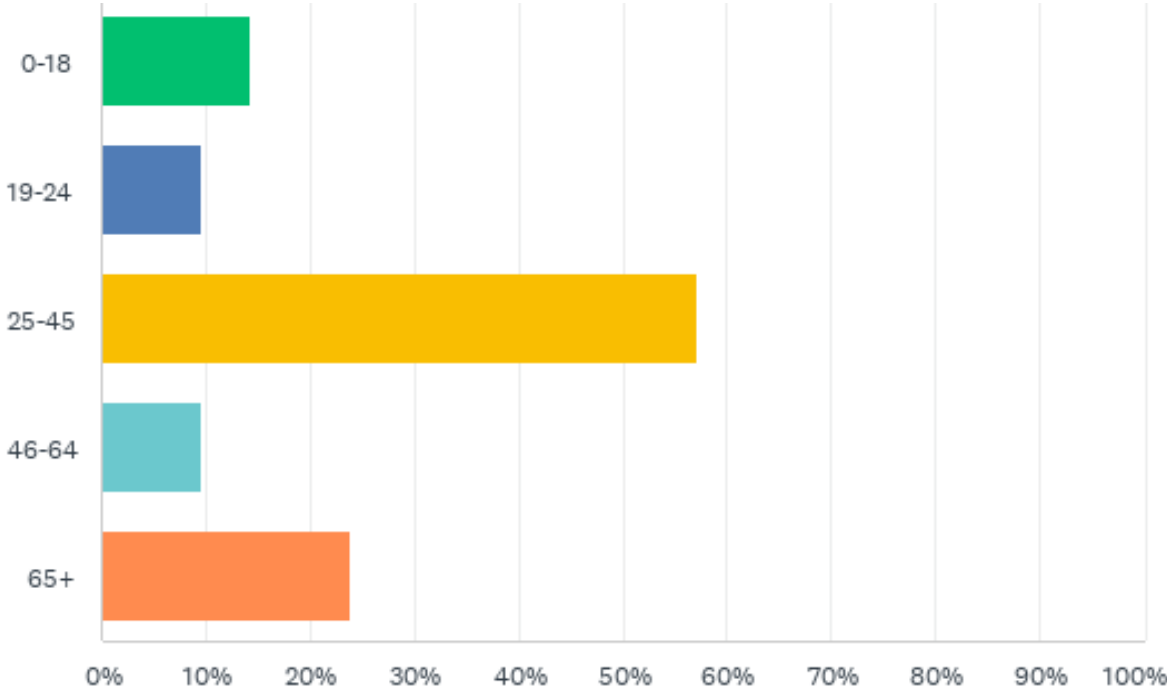


FIGURE 3-2: Which of the following groups includes your age?



In general, how comfortable are you walking in the City of Artesia?

44% of them indicated they are comfortable enough walking in Artesia, followed by 39% that indicated they are very comfortable.

How often do you bike in the City of Artesia?

Almost half of the respondents (42%), indicated that they never bike around Artesia; 32% indicated they do it only a few times a year. A smaller percentage of the respondents can be classified as frequent cyclists. The same percentage of respondents (10%) indicated that they either bike daily or 1-2 days per week; and only 5% indicated they bike 3-4 days per week.

In general, how comfortable are you bicycling in the City of Artesia?

The majority of respondents (37%) indicated they feel a little comfortable, followed closely by 32% of respondents who indicated moderate comfort.

Do you own a bike?

68% of respondents indicated they own a bike.

FIGURE 3-3: How do you get to work/school/facilities?

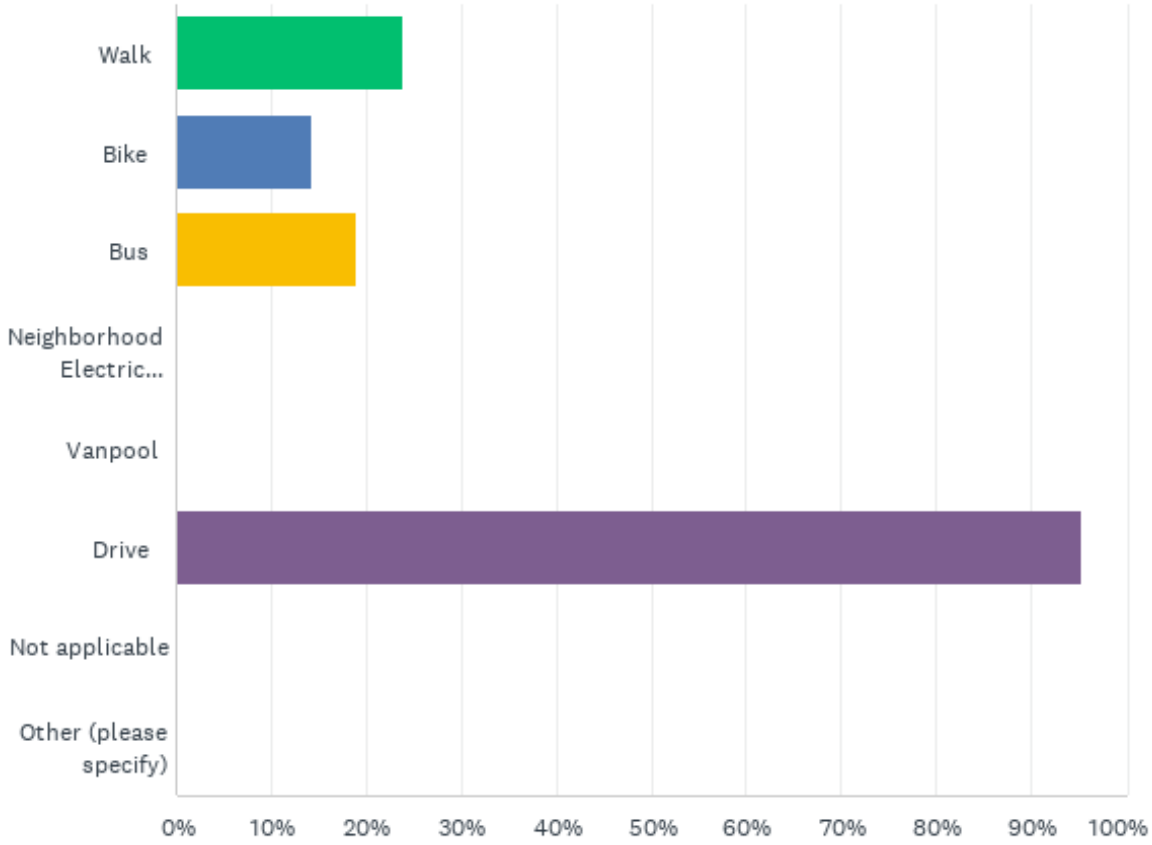


FIGURE 3-4: Do you visit parks or recreation facilities? If so, how do you get there?

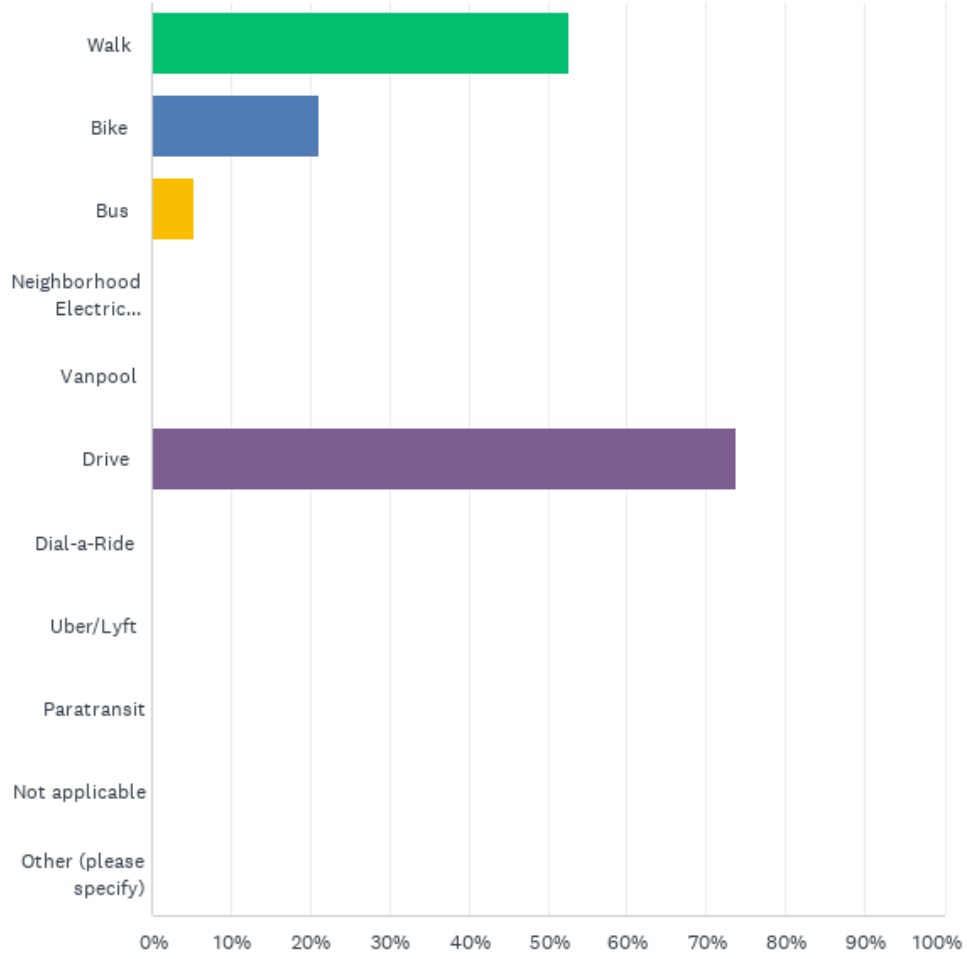
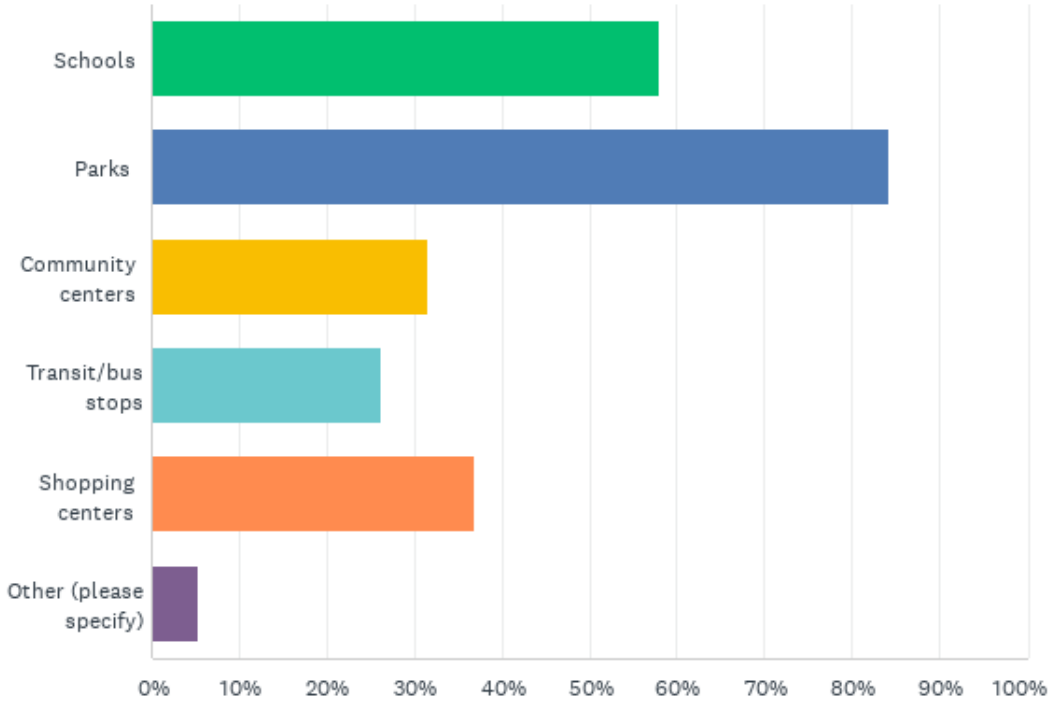


FIGURE 3-5: Where would you like to see better pedestrian and bicycle routes?



What would make it easier for you to walk more in the City of Artesia?

The same percentage of respondents (59%) indicated that continuous sidewalks and walking trails would make walking in the City easier; 47% indicated street lighting; 41% indicated street trees/ parkways; 29% indicated wider sidewalks; 24% indicated marked crosswalks, and 6% mentioned that things are too far, there are no trees, and is too hot to walk.

What would make it easier for you to bike more in the City of Artesia?

A little over half of the respondents (53%) indicated that having bike paths away from streets would make biking around Artesia easier; the same percentage of respondents (47%) indicated bike parking and bike lanes on the street; 24% indicated lighting and bike share; 12% indicated street trees, and one of the respondents mentioned that none of the options available would make it easier to bike more in Artesia.

What would make it easier for you to reach transit stops in the City of Artesia?

42% of respondents indicated bike lanes on street, bike paths away from the street, and improved sidewalks; 35% indicated lighting; 29% indicated shuttle service; 24% indicated bus shelters; 18% indicated street trees; 1 participant mentioned that none of the options and another that was not interested.

When you walk, bike, or roll, do you do it for?

100% indicated they do it as a form of recreation/ fun and to stay healthy; additionally, 24% also indicated they do it to commute; another 18% do it out of necessity, and 6% mentioned getting to the store.

What other methods of transportation/travel do you use?

The most popular alternative method of travel was Uber/Lyft with 46%; followed by pushing a stroller, with 39%; and scooters with 31%

What other forms of transportation would encourage you to visit city destinations more frequently?

64% indicated Light-Rail Train; 57% indicated Uber/ Lyft; 50% indicated bike share or scooters; 43% indicated multi-passenger shuttle (i.e. vanpool or bus); 36% indicated Neighborhood Electric Vehicle (NEV); 29% indicated dial-a-ride; and 7% indicated paratransit. Additionally, 1 respondent mentioned they would like parking in little India.

Additional comments concerning active transportation in the City of Artesia:

- A concern about the Downtown area and how having to pay for parking may unfairly burden businesses that provide goods and services.
- Other concerns included the cleanliness of various project areas.

FIGURE 3-6: What would make it easier for you to walk more in Artesia?

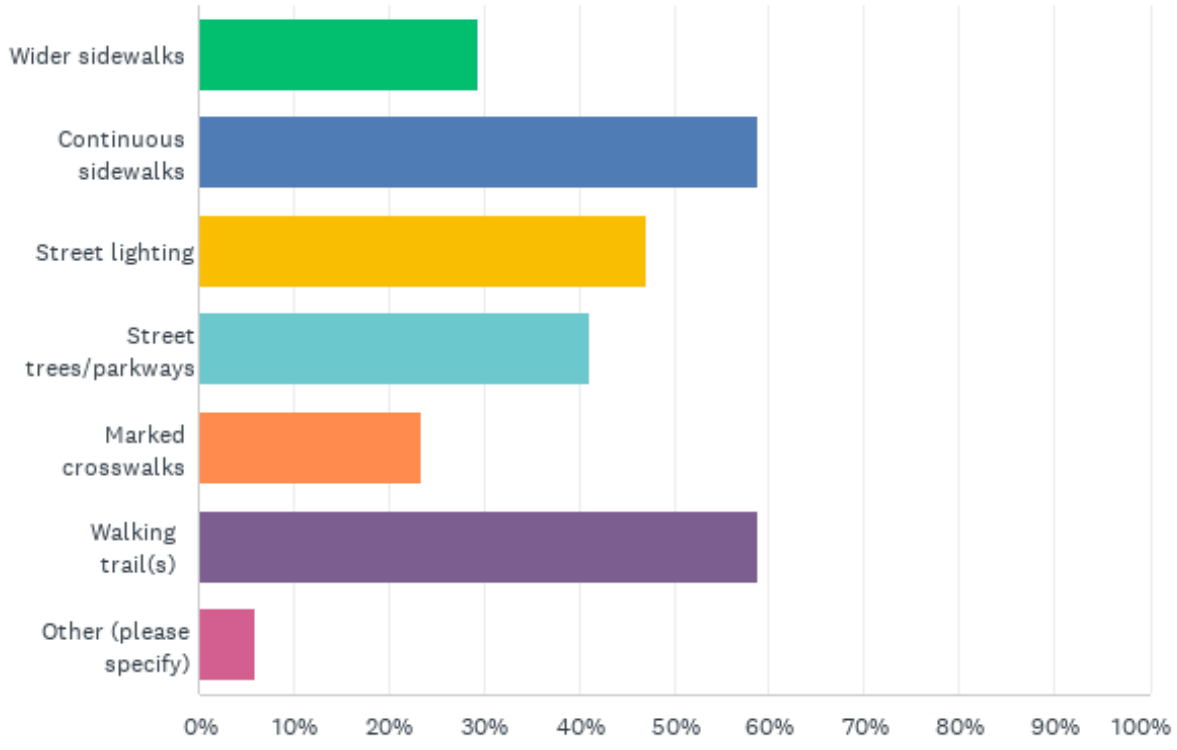
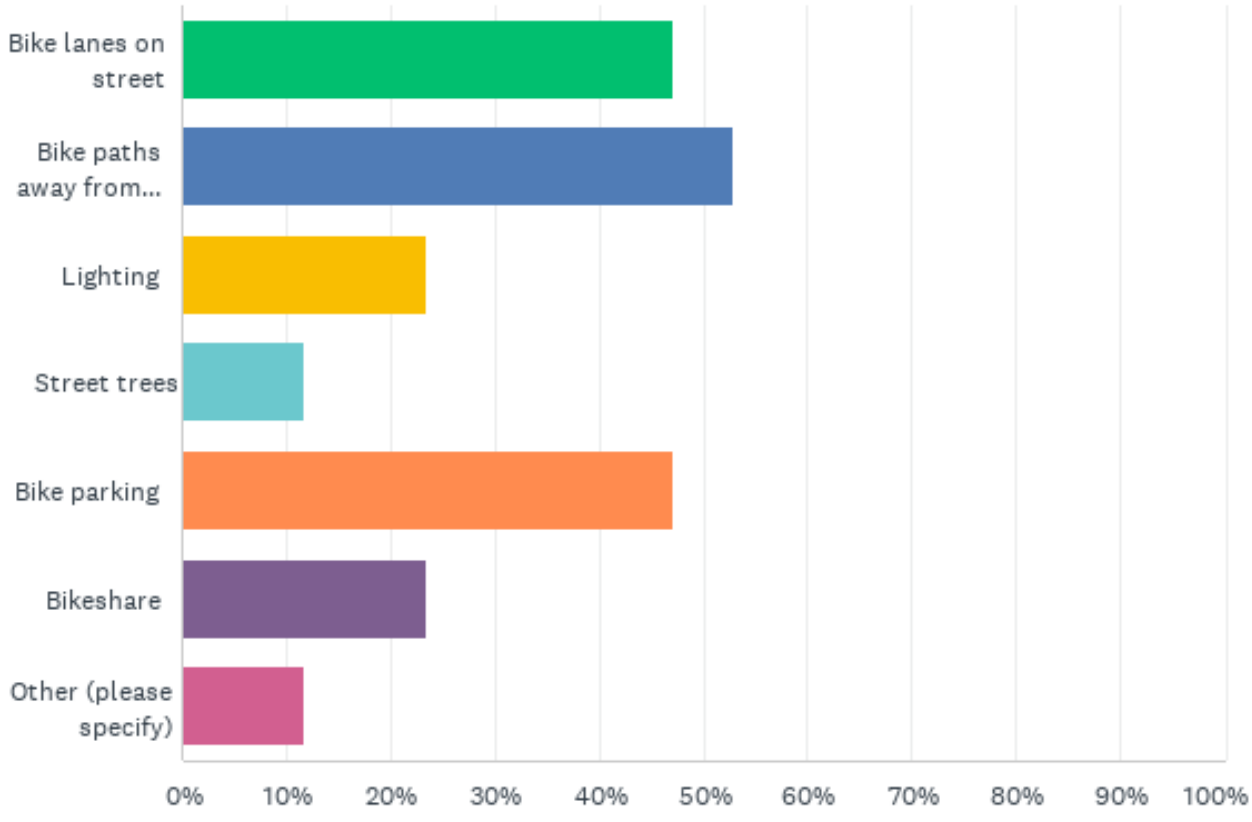


FIGURE 3-7: What would make it easier for you to bike more in Artesia?



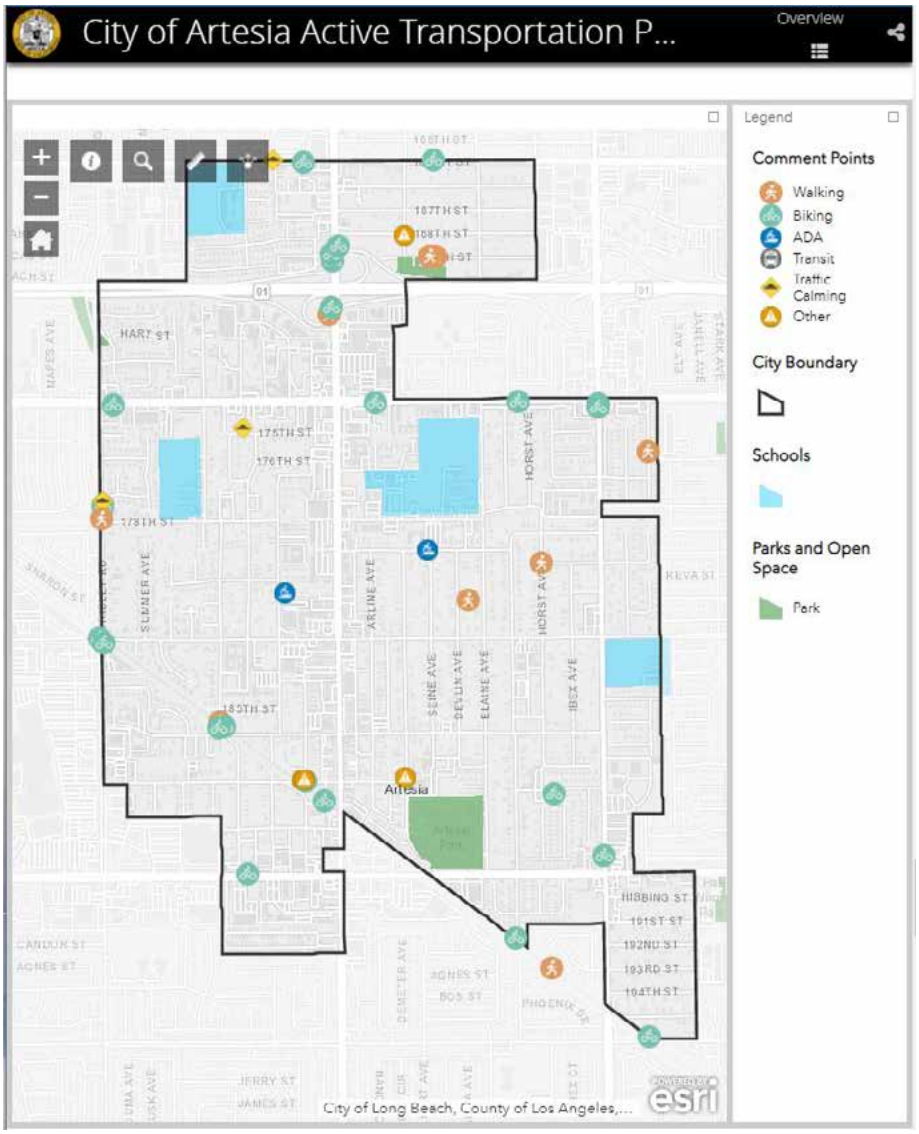
3.2.3 ONLINE MAP SURVEY

An online Story Map was created as a supplemental method to inform Artesia residents about the project, provide updates, and to participate in online surveys. An interactive comment map was also developed to allow residents to highlight location-specific issues.

A total of 43 comments were collected through the online comment map. The results were analyzed and used for the development of potential pedestrian and bikeway projects. Of the comments, 23 were bicycle-related, 10 were walking-related, four comments were related to traffic calming, two comments were related to ADA concerns, and four comments were categorized as other.

The map comments included:

- Connecting the northern part of Artesia to the southern part of the Artesia would be a great achievement of this project, as currently we can only access the south side by car.
- Love the trail, would like the trail to continue farther out to other cities.
- Can't trigger loop detector to make a left turn. Stuck here on my bike for multiple light cycles.
- Challenging/scary to bike through freeway ramps.
- Pairing traffic calming with bike lanes would allow for better connections to Cerritos College and the San Gabriel River bike trail.
- I would like the City to extend the walk/pike path through the City. This will require coordination with the City of Cerritos to ensure that the walk/bike path extends from Gridley to Ely and hopefully inspires the City of Cerritos to extend the path beyond our City borders naturally. The current walk/bike path is very nice visually and offers a great way for our residents to move around the City without getting in their cars + getting their daily exercise safely.
- I think this should also have been striped as a continental/ladder crosswalk. It's really not that visible from a distance. Or consider a raised crosswalk or even a roundabout to slow traffic.



Comment map screenshot from Project Story Map

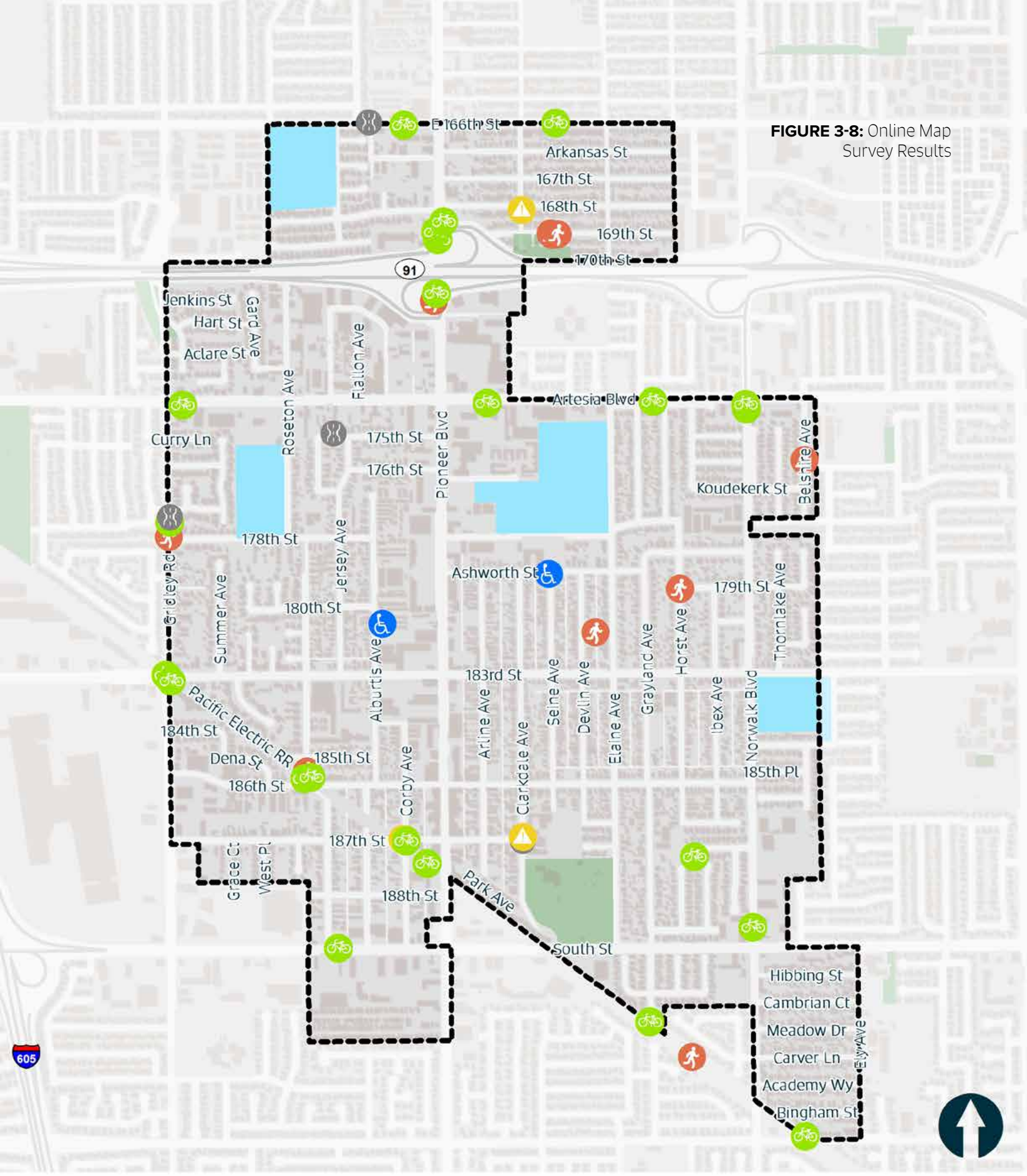


FIGURE 3-8: Online Map Survey Results

Online Map Survey Results

- ADA
- Walking
- Biking
- Traffic Calming
- Other
- City Boundary

Data Source: KTUA, 2021

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Chapter 4
Recommended Projects

4.1 Recommendations Overview

This chapter addresses infrastructure and programmatic improvements recommended to enhance bicycling and walking in Artesia. The recommendations include both short-term and long-term improvements and are meant to help the City allocate funds as they become available through various sources. The chapter contains maps, tables, and infographics that communicate improvement location, type, and extent.

It is important to note that the success of recommended projects is closely tied to programs and adopted standards, codes, and policies. The Six E's (Engineering, Education, Encouragement, Enforcement, Equity and Evaluation) can be used to leverage investments in these projects. Similarly, the effectiveness of bicycle and pedestrian programs is maximized by actual project implementation. Changes to city standards, codes, and policies may be needed to implement bicycle and pedestrian improvements. Project implementation may, in turn, facilitate changes to city standards, codes, and policies.

4.2 Active Transportation Infrastructure

Suggested active transportation infrastructure addresses a variety of issues identified in the analysis and community engagement process. They aim to enhance connectivity to transit, school zones, senior zones, activity centers, parks, and other community destinations. Pedestrian improvements help ensure equitable multi-modal transportation because they serve populations that may not be able to afford a bicycle, are not likely to ride a bicycle, or simply rely on walking to access transit services. Newer innovations like all-way pedestrian crossings, modified signal timing, and flashing beacons, are described in this chapter.

Providing safer and less stressful bicycle infrastructure is a major focus across the nation. Significant transformation in the state of practice for bicycle travel has occurred over the last five years. Much of this may be attributed to bicycling's changing role in the overall transportation system. No longer viewed as an "alternative" mode, it is increasingly considered as conventional transportation that should be actively promoted as a means of achieving community environmental, social, and economic goals. While connectivity and convenience remain essential bicycle travel quality indicators, recent research indicates the increased acceptance and practice of daily bicycling will require "low-stress" bicycle routes, which are typically understood to be those that provide bicyclists with separation from high volume and high-speed vehicular traffic. The route types recommended in this plan, and described in the following section, are consistent with this evolving state of practice.

4.2.1 CONVENTIONAL BICYCLE TREATMENTS

There are four conventional bikeway types recognized by the California Department of Transportation. Details of their design, associated wayfinding, and pavement markings can be found in the CA MUTCD and CA Highway Design Manual.

Class I: Multi-Use Paths

Class I multi-use paths (frequently referred to as "bicycle paths") are physically separated from motor vehicle travel routes, with exclusive rights-of-way for non-motorized users like bicyclists and pedestrians. They require physical buffers to ensure safety and comfort of the user.

Class II: 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 (although can be on the left side) and are between the adjacent travel lane and curb, road edge, or parking lane. They are not physically separated from motor vehicle traffic.

Class III: Bicycle Routes

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

Class IV: Separated Bikeways (Cycle Tracks)

Separated bikeways are bicycle-specific facilities that combine the user experience of a multi-use path with the on-street infrastructure of a conventional bicycle lane. Separated bikeways are physically separated from motor vehicle traffic and are designed to be distinct from any adjoining sidewalk. Physical protection measures can include raised curbs, parkway strips, reflective bollards, or parked vehicles. Separated bikeways can be either one-way or two-way, depending on the street network, available right-of-way, and adjacent land use. The safety of two-way separated bikeways must be carefully evaluated because few motor vehicle drivers are accustomed to two-way separated bikeways and they may tend to look only to the left when deciding whether it is safe to proceed across the separated bikeways.

Class I multi-use path

Class II bicycle lanes

Class III bicycle route

Class IV separated bikeway

4.2.2 ENHANCED BICYCLE TREATMENTS

While conventional bicycle facility types can be found throughout the United States, there has been a distinct shift towards further enhancement. For example, the CA MUTCD approved the installation of buffered bicycle lanes, while Shared Lane Markings or "Sharrows" have been in use since 2004 throughout the State.

These enhancements are low cost, easy to install, and provide additional awareness about the likely presence of bicyclists. In many instances, installation of these bicycle route enhancements can be coordinated as part of street resurfacing projects. The use of green markings has also become a simple and effective way to communicate the likely presence of bicyclists. It is also used to denote potential conflict zones between bicyclists and vehicles.

Buffered Bicycle Lanes

Buffered bicycle lanes provide additional space between the bicycle lane and traffic lane, parking lane, or both, to provide a more protected and comfortable space for bicyclists than a conventional bicycle lane. The buffering also encourages bicyclists to avoid riding too close to parked vehicles, keeping them out of the "door zone" where there is the potential danger of drivers or passengers suddenly opening doors into the bicyclists' path.

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 bicyclists and parked vehicles. Many cities install sharrows over a green background to enhance visibility.

Bike Boxes

A bike box is a designated area at the head of a traffic lane at a signalized intersection that provides bicyclists a safe and visible way to wait ahead of queuing traffic during the red signal phase. This positioning helps encourage bicyclists traveling straight through not to wait against the curb for the signal change.

Buffered bike lanes

Advisory bike lanes

Shared lane markings

Bike boxes

Advisory Bike Lanes

An advisory bike lane is a preferred space for bicyclists and motorists to operate on narrow streets that would otherwise be a shared roadway. Roads with advisory bike lanes accommodate low to moderate volumes of two-way motor vehicle traffic and provide a safer space for bicyclists with little or no widening of the paved roadway surface. Due to their reduced cross section requirements, advisory bike lanes have the potential to open up more roadways to accommodate comfortable bicycle travel.

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. Bicycle boulevard treatments use a combination of signs, pavement markings, traffic diverters, and traffic calming measures that help to discourage through trips by motor vehicle drivers and create safe, convenient bicycle crossings of busy arterial streets. They are similar to class III bicycle routes but tend to include more traffic calming and diversion infrastructure.

Signage and Wayfinding

Signage and wayfinding on all streets and bicycle routes are intended to identify routes to both bicyclists and drivers, provide destination information and branding, and to inform all users of changes in roadway conditions.

Colored Bicycle Lanes

Colored pavement increases the visibility of bicycle routes, identifies potential areas of conflict or transition, and reinforces bicyclists' priority in these areas. Colored pavement can be used as a corridor treatment, along the length of a bicycle lane or within a protected bikeway. Additionally, it can be used as a spot treatment, such as crossing markings at particularly complex intersections where the bicycle path may be unclear. Consistent application of color across a bikeway corridor is important to promote clear understanding for all roadway users.

Green Colored Transition Striping

Intersection or mid-block crossing markings indicate the intended path of bicyclists. Colored striping can be used to highlight conflict areas between bicyclists and vehicles, such as where bicycle lanes merge across motor vehicle turn lanes.

Colored bicycle lane

Bicycle boulevard

Signage and wayfinding

Green colored transition striping

Protected Intersections

Protected intersections maintain the integrity (low stress experience) of their adjoining separated bicycle lanes by fully separating bicyclists from motor vehicles at intersections. Hallmark features of these protected intersections include two-stage crossings supported by an advance queuing space, protective concrete islands, special bicycle-cross markings (parallel with crosswalks), and special signal phasing.

Protected intersection

Two-Stage Left Turn Queue Box

Two-stage turn queue boxes can provide a more comfortable left-turn crossing for many bicyclists because they entail two low stress crossings, rather than one potentially high stress one. They also provide a degree of separation from vehicular traffic, because they do not require merging with vehicle traffic to make left turns. Bicyclists wanting to make a left turn can continue into the intersection when they have a green light and pull into the green queue box. Bicyclists then turn 90 degrees to face their intended direction and wait for the green light of a new signal phase to continue through.

Bicycle Signals

This category includes all types of traffic signals directed at bicyclists. These can include typical green/yellow/red signals with signage explaining the signal controls, or special bikeway icons displayed within the signage lights themselves. Nearside bicycle signals may incorporate a "countdown to green" display, as well as a "countdown to red."

Bicycle Detection

Bicycle detection is used at intersections with traffic signals to alert the signal controller that a bicycle crossing event has been requested. Bicycle detection can occur either through the use of push buttons or by automated means and are marked by standard pavement symbols.

Two-stage left turn queue box

Bicycle signals

Bicycle detection

4.2.3 TRAFFIC CALMING

Traffic calming involves changes in street alignment, installation of barriers, and other physical measures to reduce traffic speeds and/or cut-through motor vehicle traffic volumes. The intent of traffic calming is to alter driver behavior and to improve street safety, livability, and other public purposes. Other techniques consist of operational measures such as police enforcement and speed displays. The following examples provided are traffic calming measures that may apply to Artesia.

Roundabouts/Traffic Circles

A roundabout is a circular intersection with yield control at its entry that allows a driver to proceed at controlled speeds in a counter-clockwise direction around a central island. Roundabouts are designed to maximize motorized and non-motorized traffic through their innovative design that includes reconfigured sidewalks, bikeway bypasses, high-visibility crosswalks, pedestrian flashing beacons, and other traffic measures. Roundabouts can be implemented on most streets but may require additional right-of-way.

A traffic circle is a small-scale traffic calming measure commonly applied at uncontrolled intersections on low volume, local residential streets. They lower traffic speeds on each approach and typically avoid or reduce right-of-way conflicts because the overall footprint is smaller compared to roundabouts. Traffic circles may be installed using simple markings or raised islands but are best accompanied with drought-tolerant landscaping or other attractive vertical elements.

Signals and Warning Devices

Traditional pedestrian signals with countdown timers remain the gold standard for high quality pedestrian crossings, although some cases warrant new signal technologies. Pedestrian Hybrid Beacons (PHBs) and Rectangular Rapid Flashing Beacons (RRFBs) are special signals used to warn and control traffic at unsignalized locations to assist pedestrians in crossing a street via a marked crosswalk. PHBs include a "red phase" requiring vehicles to come to a full stop while RRFBs are yield stops. Either of these devices should be installed at locations that have pedestrian desire lines and that connect people to popular destinations such as schools, parks, and retail. Research has shown that PHBs tend to have a 90 percent motorist compliance rate versus RRFBs, which tend to have an 80 percent motorist compliance rate. Traditional pedestrian signals with countdown timers at signalized intersections tend to have a near 100 percent compliance rate.

Signals and warning devices should be paired with additional pedestrian improvements where appropriate, such as curb extensions, enhanced crosswalk markings, lighting, median refuge islands, corresponding signage, and advance yield markings to mitigate multiple threat crashes on multi-lane roadways.

Speed Tables/Raised Crosswalks

Speed tables are flat-topped road humps, often constructed with textured surfacing on the flat section. Speed tables and raised crosswalks help to reduce vehicle speeds and enhance pedestrian safety.

Traffic circle

Signal and warning devices

Speed table

Speed display

Speed Displays

Speed displays measure the speed of approaching vehicles by radar and inform drivers of their speeds using an LED display. Speed displays contribute to increased traffic safety because they are particularly effective in getting drivers traveling ten or more miles per hour over the speed limit to reduce their speed.

Chicanes

Chicanes are a series of narrowings or curb extensions that alternate from one side of the street to the other forming an S-shaped path. Chicanes reduce drivers' speeds by causing them to shift their horizontal path of travel.

Traffic Diverters

A traffic diverter is a roadway design feature placed in a roadway to prohibit vehicular traffic from entering into or exiting from the street, or both.

On-Street Edge Friction

Edge friction is a combination of vertical elements such as on-street parking, bicycle routes, chicanes, site furnishings, street trees, and shrubs that reduce the perceived street width, which has been shown to reduce motor vehicle speeds.

Traffic diverter

Enhanced crosswalk markings

4.2.4 PEDESTRIAN TREATMENTS

Although most streets in Artesia have sidewalks, the network was evaluated to determine if appropriate sidewalk widths and American with Disabilities Act (ADA) compliant curb ramps were present. While many intersections are signalized and have crosswalks, there are some segments with long blocks without convenient crossing places. Providing crossing treatments will help to reduce unpredictable crossings between intersections.

Enhanced Crosswalk Markings

Enhanced crosswalk markings with perpendicular striping in addition to parallel stripes can be installed at existing or proposed crosswalk locations. They are designed to both guide pedestrians and to alert drivers of a crossing location. The bold pattern is intended to enhance visual awareness.

Curb Extensions

Also called bulb-outs or neck-downs, curb extensions extend the curb line outward into the travel way, reducing the pedestrian crossing distance. Typically occurring at intersections, they increase pedestrian visibility, reduce the distance a pedestrian must cross, and reduce vehicular delay. Curb extensions must be installed in locations where they will not interfere with bicycle lanes or separated bikeways. If both treatments are needed, additional design features such as ramps, or half-sized curb extensions should be considered.

Refuge Island

Refuge islands provide pedestrians and bicyclists a relatively safe place within an intersection and midblock crossing to pause and observe before crossing the next lane of traffic.

Mid-block Crossings

Mid-block crossings provide convenient locations for pedestrians and bicyclists to cross thoroughfares in areas with infrequent intersection crossings or where the nearest intersection creates substantial out-of-direction travel. Mid-block crossings should be paired with additional traffic-control devices such as traditional Pedestrian Signals, PHBs, RRFBs, LED enhanced flashing signs, and/or refuge islands.

Leading Pedestrian Intervals (LPIs)

A Leading Pedestrian Interval (LPI) is a signal timing technique that typically gives pedestrians a three to seven second head start when entering a crosswalk with a corresponding green signal in the same direction of travel. LPIs enhance the visibility of pedestrians in the intersection and reinforce their right-of-way ahead of turning vehicles, especially in locations with a history of conflict. Generally, this leads to a greater likelihood of vehicles yielding. Depending on intersection volume and safety history, a normal right-turn-on-red (RTOR) might be explicitly prohibited during the LPI phase.

Mid-block crossing

Refuge island

Curb extensions

Lighting

Pedestrian-scale lighting provides many practical and safety benefits, such as illuminating the path and making crossing walkers and bicyclists more visible to drivers. Lighting can also be designed to be fun, artistic, and interactive.

Pedestrian Scramble

Pedestrian scrambles, also known as all-way pedestrian phases, stop vehicular traffic flow simultaneously in all directions to allow pedestrians to cross the intersection in any direction. They are used at intersections with particularly heavy pedestrian crossing levels. Unless cycle lengths can be kept under 90 seconds, Leading Pedestrian Intervals (LPIs) are generally preferred over pedestrian scrambles.

Modified Traffic Signal Timing

Adjusting the time, phasing, and actuation needed to cross high-volume and wide streets provides additional safety and comfort for pedestrians and bicyclists.

Senior Zones

Potential future city-designated senior zones can be enhanced with street signage, increased crossing times at traffic signals, benches, bus stops with shelters, and pedestrian lighting.

Transit Stop Amenities

Transit stop amenities such as shelters with overhead protection, seating, trash receptacles, and lighting are essential for encouraging people to make use of public transit.

Bus stop with shelter

Lighting

Pedestrian scramble

4.2.5 PLACEMAKING

The inclusion of placemaking urban elements such as parklets encourages walking and provides usable space for all ages. In many cities, these elements have helped transform urban villages and downtowns into walkable destinations. Continued coordination with local Artesia businesses and organizations, such as the great examples currently found in Downtown, may provide collaborative design and funding opportunities between the City, its businesses, residents, and visitors.

Parklets

Parklets are conversions of one or two parking spaces for outdoor seating and other amenities, improving the urban environment's aesthetics and streetscape.

Community Art

Displaying community art is a great way to display the context of the City and for its residents to participate in the community. Community art projects can range from a mural to an exhibit or sidewalk chalk.

Special Intersection Paving and Crosswalk Art

Special intersection paving and crosswalk art provide unique opportunities at intersections to highlight crossings or key civic or commercial locations, while breaking the visual monotony of asphalt. Intersection paving treatments and crosswalk art can integrate context-sensitive colors, textures, and scoring patterns.

Paving treatments and crosswalk art do not define a crosswalk and should not be seen as a safety measure. Standard transverse or longitudinal high visibility crosswalk markings are still required.

Furnishings and Public Art

Transit shelters, bicycle 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.

Community art

Crosswalk art

Parklets

Public art

4.2.6 NEW MOBILITY / CURB MANAGEMENT

The following section highlights several clean and shared mobility options that complement a comprehensive transportation network. These forms of transportation can provide alternatives to gas-powered, single occupancy cars for travel and help reduce air pollution and greenhouse gas emissions. Clean mobility and shared options also help address transportation equity by providing affordable transportation choices for lower-income households and those who are unable to drive or own a car.

Electric shuttles

Electric vanpool/carpool

Docked bikeshare

Scootershare

Electric Shuttles

Electric shuttles can help address gaps within a community by supplementing the existing transit network or by creating new transit routes where they currently don't exist. Depending on make and model, electric-powered shuttles can be used to offer transit services within a specified radius. Zero emission models reduce the carbon footprint by eliminating greenhouse gas emissions.

Electric Vanpool/Carpool

Vanpool and carpool programs have existed for several decades, but these services have evolved with the "electrification" the transportation industry is experiencing. Electric versions of typical 12 and 18-passenger vans are being welcomed as clean mobility options for communities.

Electric Carsharing Service

An electric carsharing service could be established by purchasing a fleet of electric cars. These cars could be rented by residents to address their transportation needs, such as commuting to work, running errands, or getting to medical appointments. The City would have its own EV charging infrastructure which could be combined with other electric mobility options such as electric shuttles and electric vanpool/carpool services.

Docked Bikeshare

Docked bikeshare is a shared transport service in which bicycles or e-bicycles are made available for shared use to individuals on a short term basis for a price or for free. Docked bikeshare systems typically include electric-assist bicycles that provide extra comfort for users. Docked bikeshare systems allow people to borrow a bike from a "dock" or station and return it to another dock belonging to the same system.

E-Scootershare

Scootershare programs are popular forms of shared transportation services that involve the rental of electric motorized scooters for short trips. These programs involve the use of a mobile app to look for, rent, pay, and park the rented scooter. Scootershare programs provide a high degree of flexibility for the individual user and can be an effective method for closing mobility gaps. Short trips to visit family members and access to schools, parks, commercial areas, and transit stops are all possible with a scootershare program.

FIGURE 4-1: Mobility Mini Hub for Urban Areas (Intersection Configuration)

FIGURE 4-2: Mobility Mini Hub for Semi-Urban Areas (Intersection Configuration)

FIGURE 4-3: Mobility Mini Hub for Semi-Urban Areas (Intersection Configuration)

4.3 Prioritization Process

The project prioritization procedure is a data-driven and interactive process consisting of cumulative scores derived from various criteria. The goal of project prioritization is to provide the City guidance on which projects to pursue for future design and funding endeavors such as yearly CIP discussions or grant opportunities like Caltrans' ATP program.

The criteria used are consistent with regional best practices and include:

- Proximity to schools, parks, commercial centers, and transit stops
- Pedestrian and bicycle collisions
- Census data such as youth population density, employment density, walk to work, bike to work, and vehicle ownership
- CalEnviroScreen 3.0

4.4 Bicycle and Pedestrian Recommendations

The following recommendations will help improve the active transportation modes of travel in Artesia. The proposed projects form a comprehensive, low stress network that includes bicycle facilities on major (arterial) streets and smaller (local) streets as well. These recommendations include many of the facility types and amenities referenced at the beginning of this chapter. Subsequent sections discuss the associated programs that help support this ATP's long-term goals.

Route implementation has no specific timeline, since the availability of funds for implementation is variable and tied to the priorities of the City's capital projects. If there is desire, recommended projects can be implemented at whatever interval best fits funding cycles or to take into consideration the availability of new information, new funding sources, updated collision statistics, updated CIP lists, etc.

The plan recommends a total of 17 bikeway projects, see Table 4-1. These projects would add 14 miles of new bikeways to the City. The recommended bikeways are depicted on Figure 4-1 by facility types and identification number accompanied with tables listing detailed information such as location, route type, and extent. The following project sheets provide a brief description, maps, and metrics associated with each of the top ten bikeway projects. These project sheets can be used to help guide future development, CIP projects, and grant pursuits.

Each of these proposed projects represent a variety of street types that currently lack safe access and mobility for pedestrians, bicyclists, and other non-motorized modes. These treatments are important to mending existing safety and connectivity gaps within the City's current bicycle network. They can be implemented at the interval that best fits funding cycles, City discretion, or to take into consideration the availability of new information, new funding sources, updated collision statistics, updated CIP lists, etc.

4.5 Top Ten Priority Projects

The prioritization process identified the top ten projects for the City of Artesia. Each priority project is analyzed further in the form of "Project Cutsheets" to determine appropriate recommendations that will help the City transform the corridors into safe and comfortable spaces. The project cutsheets include information such as brief descriptions, infographics, aerial imagery, and planning-level recommendations. Several corridors contain additional notes that highlight special circumstances that will require additional attention to implement certain elements. The City is encouraged to use these cutsheets to pursue future planning, design, and construction efforts.

The top ten projects were selected to help achieve state and local transportation goals, such as those outlined in the CTP 2050. Goals one through six from Figure 2 of the CTP 2050 are reflected in this ATP's project recommendations.

Class III bicycle route

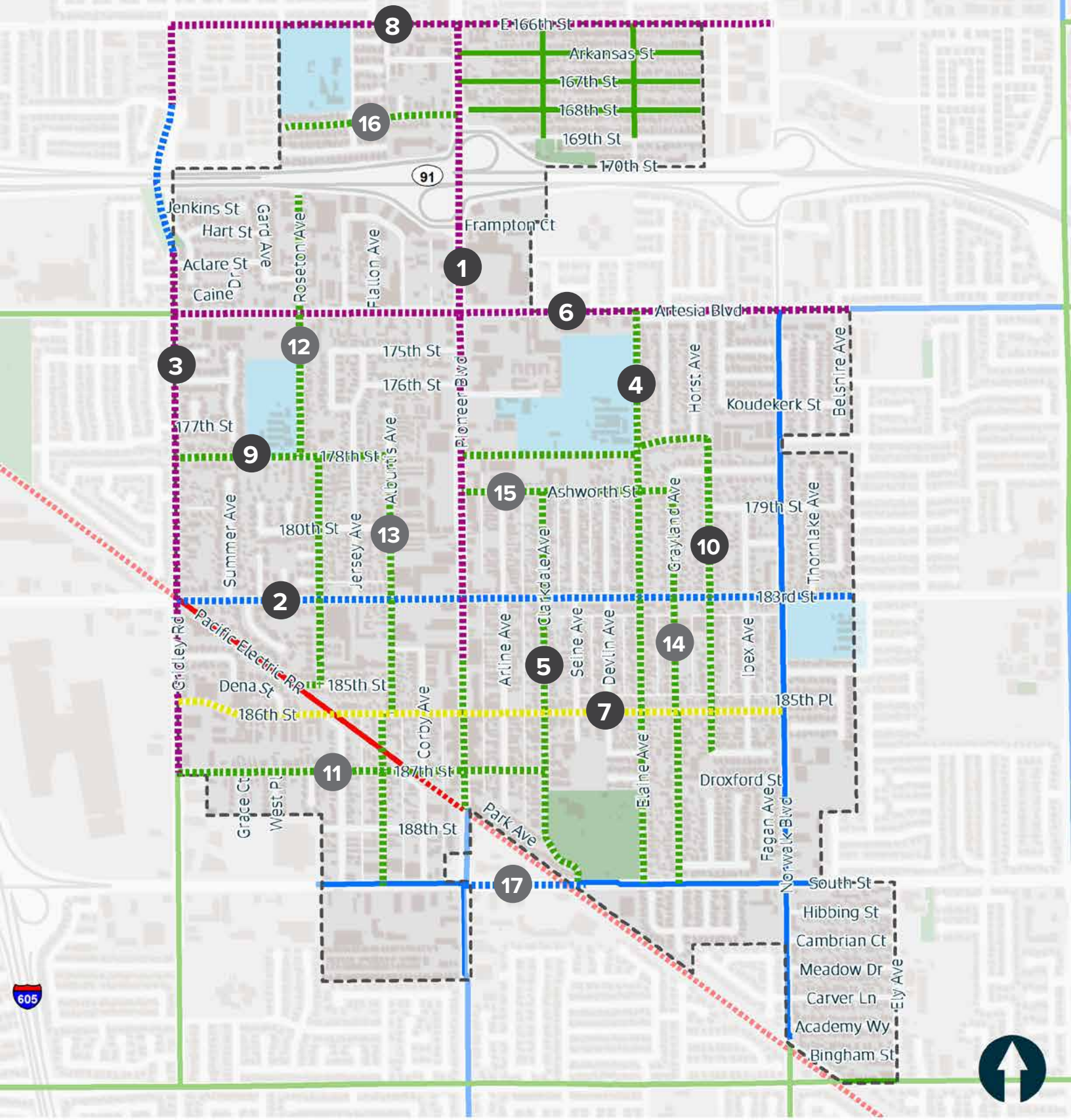
Class II bicycle lanes

Class IV separated bikeway

TABLE 4-1: Recommended Bikeway Projects

Rank	Corridor	Class Type	Miles	Between	
1	Pioneer Boulevard	Class III/IV	1.41	166th Street	South Street
2	183rd Street	Class II	1.19	Gridley Road	Cortner Avenue
3	Gridley Road	Class II/IV	1.32	166th Street	187th Street
4	Elaine Avenue	Class III	1.00	Artesia Boulevard	South Street
5	Clarkdale Avenue	Class III	0.72	Ashworth Street	South Street
6	Artesia Boulevard	Class II/IV	1.18	Gridley Road	Belshire Avenue
7	186th Street	Advisory BL	1.07	Gridley Road	Norwalk Boulevard
8	E 166th Street	Class II/IV	1.06	Gridley Road	Horst Ave
9	178th Street	Class III	0.68	Gridley Road	Elaine Avenue
10	Horst Avenue	Class III	0.67	Artesia Boulevard	187th Street
11	187th Street	Class III	0.64	Gridley Road	Clarkdale Avenue
12	Roseton Avenue	Class III	0.88	CA SR-91	185th Street
13	Alburtis Avenue	Class III	0.75	178th Street	South Street
14	Grayland Avenue	Class III	0.69	Ashworth Street	South Street
15	Ashworth Street	Class III	0.37	Pioneer Boulevard	Grayland Avenue
16	168th Street	Class III	0.31	City Boundary	Pioneer Boulevard
17	South Street	Class II	0.21	Pioneer Boulevard	Clarkdale Avenue

FIGURE 4-4: Proposed Bikeway Projects



Proposed Bikeways
- Class II: Bike Lane
- Class III: Bike Route
- Class IV: Separated Bike Lane
- Advisory Bike Lane

Existing Bikeways
- Class I: Multi-Use Path
- Class II: Bicycle Lanes
- Class III: Bicycle Routes

Previously Proposed Bikeways
- Class I: Multi-Use Path
- Class II: Bicycle Lanes

0 0.125 0.25 Miles

Project 1: Pioneer Blvd

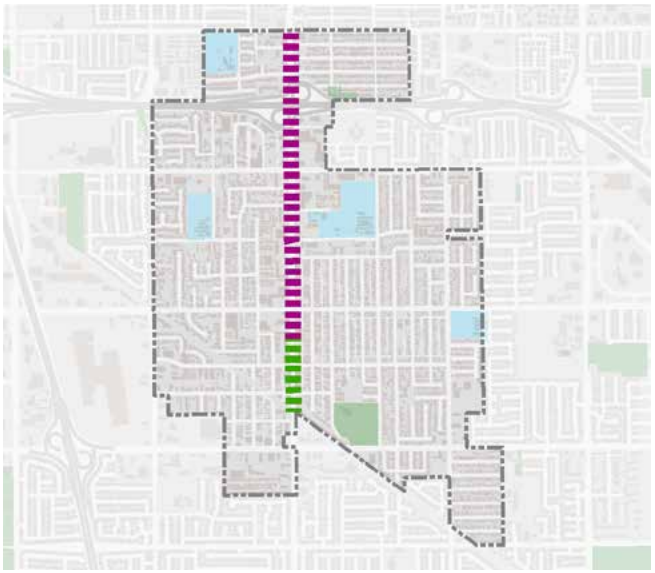
Class III Bike Route
Class IV Separated Bikeways
Cost Estimate: $1,716,500
Project Length: 1.41 miles

Existing Conditions

The Pioneer Boulevard corridor is located in central Artesia. The corridor runs north to south, connecting the entirety of the City. Pioneer Boulevard provides access to the City's downtown center, employment centers, and surrounding residential land uses. The highly trafficked corridor serves multiple transportation needs for motorists, pedestrians, bicyclists, and transit users such as access to transit stops and the existing Artesia Bike Path. The corridor has experienced a high number of collisions involving pedestrians and bicyclists, notably near CA SR-91 interchange. Pioneer Boulevard provides access to the neighboring cities of Norwalk and Cerritos.

Recommendations

Recommendations for Pioneer Boulevard include Class IV separated bikeways and Class III bike routes. Class IV bikeways are recommended between 166th Street and 183rd Street. Class III bike routes are recommended from 183rd Street to the future West Santa Ana Branch Station. Recommendations also include enhanced green transition striping at key intersections and driveways, high-visibility crosswalks, and adjustments to traffic signal timing at key intersections. Long-term recommendations include careful consideration of the removal of the all-way pedestrian crossing at 186th, CA SR-91 interchange redesign, and the West Santa Ana Branch Light Rail Station project. Pedestrian improvements at key intersections include high-visibility crosswalks and wayfinding signage.



Potential Pedestrian Enhancements

Proposed Light Rail Station

Proposed Bikeways

Class I: Multi-Use Path

Class II: Bike Lane

Class III: Bike Route

Class IV: Separated Bike Lane

Existing Bikeways

Class I: Multi-Use Path

Class II: Bike Lane

Class III: Bike Route

Parks

Schools

City Boundary

Recommendations Key

Bicycle

Pedestrian

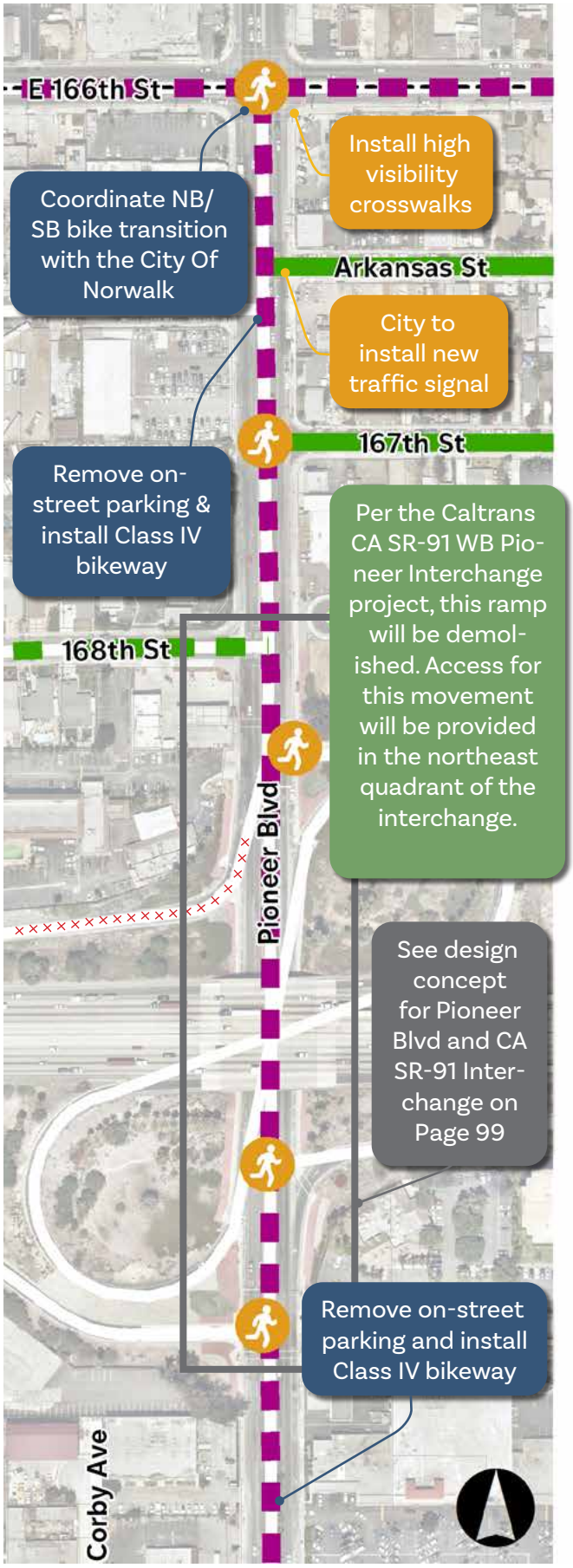
Other

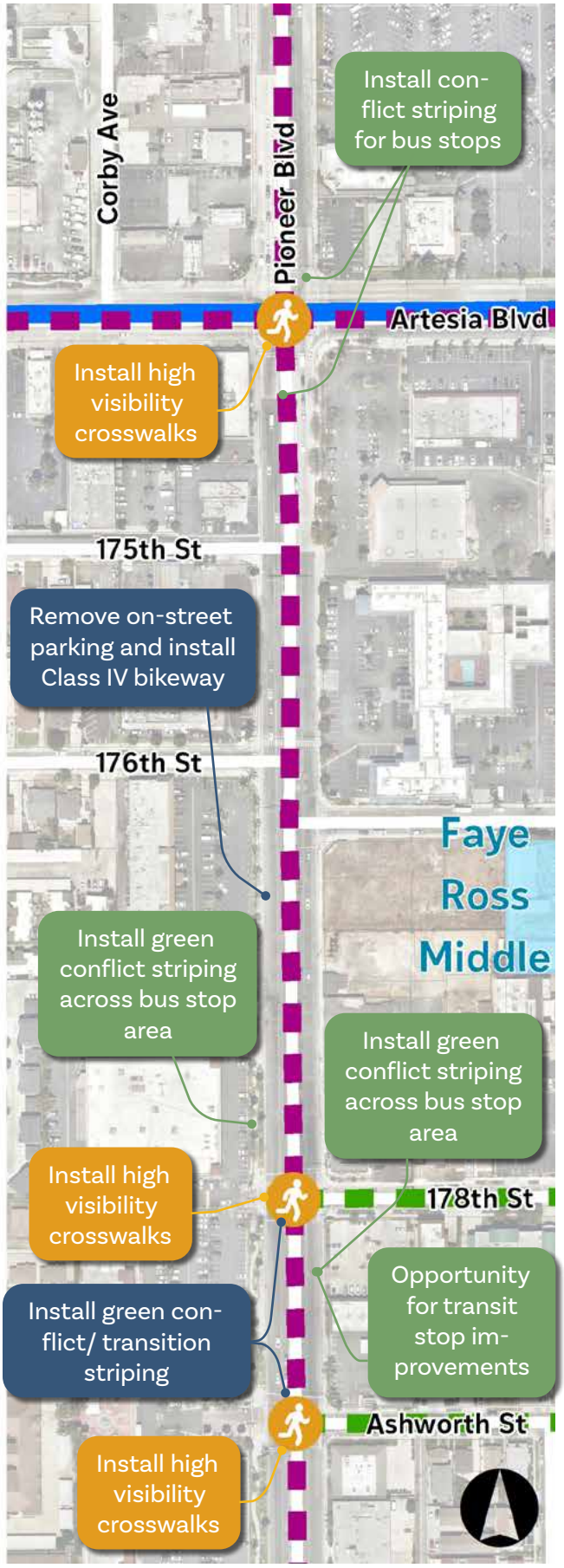
1
Schools

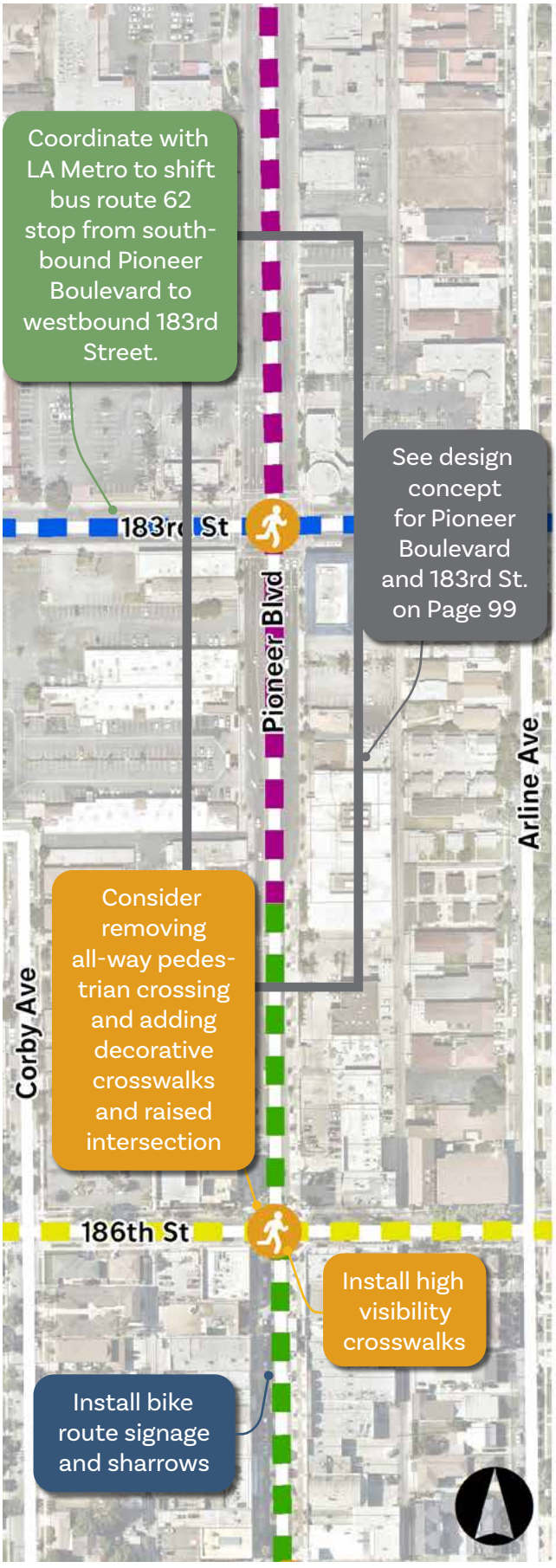
0
Park

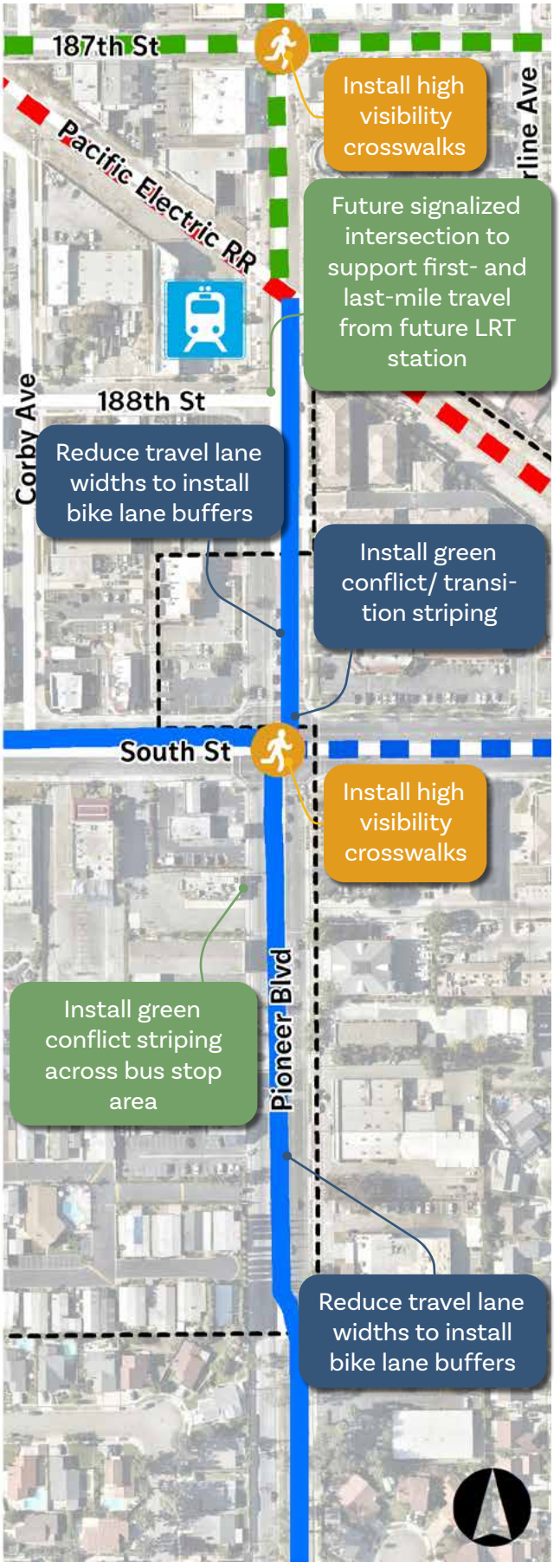
20
Intersection Improvements

17
Bike/Ped Collisions


E 166th St
Install high visibility crosswalks
Coordinate NB/ SB bike transition with the City Of Norwalk
Arkansas St
City to install new traffic signal
167th St
Remove on-street parking & install Class IV bikeway
Per the Caltrans CA SR-91 WB Pioneer Interchange project, this ramp will be demolished. Access for this movement will be provided in the northeast quadrant of the interchange.
168th St
Pioneer Blvd
See design concept for Pioneer Blvd and CA SR-91 Interchange on Page 99
Remove on-street parking and install Class IV bikeway
Corby Ave


Corby Ave
Pioneer Blvd
Install conflict striping for bus stops
Artesia Blvd
Install high visibility crosswalks
175th St
Remove on-street parking and install Class IV bikeway
176th St
Faye Ross Middle
Install green conflict striping across bus stop area
Install green conflict striping across bus stop area
Install high visibility crosswalks
178th St
Opportunity for transit stop improvements
Install green conflict/ transition striping
Ashworth St
Install high visibility crosswalks


Coordinate with LA Metro to shift bus route 62 stop from south-bound Pioneer Boulevard to westbound 183rd Street.
183rd St
Pioneer Blvd
See design concept for Pioneer Boulevard and 183rd St. on Page 99
Arline Ave
Corby Ave
Consider removing all-way pedes-trian crossing and adding decorative crosswalks and raised intersection
186th St
Install high visibility crosswalks
Install bike route signage and sharrows


187th St
Install high visibility crosswalks
Pacific Electric RR
Future signalized intersection to support first- and last-mile travel from future LRT station
188th St
Corby Ave
Reduce travel lane widths to install bike lane buffers
Install green conflict/ transi-tion striping
South St
Install high visibility crosswalks
Install green conflict striping across bus stop area
Pioneer Blvd
Reduce travel lane widths to install bike lane buffers

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Project 2: 183rd Street

Class II Bike Lanes
Cost Estimate: $3,949,800
Project Length: 1.19 miles

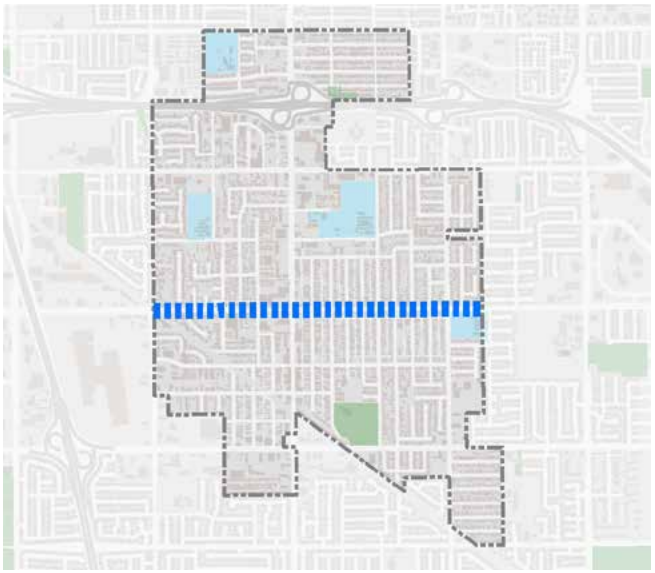
Existing Conditions

The 183rd Street corridor is located in central Artesia. The corridor runs west to east, connecting the entirety of the City. It provides direct access to the City's downtown center, commercial destinations, local school, and the Artesia Bike Path. The corridor serves multiple transportation needs for motorists, pedestrians, and transit users because it is one of the City's few uninterrupted corridors. The corridor has experienced a high number of collisions involving pedestrians, bicyclists, and motorists. 183rd Street provides access to the neighboring City of Cerritos.

Recommendations:

Recommendations for 183rd Street include Class II bike lanes between Gridley Road and the eastern city boundaries. The removal of on-street parking provides the space needed to stripe Class II bike lanes and any excess right-of-way can be used to add striped buffers where possible. Recommendations also include enhanced green transition striping at key intersections and driveways, high-visibility crosswalks, and adjustments to traffic signal timing at key intersections. Long-term recommendations include exploring traffic calming measures such as traffic circles at key intersections to minimize traffic speed.

Pedestrian improvements for the corridor include high-visibility crosswalks, wayfinding signage, and curb extensions.



Potential Pedestrian Enhancements

Proposed Light Rail Station

Proposed Bikeways

Class I: Multi-Use Path

Class II: Bike Lane

Class III: Bike Route

Class IV: Separated Bike Lane

Existing Bikeways

Class I: Multi-Use Path

Class II: Bike Lane

Class III: Bike Route

Parks

Schools

City Boundary

Recommendations Key

Bicycle

Pedestrian

Other

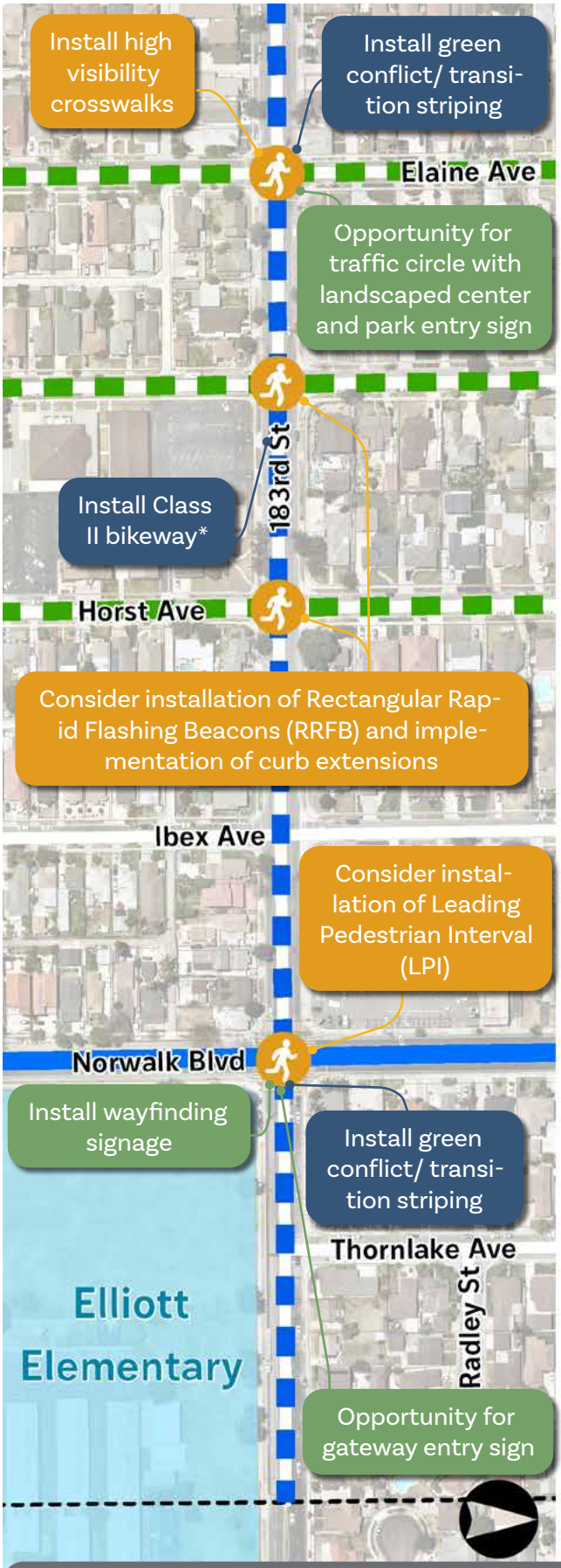
1
Schools

0
Park

20
Crosswalk Improvements

7
Bike/Ped Collisions

*Install Class II bikeway by either removing on-street parking or removing a travel lane in each direction and adding a two-way center turn lane. Cross-section will be determined pending coordination with public traffic study. Traffic study helps determine volume of vehicles and other users on a corridor.



*Install Class II bikeway by either removing on-street parking or removing a travel lane in each direction and adding a two-way center turn lane. Cross-section will be determined pending coordination with public traffic study. Traffic study helps determine volume of vehicles and other users on a corridor.

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Project 3: Gridley Road

Class II Bike Lane
Class IV Separated Bikeway
Cost Estimate: $2,407,500
Project Length: 1.32 miles

Existing Conditions

The Gridley Road corridor is located in western Artesia. The corridor runs north to south, connecting the entirety of the City. It provides convenient access to several commercial destinations, and the Artesia Bike Path. The corridor serves multiple transportation needs for motorists, pedestrians, and transit users because it is one of the City's few uninterrupted corridors. There are multiple collisions reported involving pedestrians, bicyclists, and motorists. Gridley Road provides access to the neighboring cities of Cerritos and Norwalk.

Recommendations

Recommendations for Gridley Road include Class II bike lanes and Class IV separated bikeways. The Class IV facility would cover the entire corridor except for the narrower section over the CA SR-91 overpass bridge; here, Class II bike lanes would provide added comfort and safety through this small section of the corridor. The City can consider phasing by first installing Class II buffered bike lanes and then upgrading them by installing permanent vertical barriers.

Coordination with City of Cerritos and City of Norwalk is essential to ensure bikeways and pedestrian enhancements are implemented due to the City boundaries being located along the centerline of Gridley Road. Pedestrian improvements for the corridor include high-visibility crosswalks, wayfinding signage, and curb extensions.

Potential Pedestrian Enhancements
Proposed Light Rail Station

Proposed Bikeways
Class I: Multi-Use Path
Class II: Bike Lane
Class III: Bike Route
Class IV: Separated Bike Lane

Existing Bikeways
Class I: Multi-Use Path
Class II: Bike Lane
Class III: Bike Route
Parks
Schools
City Boundary

Recommendations Key

Bicycle
Pedestrian
Other

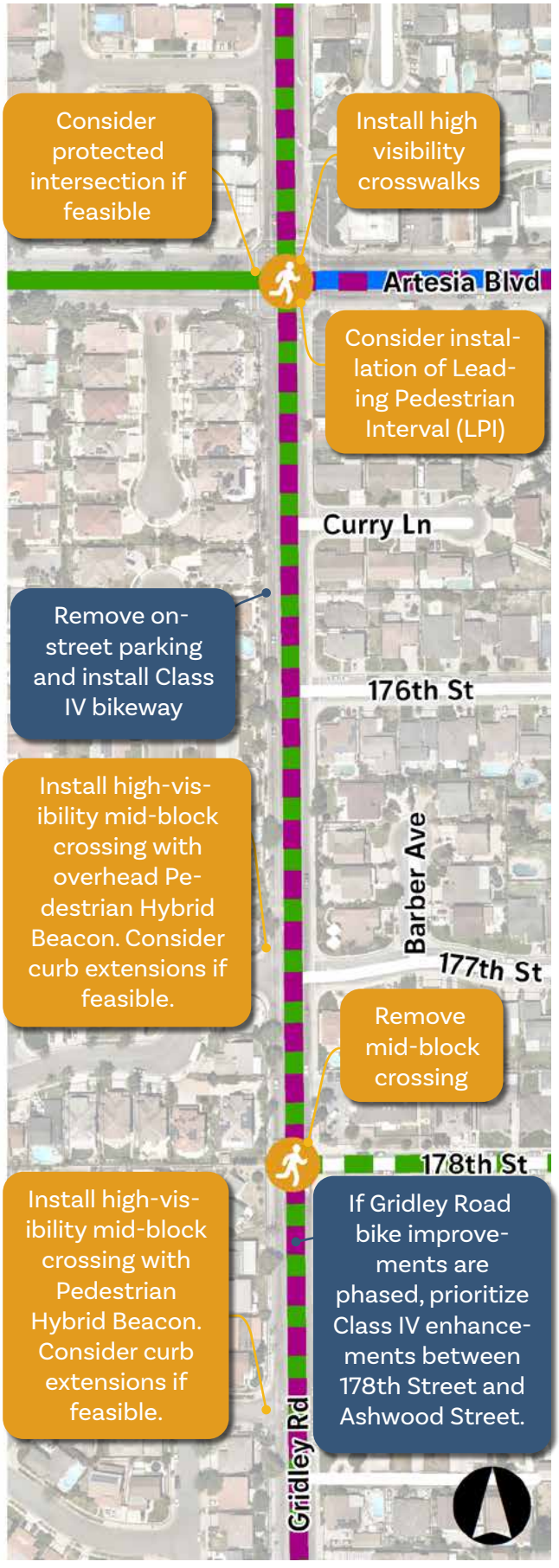
0
Schools

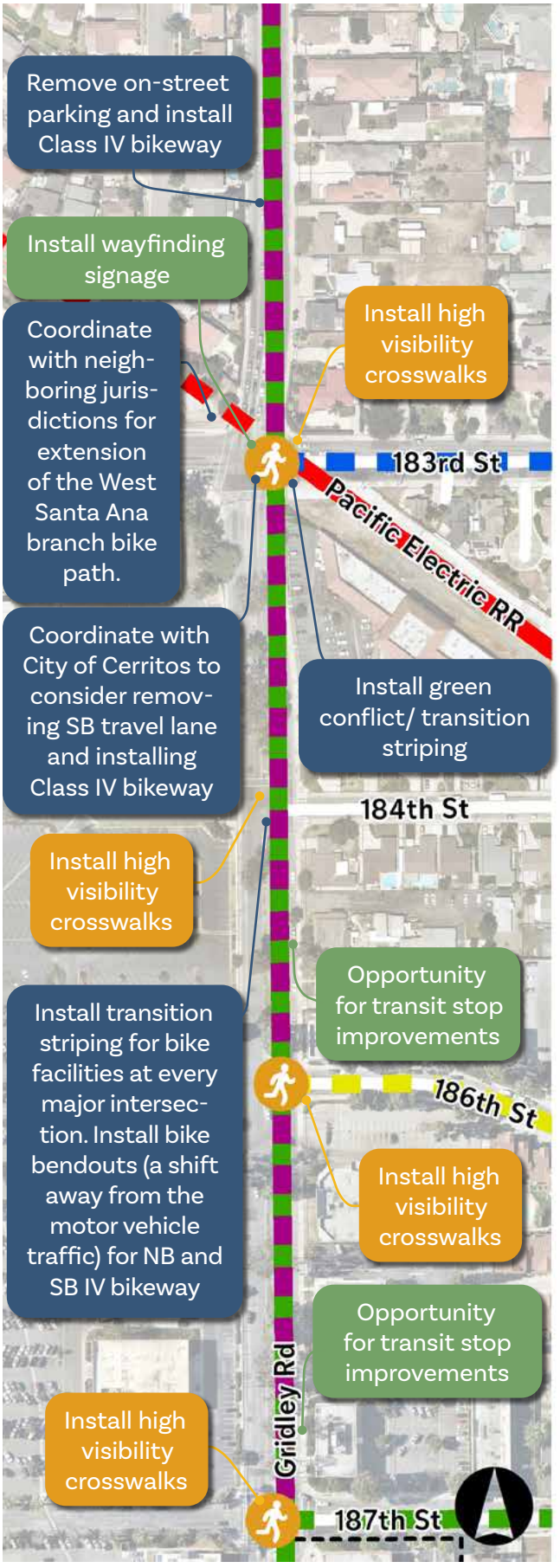
2
Park

16
Crosswalk Improvements

6
Bike/Ped Collisions


E 166th St
Install high visibility crosswalks; Coordinate with City of Norwalk and Cerritos for all improvements
Reduce lane widths and install Class IV bikeway
Gridley Rd
Install Class II bike lanes by narrowing lane widths to 10.5 feet. Coordinate with Caltrans to install necessary railing on west side of bridge overpass to be able to install bike lanes.
Ecology Park
Jenkins St
Hart St
Baber Park
Baber Ave
Remove on-street parking and install Class IV bikeway


Consider protected intersection if feasible
Install high visibility crosswalks
Artesia Blvd
Consider installation of Leading Pedestrian Interval (LPI)
Curry Ln
Remove on-street parking and install Class IV bikeway
176th St
Install high-visibility mid-block crossing with overhead Pedestrian Hybrid Beacon. Consider curb extensions if feasible.
Barber Ave
177th St
Remove mid-block crossing
178th St
Install high-visibility mid-block crossing with Pedestrian Hybrid Beacon. Consider curb extensions if feasible.
If Gridley Road bike improvements are phased, prioritize Class IV enhancements between 178th Street and Ashwood Street.
Gridley Rd


Remove on-street parking and install Class IV bikeway
Install wayfinding signage
Coordinate with neighboring jurisdictions for extension of the West Santa Ana branch bike path.
Coordinate with City of Cerritos to consider removing SB travel lane and installing Class IV bikeway
Install high visibility crosswalks
Install transition striping for bike facilities at every major intersection. Install bike bendouts (a shift away from the motor vehicle traffic) for NB and SB IV bikeway
Install high visibility crosswalks
Install high visibility crosswalks
Install high visibility crosswalks
Install green conflict/ transition striping
Opportunity for transit stop improvements
Opportunity for transit stop improvements
183rd St
184th St
186th St
187th St
Pacific Electric RR
Gridley Rd

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Project 4: Elaine Avenue

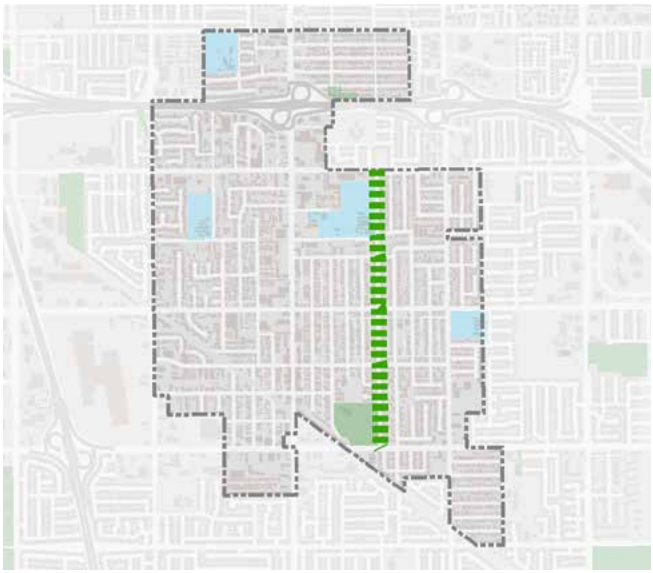
Class III Bike Route
Cost Estimate: $1,720,000
Project Length: 1.00 miles

Existing Conditions

The Elaine Avenue corridor is located in central Artesia. The corridor runs north to south, connecting a major residential core to various destinations in the City. It provides convenient access to several commercial destinations, a local school, and Artesia Park. The corridor primarily serves motorists, pedestrians, and bicyclists; there are no transit stops along the corridor. Collisions have been reported at the intersections of Artesia Boulevard, 183rd Street, and South Street.

Recommendations

Recommendations for Elaine Avenue include a Class III bike route. The bike route would be supported by the addition of sharrows and bike route signage. There is significant opportunity to brand this corridor as a neighborhood greenway (bike boulevard) with additional elements such as crosswalk art and unique wayfinding signage that correspond with Faye Ross Jr. High School and/or Artesia Park. The City can explore traffic calming measures such as planted traffic circles at key intersections. Pedestrian improvements for the corridor include high-visibility crosswalks and curb extensions.



Potential Pedestrian Enhancements
Proposed Light Rail Station

Proposed Bikeways
Class I: Multi-Use Path
Class II: Bike Lane
Class III: Bike Route
Class IV: Separated Bike Lane

Existing Bikeways
Class I: Multi-Use Path
Class II: Bike Lane
Class III: Bike Route
Parks
Schools
City Boundary

Recommendations Key

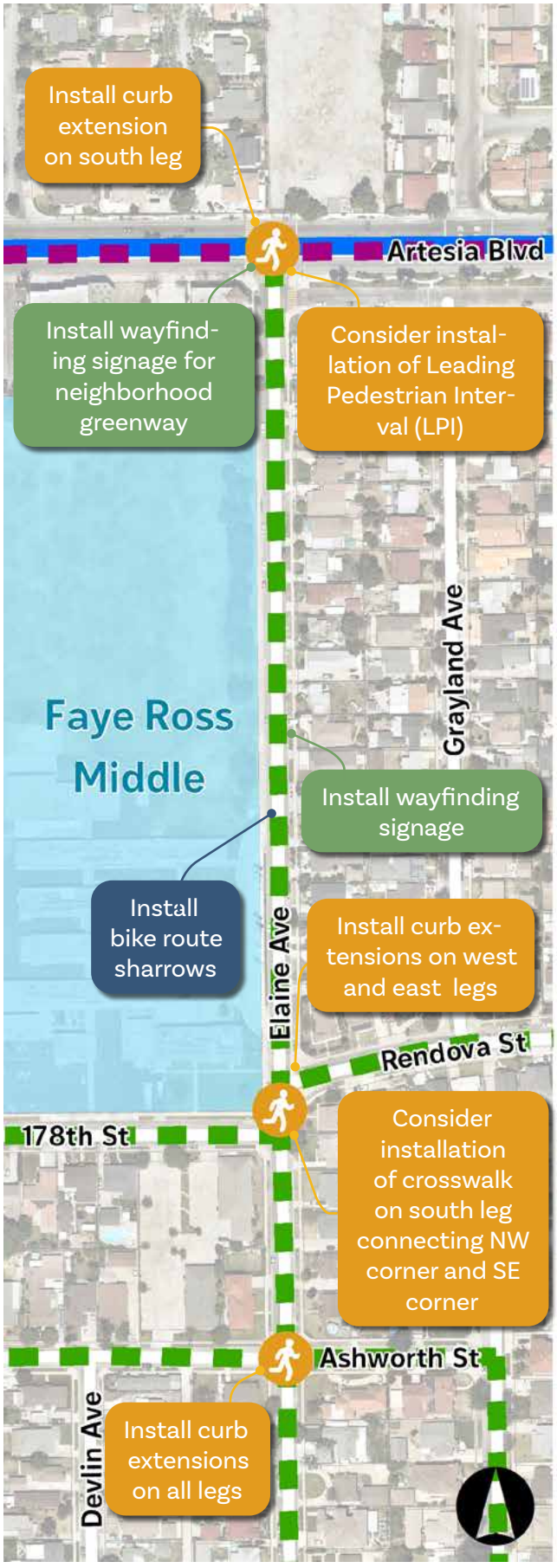
Bicycle
Pedestrian
Other

1
Schools

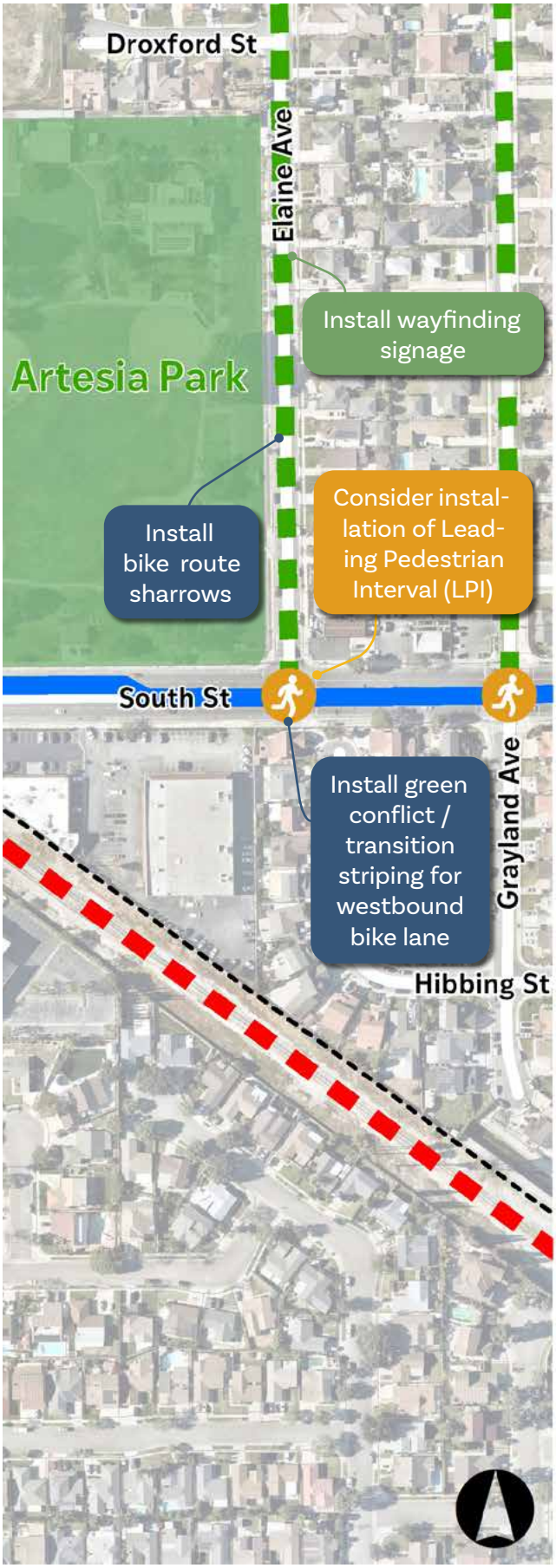
1
Park

18
Crosswalk Improvements

3
Bike/Ped Collisions


Install curb extension on south leg
Artesia Blvd
Install wayfinding signage for neighborhood greenway
Consider installation of Leading Pedestrian Interval (LPI)
Grayland Ave
Faye Ross Middle
Install wayfinding signage
Install bike route sharrows
Elaine Ave
Install curb extensions on west and east legs
Rendova St
178th St
Consider installation of crosswalk on south leg connecting NW corner and SE corner
Ashworth St
Devlin Ave
Install curb extensions on all legs


Install wayfinding signage
Install bike route sharrows
Install high visibility crosswalks
183rd St
Opportunity for traffic circle
Devlin Ave
Grayland Ave
Install bike route sharrows
Install wayfinding signage
Install high visibility crosswalks
186th St
Opportunity for traffic circle with landscaped center and park entry sign
Install curb extensions on all legs
Elaine Ave
187th St


Droxford St
Elaine Ave
Artesia Park
Install wayfinding signage
Install bike route sharrows
Consider installation of Leading Pedestrian Interval (LPI)
South St
Grayland Ave
Install green conflict / transition striping for westbound bike lane
Hibbing St

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Project 5: Clarkdale Avenue

Class III Bike Route
Cost Estimate: $1,465,400
Project Length: 0.72 miles

Existing Conditions

The Clarkdale Avenue corridor is located in central Artesia. The corridor runs north to south, connecting a major residential core to various destinations in the City. It provides convenient access to several commercial and civic destinations, local schools, and Artesia Park. The corridor primarily serves motorists, pedestrians, and bicyclists; there are no transit stops along the corridor. The corridor is important because it runs parallel to Arline Avenue and Pioneer Boulevard, providing alternative mobility options for residents. The corridor has experienced a high number of collisions, most notably at the intersection of 183rd Street as well as the intersection at 186th Street.

Recommendations

Recommendations for Clarkdale Avenue include a Class III bike route. The bike route would be supported by the addition of sharrows and bike route signage. There is significant opportunity to brand this corridor as a neighborhood greenway with additional elements such as crosswalk art and unique wayfinding signage that correspond with City Hall and/or Artesia Park. The City can explore traffic calming measures such as planted traffic circles at key intersections. Pedestrian improvements for the corridor include high-visibility crosswalks and curb extensions.

Potential Pedestrian Enhancements

Proposed Light Rail Station

Proposed Bikeways

Class I: Multi-Use Path

Class II: Bike Lane

Class III: Bike Route

Class IV: Separated Bike Lane

Existing Bikeways

Class I: Multi-Use Path

Class II: Bike Lane

Class III: Bike Route

Parks

Schools

City Boundary

Recommendations Key

Bicycle

Pedestrian

Other

0
Schools

1
Park

8
Crosswalk Improvements

8
Bike/Ped Collisions


Ashworth St
Install high visibility crosswalk on south leg
Install wayfin-ding signage for neighborhood greenway
Install bike route sharrows
Clarkdale Ave
Opportunity for traffic circle with landscaped center
183rd St
Arline Ave
Seine Ave
Install bike route sharrows


186th St
Seine Ave
Install pedestrian bulb outs
Arline
Opportunity for traffic circle with landscaped center and park entry sign
187th St
Install pedestrian bulb outs
Install bike route sharrows
Clarkdale Ave
Install wayfinding signage
Park Ave
Enhance pedestrian realm along park frontage
South St
Install green conflict / transition striping for westbound bike lane

Project 6: Artesia Boulevard

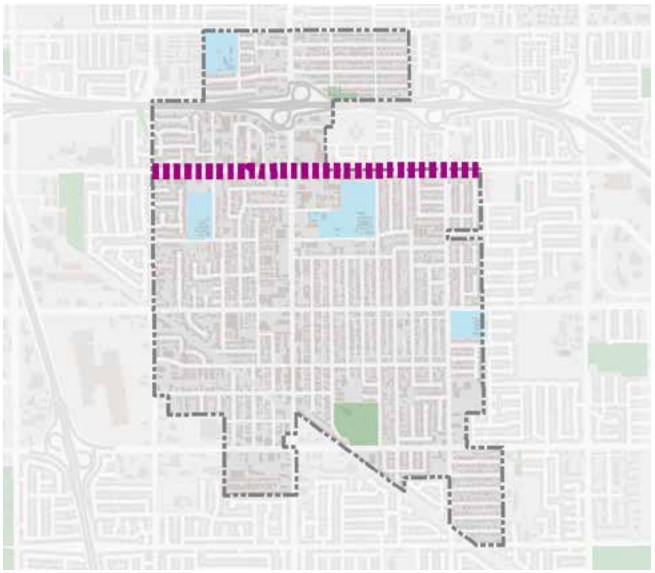
Class II Bike Lanes
Class IV Separated Bikeway
Cost Estimate: $985,800
Project Length: 1.18 miles

Existing Conditions

Artesia Boulevard is located in northern Artesia and runs west to east. Artesia Boulevard provides access to major commercial destinations, an elementary school, and residential neighborhoods. The highly trafficked corridor serves multiple transportation needs for motorists, pedestrians, bicyclists, and transit users. An existing Class II bike lane currently serves bicyclists heading west on the north side of Artesia Boulevard. The corridor has experienced many collisions involving pedestrians, bicyclists, and motorists, most notably at the intersection of Pioneer Boulevard. Artesia Boulevard provides access to the neighboring City of Cerritos.

Recommendations

Recommendations for Artesia Boulevard include upgrading the existing Class II bike lanes on the north side to Class IV separated bikeways. It is recommended to also install Class IV separated bikeways on the south side of the street where no bike facility currently exists. The City can consider project phasing by first installing Class II buffered bike lanes on the south side and then upgrading them by installing permanent vertical barriers. Additional coordination will be needed to verify on-street parking and remove it where necessary to install bikeways. Pedestrian improvements for the corridor include high-visibility crosswalks, wayfinding signage, and reassessing traffic signal timing.



Recommendations Key

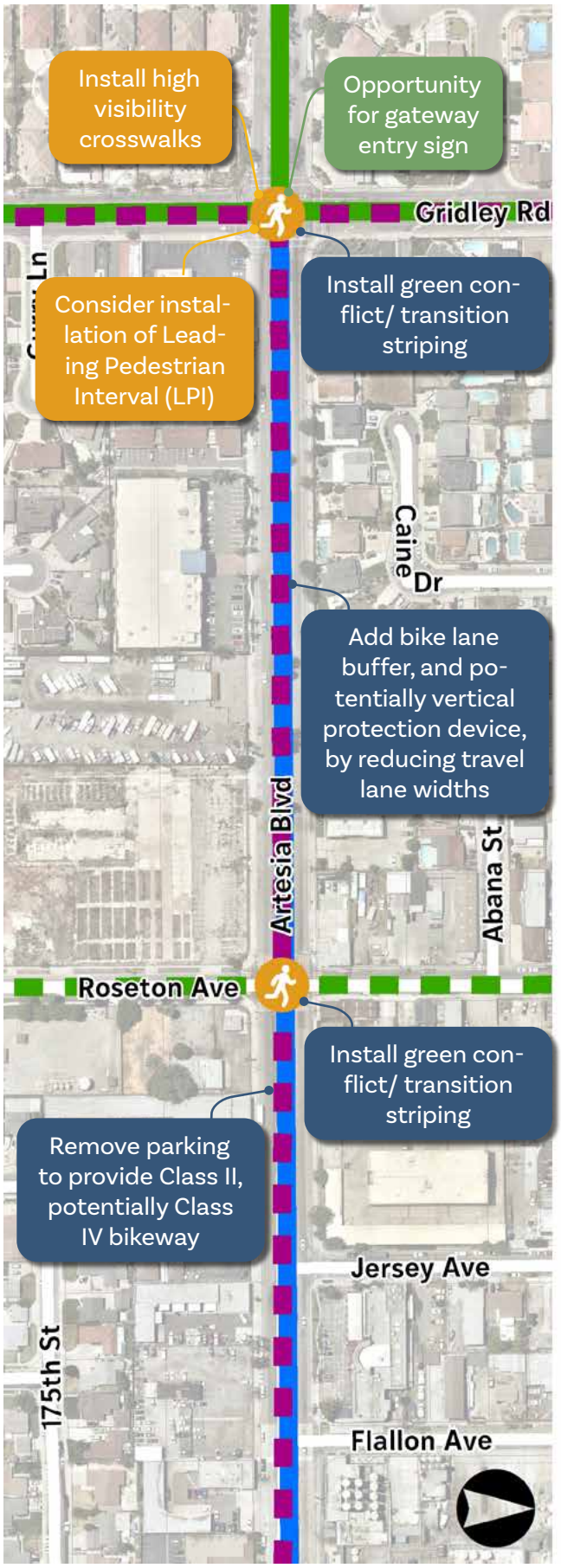
- Bicycle
- Pedestrian
- Other

1
Schools

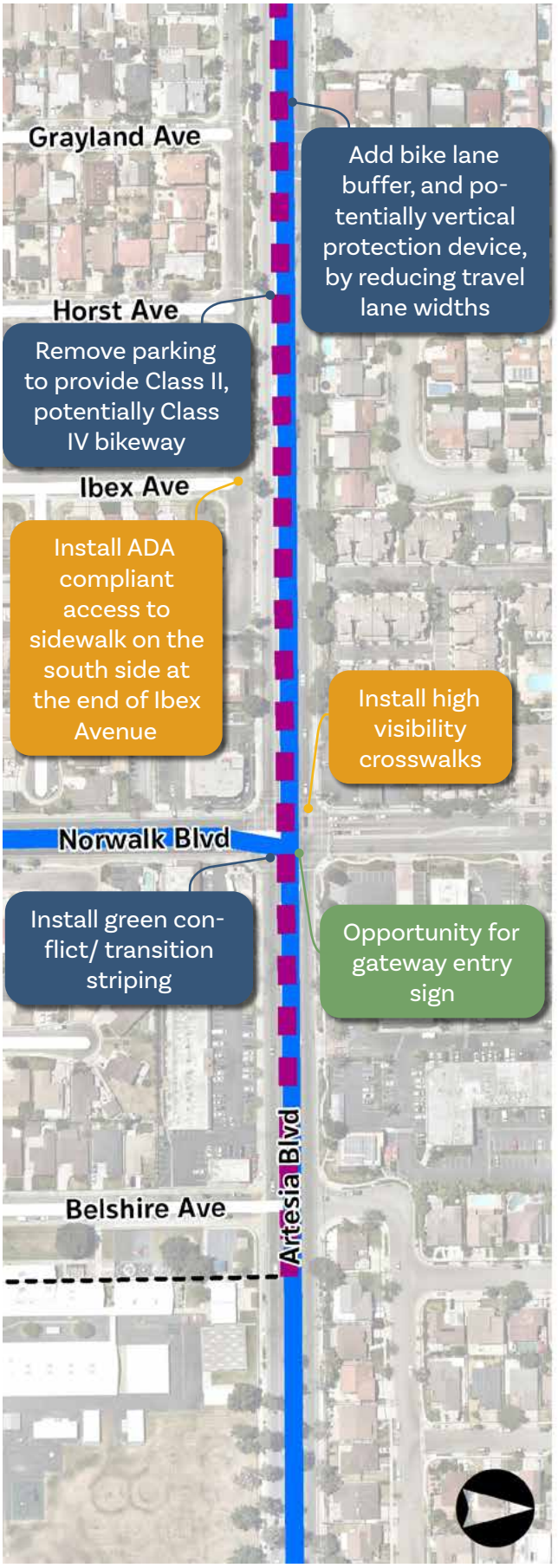
0
Park

11
Crosswalk Improvements

8
Bike/Ped Collisions


Install high visibility crosswalks
Opportunity for gateway entry sign
Gridley Rd
Consider installation of Leading Pedestrian Interval (LPI)
Install green conflict/ transition striping
Caine Dr
Add bike lane buffer, and potentially vertical protection device, by reducing travel lane widths
Artesia Blvd
Abana St
Roseton Ave
Install green conflict/ transition striping
Remove parking to provide Class II, potentially Class IV bikeway
Jersey Ave
175th St
Flallon Ave


Alburtis Ave
175th St
Corby Ave
Install high visibility crosswalks
Pioneer Blvd
Install green conflict/ transition striping
Remove parking to provide Class II, potentially Class IV bikeway
Consider installing a median refuge island, with Pedestrian Hybrid Beacon (PHB)
Faye Ross Middle
Add bike lane buffer, and potentially vertical protection device, by reducing travel lane widths
Artesia Blvd
Consider installation of Leading Pedestrian Interval (LPI)
Elaine Ave


Grayland Ave
Add bike lane buffer, and potentially vertical protection device, by reducing travel lane widths
Horst Ave
Remove parking to provide Class II, potentially Class IV bikeway
Ibex Ave
Install ADA compliant access to sidewalk on the south side at the end of Ibex Avenue
Install high visibility crosswalks
Norwalk Blvd
Install green conflict/ transition striping
Opportunity for gateway entry sign
Artesia Blvd
Belshire Ave

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Project 7: 186th Street

Advisory Bike Lanes
Class III Bike Route (Alternative)
Cost Estimate: $1,420,200
Project Length: 1.07 miles

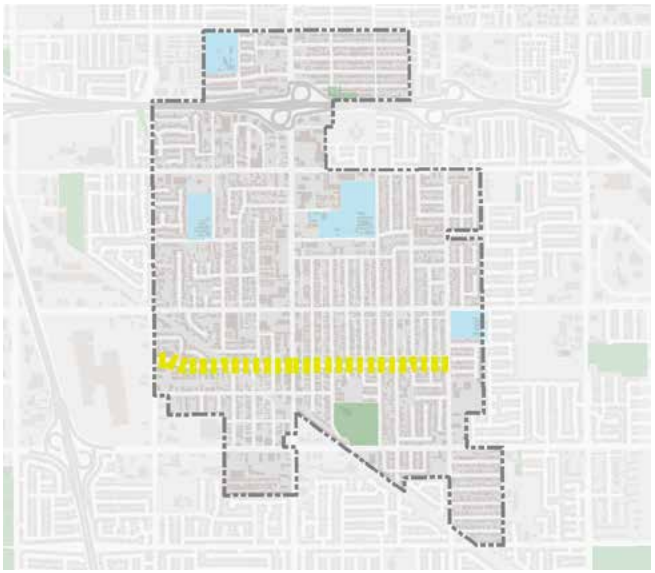
Existing Conditions

186th Street is located in south Artesia and runs west to east. 186th Street is a corridor that provides access to the downtown center, major commercial destinations, and residential areas. The corridor serves transportation needs for motorists and pedestrians. The corridor has experienced multiple collisions involving pedestrians, bicyclists, and motorists, most notably at the intersection of Pioneer Boulevard. 186th Street provides access to the neighboring City of Cerritos as well as the West Santa Ana Branch Trail.

Recommendations

Recommendations for 186th Street include advisory bike lanes between Gridley Road and Norwalk Boulevard. An Advisory Bike Lane defines a preferred space for bicyclists and motorists to operate on narrow streets that would otherwise be a shared roadway such as a Class III bike route. Roads with advisory bike lanes accommodate low to moderate volumes of two-way motor vehicle traffic and provide a prioritized space for bicyclists.

Pedestrian improvements at key intersections include high-visibility crosswalks, ADA curb ramps, and curb extensions.



Potential Pedestrian Enhancements

Proposed Light Rail Station

Proposed Bikeways

Class I: Multi-Use Path

Class II: Bike Lane

Class III: Bike Route

Class IV: Separated Bike Lane

Existing Bikeways

Class I: Multi-Use Path

Class II: Bike Lane

Class III: Bike Route

Parks

Schools

City Boundary

Recommendations Key

Bicycle

Pedestrian

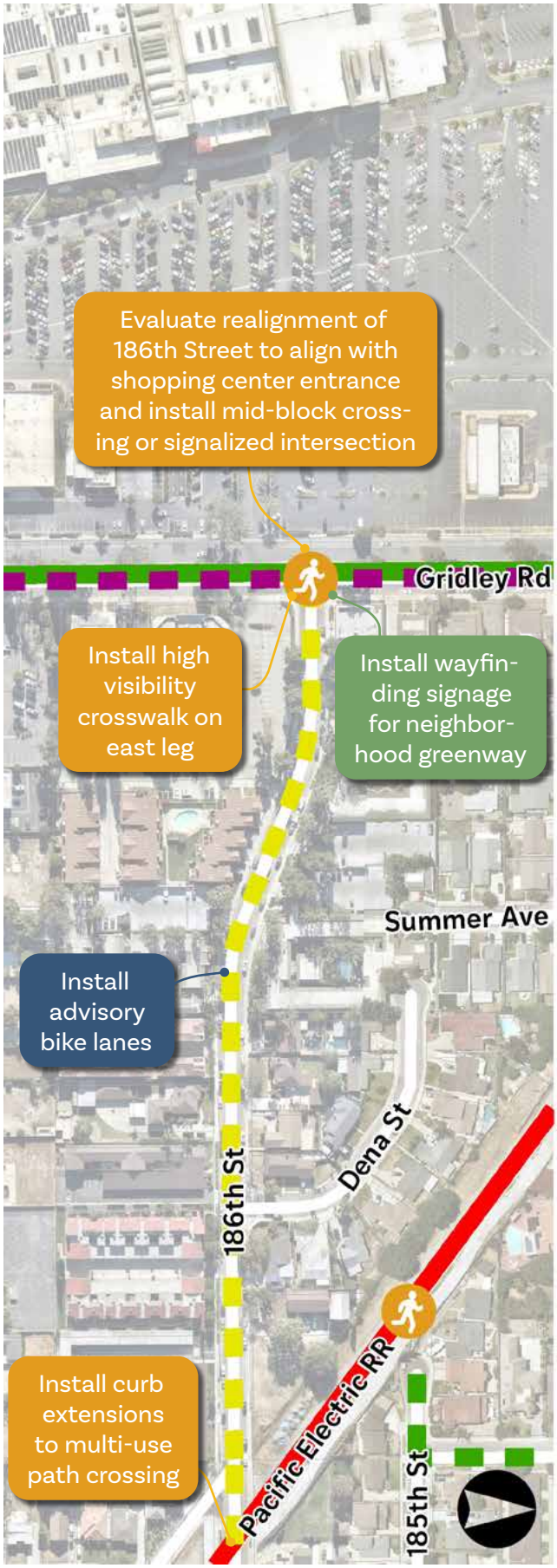
Other

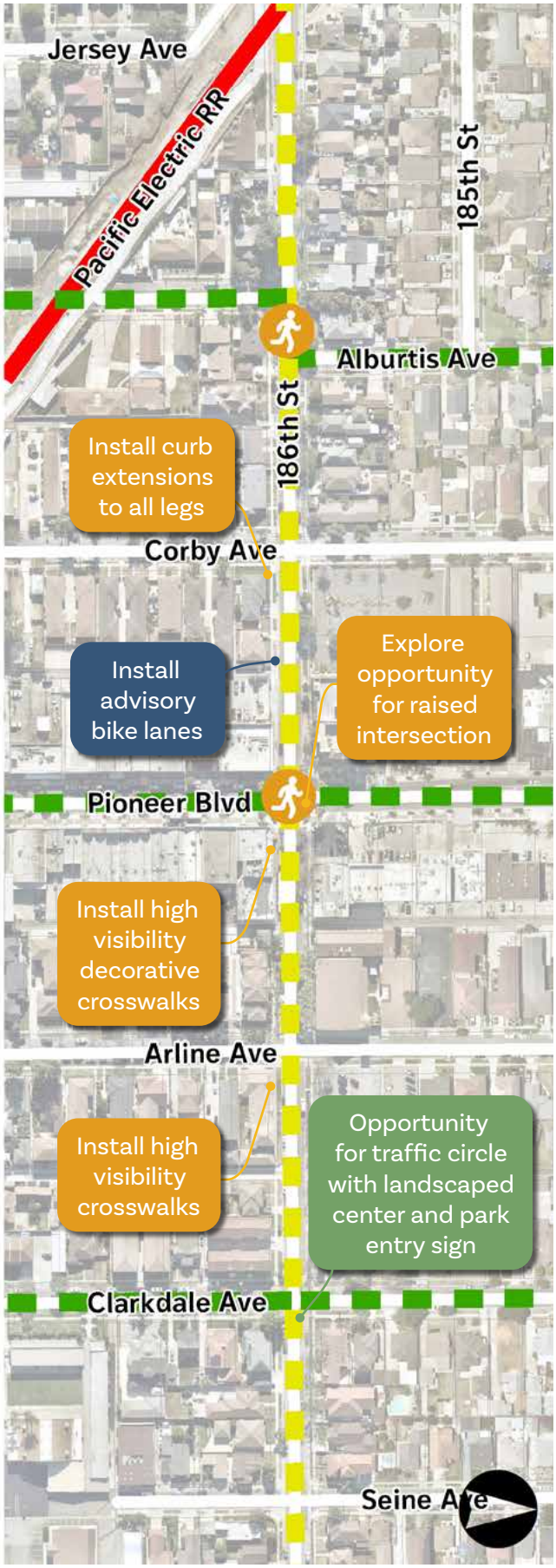
0
Schools

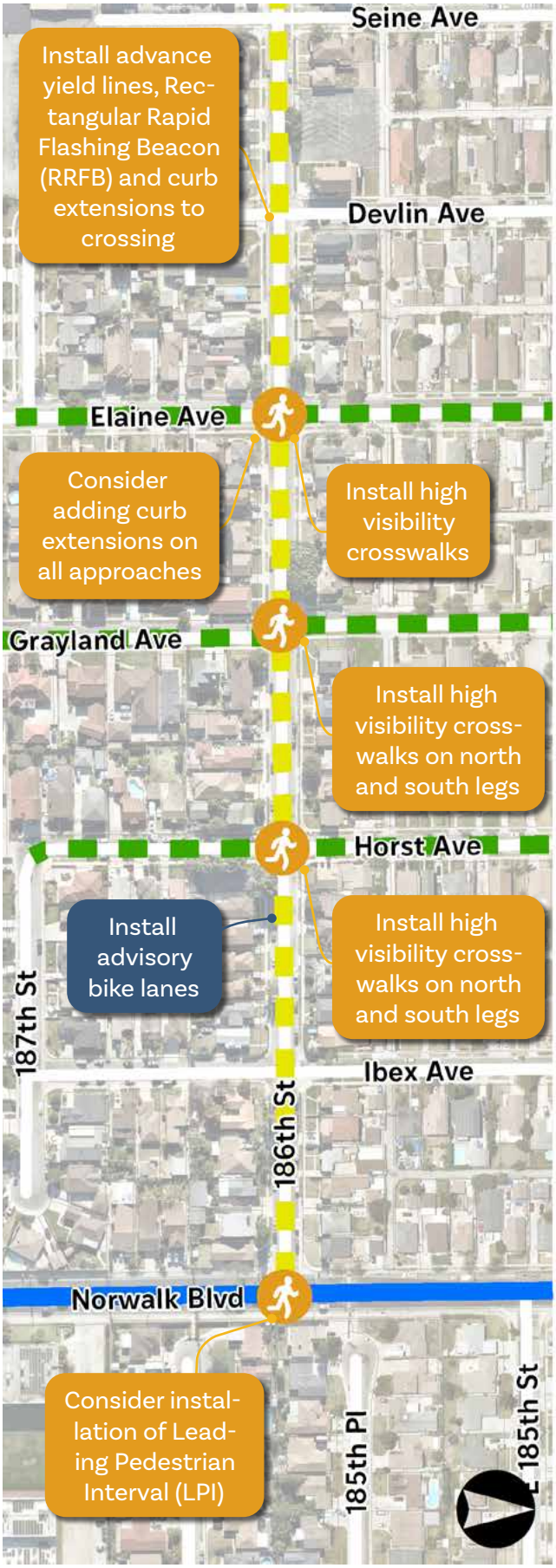
0
Park

21
Crosswalk Improvements

7
Bike/Ped Collisions


Evaluate realignment of 186th Street to align with shopping center entrance and install mid-block crossing or signalized intersection
Gridley Rd
Install high visibility crosswalk on east leg
Install wayfinding signage for neighborhood greenway
Summer Ave
Install advisory bike lanes
186th St
Dena St
Pacific Electric RR
Install curb extensions to multi-use path crossing
185th St


Jersey Ave
Pacific Electric RR
185th St
Alburtis Ave
186th St
Install curb extensions to all legs
Corby Ave
Install advisory bike lanes
Explore opportunity for raised intersection
Pioneer Blvd
Install high visibility decorative crosswalks
Arline Ave
Install high visibility crosswalks
Opportunity for traffic circle with landscaped center and park entry sign
Clarkdale Ave
Seine Ave


Seine Ave
Install advance yield lines, Rectangular Rapid Flashing Beacon (RRFB) and curb extensions to crossing
Devlin Ave
Elaine Ave
Consider adding curb extensions on all approaches
Install high visibility crosswalks
Grayland Ave
Install high visibility crosswalks on north and south legs
Horst Ave
Install advisory bike lanes
Install high visibility crosswalks on north and south legs
187th St
Ibex Ave
186th St
Norwalk Blvd
Consider installation of Leading Pedestrian Interval (LPI)
185th Pl
185th St

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Project 8: E 166th Street

Class II Bike Lanes
Class IV Separated Bikeway
Cost Estimate: $774,600
Project Length: 1.06 miles

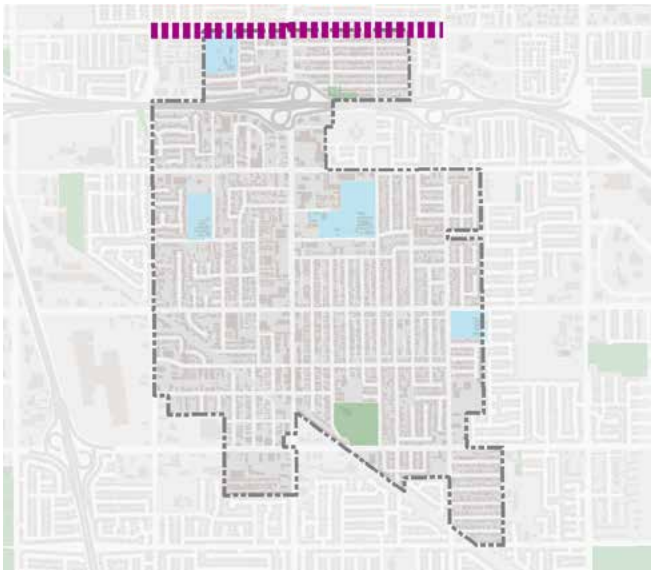
Existing Conditions

166th Street is located at the northern city limits of Artesia bordering Norwalk. This west to east corridor provides access to commercial destinations, an elementary school, and residential areas. The corridor serves multiple transportation needs for motorists, pedestrians, and transit users. The corridor has experienced several collisions involving pedestrians and motorists, most notably near the elementary school on 166th Street. The corridor provides access to the neighboring cities of Norwalk and Cerritos.

Recommendations

Recommendations include a partnership with the cities of Norwalk and Cerritos because portions of the project are within the limits of these cities. The bikeway recommendation for 166th Street includes Class IV separated bike lanes between Gridley Road and Norwalk Boulevard. The Class IV facility would be made possible by a road diet (travel lane reduction) due to low traffic volumes. The corridor would be enhanced by adding a center turn lane, something that currently does not exist.

Other recommendations include raised buffers, enhanced green transition striping at key intersections and driveways, and adjusting traffic signal timing at key intersections. Pedestrian improvements at key intersections include high-visibility crosswalks, ADA curb ramps, and curb extensions.



Potential Pedestrian Enhancements

Proposed Light Rail Station

Proposed Bikeways

Class I: Multi-Use Path

Class II: Bike Lane

Class III: Bike Route

Class IV: Separated Bike Lane

Existing Bikeways

Class I: Multi-Use Path

Class II: Bike Lane

Class III: Bike Route

Parks

Schools

City Boundary

Recommendations Key

Bicycle

Pedestrian

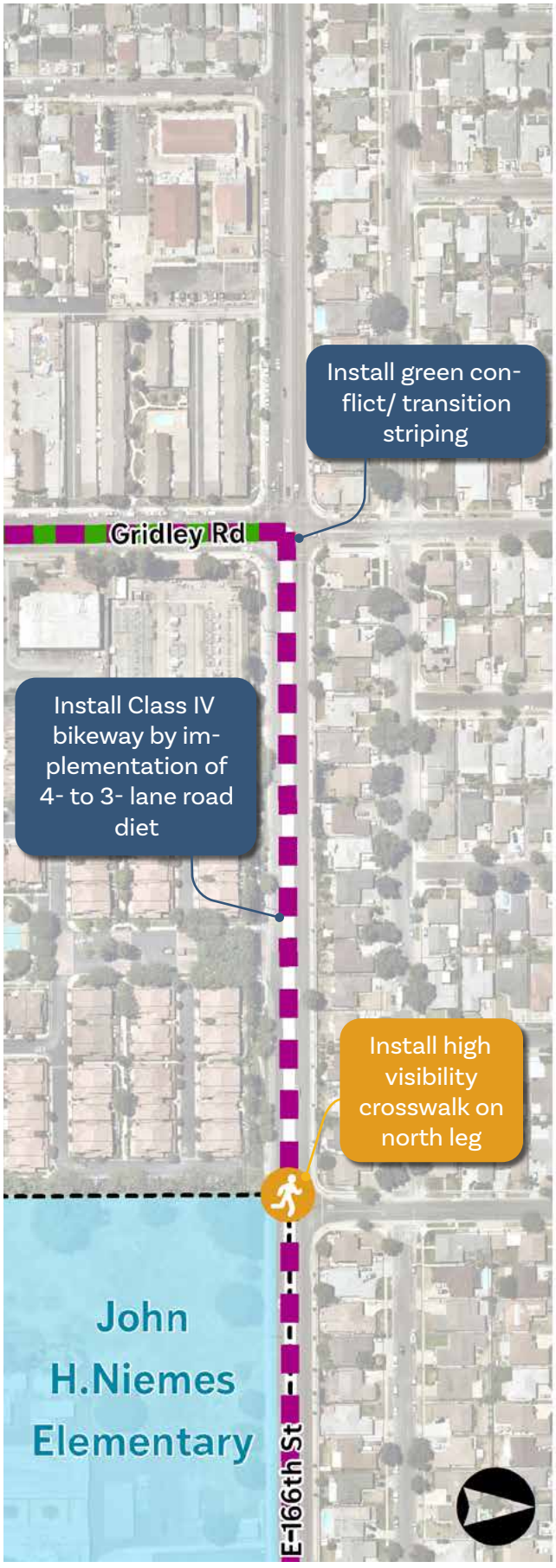
Other

1
Schools

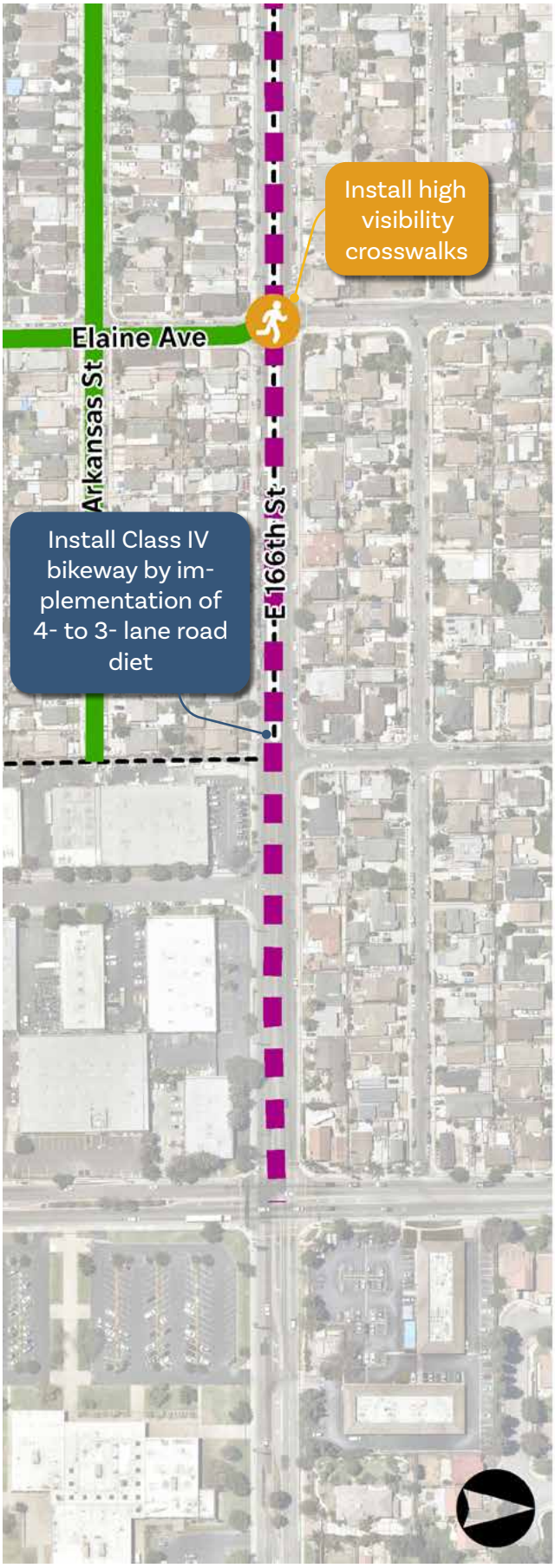
0
Park

15
Crosswalk Improvements

4
Bike/Ped Collisions


Install green conflict/ transition striping
Gridley Rd
Install Class IV bikeway by implementation of 4- to 3- lane road diet
Install high visibility crosswalk on north leg
John H.Niemes Elementary
E-166th St


John H.Niemes Elementary
Install high visibility crosswalk on west leg
Alburtis Ave
Consider realigning crosswalk on west leg for shorter crossing distance
Install high visibility crosswalk on south leg
Install high visibility crosswalks
Pioneer Blvd
Install Class IV bikeway by implementation of 4- to 3- lane road diet
Consider installation of Leading Pedestrian Interval (LPI)
E-166th St
Install mid-block crossing with Pedestrian Hybrid Beacon (PHB)
Install high visibility crosswalks on north and south legs
Clarkdale Ave


Install high visibility crosswalks
Elaine Ave
Arkansas St
E 166th St
Install Class IV bikeway by implementation of 4- to 3- lane road diet

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Project 9: 178th Street

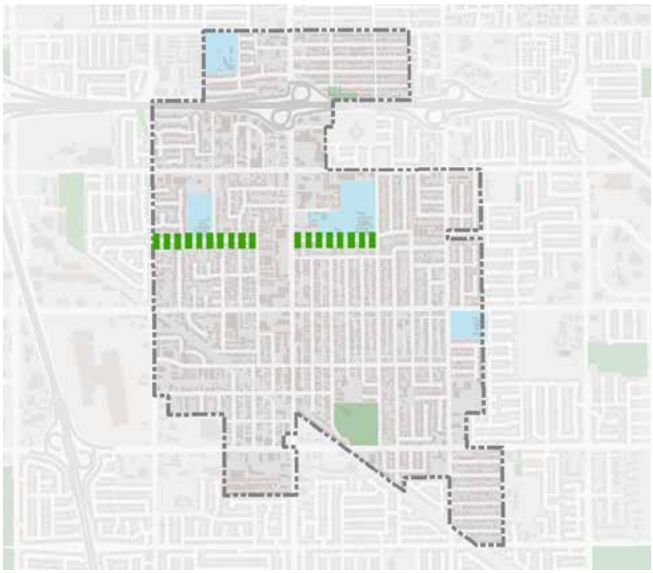
Class III Bike Route
Cost Estimate: $916,400
Project Length: 0.68 miles

Existing Conditions

178th Street is located in northwest Artesia and runs west to east. 178th Street is a corridor that provides access to an elementary school and residential areas. The corridor serves transportation needs for motorists and pedestrians. The corridor has experienced several collisions involving pedestrians and motorists; reported collisions have taken place near the elementary school. 178th Street provides access to the neighboring City of Cerritos.

Recommendations

Recommendations for 178th Street include Class III bike routes between Gridley Road and Alburtis Avenue. Recommendations also include green-backed sharrows, signage, enhanced green transition striping at key intersections and driveways, and adjusting traffic signal timing at key intersections. Pedestrian improvements at key intersections include high-visibility crosswalks, ADA curb ramps, and curb extensions.



Potential Pedestrian Enhancements
Proposed Light Rail Station

Proposed Bikeways
Class I: Multi-Use Path
Class II: Bike Lane
Class III: Bike Route
Class IV: Separated Bike Lane

Existing Bikeways
Class I: Multi-Use Path
Class II: Bike Lane
Class III: Bike Route
Parks
Schools
City Boundary

Recommendations Key

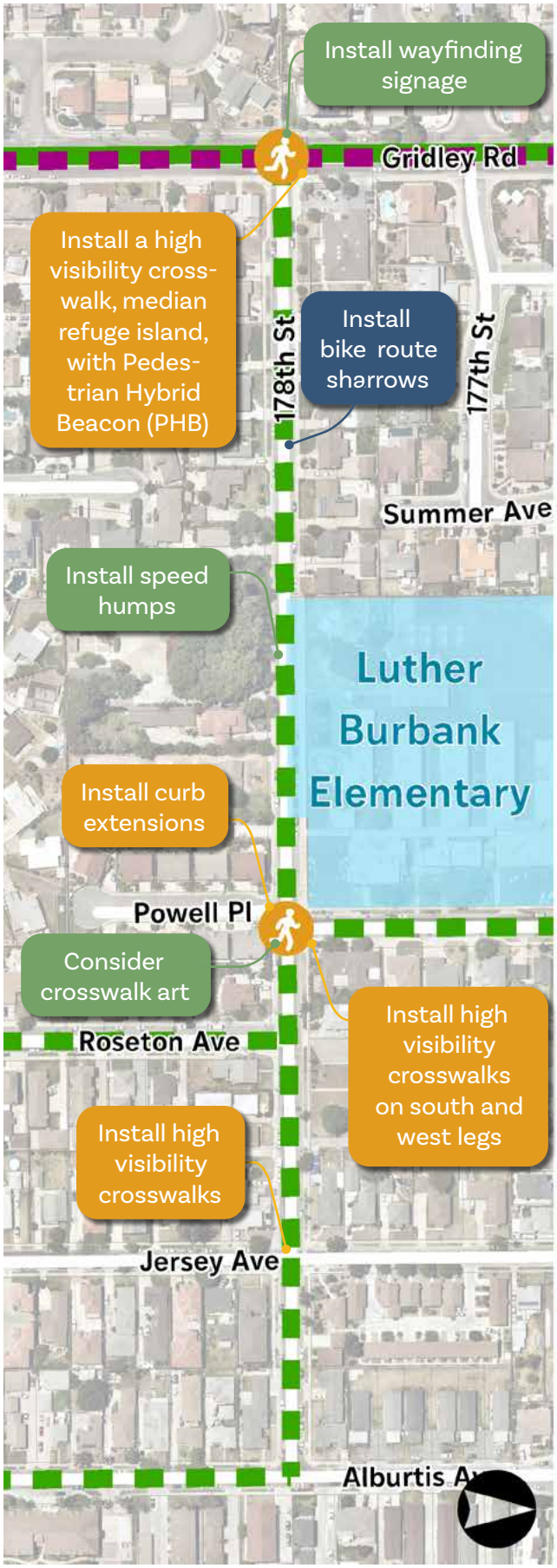
Bicycle
Pedestrian
Other

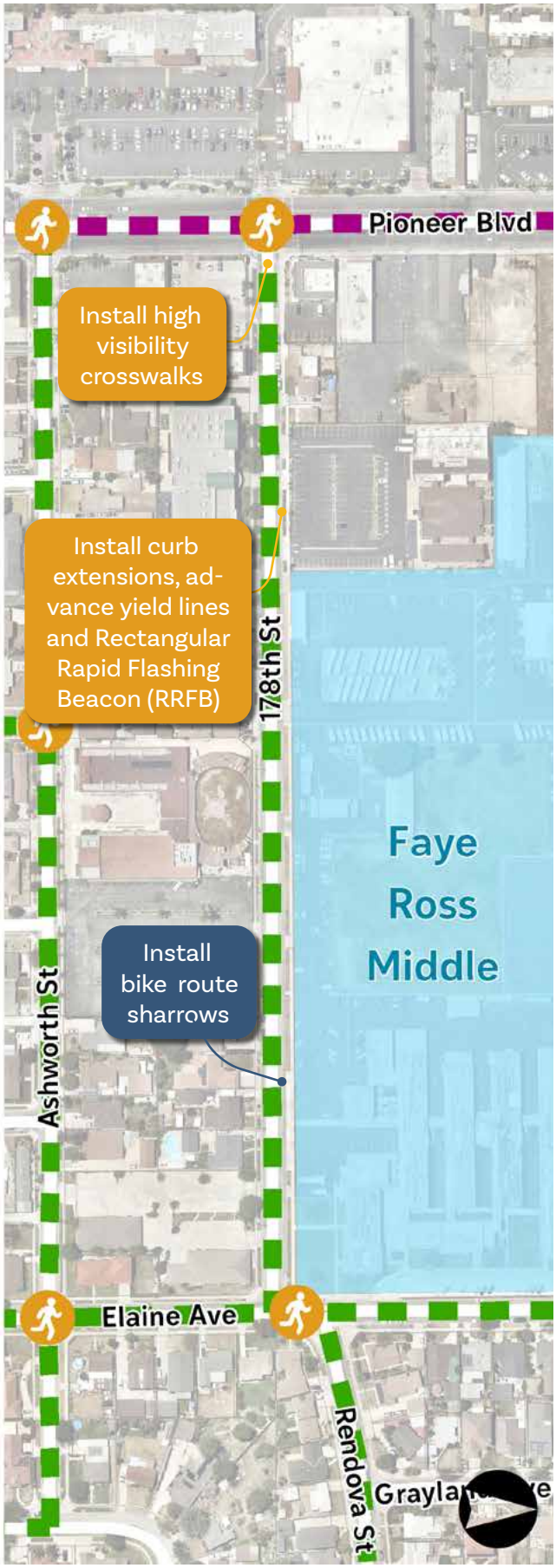
2
Schools

0
Park

13
Crosswalk Improvements

11
Bike/Ped Collisions


Install wayfinding signage
Gridley Rd
Install a high visibility cross-walk, median refuge island, with Pedes-trian Hybrid Beacon (PHB)
Install bike route sharrows
178th St
177th St
Summer Ave
Install speed humps
Luther Burbank Elementary
Install curb extensions
Powell Pl
Consider crosswalk art
Roseton Ave
Install high visibility crosswalks on south and west legs
Install high visibility crosswalks
Jersey Ave
Alburtis Av


Pioneer Blvd
Install high visibility crosswalks
Install curb extensions, ad-vance yield lines and Rectangular Rapid Flashing Beacon (RRFB)
178th St
Faye Ross Middle
Ashworth St
Install bike route sharrows
Elaine Ave
Rendova St

Project 10: Horst Avenue

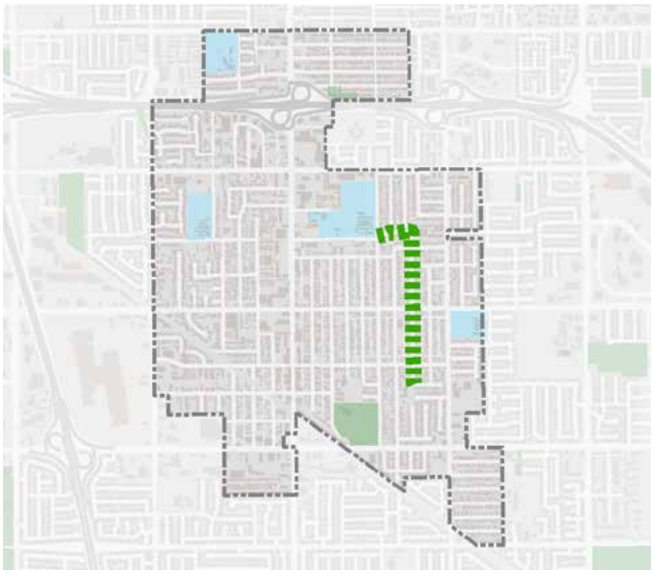
Class III Bike Route
Cost Estimate: $534,000
Project Length: 0.67 miles

Existing Conditions

The Horst Avenue project, which begins on Rendova Street and continues onto Horst Avenue, is located in eastern Artesia. Horst Avenue is a corridor that provides access to an elementary school and residential neighborhoods. The corridor serves transportation needs for motorists and pedestrians. The corridor has experienced minimal collisions; a bicycle collision has been recorded on Horst Avenue and 183rd Street.

Recommendations

Recommendations for Horst Avenue include Class III bike routes between Elaine Avenue and 183rd Street. Recommendations also include green-backed sharrows, signage, enhanced green transition striping at key intersections and driveways. Pedestrian improvements at key intersections include high-visibility crosswalks, ADA curb ramps, and curb extensions.



Potential Pedestrian Enhancements

Proposed Light Rail Station

Proposed Bikeways

Class I: Multi-Use Path

Class II: Bike Lane

Class III: Bike Route

Class IV: Separated Bike Lane

Existing Bikeways

Class I: Multi-Use Path

Class II: Bike Lane

Class III: Bike Route

Parks

Schools

City Boundary

Recommendations Key

Bicycle

Pedestrian

Other

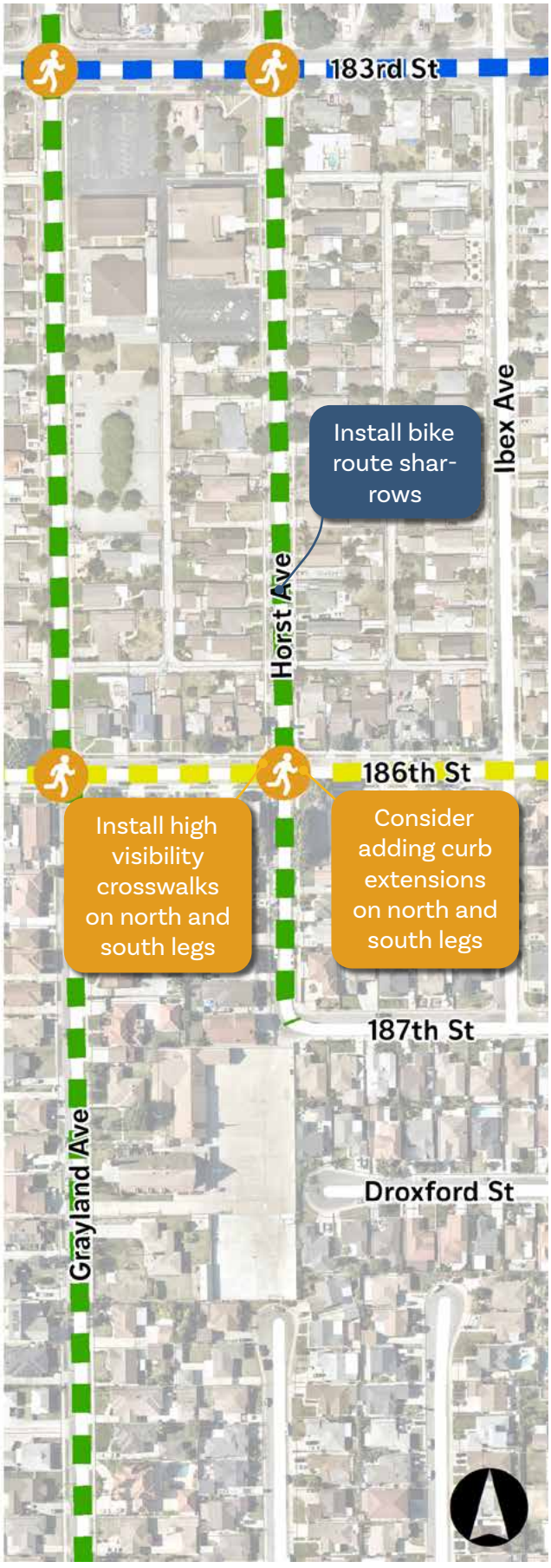
0
Schools

0
Park

14
Crosswalk Improvements

1
Bike/Ped Collisions


Faye Ross Middle
Install bike route sharrows and signage
Horst Ave
Rendova St
Install high visibility crosswalk on north leg
Ashworth St
Grayland Ave
Install high visibility crosswalk on west leg
Elaine Ave
Install bike route shar-rows
183rd St
Install high visibility crosswalks on north and south legs


183rd St
Ibex Ave
Install bike route shar-rows
Horst Ave
186th St
Install high visibility crosswalks on north and south legs
Consider adding curb extensions on north and south legs
187th St
Grayland Ave
Droxford St

4.5.1 PIONEER BOULEVARD DESIGN CONCEPTS

The team developed design concepts for Pioneer Boulevard considering it was the number one ranked project of this ATP. Two segments were identified as important sections of the corridor to be analyzed in more detail. Although the entire corridor is identified as a high priority, the two concept plans in Figures 4-5 and Figure 4-6 depict much-needed transformations of the street's existing conditions.

Design elements such as the on and off-ramps of CA SR-91, lack of existing bikeways, and lack of planted parkways contribute to conditions that are not optimal for bicyclists, pedestrians, and transit riders. These design concepts depict modern complete street and traffic engineering design principles that would improve the safety and comfort for bicyclists, pedestrians, transit riders, and drivers. The proposed designs take into account the existing right-of-way to minimize impacts to adjacent property owners.

The City is encouraged to continue evaluating Pioneer Boulevard as a priority corridor. The adjacent land uses and available right-of-way provide positive potential for re-envisioning how people travel along the corridor. The City can use these design concepts for future grant applications as a starting point for future design and implementation. The City can also use these concept plans as conversation pieces when coordinating with the City of Norwalk, City of Cerritos, Caltrans, and all other agencies involved with the right-of-way.

Concept plans were developed for:

- Pioneer Boulevard between 168th Street and Frampton Court
- Pioneer Boulevard between 183rd Street and 184th Street

High-resolution versions of these concept plans can be found in the ATP's appendix.

Existing conditions between 168th Street and Frampton Court

Existing conditions south of 183rd Street

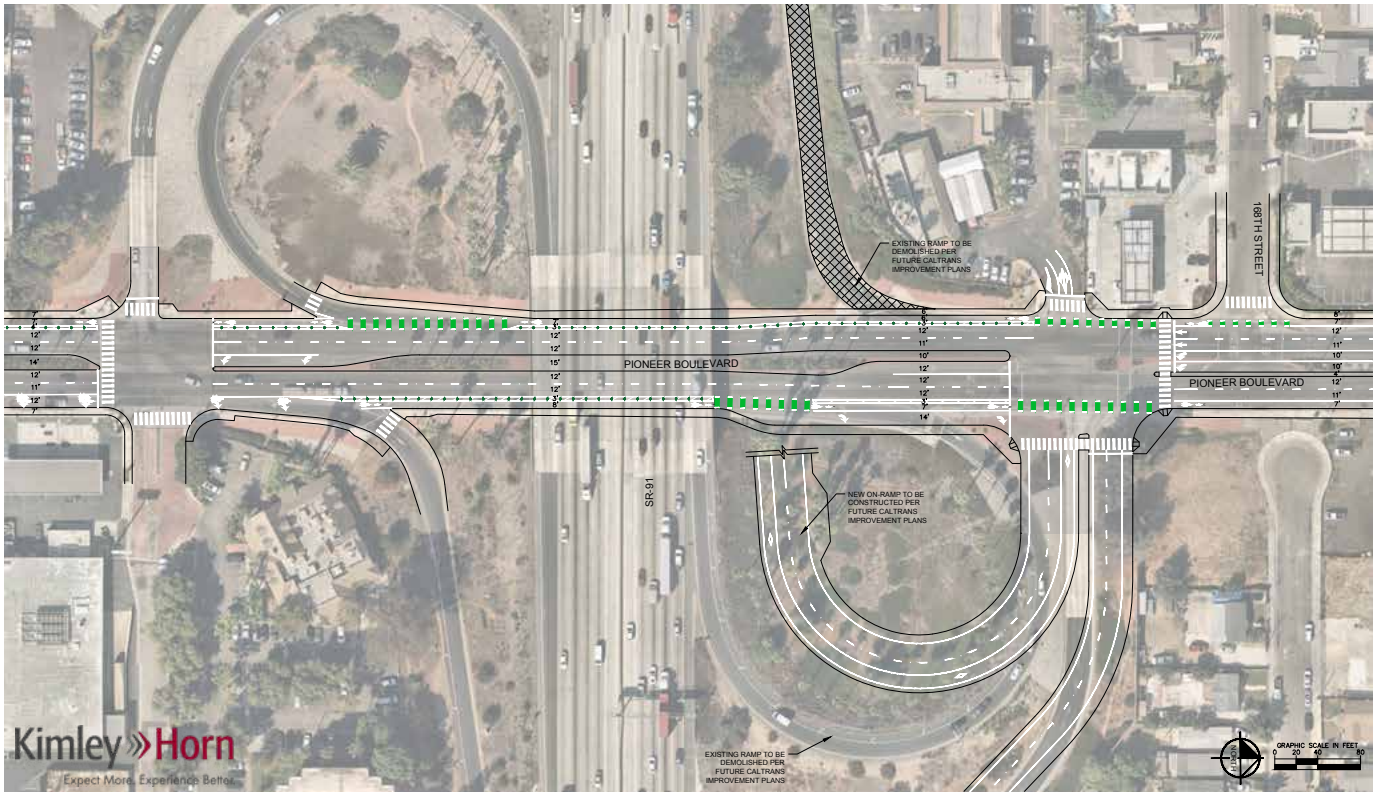


FIGURE 4-5: Pioneer Boulevard and CA SR 91 Interchange Active Transportation Design Concept

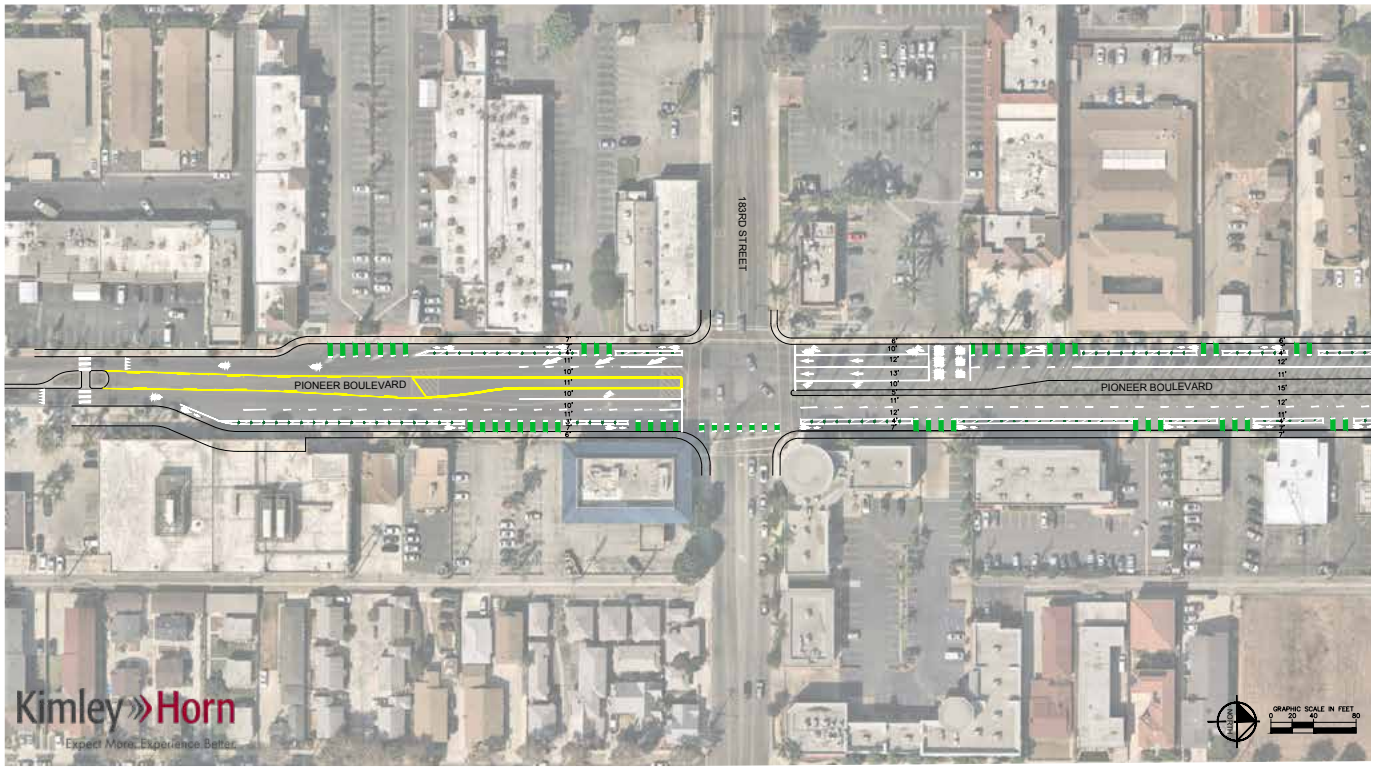


FIGURE 4-6: Pioneer Boulevard and 183rd Street Active Transportation Design Concept

4.6 Recommended Programs

This section includes a diverse menu of programs intended to support the projects recommended in this plan. The principles articulated through the "Six Es" developed by the Safe Routes Partnership (Engagement, Equity, Engineering, Encouragement, Education, and Evaluation) can help create successful programs. In particular, many policy, programmatic, and design elements can be used to improve equity if they are targeted to address mobility needs of low-income residents, minorities, children, people with disabilities, and older adults.

In addition, there has been a shift in implementation strategies. Physical projects represent the most visible and perhaps most tangible evidence of a great place for bicycling or walking. Programs are increasingly targeted to occur in conjunction with the construction of specific bicycle and pedestrian projects to take advantage of the opportunity that capital project implementation represents for a city to promote bicycling and walking as attractive options.

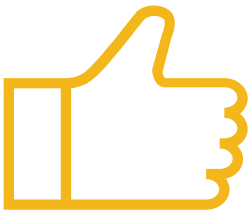
A new multi-use path, for instance, represents a great opportunity to reach out to the area's walkers and parents of school-age children, as well as the neighborhood's "interested, but concerned" bicyclists. These target groups will benefit most by directly linking route improvements and supportive programs. In this way, bundling bicycling and walking programs with projects represents a much higher return on investment for both.

The programs recommended for the City of Artesia are organized as a menu of initiatives, each listed under a broad category. These categories are not definitive. They are merely intended to offer some level of organization to the many program initiatives, the majority of which fall into at least one category.

Engagement

Equity

Engineering



Encouragement

Education

Evaluation

4.6.1 ENGAGEMENT

Community outreach initiatives should start by listening to residents, families, business owners, local leaders, and working with existing community organizations. These critical relationships should allow for purposeful, ongoing engagement opportunities. The engagement strategies used in this plan are detailed in Chapter Three. Listed below are a few examples of engagement methods that can be used to increase public participation.

Signage

Signage is an effective tool to share information about a program or project. Displays can inform the public and stimulate citizens and stakeholders to participate in engagement activities. These displays can be used to remind people to engage in a positive behavior that you are seeking through this effort.

Electronic Newsletter

Distribution of an online newsletter is a great way to engage the public. Distribution should be researched and considered prior to utilizing this outreach method. This form of media can be used to display project and contact information as well as ways for readers to get involved.

Hotline

A hotline is a great way for community members to call in, leave comments, or talk to someone directly about the project or program. A hotline should be considered as a support tool of an overall community engagement strategy. In order to guarantee a hotline's success, it should be staffed and have the right person at the receiving end. Depending on the target audience, it may be necessary to have a multi-lingual person staffing the hotline. A hotline number is relatively low cost and requires little effort to maintain.

Surveys and Questionnaires

Surveys and questionnaires can also be created to identify the needs and views of a large number of people. Surveys are effective when a limited number of short and concise questions are used to gather information and feedback.

4.6.2 EQUITY

The ATP prioritizes the safety of Artesia residents whose primary mode of transportation is walking, biking, skateboarding, and public transportation. Special emphasis is given to low-income neighborhoods and streets where the risk for collisions is greater. This plan intends to reduce barriers for low income and senior neighborhoods while mitigating potentially harmful long-term impacts. The following strategies and practices to address bicycle and pedestrian inequities.

Consider the Transportation Needs of Traditionally Underserved Populations

Recognize the importance of addressing the barriers that prevent trips from being safe, especially for the younger and underserved populations who cannot afford, operate, or choose not to drive vehicles.

Examine Organizational Practices and Policies

Existing practices and policies may have unintended consequences when it comes to transportation equity. A systematic review of its practices should be performed to identify potential equity issues and opportunities.

Increase Staff Diversity

Surveys have shown disparity between the socio-demographics of transportation decision-makers and the community they are meant to serve. Agencies should continually seek to increase the diversity of their staff at all levels of leadership and decision-making so that their workforce represents the community it serves.

Prioritize Projects in Light of Equity Considerations

Agencies can aim to implement improvements in areas that are disproportionally affected by health and safety burdens, acknowledging that policies and designs that improve conditions for vulnerable groups can benefit everyone in the community.

Encourage Public Involvement

Collaboration with the community is an integral part of the planning process. Individuals, especially those belonging to traditionally underserved communities, need to be empowered to participate in the transportation planning processes and have their needs heard.

4.6.3 ENGINEERING

A variety of engineering tools can be used to make sure that the roadways in Artesia are designed to keep bicyclists and pedestrians safe at all times while maintaining efficient travel throughout the City. Some of these tools include street design techniques that are meant to reduce traffic congestion, decrease vehicular speeds, and enhance pedestrian and bicycle safety and comfort.

Some examples of engineering and traffic enhancements that provide a safer environment for pedestrians and bicyclists include:

- Traffic control signs
- Curb and high visibility pavement markings
- Signal timing
- Parking controls
- Traffic safety monitoring

4.6.4 ENCOURAGEMENT

Vehicle usage can be decreased in part by actively encouraging residents and visitors to bike, walk, and ride transit for a variety of trips and purposes. Encouragement is all about making bicycling and walking more fun, healthy and easy to do. To achieve this, the City, along with LA Metro and other local organizations, can organize a series of activities and events that promote alternate modes of transportation and healthier lifestyles.

National Bike Month in May

During the month of May, cities across the country organize events and campaigns to educate people about biking and to encourage them to bike more to their destinations. Activities such as Bike Week, Bike to Work, and Bike Fridays can be organized and promoted.

Open Streets Events

Open streets events are increasingly popular in Southern California. They provide families and friends an opportunity to walk, bike, skate, or scooter down streets in their city free of cars.

Family Friendly Bike Rides

Fun family-friendly summer bike rides meant to encourage bike usage. This event intends to teach about bicycle and road safety.

Walk to School Day

This is a fun, educational event involving children, parents, and community leaders. This event gives students and families the opportunity to socialize and start the day off with enthusiasm and allows them to build connections with other members of the community.

National Bike Month logo

Bike to School Day logo

Open streets event in Long Beach

Ride and Walk of Lights

Annual winter evening family-friendly walk and bike ride where participants use battery lights and/or bike lights to be more visible while they walk or bike.

5K Running/Walking Events

Free five kilometers running and walking events that take place in the city are an excellent way to encourage people to explore their city on foot. Post-race refreshments and healthy snacks can be provided to participants.

Food-Focused Bike Rides

Bike ride events where participants get together to enjoy food while cruising through a city's streets and neighborhoods are an innovative way of bridging bike riding with community building.

Walking Tours

The City and other local groups can organize family-friendly themed walks where participants have the opportunity to explore key locations including historical buildings, parks, murals, and businesses.

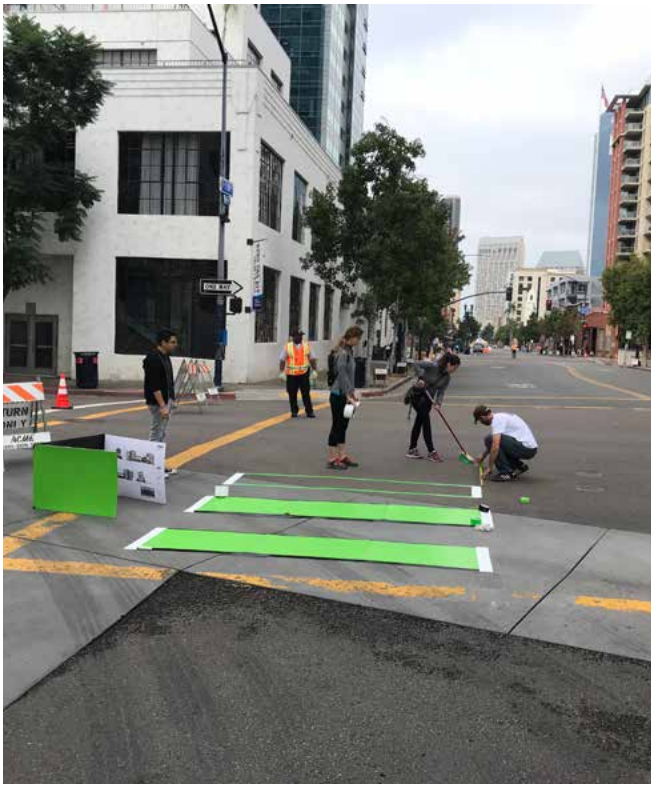
Bike to Work Week

Participants can pledge to bike to work at least once during a set week. The participants can then be entered to win a raffle or prize. For this to work, participants can receive one entry for every day they participate to increase their odds.

Demonstration Project

Over the past decade Tactical Urbanism or "Demonstration Projects" has become an international movement, bringing about a shift in how communities think about project development and delivery. These demonstration projects include low-cost, temporary changes to the built environment intended to improve local neighborhoods and gathering places. In Southern California, these projects have loosely emulated a planned and designed project to allow residents to experience what the project may look like and how it affects traffic, active transportation modes and transit. These events are aimed to educate and gain support from the community to move towards implementation. The City of Artesia can utilize SCAG's *GoHuman* campaign to facilitate these demonstration projects as needed.

Walk audit/ tours in Santa Ana



Demonstration project in San Diego

4.6.5 EDUCATION

Artesia has had a number of collisions involving pedestrians and bicyclists. According to the Statewide Integrated Traffic Records System (SWITRS) bicycle and pedestrian collision dataset, there were 24 bicycle-related collisions, 16 pedestrian-related collisions, and 165 vehicular-related collisions. The City should consider carrying out public education campaigns to improve pedestrian and bicyclist safety. The following examples of education campaigns can help teach motorists, pedestrians, and bicyclists how to share the road safely.

Safety Assemblies

Safety assemblies can be organized as interactive gatherings or festivals that consist of various stations throughout a school gymnasium or park. Each station can have a bicycle, pedestrian, and teen driver safety component that allows students to participate in various activities while learning the basics of "on the road" safety.

Bike Safety Workshops

A two-hour long class intended to build habits and skills, and in-depth exploration of rights and responsibilities of bicyclists, including an "on bike" maneuvers class intended to increase confidence. Participants get a free helmet and bike lights.

Pedestrian and Bike Traffic Safety Fairs

An obstacle course to teach pedestrians and bicyclists how to identify different street signs and how to use street infrastructure to increase safety. Youth and children navigate the obstacle course to win free helmets and lights.

Family Cycling Education

Family-friendly interactive training and infrastructure tour intended to increase the confidence of pedestrians and bicyclists. Participants get a free helmet and bike lights. These safety resource distribution events allow families to learn about the importance of wearing a helmet. Participants can receive free helmets and bike lights and are taught about the bicycle rules of the road, as well as how to be visible and predictable when riding.

Separated bikeway demonstration project

Bike Maintenance and Ride Workshops

Bike maintenance and ride workshops can include a series of classes for youth between 12-18 years. These classes are meant to teach riders how to fix and ride a bicycle. Participants learn the rules of the road, as well as their rights and responsibilities as bicyclists. These classes can offer the opportunity for participants to receive a free bike.

4.6.6 EVALUATION

In order to improve programs and ensure that the bicycle and pedestrian conditions in Artesia are adequate, audits, traffic-safety data collection, analysis, and reporting are necessary. Additionally, surveys allow agencies to gain input from users on existing issues and potential solutions. The following examples include ways the City can evaluate and monitor programs and infrastructure.

Create City Staff Active Transportation Evaluator Position

An active transportation evaluator position would assist the City's current active transportation coordinator in reviewing project plans and built projects as well as ensuring consistency and cooperation between city departments. The evaluator would also assist with completing grant applications, maintaining a prioritized list of improvements, researching appropriate funding sources, and updating cost estimates. This investment in staff is often returned since this position is usually responsible for securing State and federal funding.

Active Transportation Advisory Committee

The City can explore creating an Active Transportation Advisory Committee that can provide oversight for this Active Transportation Plan. Many municipalities have developed bicycle and pedestrian, or active transportation advisory committees to address issues and opportunities related to walking, bicycling, and transit. This group can act as a community liaison and support City staff, volunteers, and advocate efforts to address issues and help evaluate the progress of improvements in this Active Transportation Plan.

Conduct Bicycle and Pedestrian Counts and Review Collision Data

Conduct regular bicyclist and pedestrian counts throughout the City to determine baseline mode share and subsequent changes. Conducting counts would allow the City to collect information on where the most bicycling and walking occur. This assists in prioritizing and justifying projects when funding is solicited and received. Counts can also be used to study bicycling and walking trends throughout the City. Analysis that could be conducted includes:

- Changes in volumes before and after projects have been implemented
- Prioritization of local and regional projects
- Research on clean air change with increased bicycle use

Counts should be conducted at the same locations and at the same times every year. Conducting counts during different seasons within the year may be beneficial to understanding the differences in bicycle and pedestrian traffic volumes based on seasonal weather. In addition, bicycle and pedestrian counts should be collected as part of any existing traffic counts. Results should be regularly recorded for inclusion in the bicycle and pedestrian report card (see next section).

Artesia city staff should engage the Sheriff's department to collect and track collision data. Regular reports of traffic collisions should be presented to the advisory committee. Traffic collisions involving bicyclists and pedestrians should be regularly reviewed and analyzed to develop plans to reduce their frequency and severity. Any such plans should include Sheriff involvement and should be monitored to determine their effectiveness. Results of the number of collisions should be recorded in a bicycle and pedestrian report card described in the next section.

Bicycle and Pedestrian Report Card

The City could develop a bicycle and pedestrian report card, a checklist used to measure the success of plan implementation, as well as effort made, within the City. The report card could be used to identify the magnitude of accomplishments in the previous year and general trends. The report card could include, but not be limited to, keeping track of system completion, travel by bicycle or on foot (counts) and safety.

The City can use the report card to track trends, placing more value on relative than absolute gains (in system completion, mode share, and safety). For example, an upward trend in travel by bicycle or on foot would be viewed as a success, regardless of the specific increase in the number of bicyclists or walkers. Safety should be considered relative to the increase in bicyclists and walkers. Sometimes crash numbers go up simply because bicycling and walking increases, at least initially. Instead, measure crashes as a percentage of an estimated overall mode share count.

A major portion of the report card would be an evaluation of system completion. An upward trend would indicate that the City is progressing in its efforts to complete the bicycle and pedestrian network identified in this document. The report card could be developed to utilize information collected as part of annual and on-going evaluations, as discussed in the previous sections. The report card is not intended to be an additional task for City staff, but rather a means of documenting and publicizing the City's efforts related to bicycle and pedestrian planning. It can be a task of the advisory committee to review annual report cards and to suggest future plan and goal adjustments.

In addition to quantifying accomplishments related to the bicycle plan, the City should strive to quantify its efforts. These may be quantified as money spent, staff hours devoted or other in-kind contributions. The quantified effort should be submitted as a component of the bicycle and pedestrian report card. Some cities publish their report cards online.

Apply for Bicycle Friendly Community Designation

Bicycle Friendly Community designation is part of a program offered by the League of American Bicyclists (LAB) intended to provide communities with guidance on becoming more bicycle friendly and to award recognition for their achievements. Like the report card described previously, Bicycle Friendly Community designation provides a standard by which the City of Artesia can measure its progress toward bicycle friendliness. It could be a function of the Bicycle Advisory Team to support City staff to compile an updated application to improve upon its current Bronze level Bicycle Friendly Community status.

4.6.7 HEALTH-RELATED PROGRAMS AND EVENTS

There are a number of actions and programs that can be made available in communities to further promote healthy lifestyles choices through active transportation modes. Active transportation has many proven physical, social, and mental health benefits through increased levels of physical activity.

Los Angeles Rivers Challenge

The LA Rivers challenge is a fun event aimed at completing the mileage goal that is best for you. Select the goal that excites you, tests your abilities, or that you can do with your family. There is a distance to ride, walk, or run for everyone.

Los Angeles Rivers Challenge logo

Chapter 5

Funding

5.1 Funding Opportunities

Federal, state, and local government agencies invest billions of dollars every year in the nation's transportation system. Only a fraction of that funding is used to develop policies, plans, and projects to improve conditions for bicyclists and pedestrians. Even though appropriate funds are available, they are limited and often hard to find. Desirable projects sometimes go unfunded because communities may be unaware of a fund's existence or may apply for the wrong type of grant. In addition, there is increasing competition between municipalities for the limited available funds.

Whenever federal funds are used for bicycle and pedestrian projects, a certain level of state and/or local matching funding is generally required. State funds are often available to local governments on similar terms. Almost every implemented active transportation or complete street program and infrastructure in the United States has had more than one funding source and it often takes a good deal of coordination to pull the various sources together.

According to the publication by the Federal Highway Administration (FHWA), an Analysis of Current Funding Mechanisms for Bicycle and Pedestrian Programs at the Federal, State and Local Levels, where successful local bicycle infrastructure programs exist, there is usually an active transportation coordinator with an extensive understanding of funding sources, such as Caltrans. City staff are often in a position to develop a competitive project and detailed proposal that can be used to improve conditions for bicyclists and pedestrians within their jurisdictions. Some of the following information on federal and state funding sources was derived from the previously mentioned FHWA publication.

ACTIVE TRANSPORTATION PROJECTS AND PROGRAMS, SUCH AS:

The City of Artesia should continue to pursue state level grants through programs such as Caltrans' Active Transportation Planning (ATP) and Sustainable Transportation Planning grants, the Strategic Growth Council's Sustainable Community Planning Grants, Urban Greening Grants and through the Highway Safety Improvement Program (HSIP). Projects that are not awarded funding through the Caltrans ATP cycles are sent to the Southern California Association of Governments (SCAG), the local MPO, for consideration for funding through their programs. It will be important to coordinate efforts with adjacent jurisdictions on projects that affect and benefit both cities. Coordination and joint efforts also strengthen an application due to combined benefits for multiple jurisdictions.

Table 5-1 through Table 5-3 identify potential federal, state, and local funding opportunities that may be used from design to maintenance phases of projects. Due to trends in Low Impact Development (LID) and stormwater retention street designs, funding sources for these improvements not only increase the chances for first and last mile improvements, but can also be incorporated into streetscape and development projects.

Refer to funding sources for specific details on funding cycles.

TABLE 5-1: Federal Funding Sources:

FUNDING SOURCE	FUNDING ORIGIN	PURPOSE/ DESCRIPTION	FUNDING CYCLE	ACTIVE TRANSPORT[1]			PROJECT EXAMPLES	WEBSITE	C / F[2]
				INF	NI	PLAN			
Enhanced Mobility of Seniors and Individuals with Disabilities	FTA	The goal of this program is to improve mobility for seniors and individuals with disabilities by removing barriers to transportation service and expanding transportation mobility options.	Varies	X	X		• Mobility management programs • Building an accessible path to a bus stop • Improving signage, or way-finding technology	https://www.transit.dot.gov/funding/grants/enhanced-mobility-seniors-individuals-disabilities-section-5310	F & C
Safe Routes to Parks, Activating Communities Program	National Center for Safe Routes to School and Caltrans	The program framework provides a structured process to increase safe and equitable access to parks and green spaces. The framework includes four main areas of activity: 1) Assessment, 2) Planning, 3) Implementation, and 4) Sustainability, with each area heavily infused with proactive community engagement.	Varies	X		X	• Safe Routes to Parks action plans • Implementation activities such as acquiring rights-of-way, maintenance, and street design	https://www.saferoutespartnership.org/healthy-communities/saferoutestoparks/2019	C
Pilot Program for Transit-Oriented Development Planning - Section 20005(b)	FTA	Provides funding to local communities to integrate land use and transportation planning with a transit capital investment that will seek funding through the Capital Investment Grant (CIG) Program.	Annual	X			TOD projects and plans	https://www.transit.dot.gov/notices-funding/pilot-program-transit-oriented-development-planning-fy2021-notice-funding	C

Notes:
[1] *INF - Infrastructure*
NI - Non-infrastructure
PLAN - Planning

[2] Column Heading "C / F" = Grant Type: C=Competitive or F=Formula

FUNDING SOURCE	FUNDING ORIGIN	PURPOSE/ DESCRIPTION	FUNDING CYCLE	ACTIVE TRANSPORT[1]			PROJECT EXAMPLES	WEBSITE	C / F[2]
				INF	NI	PLAN			
Public Transportation COVID-19 Research Demonstration Grant Program	FTA	This program will fund grants through public transit agencies to develop, deploy, and demonstrate innovative solutions that address COVID-19 related concerns to increase operating efficiencies and improve mobility.	Varies			X	Plans and measures for innovative solutions that improve the operational efficiency of transit agencies and enhance the mobility of transit users affected by the COVID-19 public health emergency	https://www.transit.dot.gov/grant-programs/public-transportation-covid-19-research-demonstration-grant-program	
Public Transportation Innovation - 5312		Provides funding to develop innovative products and services assisting transit agencies in better meeting the needs of their customers.	Varies	X			Research, development, demonstration and deployment projects	https://www.transit.dot.gov/funding/grants/public-transportation-innovation-5312	C
Safety Research and Demonstration Program		The Safety Research and Demonstration (SRD) Program is part of a larger safety research effort at the U.S. Department of Transportation that provides technical and financial support for transit agencies to pursue innovative approaches to eliminate or mitigate safety hazards. The SRD program focuses on demonstration of technologies and safer designs.	Annual			X	Operational safety programs	https://www.transit.dot.gov/research-innovation/safety-research-and-demonstration-program	C

FUNDING SOURCE	FUNDING ORIGIN	PURPOSE/ DESCRIPTION	FUNDING CYCLE	ACTIVE TRANSPORT[1]			PROJECT EXAMPLES	WEBSITE	C / F[2]
				INF	NI	PLAN			
State of Good Repair (SGR) Grants - 5337	FTA	Provides capital assistance for maintenance, replacement, and rehabilitation projects of existing high-intensity fixed guideway and high-intensity motorbus systems to maintain a state of good repair. Additionally, SGR grants are eligible for developing and implementing Transit Asset Management plans.	Four Fiscal Years			X	Fixed guideway and high intensity motorbus systems	https://www.transit.dot.gov/funding/grants/state-good-repair-grants-5337	F
Urbanized Area Formula Grants - 5307		Provides funding to public transit systems in Urbanized Areas (UZA) for public transportation capital, planning, job access and reverse commute projects, as well as operating expenses in certain circumstances.	Annual			X	Planning, engineering, design and evaluation of transit projects and other technical transportation-related studies	https://www.transit.dot.gov/funding/grants/urbanized-area-formula-grants-5307	F
Accelerating Innovative Mobility (AIM)		AIM will highlight FTA's commitment to support and advance innovation in the transit industry.	Varies			X	Research and technology programs and plans	https://www.transit.dot.gov/AIM	C
Access and Mobility Partnership Grants		This program provides competitive funding to support innovative capital projects for the transportation disadvantaged that will improve the coordination of transportation services and non-emergency medical transportation services.	Varies			X	Coordination of non-emergency medical transportation services program	https://www.transit.dot.gov/funding/grants/grant-programs/access-and-mobility-partnership-grants	C

FUNDING SOURCE	FUNDING ORIGIN	PURPOSE/ DESCRIPTION	FUNDING CYCLE	ACTIVE TRANSPORT[1]			PROJECT EXAMPLES	WEBSITE	C / F[2]
				INF	NI	PLAN			
Better Utilizing Investments to Leverage Development (BUILD) Transportation Grants Program	FTA	US DOT's BUILD Transportation Discretionary Grants program funds investments in transportation infrastructure, including transit.	Annual	X			Construction projects	https://www.transit.dot.gov/funding/grants/better-utilizing-investments-leverage-development-build-transportation-grants-program	C
Capital Investment Grants - 5309		Provides funding through a multi-year competitive process for transit capital investments, including heavy rail, commuter rail, light rail, streetcars, and bus rapid transit. Federal transit law requires transit agencies seeking CIG funding to complete a series of steps over several years to be eligible for funding.	Annual	X			Design and construction of new fixed-guideways or extensions to fixed guideways	https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/5309_Capital_Investment_Grant_Fact_Sheet.pdf	C
Enhanced Mobility of Seniors & Individuals with Disabilities - Section 5310		Formula funding to states for the purpose of assisting private nonprofit groups in meeting transportation needs of the elderly and persons with disabilities.	Annual			X	Planning program to meet the special transportation needs of seniors and individuals with disabilities	https://www.transit.dot.gov/funding/grants/enhanced-mobility-seniors-individuals-disabilities-section-5310	F

FUNDING SOURCE	FUNDING ORIGIN	PURPOSE/ DESCRIPTION	FUNDING CYCLE	ACTIVE TRANSPORT[1]			PROJECT EXAMPLES	WEBSITE	C / F[2]
				INF	NI	PLAN			
Flexible Funding Programs - Congestion Mitigation and Air Quality Program - 23 USC 149	FTA	CMAQ provides funding to areas in nonattainment or maintenance for ozone, carbon monoxide, and/or particulate matter. States that have no nonattainment or maintenance areas still receive a minimum apportionment of CMAQ funding for either air quality projects or other elements of flexible spending. Funds may be used for any transit capital expenditures otherwise eligible for FTA funding as long as they have an air quality benefit.	Annual		X	X	Transportation project or program that is likely to contribute to the attainment or maintenance of a national ambient air quality standard	https://www.transit.dot.gov/funding/grants/flexible-funding-programs-national-highway-performance-program-23-usc-119	F
Flexible Funding Programs - National Highway Performance Program - 23 USC 119		Provides support for the condition and performance of the National Highway System (NHS), for the construction of new facilities on the NHS, and to ensure that investments of Federal funds in highway construction are directed to support progress toward the achievement of performance targets established in a State's asset management plan for the NHS.	Annual	X			Construction projects of highways, bridges, ferry boats, and facilities	https://www.transit.dot.gov/funding/grants/flexible-funding-programs-national-highway-performance-program-23-usc-119	F

FUNDING SOURCE	FUNDING ORIGIN	PURPOSE/ DESCRIPTION	FUNDING CYCLE	ACTIVE TRANSPORT[1]			PROJECT EXAMPLES	WEBSITE	C / F[2]
				INF	NI	PLAN			
Flexible Funding Programs - Surface Transportation Block Grant Program - 23 USC 133	FTA	Provides funding that may be used by states and localities for a wide range of projects to preserve and improve the conditions and performance of surface transportation, including highway, transit, intercity bus, bicycle and pedestrian projects.	Annual					https://www.fhwa.dot.gov/fastact/factsheets/stbgfs.cfm	F
Grants for Buses and Bus Facilities Formula Program - 5339(a)		Provides funding to states and transit agencies through a statutory formula to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities. In addition to the formula allocation, this program includes two discretionary components: The Bus and Bus Facilities Discretionary Program and the Low or No Emissions Bus Discretionary Program.	Annual	X			Projects to replace, rehabilitate and purchase buses, vans, and related equipment, and to construct bus-related facilities	https://www.transit.dot.gov/funding/grants/busprogram	F

FUNDING SOURCE	FUNDING ORIGIN	PURPOSE/ DESCRIPTION	FUNDING CYCLE	ACTIVE TRANSPORT[1]			PROJECT EXAMPLES	WEBSITE	C / F[2]
				INF	NI	PLAN			
Areas of Persistent Poverty Program	FTA	In keeping with the U.S. Department of Transportation's focus on addressing the deteriorating conditions and disproportionately high fatality rates on our rural transportation infrastructure, FTA's Areas of Persistent Poverty Program supports projects that will address the transportation challenges faced by areas of persistent poverty.	June			X	Improve transit service and facilities in areas of persistent poverty	https://www.transit.dot.gov/HOPE	
Integrated Mobility Innovation (IMI)	FTA	FTA's IMI Program funds projects that demonstrate innovative and effective practices, partnerships and technologies to enhance public transportation effectiveness, increase efficiency, expand quality, promote safety and improve the traveler experience.	Annual			X	Trip planning services, planning and developing business models, obtaining equipment and service, acquiring or developing software and hardware interfaces to implement the project, operating the demonstration, and providing data to support performance measurement and evaluation.	https://www.transit.dot.gov/IMI	C

FUNDING SOURCE	FUNDING ORIGIN	PURPOSE/ DESCRIPTION	FUNDING CYCLE	ACTIVE TRANSPORT[1]			PROJECT EXAMPLES	WEBSITE	C / F[2]
				INF	NI	PLAN			
Mobility for All Pilot Program Grants	FTA	This funding opportunity seeks to improve mobility options through employing innovative coordination of transportation strategies and building partnerships to enhance mobility and access to vital community services for older adults, individuals with disabilities, and people of low income.	January			X	Transportation projects with a focus on employing mobility management strategies, vehicle purchase, IT purchase, leasing equipment or a facility for use in public transportation etc.	https://www.transit.dot.gov/funding/grants/grant-programs/mobility-all-pilot-program-grants	C
Mobility on Demand (MOD) Sandbox Demonstration Program - 5312		Funds projects that promote innovative business models to deliver high quality, seamless and equitable mobility options for all travelers.	Annual			X	• Private for-profit and not-for-profit organizations, including shared use mobility providers, and technology system suppliers • Operators of transportation services, such as employee shuttle services, airport connector services, university transportation systems, or parking and tolling authorities • State or local government entities • Other organizations that may contribute to the success of the project team including consultants, research consortia or not-for-profit industry organizations, and institutions of higher education	https://www.transit.dot.gov/funding/grants/grant-programs/mobility-all-pilot-program-grants	C

FUNDING SOURCE	FUNDING ORIGIN	PURPOSE/ DESCRIPTION	FUNDING CYCLE	ACTIVE TRANSPORT[1]			PROJECT EXAMPLES	WEBSITE	C / F[2]
				INF	NI	PLAN			
Our Town	National Endowment for the Arts	Our Town is the National Endowment for the Arts' creative placemaking grants program. These grants support projects that integrate arts, culture, and design activities into efforts that strengthen communities by advancing local economic, physical, and/or social outcomes.	August		X		• Arts Engagement (Artist residency, art festivals, community co-creation of art, performances, public art) • Cultural planning (district, asset, and art) • Design (Artist/designer-facilitated community planning, Design of artist space and cultural facilities, public space design) • Artist and creative industry support (Creative business and professional artist development)	https://www.arts.gov/grants/our-town	C

TABLE 5-2: State Funding Sources:

FUNDING SOURCE	FUNDING ORIGIN	PURPOSE/ DESCRIPTION	FUNDING CYCLE	ACTIVE TRANSPORT[1]			PROJECT EXAMPLES	WEBSITE	C / F[2]
				INF	NI	PLAN			
Clean Mobility Options	Air Resources Board	The Program makes $20 million available for zero-emissions shared mobility projects (such as car sharing, bike sharing, and on-demand sharing) in disadvantaged and low-income communities, including some tribal and affordable housing communities (California Climate Investments)	Varies	X			• Bikeshare programs • "Quick build" right-of-way safety improvements for bicycles and scooters	https://www.cleanmobilityoptions.org/	F
Transformative Climate Communities (TCC)	Strategic Growth Council/ Department of Conservation		February	X				http://www.sgc.ca.gov/programs/tcc/	

Notes:
[1] *INF - Infrastructure*
NI - Non-infrastructure
PLAN - Planning

[2] Column Heading "C / F" = Grant Type: C=Competitive or F=Formula

FUNDING SOURCE	FUNDING ORIGIN	PURPOSE/ DESCRIPTION	FUNDING CYCLE	ACTIVE TRANSPORT[1]			PROJECT EXAMPLES	WEBSITE	C / F[2]
				INF	NI	PLAN			
Sustainable Transportation Equity Project (STEP)	Air Resources Board	The Program makes $2 million available for planning and capacity building grants. Funding is intended to help low-income and disadvantaged communities identify residents' transportation needs and prepare to implement clean transportation and land use projects. The Program makes $20 million available for one to three implementation block grants to fund clean transportation and land use projects in disadvantaged communities. Funded projects will work together to increase community residents' access to key destinations so they can get where they need to go without the use.	August	X	X	X	• New bike routes (Class I, Class II, or Class IV) and supporting infrastructure • Publicly-accessible bike parking, storage, and repair infrastructure (e.g., bike racks, bike lockers, bike repair kiosks) • New walkways that improve mobility/ access/safety of pedestrians (nonmotorized users) • Street crossing enhancements, including accessible pedestrian signals	https://ww3.arb.ca.gov/msprog/ct/opportunitiesgov/step.htm	C

FUNDING SOURCE	FUNDING ORIGIN	PURPOSE/ DESCRIPTION	FUNDING CYCLE	ACTIVE TRANSPORT[1]			PROJECT EXAMPLES	WEBSITE	C / F[2]
				INF	NI	PLAN			
Local Streets and Roads (LSRP) Program	California Transportation Commission	The purpose of the program is to provide approximately $1.5 billion per year to cities and counties for basic road maintenance, rehabilitation, and critical safety projects on the local streets and roads system.	Annual (May)	X			• Implement enhanced crosswalk signing and striping • Create safety separation between motorists, bicyclists and pedestrians • Design and construction of school access and safety improvements to six schools (SRTS)	https://catc.ca.gov/programs/sb1/local-streets-roads-program	F
Solutions for Congested Corridors (SCCP)	California Transportation Commission	The purpose of the program is to provide funding to achieve a balanced set of transportation, environmental, and community access improvements to reduce congestion throughout the state. This statewide, competitive program makes $250 million available annually for projects that implement specific transportation performance improvements and are part of a comprehensive corridor plan by providing more transportation choices while preserving the character of local communities and creating opportunities for neighborhood enhancement.	Every Two Years	X			• Construct Class I and Class II bikeways • Pedestrian improvements and plaza at a transit station • Intersection improvements	https://catc.ca.gov/programs/sb1/solutions-for-congested-corridors-program	C

FUNDING SOURCE	FUNDING ORIGIN	PURPOSE/ DESCRIPTION	FUNDING CYCLE	ACTIVE TRANSPORT[1]			PROJECT EXAMPLES	WEBSITE	C / F[2]
				INF	NI	PLAN			
State Transportation Improvement Program (STIP)	California Transportation Commission/ California Department of Transportation (Caltrans)	The STIP is the biennial five-year plan adopted by the Commission for future allocations of certain state transportation funds for state highway improvements, intercity rail, and regional highway and transit improvements. Local agencies should work through their Regional Transportation Planning Agency (RTPA), County Transportation Commission, or Metropolitan Planning Organization (MPO), as appropriate, to nominate projects for inclusion in the STIP.	Every Two Years	X			• Bike/ped Overcrossing and Access Improvements and bicycle and pedestrian bridge • Class I, II, III, & IV bike lanes • Multi-Use paths • Complete Streets improvements	https://dot.ca.gov/programs/local-assistance/fed-and-state-programs/state-transportation-improvement-program	C
Urban Forestry Program	California Department of Forestry and Fire Protection (CAL FIRE)	This program funds Urban Greening projects that result in the conversion of an existing built environment into green space that uses natural and green infrastructure approaches to create sustainable and vibrant communities.	Varies	X		X	• Urban Forest Expansion and Improvement • Urban Forest Management Activities • Urban Wood and Biomass Utilization	https://www.fire.ca.gov/grants/urban-and-community-forestry-grant-programs/	C

FUNDING SOURCE	FUNDING ORIGIN	PURPOSE/ DESCRIPTION	FUNDING CYCLE	ACTIVE TRANSPORT[1]			PROJECT EXAMPLES	WEBSITE	C / F[2]
				INF	NI	PLAN			
Infill Infrastructure Grant Program for Small Jurisdictions	California Department of Housing and Community Development	The purpose of the program is to provide grants for Capital Improvement Projects in support of Qualifying Infill Projects or Qualifying Infill Areas. Funding for this NOFA and program requirements are provided under Assembly Bill 101 (Stats. 2019, ch. 159, 20) and Part 12.5 (commencing with section 53559) of Division 31 of the Health and Safety Code.	Varies	X				https://www.hcd.ca.gov/grants-funding/active-funding/iigp.shtml	C
Land and Water Conservation Fund (LCWF)	California Department of Parks and Recreation	The LWCF is a program to conserve irreplaceable lands and improve outdoor recreation opportunities. The program can be used for local efforts to support state and local parks and playgrounds and to provide the tools that communities need to meet their diverse conservation and recreation needs.	Annual	X	X		• Recreational areas, trails • Support for community parks, trails recreational access sites and open spaces	https://www.lwcfcoalition.com/	F
Statewide Park Program	California Department of Parks and Recreation	The goal of this program is to create new parks and new recreation opportunities in underserved communities across California.	December	X	X		• Acquisition of land • Jogging and walking loop, par course, running track • Non-motorized trail, pedestrian/bicycle bridge, greenbelt/linear	https://www.parks.ca.gov/?page_id=29939	C

FUNDING SOURCE	FUNDING ORIGIN	PURPOSE/ DESCRIPTION	FUNDING CYCLE	ACTIVE TRANSPORT[1]			PROJECT EXAMPLES	WEBSITE	C / F[2]
				INF	NI	PLAN			
Active Transportation Planning Grants (ATP)	California Department of Transportation (Caltrans)	Funding for Sidewalks, bike lanes, trails, Safe Routes to School programs, and pedestrian and bicycle plans. The ATP consolidates existing federal and state transportation programs, including the Transportation Alternatives Program (TAP), Bicycle Transportation Account (BTA), and State Safe Routes to School (SRTS), into a single program.	July-September	X	X	X	• Capital Improvements • Bicycle, pedestrian Plan • Safe Routes to School Plan • Active Transportation Plan • Education, Encouragement, and Enforcement Activities • Quick-Build Project	https://dot.ca.gov/programs/local-assistance/fed-and-state-programs/active-transportation-program	C
Transportation Development Act (TDA) Article 3 (SB 821)		The goal of this act is to improve existing public transportation services and encourage regional transportation coordination. TDA established two funding sources; the Local Transportation Fund (LTF), and the State Transit Assistance (STA) fund. Providing certain conditions are met, counties with a population under 500,000 (according to the 1970 federal census) may also use the LTF for local streets and roads, construction and maintenance. The STA funding can only be used for transportation planning and mass transportation purposes.	Annual • Article 3 Bicycle and Pedestrian projects and Article 3 Transit Stop Access Improvement Program.	X		X	• Partners with member jurisdictions to apply for the Transit Stop Access Improvement Program for ADA bus stop improvements and amenities	https://dot.ca.gov/programs/rail-and-mass-transportation/transportation-development-act	F

FUNDING SOURCE	FUNDING ORIGIN	PURPOSE/ DESCRIPTION	FUNDING CYCLE	ACTIVE TRANSPORT[1]			PROJECT EXAMPLES	WEBSITE	C / F[2]
				INF	NI	PLAN			
Sustainable Transportation Planning Grants	California Department of Transportation (Caltrans)	The program includes $29.5 million to encourage local and regional planning that furthers state goals, including, but not limited to, the goals and best practices cited in the Regional Transportation Plan Guidelines adopted by the California Transportation Commission.	Annual			X	• Safe Routes to School Plan • Active Transportation Plan • Bike/ped Trail/ Path Feasibility Study • Complete Streets Plan • Sustainable Communities Plan • Transit-Oriented Development Plan • First/Last Mile Connectivity Plan	https://dot.ca.gov/programs/transportation-planning/regional-planning/sustainable-transportation-planning-grants	C
Urban Greening	California Natural Resources Agency	The Program supports the development of green infrastructure projects that reduce GHG emissions and provide multiple benefits. Must include at least one of the following: • Sequester and store carbon by planting trees • Reduce building energy use by strategically planting trees to shade buildings • Reduce commute vehicle miles traveled by constructing bicycle paths, bicycle lanes or pedestrian facilities that provide safe routes for travel between residences, workplaces, commercial centers, and schools. (California Climate Investments)	Varies	X			• Non-motorized urban trails that provide safe routes for both recreation and travel between residences, workplaces, commercial centers, and schools • Projects that expand or improve the usability of existing active transportation routes (e.g., walking or bicycle paths) or create new active transportation routes that are publicly accessible by walking • Complete Green Streets	https://resources.ca.gov/grants/urban-greening	C

FUNDING SOURCE	FUNDING ORIGIN	PURPOSE/ DESCRIPTION	FUNDING CYCLE	ACTIVE TRANSPORT[1]			PROJECT EXAMPLES	WEBSITE	C / F[2]
				INF	NI	PLAN			
Environmental Enhancement and Mitigation (EEMP)	California Natural Resources Agency and Caltrans	The EEMP is an annual program established by legislation in 1989 and amended on September 26, 2013. It offers grants to local, state and federal governmental agencies and to nonprofit organizations for projects to mitigate the environmental impacts caused by new or modified public transportation facilities.	Varies	X				https://resources.ca.gov/grants/environmental-enhancement-and-mitigation-eem/	C
Local Partnership Program - Competitive and Formulaic	California Transportation Commission	The primary objective of this program is to provide funding to counties, cities, districts, and regional transportation agencies in which voters have approved fees or taxes dedicated solely to transportation improvements or that have imposed fees, including uniform developer fees, dedicated solely to transportation improvements. Funding includes $200M/year to improve aging Infrastructure, Road Conditions, Active Transportation, Transit and rail, Health and Safety Benefits	March - June	X	X	X	• Close sidewalk gap, install class II bike lanes and cycle track, curb extensions, pedestrian enhancements, improvements to lighting and signage • Construct 4 single-lane and 1 multi-lane roundabouts, and improvements to street, pedestrian and bicycle facilities • Expressway pedestrian overcrossing	https://catc.ca.gov/programs/sb1 /local-partnership-program	F & C

FUNDING SOURCE	FUNDING ORIGIN	PURPOSE/ DESCRIPTION	FUNDING CYCLE	ACTIVE TRANSPORT[1]			PROJECT EXAMPLES	WEBSITE	C / F[2]
				INF	NI	PLAN			
Transit and Intercity Rail Capital Program (TIRCP)	CalSTA and Caltrans Division of Rail and Mass Transportation	The TIRCP provides grants from the Greenhouse Gas Reduction Fund to fund transformative capital improvements that will modernize California's intercity, commuter, and urban rail systems, and bus and ferry transit systems, to significantly reduce emissions of greenhouse gases, vehicle miles traveled, and congestion.	January	X	X	X	• Pedestrian and bike trail • First/last mile connections via bike lanes and separated paths • Bike share programs • Bike parking facilities • Plans	https://calsta.ca.gov/subject-areas/transit-intercity-rail-capital-prog https://dot.ca.gov/programs/rail-and-mass-transportation/transit-and-intercity-rail-capital-program	F & C
State Highway Operations and Protection Program (SHOPP)	Caltrans Office of SHOPP Management	The Office of SHOPP Management is responsible for planning, developing, managing and reporting the four year SHOPP portfolio of projects. The Program is the State Highway System's "fix it first" program that funds repairs and preservation, emergency repairs, safety improvements, and some highway operational improvements on the State Highway System.	Annual	X			• Upgrade sidewalks to ADA compliance • Reconstruct damaged pavement • Add bike lanes to updated corridors • Upgrade pedestrian push buttons, refresh striping, and improve pedestrian and bicycle access	https://dot.ca.gov/programs/transportation-programming/state-highway-operation-protection-program-shopp-minor-program-shopp	

FUNDING SOURCE	FUNDING ORIGIN	PURPOSE/ DESCRIPTION	FUNDING CYCLE	ACTIVE TRANSPORT[1]			PROJECT EXAMPLES	WEBSITE	C / F[2]
				INF	NI	PLAN			
Office of Traffic Safety Grant Program	Office of Traffic Safety	The Program provides annual funds to prevent serious injury and death resulting from motor vehicle crashes so that all roadway users arrive at their destination safely. Funds can be used for bicycle and pedestrian safety	Due in January		X		• Safety education and encourage • Campaigns to promote safety • SRTS safety programs	https://www.ots.ca.gov/Grants/	C
Affordable Housing and Sustainable Communities Program	Strategic Growth Council and Department of Housing and Community Development	The Program funds land-use, housing, transportation, and land preservation projects to support infill and compact development that reduce greenhouse gas emissions. The Program included $550M in its latest round. (California Climate Investments)	February	X	X		• Class I, II, III, & IV bike facilities • Active transportation projects to encourage connectivity to transit networks • Bikeways and sidewalks to affordable housing and transit center • Install dedicated bicycle facilities • Pedestrian facilities such as bulb-outs	https://hcd.ca.gov/grants-funding/active-funding/ahsc.shtml	C

FUNDING SOURCE	FUNDING ORIGIN	PURPOSE/ DESCRIPTION	FUNDING CYCLE	ACTIVE TRANSPORT[1]			PROJECT EXAMPLES	WEBSITE	C / F[2]
				INF	NI	PLAN			
California Energy Commission Blueprints for Medium- and Heavy-Duty Zero - Emission Vehicle Infrastructure	California Energy Commission	For planning "blueprints" that will identify actions and milestones needed for implementation of medium- and heavy- duty zero-emission vehicles and the related electric charging and/or hydrogen refueling infrastructure. This is a planning grant to: • Build upon, but not be duplicative of previous planning efforts funded through the CEC. • Be comprehensive and implementable to assist fleets in the complete transition to MD/HD zero-emission vehicles and infrastructure. • Identify electric charging and/or hydrogen refueling requirements needed for the planned transition to or acquisition of MD/HD vehicles.	Varies	X			Planning funds to chart next steps for: • Zero-emission buses • Electric charging of buses • Hydrogen refueling stations	https://www.energy.ca.gov/filebrowser/download/1166	C
California Energy Commission Zero-Emission Transit Fleet Infrastructure Deployment	California Energy Commission	To fund electric vehicle charging or hydrogen refueling infrastructure needed to support the large-scale conversion of transit bus fleets to zero-emission vehicles at multiple transit agencies serving diverse geographic regions and populations. Total available funding: $20 million	Annual	X			Planning funds to chart next steps for: • Zero-emission buses • Electric charging of buses • Hydrogen refueling stations	https://www.energy.ca.gov/solicitations/2020-07/gfo-20-602-zero-emission-transit-fleet-infrastructure-deployment	C

FUNDING SOURCE	FUNDING ORIGIN	PURPOSE/ DESCRIPTION	FUNDING CYCLE	ACTIVE TRANSPORT[1]			PROJECT EXAMPLES	WEBSITE	C / F[2]
				INF	NI	PLAN			
Local Partnership Grant Program	California Transportation Commission	Improvements to transit facilities, including guideways, that expand transit services, increase transit ridership, improve transit safety, enhance access or convenience of the traveling public, or otherwise provide or facilitate a viable alternative to driving.	Summer 2021		X		• Alternative fuel buses acquisition • Charging infrastructure to fuel/power alternative fuel buses • Maintenance facility upgrades or construction of new O&M facilities • Innovative fare payment systems • New operational model • Bus shelter improvements • Fare collection upgrades	https://catc.ca.gov/programs/sb1/local-partnership-program	C & F
Placemaking Grants	National Association of Realtors (NAR)	Placemaking means many things to different people, but NAR looks as placemaking as a way to make communities better places to live by transforming unused and underused sites and "eyesores" into welcoming destinations accessible to everyone in a community.	October 15, 2021		X		• Amenities (street furniture, paint, signage, materials, landscaping, murals, etc.) • Site preparation • Artist fees	https://realtorparty.realtor/community-outreach/placemaking/	C

FUNDING SOURCE	FUNDING ORIGIN	PURPOSE/ DESCRIPTION	FUNDING CYCLE	ACTIVE TRANSPORT[1]			PROJECT EXAMPLES	WEBSITE	C / F[2]
				INF	NI	PLAN			
Levitt AMP Music Series	Levitt Founda-tion	An exciting matching grant program made possible by the Mortimer & Mimi Levitt Foundation, a national creative placemaking funder dedicated to strengthening the social fabric of America through the power of free, live music. With Levitt AMP, the joy of free, live music is bringing communities together in small and mid-sized towns and cities across the country.	Annual		X		Free Music Series	https://grant.levittamp.org/submit-a-registration/	C
Online Fundrasing Platform	IOBY	ioby stands for "in our backyards," but it also stands for taking care of each other, for civic participation, and for trusting neighbors to know what's best for the neighborhood. ioby gives local leaders the ability to crowdfund the resources they need to build real, lasting change from the ground up. Our crowdfunding platform helps connect local leaders with support and funding from their communities to make our neighborhoods more sustainable, healthier, greener, more livable, and more fun.	Ongoing		X		• Clear air programs • Clean water programs • Climate change programs • Compost programs • Education programs • Mutual Aid programs • Open Space & Greening programs • Public Health & Nutrition programs • Recycling programs	https://ioby.org/	

TABLE 5-3: Local Funding Sources:

FUNDING SOURCE	FUNDING ORIGIN	FUNDING CYCLE
Special Habitat Conservation Programs	Regional MPOs/Local Cities	Varies
Special Parks and Recreation Bond Revenues		
Special Transportation Bonds and Sales Tax Incentives		
Sustainable Communities Program (SCP)[1]	Southern California Association of Governments (SCAG)	Annual Budget
Local Community Engagement and Safety Mini-Grants[2]		May-July
Advertising Sales/Naming Rights	Local Jurisdictions	Annual Budget
Bi Bipartisan Infrastructure Deal (Infrastructure Investment and Jobs Act)		
Community Facilities District (CFD)		
Infrastructure Financing District (IFD)		
Facilities Benefit Assessment District (BFA)		
Easement Agreements/Revenues		
Equipment Rental Fees		
Facility Use Permits Fees		
Fees and Charges/Recreation Service Fees		
Food and Beverage Tax		
General Fund		
General Obligation Bonds		
Intergovernmental Agreements		
Lease Revenues		
Mello Roos Districts		
Residential Park Improvement Fees		
Park Impact Fees		
Traffic Impact Fees		
In-Lieu Fees		
Pouring Rights Agreements		
Private Development Agreements		
Surplus Real Estate Sale Revenues		
Revenue Bond Revenues		
Sales Tax Revenues		
Transient Occupancy Tax Revenues		
Wastewater Fund Reserves		
Utility Taxes		

Websites:

[1] *https://scag.ca.gov/sustainable-communities-program*

[2] *https://scag.ca.gov/apply-mini-gran*

FUNDING SOURCE	FUNDING ORIGIN	FUNDING CYCLE
Business Improvement Districts (BID)	Non-profits, Business Organizations or City	Varies
Maintenance Assessment Districts (MAD)		
Property Based Improvement Districts (PBID) **Landscape Maintenance District (LMD)**		
Various Sports Field Grants	Various Agencies, Foundations and Corporations	
Community Health Initiatives	Kaiser Permanente	
America's Historical Planning Grants	National Endowment for Humanities	
Corporate Sponsorships	Private Corporations	
Private Sector Partnerships		
Non-Profit Partnerships	Non-Profit Corporations	
Foundation Grants	Private Foundations	
Private Donations	Private Individuals	
Irrevocable Remainder Trusts		
Targeted Fund-raising Activities	Local Jurisdictions	
Healthy Places by Design	Robert Wood Johnson Foundation	
PeopleForBikes Community Grant Program	PeopleForBikes/Partners	Twice a year

Appendix A

Applicable Legislation

1.1 APPLICABLE LEGISLATION

Several pieces of legislation support increased bicycling and walking in the State of California. Much of the legislation addresses greenhouse gas (GHG) reduction and employs bicycling and walking as a means to achieve reduction targets. Other legislation highlights the intrinsic worth of bicycling and walking and treats the safe and convenient accommodation of bicyclists and walkers as a matter of equity. The most relevant legislation concerning bicycle and pedestrian policy, planning, infrastructure, and programs are described in the following sections.

1.1.1 STATE LEGISLATION AND POLICIES

California Transportation Plan 2050

A long-range plan completed in 2021 to provide a common framework for transportation decisions and investments throughout the state. It aims to meet the growing needs of California residents as it relates to travel accessibility, emissions, and economic impacts. There are 14 overarching recommendations that correlate to the goals of the CTP.

AB-32 California Global Warming Solutions Act

AB-32 calls for the reduction of greenhouse gas emissions and codifies a 2020 emissions reduction goal. This act also directs the California Air Resources Board (CARB) to develop specific early actions to reduce greenhouse gases while also preparing a scoping plan to identify how best to reach the 2020 limit.

SB-127 Complete Streets Bill

The new bill would require Caltrans to consider Complete Streets elements where State Highways function as local roads. In addition, it would require Caltrans and the California Transportation Commission to give high priority to safety for pedestrians and bicyclists and to building bicycle and pedestrian facilities.

SB 1000 Planning for Healthy Communities Act

Under SB 1000, cities and counties are required to adopt an Environmental Justice element, or integrate EJ-related policies, objectives, and goals throughout other elements of their General Plan. The bill also includes a process for communities to become meaningfully involved in the decision-making processes that govern land use planning in their neighborhoods.

SB-375 Redesigning Communities to Reduce Greenhouse Gases

This bill seeks to reduce vehicle miles traveled (VMT) through land use and planning incentives. Key provisions require the larger regional transportation planning agencies to develop more sophisticated transportation planning models and to use them to create “preferred growth scenarios” in their regional plans that reduce greenhouse gas emissions. The bill also provides incentives for local governments to incorporate these preferred growth scenarios into the transportation elements of their general land use plans.

AB-1358 Complete Streets Act

AB-1358 requires the legislative body of a city or county, upon revision of the circulation element of their general plan, to identify how the jurisdiction will provide for the routine accommodation of all users of the roadway including drivers, pedestrians, cyclists, individuals with disabilities, seniors, and public transit users. The bill also directs the OPR to amend guidelines for general plan circulation element development so that the building and operation of local transportation facilities safely and conveniently accommodate everyone, regardless of their travel mode.

AB-1581 Bicycle and Motorcycle Traffic Signal Actuation

This bill defines a traffic control device as a traffic-actuated signal that displays one or more of its indications in response to the presence of traffic detected by mechanical, visual, electrical, or other means. Upon the first placement or replacement of a traffic-actuated signal, the signal would have to be installed and maintained, to the extent feasible and in conformance with professional engineering practices, to detect lawful bicycle or motorcycle traffic on the roadway. Caltrans has adopted standards for implementing the legislation.

AB-1371 Passing Distance/Three Feet for Safety Act

This statute, widely referred to as the "Three Foot Passing Law," requires drivers to provide at least three feet of clearance when passing bicyclists. If traffic or roadway conditions prevent drivers from giving bicyclists three feet of clearance, they must "slow to a speed that is reasonable and prudent" and wait until they reach a point where passing can occur without endangering the bicyclists. Violations are punishable by a $35 base fine, but drivers who collide with bicyclists and injure them in violation of the law are subject to a $220 fine.

SB-743 CEQA Reform

Just as important as the aforementioned pieces of legislation that support increases in bicycling and walking infrastructure and accommodation is one that promises to remove a longstanding roadblock to them. That roadblock is vehicular Level of Service (LOS) and the legislation with the potential to remove it is SB-743.

For decades, vehicular congestion has been interpreted as an environmental impact and has often stymied on-street bicycle projects, in particular. Projections of degraded Level of Service have, at a minimum, driven up project costs and, at a maximum, precluded projects altogether. In many cases, it leads to high stress environment for cyclists and pedestrians. SB-743 removes LOS as a measure of vehicle traffic congestion that must be used to analyze environmental impacts under the California Environmental Quality Act (CEQA).

This is extremely important because adequately accommodating bicyclists, particularly in built-out environments, often requires reallocation of right-of-way and the potential for increased vehicular congestion. The reframing of Level of Service as a matter of driver inconvenience, rather than an environmental impact, allows planners to assess the true impacts of transportation projects and will help support bicycling projects that improve mobility for all roadway users.

CEQA for Bicycle and Pedestrian Plans

Based on Public Resources Code Section 15262 (Feasibility and Planning Studies) guidance, planning documents such as this ATP are exempt from CEQA analysis since they are planning and conceptual recommendations:

"A project involving only feasibility or planning studies for possible future actions which the agency, board, or commission has not approved, adopted, or funded does not require the preparation of an EIR or Negative Declaration but does require consideration of environmental factors."

As individual recommendations move forward toward further design and implementation, the City will then need to determine if there are environmental impacts that may warrant an EIR.

AB-1193 Bikeways

This act amends various code sections, all relating to bikeways in general, specifically by recognizing a fourth class of bicycle facility, cycle tracks. However, another component of AB-1193 may be even more significant to future bikeway development.

Existing law requires Caltrans, in cooperation with county and city governments, to establish minimum safe-

ty design criteria for the planning and construction of bikeways, and requires the department to establish uniform specifications and symbols regarding bicycle travel and traffic related matters. Existing law also requires all city, county, regional, and other local agencies responsible for the development or operation of bikeways or roadways to utilize all of those minimum safety design criteria and uniform specifications and symbols.

This bill revises these provisions to require Caltrans to establish minimum safety design criteria for each type of bikeway, and also authorizes local agencies to utilize different minimum safety criteria if adopted by resolution at a public meeting.

Design Information Bulletin 89-01

A Class IV Bikeway (separated bikeway) is a bikeway for the exclusive use of bicycles and includes a separation required between the separated bikeway and the through vehicular traffic. The purpose of Design Information Bulletin (DIB) 89-01 is to provide design criteria and guidance on best practices related to these separated bikeways to establish a uniform guidance that will facilitate consistent user expectations. DIB 89-01 intends to allow designers to exercise sound judgment when applying it while being consistent with Caltrans Highway Design Manual and the CA MUTCD. This DIB is written to allow for flexibility in applying design criteria, taking into consideration the context of the project's location, enabling designers to tailor the design and maximize safety and comfort.

Best practices from cities, states, and countries currently operating separated bikeways have been used to formulate the DIB 89-01. This DIB will be updated as necessary based on lessons learned from engineers and practitioners as they gain more experience with the use of separated bikeways.

SB-1 Transportation Funding

This bill creates the Road Maintenance and Rehabilitation Program to address deferred maintenance on the state highway system and the local street and road system. A total of $5.4 billion will be invested annually over the next decade, which will undertake a backlog of repairs and upgrades. Additionally, cleaner and more sustainable travel networks will be ensured for the future, including upgrades to local roads, transit agencies, and an expansion of the state's growing network of pedestrians and bicycle routes.

SB-672 Traffic-Actuated Signals: Motorcycles and Bicycles

This bill extends indefinitely the requirement to install traffic-actuated signals to detect lawful bicycle or motorcycle traffic on the roadway. By extending indefinitely requirements regarding traffic-actuated signals applicable to local governments, this bill would impose a state-mandated local program.

Existing law requires the state to reimburse local agencies and school districts for certain costs mandated by the state.

SB-760 Transportation Funding: Active Transportation: Complete Streets

This bill seeks to establish a Division of Active Transportation within Caltrans to give attention to active transportation program matters to guide progress toward meeting the department's active transportation program goals and objectives. This bill requires the California Transportation Commission to give high priority to increasing safety for pedestrians and bicyclists and the implementation of bicycle and pedestrian facilities. The bill also directs the department to update the Highway Design Manual to incorporate "Complete Streets" design concepts, including guidance for the selection of bicycle facilities.

AB-1218 California Environmental Quality Act Exemption: Bicycle Transportation Plans

This bill extends CEQA requirements exemptions for bicycle transportation plans for an urbanized area until January 1, 2021. These exemptions include restriping of streets and highways, bicycle parking and storage,

signal timing to improve street and highway intersection operations, and related signage for bicycles, pedestrians, and vehicles under certain conditions. Additionally, CEQA will also exempt from its requirements projects consisting of restriping of streets and highways for bicycle lanes in an urbanized area that are consistent with a bicycle transportation plan under certain conditions.

Caltrans' Deputy Directive 64-R2

Deputy Directive 64-R2 is a policy statement affecting Caltrans mobility planning and projects requiring the agency to:

"...provide for the needs of travelers of all ages and abilities in all planning, programming, design, construction, operations, and maintenance activities and products on the State highway system. Caltrans views all transportation improvements as opportunities to improve safety, access. and mobility for all travelers in California and recognizes bicycle, pedestrian, and transit modes as integral elements of the transportation system."

The directive goes on to mention the environmental, health and economic benefits of more Complete Stre ets.

AB 902 Traffic Violations and Diversion Programs

Existing law provides that a local authority may not allow a person who has committed a traffic violation under the Vehicle Code to participate in a driver awareness or education program as an alternative to the imposition of those penalties and procedures unless the program is a diversion program for a minor who commits an infraction not involving a motor vehicle and for which no fee is charged.

This bill would instead allow any person of any age who commits an infraction not involving a motor vehicle to participate in a diversion program sanctioned by local law enforcement. The bill would eliminate the requirement that such a program charge no fee, as well as other technical changes.

AB 1096 Electric Bicycles as Vehicles

Existing law defines a "motorized bicycle" as a device that has fully operative pedals for propulsion by human power and has an electric motor that meets specified requirements. The bill would define an "electric bicycle" as a bicycle with fully operable pedals and an electric motor of fewer than 750 watts and would create three classes of electric bicycles.

The bill would prohibit the operation of the most powerful Class 3 electric bicycles on specified paths, lanes, or trails unless that operation is authorized by a local ordinance. The bill would also authorize a local authority or governing body to prohibit, by ordinance, the operation of Class 1 or Class 2 electric bicycles on specified paths or trails.

AB-390 Pedestrian Crossing Signals

This bill authorizes a pedestrian facing a flashing "DON'T WALK" or "WAIT" or approved "Upraised hand" symbol with a "countdown" signal to proceed, so long as the pedestrian completes the crossing before the display of the steady "DON'T WALK OR WALK" or "WAIT" or approved "Upraised Hand" symbol.

AB-285 Forecast Impacts of Emerging Technologies

The California Transportation Plan (CTP), produced by Caltrans, is required to address how it will help meet state greenhouse gas emission and clean air goals. Starting in 2025, the CTP will have to forecast the potential impacts of future transportation technologies on infrastructure, access, and the overall transportation system. It will also be required to consider environmental justice in its planning for transportation and freight movement.

AB-1266 Bicycle Guidance Signs Through an Intersection

AB-1266 ultimately aims to make it safer for bicycle riding in California at busy intersections. The bill requires Caltrans to develop standards for lane striping, pavement markings, and appropriate regulatory signs that allow bicyclists to go straight from a right or left turn lane and to safely cross outside of the high-traffic lanes.

SB-400 Clean Cars 4 All Program

This bill would include e-bikes and bike sharing programs as options within California's Clean Cars 4 All program. CC4A aims to reduce car emissions by increasing the turnover of the existing vehicles and replacing them with newer, cleaner, and more efficient vehicles. Reducing emissions from existing vehicles is a component of California's State Implementation Plan for meeting air quality standards and also supports efforts to meet the state's 2030 climate change goals.

Executive Order N-19-19

California Governor Gavin Newsom signed Executive Order N-19-19 on September 20, 2019 to require the State to continue efforts to reduce greenhouse gas emissions and mitigate climate change impacts while building a sustainable economy. The California State Transportation Agency is directed to leverage strategies towards lowering vehicle miles traveled by supporting active modes of transportation such as biking and walking that also benefit public health.

1.1.2 FEDERAL LEGISLATION

Safe Streets Act (S-2004/HR-2468)

HR2468 encourages safer streets through policy adoption at the state and regional levels, mirroring an approach already being used in many local jurisdictions, regional agencies, and states governments. The bill calls upon all states and metropolitan planning organizations (MPOs) to adopt Safe Streets policies for federally funded construction and roadway improvement projects within two years. Federal legislation will ensure consistency and flexibility in road-building processes and standards at all levels of governance.

Interim Approval for Optional Use of an Intersection Bicycle Box (IA-18)

Intersection bicycle boxes are designated areas at signalized intersections that provide bicyclists with a space in which to wait in front of stopped motor vehicles during the red signal phase so that they are more visible to motorists. Since they are still considered an experimental traffic control device, the Federal Highway Administration issued an Interim Approval to allow the provisional use of intersection bicycle boxes in October 2016. This Interim Approval does not create a new mandate compelling the use of intersection bicycle boxes but will allow agencies to install intersection bicycle boxes, pending official rulemaking revising the MUTCD, to facilitate more efficient operations at intersections. Interim Approval of a provisional device typically results in its inclusion in a future Notice of Proposed Amendments to revise the MUTCD. However, this Interim Approval does not guarantee the adoption of the provisional device, either in whole or in part, in any future rulemaking that revises the MUTCD.

1.2 Primary Guidance

In 2014, the California Department of Transportation (Caltrans) updated the CA MUTCD to provide uniform standards and specifications for all official traffic control devices in California. This update is meant to implement Caltrans's 2014 mission to provide a safe, sustainable, integrated, and efficient transportation system to enhance California's economy and livability. The purpose of the CA MUTCD is to improve safety and mobility for all travellers by setting minimum standards and providing guidance intended to balance safety and convenience for everyone in traffic, including drivers, pedestrians, and bicyclists.

The CA MUTCD contains the basic principles that govern the design and use of traffic control devices that aim to promote highway safety and efficiency by providing for the orderly movement of all road users on streets, highways, bikeways, and private roads open to public travel. Multimodal policies for safer crossings, work zones, and intersections are integrated as part of the CA MUTCD, with improvements including:

- Crosswalks Enhancements Policy
- Temporary Traffic Control Plans
- Work Zone and Higher Fines Signs and Plaques
- Traffic Control for School Areas

Additionally, NACTO guidance was analyzed to ensure flexibility and innovation in the design and operations of streets and highways in California. Much of the guidance provided in the CA MUTCD is consistent with the NACTO Urban Bikeway Design Guide.

1.2.1 CALTRANS HIGHWAY DESIGN MANUAL, CHAPTER 1000: BICYCLE TRANSPORTATION DESIGN

Chapter 1000 of the Caltrans Highway Design Manual serves as the official design standard for bikeways in California. This chapter defines a "bikeway" as a facility that is provided primarily for bicycle travel and recognizes its importance in improving bicycling safety and convenience. Chapter 1000 intends to help accommodate motor vehicle and bicycle traffic on the roadway system, or as a complement to the road system to meet the needs of bicyclists. This chapter classifies bikeway facilities into five different types that include:

- Shared Roadway (No Bikeway Designation)
- Class I Bikeway (Bike Path)
- Class II Bikeway (Bike Lane)
- Class III Bikeway (Bike Route)
- Class IV Bikeways (Separated Bikeways)

However, Chapter 1000 states that these designations should not be construed as a hierarchy of bikeways since each bikeway type has its appropriate application. Additionally, this chapter only provides design guidance for Class I bike paths, Class III bike routes, as well as trails.

1.2.2 FHWA BIKE LANE PLANNING AND DESIGN GUIDE

This 2015 guide is the most recent national bike lane design guide and for many, the primary national resources for planning and designing bicycle facilities. It captures the state of practice of bicycle facility design within the street right of way. It provides a menu of design options covering typical one and two-way cycle tracks and provides detailed intersection design information covering topics such as turning movement operations, signalization, signage, and on-road markings.

1.2.3 FHWA BIKEWAY SELECTION GUIDE

This 2019 guide is an important complement to the 2015 FHWA Bike Lane Planning and Design Guide. It has a focus on designing for all ages and abilities. It gives the designer additional tools such as matrices, flow charts, and graphs that facilitate the design of the appropriate bikeway based both on roadway characteristics and the intended type of cyclist.

1.2.4 MASSDOT SEPARATED BIKE LANE PLANNING & DESIGN GUIDE

This guide draws on research and best practices from the United States and around the world to deliver a unique manual not covered in other manuals, such as protected intersections and cycle tracks within roundabouts. Although it is a state guide and not a national guide, the up-to-date information and the easy-to-read graphics make it an important reference guide for bicycle planners and designers.

1.2.5 AASHTO GUIDE TO BIKEWAY FACILITIES

The AASHTO bicycle and pedestrian design guides are important national resources for planning, designing, and operating bicycle and pedestrian facilities, especially for bike path design outside a typical road right of way that is not covered in other guides. The NACTO Urban Bikeway Design Guide and the Institute of Transportation Engineers (ITE) Designing Urban Walkable Thoroughfares Guide, builds upon the flexibilities provided in the AASHTO guides, which can help communities plan and design safe and convenient facilities for pedestrians and cyclists. FHWA supports the use of these resources to further develop non-motorized transportation networks, particularly in urban areas. Moreover, in August of 2013, the FHWA issued a memo on Bicycle and Pedestrian Facility Design Flexibility issuing their support for taking a flexible approach to bicycle and pedestrian facility design. Moving away from standards and towards flexibility in design using the designer's judgment is an important step towards contextual design, implementing the appropriate facility based on location and context.

1.2.6 NACTO URBAN BIKEWAY AND URBAN STREET DESIGN GUIDES

The NACTO guides represent the industry standard for innovative bicycle and streetscape facilities and treatments in the United States. In 2014, Caltrans officially endorsed the NACTO Urban Street Design Guide and Urban Bikeway Design Guide as valuable toolkits for designing and constructing safe, attractive local streets. At the time, Caltrans was only the third State Department of Transportation to officially endorse the Guides.

It is important to note that virtually all of the Urban Bikeway Design Guide design treatments (with two exceptions) are permitted under the Federal MUTCD. The NACTO Urban Street Design Guide is the more generalized of the two guides and organized into six sections. Each section is further subdivided, depending on the topic. The NACTO Urban Bikeway Design Guide is also organized into six sections, but its information is bicycle-specific. For each section, it offers three levels of guidance: Required Features, Recommended Features, and Optional Features. The following section introduces the broad facility types included in the NACTO Urban Bikeway Design Guide.

1.2.7 NACTO TRANSIT STREET DESIGN GUIDE

As transit gains a more prominent role in cities, more people are using buses, streetcars, and light rail than ever before. As a result, street design is shifting to give transit the space it deserves. The NACTO Transit Street Design Guides provide design guidance for the development of transit facilities on streets, as well as for prioritizing transit, improving its service quality, and to support other related goals.

The majority of design elements included in this guide are consistent with MUTCD standards, including signage, markings, and signal elements that have received interim approval. These guidelines were developed using other design guidance as a basis, along with city case studies, best practices, research and evaluation of existing designs, and professional consensus.

1.2.8 NACTO URBAN STREET STORMWATER GUIDE

The NACTO Urban Street Stormwater Guide provides guidelines on how to create resilient cities that are better prepared for climate change while creating public spaces that deliver social and economic value to these places. This guide focuses on green infrastructure within urban streets, including the design and engineering of stormwater management practices that support and improve mobility. It also intends to reduce the impacts of runoff and human activity on natural ecological processes.

One of the main goals of this guide is to encourage interdepartmental partnerships around sustainable infrastructure, which includes communicating the benefits of such projects. However, this guide does not address stormwater management strategies on private property, nor does it address drainage and infiltration around controlled-access highways.

1.2.9 COMPLETE STREETS AND ROUTINE ACCOMMODATION

An adopted Active Transportation Plan provides a roadmap to support planning and implementing a bicycle and pedestrian network, can help to integrate bicycle and pedestrian planning into broader planning efforts, and is required for State funding of bikeway and pedestrian projects.

For many cities, however, a bicycle and pedestrian plan alone is not enough to ensure the implementation of the plan's goals and projects. A hurdle many cities face is that their various plans are not well integrated. Despite many cities' attempts to support a "Complete Streets approach," entrenched and often contradictory policies can make implementation difficult. For instance, an ATP, an ADA transition plan, and a specific plan may address the same area, but ignore each other's recommendations. One plan may identify a certain project, but it may not be implementable due to prevailing policies and practices that prioritize vehicular flow and parking over other modes.

An adopted Complete Streets policy has the potential to address these shortcomings through the designation of some important corridors as Complete Streets, accommodating all roadway users, and other corridors as priority corridors for certain modes. A system that assigns priority for different modes to specific corridors, offset from one another, is referred to as a layered network.

Efforts to implement Complete Streets policy often highlight other significant obstacles, chief among them documents defining "significant impacts" to traffic, acceptable vehicular "Level of Service" thresholds, and parking requirements. Drafting a Complete Streets policy often means identifying roadblocks like these and ultimately mandating increased flexibility to allow for the creation of a more balanced transportation system. In the case of an ATP, the network identified could become the bicycle and pedestrian layers. Identification in such a plan, reiteration within a Complete Streets policy framework, and exemption from traditional traffic analyses can make implementation more likely and much more affordable.

Legislative support for Complete Streets can be found at the State level (AB-1358) and is being developed at the national level (HR-2468). As explained in further detail in the following section on applicable legislation, AB-1358 requires cities and counties to incorporate Complete Streets in their general plan updates and directs the State Office of Planning Research (OPR) to include Complete Streets principles in its update of guidelines for general plan circulation elements. Examples of best practices in Complete Streets Policies from around the United States can be found at: http://www.smartgrowthamerica.org/complete-streets-2013-analysis.

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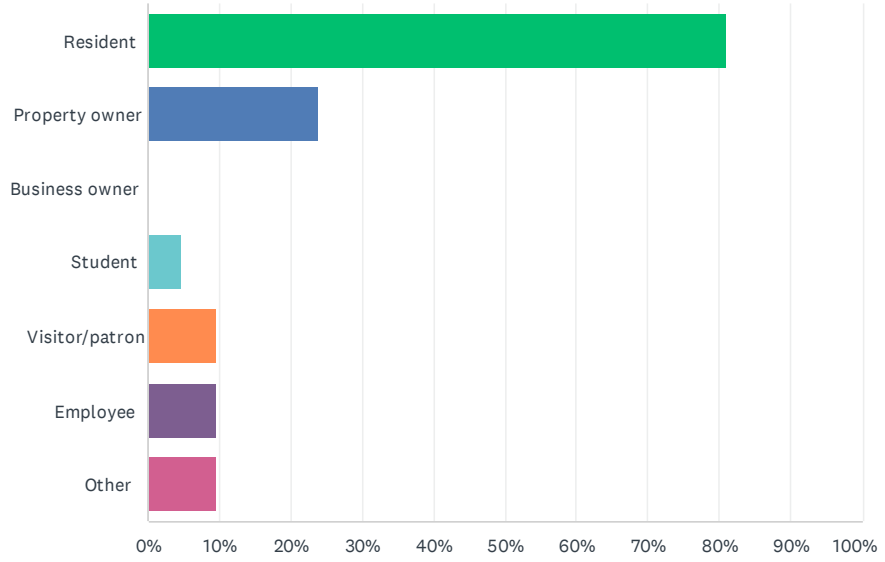
Appendix B
SurveyMonkey Results

Artesia Active Transportation: Community Survey

Q1 How would you best describe your relationship with Artesia? (Check all that apply)

Answered: 21 Skipped: 0

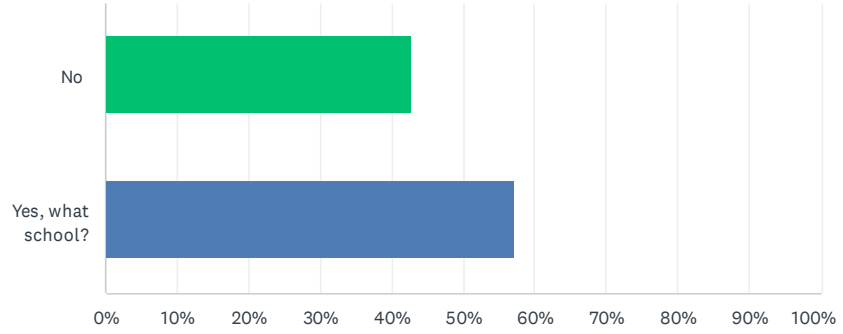


ANSWER CHOICES	RESPONSES	
Resident	80.95%	17
Property owner	23.81%	5
Business owner	0.00%	0
Student	4.76%	1
Visitor/patron	9.52%	2
Employee	9.52%	2
Other	9.52%	2
Total Respondents: 21		

Artesia Active Transportation: Community Survey

Q2 Are there students in the household?

Answered: 21 Skipped: 0



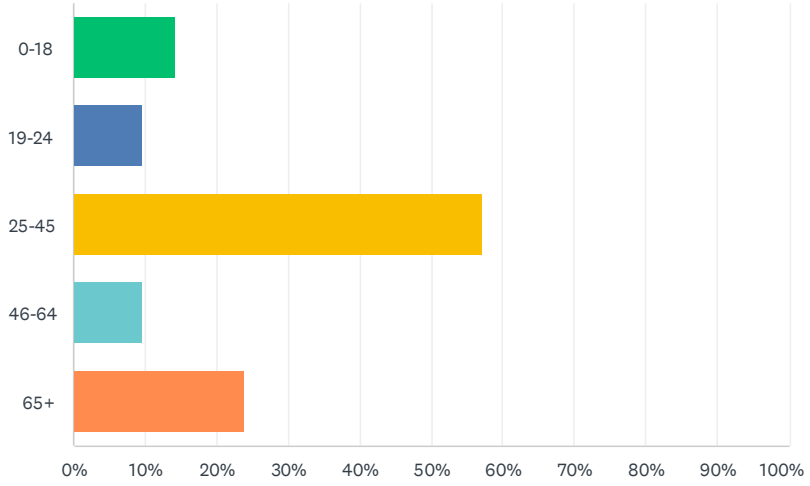
ANSWER CHOICES	RESPONSES	
No	42.86%	9
Yes, what school?	57.14%	12
TOTAL		21

#	YES, WHAT SCHOOL?	DATE
1	Gonsalves	10/3/2021 11:41 AM
2	Chs	8/13/2021 5:01 PM
3	OCSA	8/3/2021 7:08 PM
4	Mary Bragg	8/3/2021 6:11 PM
5	Not specified	7/27/2021 2:38 PM
6	Cerritos College	7/2/2021 7:22 PM
7	Cerritos College	7/2/2021 7:22 PM
8	Ross middle school	7/2/2021 6:52 PM
9	PReschool	7/2/2021 6:47 PM
10	Nixon Academy	7/2/2021 6:27 PM
11	Benito Juarez	5/18/2021 7:18 PM
12	Nixon	5/15/2021 11:44 AM

Artesia Active Transportation: Community Survey

Q3 Which of the following groups includes your age?

Answered: 21 Skipped: 0

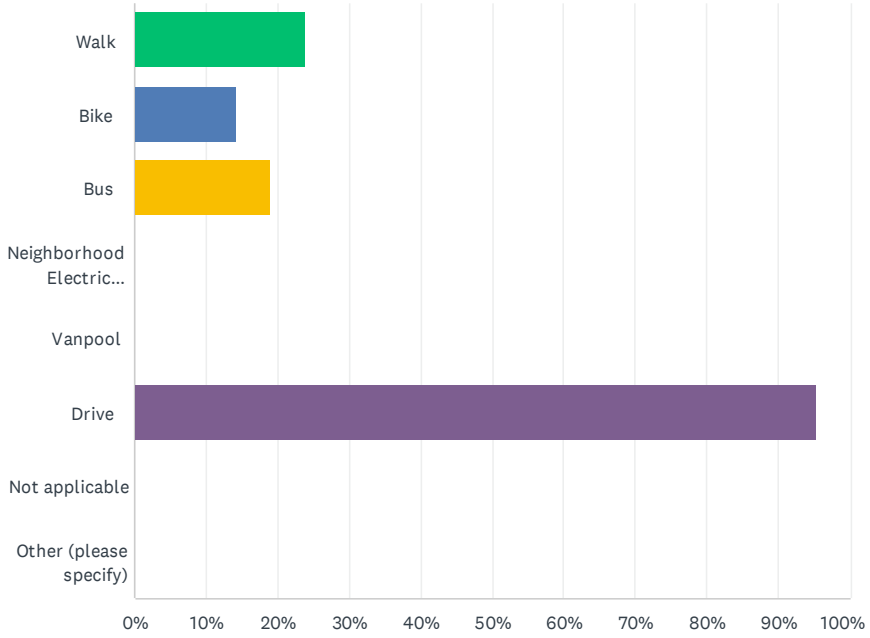


ANSWER CHOICES	RESPONSES	
0-18	14.29%	3
19-24	9.52%	2
25-45	57.14%	12
46-64	9.52%	2
65+	23.81%	5
Total Respondents: 21		

Artesia Active Transportation: Community Survey

Q4 How do you get to work/school/facilities? (Check all that apply)

Answered: 21 Skipped: 0



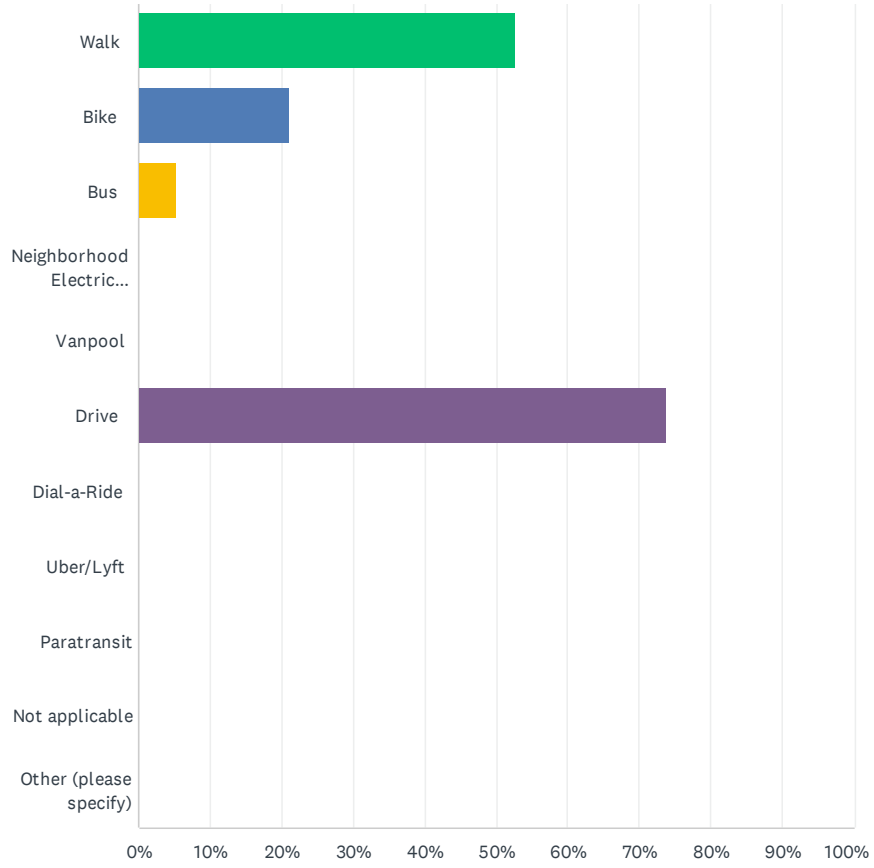
ANSWER CHOICES	RESPONSES	
Walk	23.81%	5
Bike	14.29%	3
Bus	19.05%	4
Neighborhood Electric Vehicle (NEV)	0.00%	0
Vanpool	0.00%	0
Drive	95.24%	20
Not applicable	0.00%	0
Other (please specify)	0.00%	0
Total Respondents: 21		

#	OTHER (PLEASE SPECIFY)	DATE
	There are no responses.	

Artesia Active Transportation: Community Survey

Q5 Do you visit city parks or recreation facilities? If so, how do you get there? (Check all that apply)

Answered: 19 Skipped: 2



Artesia Active Transportation: Community Survey

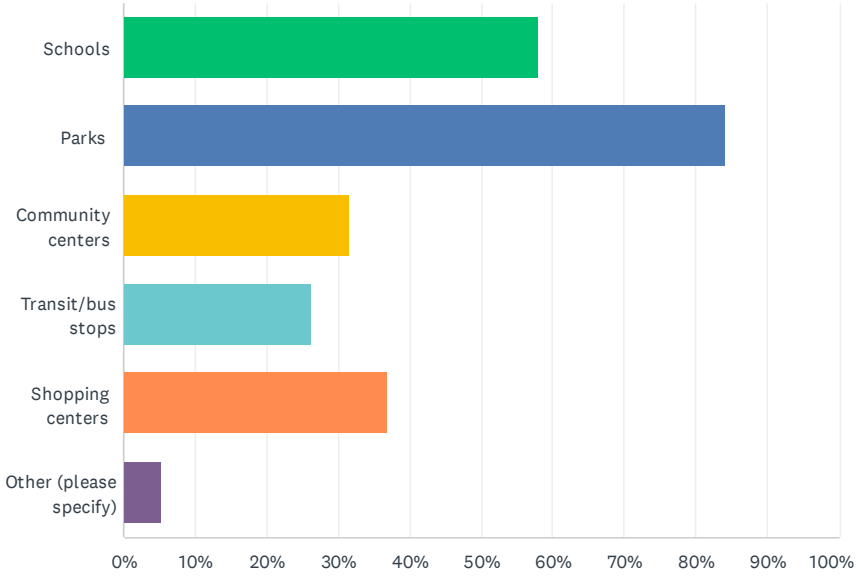
ANSWER CHOICES	RESPONSES	
Walk	52.63%	10
Bike	21.05%	4
Bus	5.26%	1
Neighborhood Electric Vehicle (NEV)	0.00%	0
Vanpool	0.00%	0
Drive	73.68%	14
Dial-a-Ride	0.00%	0
Uber/Lyft	0.00%	0
Paratransit	0.00%	0
Not applicable	0.00%	0
Other (please specify)	0.00%	0
Total Respondents: 19		

#	OTHER (PLEASE SPECIFY)	DATE
	There are no responses.	

Artesia Active Transportation: Community Survey

Q6 Where would you like to see better pedestrian and bicycling routes to?

Answered: 19 Skipped: 2



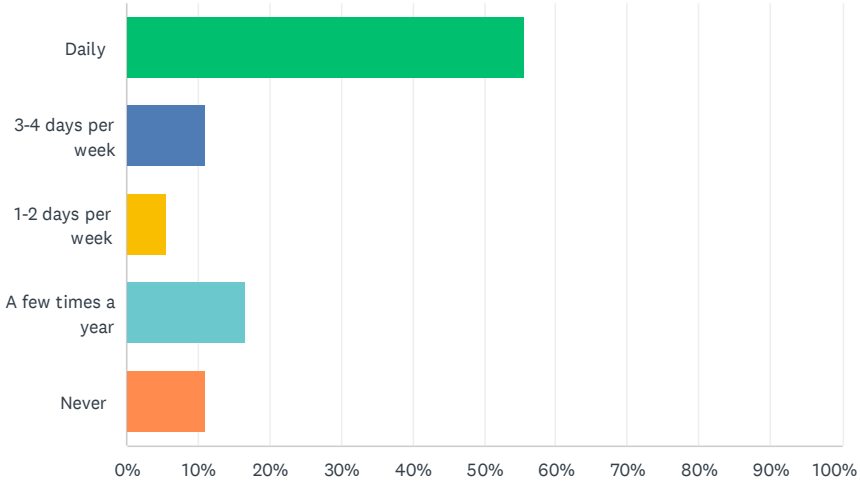
ANSWER CHOICES	RESPONSES	
Schools	57.89%	11
Parks	84.21%	16
Community centers	31.58%	6
Transit/bus stops	26.32%	5
Shopping centers	36.84%	7
Other (please specify)	5.26%	1
Total Respondents: 19		

#	OTHER (PLEASE SPECIFY)	DATE
1	no need. streets narrow when driving	7/26/2021 2:45 PM

Artesia Active Transportation: Community Survey

Q7 How often do you walk in Artesia?

Answered: 18 Skipped: 3

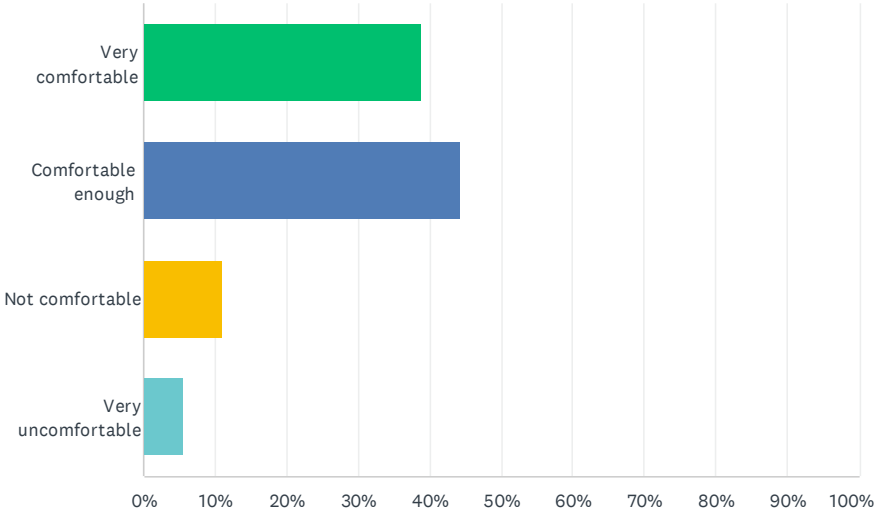


ANSWER CHOICES	RESPONSES	
Daily	55.56%	10
3-4 days per week	11.11%	2
1-2 days per week	5.56%	1
A few times a year	16.67%	3
Never	11.11%	2
TOTAL		18

Artesia Active Transportation: Community Survey

Q8 In general, how comfortable are you walking in Artesia?

Answered: 18 Skipped: 3

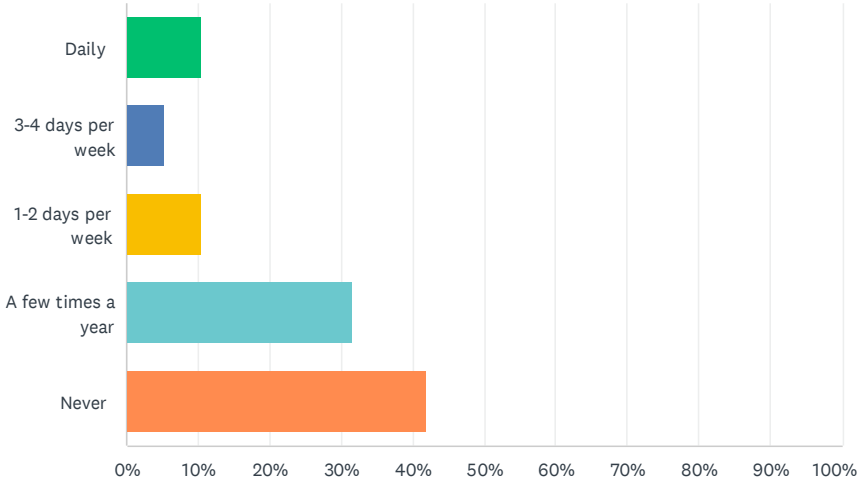


ANSWER CHOICES	RESPONSES	
Very comfortable	38.89%	7
Comfortable enough	44.44%	8
Not comfortable	11.11%	2
Very uncomfortable	5.56%	1
TOTAL		18

Artesia Active Transportation: Community Survey

Q9 How often do you bike in Artesia?

Answered: 19 Skipped: 2

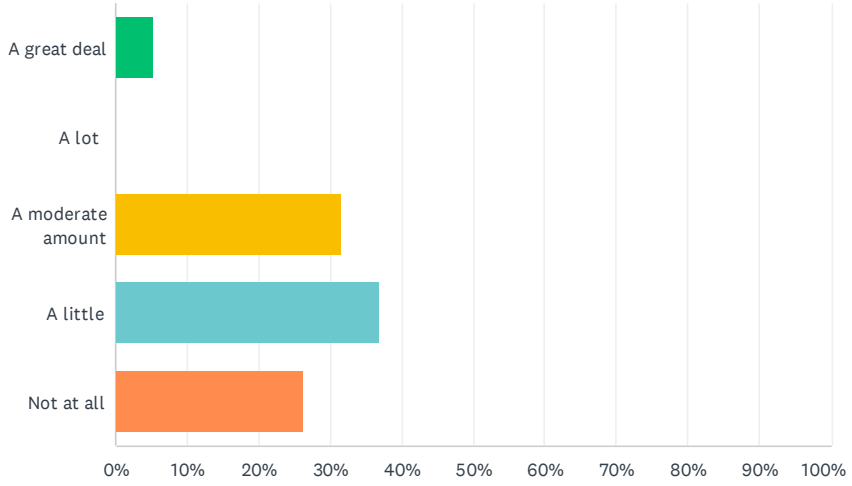


ANSWER CHOICES	RESPONSES	
Daily	10.53%	2
3-4 days per week	5.26%	1
1-2 days per week	10.53%	2
A few times a year	31.58%	6
Never	42.11%	8
TOTAL		19

Artesia Active Transportation: Community Survey

Q10 In general, how comfortable are you bicycling in Artesia?

Answered: 19 Skipped: 2

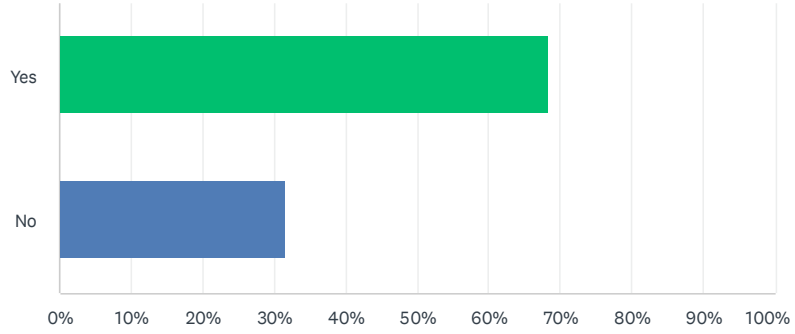


ANSWER CHOICES	RESPONSES	
A great deal	5.26%	1
A lot	0.00%	0
A moderate amount	31.58%	6
A little	36.84%	7
Not at all	26.32%	5
TOTAL		19

Artesia Active Transportation: Community Survey

Q11 Do you own a bike?

Answered: 19 Skipped: 2

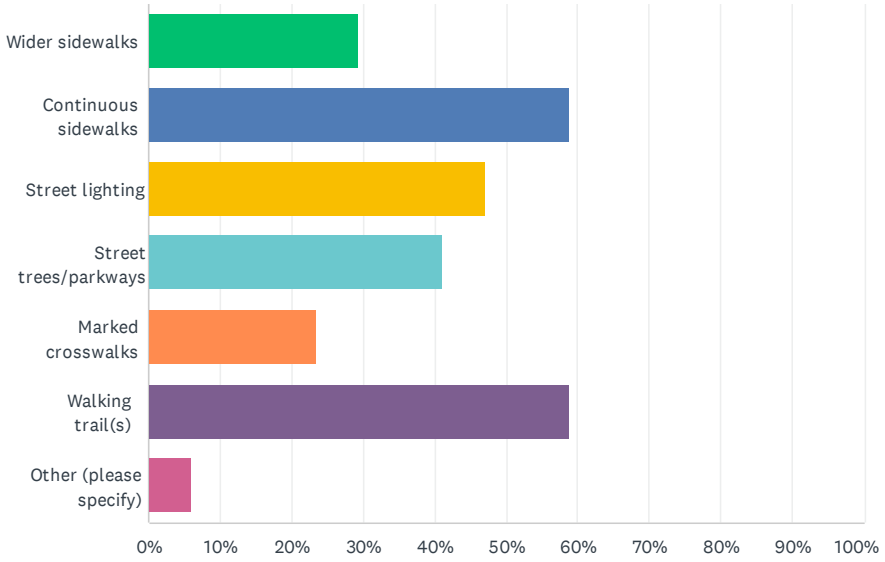


ANSWER CHOICES	RESPONSES	
Yes	68.42%	13
No	31.58%	6
TOTAL		19

Artesia Active Transportation: Community Survey

Q12 What would make it easier for you to walk more in Artesia? (Check all that apply)

Answered: 17 Skipped: 4

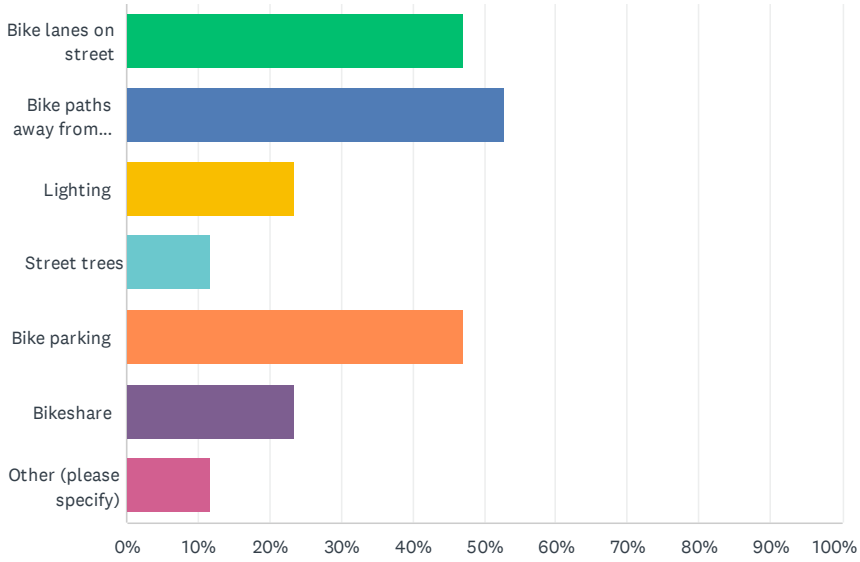


ANSWER CHOICES	RESPONSES	
Wider sidewalks	29.41%	5
Continuous sidewalks	58.82%	10
Street lighting	47.06%	8
Street trees/parkways	41.18%	7
Marked crosswalks	23.53%	4
Walking trail(s)	58.82%	10
Other (please specify)	5.88%	1
Total Respondents: 17		

#	OTHER (PLEASE SPECIFY)	DATE
1	things too far. no trees. to hot to walk	7/26/2021 2:46 PM

Q13 What would make it easier for you to bike more in Artesia? (Check all that apply)

Answered: 17 Skipped: 4



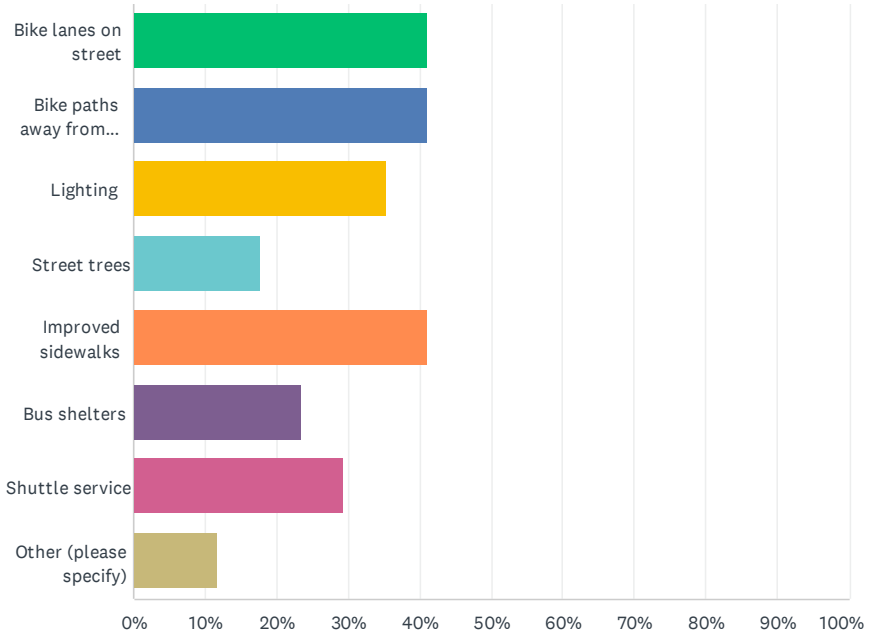
ANSWER CHOICES	RESPONSES	
Bike lanes on street	47.06%	8
Bike paths away from street	52.94%	9
Lighting	23.53%	4
Street trees	11.76%	2
Bike parking	47.06%	8
Bikeshare	23.53%	4
Other (please specify)	11.76%	2
Total Respondents: 17		

#	OTHER (PLEASE SPECIFY)	DATE
1	none	7/26/2021 2:46 PM
2	Does not back	7/2/2021 6:52 PM

Artesia Active Transportation: Community Survey

Q14 What would make it easier for you to reach transit stops in Artesia? (Check all that apply)

Answered: 17 Skipped: 4



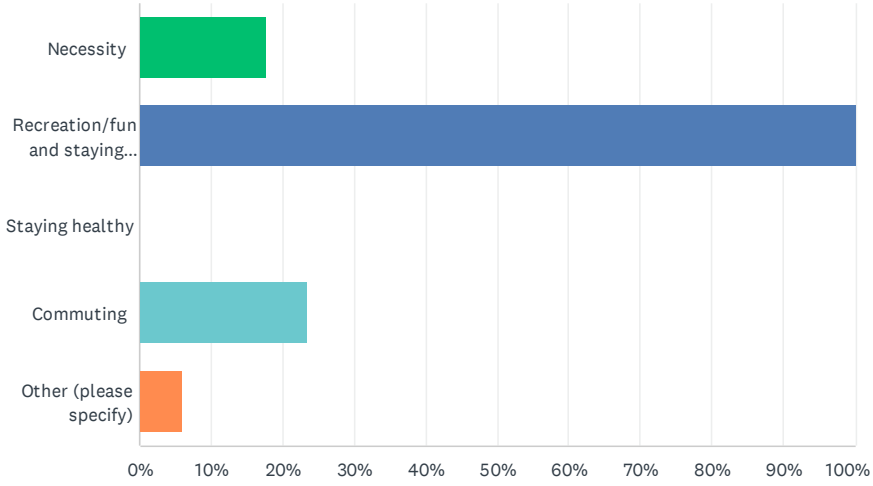
ANSWER CHOICES	RESPONSES	
Bike lanes on street	41.18%	7
Bike paths away from street	41.18%	7
Lighting	35.29%	6
Street trees	17.65%	3
Improved sidewalks	41.18%	7
Bus shelters	23.53%	4
Shuttle service	29.41%	5
Other (please specify)	11.76%	2
Total Respondents: 17		

#	OTHER (PLEASE SPECIFY)	DATE
1	none	7/26/2021 2:46 PM
2	Not interested	7/2/2021 6:52 PM

Artesia Active Transportation: Community Survey

Q15 When you walk, bike, or roll, do you do it for (check all that apply):

Answered: 17 Skipped: 4



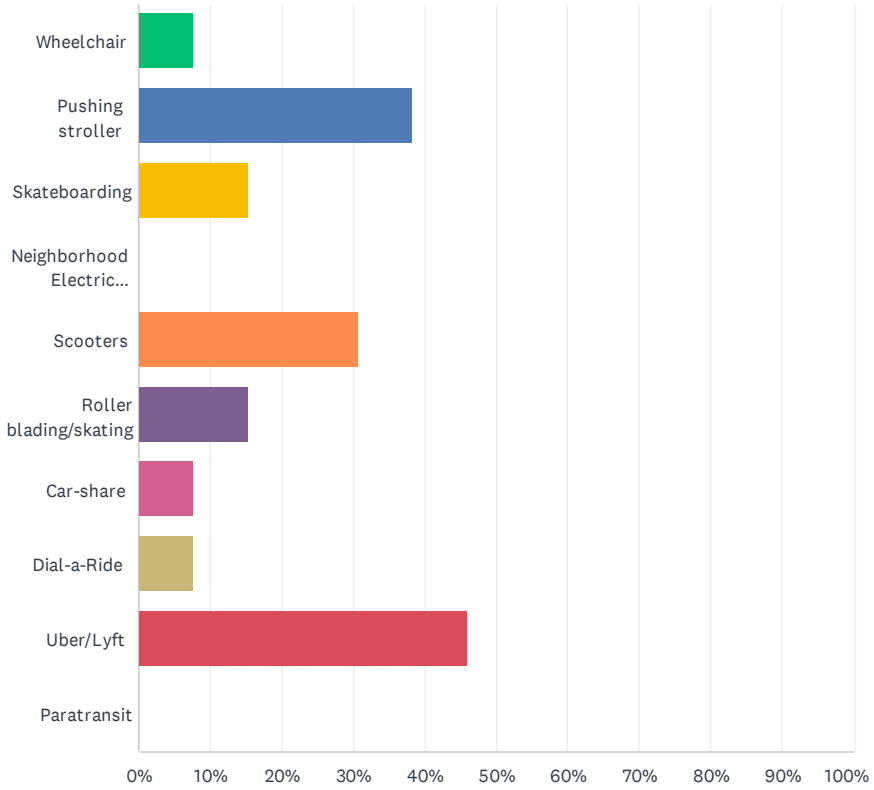
ANSWER CHOICES	RESPONSES	
Necessity	17.65%	3
Recreation/fun and staying healthy	100.00%	17
Staying healthy	0.00%	0
Commuting	23.53%	4
Other (please specify)	5.88%	1
Total Respondents: 17		

#	OTHER (PLEASE SPECIFY)	DATE
1	Get to store	7/2/2021 6:53 PM

Artesia Active Transportation: Community Survey

Q16 What other methods of transportation/travel do you use? (Check all that apply)

Answered: 13 Skipped: 8



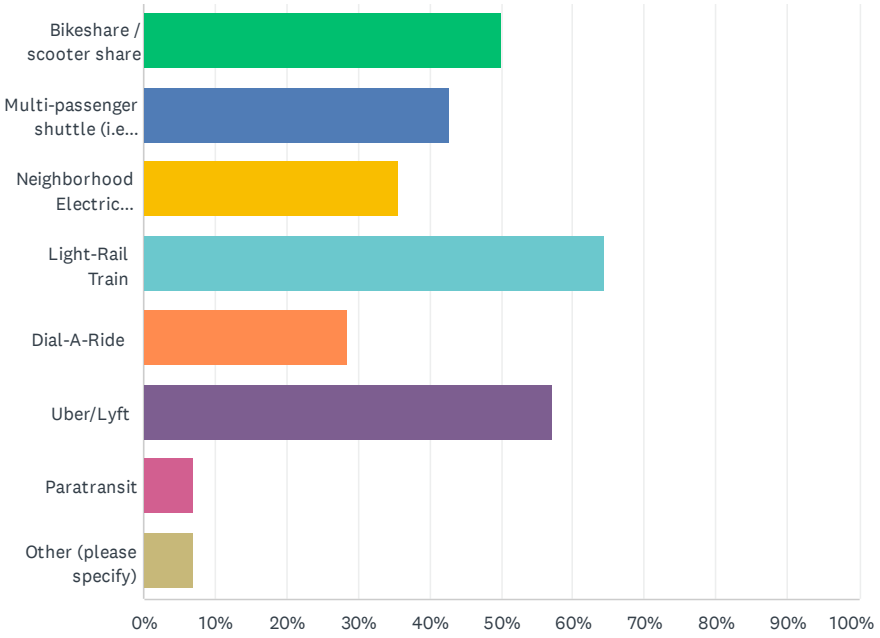
Artesia Active Transportation: Community Survey

ANSWER CHOICES	RESPONSES	
Wheelchair	7.69%	1
Pushing stroller	38.46%	5
Skateboarding	15.38%	2
Neighborhood Electric Vehicle (NEV)	0.00%	0
Scooters	30.77%	4
Roller blading/skating	15.38%	2
Car-share	7.69%	1
Dial-a-Ride	7.69%	1
Uber/Lyft	46.15%	6
Paratransit	0.00%	0
Total Respondents: 13		

Artesia Active Transportation: Community Survey

Q17 What other forms of transportation would encourage you to visit city destinations more frequently?

Answered: 14 Skipped: 7



ANSWER CHOICES	RESPONSES	
Bikeshare / scooter share	50.00%	7
Multi-passenger shuttle (i.e. vanpool or bus)	42.86%	6
Neighborhood Electric Vehicle (NEV)	35.71%	5
Light-Rail Train	64.29%	9
Dial-A-Ride	28.57%	4
Uber/Lyft	57.14%	8
Paratransit	7.14%	1
Other (please specify)	7.14%	1
Total Respondents: 14		

#	OTHER (PLEASE SPECIFY)	DATE
1	parking in little india	7/26/2021 2:47 PM

Appendix C

Cost Estimates

Pioneer Boulevard				
Item	**Quantity**	**Unit**	**Unit Cost**	**Total Cost**
Class IV Bikeway Signage & Striping	1.1	miles	$ 230,000	$ 253,900
Class IV Bikeway Flexible Delineator Posts (20' O.C.)	500	EA	$ 200	$ 100,000
Class III Bikeway Signage & Striping	0.2	miles	$ 100,000	$ 20,900
Add Buffer to Existing Class II Bike Lanes	4,000	LF	$ 3	$ 12,000
Transit Stop Improvements at 178th Street	1	LS	$ 20,000	$ 20,000
Shift Transit Stop from Pioneer Blvd to 183rd Street	1	LS	$ 10,000	$ 10,000
Construct Raised Intersection at Pioneer Blvd and 186th Street with Decorative Crosswalks (Includes sidewalk and curb ramp updates) (Also see 186th Street)	10,000	SF	$ 40	$ 400,000
Install Traffic Signal at Pioneer Blvd and 188th Street Intersection	1	EA	$ 300,000	$ 300,000
Pioneer Boulevard Construction Subtotal				**$ 1,116,800**
Contingency	20%			$ 223,400
Escalation	4%	3 years		$ 139,500
Pioneer Boulevard Construction Total				**$ 1,479,700**
Design	12%			$ 177,600
Environmental	4%			$ 59,200
Pioneer Boulevard Grand Total				**$ 1,716,500**

183rd Street				
Item	**Quantity**	**Unit**	**Unit Cost**	**Total Cost**
Class II Bikeway Signage & Striping	1.2	miles	$ 190,000	$ 228,000
Install Dual Sided Solar Powered RRFBs (at Grayland and Horst Ave)	4	EA	$ 12,500	$ 50,000
Construct Crosswalk on West Leg of 183rd Street at Roseton Ave (includes 2 curb ramps, striping, minor traffic signal mods)	1	LS	$ 42,000	$ 42,000
Construct Curb Extensions at 183rd Street and Roseton Ave Intersection	2	EA	$ 55,000	$ 110,000
Construct Curb Extensions at 183rd Street and Alburtis Ave Intersection (consider storm drain inlets)	3	EA	$ 70,000	$ 210,000
Construct Curb Extensions at 183rd Street and Pioneer Boulevard	4	EA	$ 55,000	$ 220,000
Construct Neighborhood Traffic Circle at 183rd Street and Clarkdale Ave (Also see Clarkdale Ave)	1	LS	$ 550,000	$ 550,000
Construct Neighborhood Traffic Circle at 183rd Street and Elaine Ave (Also see Elaine Ave)	1	LS	$ 550,000	$ 550,000
Construct Curb Extensions at 183rd Street and Grayland Ave (Also see Horst Ave)	4	EA	$ 55,000	$ 220,000
Construct Curb Extensions at 183rd Street and Horst Ave (Also see Horst Ave)	4	EA	$ 55,000	$ 220,000
Gateway Entry Sign	2	EA	$ 50,000	$ 100,000
Traffic Signal Modifications (to account for loop adjustments, timing adjustments) per Intersection	7	EA	$ 10,000	$ 70,000
183rd Street Construction Subtotal				**$ 2,570,000**
Contingency	20%			$ 514,000
Escalation	4%	3 years		$ 321,000
183rd Street Construction Total				**$ 3,405,000**
Design	12%			$ 408,600
Environmental	4%			$ 136,200
183rd Street Grand Total				**$ 3,949,800**

Gridley Road				
Item	**Quantity**	**Unit**	**Unit Cost**	**Total Cost**
Class II Bikeway Signage & Striping	0.1	miles	$ 190,000	$ 11,100
Class IV Bikeway Signage & Striping	1.2	miles	$ 230,000	$ 282,800
Class IV Bikeway Flexible Delineator Posts (20' O.C.)	560	EA	$ 200	$ 112,000
Reconstruct Railing on West Side of Bridge Over SR 91	235	LF	$ 300	$ 70,500
Construct Protected Intersection at Gridley Road and Artesia Blvd	1	LS	$ 550,000	$ 550,000
Install Pedestrian Hybrid Beacon (at 177th and Ashworth)	2	EA	$ 60,000	$ 120,000
Construct Curb Extensions at Gridley Road and 177th Street	4	EA	$ 55,000	$ 220,000
Construct Curb Extensions at Gridley Road and Ashworth Street	2	EA	$ 55,000	$ 110,000
Transit Stop Improvements	2	EA	$ 20,000	$ 40,000
Traffic Signal Modifications (to account for loop adjustments, timing adjustments) per Intersection	5	EA	$ 10,000	$ 50,000
Gridley Road Construction Subtotal				**$ 1,566,400**
Contingency	20%			$ 313,300
Escalation	4%	3 years		$ 195,600
Gridley Road Construction Total				**$ 2,075,300**
Design	12%			$ 249,100
Environmental	4%			$ 83,100
Gridley Road Grand Total				**$ 2,407,500**

Elaine Avenue				
Item	**Quantity**	**Unit**	**Unit Cost**	**Total Cost**
Class III Bikeway Signage & Striping	1.0	miles	$ 190,000	$ 190,000
Construct Curb Extension at Elaine Ave and Artesia Blvd South Leg	1	EA	$ 55,000	$ 55,000
Construct Curb Extensions at Elaine Ave and Rendova/178th Street and Crosswalk on South Leg (update all curb ramps to standard)	1	LS	$ 140,000	$ 140,000
Construct Curb Extensions at Elaine Ave and Ashworth Street	4	EA	$ 55,000	$ 220,000
Construct Neighborhood Traffic Circle at Elaine Ave and 183rd Street (See 183rd Street)	0	LS	$ 550,000	$ -
Construct Neighborhood Traffic Circle at Elaine Ave and 186th Street (Also see 186th Street)	1	LS	$ 500,000	$ 500,000
Traffic Signal Modifications (LPI) per Intersection	2	EA	$ 7,000	$ 14,000
Elaine Avenue Construction Subtotal				**$ 1,119,000**
Contingency	20%			$ 223,800
Escalation	4%	3 years		$ 139,800
Elaine Avenue Construction Total				**$ 1,482,600**
Design	12%			$ 178,000
Environmental	4%			$ 59,400
Elaine Avenue Grand Total				**$ 1,720,000**

Clarkdale Avenue				
Item	**Quantity**	**Unit**	**Unit Cost**	**Total Cost**
Class III Bikeway Signage & Striping	0.72	miles	$ 190,000	$ 136,800
Construct Neighborhood Traffic Circle at 183rd Street and Clarkdale Ave (See 183rd Street)	0	LS	$ 550,000	$ -
Construct Neighborhood Traffic Circle at Clarkdale Ave and 186th Street (Also see 186th Street)	1	LS	$ 550,000	$ 550,000
Construct Curb Extensions at Clarkdale Ave and 187th Street	2	EA	$ 55,000	$ 110,000
Enhance pedestrian realm along park frontage (sample cost includes new 8' wide sidewalk, new fence, lighting improvements)	1	LS	$ 156,600	$ 156,600
Clarkdale Avenue Construction Subtotal				**$ 953,400**
Contingency	20%			$ 190,700
Escalation	4%	3 years		$ 119,100
Clarkdale Avenue Construction Total				**$ 1,263,200**
Design (12%)				$ 151,600
Environmental (5%)				$ 50,600
Clarkdale Avenue Grand Total				**$ 1,465,400**

Artesia Boulevard				
Item	**Quantity**	**Unit**	**Unit Cost**	**Total Cost**
Class IV Bikeway Signage & Striping	1.2	miles	$ 230,000	$ 271,400
Class IV Bikeway Flexible Delineator Posts (20' O.C.)	530	EA	$ 200	$ 106,000
Install Pedestrian Hybrid Beacon at Clarkdale Ave	1	EA	$ 60,000	$ 60,000
Construct Median Refuge Island on Artesia Blvd at Clarkdale Ave	500	SF	$ 30	$ 15,000
Construct Curb Ramps at Clarkdale Ave for PHB Crossing	2	EA	$ 15,000	$ 30,000
Construct ADA Access to Ibex Avenue (includes 3 curb ramps)	1	LS	$ 45,000	$ 45,000
Gateway Entry Sign	2	EA	$ 50,000	$ 100,000
Traffic Signal Modifications (LPI) per Intersection	2	EA	$ 7,000	$ 14,000
Artesia Boulevard Construction Subtotal				**$ 641,400**
Contingency	20%			$ 128,300
Escalation	4%	3 years		$ 80,100
Artesia Boulevard Construction Total				**$ 849,800**
Design	12%			$ 102,000
Environmental	4%			$ 34,000
Artesia Boulevard Grand Total				**$ 985,800**

186th Street				
Item	**Quantity**	**Unit**	**Unit Cost**	**Total Cost**
Advisory Bike Lanes Signage & Striping	1.1	miles	$ 170,000	$ 187,000
Construct Improvements at 186th Street and Gridley Road (includes 5 new curb ramps, median refuge island, and PHB)	1	LS	$ 155,000	$ 155,000
Construct Curb Extensions at 186th Street and RR	2	EA	$ 55,000	$ 110,000
Construct Curb Extensions at 186th Street and Corby Ave	4	EA	$ 55,000	$ 220,000
Construct Raised Intersection at Pioneer Blvd and 186th Street (See Pioneer Blvd)	10,000	SF	$ -	$ -
Construct Neighborhood Traffic Circle at Clarkdale Ave and 186th Street (See Clarkdale Ave)	0	LS	$ 550,000	$ -
Construct Curb Extensions at 186th Street and Devlin Ave	4	EA	$ 55,000	$ 220,000
Install Dual Sided Solar Powered RRFBs at Devlin	2	EA	$ 12,500	$ 25,000
Construct Neighborhood Traffic Circle at Elaine Ave and 186th Street (Also see Elaine Ave)	0	LS	$ 500,000	$ -
Traffic Signal Modifications (LPI) per Intersection	1	EA	$ 7,000	$ 7,000
186th Street Construction Subtotal				**$ 924,000**
Contingency	20%			$ 184,800
Escalation	4%	3 years		$ 115,400
186th Street Construction Total				**$ 1,224,200**
Design	12%			$ 147,000
Environmental	4%			$ 49,000
186th Street Grand Total				**$ 1,420,200**

166th Street				
Item	**Quantity**	**Unit**	**Unit Cost**	**Total Cost**
Class IV Bikeway Signage & Striping	1.1	miles	$ 230,000	$ 243,800
Class IV Bikeway Flexible Delineator Posts (20' O.C.)	480	EA	$ 200	$ 96,000
Realign Crosswalks at 166th Street and Jersey Street (Assumes 3 new curb ramps, $15k utility relocation)	1	LS	$ 60,000	$ 60,000
Install Pedestrian Hybrid Beacon at 166th Street and Clarkdale Ave	1	EA	$ 60,000	$ 60,000
Construct Curb Ramps at 166th Street and Clarkdale Ave	2	EA	$ 15,000	$ 30,000
Traffic Signal Modifications (LPI) per Intersection	2	EA	$ 7,000	$ 14,000
166th Street Construction Subtotal				**$ 503,800**
Contingency	20%			$ 100,800
Escalation	4%	3 years		$ 63,000
166th Street Construction Total				**$ 667,600**
Design	12%			$ 80,200
Environmental	4%			$ 26,800
166th Street Grand Total				**$ 774,600**

178th Street				
Item	**Quantity**	**Unit**	**Unit Cost**	**Total Cost**
Class III Bikeway Signage & Striping	0.7	miles	$ 190,000	$ 129,200
Install Pedestrian Hybrid Beacon at 178th Street and Gridley Road	1	EA	$ 60,000	$ 60,000
Construct Median Refuge Islands and Curb Ramps at 178th Street and Gridley Road (includes 2 ramps and median refuge island)	1	LS	$ 45,000	$ 45,000
Install Speed Humps	1	EA	$ 10,000	$ 10,000
Construct Curb Extensions at 178th Street and Powell Place	4	EA	$ 55,000	$ 220,000
Install Dual Sided Solar Powered RRFBs at 178th Street and Preschool	2	EA	$ 12,500	$ 25,000
Construct Curb Extensions at 178th Street and Preschool	2	EA	$ 50,000	$ 100,000
Traffic Signal Modifications (LPI) per Intersection	1	EA	$ 7,000	$ 7,000
178th Street Construction Subtotal				**$ 596,200**
Contingency	20%			$ 119,300
Escalation	4%	3 years		$ 74,500
178th Street Construction Total				**$ 790,000**
Design	12%			$ 94,800
Environmental	4%			$ 31,600
178th Street Grand Total				**$ 916,400**

Horst Avenue				
Item	**Quantity**	**Unit**	**Unit Cost**	**Total Cost**
Class III Bikeway Signage & Striping	0.7	miles	$ 190,000	$ 127,300
Construct Curb Extensions at Horst Ave and 186th Street	4	EA	$ 55,000	$ 220,000
Horst Avenue Construction Subtotal				**$ 347,300**
Contingency	20%			$ 69,500
Escalation	4%	3 years		$ 43,400
Horst Avenue Construction Total				**$ 460,200**
Design	12%			$ 55,300
Environmental	4%			$ 18,500
Horst Avenue Grand Total				**$ 534,000**

All Projects Total	**$ 15,890,200**

Formula References			
Install White Thermoplastic Crosswalk	EA	$	-
Class II Signage & Striping	miles	$	190,000
Class III Bikeway Signage & Striping	miles	$	150,000
Class IV Bikeway Signage & Striping	miles	$	230,000
Class IV Bikeway Flexible Delineator Posts (20' O.C.)	EA	$	200
Curb Extension	EA	$	55,000
Contingency			20%
Escalation			4%
Years			3
Design			12%
Environmental			4%

Additional Cost References			
Install Green Conflict Striping	LF	$	50
Install White Thermoplastic Crosswalk	SF	$	6
Install White Thermoplastic Crosswalk	EA	$	2,250
Furnish and Install 28” white flexible post delineator and Tuff Curb	EA	$	180
Furnish and Install K-71 Delineator Posts	EA	$	330
Construct Median Curb Bike Lane Separation	LF	$	300
Furnish and Install Bike Signal (2 approaches of intersection)	LS	$	25,000