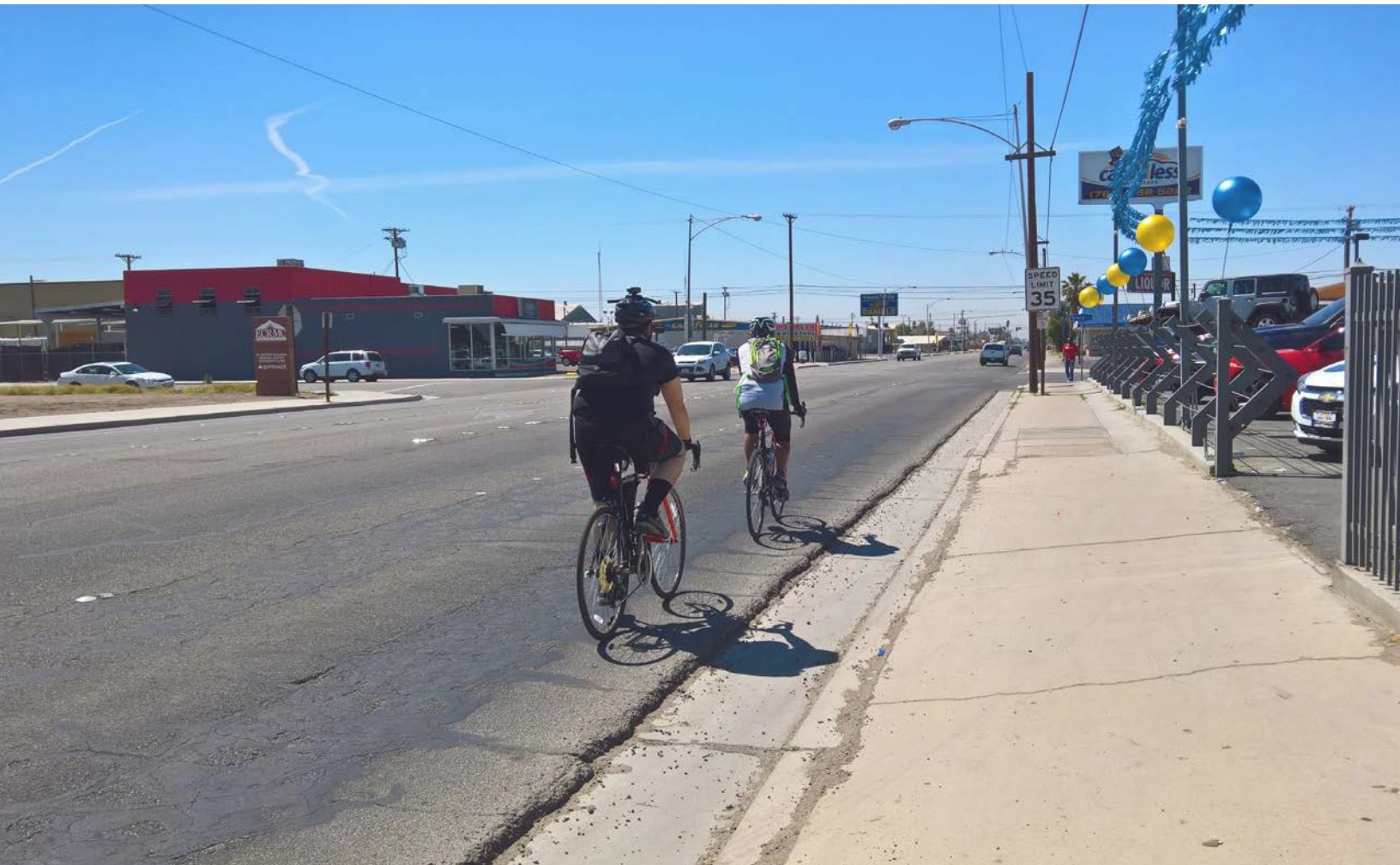
3 Existing Conditions

Existing Conditions

Understanding the existing roadway conditions, demographics, land use, and other context-sensitive information in El Centro and the adjacent region is imperative for planning for its future. This chapter summarizes various datasets to provide meaningful discussions on how each of the topics support or impede bicycle and pedestrian facility development within the City.

This chapter also summarizes various analysis models used to understand the City's roadway network and the development of the bicycle and pedestrian projects found in Chapter 5. Each dataset provides valuable information that contributes to the holistic understanding of the City's current network and how to improve it.



Existing Land Use

El Centro's land use patterns reflect a typical suburban structure, while still maintaining evidence of its agricultural past. Non-residential land uses such as agriculture and industrial are concentrated along the City's boundaries. The core of the city is comprised of a combination of single family and multi family residential, commercial, and with some open space land uses.

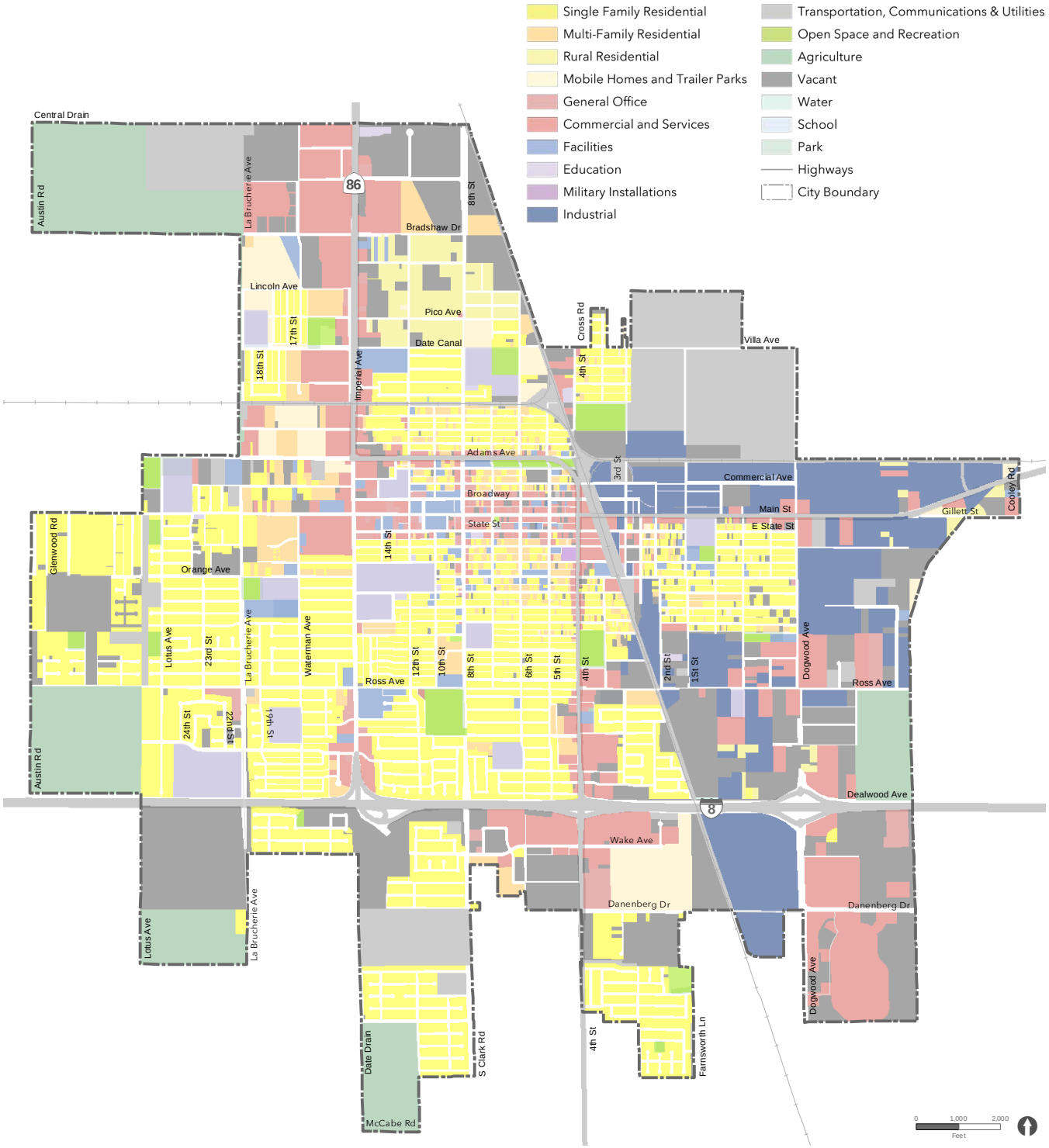


Figure 3-1: Existing Land Use

Activity Centers

To be eligible for State Active Transportation Program funding, a city's bicycle and pedestrian plan must address connections between specific activity center types. These activity centers are essential destinations, including the community's major employers, office buildings, industrial sites, government sites, retail centers, hospitals, tourist attractions, schools, and parks. Activity Centers in El Centro are distributed along certain corridors such as Imperial Avenue, Broadway/State Street, 4th Street, and in the southeast corner of the city. Bicycle parking is available at several of these activity centers, and additional bicycle parking should be prioritized and installed at these locations as well.

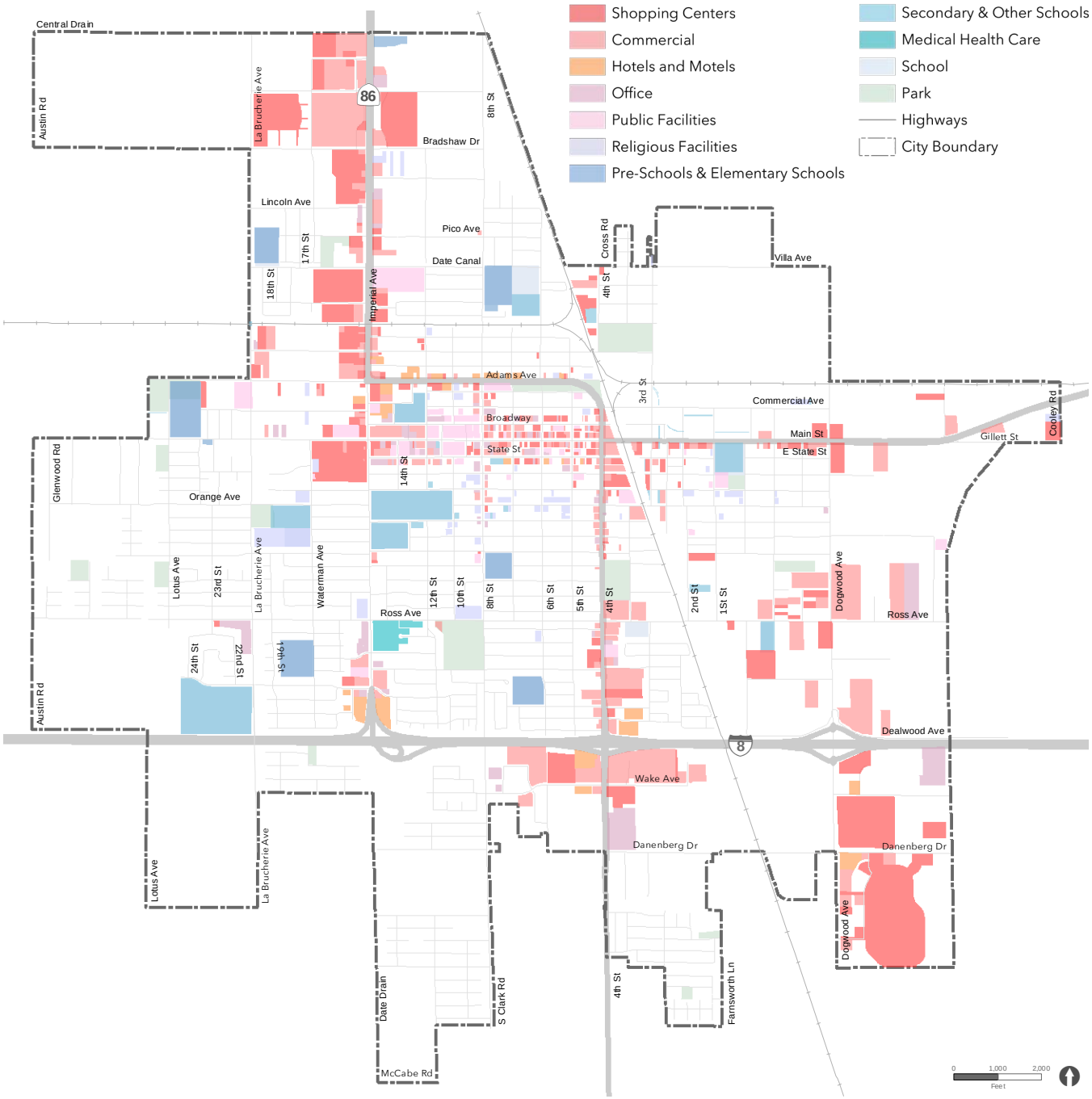


Figure 3-2: Activity Centers

Sidewalk Network Evaluation

Identifying deficiencies in the pedestrian network is critical for encouraging active transportation. Data collection was completed through a combination of a desktop analysis and field-work to identify missing sidewalks with half-mile walksheds around key destinations, such as schools.

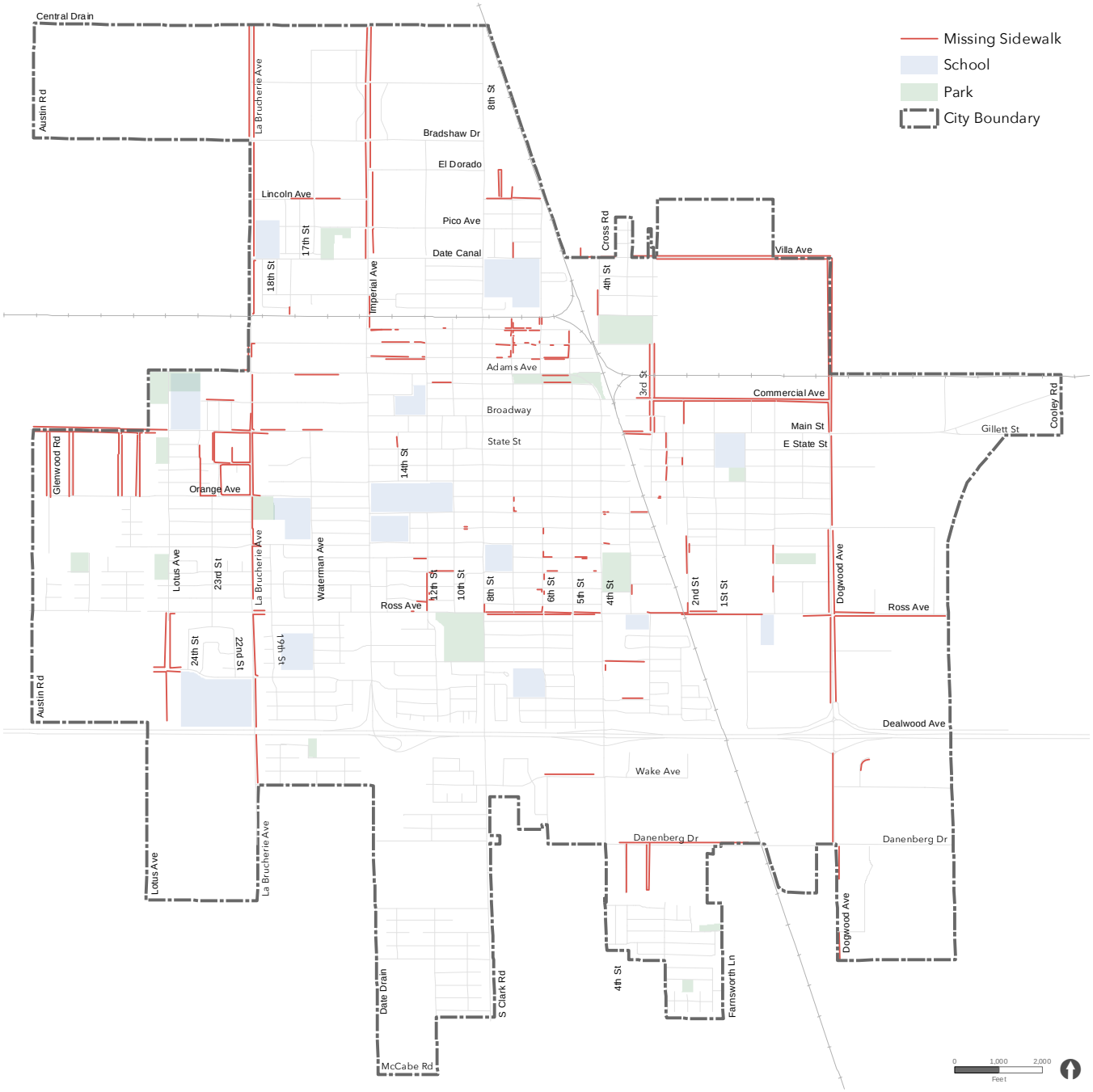


Figure 3-3: Sidewalk Network Evaluation

Street Classification

The majority of El Centro's streets are classified as local (45 percent) per the Federal Highway Administration (FHWA) Functional Classification System. These streets are followed in quantity by collector (23 percent), arterial (18 percent), and lastly other freeway or expressway (13 percent).

Other Freeway

Other freeways and expressways are characterized by directional travel lanes and limited on- and off-ramps. Typically the travel lanes are directionally separated by a physical barrier, such as a median. This functional class' primary purpose is to maximize mobility, so adjacent land uses are not directly served.

Arterial

Arterial streets are continuous routes that carry through traffic between neighborhoods and communities, frequently providing access to major traffic generators such as shopping areas, employment centers, recreational areas, higher-density residential areas, and places of assembly. Driveway access, especially for residential uses, to a major arterial is generally discouraged or kept to a minimum to facilitate traffic flows.

Collector

Collector streets are designed to provide access to local streets within residential and commercial areas or to connect streets of higher classifications for adequate traffic circulation.

Local

Local streets provide access to abutting individual properties and to link such properties and their uses to a collector street. City street standards typically ensure that local streets provide access to abutting properties and include a variety of designs and spacing, depending on access needs. Local streets are intended to serve only adjacent uses and are intended to protect residents from through traffic impacts.

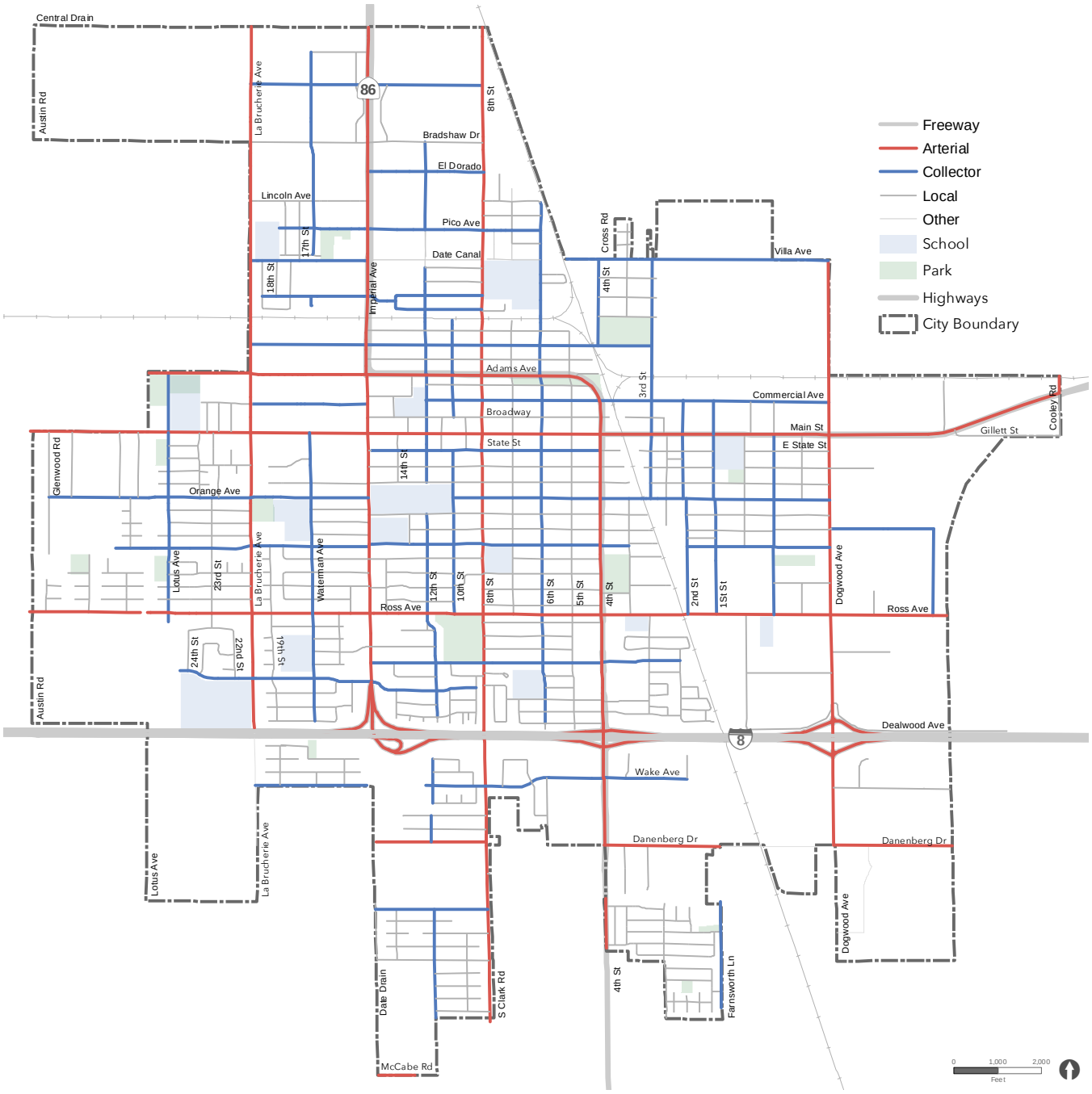
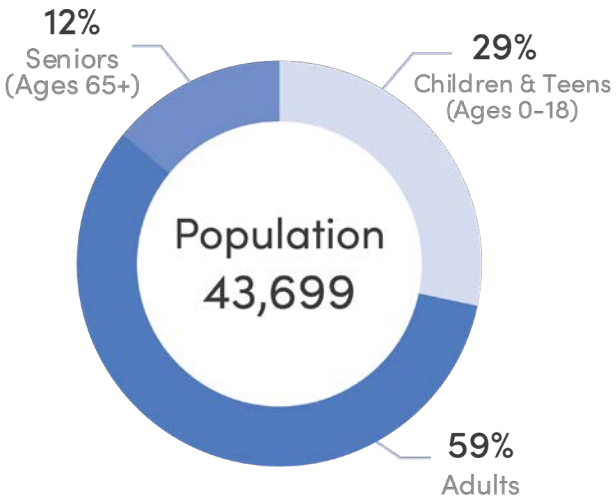


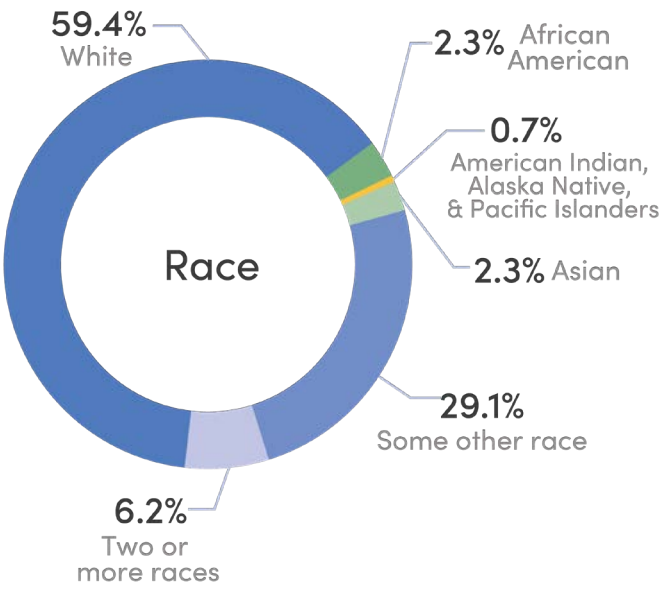
Figure 3-4: Street Classification

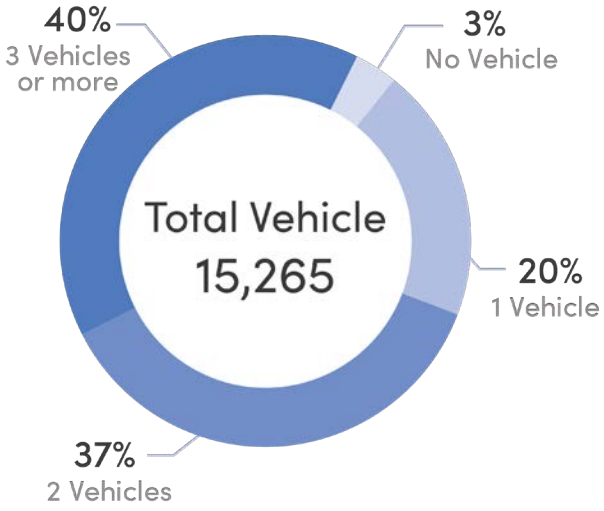
Population, Employment, and Income

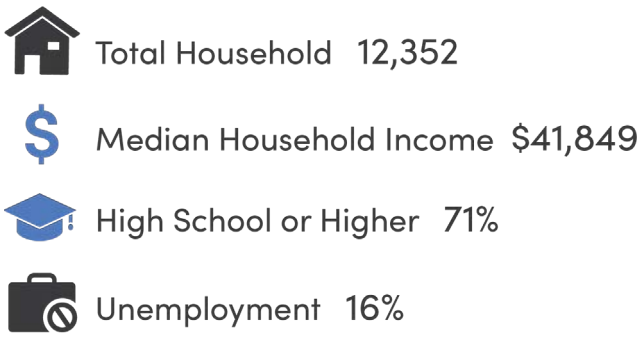
According to the U.S. Census 2016 American Community Survey (ACS), El Centro has a population of 43,699 within its 11.19 square mile city boundary, resulting in a population density of 3,905 people per square mile in 12,352 households. El Centro's population has a relatively even age distribution with roughly 12 percent of the population classified as seniors (over the age of 65), and 31 percent as children under the age of 18. El Centro's racial make-up is 59.4 percent white, 2.3 percent Asian, 2.3 percent Black, 0.7 percent American Indian/Alaskan Native/Pacific Islanders, 29.1 percent some other race, and 6.2 percent two or more races. Hispanic or Latino of any race makes up 84.9 percent of the total population in El Centro.

Median household income is $41,849. Of the households surveyed in 2016, most households have access to one or more vehicles, but three percent reported lacking access to a vehicle.









Source: U.S. Census 2016 American Community Survey (ACS)

Transportation Mode Share

According to the U.S. Census 2016 American Community Survey 'Transportation to Work' estimates, the majority of El Centro's resident commuters (80 percent) rely on personal vehicles to travel to and from work. This mode is followed in prevalence by carpooling (12 percent), working from home (3.4 percent), walking (1.7 percent), transit (1.3 percent), by motorcycle (1.1 percent), and finally, by bicycle (0.5 percent).

Mode Share

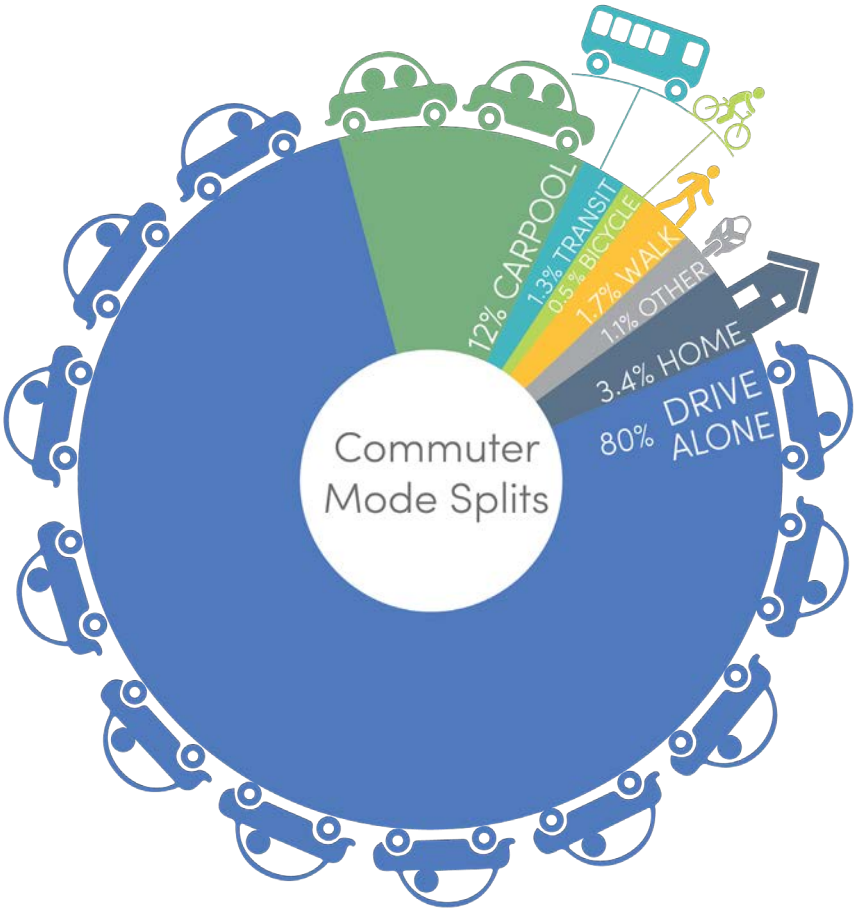
Walking: This mode share measures the percentage of workers aged 16 years and over who commute to work by foot. Mode share reflects how well infrastructure and land-use patterns support travel to work by foot. Walking mode share patterns tend to be connected to the relative proximity of housing to employment centers.

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

Public Transit: This 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.

Carpool: This mode share measures the percentage of workers aged 16 years and over who commute to work sharing a private vehicle between two or more persons.

Drive Alone: This mode share measures the percentage of workers aged 16 years and over who commute to work alone in a private vehicle.



Source: U.S. Census 2016 American Community Survey (ACS)

Analysis

Analysis of existing and future conditions, as well as latent demand, is an essential step in any transportation project planning process. For this project, analysis included spatial (GIS) analysis, fieldwork, and community and stakeholder input. This multi-pronged approach allowed for maximal data capture and cross-referencing of findings. For example, bicycle and pedestrian safety concerns were analyzed through collision data, including locations, frequencies and causes. Cross-referencing these collision data with public input helped to verify safety issues and identify areas for new or improved facilities.

This section is primarily concerned with explanations and discussions of the various spatial analyses employed in this project. Brief discussions of the role of fieldwork and community/stakeholder input are provided below, while the remainder is devoted to spatial analysis.

Fieldwork

The project team conducted fieldwork, using measuring tools and georeferenced photos, on several occasions. Fieldwork was conducted prior to project kick-off (to better understand existing conditions) and during project development (to verify data obtained from GIS and community/stakeholder input).

Community/Stakeholder Input

Community and stakeholder input played a very important role in developing facility and program recommendations. A summary of community and stakeholder input obtained and its impact on project recommendations is included in Chapter 4, “Community Engagement.”

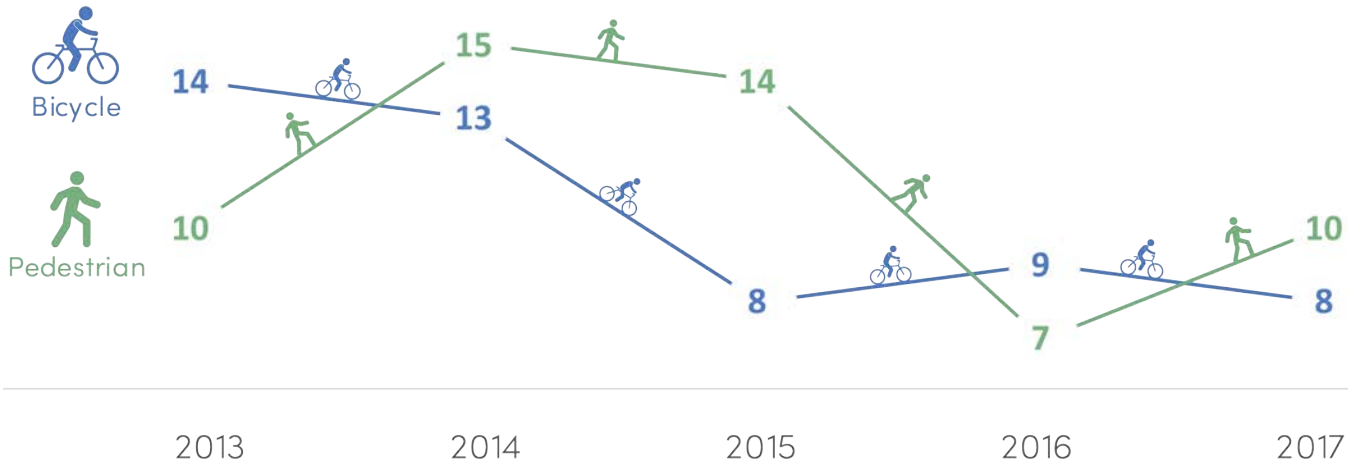
Spatial (GIS) Analysis

Spatial analysis included simple, data-driven analyses and more complex analyses, requiring evaluations of layered information and multiple inputs. Data-driven topics include existing and proposed bicycle facilities, average daily trips, activity centers, transit routes, safety analysis and bicycle-pedestrian suitability. Topics requiring more complex analysis (safety/collisions and bicycle-pedestrian routing) are discussed in more detail in their respective sections.

Bicycle and Pedestrian Collisions

Bicycle and pedestrian collision data were obtained from the Statewide Integrated Traffic Records System (SWITRS) collision data set managed by the California Highway Patrol (CHP). This dataset captures all reported bicycle-vehicle, pedestrian-vehicle and bicycle-pedestrian collisions that resulted in injury or property damage in El Centro in the five-year period of 2013 through 2017. Collisions that occurred on Interstate 8 are displayed on the map but were not included in the subsequent analysis. Additionally, collisions on off-street paths are not reported in the data. It is important to note that collisions involving bicyclists are known to be under-reported, and therefore bicycle collisions are likely under-represented in this analysis.

During this five-year period there were a total of 56 pedestrian-related collisions and 52 bicycle-related collisions; five of which resulted in fatalities. Bicycle-related collisions fluctuated throughout this time period with peaks between 2013 to2014, while pedestrian-related collisions remained relatively high between 2014 to 2015, dropping by half in 2016. There was an increase in pedestrian collisions reported in 2017. The bulk of both collision types resulted in injury or complaint of pain, approximately 89 percent, with 11 percent resulting in severe injury or death. Approximately 67 percent of collisions occurred in daylight conditions, with 34 percent occurring in either unlighted conditions or at dawn/dusk.



Pedestrian and Bicyclist Collisions, 2013-2017

Most bicycle collisions (60 percent) were caused by bicyclists traveling on the wrong side of the road, and both bicyclists and drivers making unsafe or improper turns. The remainder of collisions were caused by a variety of driver and bicyclist violations. Approximately 54 percent of total collisions were categorizes as the fault of bicyclists and 46 percent the fault of drivers. Approximately 64 percent of pedestrian collisions were caused by drivers and pedestrians violating the other party's right-of-way. Overall, 45 percent of pedestrian collisions were the fault of drivers, and 54 percent the fault of pedestrians. Remaining pedestrian collisions were caused by drivers traveling at unsafe speeds, violating "Wait" or "Don't Walk" signals, and other unknown causes.

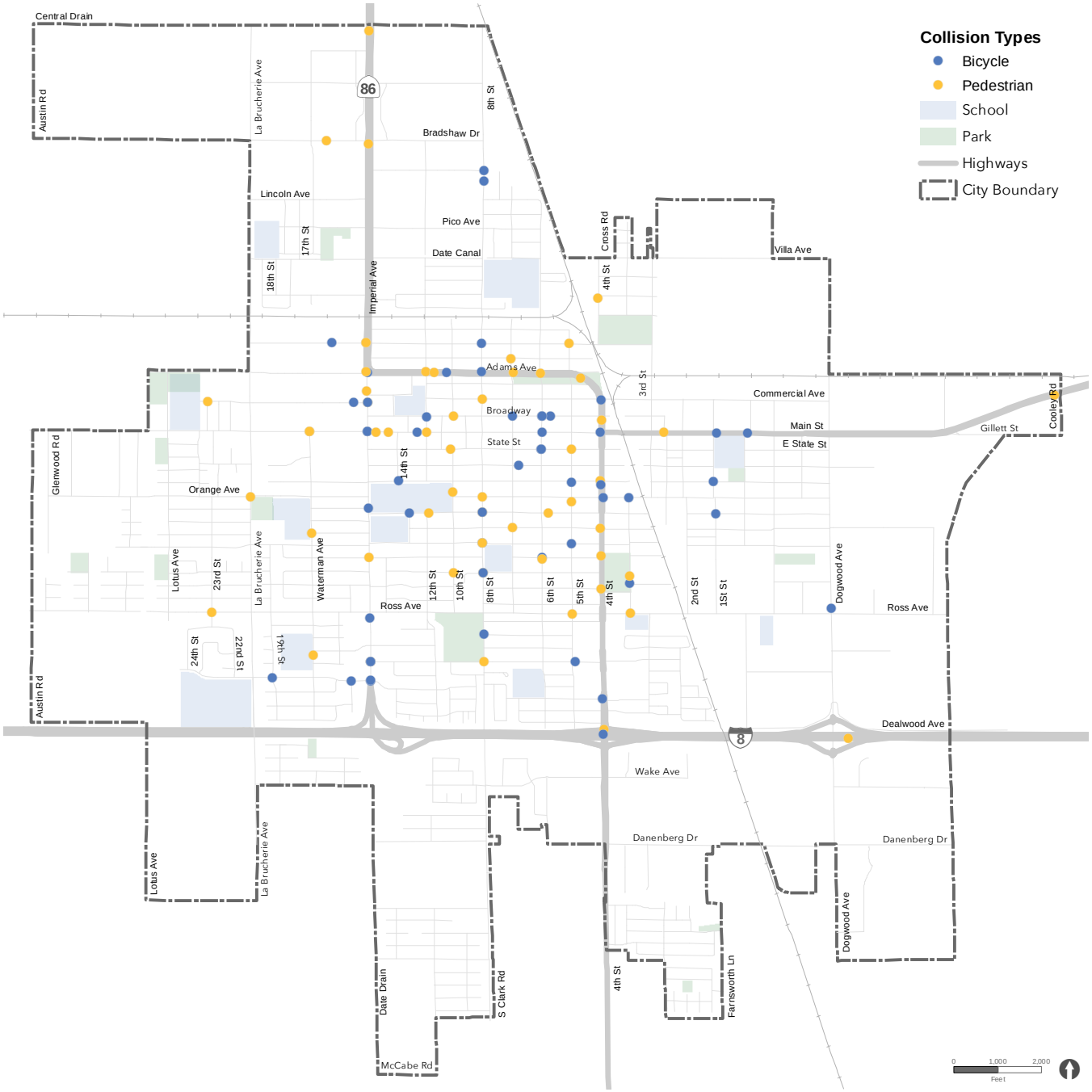


Figure 3-5: Pedestrian and Bicyclist Collisions, 2013-2017

Existing and Previously Proposed Bicycle Facilities

El Centro's existing bicycle facility network consists of roughly 27 miles of multi-use paths, bicycle lanes, and shared bicycle routes within City limits. Over 89 percent of existing facilities are shared bicycle routes located on collector and local streets. The existing facilities were reviewed for potential upgrades and missing sidewalk data helped to guide future infill projects. Previously proposed projects include multi-use paths, bicycle lanes, and shared bicycle routes.

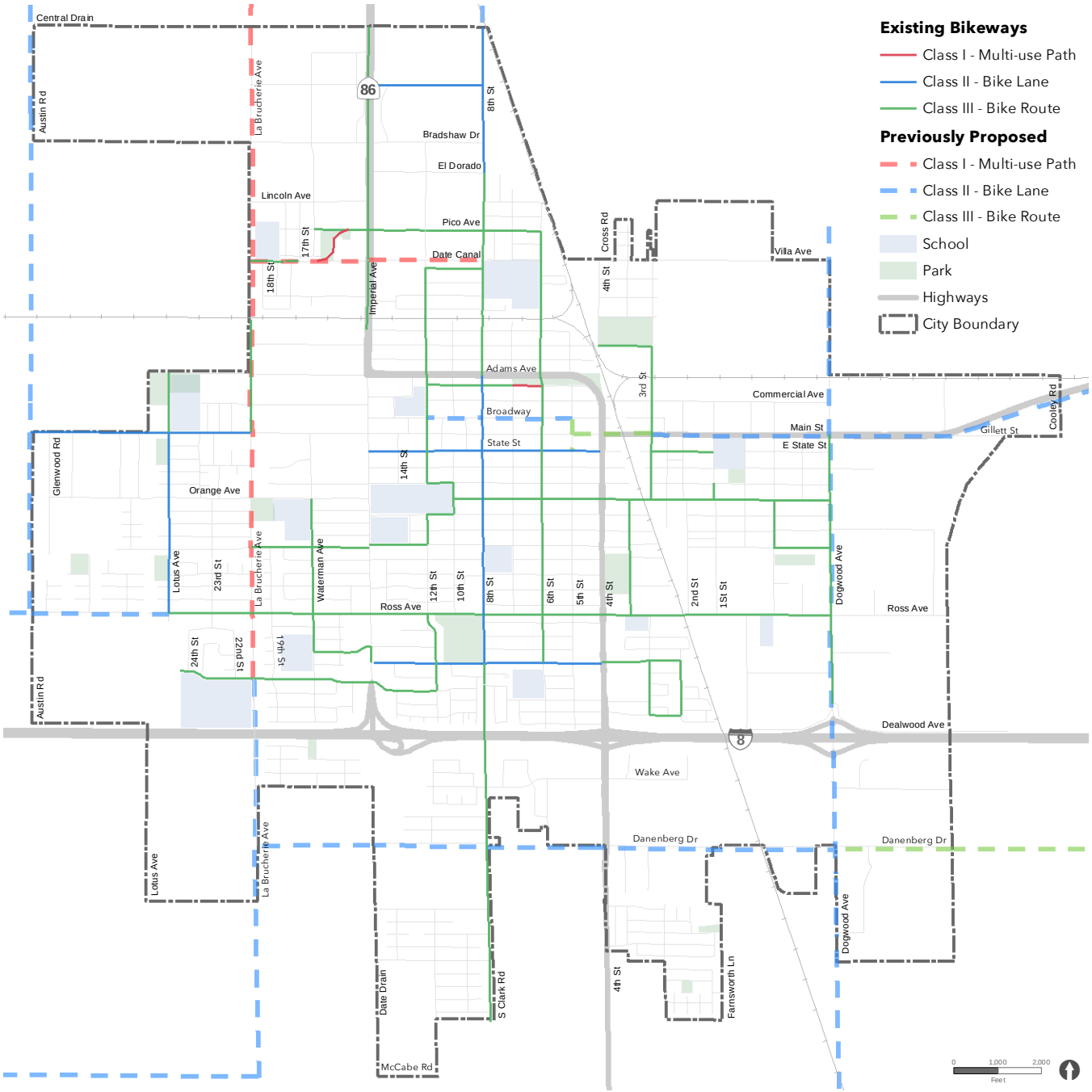


Figure 3-6: Existing and Previously Proposed Bikeway Facilities