A2

Existing Conditions (Citywide and Focus Areas)

MEMORANDUM

To: Leslie Mancebo, Jeff Jelsma, and Charisse Padilla, City of Sacramento

From: Mauricio Hernández and Cole Peiffer, Alta Planning + Design

Date: July 21, 2023

Re: **Streets for People: Sacramento Active Transportation Plan - Existing Conditions (Final Deliverable)**

Table of Contents

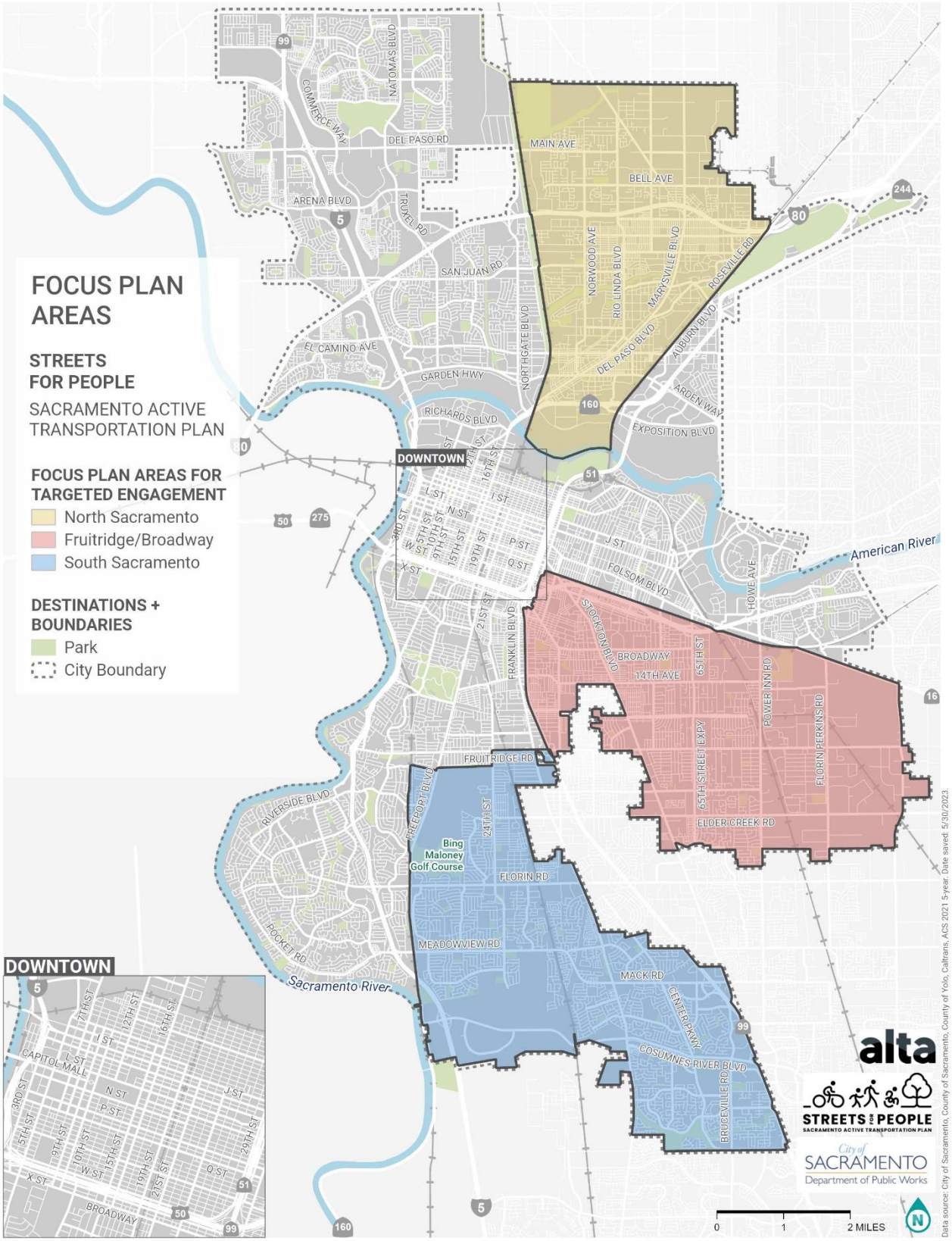
1. Introduction

Project Description

The *Streets for People: Sacramento Active Transportation Plan* will improve conditions for people walking, biking, and rolling in the City of Sacramento. This citywide plan will address active transportation needs throughout the city and will target three focus plan areas of high-need and historical disinvestment (shown in **Figure 1**) for expanded engagement opportunities and in-depth analysis. Through this effort, the project team will focus on addressing citywide issues for people walking, biking, and rolling, while prioritizing engagement in areas with the greatest equity needs and largest gaps in active transportation infrastructure. To guide the development of this plan, the City has created a Community Planning Team (CPT) composed of a diverse group of residents from the focus plan areas. Feedback derived from the CPT will help guide the project engagement and target recommendations to meet the unique needs of each focus plan area.

The community will have opportunities to engage throughout the project, including walking and biking audits, interactive maps and surveys, in person and virtual community meetings, and pop-up events across the city. Data analysis will inform and support public engagement as well as the identification of community needs. Recommendations from the *Streets for People* plan will focus on improving safety, connectivity, and accessibility for people walking, biking, or rolling through specific engineering enhancements, policy improvements or adjustments, and new or adapted programs across the city. The comprehensive recommendations will be part of the final *Streets for People* plan, which will provide project and policy guidance for active transportation across the city for years to come.

Figure 1: City of Sacramento and Focus Plan Areas for Targeted Engagement



Memo Overview

This memo summarizes the existing conditions for people walking, biking, and rolling in Sacramento based on data from a variety of sources including past plans and planning documents as well as geospatial data. This section provides an overview of analysis findings that identify leading issues for active transportation in the city. These findings will be combined with outcomes from the public engagement process to develop community-driven and data-informed recommendations and improvements in the final *Streets for People* plan.

The memo is organized into seven sections:

- Section 1 – Introduction: Memo overview and introduction.
- Section 2 – Plan Review: List of reviewed plans and policies and a high-level summary of findings.
- Section 3 – Community Overview and Resources: Summary of demographic, income, and land use data
- Section 4 – Equity Profile: Summary of equity analysis metrics (CalEnviroScreen 4.0).
- Section 5 – Public Health: Summary of health analysis metrics (Healthy Places Index, access to schools, heat vulnerability).
- Section 6 – Transportation Profile: Overview of existing sidewalk, bicycle, transit, roadway networks, and typical housing and transportation costs as a percentage of income.
- Section 7 – Collision Analysis and High-Injury Network Comparison: Collision data overview highlighting trends from the five most recent years of available data.

Summary of Findings

Conditions for people walking, biking, and rolling in the City of Sacramento vary significantly across the city based on equity, health, housing costs, and transportation safety metrics. While there are areas throughout the city exhibiting varying degrees of need for improvements based on an analysis of existing infrastructure as well as environmental and socio-economic metrics, the greatest concentration of issues were identified within the three focus plan areas. From access to parks and grocery stores to the number of predicted extreme heat events, the identified focus plan areas consistently ranked highest in need for improvement. This reiterates the importance of providing focused analysis and outreach in these three focus plan areas.

While safety for people walking and biking continues to be a key priority across the city, **fatal collisions involving people walking accounted for more than half (51.4%) of all fatal collisions in the city in 2020, increasing from 27% in 2016**. Comparatively, no fatal collisions were recorded for people bicycling in 2020, an improvement from the nine fatal collisions in 2016. Furthermore, **roadway segments on moderate-speed roadways (posted speed limits between 35 and 40 mph) accounted for nearly one-third of all fatal and serious injury collisions for people walking**. These roadways often present barriers for people walking, with typically longer (i.e., more than ¼ mile) distances between crossings than lower-speed roadways (posted speed lower than 35 mph). Similarly, wrong-way riding on moderate-speed roadways was the leading collision factor and accounted for 10% of all fatal and serious injury collisions involving people bicycling over the past five years. Targeting improvements on these roadways in key areas of need will help address leading safety issues for people walking and bicycling in the City of Sacramento.

2. Plan Review

Planning improvements to the transportation network requires an iterative process that relies on past planning documents to maintain focus on previously identified issues, evaluate progress made, and refine recommended improvements from prior plans. The *Streets for People* planning process is rooted in findings and recommendations from prior citywide planning documents; plans relating to each focus plan area were also reviewed and are detailed below. A summary of the findings from this plan review is included at the end of this section.

Citywide

- Pedestrian Master Plan (2006), City of Sacramento
- Design and Procedure Manual Section 15 – Street Design Standards (2009), City of Sacramento
- Bicycle Master Plan (2016; amended 2018), City of Sacramento
- Vision Zero Sacramento Action Plan (2018), City of Sacramento
- Complete Streets Policy (2019), City of Sacramento
- Vision Zero Top 5 Corridors (2020), City of Sacramento
- Criteria and Guidance for Creative Crosswalks (2021), City of Sacramento
- Pedestrian Crossing Guidelines – Treatment Applications Guide (2021), City of Sacramento
- Vision Zero School Safety Study (2021), City of Sacramento
- Climate Action Plan (2022), City of Sacramento
- Climate Action Plan - Adaptation Plan (2022), City of Sacramento

Focus Plan Area Specific

Fruitridge/Broadway Plans

- Southeast Sacramento Bicycle and Pedestrian Access Study (2008), City of Sacramento
- Fruitridge Broadway Community Plan (2015)
- Oak Park Active Travel Study (2017), Oak Park Neighborhood Association
- Sacramento Center for Innovation (2013; amended 2018), City of Sacramento
- Peter Burnett Elementary School Walk Audit Report (2018), WALKSacramento (Civic Thread)
- Will C. Wood Middle School Walk Audit Report (2019), WALKSacramento (Civic Thread)
- Fruitridge Walk Audit Report (2019), Sacramento County Public Health
- Oak Ridge Elementary School Walk Audit Report (2019), WALKSacramento (Civic Thread)
- Elder Creek Elementary School Walk Audit Report (2020), WALKSacramento (Civic Thread)
- Stockton Boulevard Corridor Plan (2021), City of Sacramento

North Sacramento Plans

- Swanston Station Transit Village Specific Plan (2007), City of Sacramento
- North Sacramento Walk Audit Report (2019), Sacramento County Public Health

South Sacramento Plans

- Southeast Sacramento Bicycle and Pedestrian Access Study (2008)
- South Area Community Plan (2015)
- Freeport Boulevard Walk Audit Report (2020), Freeport Boulevard Transportation Safety Committee
- Safe Routes to School South Sacramento – Webpage
- Woodbine Park Walk Audit Report (2021), Sacramento County Public Health

Findings

The plans that were reviewed span a 17-year period during which time the City implemented enhancements to the walking and biking networks, as well as supportive policies and programs. In recent years, the City has worked to evaluate and analyze existing safety and connectivity issues, most notably with the Vision Zero program. Adopted in 2018, the Vision Zero Action Plan identified the citywide high injury network (HIN). Since the adoption of the Action Plan, the City has conducted a detailed review of the top five corridors from the HIN and identified focused safety improvements around 20 schools. The City has also developed policies to enhance active transportation networks and improve crossings. These include the Complete Streets Policy, Pedestrian Crossing Guidelines, and Guidance for Creative Crosswalks, which were developed and passed between 2019 and 2021. In concert with these efforts, and to meet greenhouse gas and vehicle miles traveled (VMT) reduction targets, the City recently drafted the *Climate Action and Adaptation Plan* (awaiting ratification as of the writing of this memo), which identifies the implementation of high-quality active transportation networks as the highest priority mobility investment for the City.

The City's focus on improving active transportation has increased substantially over the past five years and will continue to grow based on the recently approved *Transportation Priorities Plan Prioritization* and the anticipated *Climate Action and Adaptation Plan*. Implementation of active transportation projects is a strategy in both plans to equitably address transportation safety, sustainability, public health, and air quality. The *Streets for People* plan will further support these community-wide goals by acting as the guide to the implementation of active transportation facilities.

3. Community Overview and Resources

California's capital, Sacramento is located at the confluence of the American River and Sacramento River within Sacramento County. Covering approximately 99 square miles, the city lies in northern California's Sacramento Valley, approximately 70 miles to the northeast of the San Francisco Bay Area and 25 miles west of the Sierra Nevada Mountain range. Sacramento is generally flat with a warm and temperate climate.

Demographics

Sex and Gender

In 2021, the city had an estimated population of 518,605.[1] The population is fairly evenly split by sex, with 51% women and 49% men. Compared to the county and state (which both have a median age of 37), the city is slightly younger with a median age of 35.[2] While the city and county have a similar age breakdown, the City of Sacramento has a higher percentage of people between the ages of 20 and 34 (25%) compared to the county (22%). **Figures 2** and **3** provide a breakdown of the city and county populations by age and sex.

Figure 2: City of Sacramento: Age and Sex

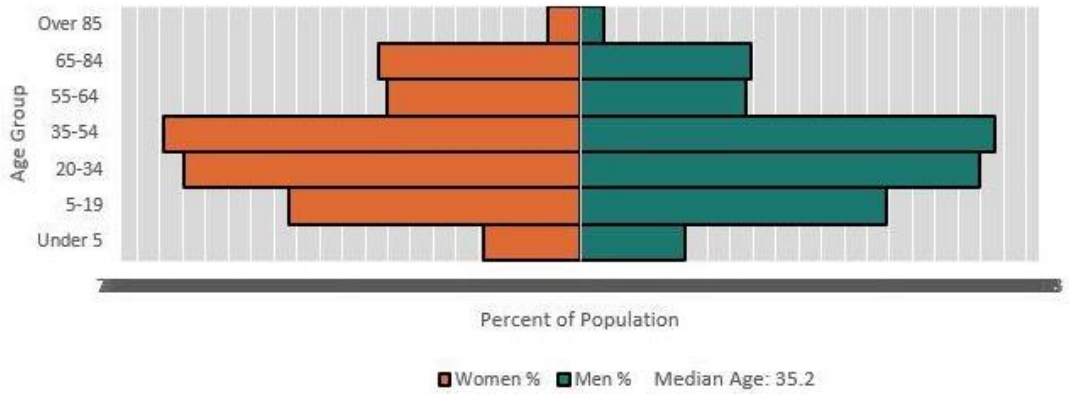
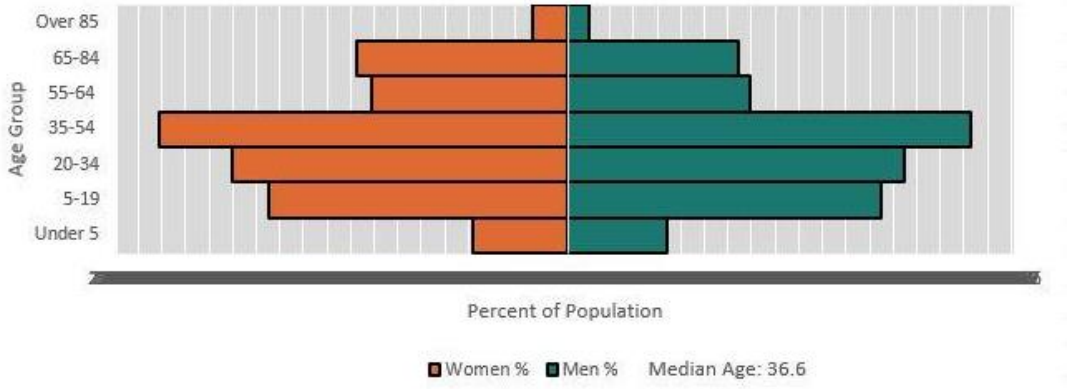


Figure 3: Sacramento County: Age and Sex



[1] American Community Survey, 5-year estimates (2017–2021).
[2] Ibid.

Race

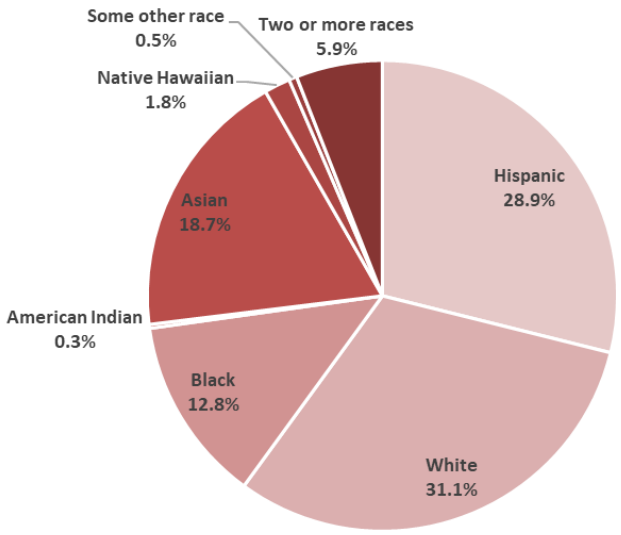
Sacramento is a diverse city with the following race and ethnicity characteristics: Asian residents account for 19%, Black/African American residents account for 13%, residents of Hispanic descent account for 29%, and white residents account for 31% of the population. The complete racial profile of the city is presented in **Figure 4**. **Table 1** compares the racial breakdown of city residents to the county and state.

Table 1: City of Sacramento, Sacramento County, and California Race/Ethnicity

Race	City of Sacramento	Sacramento County	California
African American or Black	13%	9%	5%
American Indian	0.3%	0.3%	0.3%
Asian	19%	17%	15%
Hispanic	29%	24%	40%
Native Hawaiian	2%	1%	0.3%
Two or More Races	6%	6%	4%
Some Other Race	1%	0.4%	0.4%
White	31%	43%	36%

Source: American Community Survey, 5-year estimates (2017–2021)

Figure 4: City of Sacramento: Race/Ethnicity

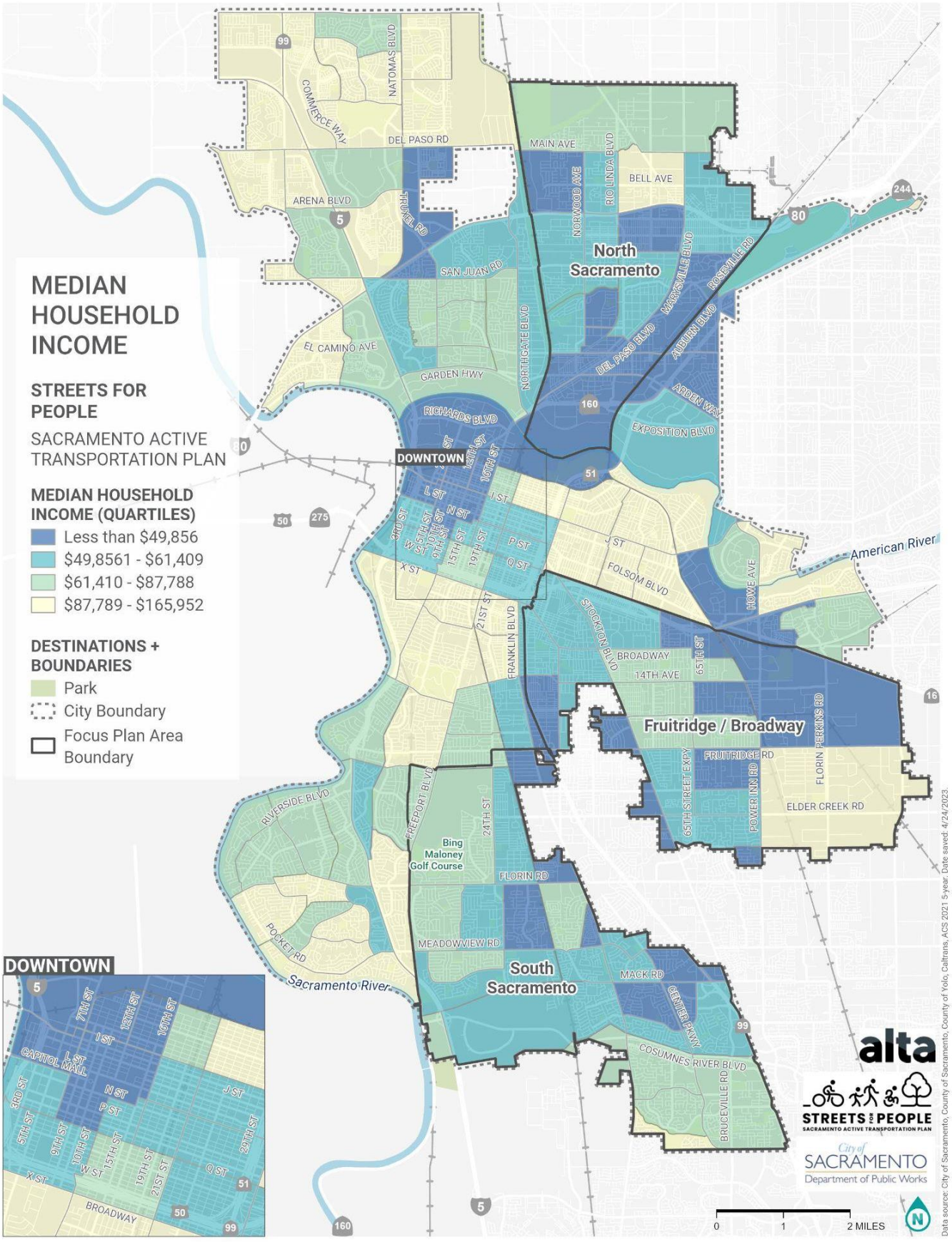


Income

The overall city median household income (MHI) is approximately $71,000, which is below the MHI for both the county ($76,000) and the state of California ($84,000).[3] There are more residents in the city living in poverty than the county or the state with approximately 14.8% of city residents living below the poverty line, compared to 13.3% in the county and 12.3% in the state. **Figure 5** shows the MHI for the city, broken down by census tract. The areas with the lowest MHI include the project focus plan areas of North Sacramento, South Sacramento, and Fruitridge/Broadway (see **Figure 5**). As previously mentioned, these are areas of historical disinvestment and high need. The highest concentration of census tracts in the lowest quartile (households making less than $49,856) is in the North Sacramento focus plan area, particularly between the Sacramento Northern Railroad and the Walter S. Ueda Parkway to the west, the American River to the south, the city limits to the east, and Main Avenue to the north. Outside the three focus plan areas, the northwest area of Downtown—including the Mansion Flats, Alkali Flat, Southern Pacific/Richards, and Dos Rios Triangle neighborhoods—also has a high concentration of low-income households.

[3] American Community Survey, 5-year estimates (2017–2021).

Figure 5: Median Household Income



Housing

Housing burdened low-income households are households that are both low-income and highly burdened by housing costs. Data from the Housing and Urban Development (HUD) Comprehensive Housing Affordability Strategy (CHAS) is used to determine the Housing Burden Indicator within the CalEnviroScreen 4.0 dataset. The indicator shows the percent of households in a census tract that are both low income (making less than 80% of their county's median household income) and severely burdened by housing costs (paying greater than 50% of their income for housing costs).

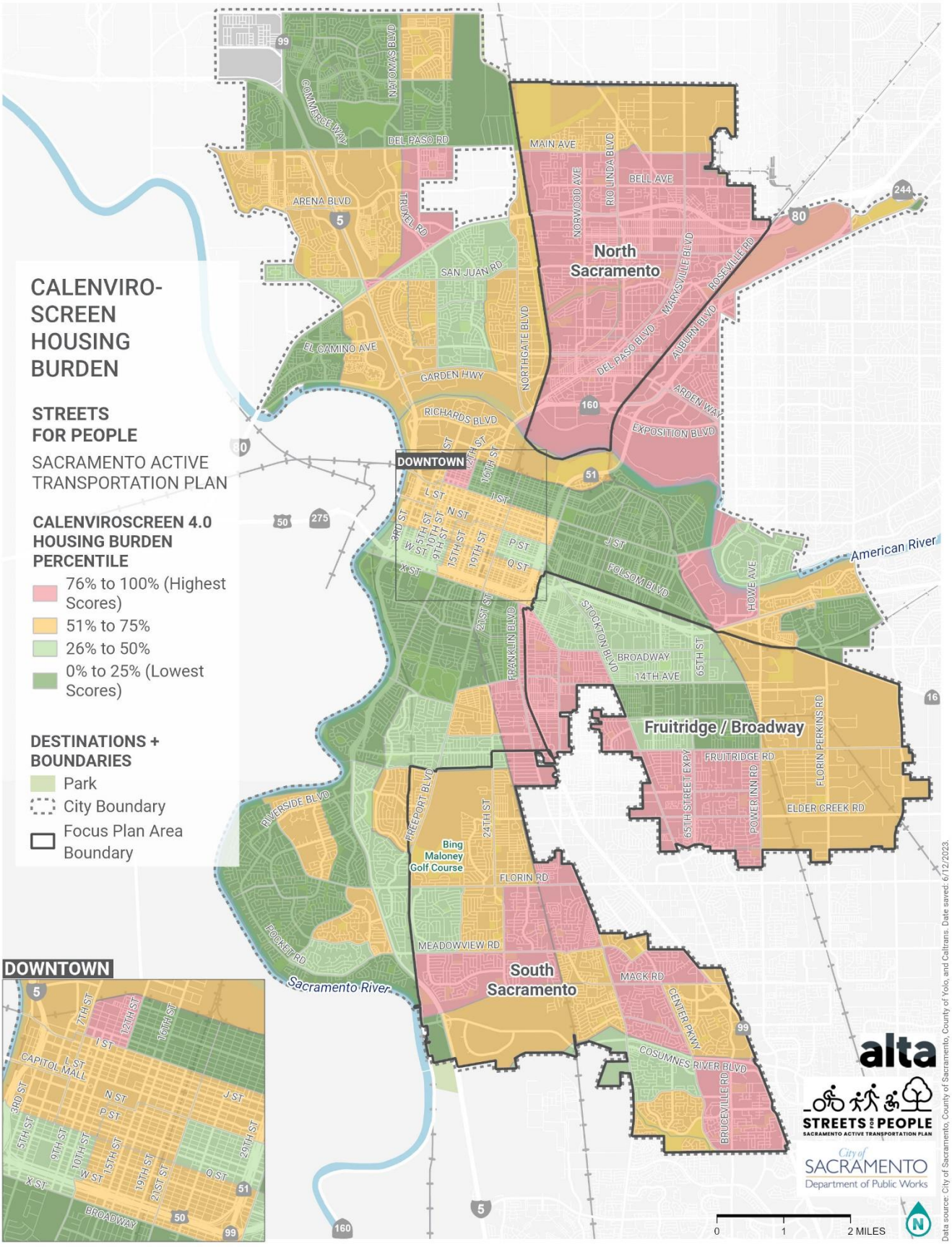
As seen in **Figure 6**, the majority of households in the focus plan areas fall within the 75th to 100th percentile of the Housing Burden Indicator. This means that a higher percentage of households in these census tracts are both low-income and pay greater than 50% of their income for housing costs compared to other census tracts within Sacramento. The data also indicates that certain neighborhoods within these focus plan areas are more burdened than others.

Focus plan areas with census tracts falling within the 75th to 100th percentile of the Housing Burden Indicator include:

- **Fruitridge/Broadway** focus plan area: north, central, and south Oak Park; Fruitridge Manor; Avondale; Southeast Village; and Glen Elder neighborhoods.
- **North Sacramento** focus plan area: all neighborhoods south of Main Avenue.
- **South Sacramento** focus plan area: the Meadowview, Parkway, and portions of the Valley Hi / North Laguna neighborhoods.

There are also pockets of high housing burden in the Village 5 neighborhood near the Interstate 80/Truxel Road exit; in the Alkali Flat neighborhood, the North City Farms neighborhood, and the area between the American River and Interstate 80 Business Route.

Figure 6: CalEnviroScreen Housing Burden Percentile



Land Use

Planning land uses and transportation together creates safer, more walkable environments. Designing local land uses with mobility in mind can create more opportunities for access to destinations, supporting the local economy. Diverse land uses with higher densities encourage walking or bicycling trips as destinations are closer together and easier to access. Conversely, segregated land uses that are low-density and further apart promote driving.

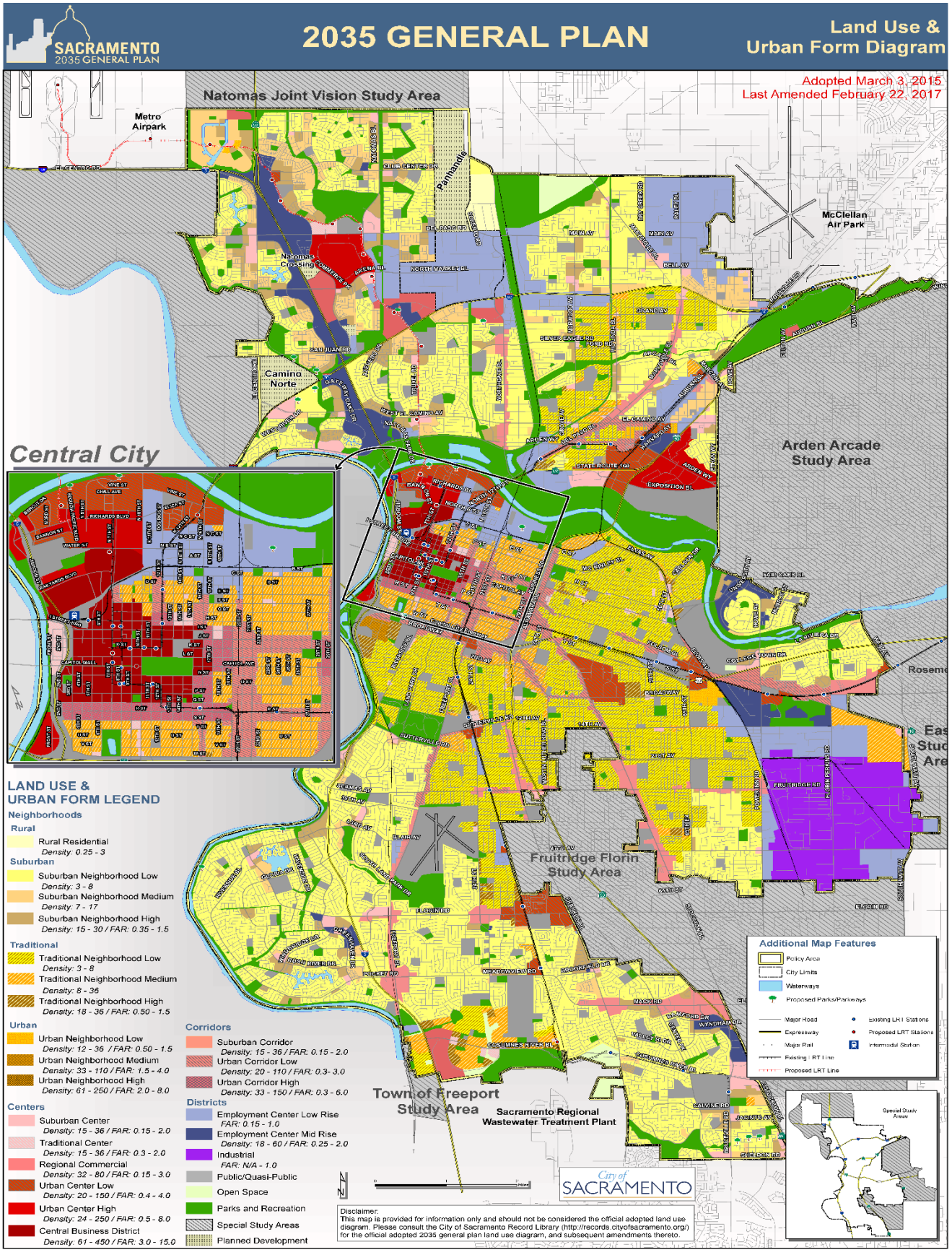
Downtown Sacramento and many of the adjacent neighborhoods, known as the Central City, have a grid-based street network. Downtown Sacramento consists of a mix of uses with high-density development, as shown in **Figure 7**. Adjacent neighborhoods in the Central City such as Midtown, Winn Park, Southside Park, and Boulevard Park also consist of a grid-based street network and a mix of housing types and uses.

In areas of the city developed since the 1950s, the street network becomes less connected with more winding streets that extend out from highways and major arterials. Land use is generally characterized by low-density residential and commercial development. Most major arterials in these outer neighborhoods are auto-oriented and consist of low-density commercial uses. The City of Sacramento aims to transform many of these corridors into higher-density, mixed-use, and transit-friendly environments.[4]

In addition to commercial and residential uses, Sacramento's open spaces and parks are scattered throughout neighborhoods and along the rivers, creeks, and canals. Industrial uses are primarily concentrated east of Power Inn Road along the eastern city boundary at the Florin Fruitridge Industrial Park. Employment centers and mixed-use centers outside Downtown include destinations such as the UC Davis Medical Center, California State University - Sacramento, Point West, Cal Expo, the commercial areas along Interstate 5 (I-5), and the Executive Airport. **Figure 7** on the next page provides a general summary of land uses throughout the city.

[4] City of Sacramento 2035 General Plan.

Figure 7: City of Sacramento 2035 General Plan Land Use Map (Source: Sacramento 2035 General Plan)



Commute Profile

The National Household Travel Survey data set provides insight into the transportation modes used for commuting to and from work[5]. However, this data is limited and offers just a small snapshot of the full transportation picture. To this end, it is important to consider the numerous trips that may be taken throughout a typical day that are not work-related and that may occur with a different mode. This Plan aims to address all trips.

Based on the latest data, around 15% of transportation trips in the Greater Sacramento Region (i.e., Sacramento, Roseville, Arden, Arcade) were commute-related trips. Of these, 68.9% were completed driving alone and 9.6% were via carpool.[6] Across the city, transit use accounts for approximately 2.9% of all commute trips. People walking (2.9%) and people biking (1.6%) to work account for around 4.5% of total commuting trips.

African American residents use public transit at nearly twice the rate compared to all other races: 5.6% compared to 2.9%. American Indian residents walk at a rate (5.5%) slightly higher than other races.[7] **Table 2** provides a complete breakdown of commute modes by race.

Table 2: City of Sacramento Commute to Work by Race/Ethnicity

Race	Drive Alone	Carpool	Transit	Walk	Bike/Taxi/ Motorcycle[8]	Work from Home
African American or Black	67.9%	9.3%	5.6%	3.1%	2.6%	11.6%
American Indian	74.8%	6.3%	2.7%	5.5%	2.6%	8.1%
Asian	69.4%	12.0%	2.9%	1.6%	1.7%	12.3%
Hispanic	71.2%	12.7%	2.5%	2.2%	2.4%	9.1%
Native Hawaiian	78.3%	8.1%	0.1%	2.1%	1.1%	10.3%
Two or More Races	68.2%	10.4%	2.1%	2.0%	3.3%	14.0%
Some Other Race	72.4%	14.9%	2.4%	1.6%	2.0%	6.7%
White	67.7%	7.1%	2.6%	4.0%	4.1%	14.5%
Total Average	68.9%	9.6%	2.9%	2.9%	3.1%	12.6%

Source: American Community Survey, 5-year Estimate (2017–2021)

It is important to note that approximately **one in ten (11.3%) of all trips** completed in the Greater Sacramento Region are active transportation trips according to the latest data from the National Household Travel Survey.

[5] Federal Highway Administration. (2020). 2020 NextGen NHTS National Passenger OD Data, U.S. Department of Transportation, Washington, DC. Available online: https://nhts.ornl.gov/od/.
[6] American Community Survey, 5-year estimates (2017–2021).
[7] Ibid.
[8] NOTE: The numbers presented in this table have been aggregated for bike/taxi and motorbike as the American Community Survey combines these commute-to-work categories when presented by race/ethnicity.

4. Equity Profile

This section identifies the areas and populations within the city that have the greatest need for active transportation improvements due to disproportionate societal, environmental, health, and economic burdens compared to the city as a whole. Active transportation improvements can help address these burdens and begin to address decades of historical disinvestment.

Environmental Health–CalEnviroScreen 4.0

CalEnviroScreen 4.0[9] examines census tracts based on the combined indicators of pollution burden (i.e., exposures and environmental effects) and population characteristics (i.e., sensitive populations and socioeconomic factors). Pollution burden and population characteristics consist of a total of 21 statewide indicators ranging from low educational attainment to existing ozone levels (more information on each indicator is available from the Office of Environmental Health Hazard Assessment). Census tracts that score in the top 25th percentile are typically considered the most disadvantaged at the statewide level and have been targeted for greenhouse gas reduction funding through Senate Bill 535.[10] Overall scores for each census tract within the city are shown in **Figure 8**. Higher scores (depicted by red and yellow on the map) signify higher levels of pollution. **Figure 9** and **Figure 10** show the pollution burden and population characteristics scores, respectively.

Overall Score

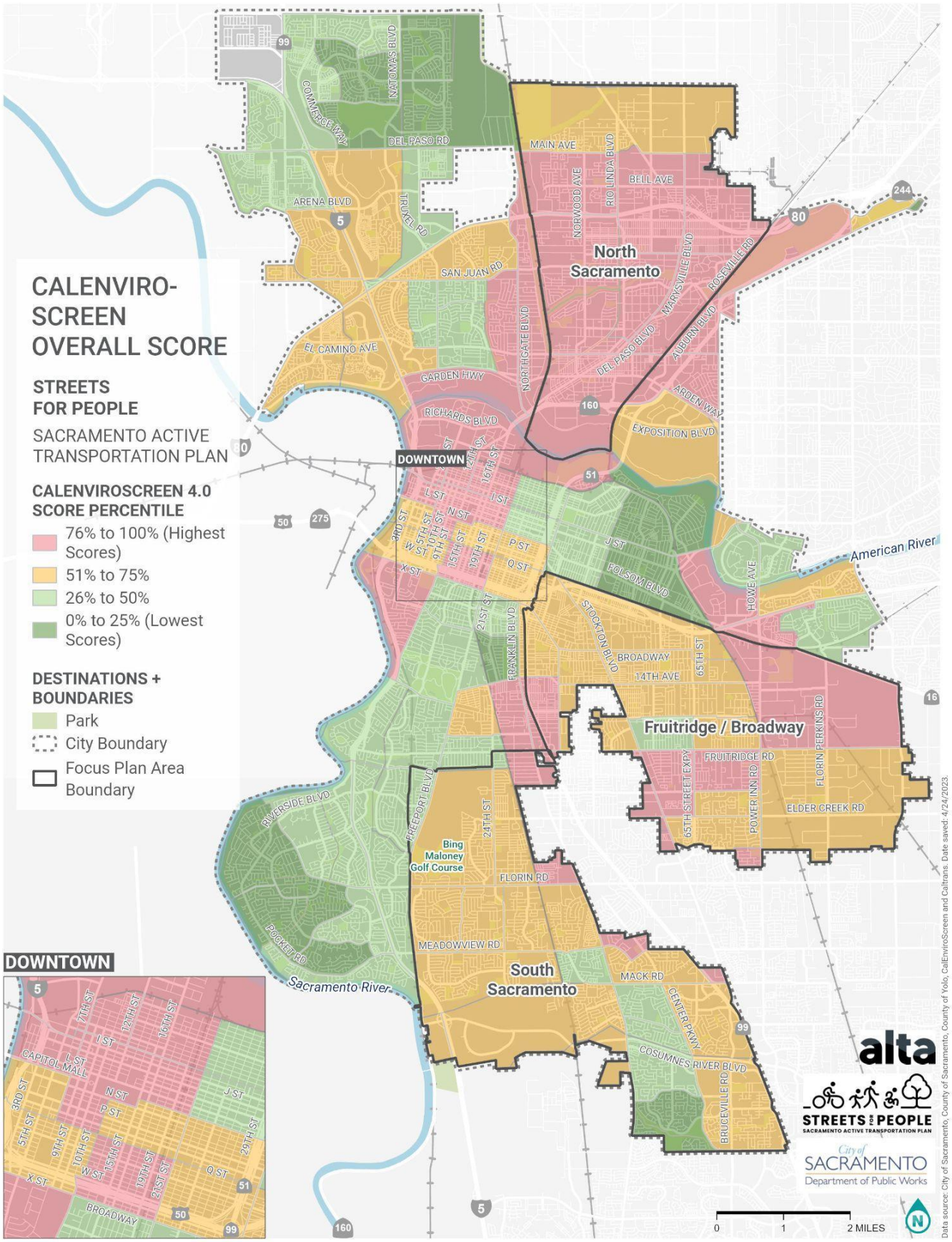
The most disadvantaged census tracts—census tracts that score within the top 25th percentile overall—are located in the following areas:

- The **North Sacramento** focus plan area south of Main Avenue scores within the top 25th percentile overall. I-80 runs through this focus plan area, and the Sacramento McClellan Airport is nearby, just to the east of the focus plan area boundary.
- The **Fruitridge/Broadway** focus plan area has several locations that score within the top 25th percentile overall, including:
    - The northern half of the focus plan area east of Power Inn Road, which includes the Belvedere, Power Ridge, and New Brighton neighborhoods. While there are relatively few residences in this area, it does contain Granite Regional Park and the Power Inn Sacramento Regional Transit (SacRT) light rail station.
    - A significant portion of the Avondale and Fruitridge Manor neighborhoods between Power Inn Road to the east, Fruitridge Road to the north, and Stockton Boulevard to the west.
    - The South Oak Park neighborhood.

[9] CalEnviroScreen 4.0 available online: https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40.
[10] Senate Bill 535 establishes minimum funding requirements and definitions for Disadvantaged Communities (DACs).

- The **South Sacramento** focus plan area is generally ranked as having a moderately high level of need based on the overall score; however, three locations within the focus plan area score within the top 25th percentile overall. These locations are along the eastern city boundary, in the South City Farms neighborhood, and in the small portion of the Parkway neighborhood north of Florin Road.
- Outside the three focus plan areas, portions of Downtown also score within the top 25th percentile overall highlighting areas of the city with the greatest need.

Figure 8: CalEnviroScreen 4.0 – Overall Score

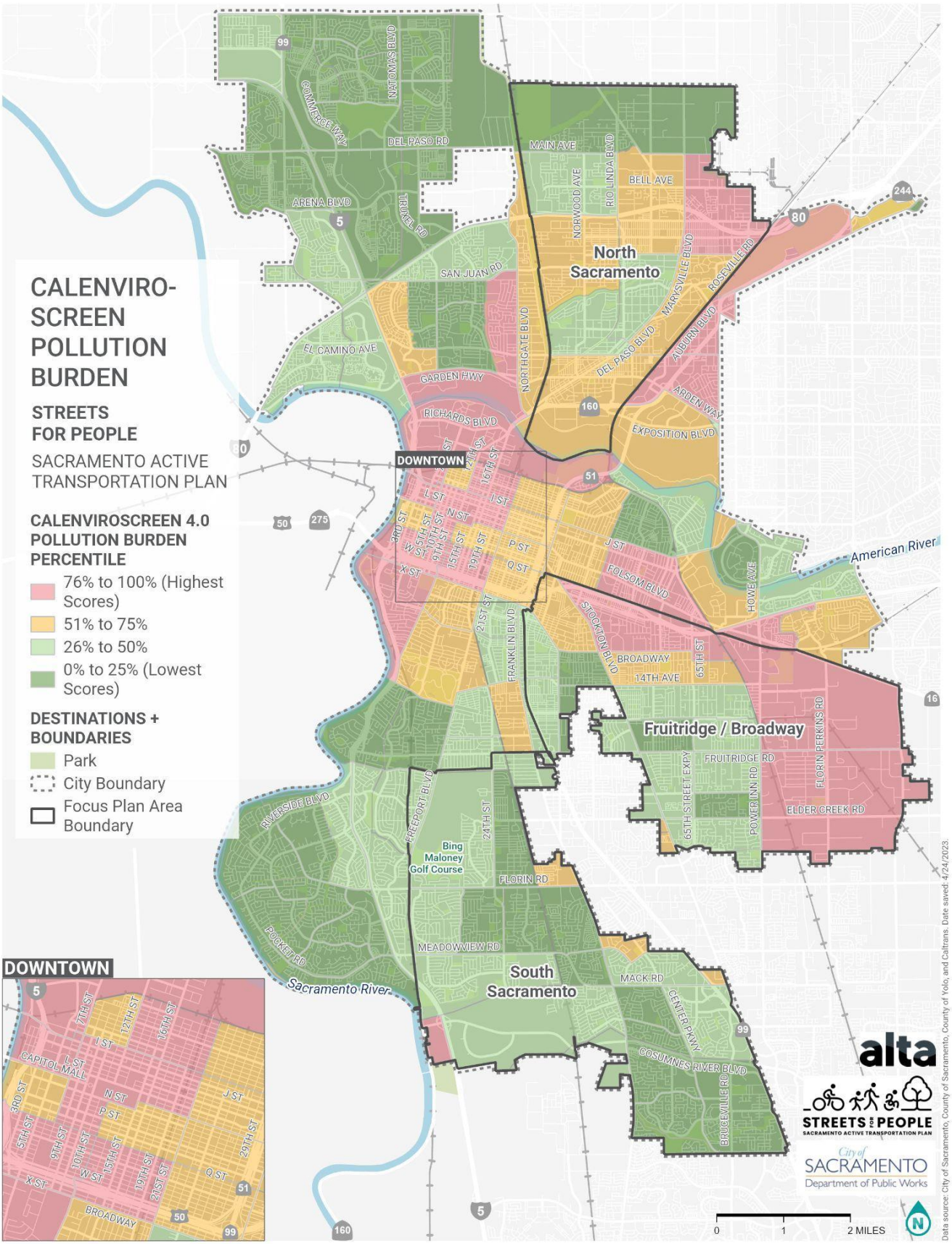


Pollution Burden

As shown in **Figure 10** on the next page, the locations with the highest pollution burden vary slightly from the overall CalEnviroScreen scores. Areas with high concentrations of industrial land uses typically experience increased air pollutants from a higher proportion of truck traffic, manufacturing emissions, and proximity to highways where a significant amount of air pollution is generated. The areas with the highest pollution burden include:

- The neighborhoods in the **Fruitridge/Broadway** focus plan area located east of Power Inn Road and the Union Pacific railroad tracks, including Elder Creek, Depot Park, Power Ridge, Belvedere, Florin Fruitridge Industrial Park, New Brighton, and Morrison Creek.
- The neighborhoods along I-50 in the **Fruitridge/Broadway** focus plan area such as Elmhurst, Fairgrounds, and Tahoe Park north of Broadway.
- The neighborhoods in and adjacent to the **North Sacramento** focus plan area near I-80 such as Ben Ali, Del Paso Park, and East Del Paso Heights.
- Outside the three focus plan areas, almost the entirety of Downtown west of 19th Street, southwest of Downtown along the Sacramento River, and north of Downtown below the American River. Some of the neighborhoods include Mansion Flats, Alkali Flat, Southern Pacific/Richards, Dos Rios Triangle, Southside Park, Old Sacramento, and Upper Land Park.

Figure 9: CalEnviroScreen 4.0 – Pollution Burden



Population Characteristics

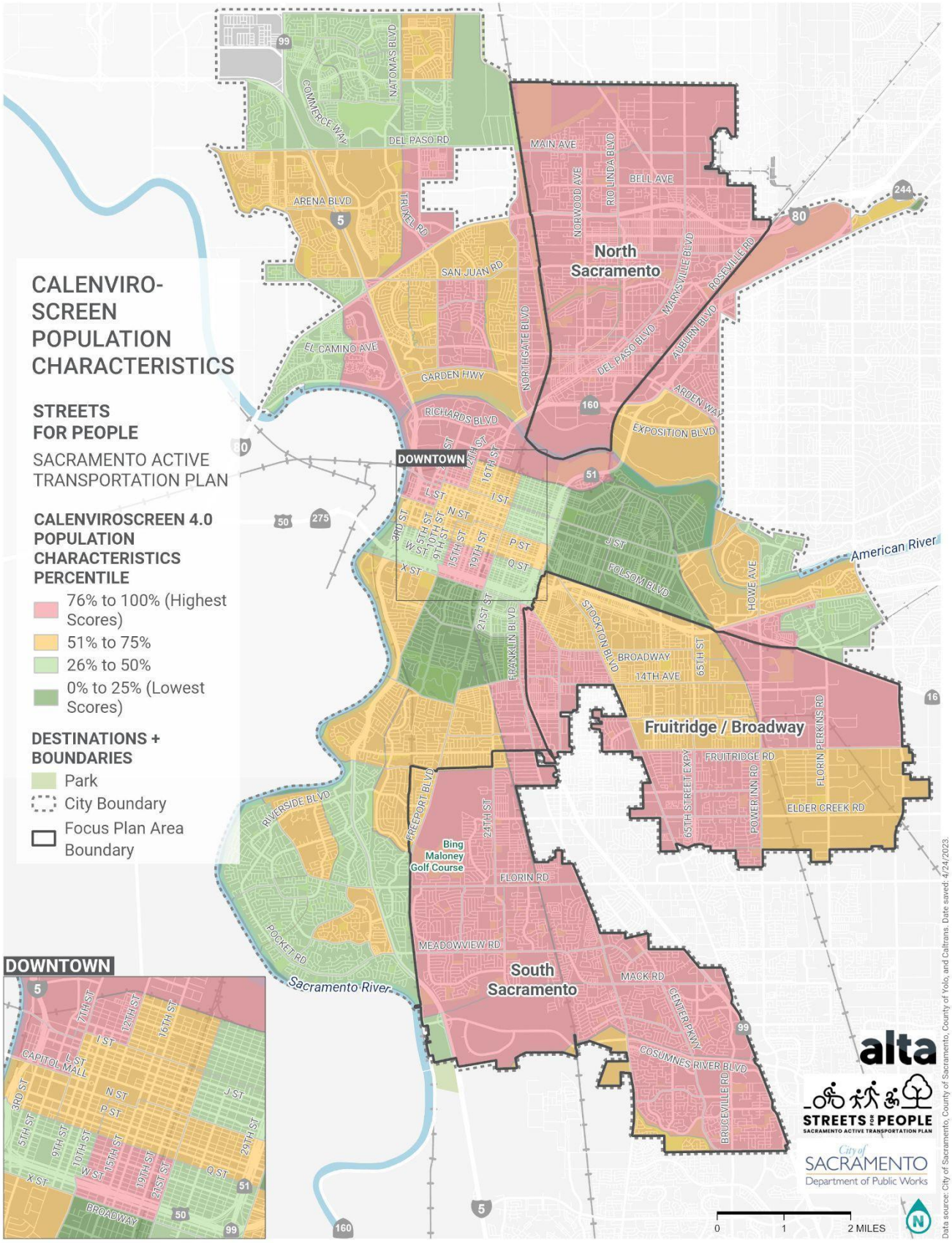
CalEnviroScreen uses a combined index for summarizing population characteristics. Population characteristics that result in increased vulnerability to pollution include the following indicators:

- High incidence of asthma
- High incidence of cardiovascular disease
- Low birth weight of infants
- Low educational attainment
- Housing burden[11]
- Linguistic isolation[12]
- Poverty[13]
- High unemployment rates

Almost all the North Sacramento and South Sacramento focus plan areas and most of the Fruitridge/Broadway focus plan area scored above the 75th percentile for population characteristics (**Figure 11**) that are the most vulnerable to pollution. Outside the three focus plan areas, the northwest area of Downtown and neighborhoods north of Downtown such as Alkali Flat, Southern Pacific/Richards, Dos Rios Triangle, South Natomas, Gateway Center, and Metro Center scored above the 75th percentile for population characteristics that result in increased vulnerability to pollution.

[11] Based on data from Housing and Urban Development (HUD) Comprehensive Housing Affordability Strategy. This indicator identifies the percentage of households in a census tract that are both low income (making less than 80% of their county's median family income) and severely burdened by housing costs (paying greater than 50% of their income for housing costs).
[12] Based on data from the American Community Survey. Identifies percentage of limited English-speaking households, which are households where no one over age 14 speaks English well.
[13] Based on data from the American Community Survey. Identifies the percentage of the population with incomes less than two times the federal poverty level.

Figure 10: CalEnviroScreen 4.0 – Population Characteristics



5. Public Health

Healthy Places Index

The Healthy Places Index, developed by the Public Health Alliance of Southern California, provides valuable insights into specific public policy and health considerations. The overall index is a composite of 25 individual metrics, which cover economics, education, social, transportation, healthcare access, neighborhood composition, housing, and environmental factors.[14] Two significant metrics related to public health and transportation include *access to parks* and *grocery store access*. Parks are important community assets and provide outdoor open space and places for recreation and exercise. Having access to a grocery store can improve residents' health by encouraging a better diet, reducing chronic disease, and lowering the risk of food insecurity.

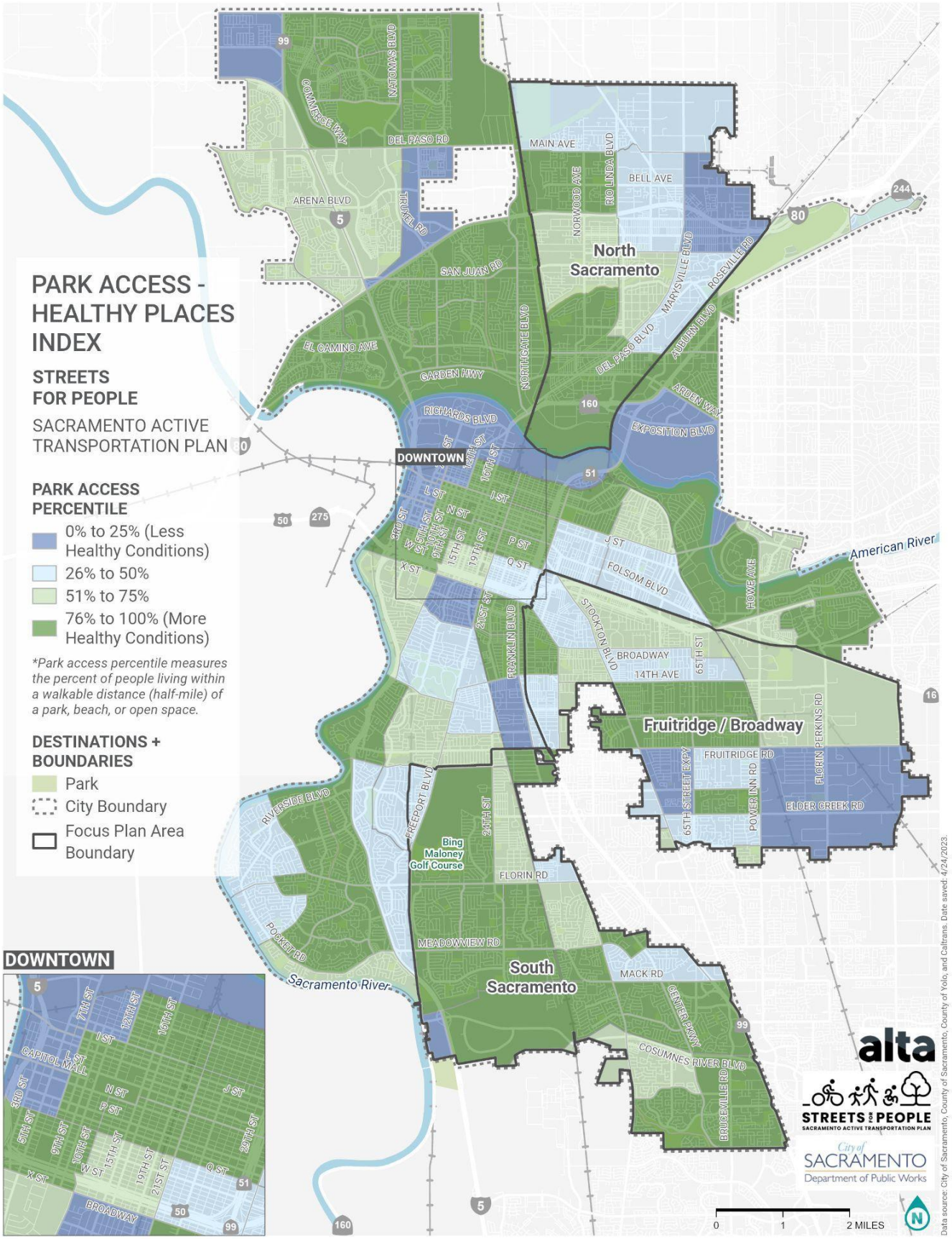
Access to Parks

There are parks distributed throughout the city including small neighborhood parks, larger community parks, regional parks, open space areas, and shared-use paths. **Figure 11** displays access to parks[15] for Sacramento residents. The following neighborhoods were identified as having the lowest levels of park access across the City based on the Healthy Places Index data:

- **North Sacramento Focus** plan area: Point West and neighborhoods adjacent to the Sacramento McClellan Airport such as East Del Paso Heights, Village Green, Parker Homes, and Raley Industrial Park
- **Fruitridge/Broadway Focus** plan area: Fruitridge Manor, Depot Park, Florin Fruitridge Industrial Park, and Morrison Creek
- The northwest area of Downtown, including Alkali Flat, Southern Pacific/Richards, and Dos Rios Triangle
- The Land Park neighborhood bordered by Vallejo Way to the north, I-80 to the south, 21st Street to the east and Riverside Boulevard to the west
- North City Farms
- Village 5
- Greenbriar

[14] Healthy Places Index 3.0, Public Health Alliance of Southern California.
[15] Healthy Places Index measures Park Access as the percent of residents within ½ mile of a park greater than 1 acre, or a beach, open space, or coastline (HCI-Search (ca.gov))

Figure 11: Healthy Places Index – Park Access



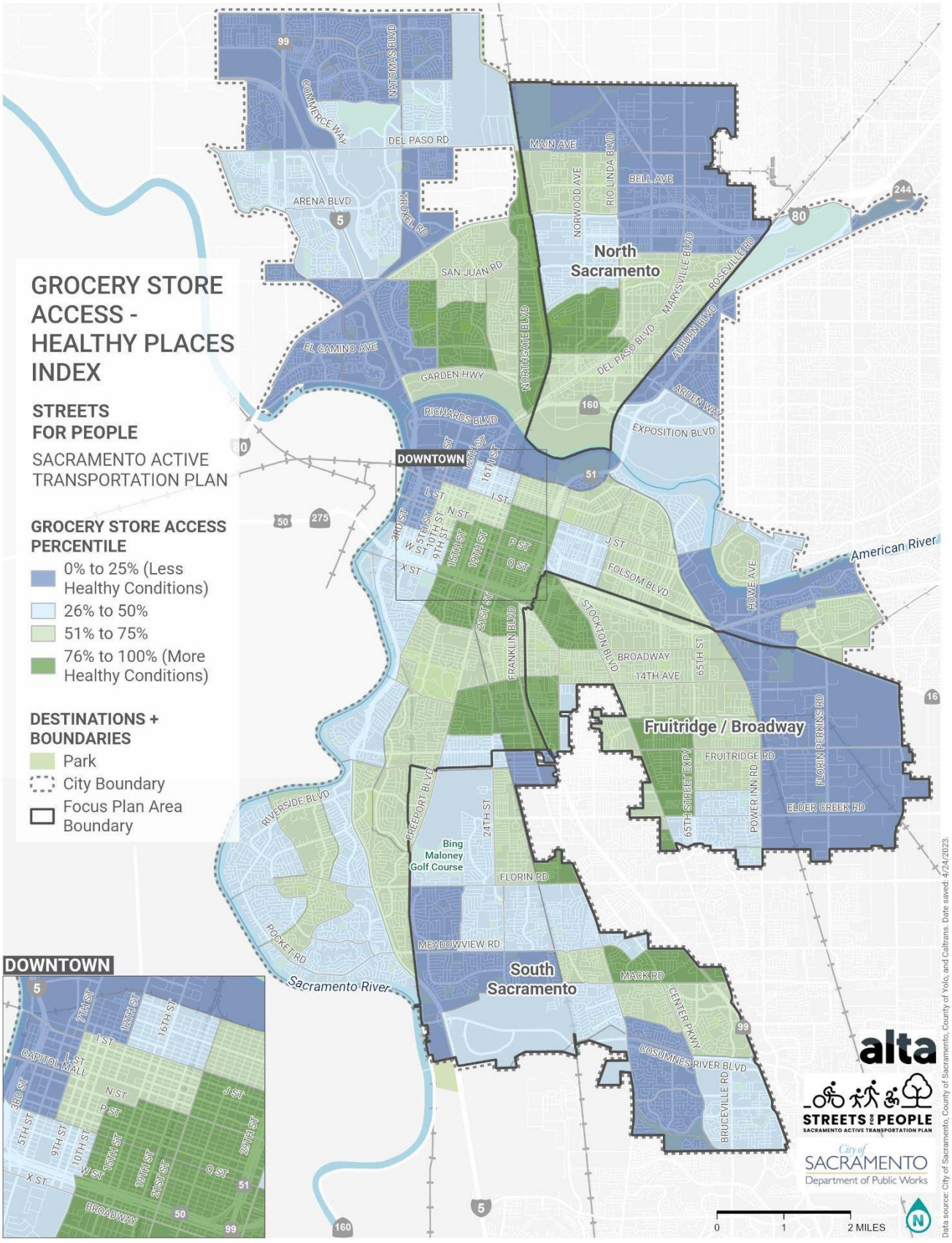
Grocery Store Access

Grocery store access is evaluated by the percentage of people in an urban area who live within a half mile radius from a grocery store. Using this threshold, the Central City—which includes neighborhoods such as Midtown, Winn Park, Newton Booth, Curtis Park, and Med Center—generally has the highest access to a grocery store. Outside these central neighborhoods, grocery store access is more scattered, which requires residents to travel farther, on average, to reach a grocery store, as noted in **Figure 12**.

The following neighborhoods were identified as having the lowest levels of grocery store access across the city:

- **Fruitridge/Broadway** focus plan area: New Brighton, Depot Park, Florin Fruitridge Industrial Park, Belvedere, Power Ridge, and Morrison Creek neighborhoods.
- **North Sacramento** focus plan area: The Robla neighborhood and neighborhoods adjacent to the Sacramento McClellan Airport such as East Del Paso Heights, Village Green, Parker Homes, and Raley Industrial Park.
- **South Sacramento** focus plan area: The Valley Hi/North Laguna neighborhood west of Center Parkway and the Meadowview neighborhood south of Florin Road and west of the Union Pacific railroad tracks.
- The northwest area of Downtown—including Alkali Flat, Southern Pacific/Richards, and Dos Rios Triangle—have low grocery store access. Other neighborhoods with low grocery store access are mostly concentrated in the northwest area of the city, including Metro Center, Gateway Center, Willowcreek, Village 5, Heritage Park, Natomas Park, Village 7, Natomas Creek, and Greenbriar.

Figure 12: Healthy Places Index – Grocery Store Access



Access to Schools

Major roadways, especially those with a history of traffic collisions, act as barriers to school access regardless of proximity. While a child may live close to a school, major roadways can prevent active transportation trips to school that would otherwise be relatively short trips (up to a half mile). This analysis focuses on understanding the relationship between elementary, middle, and high schools including both public and private/charter schools, and the City-identified high injury network (HIN). Corridors on the HIN have the highest levels of fatal and serious injury collisions for people walking, bicycling, and driving in the city.[16] According to the Vision Zero Action Plan, 79% of all collisions occur on the HIN, which accounts for just 14% of the City's roadways.

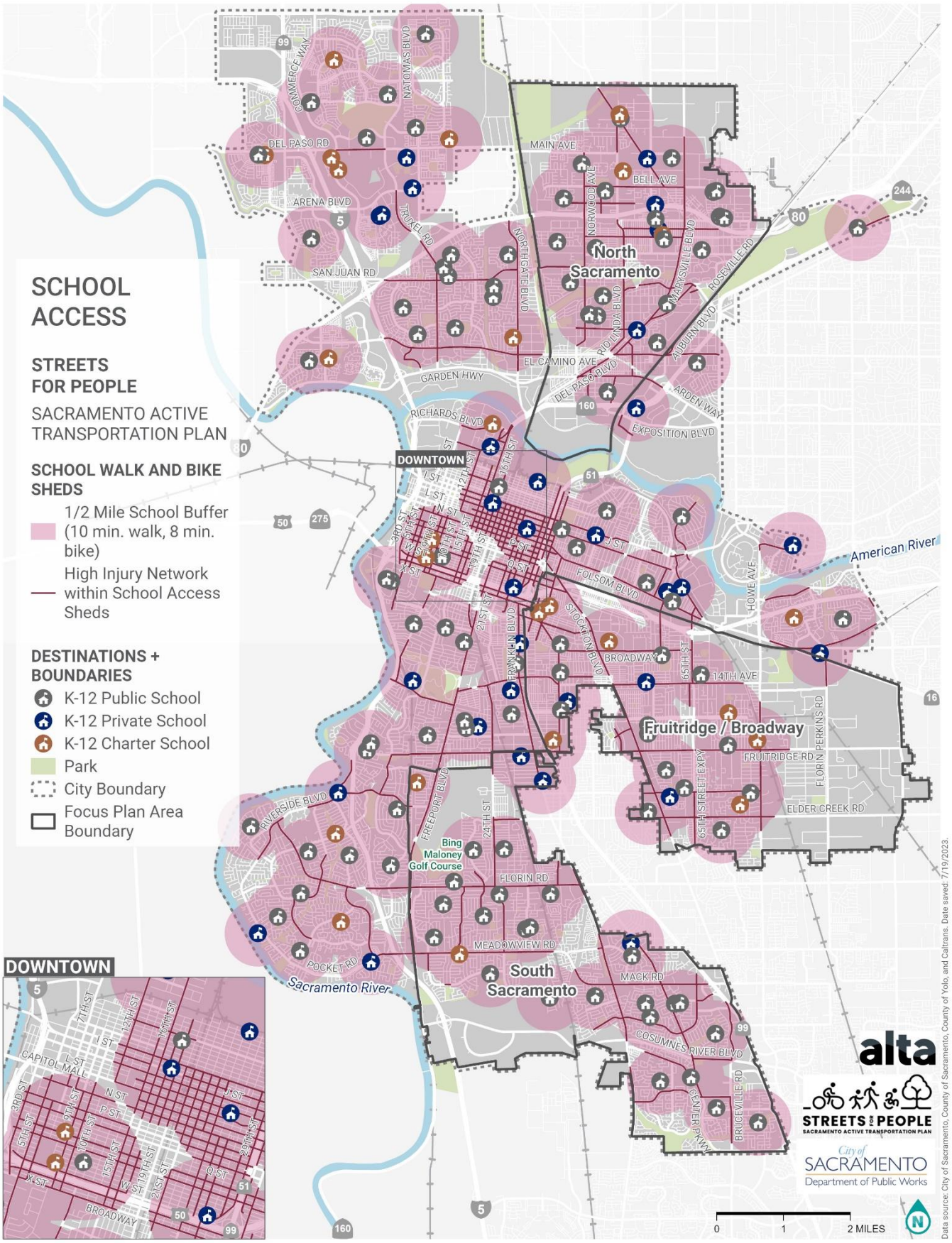
For this analysis, a distance of 0.5 miles was used as the reference for an approximate 10-minute walk or 8-minute bicycle ride.[17] **Figure 13** displays the areas (shown in pink) within a half-mile radius of public, private, and charter schools in Sacramento and all HIN segments within a half-mile of a school. As shown, an HIN corridor is located within a half-mile radius of most schools in Sacramento. Some portions of the city, such as the Natomas community, have very few HIN roadways within a half mile of a school. By contrast, nearly all the schools in the focus plan areas and the Central City are located near multiple HIN roadways; some schools, such as Washington Elementary School and William Land Elementary School, are surrounded by HIN roadways. Some of the HIN corridors near schools in the focus plan areas include:

- **Fruitridge/Broadway** focus plan area: Power Inn Road, Elder Creek Road, Fruitridge Road, Stockton Boulevard, 14th Avenue, 65th Street, and Broadway
- **South Sacramento** focus plan area: Bruceville Road, Cosumnes River Boulevard, Mack Road, Center Parkway, Meadowview Road, and Florin Road
- **North Sacramento** focus plan area: Marysville Boulevard, Rio Linda Boulevard, Norwood Avenue, and Bell Avenue

Ninety-four (56%) of the City's elementary, middle, and high schools are located within 1,000 feet of an HIN roadway. Furthermore, 35% of the HIN falls within Disadvantaged Communities.

[16] More information regarding the High Injury Network and its development are included in the Sacramento Vision Zero Action Plan. Available online: https://www.cityofsacramento.org/Public-Works/Transportation/Programs-and-Services/Vision-Zero/Vision-Zero-Action-Plan.

Figure 13: High Injury Network and School Access



Heat Vulnerability Analysis

Heat Health Action Index

The and residents is composed of several variables that represent heat vulnerability. Heat vulnerability is a metric that gauges the relative effects of social vulnerability factors (e.g., race, education, age, income, and transportation), health factors (e.g., physical disability, asthma, and heart health), and environmental factors (e.g., land development, ozone, particulate matter, tree canopy, and urban heat islands) to gauge how vulnerable communities may be to relative changes in temperature and increases in the number of heat events. People with limited vehicle access who must walk, bike, or take transit tend to be more vulnerable to high temperatures; therefore, the availability or lack of shade can be major factors in opting to walk, bike, or access transit.

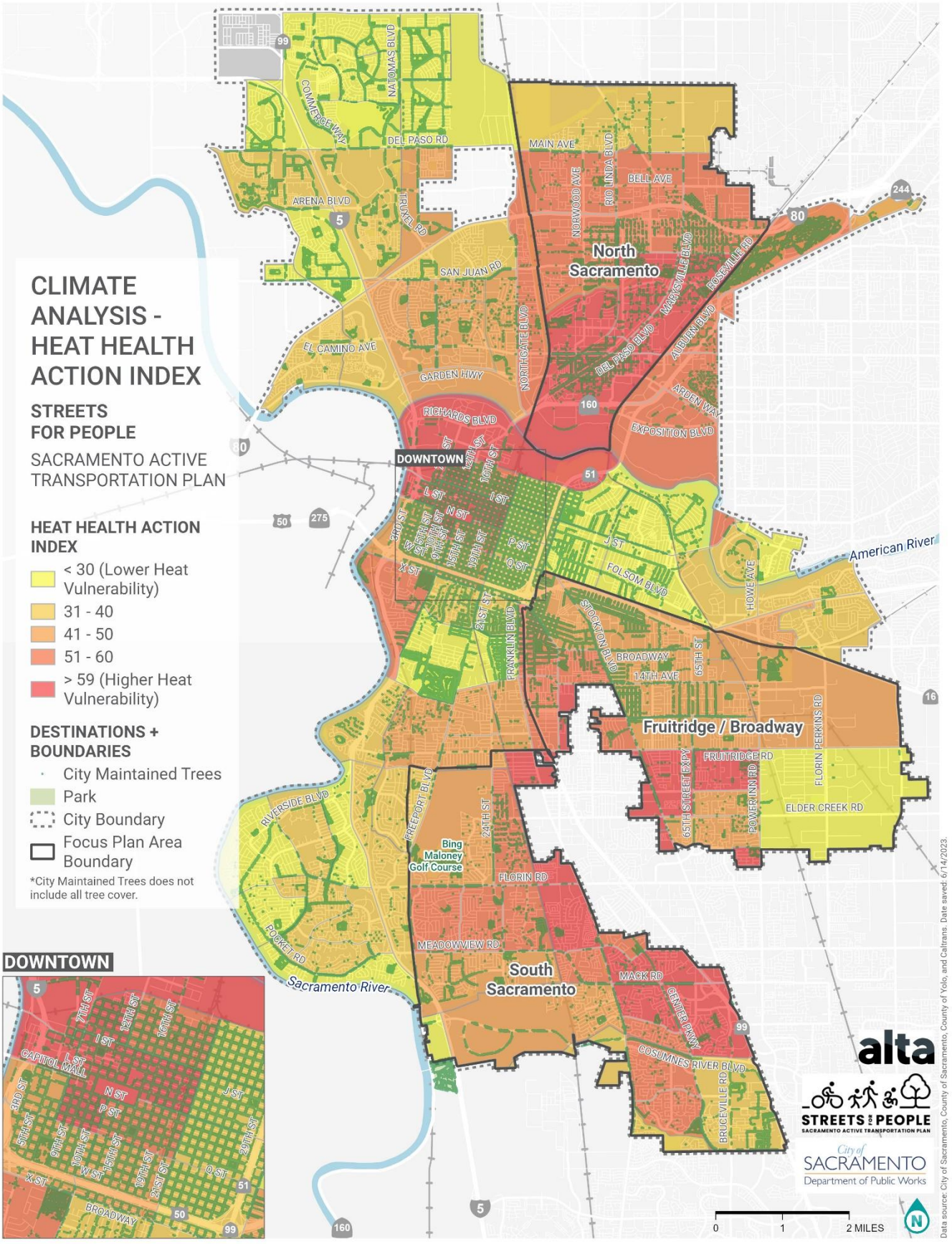
The index is based on a score of 0 to 100 with lower scores indicating less heat vulnerability. The average summer temperature in California is projected to increase by four to five degrees Fahrenheit by the year 2100.[18] As the average temperature increases, the frequency and severity of extreme heat events—periods of relatively hotter and more humid conditions that impact the social, health, and environmental factors listed in the preceding paragraph—will also increase in frequency and severity.

Figure 14 shows the Heat Health Action Index for the city which include:

- **North Sacramento focus plan area:** This area has the highest heat index ratings compared to the rest of the city. The highest index score within this focus plan area is 70, located in the neighborhoods of Willis Acres, Richardson Village, and Noralto.
- **Fruitridge/Broadway focus plan area**: the highest index score in this area is 67, located on the eastern edge of South Oak Park, in a tract shared with unincorporated Sacramento County. Other neighborhoods with high heat index scores in this focus plan area include Fruitridge Manor, Avondale, and the southern tip of Glen Elder.
- **South Sacramento focus plan area**: South City Farms and much of the Parkway and Valley Hi/North Laguna neighborhoods close to the eastern border of the city also have high heat index scores.
- Outside the three focus plan areas, the northwest area of Downtown and the adjacent neighborhoods to the north—including Alkali Flat, Southern Pacific/Richards, and Dos Rios Triangle—also have some of the highest heat index scores.

[18] California's Fourth Climate Change Assessment - Summary Report (2018).

Figure 14: Heat Health Action Index



Tree Canopy Cover

The tree canopy analysis examines how much of a given area is covered by tree shade. **Figure 15** provides the results of this analysis. It is important to note that this map highlights the locations of City-maintained trees only and is not representative of every tree within the city. Additionally, the California Heat Assessment Tool (CHAT)—a tool funded by the California Natural Resources Agency to better understand the dimensions of heat vulnerability—forecasts areas expected to have more than six annual extreme heat events, which will have a considerable impact on the health of residents. The analysis projected more than six annual extreme heat events in all North Sacramento focus plan area census tracts (shown in red in **Figure 15**).

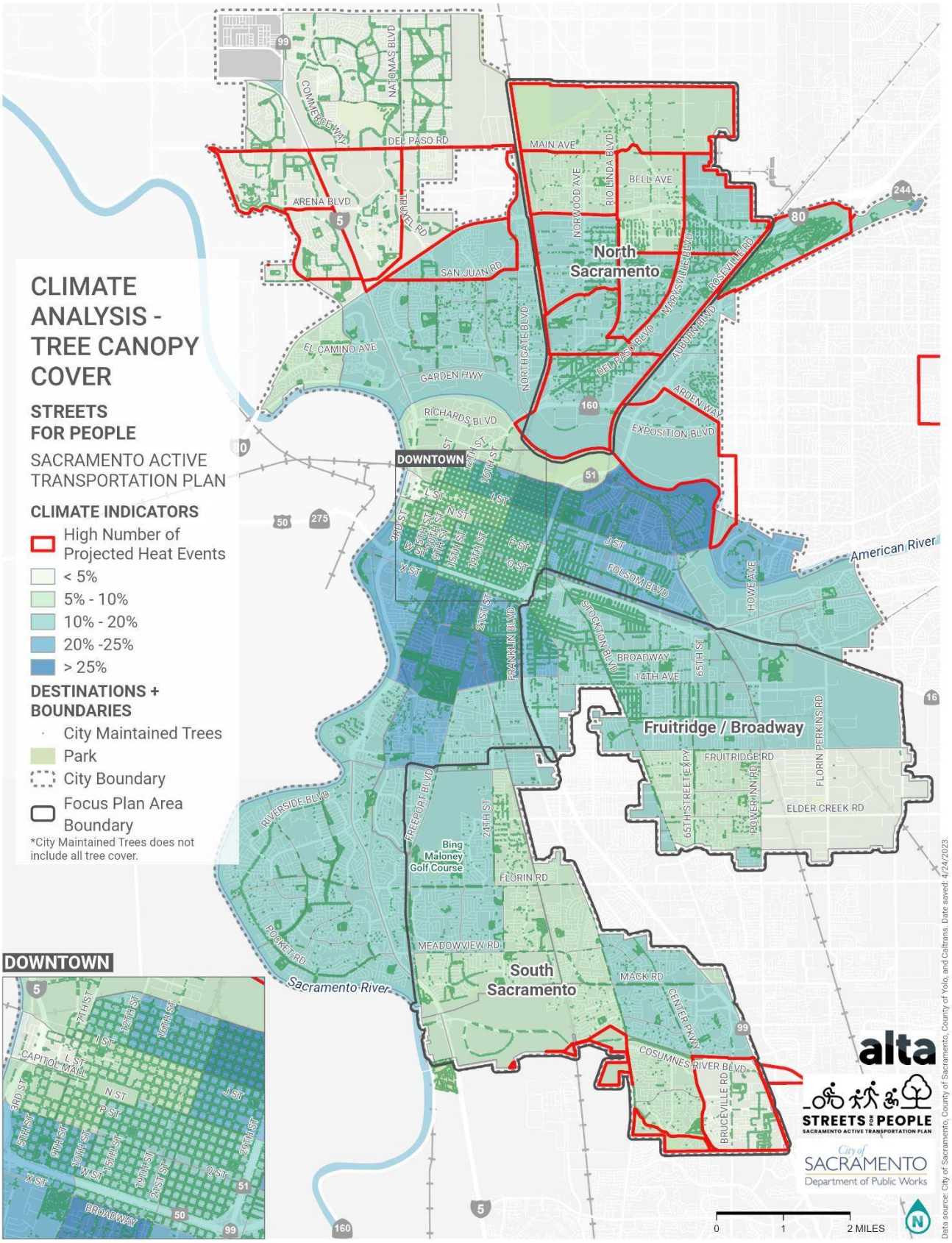
Downtown and the Central City neighborhoods adjacent to Downtown have the highest overall tree cover. Some of these neighborhoods include Land Park, Curtis Park, Marshall School, East Sacramento, and River Park.

The average tree canopy coverage across the City of Sacramento is 13.5%, which is below the statewide average of 19% tree canopy coverage in urban areas.[19] The focus plan areas have lower tree coverage than the city average overall, especially in industrial areas. The following provides a brief analysis of tree canopy coverage in the focus plan areas:

- **Fruitridge/Broadway** focus plan area: Only one census tract has more than 20% tree canopy cover. No tracts south of Fruitridge Road and east of Stockton Boulevard have more than 9% tree canopy cover. Based on CHAT analysis, there are no areas within Fruitridge/Broadway that are projected to have more than six annual extreme heat events.
- **North Sacramento** focus plan area: None of the census tracts have more than 20% tree canopy cover. Only one census tract north of I-80 has more than 9% tree canopy cover. CHAT analysis indicates that the entire North Sacramento focus plan area will experience more than six annual extreme heat events.
- **South Sacramento** focus plan area: No census tract has more than 15% tree canopy cover, and some have as little as 4% coverage. CHAT analysis projects more than six annual extreme heat events within the Valley Hi/North Laguna neighborhood.
- Outside the three focus plan areas, the Natomas neighborhood had tree canopy coverage levels as low as 6%.

[19] US Department of Agriculture, US Forest Service, "Urban Tree Canopy in California." Available online: https://www.fs.usda.gov/detailfull/r5/communityforests/?cid=fseprd647442&width=full.

Figure 15: Tree Canopy Cover



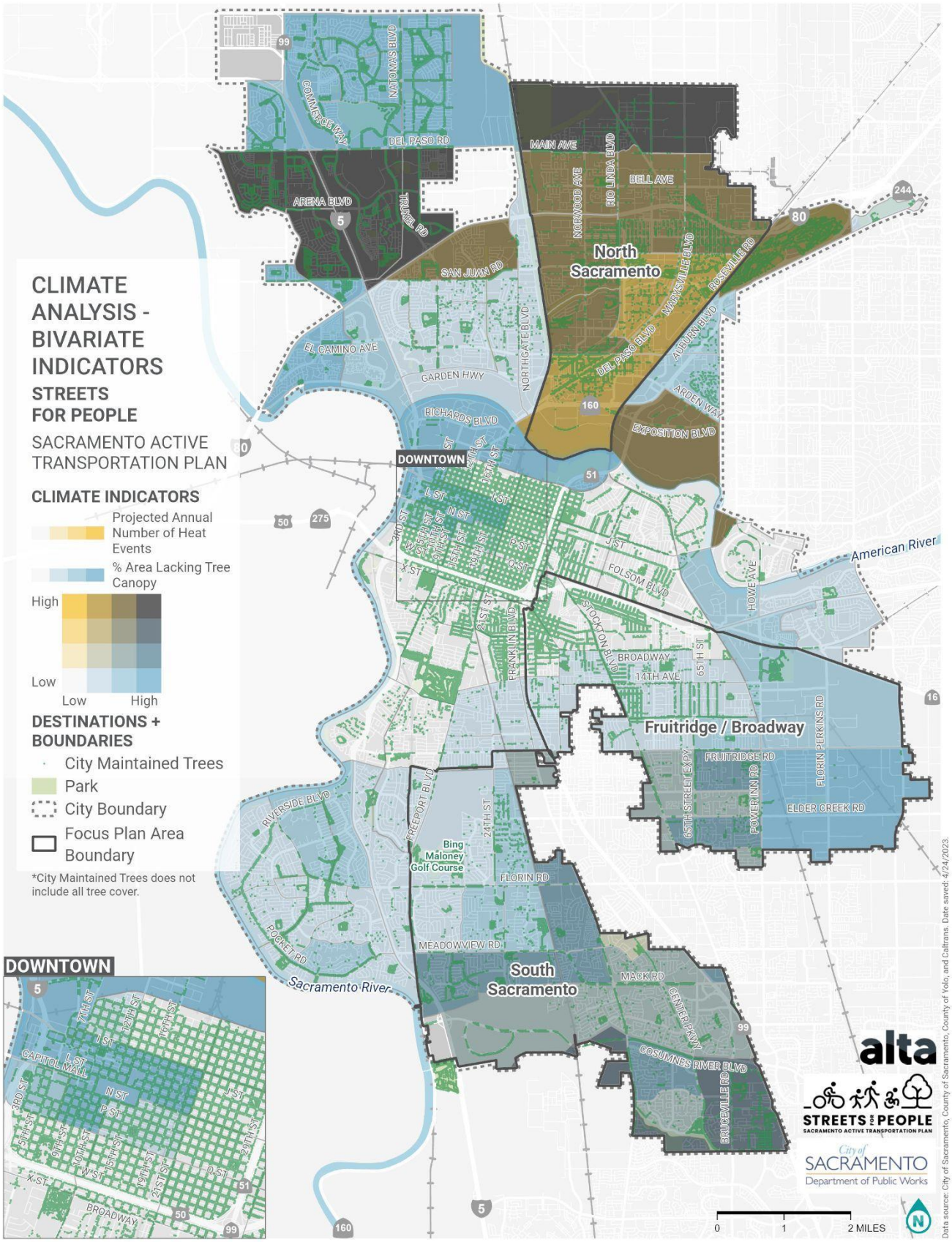
Bivariate Climate Analysis

A bivariate analysis evaluated where areas with high heat vulnerability overlap with low tree canopy coverage. This analysis combined projected heat events and existing tree canopy cover data. The results, included in **Figure 16**, indicate that the focus plan areas are more susceptible to heat vulnerability, particularly North Sacramento. The neighborhoods on either side of I-5 in northwest Sacramento—including Sundance Lake, RP - Sports Complex, Gateway West, Natomas Crossing, and Village 5—also have some of the highest heat vulnerability in the city. Heat vulnerability is an important metric for understanding climate resiliency and identifying locations for tree canopy expansion through the inclusion of street trees or shade trees with public works projects.

The focus plan areas show the following results:

- **North Sacramento** focus plan area: Communities north of Main Avenue have the highest heat vulnerability (i.e., experience the most impacts from climate change) and represent the biggest opportunity for tree canopy improvement within the North Sacramento focus plan area.
- **Fruitridge/Broadway** focus plan area: Communities south of Fruitridge Road and west of Power Inn Road have the highest heat vulnerability (i.e., experience the most impacts from climate change) and represent the biggest opportunity for tree canopy improvement within the Fruitridge/Broadway focus plan area.
- **South Sacramento** focus plan area: The southeastern corner of the focus plan area in the Valley Hi/North Laguna neighborhood has the highest heat vulnerability (i.e., will experience the most impacts from climate change) and represents the biggest opportunity for tree canopy improvement within the South Sacramento focus plan area.

Figure 16: Bivariate Climate Analysis



6. Transportation Profile

Sacramento's street network includes large arterials, collectors, highways, major infrastructure facilities, and local roadways. I-80, US Highway 50, US Highway 99, and I-5 are main thoroughfares that host high volumes of local and through vehicular traffic. Due to limited access and crossing points, highways and interstates often act as barriers to people using active modes of transportation. Railroad tracks and the SacRT light rail tracks throughout the city, especially those which parallel the US Highway 50 and I-80 corridors, also act as barriers.

Street types and networks vary throughout different parts of the city. While the Central City contains a dense gridded street network, newer development areas often contain more sprawled local roadways and neighborhood cul-de-sacs. The existing street and highway network can be seen in **Figure 17**.

Walking Facilities

Walking facilities throughout the city include sidewalks, shared-use paths (Class I), and intersection or mid-block crossing facilities. A map of the existing sidewalks is shown in **Figure 18.** Throughout the city, there are almost 80 miles of shared-use paths, the majority of which are located along the American River and Sacramento River. Most streets in Sacramento have sidewalks, but some areas lack walking facilities, including northeast Sacramento, portions of Elder Creek Road and industrial areas in Fruitridge/Broadway, and Freeport Boulevard and Cosumnes River Boulevard in South Sacramento. Areas highlighted in red are places that lack existing sidewalks; areas shown in dark gray lack data on the presence of sidewalks.

Figure 19 denotes the location of currently inventoried marked crosswalks throughout the City as well as the locations for signals activated by a person walking including flashing pedestrian beacons, pedestrian signals, pedestrian hybrid beacons (HAWK), and rectangular rapid flashing beacons (RRFB). Crossing facilities for people walking provide a clearly defined location for people to cross the roadway while outside a vehicle. These facilities are critical to creating safe crossing opportunities either at intersections or at mid-block locations. The Downtown area of Sacramento has crosswalks and signals on a significant portion of major intersections. Outside the Downtown area, marked crosswalks and pedestrian signals are largely concentrated on major arterial roadways and near elementary and middle schools.

Figure 17: Existing Street Network

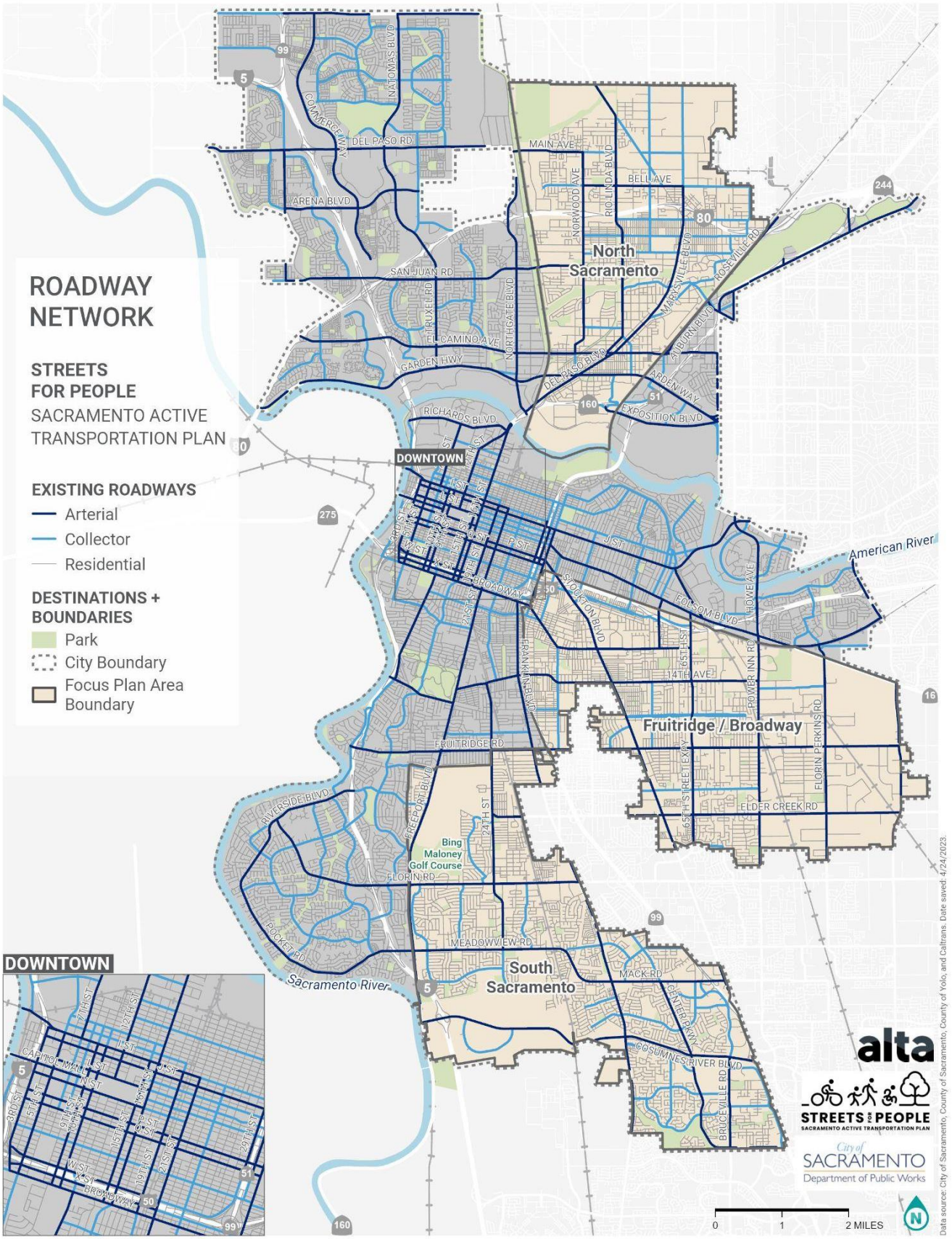


Figure 18: Existing Sidewalk Network

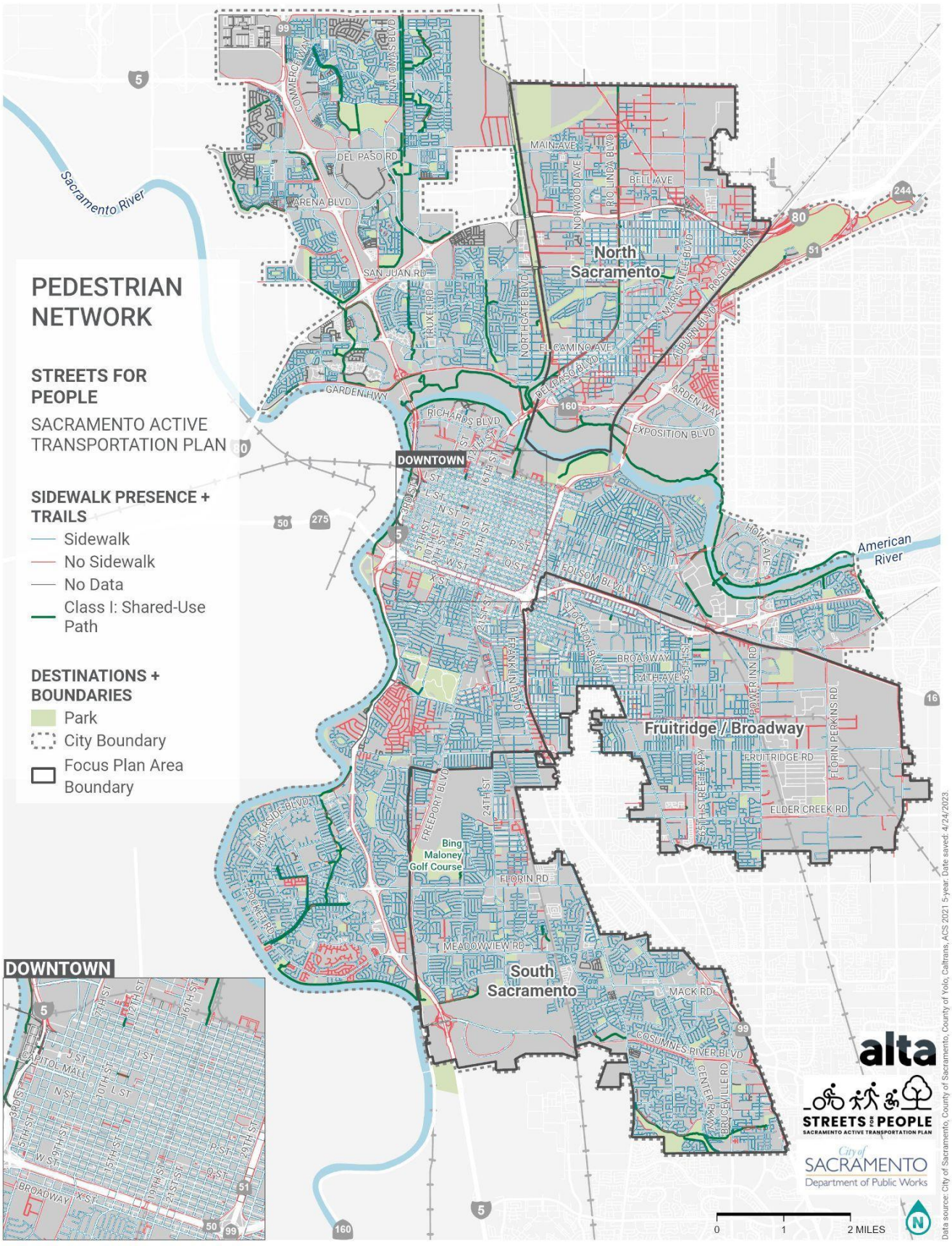
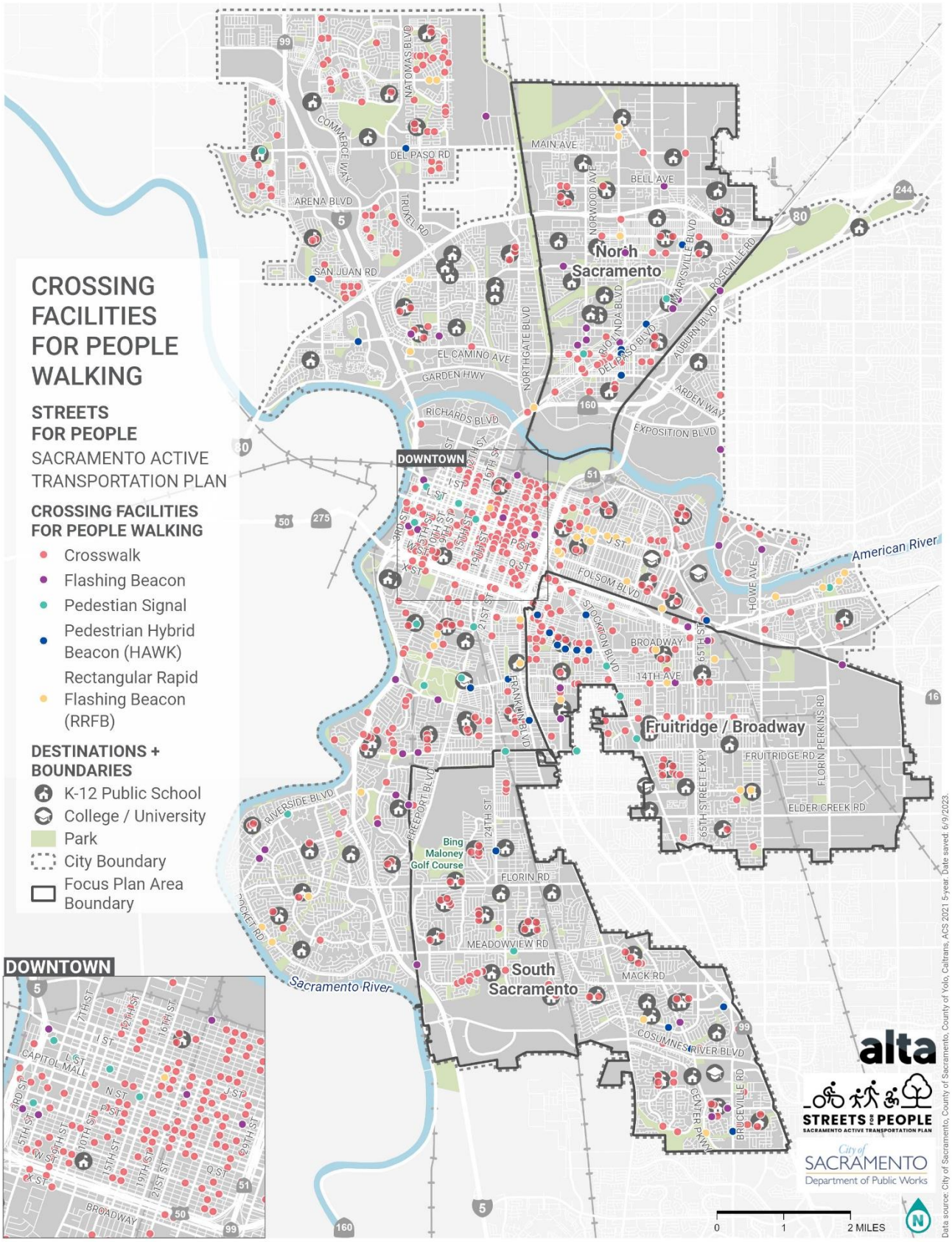


Figure 19: Existing Inventoried Marked Crosswalks and Crossing Facilities



Bicycling Facilities

The City of Sacramento contains 427.2 miles of existing bicycle facilities, shown in **Figure 20** and **Table 3**. These facilities primarily consist of bicycle lanes, bicycle routes, and shared-use paths. Regional trails that provide long-distance connections across the city include:

- Sacramento River Parkway
- Sacramento Northern Parkway
- Walter S. Ueda Parkway
- Garden Highway Bikeway
- Jedediah Smith Trail
- Victory Promenade

There are dedicated routes for biking that connect to many areas within the city; however, bikeways are not consistently connected or continuous along all corridors. Shared-use paths, separated bikeways, and buffered bike lanes are considered the most comfortable bike facilities for a wide range of ages and abilities. Under existing conditions, most of the city's long-distance bikeway connections consist of bike lanes and bike routes. These offer minimal to no protection from vehicular traffic and fail to serve people with a low-tolerance for traffic stress. Barriers to biking also include river crossings, railroad crossings, and major highways such as I-5, I--80, and US Highway 50.

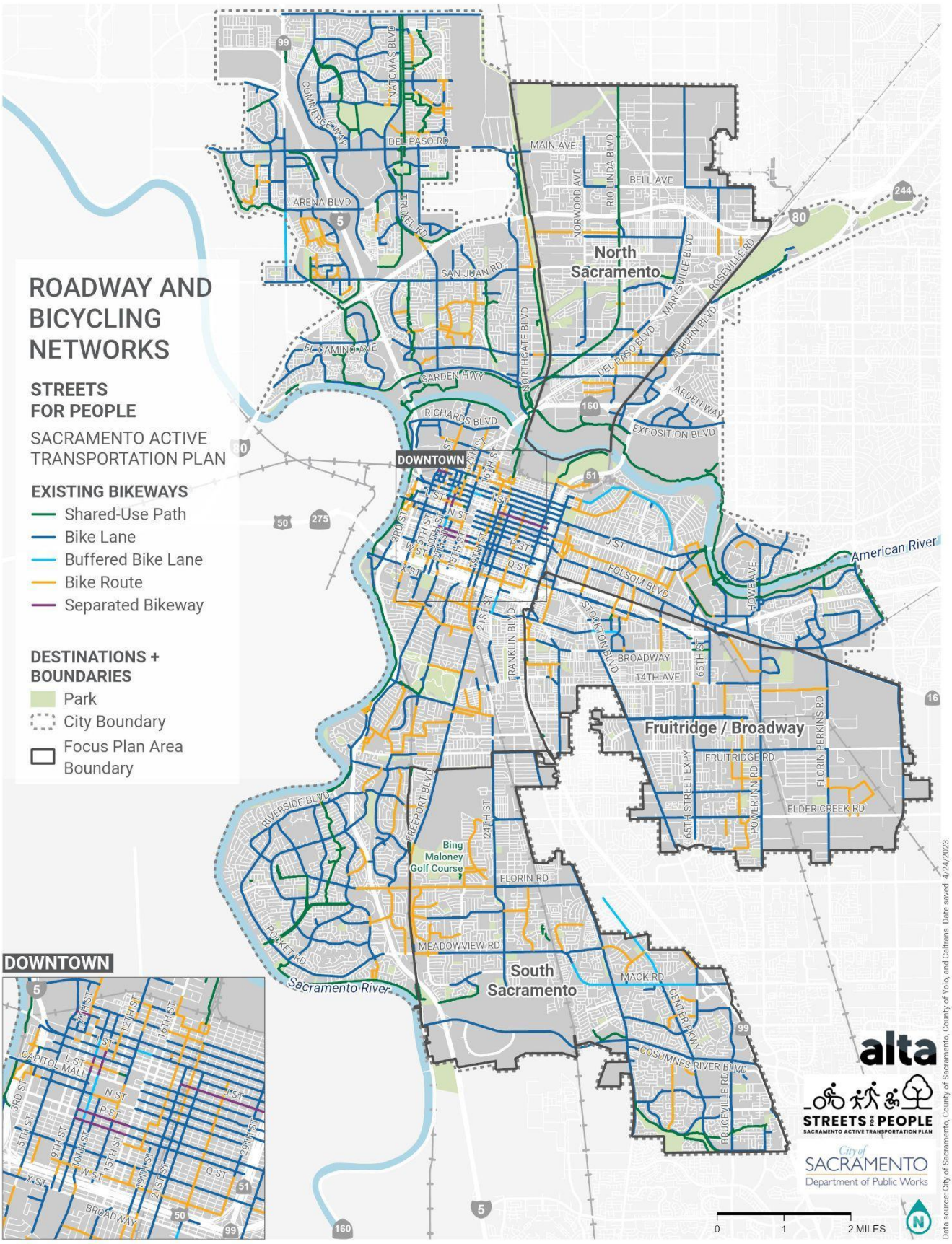
Table 3: Existing Bicycle Facilities in the City of Sacramento

Bikeway Class	Mileage
Shared-Use Path (Class I)	78.7
Bike Lane (Class II)	257.2
Buffered Bike Lane (Class IIB)[20]	7.6
Bike Routes (Class III)	81.5
Separated Bikeway (Class IV)	2.2
Total	**427.2**

Bikeway classification based on Caltrans HDM Chapter 1000.

[20] The California Highway Design Manual does not currently distinguish between buffered bike lanes or standard bike lanes, however, the City intends to designate them separately.

Figure 20: Existing Bikeway Network



Transit Network and Facilities

The City of Sacramento is served by Sacramento Regional Transit (SacRT) light rail and buses. The network includes 52 light rail stations, 30 bus and light rail transfer centers, and 22 park-and-ride lots. Three light rail lines (blue, gold, and green) connect riders to Sacramento's Downtown from the southern, eastern, and northeastern edges of the city. A total of 58 bus lines serve the city, including local neighborhood lines, cross-city routes, and regional routes connecting to surrounding jurisdictions such as Rancho Cordova, Davis, and Citrus Heights. A map of the bus and light rail routes serving the city can be seen in **Figure 21**. SacRT allows up to four bicycles per car in its light rail service, and 100% of its bus fleet is equipped with racks that hold either two or three bicycles at a time. The average weekday total ridership per bus stop within the City of Sacramento is shown in **Figure 22**. High bus ridership tends to cluster within the city's Downtown, as well as along several arterial roadways such as Florin Road, Stockton Boulevard, Truxel Road, and Broadway. Of the City's 10 busiest bus stops shown in **Table 4**, four are co-located with light rail stations, three at commercial destinations (the Arden Fair Mall, Arden Towne Center, and the Promenade Center) two in Downtown, and one at California State University - Sacramento.

Table 4: Top 10 Busiest Bus Stops Citywide

Stop Location	Average Weekday Boardings & Alightings[21]
University/65th Street Light Rail Station	2,389
Watt Avenue/I-80 Light Rail Station	2,202
California State University - Sacramento (State University Drive & J Street)	2,092
Arden/Del Paso Light Rail Station	1,385
Arden Fair Mall	1,055
Florin Towne Center	1,026
Marconi/Arcade Light Rail Station	988
9th Street and L Street	876
The Promenade Center	406
8th Street and J Street	398

The Sacramento Valley Amtrak station provides connections to four different Amtrak routes and is located in downtown Sacramento on the corner of 5th Street and I Street. This station connects visitors, residents, and commuters traveling regionally and across the country. The station is a key link for both visitors and commuters and in 2022 was the second busiest in California and fourteenth busiest in the nation with a total of 456,647 boardings and alightings.[22] The level of ridership was nearly twice as high prior to 2020 with an average of 1,070,920 boardings and alightings between 2013 and 2019.[23] This station is highlighted in **Figure 21** below with an icon showing a white train surrounded by a blue circle.

[21] SacRT. September-December 2019 ridership data.
[22] Bureau of Transportation Statistics, Amtrak Ridership, (2022)
[23] Bureau of Transportation Statistics, Amtrak Ridership, (2013 – 2019)

Figure 21: SacRT Bus and Light Rail Routes

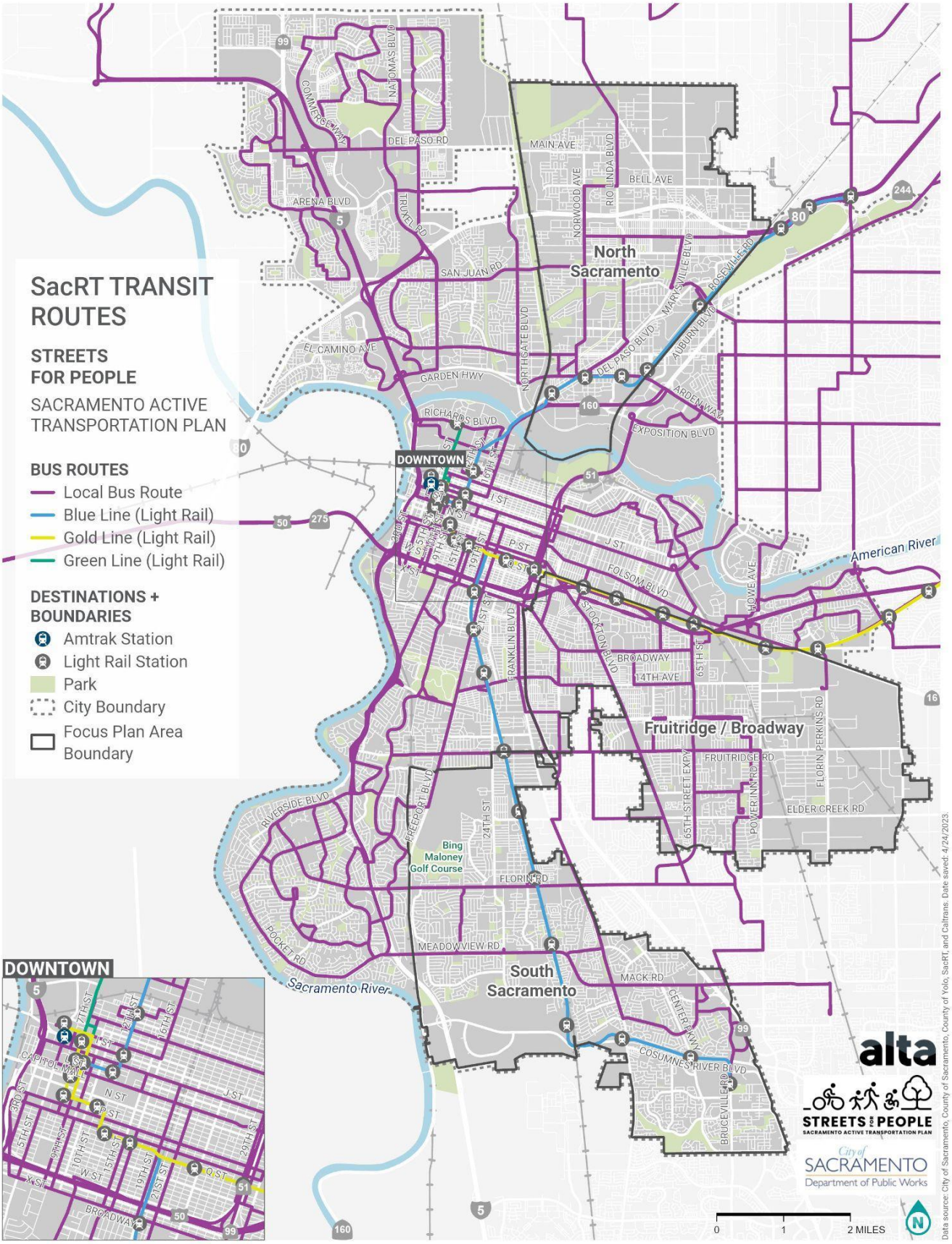
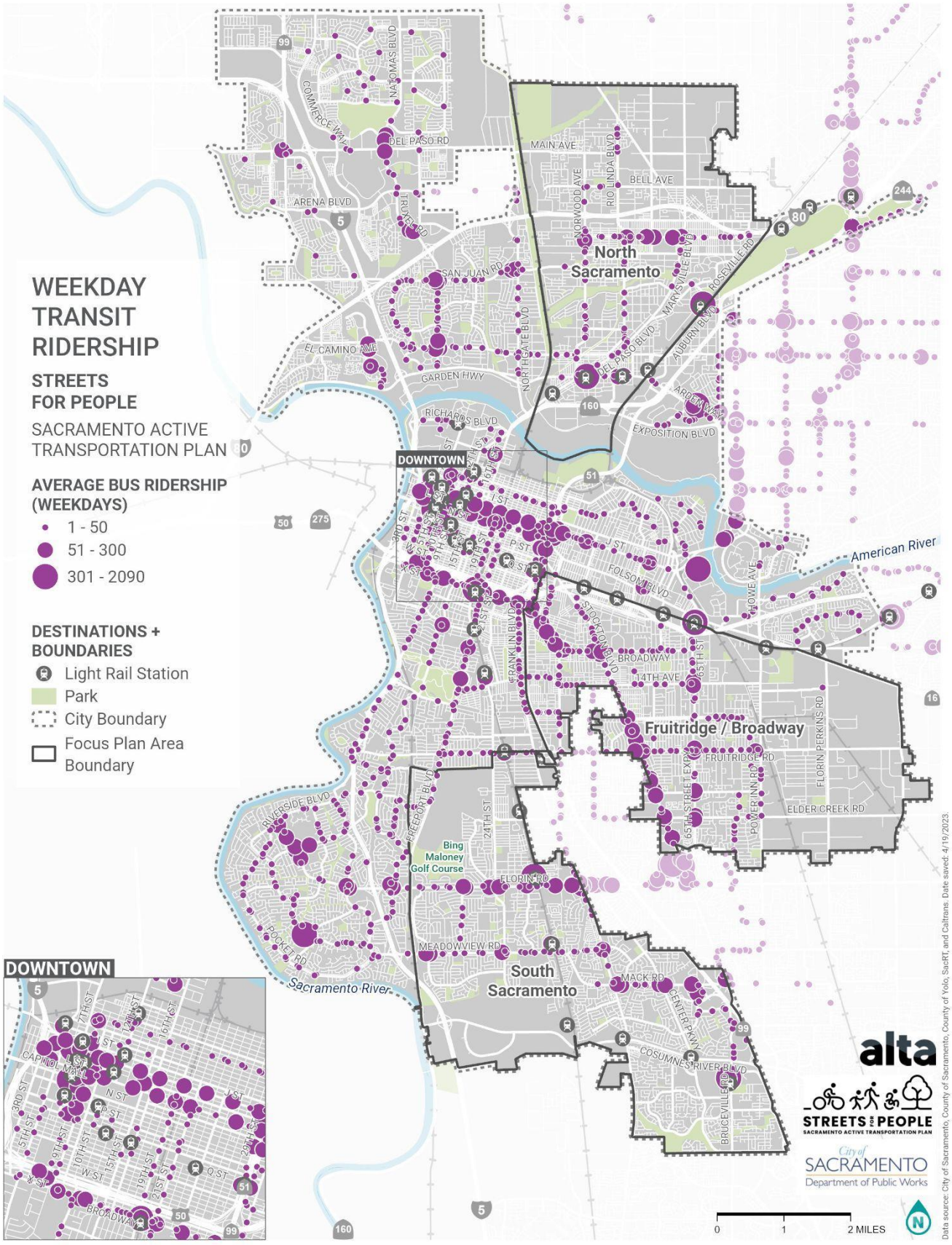


Figure 22: SacRT Bus Ridership

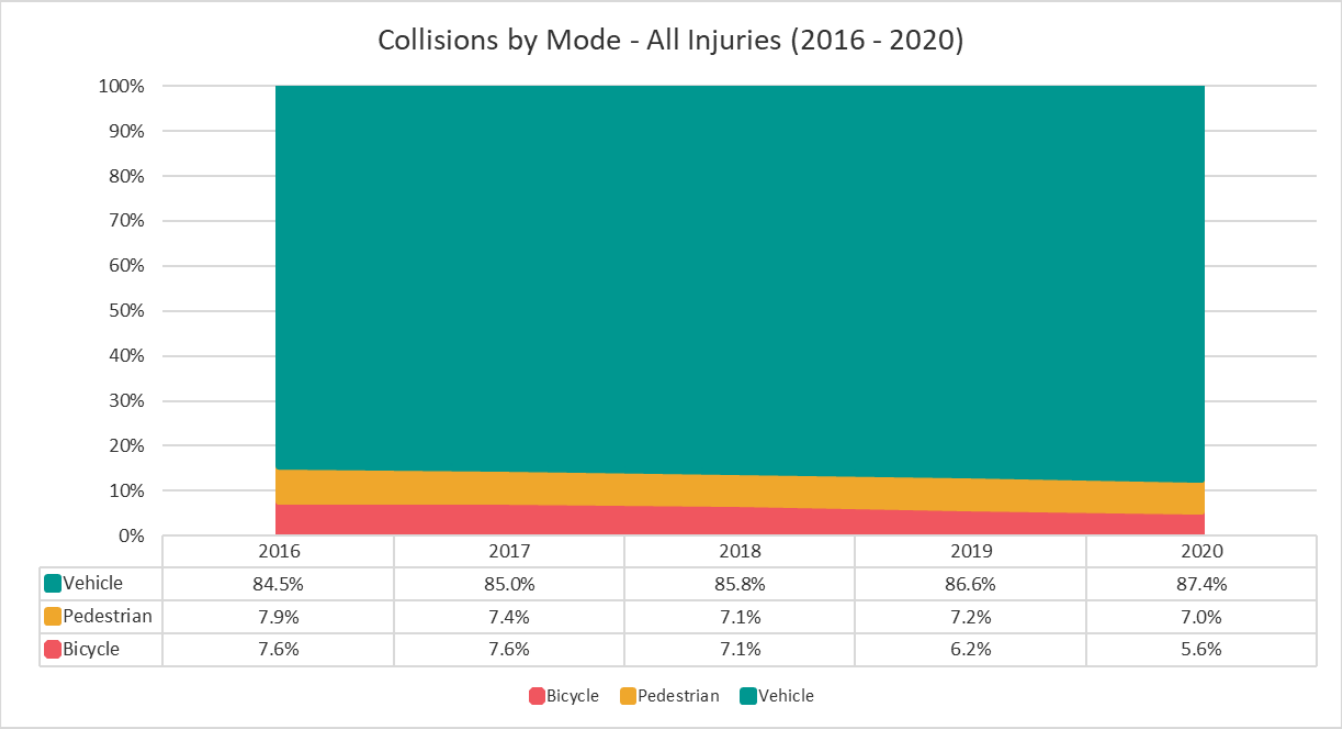


7. Collision Analysis and High-Injury Network Comparison

Collision Trends

Over the five-year period between 2016 and 2020, collisions involving people walking represented a high proportion of total fatal and serious injury (known as KSI, or "killed or seriously injured") collisions across the City of Sacramento, as highlighted in **Figures 23** through **25**.[24] People walking were victims of 27% of all fatal collisions within the city in 2016; this increased to 51% in 2020. Across this five-year period, people walking were victims of nearly 38% of all fatal collisions and 23% of all serious injury collisions. This indicates that people walking are overrepresented in the most serious collision types compared to all collisions causing an injury. As shown in **Figures 23** through **25**, people walking represented approximately 7% of all collisions resulting in an injury from 2016 to 2020. Comparatively, the total number of KSI collisions per year involving people walking has generally increased between 2016 and 2020, growing from 52 in 2016 to 63 in 2020.

Figure 23: Collisions by Mode – All Injuries (2016–2020), SWITRS

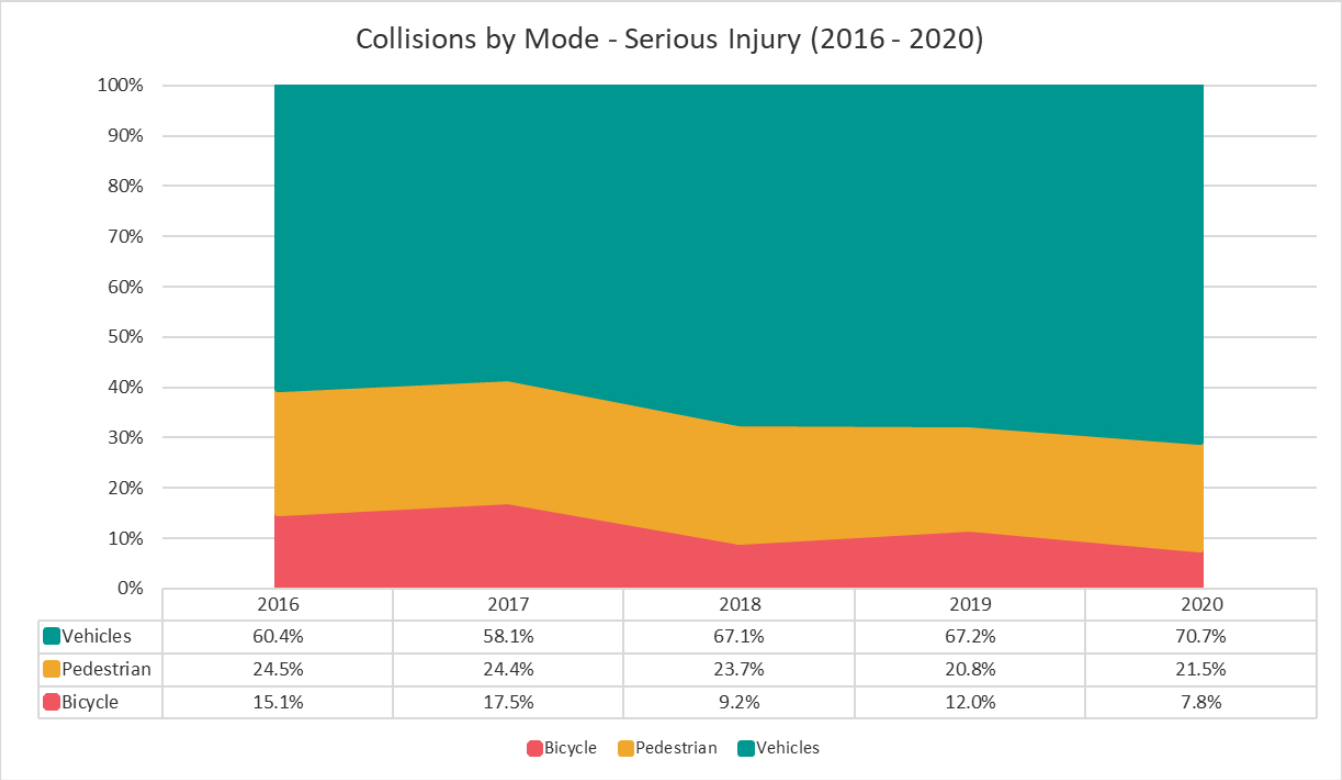


	2016	2017	2018	2019	2020
Vehicle	84.5%	85.0%	85.8%	86.6%	87.4%
Pedestrian	7.9%	7.4%	7.1%	7.2%	7.0%
Bicycle	7.6%	7.6%	7.1%	6.2%	5.6%

People biking have also been overrepresented in KSI collisions over the five-year period (2016 to 2020). People biking accounted for 11.6% of all KSI collisions but just 6.8% of all collisions resulting in an injury (**Figure 23** through **Figure 25**). Despite people biking being overrepresented in KSI collisions, KSI collisions involving people bicycling have declined by nearly 50% in the City of Sacramento over the past five years from 33 in 2016 to 16 in 2020.

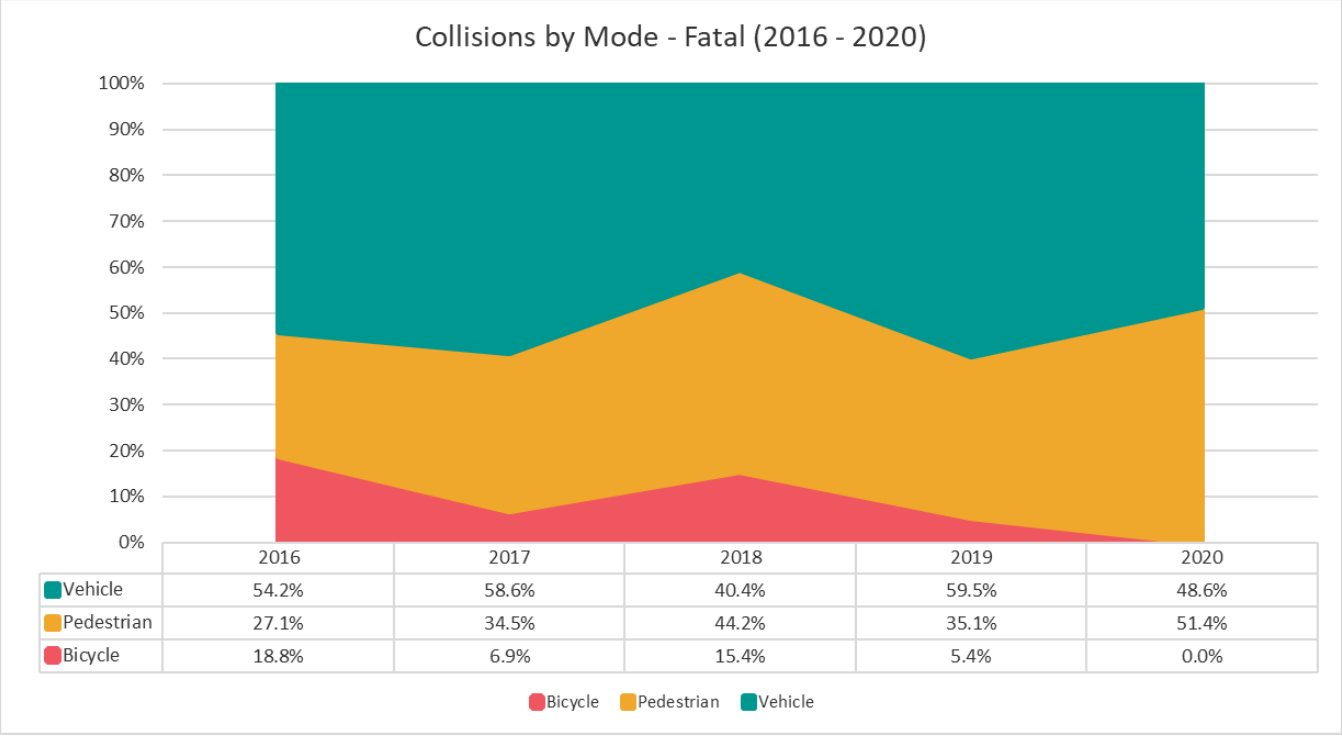
[24] Statewide Integrated Traffic Records System (SWITRS), 2016–2020.

Figure 24: Collisions by Mode – Serious Injury (2016–2020), SWITRS



	2016	2017	2018	2019	2020
Vehicles	60.4%	58.1%	67.1%	67.2%	70.7%
Pedestrian	24.5%	24.4%	23.7%	20.8%	21.5%
Bicycle	15.1%	17.5%	9.2%	12.0%	7.8%

Figure 25: Collisions by Mode – Fatal (2016–2020), SWITRS



	2016	2017	2018	2019	2020
Vehicle	54.2%	58.6%	40.4%	59.5%	48.6%
Pedestrian	27.1%	34.5%	44.2%	35.1%	51.4%
Bicycle	18.8%	6.9%	15.4%	5.4%	0.0%

Collisions For People Walking

Roadway segments (portions of the roadway in between intersections) accounted for 78% of all collisions involving people walking between 2016 and 2020. Roadway segments with posted speeds of 35 to 40 miles per hour accounted for nearly one-third of all KSI collisions involving people walking, as shown in **Figure 26**. Additionally, nearly one-third (31%) of all KSI collisions involving people walking occurred as someone crossed outside a marked crosswalk (i.e., the primary collision factor was "crossing not in crosswalk"). People walking in the roadway, including along the shoulder (i.e., in locations without sidewalks) accounted for nearly 27% of all KSI collisions involving someone walking. While the addition of walking facilities and closure of sidewalk gaps may help address these specific collision types, crash reports indicate that additional factors may have contributed to multiple collisions involving people walking including mental health issues and issues relating to the unhoused population.

Collisions for People Biking

Collisions involving people biking in the City of Sacramento vary by location (intersection versus roadway segment) depending on the roadway speed (see **Figure 27**). Roadway segments with higher posted speeds accounted for an increasingly large proportion of KSI collisions involving people bicycling:

- Roadways with low to moderate posted speeds (20 to 35 mph) – these roadways accounted for 46% of all KSI collisions involving a person bicycling with a nearly even split between intersections (25%) and roadway segments (21%).
- Roadways with moderate to high posted speeds (35 to 40 mph) – collisions occurred along these roadway segments at twice the rate than at intersections (25% versus 12%).
- Roadways with higher posted speed limits (45+ mph): On roadways with posted speeds of 45 mph or higher, more than three times as many KSI collisions involving a person bicycling occurred on roadway segments than at intersections.

People biking in the wrong direction was the leading primary collision factor for KSI collisions involving a person bicycling on low to moderate posted speed limit (20 to 35 mph) roadways. Roadways with moderate to high (35 to 40 mph) posted speed limits accounted for 10% of all KSI collisions involving a person bicycling. "Improper turning" was identified as the primary collision factor for approximately one out of every six KSI collisions involving a person bicycling (16%) between 2016 and 2020; eleven of these occurred outside of normal "daylight" conditions, which indicates potential issues with night-time visibility for people biking.

COLLISION TREE ANALYSIS

Collision trees are a tool to help identify trends in collision data and identify roadway typologies and characteristics which may result in a higher likelihood for collisions. The collision trees included in the following pages highlight the total number of pedestrian and bicycle collisions which resulted in a fatal and serious injury (KSI) collision and divide the collisions by the roadway speed limit, whether it happened at an intersection or on a roadway segment, and the primary action or violation that led to the collision; also called a "Primary Collision Factor" (PCF). Factors such as "Auto Right of Way" highlight that the automobile violated the travel right of way whereas the "Wrong Side of Road" factor indicates that a person bicycling was traveling in the wrong direction at the time of the collision.

Figure 26: KSI-Collision Tree Diagram for People Walking (2016–2020)

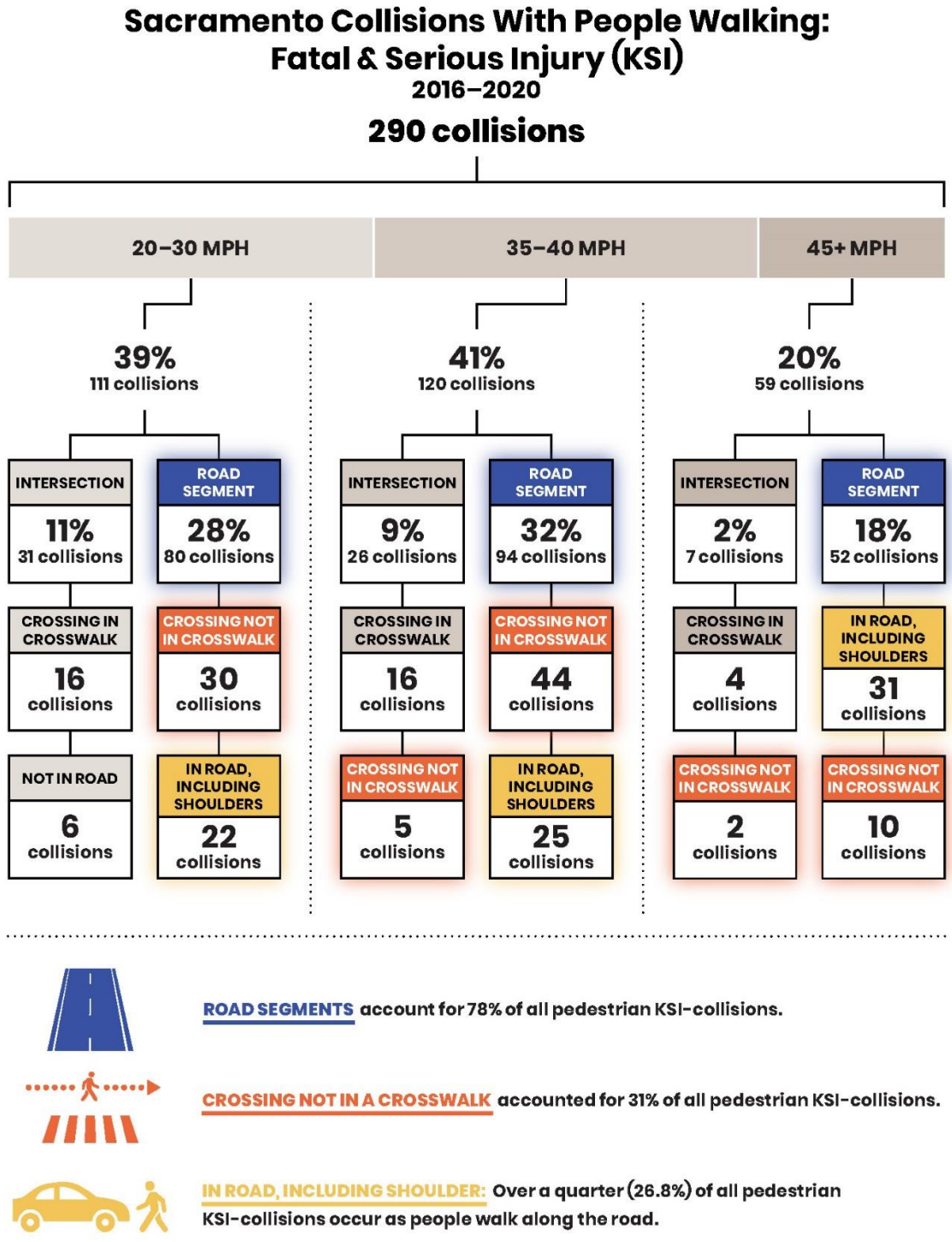
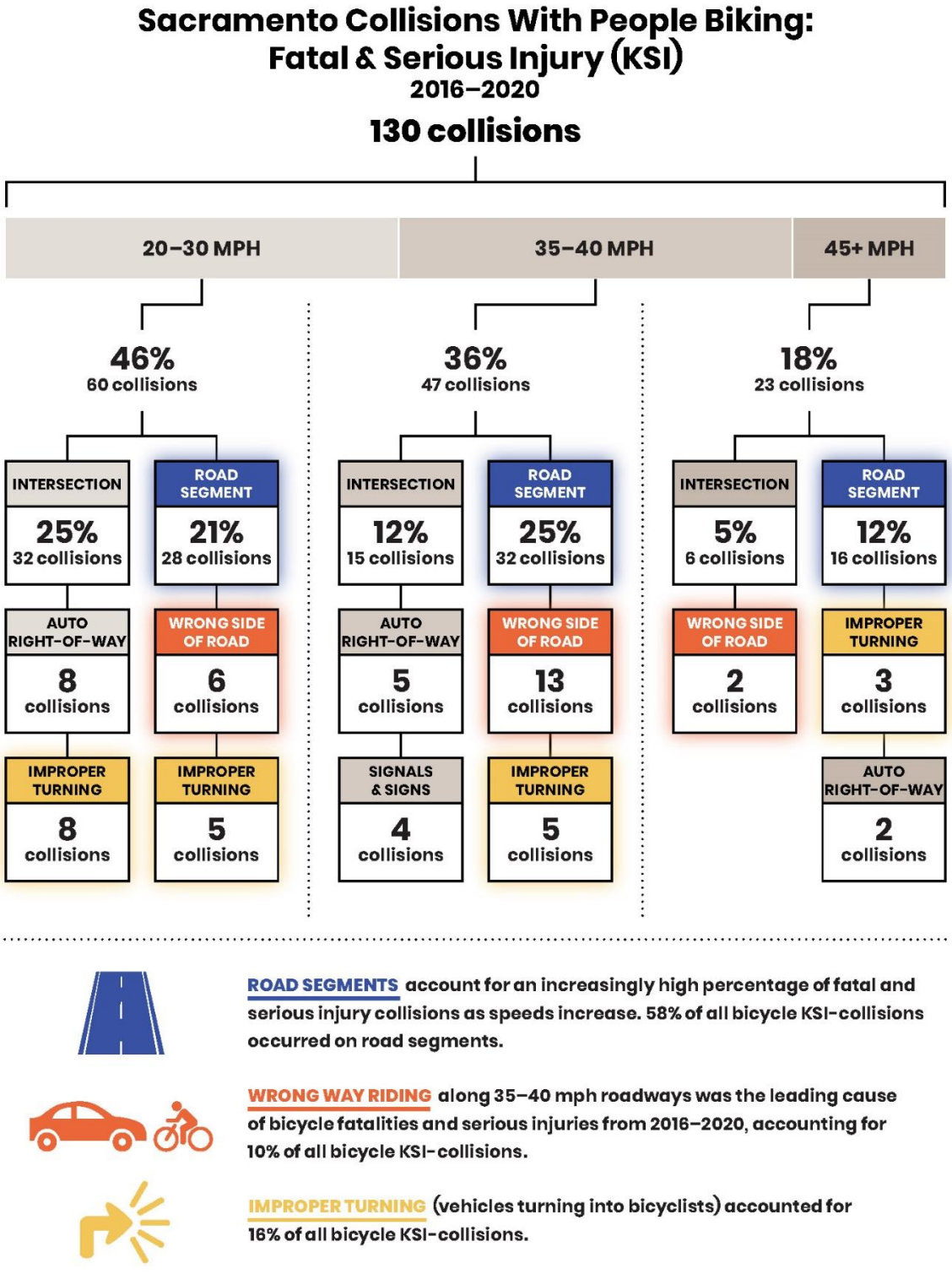


Figure 27: KSI-Collision Tree Diagram for People Biking (2016–2020)



Top Collision Locations Involving Someone Walking and Biking

The following tables and maps were developed using the latest five years of collision data (2016 to 2020) and identifying intersections with the greatest number of collisions based on the type of mode. This helps to identify intersections and intersection types that may be problematic for that specific mode. Combining the outputs from these mode-specific analyses allows for pinpointing locations that have safety concerns for multiple transportation modes.

The most frequent intersections for collisions involving people walking or biking between 2016 and 2020 are shown in **Table 5**, **Table 6**, and **Figure 28.**

Table 5: Top 10 Collision Intersections for People Biking (All Severities, 2016 - 2020)

Intersection	Collisions Involving People Biking
Fruitridge Road / Stockton Boulevard*	**7**
Sutterville Road / Freeport Boulevard	5
H Street / 29th Street	5
Mack Road / La Mancha Way*	5
Richards Boulevard / Sunbeam Avenue	4
Florin Road / 24th Street*	4
3rd Street / Capitol Mall	4
Arden Way / Evergreen Street	4
Mack Road / Center Parkway	**4**
Folsom Boulevard / 40th Street	3

**Existing City and/or County project underway*

***Bold** indicates that the intersection is both a Top 10 intersection for people walking and a Top 10 intersection for people biking.*

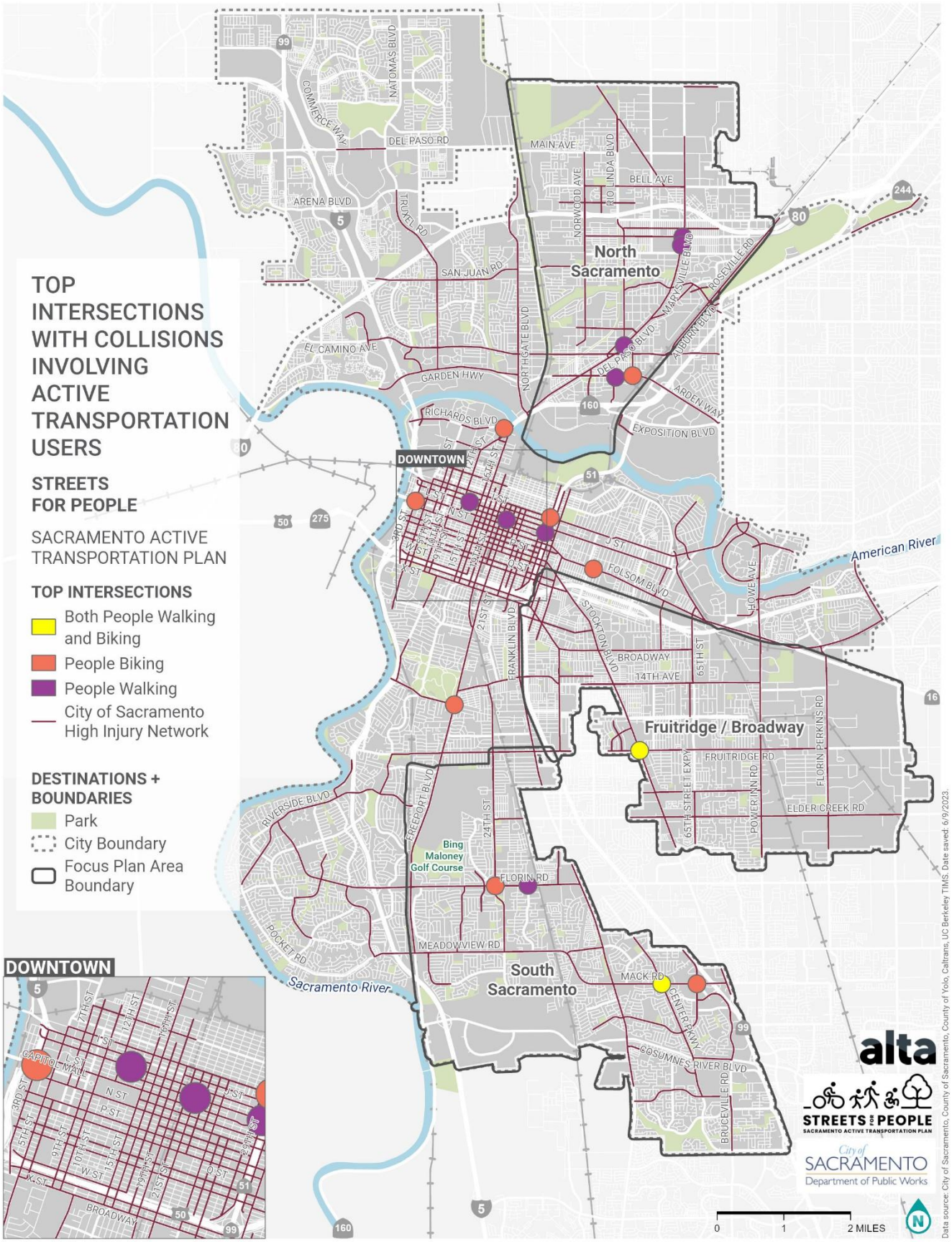
Table 6: Top 10 Collision Intersections for People Walking (All Severities, 2016 - 2020)

Intersection	Collisions Involving People Walking
Fruitridge Road / Stockton Boulevard*	**7**
K Street / 29th Street	7
Marysville Boulevard / Grand Avenue	7
Arden Way / Royal Oaks Drive	6
Mack Road / Center Parkway	**6**
Marysville Boulevard / Roanoke Avenue	6
J Street / 13th Street	5
K Street / 21st Street	5
Florin Road / 29th Street*	5
Frienza Avenue / Del Paso Boulevard	5

**Existing City and/or County project underway*

***Bold** indicates that the intersection is both a Top 10 intersection for people walking and a Top 10 intersection for people biking.*

Figure 28: High-Collision Intersections for People Walking and Biking



To: Leslie Mancebo, Project Manager; Fedolia Harris, North Sacramento Plan Area Lead, City of Sacramento

From: Mauricio Hernandez, Project Manager and North Sacramento Plan Area Lead, Alta

Date: March 30, 2022

Re: Sacramento Active Streets Plans – North Sacramento Area Profile

---

Project Introduction

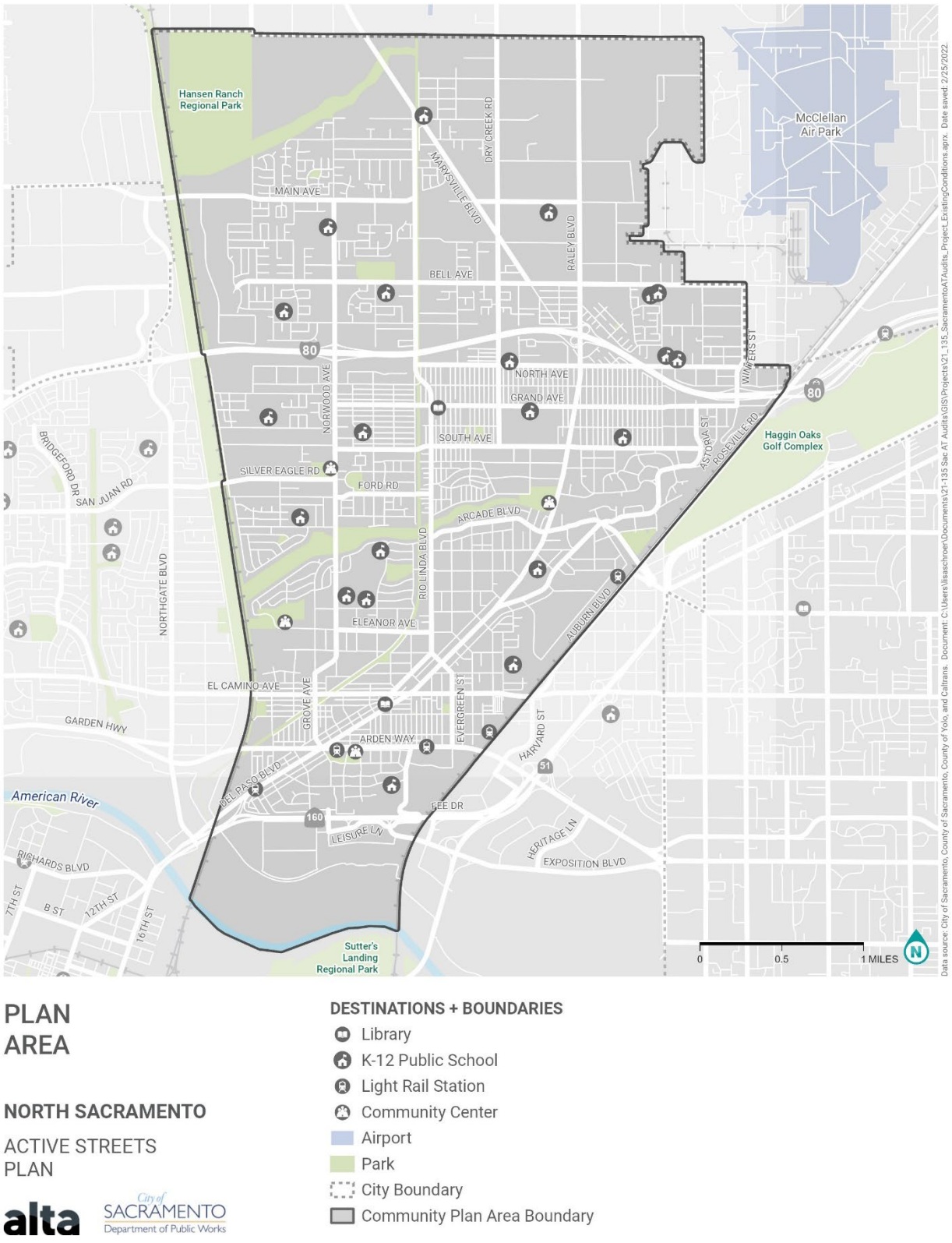
The Sacramento Active Streets Plans focus on understanding the specific needs and barriers for people walking, biking, rolling, and accessing transit in three distinct community plan areas: Fruitridge-Broadway, North Sacramento, and South Sacramento. This plan takes a granular view of active transportation and seeks to work in partnership with each community to develop implementable solutions to improve safety and mobility, and eliminate barriers to access. This project will focus on working collaboratively with a diverse range of community residents, community groups, City departments, and other interested parties. The final project will identify feasible bicycling, walking, and ADA improvements in each community plan area and provide a path to implementation.

North Sacramento Area Profile

Introduction

This Area Profile provides a detailed look at the existing facilities, demographics, and data points for the North Sacramento area (see **Figure 1** below). The Community Needs Summary reflects community identified needs and deficiencies. Information included here will support public outreach and the project team will incorporate this information into the final Active Streets Plan for the area.

Figure 1: North Sacramento Plan Area Map



PLAN AREA

NORTH SACRAMENTO

ACTIVE STREETS PLAN

alta

City of SACRAMENTO Department of Public Works

DESTINATIONS + BOUNDARIES

- Library
- K-12 Public School
- Light Rail Station
- Community Center
- Airport
- Park
- City Boundary
- Community Plan Area Boundary

Plan Review Summary

The project team reviewed 11 prior planning documents that provide policy, program, and infrastructure recommendations across the City of Sacramento within the North Sacramento area. These recommendations promote active transportation, improve street safety, and support climate change goals. See the list below for the documents the project team reviewed. A detailed summary of the plans reviewed is in **Appendix A**.

Citywide Plans

- Bicycle Master Plan (2016; amended 2018), City of Sacramento
- Complete Streets Policy (2019), City of Sacramento
- Criteria and Guidance for Creative Crosswalks (2021), City of Sacramento
- Design and Procedure Manual Section 15 – Street Design Standards (2009), City of Sacramento
- Pedestrian Crossing Guidelines – Treatment Applications Guide (2021), City of Sacramento
- Pedestrian Master Plan (2006), City of Sacramento
- Vision Zero Sacramento Action Plan (2018), City of Sacramento
- Vision Zero School Safety Study (2021), City of Sacramento
- Vision Zero Top 5 Corridors (2020), City of Sacramento

North Sacramento Focused Plans and Reports

- Swanston Station Transit Village Specific Plan (2007), City of Sacramento

North Sacramento Focused Walk Audit Reports

- North Sacramento Walk Audit Report (2019), Sacramento County Public Health

Community Overview and Resources

This information is important because it can help us to strategize about the most effective ways to engage with the community.

Plan Area, Community Demographics, and Community Resources

The North Sacramento plan area, seen in **Figure 1**, is bound roughly by the city limits to the north, the Sacramento Northern Railroad and the Walter S. Ueda Parkway Trail to the west, the American River to the south, and Auburn Boulevard and the city limits to the east. Unincorporated Sacramento County areas border the plan area to the north, east, and west. There are 26 City-designated neighborhoods within the North Sacramento plan area, listed in **Table 1**. Distinct neighborhoods identified by the City are available through the City designated neighborhood map on the City's website.[1]

[1] City of Sacramento Neighborhoods map: https://www.cityofsacramento.org/-/media/Corporate/Files/GIS/Maps/Neighborhoods_E.pdf?la=en

Table 1: North Sacramento City-Designated Neighborhoods

Neighborhoods			
American River Parkway	Hansen Park Golf Course	Old North Sacramento	Strawberry Manor
Cannon Industrial Park	Johnson Business Park	Parker Homes	West Del Paso Heights
Del Paso Heights	Johnson Heights	Pell/Main Industrial Park	Wills Acres
East Del Paso Heights	Noralto	Raley Industrial Park	Woodlake
Erikson Industrial Park	Northpointe	Richardson Village	Young Heights Village Green
Glenwood Meadows	Norwood Tech	Robla	
Hagginwood	Oak Knoll	South Hagginwood	

The North Sacramento area is home to over 59,000 residents. The population is evenly split in gender, with 51% men and 49% women. 51% of residents are 34 years old or younger and 9% of the population is 65 or older.[2] **Figure 2**, below, provides a breakdown of the population by age and gender within North Sacramento; **Figure 3** provides data for the City of Sacramento for comparison. **Table 2** compares the racial breakdown of plan area residents to the city and state. The community is made up of the following: Asian residents accounting for 14% of the population; Black residents accounting for 14% of the population; Hispanic residents accounting for 22% of the population; and White residents account for 40% of the population.[3] **Figure 4** shows the racial profile of the community.

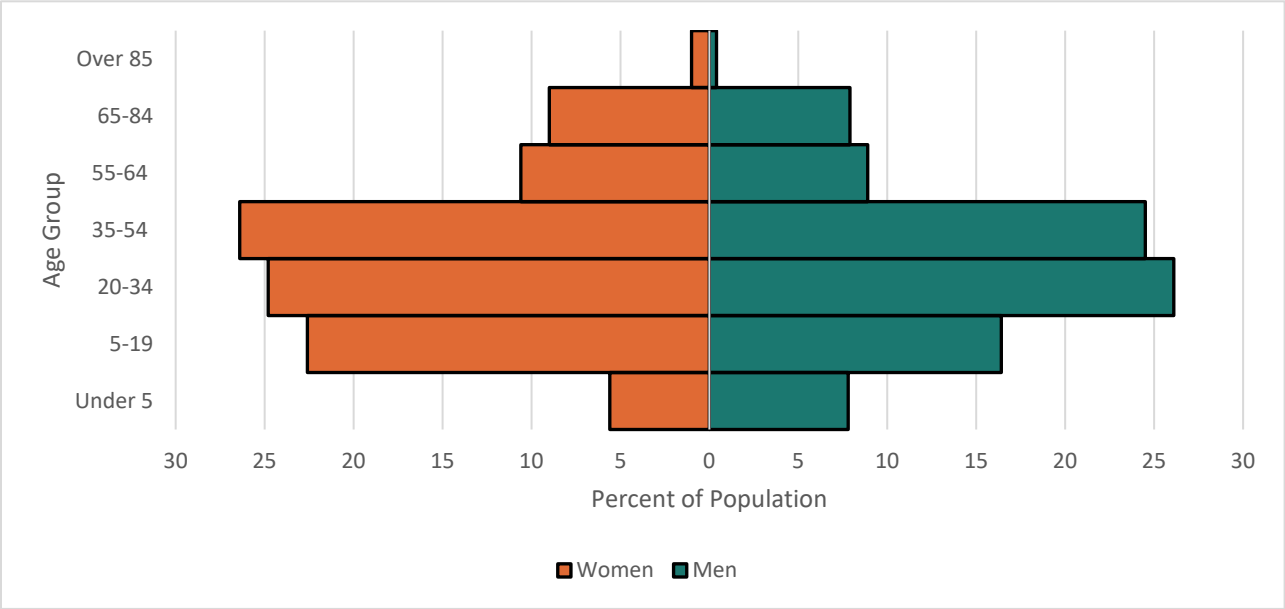
Table 2: North Sacramento Race/Ethnicity

Demographics			
Race	North Sacramento	City of Sacramento	California
African American or Black	14%	13%	5%
American Indian	1%	1%	1%
Asian	14%	19%	15%
Hispanic	22%	28%	39%
Native Hawaiian	3%	2%	1%
Two or More Races	6%	5%	3%
White	40%	32%	36%

Source: American Community Survey, 2015-2019

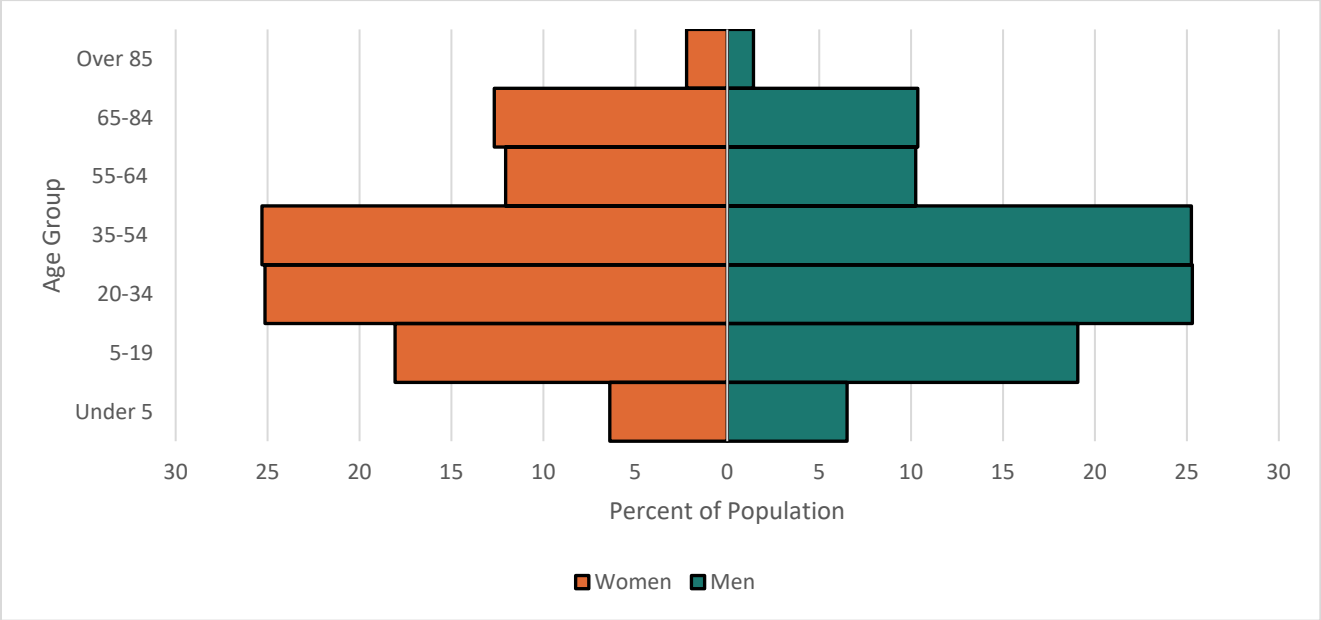
[2] American Community Survey 2015-2019
[3] American Community Survey 2015-2019

Figure 2: Population: North Sacramento Gender and Age



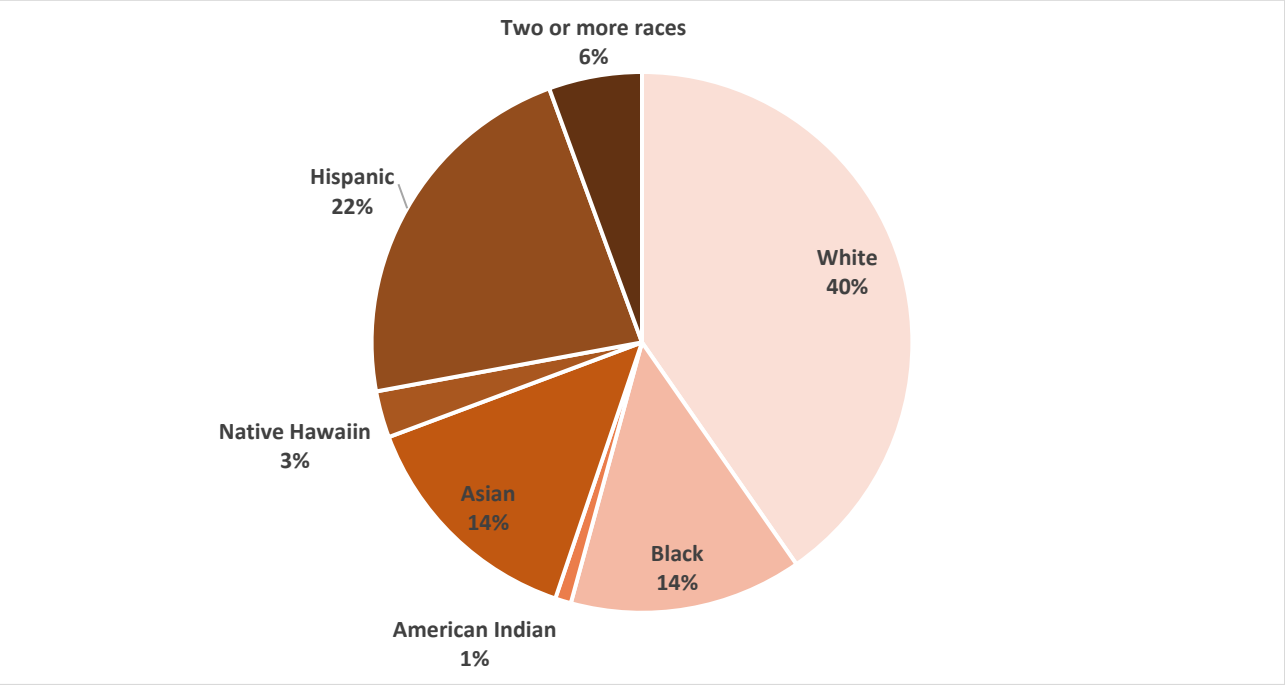
Source: American Community Survey, 2015-2019

Figure 3: Population: City of Sacramento Gender and Age



Source: American Community Survey, 2015-2019

Figure 4: Population: Race



Source: American Community Survey, 2015-2019

Land Use and Activity Generators

North of Interstate-80 (I-80) near Main Avenue land use is mostly suburban neighborhoods, with schools scattered throughout, and the Hansen Ranch Park at the top of the city boundary. To the east of Marysville Boulevard are several low-rise employment centers, with businesses like HVAC supply, construction services, and tire distributors. South of Bell Avenue before I-80 are medium density suburban areas with more low-rise employment centers.

South of I-80 near Grand Avenue are medium density traditional neighborhoods with community destinations such as three high schools, a library, and several small parks. As Norwood Avenue travels south of I-80, it passes through the Norwood Tech neighborhood, a low-rise employment center featuring the Sacramento Truck Center, and warehouse corporate locations for FedEx and The Home Depot. There are high density suburban neighborhoods along Norwood Avenue, but traveling west from Norwood Avenue the development intensity decreases, and there are large plots of undeveloped land.

South of Arcade Creek, the neighborhoods to the west are low density traditional neighborhoods, in the center are low density suburban neighborhoods, and to the east are low rise employment centers in the Cannon Industrial Park area. North of the American River are more low-rise employment centers with health centers, a Costco, and several hotels.

Marysville Boulevard/Del Paso Boulevard is a major north-south connector in North Sacramento, and El Camino Avenue is a major east-west connector, both featuring retail, community services, groceries, restaurants, and other community destination along the corridors. The Sacramento Northern Bike Trail cuts through the center of the plan area providing bicycle connections to parks and schools.

Commute Profile

Within the North Sacramento area, 91% of workers drive to work (either alone or carpooling). 80% of commuters drive alone. Black residents use public transit at a higher rate (5%) compared to 0% to 4% for all other races. American-Indian residents and Native Hawaiian or Alaskan residents walk at a rate (2%) slightly higher than other races.[4] **Table 3**, below, provides a complete breakdown of commute modes by race.

Table 3: Commute to Work by Race

Race	Drive alone	Carpool	Transit	Walk	Bike/Taxi/Motorcycle	Work from home
Native Hawaiian or Alaskan	84%	11%	2%	2%	0%	1%
Other Race	83%	11%	1%	1%	1%	3%
Hispanic	82%	12%	1%	1%	1%	3%
American Indian	81%	16%	0%	2%	1%	0%
Asian	80%	11%	2%	0%	1%	6%
White	77%	7%	3%	1%	2%	9%
2 or more races	76%	13%	4%	0%	1%	6%
African American or Black	75%	9%	5%	1%	2%	9%
AVERAGE	**80%**	**11%**	**2%**	**1%**	**1%**	**5%**

Source: American Community Survey, 2015-2019

Community Equity Profile

This section identifies the areas and population within the North Sacramento plan area that has the greatest need for active transportation improvements and is disproportionately burdened by social, environmental, health, and economic factors.

Environmental Health – *CalEnviroScreen 4.0*

Overall Score

The CalEnviroScreen 4.0[5] analysis is based on two combined indicators: Pollution Burden (i.e., exposures and environmental effects) and Population Characteristics (i.e., sensitive populations and socioeconomic factors). Together, 21 statewide indicators compose the analysis. The top 25 percent of census tracts are typically considered the most disadvantaged at the statewide level and have been targeted for Greenhouse Gas Reduction funding through Senate Bill 535. Overall scores for each census tract within the plan area are shown in **Figure 5**. Higher scores indicate worse pollution and population indicators. **Figures 6** and **7** show the Pollution Burden and Population Characteristics scores, respectively.

Pollution Burden

All but one of the census tracts in the plan area are within the top 25th percent of census tracts. North of Main Avenue near Hansen Ranch Regional Park the scores are lower, however the rest of the plan area, where most of the destinations and neighborhoods are located, are disadvantaged communities based on this metric.

[4] American Community Survey 2015-2019
[5] CalEnviroScreen 4.0 available here: https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40

As shown in **Figure 6**, the location with the highest pollution burden is between Main Avenue, Raley Boulevard, South Avenue and the city limit to the east. I-80 runs through this area, and the Sacramento McClellan Airport is nearby just to the east of the plan area boundary. Areas with high concentrations of industrial land uses typically experience increased air pollutants from a higher proportion of truck traffic, manufacturing emissions, and close proximity to highways where vehicles generate a significant amount of air pollution.

Population Characteristics

Most of the North Sacramento plan area scored above the 75th percentile for population characteristics (**Figure 7**) that are the most vulnerable to pollution. Population characteristics that result in increased vulnerability to pollution include the following indicators:

- Asthma
- Cardiovascular disease
- Low birth weight infants
- Educational attainment
- Housing burden
- Linguistic isolation
- Poverty
- Unemployment

Figure 5: CalEnviroScreen 4.0 – Overall Score

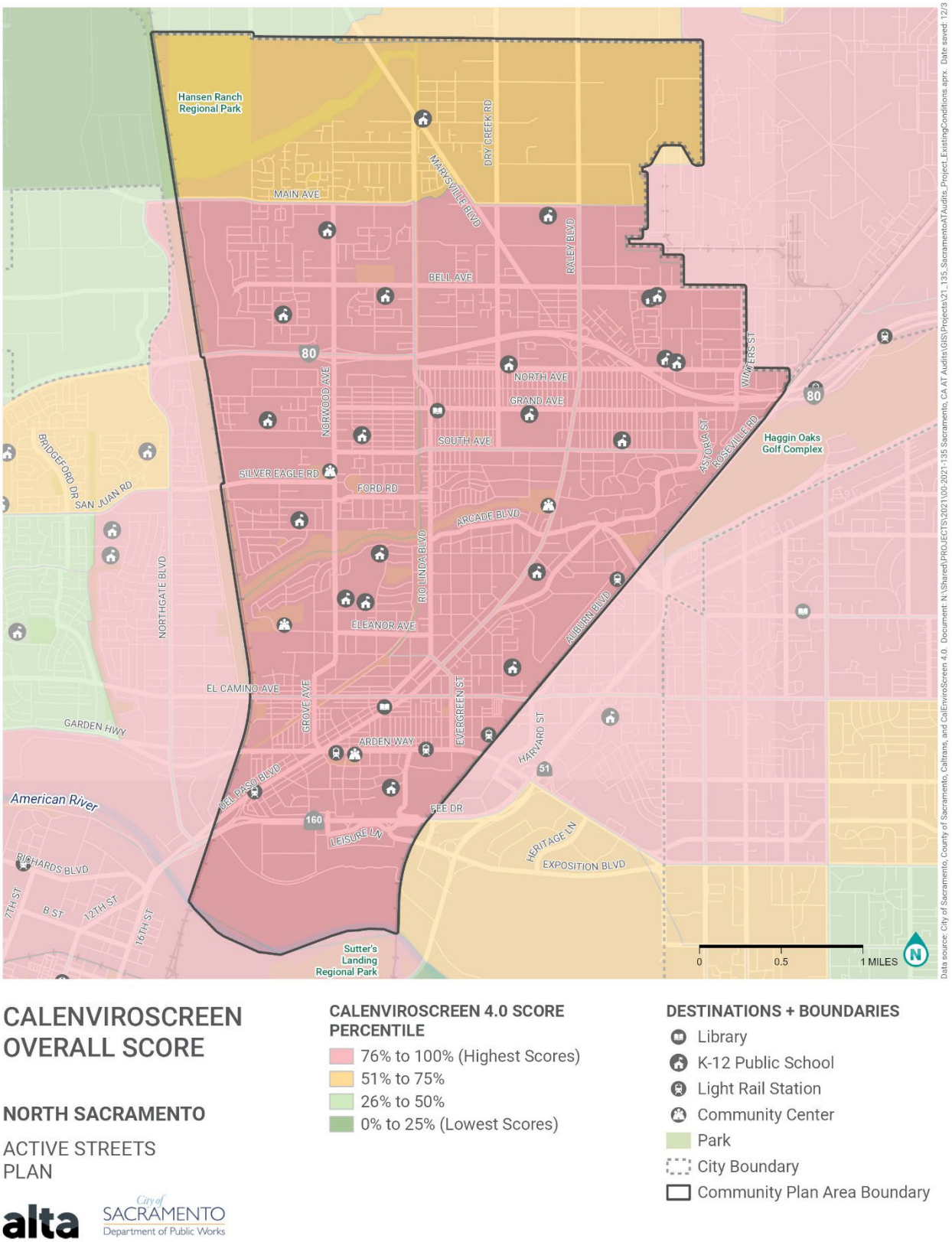


Figure 6: CalEnviroScreen 4.0 Pollution Burden

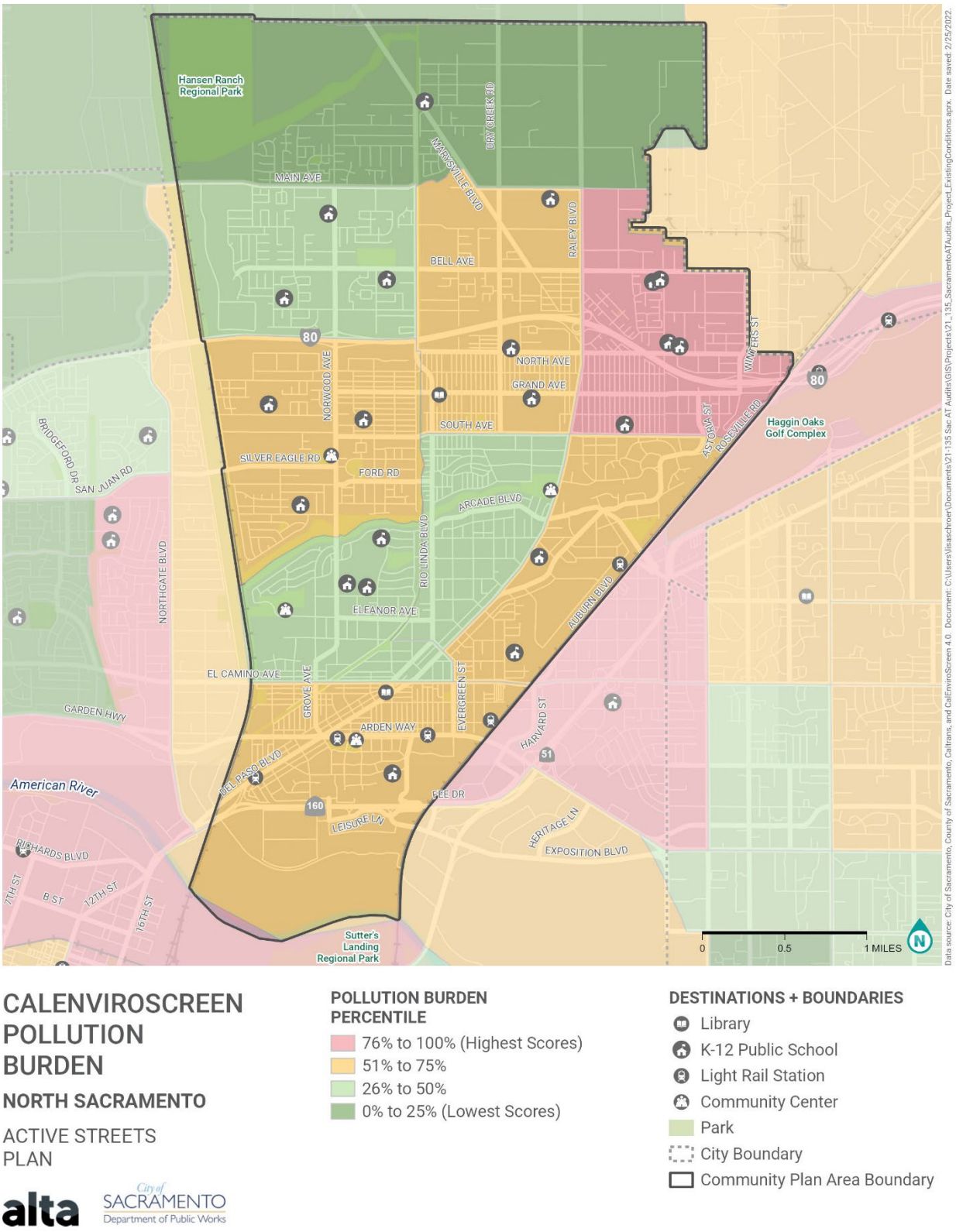
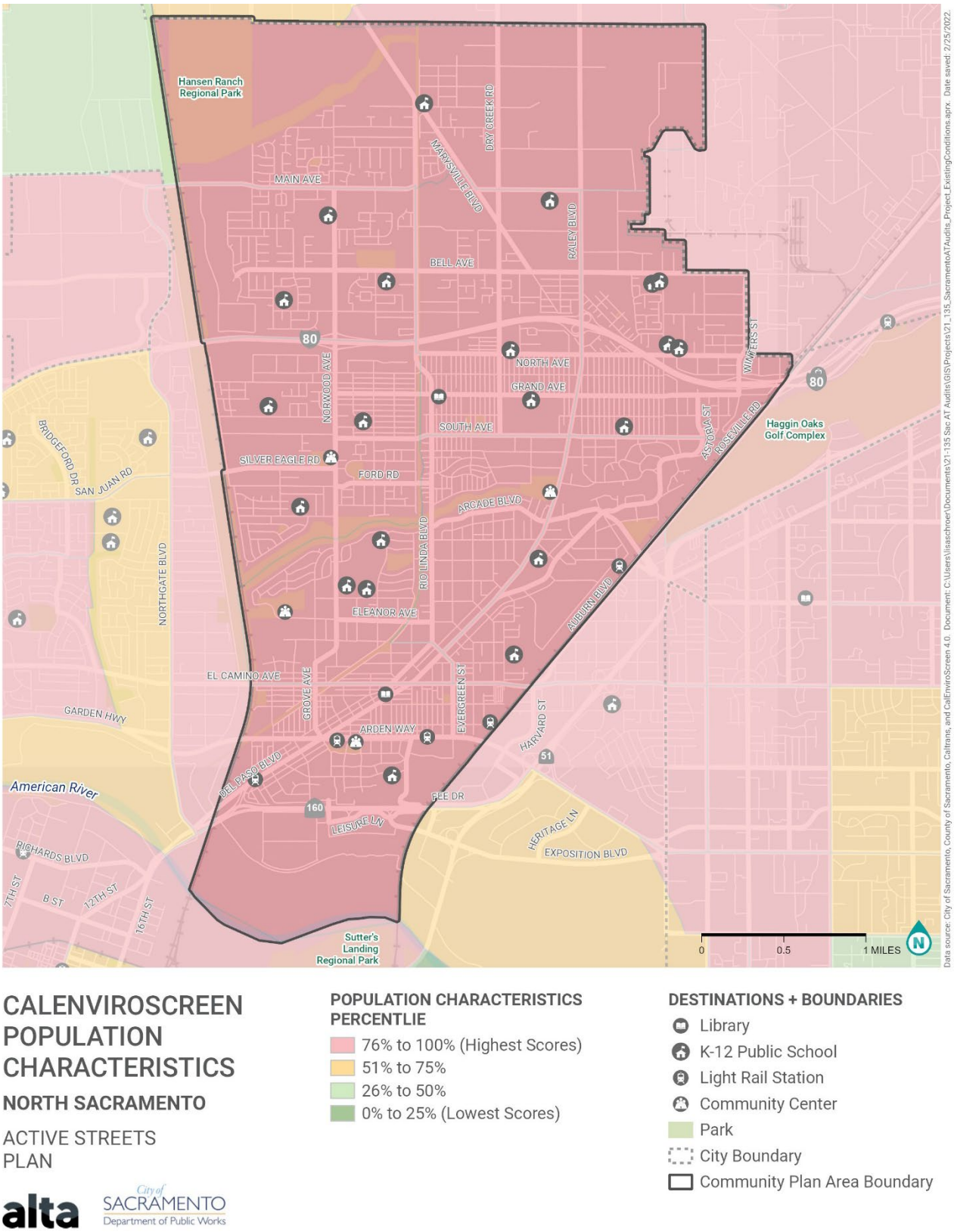


Figure 7: CalEnviroScreen 4.0 Population Characteristics



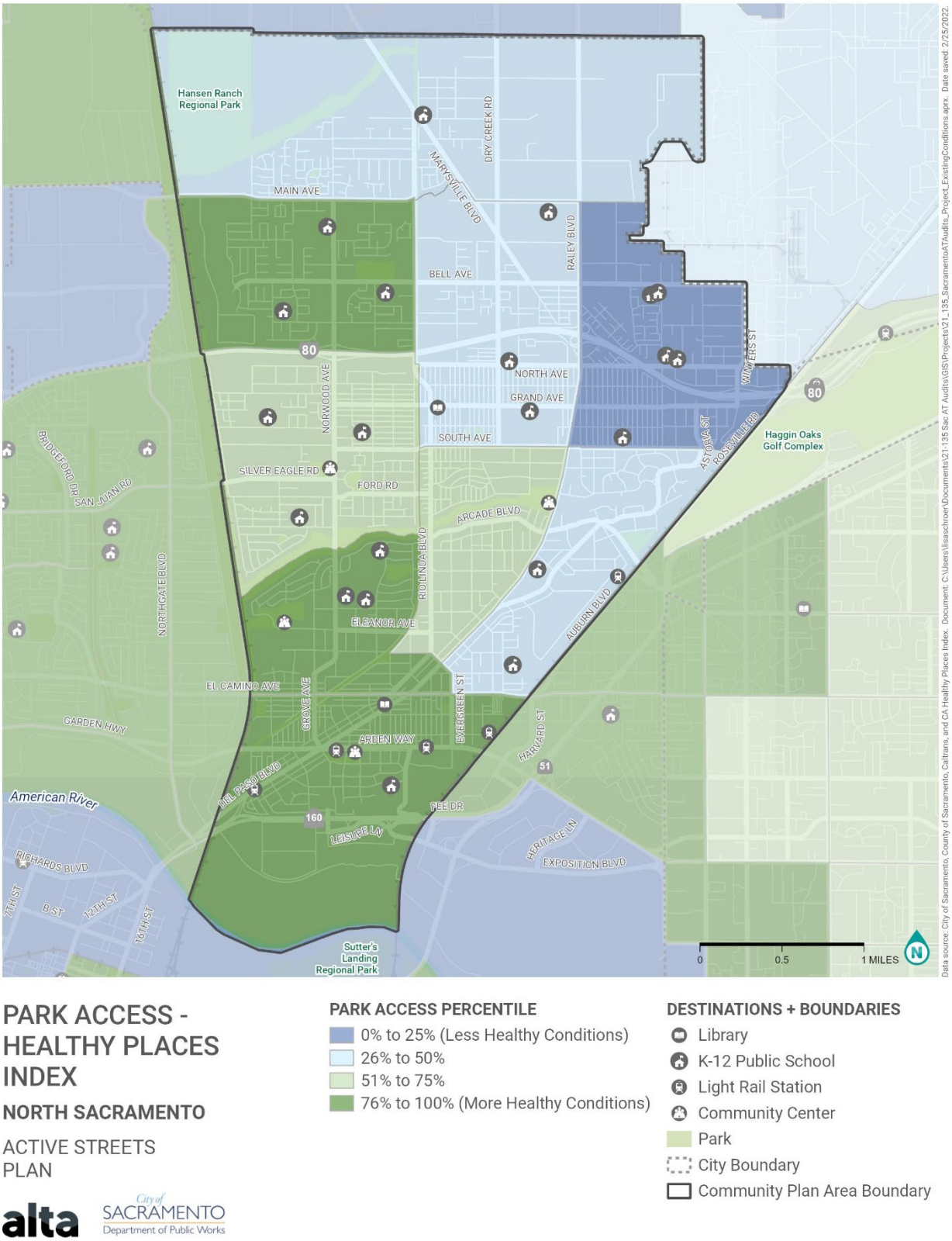
Public Health - Healthy Places Index

The Healthy Places Index (HPI),[6] developed by the Public Health Alliance of Southern California provides valuable insights into specific public policy and health considerations. The overall HPI index is a composite of 25 individual metrics. Two of the most important metrics for increased public health include access to parks and supermarket access. Parks are important community assets and provide outdoor open space and places to play, exercise, and recreate. **Figure 8** displays the park access of residents in the North Sacramento area.[7] There are parks distributed throughout the plan area, including Hansen Ranch Regional Park to the north, Arcade Creek through the center of the plan area, and American River Parkway to the south. Most of area's residents in the south west quadrant of the plan area live within a half-mile of a large park. Even in areas further from larger parks, residents can visit small neighborhood parks throughout the plan area. The Youth, Parks, and Recreation Enrichment (YPCE) Department at the City of Sacramento recently completed a similar Park Access and Equity analysis which is available through the Trust for Public Land website.[8]

Having access to a supermarket can improve residents' health by encouraging a better diet, reducing chronic disease, and lowering the risk of food insecurity.[9] Residents in the neighborhoods of Willis Acres, Richardson Village, and Noralto have the closest access to supermarkets, while the remaining plan area residents must travel further, on average, to reach a grocery store. Residents in the north east portion of the plan area do not live within at least half a mile of a supermarket, and must travel the furthest distances, as noted in **Figure 9**.

[6] Available at: www.healthyplaceindex.com
[7] The Healthy Places Index Park metric indicates if residents are within a half-mile of a park that is 1 acre or greater in size. Small neighborhood or pocket parks do not register on this analysis
[8] Trust for Public Land – Park Access Score Tool: https://parkserve.tpl.org/mapping/index.html?CityID=PS0664000
[9] Food Trust and PolicyLink, 2013. Access to Healthy Food and Why It Matters: A Review of the Research, available at http://www.healthyfoodaccess.org/resources-tools/library/access-healthy-food-why-matters

Figure 8: Healthy Places Index – Park Access



PARK ACCESS - HEALTHY PLACES INDEX

NORTH SACRAMENTO

ACTIVE STREETS PLAN

alta

City of SACRAMENTO Department of Public Works

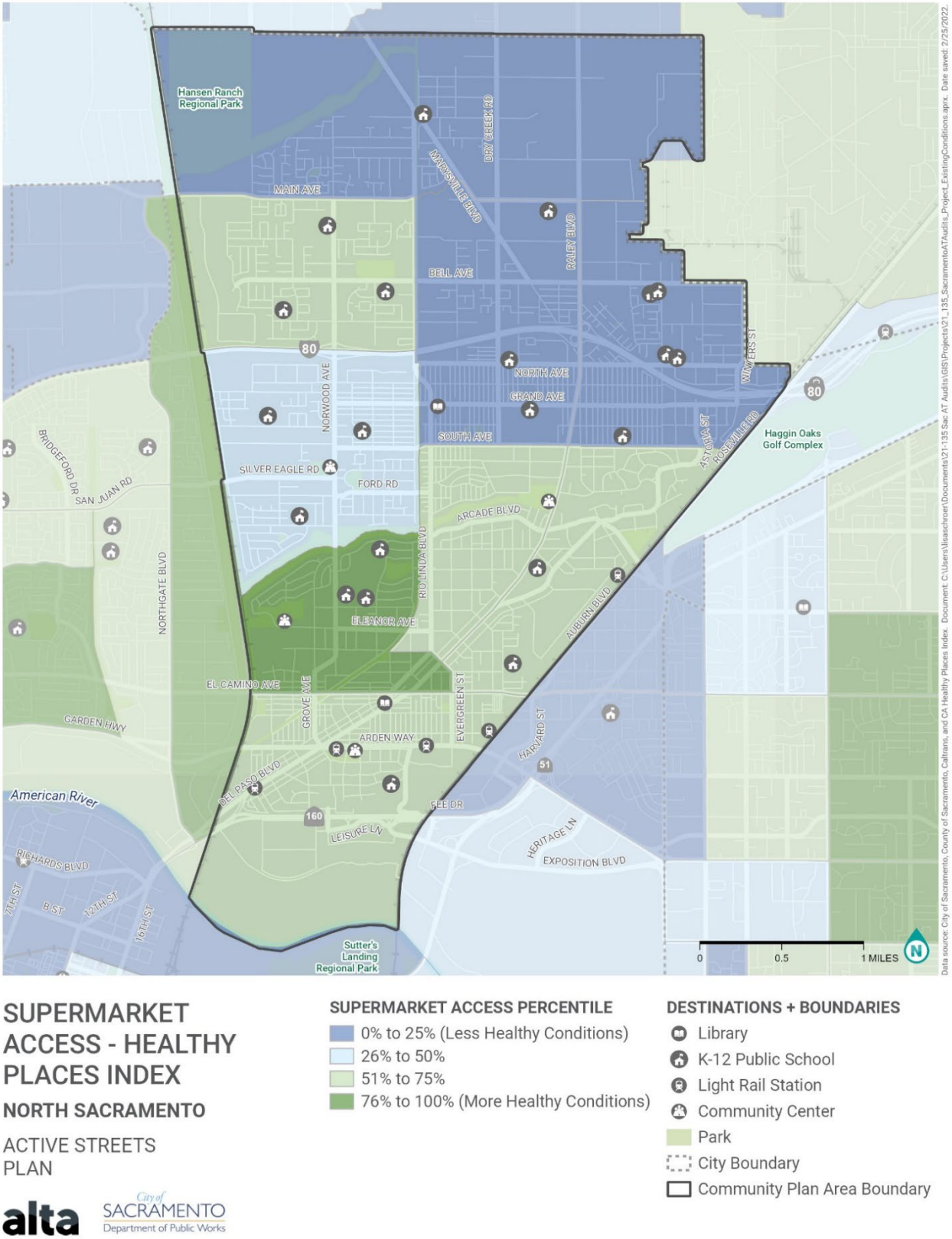
PARK ACCESS PERCENTILE

- 0% to 25% (Less Healthy Conditions)
- 26% to 50%
- 51% to 75%
- 76% to 100% (More Healthy Conditions)

DESTINATIONS + BOUNDARIES

- Library
- K-12 Public School
- Light Rail Station
- Community Center
- Park
- City Boundary
- Community Plan Area Boundary

Figure 9: Healthy Places Index – Grocery Store Access



Heat Vulnerability Analysis

California Heat Assessment Tool (CHAT)

Denser areas of the Plan Area are more vulnerable to extreme heat due to the higher number of people. The Heat Health Action Index[10] is comprised of several variables that represent heat vulnerability. Heat vulnerability is a metric that gauges the relative effects of *social vulnerability factors* (i.e., race, education, age, income, transportation, etc.), *health factors* (i.e., physical disability, asthma, heart health, etc.), and *environmental factors* (land development, ozone, particulate matter, tree canopy, urban heat islands, etc.) to gauge how vulnerable communities may be to relative changes in temperature and increases in the number of heat events. The index is based on a score of 0-100 with lower scores indicating less heat vulnerability. The average summer temperature in California is projected to increase by 4-5 degrees Fahrenheit by the year 2100. As the average temperature increases, the frequency and severity of extreme heat events, (periods of relatively hotter and more humid conditions that impact the social, health, and environmental factors listed above), will also increase in frequency and severity.[11]

Figure 10 shows the Heat Health Action Index for the plan area. Southern sections of the plan area have higher index ratings than the rest of North Sacramento. The highest index score within the plan area is 70, located in the neighborhoods of Willis Acres, Richardson Village, and Noralto. Based on CHAT analysis, areas projected to have more than six annual extreme heat events will have a considerable impact on the health of residents. The analysis projected more than six annual extreme heat events in all of the census tracts in North Sacramento.[12]

Tree Canopy Analysis

Figure 11 provides the results of a tree canopy analysis. The analysis examines how much tree shade covers a given area. The map also displays where city-maintained trees are within the plan area. **It is important to note that this map highlights the locations of city-maintained trees only and is not representative of every tree within the Plan area.** As shown on the map, these trees are concentrated along Del Paso Boulevard, Arcade Boulevard, and near the neighborhoods of Hagginwood, South Hagginwood, and East Del Paso Heights. There are very few city trees north of I-80. None of the census tracts have more than 20% tree canopy cover. Only one census tract north of I-80 has more than 9% tree canopy cover.[13] For comparison, the average tree canopy coverage across the City of Sacramento is 13.5%.

The project team conducted a bivariate analysis combining both heat events and tree canopy cover. The results, shown in **Figure 12**, indicate that communities north of Main Avenue have the highest heat vulnerability (i.e., experience the most impacts from climate change) and represent the biggest opportunity for tree canopy improvement within the North Sacramento area. Communities in the southern part and eastern central part of the plan area comparatively have the lowest heat vulnerability, however still have a high projected annual number of heat events.

[10] Available at: www.cal-heat.org
[11] California Heat Assessment Tool, CHAT
[12] California Heat Assessment Tool, CHAT
[13] California Heat Assessment Tool, CHAT & City of Sacramento City Maintained Tree Data

Figure 10: Heat Health Index

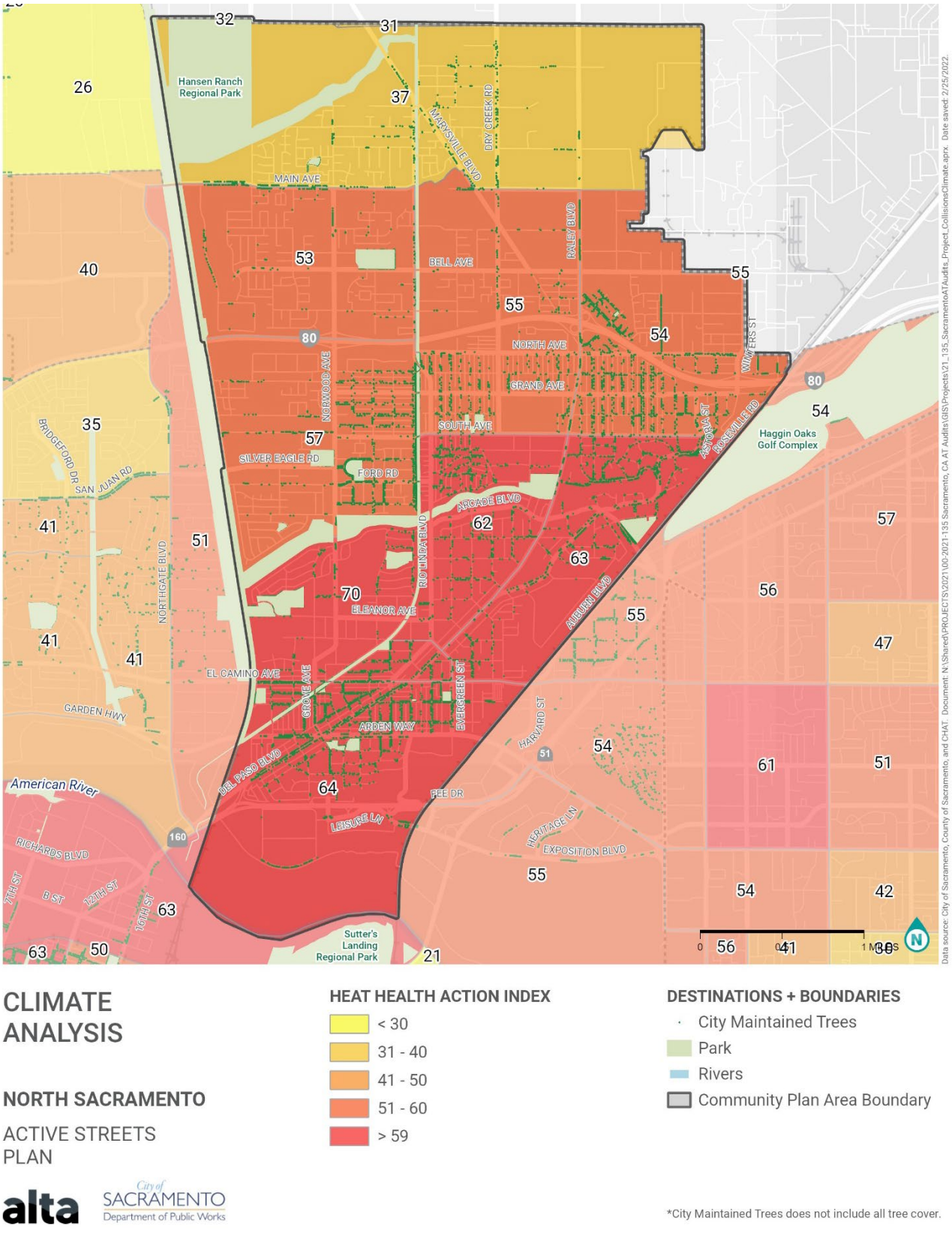


Figure 11: Tree Canopy Cover

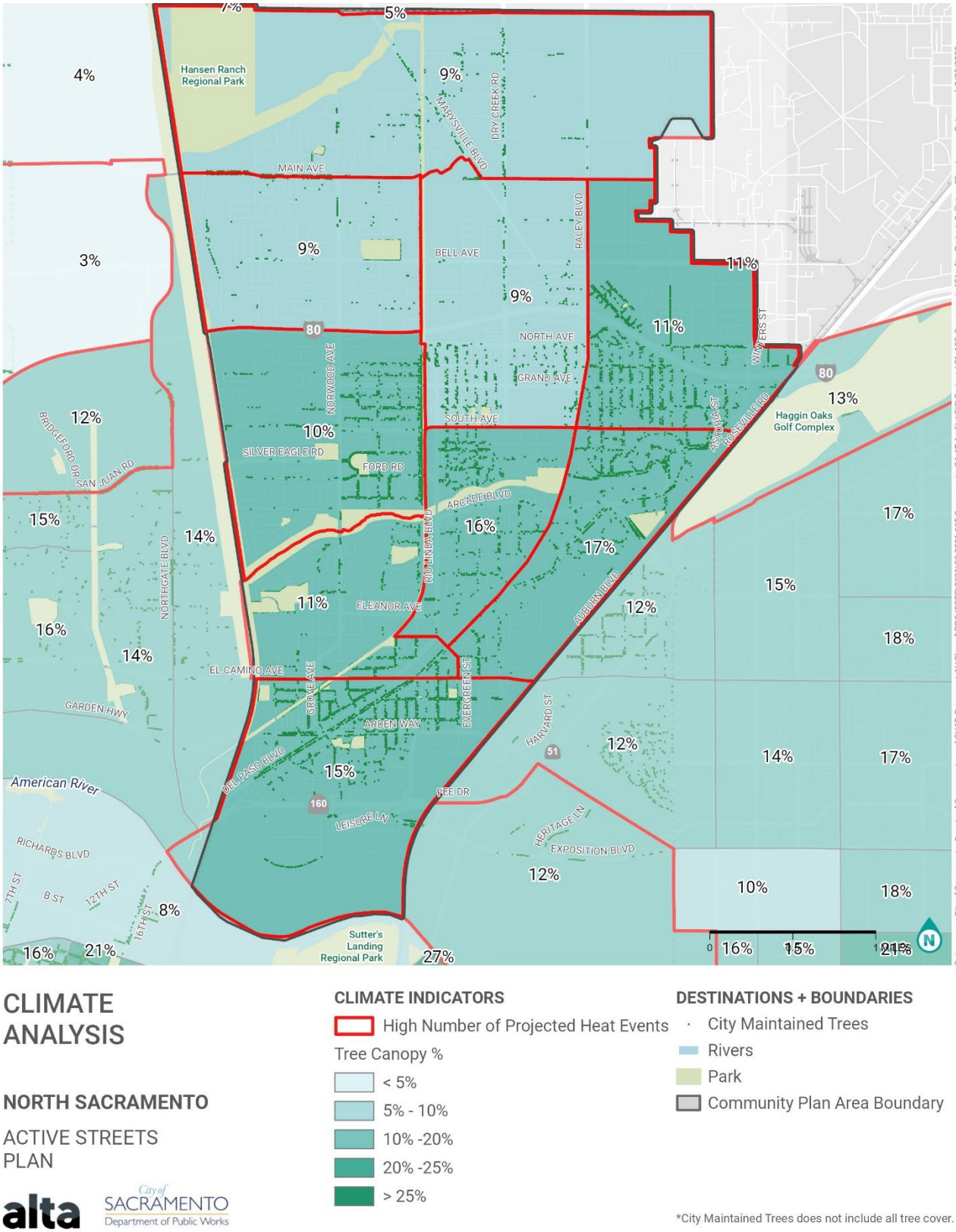
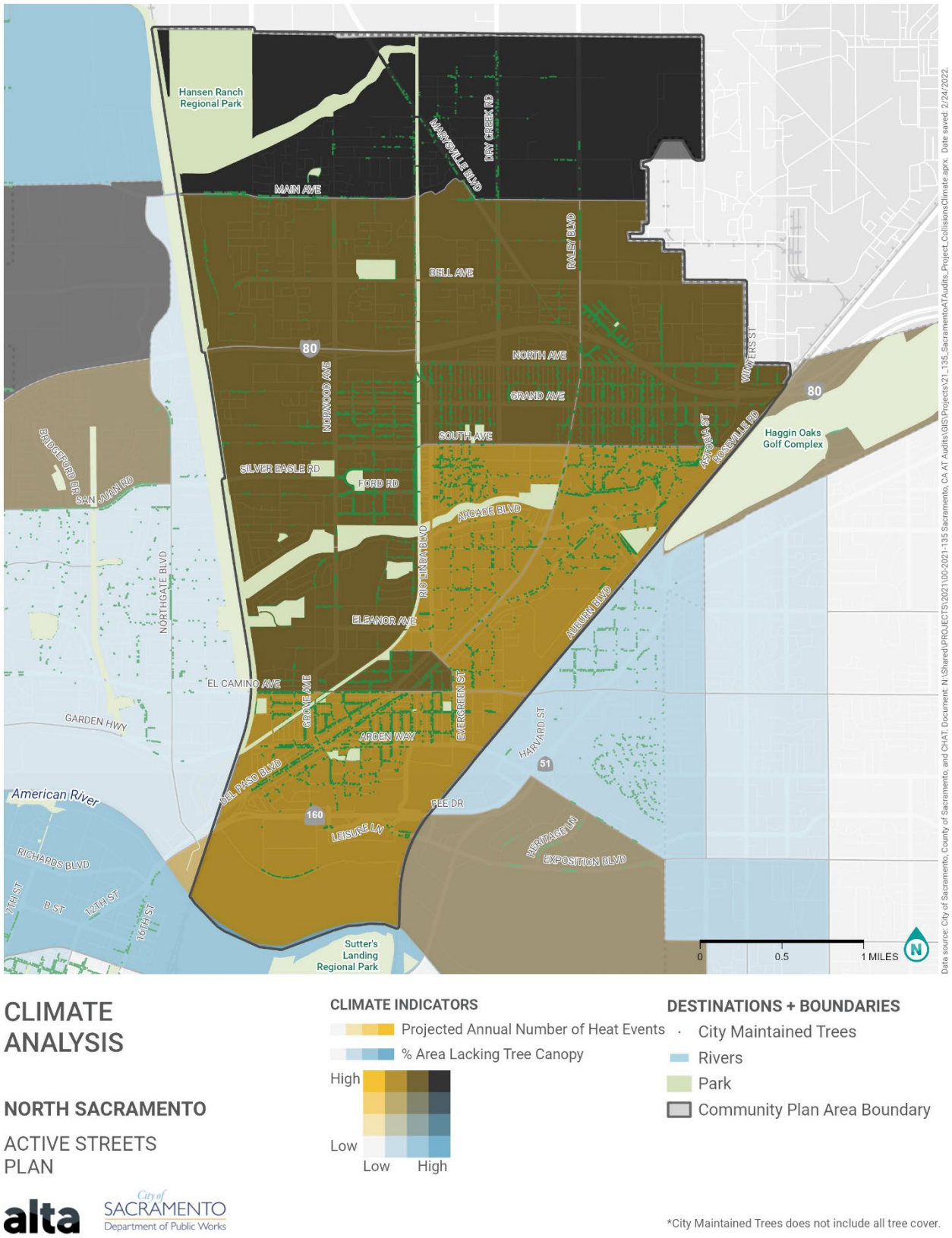


Figure 12: Bivariate Climate Analysis



Housing and Transportation Costs Index

The Housing and Transportation Costs Index[14] (H&T) provides an overview of how much income the average household within a census tract spends on housing and transportation costs. The US Department of Housing and Urban Development (HUD) suggests that households should spend about one-third of their income on housing costs.[15] As seen in **Figure 13**, most households spend under 30% of their income on housing costs across the plan area. **Figure 14** adds transportation costs to the index. As shown in the map below, households on average spend roughly an additional 10-20% of income on transportation costs. Combined, most households spend around or just under half of their income on housing and transportation costs.[16]

[14] Available at: https://htaindex.cnt.org/
[15] https://htaindex.cnt.org/
[16] https://htaindex.cnt.org/

Figure 13: Household Income Spent of Housing Costs

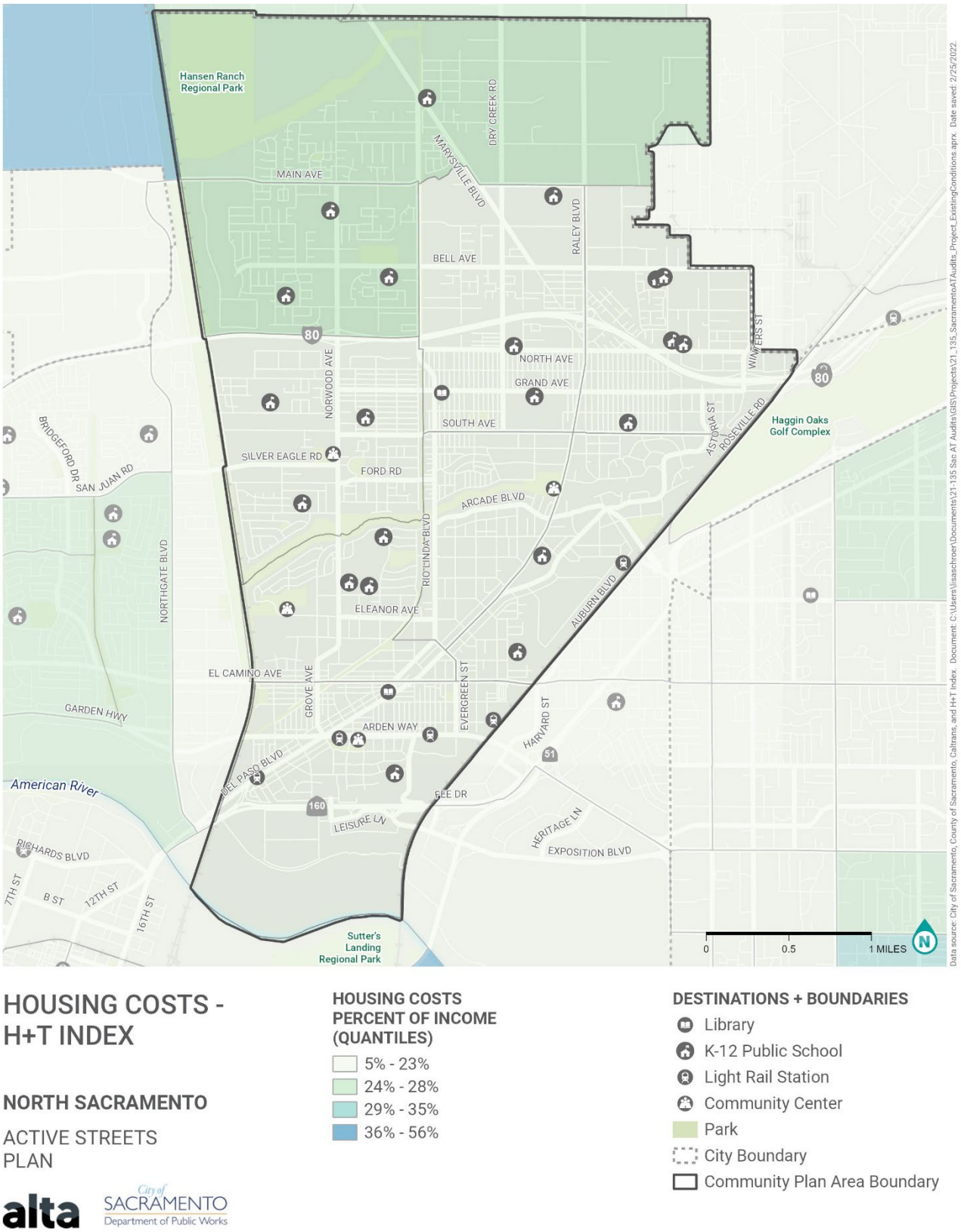
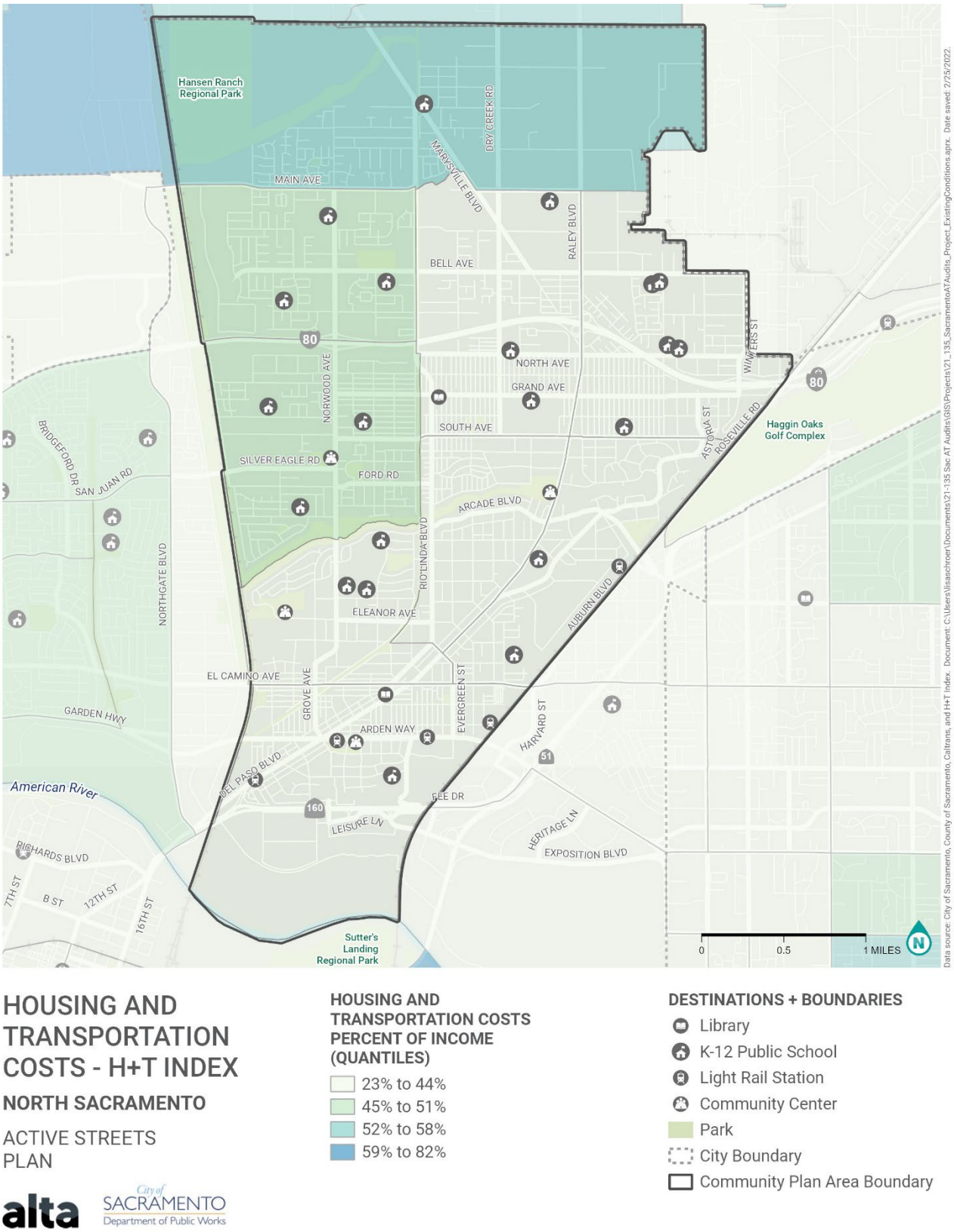


Figure 14: Household Income Spent on Housing and Transportation Costs



Transportation Profile

Existing Streets

The North Sacramento plan area has several large arterials, highways, and major infrastructure facilities. I-80 runs east-west through the center of the plan area and State Route 160 runs east-west along the southern edge of the plan area boundary. **Figure 16** shows the existing street and highway network. Major streets include:

North-South streets:

- Marysville Boulevard
- Raley Boulevard
- Rio Linda Boulevard
- Del Paseo Boulevard
- Norwood Avenue
- Grove Avenue

East-West streets:

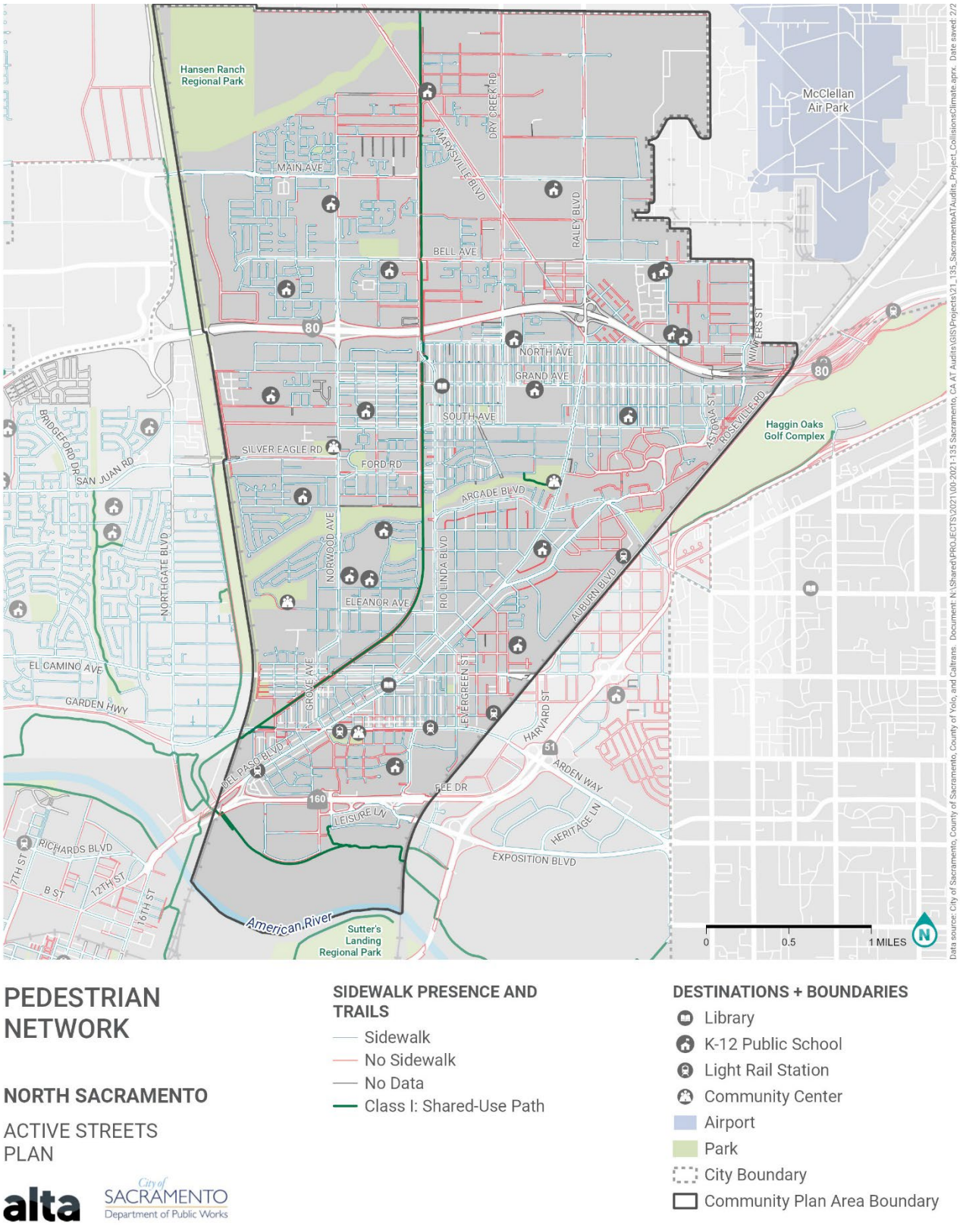
- Main Avenue
- Bell Avenue
- North Avenue
- Grand Avenue
- Arcade Boulevard
- Arden Way

Although there is a crossing point at the Sacramento Northern Bike Trail and Walter S. Ueda Parkway Trail along Steelhead Creek, I-80 largely acts as a barrier for active modes. This is due to the current design of overpasses and underpasses along the highway which provide limited space for people biking or walking.

Walking facilities

Walking facilities include sidewalks, shared use paths (trails), and intersection (or mid-block) crossing facilities. **Figure 15** is a map of the existing sidewalk network in North Sacramento. The Sacramento Northern Bike Trail shared use path travels north-south through the plan area and the Walter S. Ueda Parkway Trail shared use path runs north-south just outside of the plan area boundary. Additionally, the American River Bike Trail travels east-west near the southern border of the plan area. Many local streets in North Sacramento do not have sidewalk, including areas near schools, particularly in the industrial zones to the east, south, and north. Portions of Arden Way are missing sidewalks as is the entirety of Marysville Boulevard north of I-80.

Figure 15: Existing Sidewalk Network



Bicycling Facilities

The plan area includes 25.3 miles of existing bicycle facilities, shown in **Figure 16** and **Table 4**[17]. These facilities primarily consist of shared use paths and bike lanes. Within North Sacramento, the network of bicycle lanes is on north-south streets Raley Boulevard, Norwood Avenue, and Del Paso Boulevard and on east-west streets Grand Avenue, El Camino Avenue, and Garden Highway. Other than the connected routes in the southern portion of the plan area, most of the bike lanes are not consistently spaced, nor are they connected or continuous. Some smaller streets have bicycle routes. People riding bicycles can mostly find bicycle routes connecting to bike lanes in the southern portion of the plan area, with a few other routes scattered in the center of the plan area. Beyond this, the plan area lacks an east-west bicycle facility north of El Camino Avenue.

There are no buffered bike lanes or separated bikeways within the plan area, however the Sacramento Northern Bike Trail shared use path travels north-south through the center of the plan area, and the American River Bike Trail is a shared use path that provides east-west connectivity at the southern end of the plan area. These shared use paths are low-stress facilities for people bicycling, meaning most people who bike would feel comfortable using them.

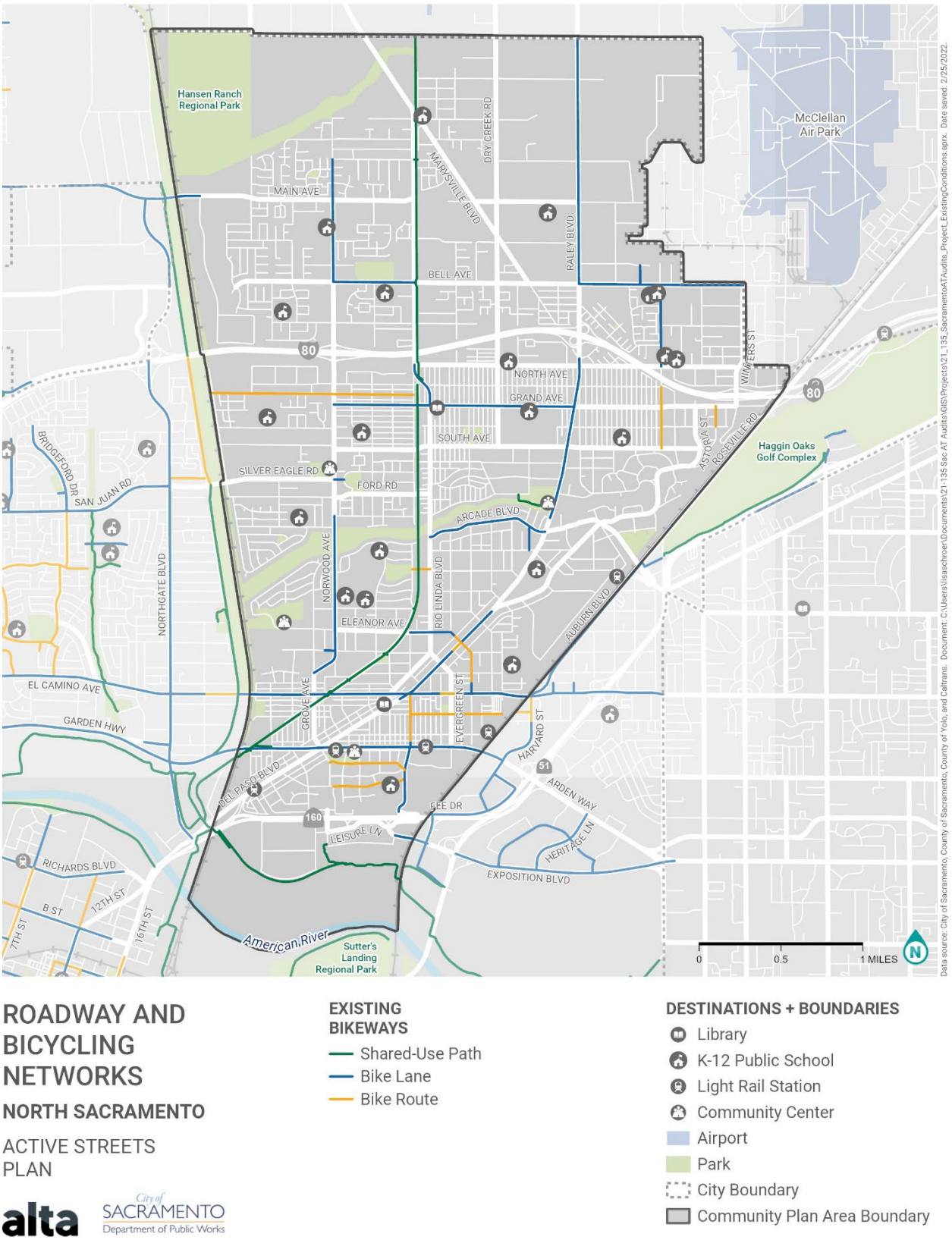
The bicycle facilities in North Sacramento provide access to neighborhoods, parks, employment centers, schools, and other community destinations. The Sacramento Northern Bike Trail also allows people bicycling to cross the I-80 underpass. The bicycle facilities in North Sacramento offer access to neighboring communities outside of the plan area in the south, but connections are sparse in the northern region of the plan area.

Table 4: Existing Bicycle Facilities in North Sacramento

Bikeway Class	Mileage
Shared use Path	7.2 mi
Bike Lane	14 mi
Buffered Bike Lane	0 mi
Bike Route	4.1 mi
Separated Bikeway	0 mi
Total	**25.3 mi**

[17] The Walter S. Ueda Parkway Trail shared use path is not included in Table 4 mileage totals as it is outside of the plan area boundary.

Figure 16: Street and Bicycling Networks



ROADWAY AND BICYCLING NETWORKS

NORTH SACRAMENTO

ACTIVE STREETS PLAN

alta

City of SACRAMENTO Department of Public Works

EXISTING BIKEWAYS

- Shared-Use Path
- Bike Lane
- Bike Route

DESTINATIONS + BOUNDARIES

- Library
- K-12 Public School
- Light Rail Station
- Community Center
- Airport
- Park
- City Boundary
- Community Plan Area Boundary

Transit Network and Facilities

SacRT light rail (Blue Line) and buses serve the North Sacramento area. As of January 2022, ten local bus routes served the plan area. Blue Line light rail service runs along the southern and eastern border of the plan area near Del Paso Boulevard and Auburn Boulevard. Bus service runs throughout the southern and central part of the plan area, with limited bus service north of I-80. **Table 5** provides more information on the bus routes serving the area. **Figure 17** shows a map of the bus and light rail routes serving the area.

Table 5: SacRT Bus Route Information

Route Number	Route Name	Peak Frequency	Minimum Frequency	Days of Operation
Line 113	North Market Commuter	3 daily peak trips	-	Weekday
Line 129	Arden Commuter	2 daily peak trips	-	Weekday
Line 13	Natomas / Arden	45 minutes	60 minutes	All week
Line 15	Del Paso Heights	30 minutes	60 minutes	All week
Line 19	Rio Linda	60 minutes	60 minutes	All week
Line 23	El Camino	15 minutes	60 minutes	All week
Line 25	Marconi	30 minutes	60 minutes	All week
Line 86	Grand	30 minutes	60 minutes	All week
Line 87	Howe	30 minutes	60 minutes	All week
Line 88	West El Camino	30 minutes	60 minutes	All week

Source: SacRT. September-December 2019 route data.

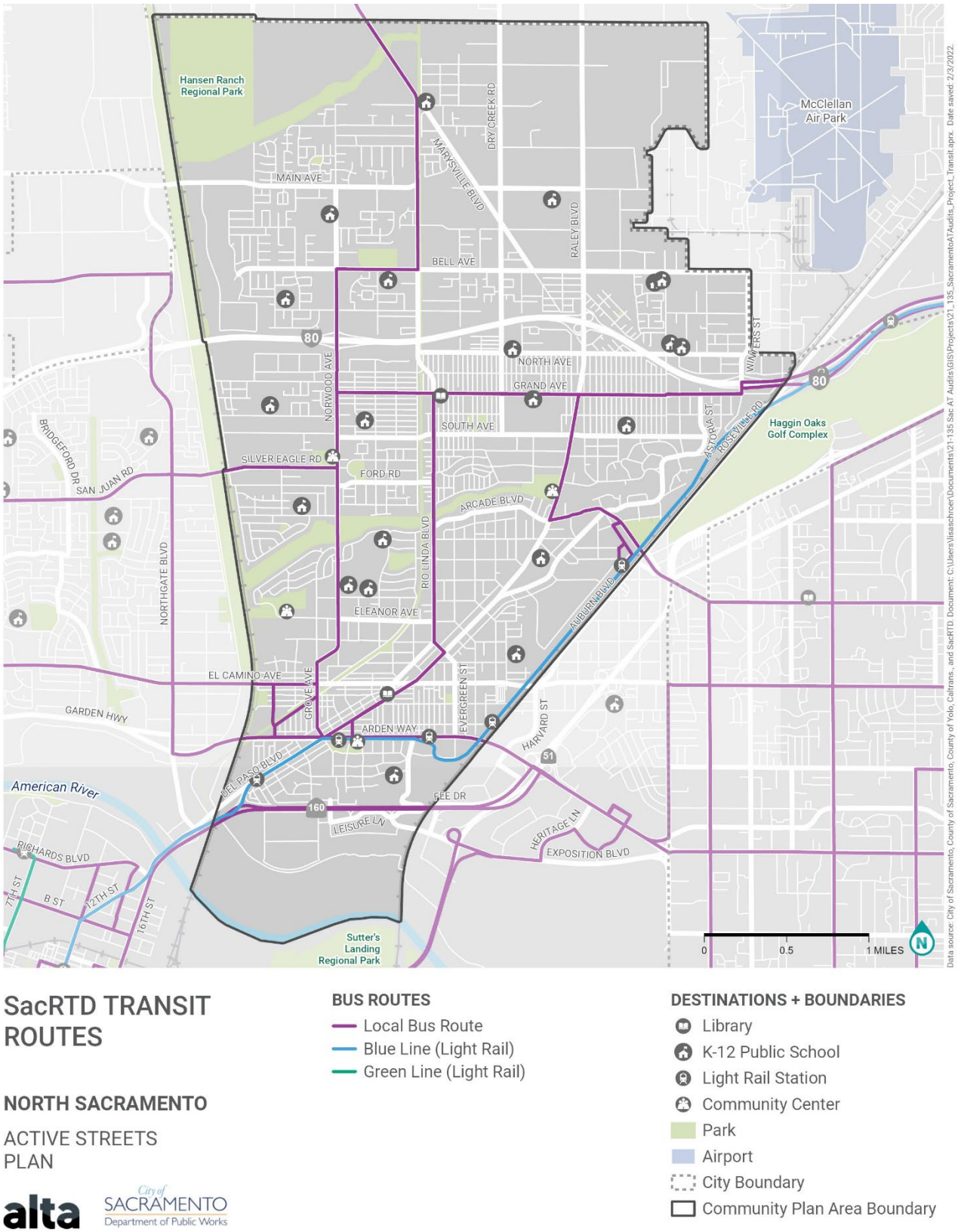
Figure 18 shows ridership for bus stops within the plan area (average weekday boardings and alightings between September and December 2019). The heaviest ridership within the plan area is on the Grand, Norwood, Rio Linda, and Arden corridors. **Table 6** shows the top 5 busiest bus stops in the plan area.

Table 6: Top Five Busiest Bus Stops

Stop Location	Average Weekday Boardings and Alightings
Del Paso Light Rail Station (3 bus transfers)	1385
Macroni Light Rail Station (3 bus transfers)	988
Arden Way & Royal Oaks Dr (Eastbound)	94
Grand Ave & Marysville Blvd (Westbound)	88
Grand Ave & Elm St (Westbound)	84

Source: SacRT. September-December 2019 ridership data.

Figure 17: SacRT Bus and Light Rail Routes



SacRTD TRANSIT ROUTES

NORTH SACRAMENTO

ACTIVE STREETS PLAN

alta

City of SACRAMENTO Department of Public Works

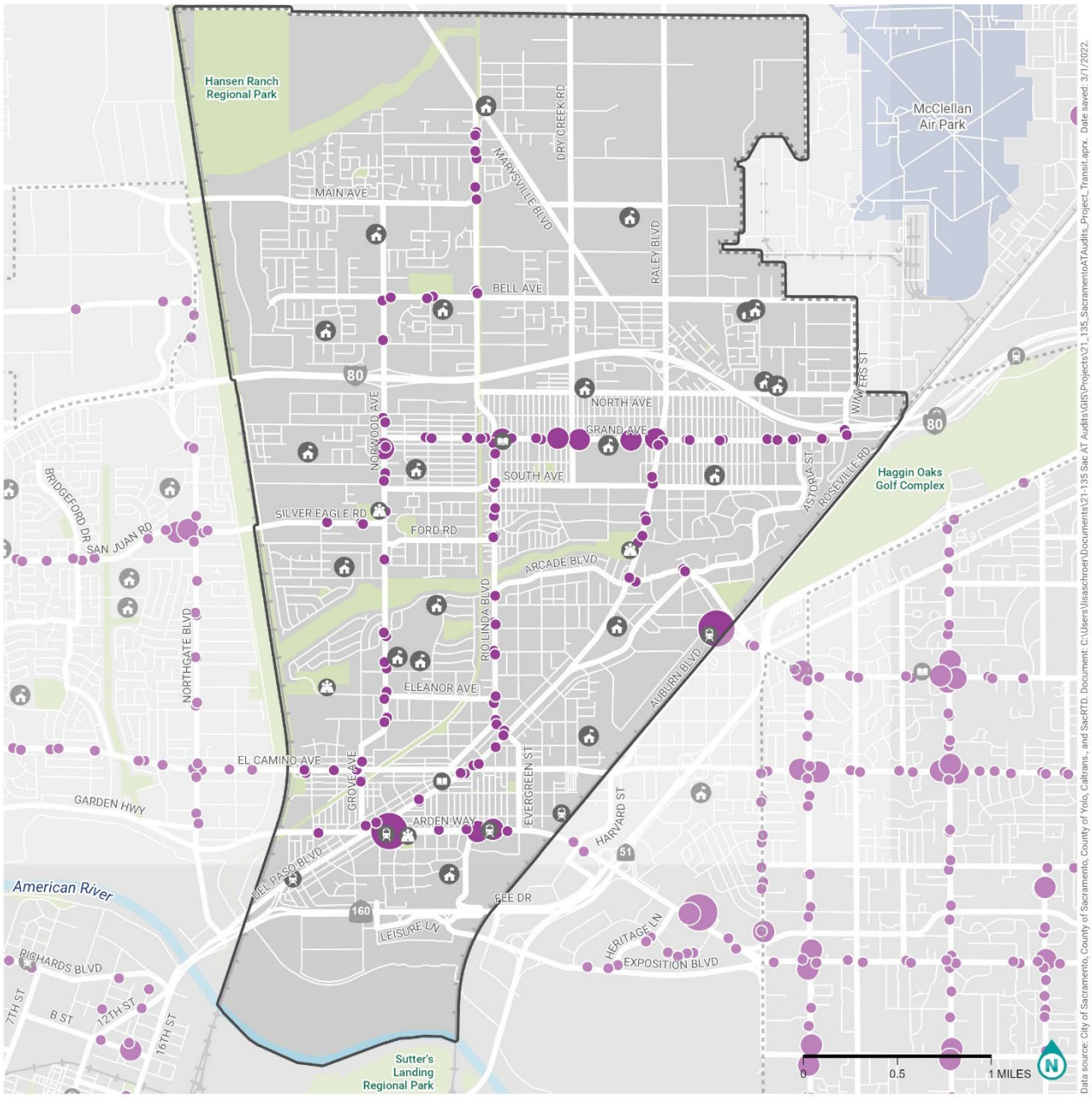
BUS ROUTES

- Local Bus Route
- Blue Line (Light Rail)
- Green Line (Light Rail)

DESTINATIONS + BOUNDARIES

- Library
- K-12 Public School
- Light Rail Station
- Community Center
- Park
- Airport
- City Boundary
- Community Plan Area Boundary

Figure 18: Bus Ridership



Collision Analysis

The project team completed a collision analysis for the five-year period between 2016 and 2020. There were 1,956 reported collisions across all travel modes in these five years. **Table 7** provides a breakdown of collisions by travel mode.[18] Collisions involving people walking or bicycling account for a combined 16% of all collisions (6% biking and 10% walking) but are 47% of severe injury and fatal collisions. Of these, 12% included people bicycling and 35% involved people walking.[19] The overrepresentation of severe injuries and fatalities for people walking and biking highlights disparities in dedicated infrastructure for these more vulnerable street users.

Table 7: North Sacramento Collisions by Mode and Severity[20]

Collisions Involving	Collisions with No Injuries or Minor Injuries	Collisions with Severe Injuries or Fatalities	Total Collisions	Percent of Severe or Fatal Collisions	Percent of Total Collisions
People Driving Only	1,547	93	**1,640**	**53%**	**84%**
People Bicycling	107	20	**127**	**12%**	**6%**
People Walking	128	61	**189**	**35%**	**10%**
TOTAL	**1,782**	**174**	1,956	100%	100%

Source: SWITRS, 2016-2020

Table 8 lists the top ten collision locations across all modes within the plan area.

[18] This data only analyzes reported collisions. Collisions can be unreported for several reasons including: lack of trust in law enforcement, or minor collisions that did not result in any injuries or property damage.
[19] SWITRS 2016-2020
[20] Collisions involving a person biking or walking are counted in their respective categories and are excluded from the "Collision Involving People Driving Only" category.

Table 8: Top 10 Collision Intersections (all modes)

Rank	Cross Street 1	Cross Street 2	Total Collisions
1	Del Paso Blvd	Evergreen St	28
2	Marysville Blvd	Grand Ave	25
3	Marysville Blvd	Los Robles Ave	24
4	Del Paso Blvd	Glenrose Ave	22
5	Marysville Blvd	Roanoke Ave	22
6	Rio Linda Blvd	Eleanor Ave	20
7	Royal Oaks Dr	Arden Way	19
7	Del Paso Blvd	El Camino Ave	19
9	Norwood Ave	Jessie Ave	19
10	Rio Linda Blvd	Grand Ave	18

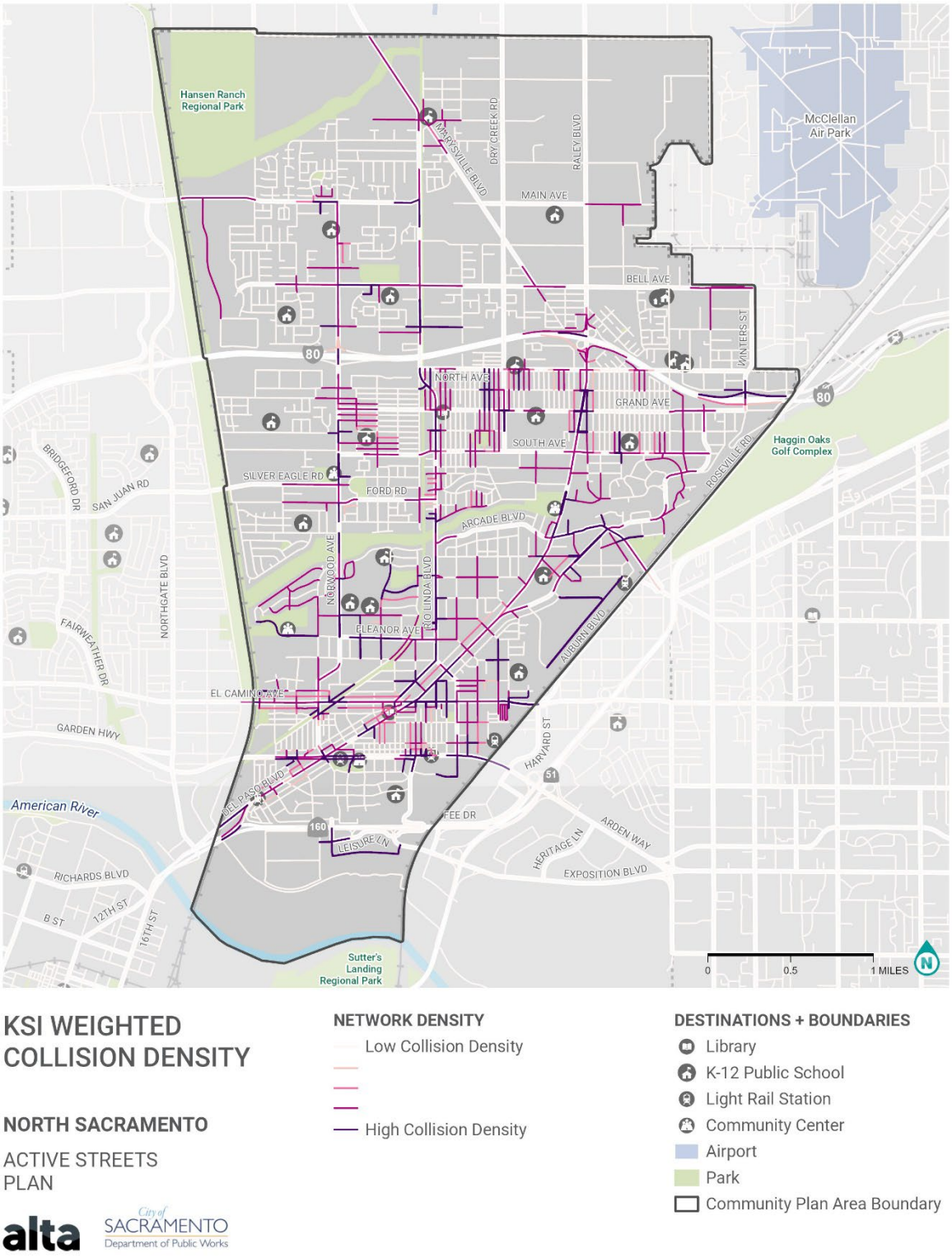
Source: SWITRS, 2016-2020

Figure 19 shows the killed or seriously injured (KSI) weighted density of collisions throughout the plan area. For this analysis, the project team weighted collisions that resulted in a severe injury or fatality higher than other collisions[21].

Streets with the highest density and severity of collisions include large arterial streets such as Del Paso Boulevard, Marysville Boulevard and Rio Linda Boulevard. There are, however, several additional smaller collector and local streets that have a history of multiple/severe collisions based on analyzed data. Some of the street segments with the highest densities are near schools (including Las Palmas Elementary, Hagginwood Elementary School, and Keema High School), parks (including Woodlake Park, Mama Marks Park, and Robla Community Park), and other community destinations (including the Del Paso Heights Library, the Hagginwood Library, and the Hagginwood Community Center).

[21] Collisions that resulted in a severe injury or fatality received 10 points while other collisions received 1 point in the weighted analysis.

Figure 19: Weighted Collison Density



Top Collision Locations Involving Someone Walking

Figure 20 shows the location of collisions involving people walking within the plan area. These mainly occurred on arterial or collector streets including:

- Royal Oaks Drive
- Arden Way
- Marysville Boulevard
- Grand Avenue
- Roanoke Avenue

Table 9 lists the ten locations with the highest number of collisions involving someone walking within the plan area. Four of these locations are on Marysville Boulevard. Arden Way, Del Paso Boulevard, and El Camino Avenue are each included in two different locations.

Table 9: Top 10 Collision Intersections Involving People Walking

Rank	Cross Street 1	Cross Street 2	Number of Collisions
1	Royal Oaks Dr	Arden Way	8
2	Marysville Blvd	Grand Ave	7
3	Marysville Blvd	Roanoke Ave	6
4	Marysville Blvd	Harris Ave	5
4	Del Paso Blvd	Frienza Ave	5
5	Oxford St	Arden Way	4
5	Del Paso Blvd	El Camino Ave	4
5	Empress St	El Camino Ave	4
5	Marysville Blvd	Los Robles Blvd	4
6	Rio Linda Blvd	Las Palmas Ave	3

Source: SWITRS, 2016-2020

Top Collision Locations Involving Someone Biking

Figure 21 shows the location of collisions involving someone bicycling within the plan area. These mostly occurred on arterial or collector streets including:

- Evergreen Street
- Arden Way
- Rio Linda Boulevard

Table 10 lists the ten locations with the highest frequency of collisions involving someone bicycling within the plan area. Three of these locations are on Rio Linda Boulevard, and two locations are on Del Paso Boulevard.

Table 10: Top 10 Collision Intersections Involving People Bicycle

Rank	Cross Street 1	Cross Street 2	Number of Collisions
1	Evergreen St	Arden Way	4
2	Rio Linda Blvd	Jessie Ave	3
2	Altos Ave	Acacia Ave	3
2	Rio Linda Blvd	Rivera Dr	3
2	Rio Linda Blvd	Harris Ave	3
2	Del Paso Blvd	Frienza Ave	3
3	Belden St	South Ave	2
3	Del Paso Blvd	Plaza Ave	2
3	Canterbury Rd	Leisure Ln	2
3	Arcade Blvd	Kenwood St	2

Source: SWITRS, 2016-2020

Figure 20: Collision Locations and Severity Involving Someone Walking

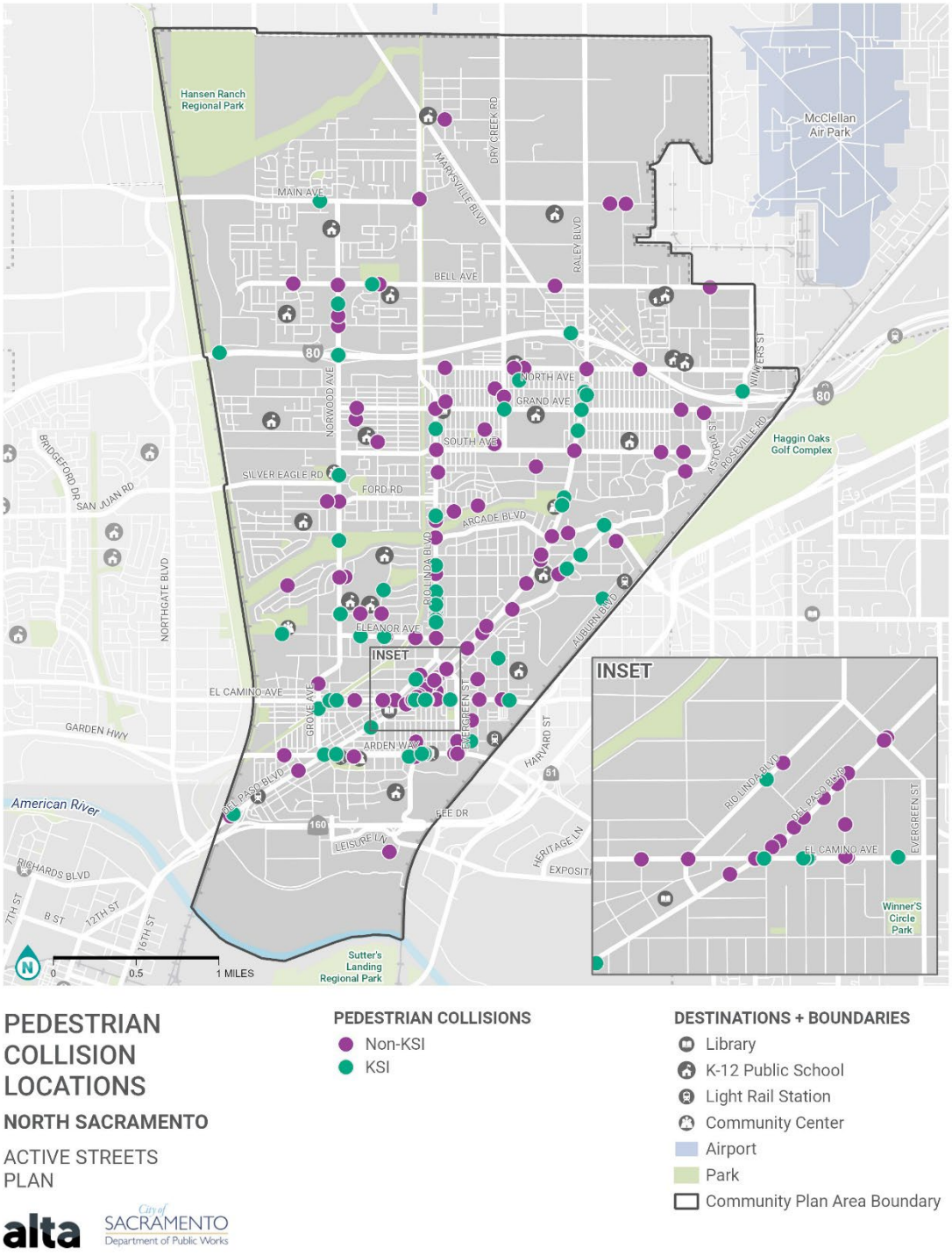
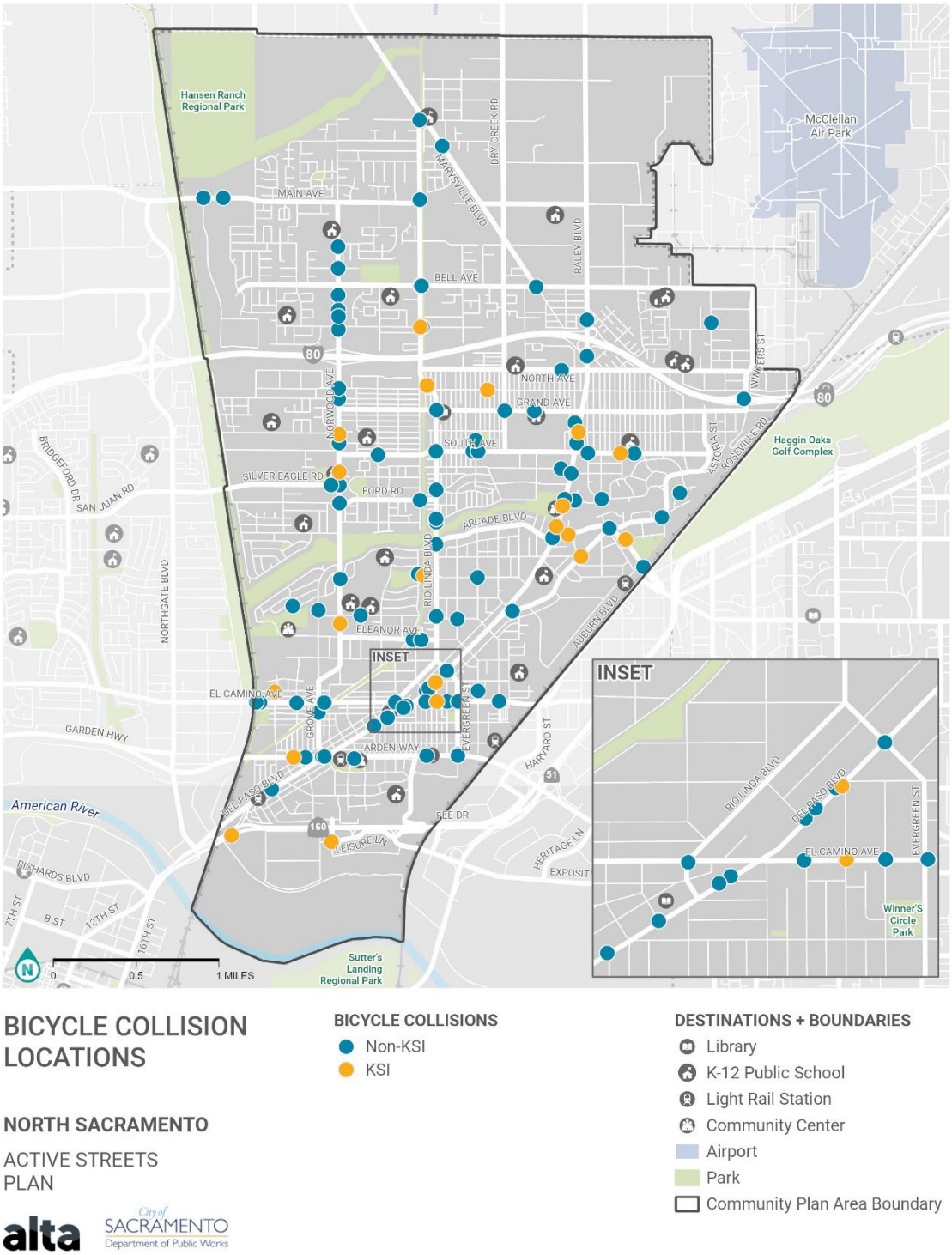


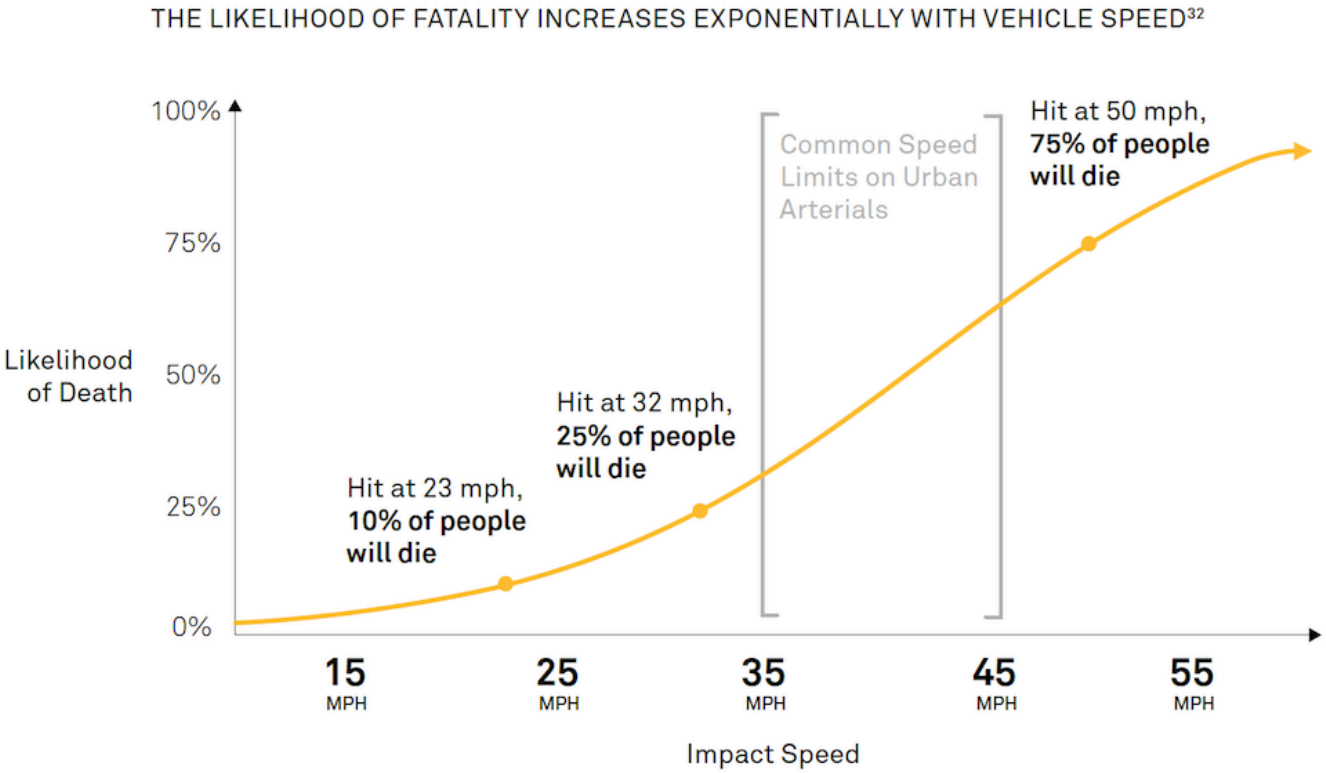
Figure 21: Collision Locations and Severity Involving Someone Bicycling



Collision Anatomy Analysis - Trends Common in Collisions Involving Someone Walking

Figure 22 shows the relationship between vehicle speed and risk of fatality. Of the 92 collisions that occurred on streets with posted speed limits of 35 MPH or greater, 66% of them did not occur at an intersection, likely meaning that these collisions occurred at higher rates of speed than those at intersections.[22] A total of 31% of street segment collisions occurred on streets with posted speed limits between 35 MPH and 45 MPH. An additional 2% of collisions occurred on street segments with a posted speed limit greater than 45 MPH; 33% of all collisions occurred on street segments with a posted speed limit of at least 35 MPH.[23]

Figure 22: Relationship Between Vehicle Speed and Fatal Injuries



Source: NACTO, "City Limits: Speed Kills"

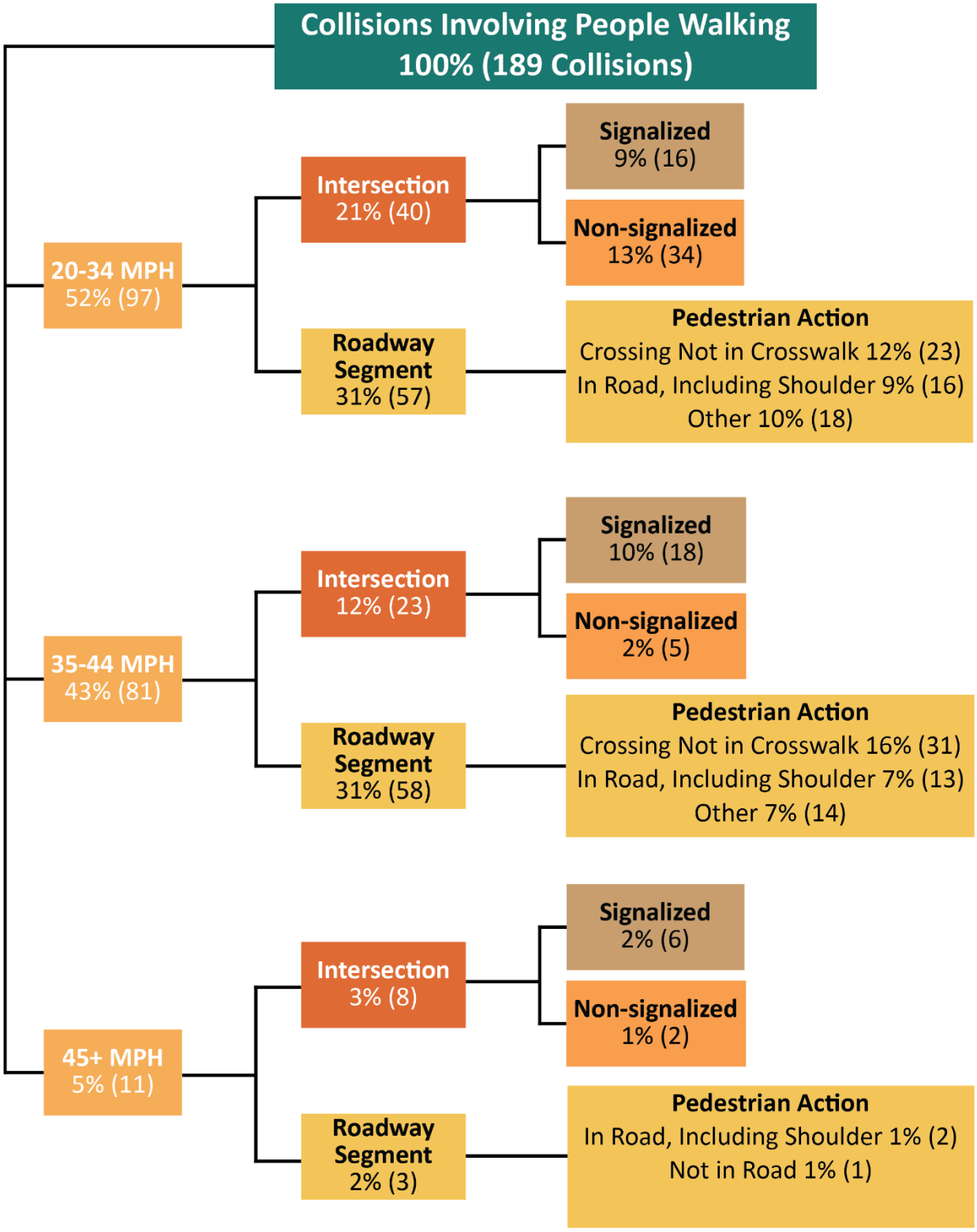
[22] Intersection collisions are collisions that occur within 250 feet of an intersection. Street segment/mid-block collisions are those that occur further away from an intersection.

[23] SWITRS, 2016-2020

As shown in **Figure 23** below, between 2016 – 2020, there were 189 collisions involving someone walking in the plan area. About half (48%) of these occurred on streets with posted speed limits of 35 MPH or greater; 5% of them occurred on streets with posted speed limits of 45 MPH or more. Speed is a critical factor in determining injury severity. For example, a person driving at 35 MPH hitting a person walking is five times more likely to kill the person walking than a person driving at 20 MPH. Each 5 MPH vehicle speed increase increases the risk of fatalities by 3% on local streets.[24] Of the mid-block collisions involving people walking, the two leading "pedestrian actions" (what they are doing at the time of collision) included people crossing not in a crosswalk and people walking in the street/on the shoulder.[25] At intersections, 56% of collisions occurred at signalized locations.

[24] "Speed Kills." NACTO. https://nacto.org/publication/city-limits/the-need/speed-kills/
[25] Note it is legal for people walking to cross mid-block at locations not between two signalized intersections, unless otherwise posted.

Figure 23: North Sacramento Collisions Involving People Walking Diagram

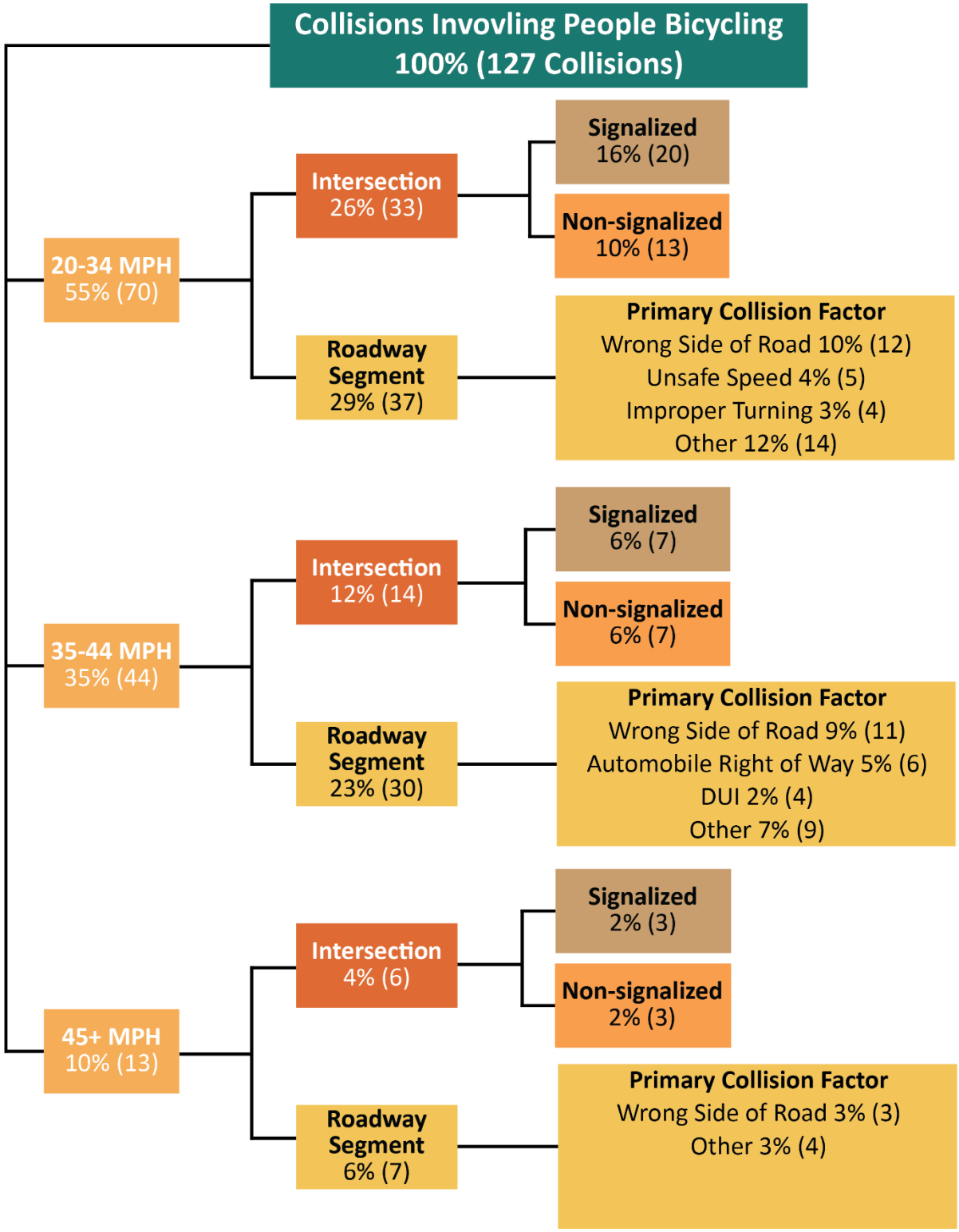


Collision Anatomy Analysis - Trends Common in Collisions Involving Someone Bicycling

As noted in **Figure 24**, between 2016-2020, there were 127 collisions involving someone bicycling; 45% of these collisions occurred on streets with speed limits of 35 MPH or greater; 10% of those collisions occurred on streets with speed limits of 45 MPH or greater. Collisions at these higher speeds place people biking at a much higher risk for severe injury or death. Forty-two percent of collisions involving someone bicycling occurred at intersections and 58% occurred on street segments. Regardless of street speed, collisions with people bicycling at intersections occurred more frequently at signalized locations than unsignalized intersections. Two of the top primary collision factors across all speed limits include biking on the wrong side of the street (26 collisions) and automobile ROW violation (i.e., automobile violates – enters – pedestrian/bicyclist ROW; 6 collisions).[26]

[26] SWITRS, 2016-2020

Figure 24: North Sacramento Collisions Involving People Bicycling Diagram



High-Injury Network

In 2018, the City of Sacramento adopted a Vision Zero Action Plan to eliminate traffic fatalities and severe injuries by 2027. The Vision Zero Plan established a High Injury Network (HIN), consisting of corridors with the highest levels of severe and fatal collisions for people walking, biking, and driving. The Citywide HIN accounts for roughly 80% of collisions; the HIN covers about 14% (225 miles) of the City's streets. Within the North Sacramento area, there are 27.7 miles of streets on the citywide HIN, 12% of the network.

Most arterial streets are part of the HIN network in the North Sacramento area. Streets on the HIN include:

- Marysville Boulevard
- Raley Boulevard
- Bell Avenue
- Norwood Avenue
- North Avenue
- Grand Avenue
- Rio Linda Boulevard
- Arcade Boulevard
- Eleanor Avenue
- Del Paso Boulevard
- El Camino Avenue
- Arden Way
- Evergreen Street

The only arterial or collector streets within the plan area not included in the HIN are Grove Avenue, Ford Road, South Avenue, Main Avenue and Dry Creek Road. **Figure 25** shows the HIN with the locations of the top ten collision intersections by mode. **Figure 26** shows the HIN with the overall top ten collision intersections in the plan area (locations with the most total collisions inclusive of all modes). **Table 11** lists the top ten collision intersections for all modes, walking, and bicycling. Within **Table 11** the "All Collisions" column indicates the top ten collision locations for all modes including automobiles, walking, biking, and others. The walking and bicycling columns, respectively, indicate the top ten collision location for the specific modes. The "Number of Modes" column indicates how many of the mode-based top ten lists each intersection is in.

Marysville Boulevard and El Camino Avenue have a segment in the City's Top Five Vision Zero Network (2018). The Vision Zero Top Five Corridors (2018) document gives detailed descriptions of existing conditions along the Marysville Boulevard and El Camino Avenue corridor segments and provides conceptual designs for safety improvements. The conceptual safety improvements are intended to slow down people driving, make it easier to cross the street, and improve safety for those walking, biking, and rolling along the corridor.

Table 11: Top 10 Collision Locations by Mode

Intersection	All Collisions	Collisions Involving People Bicycling	Collisions Involving People Walking	Top Ten Locations – Number of Modes
Del Paso Blvd/El Camino Ave	●	-	●	2
Del Paso Blvd/Frienza Ave	-	●	●	2
Marysville Blvd/Grand Ave	●	-	●	2
Marysville Blvd/Roanoke Ave	●	-	●	2
Royal Oaks Dr/Arden Way	●	-	●	2
Altos Ave/Acacia Ave	-	●	-	1
Arcade Blvd/Kenwood St	-	●	-	1
Belden St/South Ave	-	●	-	1
Canterbury Rd/Leisure Ln	-	●	-	1
Del Paso Blvd/Evergreen St	●	-	-	1
Del Paso Blvd/Glenrose Ave	●	-	-	1
Del Paso Blvd/Plaza Ave	-	●	-	1
Empress St/El Camino Ave	-	-	●	1
Evergreen St/Arden Way	-	●	-	1
Marysville Blvd/Harris Ave	-	-	●	1
Marysville Blvd/Los Robles Ave	●	-	-	1
Marysville Blvd/Los Robles Blvd	-	-	●	1
Norwood Ave/Jessie Ave	●	-	-	1
Oxford St/Arden Way	-	-	●	1
Rio Linda Blvd/Eleanor Ave	●	-	-	1
Rio Linda Blvd/Grand Ave	●	-	-	1
Rio Linda Blvd/Harris Ave	-	●	-	1
Rio Linda Blvd/Jessie Ave	-	●	-	1
Rio Linda Blvd/Las Palmas Ave	-	-	●	1
Rio Linda Blvd/Rivera Dr	-	●	-	1

Source: SWITRS, 2016 -2020

Figure 25: High Injury Network and Top Collision Locations in Plan Area (Bicycling and Walking)

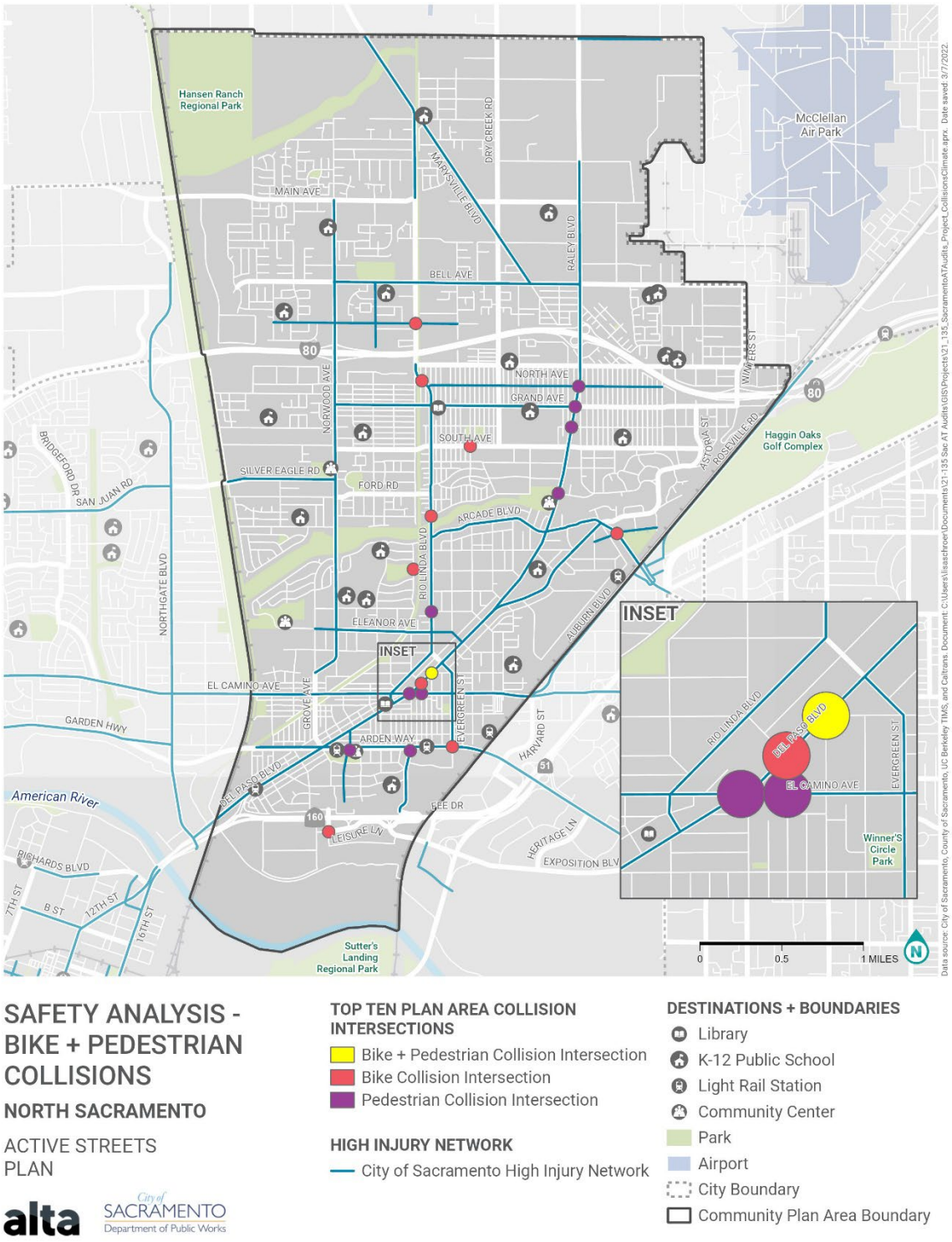
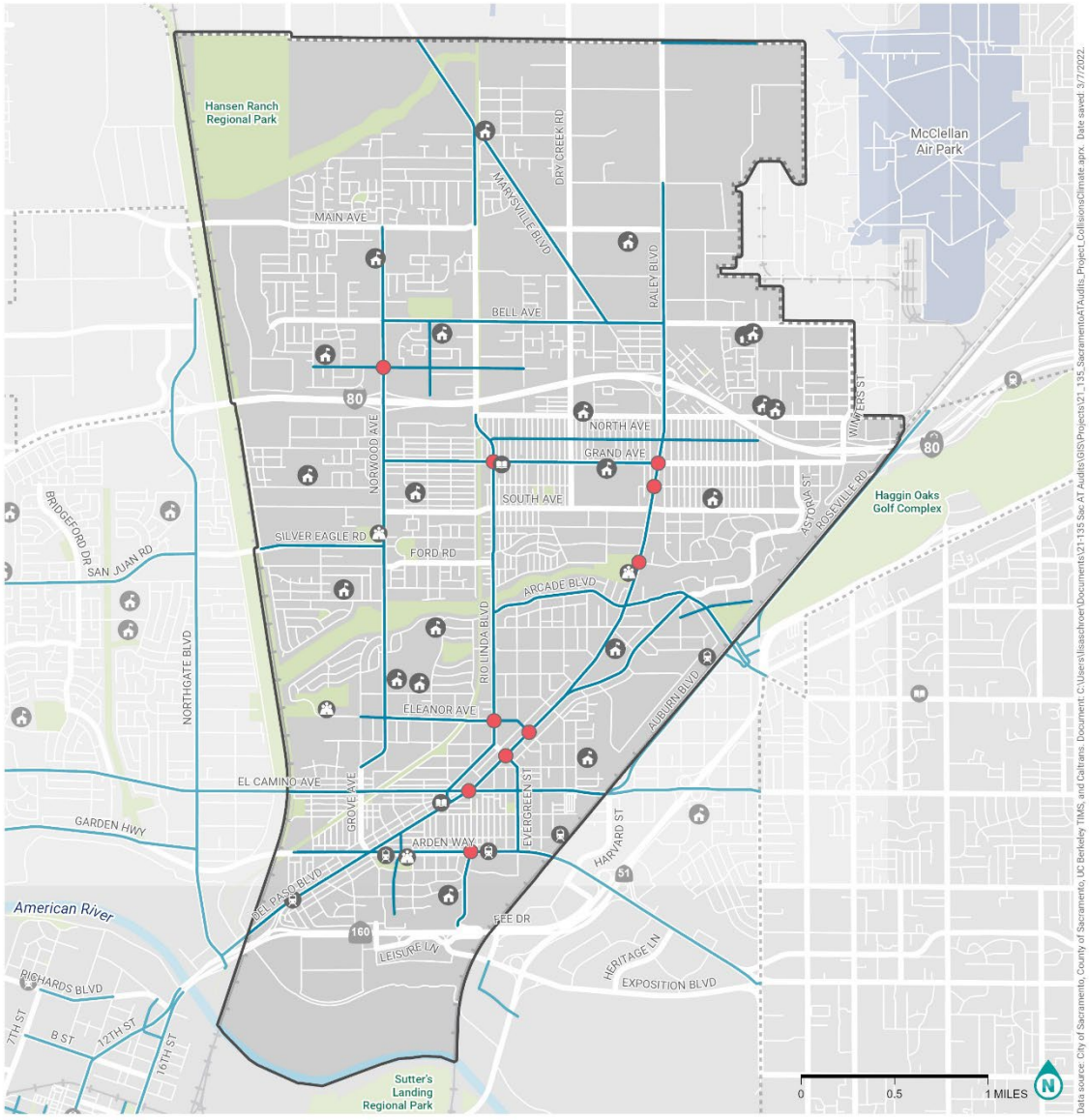


Figure 26: High Injury Network and Top Collision Locations in Plan Area (All Modes)



SAFETY ANALYSIS - All MODES COLLISIONS

NORTH SACRAMENTO

ACTIVE STREETS PLAN

alta

City of SACRAMENTO Department of Public Works

HIGH INJURY NETWORK AND TOP TEN COLLISION INTERSECTIONS

- City of Sacramento High Injury Network
- Collision Intersection (All Modes)

DESTINATIONS + BOUNDARIES

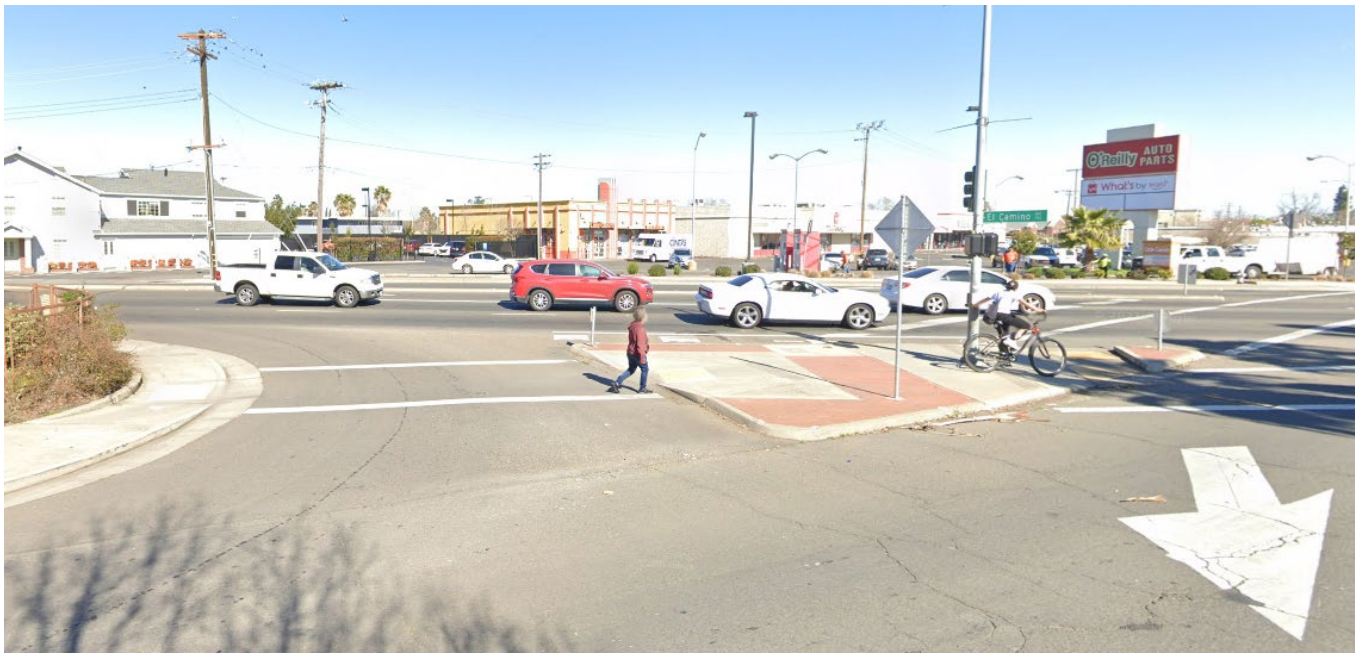
- Library
- K-12 Public School
- Light Rail Station
- Community Center
- Park
- Airport
- City Boundary
- Community Plan Area Boundary

Collision Analysis Summary

The collision analysis above indicates that moderate speed (35 – 45 mph) arterial roadways in the North Sacramento area represent a potential barrier and safety concern for active transportation users. While arterial roadways provide efficient movement of vehicles, they often act as barriers to active transportation modes due to the perceived and potential safety hazards. Between 2016 -2020, 35% of all collisions involving people bicycling and 43% of all collisions involved people walking in the North Sacramento area occurred on roadways with 35-45 mph speeds, a typical posted speed limit for arterial roadways. Between 2016 and 2020, nearly all KSI collisions occurred along arterial roadways in North Sacramento (**Figure 20** and **Figure 21**). Data highlights that a majority of bicycle and pedestrian crashes occurred along roadway segments rather than at intersections; 52% of all collisions involving a person bicycling and 62% of all collisions involving a person walking occurred along roadway segments on roadway with posted speeds of 45 mph and below. Focusing on improving safety for people walking and biking along the roadway and enhancing mid-block crossing facilities would help address this type of crash.

It is important to note that North Sacramento has a large number of offset or skewed intersections. Roadways which do not follow a traditional grid pattern, especially Marysville Boulevard and Del Paso Boulevard, create skewed intersections with long crossing distances for people walking. These roadways also include vehicle channelization lanes or "slip lanes" (**Figure 27**) which help to prioritize the movement of vehicles at the detriment of people walking and biking. A total of seven (7) of the Top Ten Collision intersections involving someone walking (**Table 9**) are skewed intersections. These intersections present an opportunity to improve safety for those crossing the street by reducing crossing distances for people and minimizing intersection corner radii to reduce speeds of turning vehicles.

Figure 27. Vehicle channelization lane at the El Camino Ave / Del Paso Blvd intersection



To: Leslie Mancebo, Project Manager; Andrew Hart, Fruitridge Broadway Plan Area Lead; City of Sacramento

From: Mauricio Hernández, Project Manager; Cole Peiffer, Assistant Project Manager / Fruitridge Broadway Plan Area Lead

Date: March 30, 2022

Re: Sacramento Active Streets Plans – Fruitridge-Broadway Area Profile

---

Project Introduction

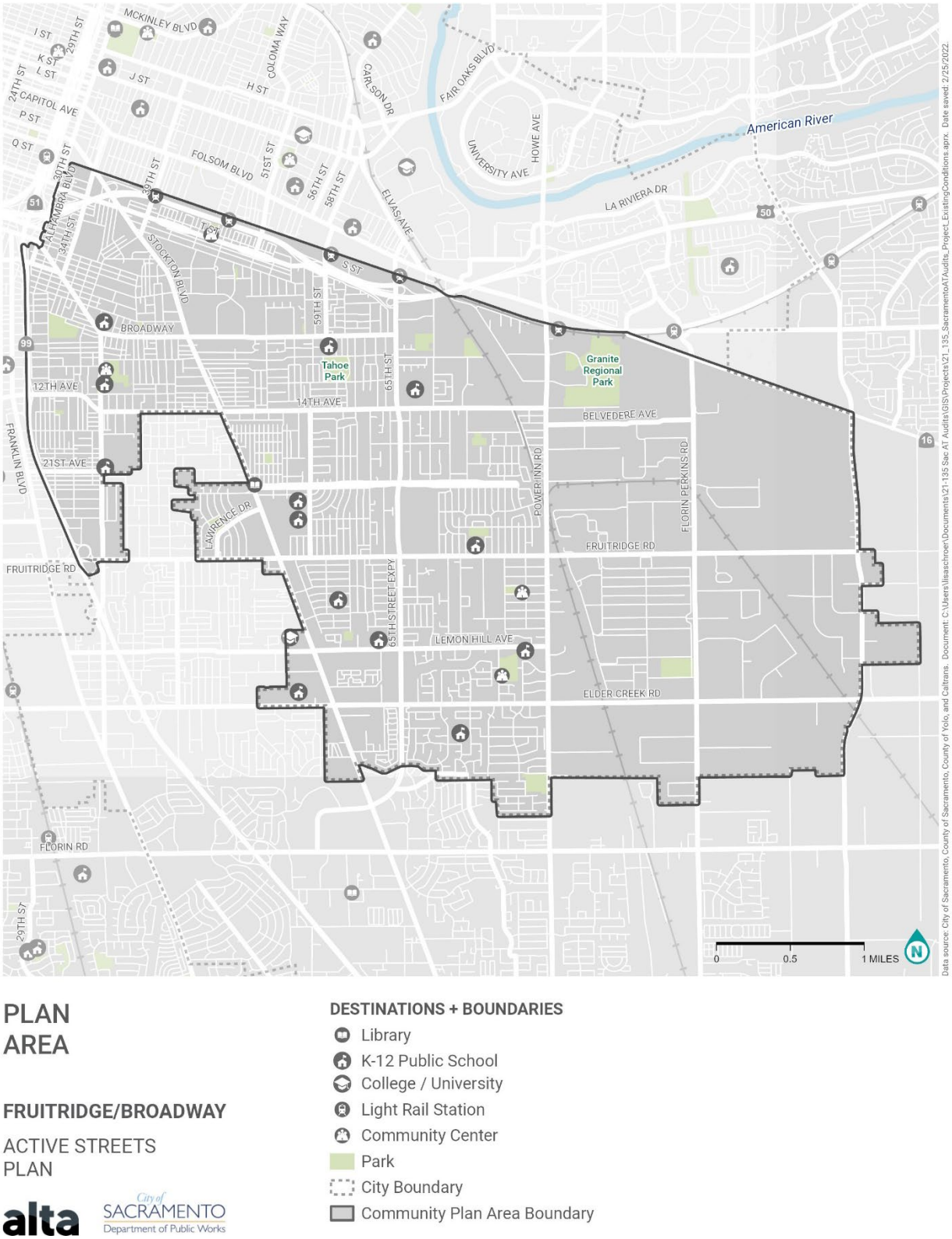
The Sacramento Active Streets Plans focus on understanding the specific needs and barriers for people walking, biking, rolling, and accessing transit in three distinct community plan areas: Fruitridge-Broadway, North Sacramento, and South Sacramento. This plan takes a granular view of active transportation and seeks to work in partnership with each community to develop implementable solutions to improve safety and mobility, and eliminate barriers to access. This project will focus on working collaboratively with a diverse range of community residents, community groups, City departments, and other interested parties. The final project will identify feasible bicycling, walking, and ADA improvements in each community plan area and provide a path to implementation.

Fruitridge-Broadway Area Profile

Introduction

This Area Profile provides a detailed look at the existing facilities, demographics, and data points for the Fruitridge-Broadway area (see **Figure 1** below). Community identified needs and deficiencies will be reflected in the Community Needs Summary. Information included here will support public outreach and will be incorporated into the final Active Streets Plan for the area.

Figure 1: Fruitridge-Broadway Plan Area Map



Plan Review Summary

The project team reviewed 19 prior planning documents that provide policy, program, and infrastructure recommendations across the City of Sacramento within the Fruitridge-Broadway area. These recommendations promote active transportation, improve street safety, and support climate change goals. The documents reviewed are listed below. A detailed summary of the plans reviewed is in **Appendix A**.

Citywide Plans

- Bicycle Master Plan (2016; amended 2018), City of Sacramento
- Complete Streets Policy (2019), City of Sacramento
- Criteria and Guidance for Creative Crosswalks (2021), City of Sacramento
- Design and Procedure Manual Section 15 – Street Design Standards (2009), City of Sacramento
- Pedestrian Crossing Guidelines – Treatment Applications Guide (2021), City of Sacramento
- Pedestrian Master Plan (2006), City of Sacramento
- Vision Zero Sacramento Action Plan (2018), City of Sacramento
- Vision Zero School Safety Study (2021), City of Sacramento
- Vision Zero Top 5 Corridors (2020), City of Sacramento

Fruitridge-Broadway Focused Plans and Reports

- Fruitridge Broadway Community Plan (2015)
- Oak Park Active Travel Study (2017), Oak Park Neighborhood Association
- Sacramento Center for Innovation (2013; amended 2018), City of Sacramento
- Southeast Sacramento Bicycle and Pedestrian Access Study (2008), Sacramento Housing and Redevelopment Agency
- Stockton Boulevard Corridor Plan (2021), City of Sacramento

Fruitridge-Broadway Focused Walk Audit Reports

- Elder Creek Elementary School Walk Audit Report (2020), WalkSacramento (Civic Thread)
- Fruitridge Walk Audit Report (2019), Sacramento County Public Health
- Oak Ridge Elementary School Walk Audit Report (2019), WalkSacramento (Civic Thread)
- Peter Burnett Elementary School Walk Audit Report (2018), WalkSacramento (Civic Thread)
- Will C. Wood Middle School Walk Audit Report (2019), WalkSacramento (Civic Thread)

Community Overview and Resources

The information contained in this section important to help strategize about the most effective ways to engage with the community.

Plan Area, Community Demographics, and Community Resources

The Fruitridge-Broadway plan area, seen in **Figure 1**, is bound roughly by U.S. Highway 50 (US-50) and Jackson Road to the north, State Route 99 (SR-99) and Stockton Boulevard to the west, the city limits to the south, and Watt Avenue to the east. Areas of unincorporated Sacramento County border the plan area to the west, south, and east below Fruitridge Boulevard. Fruitridge-Broadway wraps around an area of unincorporated Sacramento County known as the "Fruitridge Finger," located south of 14th Avenue between Stockton Boulevard and Martin Luther King Jr. Boulevard. There are 28 City-designated neighborhoods within the plan area, listed in **Table 1**. Distinct neighborhoods identified by the City are available through the City designated neighborhood map on the City's website.[1]

Table 1: Fruitridge-Broadway City-Designated Neighborhoods

Neighborhoods			
Avondale	Elder Creek	Lawrence Park	South Oak Park
Belvedere	Elmhurst	Med Center	Southeast Village
Central Oak Park	Fairgrounds	Morrison Creek	Tahoe Park
Colonial Heights	Florin Fruitridge Industrial Park	New Brighton	Tahoe Park East
Colonial Manor	Fruitridge Manor	North Oak Park	Tahoe Park South
Colonial Village	Glen Elder	Power Ridge	Tallac Village
Depot Park	Granite Regional Park	Ramona Village	West Tahoe Park

Over 82,000 residents live in Fruitridge-Broadway. The population is fairly evenly split in gender, with 51% women and 49% men. This area of the city has a younger population compared to the rest of the city: 49% of residents are 34 years old or younger and only 13% of the population is 65 or older.[2] **Figure 2**, below, provides a breakdown of the population by age and gender within Fruitridge Broadway. **Figure 3** provides a comparison to the entire City of Sacramento. **Table 2** compares the racial breakdown of plan area residents to the city and state. The community is made of the following: Asian residents account for 20%; Black/African American residents account for about 10% of the population; residents of Hispanic descent (14%) and; white residents account for 46% of the population.[3] The racial profile of the community is presented in **Figure 4**.

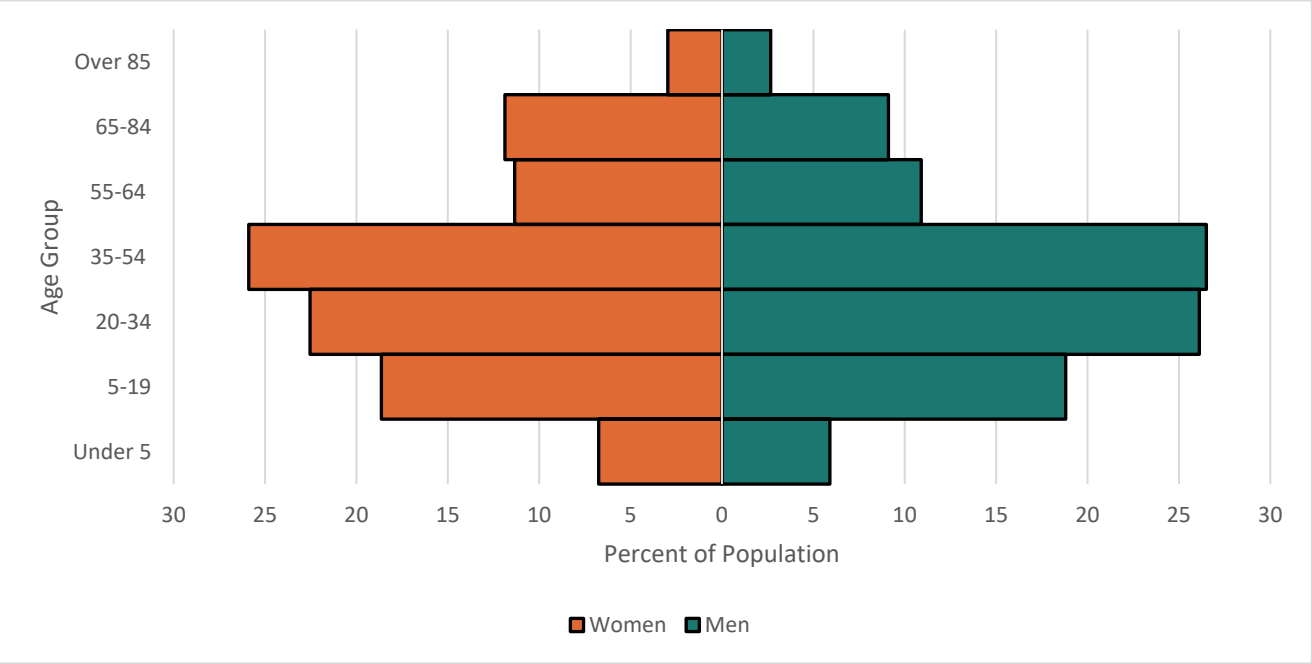
[1] City of Sacramento Neighborhoods map: https://www.cityofsacramento.org/-/media/Corporate/Files/GIS/Maps/Neighborhoods_E.pdf?la=en
[2] American Community Survey 2015 - 2019
[3] American Community Survey 2015 - 2019

Table 2: Fruitridge-Broadway Race/Ethnicity

Demographics			
Race	Fruitridge-Broadway	City of Sacramento	California
African American or Black	10%	13%	5%
American Indian	1%	1%	1%
Asian	20%	19%	15%
Hispanic	14%	28%	39%
Native Hawaiian	1%	2%	1%
Two or More Races	8%	5%	3%
White	46%	32%	36%

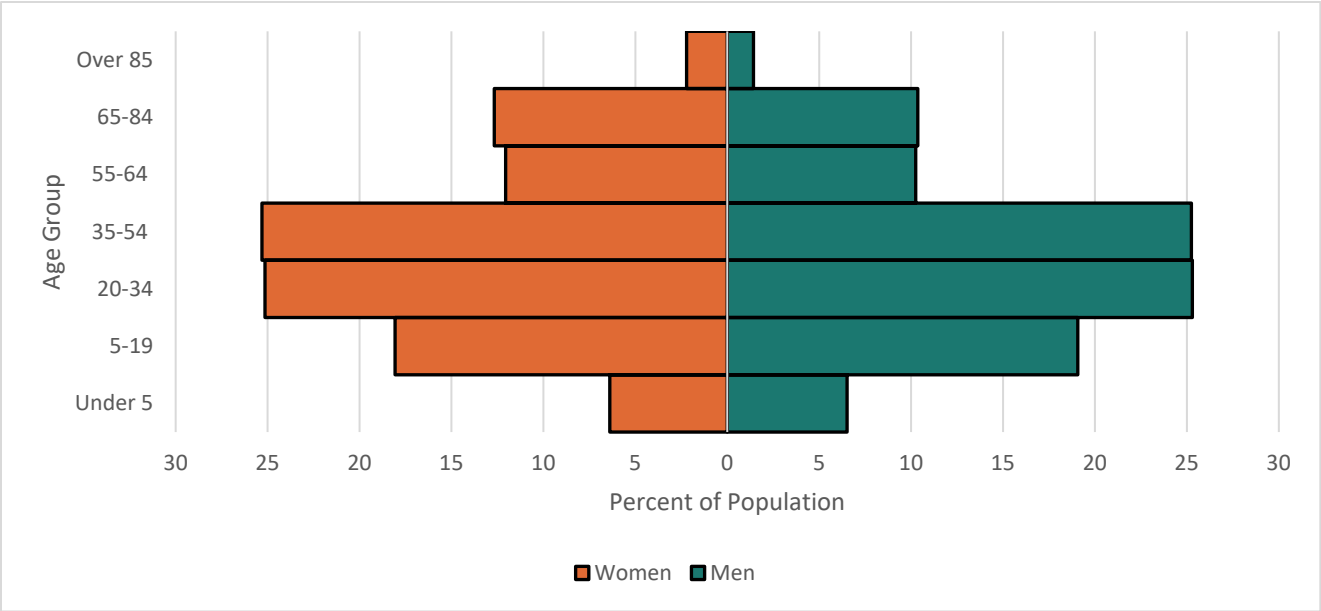
Source: American Community Survey, 2015-2019

Figure 2: Population: Fruitridge Broadway Gender and Age



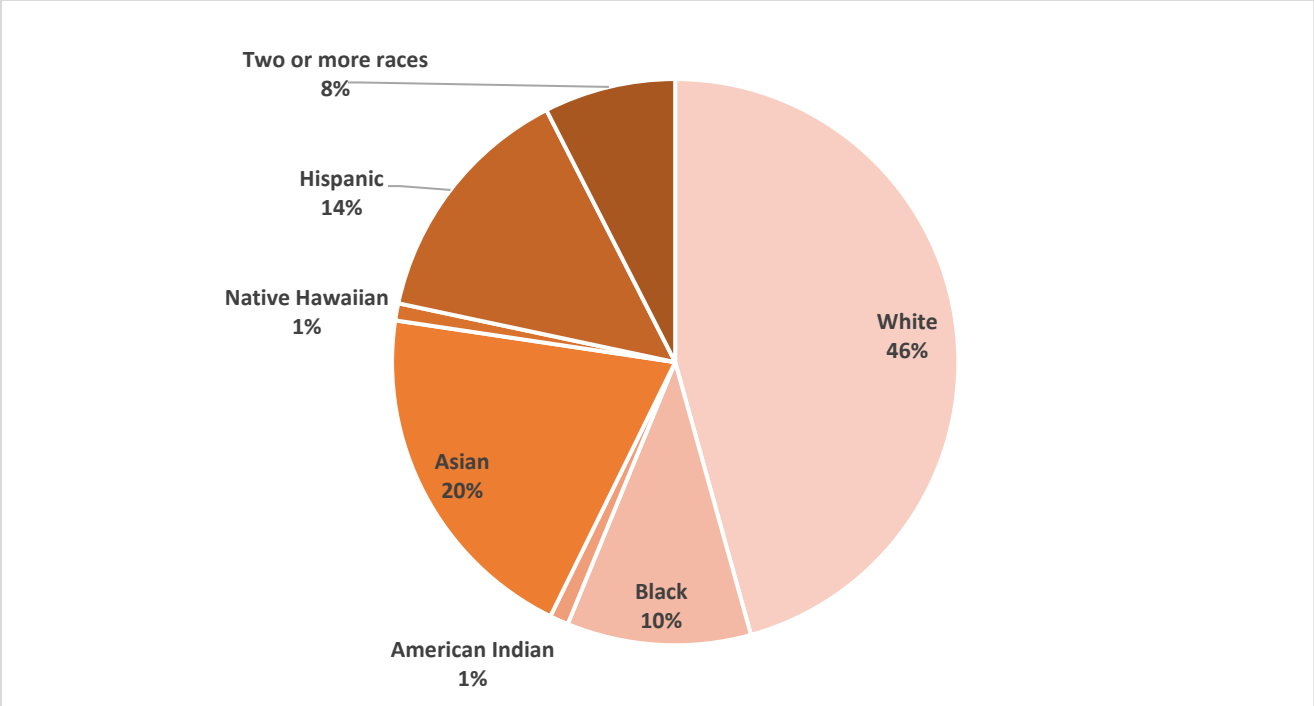
Source: American Community Survey, 2015-2019

Figure 3: Population: City of Sacramento Gender and Age



Source: American Community Survey, 2015-2019

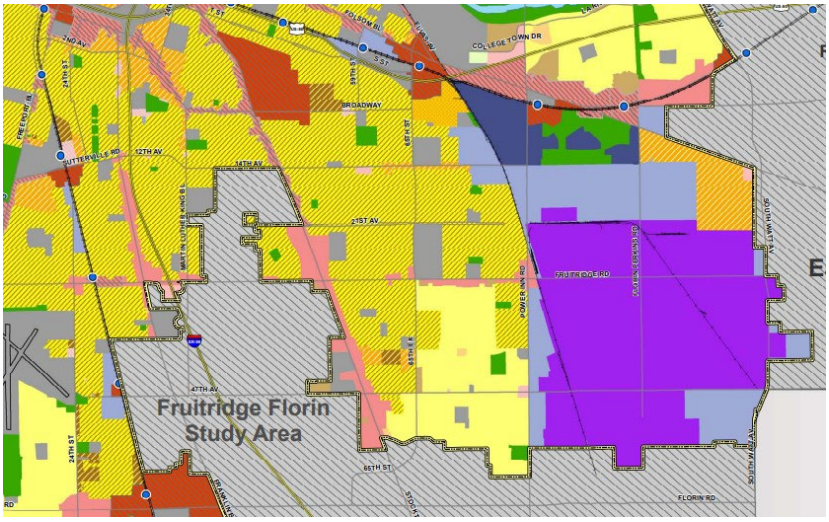
Figure 4: Population: Race



Source: American Community Survey, 2015-2019

Land Use and Activity Generators

Figure 5 Excerpt of Sacramento 2030 General Plan Land Use Map



There are two distinct areas of land uses within the Fruitridge-Broadway plan area, roughly divided east and west by Power Inn Road / the Union Pacific (UP) rail tracks, shown in **Figure 5.**[4]

West of Power Inn Road, the land use is primarily residential with numerous residential neighborhoods, schools, parks, community centers, and other community destinations. Stockton Boulevard is the primary commercial corridor through the entire western portion of the plan area. Along the northern section of Stockton Boulevard (north of Broadway), there are two major employment centers, the California Department of Justice building and the UC Davis Medical/Shriners Hospital for Children campus. While outside of the plan area, California State University, Sacramento (Sac State) is just north of the plan area on the north side of US-50. The University of the Pacific, McGeorge School of Law is located east of SR-99, near 5th Avenue. All 13 elementary, middle, or high schools within the plan area are located to the west of Power Inn Road. A relatively isolated residential development marketed towards Sac State students exists between Power Inn Road and the UP tracks on Ramona Avenue south of US-50.

East of Power Inn Road, land uses are primarily industrial save for the large Granite Regional Park office complex along the northern border of the plan area. This section of the plan area has significantly higher volumes of truck traffic serving the various warehouses and industrial and manufacturing sector businesses. There are a small number of parks east of Power Inn Road, including Army Depot Park and Granite Regional Park. Cristo Rey High School is located north of Granite Regional Park at Florin Perkins Road/Jackson Road.

Commute Profile

Within the Fruitridge-Broadway area, 88% of workers drive to work (either alone or carpooling). 77% of all workers drive alone. Black residents use public transit at a higher rate (6%) compared to 2% or 3% for all other races. American-Indian residents walk at a rate (4%) slightly higher than other races.[5] **Table 3** below provides a complete breakdown of commute modes by race.

[4] On the City of Sacramento land use maps, yellow colors indicate residential uses of varying densities; blue uses indicate employment centers of various intensities; and purple colors indicate industrial uses. The complete zoning map can be accessed here: https://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/Maps/GP_CitywideLandUse_30x40.pdf?la=en

[5] American Community Survey, 2015 - 2019

Table 3: Commute to Work by Race

Race	Drive alone	Carpool	Transit	Walk	Bike/Taxi/ Motorcycle	Work from home
Native Hawaiian or Alaskan	80%	10%	2%	1%	3%	4%
White	79%	8%	2%	1%	2%	8%
American Indian	78%	12%	3%	4%	1%	2%
Asian	78%	12%	2%	1%	2%	5%
Hispanics	77%	13%	2%	2%	2%	4%
Other Race	77%	14%	2%	2%	2%	3%
Two or more races	76%	11%	3%	2%	3%	6%
Black	74%	9%	6%	2%	2%	7%
AVERAGE	**77%**	**11%**	**3%**	**2%**	**2%**	**5%**

Source: American Community Survey, 2015-2019

Community Equity Profile

This section identifies the areas and population within the Fruitridge-Broadway plan area that has the greatest need for active transportation improvements and is disproportionately burdened by social, environmental, health, and economic factors.

Environmental Health – *CalEnviroScreen 4.0*

The CalEnviroScreen 4.0[6] analysis is based on two combined indicators Pollution Burden (i.e., exposures and environmental effects) and Population Characteristics (i.e., sensitive populations and socioeconomic factors). Together, 21 statewide indicators compose the analysis. The top 25 percent of census tracts are typically considered the most disadvantaged at the statewide level and have been targeted for Greenhouse Gas Reduction funding through Senate Bill 535. Overall scores for each census tract within the plan area are shown in **Figure 6**. Higher scores indicate worse pollution and population indicators. **Figure 7** and **Figure 8** show the Pollution Burden and Population Characteristics scores, respectively.

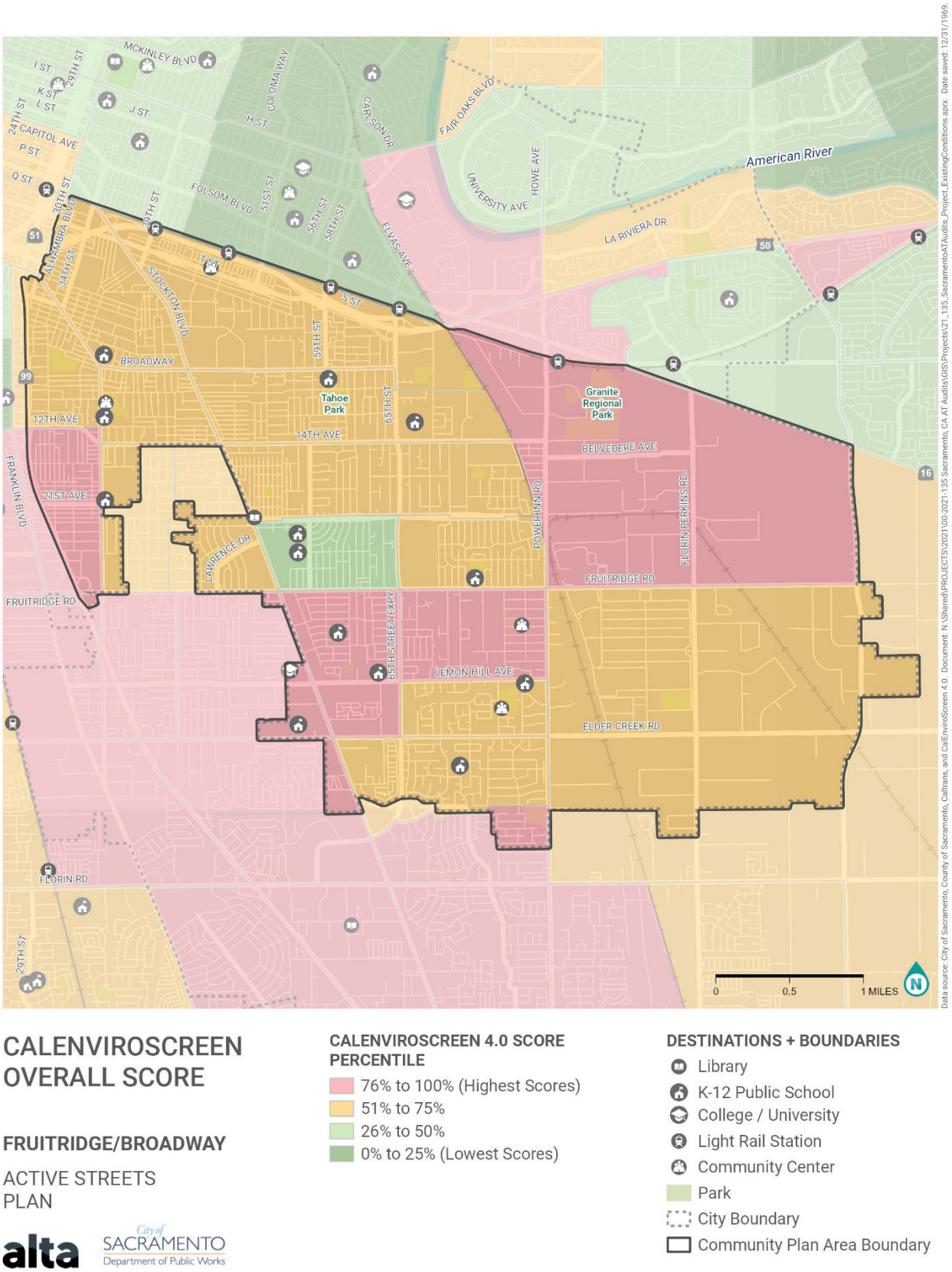
Overall Score

There are five census tracts within the plan area that score within the top 25 percent overall.

- Two disadvantaged areas are along the southern border, one near Danny Nunn Park in the Glen Elder neighborhood and the tract southwest of 47th Avenue and Stockton Boulevard.
- To the west, the census tract south of 12th Avenue between Martin Luther King Jr. Boulevard and the city limit in the South Oak Park neighborhood also scored above the 75th percentile. Christian Brothers High School, Oak Ridge Elementary, and Father Keith B. Kenny Elementary school directly border this area.

[6] CalEnviroScreen 4.0 available here: https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40

Figure 6: CalEnviroScreen 4.0 – Overall Score



- The fourth area represents a significant portion of the Avondale and Fruitridge Manor neighborhoods between Power Inn Road to the east, Fruitridge Road to the north, and Stockton Boulevard to the west.
- The fifth area is a large tract that occupies the northern half of the plan area east of Power Inn Road. While there are relatively few residences in this area, it does contain Granite Regional Park and the Power Inn Sacramento Regional Transit (SacRT) light rail station.

Pollution Burdens

As shown in **Figure 7**, the locations with the highest pollution burden are located east of Power Inn Road and the UP tracks in the industrial areas and the tracts to the north that include US-50. Areas with high concentrations of industrial land uses typically experience increased air pollutants from a higher proportion of truck traffic, manufacturing emissions, and close proximity to highways where a significant amount of air pollution is generated.

Population Characteristics

The west and southwestern segments of the plan area scored above the 75th percentile for population characteristics (**Figure 8**) that are the most vulnerable to pollution. Population characteristics that result in increased vulnerability to pollution include the following indicators:

- Asthma
- Cardiovascular disease
- Low birth weight infants
- Educational attainment
- Housing burden
- Linguistic isolation
- Poverty
- Unemployment

Figure 7. CalEnviroScreen 4.0 Pollution Burden

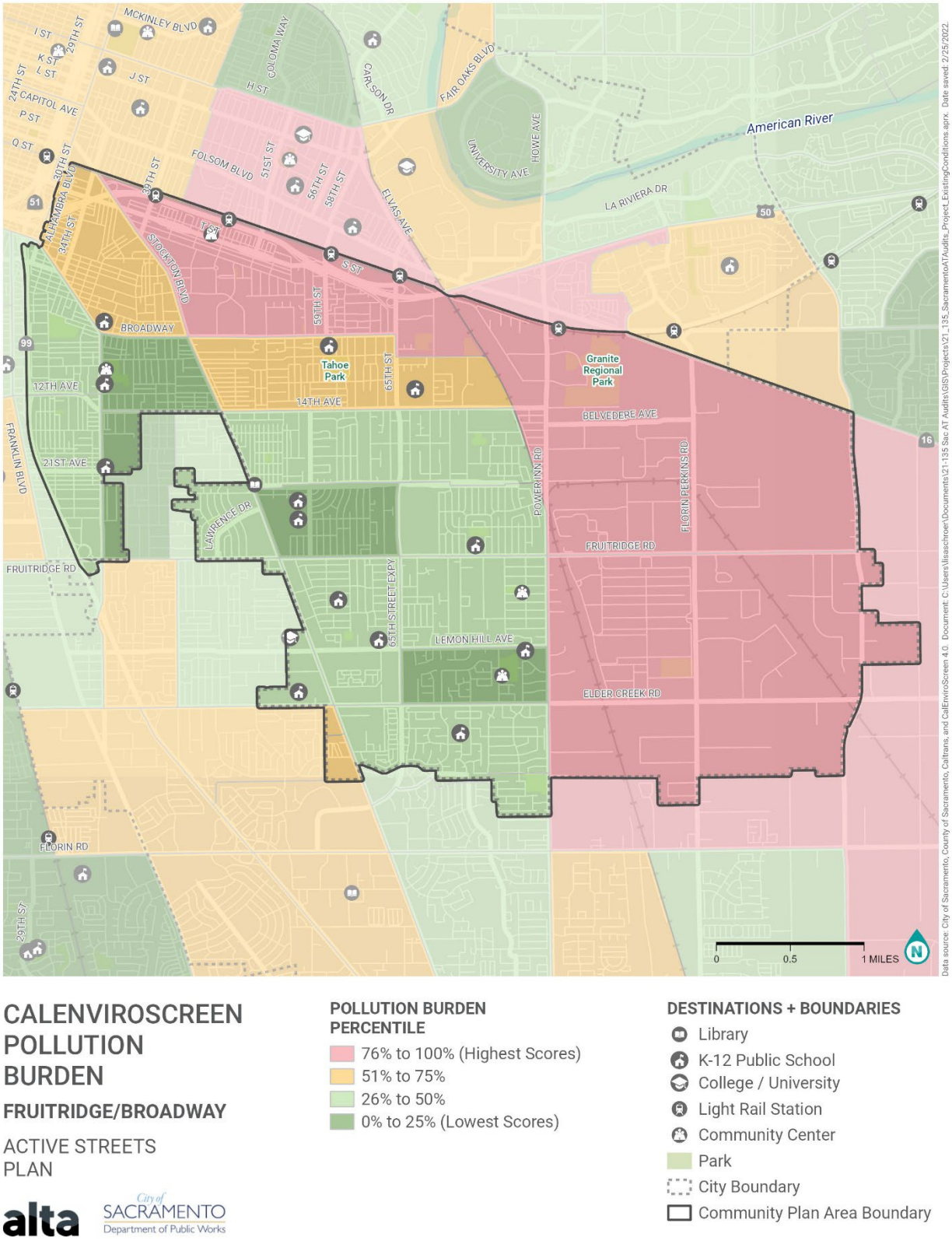
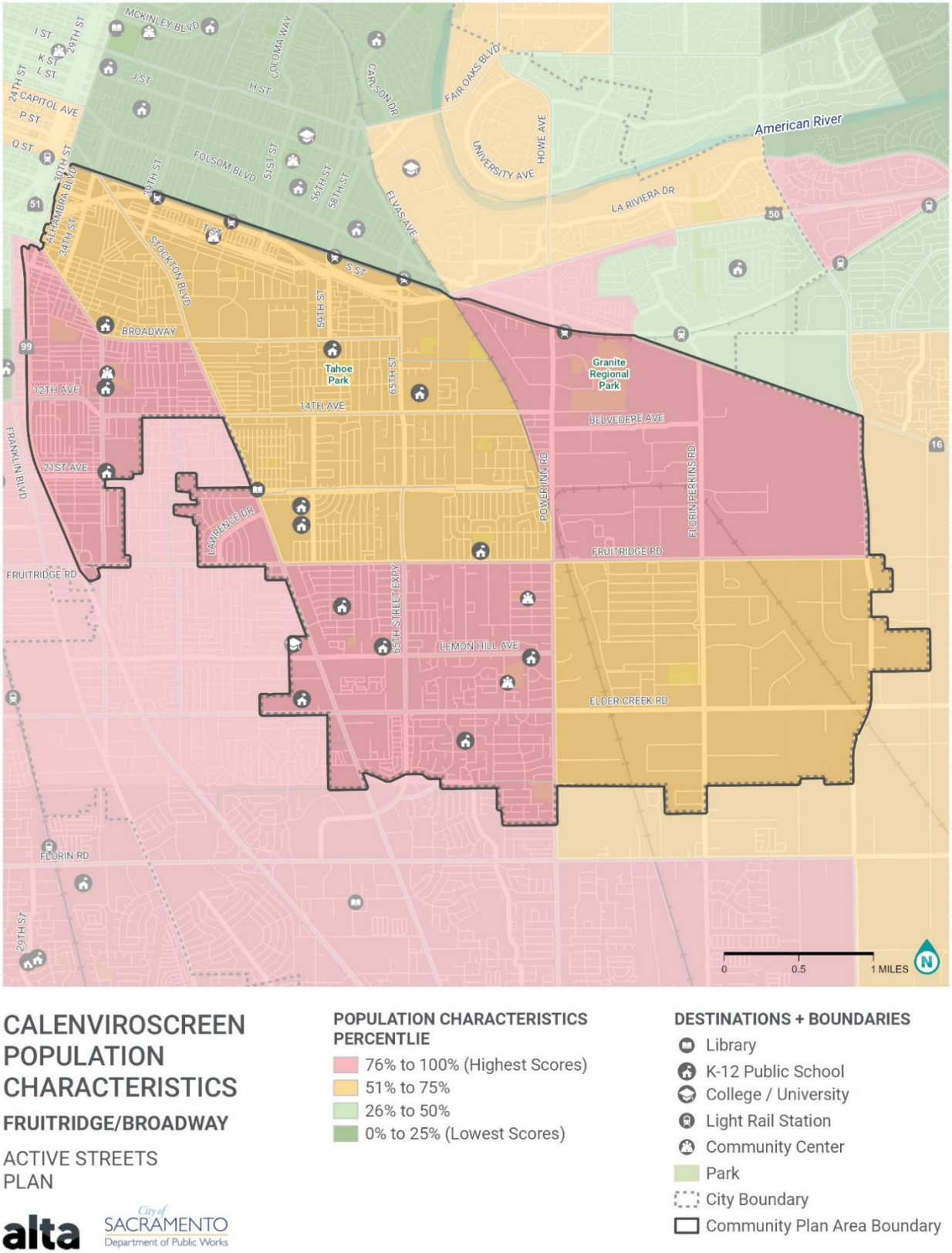


Figure 8: CalEnviroScreen 4.0 Population Characteristics



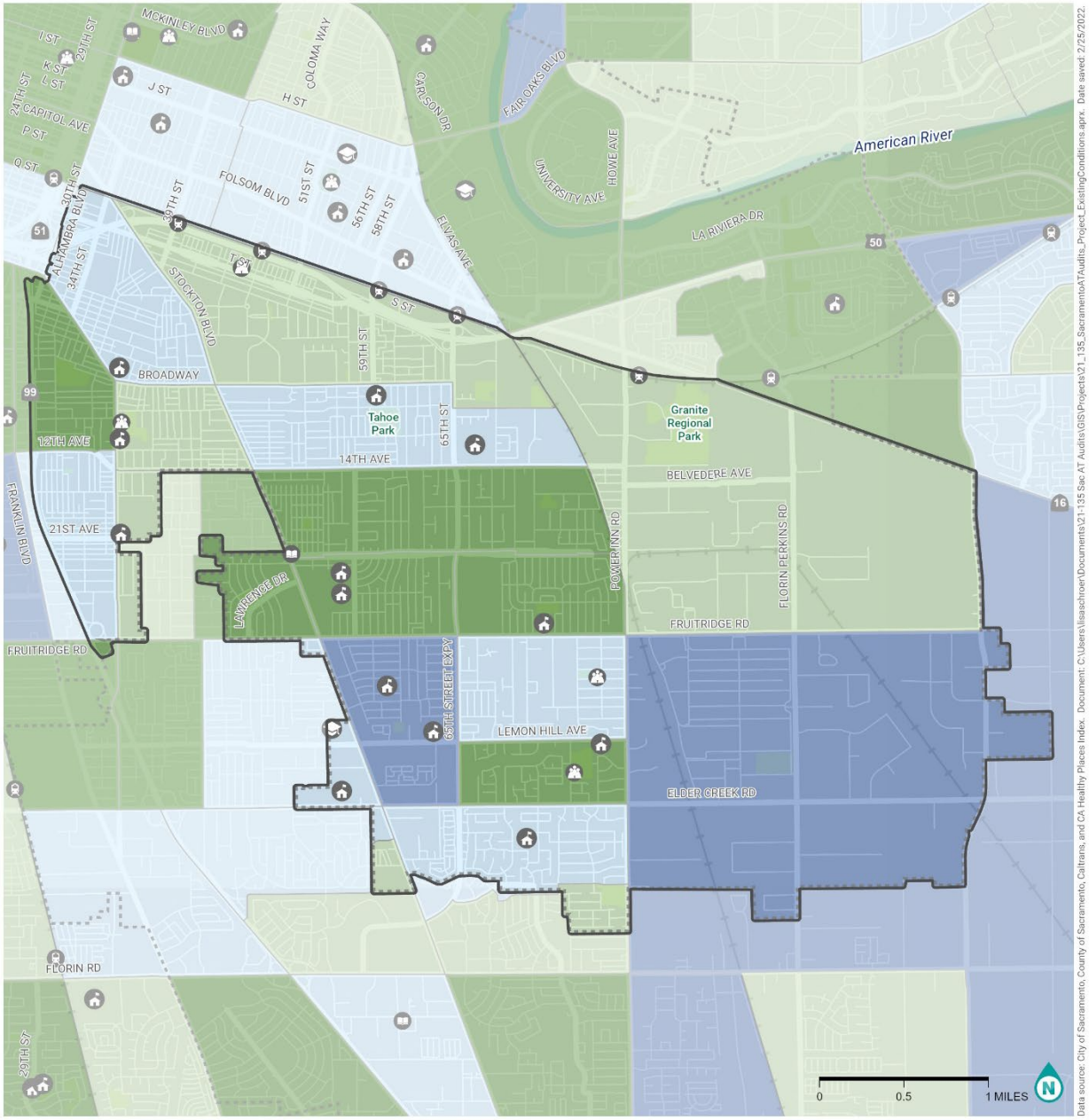
Public Health - *Healthy Places Index*

The Healthy Places Index (HPI),[7] developed by the Public Health Alliance of Southern California, provides valuable insights into specific public policy and health considerations. The overall HPI index is a composite of 25 individual metrics. Two of the most important metrics for increased public health include access to parks and supermarket access. Parks are important community assets and provide outdoor open space and places to play, exercise, and recreate. **Figure 9** displays the park access of residents in the Fruitridge-Broadway area.[8] There are parks distributed throughout the plan area, including two in the industrial areas east of Power Inn Road. About half of the area's residents live within a half-mile of a large park. In areas further from larger parks, residents can visit small neighborhood parks throughout the plan area. The City's Youth, Parks, and Recreation Enrichment (YPCE) Department recently completed a similar Park Access and Equity analysis which are available through the Trust for Public Land website.[9]

Having access to a supermarket can improve residents' health by encouraging a better diet, reducing chronic disease, and lowering the risk of food insecurity.[10] At least half of the population in census tracts located in residential areas live within at least half a mile of a supermarket. However, Southeast Village and Glen Elder neighborhood residents must travel further, on average, than other community members to reach a grocery store. Residents within the South Oak Park neighborhood, closest to the eastern city limit, also have to travel further, on average, to reach a grocery store, as noted in **Figure 10**.

[7] Available at: www.healthyplaceindex.com
[8] The Healthy Places Index Park metric indicates if residents are within a half-mile of a park that is 1 acre or greater in size. Small neighborhood or pocket parks do not register on this analysis
[9] Trust for Public Land – Park Access Score Tool: https://parkserve.tpl.org/mapping/index.html?CityID=PS0664000
[10] Food Trust and PolicyLink, 2013. Access to Healthy Food and Why It Matters: A Review of the Research, available at http://www.healthyfoodaccess.org/resources-tools/library/access-healthy-food-why-matters

Figure 9: Healthy Places Index – Park Access



PARK ACCESS - HEALTHY PLACES INDEX

FRUITRIDGE/BROADWAY

ACTIVE STREETS PLAN

alta

City of SACRAMENTO Department of Public Works

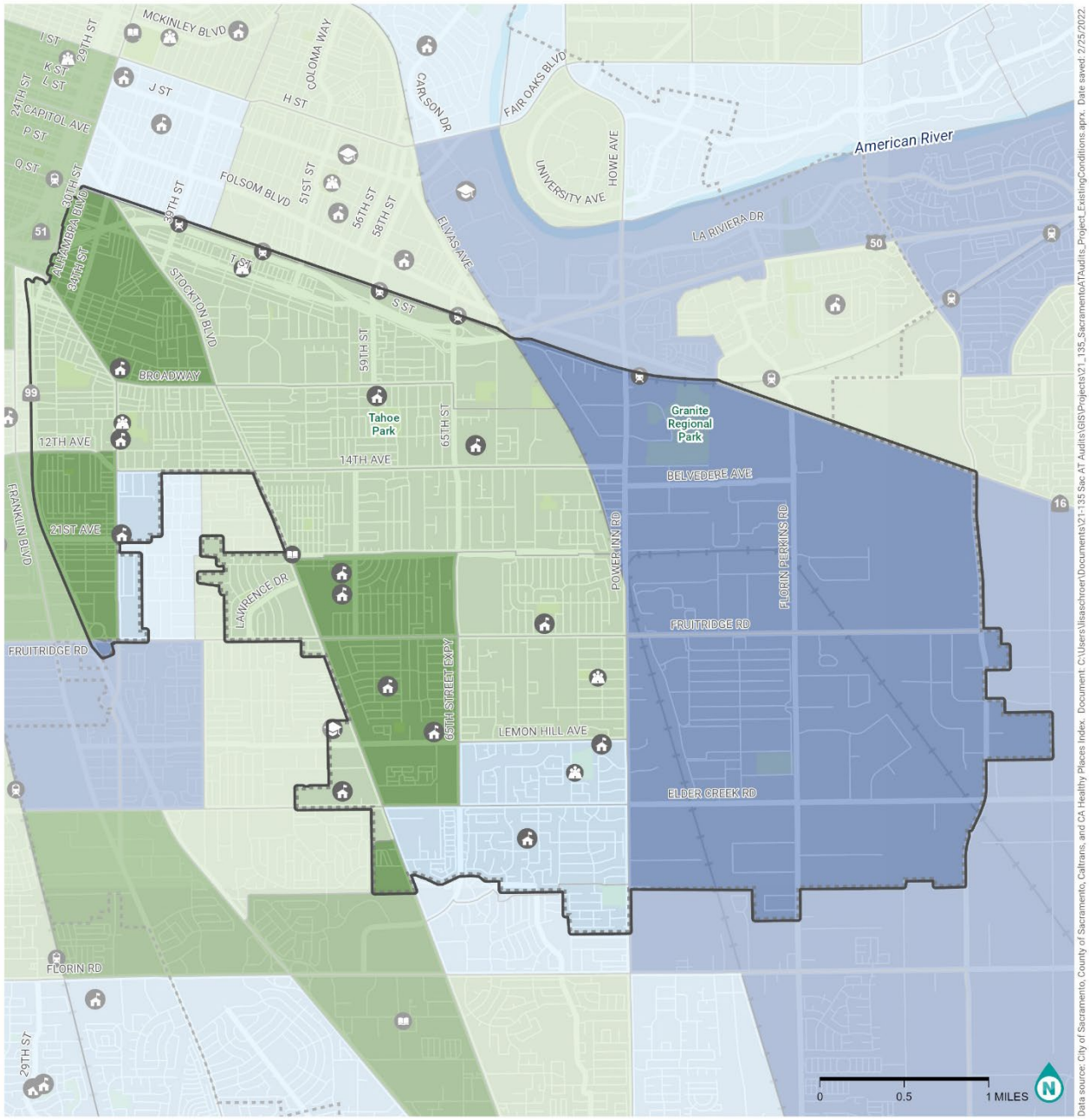
PARK ACCESS PERCENTILE

- 0% to 25% (Less Healthy Conditions)
- 26% to 50%
- 51% to 75%
- 76% to 100% (More Healthy Conditions)

DESTINATIONS + BOUNDARIES

- Library
- K-12 Public School
- College / University
- Light Rail Station
- Community Center
- Park
- City Boundary
- Community Plan Area Boundary

Figure 10: Healthy Places Index – Grocery Store Access



SUPERMARKET ACCESS - HEALTHY PLACES INDEX

FRUITRIDGE/BROADWAY

ACTIVE STREETS PLAN

alta

City of SACRAMENTO Department of Public Works

SUPERMARKET ACCESS PERCENTILE

- 0% to 25% (Less Healthy Conditions)
- 26% to 50%
- 51% to 75%
- 76% to 100% (More Healthy Conditions)

DESTINATIONS + BOUNDARIES

- Library
- K-12 Public School
- College / University
- Light Rail Station
- Community Center
- Park
- City Boundary
- Community Plan Area Boundary

Heat Vulnerability Analysis

Heat Health Action Index

The Heat Health Action Index[11] is comprised of several variables that represent heat vulnerability. Heat vulnerability is a metric that gauges the relative effects of *social vulnerability factors* (i.e., race, education age, income, transportation, etc.), *health factors* (i.e., physical disability, asthma, heart health, etc.), and *environmental factors* (land development, ozone, particulate matter, tree canopy, urban heat islands, etc.) to gauge how vulnerable communities may be to relative changes in temperature and increases in the number of heat events. The index is based on a score of 0-100 with lower scores indicating less heat vulnerability. The average summer temperature in California is projected to increase by 4-5 degrees Fahrenheit by the year 2100. As the average temperature increases the frequency and severity of extreme heat events, periods of relatively hotter and more humid conditions that impact the social, health, and environmental factors listed above, will also increase in frequency and severity.[12]

Figure 11 shows the Heat Health Action Index for the plan area. The more densely populated southern and western sections of the plan area have higher index ratings than the rest of the Fruitridge-Broadway area. Denser areas of Fruitridge-Broadway are more vulnerable to extreme heat due to higher concentration of people and potential for diverse impacts. The highest index score within the plan area is 67, located in the eastern edge of South Oak Park, in a tract shared with unincorporated County. As such, the tract with the lowest index score is the southern tract in the industrial area which has a relatively low population density. Based on CHAT analysis, having six or more extreme heat events is considered significant. There are no areas within Fruitridge-Broadway that are projected to have more than six annual extreme heat events.[13]

Tree Canopy Analysis

The analysis examines how much of a given area is covered by tree shade. The map also displays where city-maintained trees are within the plan area. **Figure 12** provides the results of a tree canopy analysis. **It is important to note that this map highlights the locations of city-maintained trees only and is not representative of every tree within the Plan area.** As shown on the map, these trees are typically concentrated in the northwestern corner of the Plan area. There are very few city trees in the industrial areas east of Power Inn Road, except near Granite Regional Park. Only one census tract has more than 20% tree canopy cover. No tracts south of Fruitridge Road and east of Stockton Boulevard have more than 9% tree canopy cover.[14] For comparison, the average tree canopy coverage across the City of Sacramento is 13.5%.

Bivariate Heat Analysis

A bivariate analysis was conducted combining both heat events and tree canopy cover. The results, shown in **Figure 13**, indicate that communities south of Fruitridge Road and west of Power Inn Road have the highest heat vulnerability (i.e., experience the most impacts from climate change) and represent the biggest opportunity for tree canopy improvement within the Fruitridge-Broadway area. Communities in the northwest part of the plan area (generally north of Broadway) have the lowest heat vulnerability within the area.

[11] Available at: www.cal-heat.org
[12] California Heat Assessment Tool, CHAT
[13] California Heat Assessment Tool, CHAT
[14] California Heat Assessment Tool, CHAT & City of Sacramento City Maintained Tree Data

Figure 11: Heat Health Index

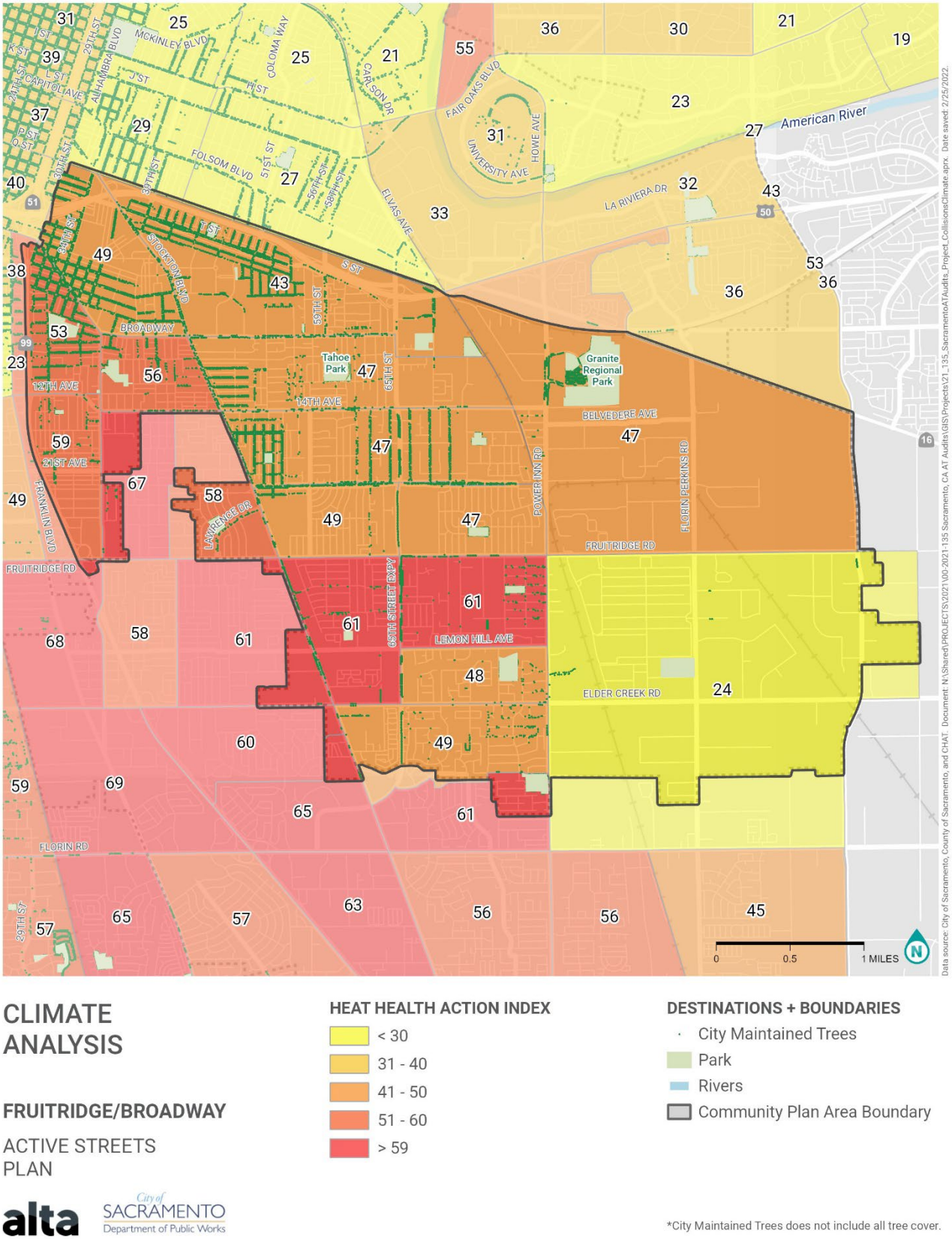


Figure 12: Tree Canopy Cover

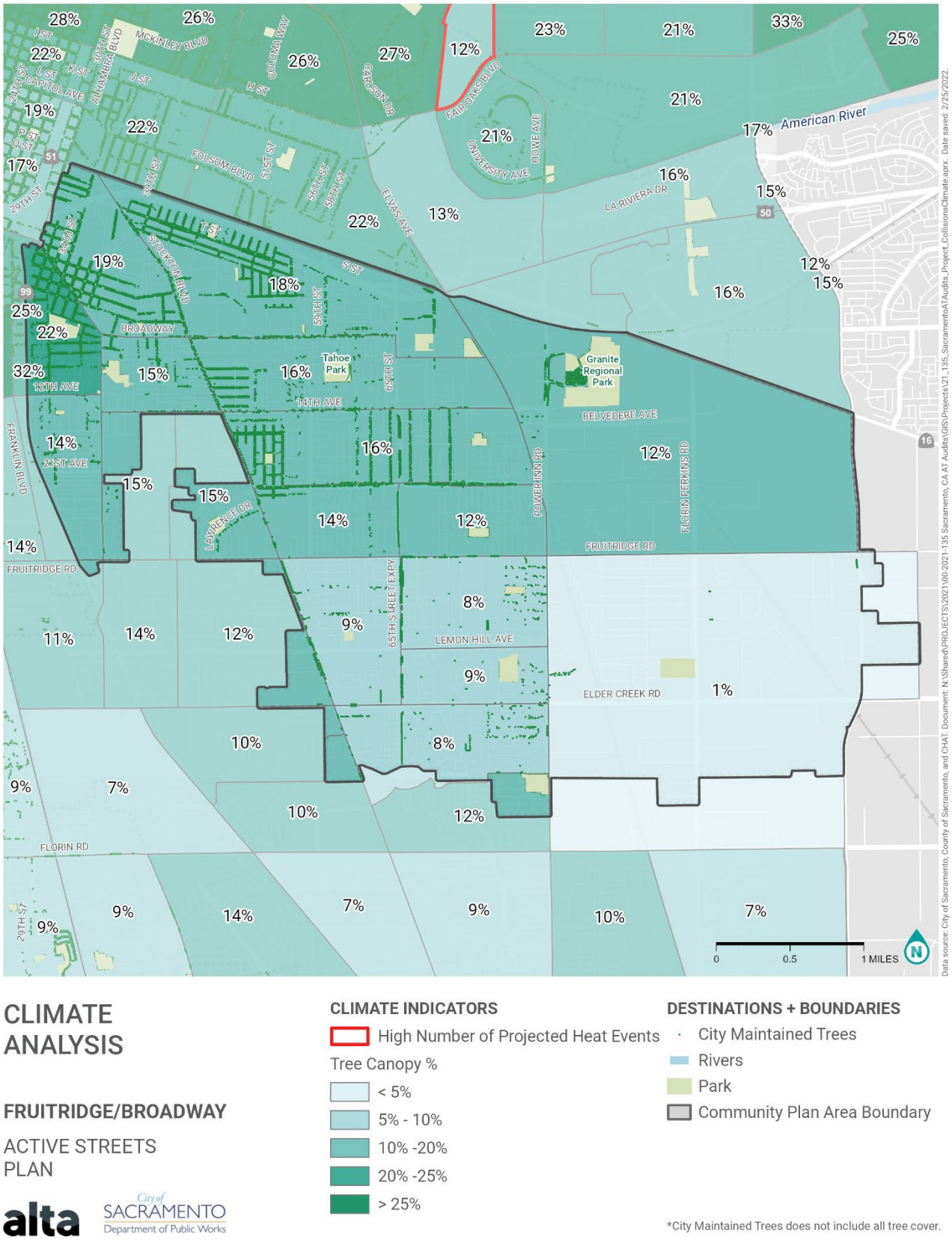
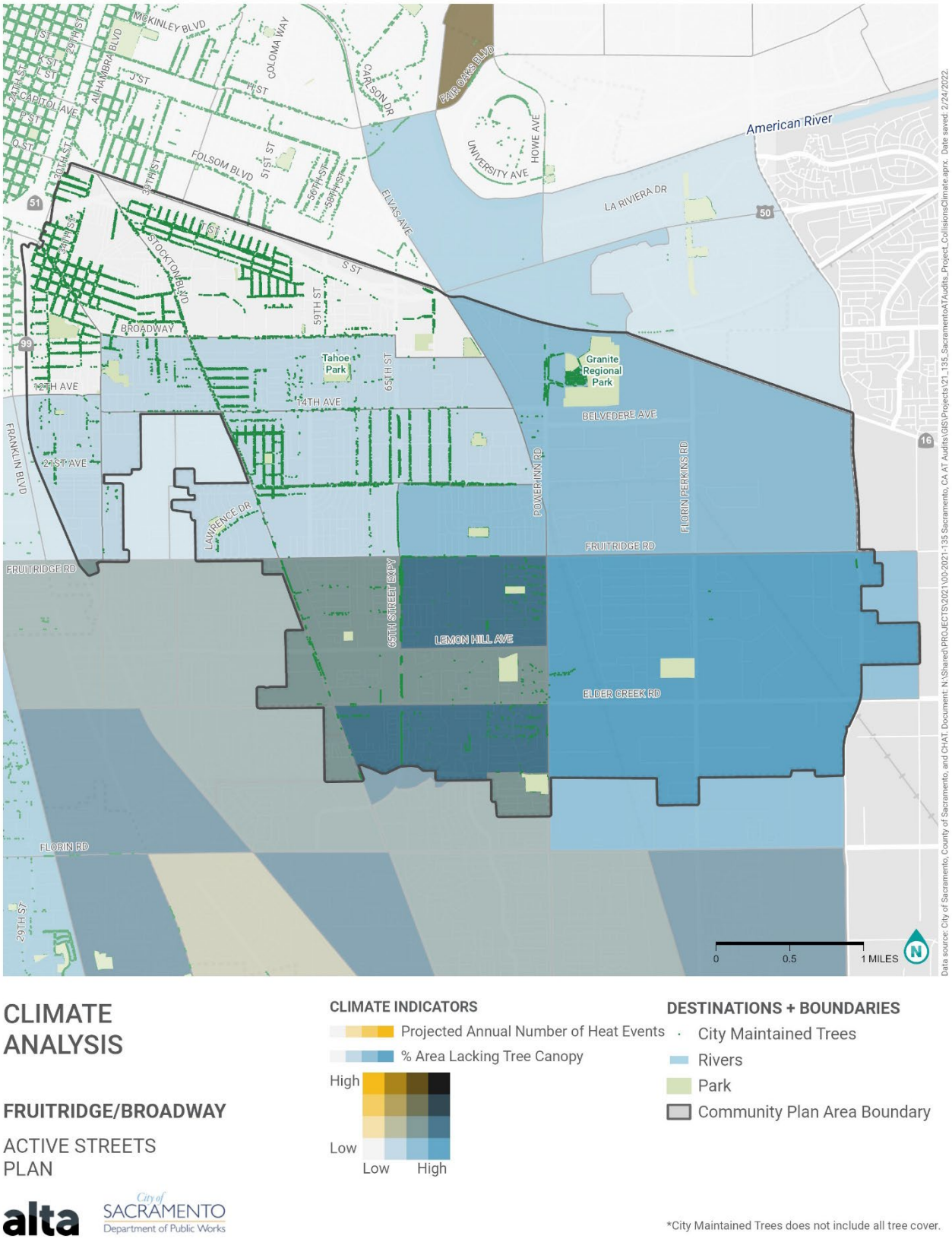


Figure 13: Bivariate Climate Analysis



Housing and Transportation Costs Index

The Housing and Transportation Costs Index[15] (H&T) provides an overview of how much income the average household within a census tract spends on housing and transportation costs. The US Department of Housing and Urban Development (HUD) suggest that households should spend about one-third of their income on housing costs.[16] As seen in **Figure 14**, most households spend under 30% of their income on housing costs across the plan area. **Figure 15** adds transportation costs to the index. As shown in the map below, households on average spend roughly an additional 10-20% of income on transportation costs. Combined, most households spend around or just under half of their income on housing and transportation costs.[17]

[15] Available at: https://htaindex.cnt.org/
[16] https://www.huduser.gov/portal/pdredge/pdr-edge-research-110617.html#:~:text=Moderate%20cost%20burden%3A%20Households%20spending,of%20income%20on%20housing%20expenses.
[17] Housing and Transportation Cost Index

Figure 14: Household Income Spent of Housing Costs

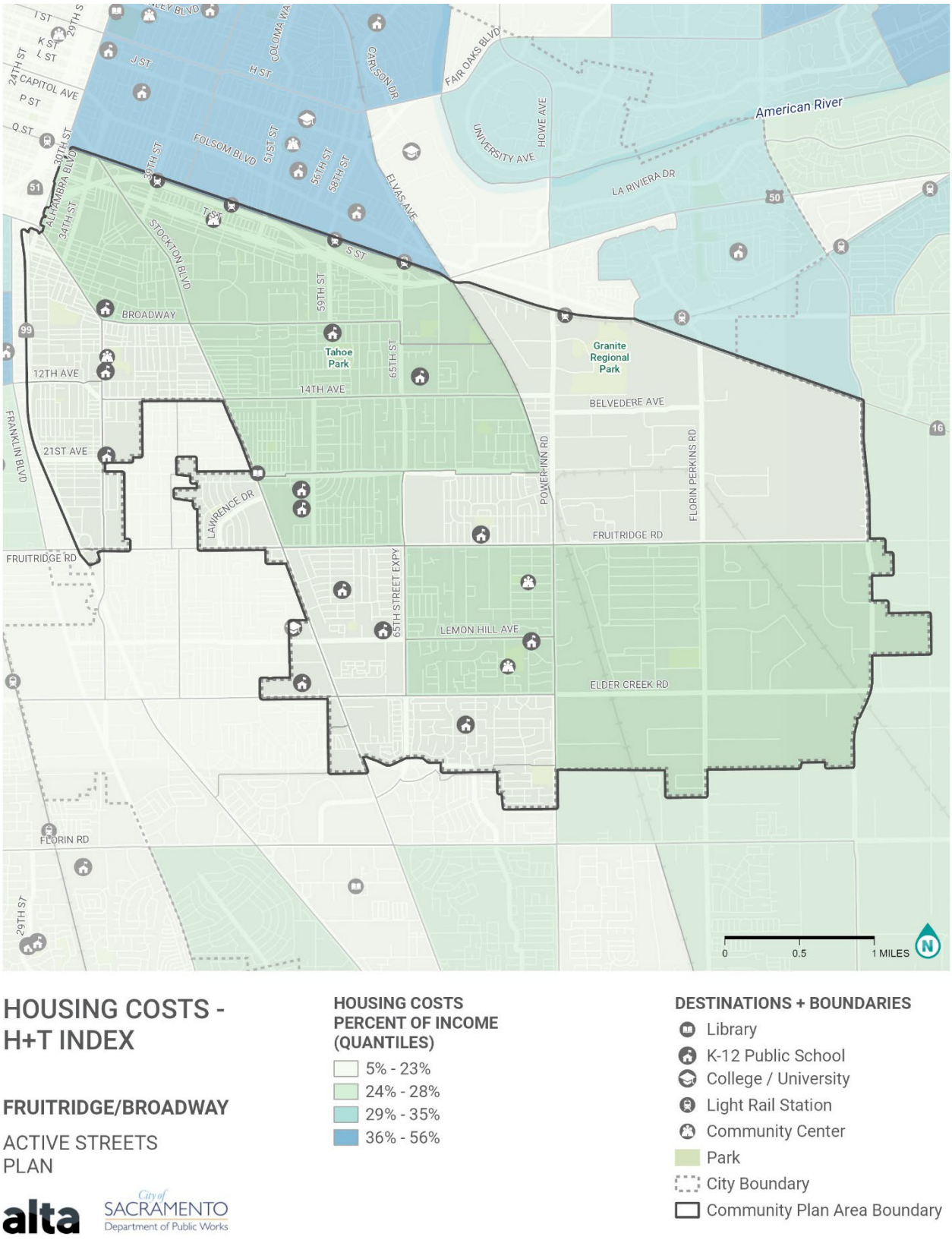
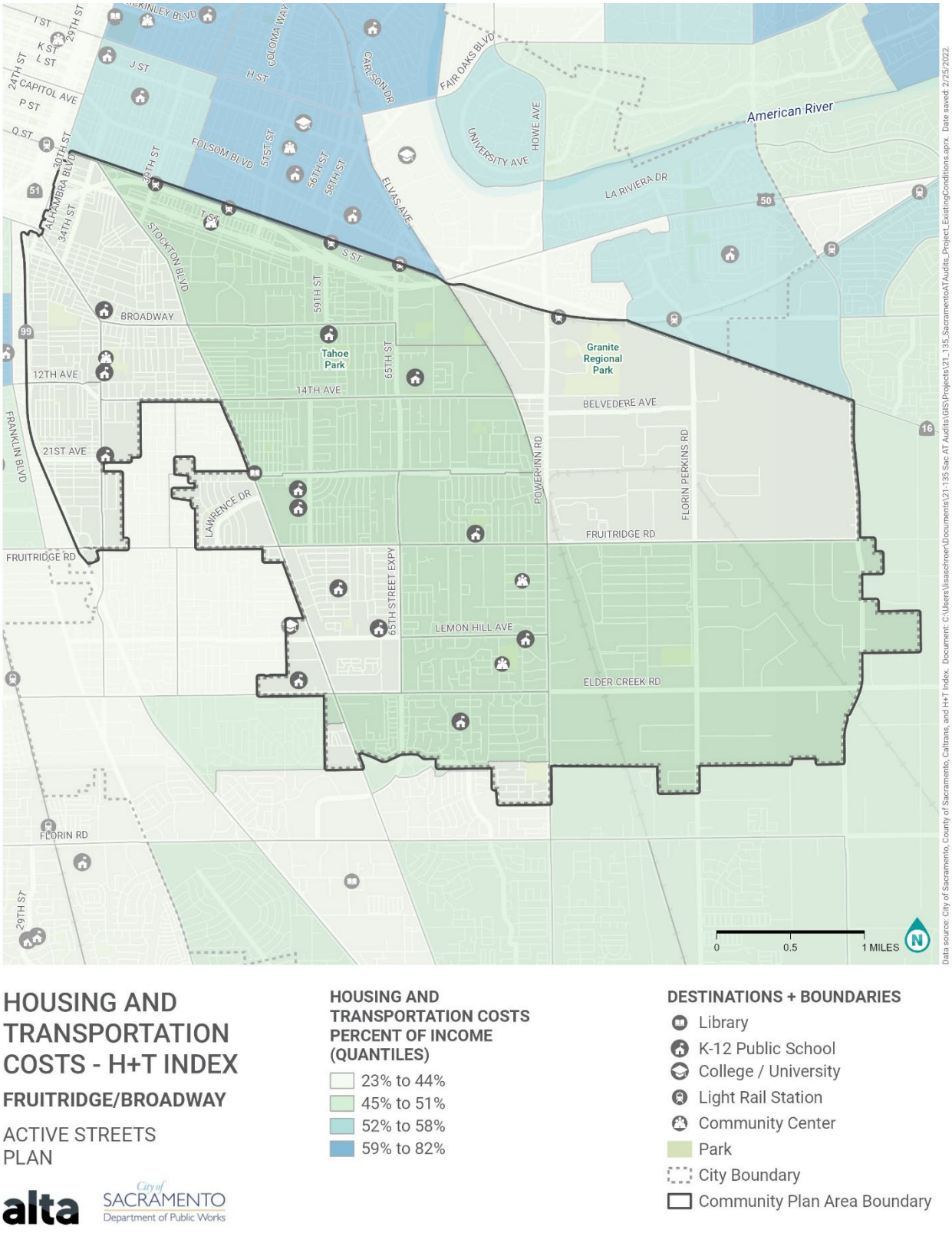


Figure 15: Household Income Spent on Housing and Transportation Costs



Transportation Profile

Existing Streets

The Fruitridge-Broadway plan area has several large arterials, highways, and major infrastructure facilities. The plan area is generally bound by highways to the west (SR-99) and the north (US-50). The existing street and highway network can be seen in **Figure 17**. Major streets include:

North-south streets:

- Martin Luther King, Jr. Boulevard
- Stockton Boulevard
- 65th Street Expressway
- Power Inn Road
- Florin Perkins Road

East-west streets:

- Broadway
- 14th Avenue
- Fruitridge Road
- Lemon Hill Avenue
- Elder Creek Road
- Jackson Road

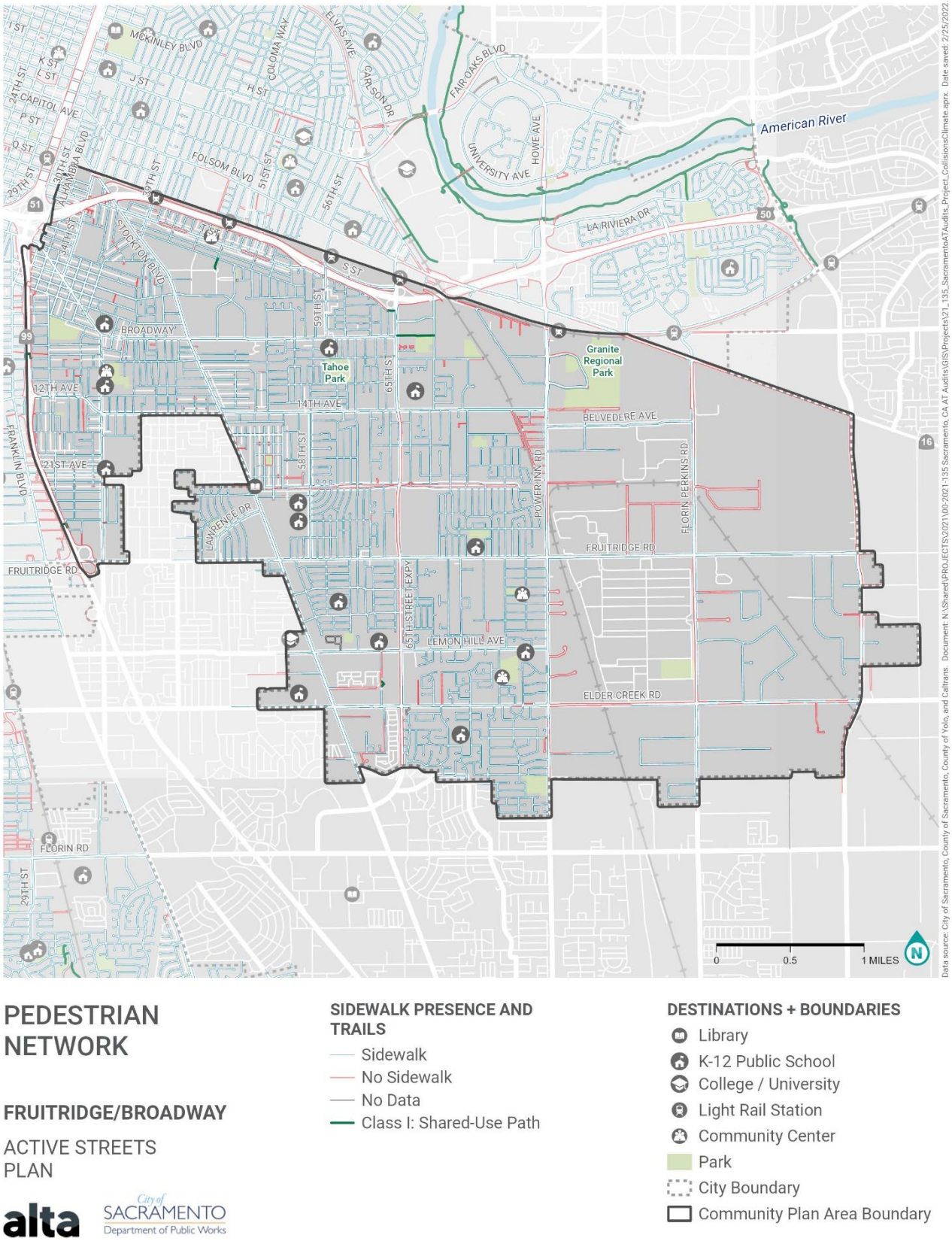
The highways to the north (US-50) and west (SR-99) act as barriers for active modes, due to limited access or crossing points and their large physical structures which divide communities. Other infrastructure barriers within the plan area include railroad tracks that run through the industrial areas and the SacRT light rail tracks near the US-50 corridor.

Walking Facilities

Walking facilities include sidewalks, shared-use paths (trails), and intersection or mid-block crossing facilities. A map of the existing sidewalk network is shown in **Figure 16**. Within the Fruitridge-Broadway area, there are only a handful of shared use paths (less than one mile in total length). Most streets have sidewalks on both sides of the street west of Power Inn Road. Only a few residential streets do not have sidewalks. The 65th Street Expressway and 21st Avenue, two of the area's arterial/collector streets, do not have continuous sidewalks.

East of Power Inn Road, the sidewalk network is less complete. The less-dense street network, increased frequency of missing sidewalks, and the higher concentration of trucks and large vehicles creates a constrained and less comfortable environment for people walking. There are also sidewalks missing around Granite Regional Park, hindering active access to the park.

Figure 16: Existing Sidewalk Network



Bicycling Facilities

The plan area includes 53.1 miles of existing bicycle facilities, shown in **Figure 17** and **Table 4**. These facilities primarily consist of bicycle lanes and bicycle routes. Within Fruitridge-Broadway, the network of bicycle lanes includes multiple major north-south streets:

- Martin Luther King, Jr. Boulevard
- Stockton Boulevard
- 65th Street Expressway
- Power Inn Road
- Florin Perkins Road

There are dedicated facilities on some east-west routes, but they are not consistently spaced, nor are they as connected or continuous as some facilities on north-south corridors (e.g., 21st Avenue and Lemon Hill Avenue). Some residential streets have bicycle routes. This facility type is typically found around schools or parks throughout the plan area.

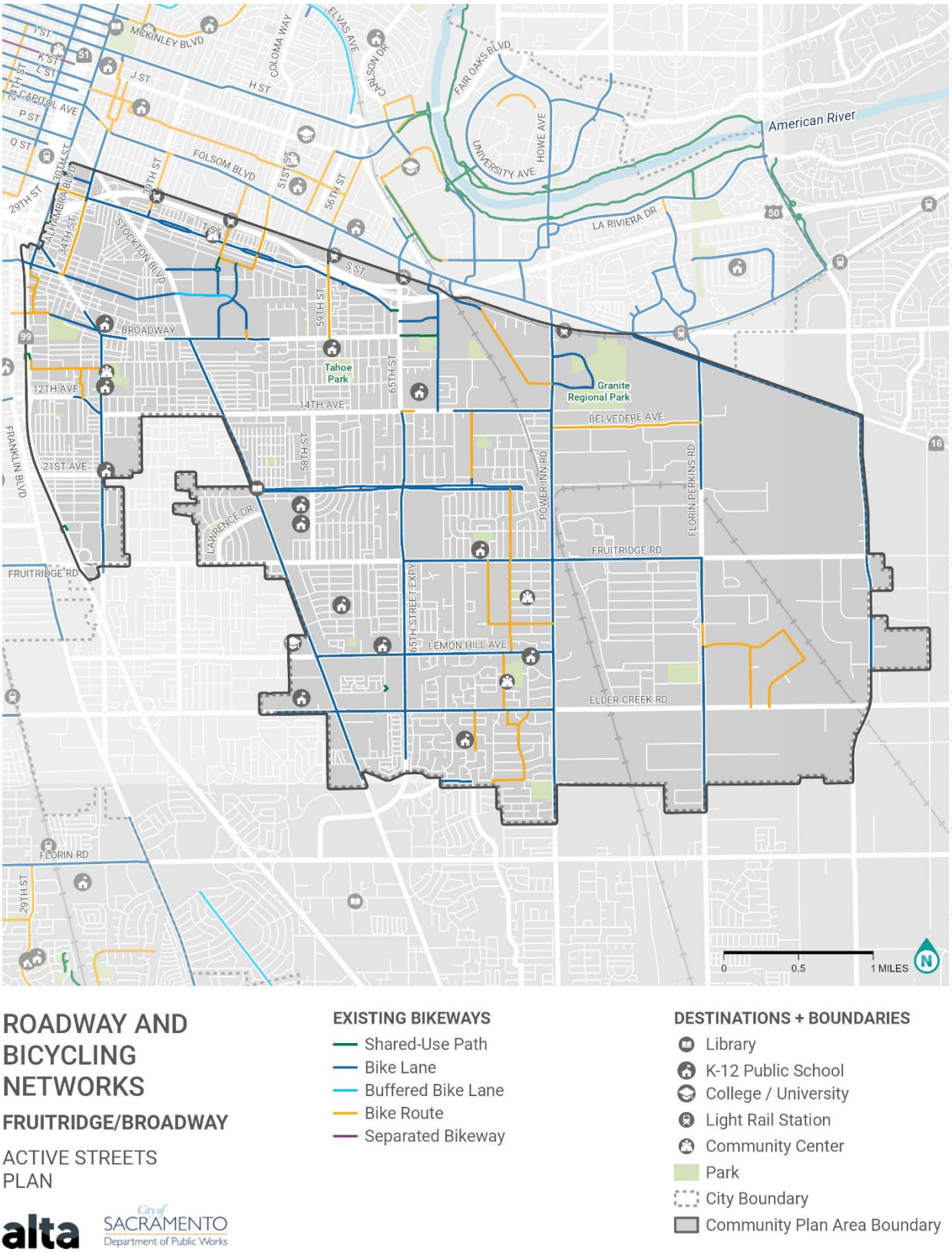
There are only a small number of segments of shared use paths (trail) segments throughout the plan area. There is one segment with buffered bike lanes along 2nd Avenue. There are no bicycle boulevards or separated bikeways within the plan area. These four facility types are considered low-stress bicycling facilities. Within Fruitridge-Broadway, there is no network of these facilities; only less than one-mile of individual facilities.

The area has multiple connection points to the north, providing access across US-50 and SacRT light rail stations. There are limited connections to the west across SR-99 and few connections to the south into unincorporated County.

Table 4: Existing Bicycle Facilities in Fruitridge Broadway

Bikeway Class	Mileage (mi)
Shared-use Path	0.5
Bike Lane	36.5
Buffered Bike Lane	0.4
Bike Route	11.2
Separated Bikeway	0.0
Total	**53.1**

Figure 17: Street and Bicycling Networks



Transit Network and Facilities

The Fruitridge Broadway area is served by SacRT light rail (Gold Line) and buses. As of January 2022, nine local bus routes served the plan area. Gold Line light rail service runs along northern border of the plan area near the US-50 corridor. Line 138, the Causeway Connection, connects UC Davis Medical Center to the main UC Davis campus. Most of the bus service is concentrated in the western half of the plan area, with limited bus service east of Power Inn Road. More information on the bus routes serving the area can be seen in **Table 5**. A map of the bus and light rail routes serving the area can be seen in **Figure 18**.

Table 5: SacRT Bus Route Information

Route Number	Route Name	Peak Frequency	Minimum Frequency	Days of Operation
Line 38	Tahoe Park	30 minutes	60 minutes	All week
Line 51	Stockton/Broadway	12 minutes	60 minutes	All week
Line 61	Fruitridge	30 minutes	45 minutes	All week
Line 67	Franklin	30 minutes	60 minutes	All week
Line 68	Oak Park	30 minutes	60 minutes	All week
Line 81	Florin	15 minutes	60 minutes	All week
Line 109	Hazel Express	2 daily peak trips	-	Weekday peak
Line 138	Causeway Connection	60 minutes	60 minutes	Weekday
Line 161	Belvedere	1 daily peak trip	-	Weekday peak

Source: SacRT. September-December 2019 route data.

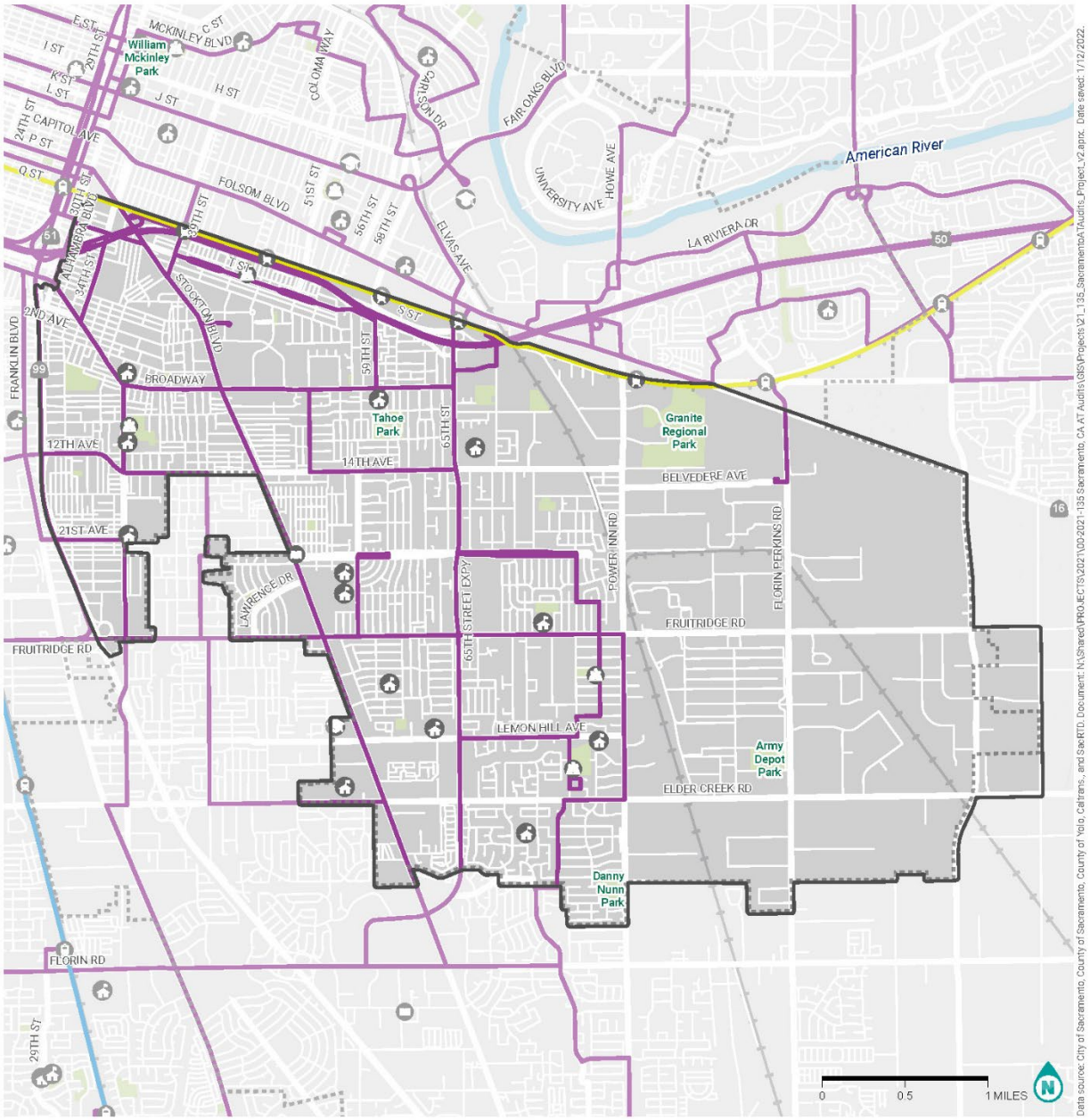
Figure 19 shows ridership for bus stops within the plan area (average weekday boardings and alightings between September and December 2019). The heaviest ridership within the plan area is on the Stockton, Broadway, and Fruitridge corridors. **Table 6** shows the top 5 busiest bus stops in the plan area.

Table 6: Top Five Busiest Bus Stops

Stop Location	Avg Weekday Total Boarding/Alightings
Broadway & Stockton Blvd (Westbound)	183
65th St & 14th Ave (Northbound)	167
65th St & 14th Ave (Southbound)	153
Broadway & 34th St (Eastbound)	136
Broadway & Stockton Blvd (Southbound)	132

Source: SacRT. September-December 2019 ridership data.

Figure 18: SacRT Bus and Light Rail Routes



SacRTD TRANSIT ROUTES

FRUITRIDGE/BROADWAY

ACTIVE STREETS PLAN

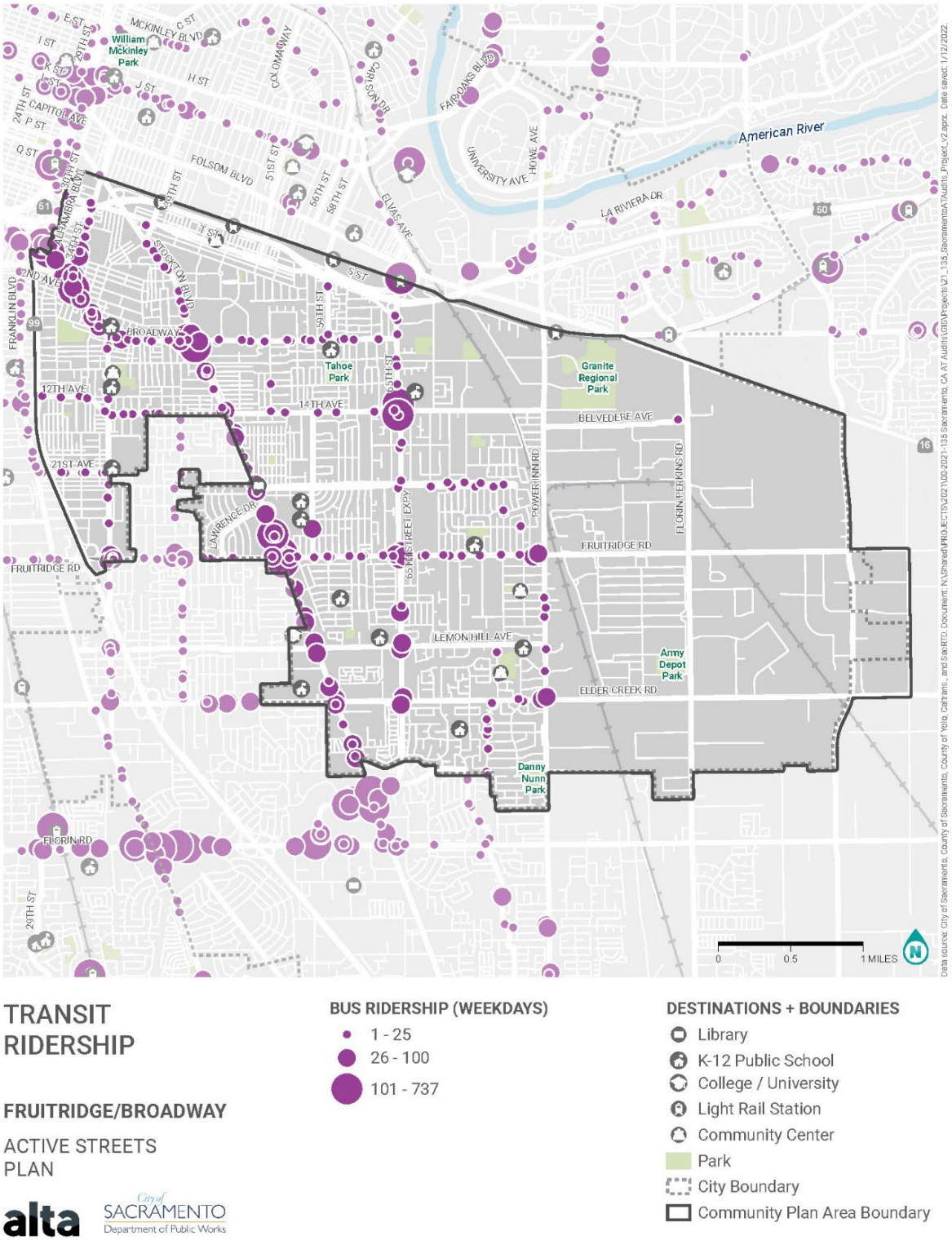
alta

City of SACRAMENTO Department of Public Works

BUS ROUTES
- Local Bus Route
- Blue Line (Light Rail)
- Gold Line (Light Rail)

DESTINATIONS + BOUNDARIES
- Library
- K-12 Public School
- College / University
- Light Rail Station
- Community Center
- Park
- City Boundary
- Community Plan Area Boundary

Figure 19: Bus Ridership



Collision Analysis

The project team completed a collision analysis for the five-year period between 2016 and 2020. There were 2,639 reported collisions across all travel modes in these five years. **Table 7** provides a breakdown of collisions by travel mode.[18] Collisions involving people walking or bicycling account for a combined 12% of all collisions but are 32% of severe injury and fatal collisions. Of these 10% included people bicycling and 22% involved people walking.[19] The overrepresentation of severe injuries and fatalities for people walking and biking highlights disparities in dedicated infrastructure for these more vulnerable street users.

Table 7: Fruitridge-Broadway Collisions by Mode and Severity[20]

Collisions Involving	Collisions with No Injuries or Minor Injuries	Collisions with Severe Injuries or Fatalities	Total Collisions	Percent of Severe or Fatal Collisions	Percent of Total Collisions
People Driving Only	2,186	135	2,321	68%	88%
People Bicycling	144	20	164	10%	6%
People Walking	109	45	154	22%	6%
TOTAL	**2,439**	**200**	**2,639**	**100%**	**100%**

Source: SWITRS, 2016-2020

Table 8 lists the top ten collision locations across all modes within the plan area. For all modes, collisions most frequently occurred on:

- Fruitridge Road – Five of the top ten locations are located on Fruitridge Road.
- Stockton Boulevard
- Elder Creek Road

[18] This data only analyzes reported collisions. Collisions can be unreported for several reasons including lack of trust in law enforcement, or minor collisions that did not result in any injuries or property damage.
[19] SWITRS, 2016 - 2020
[20] Collisions involving a person biking or walking are counted in their respective categories and are excluded from the "Collision Involving People Driving Only" category.

Table 8: Top 10 Collision Intersections (all modes)

Rank	Cross Street 1	Cross Street 2	Total Collisions
1	Stockton Blvd	Elder Creek Rd	32
2	Stockton Blvd	Fruitridge Rd	30
3	65th St Expy	Elder Creek Rd	27
4	Mendocino Blvd	Fruitridge Rd	24
5	MLK Jr Blvd	Fruitridge Rd	23
6	Jansen Dr	Stockton Blvd	21
7	34th St	Broadway	21
7	65th St	Fruitridge Rd	20
9	Power Inn Rd	Fruitridge Rd	19
10	65th St	Lemon Hill Ave	19

Source: SWITRS, 2016-2020

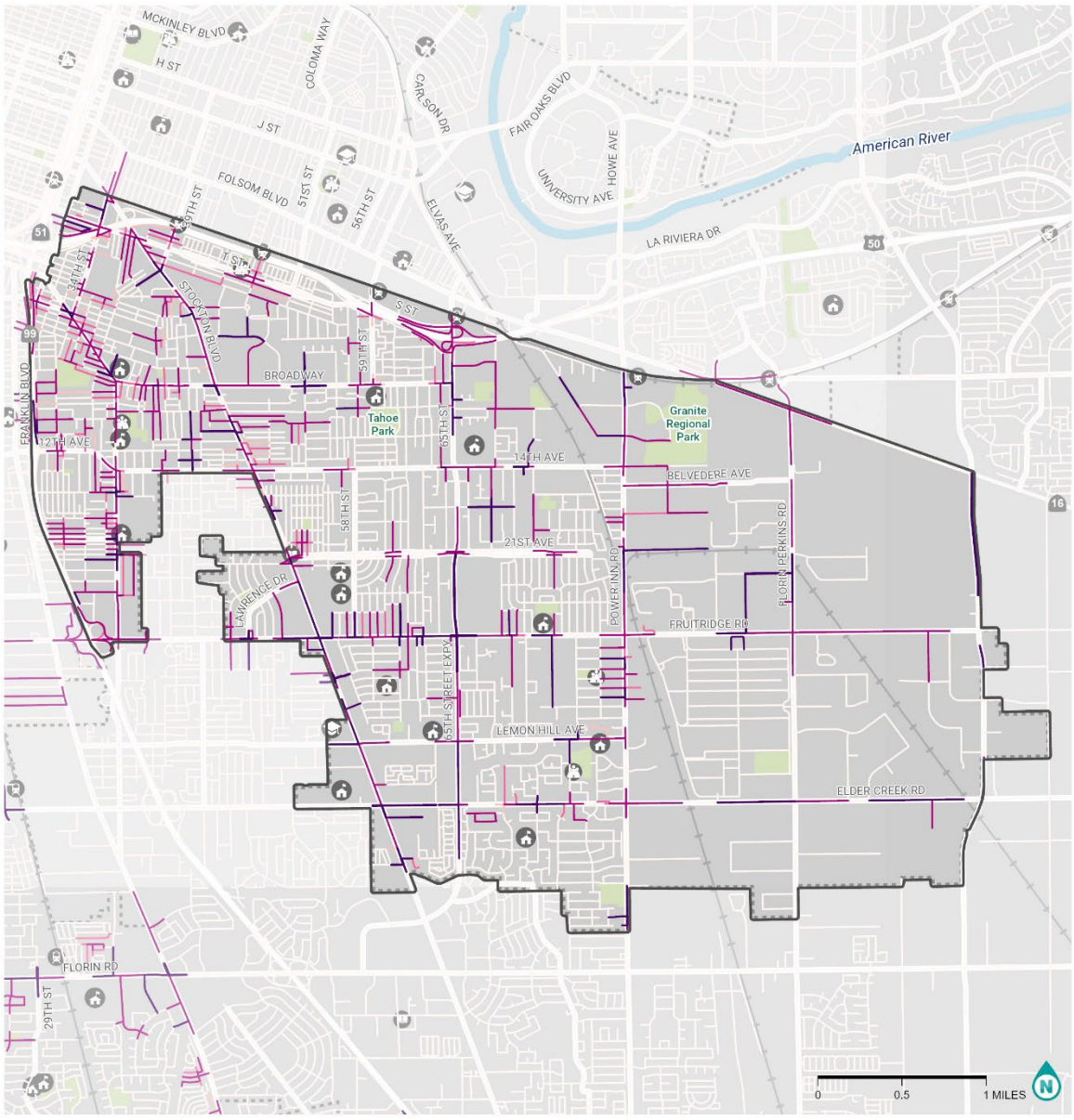
Figure 20 shows the KSI (killed or serious injury) weighted density of collisions throughout the plan area. For this analysis, collisions that resulted in a severe injury or fatality are weighted higher than other collisions.[21] The highest frequency of collisions occurred on:

- Stockton Boulevard
- Broadway
- Martin Luther King Jr. Boulevard
- 65th Street Expressway

Streets with the highest density and severity of collisions include large arterial streets (see above list). There are, however, several additional smaller collector and local streets that have a history of multiple/severe collisions based on analyzed data. Some of the street segments with the highest densities are near schools (Earl Warren Elementary and Father Keith Kenny K-8), parks (Granite Regional), and other community destinations.

[21] Collisions that resulted in a severe injury or fatality received 10 points while other collisions received 1 point in the weighted analysis.

Figure 20: Weighted Collision Density



Top Collision Locations Involving Someone Walking

Figure 21 shows the location of collisions involving those walking within the plan area. These mainly occurred on arterial or collector streets including:

- Stockton Boulevard
- Fruitridge Road
- Broadway
- Martin Luther King Jr. Boulevard

Table 9 lists the ten locations with the highest frequency of collisions involving someone walking within the plan area. Six of these locations include Stockton Boulevard, and five of the locations include Fruitridge Road.

Table 9: Top 10 Collision Intersections Involving People Walking

Rank	Cross Street 1	Cross Street 2	Number of Collisions
1	Stockton Blvd	Fruitridge Rd	7
2	49th St	Fruitridge Rd	3
2	53rd St	Fruitridge Rd	3
2	Stockton Blvd	Jansen Dr	3
2	Stockton Blvd	Fowler Ave	3
2	Stockton Blvd	Elder Creek Rd	3
7	58th St	Fruitridge Rd	2
7	Mendocino Blvd	Fruitridge Rd	2
7	Stockton Blvd	Lemon Hill Ave	2
7	Stockton Blvd	14th Ave	2

Source: SWITRS, 2016-2020

Top Collision Locations Involving Someone Biking

Figure 22 shows the location of collisions involving people bicycling within the plan area. These mostly occurred on arterial or collector streets including:

- Stockton Boulevard
- Fruitridge Road
- Broadway
- Elder Creek Road

Table 10 lists the ten locations with the highest frequency of collisions involving someone bicycling within the plan area. All but one of the top ten intersections are along Stockton Boulevard.

Table 10: Top 10 Collision Intersections Involving People Bicycling

Rank	Cross Street 1	Cross Street 2	Number of Collisions
1	Stockton Blvd	Fruitridge Rd	7
2	Stockton Blvd	Lemon Hill Ave	3
2	34th St	T St	3
2	Stockton Blvd	Young St	3
2	Stockton Blvd	16th Ave	3
2	Stockton Blvd	McMahon Dr	3
2	Stockton Blvd	Broadway	3
2	Stockton Blvd	15th Ave	3
9	Stockton Blvd	Y St	2
9	Stockton Blvd	21st Ave	2

Source: SWITRS, 2016-2020

Figure 21: Collision Locations and Severity Involving Someone Walking

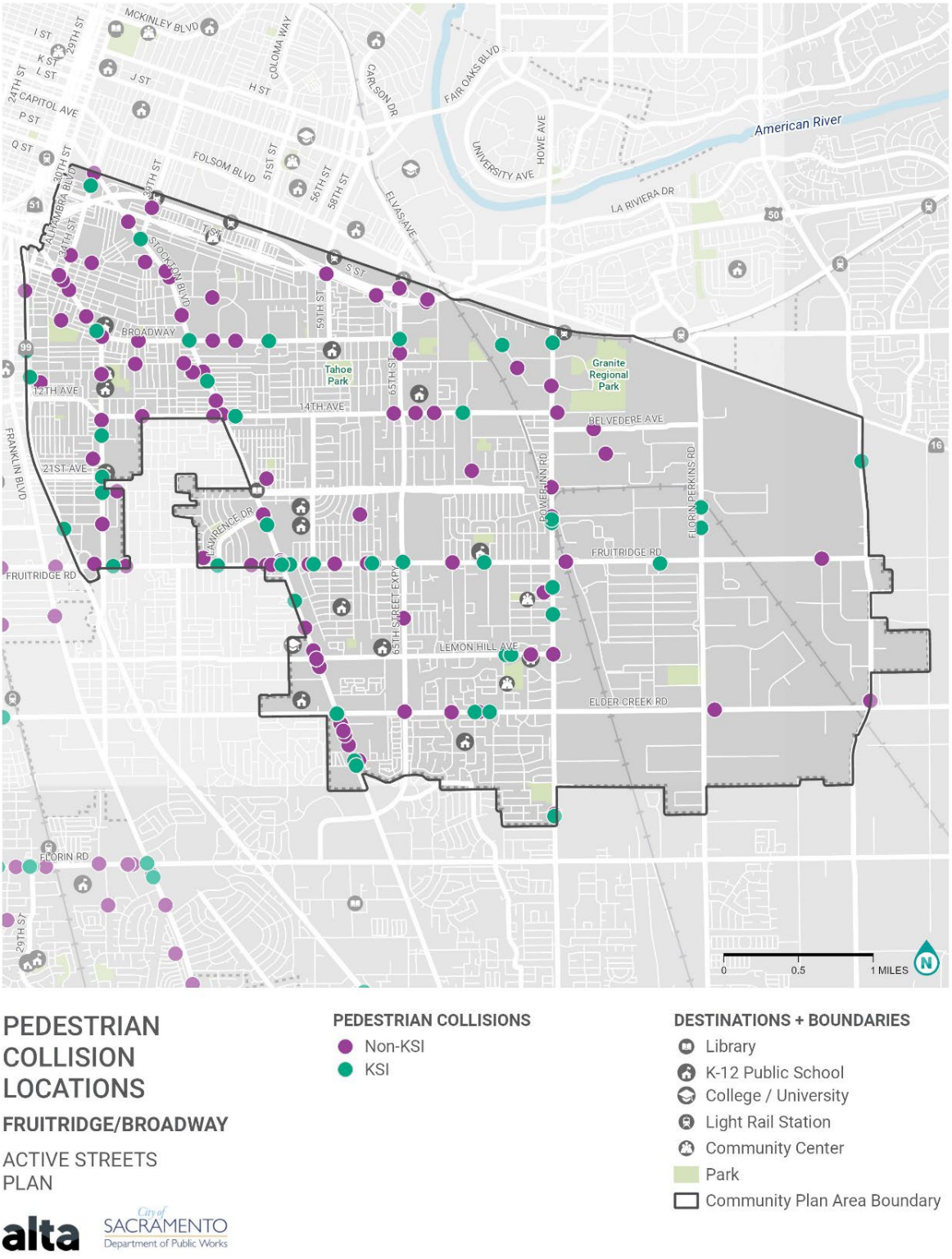
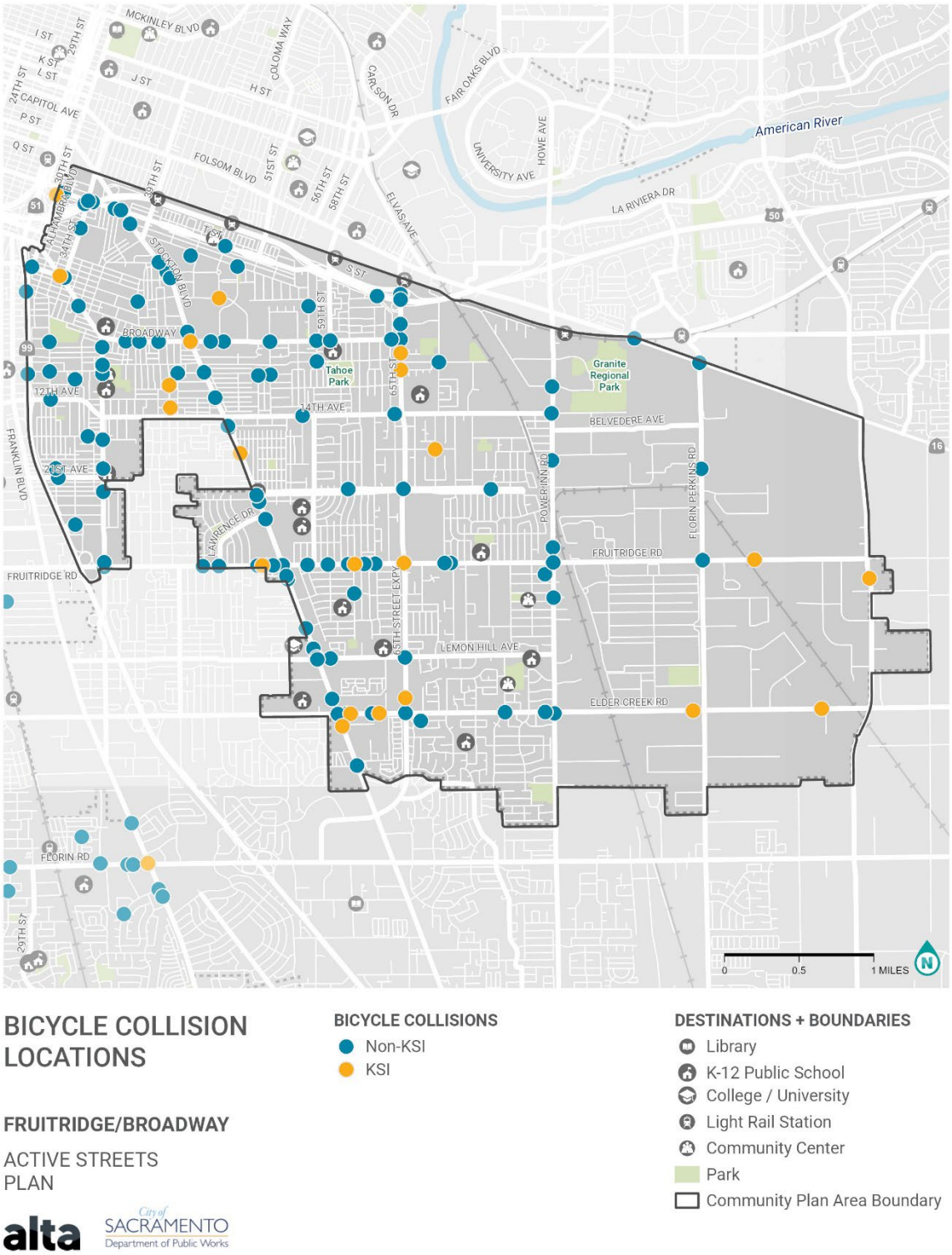


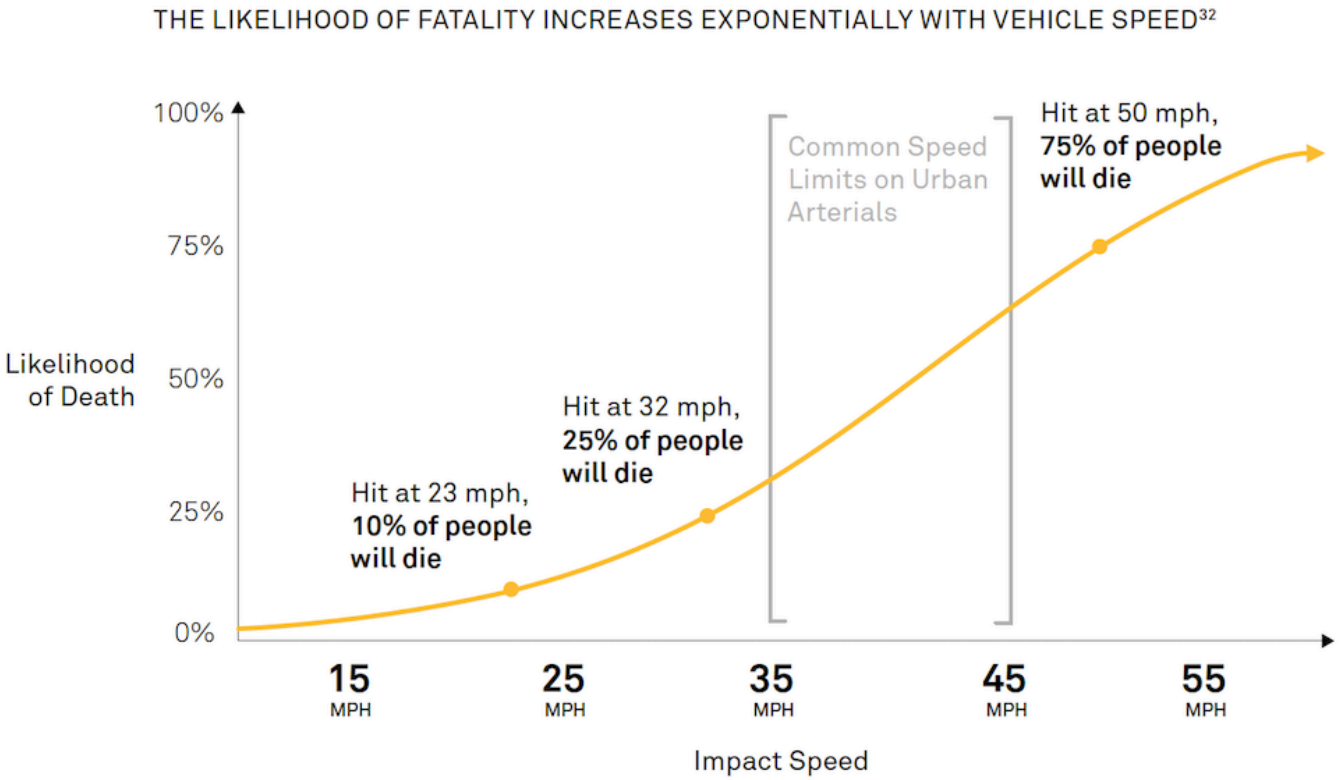
Figure 22: Collision Locations and Severity Involving Someone Bicycling



Collision Anatomy Analysis – Collisions Involving Someone Walking

Figure 23 shows the relationship between vehicle speed and risk of fatality. Of the 103 collisions that occurred on streets with posted speed limits of 35 MPH or greater, 78% of them did not occur at an intersection, likely meaning that these collisions occurred at higher rates of speed than those at intersections[22]. Thirty-eight percent of street segment collisions occurred on streets with posted speed limits between 35 MPH and 45 MPH. An additional 14% of collisions occurred on streets with a posted speed limit greater than 45 MPH; Fifty-two (52%) of all non-intersection collisions occurred on streets with a posted speed limit of at least 35 MPH.[23]

Figure 23: Relationship Between Vehicle Speed and Fatal Injuries



Source: NACTO, "City Limits: Speed Kills"

[22] Collisions that occur with 250 feet of an intersection are considered intersection collisions. Those that occur further away are considered street segment/mid-block collisions.
[23] SWITRS, 2016 -2020

As noted in **Figure 24**, Between 2016 – 2020, there were 154 collisions involving someone walking in the plan area. Two-thirds (67%) of these occurred on streets with posted speed limits of 35 MPH or greater; almost 17% of them occurred on with posted speed limits of 45 MPH or more. Speed is a critical factor in determining injury severity. For example, a person walking who is hit by a person driving at 35 MPH is five times more likely to die than a person walking who is hit by a person driving at 20 MPH. Each 5 MPH increase increases the risk of fatalities by 3% on local streets.[24] Of the mid-block collisions involving people walking, the two leading "pedestrian actions" (what they are doing at the time of collision) included people crossing not in a crosswalk and people walking in the street/on the shoulder[25]. At intersections, 65% of collisions occurred at signalized locations.

Collision Anatomy Analysis – Collisions Involving Someone Bicycling

As illustrated in **Figure 25**, between 2016-2020, there were 164 collisions involving someone bicycling. Over 60% of these collisions occurred on streets with speed limits of 35 MPH or greater; 16% (26 collisions) of those collisions occurred on streets with speed limits of 45 MPH or greater. Collisions at these higher speeds place people biking at a much higher risk for severe injury or death. Collisions involving someone bicycling occurred almost evenly at intersections (48%) and street segments (52%). Regardless of street speed, collisions with people bicycling at intersections occurred more frequently at signalized locations than stop-controlled or uncontrolled intersections. Two of the top primary collision factors across all speed limits include automobile ROW violation (i.e., automobile violates – enters – pedestrian/bicyclist ROW; 20 collisions) and biking on the wrong side of the street (16 collisions).[26]

[24] "Speed Kills." NACTO. https://nacto.org/publication/city-limits/the-need/speed-kills/
[25] It is legal for people walking to cross mid-block at locations not between two signalized intersections, unless otherwise posted
[26] SWITRS, 2016 - 2020

Figure 24: Fruitridge-Broadway Collisions Involving People Walking Diagram

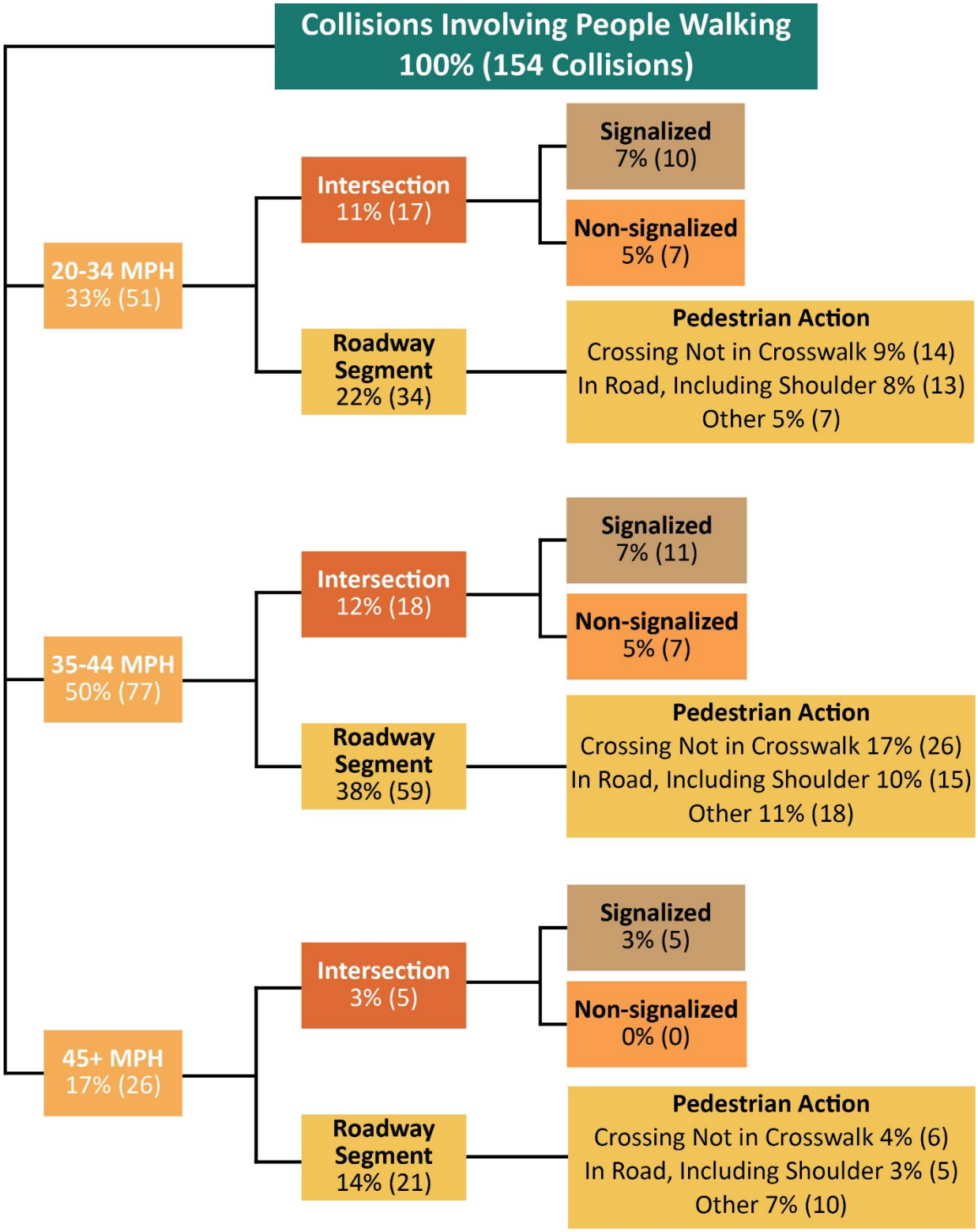
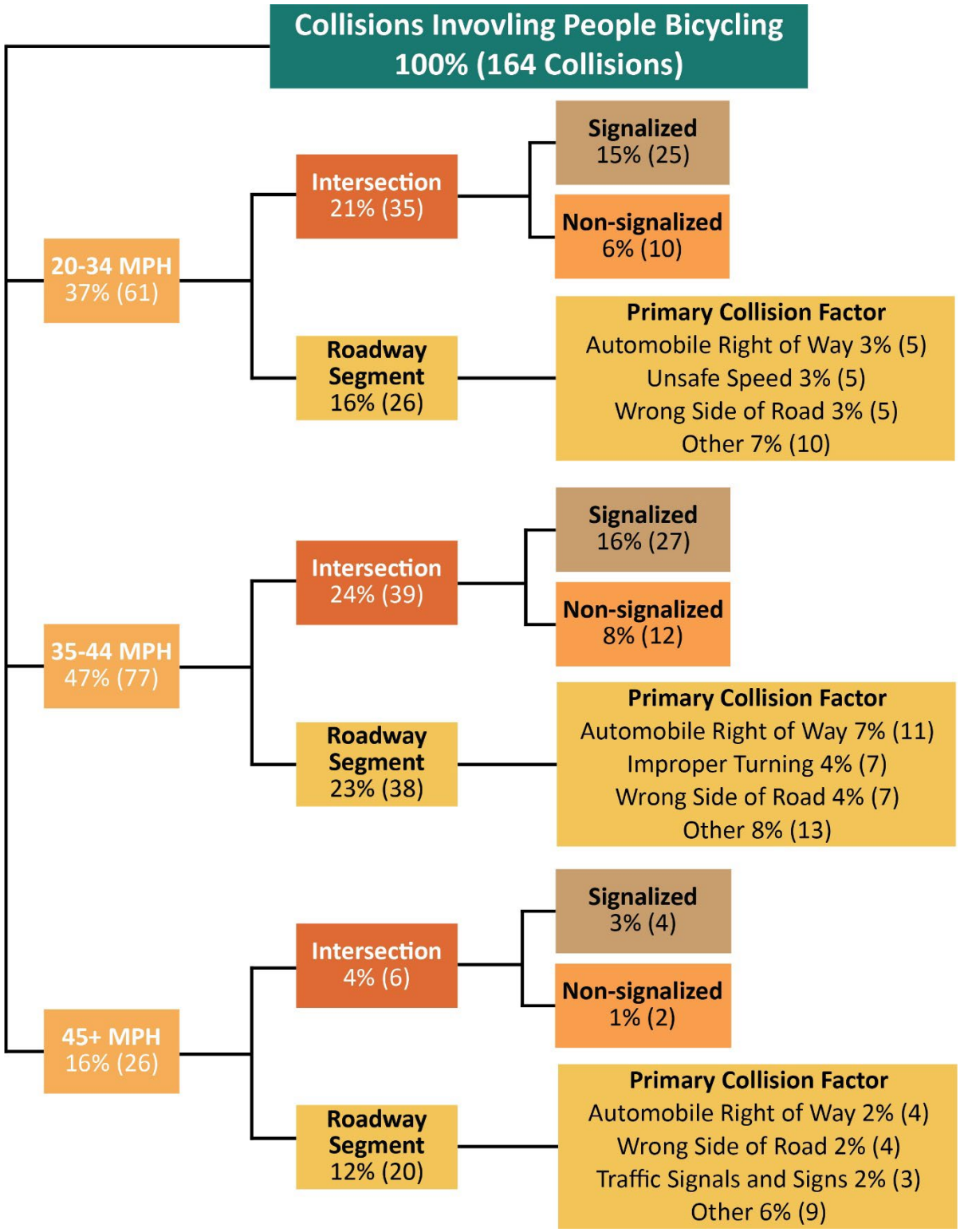


Figure 25: Fruitridge Broadway Collisions Involving People Bicycling Diagram



High-Injury Network

In 2018, the City of Sacramento adopted a Vision Zero Action Plan to eliminate traffic fatalities and severe injuries by 2027. The Vision Zero Plan established a High Injury Network (HIN), consisting of corridors with the highest levels of severe and fatal collisions for people walking, biking, and driving. The Citywide HIN accounts for roughly 80% of collisions; the HIN covers about 14% (225 miles) of the City's streets. Within the Fruitridge-Broadway area, there are 35.5 miles of streets on the citywide HIN, 16% of the network.

Most arterial streets with Fruitridge-Broadway are part of the HIN network. Streets on the HIN include:

- Stockton Boulevard
- Martin Luther King, Jr. Boulevard
- 65th Street Expressway (segments)
- Power Inn Road
- Florin Perkins Road
- Broadway
- 12th Avenue
- 14th Avenue
- Fruitridge Road
- Lemon Hill Avenue
- Elder Creek Road

The only arterial or collector streets within the plan area not included in the HIN are 21st Avenue, Belvedere Avenue, and T Street. **Figure 26** shows the HIN with the locations of the top ten collision intersections within the plan area by mode. **Figure 27** shows the HIN with the overall top ten collision intersections within the plan area (locations with the most total collisions inclusive of all modes). **Table 11** lists the top ten collision intersections for all modes, people walking, and people bicycling.

Four locations are on the top ten list for more than one travel mode. Three of these four locations are located on Stockton Boulevard. Stockton Boulevard has two segments in the City's Top Five Vision Zero Network (2018):

- Stockton Boulevard between Broadway and 13th Street
- Stockton Boulevard between McMahon Drive and Patterson Way

The Top Five Vision Zero Network Plan identified the five corridors in Sacramento with the highest number of fatal and serious crashes involving people walking, bicycling, or driving. The Stockton Boulevard intersections with Elder Creek Road and Lemon Hill Avenue, mentioned above, are within the limits of the southern HIN section of corridor. The Vision Zero Top Five Corridors (2018) document gives detailed descriptions of existing conditions along the Stockton corridor segments and provides conceptual designs for safety improvements. The proposed safety improvements will slow down people driving, make it easier to cross the street, and improve safety for those walking, biking, and rolling along the corridor.

Table 11: Fruitridge-Broadway Top 10 Collision Locations by Mode

Intersection	All Collisions	Collisions Involving People Bicycling	Collisions Involving People Walking	Top Ten Locations – Number of Modes
Stockton Blvd / Fruitridge Rd	●	●	●	3
Stockton Blvd / Lemon Hill Ave	–	●	●	2
Mendocino Blvd / Fruitridge Rd	●	–	●	2
Stockton Blvd / Elder Creek Rd	●	–	●	2
49th St / Fruitridge Rd	–	–	●	1
53rd St / Fruitridge Rd	–	–	●	1
58th St / Fruitridge Rd	–	–	●	1
Stockton Blvd / 14th Ave	–	–	●	1
Stockton Blvd / Fowler Ave	–	–	●	1
Stockton Blvd / Jansen Dr	–	–	●	1
34th St / T St	–	●	–	1
Stockton Blvd / 15th Ave	–	●	–	1
Stockton Blvd / 16th Ave	–	●	–	1
Stockton Blvd / 21st Ave	–	●	–	1
Stockton Blvd / Broadway	–	●	–	1
Stockton Blvd / McMahon Dr	–	●	–	1
Stockton Blvd / Y St	–	●	–	1
Stockton Blvd / Young St	–	●	–	1
34th St / Broadway	●	–	–	1
65th St / Fruitridge Rd	●	–	–	1
65th St / Lemon Hill Ave	●	–	–	1
65th St Expy / Elder Creek Rd	●	–	–	1
Jansen Dr / Stockton Blvd	●	–	–	1
MLK Jr Blvd / Fruitridge Rd	●	–	–	1
Power Inn Rd / Fruitridge Rd	●	–	–	1

Figure 26: Fruitridge-Broadway High Injury Network and Top Collision Locations (Bicycling and Walking)

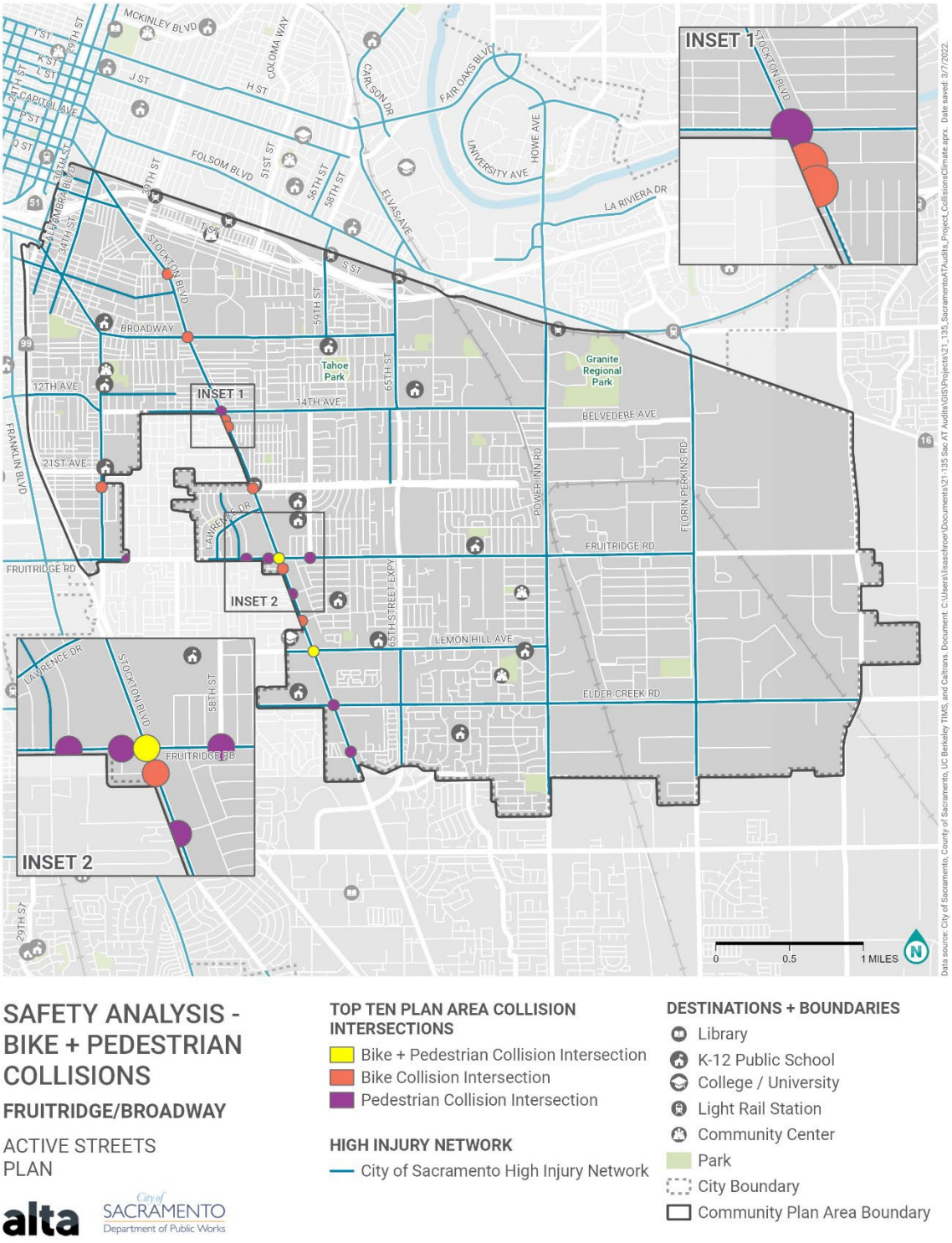
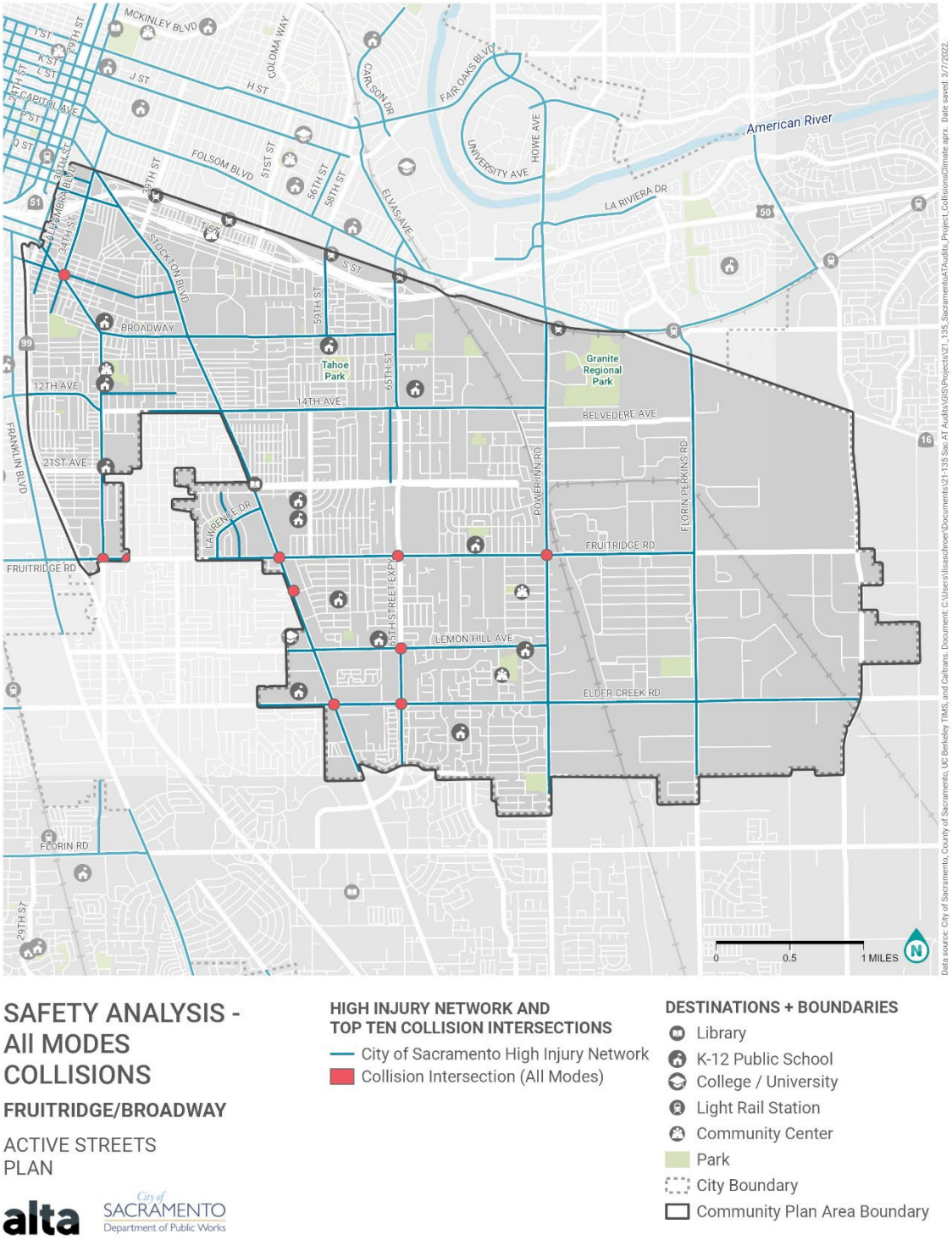


Figure 27: Fruitridge-Broadway High Injury Network and Top Collision Locations (All Modes)



Collision Analysis Summary

The collision analysis above indicates that moderate speed (35 – 45 mph) arterial roadways in the Fruitridge Broadway area present barriers and safety concerns for active transportation users. While arterial roadways provide efficient movement of vehicles, they often act as barriers to active transportation modes due to the perceived and potential safety hazards. Between 2016 -2020, 47% of all collisions involving people bicycling and 50% of all collisions involved people walking in the Fruitridge Broadway area occurred on roadways with 35-45 mph speeds, a typical posted speed limit for arterial roadways. Furthermore, during the same time period nearly all KSI collisions occurred along arterial roadways in the area (**Figure 21** and **Figure 22**).

The collision analysis presented above highlights that a majority of bicycle and pedestrian crashes occurred along Stockton Boulevard. This major thoroughfare has nine of the top ten collision intersections for people walking and six out of the top ten collision intersections for people bicycling. Beyond Stockton Boulevard, Fruitridge Boulevard includes five of the top ten collision locations for people bicycling.

It is important to note that the Stockton Boulevard / Fruitridge Boulevard intersection had the highest number of bicycle and pedestrian collisions between 2016 and 2020. Both of these arterial roadways and their intersection present significant opportunities to improve safety for people walking and biking in the Fruitridge Broadway area.

To: Leslie Mancebo, Project Manager / South Sacramento Plan Area Lead, City of Sacramento

From: Mauricio Hernández, Project Manager; Libby Nachman, South Sacramento Plan Area Lead, Alta Planning + Design

Date: March 30, 2022

Re: Sacramento Active Streets Plans – South Sacramento Area Profile

---

Project Introduction

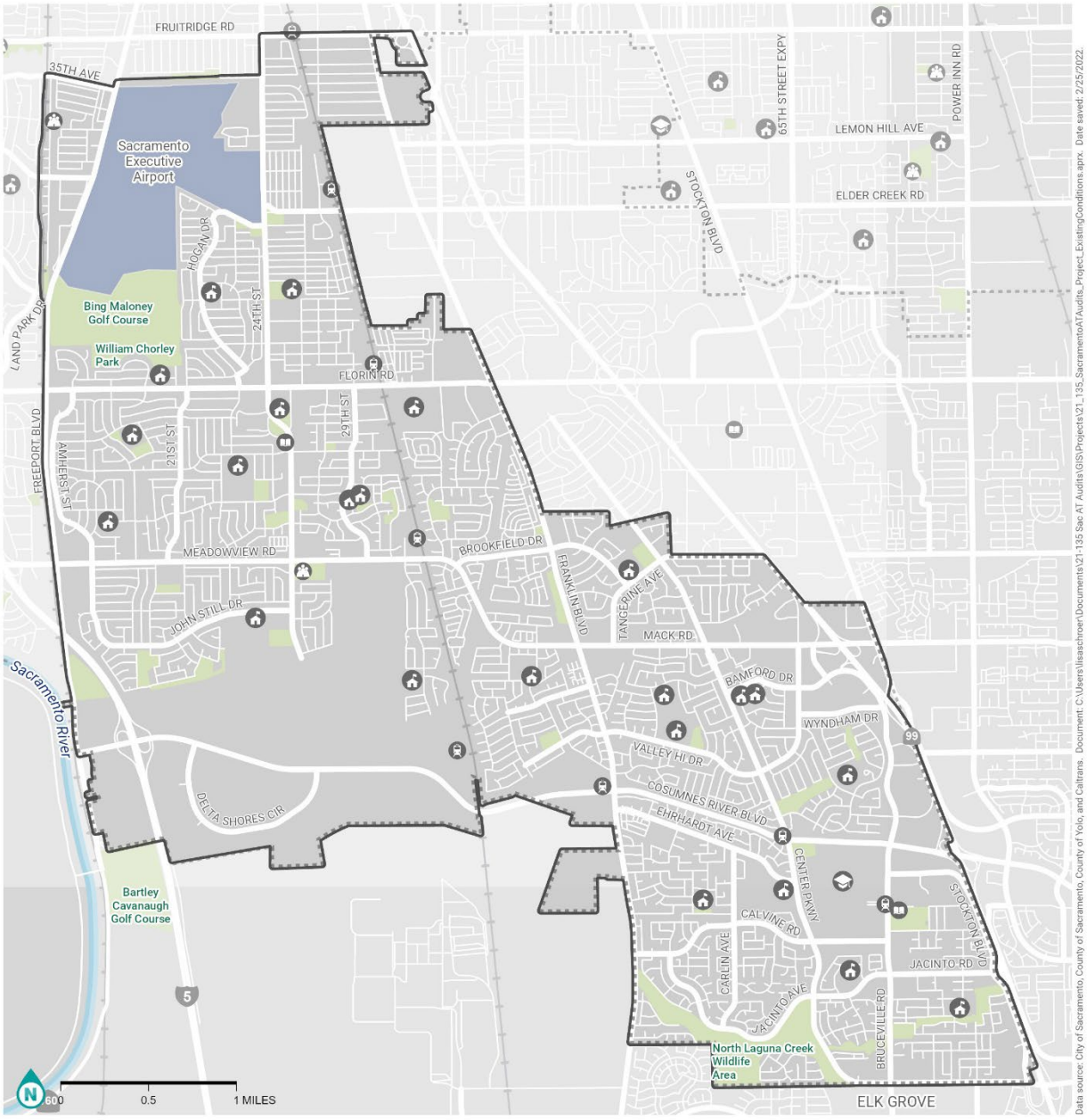
The Sacramento Active Streets Plans focus on understanding the specific needs and barriers for people walking, biking, rolling, and accessing transit in three distinct community plan areas: Fruitridge-Broadway, North Sacramento, and South Sacramento. These plans take a granular view of active transportation and seek to work in partnership with each community to develop implementable solutions to improve safety, mobility, and access. The plan process will work collaboratively with a diverse range of community residents, community groups, City departments, and other interested parties. The final Plans will identify bicycling, walking, and ADA improvements in each community plan area and provide a path to implementation.

South Sacramento Profile

Introduction

This Area Profile provides a detailed look at the existing facilities, demographics, and data points for the South Sacramento area (**Figure 1**). Community-identified needs and deficiencies will be reflected in the Community Needs Summary. Information included here will support public outreach and will be incorporated into the final Active Streets Plan for the area.

Figure 1: South Sacramento Plan Area Map



PLAN AREA

SOUTH SACRAMENTO

ACTIVE STREETS PLAN

alta

City of SACRAMENTO Department of Public Works

DESTINATIONS + BOUNDARIES

- Library
- K-12 Public School
- College / University
- Light Rail Station
- Community Center
- Airport
- Park
- City Boundary
- Community Plan Area Boundary

Plan Review Summary

The project team reviewed 12 prior planning documents that provide policy, program, and infrastructure recommendations across the City of Sacramento and within the South Sacramento area. These recommendations promote active transportation, improve street safety, and support climate change goals. The documents reviewed are listed below. A detailed summary of the plans reviewed is in **Appendix A**.

Citywide Plans

- Bicycle Master Plan (2016; amended 2018), City of Sacramento
- Complete Streets Policy (2019), City of Sacramento
- Criteria and Guidance for Creative Crosswalks (2021), City of Sacramento
- Design and Procedure Manual Section 15 – Street Design Standards (2009), City of Sacramento
- Pedestrian Crossing Guidelines – Treatment Applications Guide (2021), City of Sacramento
- Pedestrian Master Plan (2006), City of Sacramento
- Vision Zero Sacramento Action Plan (2018), City of Sacramento
- Vision Zero School Safety Study (2021), City of Sacramento
- Vision Zero Top 5 Corridors (2020), City of Sacramento

South Sacramento Focused Plans and Reports

- South Area Community Plan (2015)

South Sacramento Focused Walk Audit Reports

- Woodbine Park Walk Audit Report (2021), Sacramento County Public Health
- Freeport Boulevard Walk Audit Report (2020), Freeport Boulevard Transportation Safety Committee

Community Overview and Resources

This information is important because it can help us to strategize about the most effective ways to engage with the community.

Plan Area, Community Demographics, and Community Resources

The South Sacramento plan area (**Figure 1**) is bound roughly by 35th Avenue and Fruitridge Road to the north, Freeport Boulevard to the west, the city limits and Sheldon Road to the south, and State Route 99 (SR 99) to the east. Unincorporated Sacramento County borders the plan area to the east and south, and unincorporated Yolo County borders the plan area to the southwest. There are nine City-designated neighborhoods within the plan area (**Table 1**). Distinct neighborhoods identified by the City are available through the City designated neighborhood map on the City's website.[1]

Table 1: South Sacramento City Designated Neighborhoods

Neighborhoods		
Airport	Golf Course Terrace	South City Farms
Brentwood	Meadowview	Valley Hi/ North Laguna
Freeport Manor	Parkway	Woodbine

[1] City of Sacramento Neighborhoods map: https://www.cityofsacramento.org/-/media/Corporate/Files/GIS/Maps/Neighborhoods_E.pdf?la=en

The South Sacramento plan area has a population of over 120,000 residents. The population is fairly evenly split in gender, with 51% women and 49% men. This area of the city has a relatively younger population: 54% of residents are 34 years old or younger and only 12% of the population is 65 or older compared to approximately 50% and 14% citywide, respectively (**Figure 3**).[2] The community is more diverse overall compared to the City of Sacramento and the State of California (**Table 2** and **Figure 4**). **Table 2** compares the racial breakdown of plan area residents to the city and state.

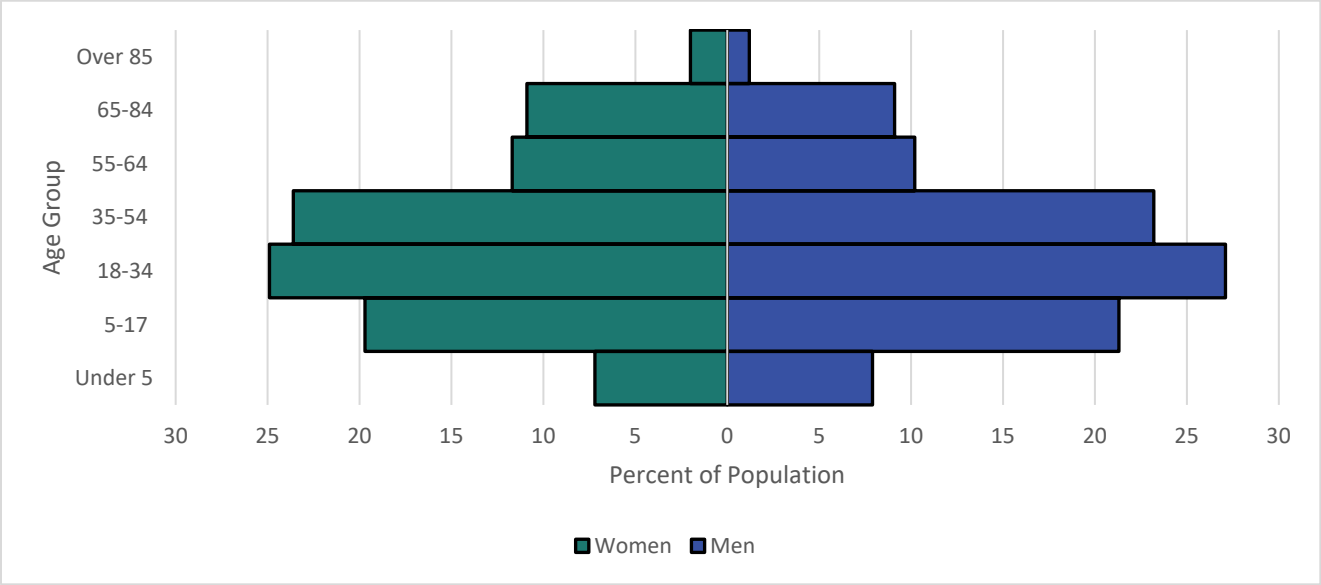
Table 2: South Sacramento Race / Ethnicity

Demographics			
Race	South Sacramento	City of Sacramento	California
African American or Black	20%	13%	5%
American Indian	<1%	1%	1%
Asian	26%	19%	15%
Hispanic	13%	28%	39%
Native Hawaiian	4%	2%	1%
Two or More Races	8%	5%	3%
White	29%	32%	36%

Source: American Community Survey, 2015-2019

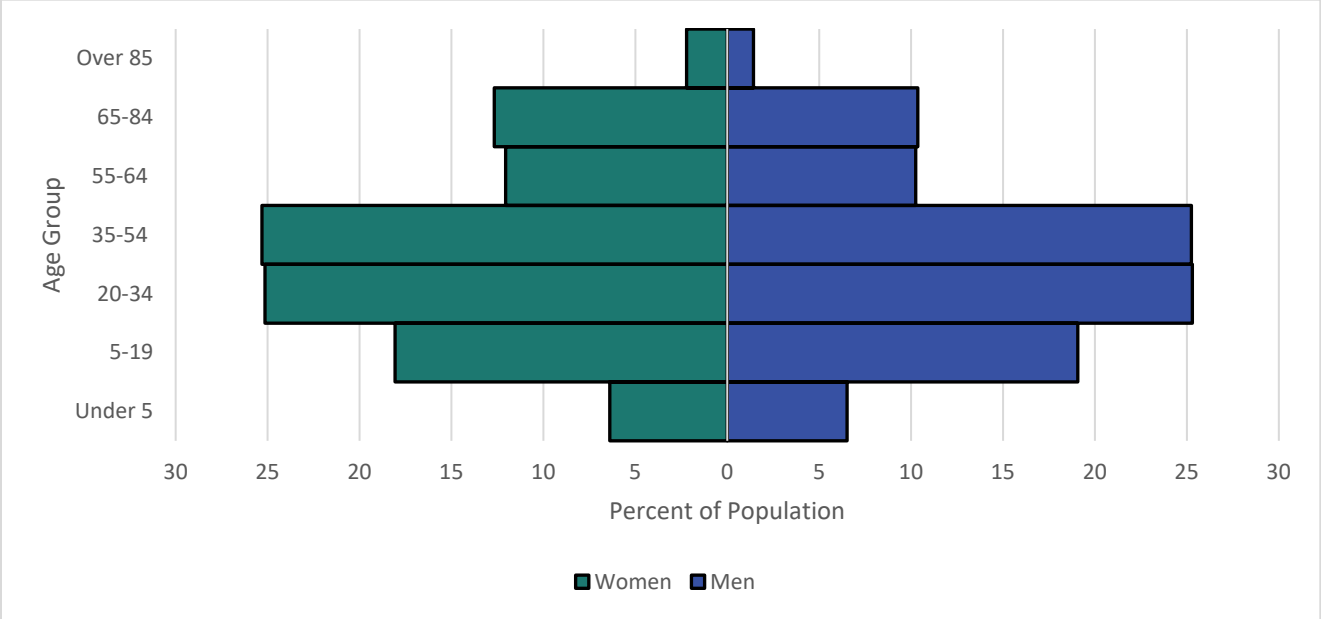
[2] American Community Survey, 2015 - 2019

Figure 2: Population: Gender and Age



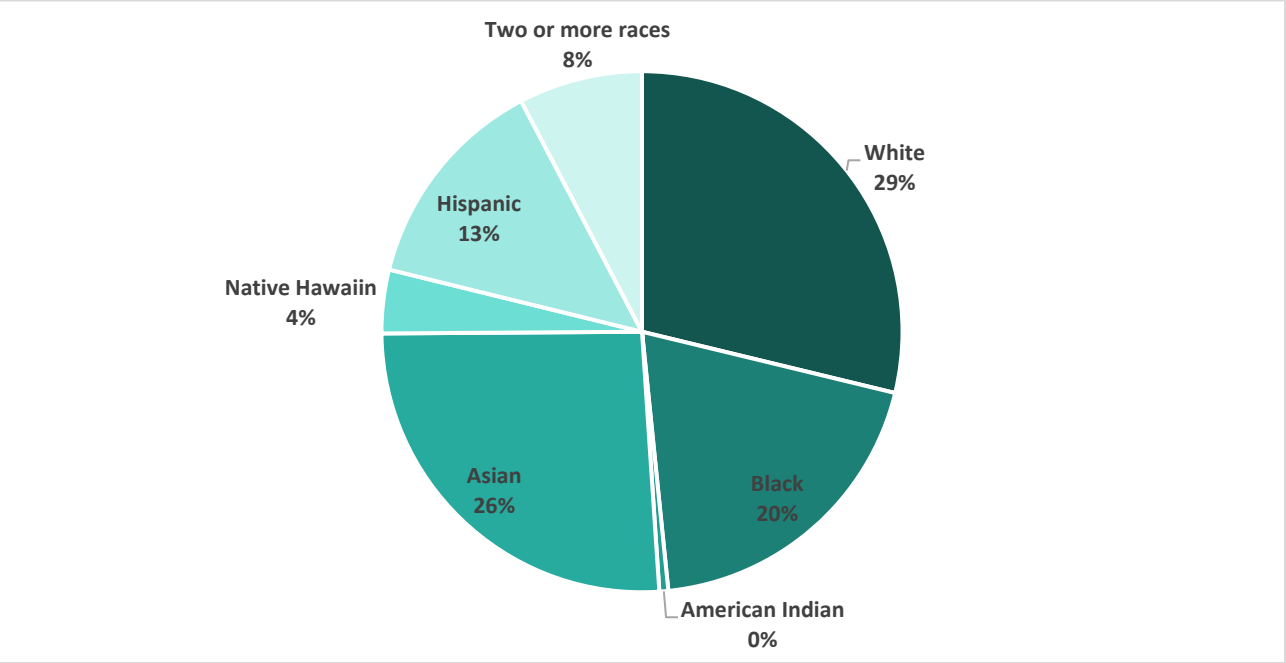
Source: American Community Survey, 2015-2019

Figure 3: Population: City of Sacramento Gender and Age



Source: American Community Survey, 2015-2019

Figure 4: Population: Race



Source: American Community Survey, 2015-2019

Land Use and Activity Generators

According to the City of Sacramento's Land Use Map, the South Sacramento plan area consists primarily of single-family residential neighborhoods with community destinations, retail and employment centers located along major corridors.

The primary north-south corridors through the plan area are Freeport Boulevard, 24th Street, Center Parkway, and Franklin Boulevard. Freeport Boulevard, running along the western edge of the plan area, connects light industrial, office, retail, and the Bill Conlin Sports Complex. Just east of the Executive Airport, 24th Street includes various public agency buildings and a shopping center at Florin Road. Franklin Boulevard connects shopping centers and industrial uses.

The primary east-west corridors are Florin Road, Meadowview Road, Mack Road, and Cosumnes River Boulevard. Luther Burbank High School and the Southgate Plaza mall are located on Florin Road, along with other commercial and industrial uses. Various public agency buildings such as the City of Sacramento Solid Waste Center and the California National Guard are located along Meadowview Road. A major greenfield development is located just north of Cosumnes River Boulevard, where new shopping, housing, and employment is expected to be developed. While the retail portion of the development has begun construction, there is no current timeline for the completion of the full site plan. Cosumnes River College is also located along Cosumnes River Boulevard, just west of SR 99.

Commute Profile

Within the South Sacramento area, 88% of workers drive to work (either alone or carpooling) and almost three quarters (73%) of workers drive alone to work. Black residents use public transit at a higher rate (6%) compared to 4% for white residents and 0% to 3% for all other races. American-Indian residents walk at a rate (8%) much higher than other races (**Table 3**).[3]

Table 3: Commute to Work by Race

Race	Drive alone	Carpool	Transit	Walk	Bike/Taxi/Motorcycle	Work from home
Native Hawaiian or Alaskan	86%	6%	1%	0%	4%	3%
American Indian	73%	11%	0%	8%	0%	8%
Asian	73%	18%	3%	1%	1%	5%
White	73%	11%	4%	2%	3%	8%
Hispanic	72%	19%	3%	2%	2%	3%
Black	69%	16%	6%	0%	3%	5%
Other race	69%	21%	3%	2%	1%	3%
2 or more races	69%	19%	2%	2%	3%	5%
AVERAGE	**73%**	**15%**	**3%**	**2%**	**2%**	**5%**

Source: American Community Survey, 2015-2019

Community Equity Profile

This section identifies the areas and population within the South Sacramento plan area that has the greatest need for active transportation improvements and is disproportionately burdened by social, environmental, health, and economic factors.

Environmental Health – *CalEnviroScreen 4.0*

The CalEnviroScreen 4.0[4] analysis is based on two combined indicators: Pollution Burden (i.e., exposures and environmental effects) and Population Characteristics (i.e., sensitive populations and socioeconomic factors). Together, 21 statewide indicators compose the analysis. The top 25th percent of census tracts are typically considered the most disadvantaged at the statewide level and have been targeted for Greenhouse Gas Reduction funding through Senate Bill 535. **Figure 5** below shows the overall score for each census tract within the plan area. Higher scores indicate worse pollution and population indicators. **Figures 6** and **7** show the Pollution Burden and Population Characteristics scores, respectively.

Overall Score

Small areas on the boundary of the plan area had the highest pollution burden. These areas do not cover entire neighborhoods within the plan area and are in the following locations:

- Fruitridge Road and SR 99 in the South City Farms neighborhood
- Florin Road and Franklin Boulevard in the Parkway neighborhood
- North of Brookfield Drive east of Franklin Boulevard in the Parkway neighborhood near Charles E. Mack School
- Northeast of Mack Road and SR 99

[3] American Community Survey, 2015-2019
[4] CalEnviroScreen 4.0 available here: https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40

These four areas contain mostly industrial uses with relatively few residences. These areas do, however, include Charles E. Mack School, Nielsen Park, and the Florin Station and Fruitridge Station of Sacramento Regional Transit (SacRT) light rail system.

Pollution Burden

Areas with the highest pollution burden include:

- Southwest of I-5 and Consumnes River Boulevard in the Meadowview neighborhood near Freeport (76th to 100th percentile)
- Near Florin Road and Franklin Boulevard in the Parkway neighborhood (51st to 75th percentile)
- North of Brookfield Drive east of Franklin Boulevard in the Parkway neighborhood near Charles E. Mack School
- Northeast of Mack Road and SR 99 (51st to 75th percentile)

Areas with high concentrations of industrial land uses typically experience increased air pollutants from a higher proportion of truck traffic, manufacturing emissions, and close proximity to highways where a significant amount of air pollution is generated. The South Sacramento area has a low level of pollution burden, with all areas in the bottom 25 percent or better. Neighborhoods with the lowest pollution burden include:

- Brentwood
- Woodbine
- Parkway
- Meadowview
- Valley Hi / North Laguna

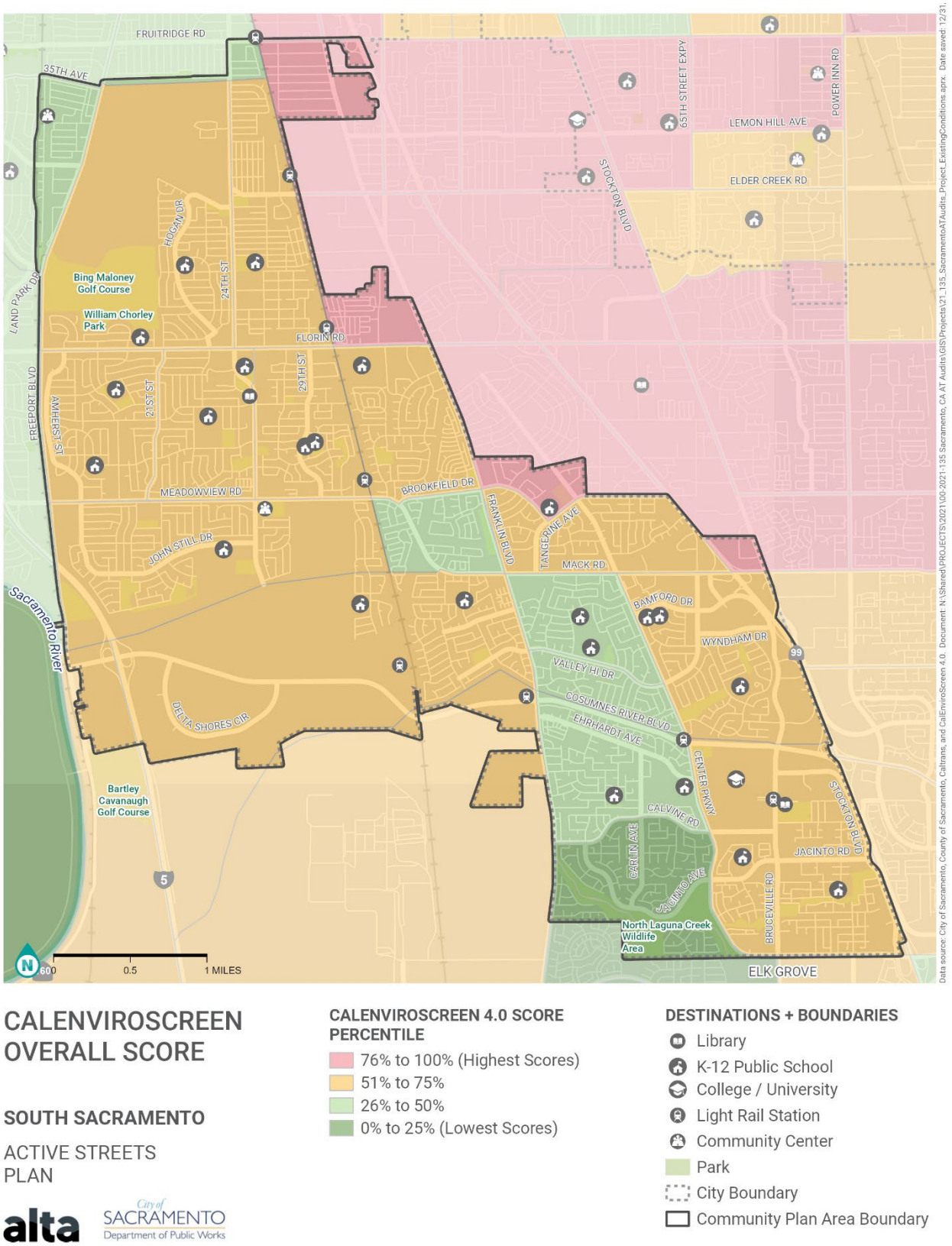
These areas have relatively low burdens from environmental pollutions sources such as high truck traffic, industrial uses, and other sources of air pollution.

Population Characteristics

Most of the South Sacramento plan area scored above the 75th percentile for population characteristics (**Figure 7**) that are the most vulnerable to pollution. Population characteristics that result in increased vulnerability to pollution include the following indicators:

- Asthma
- Cardiovascular disease
- Low birth weight infants
- Educational attainment
- Housing burden
- Linguistic isolation
- Poverty
- Unemployment

Figure 5: CalEnviroScreen 4.0 – Overall Score



CALENVIROSCREEN OVERALL SCORE

SOUTH SACRAMENTO

ACTIVE STREETS PLAN

alta

City of SACRAMENTO Department of Public Works

CALENVIROSCREEN 4.0 SCORE PERCENTILE

- 76% to 100% (Highest Scores)
- 51% to 75%
- 26% to 50%
- 0% to 25% (Lowest Scores)

DESTINATIONS + BOUNDARIES

- Library
- K-12 Public School
- College / University
- Light Rail Station
- Community Center
- Park
- City Boundary
- Community Plan Area Boundary

Figure 6. CalEnviroScreen 4.0 Pollution Burden

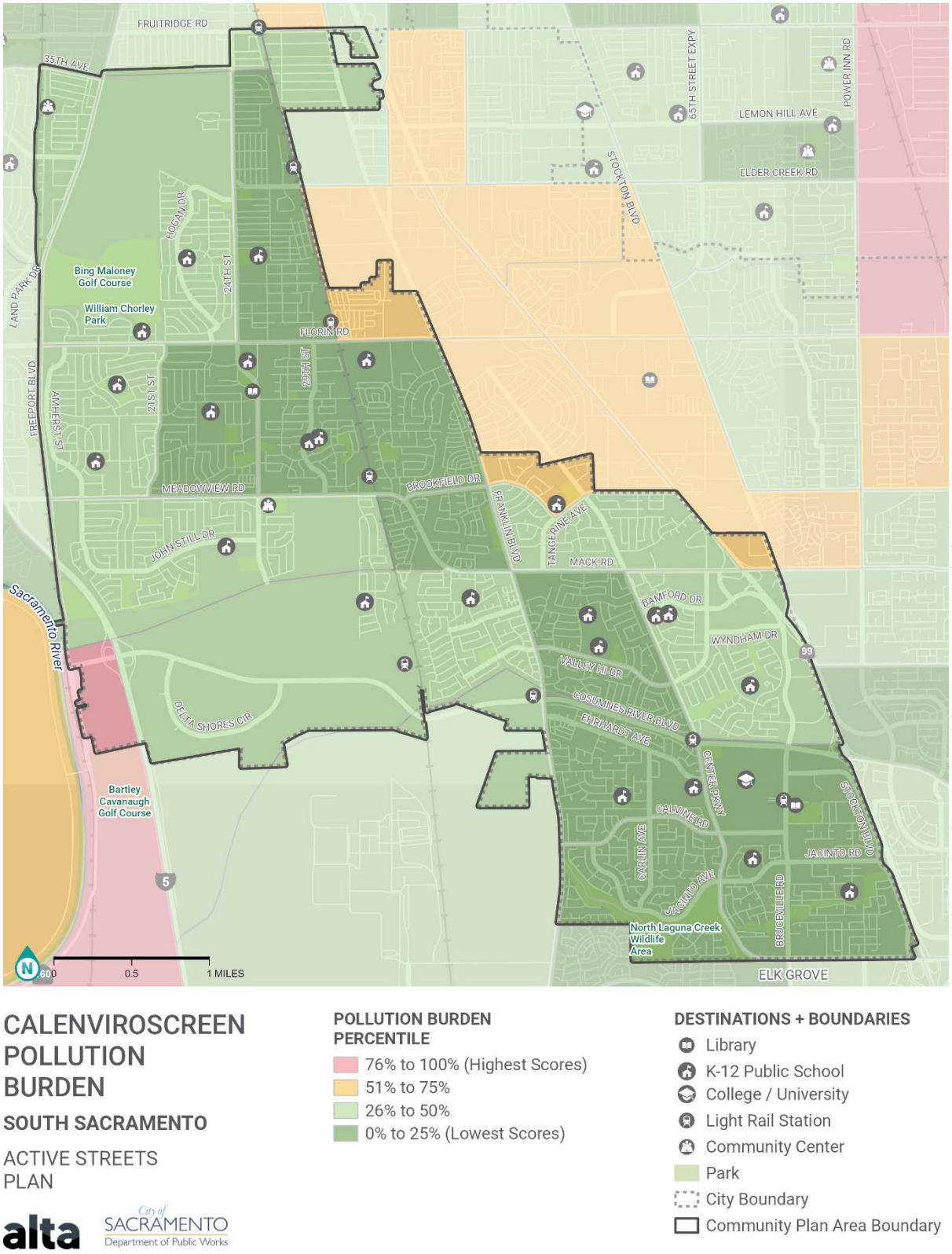
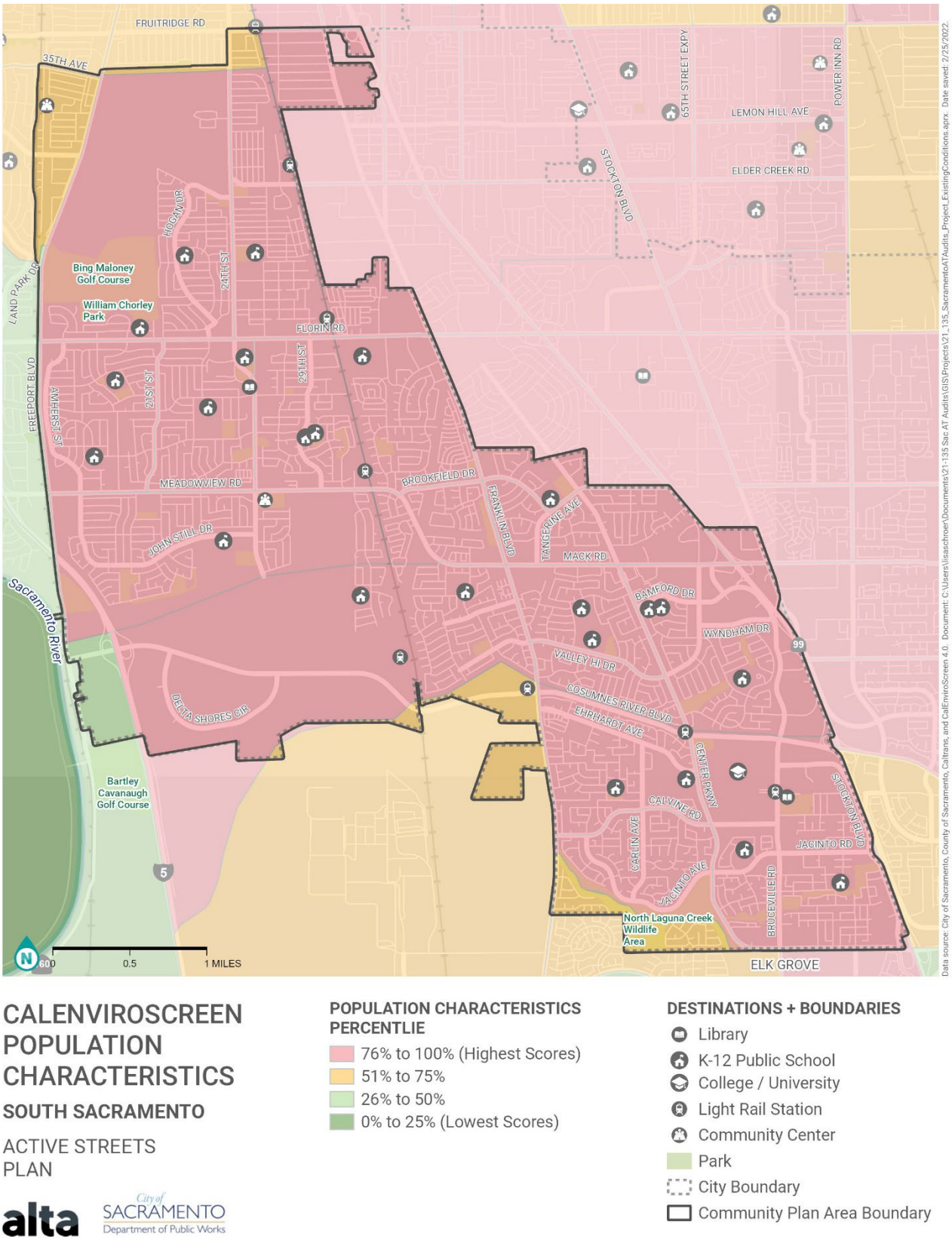


Figure 7: CalEnviroScreen 4.0 Population Characteristics



CALENVIROSCREEN POPULATION CHARACTERISTICS

SOUTH SACRAMENTO

ACTIVE STREETS PLAN

alta

City of SACRAMENTO Department of Public Works

POPULATION CHARACTERISTICS PERCENTLIE

- 76% to 100% (Highest Scores)
- 51% to 75%
- 26% to 50%
- 0% to 25% (Lowest Scores)

DESTINATIONS + BOUNDARIES

- Library
- K-12 Public School
- College / University
- Light Rail Station
- Community Center
- Park
- City Boundary
- Community Plan Area Boundary

Public Health - Healthy Places Index

The Healthy Places Index (HPI)[5] developed by the Public Health Alliance of Southern California, is a composite of 25 individual public policy and health metrics. Two important metrics for increased public health include park access (**Figure 8**) and supermarket access (**Figure 9**).

As seen in **Figure 8**, most of the area's residents live within a half-mile of a park. Areas where less than half of residents live within a half-mile of a park include:

- North of Mack Road and east of Franklin Boulevard in the Parkway neighborhood
- North of Florin Road and east of the Union Pacific railroad line also in the Parkway neighborhood; and
- West of Freeport Boulevard and south of 35th Avenue in the Freeport Manor neighborhood

The Youth, Parks, and Recreation Enrichment (YPCE) Department at the City of Sacramento recently completed a similar Park Access and Equity analysis which is available through the Trust for Public Land website.[6]

Having access to a supermarket can improve residents' health by encouraging a better diet, reducing chronic disease, and lowering the risk of food insecurity.[7] The majority of the population in census tracts located in residential areas do *not* live within at least half a mile of a supermarket. Residents living within the following neighborhoods have to travel furthest, on average, to reach a grocery store compared to other neighborhoods in the South Sacramento plan area:

- South City Farms,
- Meadowview, and
- Valley Hi/North Laguna

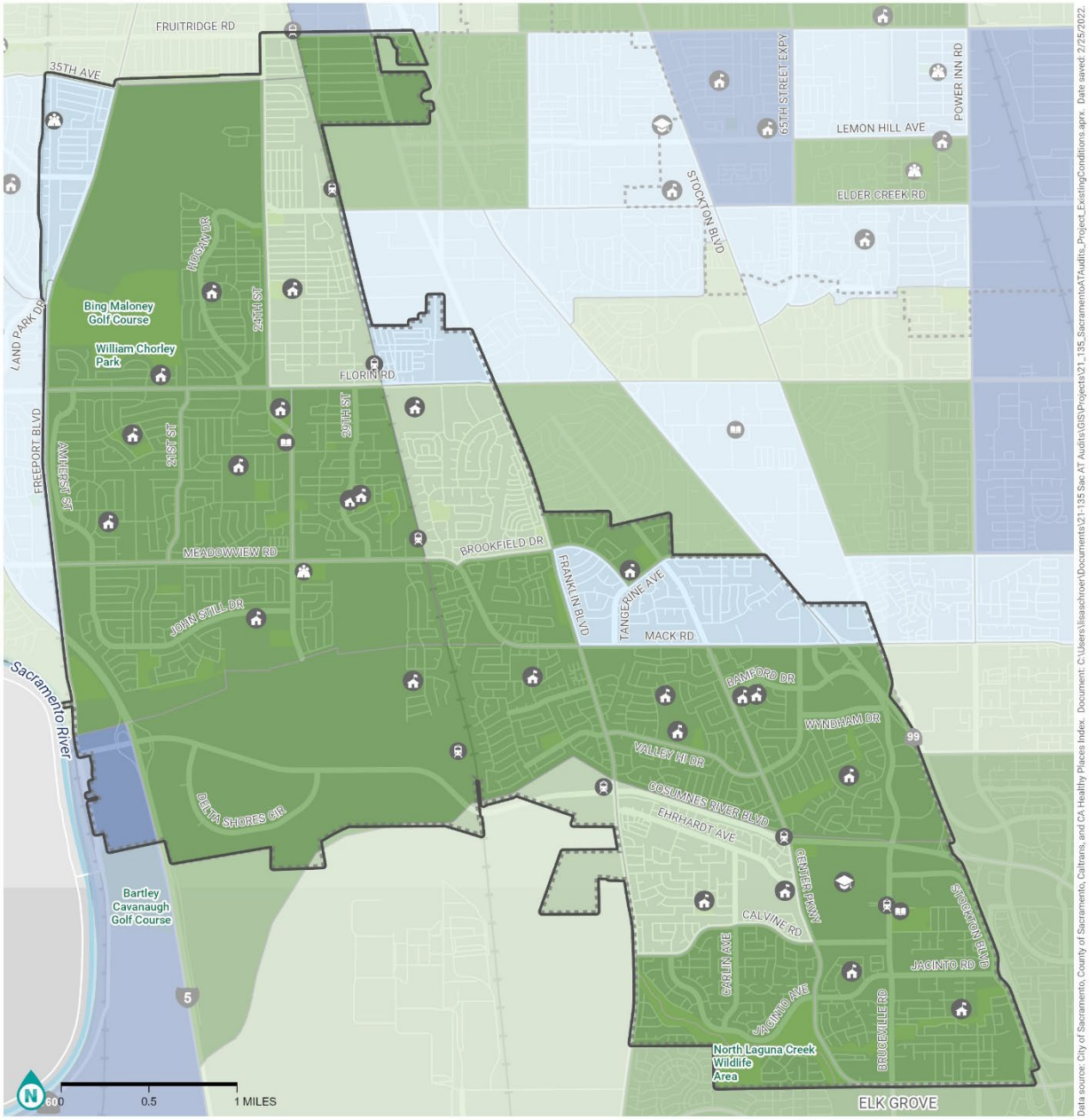
Residents within the Parkway neighborhood have the greatest access, on average, to a grocery store in the plan area.

[5] www.healthyplaceindex.com

[6] Trust for Public Land – Park Access Score Tool: https://parkserve.tpl.org/mapping/index.html?CityID=PS0664000

[7] Food Trust and PolicyLink, 2013. Access to Healthy Food and Why It Matters: A Review of the Research, available at http://www.healthyfoodaccess.org/resources-tools/library/access-healthy-food-why-matters

Figure 8: Healthy Places Index – Park Access



PARK ACCESS - HEALTHY PLACES INDEX

SOUTH SACRAMENTO

ACTIVE STREETS PLAN

alta

City of SACRAMENTO Department of Public Works

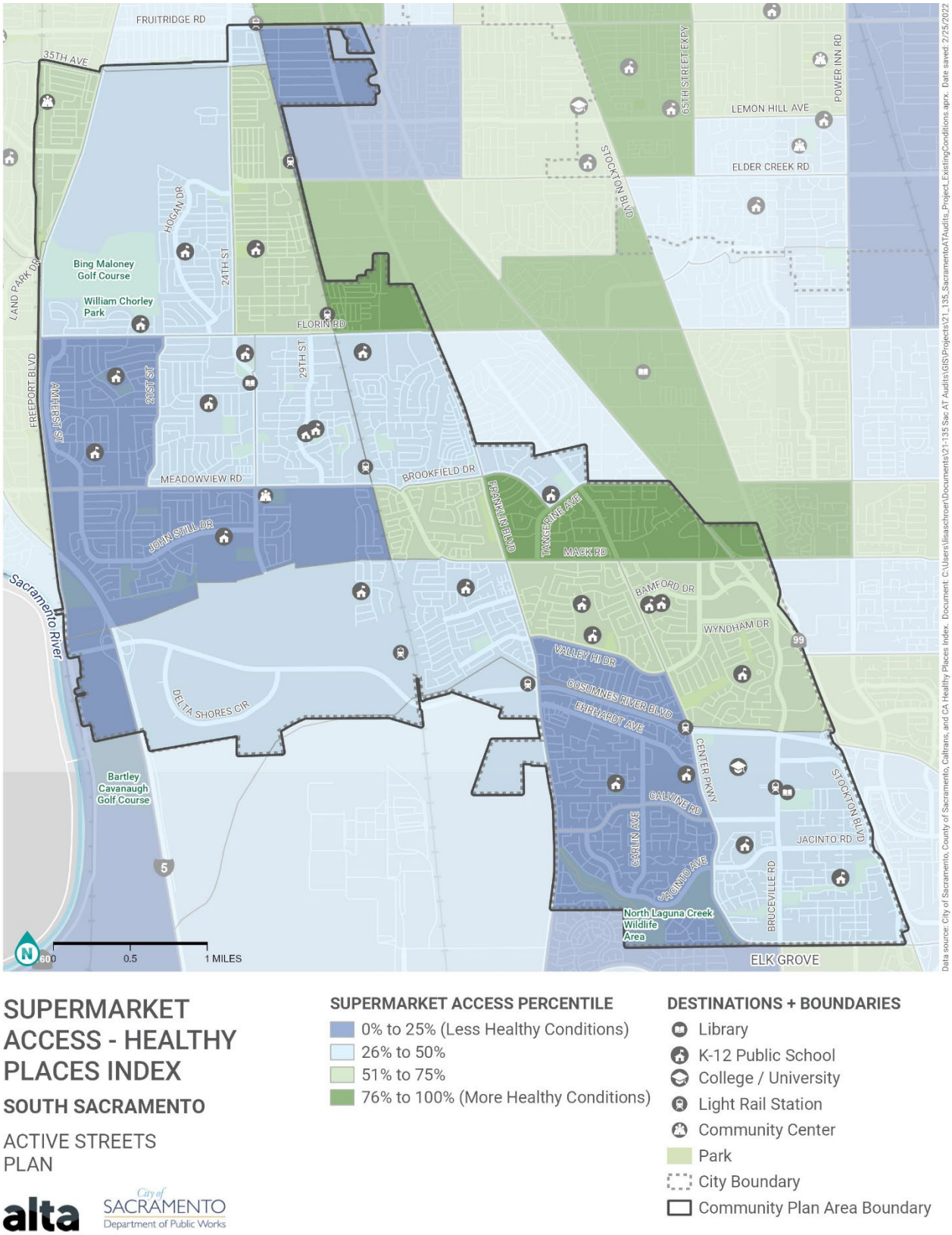
PARK ACCESS PERCENTILE

- 0% to 25% (Less Healthy Conditions)
- 26% to 50%
- 51% to 75%
- 76% to 100% (More Healthy Conditions)

DESTINATIONS + BOUNDARIES

- Library
- K-12 Public School
- College / University
- Light Rail Station
- Community Center
- Park
- City Boundary
- Community Plan Area Boundary

Figure 9: Healthy Places Index – Grocery Store Access



Heat Vulnerability Analysis

California Heat Assessment Tool (CHAT)

Denser areas of the Plan Area are more vulnerable to extreme heat due to the higher number of people. The Heat Health Action Index[8] (**Figure 10**) is comprised of several variables that represent heat vulnerability. Heat vulnerability is a metric that gauges the relative effects of *social vulnerability factors* (i.e., race, education, age, income, transportation, etc.), *health factors* (i.e., physical disability, asthma, heart health, etc.), and *environmental factors* (land development, ozone, particulate matter, tree canopy, urban heat islands, etc.) to gauge how vulnerable communities may be to relative changes in temperature and increases in the number of heat events. The index is based on a score of 0-100 with lower scores indicating less heat vulnerability. The average summer temperature in California is projected to increase by 4-5 degrees Fahrenheit by the year 2100. As the average temperature increases, the frequency and severity of extreme heat events (periods of relatively hotter and more humid conditions that impact the social, health, and environmental factors listed above) will also increase in frequency and severity.[9]

The following neighborhoods (located primarily in the eastern half of the plan area) have higher index ratings than the rest of the South Sacramento area, including:

- South City Farms,
- Parkway, and
- Valley Hi/North Laguna

Based on CHAT analysis, areas projected to have more than six annual extreme heat events will have a considerable impact on the health of residents. The analysis projected more than six annual extreme heat events within the Valley Hi/North Laguna neighborhood (**Figure 11**).

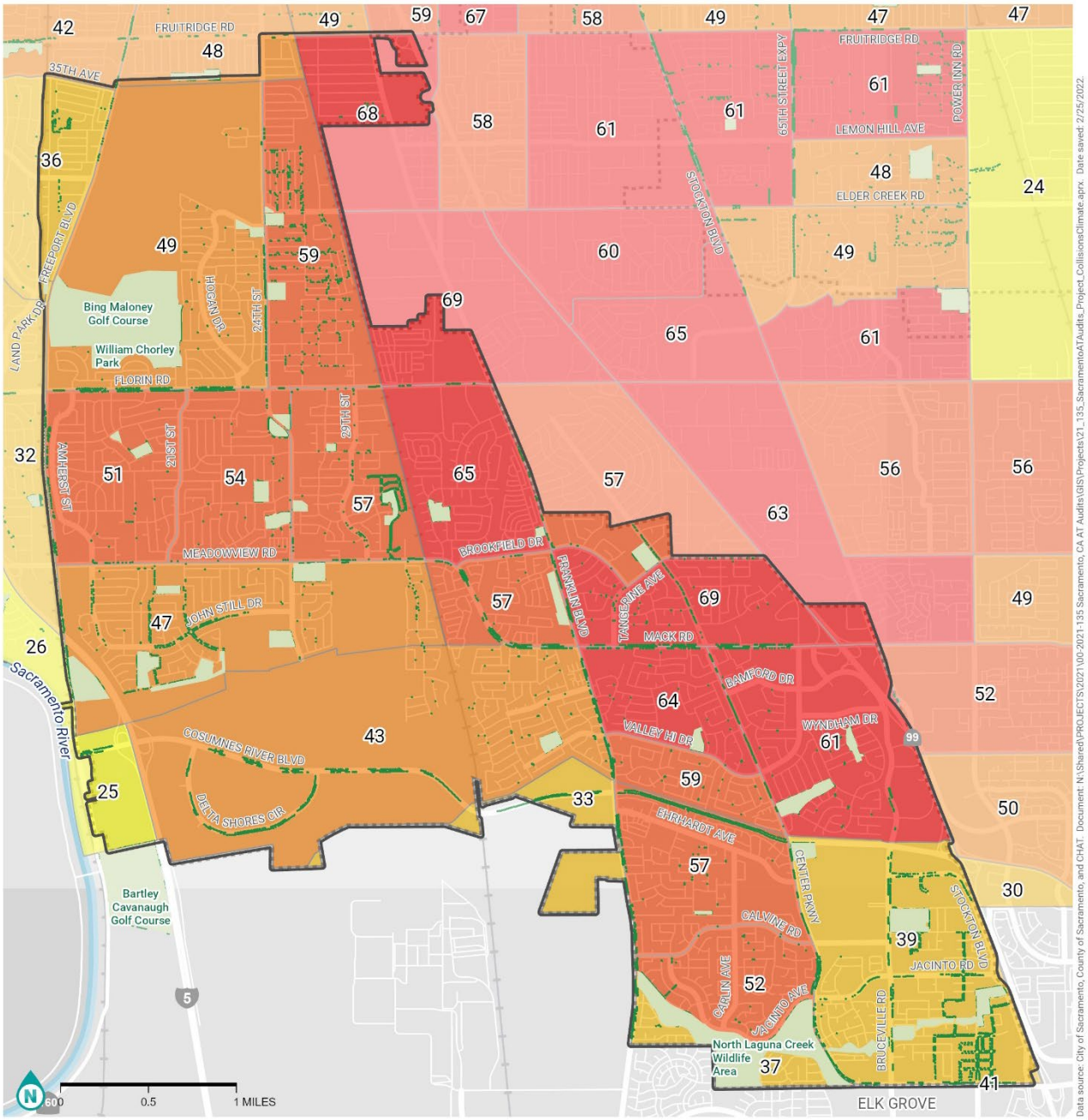
Tree Canopy Analysis

Figure 11 provides the results of a tree canopy analysis. The analysis examines how much of a given area is covered by tree shade. The map also displays where city-maintained trees are within the plan area. It is important to note that this map highlights the locations of city-maintained trees only and is not representative of every tree within the Plan area. Overall, the plan area has relatively few city-maintained trees. As shown on the map, these trees are typically concentrated in the northwestern section of the plan area as well as in the Parkway and Valley Hi/North Laguna neighborhoods east of Franklin Boulevard and north of Ehrhardt Avenue. There are very few city trees in the southeastern section of the plan area in the Valley Hi/North Laguna neighborhood. No census tract has more than 15% tree canopy cover and some had as little as 4% coverage. For comparison, the average tree canopy coverage across the City of Sacramento is 13.5%.

A bivariate analysis combining both heat events and tree canopy cover indicates that the southeastern corner of the plan area in the Valley Hi/North Laguna neighborhood has the highest heat vulnerability (i.e., will experience the most impacts from climate change) and represents the biggest opportunity for tree canopy improvement within the South Sacramento area (**Figure 12**). Communities in the northwest part of the plan area (generally west of 24th Street and north of Meadowview Road) have the lowest heat vulnerability within the area.

[8] Available at: www.cal-heat.org
[9] California Heat Assessment Tool, CHAT

Figure 10: Heat Health Index



CLIMATE ANALYSIS

SOUTH SACRAMENTO

ACTIVE STREETS PLAN

HEAT HEALTH ACTION INDEX

- < 30
- 31 - 40
- 41 - 50
- 51 - 60
- > 59

DESTINATIONS + BOUNDARIES

- City Maintained Trees
- Park
- Rivers
- Community Plan Area Boundary

*City Maintained Trees does not include all tree cover.

Figure 11: Tree Canopy Cover

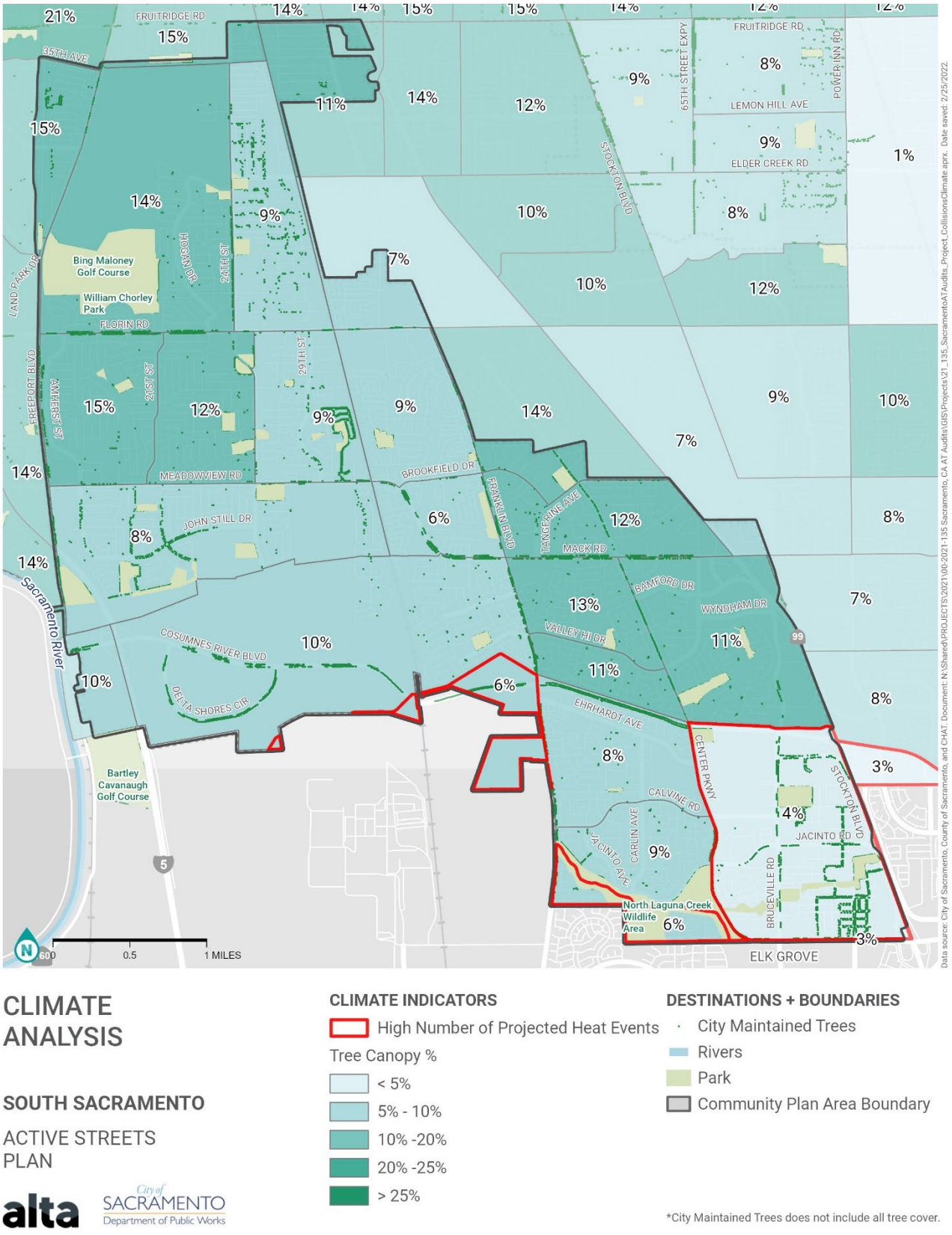
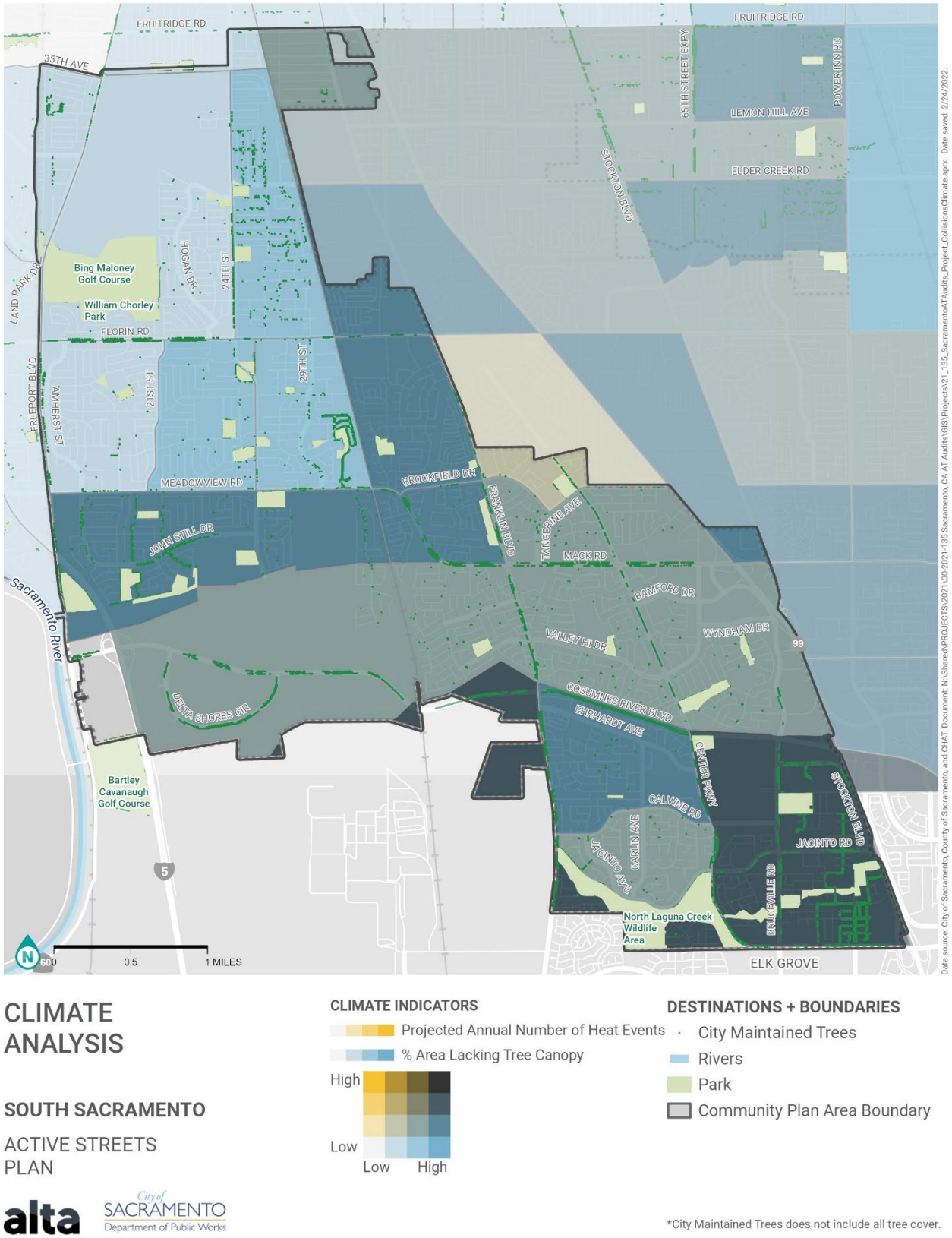


Figure 12: Bivariate Climate Analysis



Housing and Transportation Costs Index

The Housing and Transportation Costs Index[10] (H&T) shows how much income the average household within a census tract spends on housing and transportation costs. The US Department of Housing and Urban Development (HUD) suggests that households should spend about one-third of their income on housing costs.[11] Most households—with the exception of the southwestern most section of the Valley Hi/North Laguna neighborhood and the Freeport Manor neighborhood—spend less than 30% of their income on housing costs across the plan area (**Figure 13**). Households in the following neighborhoods spend more than half of their income on housing and transportation costs combined (**Figure 14**):

- The northwestern section of the Valley Hi/North Laguna neighborhood,
- The southwestern most section of the Valley Hi/North Laguna neighborhood, and
- The Freeport Manor neighborhood

Combined, most households spend around or just under half of their income on housing and transportation costs.[12]

[10] Available at: https://htaindex.cnt.org/
[11] https://htaindex.cnt.org/
[12] https://htaindex.cnt.org/

Figure 13: Household Income Spent on Housing Costs

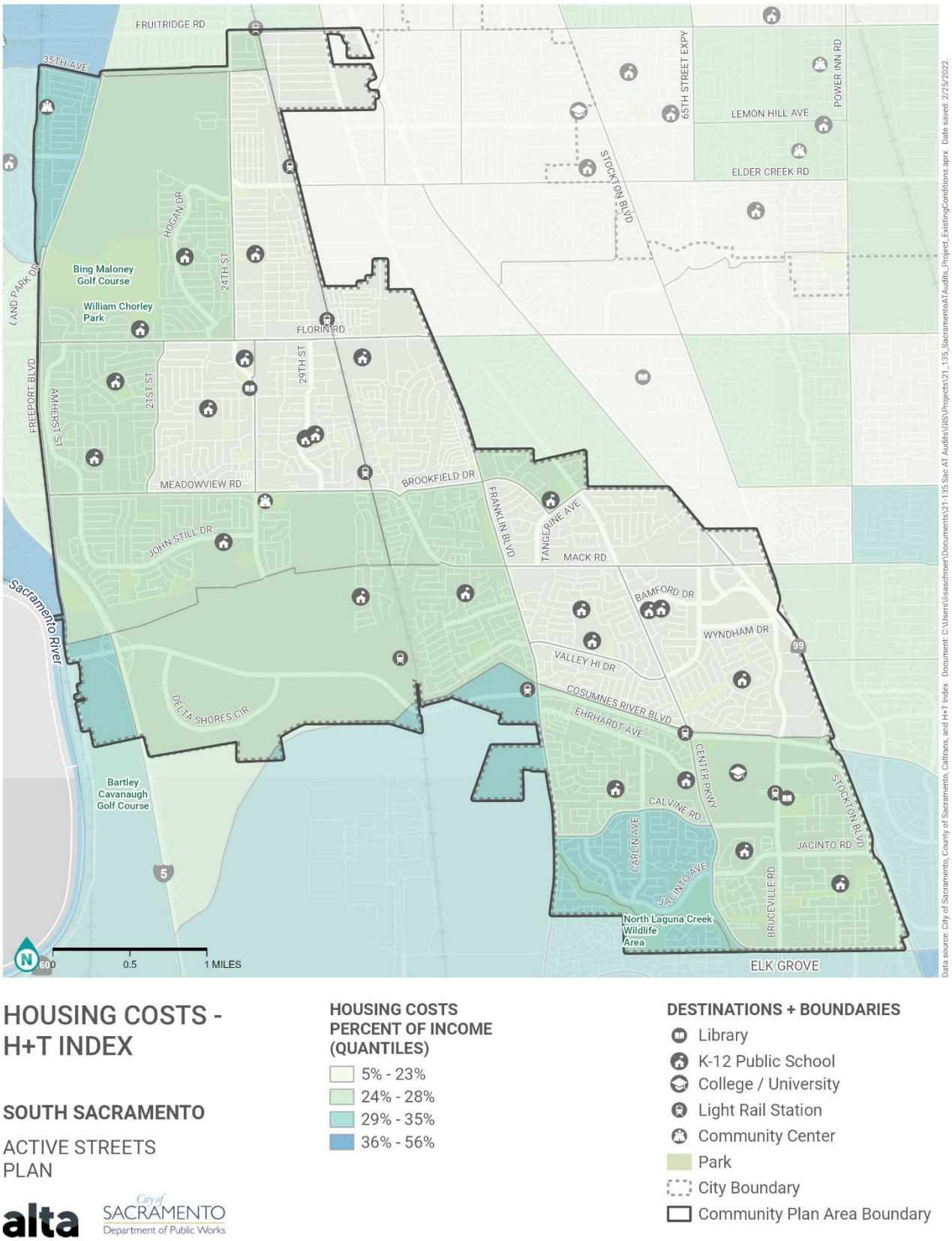
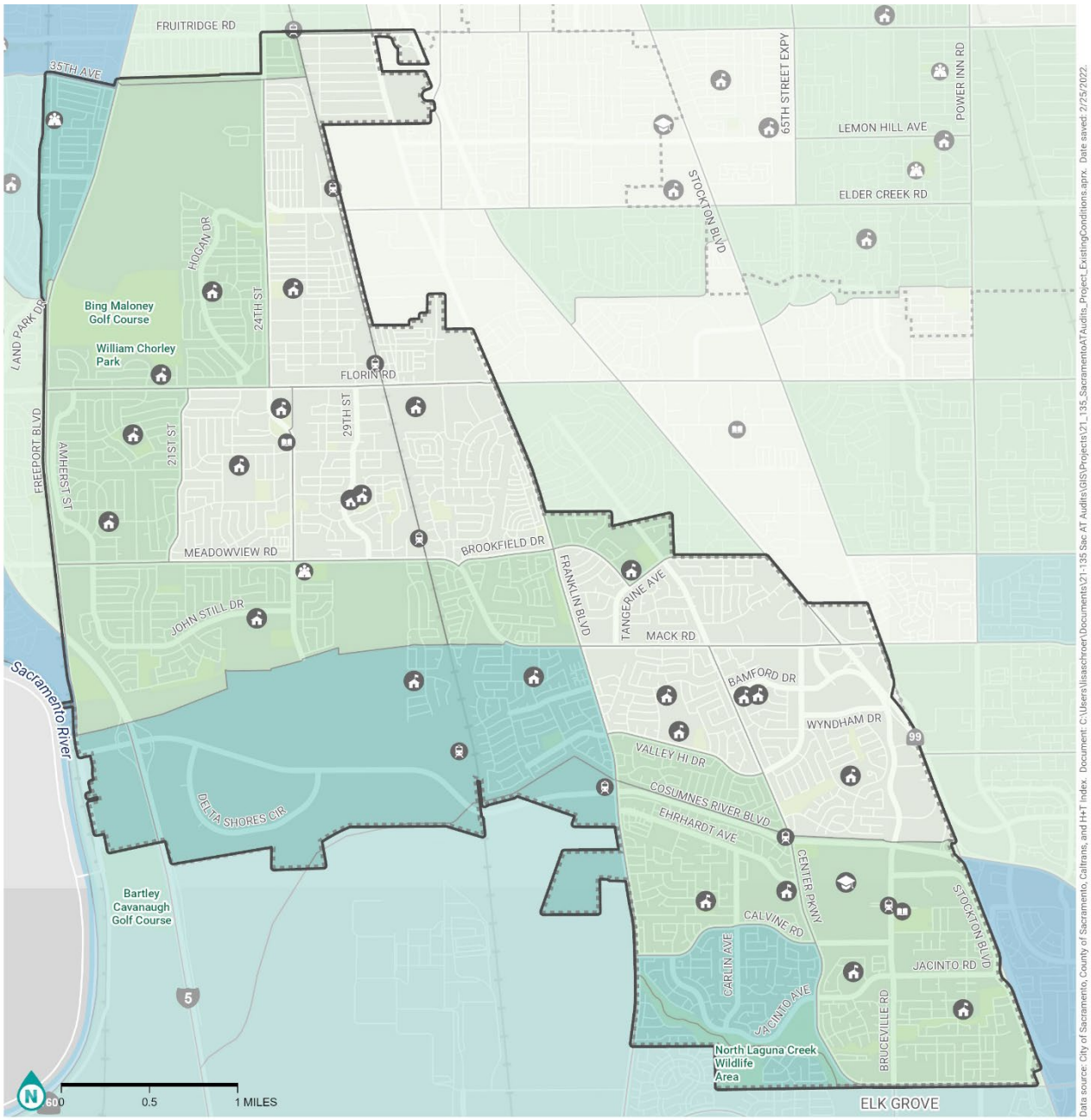


Figure 14: Household Income Spent on Housing and Transportation Costs



HOUSING AND TRANSPORTATION COSTS - H+T INDEX

SOUTH SACRAMENTO

ACTIVE STREETS PLAN

alta

City of SACRAMENTO Department of Public Works

HOUSING AND TRANSPORTATION COSTS PERCENT OF INCOME (QUANTILES)

- 23% to 44%
- 45% to 51%
- 52% to 58%
- 59% to 82%

DESTINATIONS + BOUNDARIES

- Library
- K-12 Public School
- College / University
- Light Rail Station
- Community Center
- Park
- City Boundary
- Community Plan Area Boundary

Transportation Profile

Existing Streets

The South Sacramento plan area has several large arterials and major infrastructure facilities. The plan area is generally bound by highways to the east (SR-99) other major arterials (Freeport Boulevard to the west). Major streets include:

North-south streets:

- Freeport Boulevard
- 24th Street
- Franklin Boulevard
- Center Parkway
- SR 99

East-west streets:

- Florin Road
- Meadowview Road
- Mack Road
- Cosumnes River Boulevard
- Sheldon Road

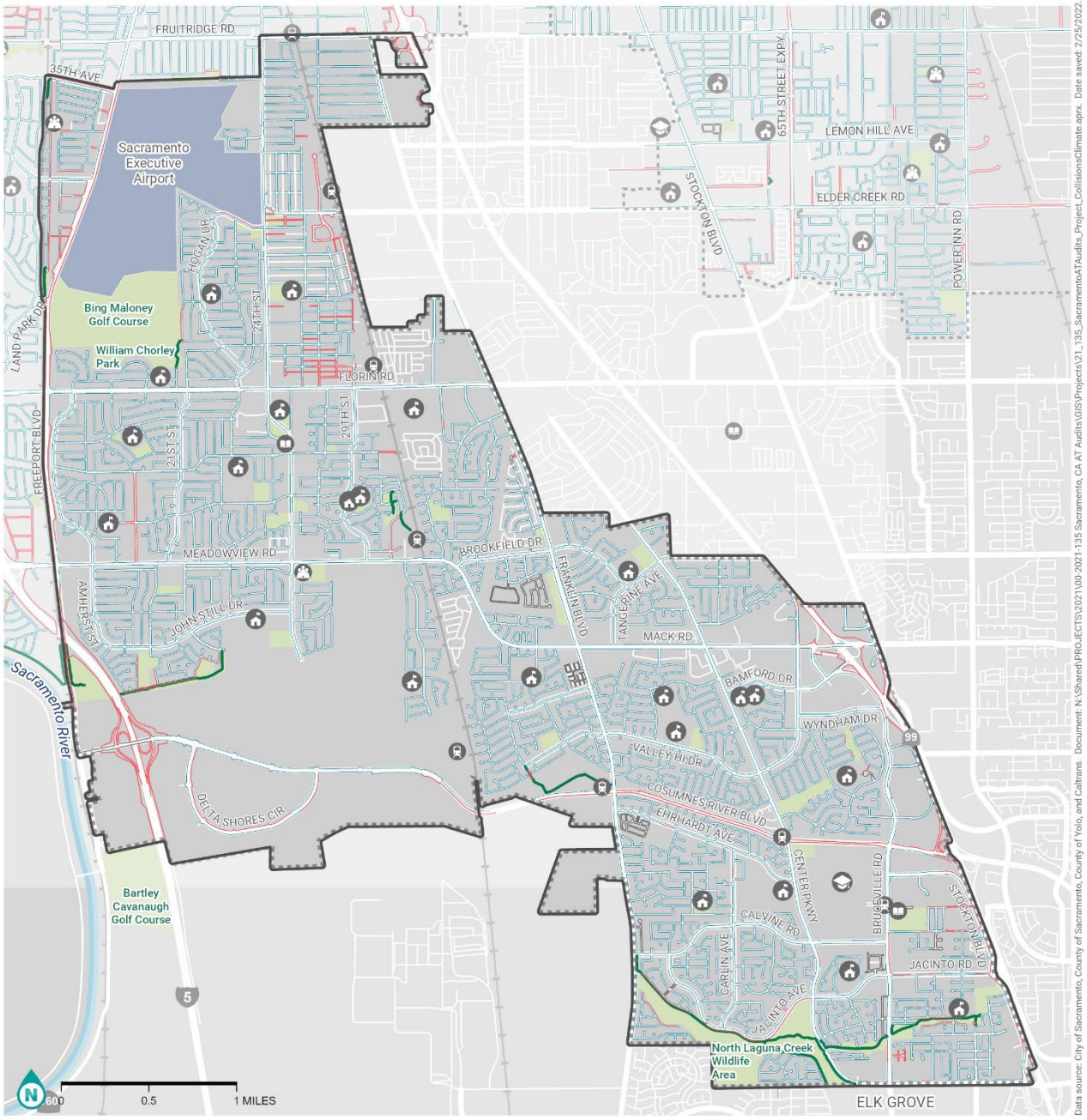
The major arterials and highways are barriers for people walking and bicycling due to limiting access or crossing points and their large physical structures which divide communities. Other infrastructure barriers within the plan area include the Union Pacific railroad tracks and SacRT light rail tracks.

Walking Facilities

Walking facilities include sidewalks, shared-use paths (trails), and intersection (or mid-block) crossing facilities (**Figure 15**). Within the South Sacramento area, there are 5.6 miles of shared use paths, such as through the North Laguna Creek Wildlife Area. Most streets have sidewalks on both sides of the street. Cosumnes River Boulevard and Freeport Boulevard, two of the area's arterial streets, do not have continuous sidewalks.

The sidewalk network is most inconsistent in the Freeport Manor and Woodbine neighborhoods. The less-dense street network and increased frequency of missing sidewalks create a disconnected and less comfortable environment for people walking.

Figure 15: Existing Sidewalk Network



PEDESTRIAN NETWORK

SOUTH SACRAMENTO

ACTIVE STREETS PLAN

alta City of SACRAMENTO Department of Public Works

SIDEWALK PRESENCE AND TRAILS

- Sidewalk
- No Sidewalk
- No Data
- Class I: Shared-Use Path

DESTINATIONS + BOUNDARIES

- Library
- K-12 Public School
- College / University
- Light Rail Station
- Community Center
- Airport
- Park
- City Boundary
- Community Plan Area Boundary

Bicycling Facilities

The plan area includes 58.6 miles of existing bicycle facilities (**Figure 16** and **Table 4**). These facilities primarily consist of bicycle lanes and bicycle routes. Within South Sacramento, the network of bicycle lanes includes both north-south streets and east-west streets such as 24th Street, Franklin Boulevard, Cosumnes River Boulevard, and Bruceville Road. The most connected and continuous facilities are located primarily in the Valley Hi/North Laguna neighborhood. Some local residential and collector streets have bicycle routes, which are typically found around schools or parks throughout the plan area.

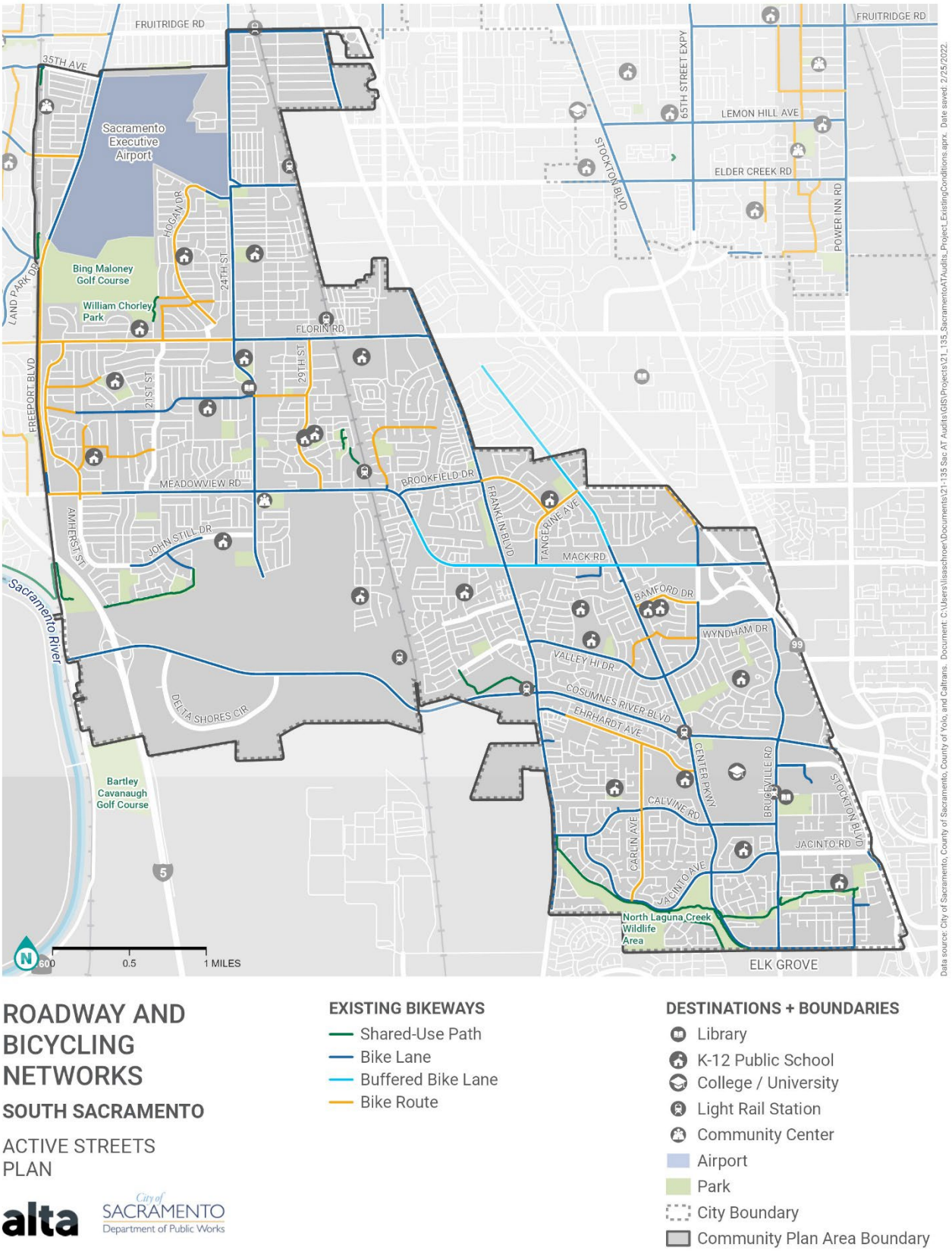
There are a small number of shared use path (trail) segments throughout the plan area. These are typically located within parks in the plan area such as the North Laguna Creek Wildlife Area. Segments of buffered bike lanes exist along Mack Road and Center Parkway. There are no bicycle boulevards or separated bikeways within the plan area. These four facility types are considered low-stress bicycling facilities and are comfortable for most users. Within South Sacramento, there are a total of 9 miles of low-stress facilities, but they are not connected as a network.

Bicycle facilities connect to the County and other areas of the city through Freeport Boulevard and 24th Street provide connections to the north and Florin Road, Cosumnes River Boulevard, and 35th Avenue to the west.

Table 4: Existing Bicycle Facilities in South Sacramento

Bikeway Class	Mileage (mi)
Shared-use Path	5.6
Bike Lane	35.1
Buffered Bike Lane	3.5
Bike Route	14.4
Separated Bikeway	0.0
Total	**58.6**

Figure 16: Street and Bicycling Networks



Transit Network and Facilities

The South Sacramento area is served by SacRT light rail (Blue Line) and buses (**Table 5** and **Figure 17**). As of January 2022, fourteen bus routes serve the plan area. Blue Line light rail service runs along eastern half of the plan area east of 24th Street and along Cosumnes River Boulevard. Bus service is fairly distributed throughout the plan area with a few gaps in the southern half of the plan area and directly east of the Executive Airport.

Table 5: SacRT Bus Route Information

Route Number	Route Name	Peak Frequency	Minimum Frequency	Days of Operation
Line 56	Meadowview	30 minutes	60 minutes	All Week
Line 61	Fruitridge	30 minutes	45 minutes	All week
Line 62	Freeport	30 minutes	60 minutes	All week
Line 67	Franklin	30 minutes	60 minutes	All week
Line 68	Oak Park	30 minutes	60 minutes	All week
Line 81	Florin	15 minutes	60 minutes	All week
Line 105	Elsie	2 daily peak trips	-	Weekday peak
Line 205	Fruitridge Rd – Freeport Blvd	2 daily peak trips	-	Weekday peak
Line 227	South Land Park – Greenhaven Dr	1 daily peak trip	-	Weekday peak
Line 246	Meadowview Rd – Greenhaven Dr	2 daily peak trips	-	Weekday peak
Line 247	21st St – Florin Rd	1 daily peak trip	-	Weekday peak
Line 248	Meadowview Rd – Rush River Dr	2 daily peak trips	-	Weekday peak
Line 252	Freeport – Fruitridge – ML King	1 daily peak trip	-	Weekday peak

Source: SacRT. September-December 2019 route data.

The heaviest ridership within the plan area is along the Florin Road corridor (**Figure 18**). Four out of the five busiest bus stops are transfer locations with SacRT light rail (Blue Line) stations (**Table 6**).

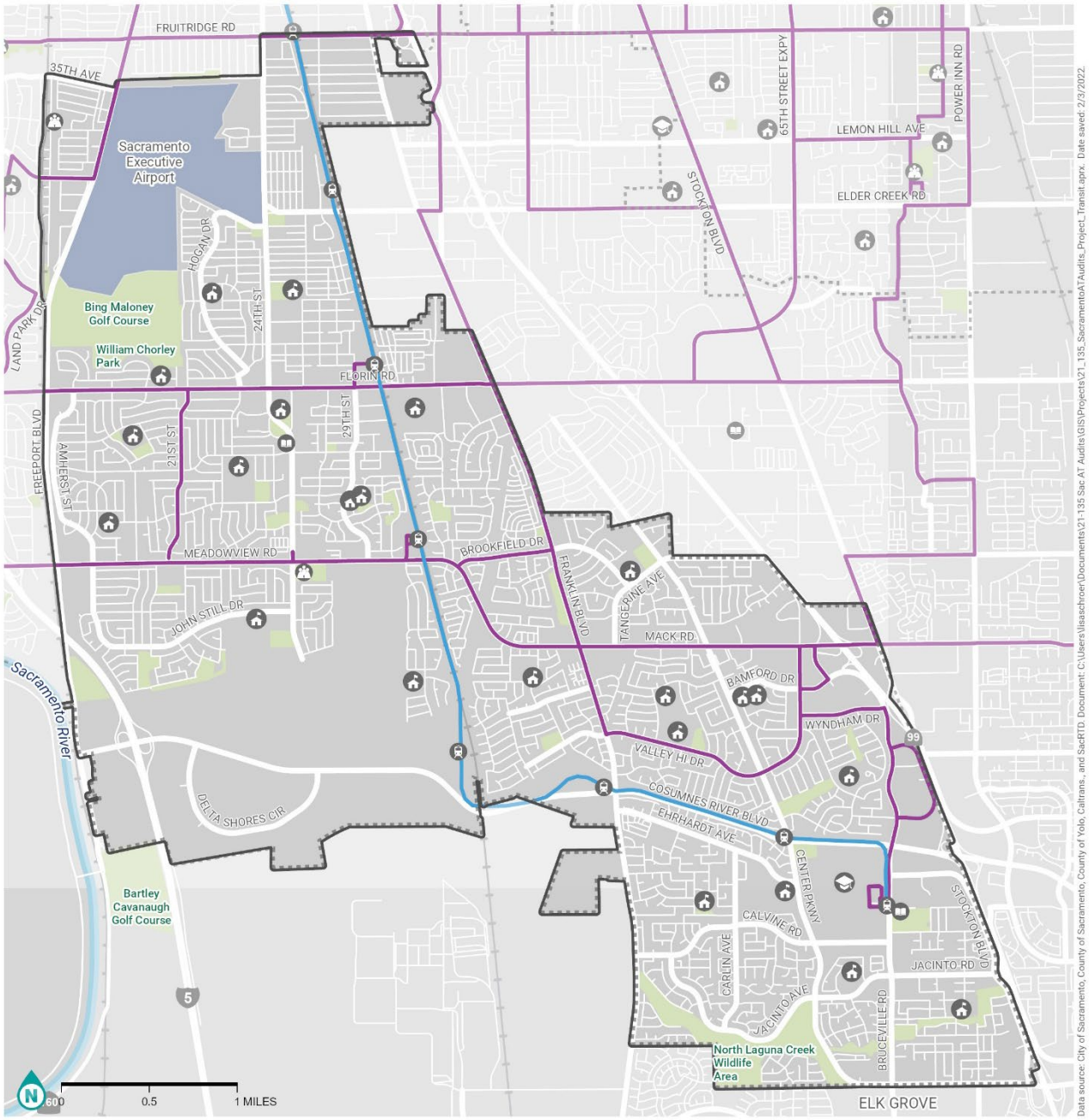
Table 6: Top Five Busiest Bus Stops[13]

Stop Location	Route(s)	Average Weekday Boardings and Alightings
Cosumnes Light Rail Station (Transfer for 3 bus routes – total of both directions)	56, 67, 68	776
Florin Light Rail Station (total of both directions)	81	388
Fruitridge Light Rail Station (total of both directions)	61	263
Meadowview Light Rail Station (Transfer for 2 bus routes – total of both directions)	56, 105	258
Valley Hi Dr & Mack Rd (southbound	119	195

Source: SacRT. September-December 2019 ridership data.

[13] The Morrison Creek Station opened in 2021.

Figure 17: SacRT Bus and Light Rail Routes



SacRTD TRANSIT ROUTES

SOUTH SACRAMENTO

ACTIVE STREETS PLAN

alta

City of SACRAMENTO Department of Public Works

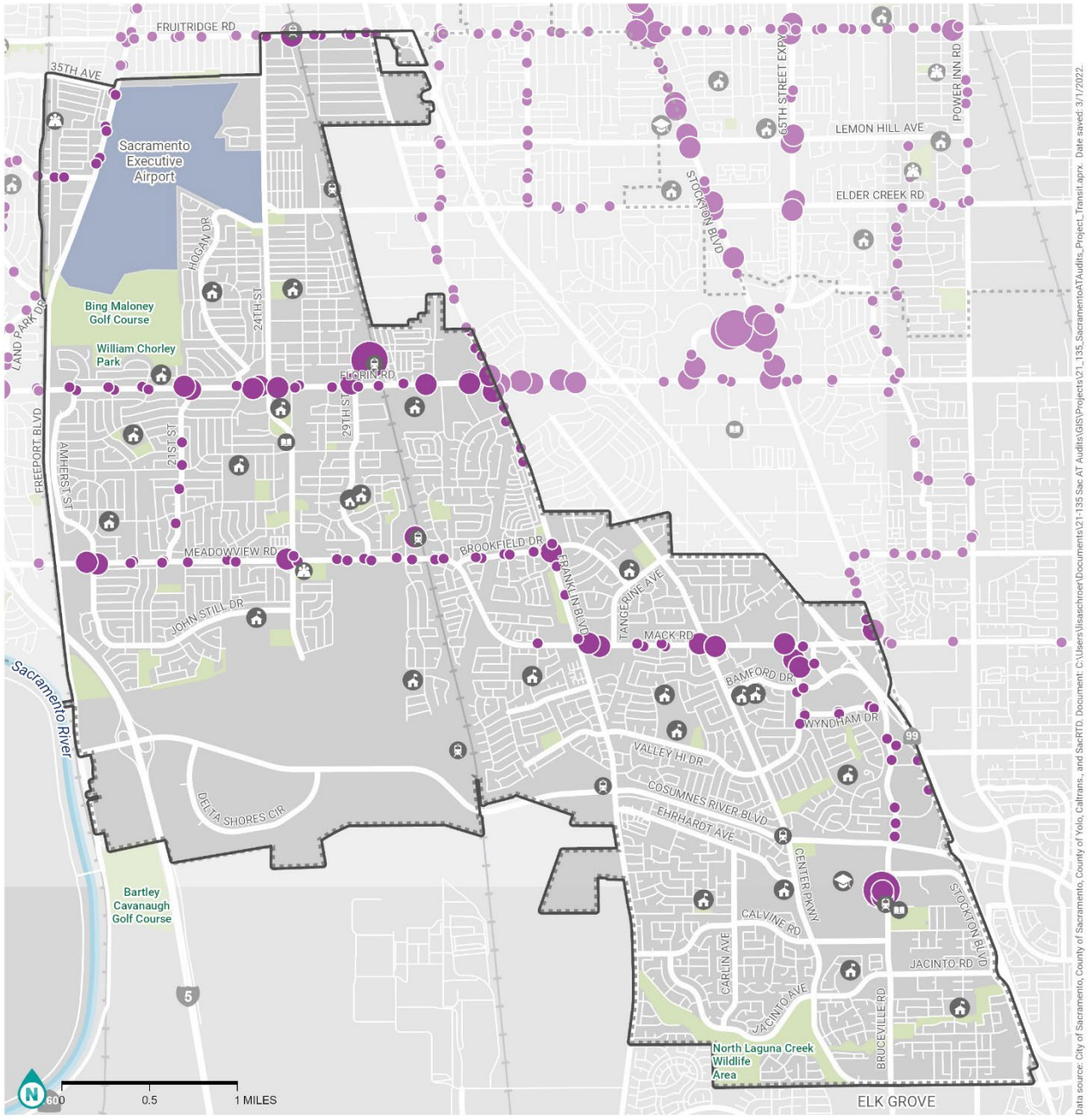
BUS ROUTES

- Local Bus Route
- Blue Line (Light Rail)

DESTINATIONS + BOUNDARIES

- Library
- K-12 Public School
- College / University
- Light Rail Station
- Community Center
- Park
- Airport
- City Boundary
- Community Plan Area Boundary

Figure 18: Bus Ridership



WEEKDAY TRANSIT RIDERSHIP

SOUTH SACRAMENTO

ACTIVE STREETS PLAN

alta

City of SACRAMENTO Department of Public Works

AVERAGE BUS RIDERSHIP (WEEKDAYS)

- 1 - 50
- 51 - 300
- 301 - 2090

DESTINATIONS + BOUNDARIES

- Library
- K-12 Public School
- College / University
- Light Rail Station
- Community Center
- Park
- Airport
- City Boundary
- Community Plan Area Boundary

Collision Analysis

There were 2,933 reported collisions across all travel modes between 2016 and 2020 (**Table 7**).[14] Collisions involving people walking or bicycling account for a combined 13% of all collisions yet they account for a disproportionately higher proportion of severe injury and fatal collisions: 37%. Of these, 8% included people bicycling and 29% involved people walking.[15] The overrepresentation of severe injuries and fatalities for people walking and biking highlights disparities in dedicated infrastructure for these vulnerable street users.

Table 7: South Sacramento Collisions by Mode and Severity[16]

Collisions Involving	Collisions with No Injuries or Minor Injuries	Collisions with Severe Injuries or Fatalities	Total Collisions	Percent of Severe or Fatal Collisions	Percent of Total Collisions
People Driving Only	2,402	144	**2,546**	**62%**	**87%**
People Bicycling	148	19	**167**	**8%**	**6%**
People Walking	152	68	**220**	**29%**	**7%**
TOTAL	**2,702**	**231**	**2,933**	**100%**	**100%**

Source: SWITRS, 2016-2020

Table 8 lists the top ten collision locations across all modes within the plan area.

Table 8: Top 10 Collision Intersections (all modes)

Rank	Cross Street 1	Cross Street 2	Total Collisions
1	Franklin Blvd	Florin Rd	50
2	Valley Hi Dr	Mack Rd	42
3	Franklin Blvd	Mack Rd	39
4	24th St	Florin Rd	36
5	Bruceville Rd	Consumnes River Blvd	26
6	Center Pkwy	Mack Rd	26
7	Franklin Blvd	Brookfield Dr	24
7	Meadowview Rd	Mack Rd	24
9	Alta Valley Dr	Mack Rd	24
10	29th St	Florin Rd	23

Source: SWITRS, 2016-2020

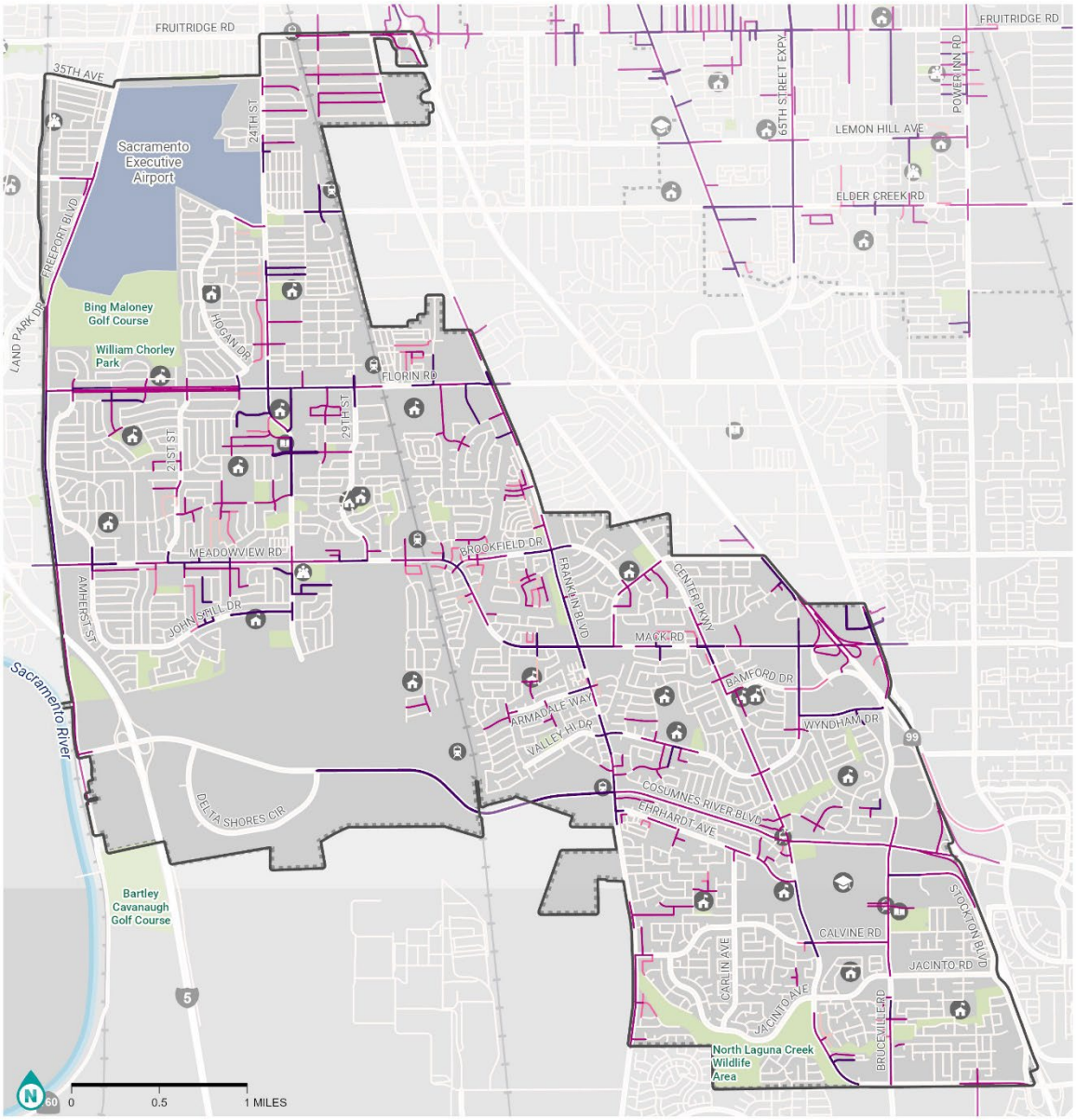
The weighted density of collisions throughout the plan area (**Figure 19**) considers all collisions and adds addition weight to those that resulted in someone being killed or seriously injured (KSI).[17]

[14] Note: This data only analyzes reported collisions. Collisions can be unreported for several reasons including, lack of trust in law enforcement, minor collisions that did not result in any injuries or property damage, etc.
[15] SWITRS, 2016 - 2020
[16] Collisions involving a person biking or walking are counted in their respective categories and are excluded from the "Collision Involving People Driving Only" category.
[17] Collisions that resulted in a severe injury or fatality received 10 points while other collisions received 1 point in the weighted analysis.

Streets with the highest density and severity of collisions include large arterial streets such as Florin Road[18] and Franklin Boulevard. There are, however, several additional smaller collector and local streets that have a history of multiple and/or severe collisions based on analyzed data such as Tangerine Avenue, John Still Drive, and 68th Avenue. Some of the street segments with the highest densities are near schools (such as Charles E. Mack School and John H. Still Elementary), parks (such as 24th Street Bypass Park and North Laguna Creek Park), and other community destinations.

[18] *The section of Florin Road from Tamoshanter Way to Amherst Street includes frontage roadways which are included in the analysis due to their close proximity and relationship to Florin Road; however, it is important to note that collisions between 2016-2020 occurred on Florin Road and not on the frontage roadways in this section.*

Figure 19: Weighted Collison Density



Top Collision Locations Involving Someone Walking

Figure 20 shows the location of collisions involving those walking within the plan area. **Table 9** lists the ten locations with the highest frequency of collisions involving someone walking within the plan area. Four of these locations include Mack Road and Florin Road.

Table 9: Top 10 Collision Intersections Involving People Walking

Rank	Cross Street 1	Cross Street 2	Number of Collisions
1	East Pkwy	Florin Rd	7
2	MLK Jr Blvd	47th Ave	7
2	Center Pkwy	Mack Rd	7
2	Franklin Blvd	Florin Rd	6
2	29th St	Florin Rd	5
2	Valley Hi Dr	Mack Rd	4
7	24th St	Florin Rd	4
7	24th St	Gardendale Rd	4
7	Franklin Blvd	Mack Rd	4
7	Summersdale Dr	Mack Rd	3

Source: SWITRS, 2016-2020

Top Collision Locations Involving Someone Biking

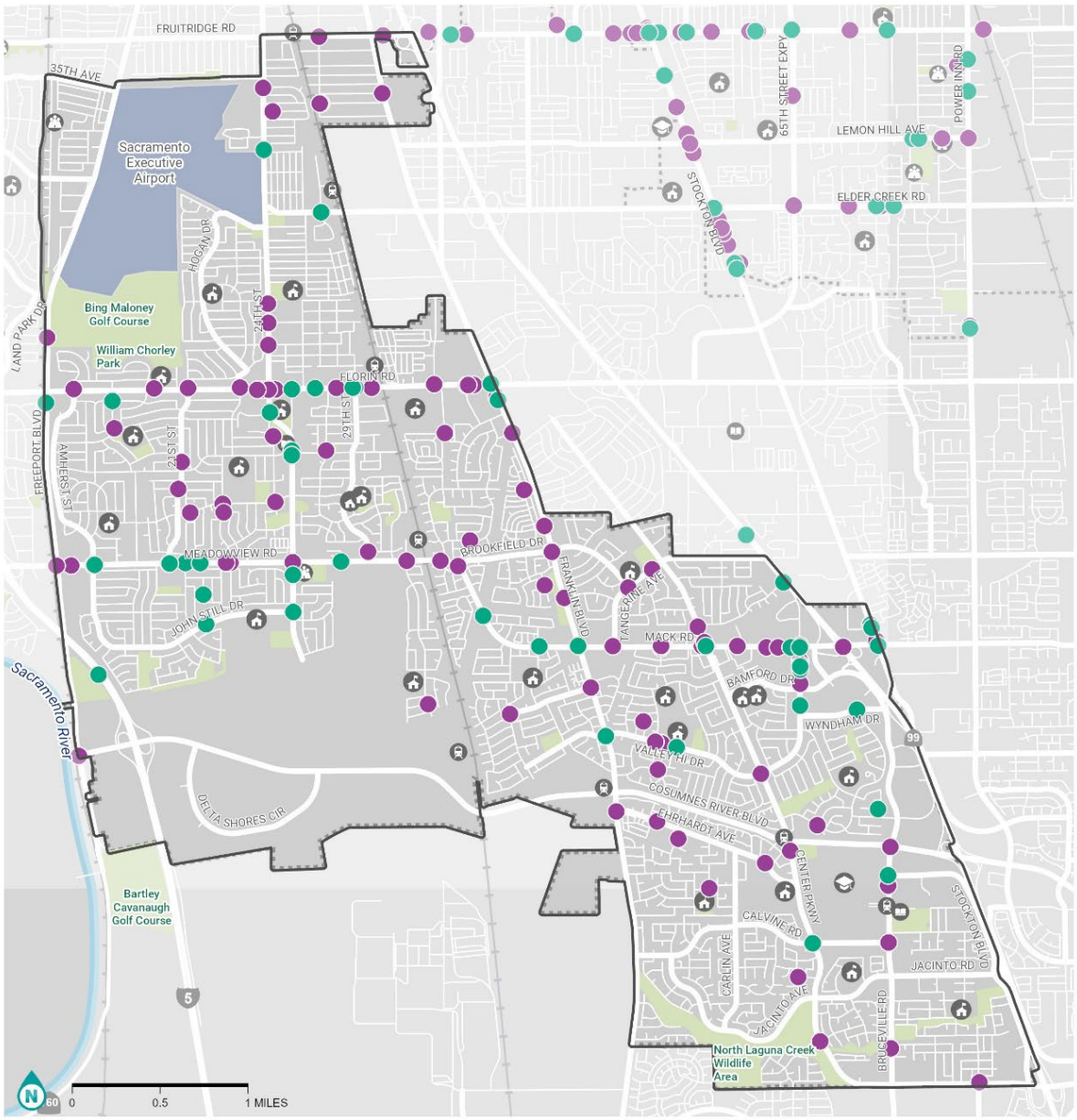
Table 10 lists the ten locations with the highest frequency of collisions involving someone bicycling within the plan area. Four of these locations include Florin Road. **Figure 21** shows the location of collisions involving someone bicycling within the plan area.

Table 10: Top 10 Collision Intersections Involving People Biking

Location Rank	Cross Street 1	Cross Street 2	Number of Collisions
1	Franklin Blvd	Florin Rd	6
2	Valley Hi Dr	Mack Rd	5
2	East Pkwy	Florin Rd	5
2	24th St	Florin Rd	4
2	Center Pkwy	Mack Rd	4
2	Munson Way	Florin Rd	3
2	Franklin Blvd	Brookfield Dr	3
2	Bruceville Rd	Stockton Blvd	3
9	Amherst St	Ferran Ave	3
9	Franklin Blvd	45th Ave	3

Source: SWITRS, 2016-2020

Figure 20: Collision Locations and Severity Involving Someone Walking



PEDESTRIAN COLLISION LOCATIONS

SOUTH SACRAMENTO

ACTIVE STREETS PLAN

alta

City of SACRAMENTO Department of Public Works

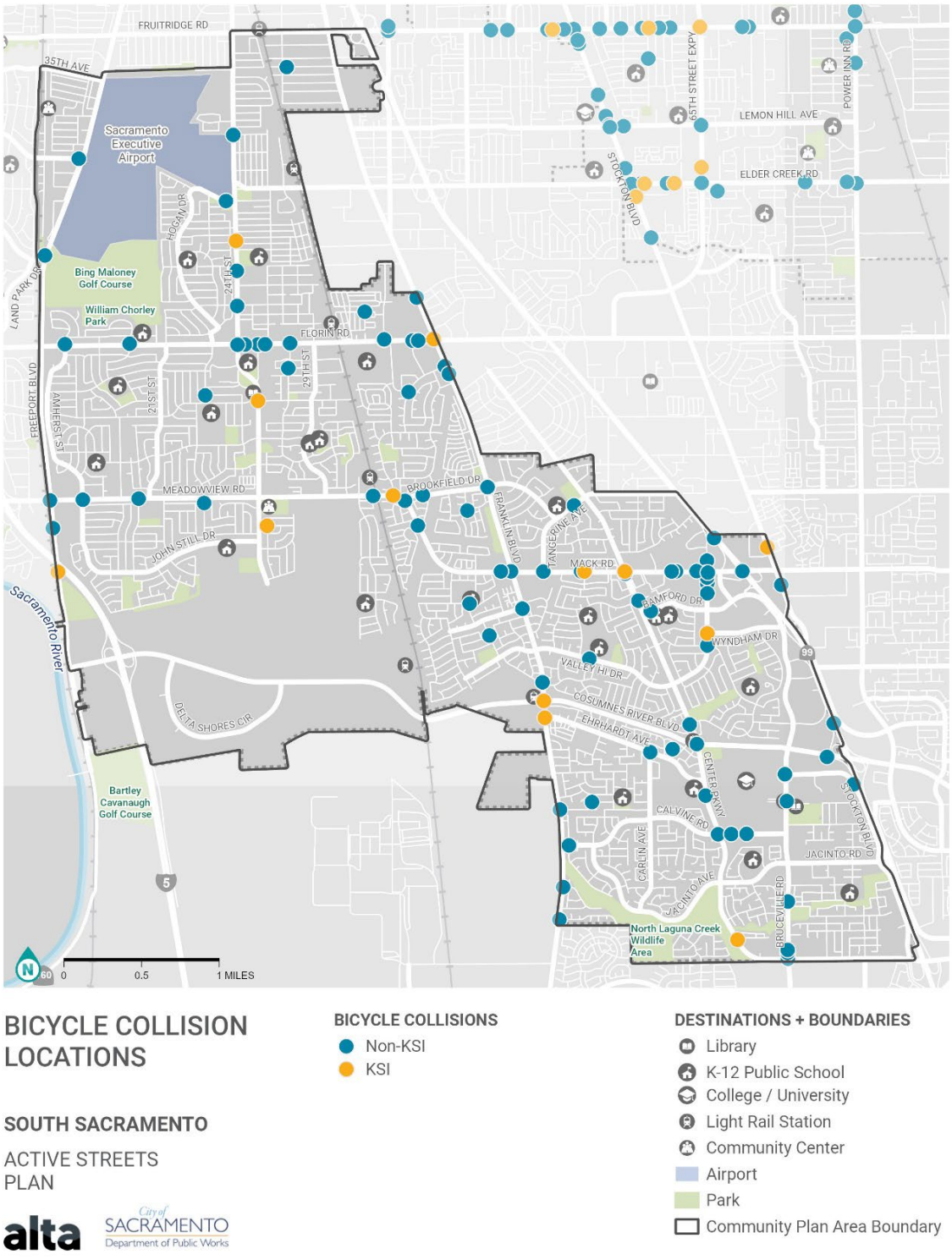
PEDESTRIAN COLLISIONS

- Non-KSI
- KSI

DESTINATIONS + BOUNDARIES

- Library
- K-12 Public School
- College / University
- Light Rail Station
- Community Center
- Airport
- Park
- Community Plan Area Boundary

Figure 21: Collision Locations and Severity Involving Someone Bicycling



BICYCLE COLLISION LOCATIONS

SOUTH SACRAMENTO

ACTIVE STREETS PLAN

alta

City of SACRAMENTO Department of Public Works

BICYCLE COLLISIONS

- Non-KSI
- KSI

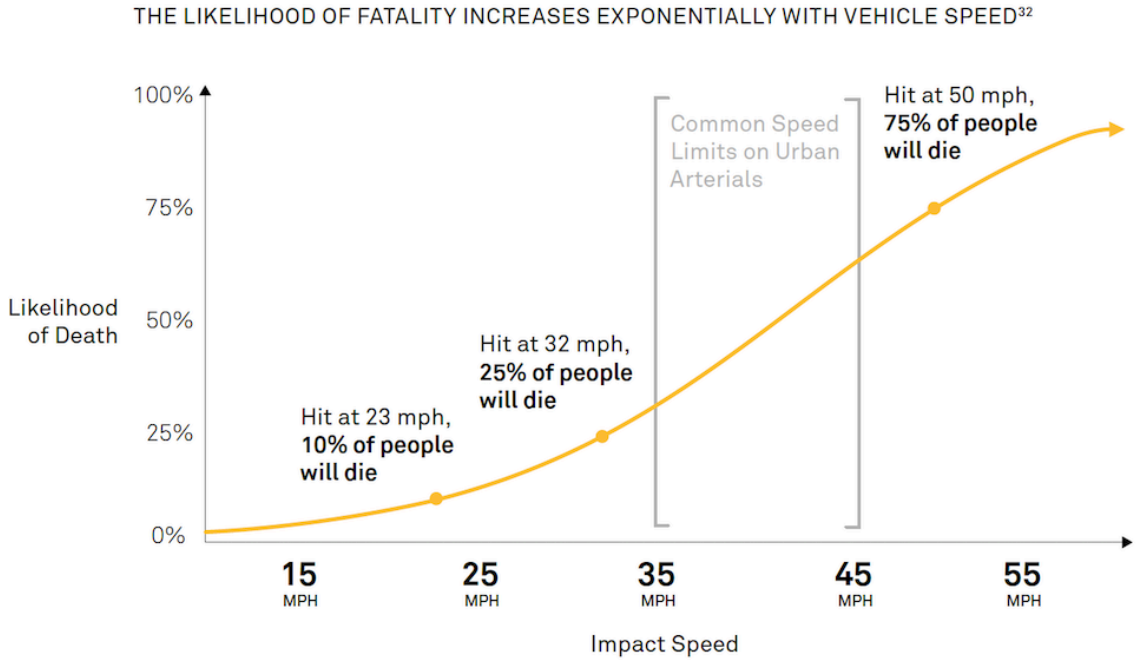
DESTINATIONS + BOUNDARIES

- Library
- K-12 Public School
- College / University
- Light Rail Station
- Community Center
- Airport
- Park
- Community Plan Area Boundary

Collision Anatomy Analysis – Trends Common in Collisions Involving Someone Walking

Figure 22 shows the relationship between vehicle speed and risk of fatality. Of the 103 collisions that occurred on streets with posted speed limits of 35 MPH or greater, 78% of them did not occur at an intersection, likely meaning that these collisions occurred at higher rates of speed than those at intersections.[19] Thirty eight percent (38%) of street segment collisions occurred on streets with posted speed limits between 35 MPH and 45 MPH. An additional 14% of collisions occurred on streets with a posted speed limit greater than 45 MPH; 52% of all non-intersection collisions occurred on streets with a posted speed limit of at least 35 MPH.[20]

Figure 22: Relationship Between Vehicle Speed and Fatal Injuries



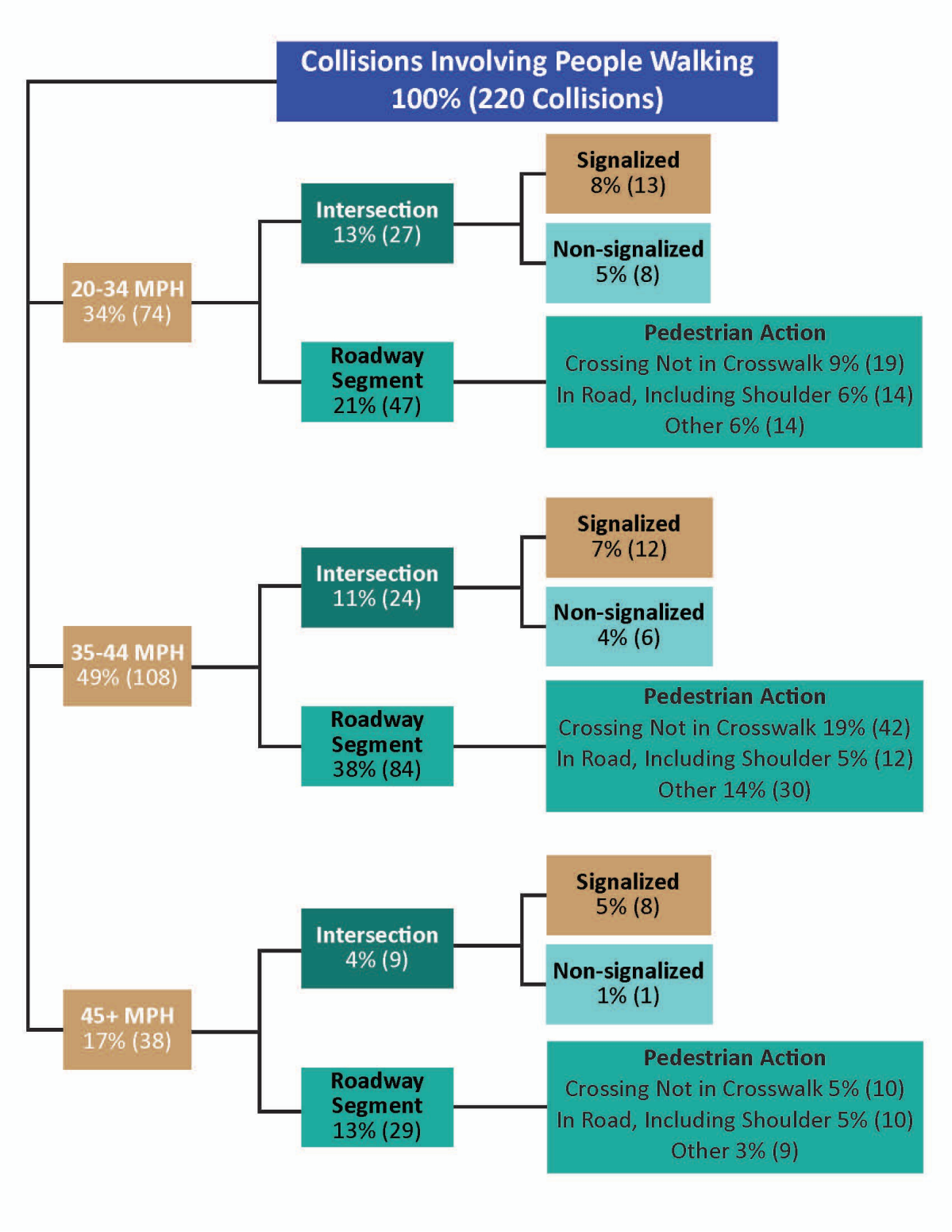
Source: NACTO, "City Limits: Speed Kills"

As shown in **Figure 23**, between 2016 – 2020, there were 220 collisions involving someone walking in the plan area. Two-thirds (66%) of these occurred on streets with posted speed limits of 35 MPH or greater; 17% of them occurred on with posted speed limits of 45 MPH or more. Speed is a critical factor in determining injury severity. For example, a person walking who is hit by a person driving at 35 MPH is five times more likely to die than a person walking who is hit by a person driving at 20 MPH. Each 5 MPH increase increases the risk of fatalities by 3% on local streets.[21]

Of the mid-block collisions involving people walking, the two leading "pedestrian actions" (what people walking are doing at the time of collision) included people crossing not in a crosswalk and people walking in the street/on the shoulder.[22] At intersections, 55% of collisions occurred at signalized locations.

[19] Collisions that occur with 250 feet of an intersection are considered intersection collisions. Those that occur further away are considered street segment/mid-block collisions.
[20] SWITRS, 2016 - 2020
[21] "Speed Kills." NACTO. https://nacto.org/publication/city-limits/the-need/speed-kills/
[22] Note: it is legal for people walking to cross mid-block at locations not between two signalized intersections, unless otherwise posted

Figure 23: South Sacramento Collisions Involving People Walking Diagram

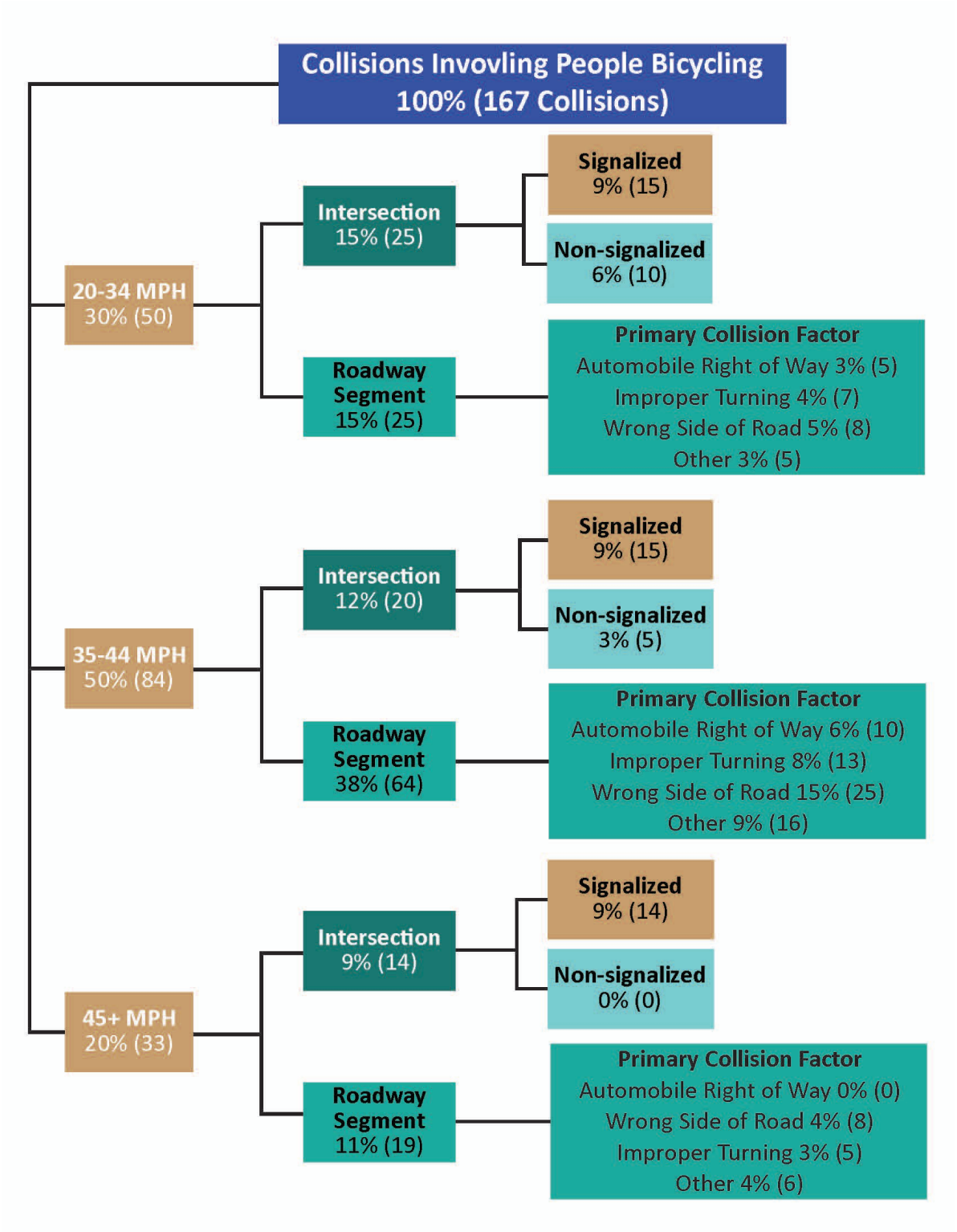


Collision Anatomy Analysis – Trends Common in Collisions Involving Someone Bicycling

As noted in **Figure 24**, between 2016-2020, there were 167 collisions involving someone bicycling. Over 70% of these collisions occurred on streets with speed limits of 35 MPH or greater; 20% (26 collisions) of those collisions occurred on streets with speed limits of 45 MPH or greater. Collisions at these higher speeds place people biking at a much higher risk for severe injury or death. Collisions involving someone bicycling occurred more often along street segments (64%) than at intersections (36%). Regardless of street speed, collisions with people bicycling at intersections occurred more frequently at signalized locations than stop-controlled or uncontrolled intersections. Two of the top primary collision factors across all speed limits include automobile improper turning (20 collisions) and biking on the wrong side of the street (33 collisions).[23] Biking on the wrong side of the street typically occurs in areas with insufficient bicycle infrastructure or access to destinations.

[23] SWITRS, 2016 -2020

Figure 24: South Sacramento Collisions Involving People Bicycling Diagram



High-Injury Network

In 2018, the City of Sacramento adopted a Vision Zero Action Plan to eliminate traffic fatalities and severe injuries by 2027. The Vision Zero Plan established a High Injury Network (HIN), consisting of corridors with the highest levels of severe and fatal collisions for people walking, biking, and driving. The Citywide HIN denotes the 14% (225 miles) of streets that account for roughly 80% of collisions. Fifteen percent (33.8 miles) of the HIN is located within the South Sacramento area. **Figure 25** denote the High Injury Network and top 10 collision locations for people walking and biking. **Figure 26** highlights the High Injury Network for all modes.

Most arterial streets in the South Sacramento area are part of the HIN network. Streets on the HIN include:

- 24th Street
- Fruitridge Road
- Franklin Boulevard
- 47th Avenue
- Freeport Boulevard
- Florin Road
- Tamoshanter Way
- Luther Drive
- 21st Street
- Meadowview Road
- Brookfield Drive
- Mack Road
- Amherst Street
- Center Parkway
- Valley Hi Drive
- Ehrhardt Avenue
- Calvine Road
- Bruceville Road
- Cosumnes River Boulevard

A number of the arterial or collector streets within the plan area not included in the HIN include Hogan Drive, 29th Street, Jacinto Road/Avenue and large segments of Cosumnes River Boulevard.

Six of the seven top collision locations for all modes (**Table 11**) are located on either Florin Road (3) or Mack Road (3). Florin Road, between 24th Street and Franklin Boulevard, is included in the City's Top Five Vision Zero Network (2018). The Florin Road intersections with 24th Street and Franklin Boulevard are within the segment included as one of the City's Vision Zero Top Five Corridors—the corridors with the highest number of collisions resulting in a fatality and/or serious injury. The Vision Zero Top Five Corridors (2018) document gives detailed descriptions of existing conditions along the Florin corridor segment and provides conceptual designs for safety improvements. The conceptual safety improvements are intended to slow down people driving, make it easier to cross the street, and improve safety for those walking, biking, and rolling along the corridor.

Table 11: Top 10 Collision Locations by Mode

Intersection	All Collisions	Collisions Involving People Bicycling	Collisions Involving People Walking	Top Ten Locations – Number of Modes
24th St/Florin Rd	●	●	●	3
Center Pkwy/Mack Rd	●	●	●	3
East Pkwy/Florin Rd	●	●	●	3
Franklin Blvd/Florin Rd	●	●	●	3
Valley Hi Dr/Mack Rd	●	●	●	3
Franklin Blvd/Mack Rd	●	–	●	2
MLK Jr Blvd/47th Ave	●	–	●	2
24th St/Gardendale Rd	–	–	●	1
29th St/Florin Rd	–	–	●	1
Alta Valley Dr/Mack Rd	●	–	–	1
Amherst St/Ferran Ave	–	●	–	1
Bruceville Rd/Consumnes River Blvd	●	–	–	1
Bruceville Rd/Stockton Blvd	–	●	–	1
Franklin Blvd/45th Ave	–	●	–	1
Franklin Blvd/Brookfield Dr	–	●	–	1
Meadowview Rd/Brookfield Dr	●	–	–	1
Munson Way/Florin Rd	–	●	–	1
Summersdale Dr/Mack Rd	–	–	●	1

Source: SWITRS, 2016 -2020

Figure 25: High Injury Network and Top Plan Area Collision Locations (Bicycling and Walking)

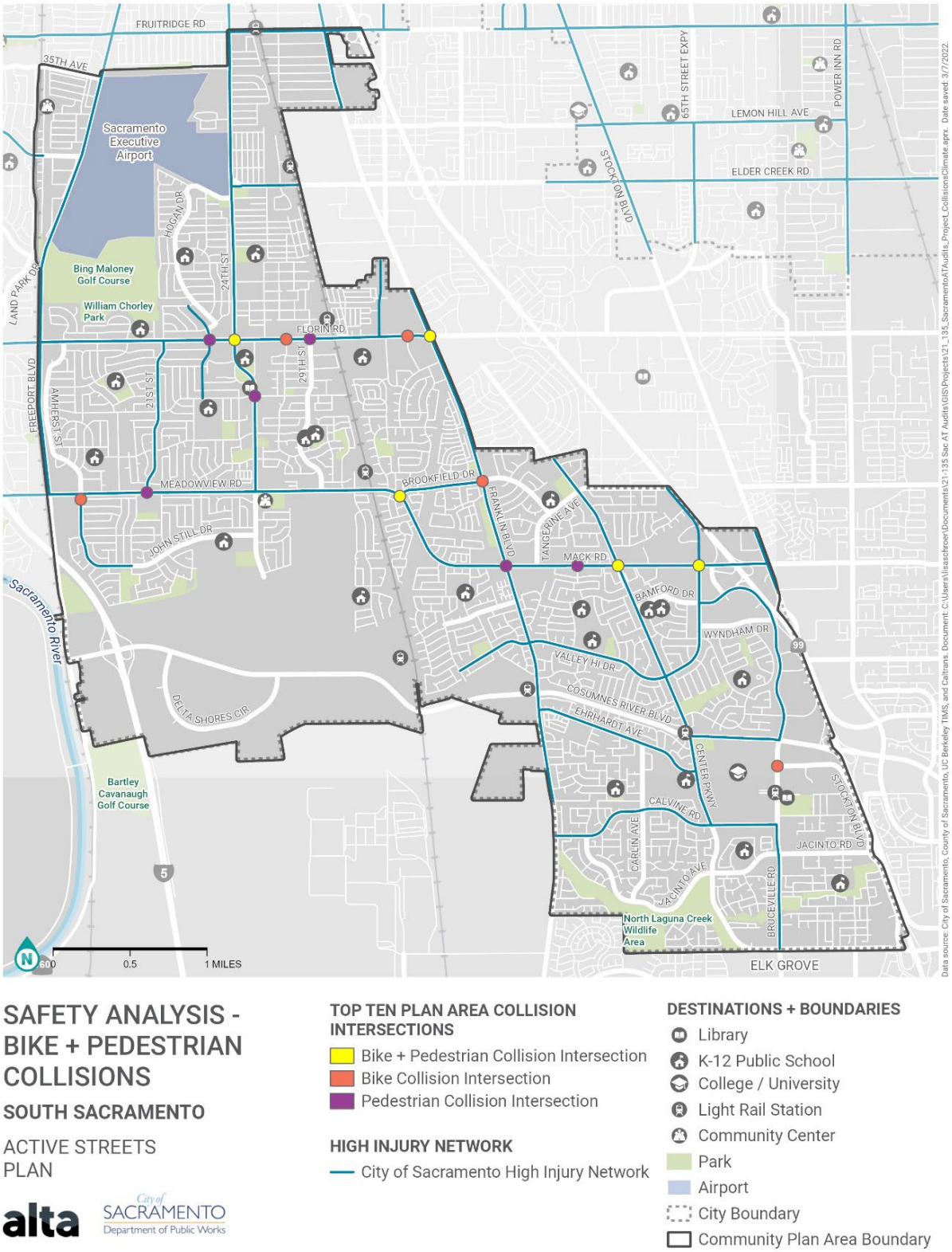
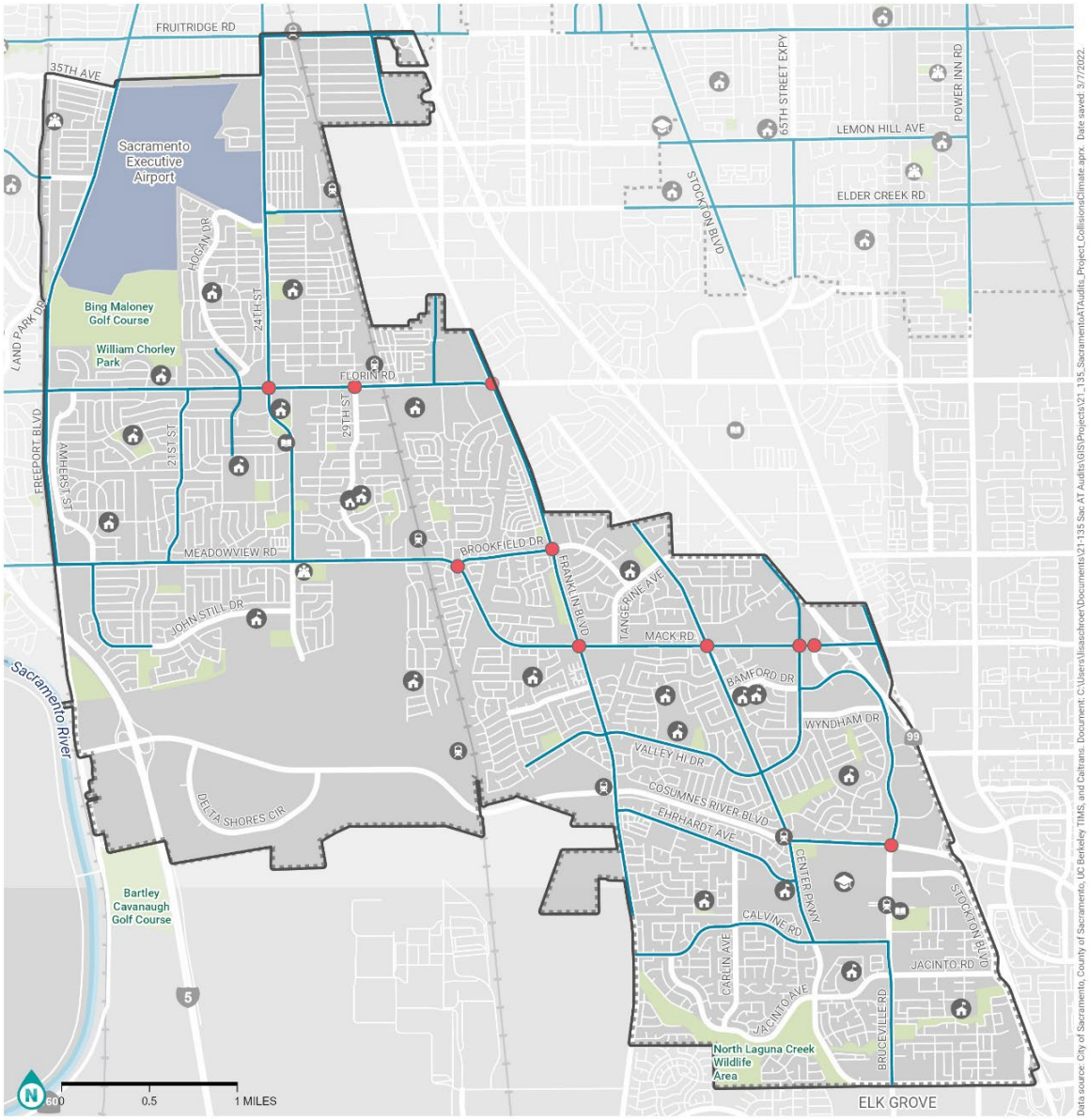


Figure 26: High Injury Network and Top Plan Area Collision Locations (All Modes)



SAFETY ANALYSIS - All MODES COLLISIONS

SOUTH SACRAMENTO

ACTIVE STREETS PLAN

alta

City of SACRAMENTO Department of Public Works

HIGH INJURY NETWORK AND TOP TEN COLLISION INTERSECTIONS

- City of Sacramento High Injury Network
- Collision Intersection (All Modes)

DESTINATIONS + BOUNDARIES

- Library
- K-12 Public School
- College / University
- Light Rail Station
- Community Center
- Park
- Airport
- City Boundary
- Community Plan Area Boundary

Collision Analysis Summary

The collision analysis above indicates that moderate speed (35 – 45 mph) arterial roadways in the South Sacramento area represent the primary safety issue for active transportation users. Half of all collisions involving a person bicycling or walking in the South Sacramento area occurred on roadways with 35-45 mph speeds, a typical posted speed limit for arterial roadways. Between 2016 and 2020, nearly all KSI collisions occurred along arterial roadways in South Sacramento (**Figure 20** and **Figure 21**) and 38% of all collisions involving people bicycling or walking occurred along a roadway with a posted speed of 35-45 mph. While these roadways provide efficient movement of vehicles, they often act as barriers to active transportation modes due to the perceived and potential safety hazards.

It is important to note that within the South Sacramento area, three roadways comprised the majority of the top ten collision locations for people bicycling, walking, and driving. Based on the analysis shown above, the following roadways present the greatest potential for safety improvements within the South Sacramento area:

- Florin Road
- Franklin Boulevard
- Mack Road