

VERNON WESTSIDE SPECIFIC PLAN  
BASELINE STUDIES  
OPPORTUNITIES AND CONSTRAINTS



**JANUARY 28, 2021**

## PLANNING CONTEXT

### PURPOSE

The Vernon Westside Specific Plan presents an opportunity to develop an approach for diversifying the economic makeup of Vernon, by laying out a framework for developing hubs of activity. To ensure that these new land uses and existing industrial activities are accessible and connected, our team must understand the existing network to guide recommendations that support future investments and redevelopment. This baseline understanding provides an overview of how people travel to, through, and from the Westside of Vernon today, and what may be imagined for the future.

This section summarizes recent planning and policy documents that shape the transportation network of the City of Vernon. This list does not include all planning and policy documents the City has produced over its history, but instead focuses on recent documents that may inform the Westside Specific Plan's approach to mobility.

#### CITY OF VERNON GENERAL PLAN (2007)

The General Plan outlines the strategies to support and manage long term growth within the City's limits. In addition to providing guidance for topics including but not limited to public safety, housing, infrastructure, and land use, the Circulation Plan addresses Vernon's transportation needs. Vernon's Circulation and Infrastructure Element frames the need for the transportation network to support truck traffic, critical to the function of local industry as businesses have continued to increasingly look to freight trucks instead of rail to meet their demands. The Circulation Plan also provides classifications to organize Vernon's Street System based on capacity and function, identifies metrics to measure performance, lists strategies to improve management of the network, and briefly addresses alternative transportation modes.

#### LA RIVER FEASIBILITY STUDY (2017)

The LA River Feasibility Study develops preliminary pathway alignments and design alternatives for the three-mile segment of the Los Angeles River in Vernon that extends from 26th Street to Atlantic Boulevard, a key regional connection for people bicycling. Once completed, the path will provide access to not only destinations and employment opportunities in Vernon but will connect users to the 17 miles of existing path between Vernon and Long Beach. The Vernon Bicycle Plan identifies 37th Street and Vernon Avenue as key connections from our study area to this regional bicycle facility. The study also synthesizes community input and identifies opportunities, constraints, and implementation strategies for the path alternatives.

#### VERNON VISION PLAN (2017)

The Vernon Vision Plan was developed to guide coordination between the City of Vernon, neighboring cities, and other agencies involved with the development of the West Santa Ana Branch (WSAB) Transit Corridor – which would connect Downtown Los Angeles to Southeast LA County. The plan outlines Vernon's goals, opportunities, and concerns associated with the transit corridor projects as they relate to land uses, mobility, and economic growth. Most pertinent to mobility are goals associated with improving connectivity to passenger rail stations and encouraging commuters to use alternative modes of transportation. The plan largely highlighted the potential WSAB station on Pacific Boulevard and Vernon Avenue, which was not selected as the preferred alternative.

Although the Vernon Vision Plan was not adopted, the Westside Specific Plan is an opportunity to realizing the some of the visions of this document – a direct response

to action 4.2.2.B calling for a specific plan to identify opportunities to redevelop properties and facilitate improvements to the public realm.

#### VERNON TRANSIT SERVICE STUDY (2019)

The Vernon Transit Service Study provides a profile of current transit services in Vernon as well as insight into future transit and mobility needs, presents conceptual alternatives to meet future mobility needs, and provides recommendations for future service options. The goal of this study is to design service options that help to improve connectivity to existing and planned economic hubs, existing transit service, and other trip attractors and generators in the City. The study also assesses potential last-mile connections between existing transit services and workplaces.

#### VERNON BICYCLE MASTER PLAN (2017)

The City of Vernon's Bicycle Master Plan serves as a guiding document for the planning, development, and management of a safe and comfortable network of bicycle facilities connecting employment centers and community destinations within the City as well as the larger regional network. The plan also identifies strategies, policies, tools, and funding sources to facilitate the implementation of future facilities. Due to the prevalence of truck and bus traffic within the City, the plan prioritizes separated bicycle facilities, such as Class I and Class IV bikeways, over shared-use facilities as part of the recommendations for creating a safe, bicycle-friendly environment. Additionally, the plan recommends supplementing infrastructure improvements with bicycle education and encouragement programs to promote active transportation and healthy living for communities.

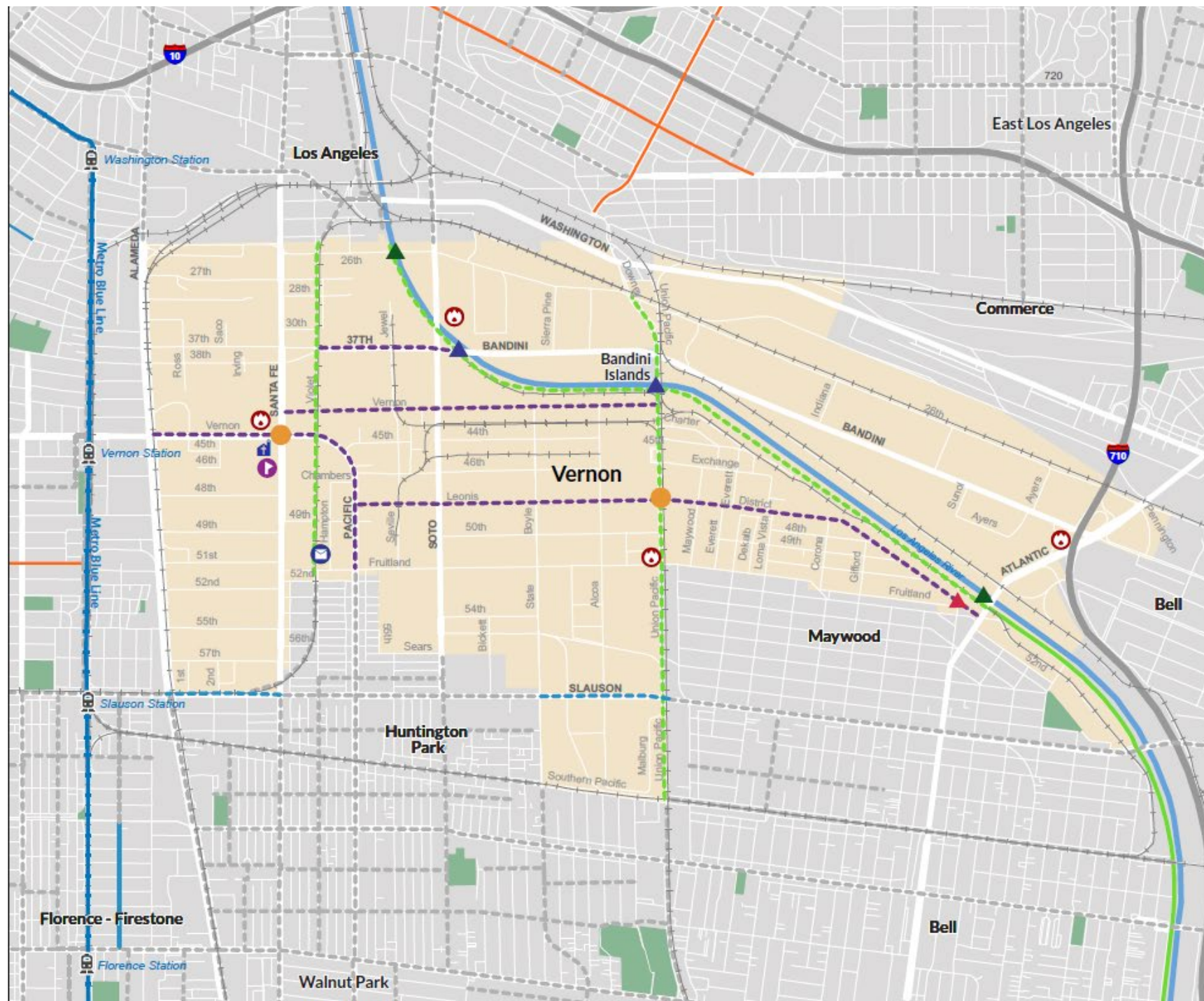
The Vernon Bicycle Plan identifies a few key bicycle connections within the study area, including:

- Separated bicycle lanes along Vernon Avenue (East and West of Santa Fe Avenue), providing access to future facilities along the LA River.
- Separated bicycle lanes on Pacific Boulevard within city limits.
- Separated bicycle lanes on 37th to provide access to future facilities along the LA River.
- Shared-use path (separated from vehicular traffic) along the Malabar Railyard right-of-way through the City limits, an effort that would require significant collaboration with BNSF, but could be a transformational project. However, an ongoing study by Metro for repurposing this railyard may disrupt plans for a shared-use path.

It should also be noted that Santa Fe Avenue south of Vernon Avenue is identified as a bicycle lane corridor as part of the Los Angeles County Bicycle Plan, suggesting that other agencies have identified potential for reducing traffic on this section of Vernon's street network.

# ROADWAY NETWORK AND USAGE

Recommended Bikeway Network - City of Vernon Bicycle Master Plan (2017)



### Recommended Bikeway Network City of Vernon Bicycle Master Plan

#### Bikeway Facilities

- |  |  |  |
|--|--|--|
|  |  | Class I Shared-Use Path                              |
|  |  | Class II Bicycle Lanes                               |
|  |  | Class III Bicycle Routes                             |
|  |  | Class IV Separated Bike Lane                         |
|  |  | Proposed LA River Access                             |
|  |  | Proposed LA River Access/Crossing                    |
|  |  | Proposed Traffic Calming                             |
|  |  | Currently Planned Bikeways in Adjacent Jurisdictions |

#### Public Transit

- |  |                                     |
|--|-------------------------------------|
|  | Metro Blue Line Station             |
|  | Metro Blue Line                     |
|  | Potential Eco-Rapid Transit Station |

#### Amenities

- |  |                    |
|--|--------------------|
|  | Park or Open Space |
|  | Vernon City Limits |
|  | Railroad Line      |
|  | Emergency Services |
|  | School             |
|  | Post Office        |
|  | Church             |



# ROADWAY NETWORK AND USAGE

## NETWORK CONNECTIVITY

Within the study area, Vernon's street network reflects a grid pattern consistent with much of the City. While gridded networks typically foster connectivity, many of the streets in the study area, particularly those running east/west, extend only a few blocks to serve specific properties and/or are offset as T-intersections where they meet major arterials. This type of design limits the porosity of the network, and forces traffic onto a few arterials to travel to different parts of the city, or to surrounding jurisdictions. Within the study area, 25th Street, Alameda Street, Vernon Avenue, Pacific Boulevard and Santa Fe Avenue facilitate connectivity throughout Vernon and beyond.

An additional consideration when discussing network connectivity is the Alameda Freight Corridor, which creates a physical division at the boundary between Los Angeles and Vernon. Though the rail freight corridor limits direct access from Vernon to Alameda Street, a regional freight corridor, it allows for Alameda East to serve freight traffic within the city almost exclusively, without the conflicts or congestion that come with the Alameda Street. Additionally, local traffic maintains access to Alameda Street at 25th Street, 38th Street, Vernon Avenue, 55th Street, and Slauson Avenue. Alameda East is largely underused today by freight, despite being specifically designed for that purpose, likely due to avoidance of regional congestion along Alameda Blvd.

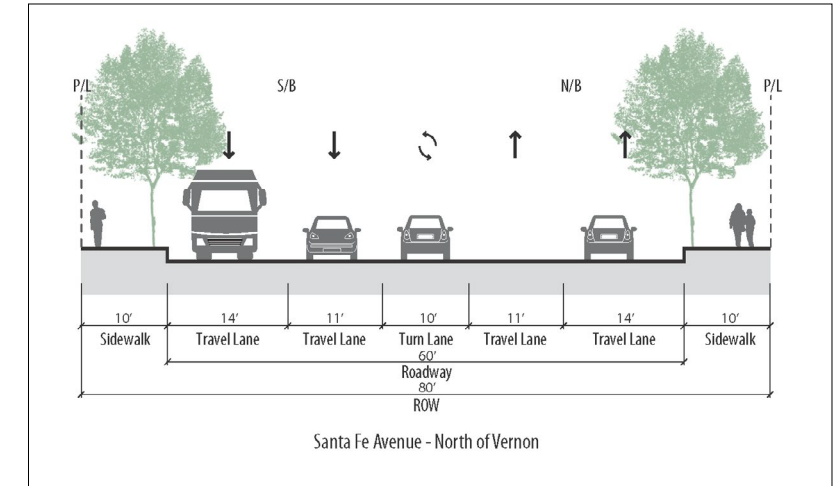
Within the study area, travel in the north/south direction within the study area primarily relies on Santa Fe Avenue, as Pacific Boulevard converts into Vernon Avenue, and Alameda East primarily provides access to properties on the western edge of Vernon. The limited options for north/south travel brings congestion challenges along with limited connectivity. Santa Fe Avenue is also a critical connector between Vernon and one of Los Angeles's remaining concentrations of industrial land uses, as well as the Arts District, to the north, and connects commuters from Huntington Park and other communities south of Vernon.

## ROADWAY CLASSIFICATIONS

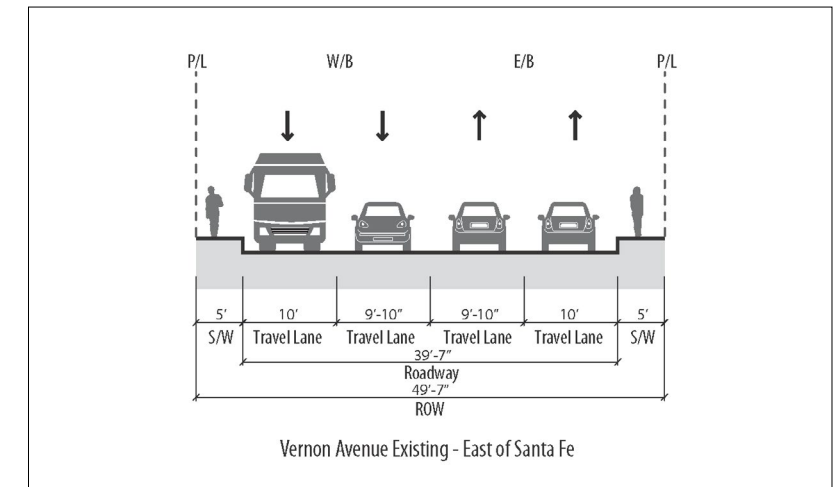
Vernon's General Plan provides traditional classifications for its street network based on roadway size and purpose. The study area network is shown by roadway classification in the map on the next page, including the following classifications:

- Arterials are tasked with creating a network of streets that carry higher volumes of traffic, typically at higher speeds, across longer distances, fostering connectivity within Vernon and beyond. Critical arterials in the study area include Alameda East, Santa Fe Avenue, and 37th Street, and Vernon Avenue. The general plan identifies a total right-of-way ranging from 80-120 feet, with up to 16 feet allocated for sidewalks or other uses beyond the curbs.
- Collector streets are designed to move traffic within Vernon and to provide access to destinations from arterials. Within the study area, only 51st Street, Fruitland Avenue, Vernon Avenue (East of Santa Fe Avenue), and a small segment of 26th are identified as collectors. The general plan identifies a total right-of-way ranging from 60-65 feet, with up to 18 feet allocated for sidewalks or other uses beyond the curbs.
- Most streets within the study area are identified as local streets, which provide access only to specific properties, and are not intended to facilitate through traffic. The general plan identifies a total right-of-way ranging from 60-65 feet, with up to 18 feet allocated for sidewalks or other uses beyond the curbs.

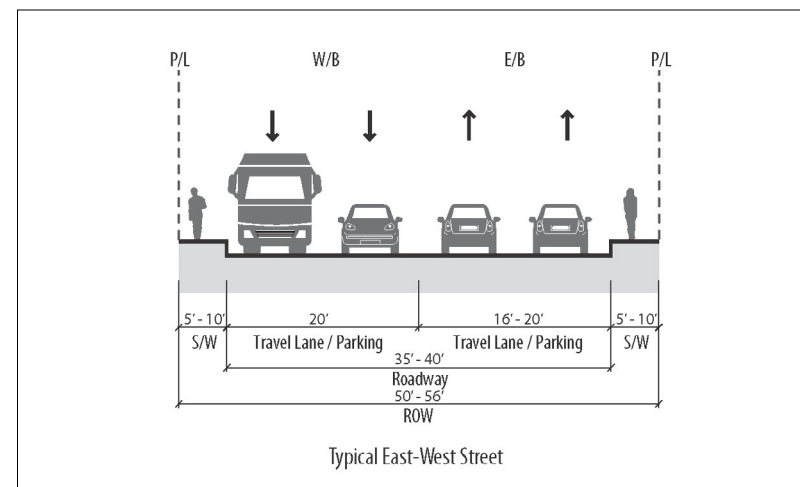
Select cross sections from the study area are reflected on this page.



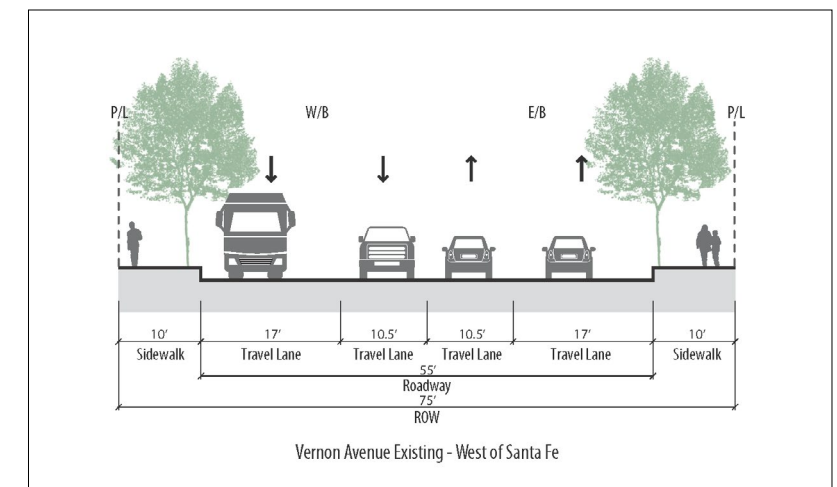
Sample Arterial Street Cross-section: Santa Fe Avenue- North of Vernon



Sample Collector Street Cross-section: Vernon Avenue- East of Santa Fe

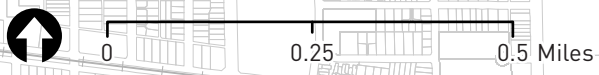
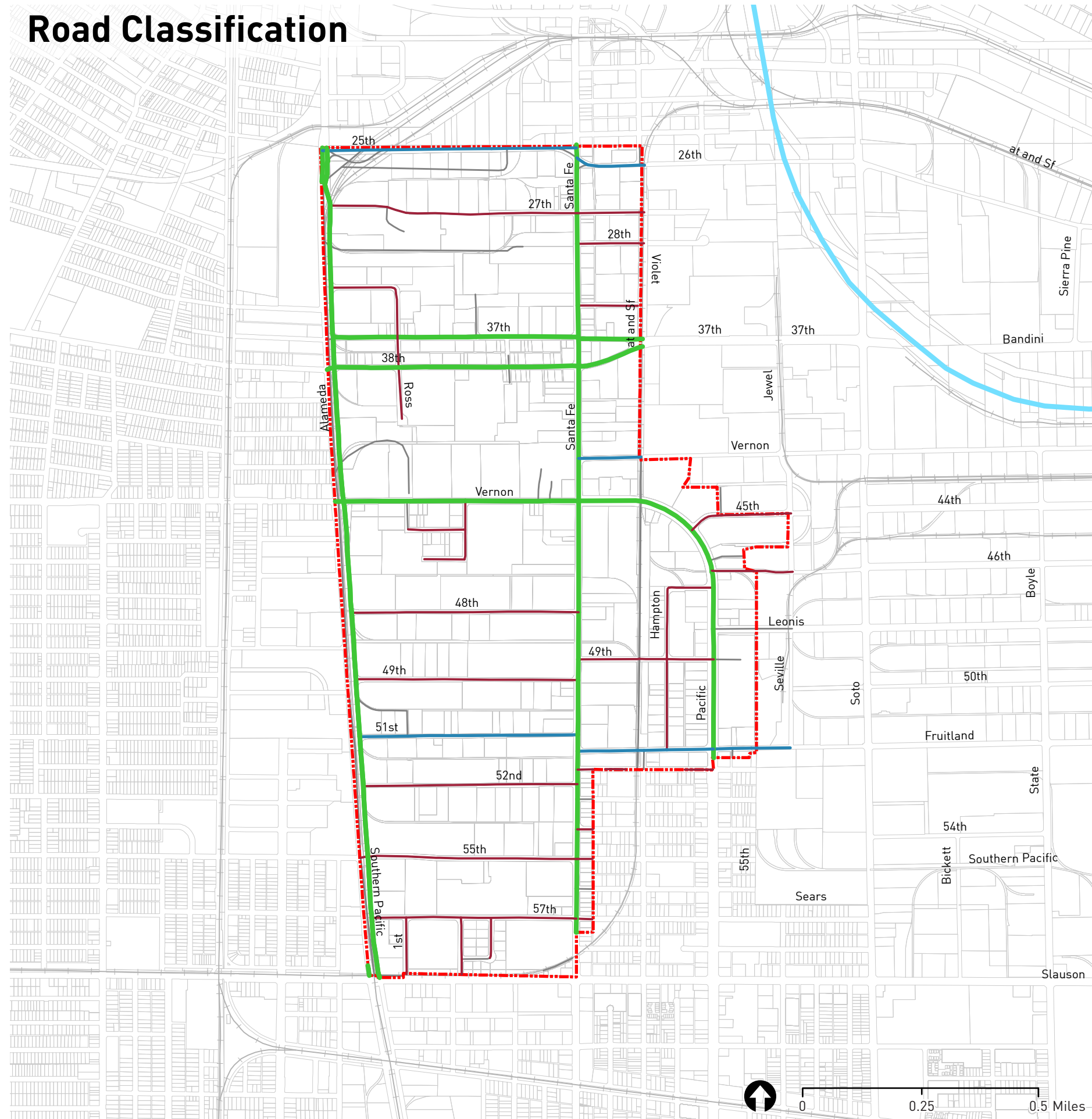


Sample Collector/Local Street Cross-section: Typical East-West Street



Sample Arterial Street Cross-section: Vernon Avenue- West of Santa Fe

# Road Classification



# ROADWAY NETWORK AND USAGE

## Legend

- Roadway Classification**
- Arterial
  - Collector
  - Local
  - Parcels
  - Study Area Boundaries
  - Los Angeles River
  - Railroad

# ROADWAY NETWORK AND USAGE

## AVERAGE ANNUAL DAILY TRIPS (AADT)

Roadway AADT helps show what streets are most used by traffic. As would be expected based on the Vernon General Plan, arterials typically carry the most traffic within the study area, as seen in the map on the right. Industry standards assume a max capacity of 10,000 AADT per travel lane a day, or about 800-1,000 trips during the peak hour. However, the theoretical capacity of a lane is just one factor to consider, as roadway network, stop spacing, and other factors contribute to how the transportation network flows. A few key observations based on this data include:

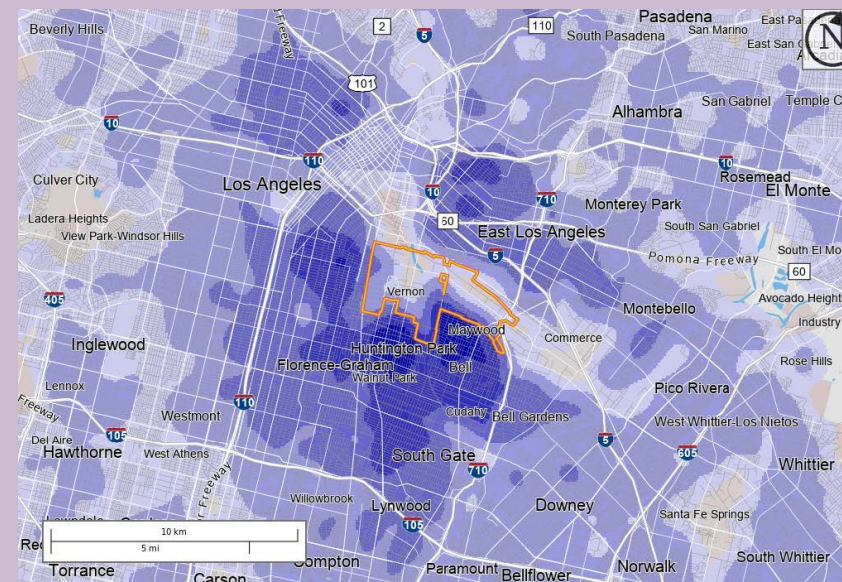
- Santa Fe Avenue sees an AADT of over 30,000 north of Vernon Avenue, and volumes between 25,000 and 30,000 south of Vernon Avenue. These volumes suggest the corridor has limited capacity to explore reallocating right-of-way in the short term.
  - » Level of Service (LOS) analysis conducted as part of the Vernon Bicycle Master Plan in 2016, shows LOS ratings of C/D in the am and pm peak hours respectively for the Santa Fe/Vernon intersection. A rating of C suggests stable traffic flow with 20-35 seconds of delay, and a rating of D reflects noticeable congestion with 35-55 seconds of delay. Neither of these ratings suggest that there is a lack of capacity, but they confirm limited flexibility for reallocating space.
  - » Alameda Avenue and Soto Street, are alternatives routes to Santa Fe Avenue, each providing access to

- the freeway network. Capacity on those alternatives is similarly limited, with Alameda carrying over 23,000 AADT and Soto over 25,000 AADT.
- Alameda East only carries about 4,000 vehicles daily, suggesting an opportunity to carry additional volumes and bring some relief to congestion along Santa Fe Avenue.
- Pacific Boulevard carries approximately a range of 15,000 and 18,000 vehicles, connecting Vernon and the neighboring jurisdiction of Huntington Park. This corridor sees the second highest volumes, second only to Santa Fe Avenue.

It should be noted that the most recent AADT dataset available for the City of Vernon is from 2005. However, as noted in the Vernon Vision Plan, these traffic counts may be applicable for this analysis based on traffic trends nationally and within Vernon. Shortly after 2005, the national recession spanning 2008-2010 drove freight traffic trends dramatically downwards. As of 2014, freight transportation services were still behind pre-recession volumes according to the Bureau of Transportation Statistics.<sup>1</sup> It would be reasonable to assume volumes have approached similar volumes as 2005 in recent years. Additionally, new data would be inaccurate due to the ongoing COVID-19 pandemic.

<sup>1</sup> Bureau of Transportation Statistics. "Long-Term Growth in Freight Transportation Services." (2020). Retrieved from: <https://www.bts.gov/topics/transportation-and-economy/long-term-growth-freight-transportation-services-0>

## WHERE DO VERNON EMPLOYEES TRAVEL FROM?

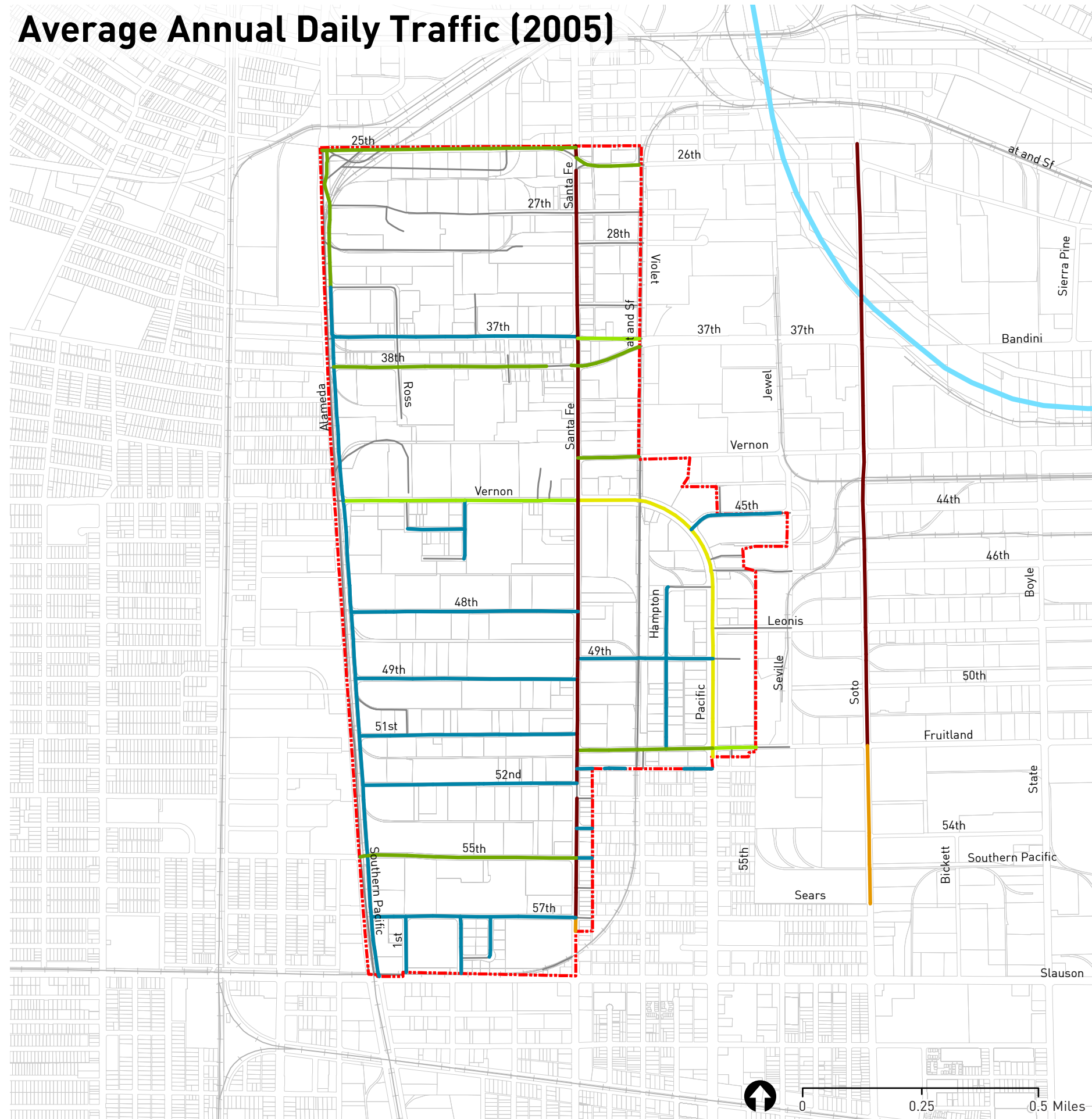


Density of Home Locations of Vernon Employees

While freight travel demands much attention in Vernon due to its industrial nature, the minimal residential population in the city means nearly all individuals employed in Vernon travel from surrounding communities, likely resulting in commute trips accounting for a significant amount of trips made in the roadway network. Where do these commuters come from?

According to data available from the U.S. Census Bureau, as of 2017, about 45% of employees live in the City of Los Angeles or in communities of Southeast Los Angeles County such as Huntington park, South Gate, Downey, Maywood, Bell, Lynwood, and Long Beach. This data also suggests that about 53% of employees live within a 10-mile radius of Vernon. Identifying opportunities to support alternative modes of transportation, with tools such as transit subsidies or shuttle services, can help Vernon effectively manage its transportation system.

# Average Annual Daily Traffic (2005)



## ROADWAY NETWORK AND USAGE

### Legend

#### Average Annual Daily Traffic

- < 5,000
- 5,001 - 10,000
- 10,001 - 15,000
- 15,001 - 20,000
- 20,001 - 25,000
- > 25,000

- Parcels
- Study Area Boundaries
- Los Angeles River
- Railroad

# ROADWAY NETWORK AND USAGE



Intersections along Alameda East are designed to support access/ ingress by larger freight vehicles featuring wider turning radii.



Properties that rely on freight have properties designed to accommodate them - including docks, ample parking space, and an area to navigate in and out. Similarly, Vernon can plan for where freight travel may be preferred and leverage roadway designs to encourage that travel behavior.



Freight trucks turning onto Santa Fe Avenue require nearly 3 lanes of traffic to effectively make a turn. Directing truck traffic to other corridors as feasible and maintaining roadway design to support these movements are critical considerations.

## FREIGHT TRUCK TRAVEL

The City of Vernon does not define specific streets as truck routes. Given the concentration of industrial land uses, all streets are open to trucks to serve local businesses as needed. A pair of corridors in the study area, or adjacent to it, are identified as key assets for freight. These include:

- Alameda Street is identified as a Truck Route by the City of Los Angeles.
- 26th Street, travelling along BNSF’s Hobart yard north of the study area is identified as a key arterial by Metro’s 2015 Los Angeles County Strategic Goods Movement Arterial Plan.

Santa Fe Avenue is not identified as an official truck route by the City of Los Angeles, however, due to its location within the study area, with warehouses on either side of it, it is a key corridor for many trucks. It is also an alternative to Alameda Street today.

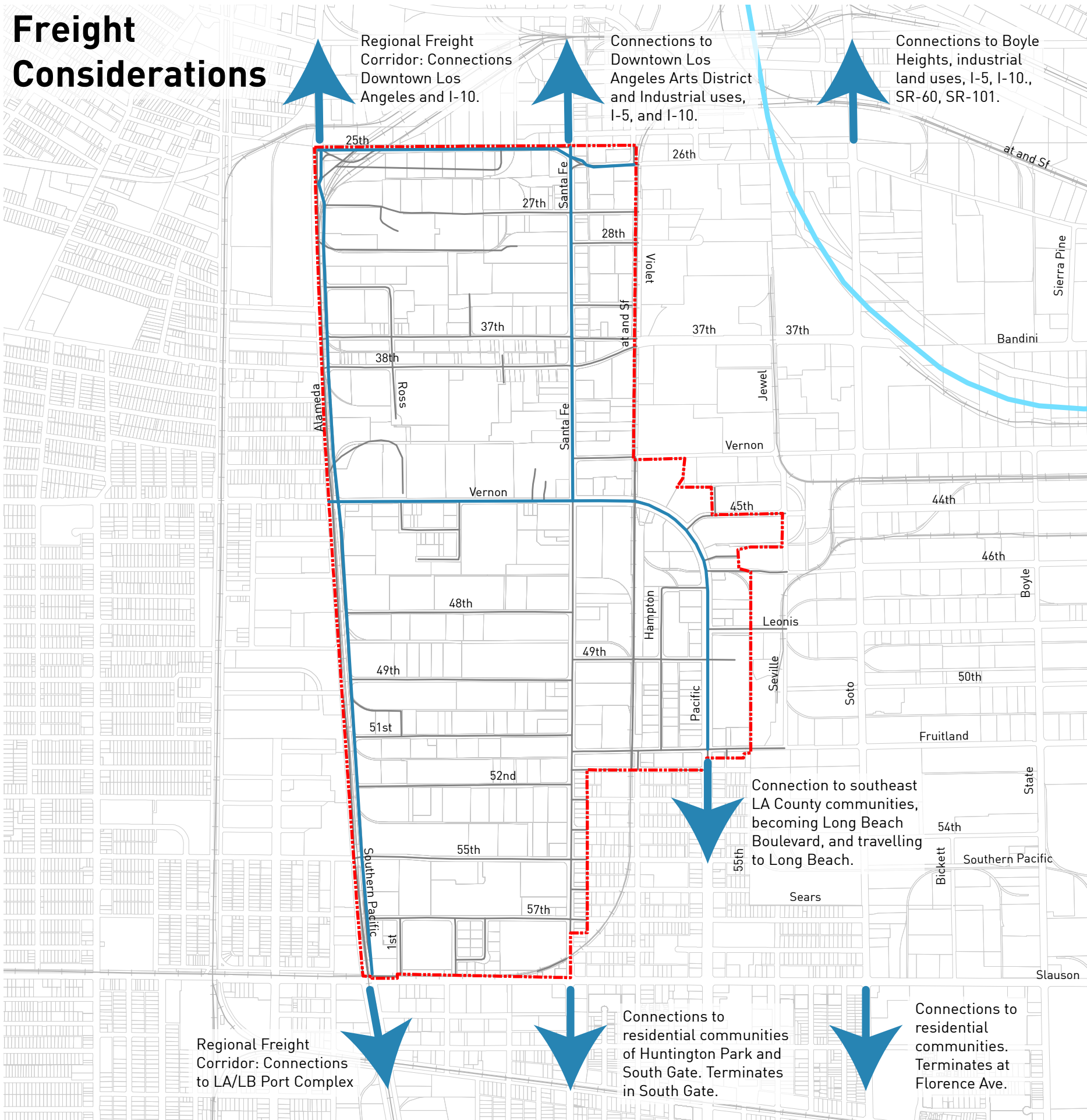
Without designated truck routes to guide truck circulation, it is not possible to manage truck traffic within Vernon.

The California Vehicle Code (CVC) provides a legal framework for the establishment and enforcement of truck routes within local jurisdictions. The CVC also grants authorities to cities to prohibit trucks on other streets. Many cities in California have designated truck routes through ordinance, or a combination of ordinances and resolutions, and in some cases, have coordinated these efforts with a General Plan update. A robust signage or improved signalization program that provides easily identifiable, consistent direction to commercial vehicle operators is critical in organizing travel patterns. Law enforcement agencies, such as the Vernon Police Department, can enforce the CVC within the City of Vernon and assist in ensuring commercial vehicle operators follow designated routes once implemented.

The map on the right highlights roadways that provide regional connectivity to freight, should Vernon consider developing a truck route network. By prioritizing the use of Alameda East, Santa Fe may become a quieter, more inviting facility, particularly south of Vernon Avenue. This would also encourage routing for freight to Alameda Avenue, Santa Fe (north of Vernon Avenue), and Soto Street, which provide access to highways in the northbound direction, and residential communities southbound.









# Freight Considerations



# ROADWAY NETWORK AND USAGE

## Legend

### Freight Considerations

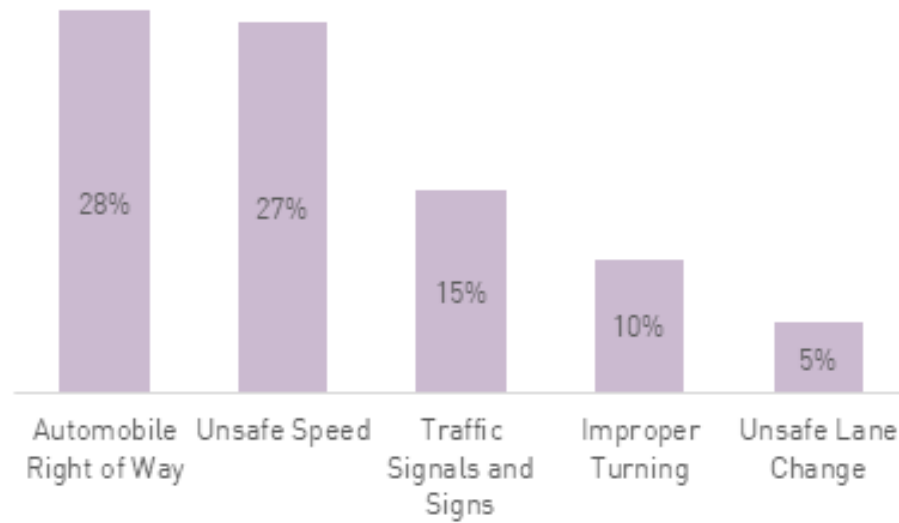
-  Preferred for Freight Travel
-  Key Connections
-  Parcels
-  Study Area Boundaries
-  Los Angeles River
-  Railroad



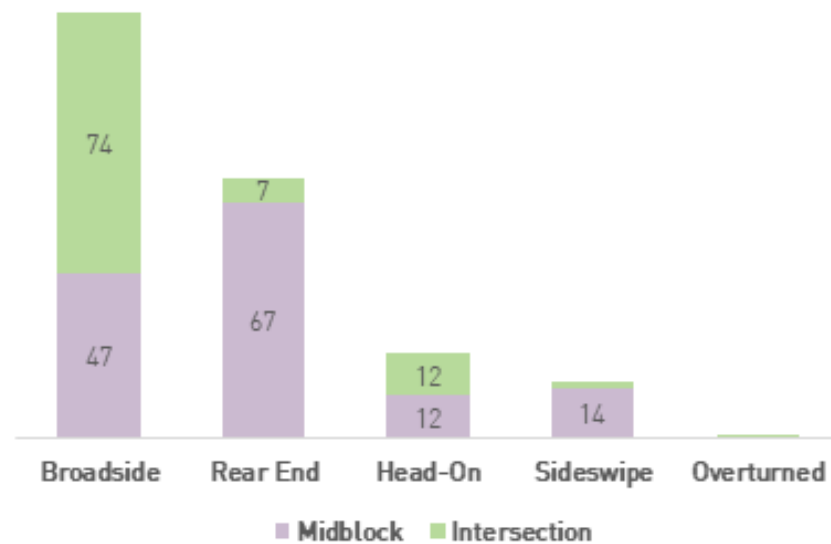
0 0.25 0.5 Miles

# ROADWAY NETWORK AND USAGE

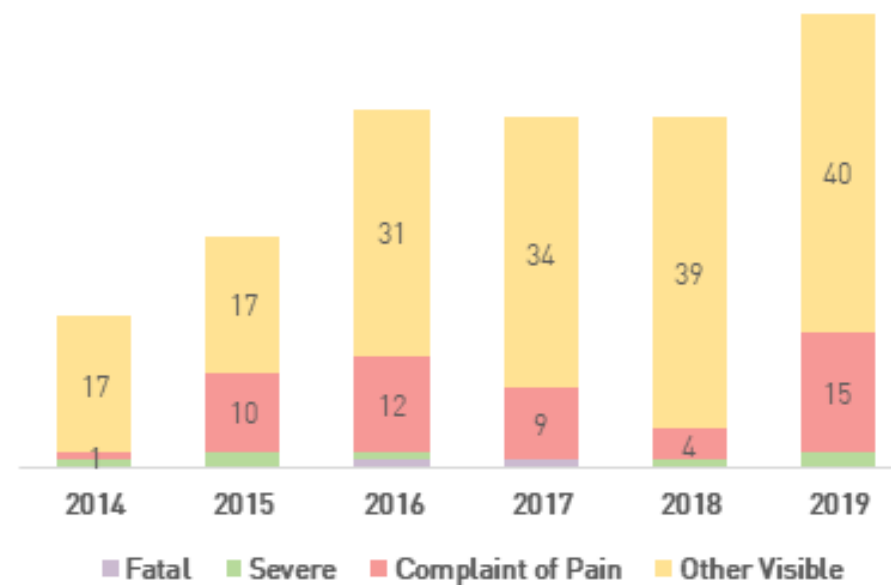
Vehicle-Only Collisions by Primary Collision Factor



Vehicle-Only Collisions by Collision Type and Location



Vehicle-Only Collisions by Severity



## VEHICLE-ONLY COLLISIONS

Evaluating where and why collisions occur helps guide roadway design by informing which safety or enforcement countermeasures are appropriate. To guide understanding, Statewide Integrated Traffic Records System (SWITRS) collision data from 2014 to 2019 was analyzed according to collision severity, primary collision factor, and collision type.

A total of 238 vehicle-only collisions occurred within the Study Area between 2014 and 2019, with the rate of incidents generally increasing over time. Vehicle-only collisions within the Study Area make up 32 percent of all vehicle-only collisions that occurred within city limits between 2014 and 2019. As shown in the chart on the bottom right, the frequency of collisions involving other visible injuries, increased each year between 2015 and 2019. The highest number of vehicle-only collisions occurred in 2019 with 57 total collisions.

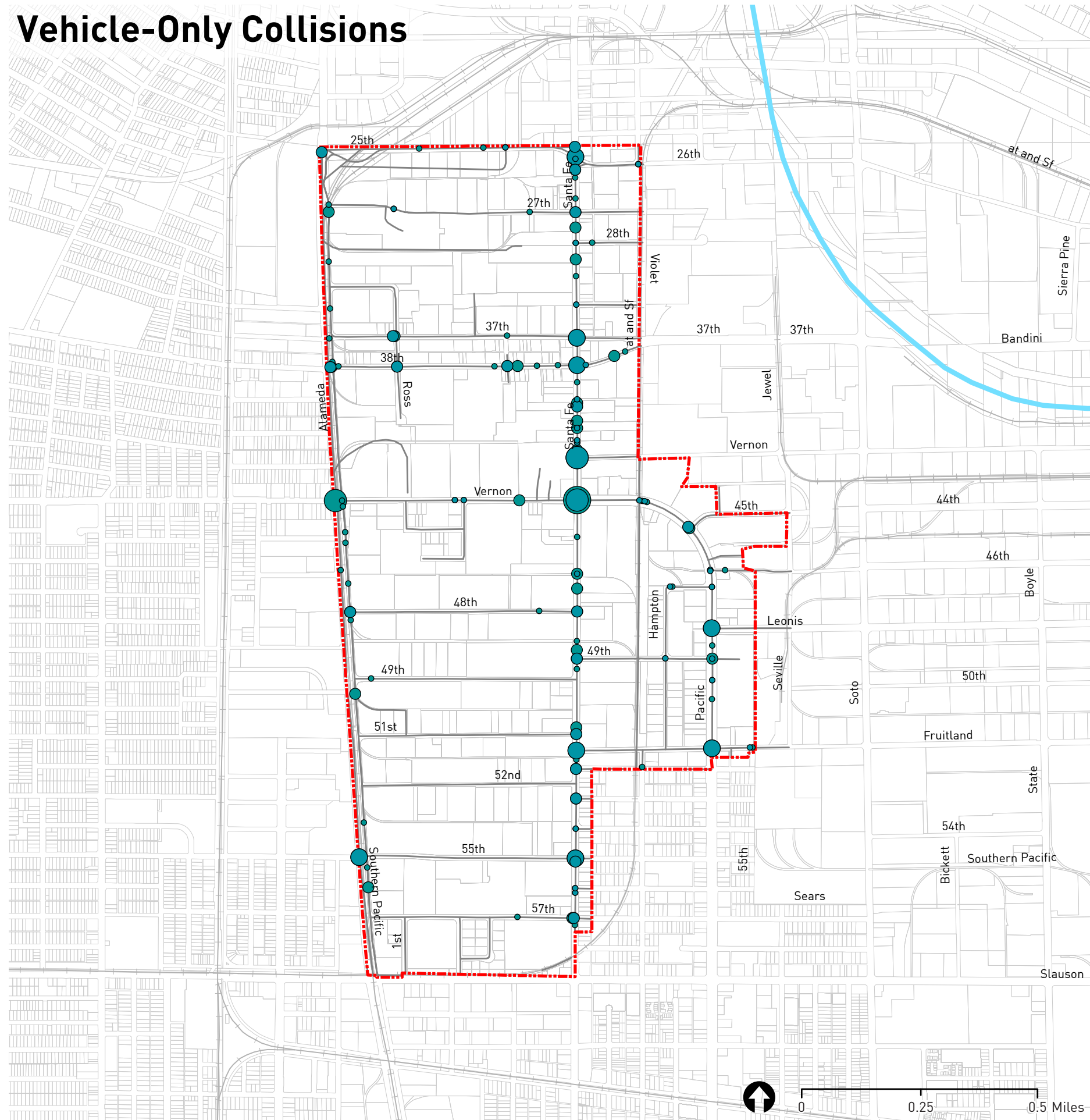
The chart on the top left shows the top five most common collision factors for vehicle-only collisions, with 'Automobile Right of Way' (ROW) accounting for 28 percent of collisions. These collisions usually result from drivers failing to yield properly from failing to see other vehicles, failing to see lane delineation, or committed rushed attempts at taking a lane. The second most common factor is 'Unsafe Speed.' Unsafe speed violations can be

addressed through redesigning and narrowing roadways to slow speeds or increasing the presence of local law enforcement.

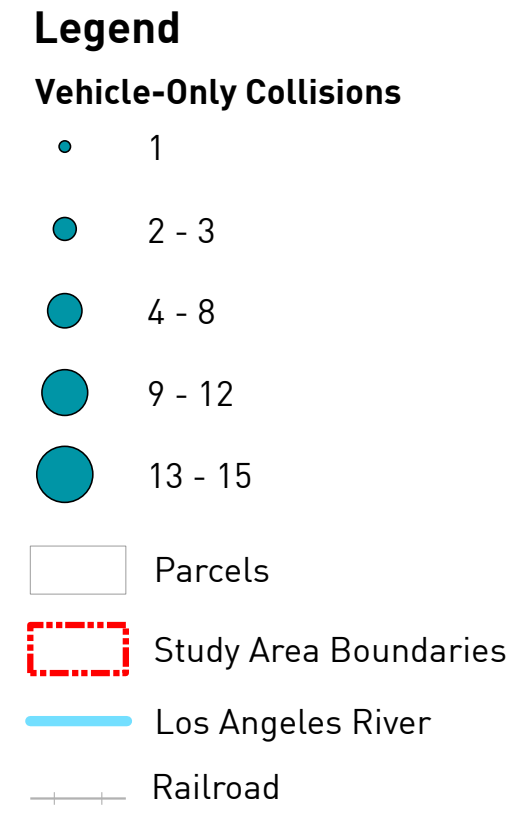
The chart on the bottom left shows where and how vehicle-only collisions occurred. Overall, collisions most frequently occurred at midblock (59 percent). The most common occurrences were broadside collisions occurring at intersections followed by rear-end collisions occurring at midblock. Broadside collisions are typically the result of vehicles entering an intersection too early to make a turn. Rear-end collisions are often due to distracted driving and/or speeding.

Most vehicle-only collisions are concentrated along Santa Fe Avenue, which runs perpendicular to other major arterials in the area (Map on the adjoining page). The sheer volume of traffic, relatively high speeds, and the speed differentials resulting from the presence of large commercial trucks along Santa Fe avenue create conditions that increase the risk of collision. Santa Fe has few protected left-hand turns, and many intersections are unsignalized. Combined with high traffic volumes, these design features likely contribute to the high frequency of broadside collisions occurring at intersections. Broadside collisions occurring at midblock may be caused by vehicles attempting to enter or exit the many driveways adjacent to the Santa Fe corridor. Many of these driveways are not accessible via a center turn lane or where present, center turn lanes are too narrow in width to hold trucks. Vehicles attempting to turn left into a driveway or merge left to oncoming traffic without a center turn lane are at a great risk of a broadside collision. In addition, rear end collisions occurring at midblock may be attributed to vehicles attempting to turn right into driveways, forcing trailing vehicles to abruptly stop. Santa Fe also has the highest AADT compared to other north-south corridors within the study area.

# Vehicle-Only Collisions



# ROADWAY NETWORK AND USAGE



## EXISTING PARKING AND CURBSIDE CONDITIONS



Parking regulations are displayed inconsistently within the westside of Vernon. Posted signage and painted curbs are utilized within the study area today.

### CURB MANAGEMENT

#### Loading Zones

Cities are increasingly adopting innovative curb management approaches to guide utilization, decrease congestion, and capture value at the curbside. The goals of curb management are generally to minimize conflicts between private vehicles, urban freight, and other modes.

The City currently has few commercial loading zones scattered throughout the Study Area. The curb length of these zones suggests they are primarily reserved for private commercial vehicles and small trucks. Curbside loading zones are generally limited due to the presence of designated loading bays and areas for truck parking at warehouses.

#### On-Street Parking Supply

The City does not currently manage on-street, single-space parking meters, or multi-space pay stations. On-street parking is primarily present on local streets that intersect arterial streets such as Alameda Street and Santa Fe Avenue. The City's on-street parking supply includes time-limited curbs, curbs with no time restrictions, and curbs where parking is restricted during certain days of the week for street sweeping. However, parking regulations are communicated inconsistently within Vernon – some streets use posted signs, others use painted curbs. On-street parking is generally prohibited along Santa Fe, Alameda Street, Vernon Avenue, and Pacific Boulevard.

According to the General Plan, many businesses do not provide adequate off-street parking for employees, largely because the properties were developed before parking was required. There are also no public or privately managed, off-street parking facilities within the Study Area. Many employees who do not have access to off-street parking at their place of work are required to park on the street.

As properties transition to other uses, creating a comprehensive approach to managing on-street parking and providing off-street parking facilities will be necessary to meet projected parking needs, while avoiding excess parking supply and maintaining flexibility to repurpose facilities as transportation needs and options evolve. While the General Plan acknowledges the need to manage the transportation system, the strategies in the Plan primarily focus on updated ITS technology. While that is certainly part of the solution, revising parking standards, and updating the existing trip reduction and transportation demand ordinance to right-size requirements for residential and mixed-use developments may be an

effective way of managing traffic and parking within Vernon. Phasing in metered and paid off-street parking as properties shift to more diverse uses may also help to expand the parking supply, facilitate enforcement, and provide a steady source of revenue for the City over time.

### PARKING STANDARDS

#### Minimum Parking Requirements

The City of Vernon's Municipal Code outlines minimum off-street parking requirements for different land uses, including residential, commercial, and industrial uses. For mixed-use building types, the number of required off-street parking and loading spaces is the sum of the requirements of the various uses. Many of Vernon's parking standards are slightly higher than the national standards set by the Institute of Transportation Engineers (ITE), particularly for commercial and industrial uses.

Properties transitioning to other uses that also require a Conditional Use Permit (CUP) must seek approval from the Director, who determines the minimum number of parking spaces as well as minimum loading and maneuvering requirements, during the CUP process.

The Municipal Code also requires that all buildings and uses, with the exception of commercial, retail, residential, and emergency shelters, must provide adequate off-street loading spaces and areas to accommodate trucks for loading and unloading.

City Hall is adjoined by a public parking structure. Standing two stories, the ground level is primarily occupied by Vernon police department and fire department vehicles. The top level, is used by employees, and visitors – and has approximately 120 parking spaces.

## EXISTING TRANSIT CONDITIONS AND OPTIONS



Many bus stops in Vernon are easily identified due to the branding of Metro rapid services. However, further improvements to the streetscape would make transit a more enjoyable option for commuters.

### LA METRO BUS SERVICE

Due to its proximity to Downtown LA, the City of Vernon is primarily served by the LA Metro bus network. Five local lines and three Metro Rapid lines serve or are within a half mile of the study area, forming a grid comprised of north-south transit travel corridors along Pacific Boulevard, Santa Fe Avenue, and Soto Street, and east-west transit travel corridors along Vernon Avenue, Leonis Boulevard, and Slauson Avenue.

The map on the next to next page illustrates existing transit routes located within a half mile of the Study Area boundaries, along with weekday stop-level ridership data for LA Metro routes. Public transit is the third most common means of commuting to work for Vernon employees (8.2%) following driving alone (32.9%) and carpooling (12.6%).<sup>2</sup> Bus service in the City of Vernon generate over 6,600 transit trip ends (both boardings and alightings) per average weekday. The highest stop-level activity within the Study Area occurs on Pacific Boulevard

and Slauson Avenue with 11,348 annual trips, Vernon Avenue and Long Beach Boulevard with 2,803 annual trips, and Pacific Boulevard and Santa Fe Avenue with 2,733 annual trips.

LA Metro is in the process of implementing changes to service as part of the NextGen Plan. Under the plan, most local and rapid buses will be combined. New lines will stop fewer times than a local bus, but a few more than rapid bus. On average, stops would be a quarter mile apart. All rapid routes serving the City will undergo the aforementioned changes between now and December 2021.

<sup>2</sup> U.S. Census, *Means of Transportation to Work for Workplace Geography (B08601)*, 2018 ACS 5-Year Estimates

## EXISTING TRANSIT CONDITIONS AND OPTIONS

### Rapid 705/Local 105

The Rapid 705 Route connects the City of Vernon to Culver City, Beverly Hills, and West Hollywood. The 705 Rapid travels along Vernon Avenue, providing connections to several key destinations within the city, including Vernon City School, City Hall, and several manufacturing employers. The 705 Rapid operates from 4:59 a.m. to 10:00 a.m. and from 2:12 p.m. to 8:36 p.m., Monday to Friday with average headways of 20 minutes. Off-peak, weekend, and holiday service are provided by the Local 105, which runs from 4:00 a.m. to 10:37 p.m. with average headways of 30 minutes on weekdays and weekends. Limited Late Night/Owl Service is also provided after 10:50 p.m. with service running until 4:29 a.m. for stops between Vernon and Leimert Park.

Under the NextGen Plan, the Local 105 and 705 Rapid will be combined to create a New High Frequency Line 105. Underutilized bus stops will be consolidated to balance speed, reliability, and accessibility, and will improve headways to 10 minutes on weekdays and 15 minutes on weekends.

### Rapid 751/Local 251

The Rapid 751 Route provides connections to Cypress Park, Lincoln Heights, Downtown LA, Huntington Park, and South Gate. It also provides connections to several LA Metro Rail lines, including the Green and Gold Lines, and serves the LA County + USC Medical Center. The Rapid 751 primarily runs on Soto Street and operates between 4:20 a.m. to 7:32 p.m. on weekdays with an average headway of 20 minutes. The Local 251 provides off-peak, weekend, and holiday service. The Local 251 operates from 3:45 a.m. to 3:27 a.m., Monday to Friday, with an average headway of

30 minutes, and provides connections to the Long Beach C (Green) Line and stops in South Gate that are not served by the Rapid 751.

The NextGen Plan will merge Lines 251 and 751. While it will continue to serve the same neighborhoods, the New Line 251 will operate more frequent service on weekdays with improved headways of 10 minutes.

### Rapid 760/Local 60

The Rapid 760 Route provides connections to Downtown LA, Huntington Park, Southgate, Watts, and Lynwood and runs primarily on Pacific Boulevard in the City of Vernon. Service is limited to weekdays and operates from 4:54 a.m. to 9:00 p.m. with headways averaging 20 minutes. The Rapid 760 provides connections to several Metro rail lines, including the B (Red), D (Purple), A (Blue), and C (Green) lines. The Local 60, which shares a similar alignment with the Rapid 760, provides weekday, weekend, and holiday service, with headways averaging 25 minutes.

The New High Frequency Line 60 will merge Lines 60 and 760 on Long Beach Boulevard between Downtown LA, C Line (Green) and A Line (Blue). Underutilized bus stops on Santa Fe Avenue and Long Beach Boulevard will be consolidated to balance speed, reliability, and accessibility. The planned combined route would follow the existing Local 60 route between Downtown LA and A Line (Blue) Artesia Station and include a reroute in Downtown LA. More high frequency will be available north of the C Line (Green) Long Beach Boulevard Station.

### Local 108

The Local 108, which operates along Slauson Avenue, provides connections to Pico Rivera, the City of Commerce, Culver City, Venice, and Marina Del Rey. Weekday service runs from 4:28 a.m. to 11:23 p.m. with average headways of 20 minutes. Weekend service runs from 5:00 a.m. to 11:10 p.m. with average headways of 25 minutes for stops between Pico Rivera and Hyde Park and average headways of 45-minutes for stops between Fox Hills and Marina Del Rey.

### Local 611

The Local 611 or Huntington Park Shuttle is a local circulator route that connects Vernon to neighboring cities including Huntington Park, Maywood, Bell, and South Gate. The route primarily runs on Vernon Avenue, Leonis Boulevard, and District Avenue within city limits and operates from 5:40 a.m. to 9:58 p.m., on weekends and weekdays, with one-hour headways.

### LA METRO RAIL SERVICE

The Metro A (Blue) Line train also runs along Long Beach one mile west of the City boundary, with stations located on Washington Avenue, Vernon Avenue, and Slauson Avenue. The A Line stations nearest the northern and southern edges of the study area are beyond walking distance to most Vernon locations with no clear routes or direct connections. The Vernon Station on Vernon Avenue and Long Beach Boulevard is the most accessible station. The station is within a 15-minute walk along Vernon Avenue to the western edge of the study area and 0.75 miles from the Vernon Avenue and Santa Fe Avenue intersection.

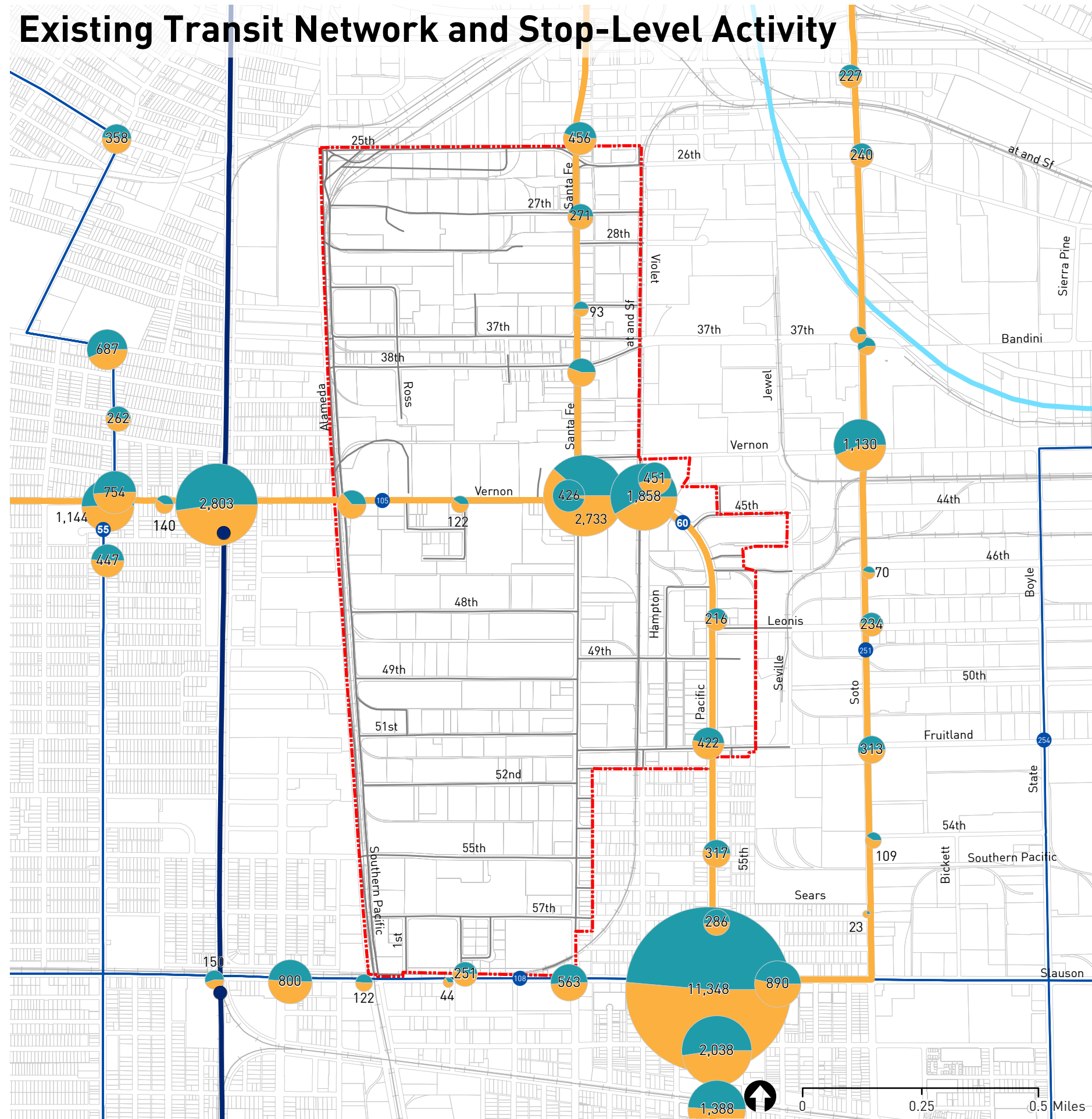
The Slauson Avenue train station is the centerpiece of an ongoing transit oriented development study, which will guide changes and development for the benefit of the Florence-Firestone community. The study may provide opportunities to coordinate and help catalyze changes in Vernon.

### ECO-RAPID TRANSIT

Eco-Rapid Transit is a joint powers authority created to pursue development of a transit system designed to enhance and increase transportation options of riders in the Southern California region. Eco-Rapid Transit consists of 11 members.

The Eco-Rapid Transit is a planned 40-mile commuter rail line, funded by Measure R that will connect Artesia to Bob Hope Airport. The portion of the route south of Downtown Los Angeles will use the West Santa Ana Branch and Pacific Electric right-of-ways. Within the City of Vernon, two alternative alignments were being evaluated though are no longer under consideration. Stations were tentatively planned for Pacific Boulevard/Vernon Avenue (West Bank alignment or Leonis Boulevard/District Boulevard (East Bank alignment), though the City expressed opposition to alignments entering the City of Vernon, which may require realignment to overlap with the Metro A Line.

# Existing Transit Network and Stop-Level Activity



## EXISTING TRANSIT CONDITIONS AND OPTIONS

### Legend

#### Transit Network

- Metro A Stations
- Metro Local Routes
- Metro Rapid BRT Routes
- Metro A (Blue) Line

#### Weekday Stop-Level Activity

- Boardings
- Alightings
- Reflects total stop activity proportionally
- Parcels
- Study Area Boundaries
- Los Angeles River
- Railroad

# ACTIVE TRANSPORTATION CONDITIONS

## BICYCLE CONDITIONS

Except for the three-quarter mile stretch of the Los Angeles River bicycle path that extends from Atlantic Boulevard to Slauson Avenue, there are few existing bicycle facilities within city limits. In addition to absence of adequate facilities, the heavy truck traffic, narrow configuration of many streets, and the lack of separation between bicyclists and motorists creates an unwelcoming environment for bicyclists. Roughly one percent of all workers commute to Vernon by biking.<sup>3</sup> Increased efforts and targeted investments towards expanding the regional bicycle network, however, present opportunities to add new bikeways in Vernon.

<sup>3</sup> U.S. Census, Means of Transportation to Work for Workplace Geography (B08601), 2018 ACS 5-Year Estimates

### Existing Facilities

The map on the adjoining page illustrates existing bikeways within a half-mile of the study area as well as proposed bikeways that are recommended from the LA County Bicycle Master Plan and the Vernon Bicycle Master Plan.

#### Class I Bicycle Path

Class I are shared-use bicycle paths, or paved trails. The facilities provide separate, exclusive right-of-way for bicycling, walking, and other non-motorized uses. They can be considered the lowest stress facilities as there are few potential conflicts between bicyclists and motor vehicles. Vernon has a total of 0.78 miles of shared-use path facilities along the Los Angeles River. Known as the Los Angeles River Bike Path, this key regional facility originates in Vernon and ends in Long Beach.

#### Class II Bicycle Lane

Class II are striped, preferential lanes on roadways for one-way bicycle travel. Some bicycle lanes include striped buffers that add several feet of separation between the bicycle lane and traffic lane or parking aisle. While there are currently no Class II bicycle lanes within city limits, there are several Class II facilities on Holmes Avenue, 8th Street, and Adams Boulevard that connect neighboring jurisdictions to Vernon.

#### Class III Bicycle Route

Class III are signed routes where people riding bicycles share a travel lane with people driving. Because they are mixed-flow facilities, bicycle routes are only appropriate for low-volume streets with slow travel speeds. Some routes are designated only by Caltrans-compliant Bicycle Route signs, while others are designed by signs and painted shared-lane markings, or “sharrows,” to indicate a shared

environment for bicyclists and motorists. Several Class III facilities on Lorena Street and 51st Street connect to Vernon.

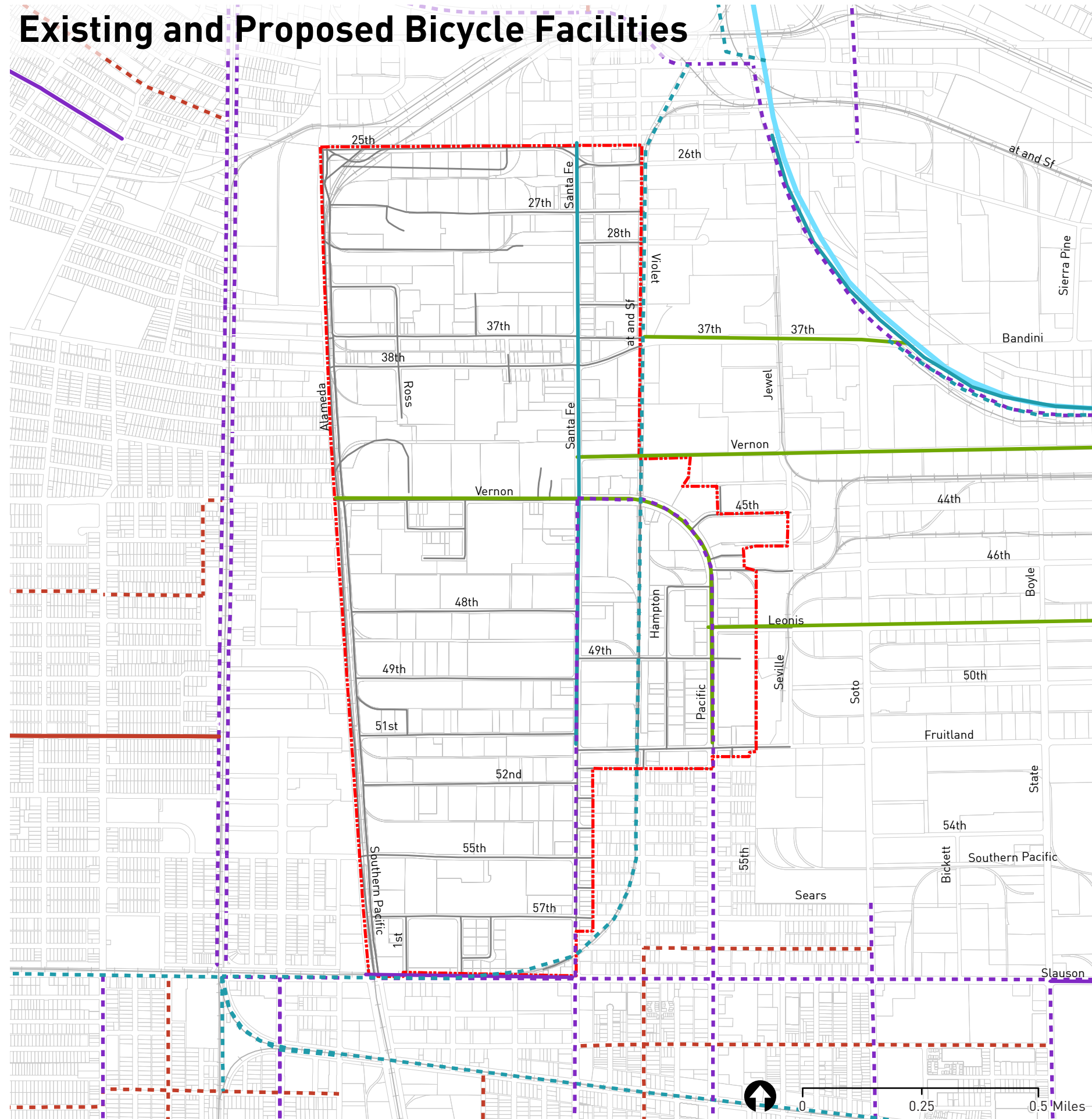
#### Class IV Separated Bikeway

Class IV—or separated bikeways—also known as cycle tracks, are on-street facilities that are physically separated from motor vehicle traffic by a vertical element or barrier, such as a curb, bollards, or vehicle parking aisle. This facility type provides extra separation between moving vehicles and people riding bicycles so that bicyclists feel more secure while traveling along a roadway. While there are currently no separated bikeway facilities within the study area, the City has emphasized a greater need for physically separated bicycle infrastructure, particularly on high-speed, high-volume roadways frequented by large trucks and buses.





# Existing and Proposed Bicycle Facilities



## ACTIVE TRANSPORTATION CONDITIONS

### Legend

#### Existing Bikeways

- Class II (Purple line)
- Class III (Red line)

#### LA County Proposed Bikeways

- Class I (Cyan dashed line)
- Class II (Purple dashed line)
- Class III (Red dashed line)

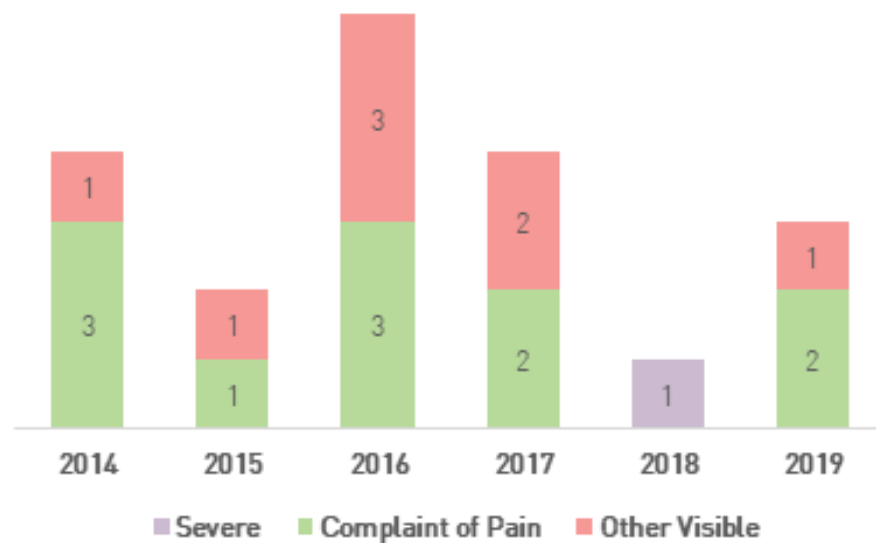
#### Vernon BMP Proposed Bikeways

- Class I (Cyan solid line)
- Class II (Purple solid line)
- Class IV (Green solid line)

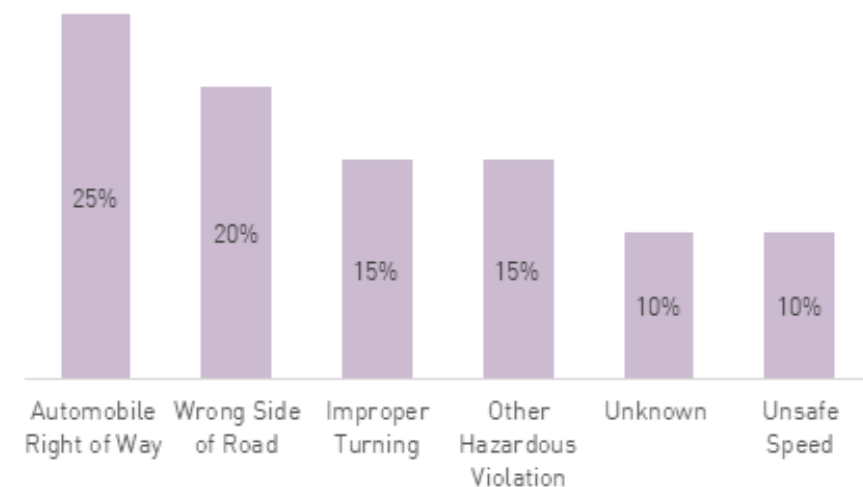
- Parcels (Thin grey lines)
- Study Area Boundaries (Red dashed line)
- Los Angeles River (Light blue line)
- Railroad (Grey line with cross-ticks)

# ACTIVE TRANSPORTATION CONDITIONS

Bicycle-Involved Collisions by Severity



Bicycle-Involved Collisions by Primary Collision Factor



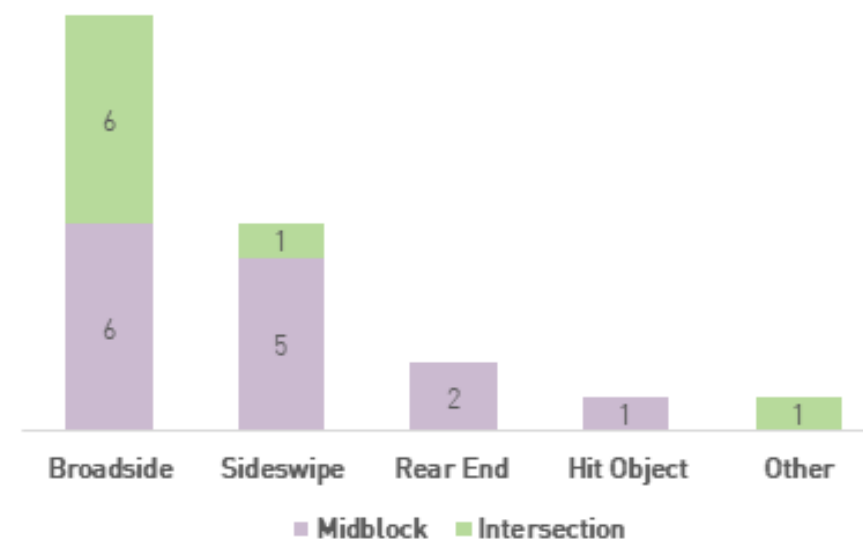
## Bicycle Safety

A total of 20 bicycle-involved collisions occurred within the Study Area between 2014 and 2019, with the rate of incidents fluctuating over time. Bicycle-involved collisions within the Study Area make up nearly three-quarters of all bicycle-involved collisions that occurred within city limits between 2014 and 2019. As shown in the figure on the top left, the frequency of collisions involving other visible injuries, increased from one in 2014 to three in 2016, and declined slightly in 2017 to two collisions. The highest number of bicycle-involved collisions occurred in 2016 with six total collisions, with half of collisions resulting in complaints of pain and half resulting in other visible injuries.

The figure on the bottom left shows the top six most common collision factors for bicycle-involved collisions, with 'Automobile Right of Way' (ROW) accounting for 25 percent of collisions. These collisions usually result from drivers failing to yield properly from failing to see others, failing to see lane delineation, or committed rushed attempts at taking a lane. The second most common factor is 'Wrong Side of Road,' which results from bicyclists riding against the flow of traffic. Potential mitigations include improved signage, wayfinding, and education on safe riding practices.

The figure on the right left shows where and how bicycle-involved collisions occurred. Overall, collisions most

Bicycle-Involved Collisions by Collision Type and Location

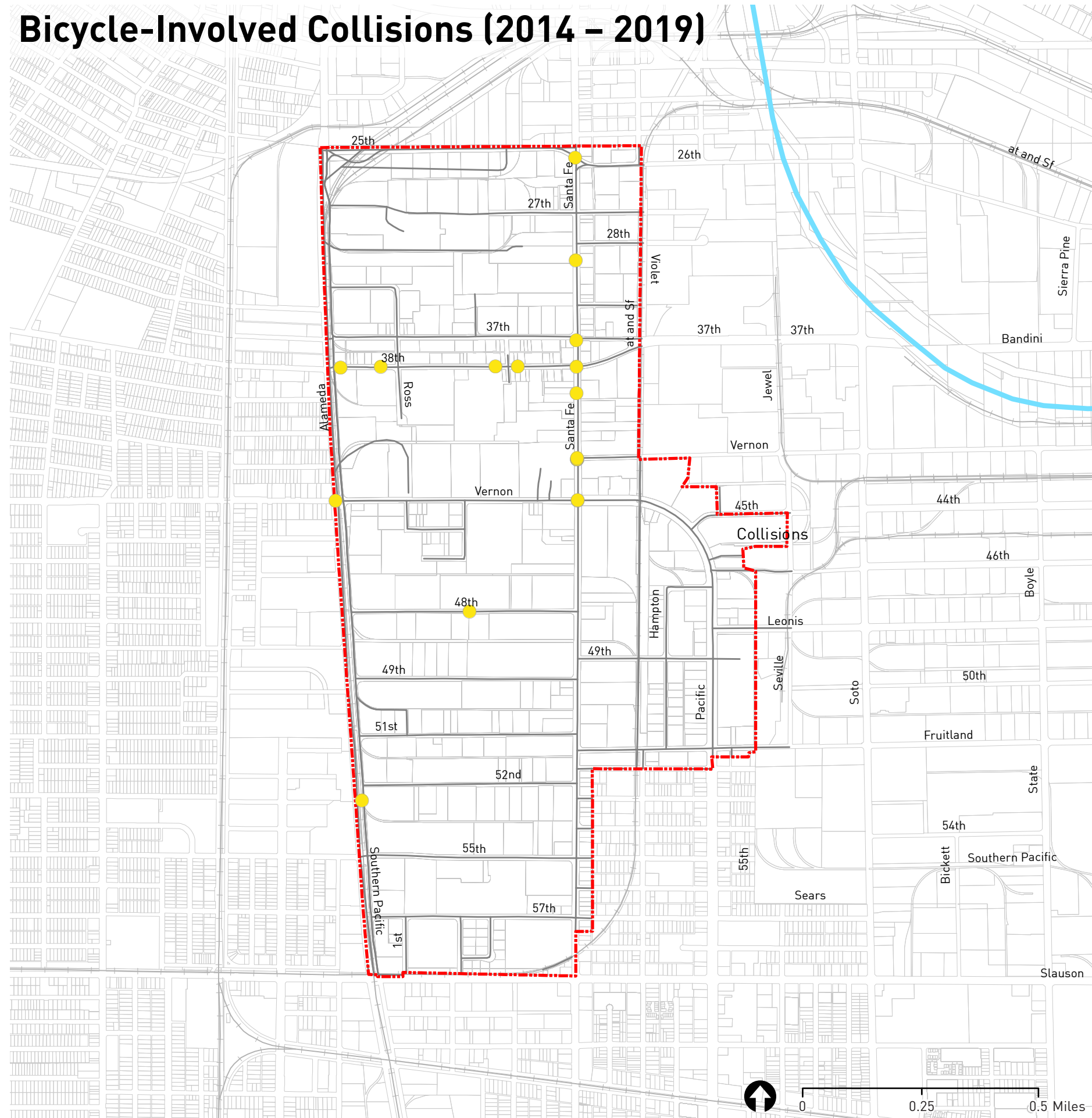


frequently occurred at midblock (64 percent). The most common occurrences were broadside collisions occurring at midblock and at intersections followed by sideswipes occurring at midblock, due to vehicles passing bicyclists closely.

Most bicycle-involved collisions are concentrated along Santa Fe Avenue, which runs parallel to Alameda Street and perpendicular to other major arterials in the area (shown in the map on adjoining page). The absence of marked or separated bicycle facilities and the presence of narrow sidewalks interrupted by driveways and utilities produce conditions that require bicyclists to share roadways with private vehicles and trucks. High vehicular traffic volumes and the speed differential between cyclists and motorists increase the risk of bicycle-involved collisions. Low intersection density, particularly north of Vernon Avenue, also limits the availability of convenient crossings and options for east-west travel for cyclists.

A second concentration of collisions is along 38th Street, which is perpendicular to Alameda Street and Santa Fe Avenue. This may indicate bicyclists primarily use 38th Street to travel into Vernon from the west as it is one of the few east-west roadways that cross Long Beach Avenue and Alameda Street. Several collisions also occurred on Alameda Street at intersections with other arterial streets.

# Bicycle-Involved Collisions (2014 - 2019)



## ACTIVE TRANSPORTATION CONDITIONS

### Legend

- Bicycle-Involved Collisions
- Parcels
- Study Area Boundaries
- Los Angeles River
- Railroad

## ACTIVE TRANSPORTATION CONDITIONS

### WALKING ENVIRONMENT

Limited intersection density, noise pollution attributed to high truck volumes, and the prevalence of long-uninterrupted blocks and surface parking lots abutting sidewalks together create a generally unwelcoming pedestrian environment. Though marked crosswalks exist at many major intersections across the city, most are traverse or standard, lacking high-visibility continental or ladder designs to increase visibility.

As seen in the map on the adjoining page, Vernon's sidewalk network is fairly complete, with most streets in the study area including sidewalks in good condition. Santa Fe features sidewalks that are about 10 feet in most sections, making space available for amenities like seating, planters (several tree wells and young trees exist), and public art. The high traffic volumes, noise pollution, and lack of separation between pedestrians and motorists, however, culminate in an uncomfortable walking environment along Santa Fe at its current dimensions. Sidewalks along local roadways are also narrow and interrupted by utility boxes and private driveways.



Santa Fe features several unique buildings with detailed design features of a previous time. These features, paired with improved pedestrian environments, can work to catalyze activity within the study area.

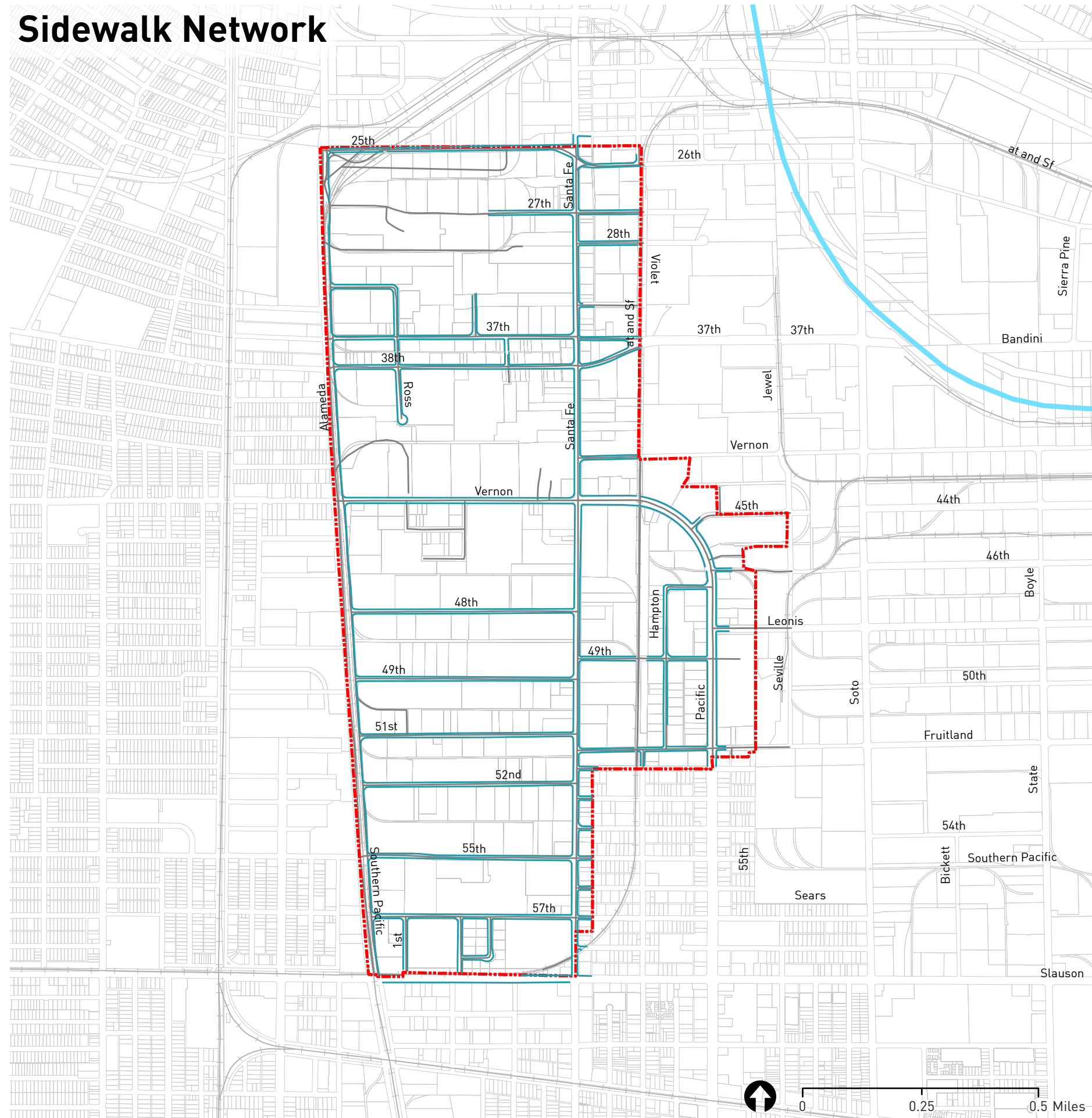


Most east/west running streets have sidewalks of adequate width to support people walking to and from work, possibly from transit but most likely from their parked vehicle. Sidewalks adjacent to large company properties may get little use, as these sites often provide sufficient parking to limit street-parking, are self contained, and there are few destinations to access during lunch or after work hours.



Walking along Santa Fe can be an intimidating experience due to the noise associated with the speed and volumes of traffic along the corridor - including a steady flow of freight trucks.

# Sidewalk Network



# ACTIVE TRANSPORTATION CONDITIONS

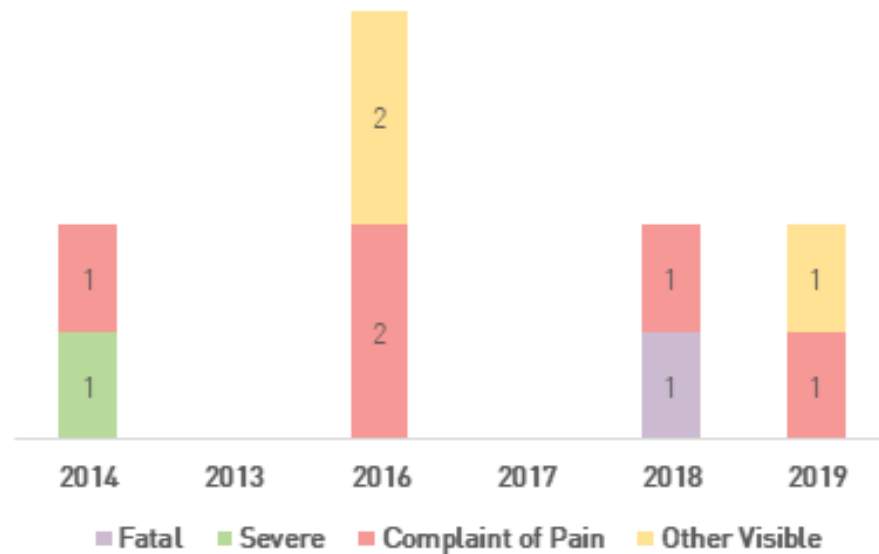
## Legend

### Sidewalk Network

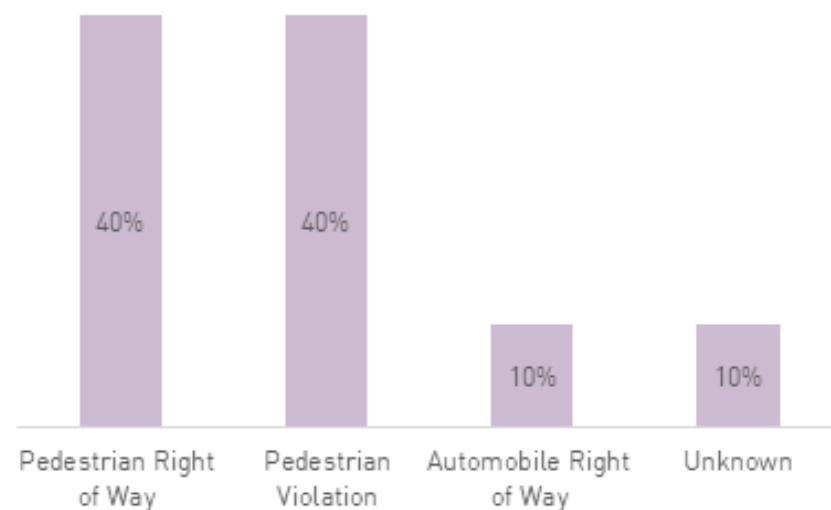
- Sidewalks
- Parcels
- Study Area Boundaries
- Los Angeles River
- Railroad

# ACTIVE TRANSPORTATION CONDITIONS

Pedestrian-Involved Collisions by Severity (2014 – 2019)



Pedestrian-Involved Collisions by Primary Collision Factor

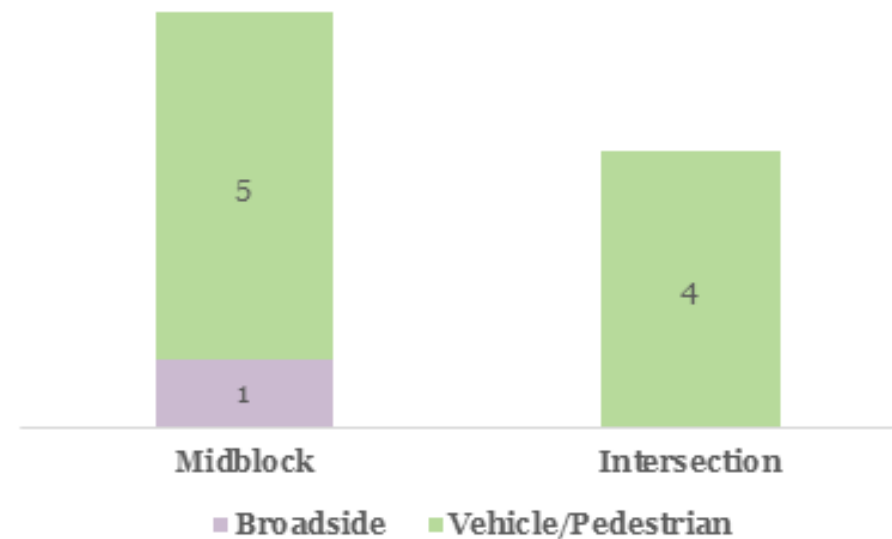


## Pedestrian Safety

A total of 10 pedestrian-involved collisions occurred within the Study Area between 2014 and 2019, with the rate of incidents fluctuating over time. Pedestrian-involved collisions within the Study Area make up roughly a third of all pedestrian-involved collisions that occurred within city limits during this time-period. As shown in the chart on top left, the frequency of pedestrian-involved collisions fluctuated from year-to-year with no pedestrian-involved collisions reported in the Study Area in 2013 and 2017. The highest number of pedestrian-involved collisions occurred in 2016 with four collisions with half resulting in complaints of pain and half resulting in other visible injuries. One pedestrian-involved collision resulting in a fatality occurred in 2018.

The chart on bottom left illustrates the most common collision factors for pedestrian-involved collisions,

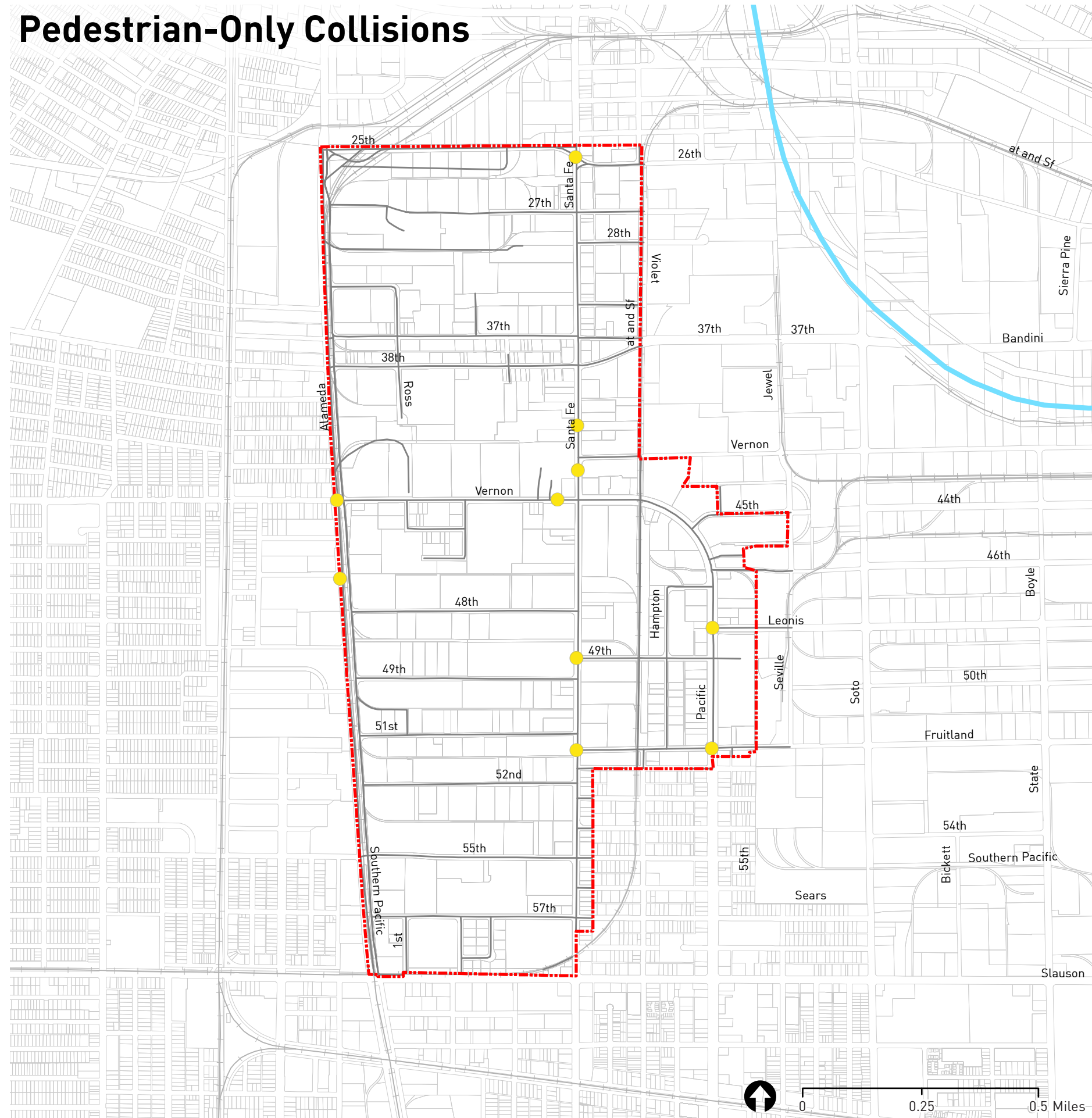
Pedestrian-Involved Collisions by Collision Type and Location



with 'Pedestrian Right of Way' (ROW) and 'Pedestrian Violation' each accounting for 40 percent of collisions. Pedestrian ROW collisions generally involve vehicles encroaching in the pedestrian right of way, which may result from drivers failing to yield to pedestrians within marked crosswalks. Potential mitigations include high visibility crosswalks, installing bulb outs to shorten pedestrian crossing distances and increase pedestrian visibility, and integrating a leading pedestrian interval at key intersections.

The chart on bottom right shows where and how pedestrian-involved collisions occurred. Overall, collisions most frequently occurred at midblock (60 percent). This suggests a demand for midblock crossing locations to facilitate pedestrian travel within the study area.

# Pedestrian-Only Collisions



# ACTIVE TRANSPORTATION CONDITIONS

## Legend

- Pedestrian-Involved Collisions
- Study Area Boundaries
- Los Angeles River
- Railroad

## ISSUES AND OPPORTUNITIES

### ISSUES AND OPPORTUNITIES

This review of existing transportation and mobility conditions within the Study Area provide a basis for understanding the issues and opportunities that can be addressed in the Westside Specific Plan. Preliminary considerations moving forward include:

- As properties are redeveloped and new land uses are introduced to Vernon, opportunities to add to the roadway network by breaking up mega blocks should be considered to enhance connectivity throughout the westside of Vernon, particularly in the north/south direction. This would help support local circulation, and limit additional congestion on arterials. To support new, more dynamic land uses, streetscapes can be leveraged to create a sense of place that is welcoming to people walking. Santa Fe, for example, could be reimagined as a gateway corridor, making use of tree wells, and other pedestrian serving furniture near potential activity hubs.
- Today, all routes are truck routes. Designating specific freight routes with signage may help direct truck traffic more effectively. For example, directing all truck traffic originating from or driving towards properties west of Santa Fe Avenue, to use Alameda East would help alleviate congestion on Santa Fe.
- When parking in Vernon, it can be unclear as to where to look to understand regulations – today some regulations are painted on the curb, others are posted. Parking management will become especially critical as land uses shift towards residential and mixed-uses. Standardizing

signage of parking regulations to uniformly communicate policies to visitors and residents helps limit confusion and can create a consistent sense of place within Vernon.

- The Specific Plan will need to apply a comprehensive and implementable approach for incorporating complete streets investments within the westside of Vernon. For example, a Bicycle Lane along Santa Fe Avenue is likely not feasible due to high traffic volumes and the need for freight trucks to use up to three lanes of traffic to exit properties facing Santa Fe.
- The City of Vernon encourages rail facilities to be merged, and spurs to be abandoned. Understanding the approach Vernon uses with stakeholders to phase out rail can help guide opportunities. The Malabar Rail Yard presents an opportunity to create a dynamic space in West Vernon, and could serve as a multimodal corridor, pedestrian greenway, or paseo, or serve freight more effectively. There are several smaller spurs, more akin to alleys, that may also serve as a catalyst to introduce new land uses and people scale activity, and improve connectivity for non-auto modes.
- To foster an environment where people are welcomed to enjoy and partake in new land uses in Vernon, identifying approaches to improving sustainability may help elevate Vernon's profile. Lessons can be learned from the Ports of Long Beach and Los Angeles to facilitate a transition to cleaner burning engines for freight vehicles, and potentially electric freight for local drayage purposes.
- With more than half of Vernon's workforce living within a 10-mile radius of the City, establishing a robust transportation demand management program could help manage commute trips in and out of Vernon. Subsidizing transit, subsidizing rideshare services, incentivizing carpooling, and employee shuttles may help reduce the number of individuals driving in and out of the City.
- Data is critical for making informed decisions, particularly for long term investments. Parking infrastructure has long lifetimes, and the mobility landscape is continually evolving, leaving the returns on investing on parking facilities unclear. A comprehensive parking utilization study would help guide the understanding of today's parking supply, demand, and need. However, strategies such as unbundled parking, and shared parking strategies will help guide new development avoid the development of excess parking capacity.



This study provides the opportunity to think critically about how transportation network can best support people walking, bicycling, taking transit, and driving to meet the needs of businesses and foster new and unique growth opportunities.



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