South-Central Fresno Truck Reroute Study

Existing Conditions Report

August 2023

City of FRESNO

San Joaquin Valley AIR POLLUTION CONTROL DISTRICT

ARCADIS

IBI GROUP

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1 Introduction & Background

The City of Fresno and the San Joaquin Valley Air Pollution Control District (SJVAPCD) are seeking to develop innovative and implementable mobility solutions and strategies to support the South-Central Fresno community. There is a significant industrial presence operating in the southwest portion of the community, which includes a fossil fuel electric power generation facility along with several other industrial sources. Industrial uses in the South-Central Fresno community have contributed to several truck impacts from freight travel. There are two main types of truck impacts:

1. Mobile source emissions
2. Non – emissions impacts (noise, traffic crashes and congestion, excess wear and tear on local roadways)

This report will explore both types of truck impacts, with an emphasis on mobile source emissions, as this report focuses on the Assembly Bill (AB 617) community within South Central Fresno. AB 617 aims to monitor and reduce air pollution exposure in disadvantaged communities. Poor air quality largely resulting from mobile source freight truck emissions has had a significant negative impact on environmental and public health conditions within a significant number of census tracts in the South-Central Fresno community. Combined with the socioeconomic conditions of the community, several census tracts have been designated by the state as disadvantaged communities. Additionally, there are several sensitive locations frequently visited by vulnerable populations in South-Central Fresno that are disproportionately burdened by poor air quality conditions including schools, daycares, and hospitals.

The South-Central Fresno community was prioritized by the San Joaquin Valley's AB 617 Environmental Justice Steering Committee. The San Joaquin Valley has been the focus of numerous air quality studies which lay the necessary foundation for the development of an emissions reduction program in this urban community. The community also has high asthma rates and cardiovascular disease impacts, along with high rates of poverty, unemployment, and linguistic isolation. The Truck Reroute Study will identify, analyze, and evaluate potential strategies that freight impacted communities in the AB 617 area might take in cooperation with the City of Fresno to abate truck impacts. Such truck impacts include air pollution, noise, polluted runoff, traffic crashes, traffic congestion, active transportation conflicts, residential and school impacts, and excess wear for local pavements and bridges.

This Study will ultimately determine whether heavy-duty trucks travelling within the community can be rerouted to reduce the negative effects of excess truck traffic for South-Central Fresno community residents. However, the purpose of this report is to review the existing transportation, land use, and demographic conditions within the South-Central Fresno community. The report will aid in identifying community needs, challenges, and opportunities for improvement in future tasks.

1.1 Purpose

The purpose of this report is to create a foundational understanding of existing conditions within the South-Central Fresno Community. Existing conditions described in this report include demographic conditions, environmental conditions, existing and ongoing planning efforts, traffic and freight

activity, and public transportation and active transportation conditions. The insights gathered through this effort will be used to inform recommendations made in future deliverables.

1.2 Past Efforts

There have been several advances in truck emissions from diesel combustion engines through State of California legislation and regulation over the past several decades. The California Air Resources Board (CARB) has been a leader in legislative action to promote and protect public health, welfare, and ecological resources through effective reduction of air pollutants. The Truck and Bus Regulation, in effect since 2008, requires heavy-duty diesel vehicles to reduce toxic air contaminants (TACs) emissions from their exhaust. In the latest installment, of the regulation all trucks and buses will be required to have 2010 or newer model year engines to reduce particulate matter and NOx emissions.

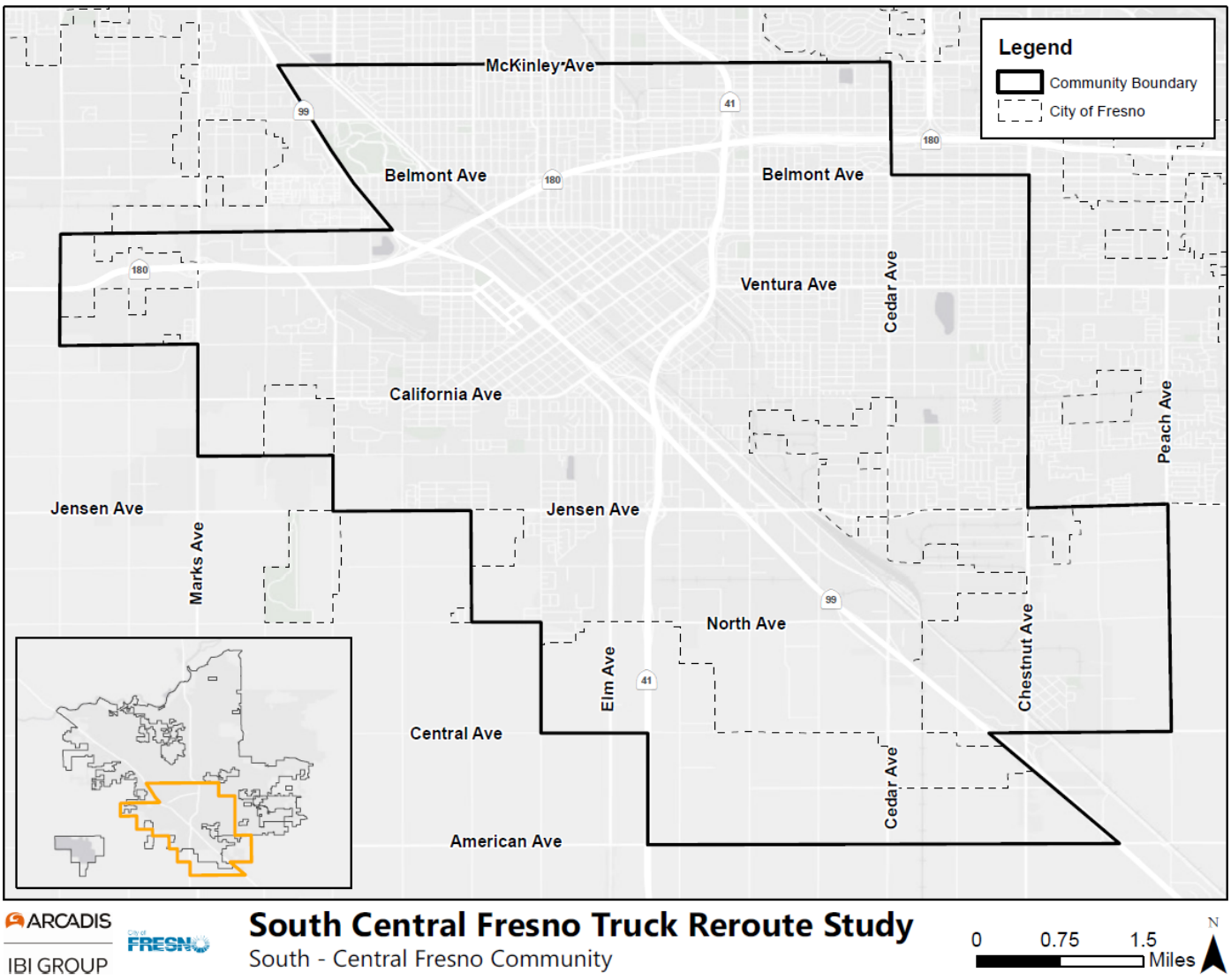
Other CARB efforts include the Advanced Clean Fleets regulation, adopted by CARB in April 2023, a part of a broader strategy to deploy medium- and heavy-duty zero-emission vehicles everywhere feasible. This Advanced Clean Fleets regulation mandates the manufactures can only sell zero-emission medium- and heavy-duty vehicles starting in 2036. Within the Advanced Clean Fleets regulation, the Advanced Clean Trucks regulation is a manufactures ZEV sales requirement and a one-time reporting requirement for large entities and fleets. Emission reductions regulation will continue to expand over the next decade due to various regulations and legislative efforts.

2 Study Area Description

2.1 Location

The South-Central Fresno community is located in the southernmost portion of the City of Fresno and is approximately 29 square miles. The study area encompasses Downtown Fresno and 1,208 acres in unincorporated Fresno County, including the communities of Calwa and Malaga (Figure 1). The South-Central Fresno community is also an AB 617 community, which is recognized by the California Air Resources Board as an environmental justice community that is severely impacted by air pollution. Poor air quality in South-Central Fresno is largely attributed to high traffic volumes and freight traffic traveling along several highways. The community is traversed by State Routes (SR) 99, 41, and 180. SR 99 runs diagonally across the study area, while SR 41 runs north-south and SR 180 runs east-west through the community.

FIGURE 1 SOUTH-CENTRAL FRESNO COMMUNITY STUDY AREA



2.2 Regional Significance of Transportation Facilities

The South-Central Fresno area is a regional hub for goods movement and the freight industry for the Central Valley Region, given its proximity to rail and highways. SR 99, 41, and 180 are all truck routes identified on the City of Fresno's Designated Truck Routes Map (2005), presented in Section 5.2 of this report. In addition to these routes, other existing truck routes running north-south through this community include Elm Avenue, East Avenue, Cedar Avenue, and Walnut Avenue. Existing east-west truck routes running through the study area include California Avenue, Jensen Avenue, North Avenue, and Golden State Boulevard. There are also several shorter segments identified as County permitted routes and planned truck routes. Transit is limited in this portion of the City, with only three FAX routes operating in this area, including routes 32, 34, and 38. Route 32 only operates during the week and route 38 provides 15-minute headways during weekdays.

In addition to providing access for goods movement and freight vehicles, SR 99 and these designated truck corridors are utilized as an alternative to I-5 for regional passenger travel. The addition of passenger travel on these corridors, in combination with limited multimodal access within South-Central Fresno contributes to significant traffic congestion. This leads to delays for freight delivery schedules, commuters arriving to work late, and an accumulation of greenhouse gas (GHG) emissions from freight and passenger vehicles idling in traffic. Additionally, heavy truck volumes within South-Central Fresno detriments community character for residents, creates unsafe bicyclist and pedestrian conditions, and creates poor air quality conditions for residents living along truck routes.

Therefore, improvements along these critical transportation corridors will result in improved connectivity within South-Central Fresno and the larger Fresno Region.

3 Demographic Conditions

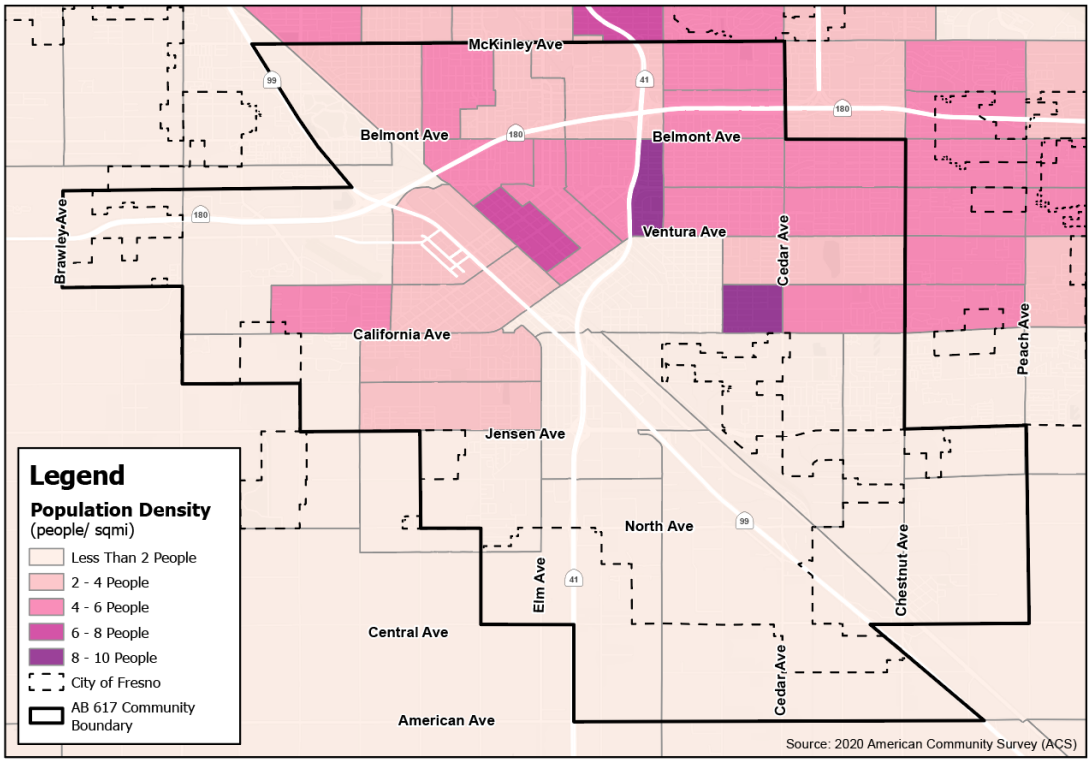
This section provides an overview of demographic characteristics within South-Central Fresno. Demographic information is derived from the 2020 American Community Survey (ACS) and the California Communities Environmental Health Screening Tool (CalEnviroScreen 4.0). Demographic characteristics described in this section include population size, employment, median household income, race, and environmental conditions.

3.1 Population

According to the 2020 census, the AB617 community in South-Central Fresno is home to approximately 122,547 residents. This represents a slight decrease of 1.7% from the 2010 census, which indicated approximately 124,643 residents. This is opposed to an overall growth of 8.7% for the City of Fresno from 494,665 in 2010 to 542,107 in 2020.

This difference in growth rates can be partially explained by the fact that South-Central Fresno is a heavily industrialized area, as reflected in Figure 14 in Section 5.2.3 of this report. This would seem to suggest that growth was robust enough in areas outside of South-Central Fresno to counter that area's decline in population.

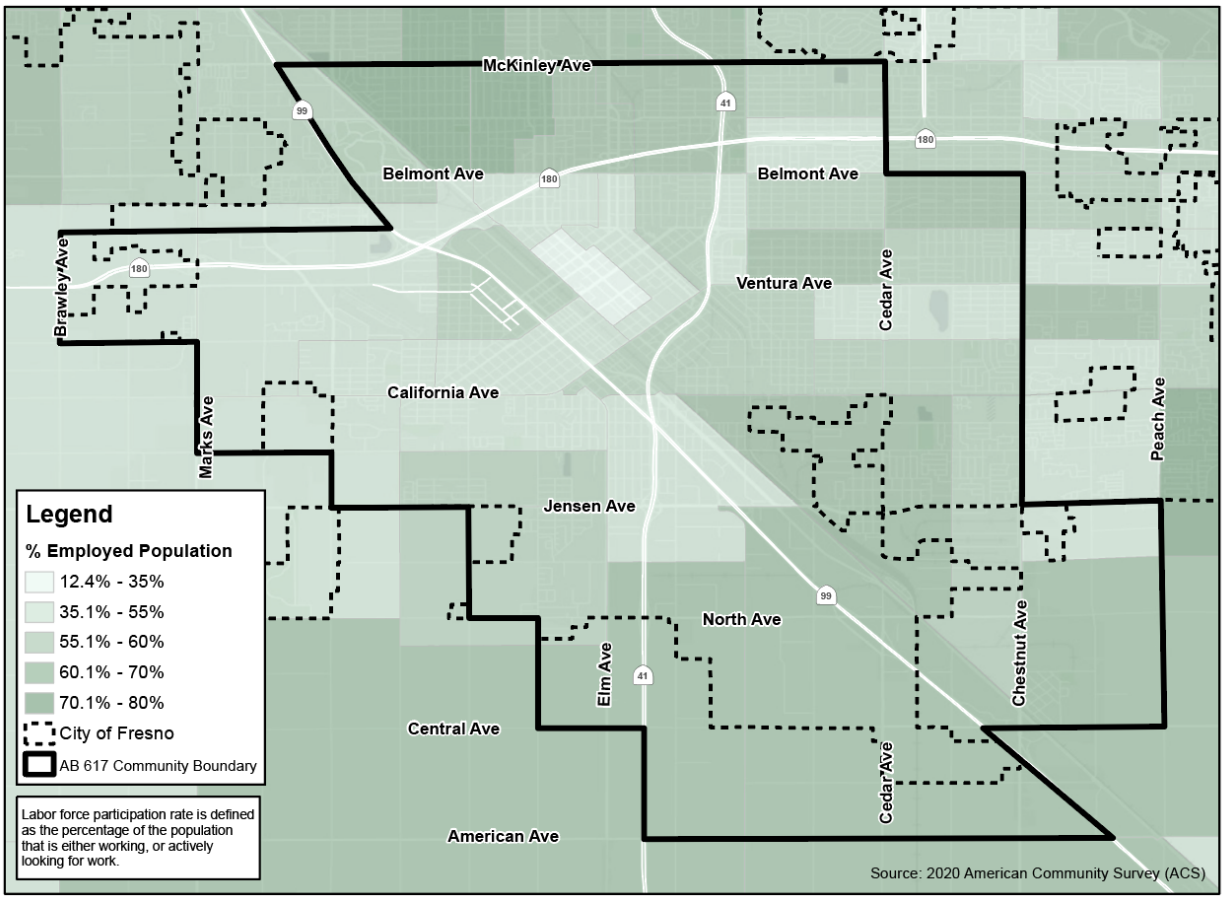
FIGURE 2: POPULATION



3.2 Employment

South-Central Fresno has a lower labor force participation rate of 55.6% than that of the overall city of Fresno at 61.5%. Additionally, it also has a higher unemployment rate of 12.8%, compared with a city-wide average of 9.54%. The nature of occupations for employed persons in South-Central Fresno tends to be primarily involved in service, sales, construction, and transportation industries, where approximately 85.3% of all workers are involved in these industries, as opposed to 68.7% for the city-wide average.

FIGURE 3: EMPLOYMENT

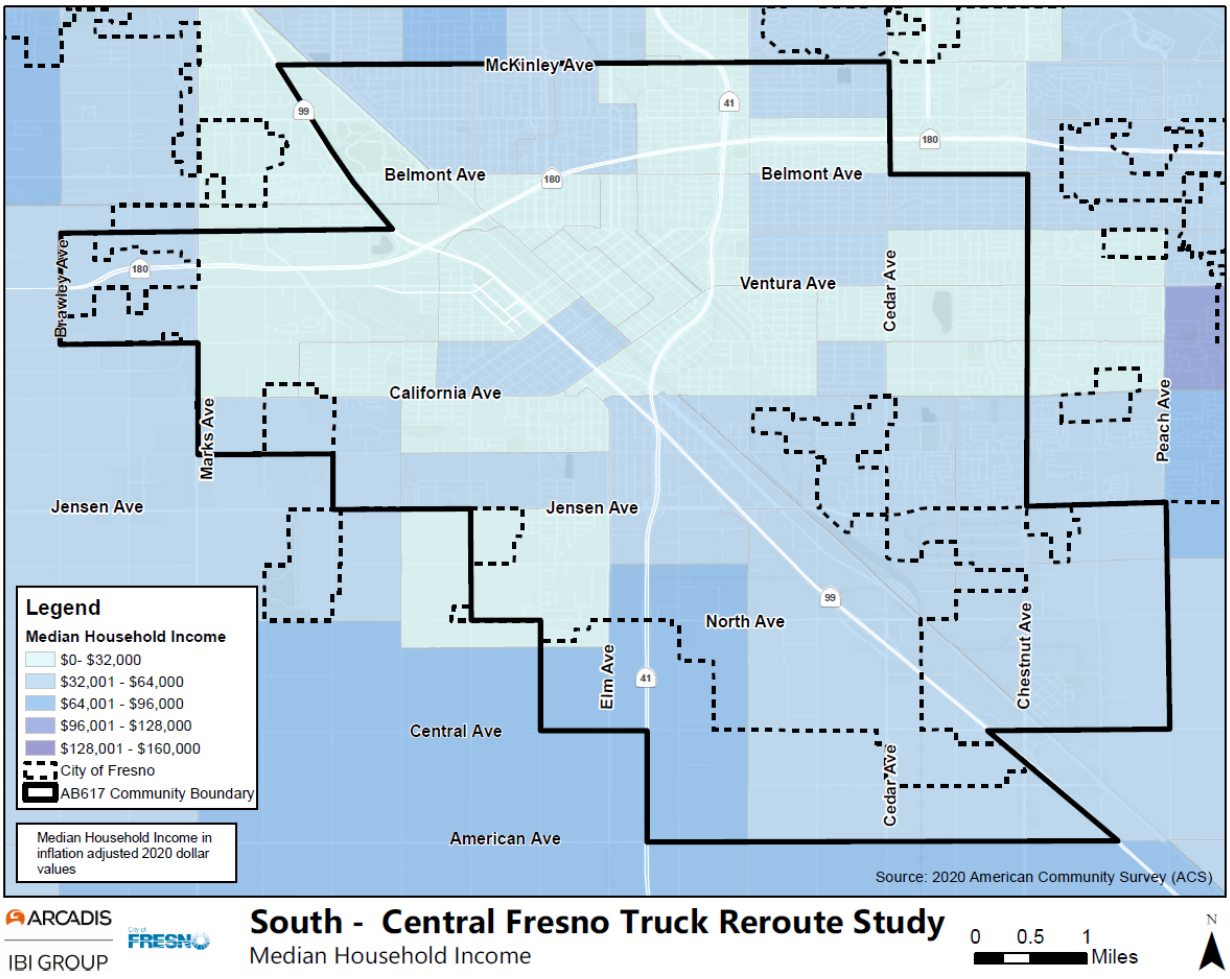


3.3 Socio-Demographic Characteristics

Median Household Income

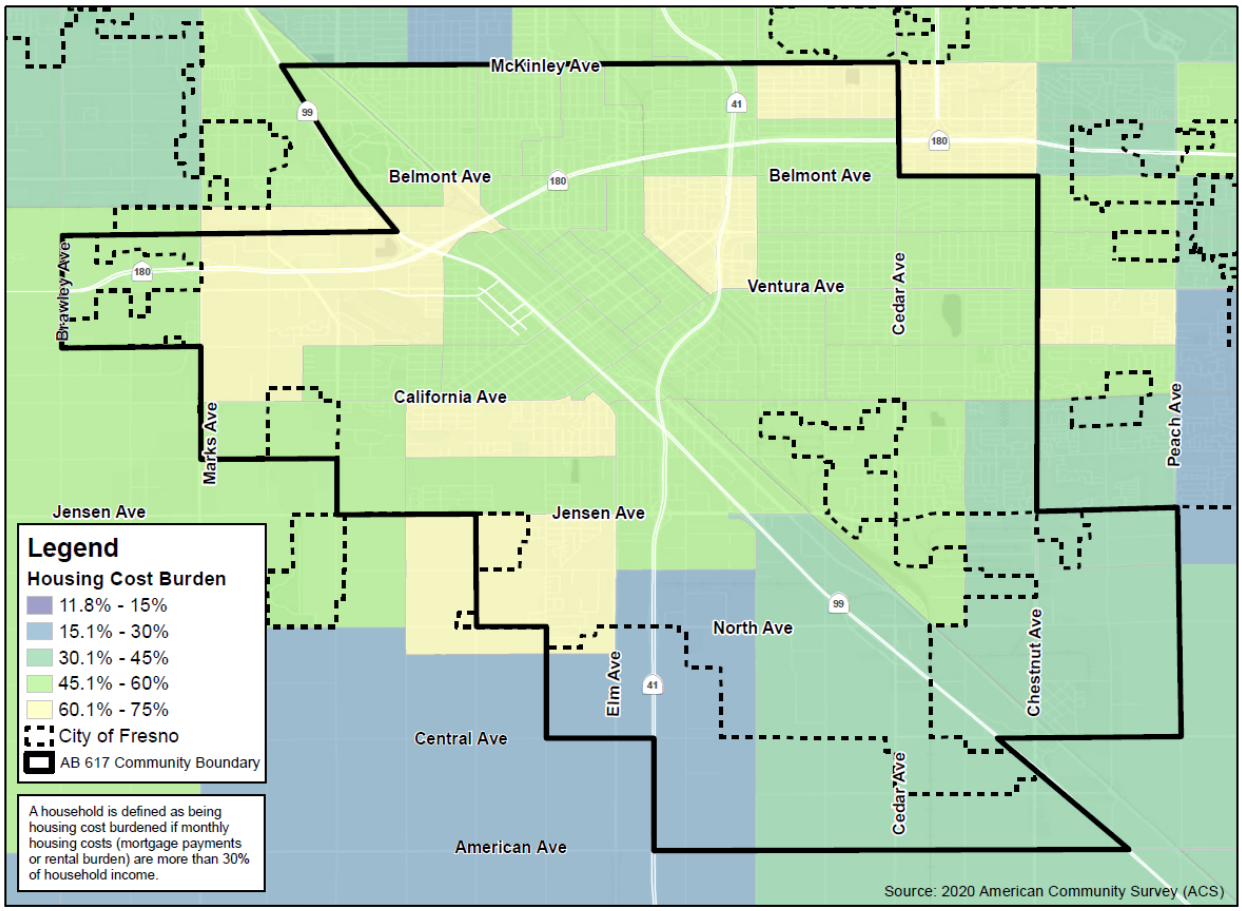
South-Central Fresno has a higher concentration of poverty than other parts of the city. The median household income is approximately $35,000, as compared to a city-wide median of $53,000. The difference in income between housing tenure is even more stark. Renter occupied households in South-Central Fresno had a median household income of $28,300 versus $57,500 for owner-occupied households. The city-wide median household income divide by tenure was $34,350 for renter-occupied households, and $79,500 for owner-occupied households.

FIGURE 4: MEDIAN HOUSEHOLD INCOME



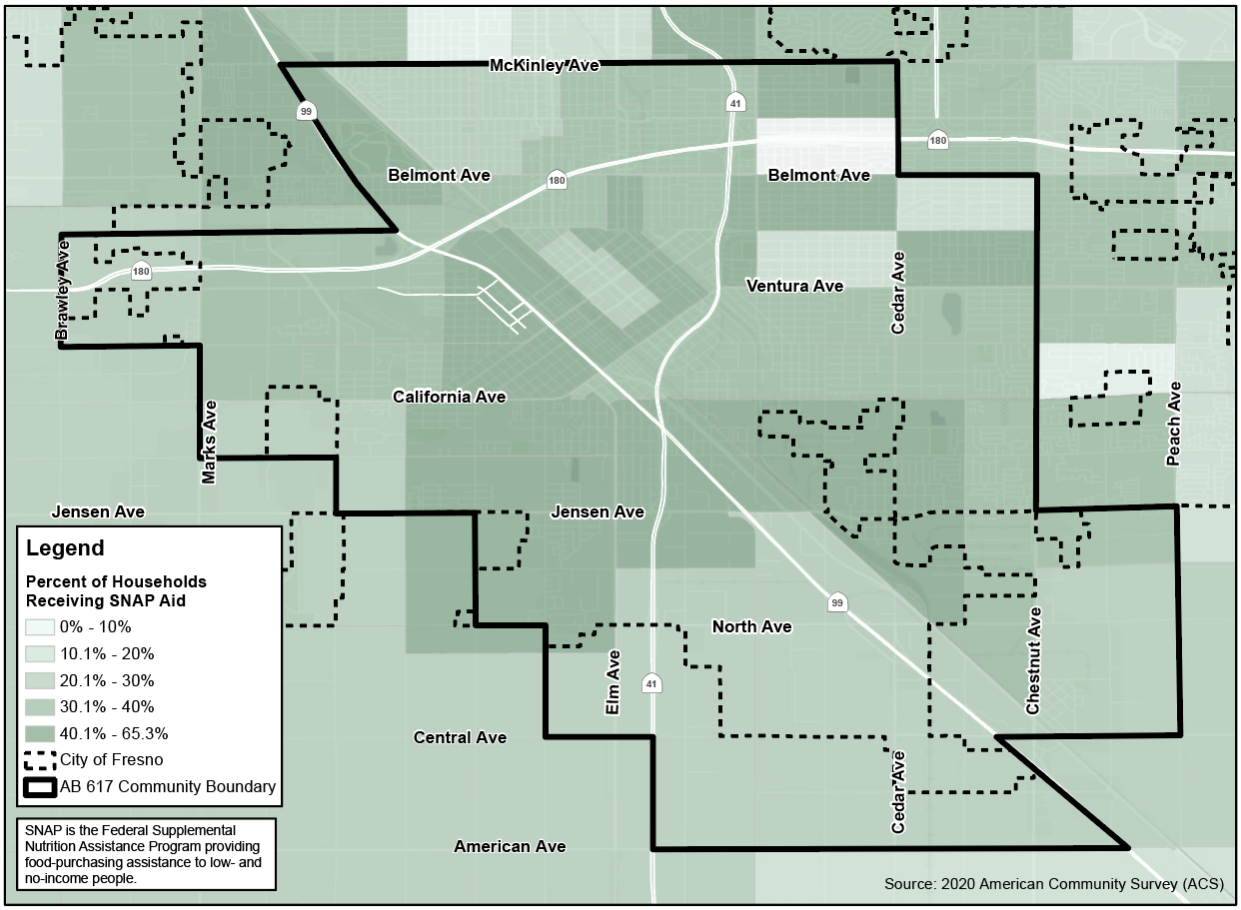
While housing cost burden (percent of income spent on housing – including rent, and mortgage costs) was higher by 10 percentage points for South-Central Fresno (53.2%) as opposed to a city-wide average of 43.2%, the proportion of cost-burdened households spending more than 50% of their income on housing costs was also higher at 29.4%, compared with a city-wide average of 20.9%. Households experiencing housing cost burden are often times most affected by freight traffic and emissions from freight vehicles as they are often located along high traffic volume corridors. Understanding where lower income households are located will help to identify the most ideal locations for improvements recommended in later tasks.

FIGURE 5: HOUSEHOLDS EXPERIENCING HOUSING COST BURDEN



A much higher proportion of households in South-Central Fresno received nutrition assistance through Supplemental Nutrition Assistance Program (SNAP), or food-stamps. Approximately 37.5% of all households received nutrition assistance, as opposed to a city-wide rate of 21.6%. Households receiving assistance through SNAP are associated with those experiencing housing cost burden. The figure below identifies where these households are most prominent.

FIGURE 6: HOUSEHOLDS RECEIVING SNAP AID



Communities of Color

Fresno is the third largest city in the US with a majority Hispanic population, at 50.5%, according to the US Census Bureau (2020). South-Central Fresno has a higher proportion of its residents identifying as Hispanic at 70.7%. Non-Hispanic Asian alone residents were 8.9%, and non-Hispanic Black or African American residents were 8.17% of the population. Figure 7 below reflects the racial composition of residents of the South-Central Fresno Community. Dots reflect the density of residents by race within each census tract. This data is being reflected because negative environmental impacts and poor air quality is historically most prominent in communities of color. Therefore, these are the communities that will benefit most directly from strategies to reduce freight congestion and emissions.

FIGURE 7: RACIAL COMPOSITION

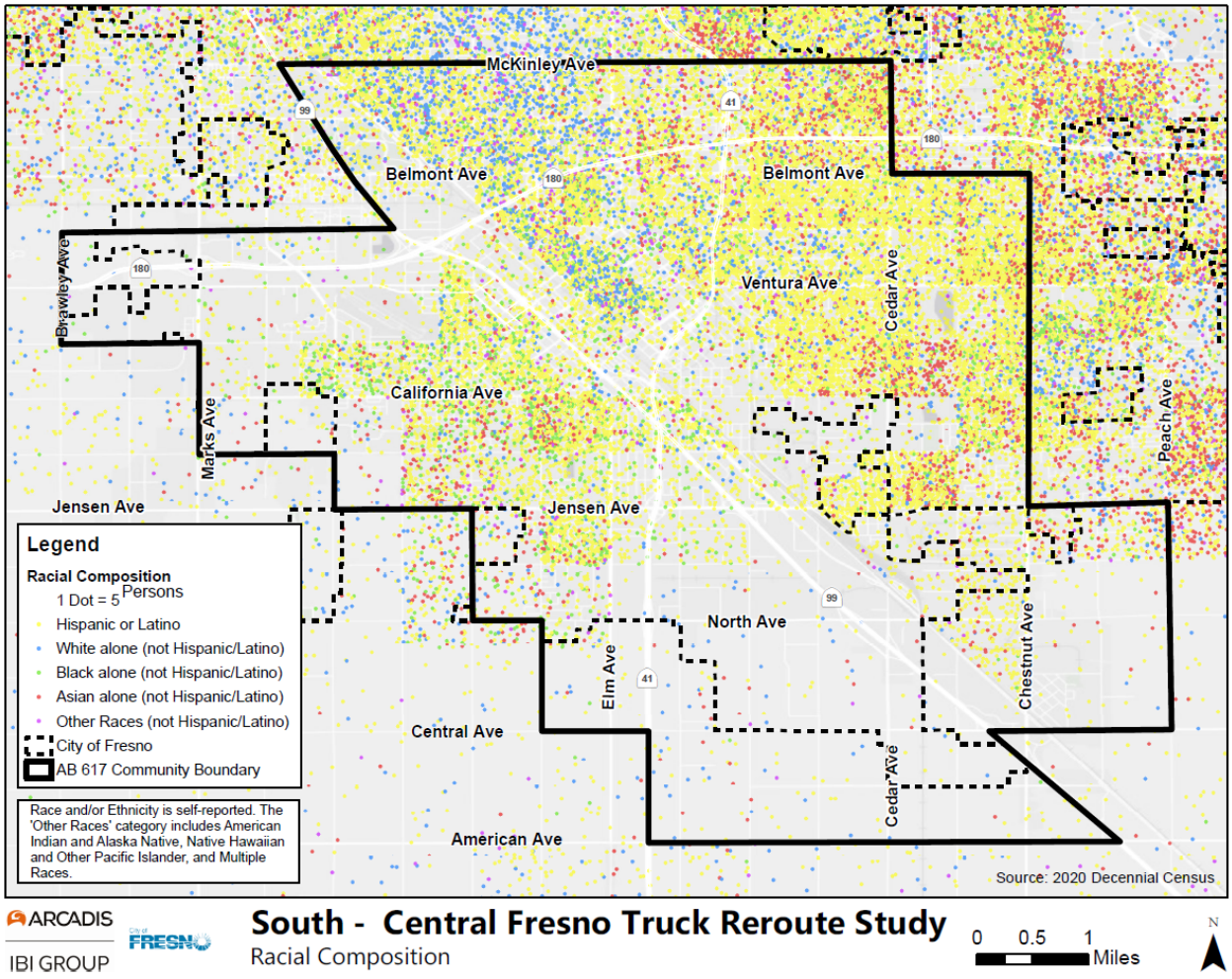
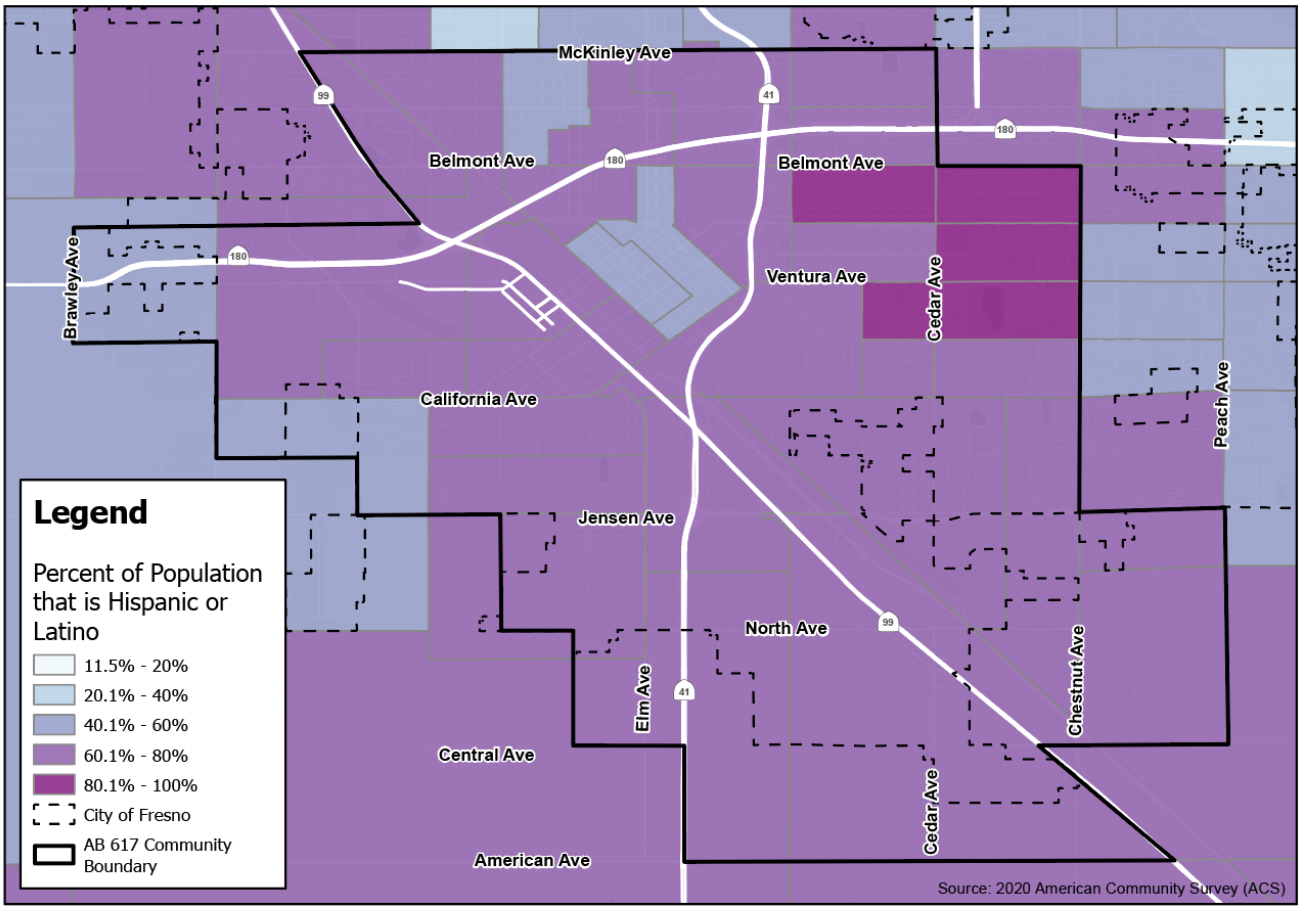
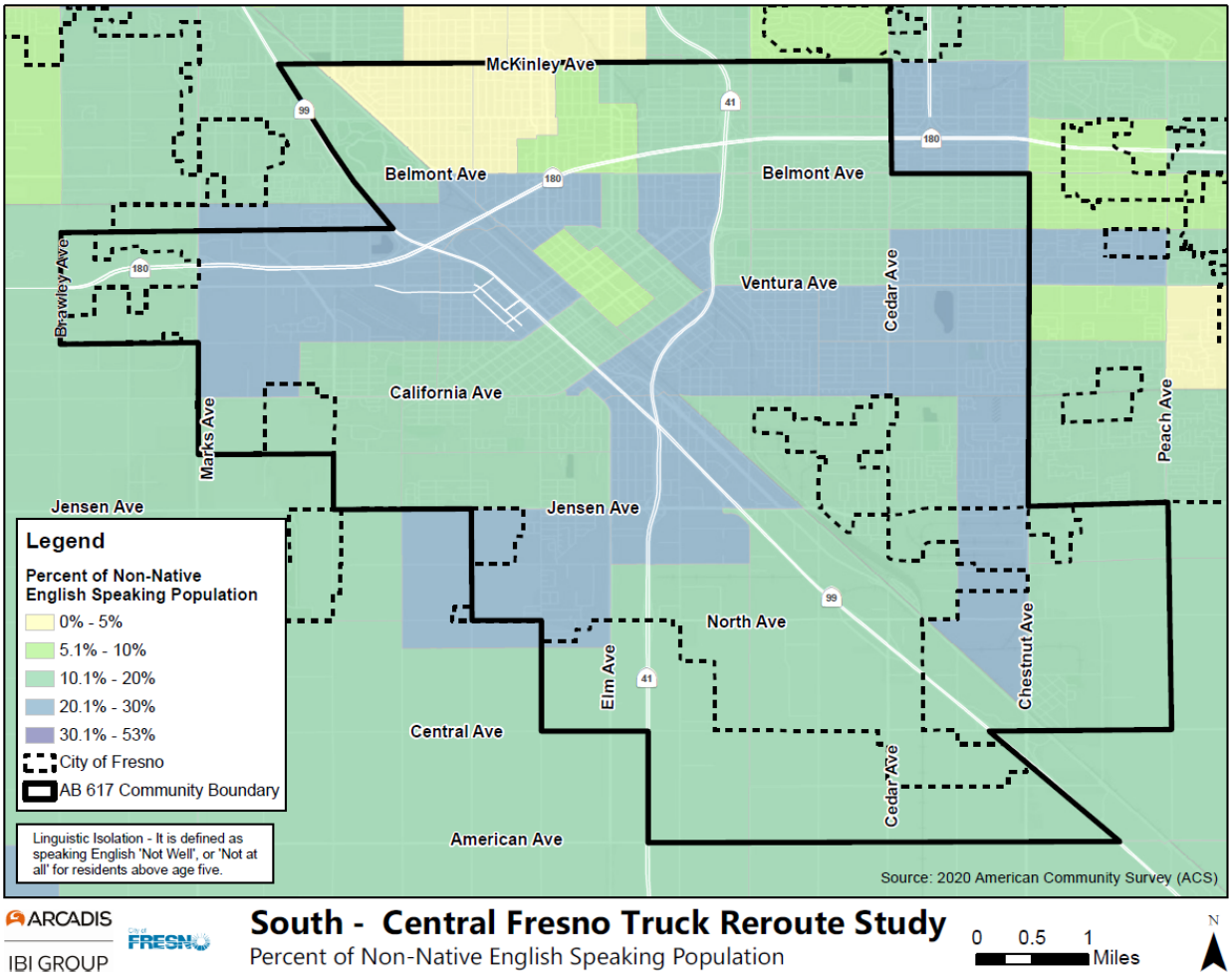


FIGURE 8: PERCENT OF POPULATION IDENTIFYING AS HISPANIC/LATINO



Compared to city-wide rates, South-Central Fresno also displays a relatively higher rate of linguistic isolation. Linguistic isolation here is defined as speaking English not well, or not at all. This data is for residents above the age of 5. 17.8% of South-Central Fresno residents were linguistically isolated. 6.7% spoke only Spanish, and this rate was 12% for residents above the age of 65. Comparatively, across the City of Fresno, 9.43% were linguistically isolated, and the proportion of residents speaking only Spanish was 2.64%. The proportion of residents above 65 speaking only Spanish was at 3.9%. Households experiencing linguistic isolation are reflected below in Figure 9. It is important to understand where there is a high density of households experiencing linguistic isolation when considering approaches to community engagement to ensure that materials are distributed in accessible languages in addition to English.

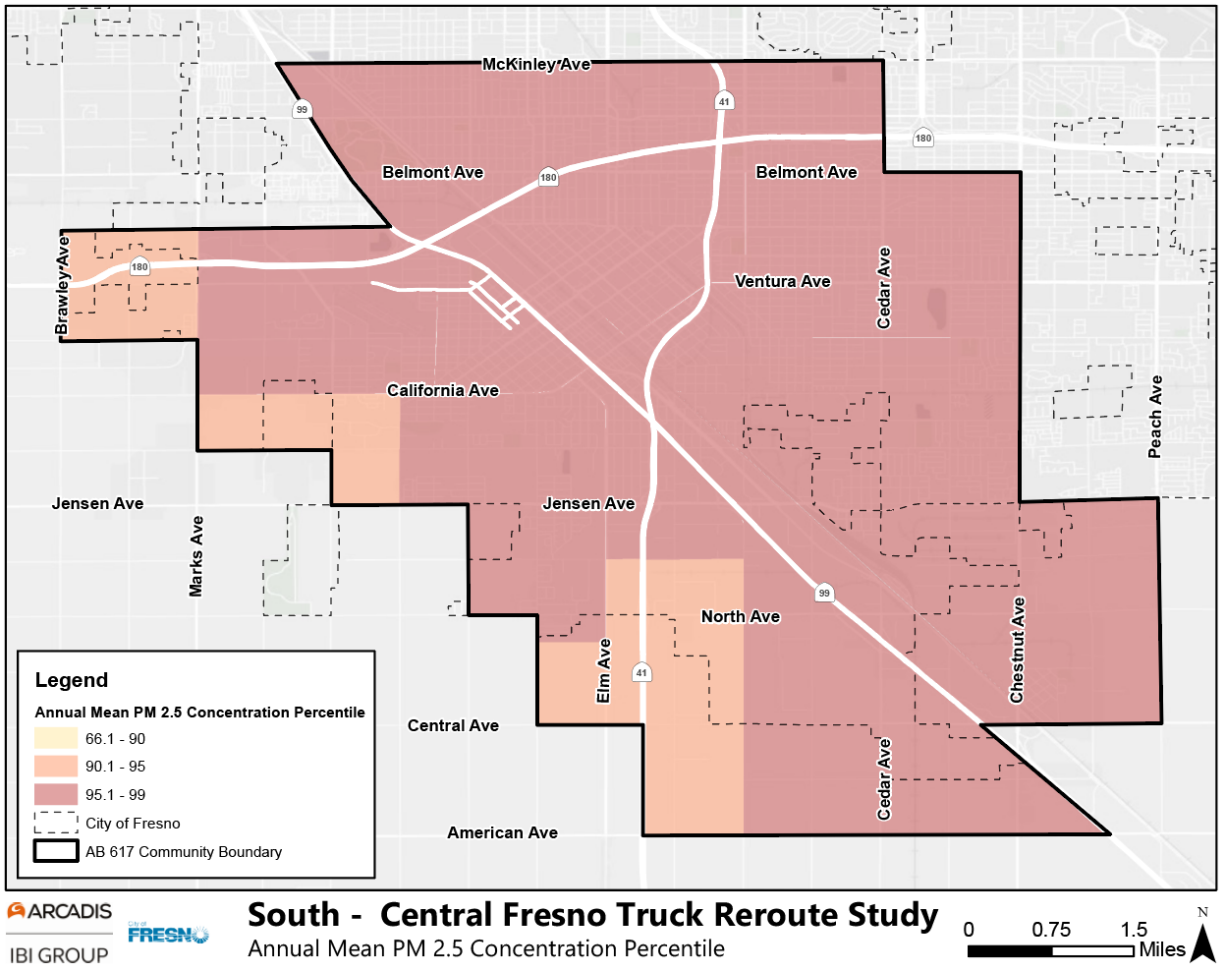
FIGURE 9: PERCENT OF NON-NATIVE ENGLISH-SPEAKING POPULATION



Environmental Conditions

South-Central Fresno's location adjacent to an industrial and warehousing district, along with intersecting freight carrying highways has resulted in an elevated rate of health conditions related to high air particulate matter. Particulate matter is a by-product of emissions from transportation vehicles, including freight vehicles. These particles may also come from industrial processes, wood burning, and other activities involving combustion. Particulate matter (PM) is not a single pollutant, but rather is a mixture of many chemical species. It is a complex mixture of solids and aerosols composed of small droplets of liquid, dry solid fragments, and solid cores with liquid coatings. Fine particulate matter is defined as particles that are 2.5 microns or less in diameter (PM2.5).[1]

FIGURE 10: ANNUAL MEAN PM 2.5 CONCENTRATIONS (PERCENTILE)



Of the six criteria air pollutants (particulate matter, ground-level ozone, nitrogen dioxide, carbon monoxide, sulfur dioxide, and lead), particulate matter and ozone pose the most widespread and significant health threats.[2] The smaller the size of particulate matter, the more deeply the particles

[1] "What is Particulate Matter?". California Air Resources Board (CARB). 2023.
[2] CalEnviroScreen 4.0 Report. Office of Environmental Health Hazard Assessment, 2021.

can penetrate into the lungs. High particulate matter is associated with a high risk of asthma and cardiovascular disease. It should also be noted that census tracts within the South-Central Fresno community and surrounding areas have some of the lowest CalEnviroScreen scores in the state. This indicates that populations living within these tracts are among the most environmentally burdened in the state. Existing PM2.5 concentrations within South-Central Fresno are reflected in Figure 10, according to percentile scores as compared to the rest of the state. Understanding existing PM2.5 concentrations will provide a foundational understanding for developing strategies to reduce emissions.

For example, The AB 617 community has an age-adjusted rate of emergency department visits for asthma of 116 per 10,000, and an age-adjusted rate of emergency department visits for cardiovascular disease of 18.9 per 10,000. City-wide, these figures stand at 89.6 per 10,000, and 12.7 per 10,000 respectively. In the rest of Fresno, outside the AB617 area, rates were even lower at 81.3 per 10,000, and 11.9 per 10,000. While the figures below reflect existing hospitalizations related to asthma and cardiovascular disease, without intervention to reduce congestion and emissions, air quality will not improve, and asthma hospitalizations are likely to increase as a result.

FIGURE 11: ASTHMA HOSPITALIZATIONS

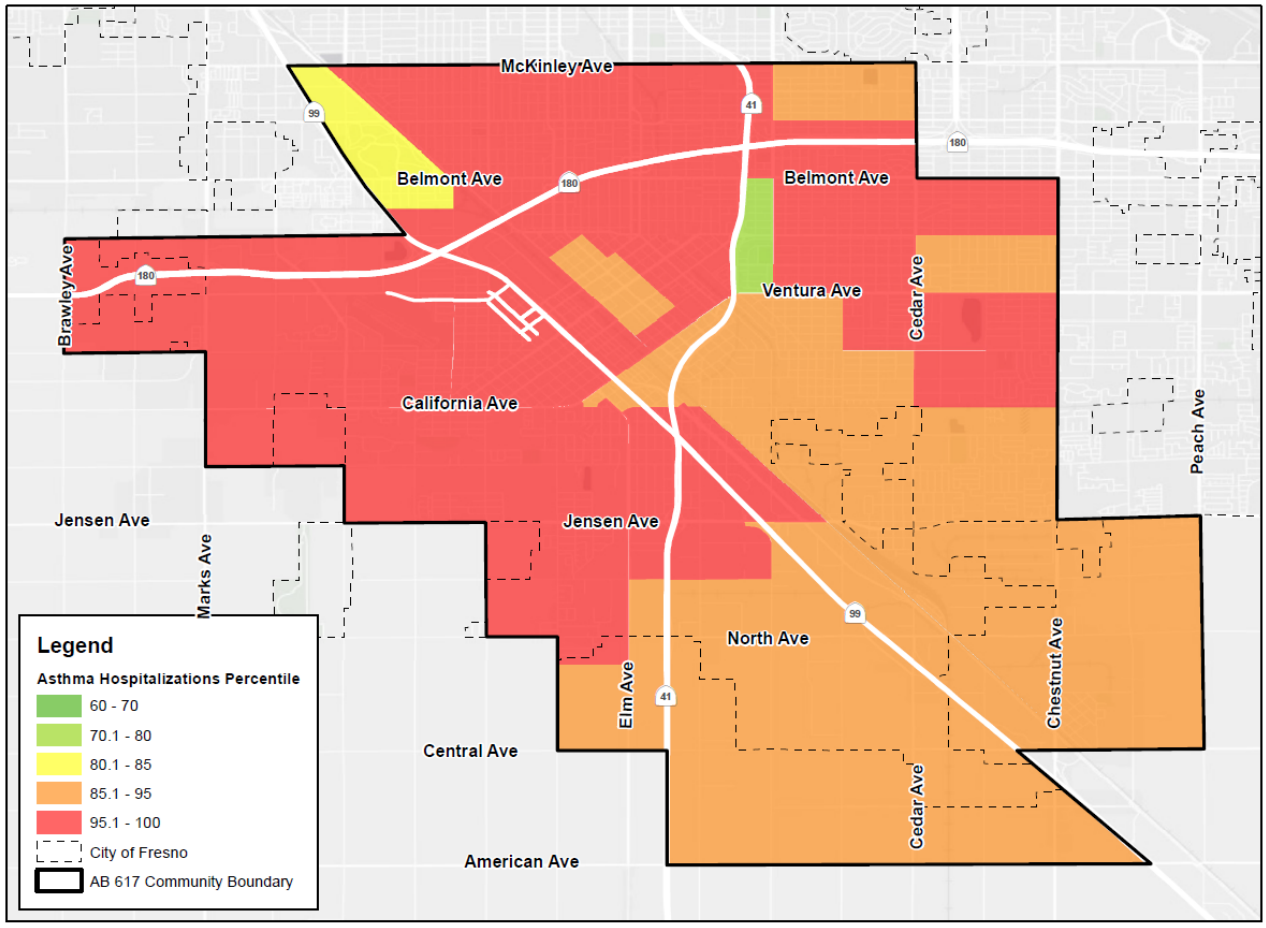
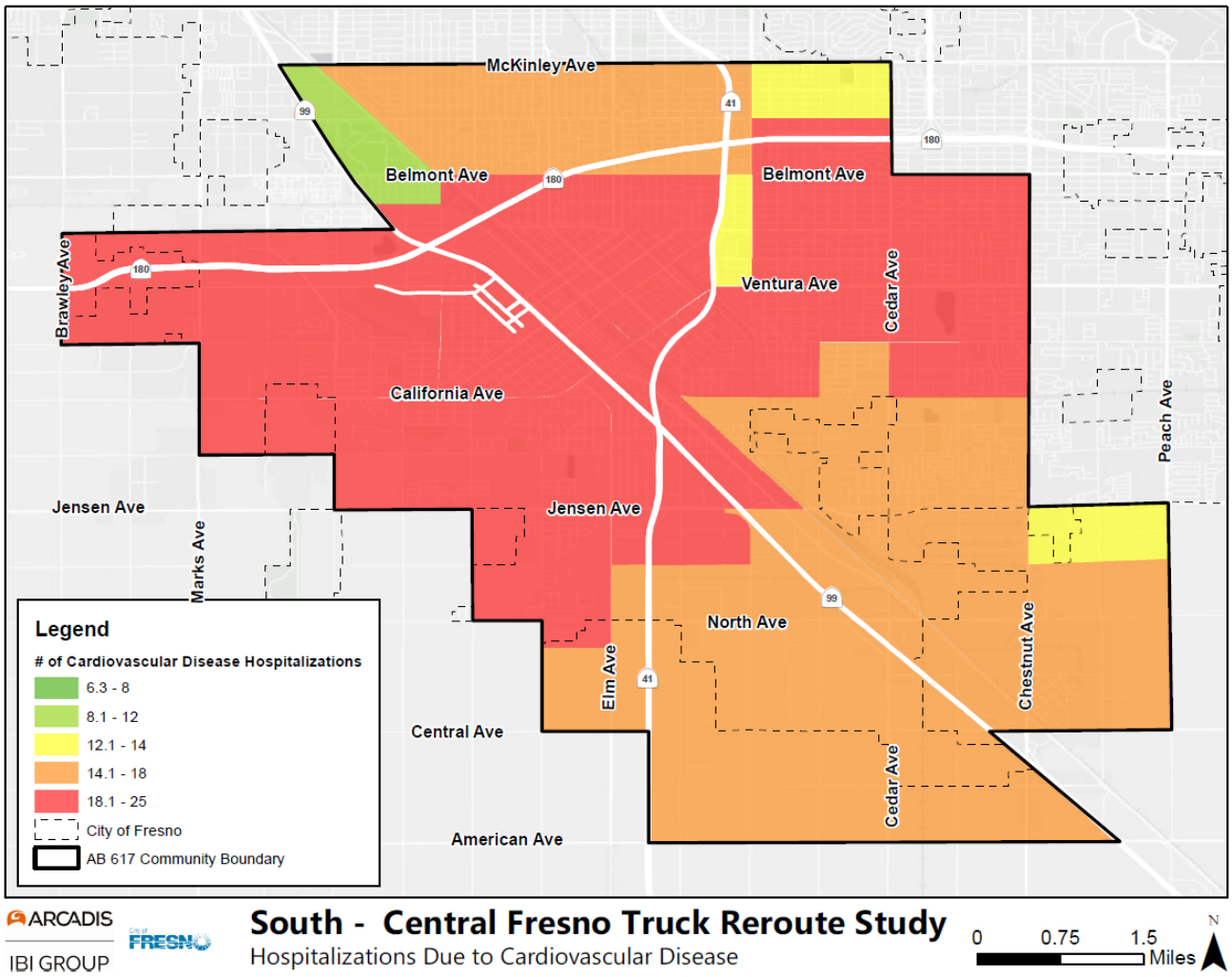


FIGURE 12: HOSPITALIZATIONS DUE TO CARDIOVASCULAR DISEASE



4 Relevant Planning Documents

This section reviews an assortment of planning documents, current projects, and state, county, and city initiatives relevant to the South-Central Fresno Truck Reroute Study. The relevant data, goals, findings, outcomes, community feedback, projects, and improvements from these planning documents will be incorporated in the analysis and development of recommended truck routes and associated improvements in the Truck Study.

4.1 California Department of Transportation: District 6 – Transportation Concept Report: State Route 41 (2017)[i]

The Caltrans District 6 Transportation Concept Report for State Route 41 (SR 41), published in 2017, evaluates the existing conditions and communicates the vision for development in neighborhoods surrounding the corridor. SR 41 runs north-south from Morro Bay to Yosemite National Park, through Fresno and Madera Counties. The report divides SR 41 into a series of 26 segments to provide a granular assessment of the corridor characteristics. Segments 10 through 12 are within the study area are surrounded by a blend of land uses including agricultural, rural and single-family residential, industrial, and cultural. Along with land use type, the report also recognizes that these segments of the corridor are surrounded by diverse demographics including minority and low-income communities.

SR 41 is a Surface Transportation Assistance Act (STAA) Terminal Access (TA) route and is a Tier 3 freight network. This section of SR 41 sees an estimated 4,700 average annual daily truck traffic (AADTT), which accounts for approximately 4% of the estimated 117,500 of SR 41 average annual daily traffic (AADT).

4.2 Fresno Regional Transportation Plan Sustainable Communities Strategy (2018)[ii]

The Fresno Council of Governments (Fresno COG) Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS), adopted in 2018, comprehensively assessed all forms of transportation within Fresno County through 2042. The 2018 RTP reviews existing policy related to Fresno COG's transportation goals, provides a need assessment for transit, and introduces a multimodal transportation network including freight. Given the County's rapidly growing population and changing travel demands, the plan emphasizes the need for enhanced coordination between transportation agencies and land use to establish sustainable communities. The 2018 RTP and Sustainable Communities Strategy aims to (Goal 2-2B) utilize a partnership of federal, State, regional, local, community and industry stakeholders to move freight on a safe, integrated, modern, efficient, and resilient system that contributes to the Fresno Region's economy, jobs, and healthy, livable communities.

4.3 South Fresno State Route 99 Corridor Project (2021)[iii]

The purpose of the project, led by Caltrans, is to reconstruct the existing half-interchanges on SR 99 at American Avenue and North Avenues by expanding them to full interchanges, thereby improving

the traffic operations at these locations. The project is located near the southern border of the City of Fresno in Fresno County on State Route 99 between post miles 12.5 and 19.1. There are two existing half-interchanges at either end of the project location, one at American Avenue and the other at North Avenue. The project proposes to reconstruct the half-interchanges by expanding them to full interchanges and bringing them up to current Caltrans design standards. There are currently two build alternatives under consideration for the current half-interchanges at each location.

The existing pavement on the half-interchanges is aging and highly deteriorated, and the on- and off-ramps are difficult for motorists to navigate and access. Vehicles are forced to use local streets to reach their destinations. The project is needed to enhance safety for freeway queuing and accommodate existing and increasing traffic demands in the project area due to the implementation of planned development on both sides of the highway. Construction is projected the be completed in 2027.

4.4 State Route 99 Rehabilitation from El Dorado Street to Clinton Avenue Project (2023)[iv]

Caltrans is proposing a roadway rehabilitation project on State Route 99 from 0.2 mile south of the El Dorado Street Overcrossing to the Clinton Avenue Overcrossing (post miles 21.2 to 24.4) in Fresno County. The project is proposing to replace the existing pavement with continuously reinforced concrete pavement and build a 46-foot median. The proposed work would also include replacing the El Dorado Street (Number 42 0184), and Olive Avenue (Number 42 0187) overcrossings as well as the Kerman Branch (Number 42 0190) underpass railroad structure, widening the Nielsen Avenue (Number 42 0188) and McKinley Avenue (Number 42 0181) undercrossings, and removing the Teilman Avenue (Number 42 0189) overcrossing. Additionally, the project would include building auxiliary lanes, retaining walls, and pumping plants. Construction is projected to be completed 2029. Lastly, the Caltrans project will remove the on and off-ramps at Belmont Avenue. This will force all traffic (including trucks) that previously used the Belmont Highway 99 ramps to go elsewhere. This will result in increased traffic on corridors that may currently not show heavy traffic while conversely heavy corridors such as Belmont may see reduced traffic as a result.

4.5 Fresno/Madera Origin-Destination Study (2016)[v]

The Fresno COG and Madera County Transportation Commission's Fresno/Madera Origin-Destination Study, published in 2016, sought to gain a better understanding of transportation movements between Fresno and Madera Counties along SR 41 and SR 99. The study analyzed the origin and destination traffic movements between the two counties, with specific attention to where residents work and shop. The information gathered through this report was used to better inform decision-making bodies in their efforts to improve regional planning practices in alignment with the SCS. The study utilized a number of data collection techniques to ensure the highest accuracy. These techniques were then deployed in several study locations at different times throughout the day throughout the study area, including along SR 41 at the Fresno/Madera County Line and at SR 41 north of SR 180 in Fresno County. The study observed 147, 834 daily vehicle trips at the "SR 41

north of SR 180" study location. A license plate analysis concluded that 13% of screened plates were trucks.

4.6 Fresno County General Plan Transportation and Circulation Element (2000)[vi]

The Fresno County General Plan, adopted in 2000, details the County's long-term plans for economic development, land use, transportation, public services, conservation, public health, and housing. The General Plan analyzed the existing conditions of the County and provides a framework for projecting future demands. The Transportation and Circulation Element of the plan detailed the existing conditions, guidelines, and goals of the countywide transportation system. Within the Element, the County explained its intention to coordinate a complex highway transportation system serving cars, heavy trucks, active modes, and more. Policy TR-A.14 states that the County shall work with the cities of Fresno County in establishing a system of designated truck routes through urban areas. The City of Fresno truck route map was last updated in 2005 and is included in Section 5.2.1 of this report.

4.7 City of Fresno General Plan Chapter 4 Mobility and Transportation (2014)[vii]

The City of Fresno's General Plan, adopted in 2014, details the City's long-term vision for development. Since the City's previous general plan was adopted in 2002, Fresno experienced significant demographic and urban transformation. The Plan identifies key challenges facing the City, including concentrated poverty, neglected neighborhoods, poor air quality, and sprawled development. Additionally, the Plan identifies several long-term transportation goals for the City including the provision of truck traffic. The City of Fresno's General Plan supports the intentions of this study. The transportation goals include MT-11-c Truck Route Designations: plan and designate truck routes within the metro area to facilitate goods production while minimizing conflicts; and MT-11-d Appropriate Truck Route Roadway Design: "incorporate trucks in design of routes designated for truck movement and ensure truck routes meet federal standards."

4.8 City of Fresno Downtown Neighborhoods Community Plan (2016)[viii]

The City of Fresno Downtown Neighborhoods Community Plan, adopted in 2016, provides an analysis of the study neighborhoods key deficits and a plan for revitalization. The plan identifies several strategies for revitalizing these neighborhoods including establishing Downtown as the heart of Fresno, reviving each community's unique identity, establishing mixed-use neighborhood centers at key intersections, improving the quality of the Community Plan Area's corridors, and creating a framework for improving neighborhoods in an effort to attract private investment.

The document details specific approaches for each community's role in achieving the Plan's overarching goals, with a focus for freight transportation as well. The Plan calls to facilitate sustainable, effective and safe movement of goods and commercial vehicles to support essential economic functions while minimizing their negative effects on residents, visitors, and businesses (Policy 3.8). The Plan also calls to minimize exposure to hazardous pollution to limit air, soil, and

water contaminants whose exposure can lead to health effects, including respiratory conditions by locating truck routes away from residential streets and sensitive uses (Policy 7.7). Additionally, the public health impacts demonstrated in section 3 of this report justifies the need to address the current truck route system. Project T-A.14 calls for a Truck Enforcement Program to reduce conflicts and nuisances caused by trucks by preventing trucks driving on non-designated truck routes.

4.9 Southwest Fresno Specific Plan (2017)[ix]

The City of Fresno's Southwest Fresno Specific Plan developed policies, programs, regulations, and guidelines extensively tailored to the needs of the Southwest Fresno community and stakeholders. The Plan provides guiding principles, development criteria, and implementation strategies to coordinate private development and public improvements given the unique opportunities and characteristics of Southwest Fresno.

The Plan identified Existing, Planned, and Recommended Truck Routes within the study area. In general, the Plan recommends removing existing truck routes on portions of California Avenue, Church Avenue, Jensen Avenue, and North Avenue, and the addition of truck routes on Central Avenue and Marks Avenue. Goal T-10 aims to create a healthy environment for Southwest Fresno residents by intentionally routing truck traffic away from sensitive areas such as residential areas, parks, and schools. The Truck Reroute Study will take a close look at the proposed truck routes in the Southwest Fresno Specific Plan for adoption in the Truck Reroute Study, with an eye advancing Goal T-10 to create a healthy environment for Southwest Fresno residents by rerouting truck traffic away from sensitive receptors.

4.10 Fulton Corridor Specific Plan (2016)[x]

The City of Fresno Fulton Corridor Specific Plan is the community's tool for guiding the future development of Downtown Fresno. The Fulton Corridor Specific Plan, adopted in 2016, provides a comprehensive guide for future land use, development, and transportation in Downtown Fresno, particularly in the area surrounding Fulton Street. The study area for the Fulton Corridor Specific Plan is located in the southern portion of the City of Fresno, bounded by Divisadero Street to the north, SR 41 to the south, N Street to the east, and SR 99 to the west.

The Plan introduced design principles which will facilitate the revitalization of this area including increasing infill development, preserving the area's distinct character, enhancing the quality of the public realm, creating an interconnected street system, increasing housing variety, creating multi-modal streets, and utilizing smart building and site design strategies. The plan called for Policy 9-2-3 b. to design new or retrofitted streets to design criteria that accommodates trailer-trucks.

4.11 North Avenue Industrial Triangle Specific Plan (1973)[xi]

The City of Fresno North Avenue Industrial Triangle Specific Plan was adopted in 1973 as a multiphase plan to develop lands of Jensen Avenue and Central Canal between Hwy 41 + 99 into an industrial district.

4.12 Fresno COG Reverse Triangle Transportation Area Plan (2021)[xii]

The Fresno COG Reverse Triangle Transportation Area Plan (RTTAP) highlights transportation improvement recommendations for the area. The RTTAP Study Area includes transportation facilities between and connecting to the State Route (SR) 99 and SR 41 corridors from Church Avenue to the north and Adams Avenue to the south. Although the RTTAP Study Area is predominately industrial in character, ensuring safe and accessible multimodal connections to existing residential communities and local schools is an essential component of the plan, especially considering the intensity of truck travel within the area. The RTTAP therefore identifies transportation infrastructure improvements and mobility service programs and strategies to ensure that future anticipated growth within the Study Area will provide opportunities to improve connectivity, accessibility, and quality of life of the existing communities.

The plan discusses truck re-routing options, which lead to the development of this City of Fresno AB 617 South-Central Fresno Community Truck Reroute Study. During development of the RTTAP, the community developed a Community Emissions Reduction Plan (CERP) that represents a ground-breaking effort by residents, advocates, and businesses to establish quantifiable emission reduction targets and advance regulatory, enforcement and incentive strategies to reduce exposure to hazardous air emissions by sensitive receptors in several South Fresno Neighborhoods.

4.13 South Central Specific Plan (SCSP) (In Progress)[xiii]

The City of Fresno South-Central Specific Plan is a plan underway. The overarching goal of the plan aims to maximize economic benefit and job growth of residents, while reducing impacts on the environment and improving quality of life. The Truck Reroute Study will work in coordination with COF and PD staff and stakeholders in a parallel effort to ensure that the SCSP and Truck Reroute Study are cohesive and complementary. Once completed, these studies should be aligned and not in conflict with one another.

4.14 AB 617 Community Emissions Reduction Program: South Central Fresno (2019)[xiv]

Assembly Bill (AB) 617, signed into law by the State of California in July 2017, initiated a state-wide effort to monitor and reduce air pollution, and improve public health, in communities that experience disproportionate burdens from exposure to air pollutants through new community-focused and community-driven actions. The community of South-Central Fresno was prioritized by the San Joaquin Valley Air Pollution Control District and subsequently selected by the California Air Resources Board (CARB) as one of two first-year communities in the San Joaquin Valley to receive clean air resources newly available under AB 617. AB 617 provides mechanisms and resources to implement community air monitoring plans (CAMPs); to develop, implement, and track community emissions reduction programs (CERPs); to improve availability of data and other technical information; and to invest substantial staffing resources and incentive funding in the community through enforcement, regulatory development, interagency collaboration, and voluntary incentive funding measures. Importantly, these measures are guided by advice and knowledge of local community members, through their input and involvement on Community Steering Committees (CSC) for each AB 617-selected community.

The South-Central Fresno CERP, which was adopted by the Valley Air District Governing Board in 2019 and approved by CARB in 2021, was developed with the AB 617 CSC, including residents, local business representatives, community-based organizations, local agencies, and state support agencies. The CERP contains both proven and innovative strategies, and significant resources, in an effort to improve community health by reducing exposure to air pollutants in South-Central Fresno.

One important measure in the South-Central Fresno CERP is HD.11 (Heavy Duty Truck Rerouting), which commits the District to work with the City of Fresno and pursue the development and execution of a Truck Reroute Study in the AB 617 South-Central Fresno Community.

The CERP identified that PM2.5 pollution in the community can be attributed mainly to Cooking Including Charbroiling (31.4%), Road Dust (15.7%), Light & Medium-duty Vehicles (14.5%), and Off-Road Equipment (8.1%). In addition, main sources of NOx emissions are from Heavy Duty Diesel Trucks (31.8%), Other On-Road Mobile (27.2%), and Off-Road Equipment (12.5%). From the technical analysis and identification of sensitive receptors, the top source categories of concern in South-Central Fresno include:

- Heavy Duty Trucks
- High Polluting & Idling Cars
- Residential Wood Burning
- Land-Use/ Industrial Development
- Illegal Burning
- Industrial Processes

The CERP anticipates investing $44.3 million in emission reductions incentives for cleaner cars and trucks, and a variety of clean air projects in the South-Central Fresno area. Additional measures have been developed to reduce exposure to air pollution for sensitive receptors. The CERP measures are projected to achieve approximately 278 tons of PM2.5 reductions and 1,662 tons of NOx reductions in the community, mainly stemming from diesel particulate matter.

4.15 Ventura / Kings Canyon Corridor Complete Streets Plan (2015)[xv]

The Fresno COG Ventura/Kings Canyon Corridor Complete Streets Plan identifies and addresses issues and concerns affecting the corridor to anticipate the need for and impacts of new public facilities. In 2035, Ventura/Kings Canyon Corridor between First Street and Peach Avenue is projected to see between 1,580 to 2,290 AM peak hour two-way traffic volumes, and between 2,310 to 3,340 PM peak hour two-way traffic volumes. Along this corridor, Ventura/Kings Canyon Corridor at Cedar Avenue, Maple Avenue, Chestnut Avenue, Winery Avenue, Willow Avenue, and Peach Avenue are all projected to experience E or F levels of service for the PM peak hour in horizon year 2035. Although LOS is used as a performance metric within this planning document, it should be noted that the City of Fresno no longer uses LOS as a metric for corridor performance.

4.16 California Avenue Complete Streets Project (2021)[xvi]

The California Avenue Complete Streets Project is a plan set created by the City of Fresno Department of Public Works of the improvements being implemented along the E. California Avenue Corridor between S. Fruit Avenue & Mayor Avenue, as an extension of the City's Active Transportation Plan.

4.17 Systematic Local Roadway Safety Plan (2020)[xvii]

The Caltrans Systematic Local Roadway Safety Plan analyzes the transportation safety data of the City of Fresno and identifies roadway improvements to reduce collision risk in the city. The Safety Plan combines the requirements of the Caltrans Systematic Safety Analysis Report (SSAR) Program and the City's local roadway Safety Plan. The Plan identified Jensen Avenue at West Avenue as a Tier I Priority Location for its Crash Severity Score, and Jensen Avenue from Walnut Avenue to S Clara Avenue as a Tier I Segment for bicycle and pedestrian crash locations. Countermeasures were identified to address systemic collision trends.

4.18 Trail Network Expansion Feasibility Plan (2020)[xviii]

The City of Fresno Trail Network Expansion Feasibility Plan builds on the City's efforts to develop the Class I bikeway (trails) network proposed in the 2017 Fresno Active Transportation Plan. The plan utilized the City's Active Transportation Prioritization Tool, Caltrans' Smart Mobility Framework (2010), as well as the CA 2040 vehicle emission reduction goal. Four of the five corridors prioritized for trail network expansion are in southwest Fresno within the study area. These include:

- Kearney Boulevard from West Avenue to Fresno Street
- Merced Street from B Street to Thorne Avenue; Thorne Avenue from Merced Street to California Avenue
- California Avenue from Fanning Ditch to Walnut Avenue; Walnut Avenue from California Avenue to Church Avenue; Belgravia Avenue to Hinton Park
- Church and Jensen Avenues, both from MLK Jr Boulevard to Elm Avenue.

4.19 City of Fresno Active Transportation Plan (2017)[xix]

The City of Fresno's Active Transportation Plan (ATP) aims to equitably improve pedestrian and bike safety, increase walking and bicycling trips, and fill key gaps in Fresno's walking and bicycling networks. The Plan calls for a build-out generally consisting of Class II Bike Lanes on all major arterials in the AB 617 study area, with Class I Bike Paths on Jensen Avenue, North Avenue, Marks Avenue, and portions of Walnut Avenue, Kearney Boulevard, among others. The corridor connecting Tulare Street, California Avenue, Church Road, and the Church Road bikeway extension to West Avenue was identified as a priority bikeway. Southeast of Downtown, Church Avenue from Maple Avenue to Peach Avenue was also identified as a priority bikeway. All build-out priority projects will be incorporated within the Truck Reroute Study.

4.20 Americans with Disabilities Act Transition Plans (2021)[xx]

The Americans with Disabilities Act is a civil rights law for people with disabilities. The City of Fresno, in accordance with 28 C.F.R. § 35.150(d) developed Transition Plans highlighting the steps needed to identify physical barriers to accessibility and develop barrier removal solutions that will facilitate the opportunity of access to all individuals. The Annual Transitions Plans Addendum lists the budgeted facilities projects for FY 21. FY 22 projects to be completed include projects at Hinton Park, Frank H. Ball Park, Tupman Park, Saroyan Theatre, Santa Fe Amtrak Station, and the Sunset Community Center.

4.21 Program Environmental Impact Report for the City of Fresno General Plan Amendment (2021)[xxi]

The City of Fresno prepared a Program Environmental Impact Report for the continued implementation of the approved Fresno General Plan, text changes to the Mobility and Transportation Element related to Vehicle Miles Traveled (VMT) analysis, and an update to the Greenhouse Gas Reduction Plan. This update, consistent with Section 15168 of the California Environmental Quality Act (CEQA) Guidelines, streamlines the implementation of the General Plan's programs and projects by supporting them with updated environmental analysis, regulatory framework, and mitigation measures, pursuant to CEQA.

4.22 Tower District Design Guidelines (2004)[xxii]

The City of Fresno Tower District Design Guidelines provides a comprehensive structure for managing and preserving the historic resources and neighborhoods in the district. The Tower District is generally located in Fresno north of SR 180 and SR 99, and west of SR 41.

4.23 Producer's Dairy EIR (2020)[xxiii]

The Producer's Dairy Environmental Impact Report (EIR) is a proposed project that includes the construction and operation of a new truck parking facility at 315/339 N. H Street. The document addresses the truck movement project area as well as closures and relinquishment of H Street between Belmont Avenue & Palm Avenue. As such, traffic will be rerouted onto other routes. The primary traffic reroute options will be northbound H Street north of Palm Avenue, southbound H Street south of Belmont Avenue, and southbound Weber Street south of Thomas Avenue.

4.24 Fresno County Regional Safety Plan and Local Road Safety Plan (2021)[xxiv]

The Fresno County Regional Safety Plan and Local Road Safety Plan identifies transportation safety barriers in Fresno County with recommended solutions. The Local Road Safety Plan addresses barriers in nine jurisdictions in Fresno County, not including the City of Fresno. The Regional Safety Plan addresses barriers in all other unincorporated areas throughout Fresno County. The Marks Avenue intersection with Jensen Avenue as well as the Oliver Avenue and Maple Avenue intersection were recommended specific treatments based on their severity score.

4.25 Fresno County Regional Active Transportation Plan (2018)[xxv]

The Fresno County ATP identifies needed bicycle and pedestrian projects and help agencies qualify for new funds to implement projects. This plan references the City of Fresno Active Transportation Plan for all active transportation strategies in the City of Fresno. Chapter 6 of the Fresno County Regional Active Transportation Plan highlights necessary improvements to county islands within Fresno and the Truck Reroute Study area. The plan highlights Class II bike lanes and new sidewalks on Valentine Avenue from Kearney Boulevard to Muscat Avenue. Newly constructed sidewalks are also proposed on North Avenue from Clara Avenue to Cherry Avenue and Cherry Avenue from North Avenue to Central Avenue.

4.26 Fresno-Clovis Metropolitan Area Class IV Separated Bikeway Feasibility Study (2017)[xxvi]

The Fresno COG initiated a project to determine the feasibility of constructing separated bikeways within Fresno and Clovis; and possibly elsewhere in the County. The feasibility study reviewed design guidance and implementation needs, evaluated existing corridors in the Fresno-Clovis area, and identified key locations where separated bikeways will likely provide the greatest benefit or return on investment.

The study determined that Class IV bike segments are most feasible within the AB617 study area on California Avenue from West Avenue to B Street, on Church Avenue from MLK Jr Boulevard to Chestnut Avenue, and from Chestnut Avenue from Clovis to Jensen Avenue. In Downtown, Tulare Street was also identified as a feasible candidate, along with Belmont Avenue from Hughes Avenue to Blackstone Avenue just north of Downtown. In the Truck Reroute Study area, only Belmont Avenue was selected a high priority segment.

4.27 California High-Speed Rail System Segment/Phase 1 (2023)[xxvii]

The California High-Speed Rail Authority (CHSR Authority), is responsible for planning, designing, building and operation of the nation's first high-speed rail system. California high-speed rail will connect the mega-regions of the state through Fresno, contribute to economic development and a cleaner environment, create jobs and preserve agricultural and protected lands.

The Phase 1 system will connect San Francisco to the Los Angeles basin via the Central Valley. The proposed Fresno Station is located in the downtown area on H Street between Fresno Street and Tulare Street. The rail alignment through Fresno consists of an alignment between G Street and H Street, and consists of elevated, at-grade, and underground segments.

Throughout 2021 and 2022, the Authority worked in collaboration with AmeriCorps CivicSpark to gather community input regarding early site activation projects that could be implemented around the future Fresno Station area.

Currently, the rail segment between Madera and Kings/Tulare including Fresno is under construction. The timeline shows that between 2030 and 2033, high-speed passenger service between Merced, Fresno, and Bakersfield can begin. In June 2023, the Authority received $20 million from the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) program

for the Fresno High-Speed Rail Station Historic Depot Renovation and Plaza Activation Project. Projects associated with this construction phase of the CHSR within South-Central Fresno include the development of the Fresno Station District in Downtown Fresno and bridges over the rail corridor at the McKinley and Belmont Avenues overpasses.

4.28 UC Merced Air Pollution Health Impact Assessment (2023)[xxviii]

In parallel to this study, the University of California at Merced Department of Public Health is conducting a study assessing the impacts of air pollution among Fresno residents. The study is funded by the San Joaquin Valley Air Pollution Control District and utilizes two approaches: 1) linking large population-based health datasets to air pollution data to estimate the impacts of air pollution on health across the lifespan; and 2) conducting a community survey to explore residents' knowledge, perception, attitude, needs, and health outcomes related to air pollution exposures.

The study is currently underway. The South-Central Fresno Truck Reroute Study intends to incorporate any available findings regarding community health impacts into the evaluation of particular needs and development of project recommendations.

5 Truck Mobility Conditions

This section describes the truck mobility conditions within the South-Central Fresno study area. This includes federal, state, and local regulatory framework, description of the roadway network, traffic volumes, VMT, and travel patterns.

5.1 Truck Regulations & Policy

Truck travel is regulated by several entities at different governmental levels. The following section presents federal, state, and regional/local regulations and policy as they relate to the South-Central Fresno area.

5.1.1 Federal Regulations

SR 99 is designated as part of the National Highway Freight Network as defined by the U.S. Department of Transportation Federal Highway Administration[3], which allows the corridor to receive direct Federal resources and policies toward improved performance of the highway portions of the U.S. freight transportation system. SR 99 is also shown in the top 25 key corridors using Freight Analysis Framework (FAF) commodity tonnage data (all commodities). The Truck Reroute Study will take into account all existing freight network routes and data to determine best possible reroutes through and around the South-Central Fresno community.

5.1.2 State Regulations

Permitting Process

The permitting process for state facilities in Fresno goes through the Caltrans District 6 office. Encroachment permit applications are considered complete once all the following are statutory in both federal and California statutes:

- Storm Water
- Americans with Disabilities Act (ADA)
- California Environmental Quality Act (CEQA)
- Additionally, all broadband facility permit applications must comply with the additional procedures established by Assembly Bill 955

Within 60 calendar days from the submittal of a COMPLETE Encroachment Permit Application a notice will be sent notifying if the application had been denied or approved.

[3] USDOT FHWA. *Status of the Nation's Highways, Bridges, and Transit Conditions and Performance: 23rd Edition: Part III: Highway Freight Transportation Conditions and Performance*, 2019. < https://www.fhwa.dot.gov/policy/23cpr/>

Compliance

There is significant legislation on truck regulation (briefly summarized in Section 1.2) through a comprehensive compliance program. In these programs, fleets and fleet operators are required to upload proof of compliance and affirmatively provide proof of certification through appropriate reporting systems such as the Truck Regulation Upload, Compliance, and Reporting System (TRUCRS) or DOORS for Off-Road Diesel-Fueled Fleets. Compliance is not optional for these reporting systems, with high penalties for fleets that are non-compliant with California air quality regulations.

Truck regulations and ordinances on state facilities in Fresno also go through the Caltrans office. Field inspectors across the state of California inspect trucks and other equipment for compliance with several California Air Resource Board (CARB) diesel regulations, which apply to all diesel trucks and buses operating within the state and have a Gross Vehicle Weight Rating (GVWR) greater than 14,000 pounds. The regulation requires older heavy vehicles to be replaced with 2011-or-newer vehicles – or have vehicles fitted with 2010-or-newer model-year engines – by January 1, 2023. Compliance with these regulations is critical to reducing greenhouse gases and diesel exhaust particulate matter, which are known contaminants to cause adverse health and environmental effects. Reductions in these emissions through regulatory programs are particularly important within the AB 617 Community, which is an environmental justice community and has historically been impacted by poor air quality resulting from a high volume of diesel trucks.

Relevant CARB diesel programs are listed below:

- Heavy-Duty Vehicle Inspection Program
- Statewide Truck and Bus (applies if based within and out of state)
- Transport Refrigeration Unit
- Solid Waste Collection Vehicle
- Drayage Truck
- Tractor-Trailer Greenhouse Gas programs

Field inspectors also conduct inspections for compliance with:

- Public Agencies and Utilities (PAU)
- In-Use Off-Road, Commercial Vehicle Idling
- School Bus Idling regulations

Several CARB diesel regulations require specific engine information, such as engine model year (MY) and engine family name, which is available from the emission control label (ECL) that is attached to the vehicle. Failure to comply with CARB regulations can result in penalties and sanctions.

Existing California law (AB 1009 of 2004) requires vehicles that operate in California, regardless of entry point, to run with engines that meet emissions standards at least as stringent as U.S. federal standards for the model year that the engine was manufactured. Additionally, all heavy-duty vehicles need to have proof that the engine meets appropriate emissions standards by having the manufacturer ECL properly affixed on the engine. The HD I/M Regulation requires all diesel, non-gasoline, and alternative fuel trucks and buses with a gross vehicle weight rating (GVWR) over

14,000 pounds to be regularly tested. This applies to California (CA) registered heavy-duty vehicles with gross vehicle weight rating GVWR more than 14,000 pounds and non-California registered heavy-duty vehicles operating in CA with GVWR more than 14,000 pounds. Violations of the requirements of Diesel Airborne Toxic Control Measures (ATCM) and Heavy-Duty Diesel Vehicle Inspection Program (HDVIP) can result in written citations with penalties.

California Vehicle Code for Trucks

The maximum gross weight for trucks is 80,000 pounds, or 20,000 pounds for single axle trucks. For trucks in the axle group less than 8 feet-6 inches between the outer axles, the maximum vehicle weight is 34,000 pounds. The maximum dimensions are 65 feet long for a semi truck or 75 feet long for a double trailer. In addition, no vehicle can be over 14 feet high or 102 inches wide.

5.1.3 Regional/Local Regulations

The City of Fresno developed a Designated Truck Routes map in 2005 of all permitted truck routes in the City of Fresno. Within South-Central Fresno, a majority of arterial streets are designated as existing truck routes or future planned truck routes. In addition, the Traffic Operations Division of the City of Fresno Public Works Department oversees all permitting for oversized trucks, annual permits, among other truck related permits.

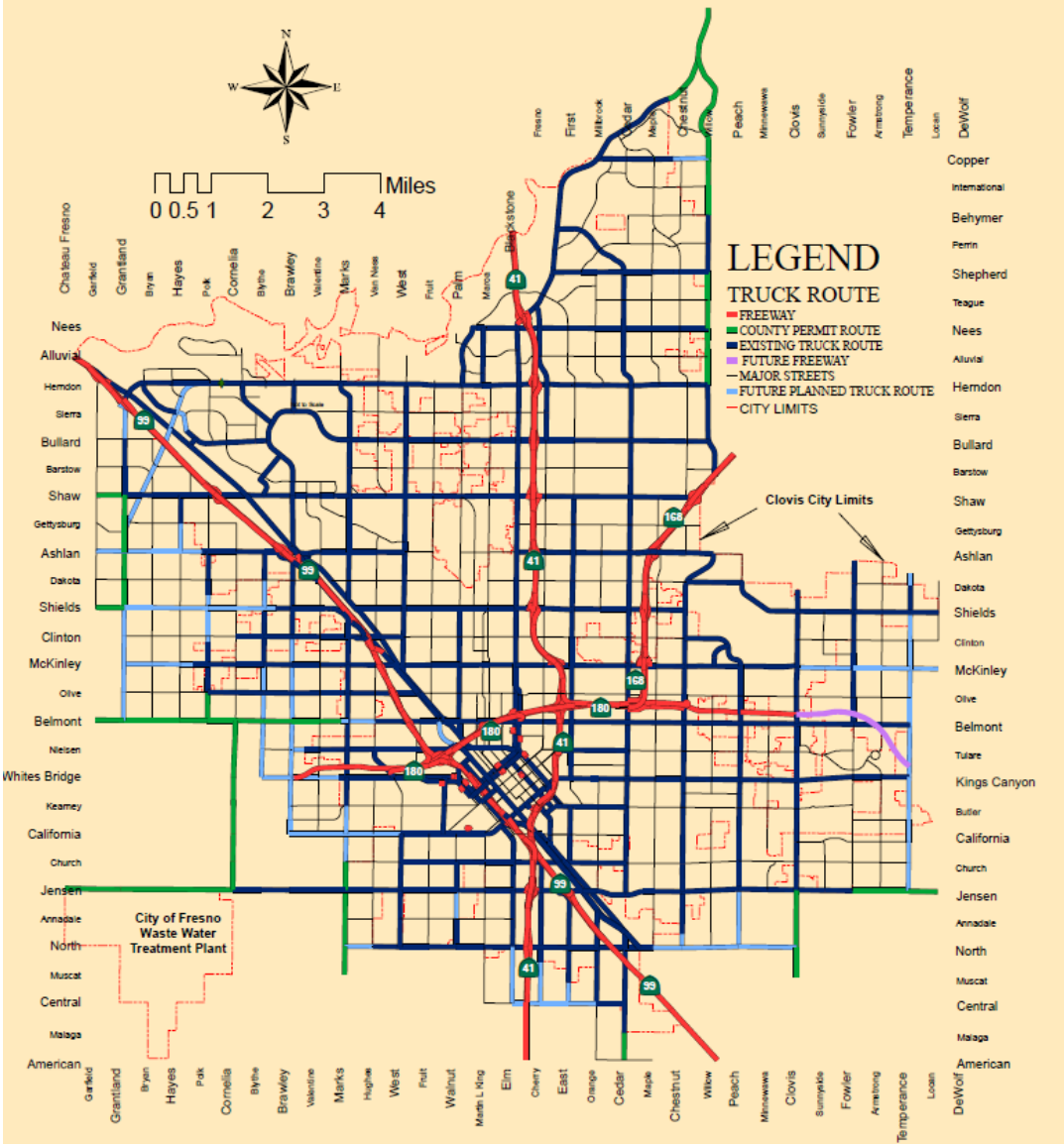
5.2 Freight Network

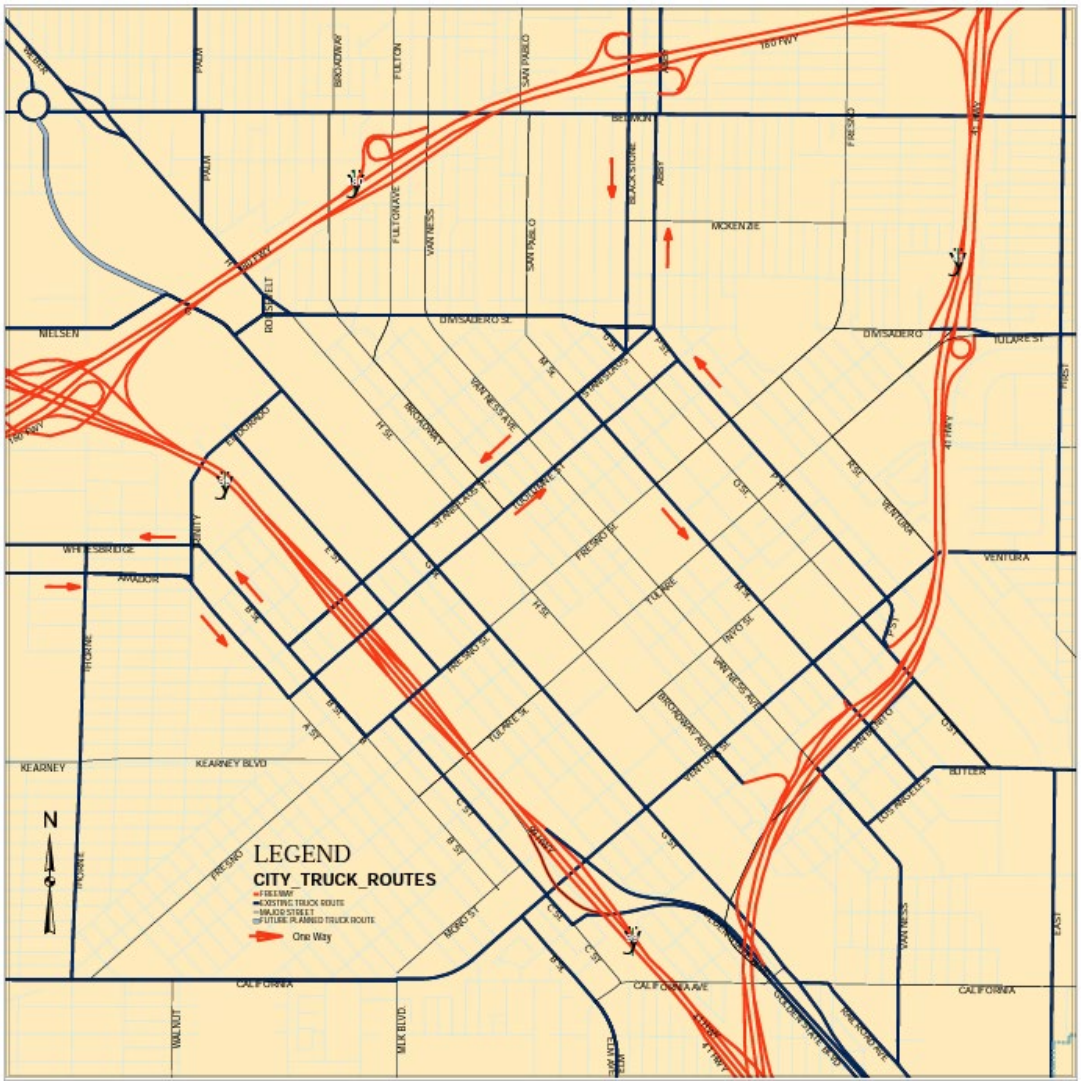
5.2.1 Truck Routes

The Caltrans California Truck Network for State highways is the official source for legal truck access routes in the State. State Route 99 through Fresno is identified as a Surface Transportation Assistance Act (STAA) National Network facility. Other highways in Fresno, including State Routes 180, 41, and 168 are identified as Terminal Access (STAA) routes through greater Fresno.

The City of Fresno adopted their Designated Truck Routes in 2005 which identifies which routes commercial vehicles exceeding 12,000 pounds are restricted to. Within the study area, portions of California, Church, Jensen, West, Walnut, and Elm Avenues, among other streets, are listed as truck routes. Figure 13 shows the City of Fresno's designated truck routes map.

FIGURE 13: CITY OF FRESNO DESIGNATED TRUCK ROUTES (CITY-WIDE AND DOWNTOWN)





5.2.2 Existing Pavement Conditions

The road system in the County of Fresno provides a farm-to-market highway system, linking cities and unincorporated communities together, and providing public mobility throughout the County. Critical freight, agricultural, and resource product movement take place not only on State Highways, but on local streets and roads. The State Department of Transportation cites an estimated 90% of freight exports from and imports into the Valley by truck in their 2013 *San Joaquin Valley Interregional Goods Movement Study*. Commodity movements will continue to rise in their reliance on truck shipments which is assumed to increase to 93% by year 2040. On average, one fully loaded 80,000-pound truck causes as much pavement wear as up to 10,000 automobiles. This will contribute to the deterioration of roadway surfaces especially when truck traffic is occurring on smaller connector facilities that are not intended for heavy truck usage which poses issues for truck operators and the city alike.

In order to determine the health or condition of the streets, a standard called the Pavement Condition Index (PCI) is used. The PCI is a scale from 0 to 100, with zero being a pothole-riddled street and 100 a newly surfaced street. A PCI score of 70 to 100 is considered excellent/good, 50 to 69 is at risk, 25 to 49 is poor, and 0 to 24 is failing. Cited from the 2018 *California Statewide Local Streets and Roads Needs Assessment Report*, from 2008 to 2018, the average weighted PCI was 74 and has only been decreasing over the years to 61, respectively, in the Fresno County area. This number represents the average of the conditions on all streets which includes cities within the County. Within the study area, the Report identified the South-Central region as "At Higher Risk" placing the PCI within the 50-60 range. Fresno County's current PCI is below the statewide weighted average PCI for streets and roads of 65 which is in the "at risk" category.

The roadway network in the city is generally a traditional grid-based network of north/south and east/west streets, except for significant portions of the Downtown Planning Area, whose grid-based network of streets are angled consistent with the northwest/southeast railroad alignment. The pavement network within the study boundary is composed of different classifications such as super arterials, arterials, collectors, and local streets. An assessment of the existing pavement conditions of the existing and proposed truck routes within the study boundary was done with the utilization of Google Earth's street view while the City of Fresno's 2014 *General Plan and Development Code Update* was used in distinguishing the roadway functional classifications in the planning area.

Super arterials have limited access and function like expressways to move large volumes of vehicles where freeways are absent and typically have four to six lanes. Jensen Avenue east of the SR-99 is identified as a super arterial and its existing pavement conditions is in the "fair" to "at risk" category with a range from minimal cracking to low/medium distressed longitudinal and transverse cracking to small potholing along the roadway. This section of roadway has an average PCI of 48 (poor).

FIGURE 14: JENSEN AVENUE FACING SOUTH AT SR 99 NORTHBOUND OFF-RAMP

Arterials are characterized by higher speed, are typically four to six lanes, and contains more truck, bus, and automobile traffic. The existing pavement conditions of arterials in the study area ranges from low to high distressed cracking and rutting which results in potholes. Blackstone Avenue is an example of low wear and tear of pavement while Central Avenue is riddled with alligator cracking, rutting and potholes. There are segments of roadway that received some pavement rehabilitation which comprised mainly of preparatory crack seal which is typically used to fill in the cracks before a street receives a full pavement treatment. The arterials running through the rural land uses are seen to have the most failing pavements as well as around the on and off ramps of the freeways. The following streets are classified as arterials:

- McKinley Avenue
- Golden State Boulevard
- Blackstone Avenue
- Abby Street
- Fresno Street
- Marks Avenue
- California Avenue (west of West Avenue)
- Ventura Street
- Jensen Avenue (west of SR-99)
- Chestnut Avenue
- North Avenue
- Central Avenue
- Cedar Avenue

FIGURE 15: CENTRAL AVENUE FACING EAST

The function of collectors is to "collect" traffic from residential streets and funnel them onto arterials. Collectors typically have two to four lanes and operate on lower speeds. Similar to arterials, the existing pavement conditions of the collectors range from minimal cracking on some roads to high distressed cracking, rutting, potholing, and roughness on others. Additionally, there are areas in which preparatory crack seal was applied as a method of rehabilitation. Tuolumne Street can be seen with none to minor cracking as compared to Railroad Avenue which is in the

failing category of the PCI. Railroad Avenue has an average PCI of 45 (poor). Generally, collector streets are not meant to accommodate large truck traffic which results in faster deterioration of the pavement if left untreated. The following streets were identified as collectors:

- Olive Avenue
- Belmont Avenue
- Nielson Avenue
- G Street
- Divisadero Street
- Tulare Avenue
- Whitesbridge Avenue
- B Street
- Stanislaus Street
- Tuolumne Street
- Trinity Street
- El Dorado Street
- M Street
- P Street
- O Street
- Van Ness Avenue
- Railroad Avenue (north of Church Avenue)
- Hughes Avenue
- West Avenue
- Palm Avenue
- Thorne Avenue
- California Avenue (east of West Avenue)
- Butler Avenue
- Church Avenue
- Walnut Avenue
- Cherry Avenue
- 1st Street
- East Avenue
- Orange Avenue

FIGURE 16: RAILROAD AVENUE FACING SOUTH

General characteristics of local streets include low speeds, low traffic volumes, and are typically two to three lanes. The pavement conditions on the local streets within the study area experiences similar ranges of no wear and tear to major deterioration of roadway which includes alligator cracking, rutting, and potholes. Amador Street can be seen with none to minimal low distressed longitudinal and transverse cracking while Railroad Avenue, south of Church Avenue, experiences high fatigue and cracking resulting in very poor pavement conditions. Other local streets pavement

conditions do not fair much better, as A Street near Frank H Ball Park has an average PCI of 53 (at risk), while C Street near Lincoln Elementary School has an average PCI of 35 (poor). The following local streets were identified:

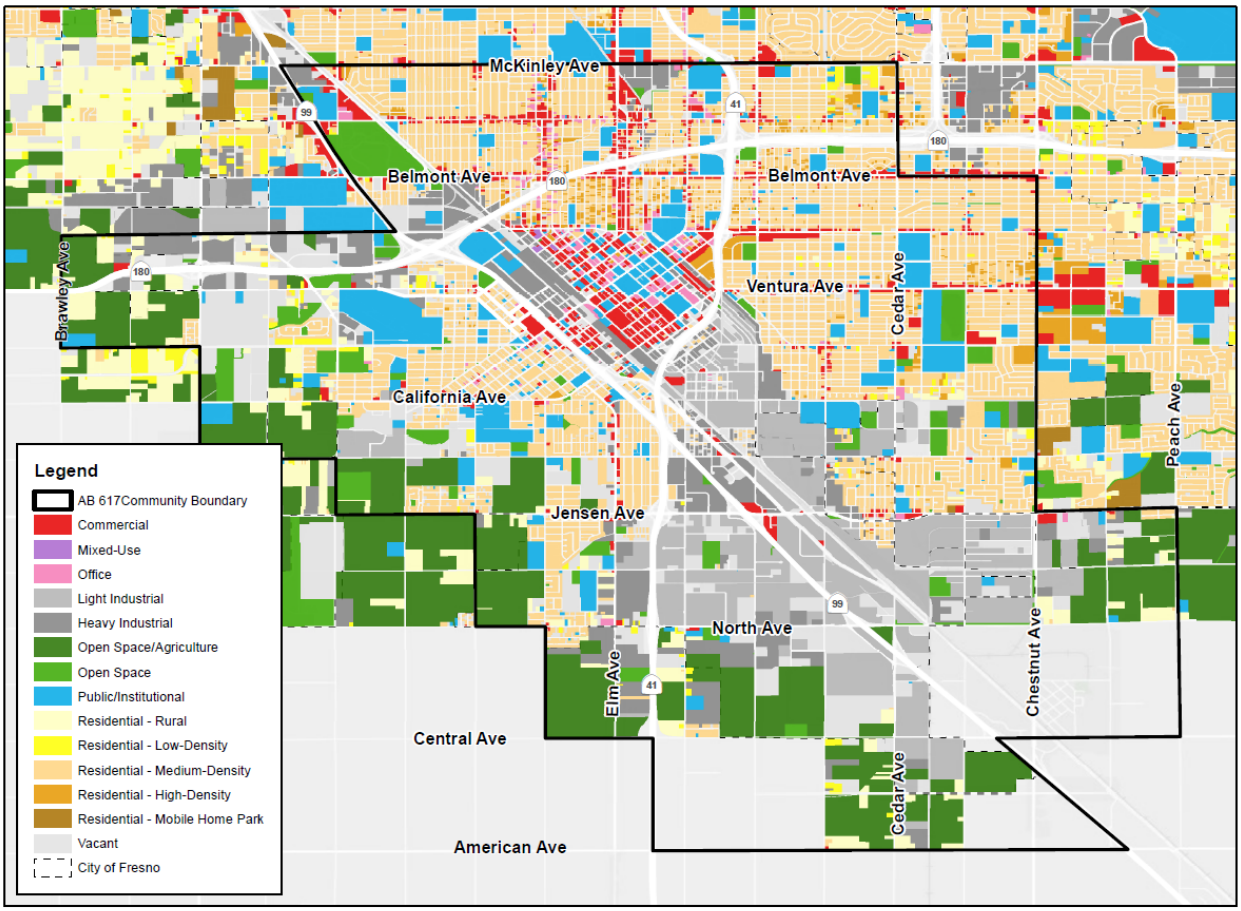
- Amador Street
- A Street
- E Street
- C Street
- Railroad Avenue (south of Church Avenue)

FIGURE 17: A STREET, ADJACENT TO LINCOLN ELEMENTARY SCHOOL

5.2.3 Land Use & Major Generators/Key Destinations

The study area includes a number of existing manufacturing, warehousing, logistics businesses, and vacant sites currently being developed. Notably, most light and heavy industrial uses that are often major producers of truck demand are located along SR 99, SR 41, and SR 180. As illustrated in the figure below, these uses are bordered by mostly residential uses, as well as agricultural uses in the southern portion of the study area. The map is based on existing land use data from the City of Fresno as of 2022.

FIGURE 18: EXISTING LAND USE

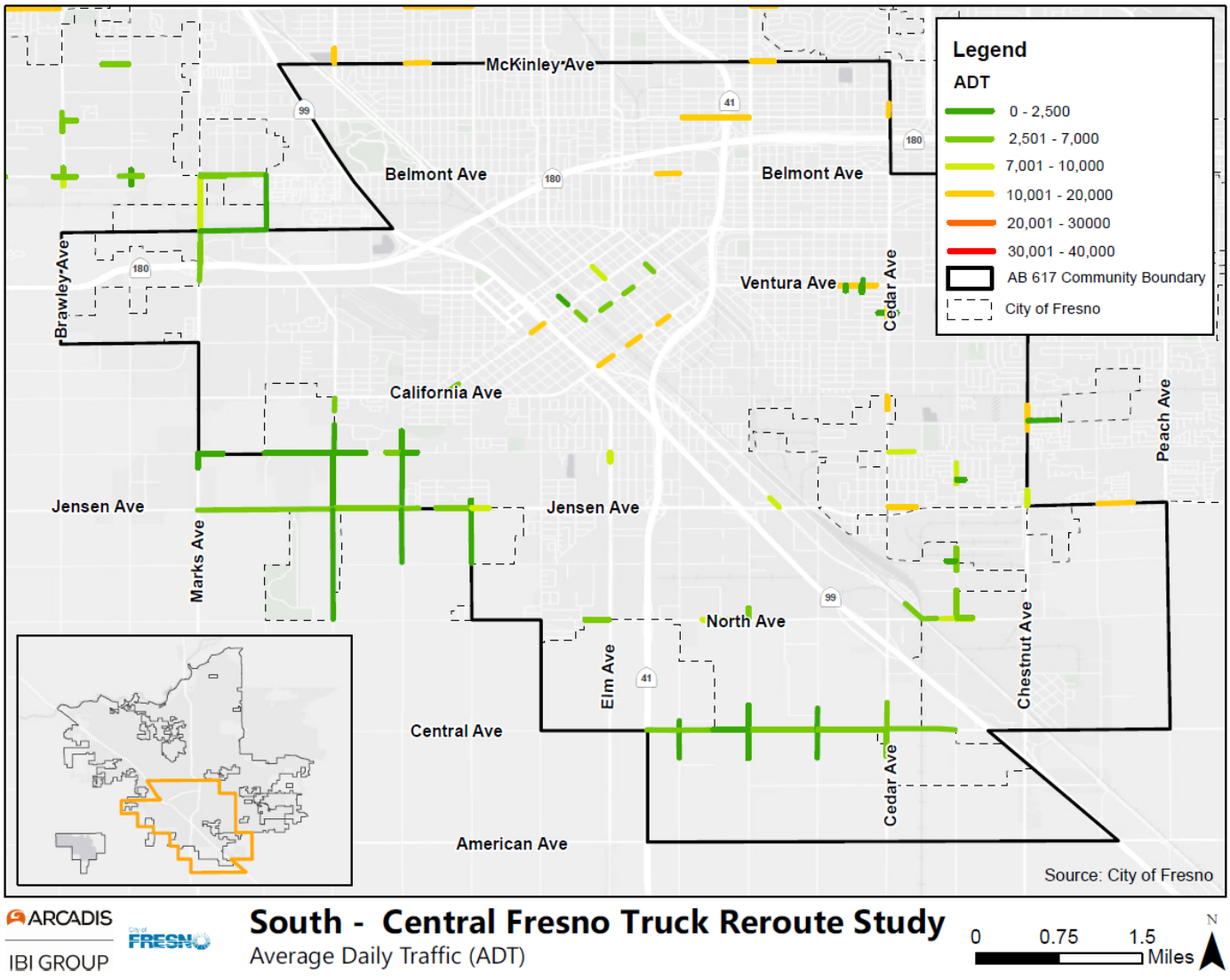


5.3 Freight Activity

5.3.1 Volumes

The figure below reflects traffic volumes on key high traffic volume segments within South-Central Fresno. Segments were located within Downtown Fresno, along Ventura Avenue, Jensen Avenue, Central Avenue, and McKinley Avenue. Traffic volumes were below 7,000 vehicles per day along most segments. However, higher traffic occurred along McKinley Avenue, Ventura Avenue, Belmont Avenue, the eastern side of Jensen Avenue, and within Downtown Fresno along California Avenue and Fresno Street. No segments within South-Central Fresno surpassed 20,000 vehicles per day.

FIGURE 19: AVERAGE DAILY TRAFFIC ON HIGH TRAFFIC VOLUME SEGMENTS

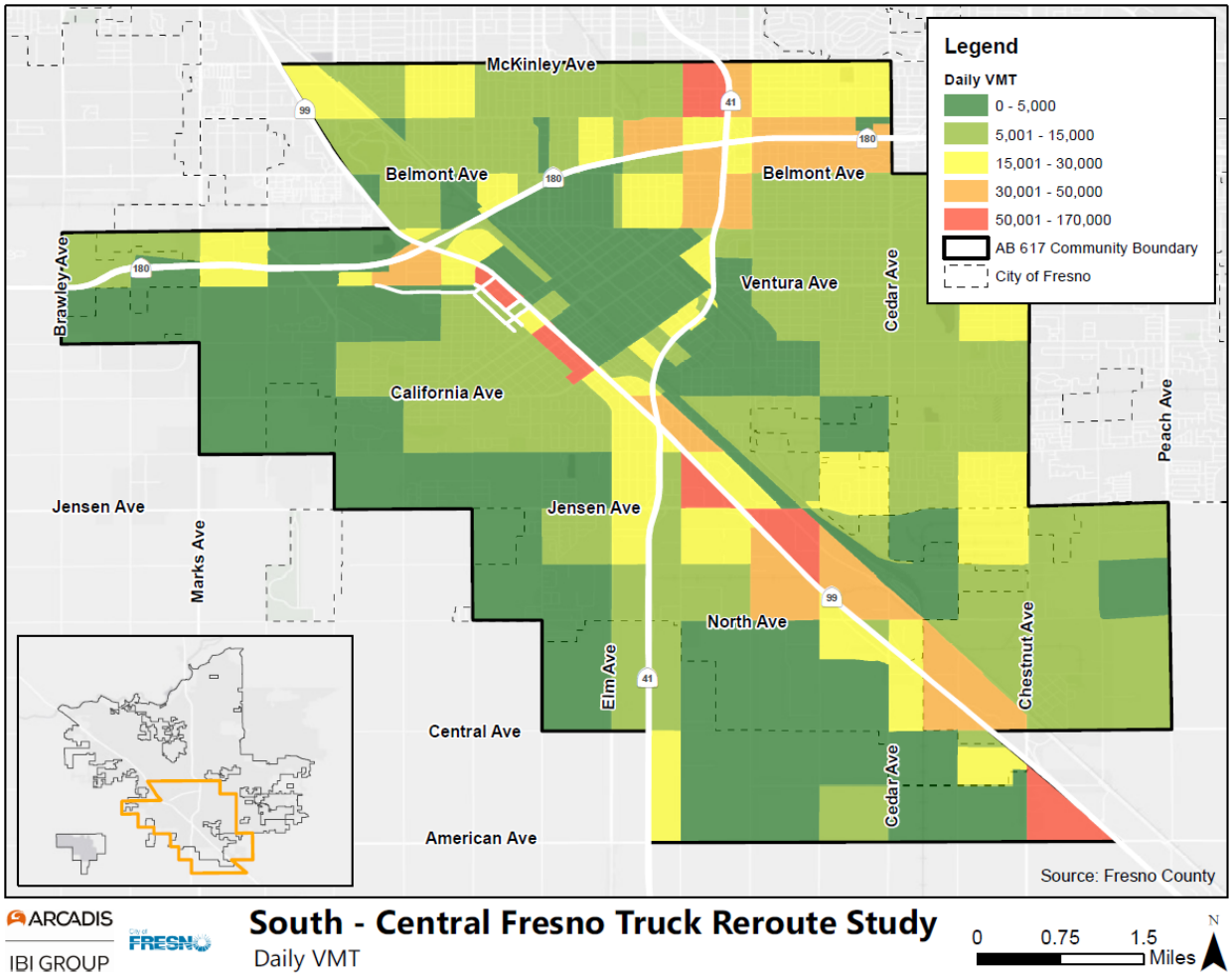


5.3.2 Vehicle Miles Traveled

Vehicle Miles Traveled (VMT) are used as as a guiding metric for understanding GHG emissions along a corridor and within its adjacent communities. As VMT reflects the number of miles being traveled by vehicle, it can also be assumed that as a driver travels more miles a higher density of pollutants contributing to GHG are also emitted. A higher level of GHG emissions is correlated with adverse health effects, including higher risk of asthma and cardiovascular disease. Therefore, if vehicles are required to travel shorter distances, it is more likely they will produce less GHG emissions. For this reason, the State of California uses VMT as the required metric for assessing the sustainability of transportation related projects. Agencies reviewing proposed transportation projects are required to assess if the projects would result in an increase in VMT and thus GHG emissions.

VMT by Transportation Analysis Zones (TAZ) is reflected in Figure 20 below. The figure highlights that TAZs surrounding SR 99 generate the greatest number of VMT, as well as portions of SR 41 near its interchange with SR 180. This corresponds with a high volume of Diesel Particulate Matter in these communities, which is reflected in Section 5.6.3 below. TAZs surrounding SR 180 also reflect high VMT.

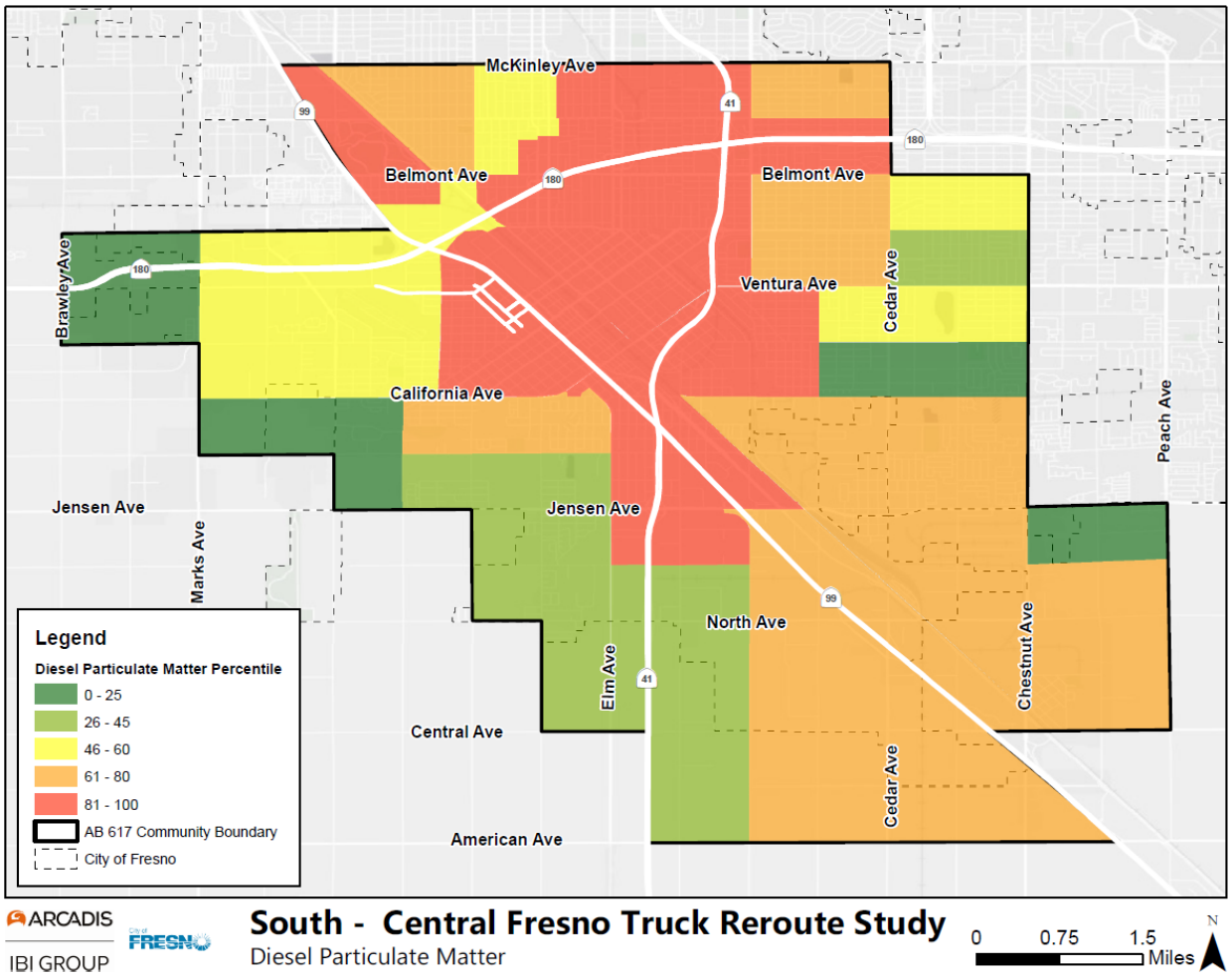
FIGURE 20: VEHICLE MILES TRAVELED BY TAZ



5.3.3 Diesel Particulate Emissions

Diesel Particulate Matter emissions are the most common emissions emitted by freight vehicles and a significant source of GHG. As previously discussed in Section 3.3.3, GHG emissions are also expected to be in alignment with areas with high VMT, as they are directly related. As noted in the section above, TAZs surrounding SR 99 have the highest diesel particulate matter emissions. This is likely in response to the high freight truck volumes that utilize this corridor. High emissions are also reflected in Downtown Fresno, along SR 180, and along SR 41.

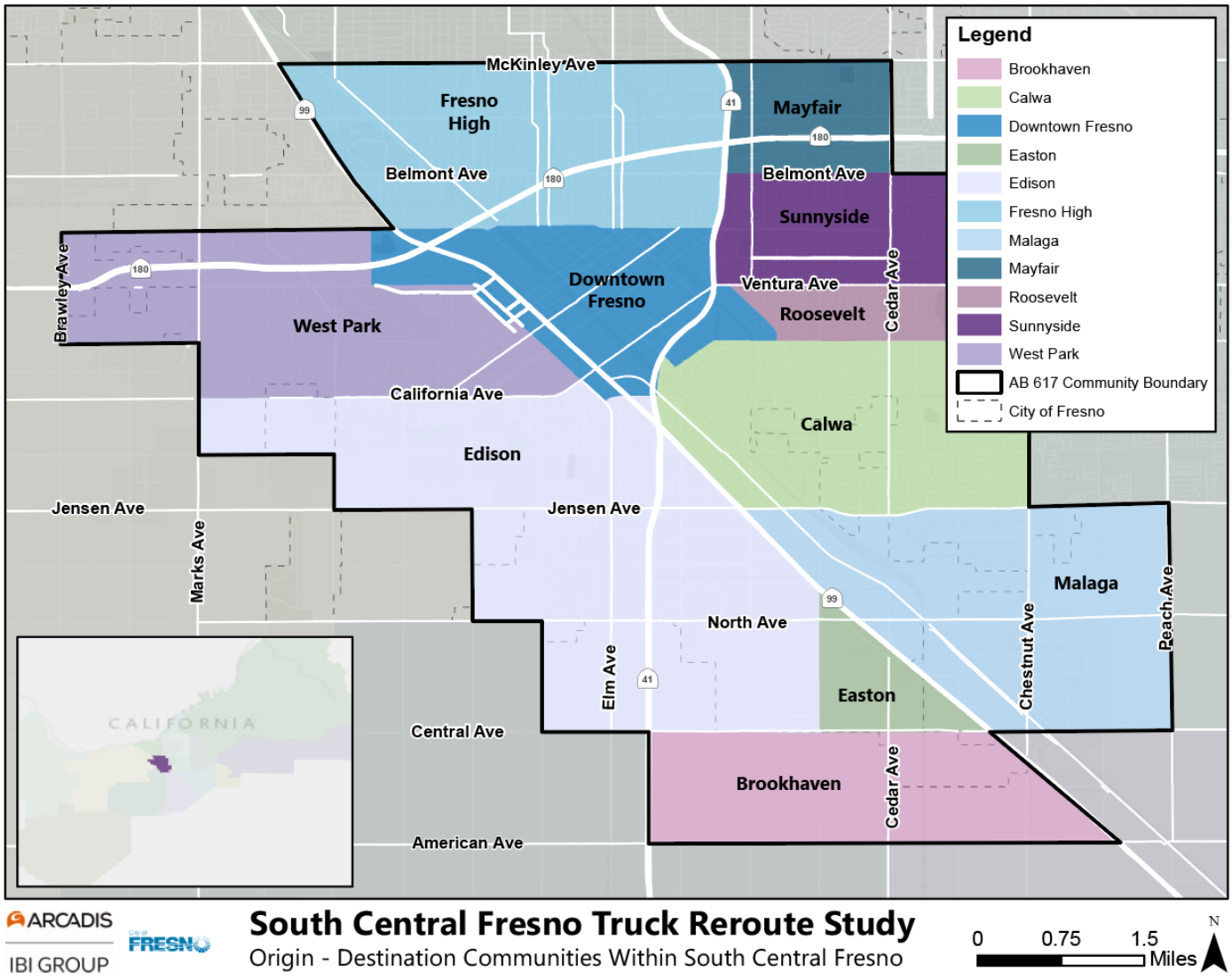
FIGURE 21: DIESEL PARTICULATE MATTER EMISSIONS



5.3.4 Travel Patterns/Origin-Destination

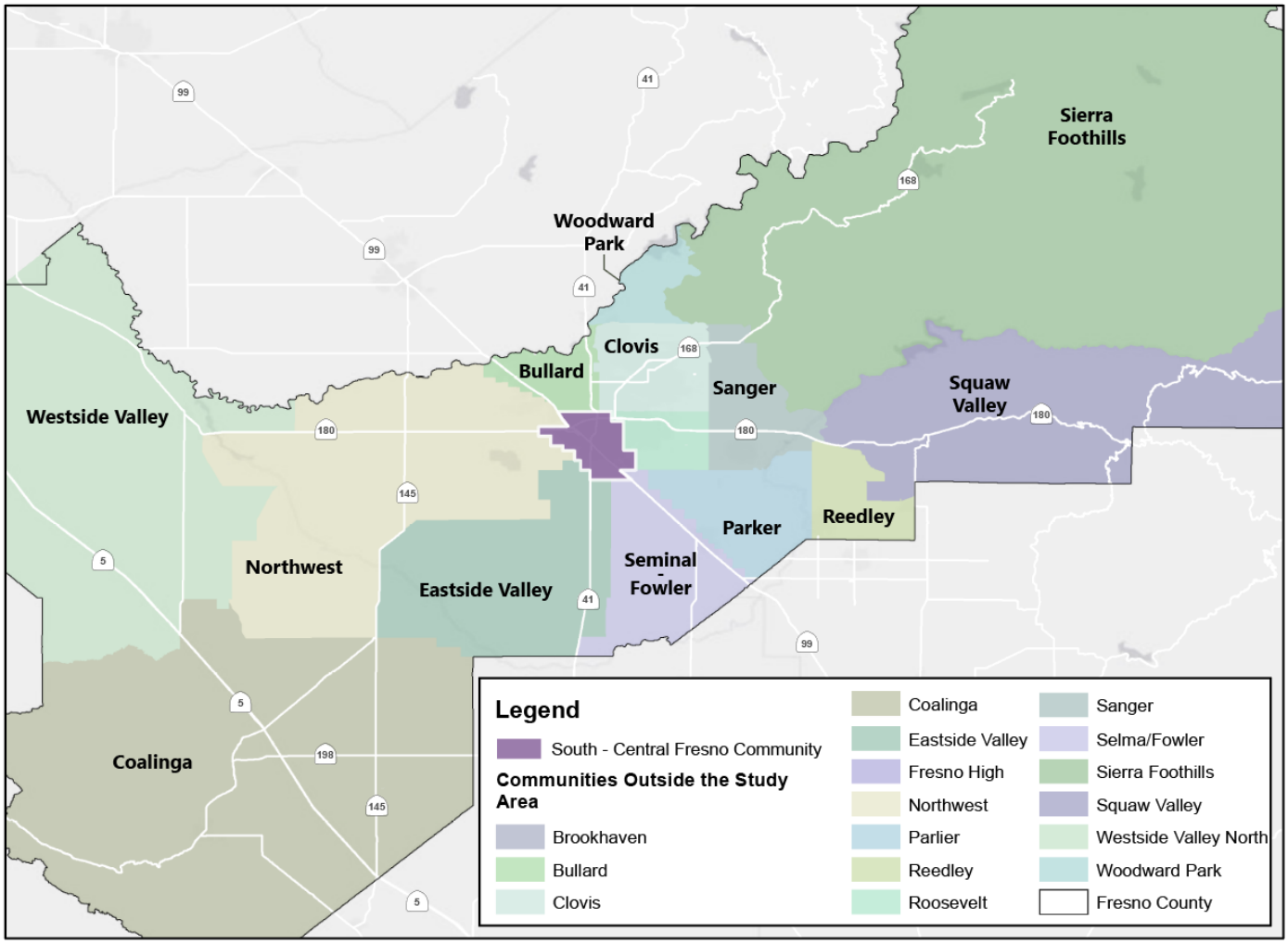
A total of 408,219 vehicle and freight truck trips[4] from the 2018 Fresno ABM Regional Travel Demand Model were analyzed to understand travel flows traveling within Fresno County and throughout South-Central Fresno in particular. Travel flows were analyzed across modes, times of day (AM vs PM), and by which community a trip began (origin) and where it ended (destination). Communities within Fresno County were categorized as "Inside South-Central Fresno" or as "Outside South-Central Fresno". Communities for the purpose of this analysis are reflected in the figures below.

FIGURE 22: ORIGIN – DESTINATION COMMUNITIES WITHIN SOUTH-CENTRAL FRESNO



[4] Fresno Activity-Based Model (ABM) Regional Travel Demand Model (2018)

FIGURE 23: ORIGIN – DESTINATION COMMUNITIES OUTSIDE SOUTH-CENTRAL FRESNO

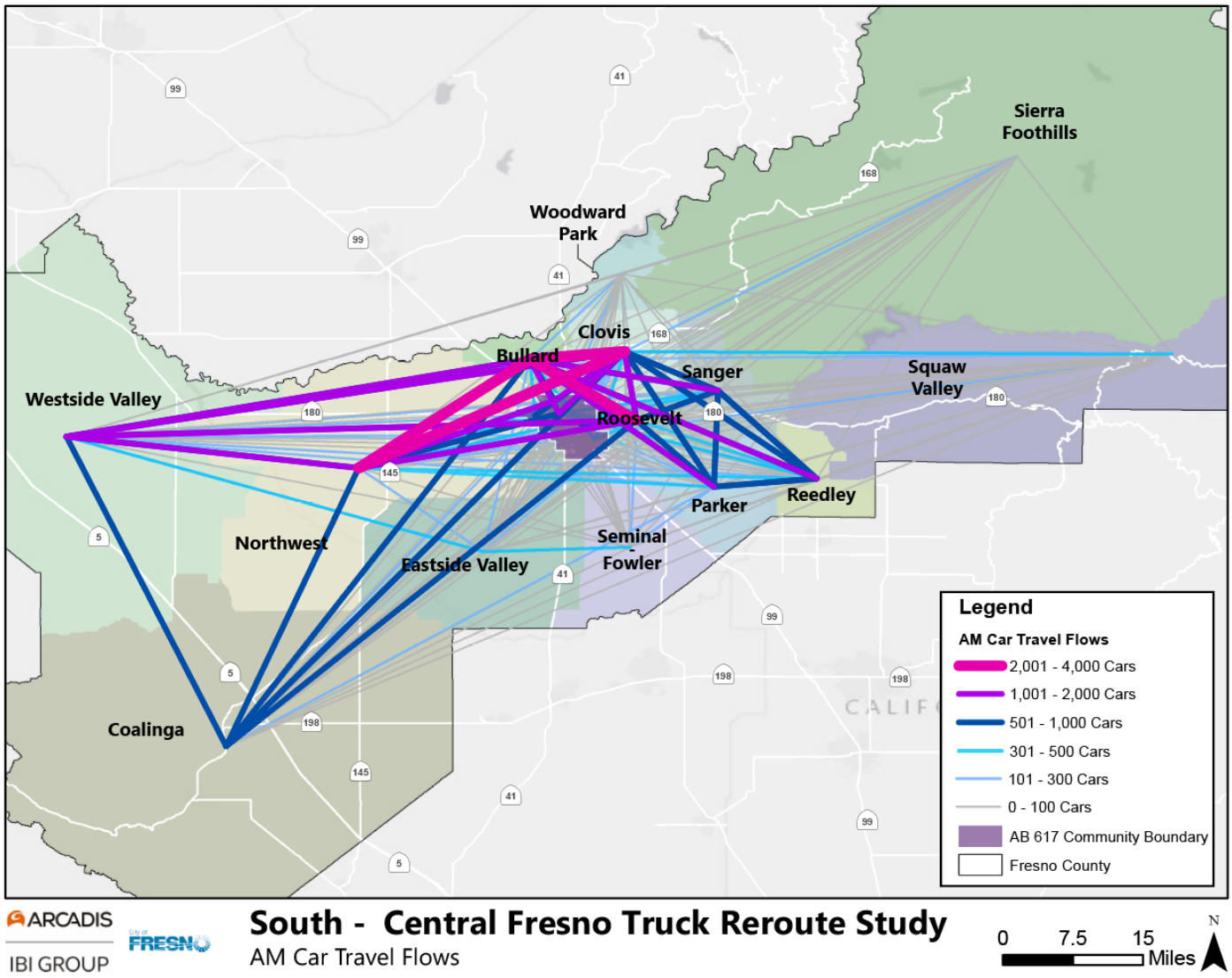


Car Travel Flows

A total of 352,691 car trips were analyzed within Fresno County. Overall, more car trips occurred during evening hours (181,156 trips) than during morning hours (171,535 trips). Of the total car trips, nearly 100 percent of total car trips occurred within the same top 10 origins and destinations. Additionally, most car trips occurred between communities outside of the South-Central Fresno Study Area. However, because these trips began and ended outside of the study area, this means there is a high volume of car traffic likely passing through the study area without stopping. This traffic contributes to noise and air pollution within the study area.

AM travel flows are reflected visually in the figures below and the top 10 PM trip pairings are also summarized.

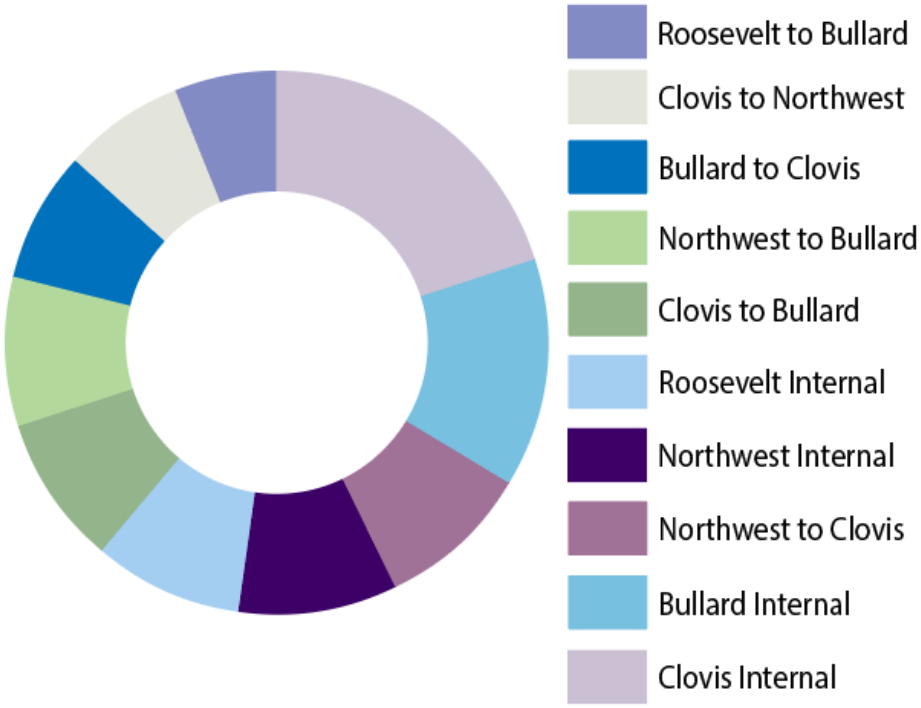
FIGURE 24: AM CAR TRAVEL FLOWS



As reflected in the figure below, the majority of car trips began and ended in the same community, within the study area. The greatest share of AM car trips occurred internal to Clovis (4.96%), followed by internal trips made in Bullard. Additionally, a significant share of car trips arrived in Bullard. The figure below reflects origin and destination (O-D) pairings for trips made within the study area.

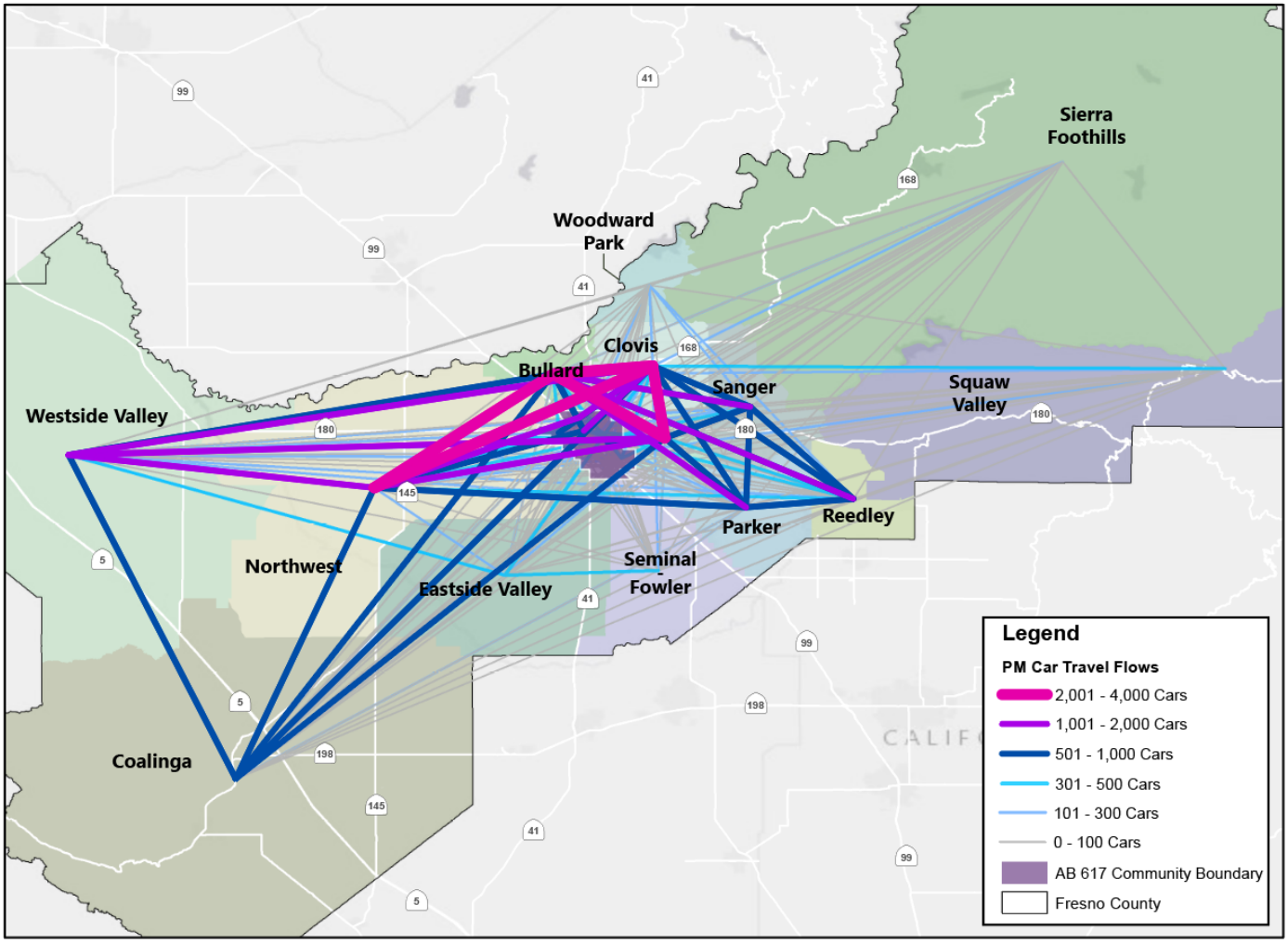
O-D Pair	Volume	% of trips
Clovis Internal	8,506	4.96%
Bullard Internal	5,708	3.33%
Northwest to Clovis	3,987	2.32%
Northwest Internal	3,925	2.29%
Roosevelt Internal	3,787	2.21%
Clovis to Bullard	3,781	2.20%
Northwest to Bullard	3,664	2.14%
Bullard to Clovis	3,314	1.93%
Clovis to Northwest	3,099	1.81%

FIGURE 25: TOP 10 AM CAR TRIP SUMMARY



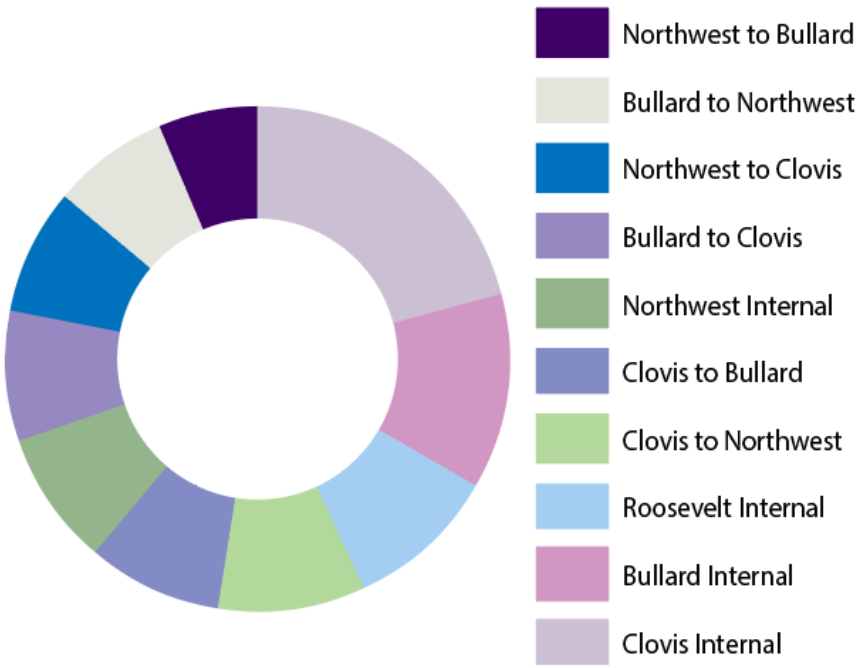
Car trips occurring during evening hours followed a similar trend, with the greatest share of trips beginning and ending in the same community. Similar to morning travel, the majority of trips began and ended within Clovis. Travel flows are reflected visually in the figures below and the top 10 PM trip pairings are also summarized.

FIGURE 26: PM CAR TRAVEL FLOWS



O-D Pair	Volume	% of trips
Clovis Internal	8,506	4.96%
Bullard Internal	5,708	3.33%
Roosevelt Internal	4,225	2.33%
Clovis to Northwest	4,056	2.24%
Clovis to Bullard	3,731	2.06%
Northwest Internal	3,672	2.03%
Bullard to Clovis	3,624	2.00%
Northwest to Clovis	3,382	1.87%
Bullard to Northwest	3,223	1.78%

FIGURE 27: TOP 10 AM CAR TRIP SUMMARY

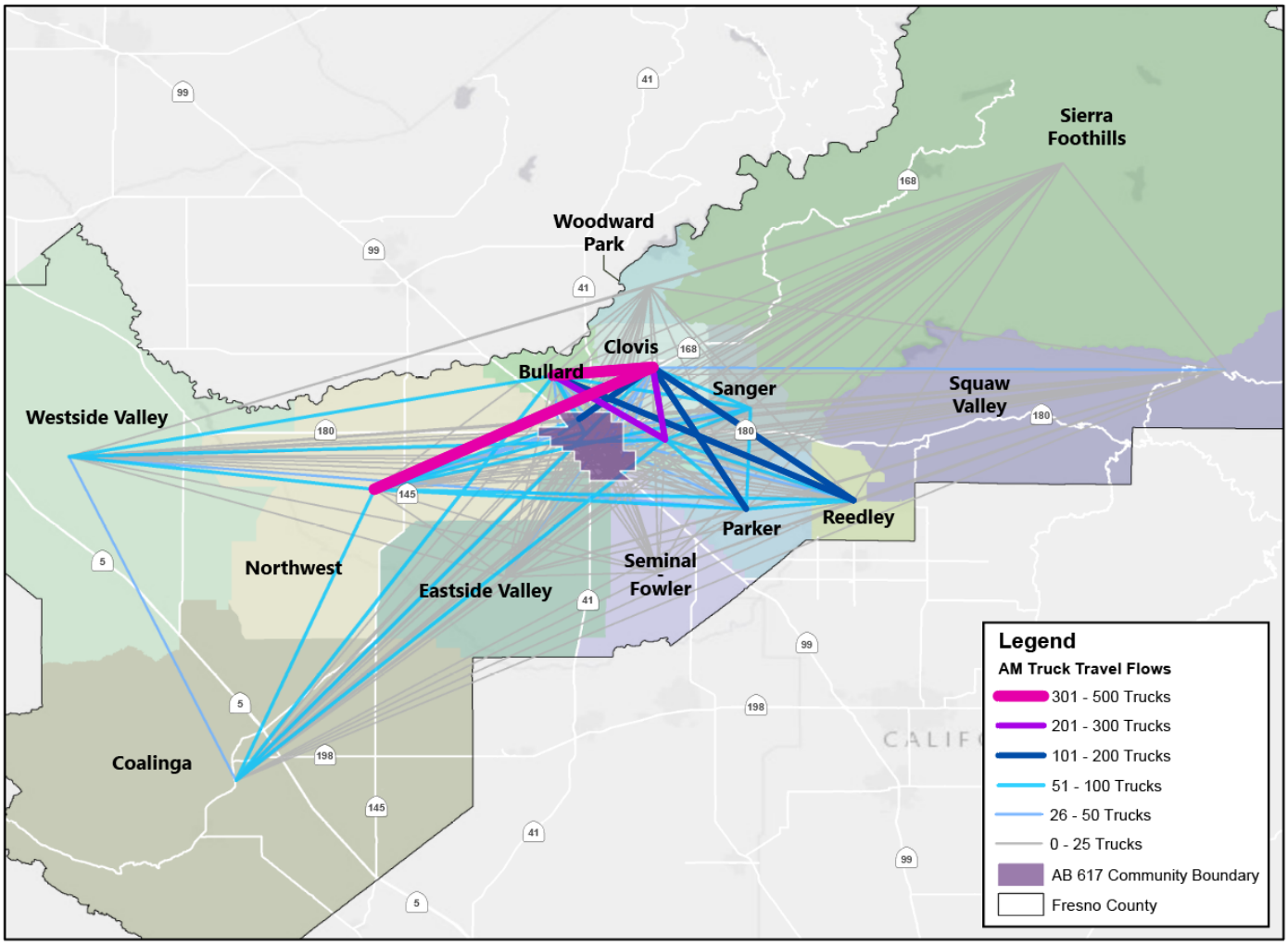


Truck Travel Flows

Truck travel flows followed a similar trend to car travel flows. Most truck trips began and ended in the same community, with the greatest share of trips occurring in Clovis. Similar to car travel flows, the most significant portion of trips occurred within the top 10 origin-destination pairs.

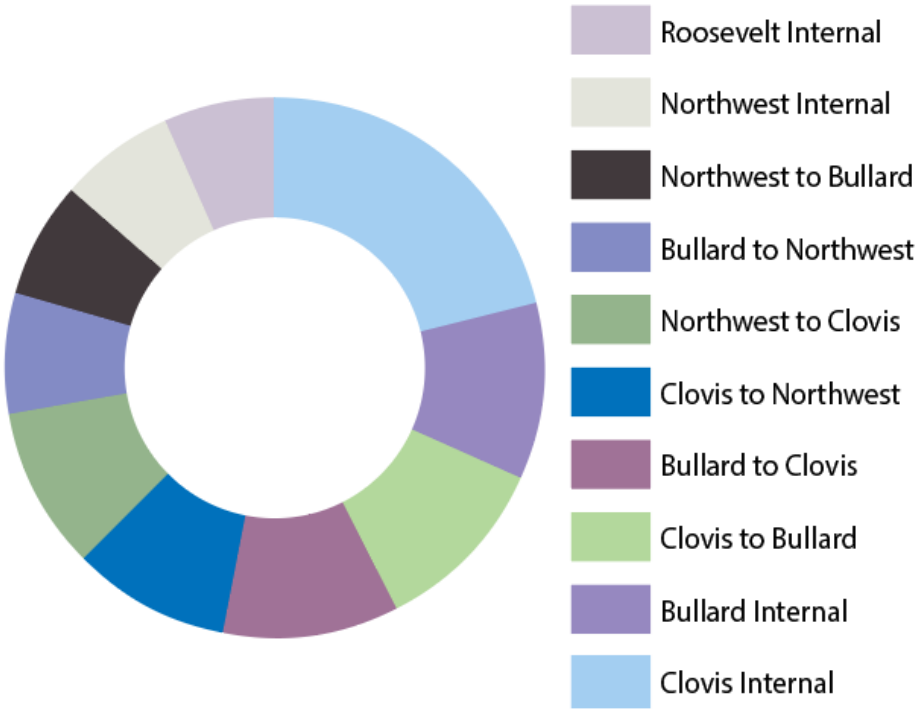
AM truck travel flows are reflected visually in the figures below, with the top 10 origin-destination pairings summarized as well.

FIGURE 28: AM TRUCK TRAVEL FLOWS



O-D Pair	Volume	% of trips
Clovis Internal	855	4.27%
Bullard Internal	431	2.15%
Clovis to Bullard	429	2.14%
Bullard to Clovis	429	2.14%
Clovis to Northwest	389	1.94%
Northwest to Clovis	389	1.94%
Bullard to Northwest	285	1.42%
Northwest to Bullard	285	1.42%
Northwest Internal	279	1.39%

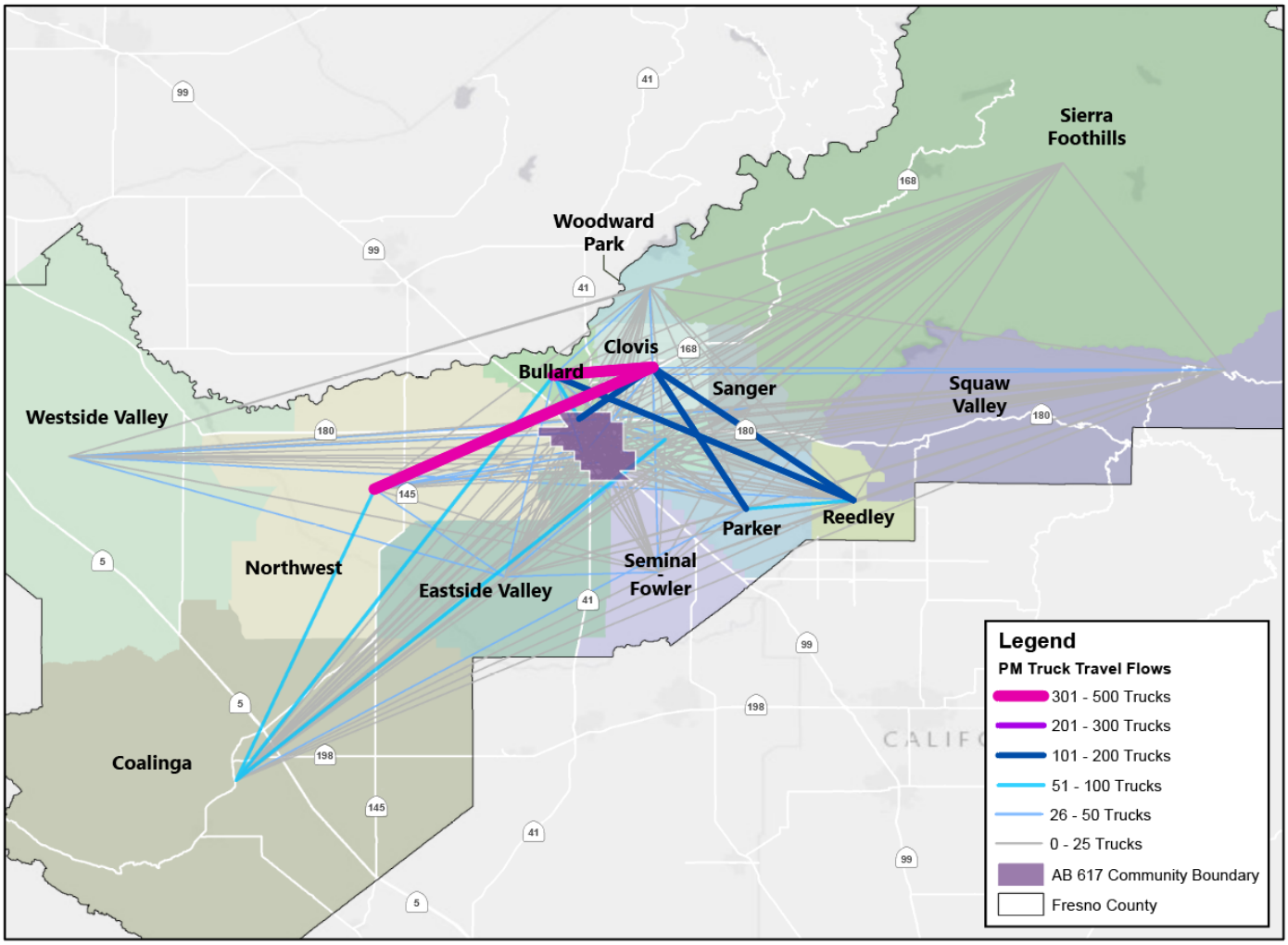
FIGURE 29: TOP 10 AM TRUCK TRIP SUMMARY



Similar to AM truck travel flows, the greatest share of trips occurred internal to Clovis, followed by trips beginning and ending in Bullard.

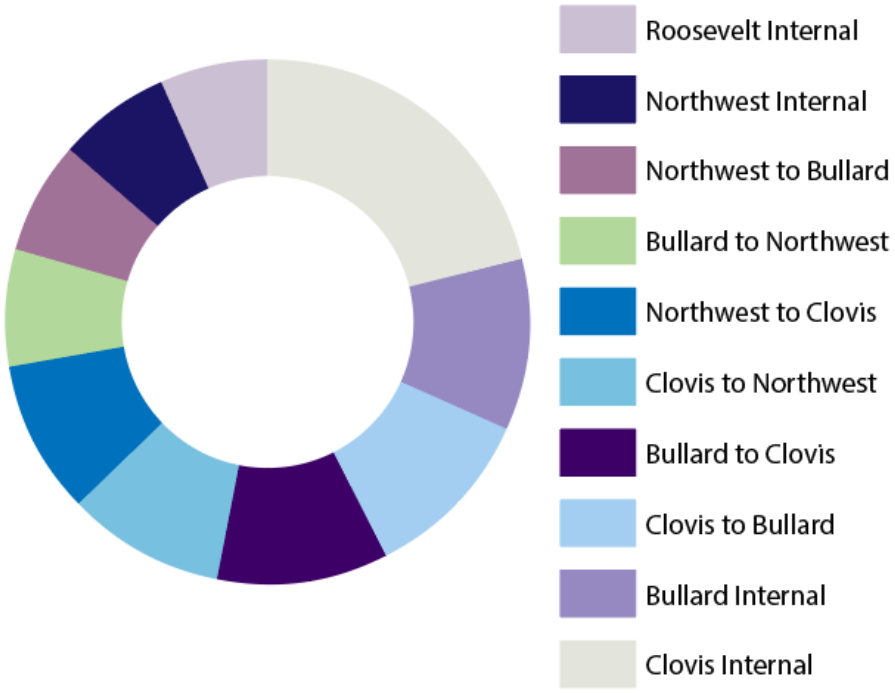
Travel flows are reflected visually in the figures below and the top 10 PM trip pairings are also summarized.

FIGURE 30: PM TRUCK TRAVEL FLOWS



O-D Pair	Volume	% of trips
Clovis Internal	1,520	4.28%
Bullard Internal	766	2.16%
Clovis to Bullard	762	2.15%
Bullard to Clovis	762	2.15%
Clovis to Northwest	691	1.95%
Northwest to Clovis	691	1.95%
Bullard to Northwest	506	1.43%
Northwest to Bullard	506	1.43%
Northwest Internal	495	1.39%

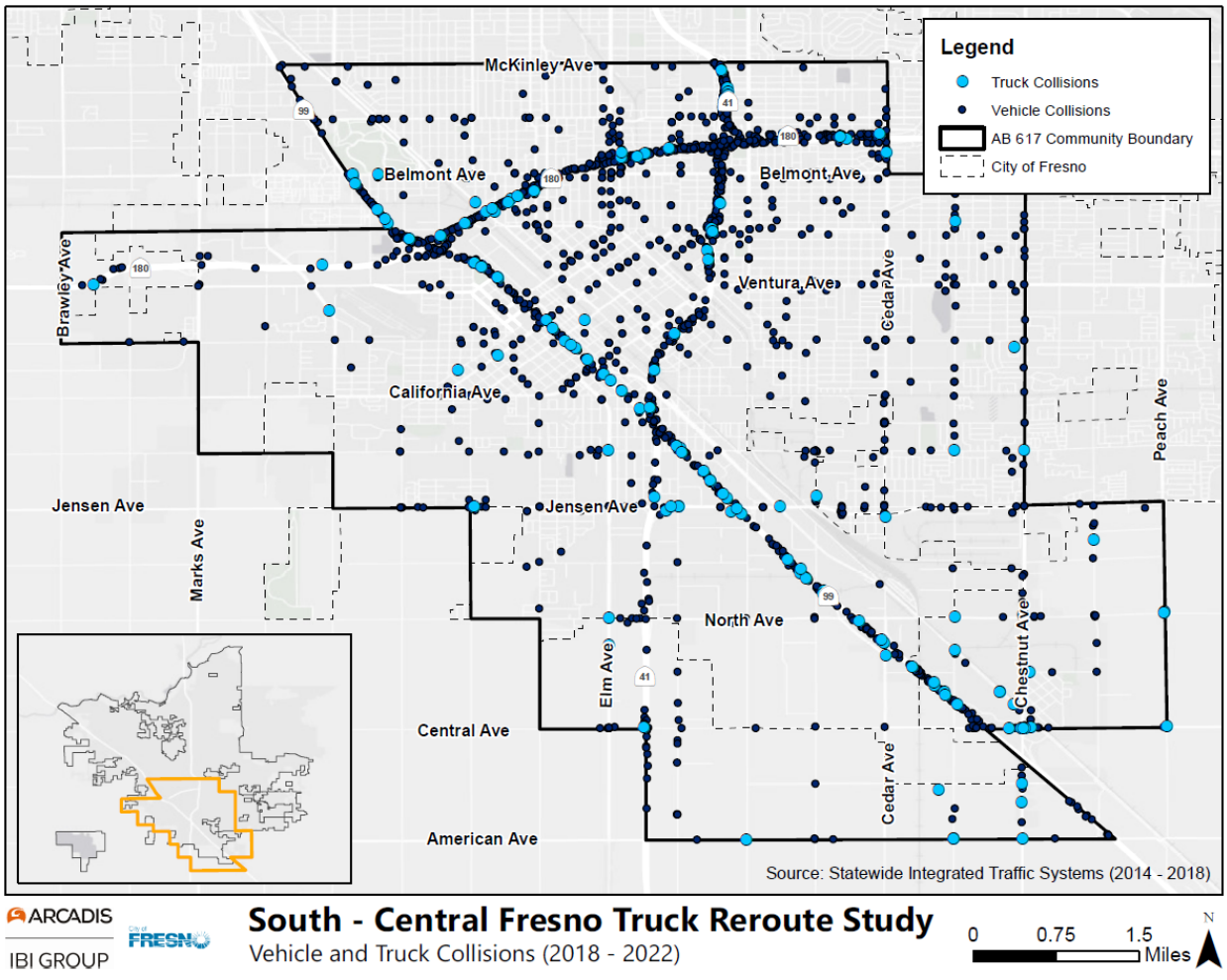
FIGURE 31: TOP 10 PM TRUCK TRIP SUMMARY



5.3.5 Collisions

Vehicle and truck collisions are reflected in the figure below. A total of 2,120 vehicle collisions and 135 truck collisions occurred within the South-Central Fresno community boundary over a five-year period[5]. Although vehicle collisions were dispersed throughout the community boundary, the majority of them occurred along SR 180, SR 99, and SR 41. A high volume of vehicle collisions occurred within Downtown Fresno and along major arterials including Jensen Avenue, North Avenue, and Fresno Street[6]. Similarly, the highest volume of truck collisions occurred along SR 180 and SR 41, with the highest volume occurring along SR 99. Some truck collisions occurred along surrounding arterials including along Jensen Avenue, Chestnut Avenue, and North Avenue. This is in line with responses gathered from community members, which highlighted that these corridors are intimidating to pedestrians, bicyclists, and motorists due to high traffic and truck volumes and speeds. This feedback is discussed further in Section 8.

FIGURE 32: VEHICLE AND TRUCK COLLISIONS



[5] Statewide Integrated Traffic Systems. 2014 – 2018.
[6] "2020-2023 Collisions". City of Fresno. 2023.

6 Public Transportation Conditions

6.1 Fresno Area Express

Fresno Area Express (FAX) is operated by the City of Fresno Department of Transportation and offers fixed-route bus services and demand-response services. Recently, FAX implemented a new high frequency transit route in addition to its other fixed-route lines.

6.1.1 Fixed-Route Service

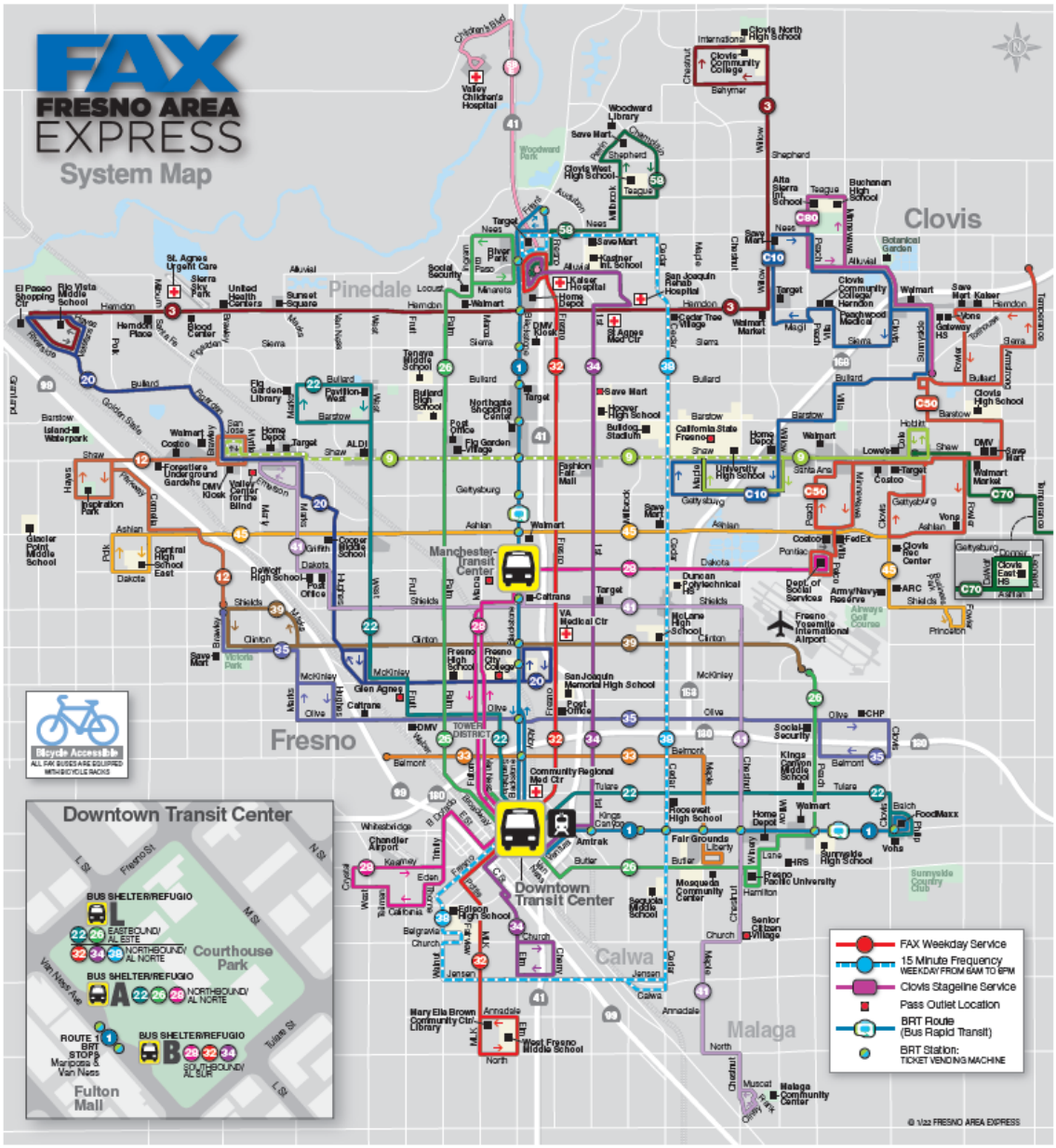
FAX offers 18 bus routes in the City of Fresno, including the BRT route. Regular service hours are Monday – Friday between 5:30 am – 10:00 pm and weekends 6:30 am – 7:00 pm. Late night service is available on select routes until approximately midnight Monday through Saturday. Frequency along the routes vary. The system map is illustrated in Figure 28.

6.1.2 High Frequency Transit Route

FAX currently provides bus-rapid transit service known as Q, which began operating in February 2018 and served over 2.5 million riders in its first year. Q's Route 1 spans 15.7 miles along Blackstone Avenue, from North Fresno Street to downtown Fresno, then out along Ventura Avenue/Kings Canyon Road to passed Clovis Avenue (Figure 28). The Q serves major shopping centers, hospitals, and other key destinations in the area. High frequency transit routes provides riders with reduced travel time by operating with fewer stops than traditional bus routes and along a route with bus priority traffic signals. During morning and afternoon peak times, frequency along this route is as low as 10 minutes. Midday service runs every 15 minutes, and early morning and later evening frequencies range between 15 and 30 minutes. Q fare is the same as regular bus fare.

Q service may be expanded upon in future years with additional routes to accommodate the region's growing transit needs, such as to connect with downtown high-speed rail in the future.

FIGURE 33: FAX SYSTEM MAP

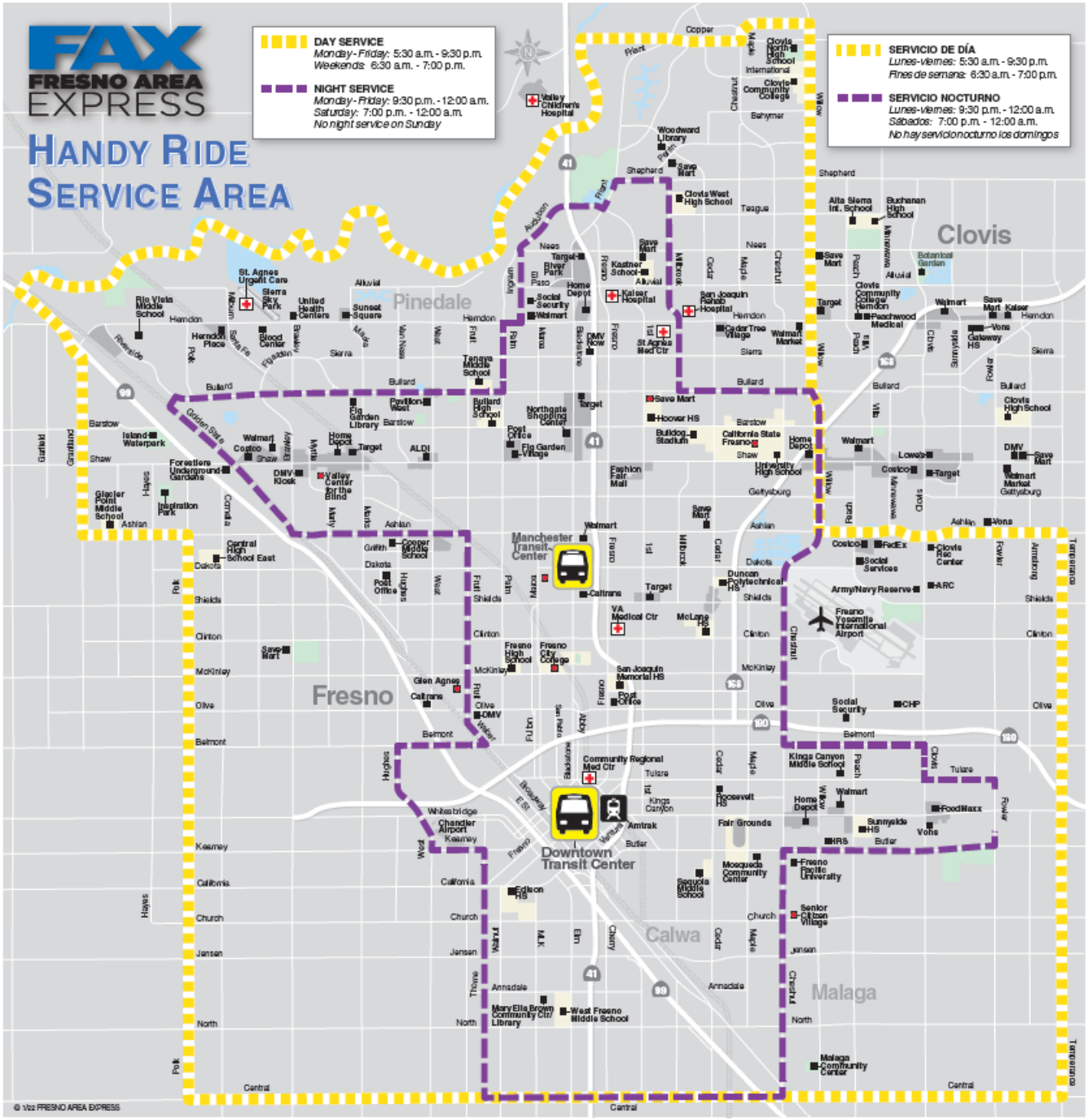


Source: Fresno Area Express (January 2022)

6.1.3 Demand-Response Service

FAX also provides paratransit bus service for eligible persons with disabilities as an alternative to its fixed-route bus service, known as Handy Ride. Day service is available Monday-Friday between 5:30 am – 9:30 pm and weekends 6:30 am – 7:00 pm. Night service is available Monday-Friday between 9:30 pm – 12:00 am and Saturday 7:00 pm – 12:00 am. The service areas for both day and night service are illustrated in the figure below, which includes a large portion of the South-Central Fresno community.

FIGURE 34: HANDY RIDE SERVICE AREAS



6.2 Fresno County Rural Transit Agency

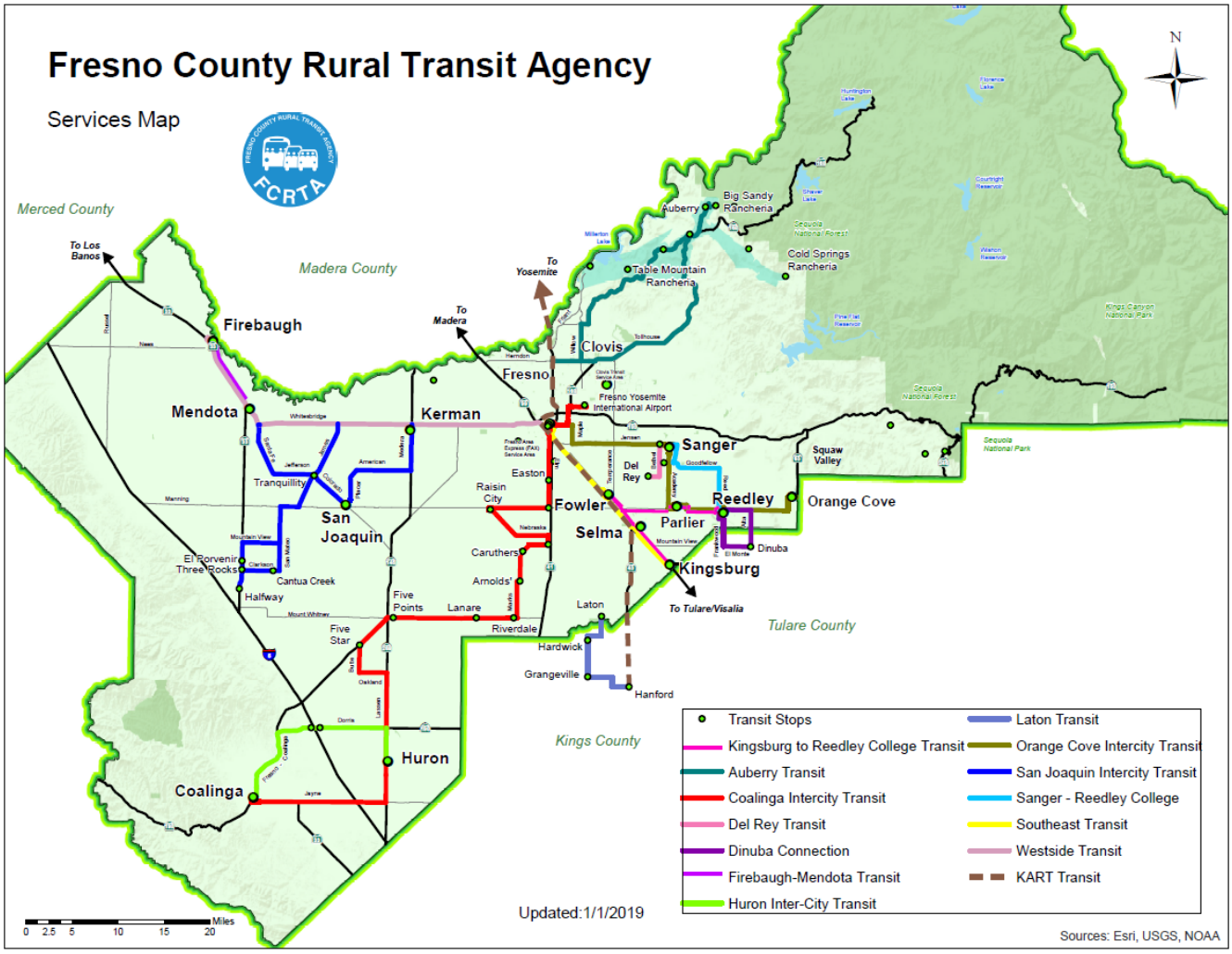
In addition to FAX, the Fresno County Rural Transit Agency (FCRTA) provides general public transit service to rural communities throughout Fresno County. The agency operates 25 transit subsystems

in 13 rural incorporated cities as well as 28 unincorporated communities, providing both fixed-route and demand-response service.

6.2.1 Fixed-Route Service

FCRTA provides 11 fixed routes throughout the County. Regular service hours are Monday – Friday between 7:00 am – 5:30 pm. Limited Saturday service is available. The system map is illustrated below. The Coalinga Intercity Transit route runs through the study area along SR 41, Southeast Transit runs along SR 99, Westside Transit runs along SR 180, and Orange Cove Intercity runs along Maple Avenue and Jensen Avenue. Additionally, KART Transit also travels through the study area between Hanford and Yosemite, along SR 41, SR 99, and SR 43.

FIGURE 35: FRCTA SYSTEM MAP



6.3 High-Speed Rail

California high-speed rail will connect the mega-regions of the state of California, through Fresno, contribute to economic development and a cleaner environment, create jobs, and preserve

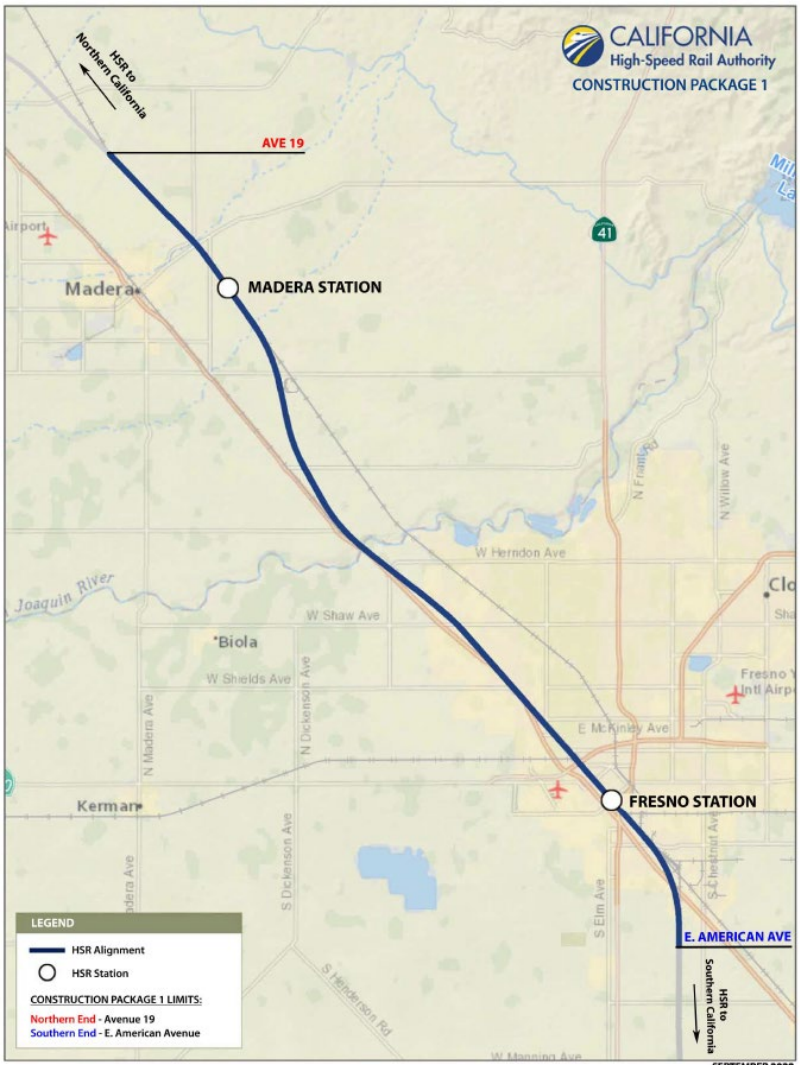
agricultural and protected lands. The California High-Speed Rail (CAHSR) Authority is responsible for planning, designing, building and operation of the nation's first high-speed rail system.

The Phase 1 system will connect San Francisco to the Los Angeles basin via the Central Valley. The proposed Fresno Station is located in the downtown area on H Street between Fresno Street and Tulare Street. The rail alignment through Fresno consists of an alignment between G Street and H Street, and consists of elevated, at-grade, and underground segments.

Throughout 2021 and 2022, the Authority worked in collaboration with AmeriCorps CivicSpark to gather community input regarding early site activation projects that could be implemented around the future Fresno Station area.

Currently, the rail segment between Madera and Kings/Tulare Counties including Fresno is under construction. The phasing proposed by the CAHSR Authority reflected in the figure below shows that between 2030 and 2033, high-speed passenger service between Merced, Fresno, and Bakersfield can begin. The figure shows the high-speed rail alignment through Fresno from the current location of the Madera Station to the north as part of Construction Package 1.

FIGURE 36: HIGH-SPEED RAIL ALIGNMENT THROUGH FRESNO



Active Transportation Conditions

This section discusses the existing active transportation network, including pedestrian and bicyclist circulation, volumes & high-use corridors for both pedestrian and bicyclist networks, and a review of pedestrian and bicyclist collisions within the South-Central Fresno community boundary.

6.4 Pedestrian Circulation

The City of Fresno's Active Transportation Plan (2017) seeks to add 661 miles of sidewalks throughout the city.

6.4.1 Priority Pedestrian Areas

City's Active Transportation Plan identifies priority pedestrian areas that have one of the following criteria:

- Pedestrian activity areas: areas with high pedestrian activity
- Safety areas: areas with a high frequency of pedestrian collisions
- Underserved neighborhoods: areas with large numbers of missing sidewalks

6.4.2 Pedestrian Collisions

Between 2018 and 2022 a total of 183 collisions occurred between vehicles and pedestrians, with 122 occurring along high collision corridors within the study area. Most pedestrian collisions occurred in the northern portion of the South-Central Fresno Community Boundary, particularly within Downtown Fresno. Collisions were also focused along major arterials with high traffic volumes, including SR 180, SR 99, Olive Avenue, Belmont Avenue, Cedar Avenue, Jensen Avenue, California Avenue, and Fresno Street. Community members also echoed these concerns about traffic safety through an online survey, which has been summarized in Section 9 of this report. Collisions that occurred along high collision corridors are highlighted in Table 1 below.

TABLE 1. PEDESTRIAN HIGH COLLISION CORRIDORS

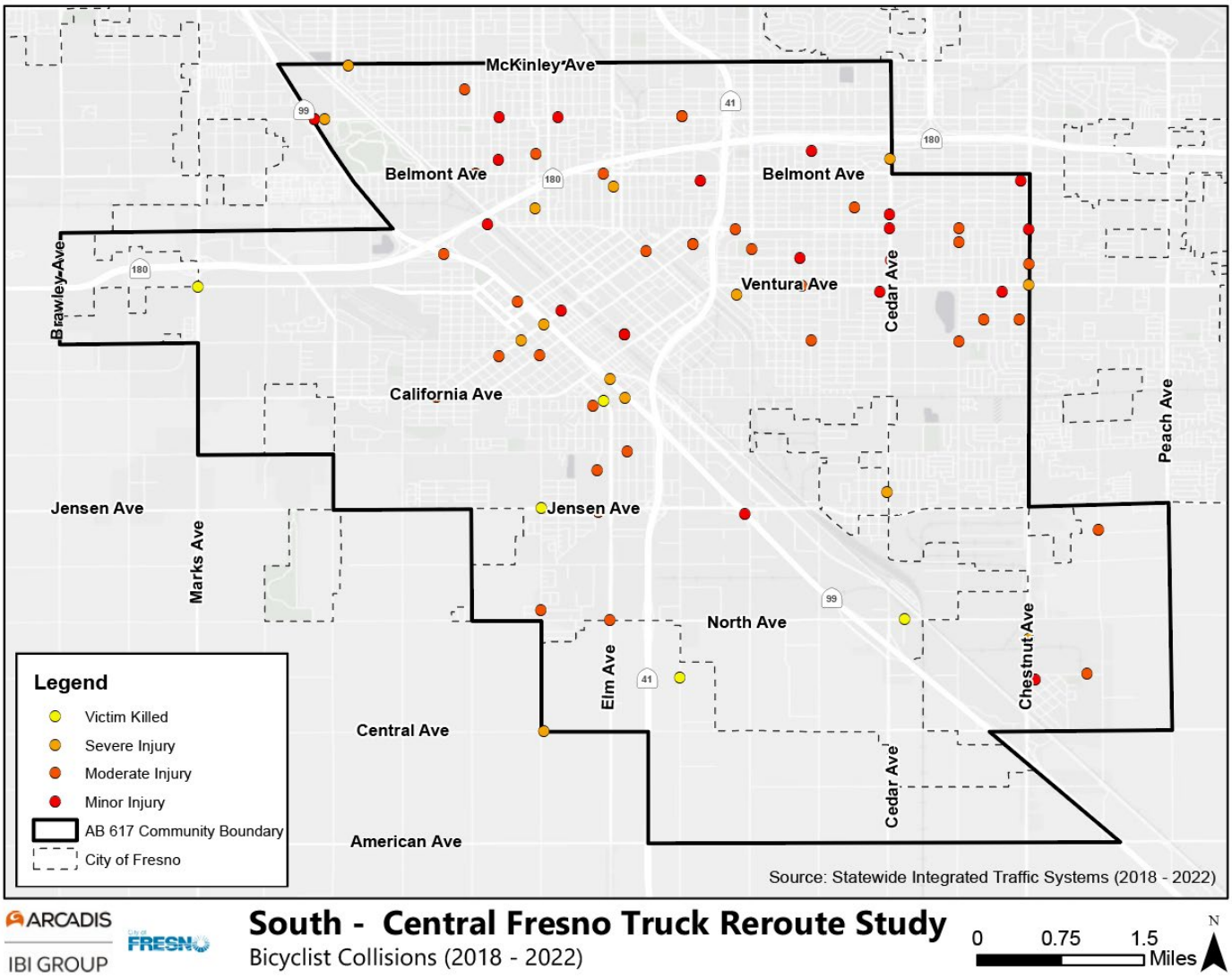
High Collision Corridor	# of Pedestrian Collisions
SR 118	13
SR 99	20
Olive Avenue	16
Belmont Avenue	22
Cedar Avenue	11
Jensen Avenue	23
California Avenue	7
Fresno Street	10

The figure below represents pedestrian collision severity and identifies whether pedestrians were killed or sustained severe, moderate, or minor injuries from collisions with vehicles. The table below summarizes collision severity as shown in Figure 37.

TABLE 2: PEDESTRIAN COLLISION SEVERITY

Collision Severity	# of Victims
Victim Killed	37
Severe Injury	39
Moderate Injury	63
Minor Injury	45
Total	**183**

FIGURE 37: PEDESTRIAN COLLISIONS



6.5 Bicycle Circulation

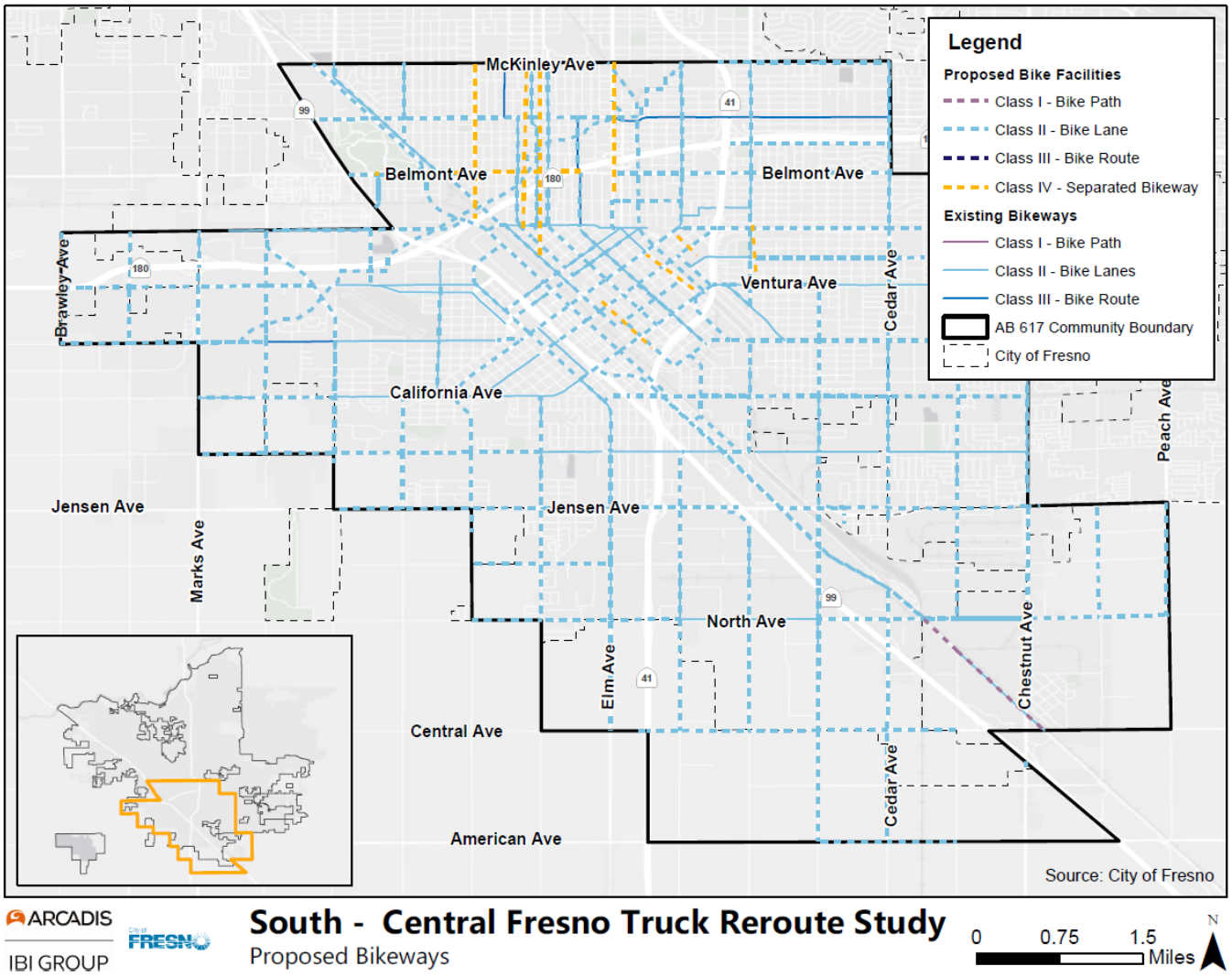
The City of Fresno's Active Transportation Plan seeks to add 166 miles of Class I bike paths, 691 miles of Class II bike lanes, 69 miles of Class III bike routes, 21 miles of Class IV separated bikeways. This includes Class IV facilities in locations in the Downtown Neighborhoods Community Plan, Fulton Corridor Specific Plan, and on Maroa Avenue and Fresno Street as alternatives to Blackstone Avenue. A brief description of the proposed bikeways is provided below:

- Class I (Bike Path) – Provides a completely separate right of way bike facility for the exclusive use of bicyclists and pedestrians.

- Class II (Bike Lane) – Provides a striped bike lane for one-way bike travel on a street or highway.
- Class III (Bike Route) – Provides a signed, shared roadway that allows for shared use between bicyclists and pedestrians or motorists. Typically, bike routes are placed on lower volume roadways.
- Class IV (Protected/ Separated Bikeway or Cycle Track) – A Bikeway that is vertically physically separated from vehicle traffic. Protection and separation from traffic can be provided through grade separation, flexible posts, inflexible barriers, or on street parking.

A map of the bikeways proposed within the South-Central Fresno Study Area is provided below in Figure 38.

FIGURE 38 CITY OF FRESNO ACTIVE TRANSPORTATION PLAN – PROPOSED BIKEWAYS



6.5.1 Volumes & High-Use Corridors

The City's Active Transportation Plan identified a priority network of bikeways to develop a complete, connected system that allows bicyclists to travel to key destinations. This network was intended to equitably serve all Fresno neighborhoods and prioritized corridors with lower levels of traffic stress, such as those with Class I bike paths, Class IV separated bikeways, and Class II bike lanes on local streets or collectors with lower traffic volumes and speeds. Within the South-Central Fresno community, these corridors include:

- McKinley Avenue (existing and planned Class II bike lanes)
- Fulton Avenue/Wishon Avenue (existing Class II bike lanes, planned Class IV)
- VanNess Avenue (existing and planned Class II bike lanes, planned Class III bike routes, planned Class IV)
- Hughes Avenue/Roeding Drive/Kearney Blvd (existing Class II bike lanes, planned Class II bike lanes, planned Class IV)
- Florence Avenue/Church Road/California Avenue/Fresno Street/Martin Avenue/Merced Street/B Street/Tuolemne Street/G Street (planned Class I bike path)
- Huntington Boulevard (existing Class II west of Hazelwood Boulevard, planned Class III east of Hazelwood Boulevard)
- R Street (planned Class IV from Ventura Street to Tulare Street)
- R Street (planned Class II from Tulare Street to Fresno Street)
- Tulare Street (existing and planned Class II, planned Class IV)
- Hazelwood Boulevard (planned and existing Class II, planned Class III)
- Maple Avenue (planned and existing Class II, planned Class IV)
- McKenzie Avenue (planned Class III)
- Lane Avenue (planned Class II)
- Church Avenue (existing Class II)

Several of these corridors are in the northern portion of the study area and near downtown Fresno. Areas within the southern half of this study's boundaries are not well represented as prioritized bikeway corridors.

6.5.2 Bicyclist Collisions

Between 2018 and 2022 a total of 76 collisions occurred between vehicles and bicyclists, with 43 collisions occurring along high collision corridors within the study area. Most bicyclist collisions occurred in the northern portion of the South-Central Fresno Community Boundary, particularly within Downtown Fresno. Collisions were also focused along major arterials with high traffic volumes, including SR 180, SR 99, Ventura Avenue, Chestnut Avenue, and Fresno Street. These high collision corridors are highlighted in Table 3 below:

TABLE 3: BICYCLIST HIGH COLLISION CORRIDORS

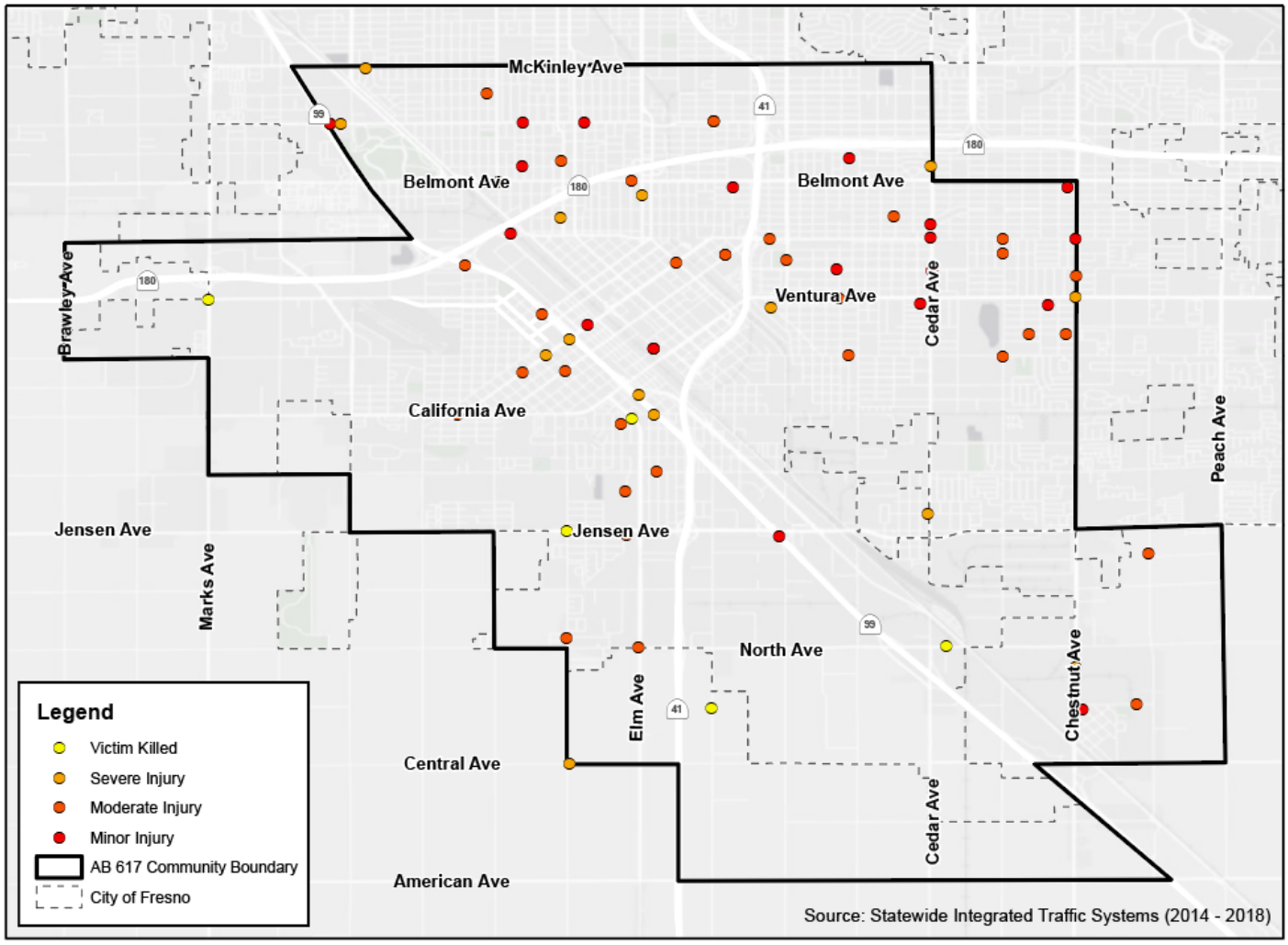
High Collision Corridor	# of Bicyclist Collisions
SR 180	7
SR 99	8
Olive Avenue	5
Belmont Avenue	6
Cedar Avenue	7
Jensen Avenue	4
California Avenue	1
Fresno Street	5

The figure below represents pedestrian collision severity and identifies whether bicyclists were killed or sustained severe, moderate, or minor injuries from collisions with vehicles. The table below summarizes collision severity as shown in Figure 39.

TABLE 4: BICYCLIST COLLISION SEVERITY

Collision Severity	# of Victims
Victim Killed	5
Severe Injury	14
Moderate Injury	33
Minor Injury	23
Total	**76**

FIGURE 39: BICYCLIST COLLISIONS



7 Community Engagement

In addition to the technical analysis of existing conditions based on available planning documents, policy, and data, feedback from community members who live and spend time in the South-Central Fresno community is critical to understanding on-the-ground conditions and informing possible solutions. The study was designed to provide multiple opportunities for community input at various project milestones.

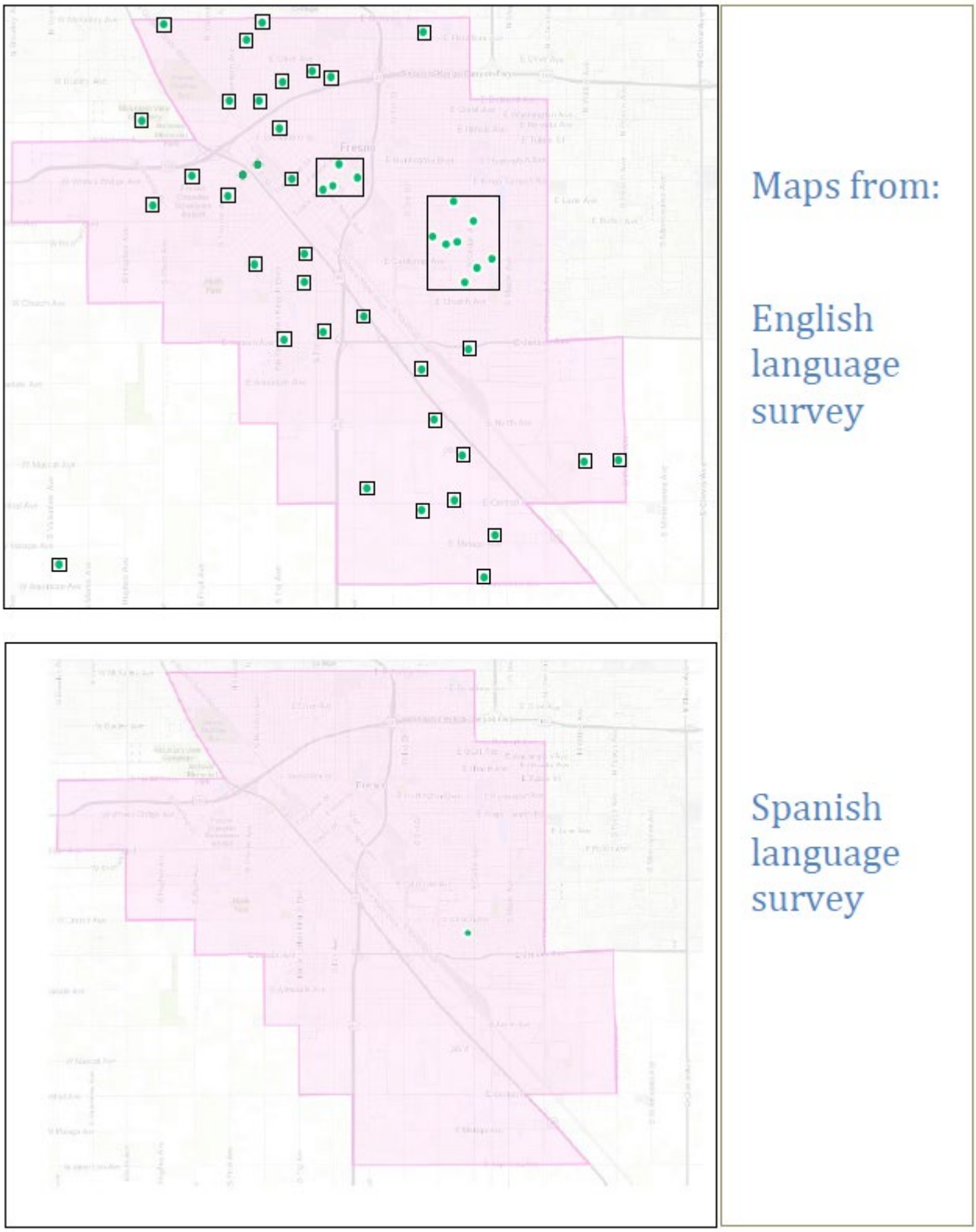
During the existing conditions phase of the study, the outreach process consisted of two forms of engagement: 1) stakeholder interviews and 2) an online survey. Stakeholder interviews were held to gather opinions related to the Existing Conditions Analysis. They were promoted through eblasts, the project's Community Advisory Group (which consists of AB 617 Sub-Committee members, businesses, CBOs, residents, and school district representatives), posted on the City's website, and promoted through the City's channels of information. The interviews were held at locally accessible locations on a Friday and on a Saturday. Less than ten participants were interviewed. While participants all lived or worked in the AB 617 community, the project team then developed, implemented, and promoted an online survey to gather more opinions. The online survey was distributed through a number of channels, including:

- E-blasts
- The City's website and social media channels
- Distribution at community centers, council district-sponsored meetings, community meetings
- Promotion by the project's Community Advisory Group (CAG) members

The survey was available between March 13, 2023, and April 25, 2023 and received a total of 60 responses. The survey had nine questions directed at understanding where respondents live or work, which streets felt the least safe to travel along, what conditions make streets feel unsafe, how air and noise pollution impacts respondents, how truck driver behavior impacts respondents' daily lives, and what kind of improvements respondents would like to see be made.

To assist in subsequent phases of engagement for future study tasks, the survey also asked for the best way to engage community members so that the project team can continue to obtain feedback about the needs and challenges experienced by the AB 617 community. Understanding which forums for engagement will be most effective will ensure that feedback will be gathered equitably and will create a more informed development of project recommendations.

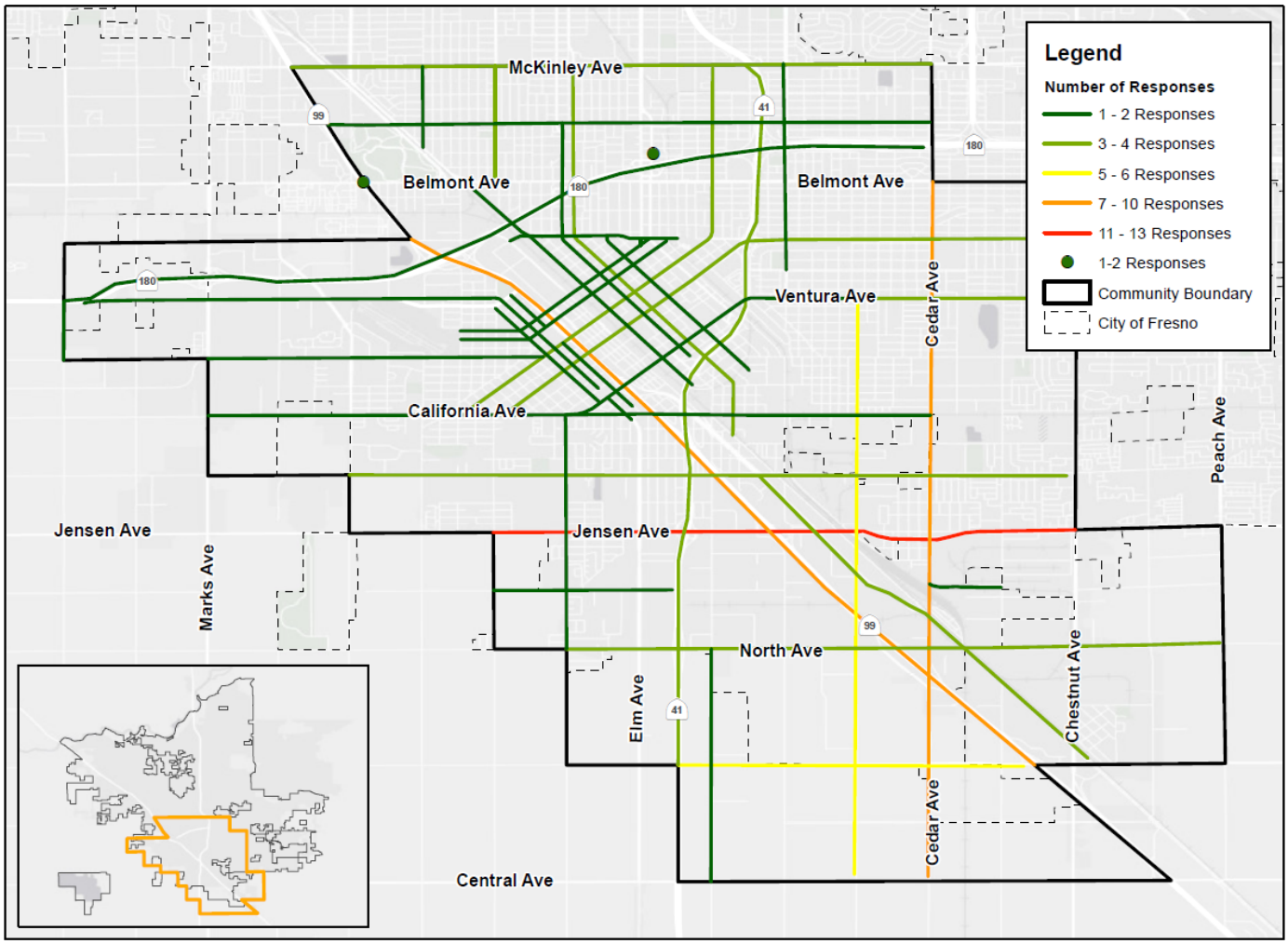
FIGURE 40: LOCATION OF WHERE SURVEY RESPONDENTS LIVE OR WORK



The survey asked respondents if there were specific streets or areas where traffic makes traveling challenging or uncomfortable for travelers. Additionally, the survey asked if there were specific streets or areas that travelers experienced high levels of noise or air pollution or avoided because traffic or safety conditions made them feel uncomfortable while walking or driving.

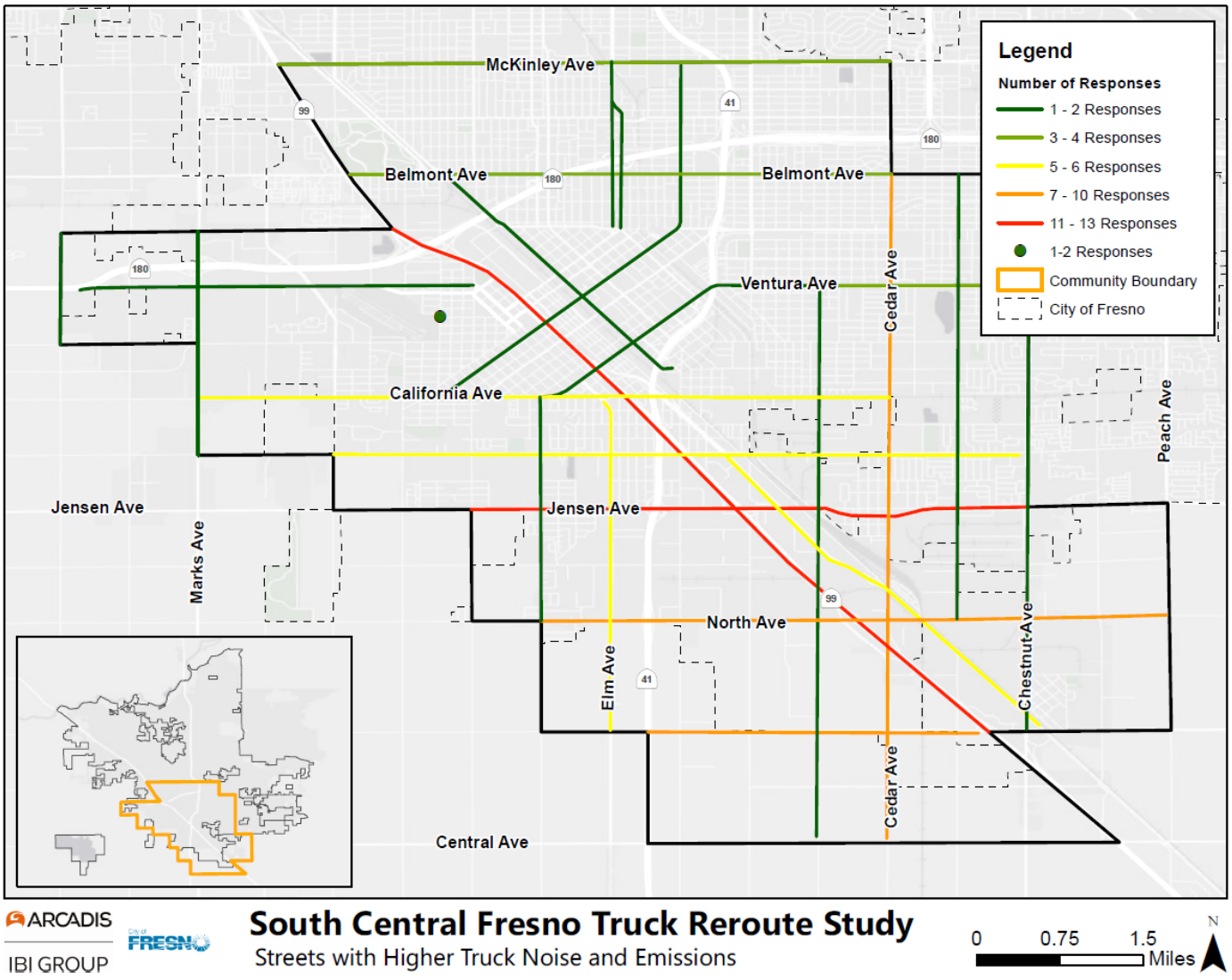
The streets and areas identified the most intimidating or uncomfortable for pedestrians, bicyclists, and drivers are highlighted in the figure below. The most frequently mentioned streets included Jensen Avenue, Cedar Avenue, Central Avenue, Orange Avenue, and SR 99.

FIGURE 41: INTIMIDATING OR UNCOMFORTABLE STREETS FOR TRAVELERS



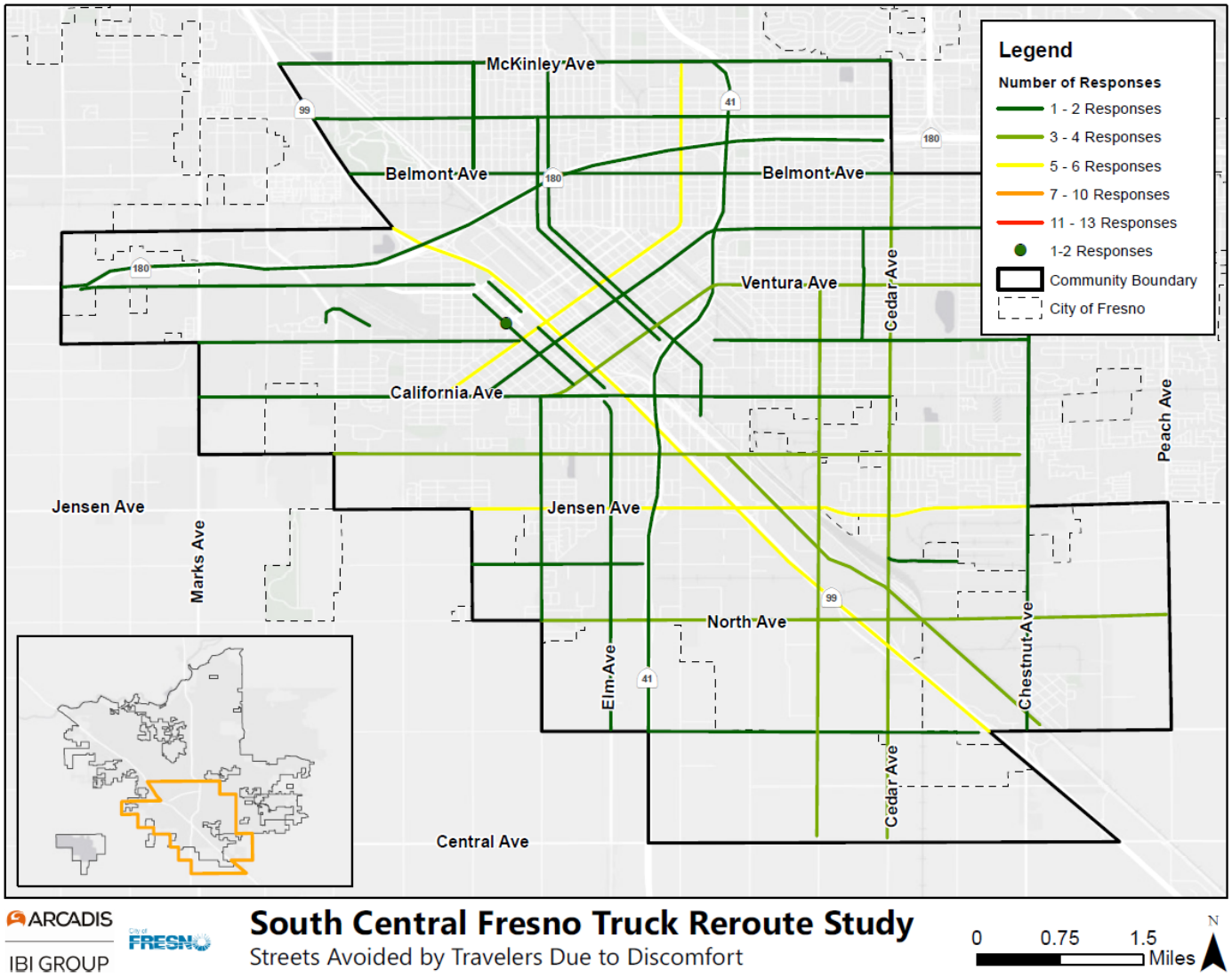
Streets or areas noted where respondents experienced heightened noise and heavier fumes from truck traffic are highlighted the figure below. The most frequently mentioned streets included North Avenue, Jensen Avenue, Cedar Avenue, California Avenue, Central Avenue, Elm Avenue, Golden State Boulevard, SR 99, and Church Avenue. These streets are all existing truck routes according to the City's Designated Truck Routes map.

FIGURE 42: STREETS WITH HIGHER TRUCK NOISE AND EMISSIONS



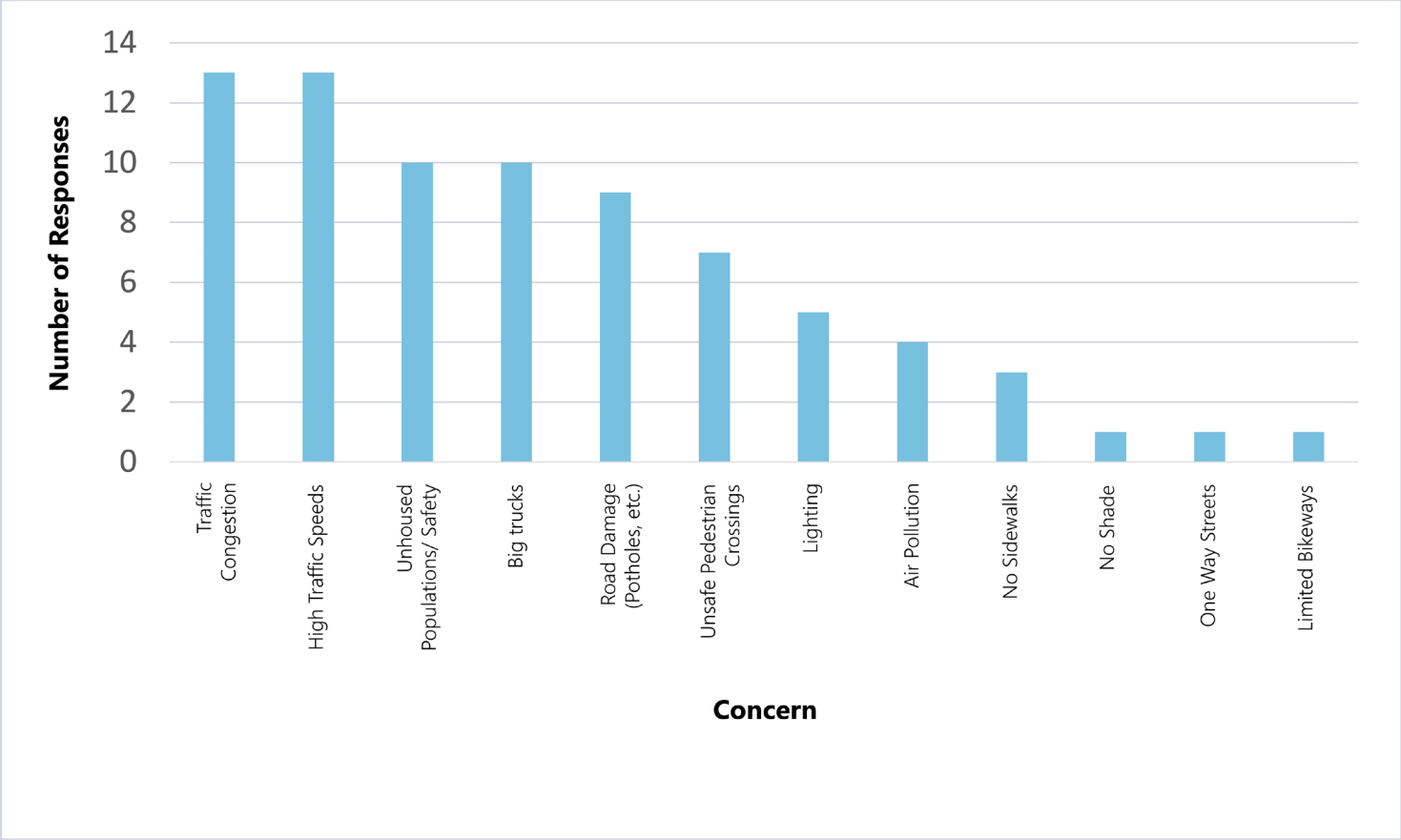
Streets or areas highlighted by respondents that are actively avoided because traffic or safety conditions made them feel uncomfortable while walking or driving are reflected in the figure below. The most frequently mentioned streets included SR 99, Jensen Avenue, and Fresno Street.

FIGURE 43: STREETS AVOIDED BY TRAVELERS DUE TO DISCOMFORT



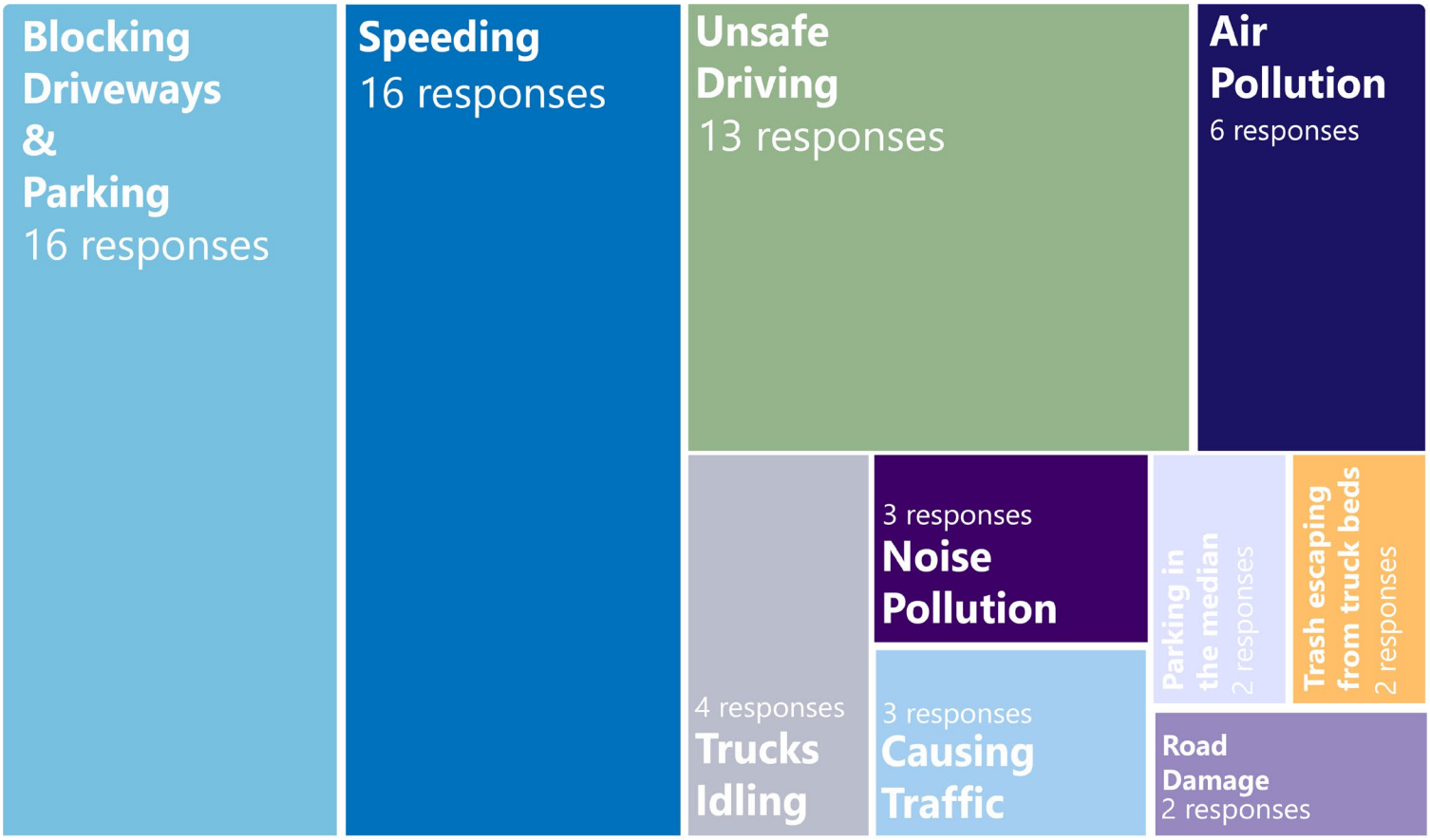
Respondents were also asked to give feedback on specific conditions that made them feel uncomfortable while walking or driving on the streets or areas mentioned in the survey questions above. The most common conditions noted by respondents included high volumes of traffic congestion, high traffic speeds, unhoused populations and public safety concerns, and big trucks crowding pedestrians and drivers when traveling on streets.

FIGURE 44: WHAT SPECIFICALLY MAKES YOU FEEL UNCOMFORTABLE WHILE WALKING OR DRIVING ON THE STREETS OR AREAS YOU MENTIONED?



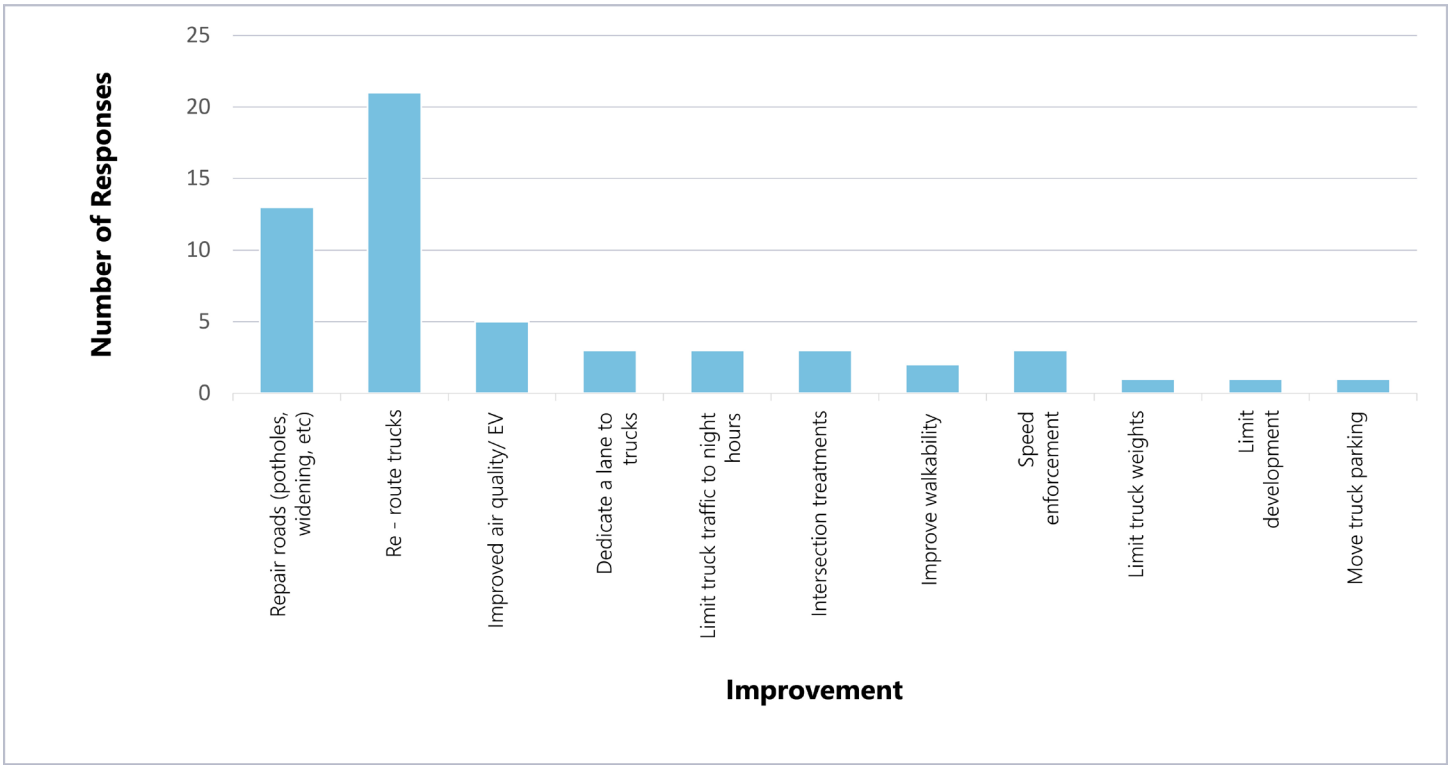
Similarly, the survey asked what types of truck behavior has made it difficult to move around the South-Central Fresno area. The figure below reflects the concerns that were highlighted by respondents, with larger boxes indicating that a concern received a higher number of responses. Concerns that were most commonly reported by respondents included trucks blocking driveways and parking spaces, speeding, unsafe driving behavior where drivers were seen texting while driving, trucks idling within the area, and air pollution from high volumes of truck traffic.

FIGURE 45: WHAT HAVE YOU OBSERVED AS THE MOST COMMON TRUCK DRIVER BEHAVIOR WHICH LED TO YOUR DISCOMFORT AT SPECIFIC LOCATIONS?



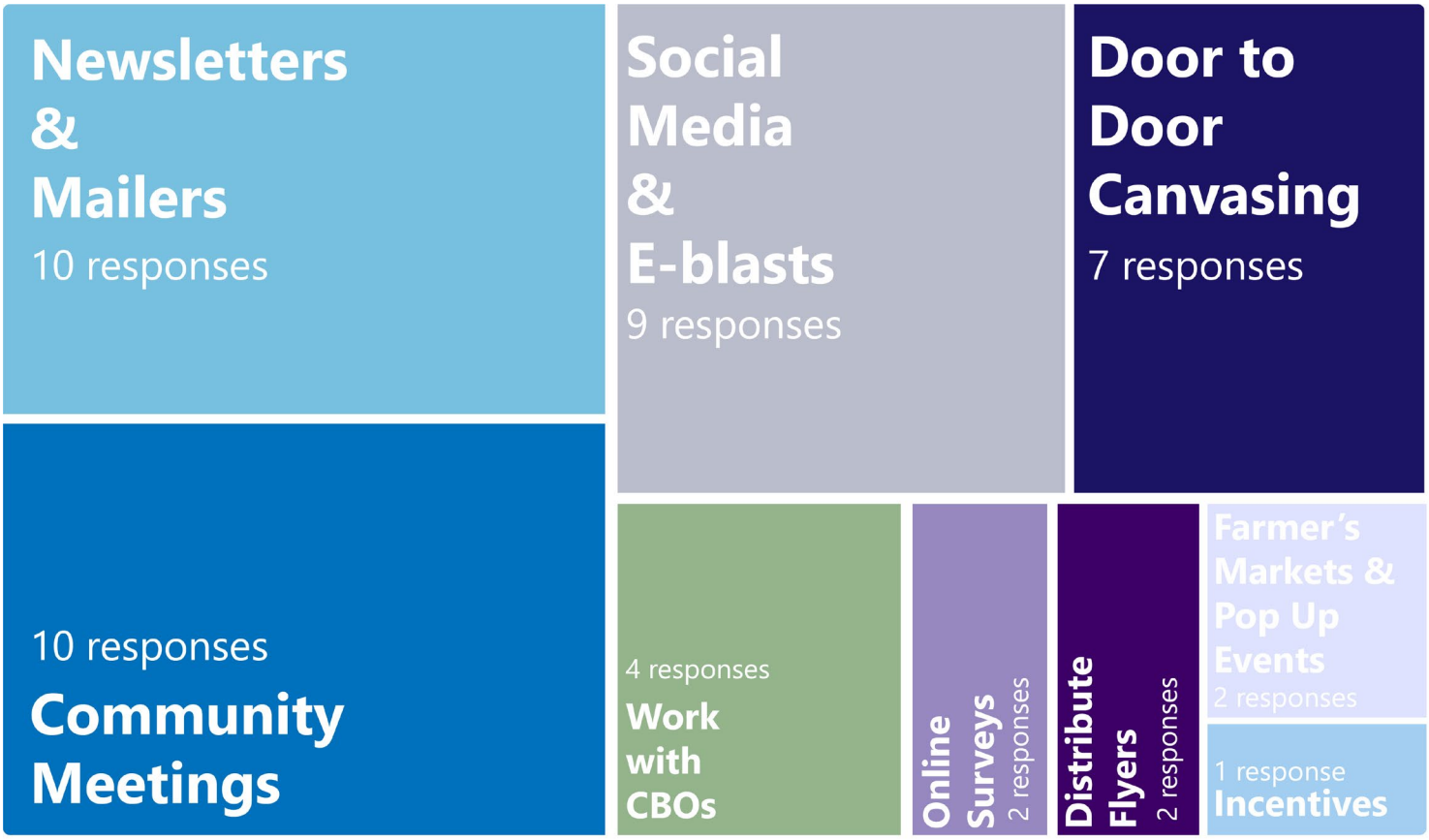
The survey also asked respondents about what types of improvements they would like to see be implemented within the South-Central Area in response to the concerns listed above. Common improvements requested included re-routing trucks to other streets or opening new roads that would allow truck traffic to bypass regular traffic, repairing roads from damage left behind by heavy freight vehicles, and improving air quality by introducing more electric vehicle trucks.

FIGURE 46: WHAT IMPROVEMENTS WOULD YOU LIKE TO SEE DONE TO REDUCE TRUCK TRAFFIC IMPACTS IN YOUR NEIGHBORHOOD



Lastly, there has been significant concern raised by community members that sufficient feedback has not been gathered and that their concerns have consistently been ignored. In an effort to address this concern, the survey polled respondents about which formats were the most effective way to gather feedback from community members. These formats can be used to ensure that feedback is gathered equitably and to ensure that recommendations reflect the same vision that community members have for the South-Central Fresno area.

FIGURE 47: WHAT IS THE BEST WAY TO ENGAGE OTHERS FROM YOUR NEIGHBORHOOD TO PROVIDE IDEAS AND FEEDBACK?



8 Next Steps

Following submission and review of this report, the project team will finalize the document as the deliverable for Task 3.

The subsequent Task 4 involves developing a Truck Management Approaches report based on national best practices related to minimizing truck impacts in and around neighborhood communities. After receiving feedback, the project team will develop recommended truck routes, community strategies, and an implementation plan for review before being finalizing the document as part of the Task 5 deliverable for this study. There are also several upcoming opportunities to gather feedback from the community, including at pop-up events and Technical Steering Committee (TSC)/ Community Advisory Group (CAG) meetings. Feedback from these engagement activities will be integrated into future deliverables and into the recommended truck routes and implementation plan.

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