APPENDIX C.

Existing and Future Conditions Technical Memorandum

YMPO ARIZONA

YUMA METROPOLITAN PLANNING ORGANIZATION

2026-2050 LONG-RANGE TRANSPORTATION PLAN UPDATE

Yuma Region in Motion

Existing and Future Conditions Working Paper

TABLE OF CONTENTS

1. LONG-RANGE TRANSPORTATION PLAN OVERVIEW

The Yuma Metropolitan Planning Organization (YMPO) is a federally recognized Metropolitan Planning Organization (MPO) for the Yuma region, located in southwestern Arizona. Federal legislation designates that an MPO must be established to represent urbanized areas with populations exceeding 50,000, as determined by the United States Decennial Census. The 1980 United States Decennial Census identified that the urbanized portion of Yuma County met the MPO population threshold of 50,000. In turn, the YMPO was formed in 1982. The purpose of the YMPO is to serve as a coordinating body for local, state, and federal agencies on traffic, transportation, air quality conformity, and related issues in Yuma County.

What is the YMPO Long-Range Transportation Plan?

Every four years, the YMPO updates the Long-Range Transportation Plan (LRTP). This plan provides a common vision for the region's future transportation needs and guides the investment of public funds in transportation facilities over the next 25 years. It includes short-, mid-, and long-term transportation strategies and addresses all modes of transportation, including automobile, bicycle, pedestrian, transit, truck, air, and rail movements. More directly than it has done in past, the YMPO strives to create a comprehensive LRTP that addresses all modes, evaluate roadway improvements and funding scenarios, and establish a path toward not only meeting the region's transportation needs but ensuring performance targets are met. The primary objectives of the YMPO's 2026-2050 LRTP are to:

- Comprehensively assess regional transportation performance and needs.
- Develop an achievable improvement and implementation plan.
- Establish policies to prioritize and systematically implement projects to address mobility, safety, pavement, bridge, and freight needs.

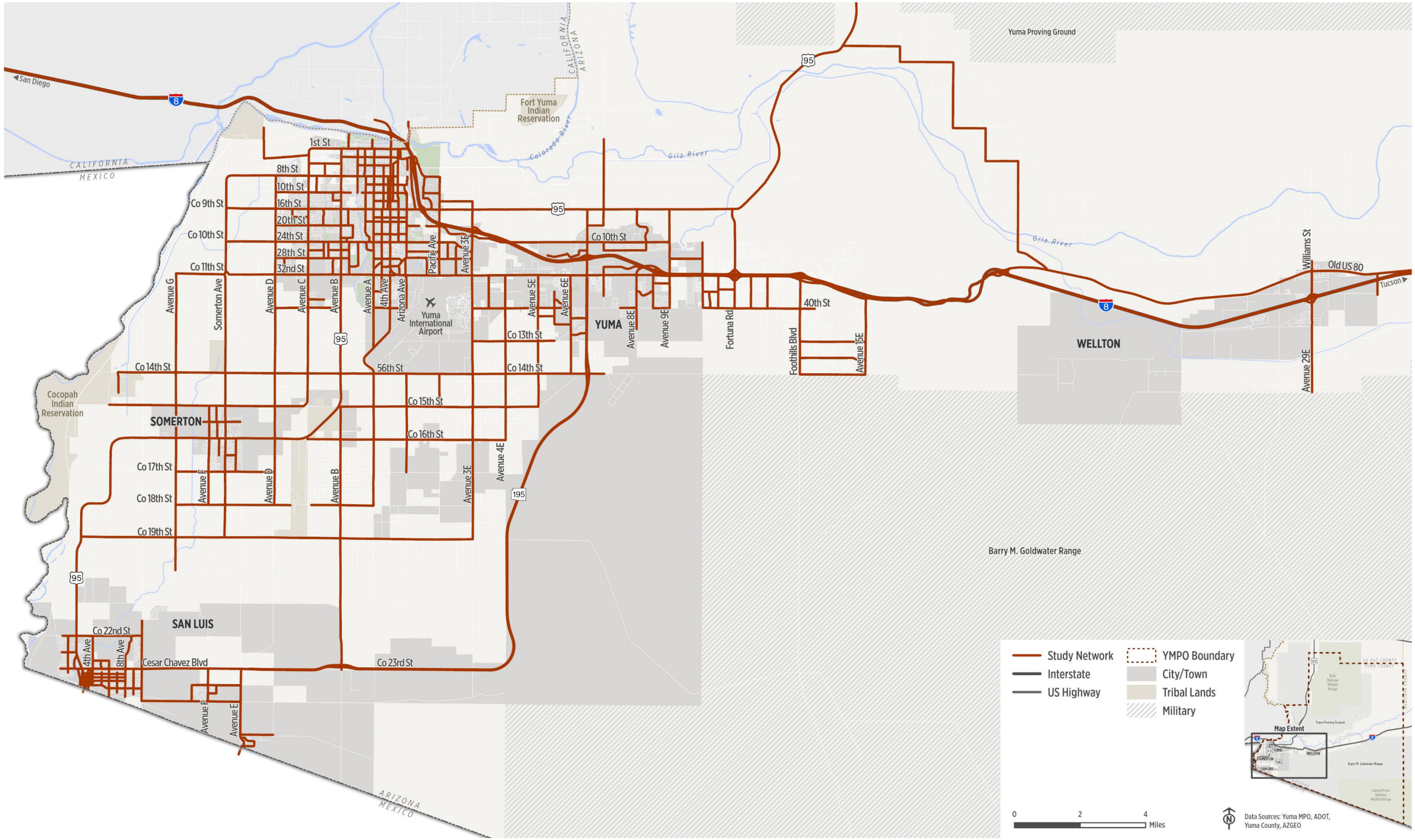
YMPO Planning Area

The YMPO is designated as a bi-state MPO, and the planning area encompasses the entirety of Yuma County and the community of Winterhaven in Imperial County **(see Figure 1.1)**. YMPO covers nearly 5,522 square miles and includes the cities of Yuma, Somerton, and San Luis, the Town of Wellton, the Cocopah Indian Tribe, and several unincorporated communities. Much of Yuma County is desert land accented by rugged mountains. However, several river valley regions contain an abundance of arable land irrigated with water from the Colorado River. Farming, cattle, tourism, warehousing, manufacturing, and two military bases—US Marine Corps Air Station (MCAS) and US Army Yuma Proving Ground (YPG)—are Yuma County's principal industries. MCAS shares one of the longest runways in the country with the Yuma International Airport.

Study Network

Streets are the physical backbone of the region's transportation network and one of its largest public assets. Developing a complete and connected multimodal network begins with identifying a wider transportation network of local and regional roadways called the "study network." The study network served as the basis for analyzing the performance and function of the region's transportation network. **Figure 1.1** illustrates the YMPO Long-Range Transportation Plan's study network.

Figure 1.1 Study Area



Why This Plan Is Important

The YMPO region is changing. We are growing by leaps and bounds, our transportation network is transforming, and the mobility needs of our residents are increasing. Some of these challenges are old, some are new, some are global, and others are unique to our region. To provide our residents, visitors, and businesses with a transportation network that works with their unique needs, we need to face our transportation future head-on. Here is a snapshot of the challenges we are facing and why this plan is so important.

The Region is Growing

People and businesses are increasingly choosing the YMPO area as their home. By 2050, our population is projected to increase by over 33 percent and employment by 25 percent! While this is great news for our economy, growth increases stress on our transportation system.

We Drive a Lot

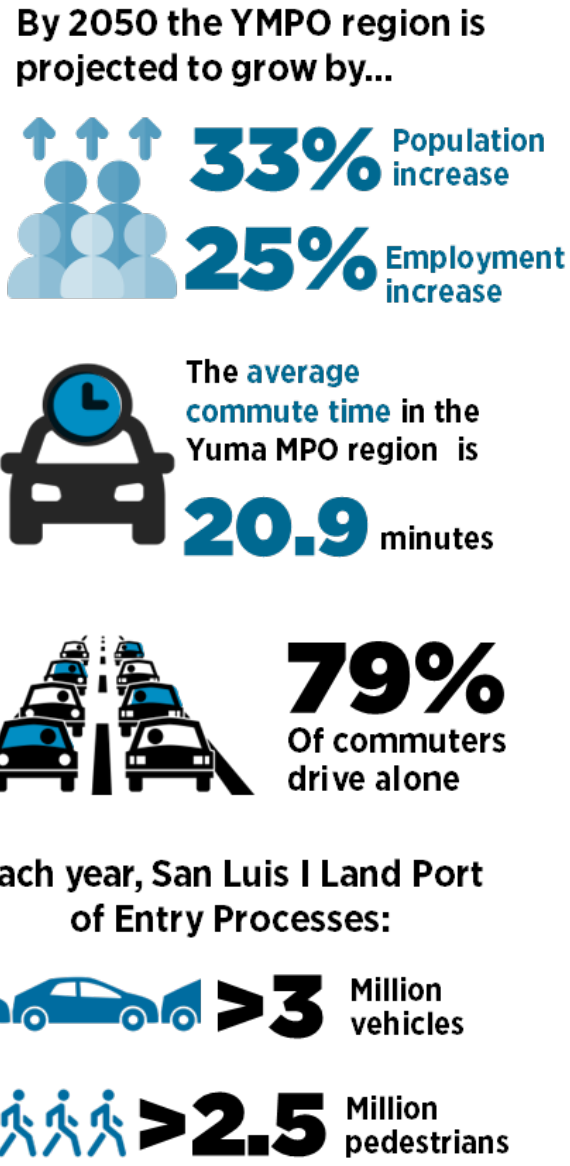
According to Replica data (a web-based transportation related big-data platform), there are over 804,000 trips on an average Thursday (Spring 2023). Of which, over 89% of these trips are made by vehicle. The reasons for the region's vehicle-dependency are complex and related not only to infrastructure, but also to the region's geography and culture. One way of combating congestion is reducing our dependency on vehicles and shifting our mindset and priorities when it comes to transportation and density.

Designing for Safety

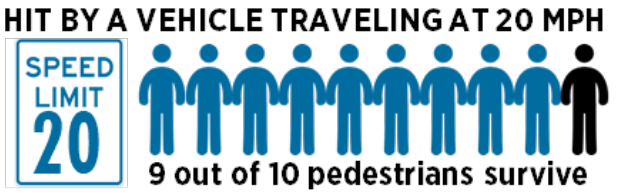
No matter how a person travels, safety is our top priority. Nationally in 2022 alone, one pedestrian was killed in a traffic crash every 70 minutes. This resulted in the highest number of pedestrians killed since 1981. In Arizona alone, the total number of people killed in traffic crashes increased by over 9% from 2021 to 2022. Rethinking how we approach roadway safety and the design helps keep our most vulnerable users safe and improves safety for everyone!

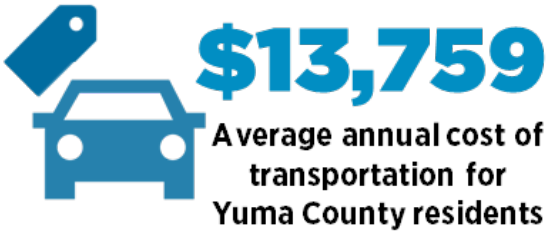
Local and International Hub

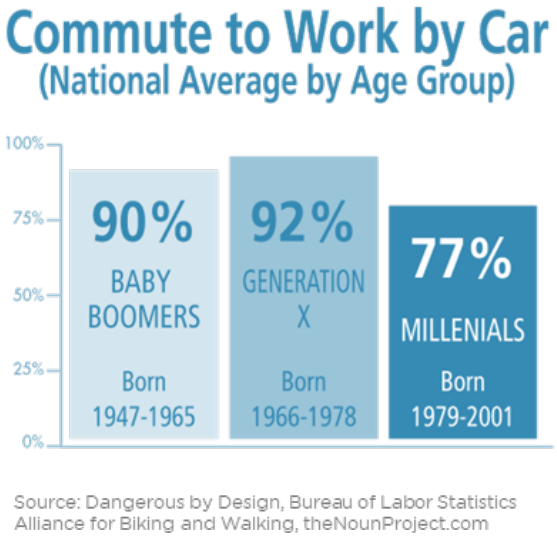
Strategically located at the crossroads of Arizona, California, and Mexico, the YMPO region is an important hub both in southwest Arizona and internationally. With over 3 million vehicles and 2 .5 million pedestrians a year, San Luis I Land Port of Entry (LPOE) is one of the busiest noncommercial LPOE in Arizona. Planned expansion to the LPOE could further increase congestion issues in San Luis and on US 95. International trade connections between the United States, Mexico, and Canada present significant opportunities and challenges for the YMPO region.



Source: Arizona Commerce Authority Socioeconomic Projections, INRIX, US Census Bureau, US General Services Administration, theNounProject.com







Source: Dangerous by Design, Bureau of Labor Statistics
Alliance for Biking and Walking, theNounProject.com

Prioritizing Investments

Since the completion of the Yuma Metropolitan Planning Organization (YMPO) 2022-2045 LRTP, several changes have occurred. These include changes in the local and regional economy, changes in travel patterns and characteristics, and increased federal funding opportunities through the Infrastructure Investment and Jobs Act. All these changes necessitate a fresh perspective on the region's current and future transportation needs. Prioritizing our scarce funds to vital links in our transportation system helps us to focus on projects that achieve the biggest bang for our buck.

Meet the Needs of Everyone

Increasingly, people of all ages are seeking more walkable and bikeable neighborhoods that offer a wide range of transportation options (including transit, shared mobility, and on-demand services). Baby boomers, retirees, and millennials are increasingly moving to locations where they can walk or ride a bike to access their daily needs. Research conducted by the Bureau of Transportation Statistics shows that nearly two-thirds of homebuyers consider the walkability of an area in their purchase decision. Employers are increasingly looking for locations that offer their employees walkable and bikeable communities in which to live, work, and play.

Incomplete Multimodal Networks

While there are hundreds of miles of sidewalks, bike lanes, and trails across our region, gaps in the system and lack of connectivity make it difficult for people to get around. Limited infrastructure, cul-de-sacs that restrict access, as well as interstates and canals that create discontinuous or inconvenient routes can discourage walking and biking, complicate emergency vehicle access, and create longer travel times.

Moving People, Not Cars

Our street network traditionally has been designed to focus on vehicle travel at the expense of the streets' other important functions. Streets should allow transit to travel efficiently, people to walk and ride bicycles, freight to move, as well as contribute to our livability by providing space for socializing and for businesses to function. Streets that do not provide comfortable alternatives to driving create barriers to transportation, especially for people who cannot drive, such as people with mobility limitations or those who cannot afford a vehicle.

How We Got Here

This section provides a summary of legislative acts and previous transportation plans, studies, and reports that influence how the YMPO region's transportation system looks and functions today.

Timeline of Legislative Acts

With significant legislative and policy changes occurring, this LRTP must account for and coincide with federal legislative changes and performance measurement targets initiated by the FAST Act and continued by the Bipartisan Infrastructure Law (BIL). Under these new regulations, all regional agencies are required to establish performance targets to be eligible as a funding recipient. The following illustrates key transportation legislative acts and the impacts of the acts on MPOs.

1991

Intermodal Surface Transportation Efficiency Act (ISTEA)

- Total funding: $155 billion with additional funding to MPOs
- Expanded MPO authority to select projects.
- Required fiscally constrained Transportation Improvement Plan (TIP).
- Required Transportation Management Area (TMA) to develop a Congestion Management Process Plan (CMP).

1998

Transportation Equity Act for the 21st Century (TEA-21)

- Total funding: $218 billion
- Increased spending by 40% over ISTEA levels.
- Modified MPO planning area boundaries to reflect nonattainment areas.
- Greater flexibility in spending federal highway and transit funds.

2005

Safe, Accountable, Flexible, Efficient Transportation Equity Act (SAFETEA-LU)

- Total funding: $286.4 billion
- Mandated that Long Range Transportation Plan (LRTP) and TIP should be updated every 4 years.
- 2 new planning factors: safety and security
- Provided guidance to incorporate transit operators in the LRTP funding estimate and financial plan.
- Required MPOs to develop an annual list of federal project.
- Required development of a Public Participation Plan.

2009

American Recovery and Reinvestment Act (ARRA)

- $831 billion stimulus package developed to jumpstart the economy during an economic downturn.
- Provided for more than $27 billion for roads and bridges and nearly $9 billion for transit projects across the nation.

2012

Moving Ahead for Progress in the 21st Century Act (MAP-21)

- Total funding: $105 billion
- Required MPOs to establish and use a performance-based approach and performance targets.
- MPOs' transportation plans must also include a "system performance report" to track progress.

2015

Fixing America's Surface Transportation Act (FAST ACT)

- Total funding: $305 billion
- Expanded planning to include resiliency and reliability; reducing stormwater impact; and enhancing travel and tourism.
- Emphasized public transportation and intercity facilities to reduce congestion and pollution.
- Established a new National Freight and Highway Projects program.

2021

Infrastructure Investment and Jobs Act (IIJA) aka Bipartisan Infrastructure Law (BIL)

- Total funding: $590 billion for transportation
- Updates HSIP program to include more flexibility for pedestrian or bicycling infrastructure and requires states to complete Vulnerable Road User safety assessments
- Creates new Safe Streets and Roads for All (SS4A) Program of $5 billion over 5 years.

Previous Plans and Studies

Previous transportation plans, studies, and reports were reviewed to acknowledge recommendations and implemented plans that apply to the existing multimodal transportation system in the region.

YMPO 2022-2045 Long-Range Transportation Plan (LRTP)

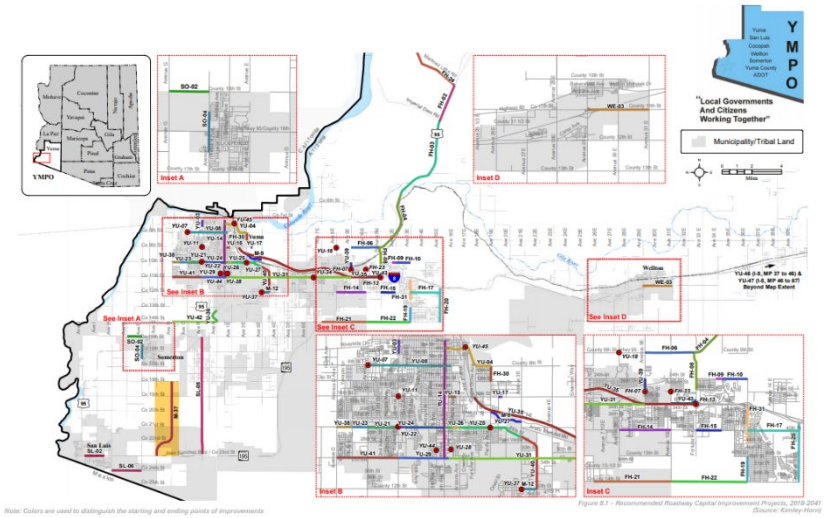
The 2022-2045 YMPO LRTP update includes a detailed report on the existing and future conditions of all transportation modes within the region. Based on these reports, a needs assessment was conducted to identify needs for the roadway, pedestrian, and bicycle networks. A matrix of recommended roadway and multimodal projects is provided detailing the proposed improvements to pavement preservation, bridges, safety, intersections, capacity, and maintenance. The project matrix includes the desired timeframe for each project, the lead agency, and a cost estimate. The proposed projects are estimated to total to over $490 million in project costs from 2022 to 2045.

San Luis Downtown Redevelopment Plan (2023)

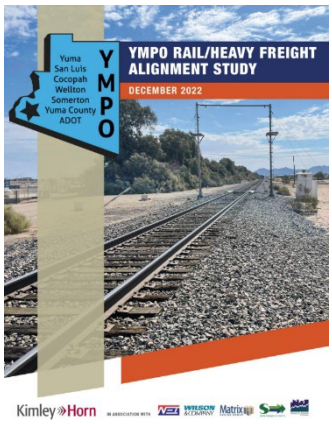
The goal of the San Luis Downtown Redevelopment Plan was to revitalize the downtown core of San Luis, Arizona to improve the quality of life for residents. To achieve this, several improvement projects were evaluated and conceptualized. These included projects related to streetscape enhancements, pedestrian amenities, bike lane evaluations, on-street parking, street lighting improvements, open space planning and development, signage and art enhancements, and several additional projects for turning Downtown San Luis into a vibrant and active space.

YMPO 2018-2041 Regional Transportation Plan (RTP)

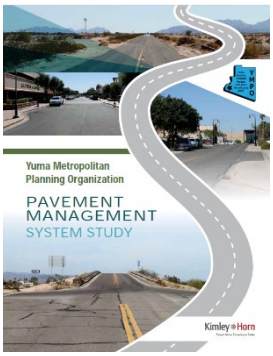
The 2018-2041 YMPO RTP update included comprehensive current and future conditions analyses as well as a transportation investment implementation plan for short-, mid-, and long-term planning horizons across the YMPO region. While the plan includes roadway, transit, and aviation needs, the focus of the plan was on roadway improvements, since YMPO member jurisdictions have control over allocating revenue associated with roadway improvements. Ultimately, the plan recommended numerous short-, mid-, and long-term improvement projects totaling over $394.3 million in project costs from 2018 to 2041. Recommended improvements from the 2018 RTP were reviewed to determine the status of the projects and evaluate them against current and future needs.



YMPO Rail/Heavy Freight Alignment Study (2022)



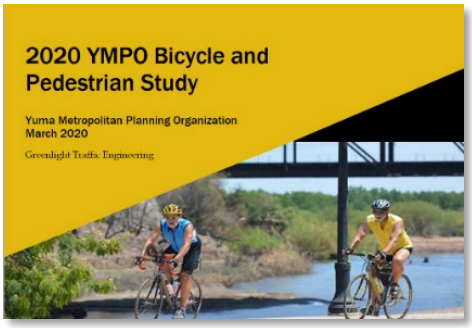
The purpose of this study was to identify a 500-foot-wide corridor for a potential rail/heavy freight corridor. The corridor would ideally follow along State Route 195. An alternatives analysis was conducted to identify the corridor that would maximize the benefits of the rail investment and minimize potential negative outcomes. The best alternative runs along SR 195 from UPPR just north of 32nd Street, all the way south along SR 195, turning southward east of Avenue E. Ultimately, the corridor would help to create an efficient and safe freight transportation network that will provide regional connections between Sonora, Mexico, and Yuma County. However, due to several limitations, the alternative concept was not formally recommended.



YMPO Pavement Management System Study (2020)

The objective of the YMPO Pavement Management System (PMS) Study was to provide the YMPO and its member agency stakeholders with the information necessary to make informed decisions about how to maintain pavement assets and at what cost. Because the City of Yuma and Yuma County have previously implemented PMS programs and have completed pavement condition assessment activities in recent years, the study focused on developing similar data sets for the Cocopah Nation, the Cities of San Luis and Somerton, and the Town of Wellton. Of the nearly 3.8 million square yards of pavement assessed, nearly a quarter (22.9 percent) of the pavement was in good condition and over 40 percent of pavement was satisfactory. Over 13 percent of pavement conditions were found to be in poor to failing condition.

YMPO Bicycle and Pedestrian Study and Design Standards (2020)

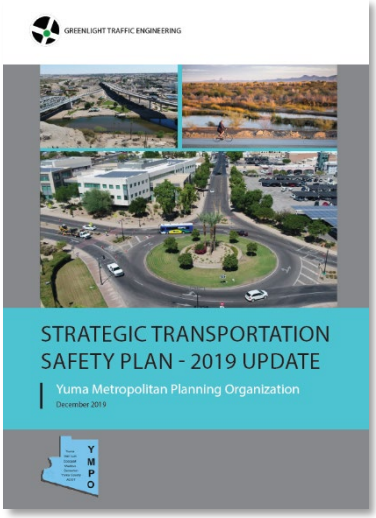


The purpose of this study was to evaluate existing pedestrian and bicycle facilities within the YMPO region and to determine additional facilities that would promote and improve the safety and accessibility for bicyclists and pedestrians across the entire region. The study reviewed existing pedestrian and bicycle facilities in the YMPO region and identified deficits and opportunities for safety improvements. Recommendations included:

- Bike lanes along all arterials, including 6-foot-wide shoulder for rural arterials, sharrow markings in the urban areas with speed limit of 35 mph or less, and adding bike lanes in the urban areas with speed limit higher than 35 mph.
- Bike lanes along all transit routes and on collectors that are not covered by transit routes.
- Installed marked crosswalks at transit stops and between neighborhoods and parks.

YMPO Regional Strategic Transportation Safety Plan Update (2019)

This purpose of this plan was to identify key strategies and resources that can be implemented to reduce the risk of fatal and serious injury crashes occurring on roadways within the YMPO region. A key component of the STSP was to identify projects for pursuing Highway Safety Improvement Program (HSIP) funds. Nine HSIP applications were developed, and eight projects were awarded $10 million. These include:



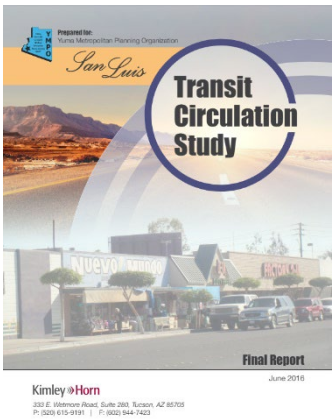
- City of Yuma:
    - Flashing yellow arrows for 32nd Street & Avenue 7E, 32nd Street & Pacific Ave, 24th Street & Avenue A
    - Wider pavement markings for 5 arterials (30 miles)
    - Pedestrian hybrid beacons for 4th Avenue & Court Street/4th Street/12th Street, 12th Street & 6th Avenue, Giss Parkway & 1st Ave
- Yuma County:
    - Curve realignment, paved shoulders, warning signage for County 11th Street & Avenue G
    - Wider pavement markings for 13 arterials (98 miles)
    - Centerline rumble strips for Avenue G and County 19th Street
    - Traffic signal installation and turn lanes for County 14th Street & Avenue 4E
- City of San Luis:
    - Curve realignment, paved shoulders, and warning signage for 10th Avenue & Los Alamos Street

Binational Freight Corridor Study

The Binational Freight Corridor Study was initiated to support identifying improvements to enhance the efficiency of the multimodal transportation system between the United States and Mexico. To date, only Technical Memorandum 1 is provided to the public. This memo provides a descriptive analysis of the study area and maps the existing and relevant freight facilities within the Pacific and Central Corridors market region. San Luis II (San Luis/San Luis Rio Colorado) is identified as one of the 24 international crossings that serve commercial vehicles.

San Luis Transit Circulator Study (2016)

The goal of the San Luis Transit Circulator Study was to evaluate the feasibility of, and opportunities for, a new transit circulator route to serve residents and visitors of San Luis with additional mobility options. The study analyzed four alternative circulator alignments and identified a preferred route. Several operating parameters, such as service span and frequency, were included in the development of an operating plan. The plan aims to integrate the circulator route with all modes of transportation with an emphasis on leveraging the existing Yuma County Area Transit (YCAT) service and accommodating safe pedestrians access.



Additional Local and Regional Studies and Plans

A review of member agency and key stakeholders' previously completed studies and plans was reviewed to better understand the local, regional, and statewide network of transportation facilities that will directly or indirectly impact the YMPO's transportation system. This review included:

- City of Yuma (2022), Yuma County (2023), Town of Wellton (2023), City of Somerton (2010), and City of San Luis (2020) Comprehensive Plans
- Arizona State Freight Plan (2022)
- ADOT Vulnerable Road User Safety Assessment (2023)
- ADOT Interstate 8 Corridor Profile Study (2023)
- ADOT State Highway-Rail Grade Crossing Action Plan (2022)
- Yuma County Intergovernmental Public Transportation Authority (YCIPTA) Short Range Transit Plan (2021)
- ADOT I-8 Corridor Profile Study (2017)
- ADOT Binational San Luis Transportation Study (2013)
- City of Somerton Transportation Plan Update (2013)
- Yuma County Rail Corridor Study (2013)
- YCIPTA Wellton Regional Transit Connector Service Feasibility Review and Implementation Plan (2006)
- YCIPTA/YMPO Short Range Transit Plan (2021)
- City of Yuma Capital Improvement Program (2024)
- City of Yuma Parks, Art, Recreation & Trails Plan (2024)
- City of Yuma Intelligent Transportation System Strategic Plan (2020)
- City of Yuma Tree and Shade Master Plan (2020)
- City of Yuma Transportation Master Plan (2020)
- City of Yuma Infrastructure Improvements Plan (2019)
- City of Yuma Bikeways Plan (2018)
- City of Yuma Transportation Master Plan (2014)
- US Border Patrol Strategy (2020)
- San Luis POE Impact Study (2023)
- Town of Wellton Bicycle and Pedestrian Plan (2014)
- Wellton Branch Rail Rehabilitation Study (2014)
- Yuma County Transportation Needs for the Foothills and Mesa Del Sol Areas PARA (2012)
- Town of Wellton Transportation Long-Range Plan PARA (2011)
- Winterhaven/Quechan Reservation Rural Connector (2008)
- Federal Railroad Administration Planning Grant to develop a DCR for Grade Separation at Ave 9E, Fortuna Rd, and County 29E (2025)

Plan Development

Long-Range Transportation Plan (LRTP) Requirements

An LRTP is a federally mandated document for MPOs to establish and/or update long-term planning vision and goals as well as to reassess changes to the regional system and reprioritize regional investments. Every four years, YMPO identifies the transportation system's strengths and weaknesses; forecasts changes in population, employment, and land use; and creates a plan to address existing and future mobility needs. Pursuant to Title 23 U.S. Code § 134 and Title 49 U.S. Code § 5303, all MPOs that are not designated with air quality non-attainment are required to update their respective transportation plans at a frequency of no longer than every five years using a planning horizon of 20 or more years. In addition to federal requirements, an Arizona executive order mandates that all MPO transportation plans are fiscally constrained and utilize the state demographer's population projections in all traffic-model forecasting.

LRTP Development Process

The development of the YMPO 2026-2050 LRTP is a collaborative effort that brings together residents, the business community, regional and state partners, and local stakeholders to create a strategic transportation vision for the YMPO area. The Plan's process includes listening, complex technical analysis, as well as coordination with concurrent planning initiatives and community partners. The multi-phased process includes the following steps:

SETTING THE STAGE	The YMPO Long-Range Transportation Plan assesses how people and goods are traveling in and through the region, as well as the performance, safety, and comfort of the region's existing transportation network. The process provides a base for understanding the region's transportation challenges and needs today and tomorrow.
ALTERNATIVES EVALUATION AND DRAFT RECOMMENDATIONS	A transportation network is only as good as its weakest link. Draft improvement strategies will be identified and evaluated to address or mitigate issues, system gaps, and needs identified in the first step.
RECOMMENDED INVESTMENT PLAN	Draft candidate projects identified in the previous step will be prioritized using a data-driven process and funding availability. The draft investment plan will be developed to outline short-, mid-, and long-term prioritized project and investment recommendations.
FINAL 2050 LRTP	This phase of the project includes a collaborative process between the YMPO and its member agencies to recommend projects and priorities.

2. PLANNING FRAMEWORK

This section outlines the region's vision for transportation as well as the goals, objectives, and performance measures that lay the groundwork for the LRTP's planning process. After plan adoption, these goals, objectives, and performance measures are routinely reviewed and monitored through an annual process that reports on system performance.

YMPO LRTP Goals

The future of the transportation system in the Yuma MPO region will be driven by the goals, objectives, and performance measures developed by the LRTP. Since these goals, objectives, and performance measures set the foundation for the entire planning effort, it is important that they reflect the direction of the community. The YMPO Executive Board previously elected to adopt and support ADOT's transportation planning goals and performance targets; however, additional regional goal areas and targets have also been identified as priority transportation areas for the region based on feedback from the Technical Working Group (TWG), YMPO Technical Advisory Committee (TAC) and the YMPO Executive Board. **Figure 2.1** outlines the goal statements that will set a roadmap for the region while also meeting federal requirements.

Figure 2.1. YMPO Adopted ADOT Transportation Goals and Additional YMPO Regional Priority Transportation Goals

Objectives, Performance Measures, and Targets

The YMPO 2026-2050 LRTP will be developed to be consistent with the requirements of the Infrastructure Investment and Jobs Act (IIJA), signed into law on November 15, 2021. IIJA continues the performance-driven, outcome-based approach to transportation planning first introduced with the Moving Ahead for Progress in the 21st Century (MAP-21) Act, which was signed into law in 2012; and continued in the Fixing America's Surface Transportation (FAST) Act, which was signed into law on December 4, 2015. Performance-based planning methods help to translate a long-range vision into a set of goals, priorities, and performance criteria that can be used to guide investment decisions.

Performance measures are quantifiable outcomes that help track progress toward accomplishing goals. Performance targets are intended to be realistic and achievable outcomes given the funding constraints of the region. FHWA requires states (ADOT) to establish the goals/percentages for the categories defined by FHWA, as outlined in MAP-21, the FAST Act, and the IIJA. YMPO also has elected to support ADOT's performance targets along with their goals. **Table 2.1** outlines the objectives, performance measures, and performance targets for the YMPO LRTP.

Table 2.1. Objectives, Performance Measures, and Targets

Objective	Performance Measure	Performance Target
ADOT Goal: Safety		
Reduce the number of fatalities and serious injuries on public roads in the region.	Number of fatalities	Year 2024 target: 1,286.1
	Rate of fatalities per 100 million VMT	Year 2024 target: 1.745
	Number of serious injuries	Year 2024 target: 3,636
	Rate of serious injuries per 100 million VMT	Year 2024 target: 5.001
	Number of non-motorized fatalities & serious injuries	Year 2024 target: 883.5
ADOT Goal: Infrastructure Condition		
Increase the percentage of roads in *good* condition.	Percent of Interstate pavements in *good* condition	2- and 4-year target of 44% or more of interstate pavements in *good* condition
	Percent of Interstate pavements in *poor* condition	2- and 4-year target of 2% or less of interstate pavements in *poor* condition
	Percent of Non-Interstate NHS pavements in *good* condition	2- and 4-year target of 28% or more of non-interstate NHS pavements in *good* condition
	Percent of Non-Interstate NHS pavements in *poor* condition	2- and 4-year target of 6% or less of non-interstate NHS pavements in *poor* condition
Increase the percentage of bridges in *good* condition	Percent of NHS bridges classified in *good* condition based on deck area	2- and 4-year target of 52% or more of NHS bridges in *good* condition
	Percent of NHS Bridges classified in *poor* condition based on deck area	2- and 4-year target of 4% or less of NHS bridges in *poor* condition

Table 2.1. Objectives, Performance Measures, and Targets (Continued)

Objective	Performance Measure	Performance Target
ADOT Goal: System Reliability		
Improve travel time reliability	Percent of person-miles on interstate with reliable travel times	81% (2 year) and 71% (4 year) target of person-miles on interstates have reliable travel times
	Percent of person-miles on non-interstate NHS with reliable travel times	84% (2 year) and 77% (4 year) target of person-miles on non-interstate NHS have reliable travel times
ADOT Goal: Freight Movement & Economic Vitality		
Maintain or improve truck travel time reliability	Improve interstate truck travel time reliability index	Interstate truck travel time reliability index of 1.37 (2 year) and 1.48 (4 year)
ADOT Goal: Environmental Sustainability		
Improve regional air quality (Portions of YMPO region are classified as nonattainment areas for PM10 and Ozone. YMPO is committed to helping ADOT achieve their targets as outlined in the third column on the right)	Reduce volatile organic compounds (VOC) emissions	222.95 (2 year) and 343.669 (4 year) targets
	Reduce nitrogen oxide (NOx) emissions	393.892 (2 year) and 571.136 (4 year) targets
	Reduce carbon monoxide emissions	5.027.922 (2 year) and 8,120.895 (4 year) targets
	Reduce PM 10 emissions	965.365 (2 year) and 1,817.637 (4 year) targets
	Reduce PM 2.5 emissions	0 (2 year) and 3.467 (4 year) targets
Regional Priority Goal: Congestion Reduction on Regional Roads of Significance (RRS)		
Reduce annual hours of delay	Annual hours of vehicle delay	Reduce annual hours of vehicle delay compared to previous year
Reduce roadway segment miles on RRSs with unacceptable LOS (LOS E or LOS F)	Miles of roadway segments that perform at LOS E or LOS F during peak periods	Reduce roadway miles with unacceptable LOS (LOS E or F) compared to previous year
Reduce intersections on RRSs with unacceptable LOS (LOS E or LOS F	Number of intersections that perform at LOS E or LOS F during peak periods	Reduce number of intersections with unacceptable LOS (LOS E or F) compared to previous year
Regional Priority Goal: Bicycle and Pedestrian Mobility		
Increase percentage of roads with bicycle lanes or paved striped shoulders	Miles of bike facilities	Increase mileage of bike facilities
Increase percentage of roads with safe sidewalk facilities	Miles of pedestrian facilities (sidewalks, trail paths, shared-use paths, etc)	Increase mileage of pedestrian facilities
Reduce five-year rolling average of bicyclist and pedestrian crashes	Number of bicyclist and pedestrian related crashes	Decrease in five-year rolling average of bicyclist and pedestrian related crashes compared to previous five-year average
Increase percent share of bicycle trips	Percent of trips in the region made by bicyclists	Increase in percent share of bicyclist trips compared to previous year

Table 2.1. Objectives, Performance Measures, and Targets (Continued)

Objective	Performance Measure	Performance Target
Regional Priority Goal: Transit Mobility		
Replace vehicles and equipment that are beyond useful life	Percent of revenue vehicles beyond useful life by 2023	26% or less of revenue vehicles beyond useful life by 2023
	Percent of equipment beyond useful life by 2023	50% or less of equipment beyond useful life by 2023
Maintain TERM (Transit Economic Requirements Model) rating below 3.0	Percent with a TERM rating below 3.0	20% or less with a TERM rating below 3.0
Increase annual transit ridership on YCAT system.	Annual YCAT transit ridership	
Involve more groups in the YMPO Regional Mobility Committee	Number of participating agencies in the Regional Mobility Committee	
Market the Enhanced Mobility of Seniors and Individuals with Disabilities (FTA 5310 Program) to the public.	Number of trips provided	
Work to meet unmet transportation needs within Yuma County	Transportation funding	
Increase cost-effectiveness of transit	Contract expense per revenue vehicle hour	
Increase annual transit ridership on YCAT system	Annual YCAT transit ridership	
Regional Priority Goal: Border Crossings		
Improve the accessibility and efficiency of cross-border travel for all modes of travel	Number of commercial truck crossings at POE2	
	Number of personal vehicle crossings at POE1	
	Number of pedestrian crossings at POE1	
Improve wait times at San Luis Ports of Entry	The U.S. Customs and Border Protection has set the following goals: Ready Lanes: 50% of general traffic lane wait times - A “Ready Lane” is a dedicated lane for travelers entering the U.S. at land border ports of entry with identification that contains a radio frequency identification (RFID) chip	

Table 2.1. Objectives, Performance Measures, and Targets (Continued)

Objective	Performance Measure	Performance Target
Regional Priority Goal: Tourism & Development		
Improve facilities that provide access to key tourism destinations and regional activity centers.		
Regional Priority Goal: Aviation		
Contribute to the economy of the region by increasing the level of aviation activity	Military aircraft operations	
	GA local operations – Those operating in the local traffic pattern or within a 20-mile radius of the airport	
	GA itinerant operations - Those GA operations (excluding commuter or air taxi) not qualifying as local	
	Commercial services – scheduled operations by certified carriers or interstate carriers	

3. THE YMPO REGION TODAY

This section presents a summary of existing socioeconomics, land use patterns, and economic characteristics and trends to set a baseline for evaluating the region's transportation system.

The YMPO Region at a Glance

Once a sleepy agriculture area, the Yuma MPO region has transformed into a diverse community that still maintains its strong heritage in agriculture. The region's dynamic growth and advantageous geographic location between California and Mexico have attracted a diverse socioeconomic, ethnic, and generational population.

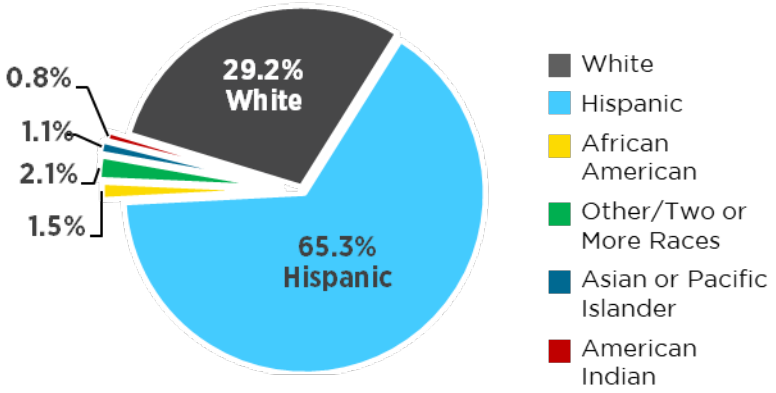
- **Total Population (Year 2023):** 213,027
- **Median Age:** 34.8
- **Female Population:** 48.5%
- **Minority Population:** 70.8%
- **Total Housing Units:** 97,148

We are Changing...

According to the 2022 US Census Bureau American Community Survey:

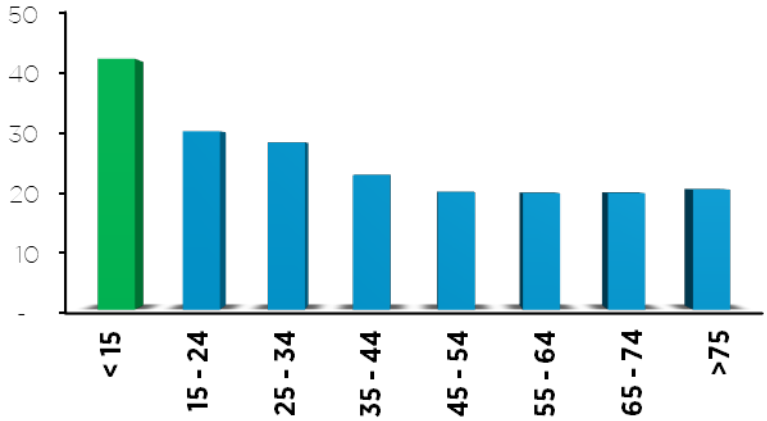
- **We are getting older:** Since 2000, our median age has slightly increased from 33.9 to 34.8 years of age. Nearly 35 percent of residents in the YMPO region, however, are under 25 years old today.
- **We have more money:** Since 2000, our median household income has increased by over 28 percent! Rising from $32,182 in 2000 to $56,439 in 2023.
- **Vehicle travel is still the predominant mode:** Single driver commuters has increased to 78.2 percent from 73.7 percent in 2000.
- **There is a digital divide:** 21 percent of households do not have a desktop or laptop computer, and 8.6 percent of households do not have a smartphone.

Population by Race

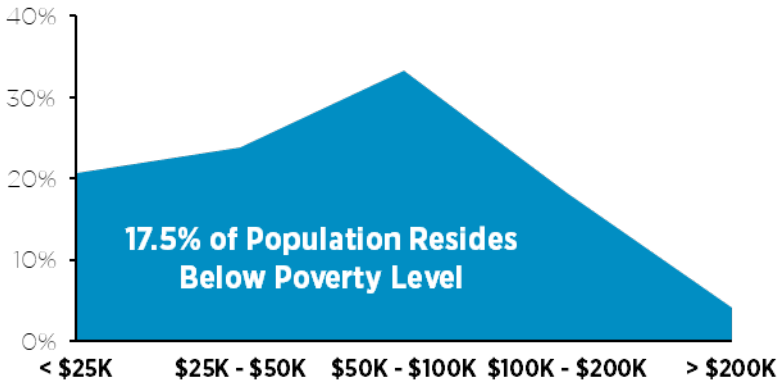


Population by Age in thousands

Median Age: 34.8



Household Income



Source: U.S. Census Bureau, ACS 2022 5-year Estimates

Lay of the Land

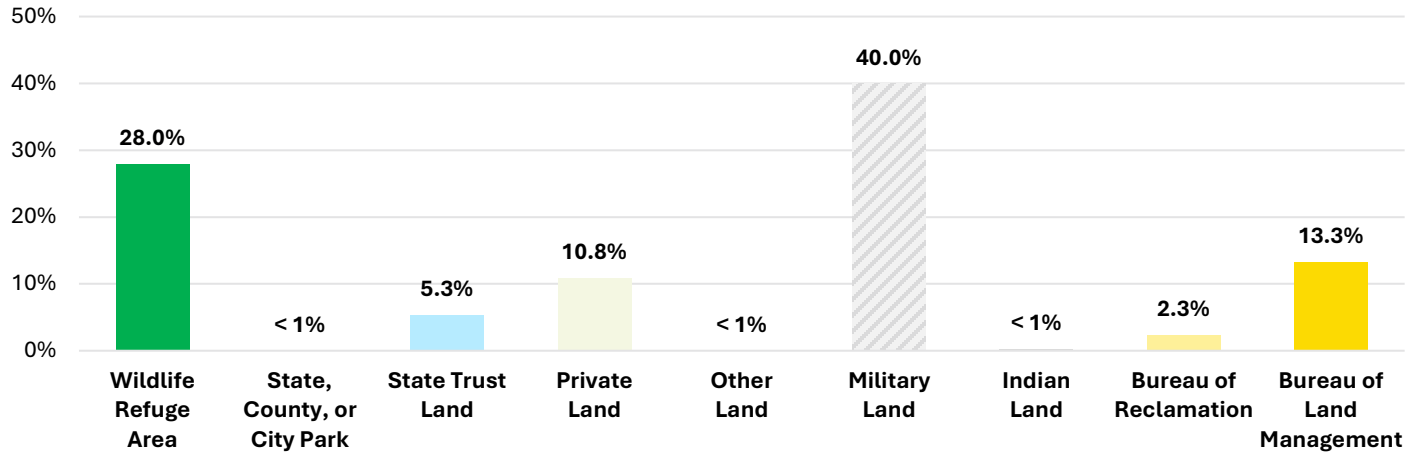
Having a strong understanding of the land use context and development patterns is imperative to creating a transportation network that complements surrounding character and facilitates movement. Just as land use influences the transportation network, the transportation network influences land use. For example, a local roadway in a residential neighborhood serves a different purpose and use than a high-capacity corridor in the downtown core.

Land Ownership Today

The YMPO region covers over 5,500 square miles and has remained relatively unchanged since the previous LRTP. As illustrated in **Figure 3.1 and 3.2**, diverse landowners occur throughout the YMPO region. Major landowners in the region include:

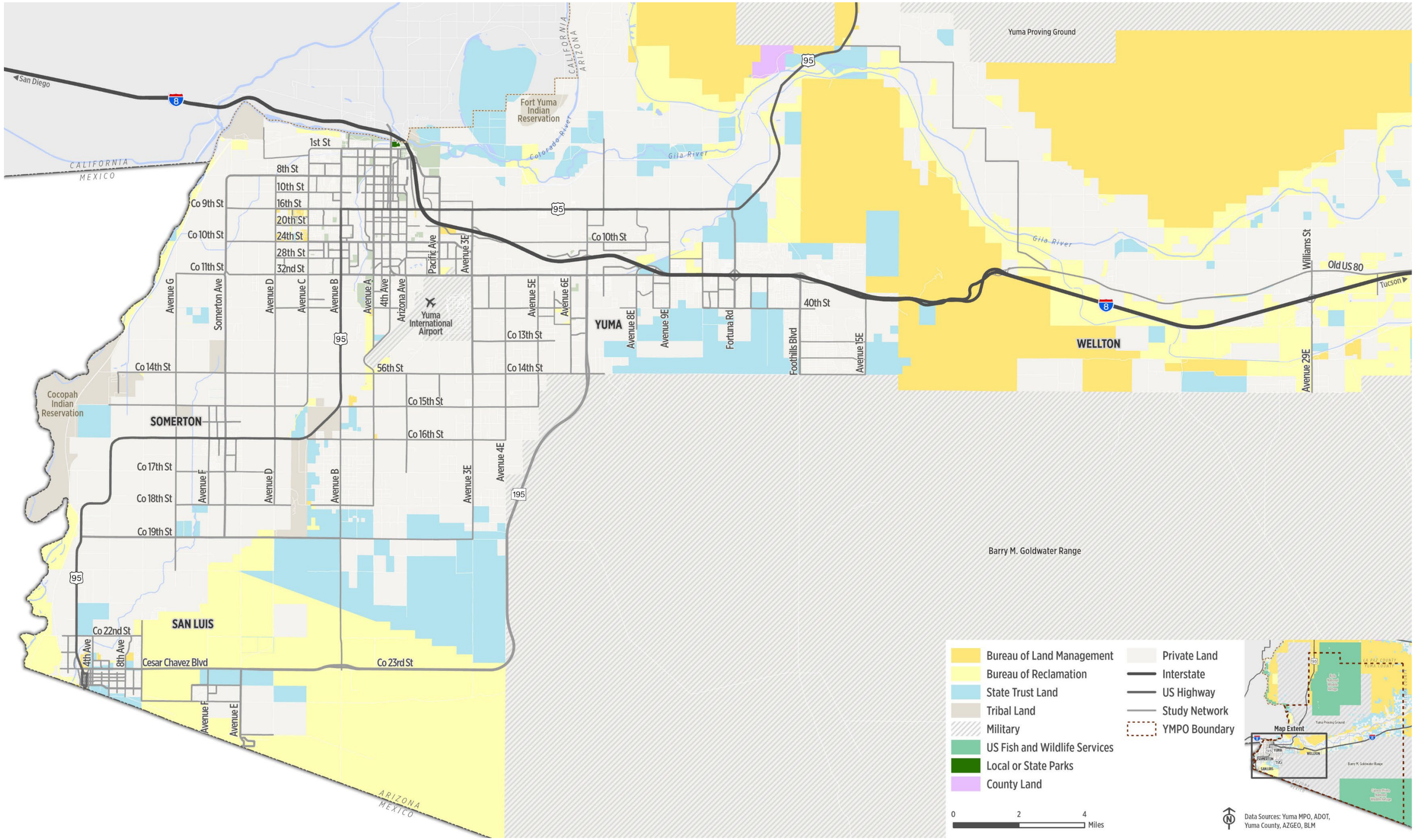
- **Privately-Owned Land:** 10.8% of land
- **Military Land:** 40% of land
- **National Wildlife Refuge Areas:** 28% of land
- **Bureau of Land Management:** 13.3% of land
- **State Trust Land:** 5.3% of land

Figure 3.1. Land Ownership in the Yuma Region Today



There is a perception that because only 10 percent of the region is privately owned there is a shortage of developable land. This low percentage, however, is largely a result of the presence of two large military areas (the Yuma Proving Grounds and the Barry M. Goldwater Range) and large wildlife refuge areas maintained by the US Fish and Wildlife Service (Cabeza Prieta, Kofa, and Imperial Mountain refuges areas). The State of Arizona owns 5.3 percent of the land in the YMPO, largely State Trust Land, and an additional 13.3 percent of land is managed by the Bureau of Land Management. The Cocopah Indian Tribe and Fort Yuma Quechan Indian Tribe are key stakeholders that own over 11.7 square miles of land within their respective reservations.

Figure 3.2. Existing Land Ownership



Where We Live

According to the US Census Bureau, the YMPO area is one of the fastest growing regions in the nation. This rapid growth and maturing urban development create opportunities, but it also poses challenges to our transportation network. Understanding where growth is greatest is imperative to creating a plan that manages the increased demands on our transportation system.

We are Growing

Since 1990, the region's population has increased by over 99 percent and shows no signs of slowing. As illustrated in **Figure 3.3 and 3.4**, much of this increased population is due to infill development and major developments in the urban fringe, particularly in the Fortuna Foothills area along I-8 and the San Luis area. Understanding where new housing and employment growth occurs is useful for defining what types of transportation services will be necessary to support both quality of life and economic stability.

Population Through the Years

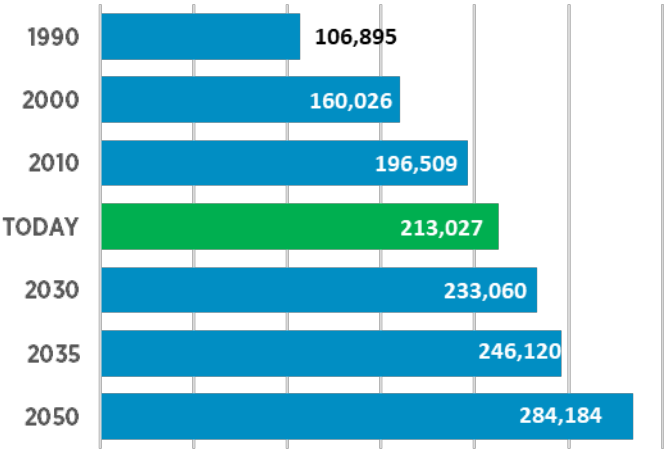
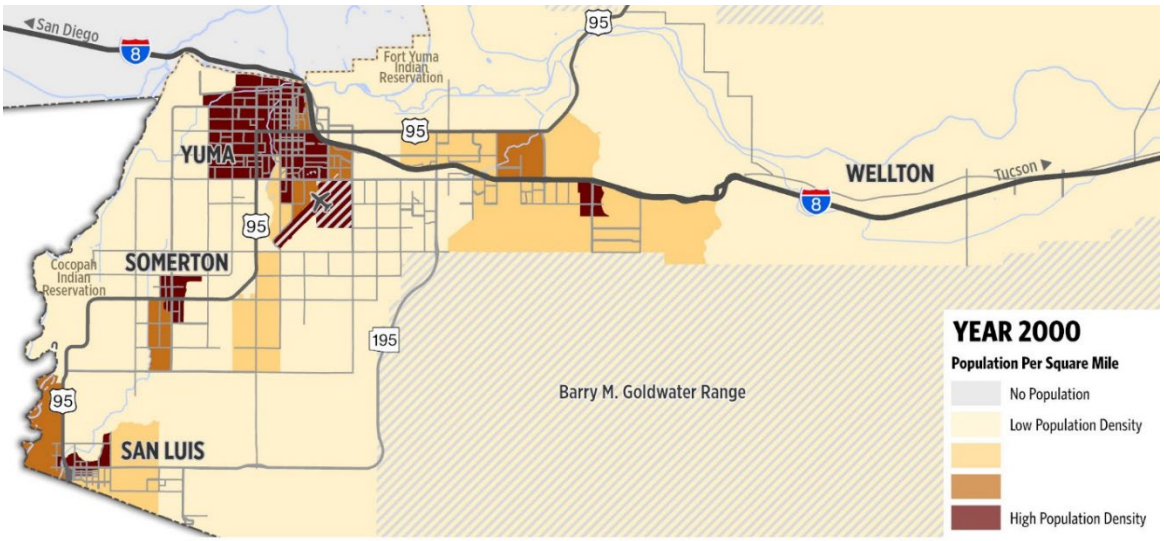


Figure 3.3. Population Growth (Census 2000–2010)



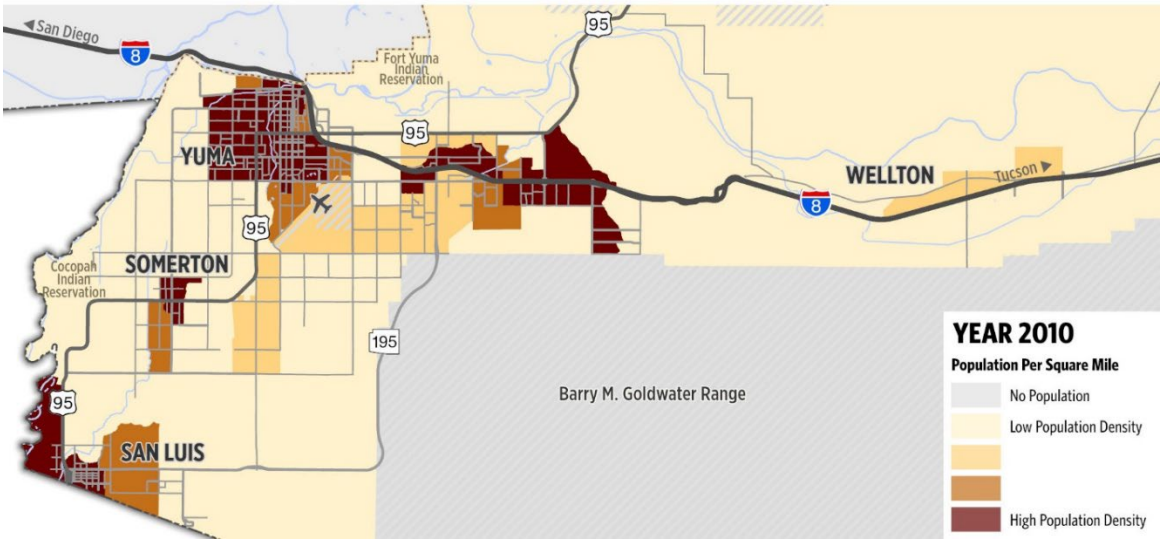
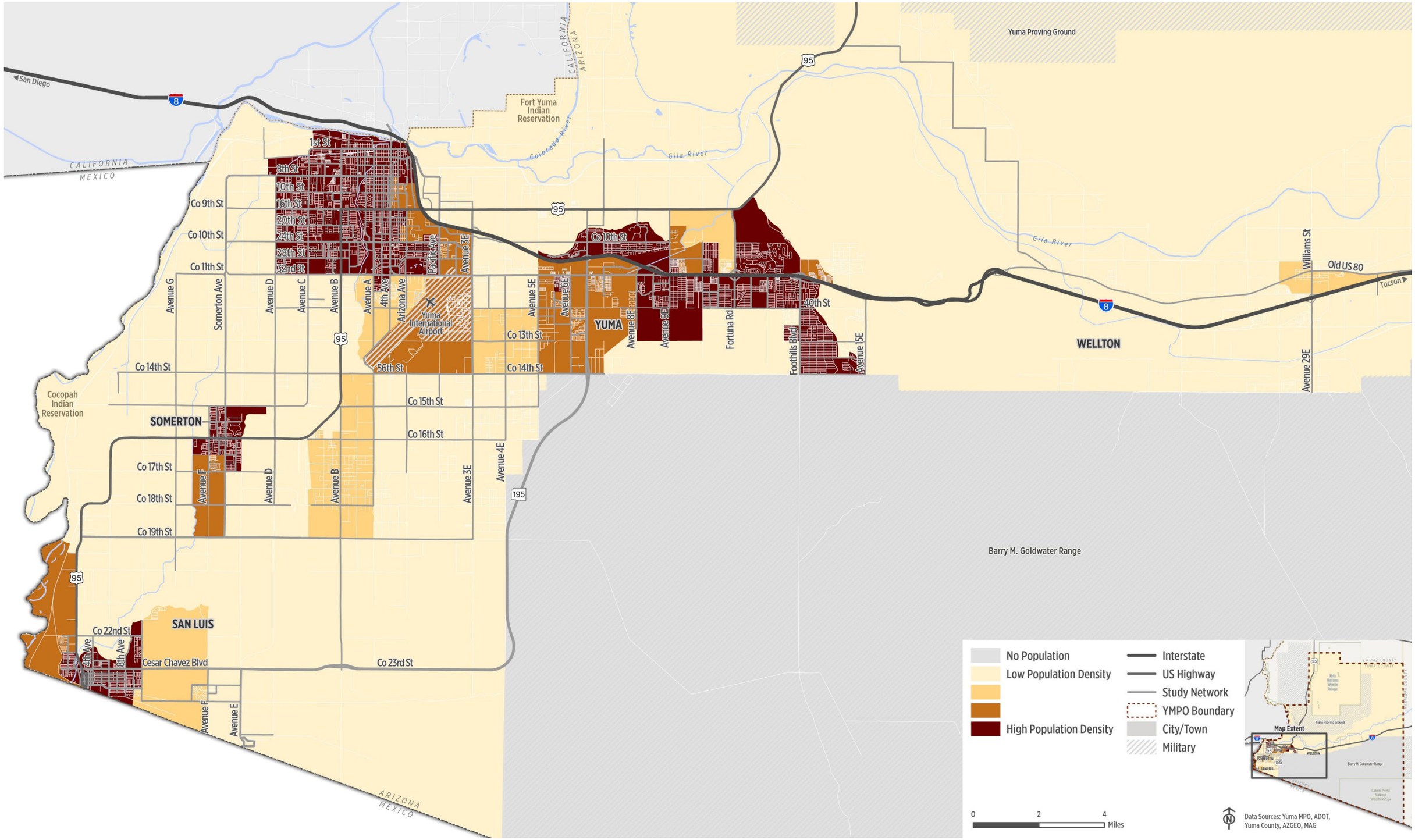


Figure 3.4. Current Population Density (2024)



Where We Work

As the region's transportation system is developed and as projects are identified and prioritized for funding, access to major employment centers should be considered. Employment centers' access to safe and reliable transportation systems will enable and encourage employers to expand and new employers to relocate to the YMPO region. As illustrated in **Figure 3.5,** employment opportunities can be found throughout the region. In total, there are over 4,400 employers who employ over 83,800 people. **Table 3.1** outlines the top employers within the region.

Table 3.1. Top Employers in the YMPO Region Today

Employer	Activity	Number of Employees
Marine Air Corps Station Yuma (MCAS—Yuma)	Government	2,200 civilian personnel; 5,300 military personnel
Yuma Regional Medical Center (YRMC)	Health Care	2,800
Yuma Proving Ground (YPG)	Government	2,100 civilians and contractors, 280 military
Yuma County	Government	1,550
Yuma Elementary School District	Education	1,300 full-time/part-time
Yuma Union High School District (YUHSD)	Education	1,040

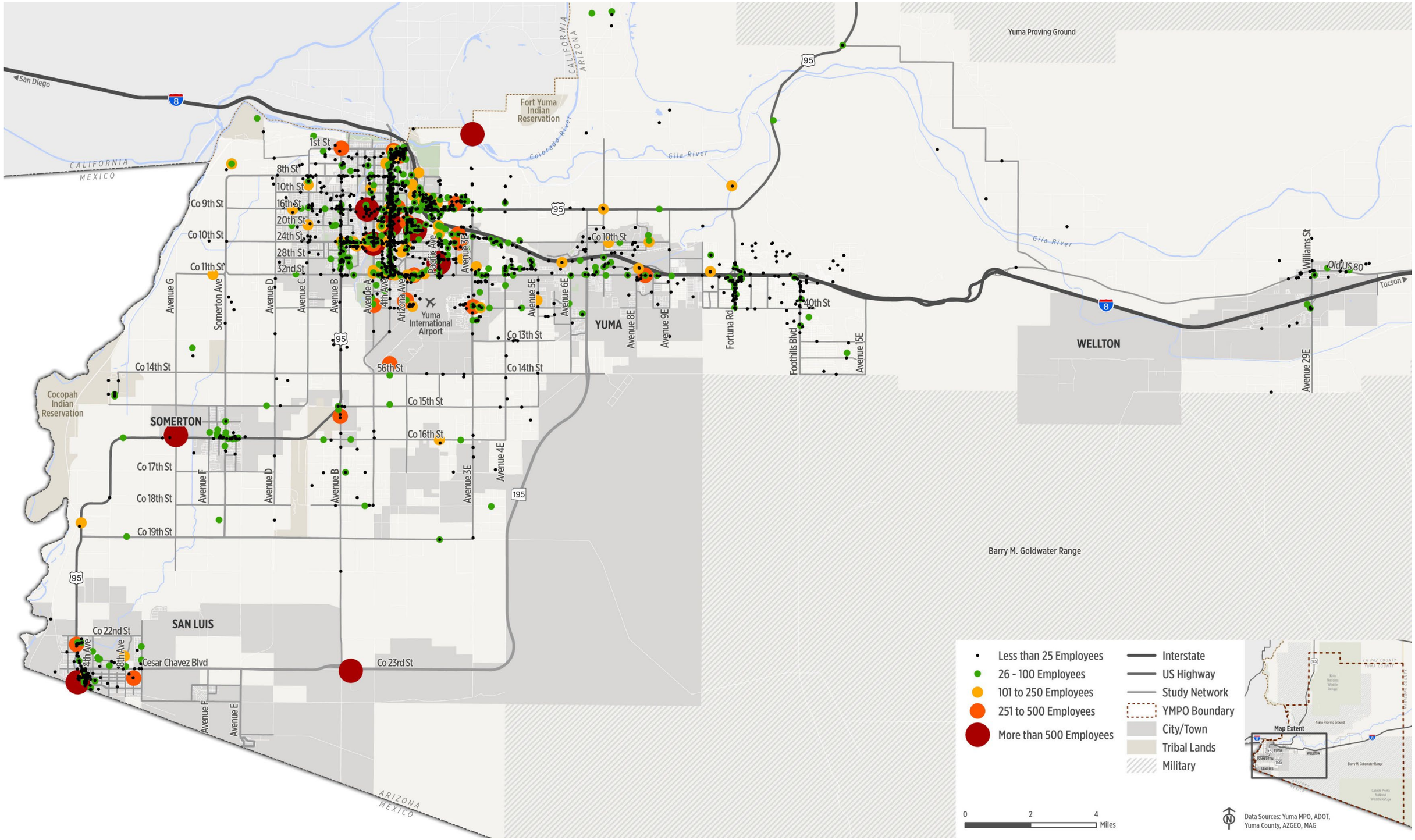
Source: MCAS, YUHSD, YPG, Yuma County, YRMC, Greater Yuma Economic Development Corporation

The economy of Yuma County is changing. In 2024, the leading industries in Yuma County were Health Care and Social Services, Retail, Accommodation and Food Services, and Manufacturing. Per the Greater Yuma Economic Development Council data, Health Care and Social Services sector accounts for over 7,000 jobs and nearly 500 employers; Retail section accounts for over 5,700 jobs and 600 employers; Accommodation and Food Services accounts for nearly 4,500 jobs and over 300 employers; and the Manufacturing sector accounts for over 4,400 jobs and nearly 100 employers.

In addition, agriculture and military industries continue to play a key role in the economy of Yuma County. As illustrated in **Figure 3.5,** major employment centers are located throughout the region. Major employment areas include:

- **Agriculture Land:** Yuma County and the surrounding region is responsible for 90 percent of all leafy vegetables grown in the United States and Canada and employs 20,000 to 30,000 seasonal workers. Agriculture produces an estimated $3.2 billion a year for the Yuma area's economy. A strong, connected transportation network that allows the efficient movement of goods and people are needed to support the region's thriving agriculture businesses.
- **Military Land:** The Yuma Proving Ground and the Marine Corps Air Station (MCAS-Yuma) are major employment generators in the Yuma region.
    - **Yuma Proving Ground (YPG**) is a large test facility for the US Army located in the northwest portion of Yuma County. YPG provides a site for the army to test things such as long-range artillery, missile-firing aircraft, cargo and personnel parachutes, direct fire weapons, unmanned aerial systems, and technologies to defeat roadside bombs. YPG also serves as a location for training with thousands of soldiers and marines each year. General Motors also operates a hot-weather vehicle testing facility on a 2,400-acre site located within YPG.
    - **Marine Corps Air Station (MCAS)**—Yuma covers 7.58 square miles within the City of Yuma. The site of MCAS was first used as an airfield in 1928. Today, MCAS Yuma supports 80 percent of the US Marine Corps' air-to-ground aviation training and hosts approximately 70 aviation units, bringing in an average of 600 aircraft and 14,000 personnel for ongoing training throughout the year.

Figure 3.5. Major Employment Areas



Where We Shop, Play, and Learn

Activity centers are vibrant community hubs and key destinations and transportation generators for people to work, play, live, and learn. Activity centers generally include a wide variety of land uses, including shopping/retail areas, commercial, hospital, and education centers. Many of these key destinations are clustered together to form larger community hubs. Understanding where key activity centers are is imperative to developing a transportation system that conveniently connects major transportation generators through a variety of modes. **Figure 3.6** illustrates major activity centers and transportation generators in the region, including:

- **K-12 Schools**. In total, there are 79 public K–12 schools in the region. The largest schools in the study area include San Luis High School, Cibola High School, Kofa High School, and Gila Ridge High School. Providing comfortable walking and biking facilities to these schools is critical since many children are likely to have short commutes that could be converted to walking or biking trips.
- **Higher Education**. Extensions of the University of Arizona, Arizona State University, and Northern Arizona University are located within the City of Yuma. Arizona Western College has 12 locations across Yuma and La Paz counties.
- **Healthcare Facilities**. Yuma Regional Medical Center is the largest healthcare facility in the county and one of the largest employers in the region.
- **Commercial Centers**. Large retail centers are located near most major subdivisions and along major roadways. Grocery stores or big-box retailers are typically the anchor store for these centers. Providing direct and convenient multimodal transportation connections between major residential communities and key activity centers creates opportunities to connect many residents to the places they need to go.

Tourism, Trade, and Economic Development

Tourism

There are three main drivers of tourism in Yuma County: winter visitors or “snowbirds,” visitors from Mexico, and visitors to the military facilities, the largest of which is the YPG. Of the three drivers, military tourism is the least cyclical. Each is discussed in more detail below.

Military tourism: Visits to the military base are one of the main drivers of business travel in Yuma. Research from the Yuma Chamber of Commerce finds that Yuma Proving Ground has some 35,000 visitors a year, comprised of U.S. and foreign travelers. The visitors come to observe equipment tests and to acquire military goods and services. While here, the visitors stay in hotel rooms, eat in restaurants, rent cars, shop for incidentals, often-extended stays here.

Winter tourism: During the winter, the population increases by about 90,000 due to the sun-seeking Winter Visitors affectionately known as "Snowbirds”. This type of traveler typically travels to Yuma in December–May and stays in the area 30 days or longer. These travelers are typically retired and range in age from late 50s through their 80s. Many arrive by RV, but others own or rent modular housing or obtain other types of temporary lodging. These locations are found throughout the county.

Tourism from Mexico: Because of its proximity to Mexico, Yuma County is a popular destination for tourists from Mexico. Visitors to the border communities of San Luis and Yuma are almost all day-visitors because of their proximity to the border. For day-trippers, shopping is the most common reason for a visit. The cities of San Luis and Yuma are the main beneficiaries of this spending as Yuma is largely accessed by travelers via the San Luis crossing. The leading shopping destination given was Walmart.

Trade

After Nogales, the San Luis Land Port of Entry (LPOE) crossing is Arizona's busiest border crossings, with a special focus on agricultural commodities. As the main source of the nation's winter vegetables, the Yuma region enjoys a strong and stable agricultural base; however, agricultural activity is subject to adverse impacts from commodity price swings and other factors. Moreover, the peak season for importing agricultural produce is the winter, the same time that Yuma's tourism sector peaks.

In 2023, the value of imports through the San Luis LPOE total $1.06 billion. This included over $521 million of fresh produce, $28 million in machinery, and $157 million in electronics via the San Luis port of entry. In that same year, the US exported $640 million in goods, according to data collected by the University of Arizona. Of all the major trade-flow reports, all are relatively stable with small dips for 2020's COVID-19 impact except for U.S. exports of electronics to Mexico via San Luis.

There is close economic integration between companies on each side of the border. As trade and commerce have grown along the border, supply chains have developed that allow manufacturers on each side to share production and work together to create goods. Intermediate inputs flow back and forth across the border as the final product is fabricated—sometimes with supply linkages extending well beyond the border.

Given the closely integrated supply chains and the associated economic exchange that support the economic vitality of both trade partners, disruptions and long or unpredictable wait times are costly to producers and consumers. In this way, negative impacts ripple through the supply chain. Over time, economic investment will gravitate to crossings where operations are efficient and predictable. Recent developments offer Yuma producers and their counterparts in Mexico an opportunity to further develop their border economy. The recent supply-chain disruptions caused by the COVID-19 pandemic highlighted supply chain weaknesses and prompted producers to reconsider the resilience of their supply chains rather than exclusively focusing on cost cutting. This focus on resiliency, safety, and security favors near-shoring or "ally" shoring essential commodities, trends that may drive greater investment along the US-Mexico border.

Economic Development

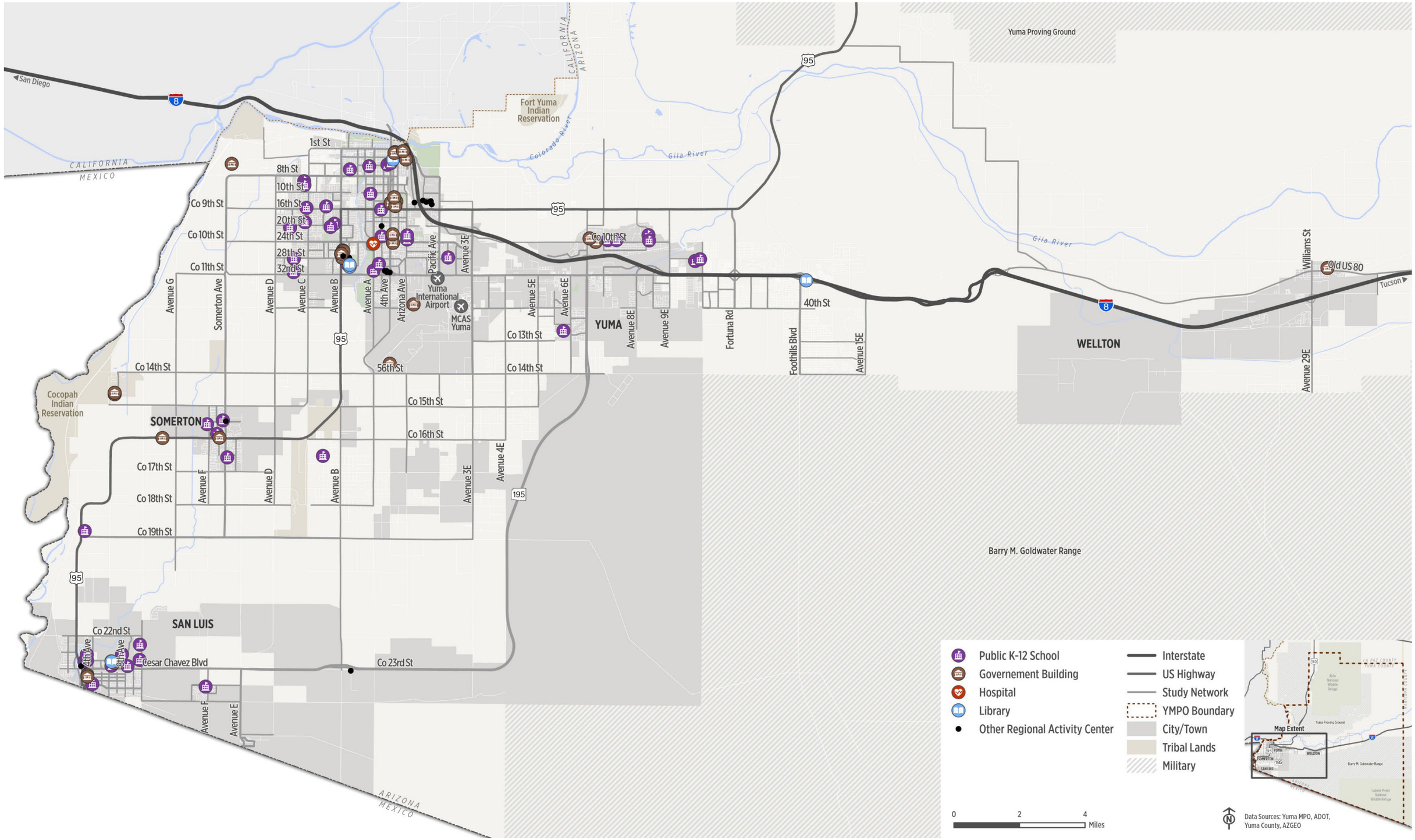
Given the volatility of some of its core industries—tourism, produce import and logistics, and cross-border trade and manufacturing—the economic development plans of Yuma County's communities focus on taking care of existing strengths and diversifying to offset some of the volatility in the economy.

For example, Yuma is already the top producer of agriculture in Arizona. Yuma County has a strong value-add agriculture and product industry with nearly 40 percent of all winter produce consumed in the US coming through the San Luis LPOE. Agribusiness and value-add business opportunities could be further developed in San Luis and elsewhere in the county. Other economic development targets include logistics and distribution, Maquila, as well as aviation and defense testing.

In Somerton, industry strengths include agriculture and related food processing, light industry, tourism related to ventures by the Cocopah Nation, and health services. Given the emphasis on agriculture and tourism, transportation planning will need to find ways to route trucks away from the main tourist areas.

The Yuma County Economic Development Plan (2020) builds on many of these themes. Key industry targets that build on the economy's strengths but offer new opportunities include an expansion of food processing into new products, aerospace/spaceport, logistics, and advanced/numerical computer control. In terms of supporting infrastructure, the plan calls for road investment in the emerging manufacturing investment zone (specifics to be determined by future study, and broadband in multiple communities, especially in the vicinity of the Spaceport once the site is selected).

Figure 3.6. Major Activity Centers



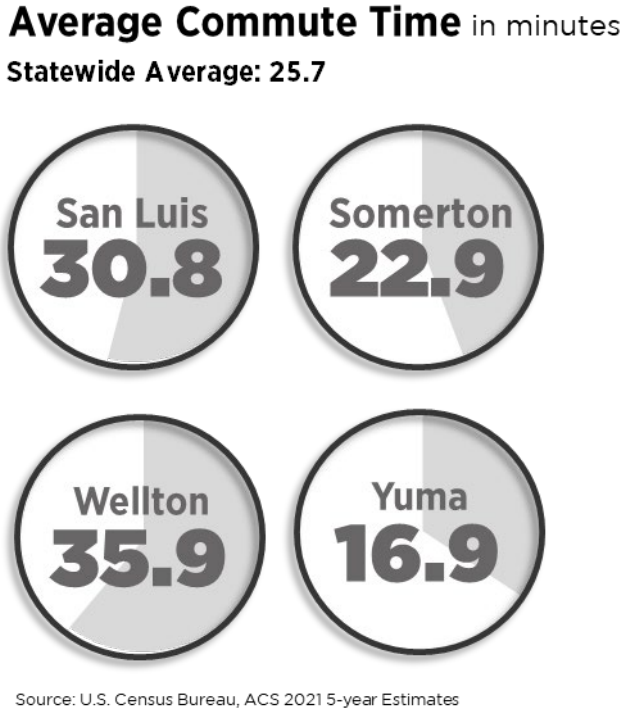
How We Travel Today

Today, we have more choices than ever before to get to the places we want to go and the people we want to see. Understanding how we get around can help define needs and opportunities for the transportation system today and in the future, regardless of whether we choose to walk, bike, ride transit, or drive. This analysis considers average weekday and weekend days to gain an understanding of how we move around. The analysis uses data from Replica, a software that incorporates anonymized data from a variety of sources like the US Census Bureau, mobile location data, land use, economic activity, and others to create a simulation of an area to model how people get around, where they are going, and when they travel.

Commute Behavior

Because driving to and from work makes up a major portion of an individual's transportation activity, how people commute is an essential element in transportation planning. According to the US Census Bureau, nearly 78.2 percent of commuters in the YMPO region drive to work alone, while only around 12.2 percent carpool and another 5.9 percent telecommute.

Figure 3.7 illustrates areas that have the highest walking, biking, and transit mode share. Densities illustrated in Figure 3.7 reflect the total number of persons who commute by walking, biking, or using public transportation per square mile according to the US Census Bureau's American Community Survey. According to the 2021 US Census Bureau American Community Survey, average commute times in the YMPO region are significantly higher than the statewide average.



How We Get There

Those traveling in the Yuma region choose to travel in different ways depending on the type of trip, the day of the week, and how far away the destination is. Replica data shows that while we mostly choose to drive, walking is the second most common way we choose to travel. As shown in **Table 3.2,** key travel trends in the region shows:

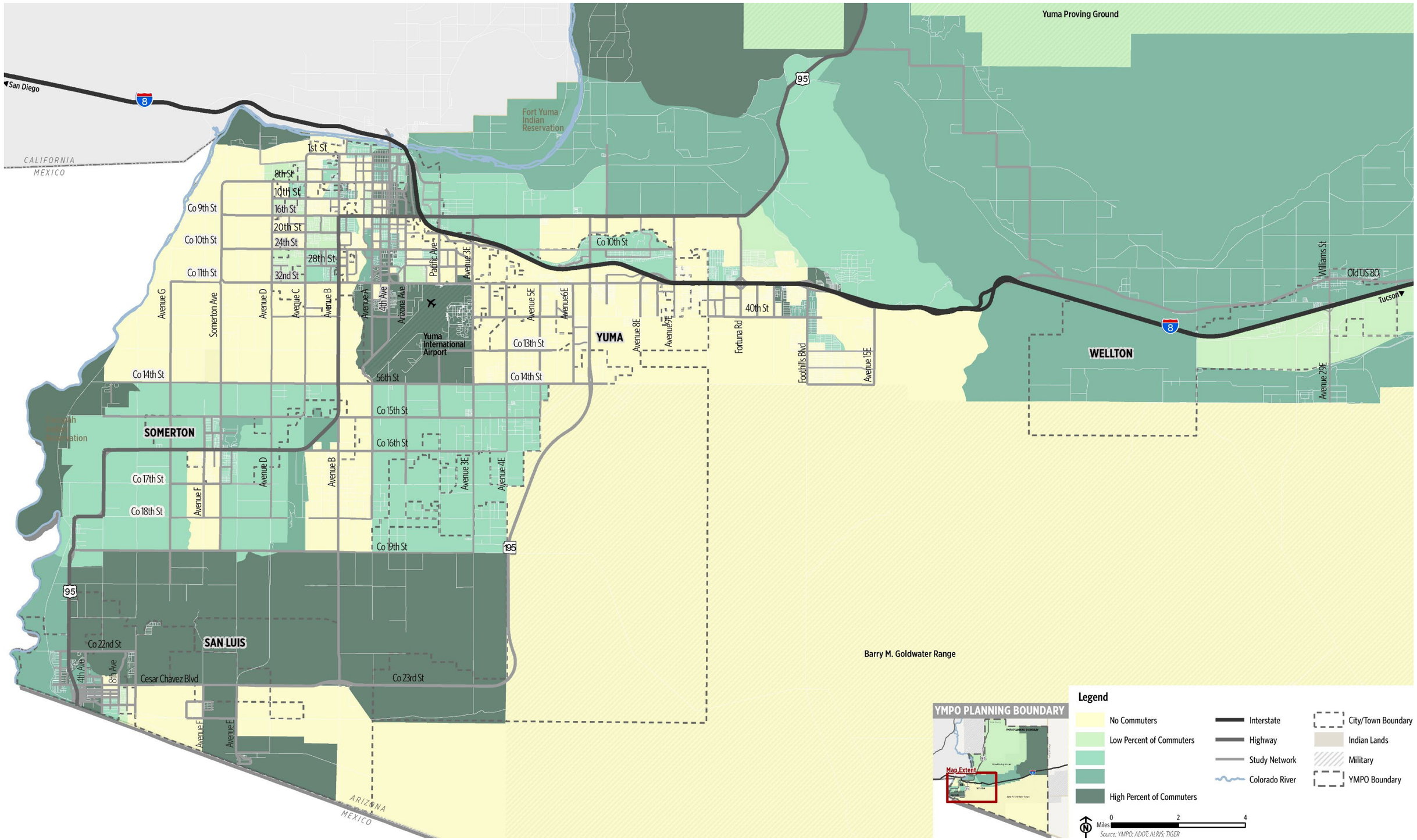
- Driving is the primary mode of travel for getting to work, going to school, and for recreation.
- Walking and biking trips are more common for recreation and daily need trips.

Table 3.2. How We Travel Today (Replica 2023)

	Drive	Transit	Bike	Walk	Other	Average Travel Time (minutes)
Getting To Work	93.4%	0.5%	0.4%	3.7%	2.0%	31.0
Getting to School	93.1%	0.0%	3.4%	3.3%	0.1%	17.3
Recreation	87.3%	0.1%	1.0%	9.5%	2.0%	26.1
Daily Needs (Shopping, Eating, Social, etc.)	82.1%	0.1%	0.9%	14.8%	2.1%	22.5

Source: Replica Southwest, Fall 2023 where the Trip Origin is within Yuma County

Figure 3.7. Percent of Workers Who Commute by Walking, Biking, or Public Transportation



Our Social Needs

Often, transportation and land use decisions place unfair burdens on disadvantaged communities. Conducting an analysis of traditionally underserved populations helps identify locations with high concentrations of people or groups who may not be physically or financially capable of owning or driving a vehicle and rely on walking, riding bicycles, and transit to meet their daily travel needs.

Disadvantaged Population Groups in the YMPO Region

A large population of the region's residents are identified as members of various disadvantaged communities. As shown in **Table 3.3**, 70 percent of the population are part of a minority group and 45 percent of the population are younger than 18 years or 65 years or older. To build and maintain an equitable transportation system, it is critical to keep in mind the needs of all the communities identified below and how those needs may differ from community groups that are not traditionally disadvantaged or underserved.

Table 3.3. Disadvantaged Population Groups in the YMPO Region

Area	Population	Age 18 and Under	Age 65 and Older	Minority	Age 18-64 with a Disability	Limited English Household	Household with No Vehicles Available
City of San Luis	38,149	29.2%	9.7%	96.4%	7.2%	41.3%	6.2%
City of Somerton	14,723	29.0%	9.9%	96.3%	6.5%	25.0%	4.7%
Town of Wellton	2,603	12.9%	49.6%	28.7%	6.5%	25.0%	6.4%
City of Yuma	101,018	25.8%	16.2%	69.4%	12.7%	14.9%	6.4%
Cocopah Indian Tribe	870	21.9%	30.1%	70.6%	6.5%	25.0%	17.6%
Yuma County Overall	**213,027**	**25.1%**	**19.7%**	**70.8%**	**12.9%**	**19.4%**	**5.3%**

Source: US Census Bureau, American Community Survey 2022 5 Year Estimates

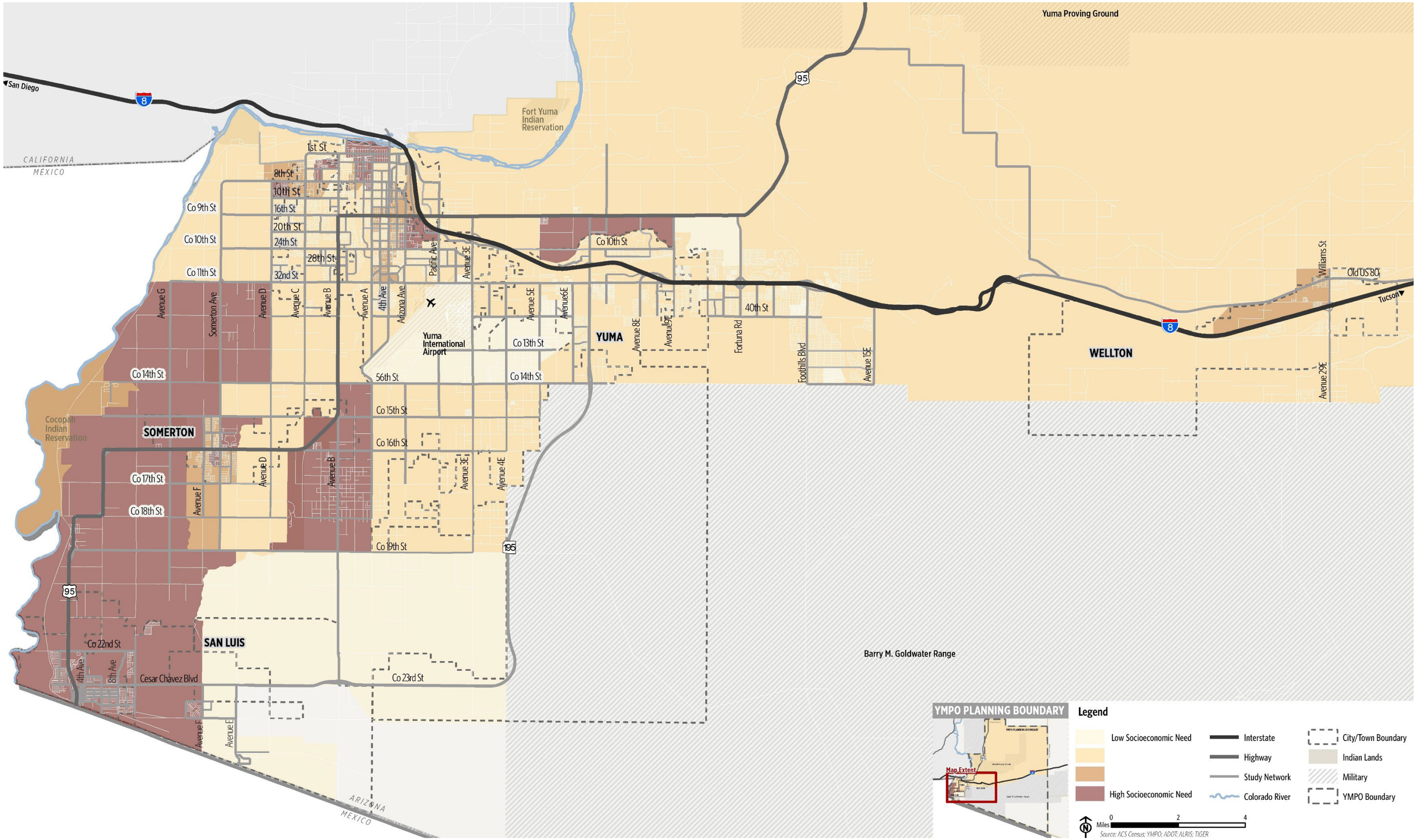
Socioeconomic Equity Model

A socioeconomic equity model was developed to identify areas with high percentages of population groups who traditionally rely on walking, riding bicycles, and using transit as their primary means of transportation. The socioeconomic equity model identified levels of socioeconomic need based on combined densities of the following indicators:

- **Age:** children and elderly populations
- **Communities of Color:** minority populations
- **Disabled Populations:** persons who have cognitive, visual, and physical disabilities
- **Low-Income:** households that are financially less likely to own a vehicle
- **Vehicle Ownership:** households with limited or no access to a vehicle

To calculate the equity of an area, family- or household-level variables were converted to person-units using the average family or household size for each block group. Each socioeconomic measure was then summed and divided by the total population of the block group. Because an individual can meet more than one of the qualifying attributes (e.g., a person could be living in poverty and be in a single-parent household), the index intentionally counts individual's multiple times to generate an index that evaluates the relative equity disadvantage of the block group. Thus, the highest theoretical score for an index block group would be 8 if every person and household met every possible criterion. **Figure 3.8** illustrates the results of the social equity model.

Figure 3.8. Social Equity Model



4. CURRENT MULTIMODAL CONDITIONS

This section outlines existing multimodal roadway characteristics and conditions in the YMPO region. This analysis sets a baseline for comparing how potential improvements will address existing and future transportation needs and issues.

YMPO's Street Network

Functional Classification

Functional classification is a hierarchy of roadway classes that characterizes streets and highways based on their role in providing access and mobility. The region uses seven primary classifications: interstate, principal arterial, minor arterial, major collector, minor collector, and local road. To access federal funding, roads must be federally functionally classified as collector or higher. Local streets are not eligible for federal funding. **Figure 4.1** illustrates the federal functional classification of the street system in the YMPO region per the Arizona Department of Transportation (ADOT).

Table 4.1 summarizes how much of the region's system is in each functional class. As shown in the figure and table, major collectors make up the majority of the YMPO LRTP study network. I-8, US 95, SR 195, and adjoining ramps also make up 27 percent of the study network, reinforcing the need to coordinate with ADOT.

Functional Classification Hierarchy

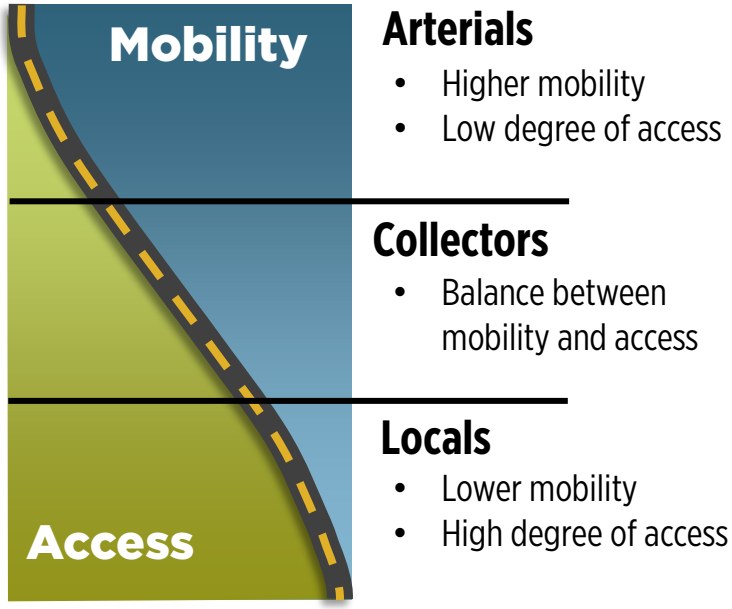


Table 4.1. Functional Classification of Study Network

Functional Classification	Mileage	Percentage
Interstate, Expressways, and Ramps	203.7	27.3%
Principal Arterial	81.9	11.0%
Minor Arterial	70.22	9.4%
Major Collector	259.9	34.8%
Minor Collector	103.4	13.8%
Local Roads*	27.26	3.7%

** The local road mileage represents only local roads of regional significance that are identified as part of the study network and does not include all local roads.*

Travel Lanes

Figure 4.2 illustrates the number of lanes of the YMPO region's street system. The figure represents the general number of through lanes, and there may be short sections with more lanes where development has occurred or fewer lanes due to development patterns. The number of lanes provided at individual intersections also varies. There are locations where additional through and/or turn lanes exist to improve intersection capacity. Key findings include:

- Two-lane major collectors account for 33 percent of the study network.
- Two-lane arterials account for 48% of the arterial roadway network and 46% of arterial roadways are four lanes.

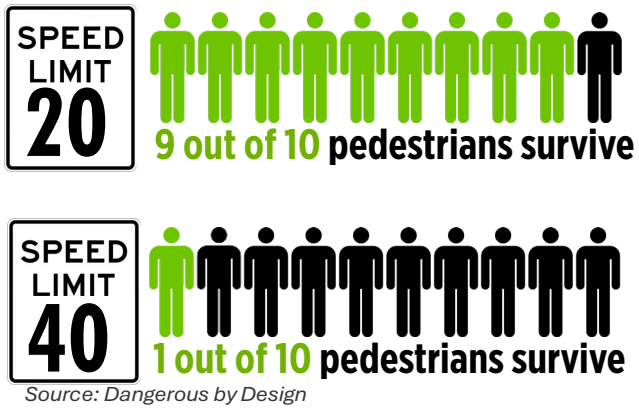
Posted Speed Limit

The speed limit of a corridor not only impacts traffic flow, but it also can be a critical factor in the number and severity of crashes. At higher speeds, a driver's peripheral vision is reduced, and a car's stopping distance is greater. As shown on the right, the likelihood that a pedestrian hit by a vehicle will survive sharply decreases when speeds increase.

To determine the posted speed limits of study corridors, speed limits were compiled from readily available GIS data from the YMPO and via a Google StreetView review of conditions. **Figure 4.3** and **Table 4.2** outlines current posted speed limits. Findings show:

- Posted speed limits vary from 25 to 75 MPH.
- Due to the regional and rural nature of corridors, many arterials and collectors in the region have a posted speed of 50 MPH or higher.
- Posted speeds drop significantly within incorporated city/town limits.

Pedestrian Fatality by Speed



Source: Dangerous by Design

Table 4.2. Posted Speed Limits

Posted Speed Limit	Mileage	Percent of System
25 MPH or Less	102.6	13.7%
30 – 35 MPH	91.0	12.1%
40 – 45 MPH	86.1	11.5%
50 MPH or Higher	471.1	62.7%

Traffic Control

Together, traffic control devices help manage the movement of people and goods in an efficient manner. Traffic control devices include:

- **Traffic Signals:** Controls the flow of vehicles on the roadway network. Improving traffic signal timing can increase mobility and reduce overall congestion.
- **Roundabouts:** A circular intersection with specific design and traffic control features including yield control of all entering traffic, channelized approaches, and appropriate geometric curvature to ensure that travel speeds on the circulatory roadway are typically less than 30 mph.
- **Traffic Signs:** A STOP or YIELD sign alert drivers to come to a complete stop or yield at intersections.

Figure 4.4 illustrates the location of traffic signals on the study network. It is important to note that the image includes traffic control devices both on the study network and on roadways intersecting the study network. Understanding access points to the study network, specifically regionally significant routes, helps to identify corridors that may benefit from access management.

Figure 4.1. Functional Classification

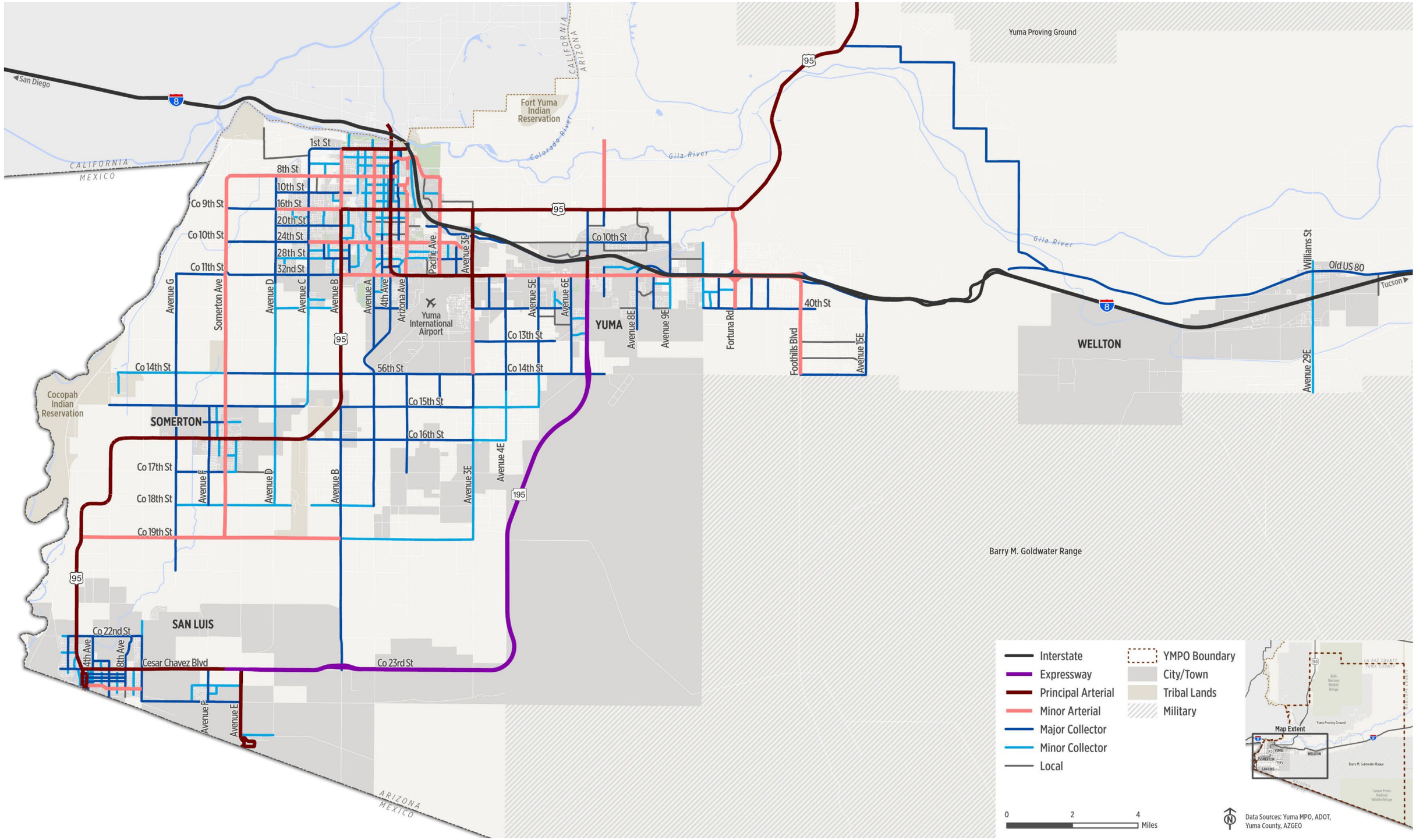


Figure 4.2. Number of Travel Lanes

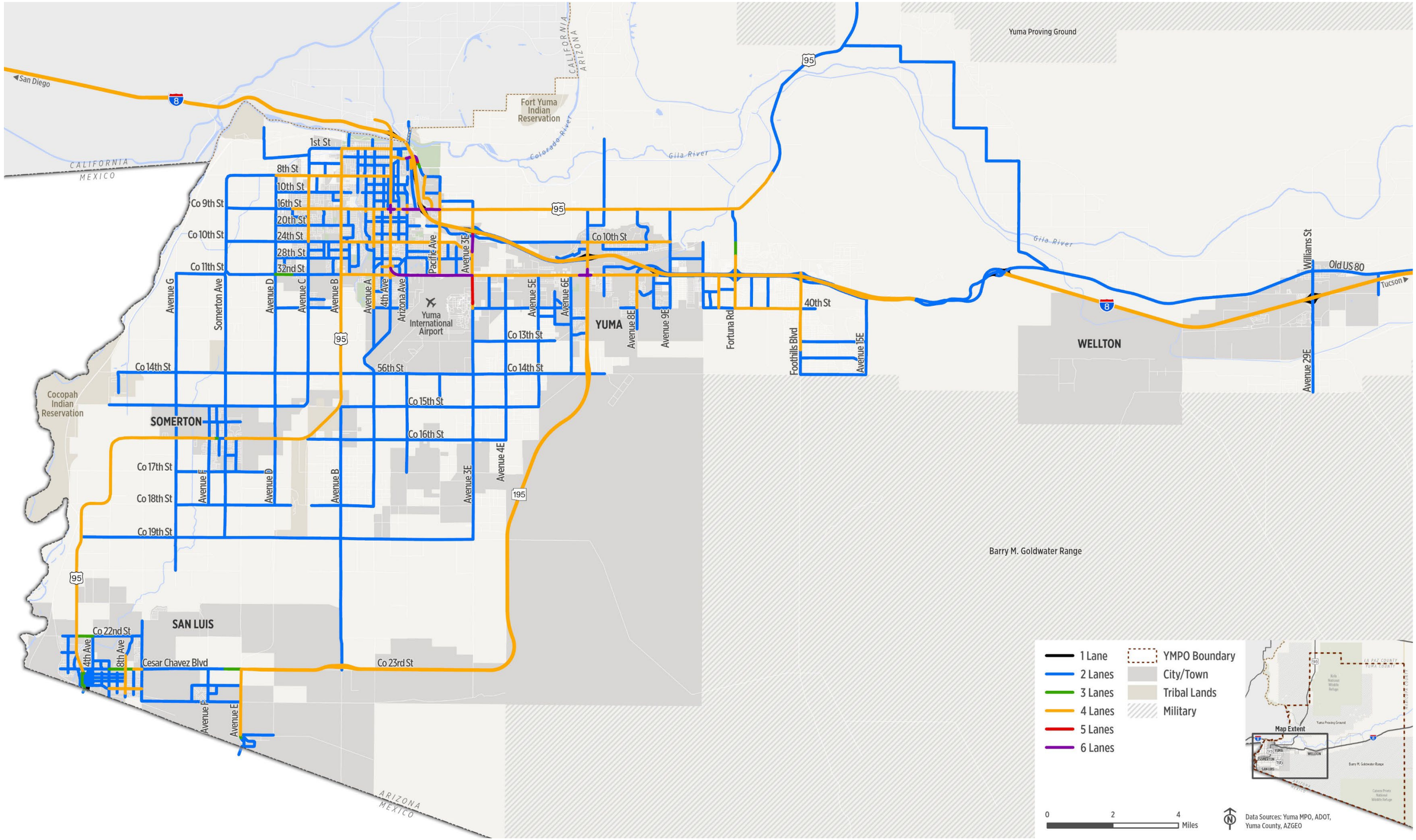


Figure 4.3. Posted Speed Limit

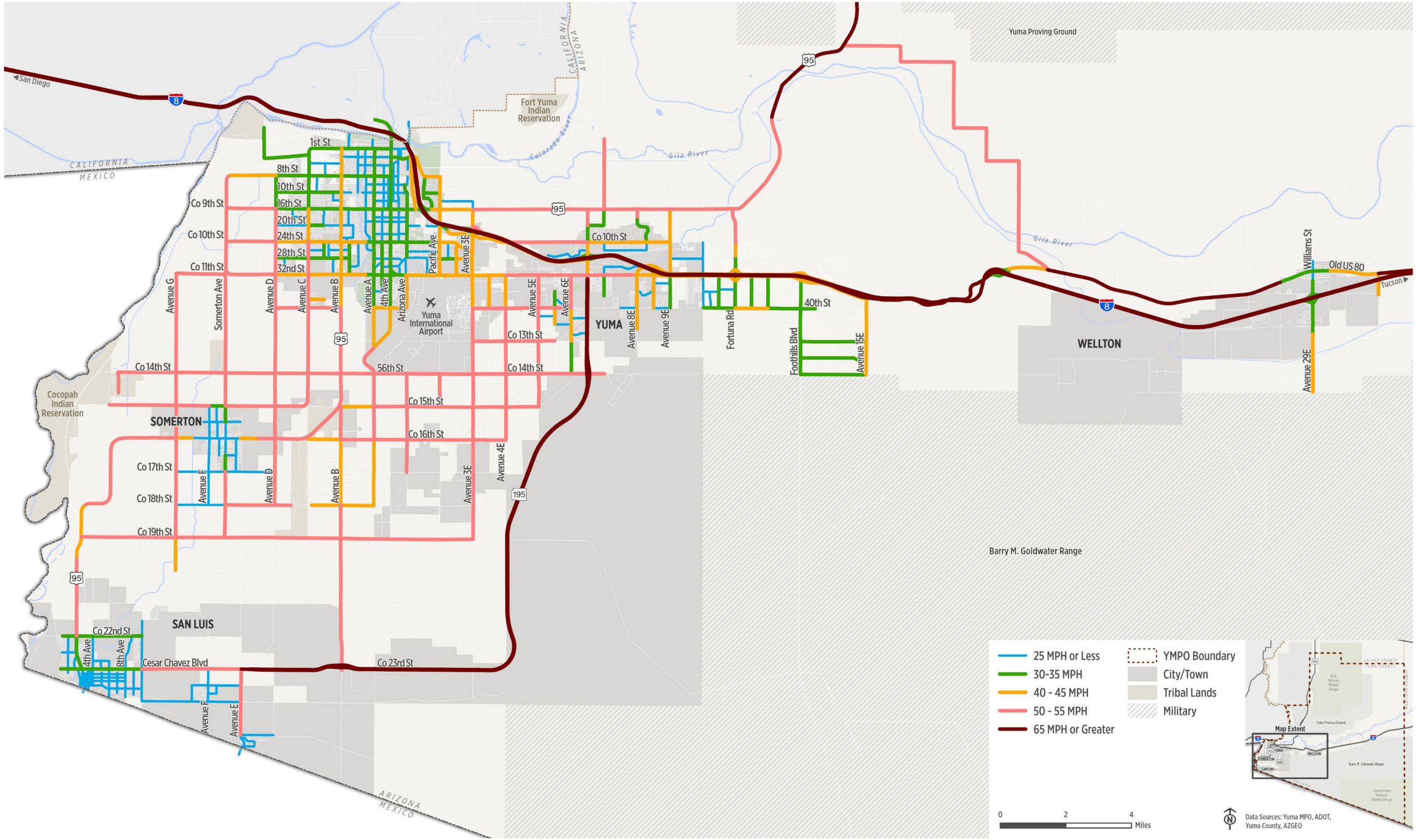
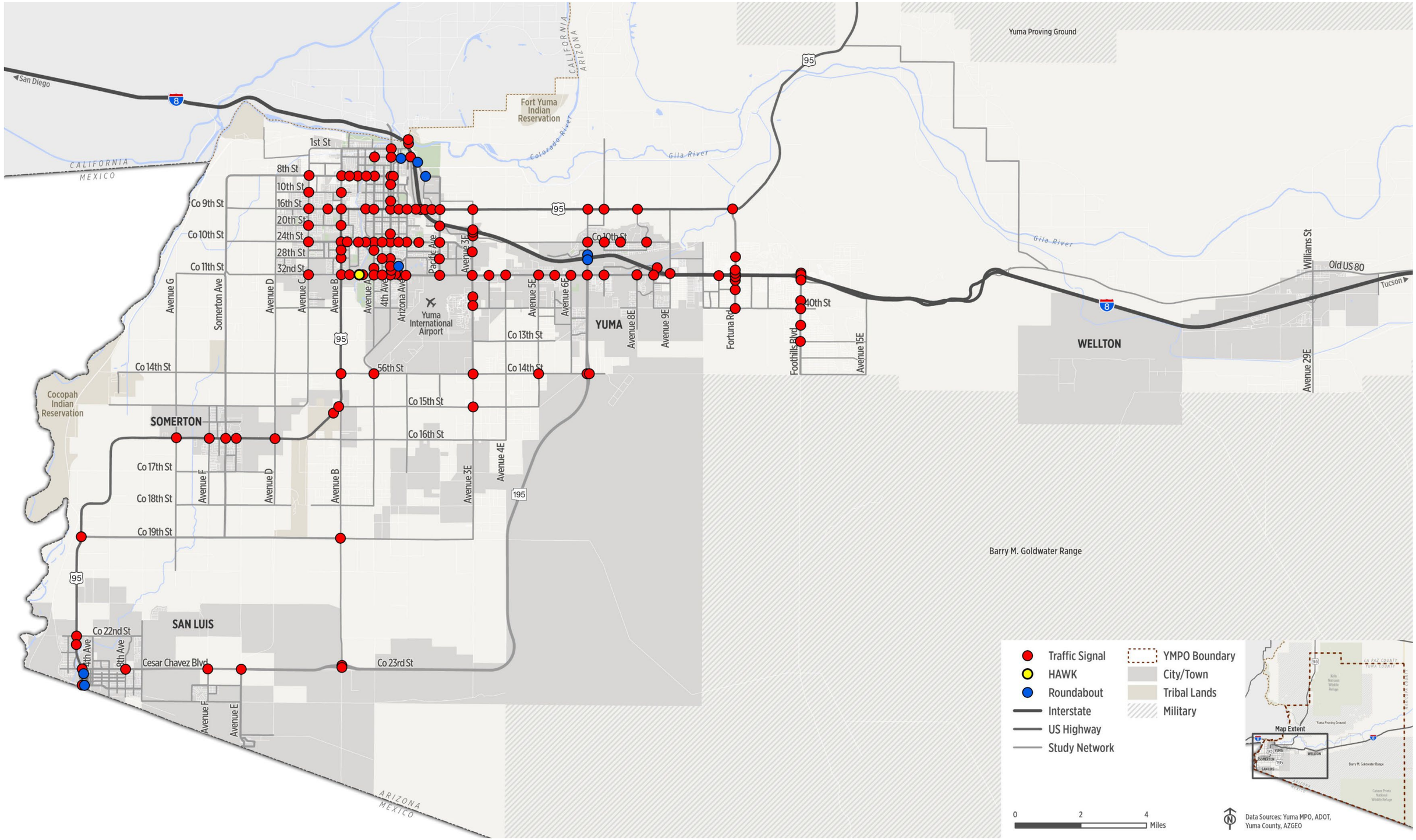


Figure 4.4. Traffic Control



Regionally Significant Routes

To assess the YMPO region in greater detail than the traditional approach of only assessing core high-capacity roadways, a set of regionally significant routes were identified in the previous LRTP. These routes represent corridors that provide important regional mobility and connectivity in and through the YMPO region. The regionally significant routes were determined through the following assessment criteria:

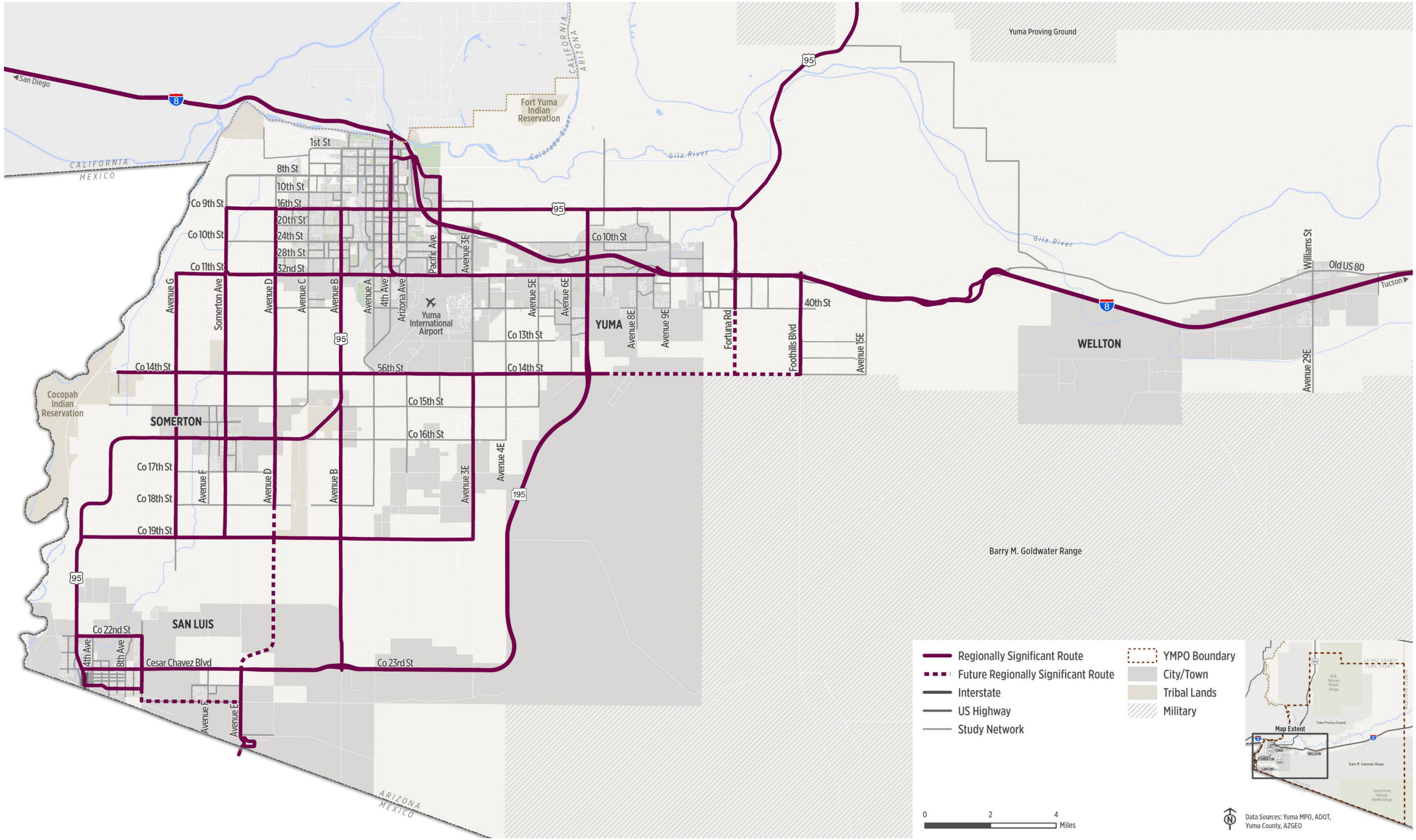
- **Functional Classification**—A regionally significant route needs to meet a minimum threshold of a collector route.
- **Route Continuity**—A regionally significant route needs to provide longitudinal access to the region. Routes with frequent termini and/or short end-to-end lengths were disqualified from consideration.
- **Criteria Access/Destination Points**—A regionally significant route needs to provide critical access to one or more regional destinations within the YMPO region. These destinations include but are not limited to employment centers, tourist sites, recreational sites, prominent residential locations, and commercial activity zones.

Following the identification of regionally significant routes using the assessment criteria, the core technical advisory committee (TAC) was given an opportunity to provide feedback to ensure that each member agency's regional routes were reflected accordingly. Following TAC approval, individual corridors (totaling approximately 329 miles) were selected as regionally significant routes, as shown in **Figure 4.5**. The regionally significant routes include:

- **Existing Regionally Significant Routes:** Existing corridors that serve as the backbone of the regional transportation system and provide local and regional mobility and connectivity to homes, employment, activity centers, and other major destinations.
- **Future Regionally Significant Routes:** Corridors identified by the TAC that with strategic improvements would provide important regional mobility connections. Future corridors include County 14th Street east of SR 195, Avenue E/D connection from County 23rd Street to County 18th Street, and a connection of Avenue 3E and County 19th Street from Avenue B to 56th Street.

YMPO is currently conducting a Roads of Regional Significance (RORS) Study, which is scheduled for completion by February 2026.

Figure 4.5. Regionally Significant Routes



System Management

The region has made a tremendous investment in our transportation network, and maintaining these facilities in good working order is no small task. This essential maintenance not only provides the public with safe infrastructure, but it also reduces costly repairs.

Structures

Maintaining bridges and culverts in a state of good repair is essential for preserving mobility and connectivity. Weight limits or closures on structurally deficient bridges negatively impact freight and traffic movement. Functionally obsolete structures that inadequately carry current traffic volumes may cause traffic congestion. ADOT performs all bridge and culvert inspections across the entire state, regardless of route ownership or classification through the structure inventory and appraisal process. There are currently 243 structures in the YMPO region, which includes bridges, culverts, overpasses, and underpasses. **Figure 4.6** illustrates the location and condition of structures along the study network. It is important to note that the construction year and/or age of the structure does not reflect more recent reconstructions or bridge improvements.

Key findings include:

- One bridges in the YMPO region are rated as in poor condition – Structure # 01770 @ I-8/Colorado River Viaduct EB
- 110 bridges are rated to be in fair condition
- 132 bridges are rated to be in good condition

Low Water Crossings

Lower water crossings at streets can present significant challenges for traffic flow, especially during periods of heavy rainfall or flooding. In some cases, closing of low water crossings during flood events could limit traffic circulation and travel options causing significant inconvenience for area residents. Based on an aerial image survey and data related recent road closures, a total of 35 low water crossings were identified throughout the YMPO region and are illustrated in Figure 4.7. Key findings include:

- Most low water crossings are located in Foothills area and the Wellton-Mohawk area.
- Multiple low water crossings are located on 48th Street and 52nd Street between Foothills Blvd and Avenue 15E in the Foothills area.
- Multiple low water crossings are located on the route that connects Old US 80 and US 95 through the Dome Valley area.

Field Review Observed Issues and Concerns

A two-day field review was conducted in October 2024 to review roadway conditions and characteristics in the YMPO region. During the field review, the study team identified several transportation system deficiencies and issues. In combination with results of the data analysis, these observations will help form the basis for developing the Plan. Several of these concerns were also identified by the public during the public and stakeholder outreach events for the project.

At-grade Union Pacific Railroad Crossings

- When trains are present at the William Street crossing in Welton, no additional access is present within 5 miles.
- Significant delays occur at Avenue 9E crossing when trains are present
- Sight distance southbound on Fortuna Road approaching the crossing is limited.
- All at grade crossings are signed in advance to warn motorists.

Roadway Geometry Issues

- 32nd Street and 4th Avenue intersection: westbound left turn is followed by a horizontal curve making the maneuver difficult for larger vehicles.
- Multiple intersections have right-turn lanes that do not meet deceleration and storage length requirements.
- As County 14th Street approaches Avenue A from the west, there is a crest curve that limits sight distance at the traffic signal.
- Landscaping walls present along residential streets frequently limit motorist's intersection sight distance.
- The intersection of Arizona Avenue and Palo Verde is elongated reducing the northbound and westbound sight distance.
- A crest curve to the east of the intersection of 8th Avenue and County 22nd Street in San Luis limits intersection sight distance.
- County 17th Street does not align at Somerton Avenue resulting in an angled through movement at the intersection.

Pedestrian and Bicycle Conditions

- Crosswalks at schools are often not marked with white paint.
- Many crosswalks are only signed or painted, rarely both present.
- Limited crossings result in pedestrians crossing midblock.
- County Avenue H (Juan Sanchez Boulevard to Julian Street): existing sidewalk dips to pavement level to allow for the roadway to drain across the sidewalk, making the sidewalk impassible.
- Avenue A has a large sag curve where it intersects with 28th Street. The crosswalk provided for this intersection is at the low point of this sag curve reducing oncoming motorist sight distance and causing all drainage to cover the crosswalk.
- 14th Avenue & 8th Street - canal multi-use path has no signage to inform the user of expected movement at crossing. Path has driveway at street crossing, but crosswalk only exists to the east at the light. No signage exists to inform drivers of the bike/ped crossing.
- Bike facilities and lighting on 28th Street drop off between 33rd Drive and 45th Avenue.

Figure 4.6. Structure Conditions

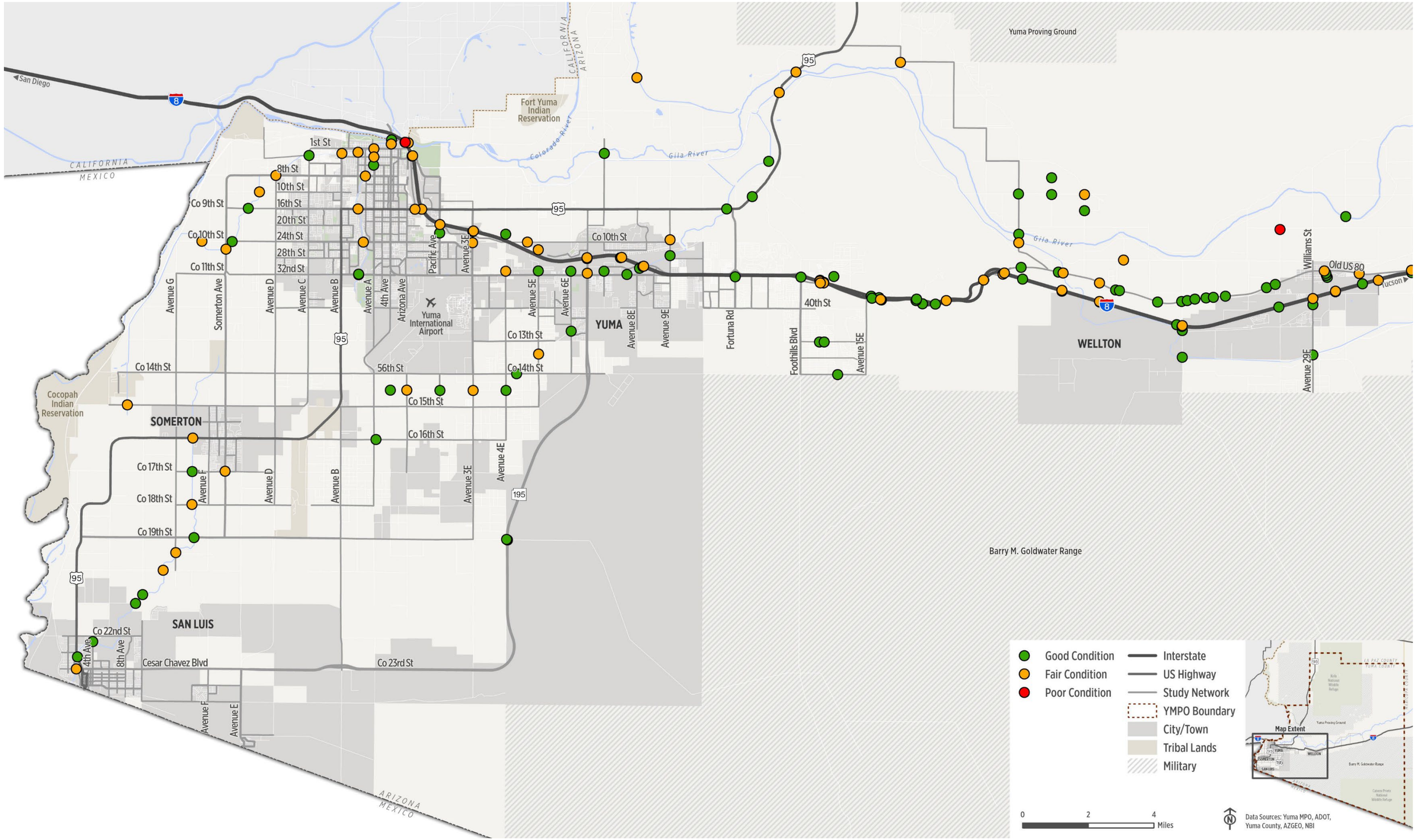
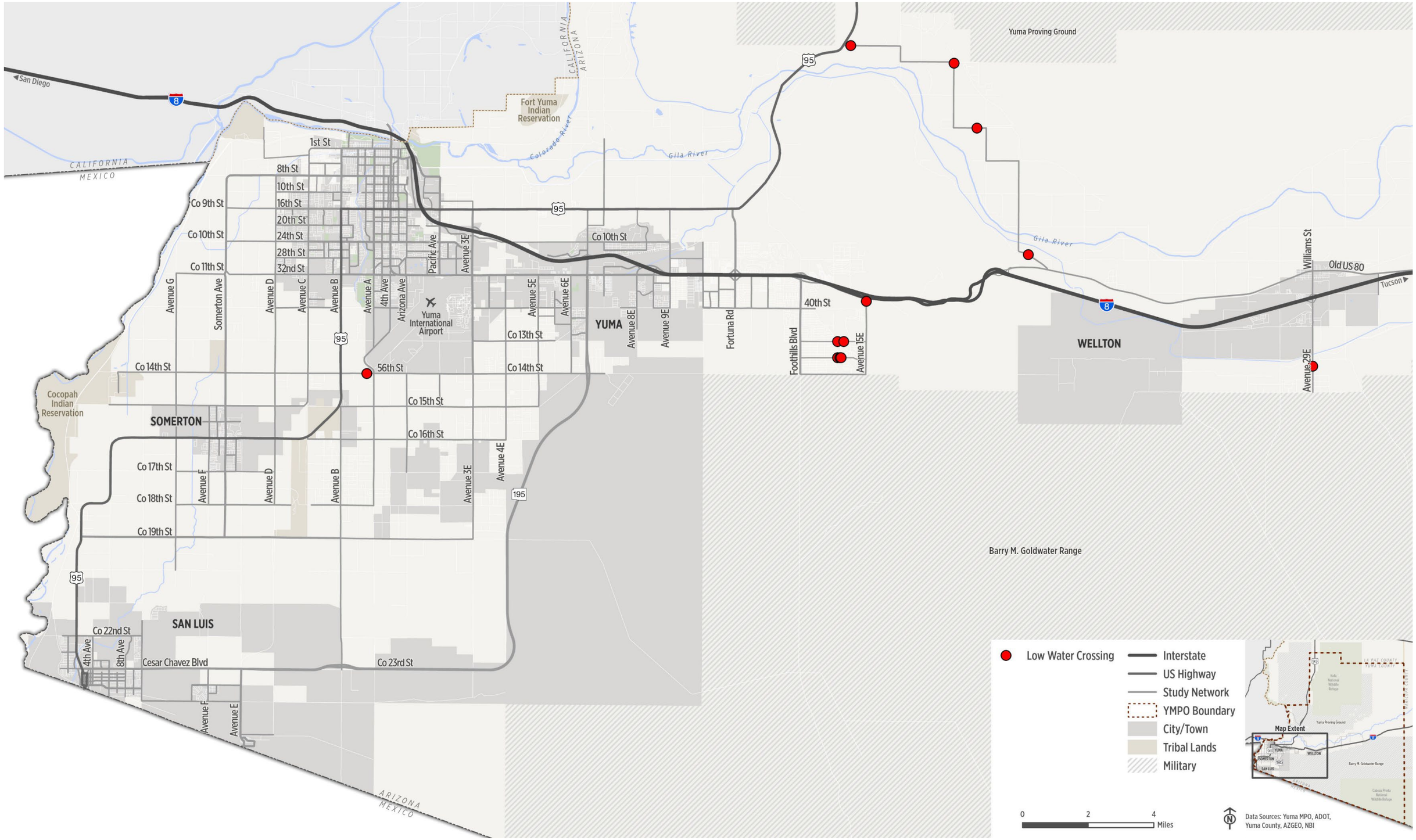


Figure 4.7. Low Water Crossings



System Performance

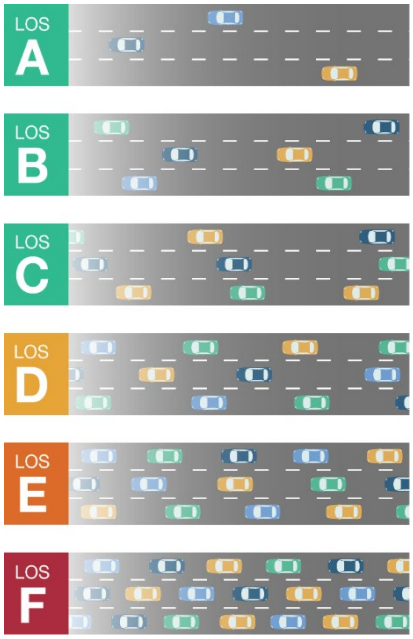
A road's performance is often evaluated using a level of service (LOS) methodology, a traditional metric used by transportation professionals and agencies for several decades.

Traffic Volumes

Traffic volumes is an important variable in understanding the function of a corridor. Current daily traffic volumes were obtained from YMPO and ADOT where available. A countywide YMPO regional travel demand model was developed, calibrated, and validated as part of this plan. Traffic volumes from the regional travel demand model represent annual average weekday traffic conditions. Yuma area experiences increased traffic volumes during the winter season. To determine peak season traffic conditions, the YMPO region was split into six subareas. For available count locations within each subarea, the percent difference in traffic between average season and peak season was determined and an average percent change was determined for each subarea. The average percent difference for each subarea was then used to determine peak season traffic volumes for the entire model network. **Figure 4.8** illustrates existing (year 2023) average weekday daily traffic volumes in the YMPO region based on the travel demand model. **Figure 4.10** illustrates the existing peak season daily traffic volume conditions. Findings show that the street segments that experience the highest traffic volumes in the City of Yuma include I-8, 16th Street, 32nd Street, 24th Street, 8th Street, Avenue 3E, 4th Avenue, Avenue B. Street segments with highest traffic volumes in the City of San Luis include Cesar Chavez Boulevard and US 95; and on US 95 through Somerton.

Level of Service

Level of Service (LOS) is a term used to describe traffic operations. Level of Service can be calculated for the various elements of a street system including road segments, signalized intersections, and unsignalized intersections. The various levels of service range from LOS A (free flowing traffic) to LOS F (forced flow, or very congested), and are described as:



- **LOS A:** free flow with low volumes and no delays
- **LOS B:** stable flow with speeds restricted by travel conditions and with minor delays
- **LOS C:** stable flow with speeds and maneuverability controlled because of higher volumes. Speed and maneuverability are severly restricted and the driver or pedestrian's experience is generally a poor level of comfort or convenience.
- **LOS E:** operating conditions at or near the capacity level. All speeds are reduced to a low but relatively uniform value. LOS E is unstable and can quickly deteriorate to LOS F.
- **LOS F:** forced flow with very low speeds caused by traffic volumes exceeding the capacity of the corridor. Users experience long delays with stop-and-go traffic.

The volume-to-capacity (V/C) ratio for each roadway segment is determined using the travel demand model's traffic volumes, functional classification, and number of lanes. Using the V/C ratios in Table 4.3, LOS for each roadway segment is then determined. **Figure 4.9** illustrates existing average weekday LOS for the YMPO region's roadway network and **Figure 4.11** illustrates the existing peak season weekday LOS conditions. **Table 4.4** lists the key roadways in the region that operate at LOS D or worse in the existing year annual average daily conditions and the peak season daily conditions.

Table 4.3. LOS and Volume-to-Capacity Thresholds

Volume-to-Capacity Ratio	LOS
<0.5	A
0.51- 0.65	B
0.66 - 0.75	C
0.76 – 0.85	D
0.86 – 1.00	E
>1.00	F

Table 4.4. Key Roadways Operating at LOS D or Worse in Existing Year

Annual Average Daily Conditions	Peak Season Daily Conditions
I-8 South Frontage Road: Avenue 9E to Fortuna Road	I-8 South Frontage Road: Avenue 9E to Fortuna Road
24th Street: 33rd Drive to Avenue A	24th Street: 33rd Drive to 1st Avenue
Yuma Palms Pkwy: Quarter mile north of 16th Street	52nd Street: Quarter mile east of Foothills Blvd
52nd Street: Quarter mile east of Foothills Blvd	Main Street in San Luis: POE to U Street
Main Street in San Luis: POE to U Street	16th Street: 4th Avenue to Arizona Avenue
	I-8 North Frontage Road: Avenue 10E to Scottsdale Road

Figure 4.8. Existing Year (2023) Annual Average Daily Weekday Traffic Volumes

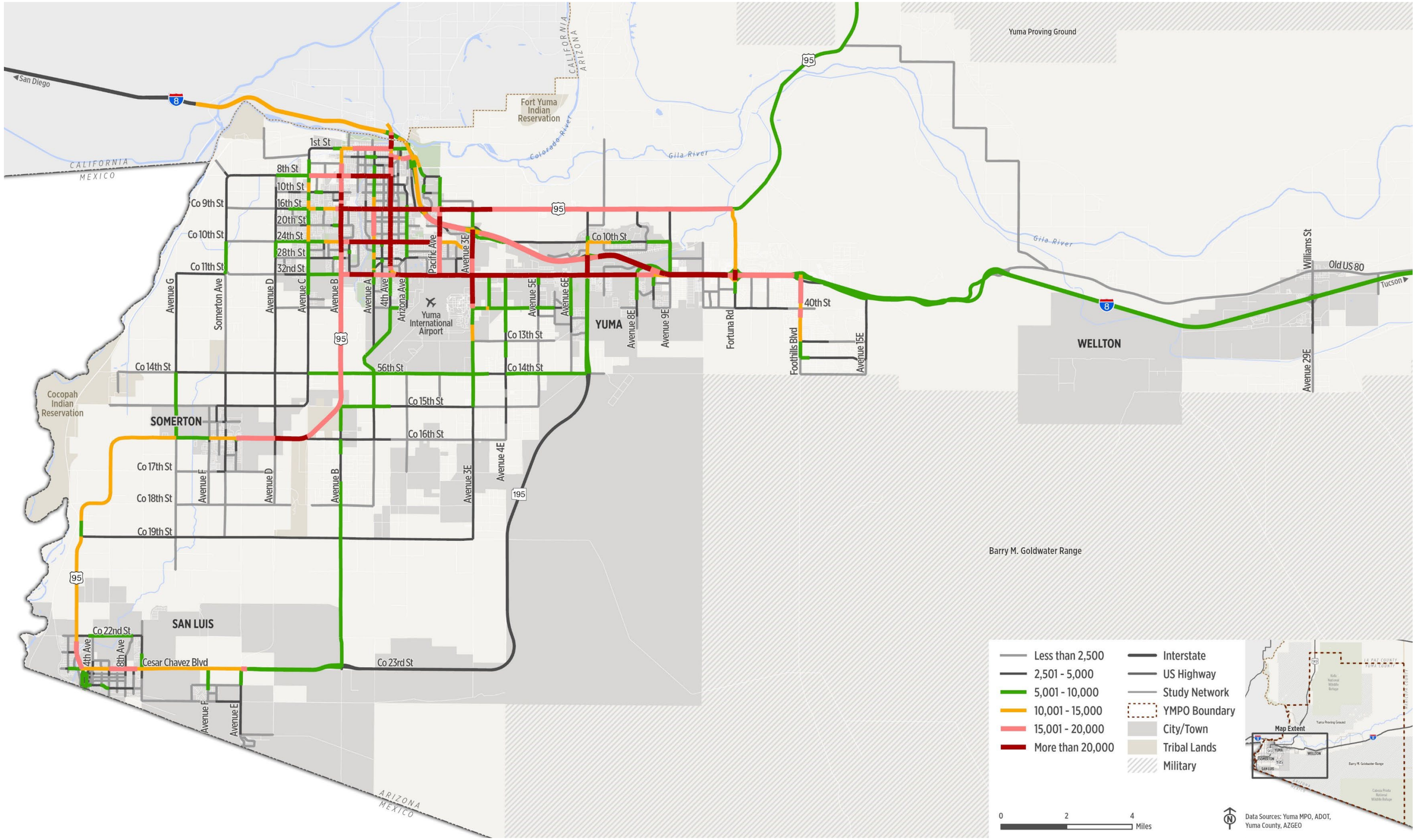


Figure 4.9. Existing Year (2023) Annual Average Daily Weekday Level of Service

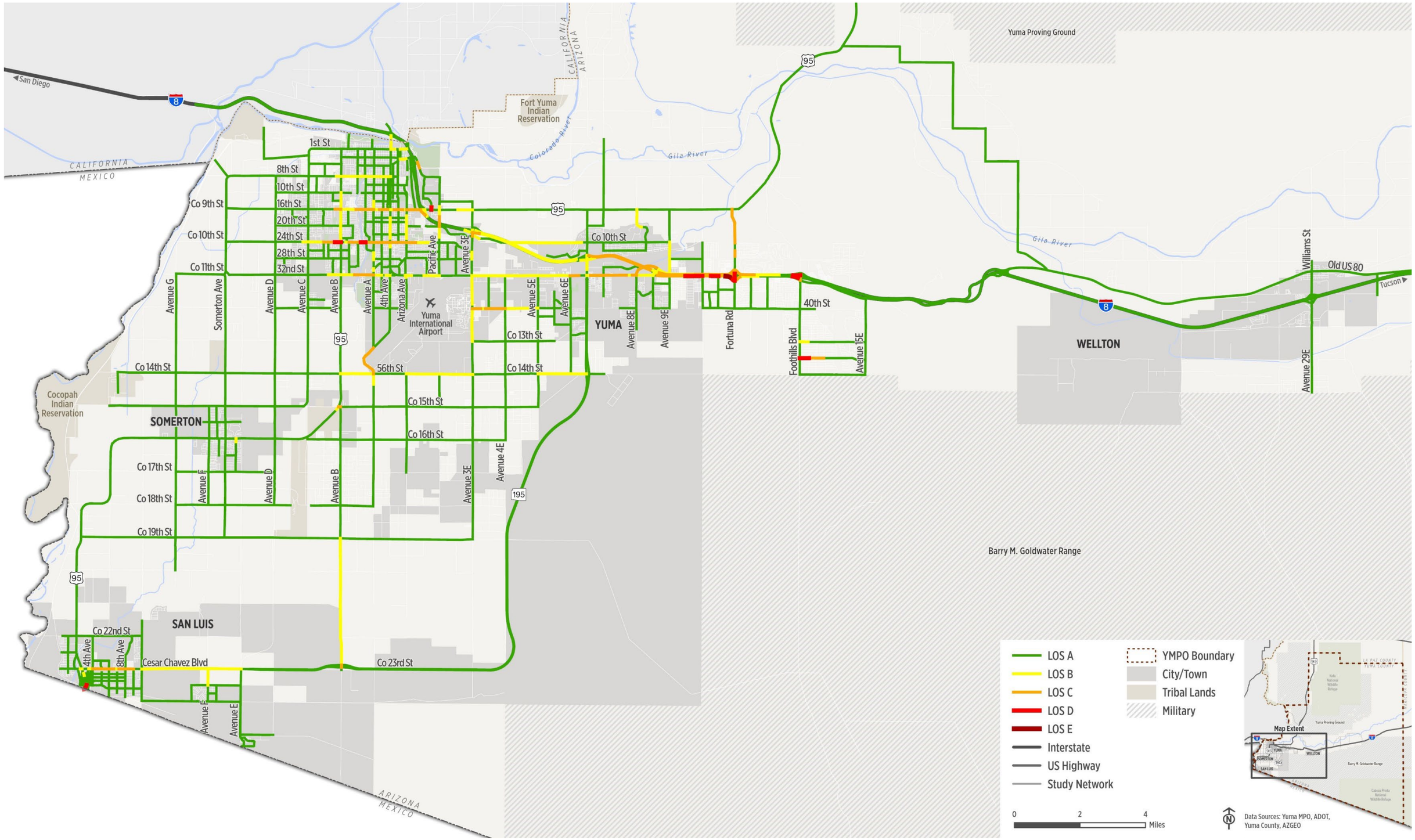


Figure 4.10. Existing Year (2023) Peak Season Daily Weekday Traffic Volumes

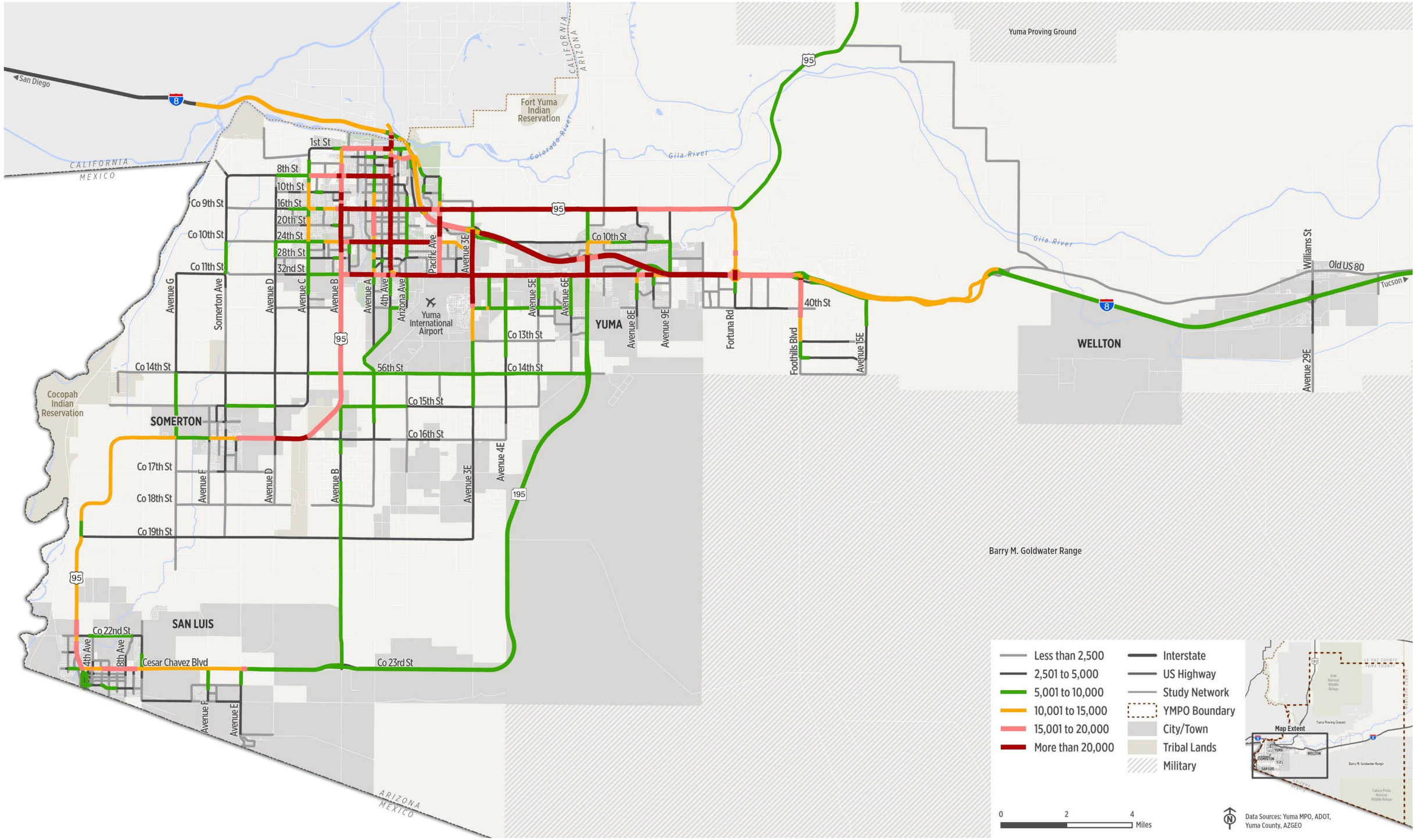
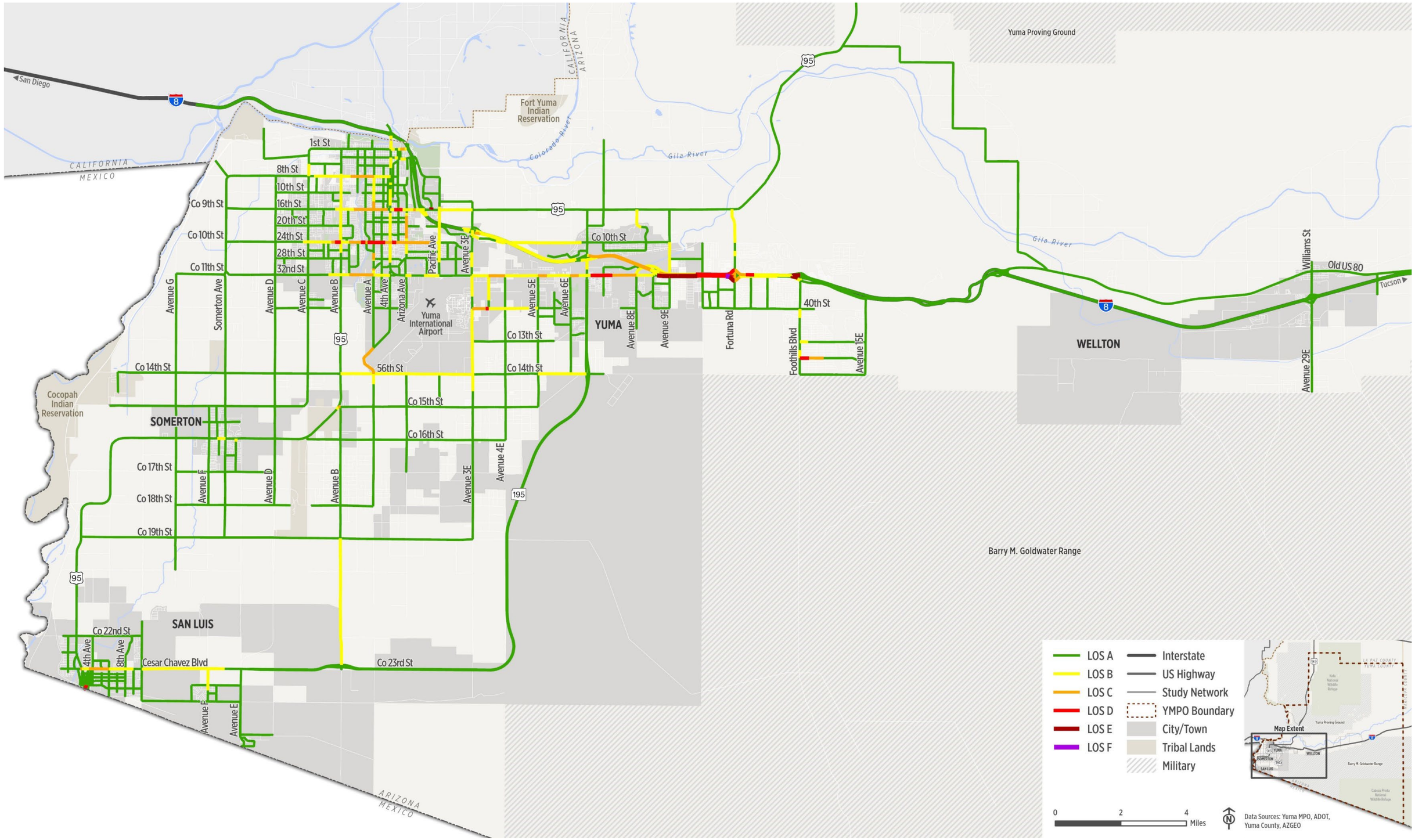


Figure 4.11. Existing Year (2023) Annual Average Peak Season Level of Service



Active Transportation

Active transportation includes any self-propelled, human-powered modes of transportation that engage people in active participation, including walking, biking, jogging, skateboarding, inline skating, and the use of assistive mobility devices. This section summarizes existing active transportation network facility locations and conditions.

Pedestrian Network

Walking is the most common form of transportation, as every trip begins and ends on foot. At some point in the day, everyone is a pedestrian. Pedestrians are highly diverse and range from joggers, groups enjoying a leisurely stroll, parents with children, skateboarders, rollerbladers, people with pets on a leash, and people using mobility aids. Sidewalks are the backbone of the pedestrian network, as they provide a designated space for people to walk along a roadway. The conditions of sidewalks affect all pedestrians, particularly individuals with disabilities. Sidewalk gaps, uneven surfaces, obstructions, or poor sidewalk conditions create deterrents or barriers to pedestrian travel. In addition to sidewalks, crosswalks are a critical component of the pedestrian network, providing pedestrians with designated space to cross the street. Conditions of existing pedestrian facilities in the region include:

- Sidewalks are generally present in urbanized cores; however, there are limited to no sidewalks in rural areas.
- Many corridors have sidewalk gaps due to sporadic corridor and business development, forcing pedestrians to walk in unpaved areas in the roadway's shoulder.
- Freeways, major roads, and canals have created physical barriers to crossing.
- Existing sidewalks are generally in fair to poor condition, making travel difficult for people using a wheelchair or pushing a stroller.

Figure 4.12 illustrates locations of existing crosswalks available within the YMPO region.

Bicycle and Trail Network

Bicycling is an essential component of any transportation system, and it provides numerous benefits to communities and residents. Despite the region's general dependency on single-occupancy vehicles, the region has a strong and thriving bicycle community of recreational cyclists who bike primarily for leisure or physical activity. These riders prefer long-distance, continuous routes and often ride on the weekend or early morning hours. To meet the needs of these riders, as well as to provide biking opportunities for commuting or personal purposes (such as shopping), the region is increasingly supporting and investing in bicycle infrastructure.

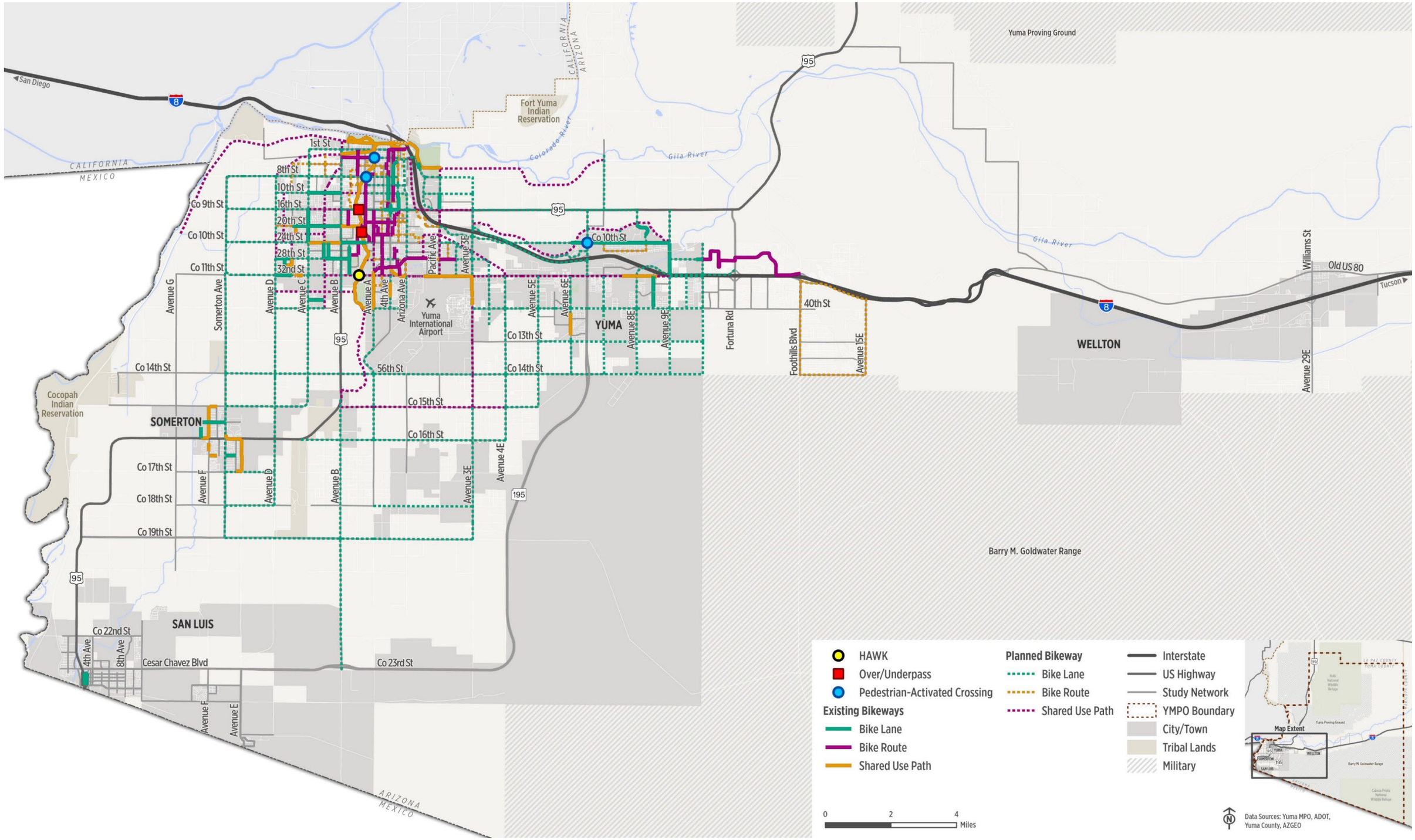
Biking in the YMPO Region Today

The majority of the existing bicycle network system within the YMPO region is composed of dedicated bicycle lanes, shared-use paths, and shared roadways or wide roadway shoulders. The Yuma Bicycle Facilities Master Plan (2009) and the YMPO Bicycle and Pedestrian Safety Plan (2020) identified a network of bike lanes, bike paths, shared-use paths, and crossings to create a network that connects to schools and activity centers to encourage bicyclists of all ages and abilities to routinely use bicycling to get to and from work, school, and other activities. **Figure 4.12** illustrates the location of existing and planned bicycle facilities within the YMPO region.

Off-Street Paths and Trails

When bicycle and pedestrian facilities are connected to recreational areas, they act as an extension of the transportation system. Connecting parks and other recreational facilities via bicycle and pedestrian facilities is a way to make parks more accessible and provide a safe and convenient means for residents to explore the recreational system. Off-street paths and trails are open to cyclists, walkers, hikers, runners, and often equestrians. **Figure 4.12** illustrates the locations of existing and future bikeways.

Figure 4.12. Active Transportation Network



Public Transportation

Yuma County Area Transit (YCAT) Service Overview

YCAT fixed route and On-Call paratransit services cover a 78-square mile service area containing just under 200,000 residents of the cities of Yuma, San Luis, and Somerton; Town of Wellton; Cocopah Indian Reservation; unincorporated communities of Gadsden, Fortuna Foothills, and Ligurta; Fort Yuma-Quechan Indian Reservation; and the Winterhaven community in Imperial County, California. Services offered include:

- Fixed routes
- Flexible (FLEX) service zones
- On-Call paratransit

As illustrated in **Table 4.5** and **Figure 4.13**, YCAT operates 10 fixed routes that extend 344 total miles. Weekday service consists of 10 routes operating between 5:30 am and 10:45 pm, although service span varies by route and only NightCAT runs after 8:07 pm. Six routes operate on Saturday between 9:15 am 6:30 pm. Most routes operate on hourly headways.

Three fixed routes also offer flexible (FLEX) service by customer request in select service areas listed below. This service allows users to request a pick-up/drop-off within a certain distance from the main route.

- **Blue Route 5** – Within the Fort Yuma Reservation. The bus can flex off route up to ¾ mile on either side of the established fixed route upon customer request either to the bus operator or by phone at least 30 minutes in advance. Requests for flex stops are limited to the first four requests per one-way trip. There is an additional fare of $2.00 for all passengers who request a flex.
- **Purple Route 6A** – Within the North Cocopah Reservation, Cocopah RV Resort, and within the East and West Cocopah Reservations. The bus can flex off route up to ¾ mile on either side of the established fixed route upon customer request either to the bus operator or by phone at least 30 minutes in advance. Requests for flex service are limited to the first four per one-way trip.
- **Gold Route 8** – Entire route within a 1.5-mile radius on either side of the route and the entire Town limits of Wellton.

As depicted in **Figure 4.13**, the routes are primarily one-way loops that connect at three major hub locations:

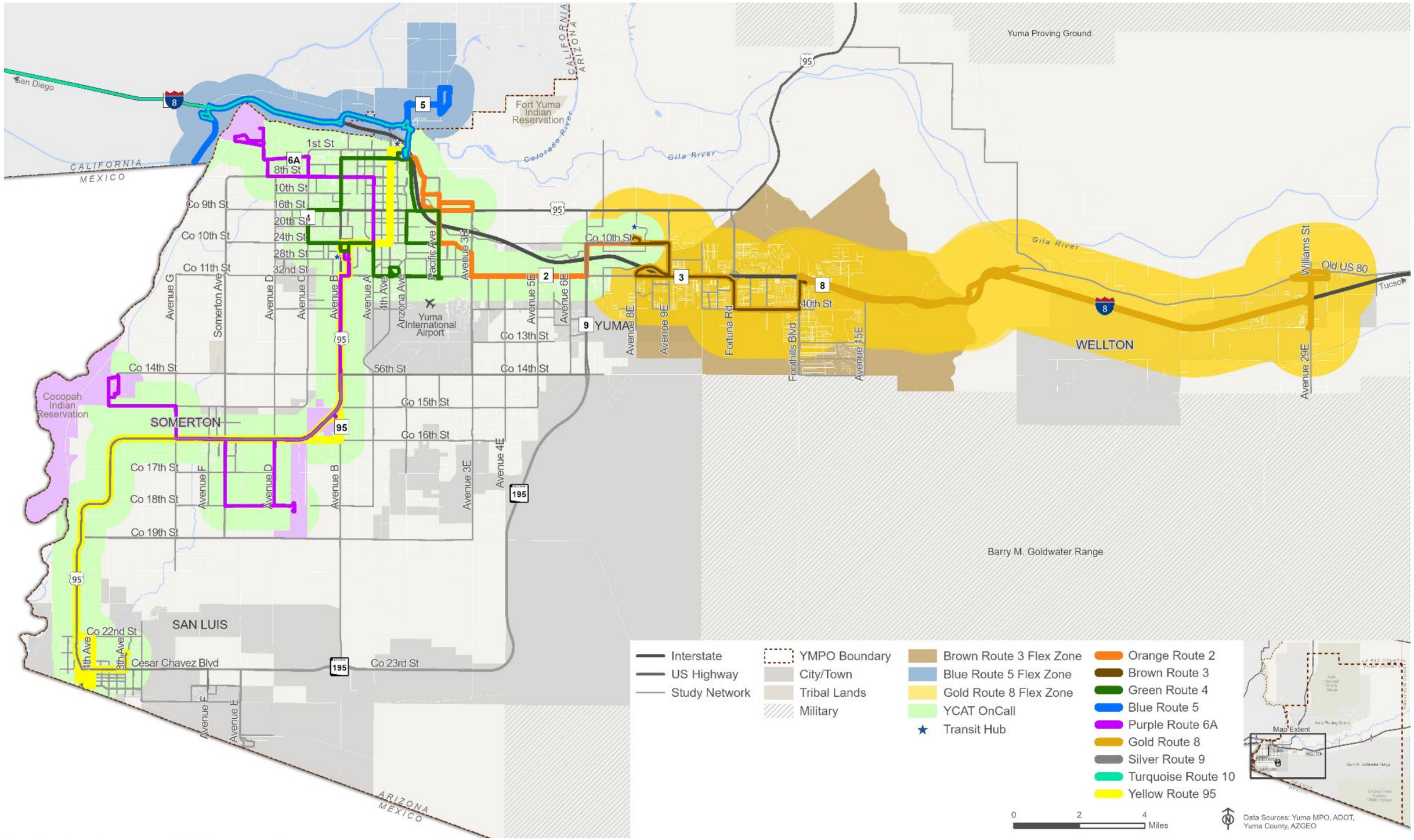
- **Downtown Yuma Transit Center (DYTC)** site is located at East 3rd and Gila Street, near the portal entrance to the Amtrak station in the northeast corner of the Downtown Historic district.
- **Arizona Western College/Northern Arizona University/University of Arizona (AWU/NAU/UA) Transfer Hub** is located north of 24th Street on the AWC campus.
- **West Yuma Transfer Hub (WYTH)** is located on the north side of West 26th Street at 23rd Avenue, adjacent to Walmart.
- Other transfer points include the Cocopah Casino, downtown San Luis, and El Centro.

Table 4.5. Temporary Rider's Guide, February 2024

	Terminals		Service Coverage	Service Span		Terminals	
	Terminal 1	Terminal 2	Key Trip Generators	Weekday Saturday	Weekday Saturday	Weekday	Saturday
2 Orange – Colleges/ E Yuma	Downtown YTC	AWC/NAY/UA Hub	Arizona Western College, Northern Arizona University, University of Arizona, Yuma Palms Regional Center	5: 27 AM/ 9:26 AM	8:15 PM- 6:21 PM	60	60
3 Brown – Fortuna Foothill Shuttle	County Library	AWC/NAY/UA Hub	Walmart, County Library	7:57 AM/ 10:57 AM	6:24 PM 5:24 PM	60	60
4/4A Green – Central Yuma Circulator	Downtown YTC	W Yuma Hub	Social Security, Yuma Palms Regional Center, Yuma International Airport, Big Curve SC, Southgate Mall, Yuma Regional Medical Center, Walmart	6:53 AM/ 9:53 AM	7:16 PM 4:16 PM	60 (2-way)	60 (1-way)
5 – Quechan Shuttle	Downtown YTC	Quechan Casino Resort	Fort Yuma Reservation, Quechan Community Center/Social Services, Winterhaven, Andrade Port of Entry (POE)	7:25 AM/ 9:25 AM	6:17 PM 4:17 PM	60	60
6 – Purple – Avenue A / Cocopah Reservation	N Cocopah Reservation Admin Office at Veterans Drive	Cocopah Casino Resort	North, East & West Cocopah Reservation, Cocopah Casino Resort, Somerton	6:50 AM/ 9:15 AM	6:50 PM 4:25 PM	60 (2-way)	60 (2-way)
8 Gold – I-8/Wellton	Welton (Arizona Ave & Williams St)	AWC/NAY/UA Hub	AWC E Yuma County Center, Ligurta Station, Walmart, County Library	6:55 AM	4:52 PM	1 AM / 2 PM Trips	-
9 Silver – South County AWC Connector	San Luis (Avenue F & Olivo)	AWC/NAY/UA Hub	San Luis, Gadsden, Somerton	5:46 AM Monday thru Thursday Only	6:16 PM	4 NB / 2 SB Trips	-
10 Turquoise – I-8/Central Yuma	Downtown YTC	El Centro Bus Terminal	Paradise Casino, Gonzo's Super Save, Winterhaven, Superior Court, Quechan Casino, Imperial Valley Mall, El Centro Medical Center	7:30 AM Mon, Wed, Fri Only	5:17 PM	2 Round Trips	-
95 Yellow – Hwy 95 South	Downtown YTC	San Luis (2nd & B)	Yuma, Cocopah, Mesa Verde/Orange Grove, Somerton, Gadsden, San Luis	5:35 AM/ 9:09 AM	8:49 PM 6:43 PM	30 / 60	60

Source: YCIPTA/YMPO Short-Range Transit Plan

Figure 4.13. Existing YCAT Transit Network and FLEX Service Zones



Source: Yuma County Intergovernmental Public Transportation Authority

System Performance

Table 4.6 provides a summary of system performance over the last six years; as of April 2024, data for 2023 is not available. This system assessment uses operational data to determine how YCIPTA, as an agency, has performed. YCAT experienced modest ridership growth from 2015 through February 2020. This upward trend, however, was significantly impacted by the 2020/2021 COVID-19 pandemic. Ridership has since been back on an upward trend but has not reached pre-pandemic numbers.

Table 4.6. YCAT Bus System Performance Indicators (2018-2022)

	2018	2019	2020	2021	2022
Annual Boardings	434,472	455,475	376,181	227,895	284,065
Total Operating Cost	$3,091,017	$4,547,418	$4,462,015	$4,914,968	$4,646,470
Fare Revenue	$416,688	$415,121	$325,093	$26,495	$340,953
Revenue Vehicle Hours	37,408	36,133	36,500	28,051	36,717
Revenue Vehicle Miles	835,223	778,830	800,561	607,202	785,886
Performance and Cost Effectiveness					
Boardings per Revenue Hour	11.7	12.7	10.3	8.1	7.7
Total Cost per Boarding	$7.11	$9.98	$11.86	$21.57	$16.36
Farebox Recovery	13.5%	9.1%	7.3%	0.5%	7.3%

Paratransit Characteristics and Performance

In accordance with the Americans with Disabilities Act (ADA), YCAT also offers complementary paratransit service to people who are unable to use the fixed route bus service due to a disability. YCAT OnCall service is available within ¾ mile of the existing fixed route service (this is separate from the FLEX service and is available for all fixed routes).

The boundaries for this service include portions of the cities of Yuma, Somerton, San Luis, unincorporated Yuma County, including Gadsden, Fortuna Foothills, Winterhaven, Fort Yuma Indian Reservation and Cocopah Tribe areas:

- Service to El Centro, Fortuna Foothills, Wellton, and Ligurta is available through route deviation services on YCAT Turquoise Route 10 or Gold Route 8.
- YCAT Gold Route 8 provides route deviated services to passengers in Wellton and within a 1½ mile radius between Wellton and Yuma Palms Regional Center, including Fortuna Foothills and Ligurta.
- YCAT Purple Route 6A will also deviate within a ¾ mile radius within the Cocopah Reservations.
- YCAT Brown Route 3 will also deviate within ¾ mile radius in the Fortuna Foothills for the entire route.
- YCAT Turquoise Route 10 will deviate within ¾ mile radius of the route in El Centro.

YCAT provides paratransit services Monday through Friday, 5:27 am to 8:15 pm, and Saturday from 9:09 am to 6:43pm. All paratransit vehicles are wheelchair accessible. Reservations must be called in 24 hours in advance. Vehicles are dispatched on a strictly as-needed basis, operating only when trip reservations have been made.

Table 4.7 provides summary of key system performance from the last six years; as of April 2024, data for 2023 is not available. YCAT OnCall provided 7,291 rides in 2022.

Table 4.7. YCAT OnCall System Performance Indicators (2018-2022)

	2018	2019	2020	2021	2022
Annual Boardings	7,933	8,364	10,438	6,489	7,291
Total Operating Cost	$233,870	$239,203	$230,957	$224,555	$243,861
Fare Revenue	$6,778	$2,754	$1,094	$105	$3,532
Revenue Vehicle Hours	4,260	4,263	4,245	2,992	3,367
Revenue Vehicle Miles	68,964	70,469	82,744	52,302	59,506
Performance and Cost Effectiveness					
Boardings per Revenue Hour	1.9	2.3	2.5	2.2	2.2
Total Cost per Boarding	$29.48	$20.41	$22.13	$34.61	$33.45
Farebox Recovery	2.9%	1.2%	0.5%	0.05%	1.45%

YCAT Vanpool Program

YCAT Vanpool provides clearly marked vans to qualifying groups of seven to 15 commuters to be driven by one of the vanpool members. Passengers share the cost of operating the van by paying a monthly fee to the primary driver. The fee covers gas, insurance, and vehicle maintenance. YCIPTA provides a $300 subsidy to vans on a first come, first served basis. The van must originate, terminate, or travel through Yuma County to be eligible for the subsidy and be branded as YCAT Vanpool. Total FY 2022 ridership was 62,709 commuters. The data reflects a recuperating program in terms of ridership and level of service following a decrease in 2021.

Currently, Yuma Proving Ground (YPG) employees are the largest market served by the YCAT Vanpool program. All vanpools currently travel to/from the YPG are operated by the U.S. Army. The YPG is an ideal market for vanpools with its relative isolation, fixed work schedules, lack of midday travel demand, and the dispersed origins of vanpool commuters. **Table 4.8** provides a summary of key system performance from the last six years.

Table 4.8 YCAT Vanpool System Performance Indicators (2018-2022)

	2018	2019	2020	2021	2022
Annual Boardings	67,622	67,922	68,423	58,784	62,709
Total Operating Cost	$374,182	$207,730	$251,682	$231,384	$279,585
Fare Revenue	$369,539	$335,101	$398,013	$388,277	$411,216
Revenue Vehicle Hours	10,274	9,833	10,698	9,473	9,088
Revenue Vehicle Miles	463,782	388,856	394,412	415,883	401,875
Performance and Cost Effectiveness					
Boardings per Revenue Hour	6.6	6.9	6.4	6.2	6.9
Total Cost per Boarding	$5.53	$3.06	$3.68	$3.94	$4.46
Farebox Recovery	98.76%	161.32%	158.14%	167.81%	147.08%

Hotel del Sol Multimodal Transportation Center

Currently, YCIPTA administration and YCAT operations are housed in a leased facility in the Gila Acres industrial area of Yuma. The 2.7-acre site includes a metal building containing garage and administrative office space and unpaved bus parking area enclosed by chain-link fencing.

In November 2021, the City was awarded a $10.6 million Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant to develop the Hotel del Sol into the Yuma region's first Multi-Modal Transportation Center (MMTC) in downtown Yuma. The MMTC will be the primary Yuma regional transfer hub for all arriving and departing Amtrak and Greyhound passengers and will serve as YCAT's downtown transit center. Additionally, this development will include public service counters for YCIPTA, eliminating the need for riders to travel to multiple locations for transportation and ticketing services.

The MMTC will be developed to serve as a fully functional one-stop transportation center, by consolidating commuter rail, intercity bus, and local public transit modes of transportation into one location.

Other Regional Transit Connections

Supporting the expansive YCAT system is a network of public and private transportation providers in the YMPO region, which include:

- **Greyhound/Flixbus** provides long-distance connections to over 3,400 destinations across the US and Mexico, including Phoenix, Tucson, San Diego, and Los Angeles. YCIPTA has developed a partnership with Greyhound to sell tickets, as well as accepting Greyhound tickets on board YCAT routes. Commissions on tickets sales have steadily increased year-by-year – starting at $7,940 for FY 2019-20 and projected to increase to $30,605 for FY 2025-26; the average between 2019 and 2024 is $22,385 (YCIPTA/YMPO Short-Range Transit Plan).
- **Amtrak** provides cross-country passenger rail service on two lines. The Sunset Limited serves Yuma three times per week and provides access to Los Angeles, Tucson, and points east to New Orleans. The Texas Eagle serves Yuma three times per week and provides access to Los Angeles, Tucson, and points to the northeast to Chicago.
- **Human services agencies** operate specialized transportation services for clientele or specialized population groups such as the elderly and those with disabilities.

Previously Identified Needs

2021 YMPO Short-Range Transit Plan :

Targeted Service Improvements (FY 2022-23): These improvements focus on fine-tuning the existing system. The changes proposed do not require intensive pre-implementation resources and do not present adverse effects on YCAT customers. Incremental service improvement strategies include:

- Modify / expand FLEX service coverage to reach more potential customers.
    - Orange 2 FLEX Zone
- Restore late afternoon schedule reliability on selected routes:
    - Green 4A Catalina Loop conversion from fixed route to FLEX
    - Yellow 95 school day capacity increase
    - Blue 5 and Turquoise 10 schedule coordination

- Prevent chronic overcrowding and customer pass-ups at schools or other locations.
- Simplify customer information and system functionality.

Fort Yuma-Quechan Reservation Service Improvements:

- Improve the Blue 5 route headway to the Andrade POE to hourly (currently every two hours).
- Expand the reach of the fixed route services on the Fort Yuma-Quechan Reservation with Personal Mobility on Demand (PMoD)[1] feeder connections.
- Introduce on-demand subsidized shared ride taxi/transportation network company service on the Fort Yuma-Quechan Reservation to reduce dependence on personal vehicles and supplement YCAT bus service.
- Increase Turquoise 10 route service to El Centro to five days per week (currently three days).

Hotel del Sol MMTC Goals:

The Hotel del Sol MMTC will be the largest investment in public transportation in Yuma in generations and serve as a focal point of the system. Below are the primary goals of the project per the City of Yuma's website:

- **Goal 1: Improve mobility.** Facilitate the improvement of mobility throughout the community and the entire region.
- **Goal 2: Stimulate economic development and redevelopment of adjacent areas.** The MMTC should be a part of a larger plan to help stimulate overall redevelopment, including economic development, either in downtown or wherever the facility is located.
- **Goal 3: Help preserve and enhance the local historic and architectural heritage.** The MMTC can be an important part of local historic preservation and redevelopment activities by providing a place for artwork, museums, and other visitor activity, including potential use as a visitor's information center.
- **Goal 4: Raise the image and profile of transportation services.** The MMTC can be an important first step in promoting and increasing the visibility of other modes of transportation such as Amtrak, Greyhound, and local public transit services.

[1] Personal Mobility on Demand (PMoD): A pilot project to determine the viability of on-demand shared ride taxi service on the Fort Yuma-Quechan Reservation would introduce a new direct travel option within the YCAT service area if either the trip origin or destination is on the Fort Yuma-Quechan Reservation. This service responds to the preference of many Reservation residents for taxi service and the coverage limitations of fixed route transit in low density areas. YCIPTA's principal roles would be to subsidize a portion of the cost of the trip to ensure sustainability, and to monitor performance relative to service standards.

Goods Movement

Another major function of the transportation system is to move goods and services for commercial purposes. The efficient movement of freight, goods, and packages is extremely important the region's economic prosperity. Yuma's location on the border of four states (Arizona; California; Sonora, Mexico and Baja, Mexico) and two countries (United States and Mexico) makes it a natural transportation hub.

Truck Freight

Major commercial and industrial trucking activity is limited to designated truck routes built to standards accommodating heavy vehicles. **Figure 4.14** illustrates designated commercial truck routes and overweight truck routes in the YMPO region today. Key routes include:

- **Designated Commercial Truck Routes:**
    - I-8, US 95 / Avenue B, SR 195 / Co 23rd Street / Cesar Chavez Boulevard, 8th Street, 16th Street, 24th Street, 32nd Street, 4th Avenue, Arizona Avenue south of 32nd Street, Avenue 3E, and Avenue E.
- **Designated Overweight Truck Routes:**
    - 32nd Street from 4th Avenue to SR 195.
    - Arizona Avenue south of 32nd Street.
    - SR 195 / Co 23rd Street / Cesar Chavez Boulevard.
    - Avenue E south of Cesar Chavez Boulevard.

As part of the City of Yuma Transportation Master Plan (2014), a Buildout Truck Routing Plan was developed for the community (shown in **Figure 4.14**. A focus for the plan was to facilitate the efficient movement of trucks and minimize excessive wear on local streets.

National Freight Highway System

The Federal Highway Administration (FHWA) has established a National Highway Freight Network to improve the US freight transportation network. While I-8 is not considered part of the Primary Highway Freight System, the interstate does provide important continuity and access to freight transportation facilities. It is also identified as part of the Strategic Rail Corridor Network (STRACNET) and the Strategic Highway Network (STRAHNET) to support military freight in Arizona.

Arizona State Freight Plan

ADOT recently updated the Arizona State Freight Plan (2022), which identifies short- and long-range freight related transportation investments. The plan identified US 95 from I-8 to Avenue 3E, County 15th Street to I-8; and I-8 from California State Line to US 95, US 95 to Avenue 3E as high-priority freight bottlenecks.

Air Freight

Yuma International Airport: Yuma International Airport (YIA) offers limited freight service through an air cargo ramp and FedEx. YIA, however, is increasingly addressing the freight needs of MCAS—Yuma, YPG, and developments in the region. As military and space-related activities increase at the YIA, the demand for expanded air freight capability will also increase.

Rolle Field: Located two miles north of San Luis II POE, Rolle Field provides general aviation services. As economic development, expansion of the San Luis II POE, and increased freight demand is placed on the region, Rolle Field is well positioned to support freight services.

Rail Freight

Arizona State Freight Plan (2022): The **Union Pacific Railroad (UPRR) Sunset Route**, which goes from Los Angeles to El Paso through the YMPO, operates up to 70 trains per day and handles approximately 20 percent of the railroad's total traffic. Ongoing double tracking of the line will allow the company to operate more than 100 trains per day.

Wellton Branch Railroad Rehabilitation Study (2014): The Wellton Branch Railroad Rehabilitation Study was conducted to assess the costs for alternatives to reestablish freight and passenger service between Arlington, Arizona, and Wellton. The re-establishment of service would provide a direct connection from Los Angeles to Phoenix. The **Wellton Branch is a segment of the UPRR Phoenix Subdivision** that extends between downtown Phoenix and Wellton, Arizona.

YMPO Rail/Heavy Freight Corridor Alignment Study (2022): YMPO recently evaluated potential railroad corridor alignments to connect the east-west Union Pacific rail line and the US-Mexico Border. The goal was to identify a location for a 500-foot-wide corridor capable of accommodating a freight rail facility. The identified corridor runs along SR 195 from UPPR just north of 32nd Street, all the way south to US 2, turning southward east of Avenue E. Ultimately, the corridor would help to create an efficient and safe freight transportation network that will provide regional connections between Sonora, Mexico, and Yuma County. However, due to several limitations related to both constructability and public opinion, the alternative concept was not formally recommended.

Border Infrastructure

Commercial and non-commercial traffic across the Arizona-Sonora border have continued to increase, and the majority of land ports of entry (LPOEs) have experienced an increased crossing of people and goods. These increases are expected to continue as rapid population and economic growth occurs in the region. However, facilities at the LPOEs are outdated and were not designed to accommodate the increased volumes of cross-border traffic. Furthermore, the COVID-19 pandemic has underscored the need for facilities and processes that promote general hygiene and public health for both travelers and staff at the LPOEs.

The YMPO region is currently served by two international separate LPOEs. The San Luis I Land Port of Entry is one of Arizona's busiest ports, with over eight million people crossing the border on a yearly basis. San Luis II Commercial Port of Entry is the second largest commodities port of entry in Arizona due to fresh produce imported from Mexico. The following provides a summary of LPOE conditions in the YMPO region today.

San Luis I Land Port of Entry

The San Luis I LPOE is located on the US-Mexico border in the City of San Luis, Arizona. The LPOE connects US Highway 95 on the north and Mexican Federal Highway 2 and Sonora State Highway 40 to the south. San Luis I POE was constructed in 1930 and later expanded in 1984 and 1991. The LPOE is the westernmost Arizona port near the California border (approximately 4 miles) and is the primary crossing location for farmworkers transported daily to agricultural fields across Yuma County.

San Luis I LPOE is the second busiest non-commercial LPOE in Arizona. Traffic data collection at the border has found:

- Vehicle traffic has increased from 3.02 million in 2012 to 3.25 million in 2018.
- Since 2010, privately-owned vehicles (POVs) using San Luis I LPOE has increased by 58 percent.
- Wait times for vehicles often exceed 2 hours.

The higher volume coupled with outdated facilities creates long wait times, leading to traffic backups in downtown San Luis from southbound vehicles and additional traffic backups from northbound vehicles traveling from Mexico. During agriculture produce season, congestion significantly increases at the LPOE due to the increase amount of cross-border traffic.

US General Service Administration (GSA) was awarded partial funding for the renovation and expansion of the LPOE in 2019. The two-phase project will include site development and infrastructure; expanded northbound POV

lanes; northbound primary and preprimary inspection canopies; associated northbound secondary processing; expanded southbound POV lanes; southbound primary and secondary inspection and processing building; parking; and more. It will also include pedestrian, administrative, and other facilities.

Upon expansion of San Luis I LPOE, the City of San Luis may need to improve and upgrade their multimodal transportation system to accommodate the additional lanes and potential increase of cross-border traffic. The City is currently in the process of developing a Downtown Redevelopment Plan that will evaluate multimodal transportation needs. In 2013, ADOT completed a San Luis street improvement project to improve traffic and pedestrian mobility through the San Luis I LPOE, to reduce conflicts between motorists, bicyclists, and pedestrians. The project recommended:

- Constructing two roundabouts, one at D Street at US 95 and one at Urtuzuastegui Street at US 95.
- Converting Archibald Street (southbound) and 1st Avenue (northbound) to one-way streets.
- Reconfiguring northbound traffic from the LPOE directly to 1st Avenue with accessibility to US 95 from Urtuzuastegui Street (east and westbound)
- Converting US 95 from a five-lane facility between the planned Urtuzuastegui Street mini-roundabout and D Street roundabout into a two-lane local road.
- Constructing a transition road from the F Street/US 95 intersection, which is north of the D Street roundabout, west to Archibald Street.
- New construction, reconstruction, and widening of Archibald Street from a two-lane street to a three-lane one-way southbound facility from F Street to Urtuzuastegui Street.
- Constructing an additional eastbound lane on Urtuzuastegui Street from Archibald Street to the LPOE.
- Providing amenities on US 95 to accommodate pedestrian and bicycle traffic.

San Luis II LPOE

Located about five miles from downtown and opened in November 2010, San Luis II LPOE is the commercial port of entry that process large freight trucks. Commercial vehicles are processed through three primary inspection lanes. One of these three lanes is dedicated as a free and secure trade (FAST) lane. This new port was designed to initially process 150 trucks per day with the potential to expand to 650 trucks per day by 2030. The facility was also designed for the potential of adding additional facilities for passenger vehicles, pedestrians, and bicyclists.

Statewide Planning Efforts

The Arizona Department of Transportation (ADOT) recently initiated a study to update the Arizona-Sonora Border Master Plan (BMP) developed in 2013 to improve the efficiency and effectiveness of Arizona-Mexico cross-border traffic. Ultimately, the plan will refine, identify, and prioritize transportation and infrastructure improvements by refining the existing plan for identifying, prioritizing, and promoting LPOE and related transportation projects. This will improve the capacity and operations of the LPOEs and transportation infrastructure to relieve traffic congestion, reduce delays, enhance safety and security, promote international trade, and improve the quality of life for residents in the border region.

Participation in the Implementation Monitoring Committee (IMC)

Continued coordination with US Customs and Border Protection (CBP) and GSA is necessary to maintain focus on transportation corridors, including routes identified as part of the National Freight Highway Network between POE projects and surface transportation infrastructure adjacent to the ports. YMPO should participate in the IMC recommended in the Arizona-Sonora BMP.

Key Challenges and Opportunities

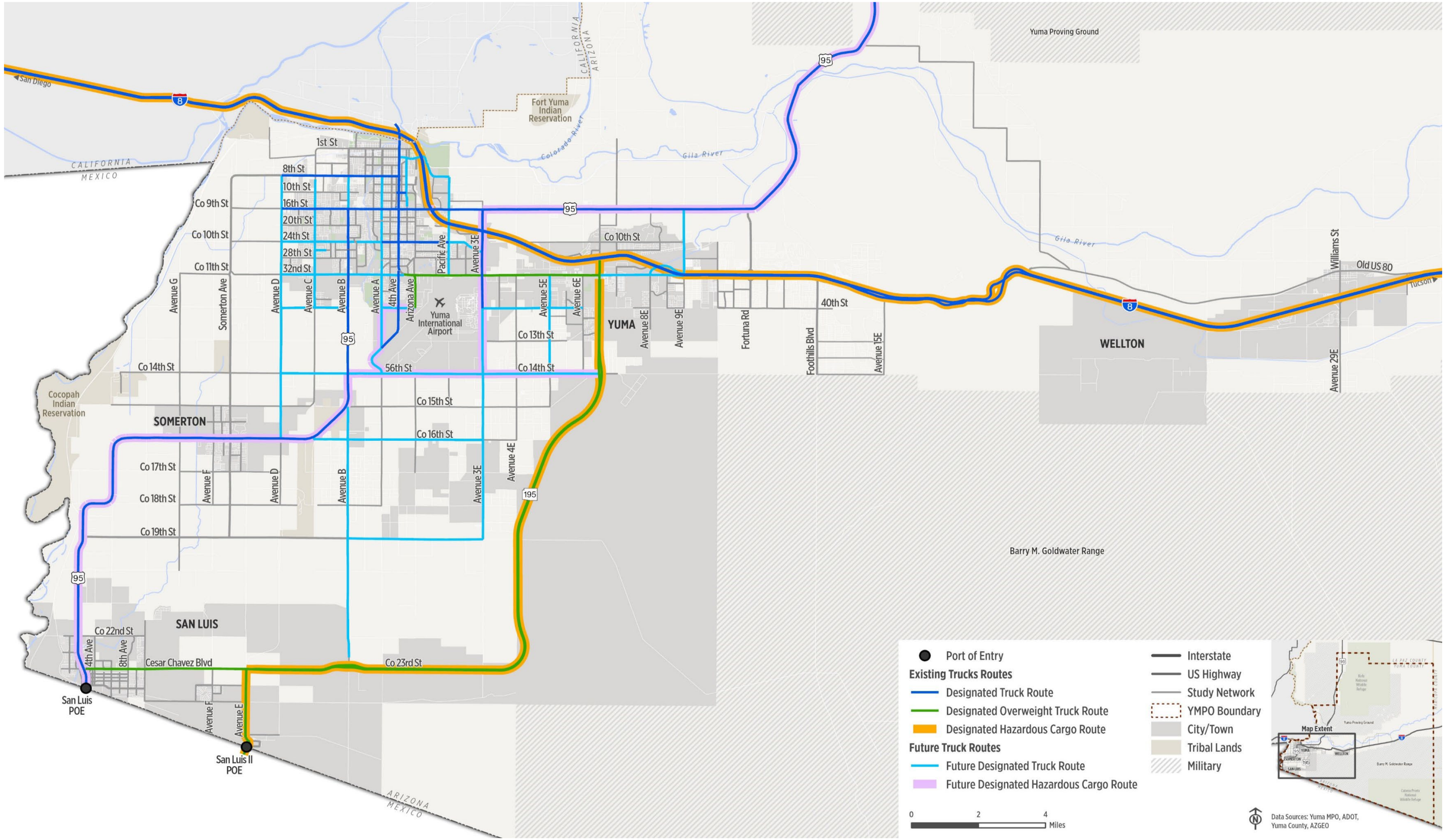
Accessibility to International POEs

Accessibility to the international POEs should be improved by providing alternate routes and additional capacity along Juan Sanchez Boulevard, Avenue E, 56th Street, US 95, and Avenue 3E, as identified and prioritized in the Arizona-Sonora BMP. The 2015 San Luis streets improvement project was designed to improve circulation of traffic, enhance pedestrian safety, and improve access to downtown businesses.

Access for Workers Traveling between Arizona and Sonora

Access for workers traveling between Arizona and Sonora, Mexico should be improved. Currently, many of these workers are pedestrians who experience long delays in the early morning hours. The expansion of San Luis I LPOE is planned to improve wait times. Processing efficiency for transit and vanpools that connect workers to downtown San Luis and agricultural employment centers should be improved.

Figure 4.14. Major Freight Facilities in the YMPO Region



Intelligent Transportation Systems

Statewide Intelligent Transportation System (ITS) Architecture

The YMPO region ITS services are governed by the Arizona Department of Transportation (ADOT). To receive federal funds for ITS projects, the Federal Highway Administration (FHWA) requires that regions implementing ITS projects have an ITS Architecture plan in place. The most recent Arizona Statewide ITS Architecture plan was developed in 2023 and is based off the National ITS Architecture, called Architecture Reference for Cooperative and Intelligent Transportation (ARC-IT). The current version of the National ITS Architecture is version 9.2, which consists of 156 total service packages across 12 Service Areas.

The YMPO region has not developed their own ITS Architecture catered to their region and utilizes the architecture provided by ADOT. Provided in **Table 4.9** are the existing ITS service packages that are currently present in the YMPO region. Some of the services are located centrally and managed by a central management center and not directly managed by the Yuma TMC.

Table 4.9. Existing ITS Service Packages

Area	Service Package	Service Package Name
Commercial Vehicle Operations	CVO21	• International Border Pre–Processing POE Inspection Administration
Data Management	DM01	• ADOT Accident Location Identification Surveillance System (ALISS) Crash Archive Data • ADOT Enforcement and Compliance Division (ECD) Archive Data • ADOT Highway Condition Reporting System (HCRS) Data Warehouse • ADOT Highway Performance Monitoring Systems (HPMS) Data Warehouse • ADOT Maintenance and Construction Operations (MCO)–Traffic Operations Center (TOC) Data Warehouse • ADOT Motor Vehicle Division (MVD) Data Warehouse • Arizona Universities Data Warehouse • AZTech Regional Archive Data System (RADS) Data Archive • Cities and Towns Data Warehouse • Commercial Vehicle Data Warehouse • County Data Warehouse • Department of Emergency and Military affairs (DEMA) ITS Data Warehouse • DPS Archive Data Warehouse • MPO ITS Data Warehouse • Transit Data Warehouse • Tribal Archive Data Warehouse
	DM02	• ADOT Performance Monitoring
Maintenance and Construction	MC02	• ADOT MCO Vehicle Maintenance
	MC05	• ADOT Central Signal Maintenance • ADOT Regional Maintenance Ops • ADOT Roadway Maintenance • Cities and Towns Maintenance and Construction • County Maintenance and Construction • Tribal Maintenance and Construction
	MC06	• ADOT Work Zone Management
	MC08	• ADOT Construction Activity Coordination

Source: RAD-IT Arizona Statewide Architecture 2023

Table 4.9. Existing ITS Service Packages (Continued)

Area	Service Package	Service Package Name
Public Safety	PS01	• Arizona Emergency Call–Taking and Dispatch • County 911 Call–Taking and Dispatch • Tribal 911 Call–Taking and Dispatch • US Border Patrol Enforcement
	PS03	• Arizona Emergency Vehicle Preemption • Cities Towns and Counties Emergency Vehicle Preemption
	PS10	• Arizona Division of Emergency Management (ADEM) Arizona State Emergency Operation Center (SEOC) Wide Area Alert • Amber Alert • Wide Area Alert for Emergency Operations Center (EOCs) statewide
	PS12	• Arizona Disaster Response and Recovery
	PS13	• Arizona Evacuation and Reentry Management
	PS14	• Arizona Disaster Traveler Information
Public Transportation	PT01	• Independent School District Transit Vehicle Tracking • Northern Arizona Intergovernmental Public Transportation Authority (NAIPTA) Transit Vehicle Tracking • ParaTransit Vehicle Tracking • YCAT Transit Vehicle Tracking
	PT02	• Independent School Bus Routes
	PT03	• Arizona Dial–a–Ride Services
	PT04	• NAIPTA Transit Fare Collection • Tribal Transit Fare Collection • YCAT Transit Fare Collection
	PT05	• NAIPTA Transit Security • YCAT Transit Security
	PT06	• Local Public – Private Transit Fleet Management
Traffic Management	TM01	• ADOT Infrastructure–Based Traffic Surveillance • Cities and Towns Infrastructure–Based Traffic Surveillance • County Infrastructure–Based Traffic Surveillance • Tribal Infrastructure–Based Traffic Surveillance
	TM03	• ADOT Traffic Signal Control • City and County Traffic Signal Control
	TM06	• ADOT Traffic Information Dissemination
	TM07	• ADOT and Nevada Department of Transportation (NDOT) DMS Coordinated TM • ADOT Statewide TOC Traffic Management Center
	TM13	• Standard Railroad Grade Crossing • ADOT Rail Grade Crossing • Tribal Rail Grade Crossing
	TM23	• AZ Mexico Border Management Systems

Source: RAD-IT Arizona Statewide Architecture 2023

Existing Devices

ITS devices in the region are managed by four different entities which own and maintain the devices present in the region – ADOT, Yuma County, the City of Yuma, City of San Luis, and the Town of Somerton. Infrastructure between these four entities varies and the findings are organized below and are displayed in **Figure 4.15**.

ADOT Infrastructure

ADOT owns and maintains various ITS devices and services in the YMPO region:

- **Dynamic Message Signs (DMS).** ADOT owns and operates two DMS boards along I-8, with one located at milepost (MP) 11 in the eastbound direction and another located at the state line with California in the eastbound direction.
- **Traffic Management Center (TMC).** The regional TMC operated by ADOT staff is located at the Yuma Public Works Department building, though only ADOT infrastructure is integrated into the TMC.
- **Closed-Circuit Television (CCTV) Cameras.** There are two CCTV camera locations on I-8 in the YMPO region: the state line with California and near Foothills Boulevard.
- **Traffic Signals (TS).** ADOT currently manages 17 traffic signals in the study area. The signals are located at traffic interchanges with I-8 as well as roadway intersections like along SR 195.
- **Maintenance Facilities.** ADOT operates two maintenance facilities in the region, both are located near the intersection of Gila Ridge Road and Pacific Avenue near I-8.

Yuma County Infrastructure

Yuma County owns and operates 27 TS devices, with all of the signals being located near the City of Yuma. The county does not operate other ITS devices.

City of Yuma Infrastructure

The city of Yuma owns and operates the majority of the TS in the region, accounting for 77 of the 122 total traffic signals in Yuma County. The city does not operate other ITS devices.

City of San Luis

The city of San Luis owns and operates four TS devices in the region. Most of these signals are located along US-95 with a traffic signal at Cesar Chavez Boulevard and 8th Avenue.

Town of Somerton Infrastructure

The city of Somerton owns and operates five TS devices in the study area. All five of the signals are located along US-95/Main Street. The city does not operate other ITS devices.

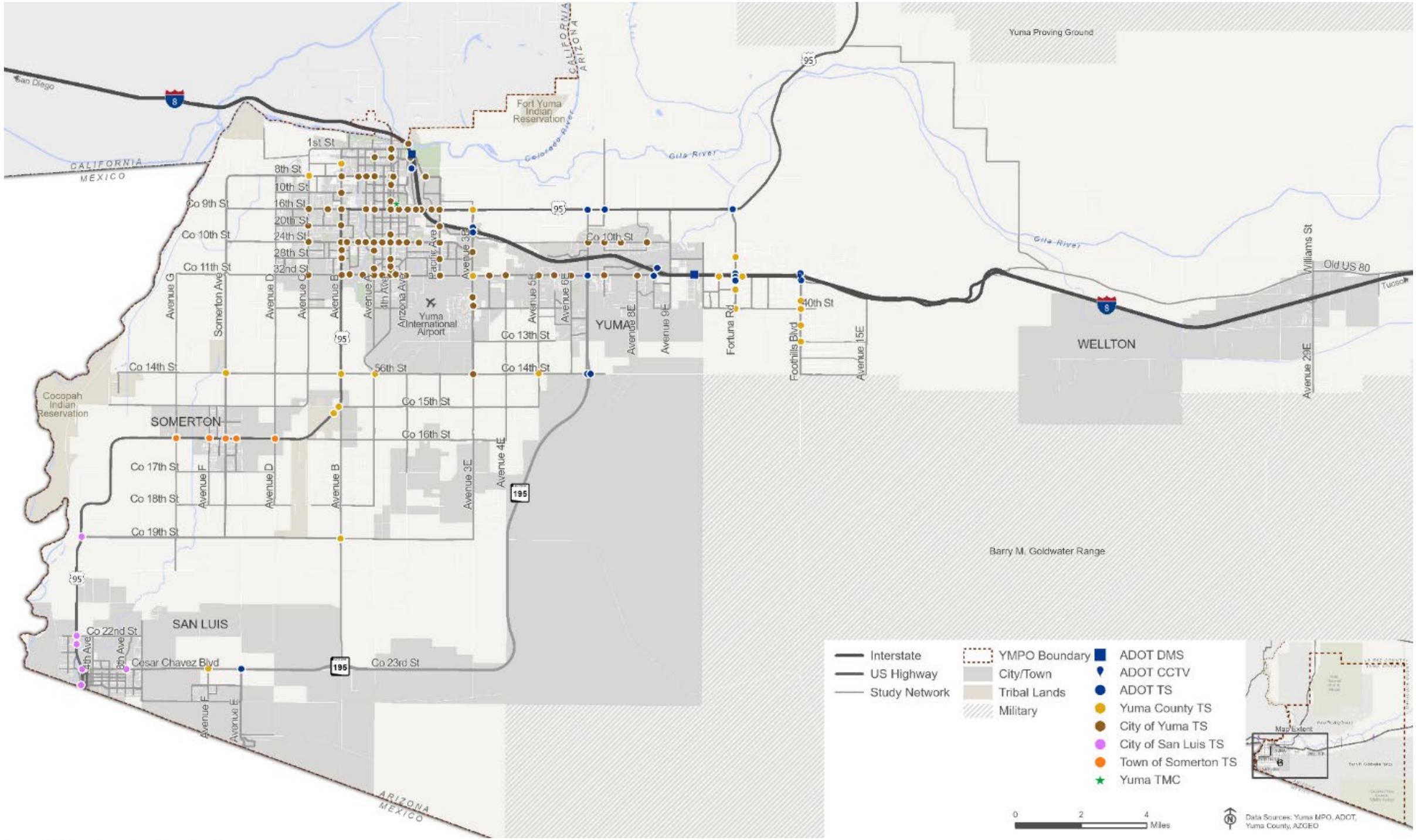
Arizona Broadband Implementation

Broadband communication in the YMPO region is entirely operated locally and not currently connected to a centralized system. ADOT operates multiple traffic signals in the region, with two of them being connected to a centralized system at I-8 and Fortuna Road as well as the I-8 and Foothills Boulevard locations. The connections in the region are currently handled via wireless, including radio and cellular.

City of Yuma Fiber Connection

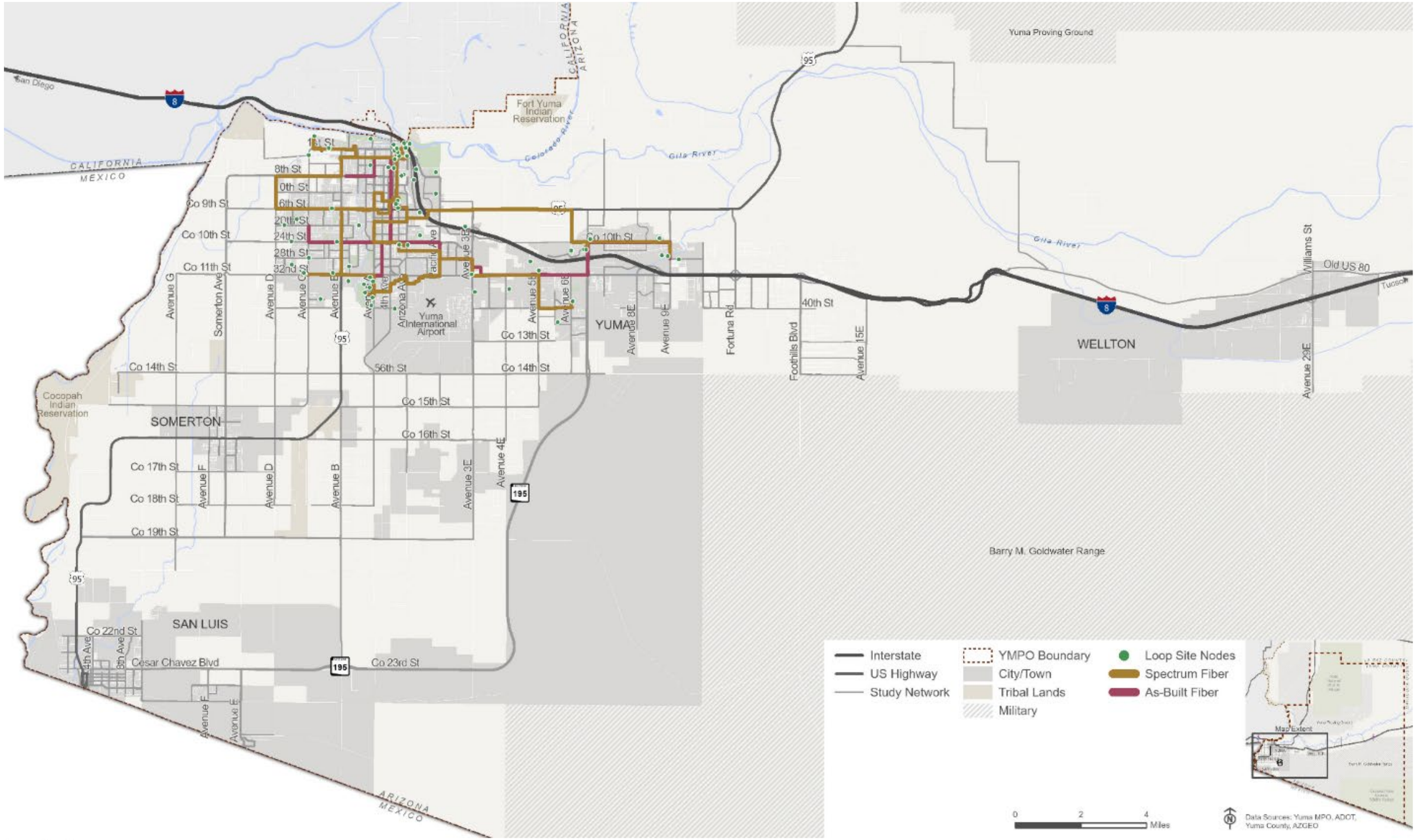
The city of Yuma hosts their own fiber infrastructure that is primarily non-transportation related. The fiber infrastructure in the city does not connect to 56 of the 77 traffic signals that are owned and operated by the City. A map of the existing fiber line and loop node sites are shown below in **Figure 4.16**.

Figure 4.15. Existing ITS Devices and TMC Location



Source: ADOT, Yuma County, City of Yuma, City of Somerton

Figure 4.16. Existing Fiber Network



Source: City of Yuma

ITS at Ports of Entry

The YMPO region has three ports of entry (POE) into Arizona. Two of the POEs are international crossing locations between the United States and Mexico and are located in San Luis. The other POE is for commercial vehicles only and is located on I-8 near the border of Arizona and California.

ITS Devices at the Yuma Truck POE

This domestic commercial vehicle POE is managed by ADOT as it is one of the major crossing locations between Arizona and California. Though ITS devices are present within the POE, such as an in-ground scale to weigh commercial vehicles, other devices on I-8 are not directly supporting the POE actions. The devices include traffic signals in the surrounding area, a DMS message board and a CCTV camera both located along I-8 near the POE.

ITS Devices at the San Luis Ports of Entry

There are two international POE locations in San Luis, the San Luis I POE which accommodates private vehicles and pedestrians and the San Luis II POE which accommodates commercial vehicles. These POEs are maintained by the United States Customs and Border Protection agency. There is also an ADOT commercial vehicle POE collocated at the San Luis II POE that weighs and permits commercial vehicles entering from Mexico. There are currently no other ITS devices located near these locations that directly support either POE, but there are traffic signals that are owned and operated by either Yuma County or ADOT along SR 195 that indirectly support the POE locations.

Previously Identified Needs

A review of documents that mention or encompass areas within the YMPO region were reviewed for ITS needs and gaps and are compiled into the following subsections.

ADOT ITS Master Plan (2023)

The ADOT ITS Master Plan was finalized in 2023 and analyzed potential locations for new ITS devices based on input from stakeholders and other previous ITS projects that were recommended to ADOT. Specific device recommendations were created for the YMPO region and are listed in **Table 4.10**.

Table 4.10. ADOT ITS Master Plan Device Recommendations

Device	Comment
Dynamic Message Sign (DMS)	• US 95 near MP 25, 42, 103 • Westbound DMS board along I-8 near the Yuma POE • DMS board located at Dateland near Ave 64 E • Eastbound DMS on I-8 near US 95 • DMS on I-8 near Foothills Blvd (both directions) • Mini-DMS westbound on I-8 near MP 30 and 57
Closed-Circuit Television (CCTV)	• Camera located at the Yuma POE • Camera located at the San Luis I POE • Cameras at existing and recommended DMS boards
Way in Motion (WIM)	• WIM device located at the Yuma POE
Flashing Beacons (FBC)	• Along US 95 between MP 42 to MP 103 to alert drivers of flooding
Wrong-Way Driver (WWD)	• WWD detection on I-8 between Fortuna Road and Foothills Boulevard
Road Weather Information System (RWIS)	• Along US 95 between MP 42 and 103
Speed Feedback Signs (SFS)	• SFS located on EB I-8 near Pacific Avenue

Source: ADOT ITS ATM Master Plan (2023)

Yuma ITS Strategic Plan (2020)

This plan was focused primarily on the City of Yuma, while acknowledging the areas around the city in the plan and accounting for their existing conditions and future needs. The plan identified needs and gaps in the report and lists the following:

Gaps Related to ITS and Operation

- No ability to remotely access and centrally manage traffic signals and associated infrastructure in real time.
- Lack of availability of real-time data at traffic signals that support day-to-day operations and emergency responses as well as planning for operations.
- Limited agency procedures and processes for coordination and joint decision making for day-to-day transportation operations.
- Not clear if existing staff have the capacity and skillsets to support operations and maintenance of advanced traffic operations strategies, infrastructure, and systems.

ITS and Operations Needs

- Upgrading traffic signal infrastructure including detection, controllers, and cabinets that are at the end of their life or are not able to support advanced operational functions that are desired.
- Standardizing traffic operations including detection, controllers, and cabinets to facilitate maintenance of devices and support compatibility across the different agencies.
- Determining agency responsibilities for operations and maintenance of traffic signals throughout the region.
- Identifying programming processes and funding sources that can more quickly and consistently support device replacement, upgrades, and funding for operations.
- Identifying funding sources and programming processes for capital investments related to ITS and Communications.

Conducting outreach and education to elected officials and the public to garner support for the use of more advanced technologies to support regional transportation operations.

How Safe Are Our Streets?

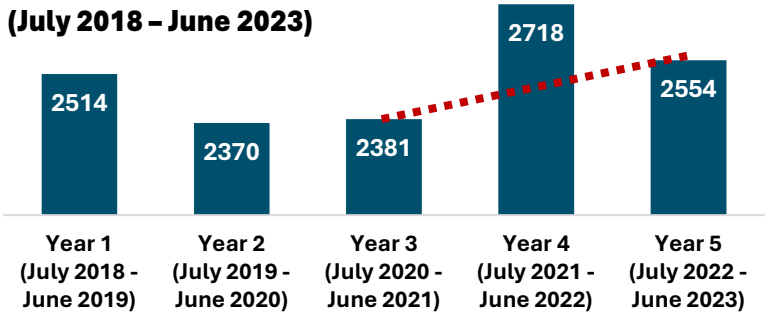
Crash data analysis helps identify trends, patterns, predominant crash types, and high-crash-rate corridors and intersections. This analysis also helps identify potential safety improvements to reduce the frequency and severity of crashes. Crash analysis presented in this section is based on data obtained from the ADOT for the five-year period of July 2018 to June 2023.

Over the five-year period, a total of 12,537 crashes were reported within the Yuma region. As shown in the chart on the right, there have been more annual crashes during the last two years than during the previous three.

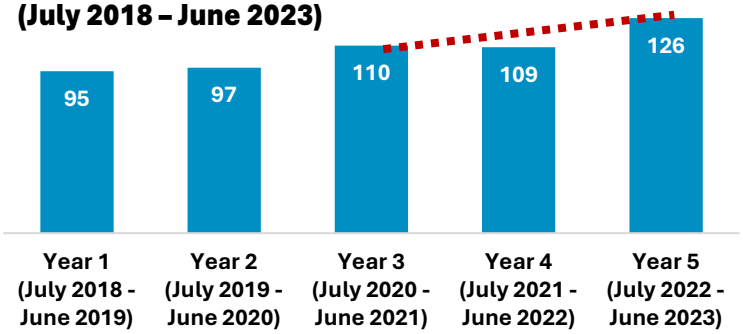
Of the 12,537 crashes, 537 resulted in a fatality or serious injury. This is 7 percent of all crashes. The number of annual fatal and serious injury crashes has been increasing over the last five years, which is shown in on the right.

The following section outlines key crash characteristics to help better understand the "who," "what," "when," "where,", and "how" of transportation safety in the Yuma region. **Figure 4.17** illustrates the locations of all the crashes.

Total Crashes (July 2018 – June 2023)



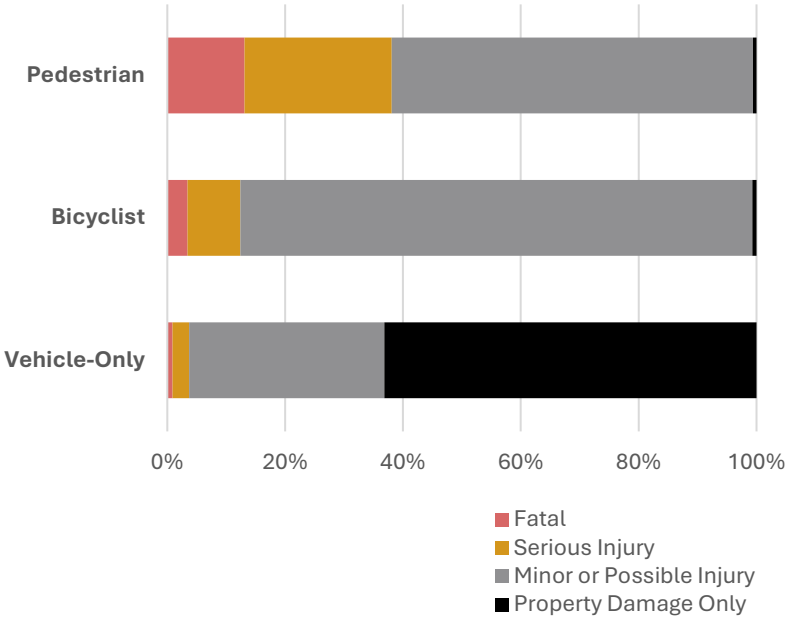
Fatal and Serious Injury Crashes (July 2018 – June 2023)



How Severe are the Crashes?

The chart to the right shows the distribution of crash severity by the three different crash modes. This chart demonstrates the vulnerability of pedestrians and bicyclists. More than half of the crashes involving only vehicles were property damage only crashes, indicating there were no recorded injuries, whereas almost every single pedestrian and bicyclist crash resulted in an injury. **Figure 4.18** shows the locations of the pedestrian and bicyclist crashes. These crashes are largely located within the boundaries of the four Cities within the YMPO. While some of these crashes do occur in the Unincorporated County, they are less common. Most of the Unincorporated County pedestrian and bicyclist crashes occur between Yuma and Wellton.

Crash Severity by Mode



Key Takeaways

- While total crashes decreased from Year 4 to Year 5, there has been a general increase in the number of annual crashes since Year 2.
- Fatal and serious injury crashes have increased by 33 percent over the last five years.
- Pedestrian and bicyclist crashes in the region almost always result in an injury.

Figure 4.17. All Crashes (July 2018 – June 2023)

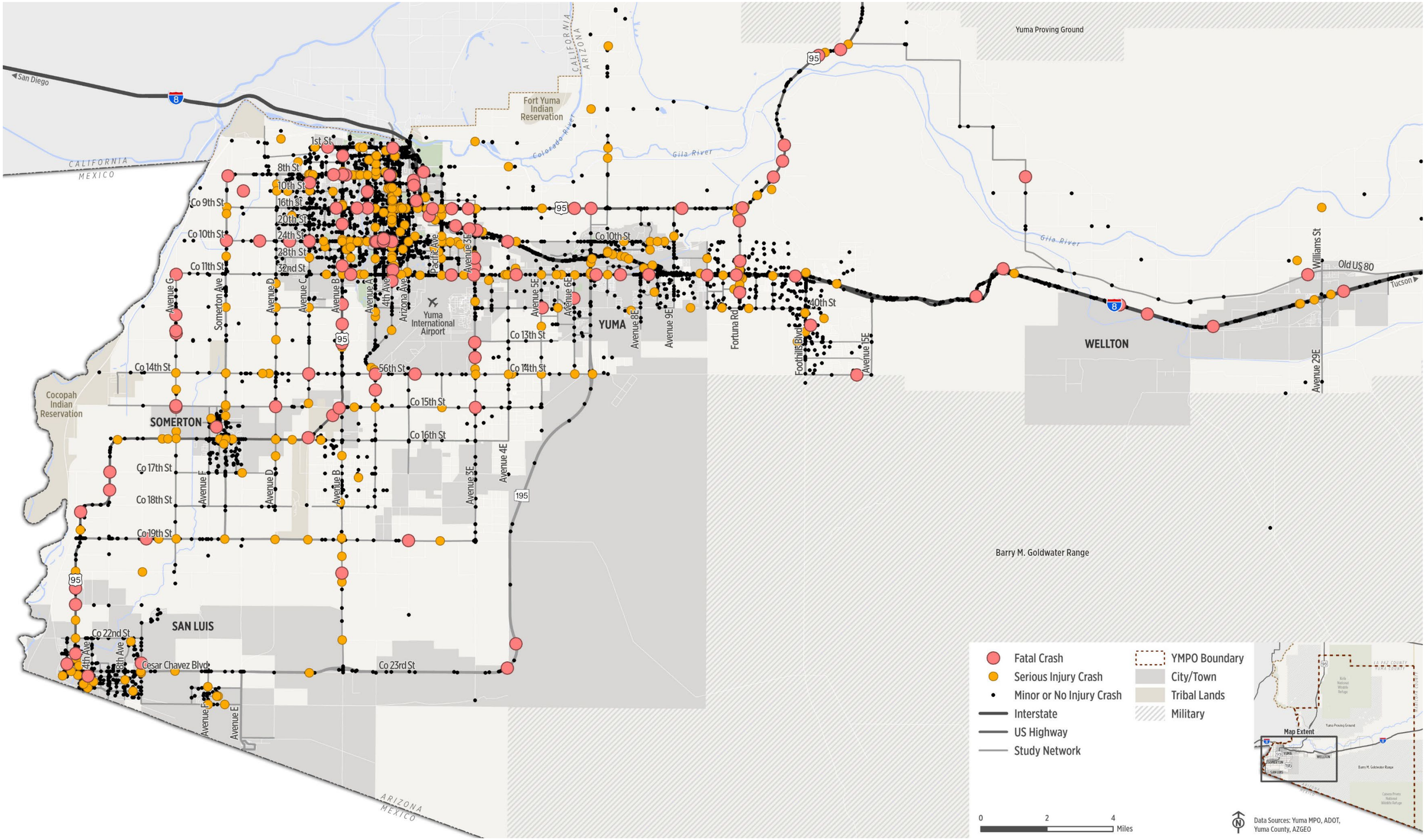
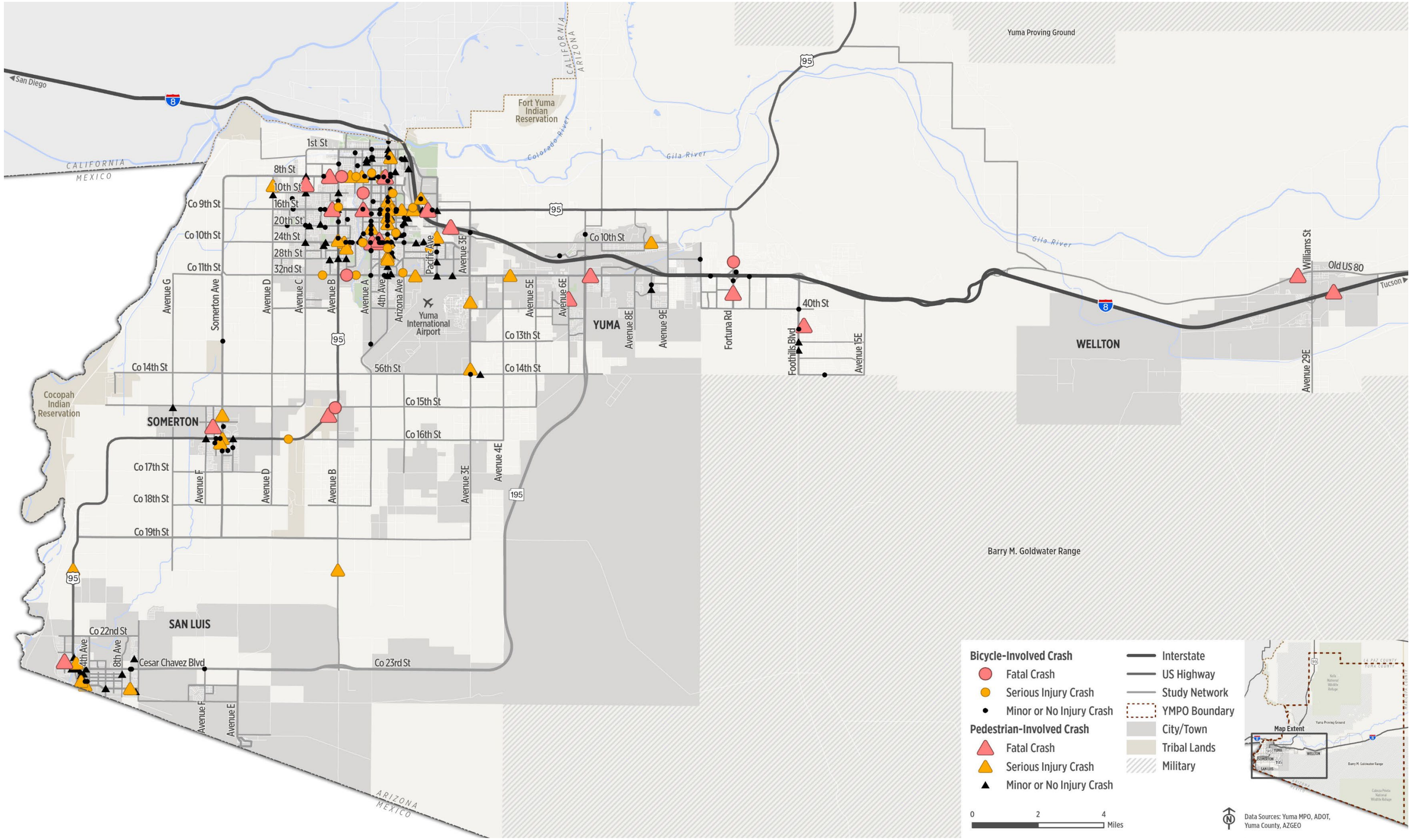


Figure 4.18. All Pedestrian and Bicyclist Crashes (July 2018 – June 2023)

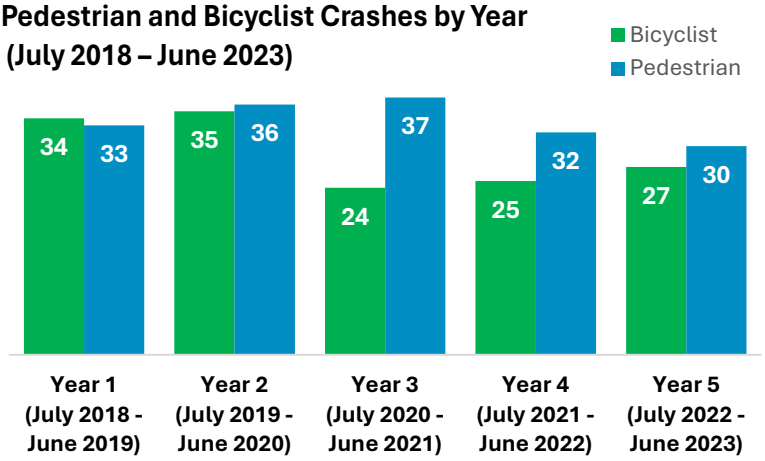


Who is Involved?

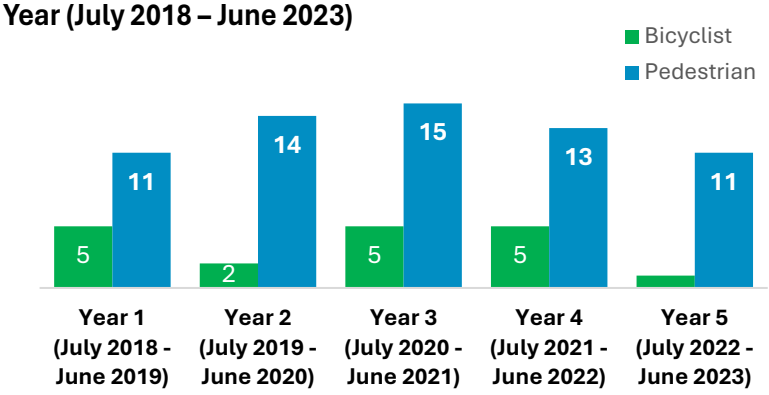
It is critical to consider the different road user types when analyzing crash data. This is because some road users, like pedestrians and bicyclists, are more vulnerable. The following key findings are from looking at the crash data by crash mode:

- Crashes involving only vehicles make up the majority of crashes in the YMPO region.
- Pedestrian and bicyclist crashes are more likely to result in an injury than vehicle-only crashes.
- Bicyclist crashes have increased over the last three years.
- Pedestrian crashes have decreased over the last three years.

Pedestrian and Bicyclist Crashes by Year (July 2018 – June 2023)



Fatal and Serious Injury Pedestrian and Bicyclist Crashes by Year (July 2018 – June 2023)

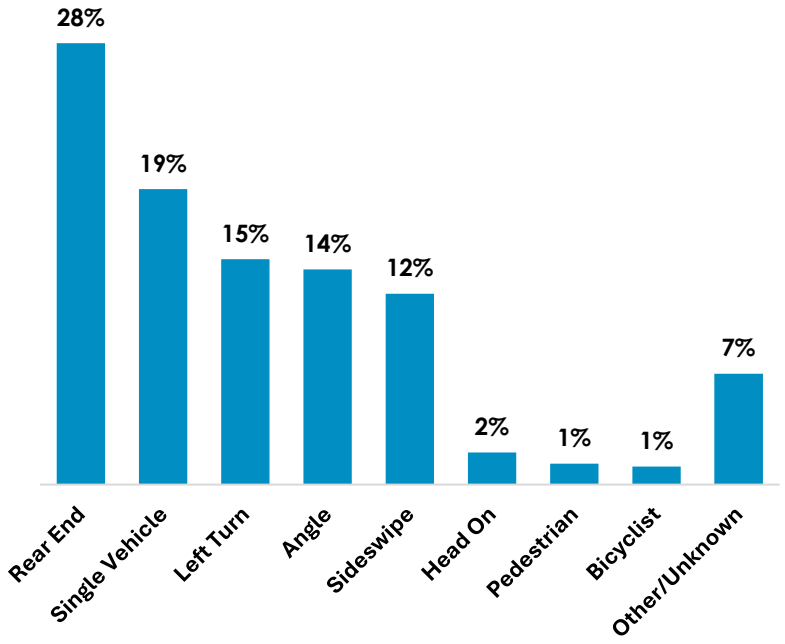


What Types of Crashes are Occurring?

Crashes are assigned a crash type in the police report to describe the configuration of the vehicles at the time of the crash. Each crash type can indicate a particular problem that may be addressed through a targeted engineering, enforcement, or behavioral countermeasure.

Rear-end crashes and single-vehicle crashes were the most common crash types in the Yuma region. These crashes make up nearly 50 percent of all the crashes in the YMPO over the last five years.

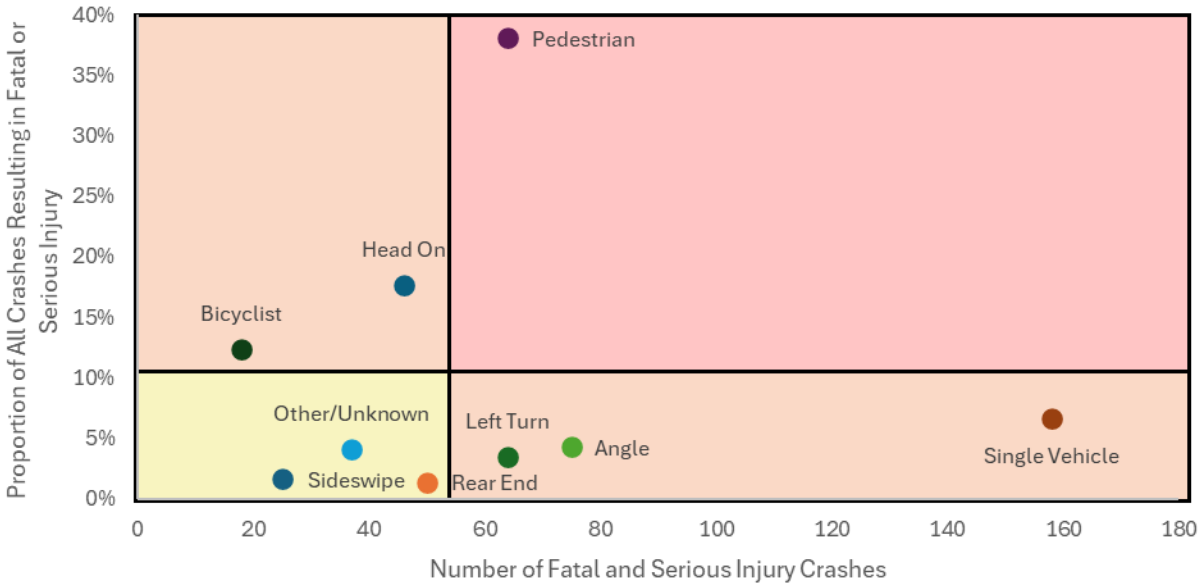
Number of Crashes by Crash Type (July 2018 – June 2023)



What Crash Types are Resulting in Fatal and Serious Injuries?

It is important to consider both crash frequency and crash severity. Pedestrian, bicyclist, and head-on crashes occur less frequently but more often result in a fatal or serious injury. On the other hand, single vehicle crashes in the Yuma region occur more frequently but are less likely to result in a fatal or serious injury.

Crash Types by Frequency and Proportion of Fatal and Serious Injury Crashes

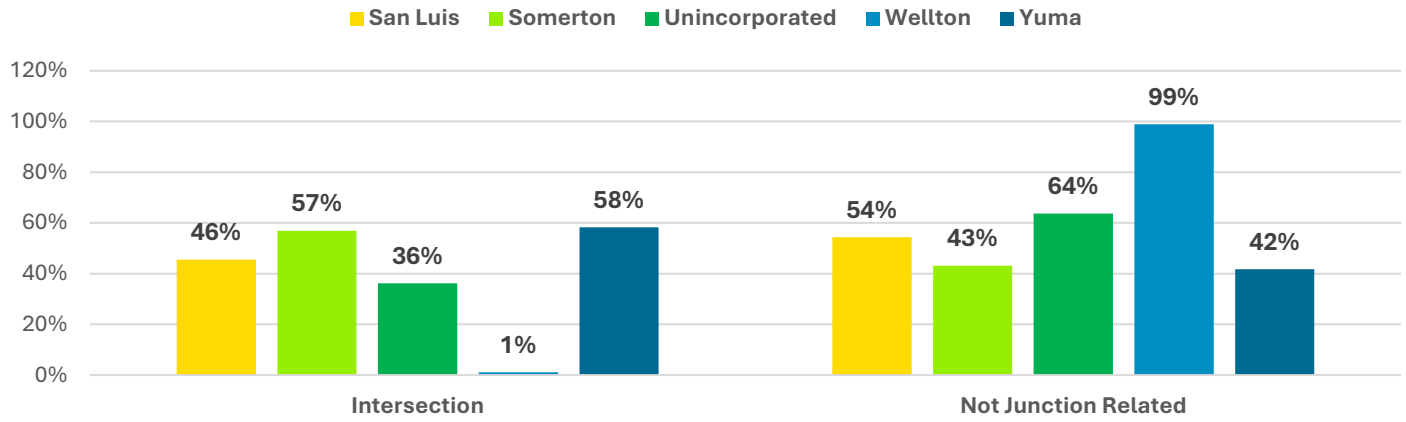


Where are the Crashes Happening?

Understanding the locational context of crashes is an important step in identifying location-specific safety issues that may be addressed through a targeted engineering, enforcement, or behavioral countermeasure. Since the Cities comprising the YMPO region vary greatly in how dense and urban they are, it is important to analyze this context for each jurisdiction independently.

Of all the jurisdictions, the City of Yuma has the greatest proportion of intersection crashes, likely due to its denser and more urban infrastructure. The majority of within Wellton and the Unincorporated County occurred along roadway segments, as these jurisdictions are more rural and comprised of fewer intersections. When looking at only fatal and serious injury crashes, the same trends were observed.

Percent of Agency Crashes at Intersections and on Road Segments (July 2018 – June 2023)



When do Crashes Occur?

Evaluating the time, day of the week, and month of crashes can help identify contributing factors such as motor vehicle volumes and street lighting. The following section outlines when crashes occurred during the period of July 2018 through June 2023.

Time of Year

The number of all crashes, fatal and serious injury crashes, and pedestrian and bicyclist crashes slightly decreased during the summer months. Still, there is a significant number of crashes in each category during each month of the year.

There is a peak for pedestrian and bicyclist crashes in November and a long-term peak for fatal and serious injury crashes from September to February.

The general increase in crashes during the winter months reflects the observed seasonal travel patterns. In winter, the population within the City alone nearly doubles due to the influx of winter visitors, or "Snowbirds."

Day of Week

The number of daily crashes and daily pedestrian and bicyclist crashes was higher during the week than on the weekends. Generally, the number of daily crashes was consistent Monday through Thursday, with a slight peak on Friday.

On the other hand, fatal and serious injury crashes were highest on Friday, Saturday, and Sunday.

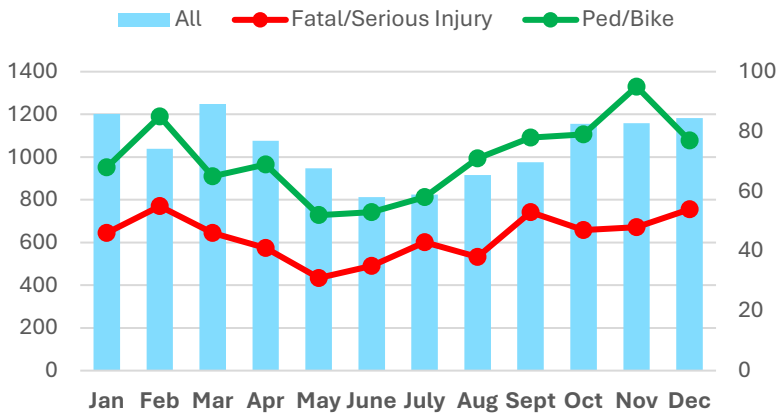
Time of Day

The chart to the right shows the distribution of when crashes happen for all crashes, fatal and serious injury crashes, and pedestrian and bicyclist crashes.

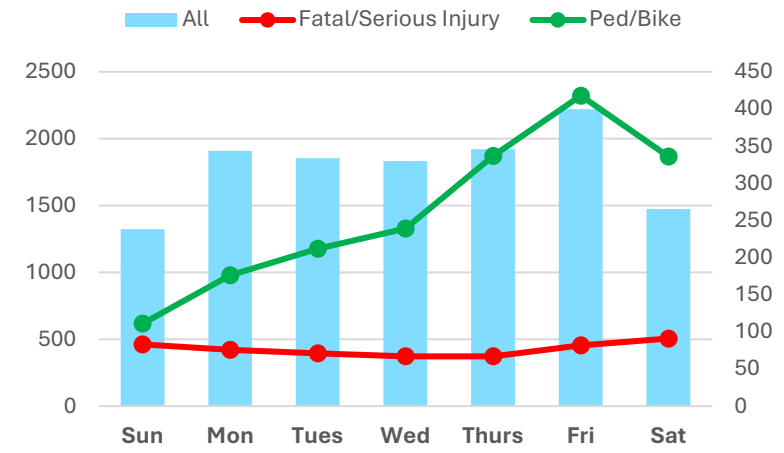
The greatest number of crashes occurred from 3 PM – 6 PM. This time frame captures when people are likely to be commuting from work and school.

Fatal and serious injury and pedestrian and bicyclist crashes were more frequent from 6 PM – 9 PM. This could be related to the combination of high road user activity and compromised lighting conditions.

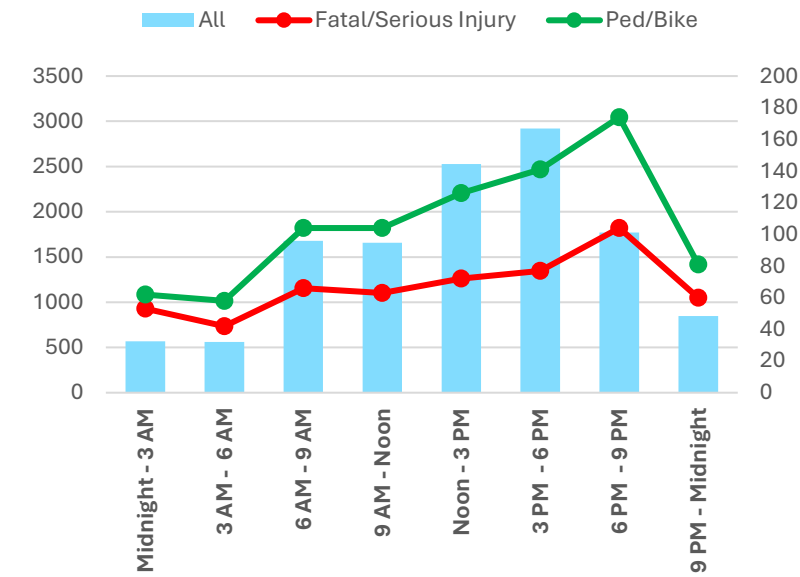
Crashes by Month (July 2018 – June 2023)



Crashes by Day of Week (July 2018 – June 2023)



Crashes by Time of Day (July 2018 – June 2023)



City of Yuma

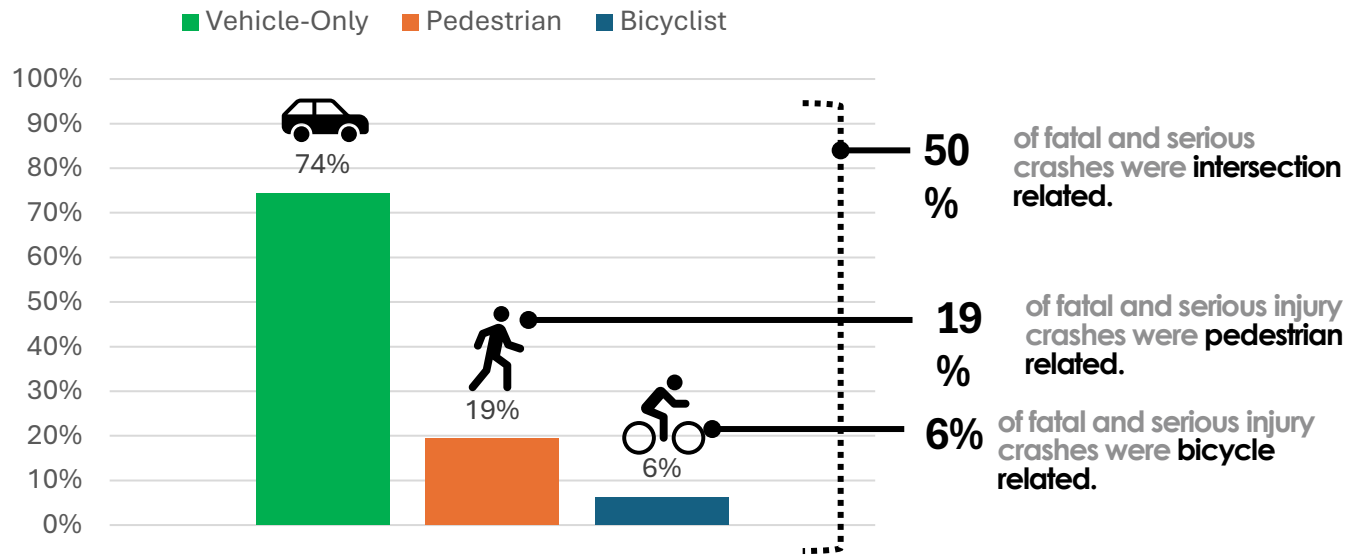
The City of Yuma is the most population dense jurisdiction in the region. As a result, it has the highest number of crashes for all modes. It is also plagued with a high percentage of pedestrian and bicyclist crashes ending in fatal or serious injury. In recent years, the number of annual crashes has hovered around 1,400, with approximately 600 resulting in a fatality or serious injury. **Figure 4.19** maps all the fatal and serious injury crashes.

7,444 total crashes reported

45 fatal crashes

178 serious injury crashes

What Types of Crashes Are Occurring in Yuma?



What are the Contributing Factors?

Roadway Network Characteristics

Four lane roadways posted at 30-35 MPH comprise...

9% of Yuma's roadway network.

32% of Yuma's fatal and serious injury crashes.

Environmental Conditions

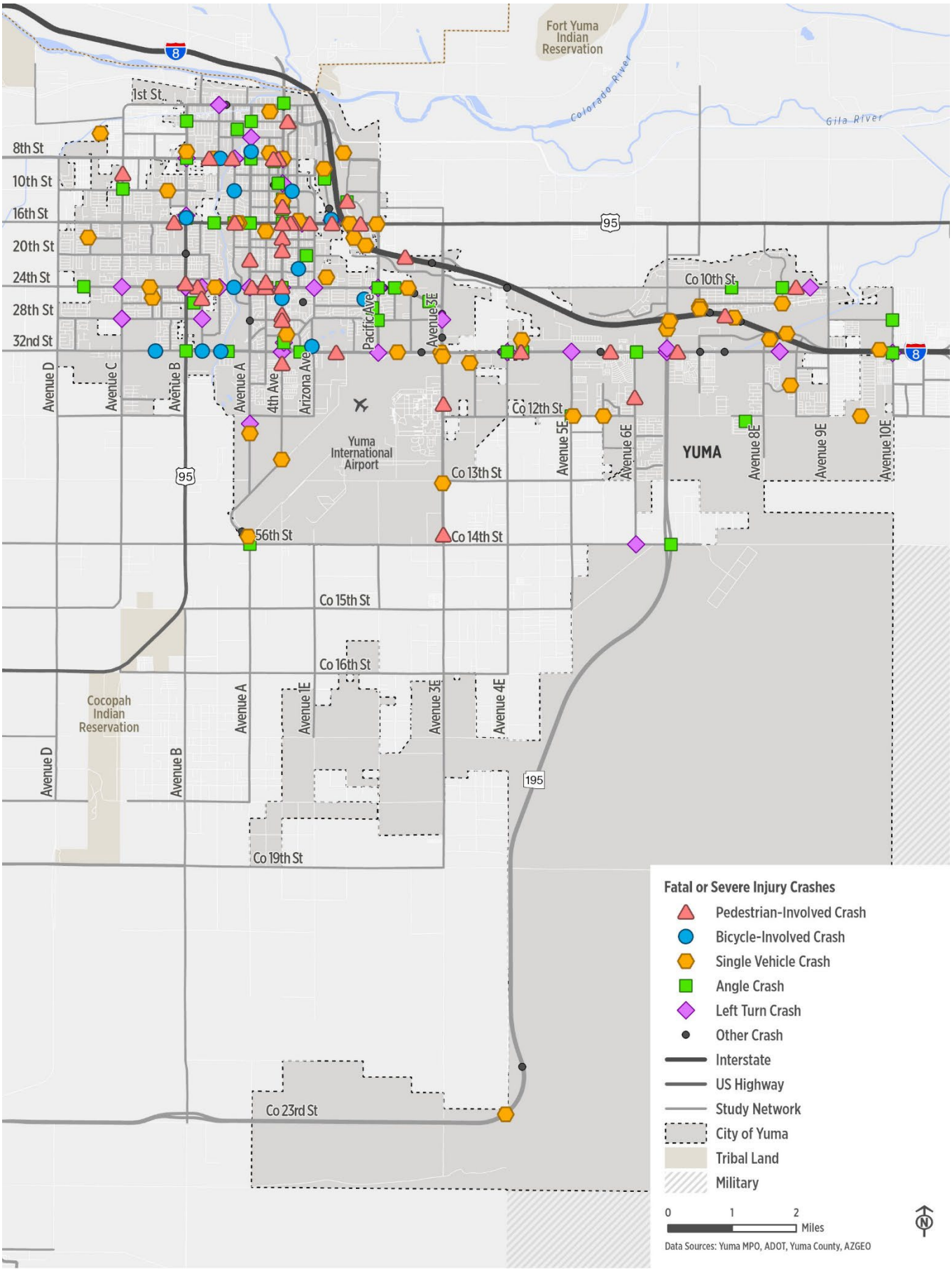
15% of Yuma's fatal and serious injury crashes occurred in **dark lighting conditions**.

Human Behavior

26% of all crashes involved **failure to yield.**

35% of all crashes involved **speeding.**

Figure 4.19. City of Yuma Fatal and Serious Injury Crash Locations



Unincorporated Yuma County

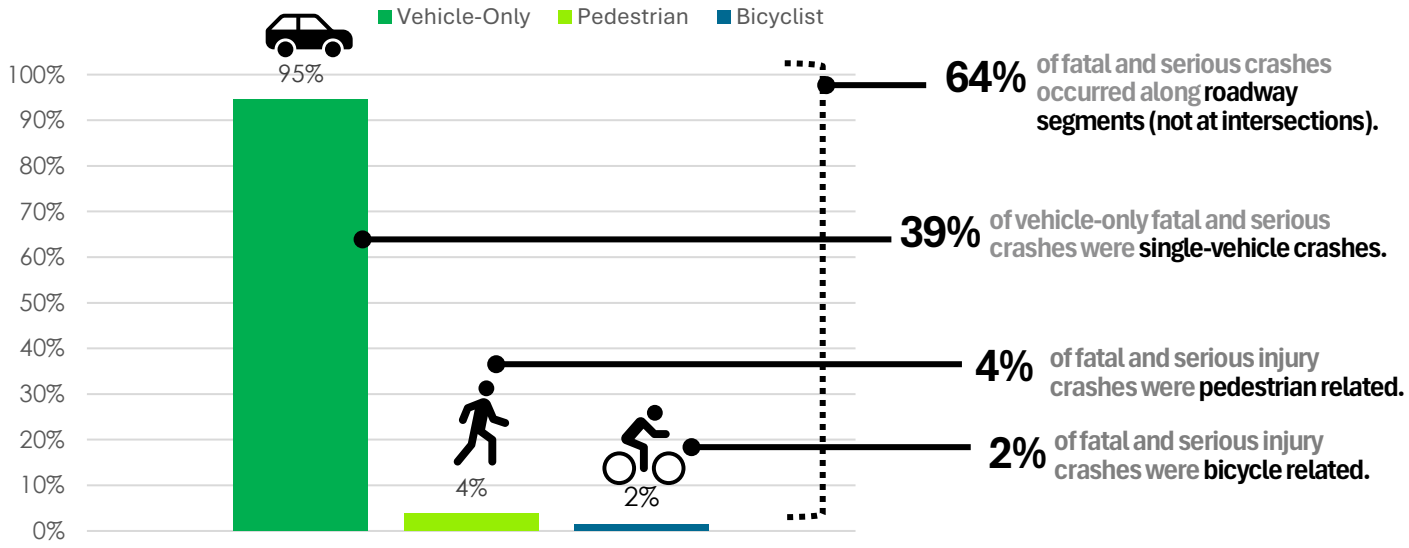
The Unincorporated Yuma County contains the portion of the region that does not fall within the boundaries of Yuma, San Luis, Somerton, and Wellton. Every year, the Unincorporated County experiences from 650 to 850 crashes which has increased in the last two years. The posted speeds in the Unincorporated County are generally higher than those within the jurisdictional boundaries. This likely contributes to the 31% of pedestrian and bicyclist crashes that resulted in a fatal or serious injury. **Figure 4.20** maps all the fatal and serious injury crashes.

3,794 total crashes reported

74 fatal crashes

184 serious injury crashes

What Types of Crashes Are Occurring in Unincorporated Yuma?



What are the Contributing Factors?

Roadway Network Characteristics

Four lane roadways posted at 40-45 MPH comprise...

1% of the Unincorporated County's roadway network.

10% of Unincorporated County's fatal and serious injury crashes.

Additional roadway network characteristics...

71% of Unincorporated County's fatal and serious injury crashes happen on 50+ MPH posted roadways.

40% of Unincorporated County's fatal and serious injury crashes happen on two-lane roadways.

Human Behavior

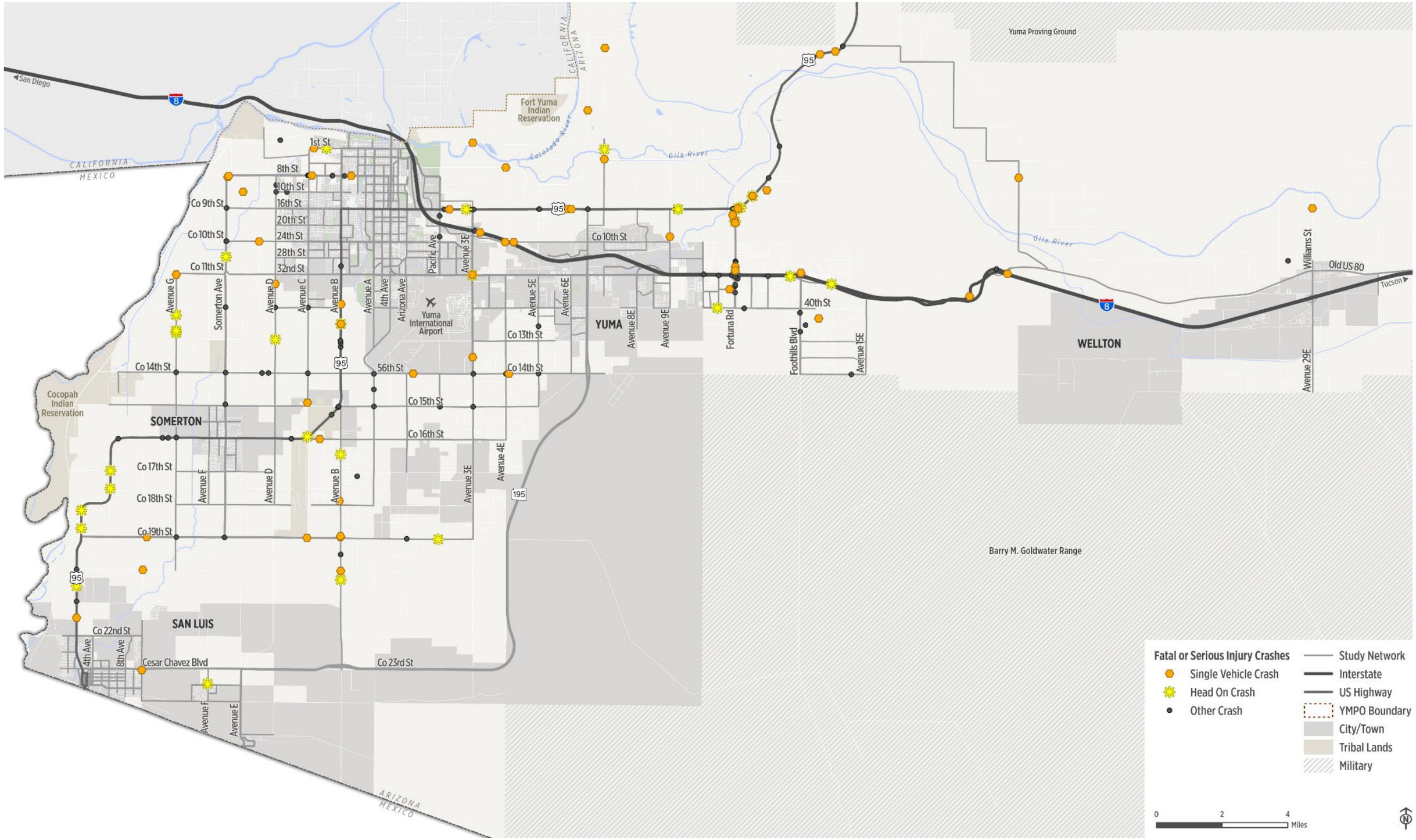
23% of all crashes involved **speeding.**

14% of all crashes involved **failure to yield.**

Environmental Conditions

28% of Unincorporated County's fatal and serious injury crashes occurred in **dark lighting conditions**.

Figure 4.20. Unincorporated Yuma County Fatal and Serious Injury Crash Locations



City of San Luis

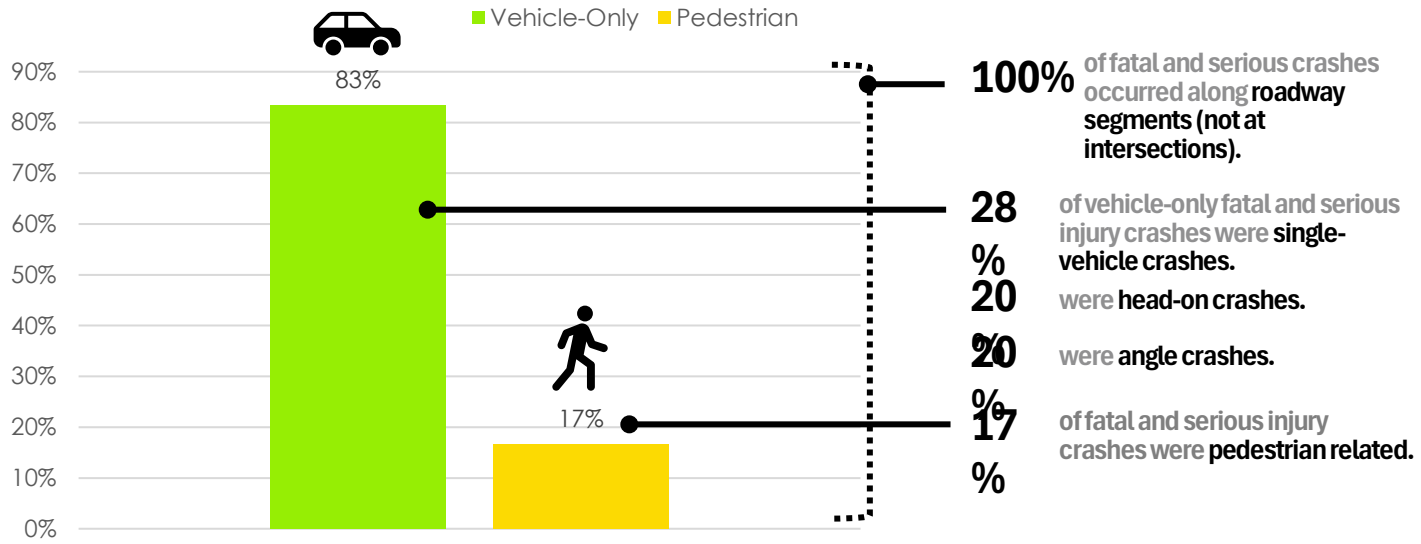
The City of San Luis is the jurisdiction with the largest percentage of lane miles posted at 25 mph (66%). Despite this, the City still experiences 176 annual crashes on average, 13% of which involve speeding as a contributing factor. While there have been no fatal or serious injury crashes involving bicyclists in the five-year study period, pedestrian fatal and serious injury crashes made up a large percent (17%) of all fatal and serious injury crashes. **Figure 4.21** maps all the fatal and serious injury crashes.

882 total crashes reported

4 fatal crashes

26 serious injury crashes

What Types of Crashes Are Occurring in San Luis?



What are the Contributing Factors?

Roadway Network Characteristics

Four lane roadways posted at 30-35 MPH comprise...

3% of San Luis's roadway network.

15% of San Luis's fatal and serious injury crashes.

Additional roadway network characteristics...

62% of San Luis's fatal and serious injury crashes happen roadways posted at 25 MPH or less.

73% of San Luis's fatal and serious injury crashes happen on two-lane roadways.

Human Behavior

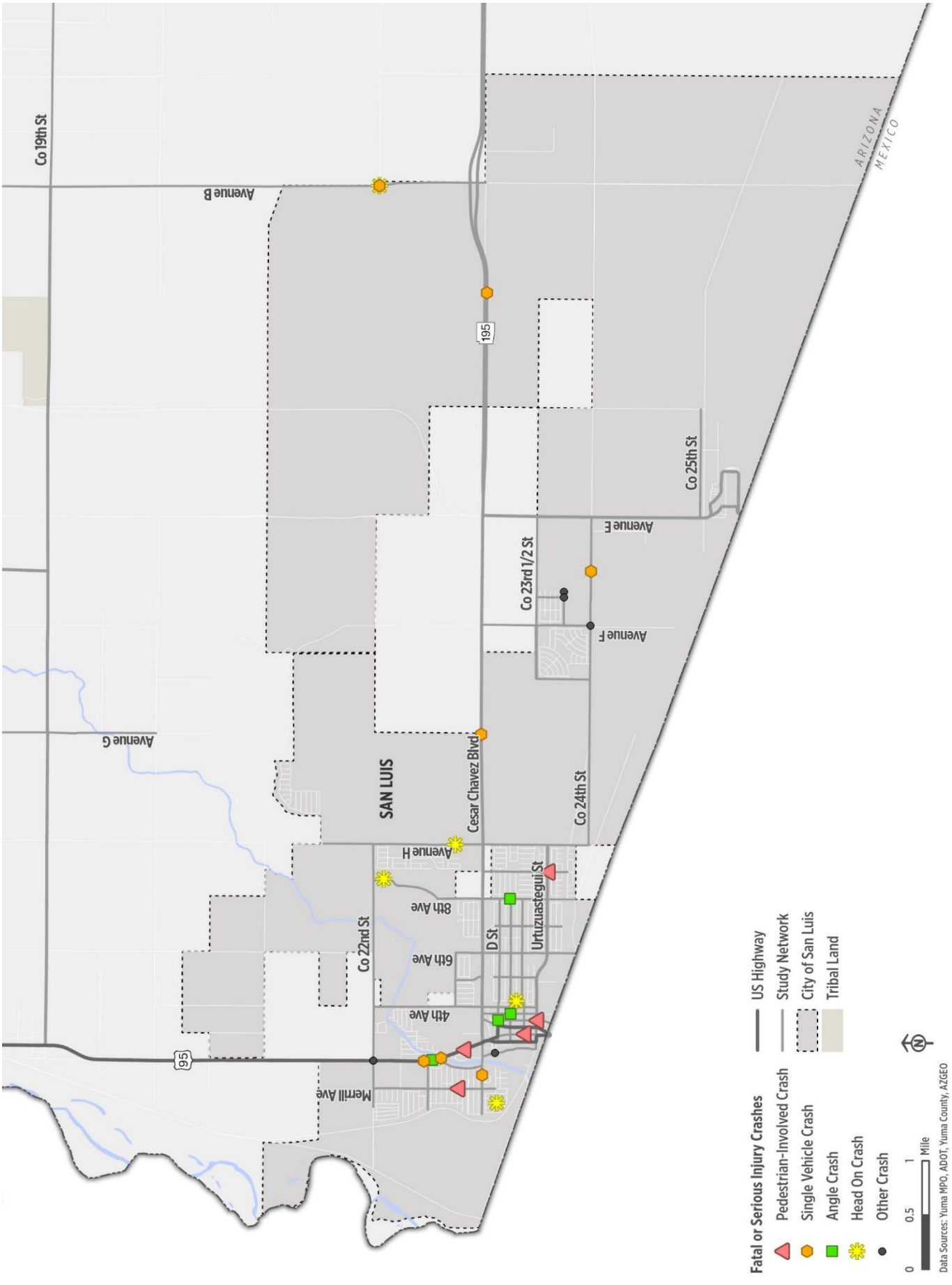
13% of all crashes involved **speeding.**

20% of all crashes involved **failure to yield.**

Environmental Conditions

13% of Yuma's fatal and serious injury crashes occurred in **dark lighting conditions**.

Figure 4.21. City of San Luis Fatal and Serious Injury Crash Locations



City of Somerton

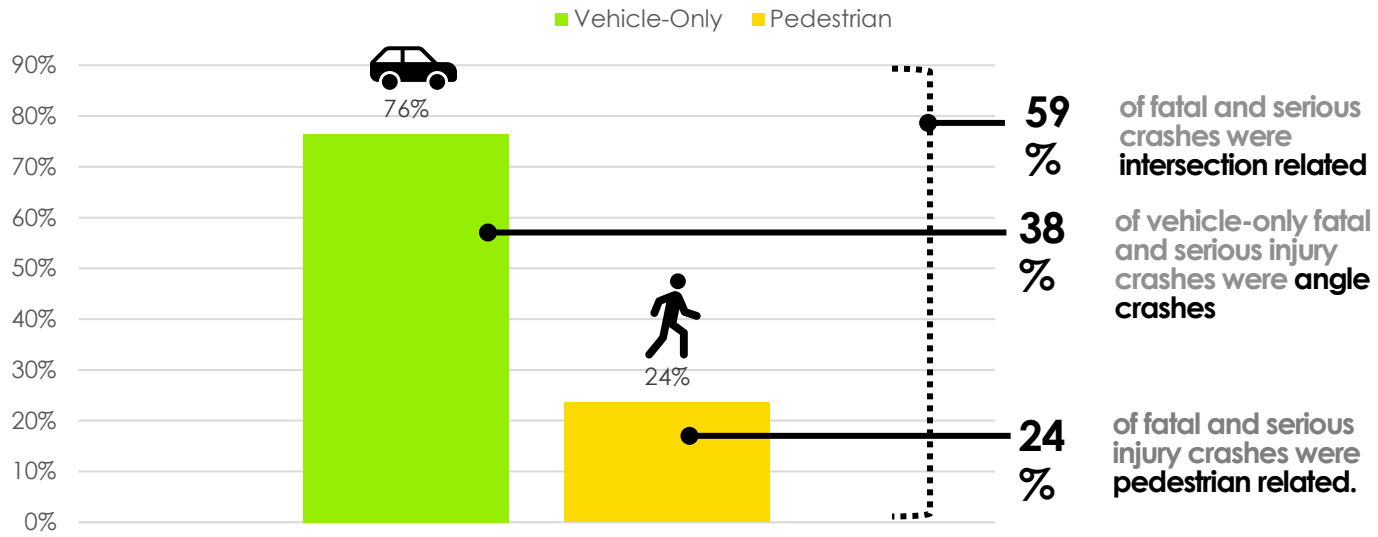
The City of Somerton is located between the City of Yuma and the City of San Luis and is split horizontally by US 95. While the average annual number of crashes (65) is low relative to most of the other jurisdictions, the City has the highest percentage of fatal and serious injury crashes involving a pedestrian (24%). **Figure 4.22** maps all the fatal and serious injury crashes.

327 total crashes reported

4 fatal crashes

13 serious injury crashes

What Types of Crashes Are Occurring in Somerton?



What are the Contributing Factors?

Roadway Network Characteristics

Two lane roadways posted at 30-35 MPH comprise...

6% of Somerton's roadway network.

14% of Somerton's fatal and serious injury crashes.

Additional roadway network characteristics...

50% of Somerton's fatal and serious injury crashes happen roadways posted at 50+ MPH,

86% of Somerton's fatal and serious injury crashes happen on two-lane roadways.

Human Behavior

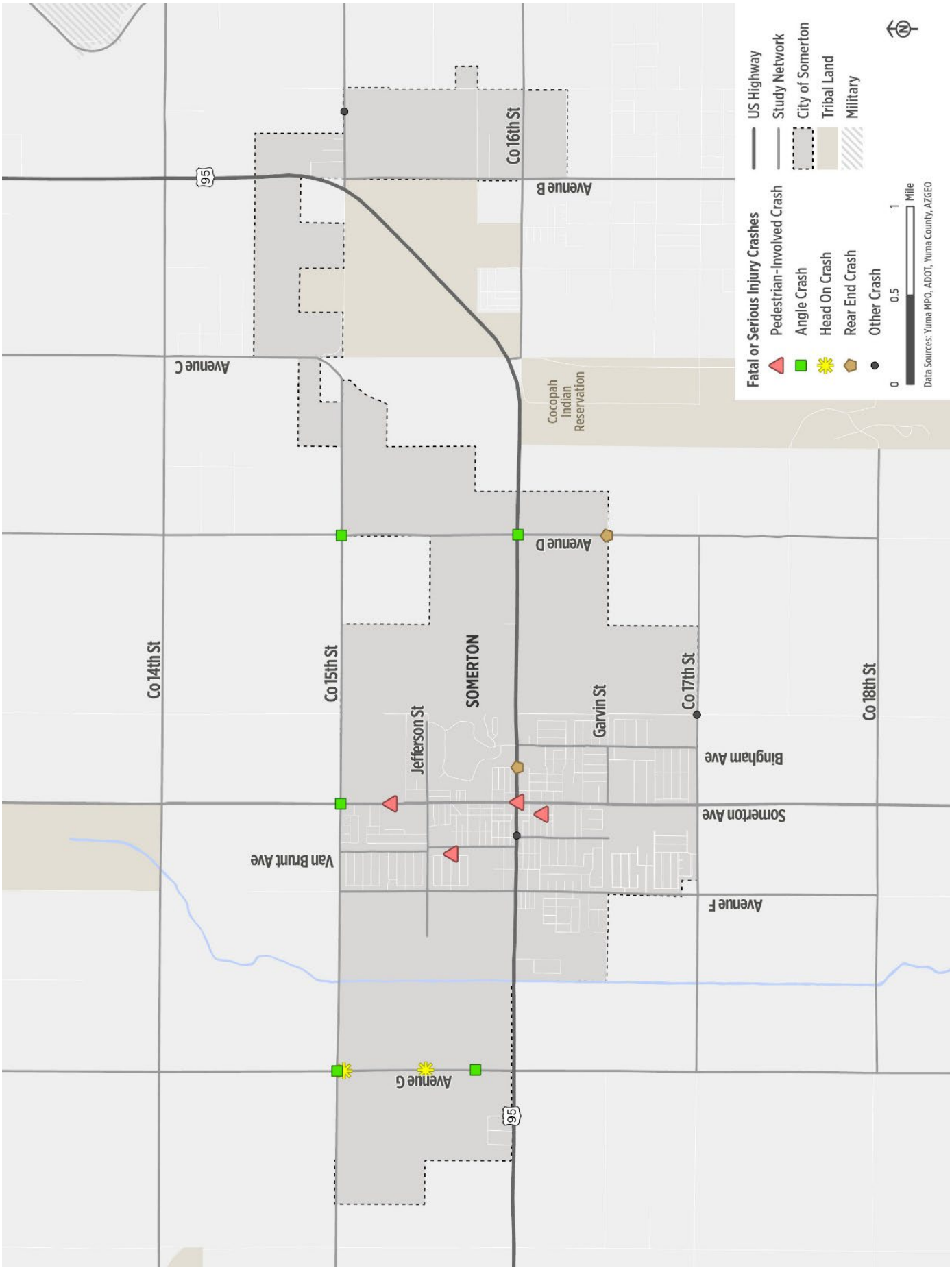
15% of all crashes involved **speeding.**

18% of all crashes involved **failure to yield.**

Environmental Conditions

29% of Somerton's fatal and serious injury crashes occurred in **dark lighting conditions**.

Figure 4.22. City of Somerton Fatal and Serious Injury Crash Locations



Town of Wellton

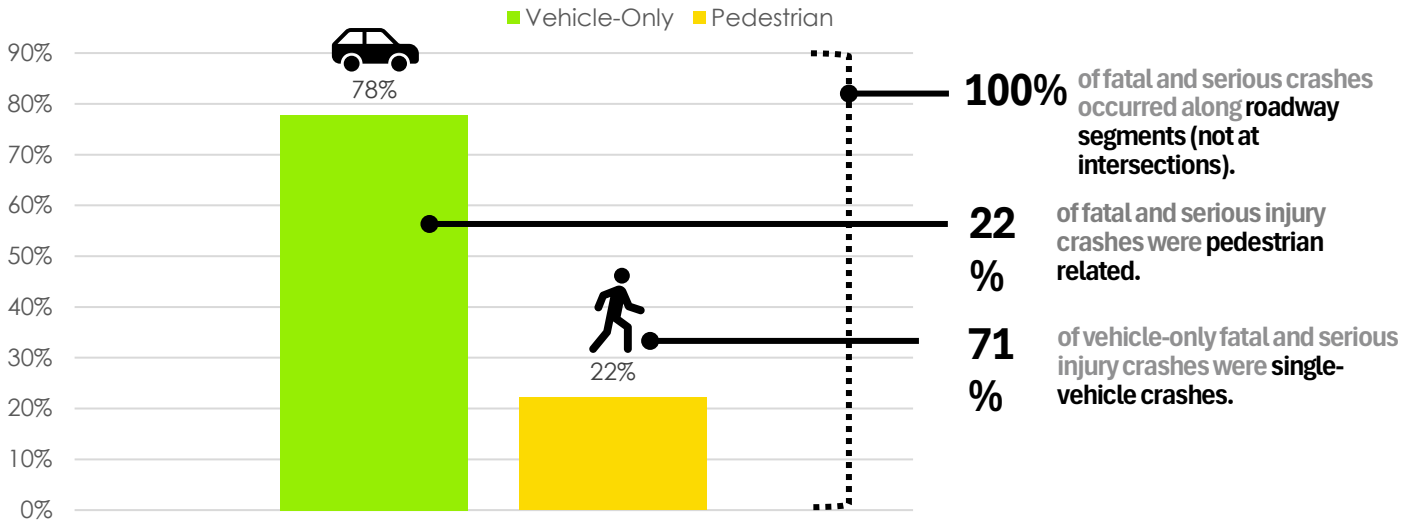
The Town of Wellton is located east of the City of Yuma and is largely characterized by Interstate 8 which runs horizontally through most of the town. Like the City of Somerton, the Town has a high percentage of fatal and serious injury crashes involving a pedestrian (22%). The Town also has the highest rate of crashes occurring in dark, unlighted conditions (31%). This is likely related to the urban feel of the Town. **Figure 4.23** maps all the fatal and serious injury crashes.

90 total crashes reported

5 fatal crashes

4 serious injury crashes

What Types of Crashes Are Occurring in Wellton?



What are the Contributing Factors?

Roadway Network Characteristics

Two lane roadways posted at 50+ MPH comprise...

66% of Somerton's roadway network.

89% of Somerton's fatal and serious injury crashes.

Additional roadway network characteristics...

89% of Somerton's fatal and serious injury crashes happen roadways posted at 50+ MPH,

100% of Somerton's fatal and serious injury crashes happen on two-lane roadways.

Human Behavior

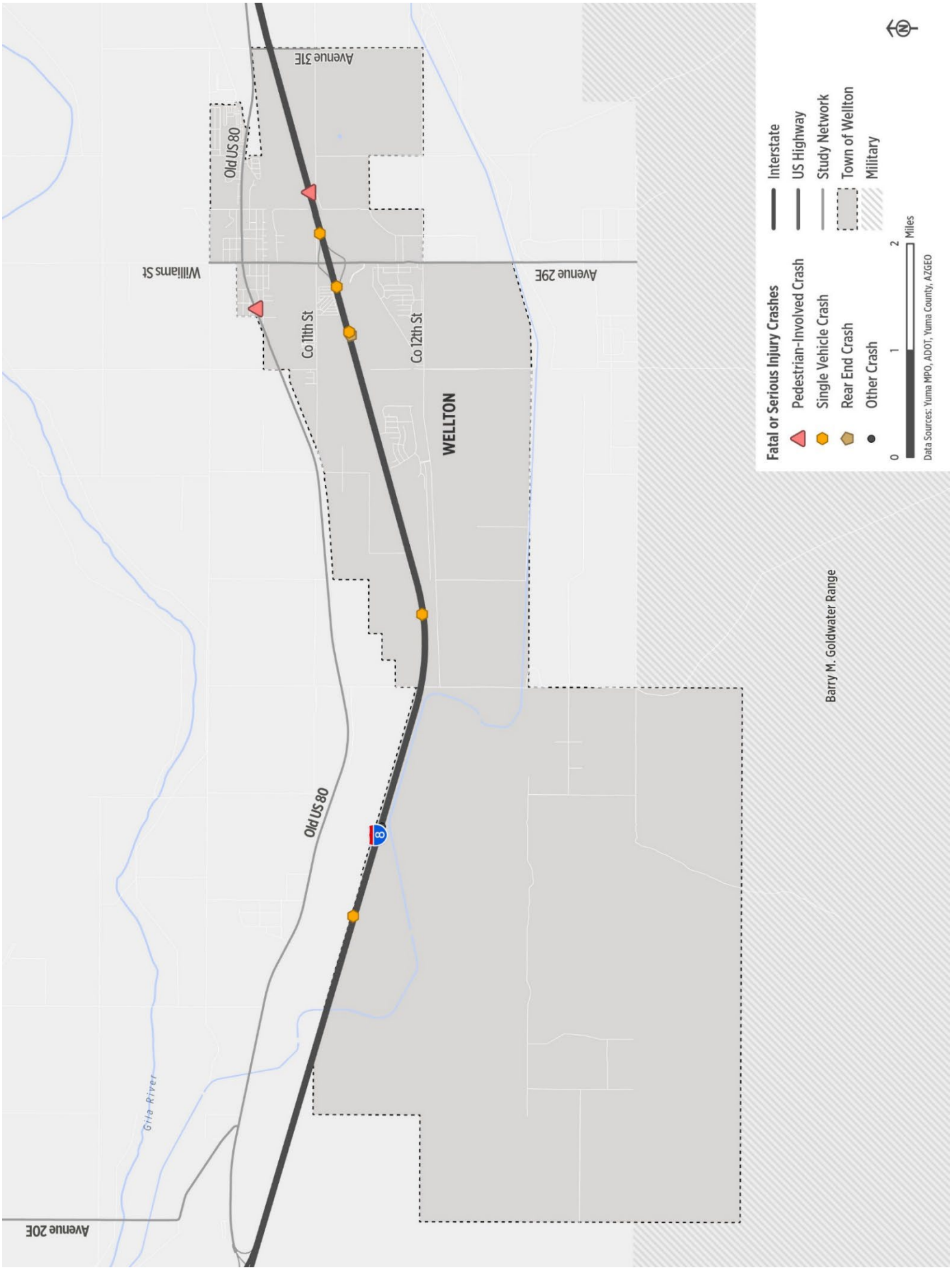
37% of all crashes involved **speeding.**

13% of all crashes involved **a vehicle not keeping in the proper lane.**

Environmental Conditions

33% of Somerton's fatal and serious injury crashes occurred in **dark lighting conditions**.

Figure 4.23. City of Wellton Fatal and Serious Injury Crash Locations



5. WHAT WE HEARD

A robust public and stakeholder outreach effort was conducted to seek input from the public regarding the existing and future deficiencies and needs of the area. For the existing conditions milestone, various public involvement approaches and strategies were conducted in coordination with the Yuma Metropolitan Planning Organization (YMPO) to increase project awareness, to solicit input from the public and key stakeholders, and to inform the development of draft LRTP alternatives. The key public involvement approaches and strategies used are described below.

YMPO Technical Advisory Committee (TAC) and Board Presentations

Presentations to inform and share updates about the LRTP process were made to the YMPO Technical Advisory Committee (TAC) and Executive Board throughout the planning process. The presentations provided an opportunity for member agencies and elected officials to hear directly from the study team on the findings of the LRTP as well as to address known issues or concerns. Presentations to the YMPO TAC were held monthly while presentations to the YMPO Executive Board were held at key project milestones.

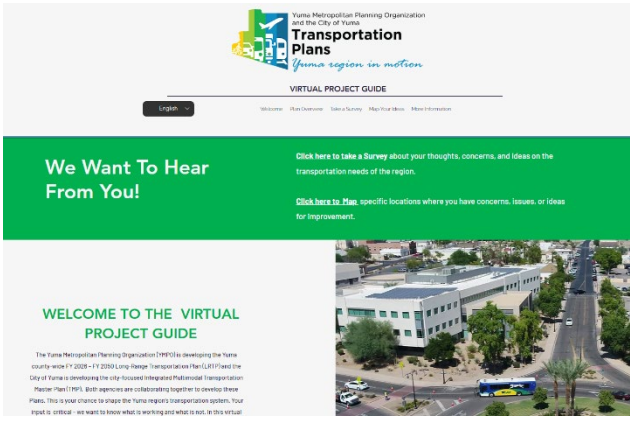
Agency/Stakeholder Coordination

To hear directly from YMPO member agencies and planning partners, one-on-one meetings were held to discuss preliminary issues, ideas, and challenges to multimodal transportation conditions in the YMPO region. These meetings provided an opportunity for the study team to talk directly to key decision-makers and staff who will help to carry forward recommendations made in the YMPO LRTP. Stakeholder meetings included:

- City of Yuma
- City of Somerton
- City of San Luis
- Town of Wellton
- Cocopah Indian Tribe
- Yuma County
- Yuma County Intergovernmental Public Transportation Authority
- Yuma County Economic Development Corporation
- Arizona Department of Transportation
- US General Services Administration

Project Website

A project website was developed and launched in spring 2024, allowing the public easy access to important information about the LRTP. The website included information for both the YMPO LRTP and the City of Yuma Transportation Master Plan. The website address was: **www.GreaterYumaMoves.com**. The website was available in English and Spanish and included key project information, a survey, and an interactive online mapping tool to allow participants to pin areas of concerns. A comment form was also provided to allow the public to submit a question or concern directly to the study team.



Advertisement and Promotion

To make the public aware of the purpose of the YMPO LRTP and to invite them to participate in an online survey and mapping exercise, the study team advertised and promoted the plan on various platforms. Advertisements and promotions completed to-date include:

- Social media posts on the YMPO's Facebook feed. This post was also shared by many of YMPO's member agencies to further aid in expanding outreach.
- Interactive workshops were conducted with stakeholders and regional partners to gather feedback on current issues and draft recommendations.
- Email notices were shared with federal, state, local, and private stakeholders to inform them about the project and encourage them to share information with their networks and participate in the public input opportunities for this project.
- Media outreach to the *Yuma Sun* and *Baja El Sol*.

Outreach Results

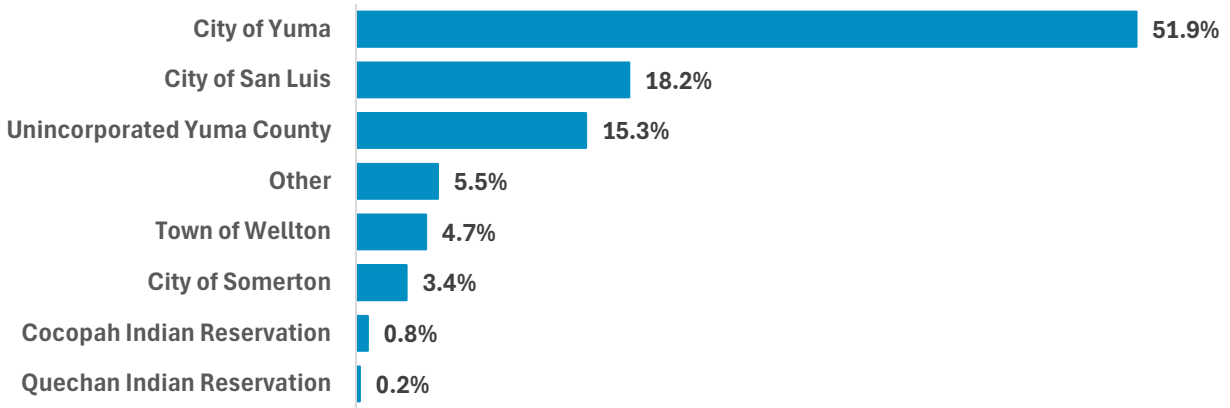
The official public comment period for public involvement phase 1 opened June 10, 2024, and closed July 31, 2024. Over 416 comments were received through email, social media, and the questionnaire; and 249 comments were received from the online interactive map featured on the project website. General themes found throughout phase 1 included:

Summary of Survey Respondents

Understanding who responded, and where they live and work, is critical to understanding the specific needs of YMPO residents and visitors and their unique communities. To ensure that the YMPO LRTP reflects the unique voices and needs of the region, it's imperative that the plan has an equitable reach that reflects the unique lived experiences the region's different demographics and geographic areas.

Where Survey Respondents Live

Community members from across Yuma County participated in varying numbers. As illustrated below, the majority of survey respondents reside in the City of Yuma.



Respondent Demographics

Age
31.6 percent of respondents are between the ages of 35 to 49. In comparison, the average age of Yuma County residents is 35.3 years old (2022 ACS Survey).

Ethnicity
44% of respondents identify as Hispanic/Latino and an additional 40.2% identify as White. In comparison, the 70.8% of Yuma County residents are Hispanic, Black, Indigenous, or a Person of Color (2022 ACS Survey).

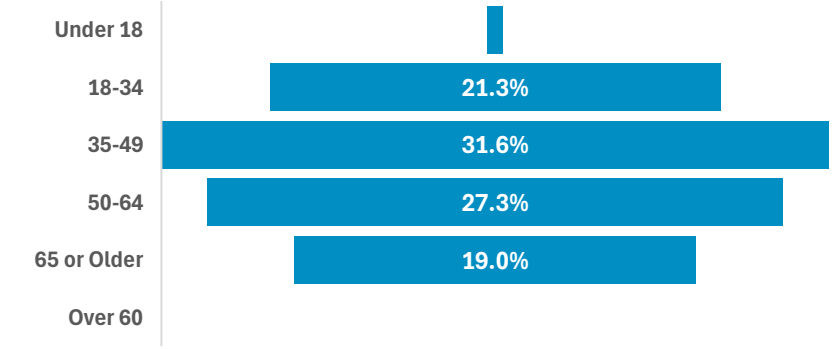
Gender
Slightly more females (49.5%) responded to the survey than males (45.1%). In comparison, 51.3% of all Yuma County residents are male (2022 ACS Survey).

Homeownership
77.2% of all survey respondents noted that they are homeowners. An additional 17.8% noted that they are renters.

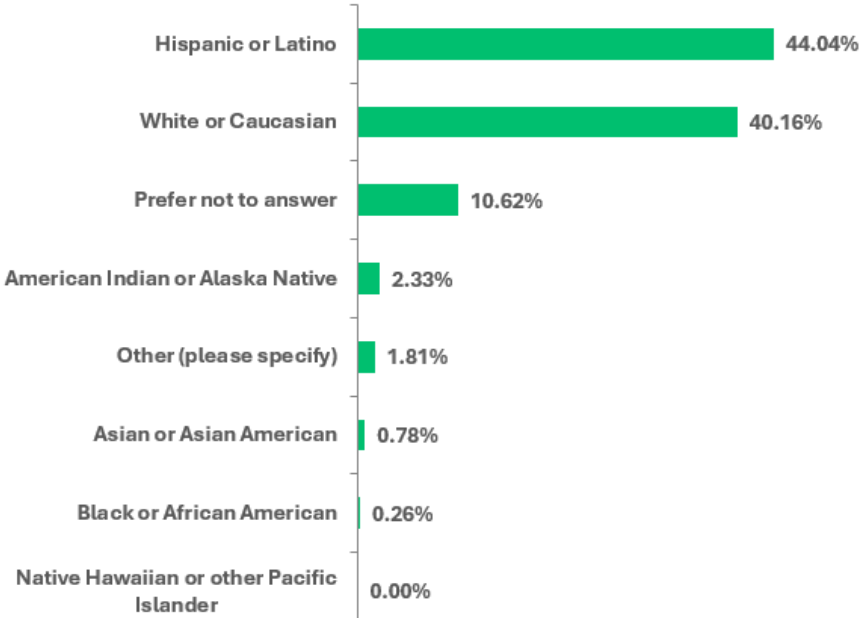
Average Commute Times
- 36.6% of respondents have a commute time less than 15 minutes.
- 28.6% of respondents' commutes are 15 to 30 minutes.
- 15.8% of respondents have a commute longer than 30 minutes. 18.9% respondents did not respond.

Additional Demographics
- 7.5% of survey respondents noted that they are business owners.
- 3.4% of respondents identified as a winter visitor or tourist.
- 3.4% of respondents noted that they are in the military.
- 8.3% of respondents are students.

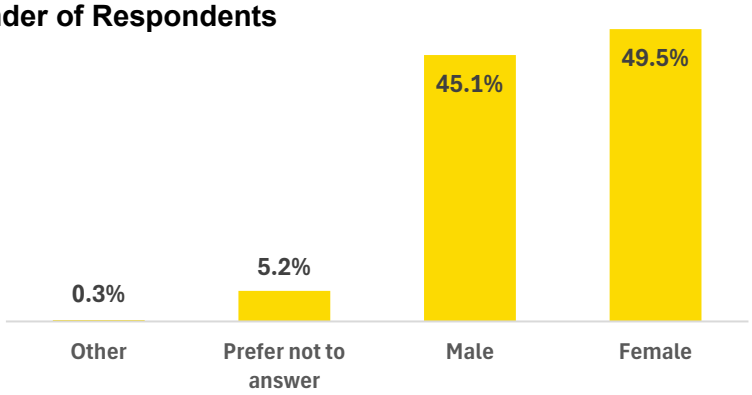
Age of Respondents



Ethnicity of Respondents



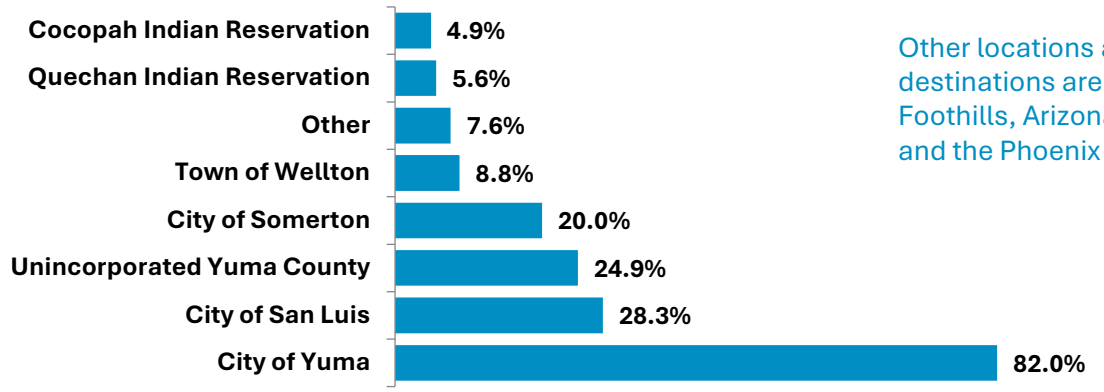
Gender of Respondents



Regionwide Survey Results

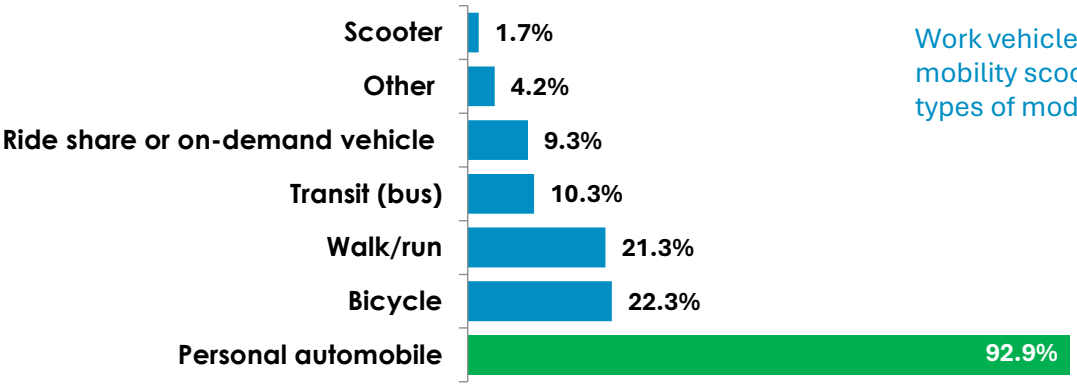
The following section summarizes the survey results (416 total surveys) noting interesting findings and comments received.

In which area of the Yuma region do you primarily travel? (Check all that apply)



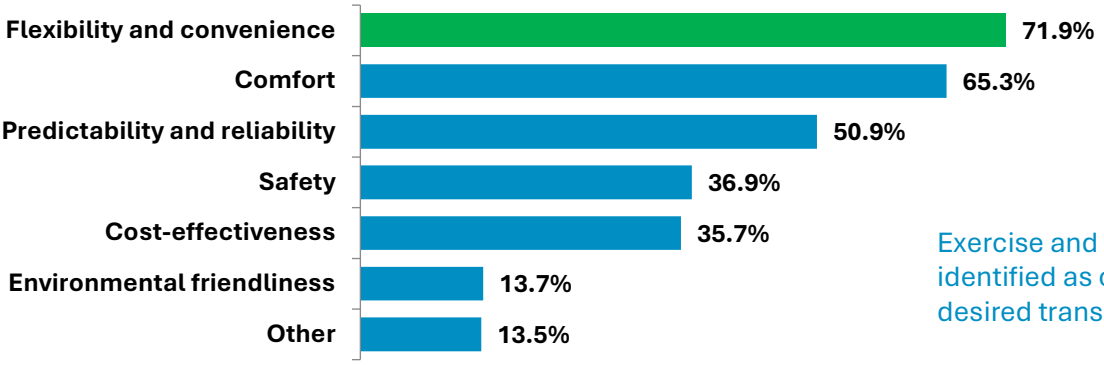
Other locations as primary destinations are the Yuma Foothills, Arizona Western College, and the Phoenix metropolitan area.

What modes of transportation do you use regularly? (Check all that apply)



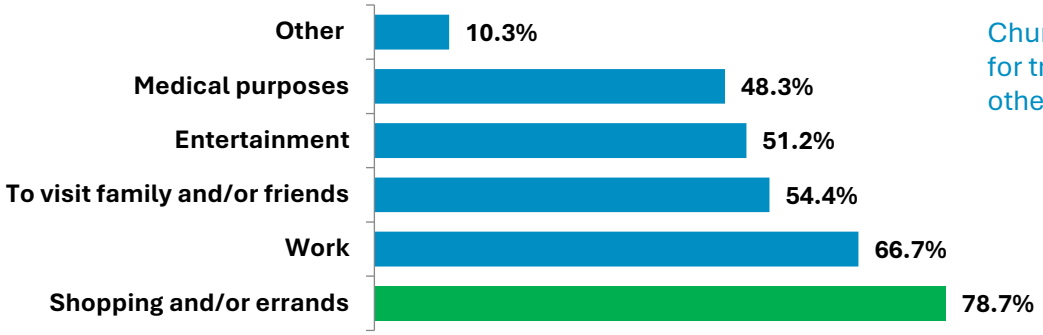
Work vehicles, golf carts, and electric mobility scooters were listed as other types of modes typically used.

Why do you choose to use the transportation modes you checked above? (Check all that apply)



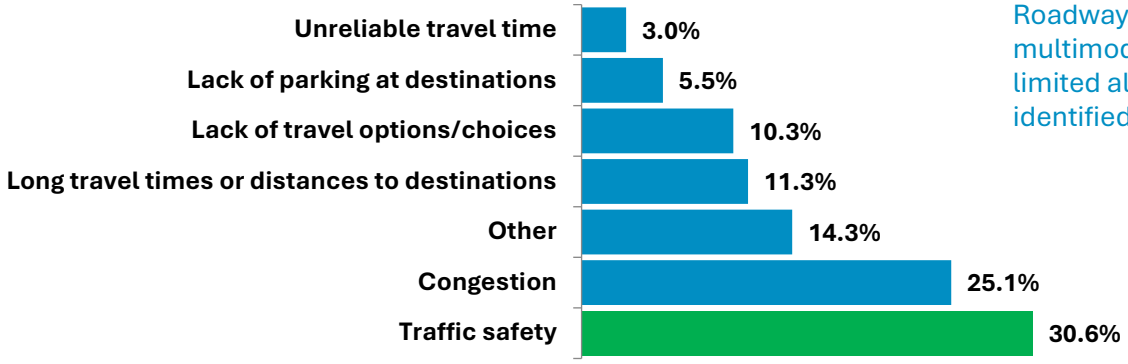
Exercise and recreation were largely identified as other reasons for choosing desired transportation mode.

What are the main reasons you travel? (Check all that apply)



Church, school, exercise, and for travel were identified as other reasons for travel.

What is your biggest transportation challenge or concern?



Roadway conditions, lack of multimodal facilities, and limited alternative routes were identified as key other concerns.

How would you rank the following conditions (1 out of 5)?

2.3 AVERAGE RATING

Roadway Surface Conditions

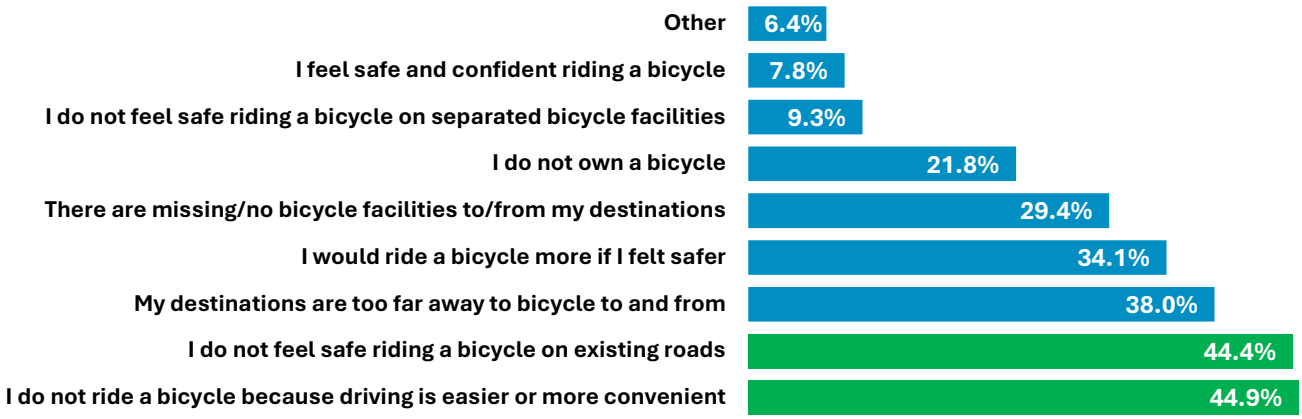
2.2 AVERAGE RATING

Sidewalk, Bike Lanes, and Shared Use Path

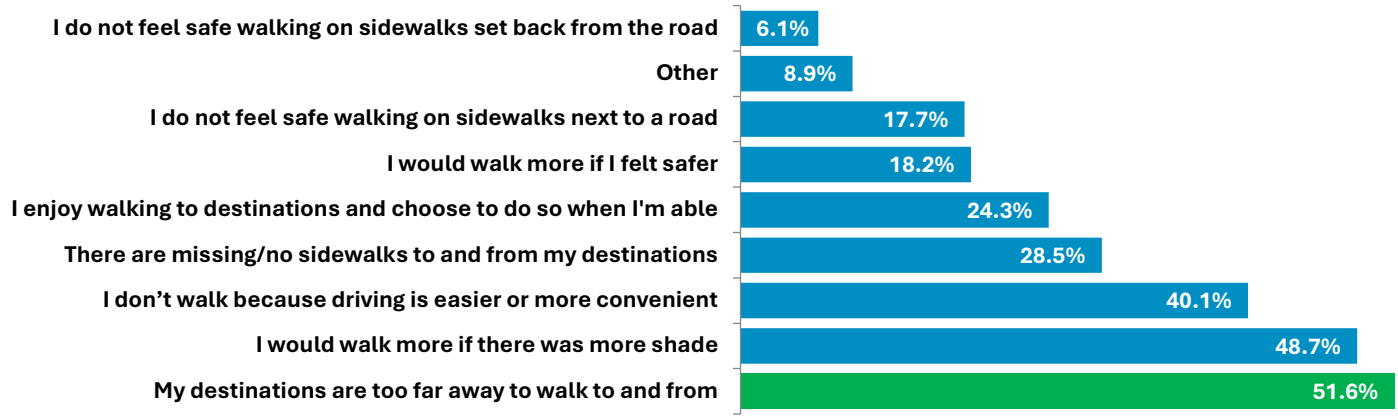
2.4 AVERAGE RATING

Condition of Buses Typically Traveled On

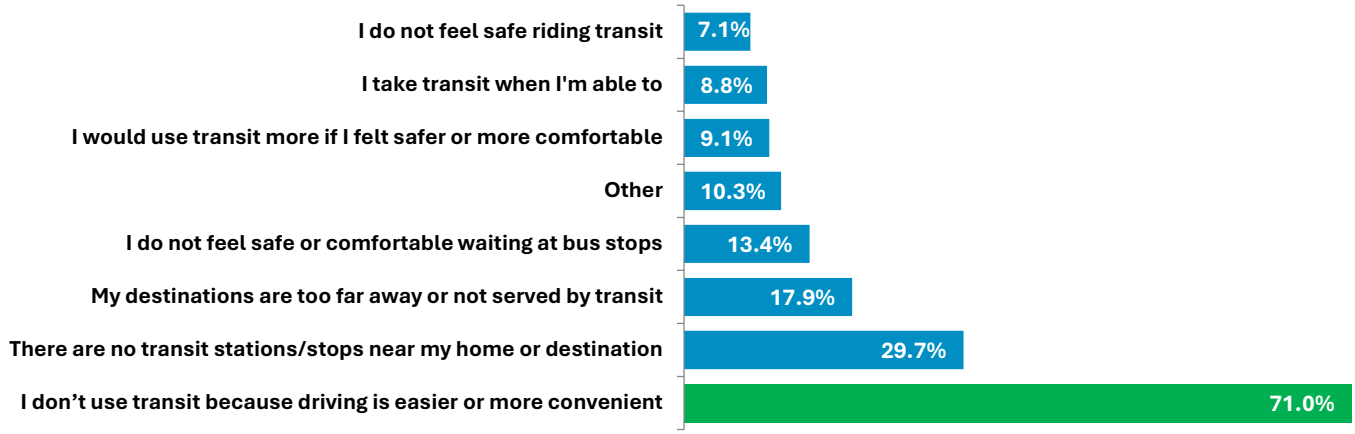
Please check all the statements that are true for you regarding BICYCLING.



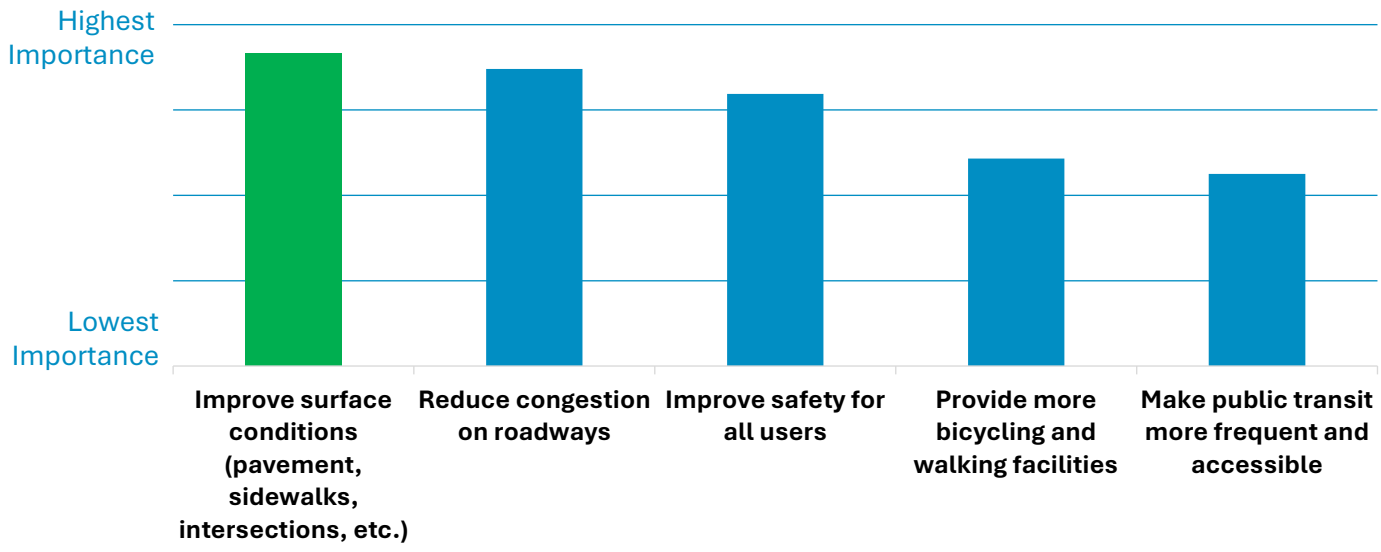
Please check all the statements that are true for you regarding WALKING.



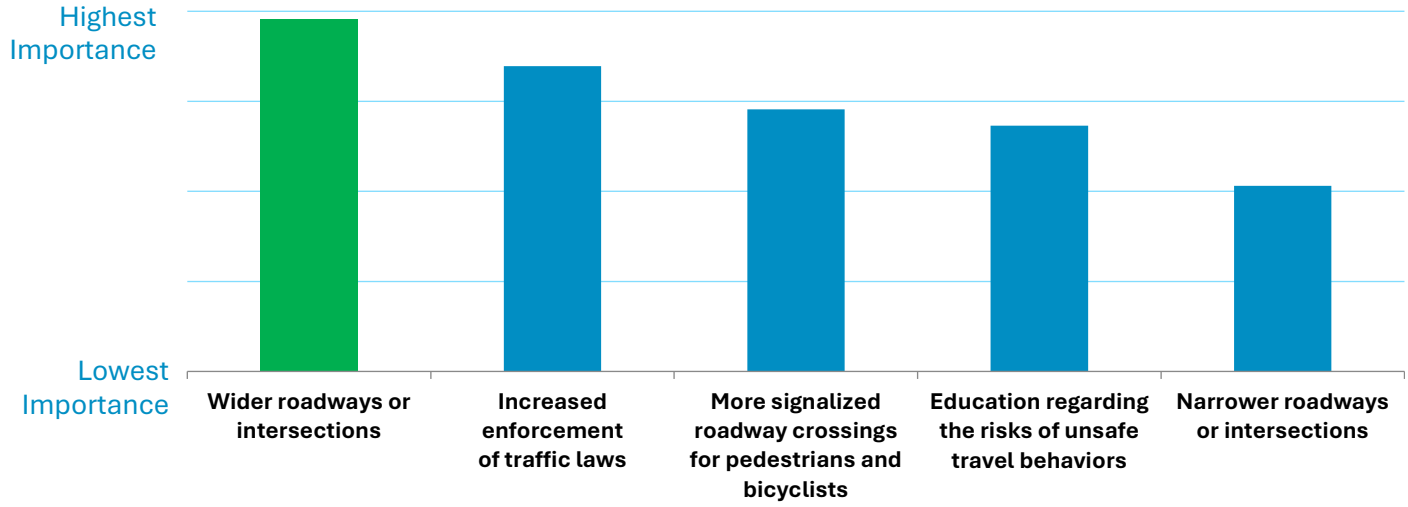
Please check all the statements that are true for you regarding using the BUS/TRANSIT



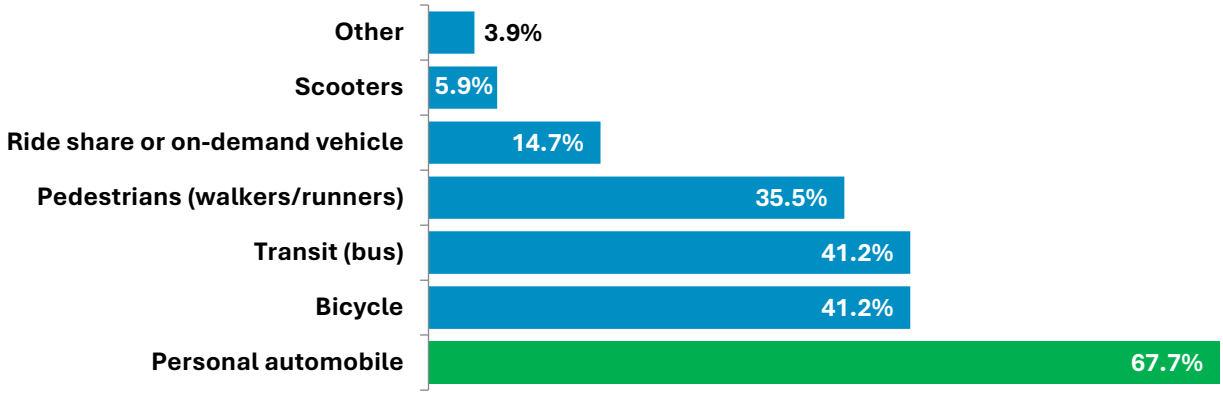
Rank in order of importance what you think is the GREATEST TRANSPORTATION NEED where you travel regularly in the region today.



Rank in order of importance what you think would be most effective at IMPROVING SAFETY.

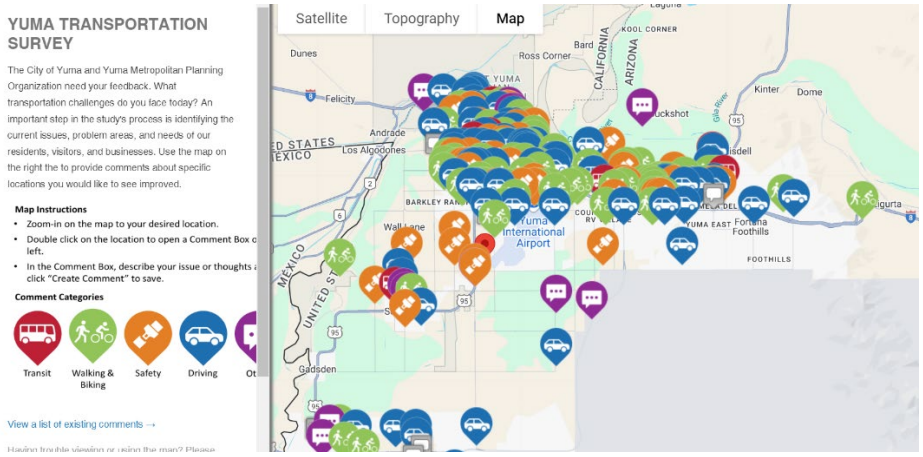


Which two modes of transportation do you think should be focused on when planning for improvements? (Check only your top two).



Online Mapping Tool Feedback

The interactive feedback map was presented as an opportunity to provide location-based comments. Once the online survey was completed, a message appeared encouraging the user to provide additional information, along with a direct link to the feedback map. The map allowed users to indicate the category of their comment. A total of 249 comments were made and participants were able to like comments made by others. 35% of comments were biking or walking related and another 34% were driving related. Below is a summary of the feedback map comments. The Phase 1 Public Engagement Summary Report lists all comments in the appendix.



Driving Related Comments

- The most "liked" comment was in regard to developing an outer loop be created to connect the western portion of Yuma to interstate 8 to relieve the east/west arterials of 1st, 8th, 16th, 24th and 32nd.
- New connections identified included:
  - New South Loop along County 14th alignment
  - Connect 40th Street
  - Extending Avenue B alignment to Winterhaven/I-8 Interchange
  - Extend Avenue 5E across I-8
  - Extend County 25th to ASH Highway
  - Connect 24th Street from Avenue 9E to Fortuna Road
  - Construct bridge over SR 195 to relieve congestion on 32nd Street
- Widening I-8 through the study area was noted by several respondents
- Truck traffic on Avenue 3E and I-8 create safety concerns and congestion issues

Walking/Biking Comments

- There is a general high demand for more walking and biking paths across the region. Locations noted were:
  - Kennedy Park to 26th Place
  - Kenndy Park to Redondo Drive
  - Castle Dome Avenue to PAAC Center
  - Along 32nd Street
  - Urtzuastegui Street on both sides
  - Adding a pedestrian bridge over 32nd Street
- Desire to build-out paths along the region's numerous canals
- There are a significant number of concerns regarding vulnerable road user safety. These are issues noted across all of region

Other Comments

- At-grade railroad crossings cause delays and safety concerns, especially in Wellton.
- Development around Somerton High School warrants infrastructure upgrades.
- Traffic calming treatments was identified by numerous respondents as a need on collector and local streets.
- Desire for expanded and enhanced public transit, including providing evening/night service for students, shade at bus stops, and additional service from Wellton to Yuma Mall and the Foothills.

Summary of Results by Subarea

Biggest Transportation Challenge or Concern Today?

Where the Respondent Lives	Highest Rank	Second Highest	Third Highest
City of San Luis	Congestion	Safety	Long Travel Times
City of Somerton	Long Travel Times	Lack of Travel Options	Safety
Town of Wellton	Congestion	Long Travel Times	Safety
City of Yuma	Safety	Congestion	Lack of Travel Options
Unincorporated Yuma County	Safety	Congestion	Other

How do You Rank the Following?

Where the Respondent Lives	Surface Conditions		Bicycle/Sidewalk Conditions	
	Adequate	Poor	Adequate	Poor
City of San Luis	51.5%	14.7%	30.9%	32.4%
City of Somerton	38.5%	30.8%	23.1%	23.1%
Town of Wellton	44.4%	33.3%	33.3%	38.9%
City of Yuma	34.7%	21.9%	30.6%	23.0%
Unincorporated Yuma County	37.9%	19.0%	27.1%	23.7%

What Mode Should We Focus Investments On?

Where the Respondent Lives	Highest Rank	Second Highest	Third Highest
City of San Luis	Vehicle	Bike	Walk
City of Somerton	Transit	Vehicle	Bike
Town of Wellton	Vehicle	Rideshare/On-Demand	Bike and Walk (Tied)
City of Yuma	Vehicle	Bike	Transit
Unincorporated Yuma County	Vehicle	Bike	Transit

Rank Greatest Transportation Need

	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5
City of San Luis	Improve Surface Conditions	Reduce Congestion	Improve Safety	Public Transit	More Walking and Biking Facilities
City of Somerton	Improve Safety	Improve Surface Conditions	Public Transit	Reduce Congestion	More Walking and Biking Facilities
Town of Wellton	Improve Surface Conditions	Reduce Congestion	More Walking and Biking Facilities	Improve Safety	Public Transit
City of Yuma	Improve Surface Conditions	Reduce Congestion	Improve Safety	More Walking and Biking Facilities	Public Transit
Unincorporated Yuma County	Improve Surface Conditions	Reduce Congestion	Improve Safety	Public Transit	More Walking and Biking Facilities

6. THE YMPO REGION TOMORROW

Understanding the impacts on project growth and development is critical to developing a transportation plan that addresses not only current issues, but future transportation needs and issues. This section outlines projected population and employment in the YMPO region and evaluates the impact of this development on the region's current transportation system.

Future Population and Employment Conditions

In accordance with Executive Order 2011-04, population and employment estimates and forecasts developed by the Arizona Office of Economic Opportunity (AOEO) should be utilized by all government agencies for planning purposes. The State Demographer's Office, a part of AOEO, develops yearly population and employment estimates and 25-year population forecasts for the State of Arizona, counties, and cities. A Council of Technical Solutions, comprised of representatives from State universities, regional councils, and state agencies, provides technical guidance on the quality, methodology, standards, and analytical techniques.

Based on previous planning documents, local jurisdictions' General Plans, and input received from local officials, planned developments and potential timeframes were identified. Socioeconomic projections developed by the State Demographer's Office for the 2030, 2035, and 2050 horizon years were disaggregated at the YMPO regional travel demand model's Traffic Analysis Zone (TAZ) level to reflect the planned residential, commercial, and employment developments. TAZs are used to divide large regions, such as the entire YMPO region, into smaller geographies to group socioeconomic data particularly for use of traffic modeling purposes. TAZ boundaries often, but not always, align with major streets or physical boundaries, such as municipal boundaries, waterways, or political boundaries.

Population Projections

The State Demographer's Office estimates that the YMPO region will have a population of 284,184 by 2050, a 33 percent increase from today's population. **Table 6.1** shows a tabular summary of the current population estimates and future population projections in the study area, whereas **Figure 6.1 to 6.3** illustrate projected population density by TAZ in the YMPO region for the years 2030, 2035, and 2050 respectively.

Table 6.1. Population Projections

Jurisdiction	Y2023	Y2030	Y2035	Y2050
San Luis	38,149	40,674	43,878	53,286
Somerton	14,723	16,553	17,622	20,748
Wellton	2,603	3,103	3,449	4,468
Yuma	101,018	112,533	119,799	141,047
Cocopah Indian Tribe	870	899	920	983
Unincorporated Yuma County	55,664	59,298	60,452	63,652
Yuma County Total	**213,027**	**233,060**	**246,120**	**284,184**

Population estimates and projections were obtained from AOEO

Housing Unit Projections

Based the future population projections presented above, household size from the American Community Survey (ACS), and feedback from local jurisdictions staff, housing unit projections were developed for each future year horizon. The YMPO region is projected to have approximately 108,772 housing units by the year 2050, a 28 percent increase from today. **Table 6.2** shows a tabular summary of the current housing unit estimates and future housing unit projections in the study area, whereas **Figure 6.4 to 6.6** illustrate projected housing units density by TAZ in the YMPO region for the years 2030, 2035, and 2050 respectively.

Table 6.2. Housing Unit Projections

Jurisdiction	Y2023	Y2030	Y2035	Y2050
San Luis	9,977	10,529	11,359	13,794
Somerton	4,833	5,202	5,538	6,520
Wellton	2,110	2,406	2,674	3,464
Yuma	45,788	49,061	52,229	61,493
Cocopah Indian Tribe	685	696	712	761
Unincorporated Yuma County	33,755	35,568	36,260	38,179
Yuma County Total	**97,148**	**103,462**	**108,772**	**124,211**

Employment Projections

Year 2023 to year 2033 employment projections from the State Demographer's Office were prorated to determine preliminary employment projections for 2030, 2035, and 2050. Preliminary projections were then updated based on feedback from jurisdiction staff and readily available future development plans. The YMPO region is projected to have approximately 104,945 employees by the year 2050, a 25 percent increase from today. **Table 6.3** shows a tabular summary of the current employment estimates and future employment projections in the study area, whereas **Figure 6.7 to 6.9** illustrate projected employment density by TAZ in the YMPO region for the years 2030, 2035, and 2050 respectively.

Table 6.3. Employment Projections

Jurisdiction	Y2023	Y2030	Y2035	Y2050
San Luis	7,127	7,592	7,924	8,920
Somerton	2,180	2,322	2,424	2,729
Wellton	1,174	1,250	1,305	1,469
Yuma	51,737	55,111	57,521	64,751
Cocopah Indian Tribe	922	983	1,025	1,154
Unincorporated Yuma County	20,711	22,062	23,027	25,921
Yuma County Total	**83,852**	**89,321**	**93,227**	**104,945**

Figure 6.1. Year 2030 Projected Population Density by Traffic Analysis Zones

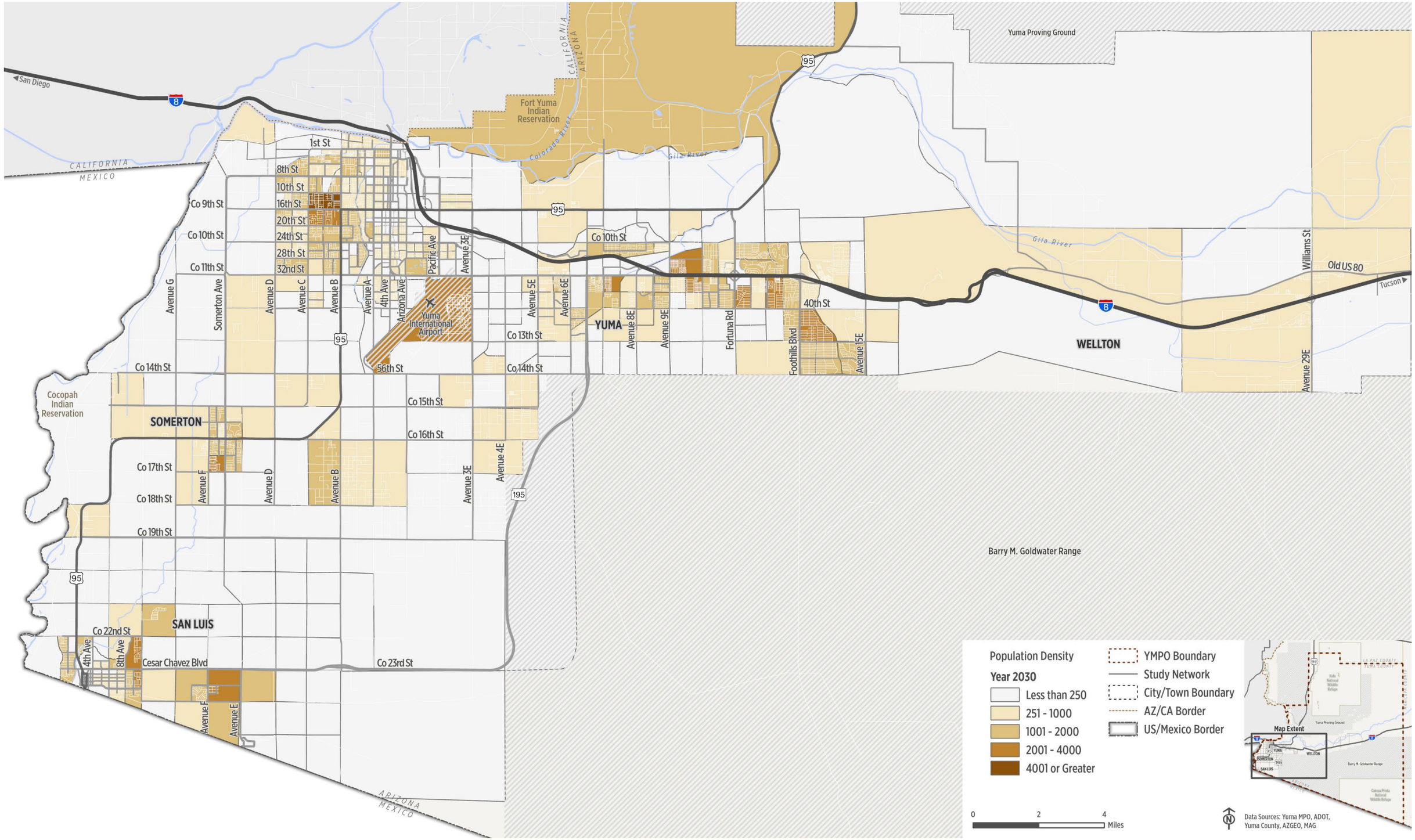


Figure 6.2. Year 2035 Projected Population Density by Traffic Analysis Zones

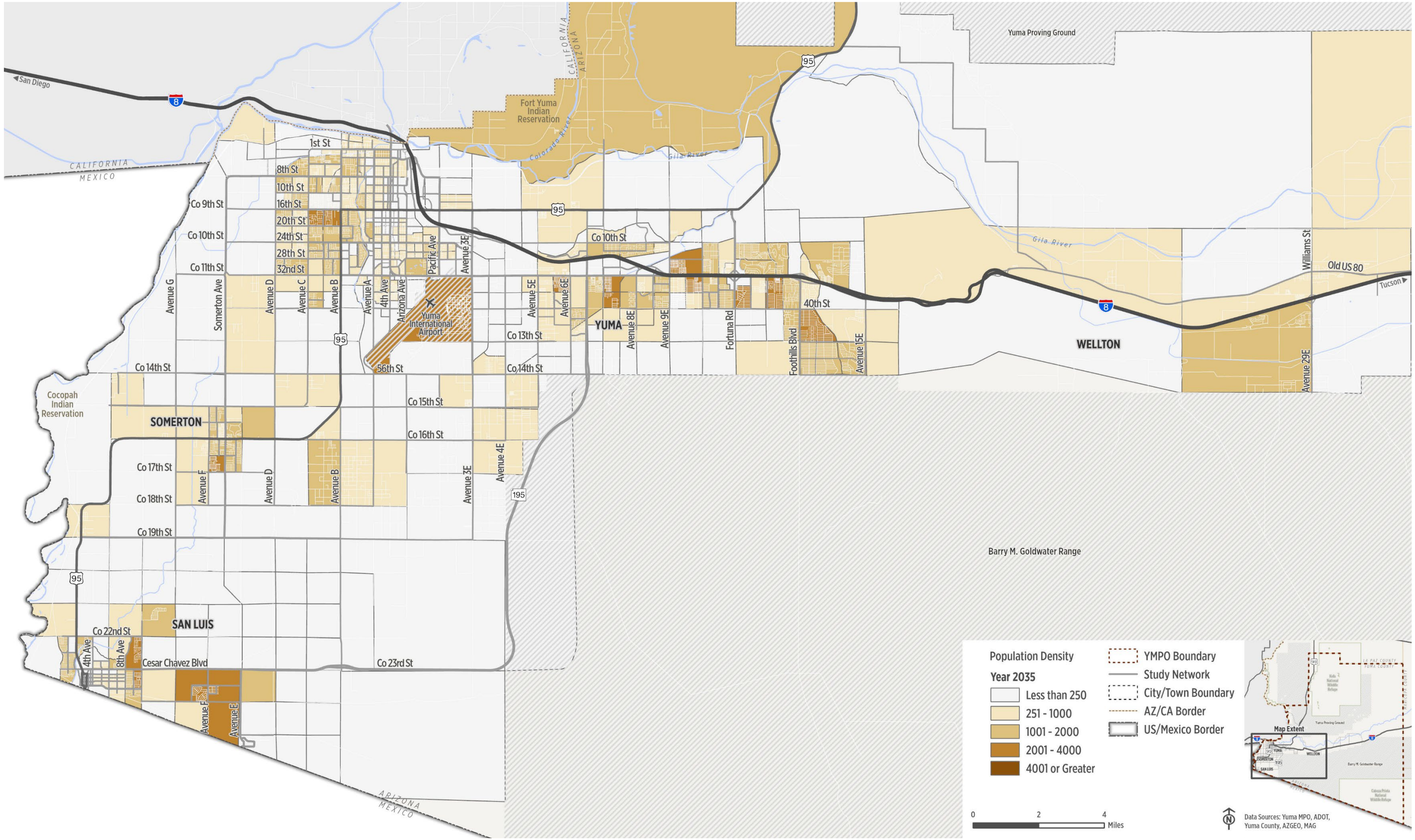


Figure 6.3. Year 2050 Projected Population Density by Traffic Analysis Zones

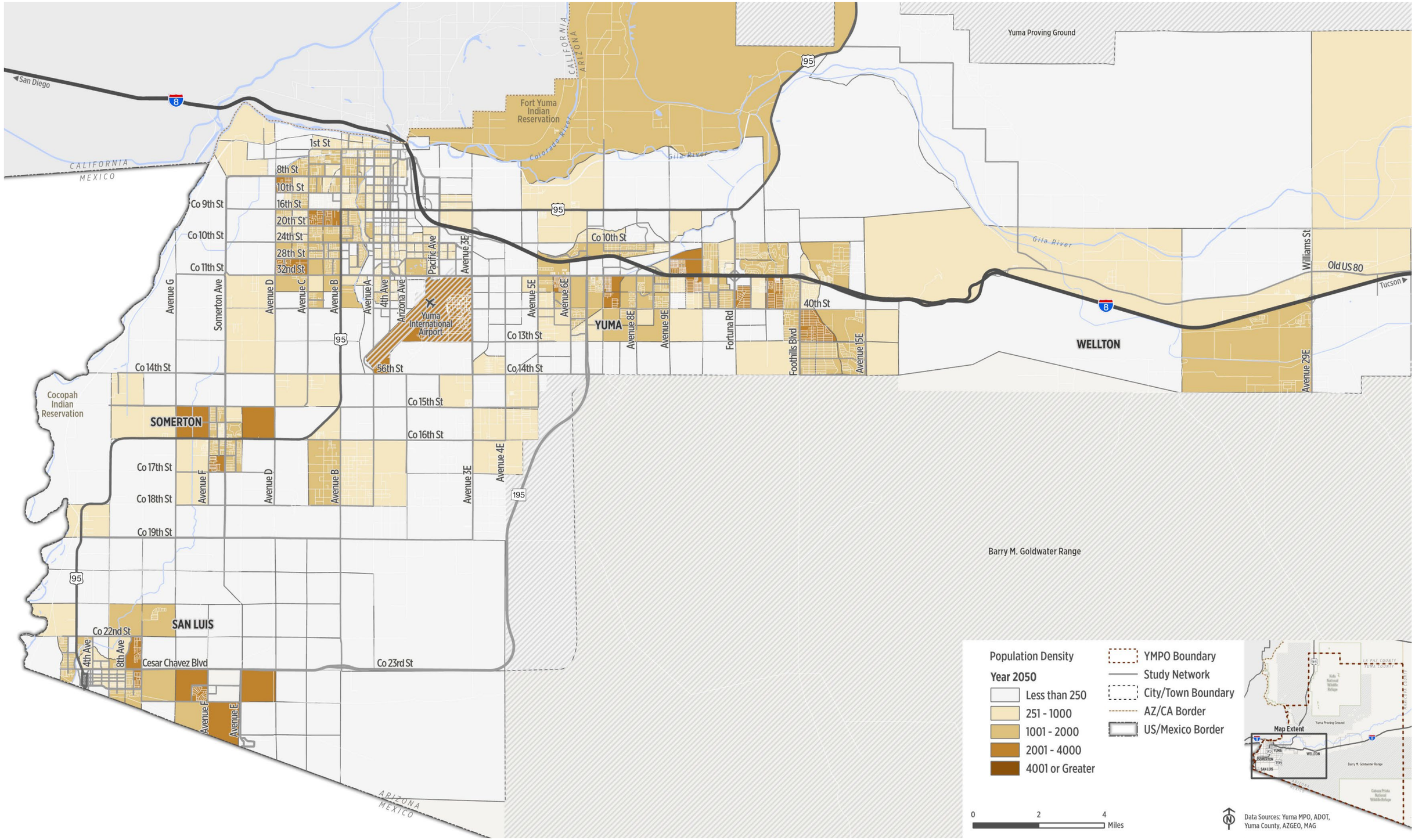


Figure 6.4. Year 2030 Projected Housing Unit Density by Traffic Analysis Zones

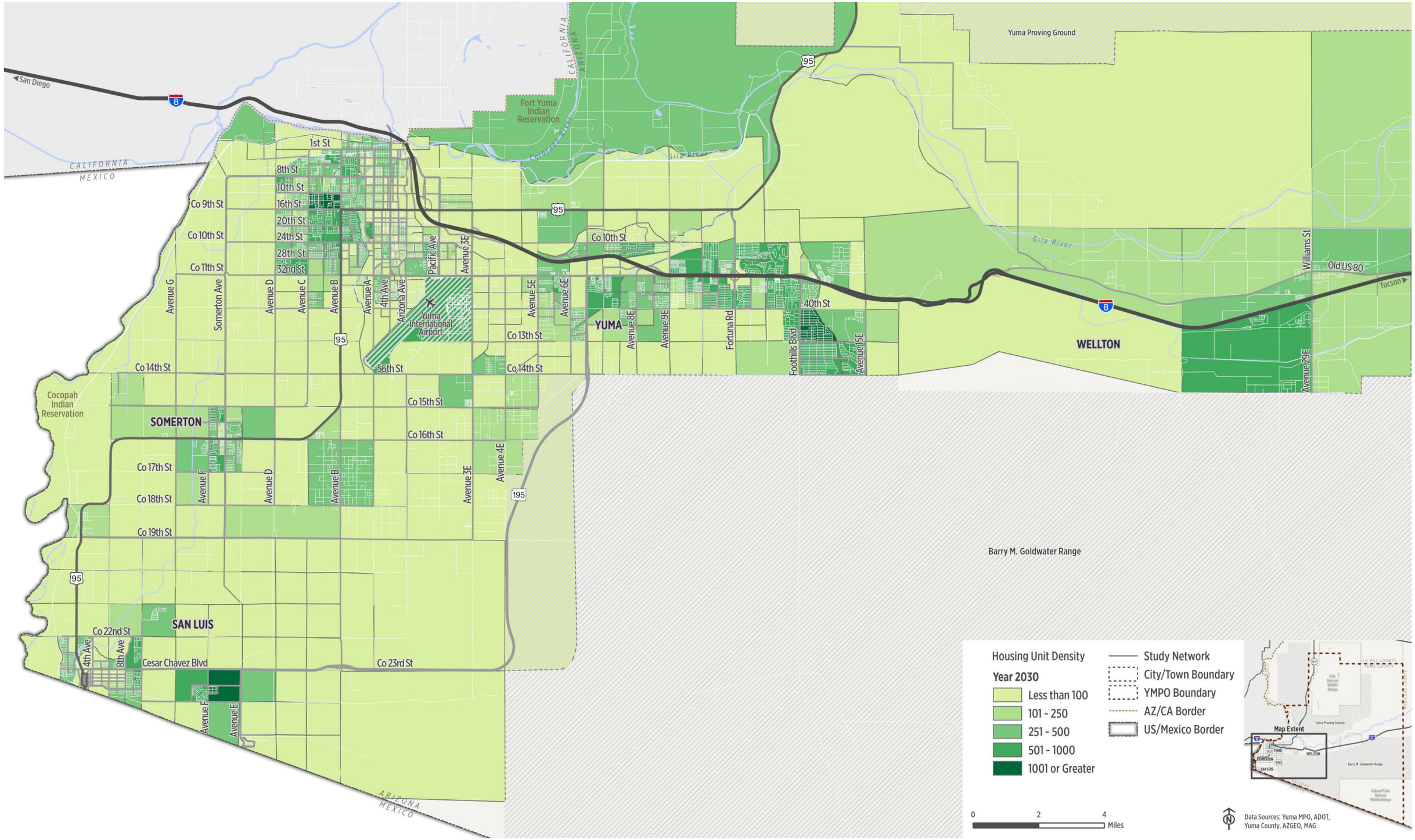


Figure 6.5. Year 2035 Projected Housing Unit Density by Traffic Analysis Zones

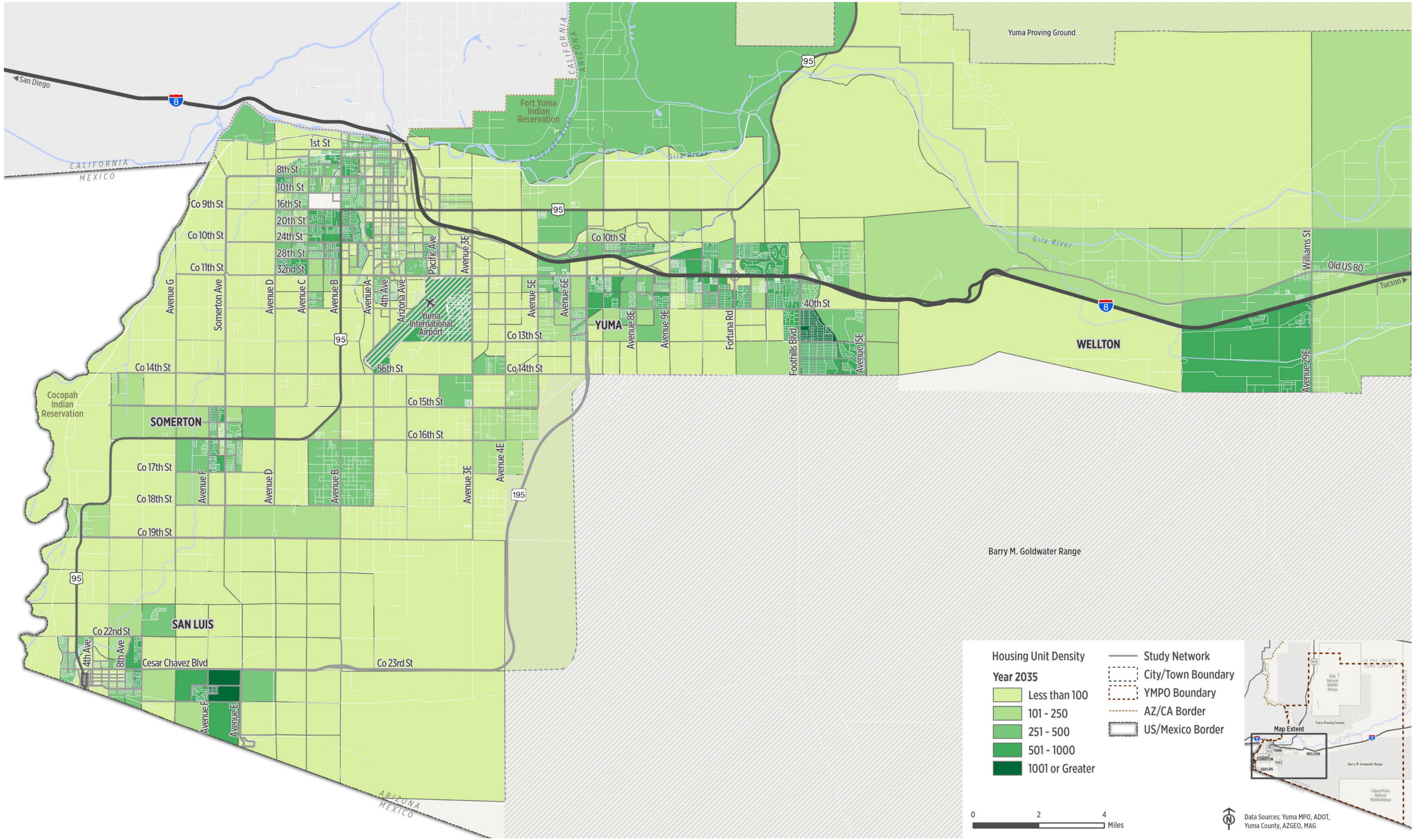


Figure 6.6. Year 2050 Projected Housing Unit Density by Traffic Analysis Zones

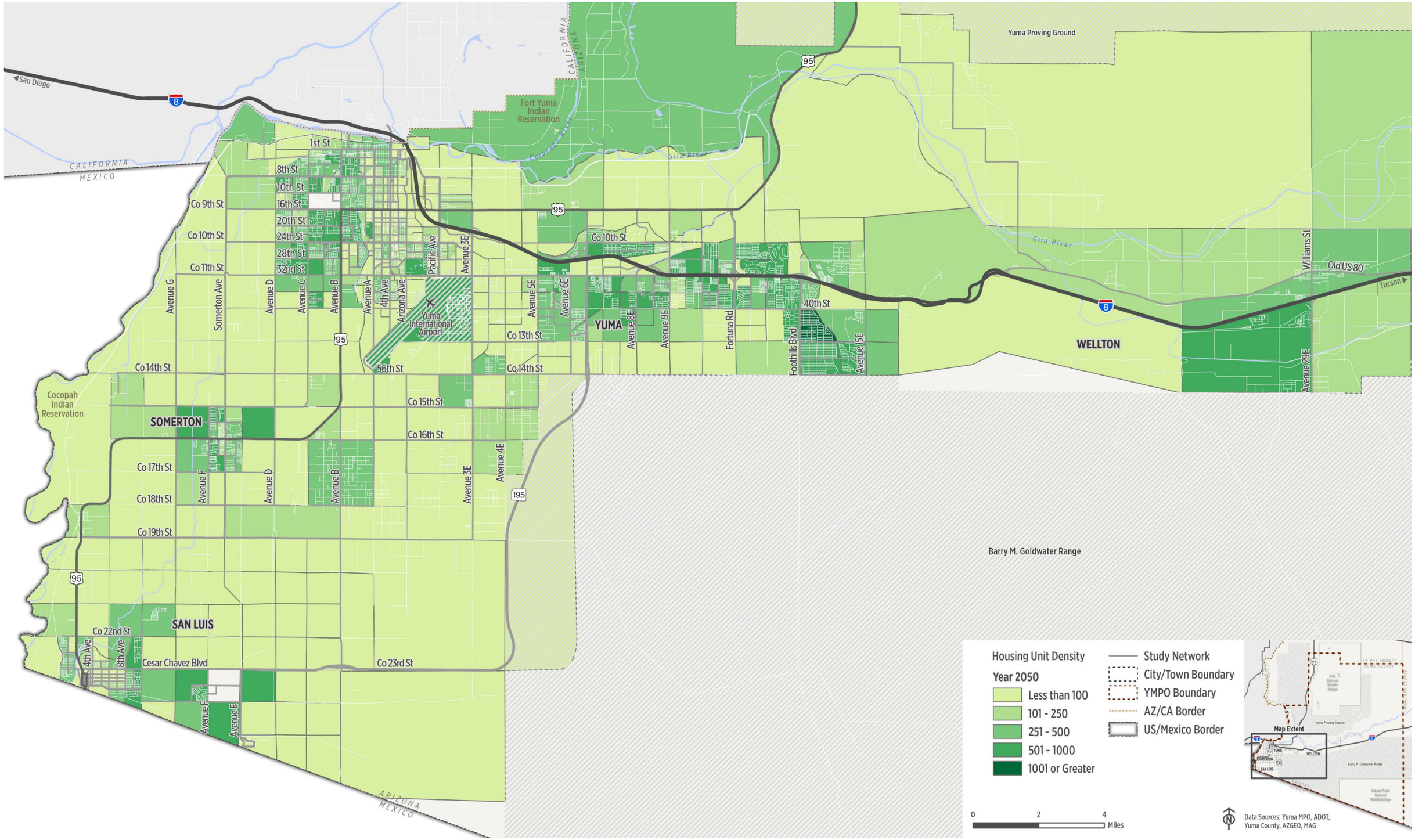


Figure 6.7. Year 2030 Projected Employment Density by Traffic Analysis Zones

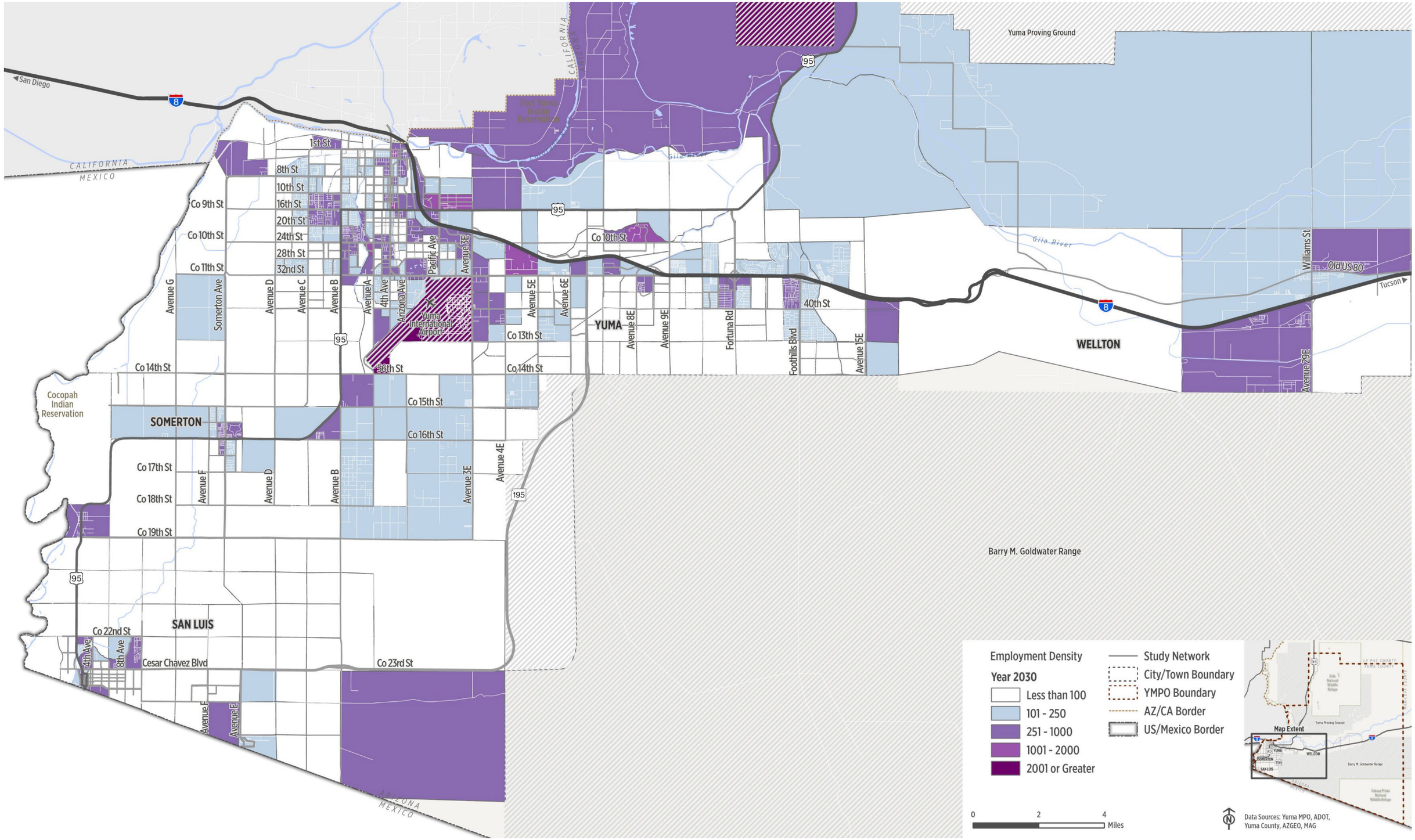


Figure 6.8. Year 2035 Projected Employment Density by Traffic Analysis Zones

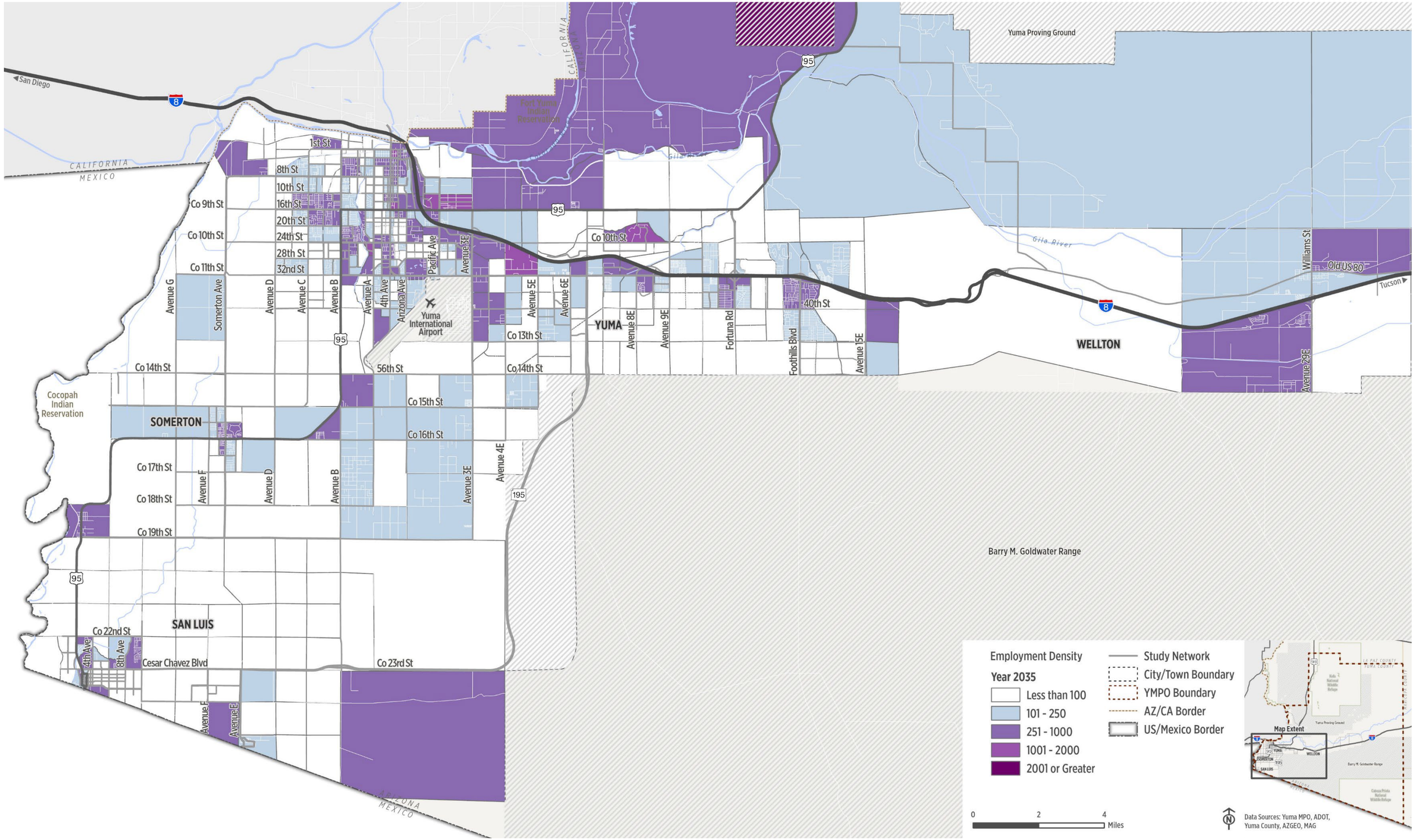
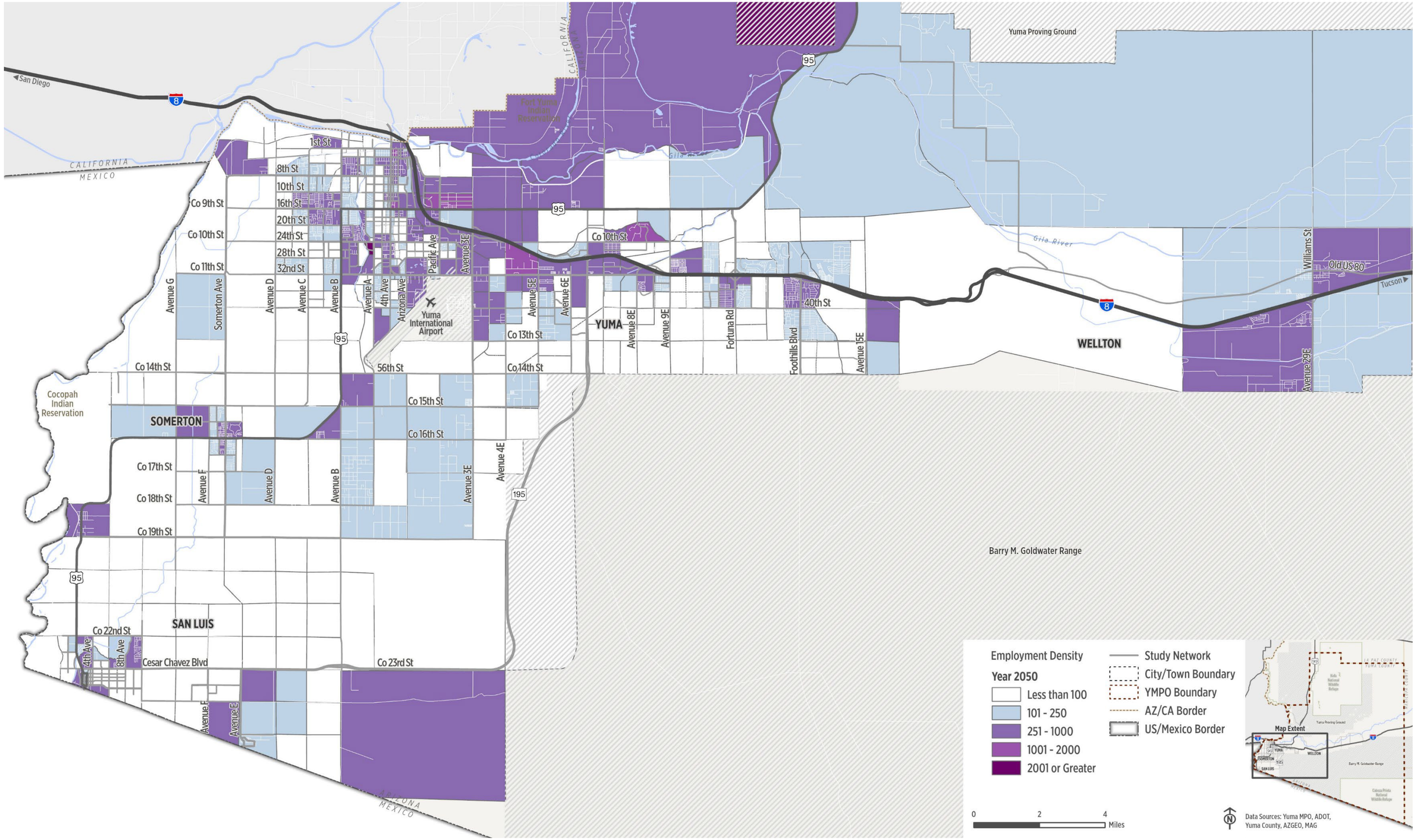


Figure 6.9. Year 2050 Projected Employment Density by Traffic Analysis Zones



Future Transportation Network Performance

The primary purpose of forecasting traffic volumes is to estimate the additional travel demand added to existing roadways and to forecast congestion levels due to projected population and employment growth. In addition, this analysis provides valuable insight into potential transportation solutions. The YMPO regional travel demand model was utilized to estimate future traffic conditions. It is important to note that all future analysis results presented in this section assume that the roadway network remains the same as today (no-build conditions) but includes roadway improvements that have been funded and are more than likely to be constructed. **Table 6.4** lists the funded capacity-related projects that are included in the no-build analysis.

Table 6.4. Programmed/Funded Capacity-Related Projects

Year	Project and Description
2025	Construct Bridge on Avenue 7E and 40th Street over A Canal
2025	Construct 40th Street between Avenue 7 ½ E and Avenue 6 ¾ E (one lane each way with a raised median – I believe this also includes an at-grade connection to SR 195/Araby Rd but the CIP doesn't say that specifically)
2028	Widen Avenue 9E from 2 to 4 lanes between South Gila Canal (City Limits) and North Frontage Road
2026	Cesar Chavez Blvd. US 95 to Ave. E (5 miles). Widen Roadway (2 to 4 lanes)-Construction

Future Traffic Conditions

Estimations of traffic conditions were developed based on projected population and employment conditions presented at the beginning of this chapter. This analysis helps evaluate how roadways perform if no roadway improvements are made for each of the horizon years 2030, 2035, and 2050. Roadway performance is expressed in terms of Level of Service (LOS). In general, for rural areas, LOS A and B represent little to no congestion, or that the roadway is "below capacity." Heavy congestion refers to roadways that are nearing or above the capacity levels of a roadway. Road segments that have the highest traffic volumes are not necessarily the most congested, as some segments can carry higher amounts of traffic because they have more lanes.

Year 2030 No-Build Traffic Conditions

Figure 6.10 and Figure 6.11 display the projected 2030 annual average weekday daily traffic volumes and the congestion levels for the committed roadway network if no other roadway improvements are made (No-Build). **Figure 6.12 and Figure 6.13** display the projected 2030 peak season weekday daily traffic volumes and the congestion levels. **Table 6.4** lists the key roadways in the region that operate at failing LOS E or worse in the year 2030 based on annual average daily conditions and the peak season daily conditions.

Table 6.4. Key Roadways Operating at LOS E or Worse by Year 2030

Annual Average Daily Conditions	Peak Season Daily Conditions
I-8 South Frontage Road: Avenue 9E to Fortuna Road	I-8 South Frontage Road: Avenue 9E to Fortuna Road
I-8 North Frontage Road: Avenue 9E to Fortuna Road	I-8 North Frontage Road: Avenue 10E to Fortuna Road
Yuma Palms Pkwy: Quarter mile north of 16th Street	Yuma Palms Pkwy: Quarter mile north of 16th Street
Main Street in San Luis: POE to U Street	32nd Street: Half mile east of SR 195
	52nd Street: Quarter mile east of Foothills Blvd

Year 2035 No-Build Traffic Conditions

Figure 6.14 and Figure 6.15 display the projected 2035 annual average weekday daily traffic volumes and the congestion levels for the committed roadway network if no other roadway improvements are made (No-Build).

Figure 6.16 and Figure 6.17 display the projected 2035 peak season weekday daily traffic volumes and the congestion levels. **Table 6.5** lists the key roadways in the region that operate at failing LOS E or worse in the year 2035 based on annual average daily conditions and the peak season daily conditions.

Table 6.5. Key Roadways Operating at LOS E or Worse by Year 2035

Annual Average Daily Conditions	Peak Season Daily Conditions
I-8 South Frontage Road: Avenue 9E to Fortuna Road	I-8 South Frontage Road: Avenue 9E to Fortuna Road
I-8 North Frontage Road: Avenue 9E to Fortuna Road	I-8 North Frontage Road: Avenue 10E to Fortuna Road
Yuma Palms Pkwy: Quarter mile north of 16th Street	Yuma Palms Pkwy: Quarter mile north of 16th Street
	32nd Street: Half mile east of SR 195
	52nd Street: Quarter mile east of Foothills Blvd

Year 2050 No-Build Traffic Conditions

Figure 6.18 and Figure 6.19 display the projected 2050 annual average weekday daily traffic volumes and the congestion levels for the committed roadway network if no other roadway improvements are made (No-Build). **Figure 6.20 and Figure 6.21** display the projected 2050 peak season weekday daily traffic volumes and the congestion levels. **Table 6.6** lists the key roadways in the region that operate at failing LOS E or worse in the year 2050 based on annual average daily conditions and the peak season daily conditions.

Table 6.6. Key Roadways Operating at LOS E or Worse by Year 2050

Annual Average Daily Conditions	Peak Season Daily Conditions
I-8 South Frontage Road: Avenue 9E to Fortuna Road	I-8 South Frontage Road: Avenue 9E to Fortuna Road
I-8 North Frontage Road: Avenue 9E to Fortuna Road	I-8 North Frontage Road: Avenue 10E to Fortuna Road
Yuma Palms Pkwy: Quarter mile north of 16th Street	Yuma Palms Pkwy: Quarter mile north of 16th Street
32nd Street: Half mile east of SR 195; Quarter mile	32nd Street: Avenue 3E to Avenue 8E; Avenue A to Avenue B
40th Street: Quarter Mile mile east of Avenue 3E	40th Street: Avenue 3E to Avenue 4E; Half mile east of SR 195
4th Avenue in the vicinity of the Yuma International Airport	4th Avenue in the vicinity of the Yuma International Airport
24th Street: I-8 to SR 195	24th Street: I-8 to SR 195; half mile west of Avenue A
	I-8: SR 195 to Fortuna Road
	52nd Street: Quarter mile east of Foothills Blvd
	Avenue 3E: Co 13th Street to 40th Street
	Fortuna Road: one mile south of US 95
	16th Street: 14th Avenue to Arizona Avenue

Figure 6.10. Year 2030 Annual Average Daily Weekday Traffic Volumes

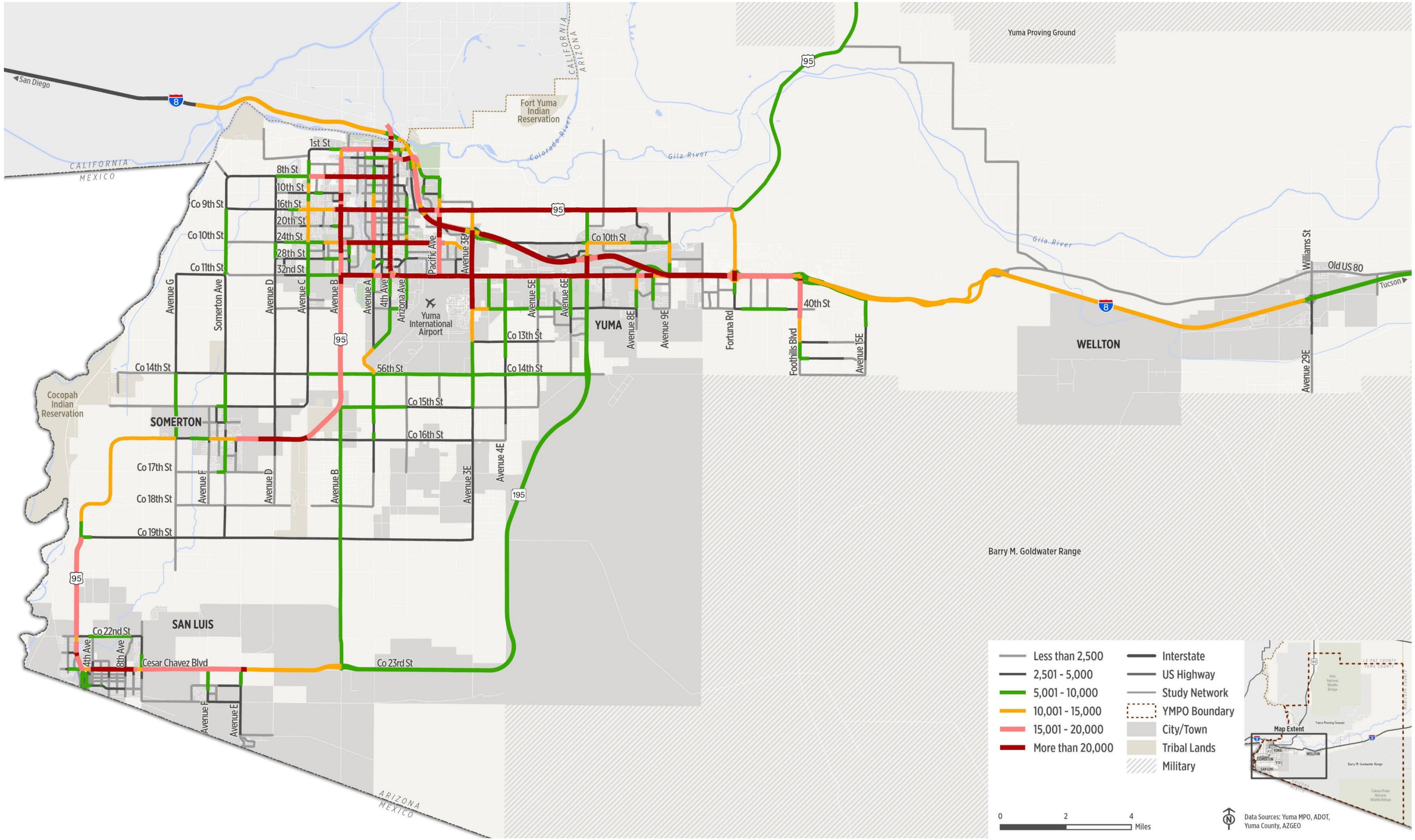


Figure 6.11. Year 2030 Annual Average Daily Weekday Level of Service

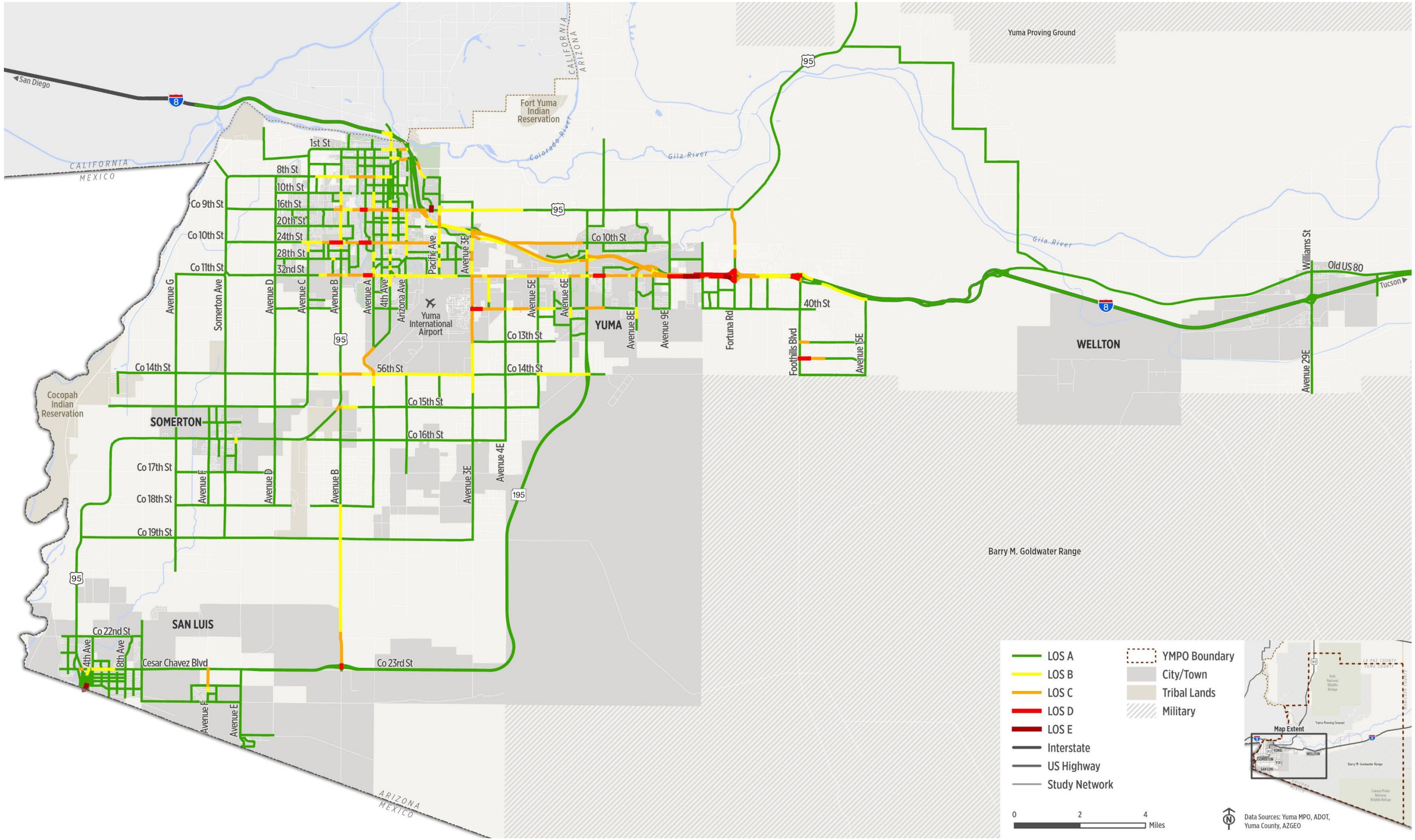


Figure 6.12. Year 2030 Peak Season Daily Weekday Traffic Volumes

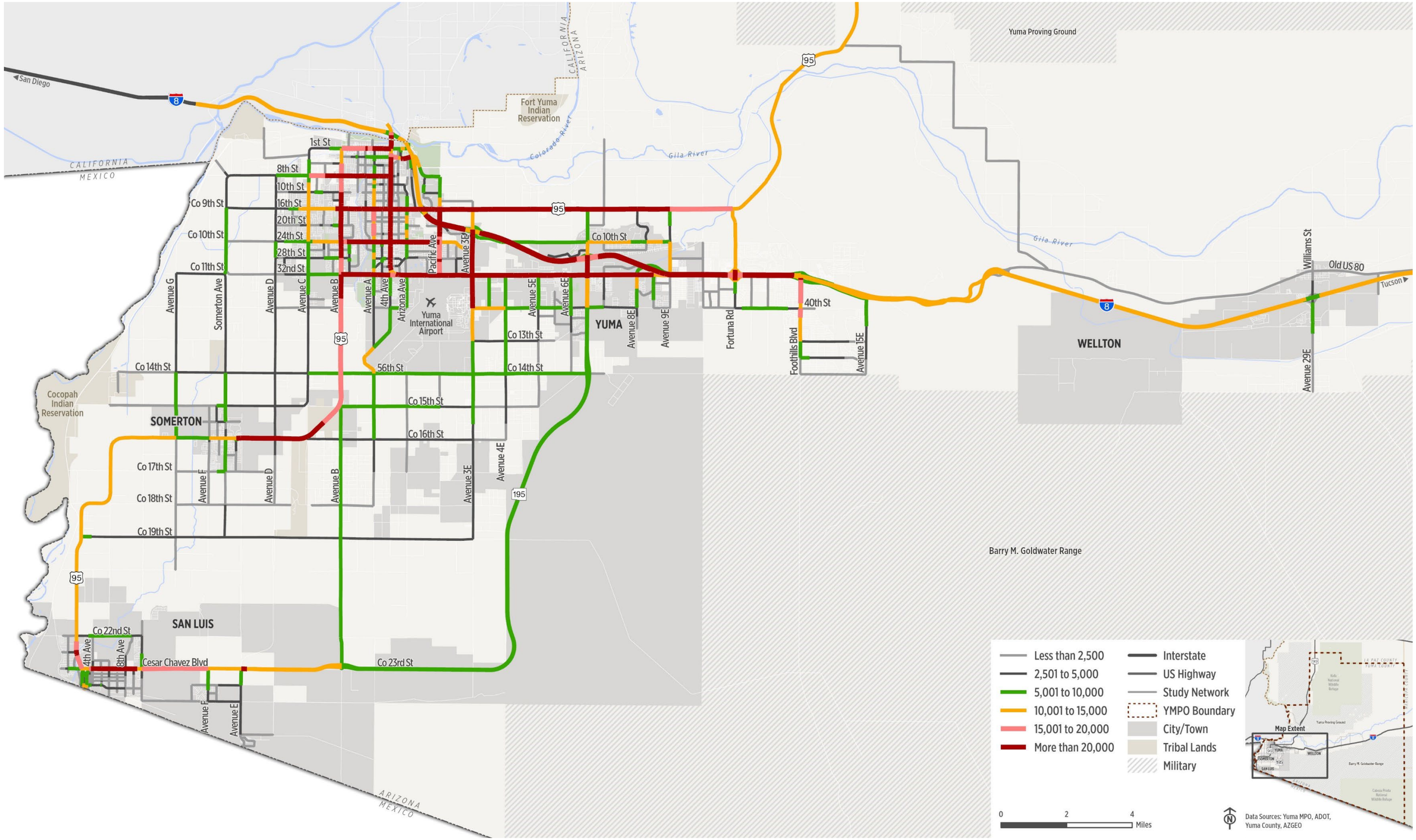


Figure 6.13. Year 2030 Peak Season Daily Weekday Level of Service

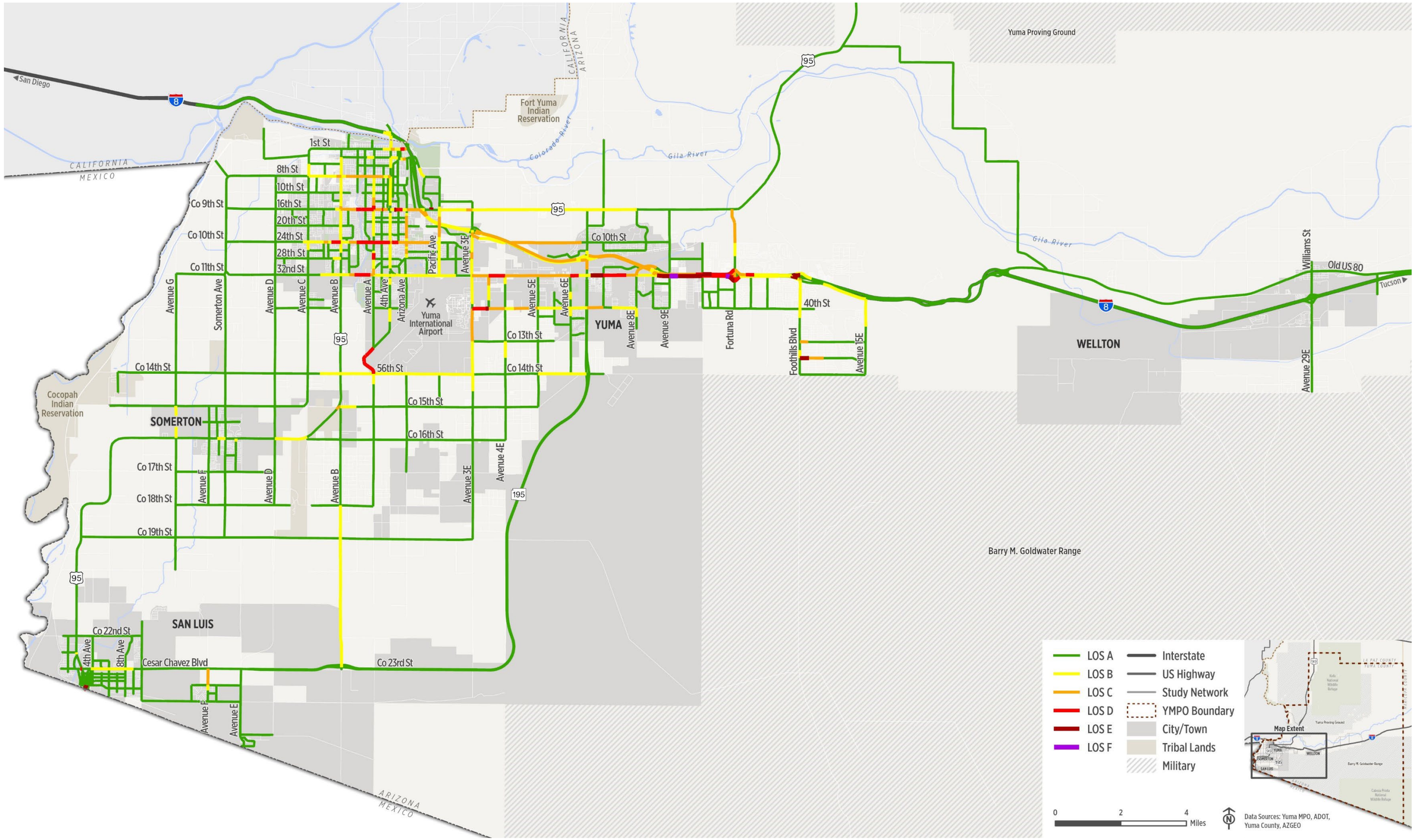


Figure 6.14. Year 2035 Annual Average Daily Weekday Traffic Volumes

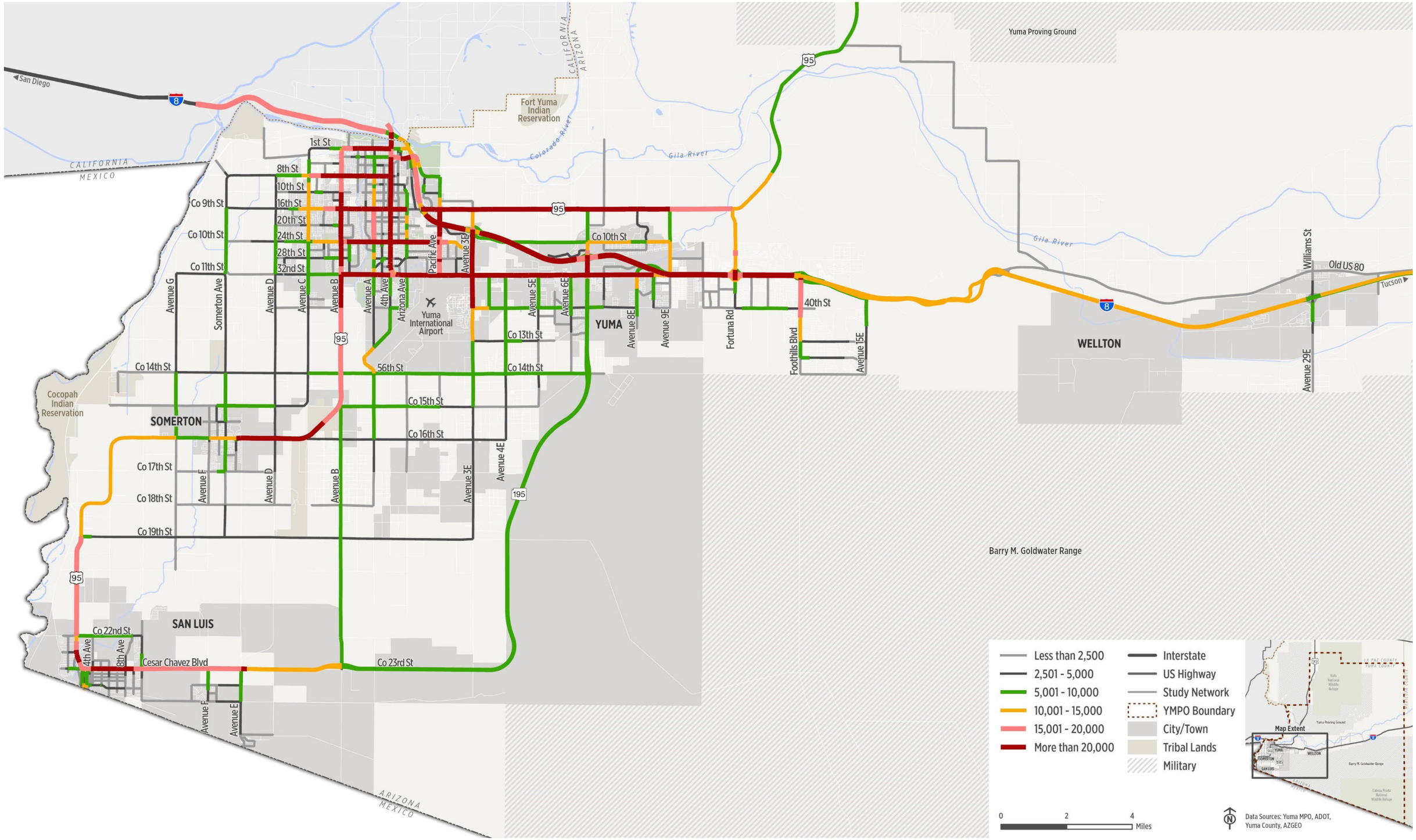


Figure 6.15. Year 2035 Annual Average Daily Weekday Level of Service

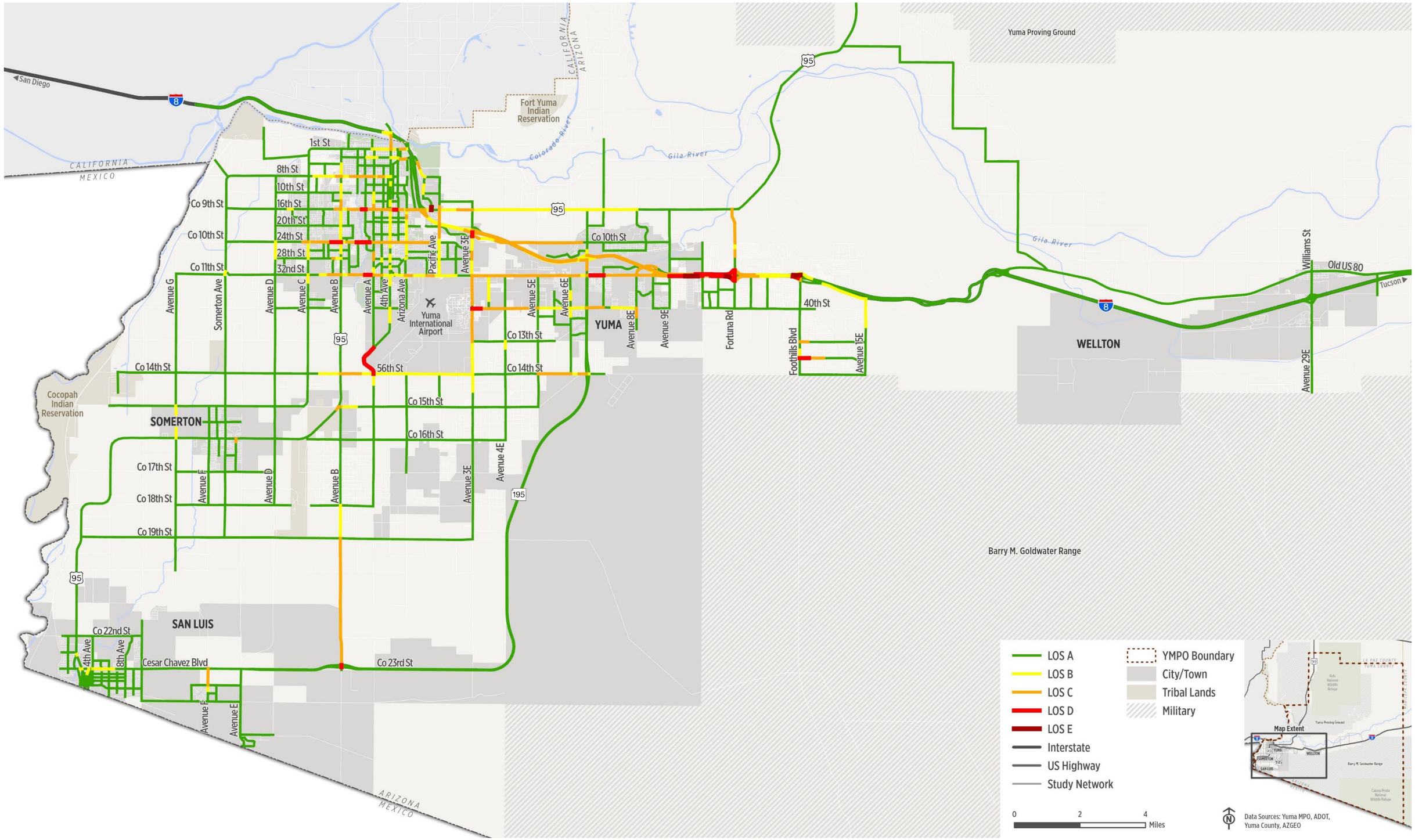


Figure 6.16. Year 2035 Peak Season Daily Weekday Traffic Volumes

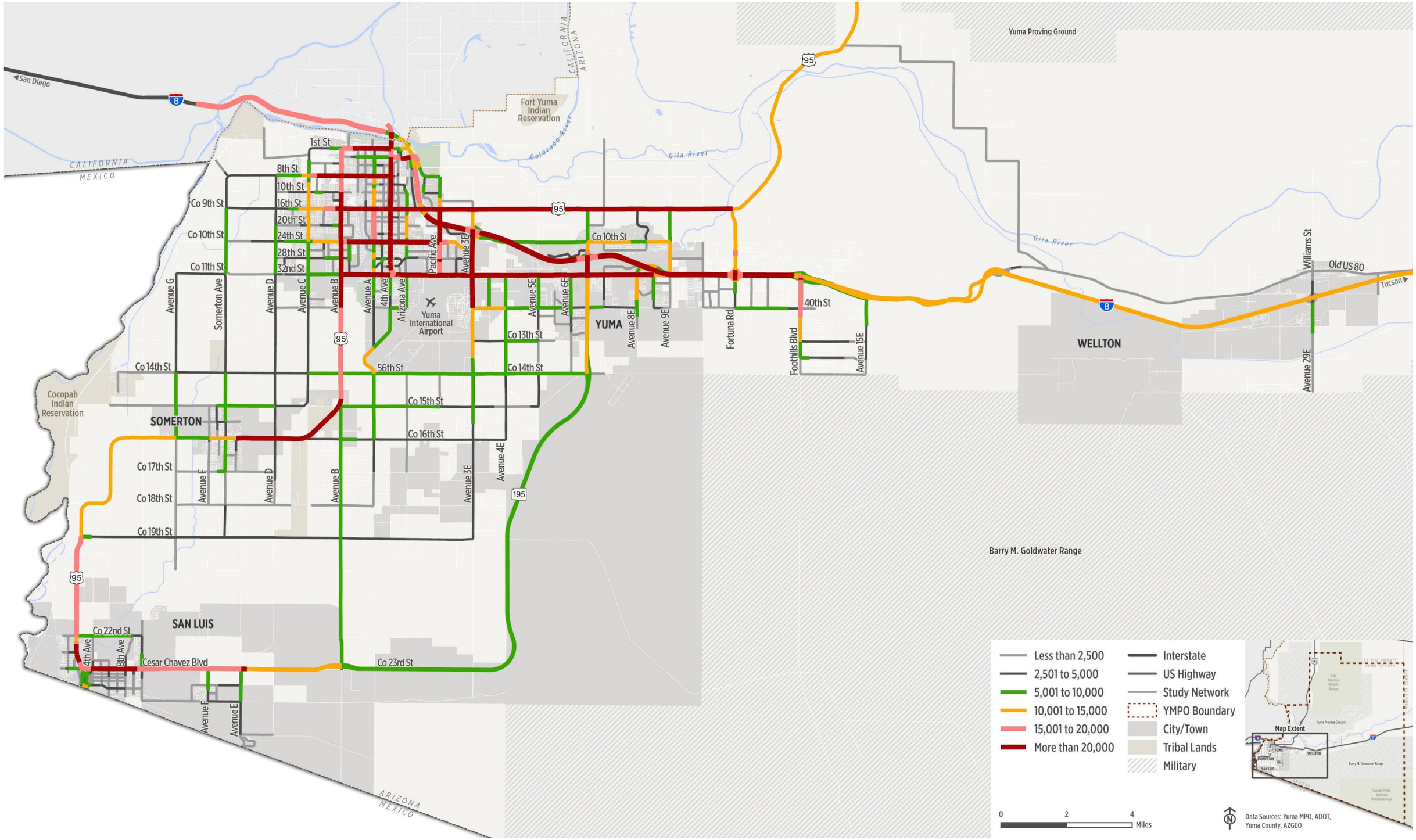


Figure 6.17. Year 2035 Peak Season Daily Weekday Level of Service

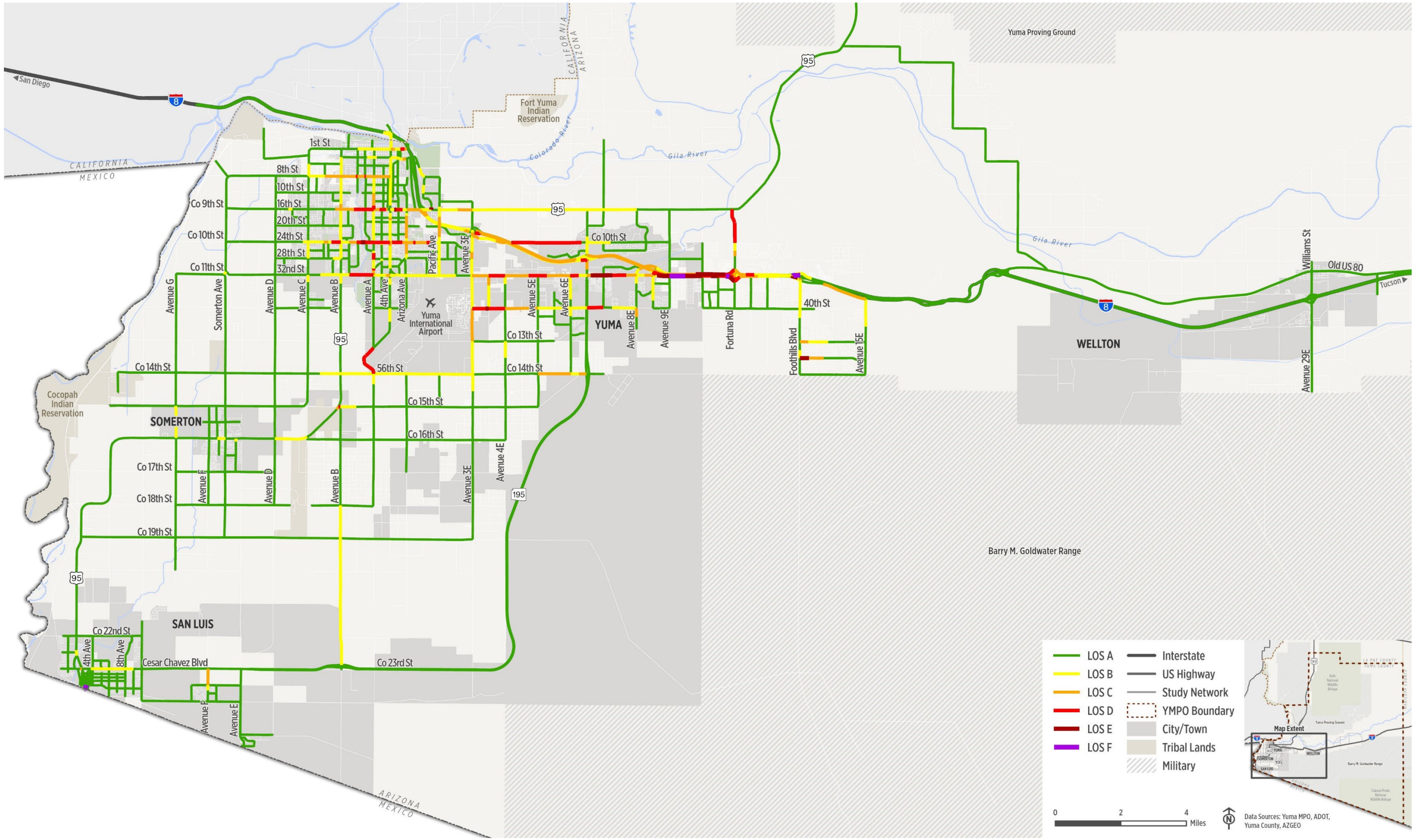


Figure 6.18. Year 2050 Annual Average Daily Weekday Traffic Volumes

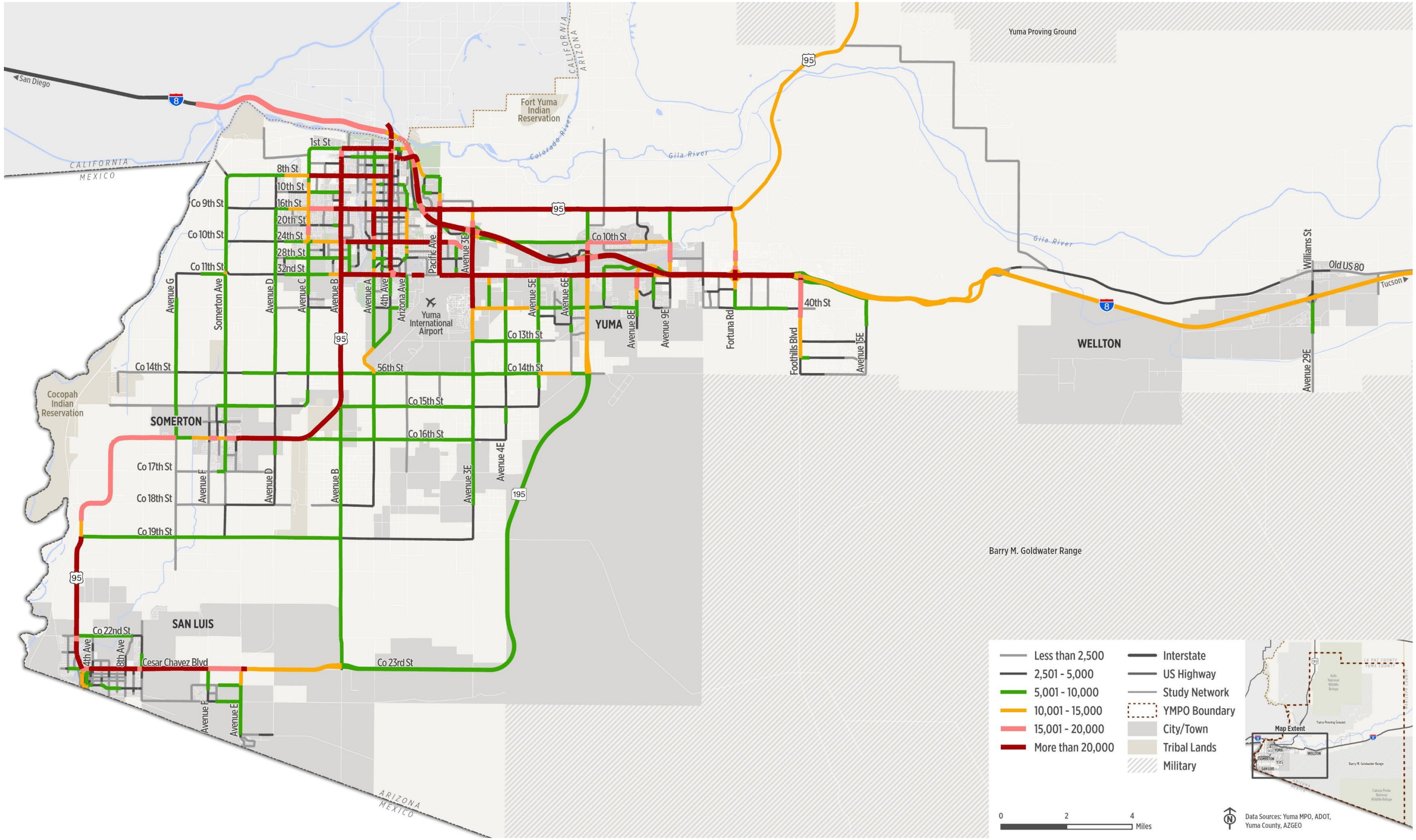


Figure 6.19. Year 2050 Annual Average Daily Weekday Level of Service

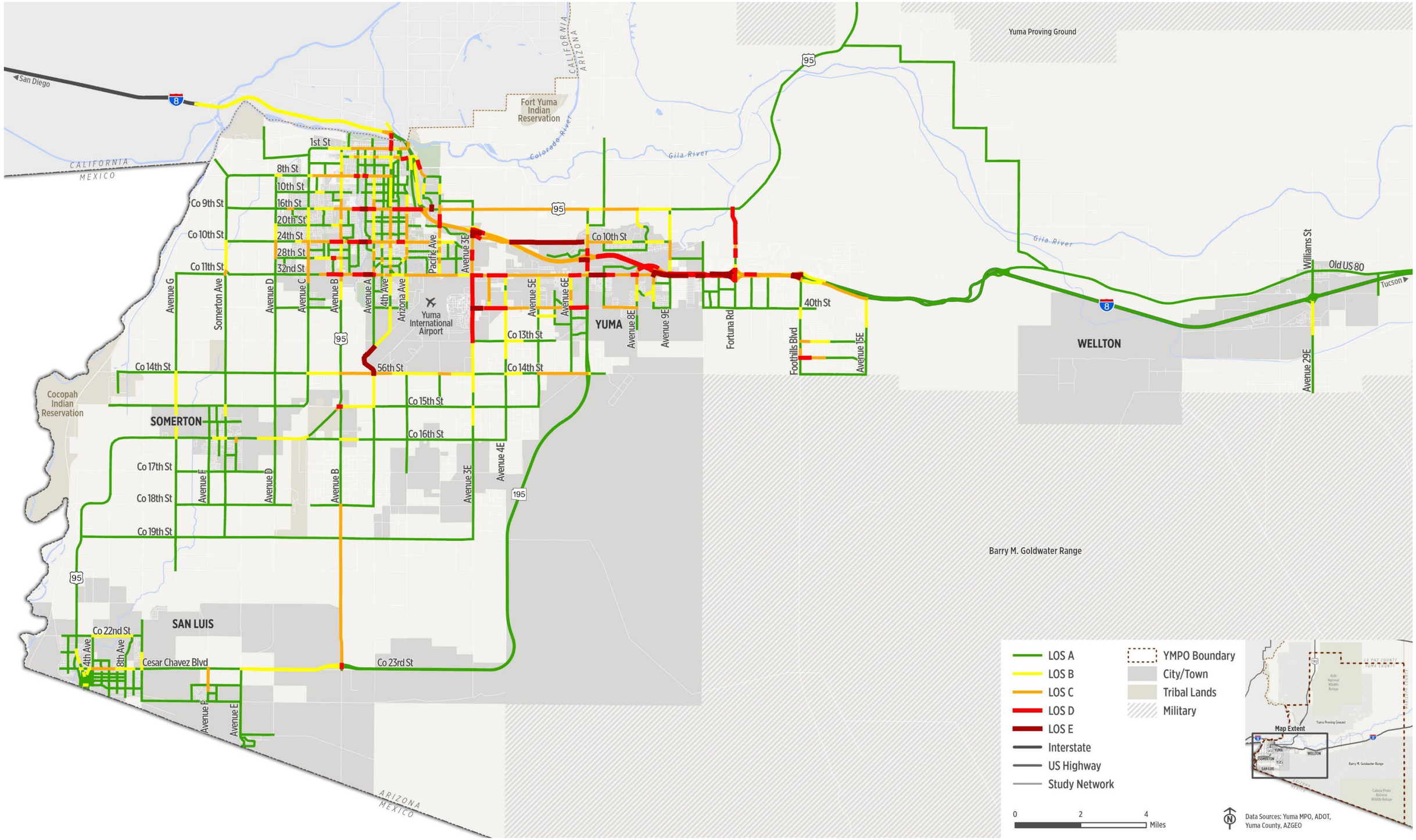


Figure 6.20. Year 2050 Peak Season Daily Weekday Traffic Volumes

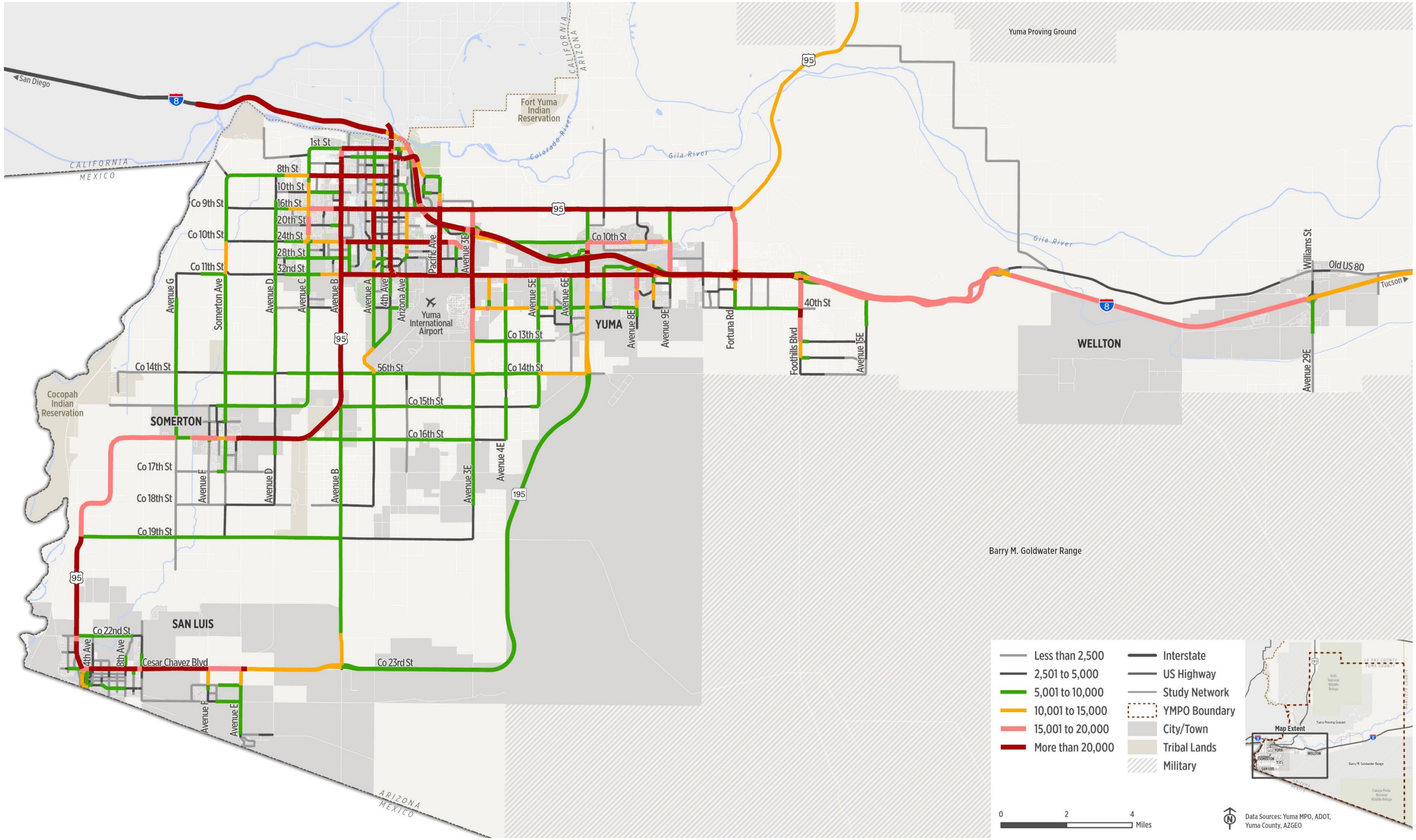


Figure 6.21. Year 2050 Peak Season Daily Weekday Level of Service