



## STAFF REPORT

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**DATE:** May 10, 2021  
**TO:** Sacramento Regional Transit Board of Directors  
**FROM:** Laura Ham, VP, Planning and Engineering  
**SUBJ:** APPROVING THE HIGH CAPACITY BUS CORRIDOR STUDY

### RECOMMENDATION

Adopt the Attached Resolution.

### RESULT OF RECOMMENDED ACTION

Approves the High-Capacity Bus Corridor Study for the Capital Region.

### FISCAL IMPACT

No fiscal impact.

### DISCUSSION

#### Background

SacRT was awarded a Caltrans Sustainable Communities Planning Grant in October 2018 in the amount of \$265,000 to fund the High Capacity Bus Study for the Capital Region and start the early planning for potential “Bus Rapid Transit (BRT)” referred to as High Capacity Transit. This was a follow-up to the work completed during the development of the SacRT Forward bus network in which staff would identify corridors best suited for High Capacity Transit improvements. SacRT contracted with WSP, Inc., Nelson Nygaard, TransPro and Walk Sacramento to assist staff in the plan development. Work on the project commenced in October 2019.

There have been many community discussions revolving around potential BRT in the region. In fact, there have been numerous planning efforts taken to lay the foundation. The work completed in 2009 for the Transit Action Plan laid out nearly a dozen corridors for potential “hi-bus service.” SacRT staff also worked with County staff to include high capacity transit corridors in the County’s Transportation Development Fee Program (SCTDF), which was updated in 2018. The SCTDF program reserves developer fees collected in the unincorporated County where SacRT has identified high demand corridors throughout the service area where frequent “high bus” service should be implemented over the next 30 to 35 years; the funding will support capital improvements associated with high frequency service. High frequency service was also a focus of the SacRT Forward project, which was a major redesign of the District’s bus network implemented in September 2019. Through this effort staff developed a high frequency

network, where 15-minute or better frequency was identified in corridors that lend themselves to support these frequency improvements. The SacRT Forward improvements were strictly operational in nature and did not consider capital improvements. In coordination with SacRT, the Sacramento Area Council of Governments (SACOG) included high capacity corridors in the update to the Metropolitan Transportation Plan. Staff has also worked closely with the City of Sacramento to include SacRT's high frequency corridors in their General Plan update. We are also coordinating with Sacramento County, Rancho Cordova, Citrus Heights and Folsom staff.

## Public Outreach

Public outreach and participation were an integral part of SacRT's project and was captured in several different formats. Staff conducted an onboard survey on nine routes on the studied corridors. Staff also conducted an online survey. In total SacRT received over 600 survey responses. Staff held an online public workshop, where 45 interested parties were in attendance representing a wide cross section of our community. Staff also conducted stakeholder interviews, reaching out to business associations, neighborhood associations and community groups. Feedback from riders was overall very positive towards SacRT service. Over 84% said they were satisfied with current service, around 90% said they felt safe riding on the bus. However, riders did share the top three things they would like to see improved. Those improvements include more frequency, buses arriving on time and later service hours. Stockton Blvd. and Watt Ave. received the most interest from participants. Another major theme from riders was improving conditions for those waiting on the bus and access to get to bus stops. Sidewalks, ADA accessibility, connectivity, lighting and shelter were all very important as highlighted by participants. The public outreach summary can be found in Attachment 1.

## Analysis

SacRT's analysis focused on five corridors that were determined to be most likely to progress in the next 10 years and, therefore, most logical to progress planning for these corridors. The corridors are Watt Ave., Florin Road, El Camino, Arden Way and Sunrise Blvd. Stockton Blvd. was examined separately in the Stockton Blvd Conceptual Plan (April 2020) (Attachment 2). The team used Swiftly to closely look at the operational characteristics of each corridor. This included identifying average transit speeds, where delays are occurring and ridership along the corridors. Staff also worked with local jurisdictions to look at land use and zoning, as well as future development plans along the corridors to evaluate compatibility of implementing BRT. Land use will play an important role in the success of higher capacity transit along a given corridor and feasibility of true BRT and Staff must continue to work with our local partners to encourage land use that support the transit investments.

## Results

The analysis shows that we should approach SacRT's BRT system planning by developing a tiered approach to further develop corridors for future BRT service. This would include pre-high capacity bus improvements. These would be short-term spot improvements to build bus stop pads, add shelters, connect sidewalks at short distances, add lighting and display real time bus information. In the medium to long term, SacRT would develop each corridor on a tiered approach and phase improvements on segments within given corridors.

Staff recommends that the Board approves and adopts the High-Capacity Bus Corridor Study for the Capital Region and directs staff to move forward with the report. Specifically, the report recommends that SacRT:

- Move forward with Stockton Blvd. Enhanced Corridor Planning Efforts
- Seek funding to further define specific, tiered improvements on corridors
- Provide for additional public involvement
- Create a capital project to include BRT improvements in the District's Capital Improvement Program
- Coordinate with local jurisdictions, SACOG and Caltrans where appropriate

## SacRT High Capacity Bus Service Study Outreach Summary

Between December 2019 and December 2020, WALKSacramento, in partnership with Sacramento Regional Transit (SacRT), completed three major outreach efforts: a series of stakeholder interviews, an online survey focused on high capacity bus service strategies, and a virtual public workshop. Community members were also invited to submit comments via email at any point throughout the study period. Outreach efforts generally sought to engage the public in the planning process, share project information, and gather feedback on high capacity bus service priorities and opportunities. A brief summary of each of the outreach efforts is included below.

### I. Stakeholder Interviews

Stakeholder interviews were conducted in two rounds and targeted a variety of stakeholders located along the five study corridors (Arden Way, Florin Road, Stockton Boulevard, Sunrise Boulevard, and Watt Avenue). The questions sought to gather more detailed information on preferences, opportunities, concerns, and other considerations for high capacity bus service.

The first round of interviews was held from mid-December 2019 through March 2020 and focused on engaging neighborhood associations, business associations, and community-based organizations. A total of 11 interviews were conducted, including two neighborhood associations, three business associations, and six community-based organizations.

The second round of interviews were held during December 2020 and primarily focused on engaging additional neighborhood associations and transportation staff from school districts whose jurisdictions included a portion of at least one of the five corridors. A total of six additional interviews were conducted, including three neighborhood associations and three school districts.

#### Key Takeaways

- Overall, major themes included transit reliability, system connectivity, safety, improved bus stop amenities, and accessibility for people with disabilities and older adults.
- Corridor-Specific Opportunities
  - On Arden Way, major priorities included improved pedestrian and cyclist access to stops, connected sidewalk networks, and expanded transit services.
  - On Florin Road, major priorities included alleviating traffic congestion, bus stop maintenance and amenities, improved pedestrian and cyclist access to stops, and expanded infrastructure for microtransit.
  - On Stockton Boulevard, major priorities included access to fresh food and employment centers, decreased trip times, expanded evening service, and enhanced bicycle facilities.

- On Sunrise Boulevard, major priorities included higher frequency bus service to alleviate congestion, improved access to fresh food, and closing first and last mile gaps.
- On Watt Avenue, major priorities included improved multimodal connections (particularly bus and light rail), bus stop maintenance, and smoother bus loading and layovers.

## **II. Online Survey**

An online survey was developed in the fall of 2020 with the goal of identifying opportunities to improve bus service along congested corridors. The survey included a series of 14 questions focused on understanding priorities for improved bus service, existing challenges with bus routes along congested corridors, and preferences for different types of high capacity strategies. The survey was distributed through the project website, e-newsletters, and email communications to community partners along the five study corridors. In total, 120 responses were collected during the survey period, which began October 7, 2020 and ended November 20, 2020.

### **Key Takeaways:**

- Top priorities included higher frequency bus service, reliable schedules, and improving travel times while on the bus.
- Preferred types of improvements included dedicated bus lanes, traffic signal priority and short bus lanes, and route alignment/straightening.
- Additional comments included a desire for direct access to popular destinations (i.e. medical facilities, shopping, entertainment), accessibility for people with disabilities and older adults, improved service in low-income and Environmental Justice communities, and improved system connectivity.

## **III. Virtual Public Workshop**

A public workshop for SacRT's High Capacity Bus Service Study was held via Zoom on Wednesday, October 21, 2020 facilitated by project team members from WALKSacramento, SacRT, WSP, and Nelson/Nygaard. The workshop was intended to increase knowledge and understanding of high capacity bus service strategies; understand current barriers for using bus service and the types of improvements that would make it more attractive; and understand priority corridors and priority segments along those corridors. In total, there were 46 participants who represented a wide range of interests, including SacRT riders, local government agencies, and community organizations.

### Key Takeaways:

- Out of the five corridors, Watt Avenue and Stockton Boulevard received the most interest for high capacity bus service improvements.
- Top considerations for improving bus service included frequency, reliability, and pedestrian access.
- Top priorities for improving the overall transit experience included bus shelters; separate, clearly designated high capacity bus service stops; and accessibility, particularly for riders who have mobility disabilities or are blind or low-vision.

### **IV. Email Submissions**

Two community members submitted comments via email during the study period. The two comments were generally concerned with improving the study's process and methods, including consulting past studies by SacRT and conducting origin-destination survey research to improve route planning.

## SacRT High Capacity Corridor Study Stakeholder Interview Executive Summary

A series of initial Phase 1 stakeholder interviews were held for the Sacramento Regional Transit High Capacity Bus Service Study from mid-December 2019 through March 2020 with 11 community-based organizations (CBO's), business associations, and neighborhood associations. A second round of interviews was conducted from December 2020 through January 2021 with three school districts and three additional neighborhood associations. These interviews were a critical component of the public engagement, as they provided an opportunity to introduce the project to key stakeholders, identify goals and outcomes, and gather important information on existing challenges and priorities. The list of stakeholders interviewed is below. Feedback from each organization has been compiled into stakeholder profiles further in this report, which are organized alphabetically.

Neighborhood Associations	Business Associations	Community-Based Organizations	School Districts
<ul style="list-style-type: none"> <li>• Anatolia Neighborhood Association</li> <li>• Golf Course Terrace Estates</li> <li>• Meadowview Neighborhood Association</li> <li>• Rosemont Community Association</li> <li>• Sunrise Oaks Neighborhood Association</li> </ul>	<ul style="list-style-type: none"> <li>• 80-Watt Improvement District</li> <li>• McClellan Park Transportation Management Authority</li> <li>• Florin Road Partnership</li> </ul>	<ul style="list-style-type: none"> <li>• Asian Resources</li> <li>• Mutual Housing</li> <li>• Resources for Independent Living</li> <li>• Ridership for the Masses</li> <li>• Sacramento Transit Riders Union</li> <li>• Society for the Blind</li> </ul>	<ul style="list-style-type: none"> <li>• Elk Grove Unified School District</li> <li>• Sacramento City Unified School District</li> <li>• Twin Rivers Unified School District</li> </ul>

The interviews were generally 30 to 45 minutes long, and to ensure consistency 9 questions were developed to be asked of all participants. The questions sought to gather more detailed information on preferences, opportunities, concerns, and other considerations around the five corridors being studied (Arden Way, Florin Road, Stockton Boulevard, Sunrise Boulevard, and Watt Avenue). Although most organizations focused their comments on one or two specific corridors, some organizations were able to speak on broader factors shared across the five corridors. A number of themes arose as priorities for this project to address, including:

**Reliability:**

- Buses don't always have frequent service and riders may have to wait 30 minutes or longer for another bus.
- Operational hours aren't convenient for school, weekend and evening work schedules, or social activities. There is a greater transit need during off-peak hours, particularly during the COVID-19 pandemic when many essential workers have experienced shifts in normal work schedules.
- Public transit trips along congested corridors take 2 or 3 times longer than if traveled on a vehicle due to frequent stops for on/off-boarding.
- There are some bus only lanes, yet the segments are too short to notice a change in travel time.

### **Connectivity:**

- The five corridors provide great connections to the different light rail lines (Blue, Gold, Green), interstate highways (I-80, I-50, I-5 and Highway 99), and provide access to essential goods and services, as well as employment centers along their routes.
- Residents are being displaced from their homes due to rising housing costs and frequently find themselves moving into areas that have limited access to public transit services.
- Access to jobs, shopping centers, schools, and medical facilities are a high priority for high capacity bus service.

### **Amenities:**

- A lack of shelters systemwide creates an uncomfortable transit experience as people often have to wait for long periods of times at stops while exposed to the elements, especially during hotter months.
- People who are blind and low vision need bus stops to be distinguishable through strategies such as large print, scannable audio, digital readers, brail, and universal signs (shapes identification similar to triangle/circle for restrooms) that signal to an individual that they are at a transit stop.
- Placement of real time route signs, similar to those found at light rail stations with departure and arrival time would help riders plan their trips better. More people own electronic devices that require Wi-Fi access and charging ports.

### **Accessibility:**

- Access to bus stops is often limited, especially for people with mobility disabilities. Sidewalks are narrow, lack curb cuts, are nonexistent along some segments, and have blockages such as utility poles that limit access for people using wheelchairs and mobility devices.
- Bus stops are difficult to access by foot or bike due to unsafe pedestrian and bicycle facilities, including sidewalk gaps, lack of bike lanes, and lack of secure bike parking.
- Overcrowding on buses is an issue, particularly on congested corridors and during school commute times.

### **Safety:**

- Many students rely on SacRT to get to and from school and primarily travel alone. Parents are concerned for their children's safety at stops and on the bus, especially when routes require several transfers and there is an increased likelihood of their child getting lost.
- Riders do not feel safe when accessing stops located at major intersections and along corridors due to high traffic volumes, aggressive drivers, and lack of adequate pedestrian facilities.
- Threats to personal safety at bus stops, such as harassment and theft, is a concern for riders, particularly when there are prolonged wait times during off-peak hours.
- Lack of hand sanitizer dispensers on buses, manual doors, and front-boarding have created health concerns on buses and at stops for riders, particularly during COVID-19.



## **Corridor-Specific Priorities and Opportunities**

### **Arden Way:**

Residents along the Arden Way corridor don't use transit very often even though this corridor provides connections to a lot of retail centers. Many households only have one car, but rather than taking the bus residents adjust their schedules and coordinate around the one car. Arden Way is a high-speed arterial where residents need to cross 11 lanes of traffic, which discourages individuals from walking, biking, or using public transit. Transit services need to be expanded, connectivity to bus stops require enhancements, and the amount of sidewalk gaps along the route need to be eliminated.

### **Florin Road:**

People drive to the Florin light rail station, Highway 99, Southgate Plaza and Florin Towne Center, and Luther Burbank High School, creating congestion for commuters along Florin Road on a daily basis. Besides traffic congestion, Florin Road has poor pedestrian and bicycle connections to transit stops, with minimal pedestrian crossing facilities and bike facilities that feel unsafe next to high speed traffic. There is a high need for microtransit to be extended to the 65th Street transfer station at Florin Mall. Bus stop vandalism is frequent and bus stops often lack adequate facilities such as seating or are placed in areas that are difficult for the elderly and people with disabilities to access. Improvements to support traffic calming, access to bus stops, and safe and well-maintained bus shelters are recommended.

### **Stockton Boulevard:**

Accessing fresh food and employment centers are a priority for those traveling along Stockton Boulevard, yet the length of transit rides, as well as limited evening hours, play a significant barrier that limits the ability of residents to rely on public transit. Improving the corridor by enhancing bike facilities to feel safer, placing bus only lanes, and incorporating Bus Rapid Transit or increased bus frequencies would be desirable.

### **Sunrise Boulevard:**

There is interest in increased bus service along Sunrise Boulevard to alleviate vehicle congestion for motorists traveling north to access key retail destinations. Access to fresh food locations is a key destination for many pedestrians, yet there are noticeable first mile and last mile accessibility gaps, particularly in the Fair Oaks and Citrus Heights areas. Prioritizing high capacity improvements at the Sunrise Mall Transit Center Greenback Lane and Arcadia Drive provides a tremendous opportunity for improving multimodal connectivity throughout the County.

### **Watt Avenue:**

The Watt/I-80 station is a major transit connection for people traveling by both bus and light rail. Watt Avenue is seen as an important transportation corridor, with potential to increase multi-modal functionality and improve access for residents and visitors traveling to the corridor or elsewhere along the corridor. Furthermore, affordable housing development and industry growth along the corridor have potential to create new demand for public transit service. Concerns about crime and human trafficking create a perception that using transit is unsafe, with poor maintenance of bus stops contributing to these personal safety concerns. Bus loading and layovers are another concern, as buses do not have dedicated pull-outs along Watt Avenue and currently block traffic and driveways.

# Stakeholder Profile: 80 Watt Improvement District

## What Corridor(s) They Represent

- Watt Avenue

## Who They Are

The 80 Watt Improvement District is a Property and Business Improvement District with the goal of improving quality of life along the Watt Avenue corridor in the North Highlands community. Currently, the district's boundaries encompass the area between Watt Avenue, Roseville Road, and Longview Drive. The district provides services including maintenance, capital improvements, marketing and advocacy, and security for properties and businesses. Since 2015, the district has helped reduce crime by 41%. In addition to these services, the district focuses on economic development, beautification, and ensuring that businesses are accessible, clean, and safe for employees and customers.

## Existing Conditions and Challenges

Watt Avenue is a heavily traveled commuter corridor, with the district estimating approximately 1.4 million vehicles traveling along the corridor per year. Additionally, the Watt/I-80 station is a major transit connection for people traveling by both bus and light rail. Major transit stops along Watt Avenue include the Watt/I-80 station, the bus stop at Safe Credit Union, and the bus stop at Walmart. Transit users tend to walk from nearby residential areas or come to the corridor from elsewhere by bus or light rail transfers. Personal safety is one of the biggest barriers for people using transit on Watt Avenue. Concerns about crime and human trafficking create a perception that using transit is unsafe. Lack of maintenance of bus stops contributes to these personal safety concerns. Bus loading and layovers are another concern, as buses do not have dedicated pull-outs along Watt Avenue and currently block traffic and driveways. Pedestrians often cross outside of crosswalks on Watt Avenue due to long distances between crosswalks, however recent installation of fencing in medians has helped address this issue.

## Priorities and Opportunities

Watt Avenue is seen as an important transportation corridor, with potential to increase multi-modal functionality and improve access for residents and visitors traveling to the corridor or elsewhere along the corridor. Major destinations on Watt Avenue include restaurants near the Watt/I-80 station (such as Starbucks, Wendy's, and Chinese food restaurants), Walmart, and the Safe Credit Union. While there is not a lot of current retail along Watt Avenue, there are opportunities for transit to better serve employment centers and provide access to jobs and health services, such as dentist offices and the Department of Human Assistance. Additionally, Mercy Housing is in the process of developing an affordable housing complex on Watt Avenue which will provide future residents with access to nearby transit stops and other walkable destinations. The Sacramento Area Council of Governments also recently allocated funding for a bike path project to Roseville Road, which is both an opportunity for bike access to transit as well as an important consideration for safety between buses and bicyclists. Other considerations for increasing transit ridership include amenities such as lighting, trash cans, bike racks, and art or other placemaking elements. Benches and shade are important, but when implemented incorrectly or are unmaintained can attract negative activity. Education and improved perception of transit through marketing and transportation demand management campaigns can help incentivize ridership as well, particularly for businesses and employees.

# Stakeholder Profile: Anatolia Neighborhood Association

## What Corridor(s) They Represent

- Sunrise Boulevard

## Who They Are

The Anatolia Neighborhood Association represents the Anatolia neighborhood, a community in Rancho Cordova, CA. The neighborhood is located in the southern part of Rancho Cordova, between Sunrise Boulevard on the west and the Rancho Cordova Parkway on the east; and from Douglas Road on the north to the greenbelt on the south. Approximately 2,000 single-family detached homes, two elementary schools, and four community parks are located within the neighborhood boundaries.

## Existing Conditions and Challenges

Currently, the neighborhood is situated in a location where it is difficult to access amenities and errands without a vehicle. While some residents do use Paratransit, the trip planning and time spent waiting is currently longer than using a personal vehicle. Most residents all have personal vehicles. Bus routes 175 and 176 do run through the neighborhood. The neighborhood association did express interest in increased service along Sunrise Boulevard to alleviate vehicle congestion for motorists traveling north to access key retail destinations along Sunrise Boulevard. In addition to businesses along Sunrise Boulevard, other popular destinations include Downtown Sacramento, the Sacramento International Airport, and the shopping centers at Folsom Boulevard and Blue Ravine Road.

## Priorities and Opportunities

The Neighborhood Association expressed interest in increase service to employment centers as the highest priorities, followed by shopping centers and education centers. Improvements to bus stops such as shelters, WiFi, interactive scheduling maps, and bike parking are also desired.

# Stakeholder Profile: Asian Resources

## What Corridor(s) They Represent

- Stockton Boulevard
- Sunrise Boulevard
- Watt Avenue

## Who They Are

Asian Resources was founded in 1980 with the purpose of assisting Southeast Asian refugees with English language services and job training. Asian Resources has since grown to support low income households, youth, and individuals with limited English proficiency to gain self-sufficiency. The organization has offices in Citrus Heights, Oak Park, and South Sacramento, and serves diverse communities with high Slavic, Middle Eastern, African American, Latinx, and Asian populations. Many of their clients rely on transit to access jobs and language development classes.

## Existing Conditions and Challenges

Customers of Asian Resources primarily live in the neighborhoods around Stockton Boulevard in South Sacramento, Sunrise Boulevard in Citrus Heights, and Watt Avenue in North Highlands. Transit along Sunrise Boulevard and Watt Avenue is primarily used for getting to and from work, whereas transit along Stockton Boulevard is primarily used for accessing grocery stores and medical services such as the UC Davis hospital and other doctor's offices.

Transportation generally is often a challenge for customers trying to attend Asian Resources' classes. Many clients do not have access to a personal vehicle and rely on transit to get to class. However, one trip often takes a long time due to the need for bus transfers, with some trips necessitating three or four different bus routes. The amount of time it takes to use transit, as well as limited evening hours, are a significant barrier that limits the ability of residents to access employment opportunities and Asian Resources' language classes and job training services.

Lack of personal and traffic safety is another major concern, both when walking to a bus stop and waiting at the bus stop. Sidewalks along each of these corridors are narrow, and while bike lanes are present they do not feel safe to use. Drivers often use the bike lanes as turning lanes and do not yield to pedestrians, creating unsafe situations and near-misses.

## Priorities and Opportunities

Asian Resources' clients have expressed interest in using transit more often if there were more routes, if routes ran more often and had extended evening hours, and if it was safer to access transit. Access to fresh food locations is a priority, especially for people traveling along Stockton Boulevard and Sunrise Boulevard. Other amenities and opportunities that would benefit the communities Asian Resources serves include converting to a clean bus fleet in order to improve air quality and increasing general education about how to use the transit system. Lowering fare costs would help improve access as well, as Asian Resources saw an increase of youth using the system when SacRT introduced free rides for students.

# Stakeholder Profile: Elk Grove Unified School District

## What Corridor(s) They Represent

- Florin Road
- Stockton Boulevard

## Who They Are

Elk Grove Unified School District (EGUSD) covers the Southeast portion of Sacramento County and is the fifth largest school district in California, with 67 schools and an average annual enrollment of 63,000 students. While EGUSD offers transportation services directly to schools within the district, SacRT has become an integral transportation option for EGUSD students to get to school and other key destinations, such as shopping centers and work programs. SacRT's free student bus pass program has been highly successful in terms of making transit financially accessible and more familiar, as the program encourages students to get comfortable using transit from an earlier age.

## Existing Conditions and Challenges

Due to budget policies under county guidelines, special education busing is the only type of busing that is required to receive funding. With projected budget cuts due to COVID-19, general education busing may not receive virtually any funding in the coming school years, making high capacity bus service critical for transporting students to and from school. There are two bus agencies within EGUSD: SacRT and E-Tran (the public transit system for the City of Elk Grove). Different bus service areas have resulted in a disconnected network for students and thus, coordination between the two agencies would be highly beneficial for overall system connectivity.

Students who live in the Anatolia neighborhood in Rancho Cordova as well as rural areas in the school district face the greatest transportation challenges as they have the longest commutes and the fewest transportation options. Additionally, students who live within walking and biking distance from schools in EGUSD face dangerous conditions related to unsafe pedestrian and cyclist facilities. Another major challenge for the district is chronic staffing shortages among school bus drivers due to stringent requirements for application, high level of responsibility, and comparatively low wages. Staffing shortages have contributed to unreliable bus service for students, causing great frustration for parents. However, EGUSD was able to create a mobile app for students and parents to track buses in real time, which helped improve trip planning.

## Priorities and Opportunities

Due to the significant challenges EGUSD is facing related to reduced system capacity, SacRT has tremendous potential to address current and future gaps in service by closely collaborating with school district transportation staff and E-Tran to ensure students are able to safely and easily get to and from school and other destinations. Continuing to incentivize transit through free bus passes will be key to reducing barriers to accessing transit. SacRT can also address current and projected gaps in service by prioritizing access to students who live in Anatolia and rural areas within the district. Additional locations that would benefit students include shopping centers, work programs, community colleges, and continued education programs. Improving timeliness and reliability is most important for encouraging students and families to use transit.

# Stakeholder Profile: Florin Road Partnership

## What Corridor(s) They Represent

- Florin Road
- Stockton Boulevard

## Who They Are

Florin Road Partnership was established in 1997 to revitalize the struggling shopping corridor along Florin Road. Florin Road Partnership (FRP) is one of the oldest PBID's in the Sacramento area. The FRP spans approximately 24.1 million square feet, encompasses more than 215 property owners, and over 400 merchants.

## Existing Conditions and Challenges

The area within Florin Road Partnership currently has a few high capacity locations – Florin Station, Micro transit from Franklin Boulevard that extends to Florin Road, 65<sup>th</sup> Street transfer station. Riders within the FRP are frequently travel to Luther Burbank High School, Florin Road Bingo Hall, Florin Mall, social services, and the Farmers Market.

Traffic levels are the largest challenge for mobility within the FRP. There are minimal pedestrian crossing facilities, bike facilities, and there is a high need for microtransit to be extended to the 65<sup>th</sup> street transfer station at Florin Mall. Secondly, bus shelters require a high amount of maintenance. FRP maintains bus sites but vandalism is frequent and bus stops lack adequate facilities such as seating or are placed in areas where accessibility is a physical barrier for the elderly.

## Priorities and Opportunities

Public safety is a top priority for riders and the FRP. FRP welcomes the exploration of a high capacity transit system but also identified many needed safety improvements that would better support bus passengers and encourage residents who currently drive to take the bus instead. Key improvements requested included 24-hour security and maintenance plans, WiFi and USB charging, physical improvements to support traffic calming and access to bus stops, safe and well-maintained bus shelters using Crime Prevention Through Environmental Design (CPTED) principles, and pedestrian and bicycle access with 8-80 design approaches in mind as critical improvements for a high capacity corridor.

# Stakeholder Profile: Golf Course Terrace Estates Neighborhood Association

## What Corridor(s) They Represent

- Florin Road

## Who They Are

Founded in 1991, the Golf Course Terrace Estate Neighborhood Association's (GCTENA) mission is to "enhance the livability and quality of the area by establishing and maintaining an open line of communication between the neighborhood, government agencies and other neighborhoods." Golf Course Terrace Estates is located in southwest Sacramento, bordered on the north by Executive Airport/47th Avenue and on the south by Florin Road. The neighborhood is adjacent to light rail and SacRT services, however, there is no longer service that directly enters the neighborhood. Transit is primarily utilized by lower-income residents of Golf Course Terrace Estates to access jobs.

## Existing Conditions and Challenges

SacRT is currently not a convenient option for older adults and people with disabilities because bus stops are not located directly in the neighborhood and thus, are more difficult to access. In addition, bus stop conditions including lack of lighting, uneven pavement, floating bus stops, and vandalized/overtaken benches contribute to an unsafe and unwelcoming environment. SmaRT Ride is frequently used by people who have challenges getting to bus or light rail stops, however, inconsistent pick-up locations make this service difficult to access. While greater SmaRT Ride van capacity is appreciated, especially during social distancing, some people have concerns surrounding cost effectiveness and carbon emissions when there are often only a few riders in the fleet's large vans. SacRT is also not a convenient option for people who work nontraditional hours (which has become more common during the COVID-19 pandemic) due to lack of service during off-peak periods or evenings and lack of proximity to stops. Workers may be able to use transit to get to work, however, existing schedules do not allow them to get back home and many have to pay for rideshare services. Health and safety concerns related to COVID-19 and crime pose additional barriers to accessing SacRT services. During the pandemic, lack of hand sanitizing dispensers on buses, front-boarding, and manual doors increase exposure to germs. In terms of personal safety, many riders feel unsafe when waiting at stops due to lack of lighting and security personnel.

## Priorities and Opportunities

Improving connections between neighborhoods and stops via Paratransit and SmaRT Ride services and offering higher frequency service during evenings and off-peak hours are top priorities. There are additional opportunities for SmaRT ride in terms of diversifying (i.e. smaller cars) and electrifying the fleet to increase cost and energy efficiency. Service can also be improved by prioritizing key destinations in the area, including hospitals, grocery stores, community colleges, downtown, and other major corridors. Addressing health and safety concerns is another top priority and can be addressed through a variety of infrastructural improvements (i.e. increased lighting at stops) and amenities (i.e. onboard hand sanitizer dispensers). Bus stops can also be improved by offering amenities such as WiFi and charging ports, especially considering mobile phones and smart phones are required to access many of SacRT's services. Lastly, people enjoy the convenience of the Connect Card in terms of being able to easily reload it online and use it for various SacRT services, however, more options for people who do not have computer access to reload their cards are recommended, such as partnerships with local grocery stores.

# Stakeholder Profile: McClellan Park TMA

## What Corridor(s) They Represent

- Watt Avenue

## Who They Are

McClellan Business Park is comprised of 3,000 acres and is located on the former McClellan Air Force Base and now operates as a corporate community with 230 tenants including private companies, and state, federal, and local government agencies. The business park is located in North Sacramento. Within the business park is the McClellan Park Transportation Management Authority (TMA). The TMA provides alternative commute options including subsidies for transit passes and aims to increase employee transit ridership, carpool and vanpool use, bicycling, and walking for McClellan Park employees and employers.

## Existing Conditions and Challenges

Route 26 current serves a large audience of riders access the business park. While route 26 does run through parts of the business park, over half of the 3,000-acre business park is not being served by transit. Additionally, the Watt I-80 and Roseville Station are major transit hubs for employees, however, walkability to the station is challenging and continuing concerns for public safety and cleanliness make transit use less desirable. Employees have requested instead for uber service to Roseville which is an added cost in addition to the \$55.00 transit subsidy already provided. Overall, the TMA consistently hears that convenience and extended time it takes to use the transit system is serving as a disincentive.

## Priorities and Opportunities

McClellan Park is a major job center and expected to increase the number of employees working there. Providing High Capacity Transit opportunities along Watt Ave as well as more frequent service and connections to nearby light rail stations are major desires. Secondly, since Route 26 has changed routes through the business park, there are two shelters that are no longer in use. The TMA is working to request that these shelters be moved to current bus stops along with identifying additional shelter coverage needed at stops.



# Stakeholder Profile: Meadowview Neighborhood Association

## What Corridor(s) They Represent

- Florin Road

## Who They Are

The Meadowview Neighborhood Association was formed to provide residents of the Meadowview neighborhood in South Sacramento with updates on relevant information such as crime, safety, traffic, neighborhood beautification, youth activities, employment development, educational opportunities, vocational training, home ownership, and social services. Many Meadowview residents use buses to connect to light rail in order to access the downtown area and employment centers. Residents also use the new SmartRide service to circulate throughout the community.

## Existing Conditions and Challenges

The Meadowview neighborhood is located approximately 10 miles south of the Sacramento downtown core, and residents often travel along main north/south corridors such as Stockton Boulevard, Franklin Boulevard, and Highway 99 to get to and from downtown. Florin Road is used to connect to these corridors as well as to light rail. Major transit destinations along Florin Road include retail shopping centers at Franklin Boulevard and Stockton Boulevard.

One of the challenges with using public transit is that it takes too long, so people choose to drive instead. Oftentimes, people will be waiting a long time at bus stops and can't tell how long their trip will take due to lack of real-time signage. Personal safety is another concern, especially for students. While SacRT recently made fares free for students, many parents do not feel comfortable letting their students ride without adult supervision, especially for children in elementary and middle school. Pedestrian safety and comfort is another challenge for accessing transit on Florin Road. Lack of tree canopy makes walking uncomfortable in hot weather, and poor maintenance of overgrown landscaping blocks bus signage and visibility of pedestrians approaching crosswalks. New mobility devices such as e-bikes and scooters, while beneficial, often block sidewalks and make it difficult for older adults and people with mobility disabilities to safely navigate already narrow sidewalks.

## Priorities and Opportunities

Bus-only lanes may help encourage more people to ride the bus because it would provide a faster alternative to the high amounts of car traffic on Florin Road, Stockton Boulevard, and Franklin Boulevard. Bus-only lanes may also help improve onboarding safety for riders and reduce congestion that is caused by cars waiting for buses to load. In tandem with bus only lanes, increasing the frequency of routes would be desired, even if they are only increased during rush hour traffic. Amenities such as bus shelters would help improve comfort while waiting for buses, particularly in hot summers and wet winters. Real time signage at bus stops would be beneficial for riders who cannot afford internet access. Additionally, there are more people with smart devices or with equipment like mobility chairs who are in need of charging, so power outlets and USB charging stations would be other great amenities. Continuing to provide incentives such as discounted and free fares for older adults and young populations can help promote ridership as well. Greater education and messaging around climate change can further demonstrate to community members about how riding public transit reduces climate emissions and improves air quality.

# Stakeholder Profile: Mutual Housing

## **What Corridor(s) They Represent**

- Arden Way
- Florin Road
- Stockton Boulevard
- Watt Avenue

## **Who They Are**

Mutual Housing develops and operates housing sites in Sacramento and Yolo counties, with a focus on sustainable, affordable housing. In total, Mutual Housing sites include over 1,100 households with over 3,600 residents, about half of whom are children. Beyond housing development, Mutual Housing also focuses on leadership development, community advocacy, community-building, and program delivery. Many residents don't have access to reliable transportation and need to use transit to access jobs, healthcare, and other services. For this reason, Mutual Housing recognizes the importance of pairing affordable housing near transit and considers transit access when developing proposals and seeking funding.

## **Existing Conditions and Challenges**

In general, limited frequency of bus service, long trip times, and cleanliness and personal safety perceptions are barriers for Mutual Housing residents when using transit. Narrow sidewalks make walking to bus stops a challenge, especially for families, and crossings near bus stops are unsafe. Residents often have to walk far distances in order to access the nearest bus stop.

In South Sacramento, residents often use transit along Florin Road or Stockton Boulevard to access the Walmart on Florin and other large shopping centers. In North Highlands, Walmart and the light rail stations are key destinations along Watt Avenue. Bus service has very long one-hour headways, which limits access to necessary destinations such as grocery stores. Residents in the Arden neighborhood don't use transit very often even though many households only have one car. Rather than taking the bus, residents adjust their schedules and coordinate around the one car.

## **Priorities and Opportunities**

Higher frequency service was highlighted as a key opportunity for high capacity transit. Residents want to be able to access major daily destinations such as grocery stores, restaurants, parks, and doctors' appointments and hospitals. In particular, Kaiser in South Sacramento and Elk Grove were identified as medical centers that many residents currently access. Amenities such as bus shelters and seating would improve comfort for people using transit. Restrooms, especially at light rail stations, is another amenity that would improve the transit experience for riders making longer trips.

# Stakeholder Profile: Resources for Independent Living

## What Corridor(s) They Represent

- Systemwide

## Who They Are

Resources for Independent Living (RIL) is a nonprofit organization that serves people with disabilities by assisting them to live independently. The primary services that they provide include peer counseling, housing assistance, advocacy, and connecting customers to assistive technology resources. Many of their customers don't own or possess a vehicle due to the economic cost or because they can't physically drive a vehicle, and therefore rely heavily on the current transit network to connect them to their desired destinations.

## Existing Conditions and Challenges

Each of the five corridors serve as origin points for people accessing downtown Sacramento or other destinations by transit. There are many residential neighborhoods along those corridors that provide opportunities for ridership. People often use public transit along these corridors to travel to local restaurants, retail centers, places of worship, schools, employment, and hospitals.

RIL identified service frequency and fares as the largest challenges for people with disabilities. With the current housing crisis many of RIL's customers are being pushed to areas where they can afford to live, which are primarily less dense suburban areas with poor transit connections. This means that the amount of time it takes to complete a transit trip is two to three times longer than driving due to the need to make numerous transfers. Additionally, physical access to transit stops is a barrier. Sidewalks are narrow and inconsistent along these corridors, with barriers such as utility poles that made sidewalks almost inaccessible for individuals in wheelchairs and other mobility devices. While curb cuts exist at most intersections, there are still some gaps, particularly along Sunrise Boulevard. Walk push buttons are also difficult to access in many cases, as they are often set back out of arm distance.

## Priorities and Opportunities

Overall, high capacity transit should aim to improve access to economic and educational opportunities. Higher frequencies and extended hours of operation are ideal to ensure that no route has less than a 30-minute headway and that late-night service is provided to accommodate jobs, education, and social activities. Destinations that RIL customers would like to access by transit include medical facilities such as Kaiser on Arden Way, grocery stores, and retail centers such as Arden Mall, Sunrise Mall, and shopping centers along Florin Road and Stockton Boulevard. Stockton Boulevard is a great candidate for Bus Rapid Transit, as it provides an opportunity to connect Elk Grove to downtown Sacramento. Along Watt Avenue, connections to the light rail stations at Watt/I-80 and Marconi provide the biggest opportunity for high capacity transit. Lowering fares is critical as costs are a prohibitive barrier for many riders. Greater reliability and frequency of service can help improve perception of transit and incentivize ridership. Other desirable amenities include bus shelters, real time arrival signage, bike parking, USB charging stations, and maps that are customized to reflect major destinations around bus stops.

# Stakeholder Profile: Ridership for the Masses

## What Corridor(s) They Represent

- Systemwide
- Watt Avenue

## Who They Are

Ridership for the Masses focuses on providing transit information to riders, with emphasis on low-income residents, seniors, students, and people who rely on transit and active transportation rather than driving. In addition to keeping their members informed on transit-related issues, Ridership for the Masses advocates for on-time, affordable, safe, integrated and accessible public transportation for all in the Sacramento Region. Through their monthly newsletter, Ridership for the Masses has been able to engage with more than 3,000 families around transit concerns and priorities across the SacRT system, particularly along Watt Avenue.

## Existing Conditions and Challenges

The Watt Avenue corridor generally serves as a starting point for many riders, with connections to the Gold and Blue light rail lines, Highway 50 and I-80, and McClellan Airport. People tend to use transit along Watt Avenue to connect to retail centers, schools, employment centers, and health care needs. A new Mercy Housing development is in progress along Watt Avenue, which will provide over 135 units for low-income households. Access to transit will be critical for tenants who may rely on public transit to commute to work.

Many of the current challenges for transit along Watt Avenue are related to accessing bus stops and light rail, including dysfunctional elevators at the Watt/I-80 station, narrow sidewalks, lack of sidewalks, and poorly maintained sidewalks. Additionally, lack of shelters at bus stops is a major concern. Poorly lit routes to bus stops along with litter and poor maintenance at bus stops contribute to personal safety concerns when using transit along Watt Avenue. While the current SmART Ride service has been beneficial for riders, it only covers a two mile stretch of Watt Avenue and provides limited connectivity to shopping and employment centers further west to Fulton Avenue or to Arden Fair Mall.

## Priorities and Opportunities

As traffic along Watt Avenue increases, investment in transit will be critical to encourage mode shift away from single-occupancy vehicles. Expanding the current bus-only lane farther north and south on Watt Avenue would be beneficial to this effort. Additionally, Ridership for the Masses indicated that having more bus stops and shorter walks to bus stops would be preferable, especially for older adults who may have mobility challenges or who may be carrying heavy bags from shopping.

Other desired amenities at bus stops include shelters for protection from weather, charging ports that provide an opportunity for riders to charge their electronics devices, and real-time rider information to help with trip planning. Wider sidewalks along routes to bus stops and other pedestrian facilities such as curb extensions are priorities in order to accommodate riders who use wheelchairs and other mobility devices.

# Stakeholder Profile: Rosemont Community Association

## What Corridor(s) They Represent

- Watt Avenue

## Who They Are

The Rosemont Community Association has played an active role in the community since 1959. Rosemont is located between the City of Sacramento and the City of Rancho Cordova and it is one of the most diverse neighborhoods in Sacramento. As Rosemont is home to many blue-collar workers, SacRT plays a crucial role in connecting residents to jobs. However, ridership has appeared to decline since the advent of COVID-19. The community is also landlocked by rivers, so transit along the major corridors provides essential access to the rest of the county and greater Sacramento area.

## Existing Conditions and Challenges

Convenience and reliability are the top barriers to accessing transit for residents. Long wait times, frequent transfers, and traffic congestion along Watt Avenue (especially south on Watt Avenue towards Jackson Boulevard where the lanes are reduced from three to two) contribute to unrealistic travel times for people to get to their destinations. Congestion is an issue in Rosemont especially because commuters avoid the freeways on their way from South Sacramento to access jobs in the northern parts of the county, primarily in Arden Arcade. Traffic safety when accessing bus stops is also a major concern. Aggressive drivers intentionally running red lights and speeding (particularly at the intersections of Watt Avenue, Kiefer Boulevard and Jackson Boulevard), unsafe crossings across major intersections, and sidewalk gaps create dangerous conditions for pedestrians when accessing bus stops. Lastly, a lack of bus shelters is a major deterrent to using transit, especially during periods of inclement weather such as extreme heat and rain.

## Priorities and Opportunities

Riders and residents in the Rosemont area are generally interested in using transit more often due to the various health and environmental benefits, but face significant barriers to safety and convenience. To address concerns related to convenience and reliability, a system-wide goal of 15-minute wait times is recommended. This could be achieved through a variety of strategies, such as bus-only lanes, higher frequency of buses, and signal priority at intersections. When there are delays, timely alerts through a mobile app would be a valuable resource for riders. Successful examples of high-capacity transit in Europe and South America can be used as models for inspiration. Promoting safety of riders is another top priority. Traffic calming measures such as speed bumps and improved pedestrian infrastructure such as continuous sidewalks and high-visibility crosswalks will be key to ensuring riders can safely access stops. Transit use can be further encouraged by providing direct access to key destinations along the corridors, such as jobs in Arden Arcade and Rancho Cordova, shopping centers, and medical facilities. Improved bus stop amenities, including shelters, WiFi, and charging stations are desired to improve the overall transit experience.

# Stakeholder Profile: Sacramento City Unified School District

## What Corridor(s) They Represent

- Florin Road
- Stockton Boulevard

## Who They Are

Sacramento City Unified School District (SCUSD) is a school district within the City of Sacramento, primarily serving neighborhoods south of the American River. SCUSD is the eleventh largest school district in California, with an annual average of 47,900 students across 81 schools. SacRT plays a crucial role in addressing students' transportation needs in SCUSD, particularly for general education students, as district bus service is reserved primarily for special education students.

## Existing Conditions and Challenges

Aside from getting to school, students use SacRT to access jobs (particularly in the retail corridors along Florin Road), community centers where after school activities are provided, and the Arden Fair Mall, which is the only major shopping center in the area. However, required transfers within the SacRT system and across other modes such as light rail make it challenging to access these destinations. Personal safety is another major barrier for students. Students often encounter dangerous conditions when accessing transit, particularly when crossing major intersections, railroad tracks, or divided highways. Those who use the bus are often intimidated by strangers at and along routes to bus stops. This is particularly concerning for parents as the majority of students ride the bus by themselves. Aside from safety, variations in schedules throughout the week make it difficult for students to get to school on time or on a consistent basis. Service is also impacted by high levels of traffic, especially along Florin Road, which can become very congested and results in crowded buses. Crowding not only causes students to wait for less crowded buses, but it also presents a significant challenge for students with accessibility needs because there are a limited number of wheelchair accessible seats on each bus. For this reason, SacRT is not typically a viable option for most students who use mobility devices to get to school.

## Priorities and Opportunities

Continuing to provide free bus passes to students will be key to ensuring transit is financially accessible. Without such incentives, RT is not a possibility for many students. To improve school commuting, potential programming to group students together at stops and on buses could alleviate concerns related to safety. As reliability is a top priority, bus schedules, particularly for routes that stop at schools, should have consistent departure times during weekday mornings to ensure students get to school on time. High capacity improvements should be prioritized along Florin Road, where congestion is greatest, as well as at major connection points such as Florin Road and 65<sup>th</sup> Street, where many students transfer from bus to light rail. Lastly, bus stops should be sited as close as possible to school campuses as longer distances between stops and schools causes safety issues for students who must cross busy pick-up/drop-off zones to access transit. This is a particular issue at Hiram Johnson High School.

# Stakeholder Profile: Sacramento Transit Riders Union

## What Corridor(s) They Represent

- Systemwide

## Who They Are

The Sacramento Transit Riders Union (SacTRU) is a community coalition of public transit riders, transit workers, neighborhood leaders, and other partners to mobilize and advocate around transit issues in Sacramento. SacTRU believes that public transit is a right and that everyone should have access to it. The coalition was originally formed when SacRT began raising fares at a time when Sacramento's transit costs were already at the highest in the nation. Some of SacTRU's initiatives include advocating for lower fares and improved transit service, supporting outreach for the SacRT Forward network study, and facilitating a media challenge for local agency staff to use and experience public transit firsthand.

## Existing Conditions and Challenges

Cost of transit fares is one of the biggest barriers that discourage people from using transit. While SacRT recently provided free rides for students, the cost of fares for low- and middle-income users are still prohibitively expensive. More funding is needed to support transit expansion and operations such as maintenance of vehicles and conversion to electric fleets. SacTRU is advocating for a fare-free system in conjunction with locally dedicated and external transit funding sources to address these challenges.

Specific to the five corridors in the High Capacity Corridors study, SacTRU identified Arden Way and Florin Road as corridors in need of expanded transit service to better serve the needs of the communities. Both corridors also have poor pedestrian connectivity to bus stops, with sidewalk gaps and personal safety concerns posing challenges for accessing transit.

## Priorities and Opportunities

The types of destinations that would benefit from high capacity transit service include supermarkets and grocery stores, schools, and job centers, both in the downtown core and along the five corridors. Bus stop infrastructure must be visible and have basic amenities such as benches and shelters. Beyond infrastructure implementation, transit should also be central to all planning processes, especially in comprehensive transportation plans. Planning efforts at the City and County levels such as Complete Streets, Vision Zero, and active transportation plans need to incorporate transit in addition to pedestrian and bicycle considerations.

# Stakeholder Profile: Society for the Blind

## What Corridor(s) They Represent

- Systemwide

## Who They Are

The Society for the Blind provides services including job skills training, mentorship, youth programming, and tools to maintain independence for youth, adults, and seniors who are blind or have low vision. The nonprofit has been in operation since 1954 and serves residents in 27 counties and 3,000 people annually. The Society for the Blind's office is located at 13<sup>th</sup> and S Streets in Midtown, Sacramento. In addition to programming at their midtown location, staff also conducts in-home training and community workshops. Their mission is *to empower individuals living with low vision or blindness to discover, develop and achieve their full potential.*

## Existing Conditions and Challenges

Because the Society for the Blind serves so many people from diverse backgrounds, all forms of transportation are utilized. A large percentage of people use light rail, specifically on the Gold Line to access their office building, while the other half take paratransit. Many of their youth use Regional Transit connections at Arden and Watt Ave to access medical appointments, Arden Mall, Los Rios College, CSUS, and Sacramento City College.

The Society for the Blind works with those who are newly blind and those who have been blind or have low vision for most of their lives. Often times, they must teach them how to ride transit, feel safe doing so, and teach them how to trip plan. Getting people to the right appointments is a big barrier. Additionally, physical markers that clearly indicate bus stops and routes are needed for rides who are visually impaired. Not having a consistent recognition system adds to the barrier of learning to navigate transit.

For folks that live farther out in the county, transit becomes a larger barrier as service is not as regular or for our 23 counties, it may require people to make multiple transfers to/from their destination. For the Society for the Blind's older population, having door to door service is imperative. While light rail is convenient to their office, bus routes are not.

## Priorities and Opportunities

The Society for the Blind expressed support for bus stop and light rail improvements to aid people who are visually impaired to more easily navigate the system. Improvements of interest include: bus stop shelters, WiFi, benches, and consistent signage at all stops with large print and brail, and audio feedback at stops and while on transit.



# Stakeholder Profile: Sunrise Oaks Neighborhood Association

## What Corridor(s) They Represent

- Sunrise Boulevard

## Who They Are

The Sunrise Oaks Neighborhood Association (SONA) represents the residents of Citrus Heights' Area 9. Sunrise Oaks community members have a wide range of transit choices, including the Sunrise Mall Transit Center Greenback Lane and Arcadia Drive, one of two major transit centers in the city, and a light rail station. While the stops along Sunrise are not reported to be frequently used, many residents use a combination of the Transit Center and light rail to access jobs downtown, American River College, and Sierra College.

## Existing Conditions and Challenges

SONA is bounded by two major corridors—Fair Oaks Boulevard on the east and Sunrise Boulevard on the west. In addition to the heavy traffic from these two major corridors, the Sunrise Mall Transit Center brings lots of bus activity that frequently results in bus bunching, particularly on the north side of Arcadia Drive. This has implications for air quality, traffic, travel times, and wait times (which also can make riders feel unsafe if waiting for longer periods of time). Furthermore, while there may be ample choices for transit in the community, trips to downtown and other key destinations require several transfers between modes (i.e. bus to light rail to bus), which contributes to longer trip times. Additionally, bus stop maintenance is a major complaint, especially from the local business community, as accumulation of trash and graffiti appear to be persistent issues.

## Priorities and Opportunities

With the conjunction of several transit modes, the Sunrise Oaks community has great potential to become a highly integrated, efficient transit hub, and thus should be a top priority for targeting future improvements. To mitigate the pinch point at the Sunrise Mall Transit Center, bus pick-up/drop-off zones could be extended to accommodate more buses. Bus routes departing from the Transit Center could also be re-routed to provide direct service to downtown and higher education institutions in the surrounding area, thereby decreasing the amount of transfers needed. SacRT might consider extending service from this area directly to Folsom, where many residents travel to access jobs and Folsom College. In addition to these improvements, residents would be further incentivized to take transit if bus shelters were provided to protect from the elements and properly maintained to ensure cleanliness and general appearance. Secure bike parking at stops would also reduce fear of theft and ease access to the Transit Center by addressing first/last mile gaps.

# Stakeholder Profile: Twin Rivers Unified School District

## What Corridor(s) They Represent

- Arden Way
- Watt Avenue

## Who They Are

Twin Rivers Unified School District (TRUSD) serves the greater Rio Linda Area and Del Paso Heights, which covers 127 square miles and 52 schools. The district is a Title I school, meaning it has a large concentration of low-income students. As TRUSD is such a large geographic area and serves low-income populations, SacRT has played a pivotal role in ensuring students can get to school. The free bus pass program has been especially crucial for the district's students who are experiencing homelessness, students in the foster care system, and students who attend the district's trade schools. The free bus pass program has also been beneficial in terms of providing young people the opportunity to get comfortable using transit from an early age. In the face of budget cuts and chronic bus driver staffing shortages, TRUSD transportation staff are hopeful that SacRT can play an even greater role in getting students to school in the future.

## Existing Conditions and Challenges

With existing schedules, SacRT service does not begin early enough in the mornings for students to be able to arrive to school on time, particularly on the early feeder routes. Furthermore, lack of service in certain areas such as Rio Linda, make it difficult, if not impossible, for many students to use SacRT to get to school. In areas where SacRT routes do extend, students often have to transfer several times on their way to school. The district recommends a maximum of two transfers per trip as this can help reduce travel times and safety concerns (i.e., students getting lost), especially considering the fact that the majority of the students travel by themselves. Additional safety concerns include unsafe crossing conditions for students accessing bus stops as SacRT buses and stops do not have the same level of safety precautions that school buses and stops often do (i.e., cars are legally required to stop when a bus is loading or unloading).

## Priorities and Opportunities

The top priority for TRUSD is ensuring service begins early enough for students to be able to get to school on time. SacRT might consider pairing schedule adjustments with higher frequency service during these timeframes to strive towards 15-minute wait times for students. SacRT may also consider designating a specific staff person to act as a liaison between the agency and the school district to identify where routes are needed most to improve access to schools. To supplement these efforts, there are potential opportunities for data collection to better understand where students are traveling to and from. TRUSD recognizes the integral role SacRT plays in the district and hopes to better integrate SacRT information on its websites so that students and families can more easily plan trips and find out which bus stops are closest. Additional priorities for high capacity improvements include improving bus stop amenities (especially the provision of shelters) and alleviating high levels of congestion on Watt Avenue through strategies such as bus-only lanes or signal priority at stoplights.

## **SacrRT High Capacity Transit Virtual Public Workshop Summary**

### **Workshop Overview**

A public workshop for SacRT's High Capacity Transit Study was held on Wednesday, October 21, 2020 from 4:00pm to 5:30pm. Due to public health measures related to COVID-19, the workshop was held virtually via Zoom and facilitated by project team members from WALKSacramento, SacRT, WSP, and Nelson/Nygaard. The workshop was intended to (1) increase knowledge and understanding of High Capacity Transit strategies, (2) understand current barriers for using bus service and the types of improvements that would make it more attractive, and (3) understand priority corridors and priority segments along those corridors. The presentation included an overview of the project, a summary of outreach, definition of key terms and concepts, and a review of the recommended corridors. Participants were able to engage with the project team and fellow stakeholders through the chat box, polling questions, discussion sections, and a final Question & Answer period. In total, there were 46 participants, who represented a wide range of interests, including SacRT riders, local government agencies, and community organizations (Appendix B). However, a few participants mentioned school districts and parents of young families as groups missing from the conversation and recommended they be included in future targeted outreach. A recording of the meeting will also be posted to SacRT's website for further engagement.

### **Summary of Feedback**

Out of the five corridors, Watt Avenue and Stockton Boulevard received the most support. Comments in favor of the Watt Avenue corridor included its unique function of serving two counties (Placer and Sacramento) as well as two light rail stations. Another participant mentioned a transit supportive land use plan called the North Watt Special Planning Area, which would pair well with high capacity bus service. Those who supported the Stockton Boulevard corridor brought up its high levels of ridership and the up-coming Aggie Square project, which will provide opportunities for mixed use development and housing. Several participants mentioned a desire for high capacity bus service to extend along the Sunrise Boulevard corridor up to the northern terminus at the Sutter medical facility in Roseville as well as portions of Placer County. System-wide, participants wanted assurance that the corridors would connect with other modes, particularly parallel neighborhood bike networks, as well as with fixed-route predictable bus lines that connect to key facilities, especially medical. In addition, there were a number of other corridors and destinations participants felt should be considered for future study, namely the Elkhorn/Greenback corridor with service to the Sacramento International Airport, Fair Oaks Boulevard, and American River College.

According to a Zoom poll (Appendix B), the top three considerations participants felt were most important to improving bus service were frequency, reliability, and pedestrian access. Furthermore, in terms of improving overall transit experience and encouraging more frequent use, the top issues that participants discussed were building and siting shelters to better protect from sun and rainfall; creating separate, clearly designated high capacity bus service stops; and ensuring accessibility, particularly for riders who have mobility disabilities or are blind or low-vision. Several participants also noted that personal vehicles illegally parked in front of stops prevents buses from pulling up to the curb, thereby impacting bus timing. Suggestions for how to improve accessibility included locating stops adjacent to existing sidewalks (as opposed to "floating" stops) and installing ground treatments to signify to

blind/low-vision riders where high capacity bus stops are located. Concern was also voiced regarding queue-jumping treatment options due to potential confusion of blind/low-vision pedestrians at signalized intersections.

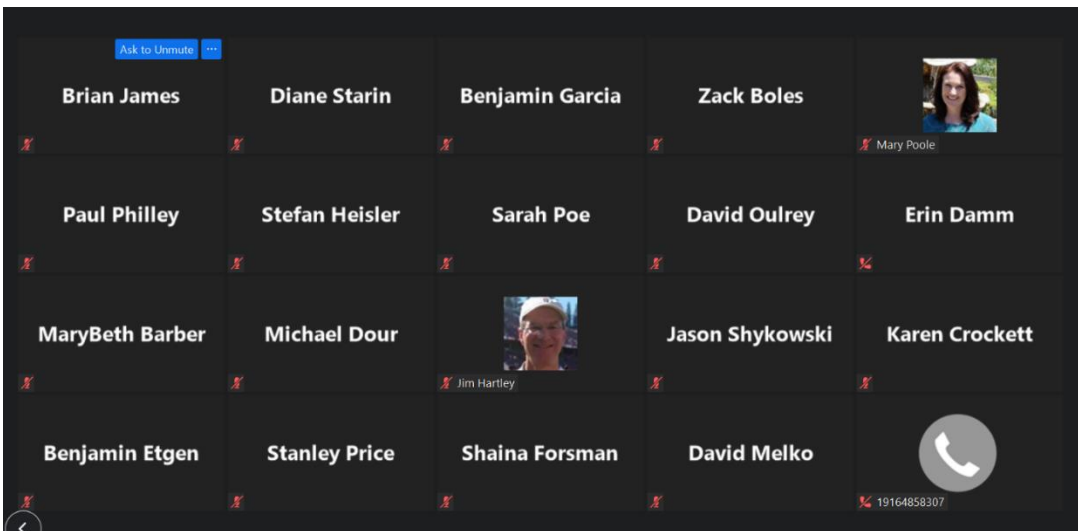
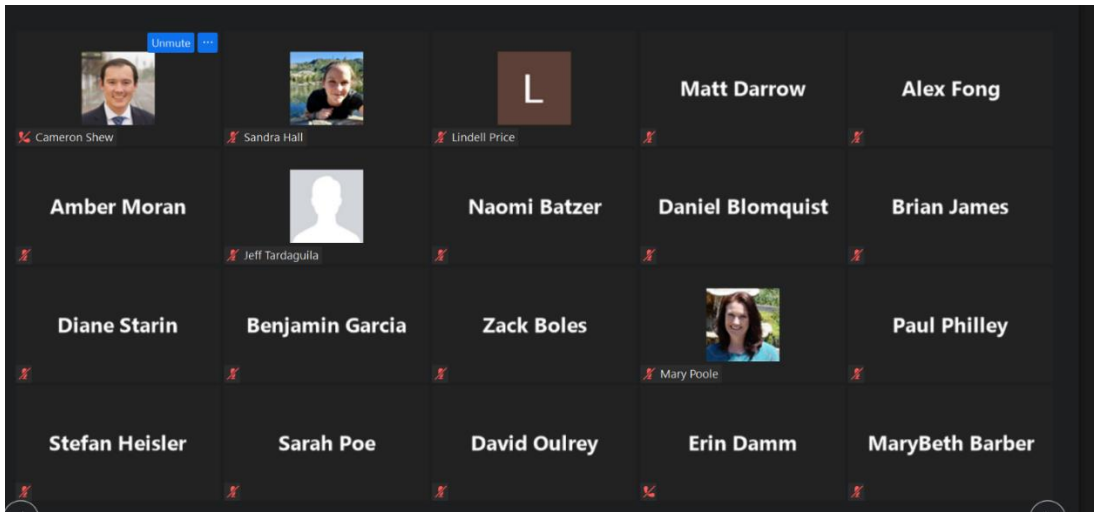
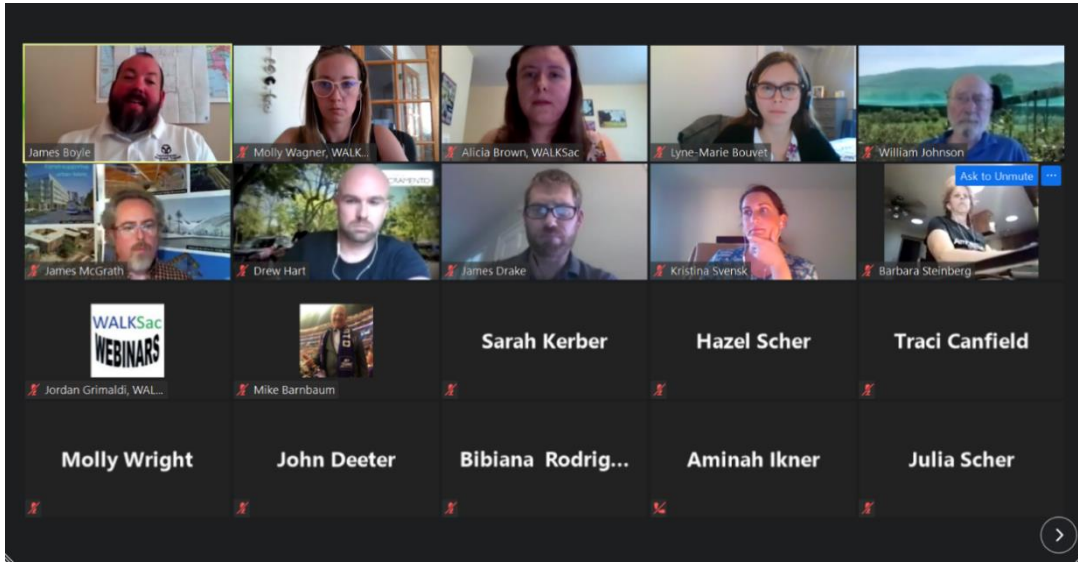
### **Frequently Asked Questions**

1. What were the criteria used to select the five corridors?
2. Will high capacity bus service be extended to the airport?

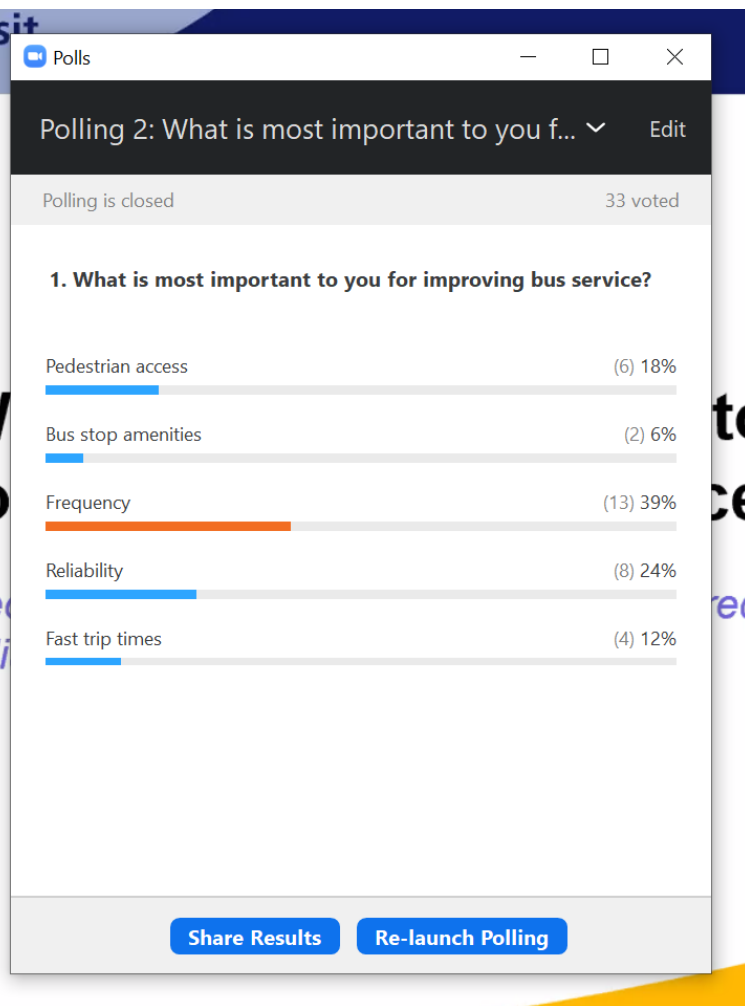
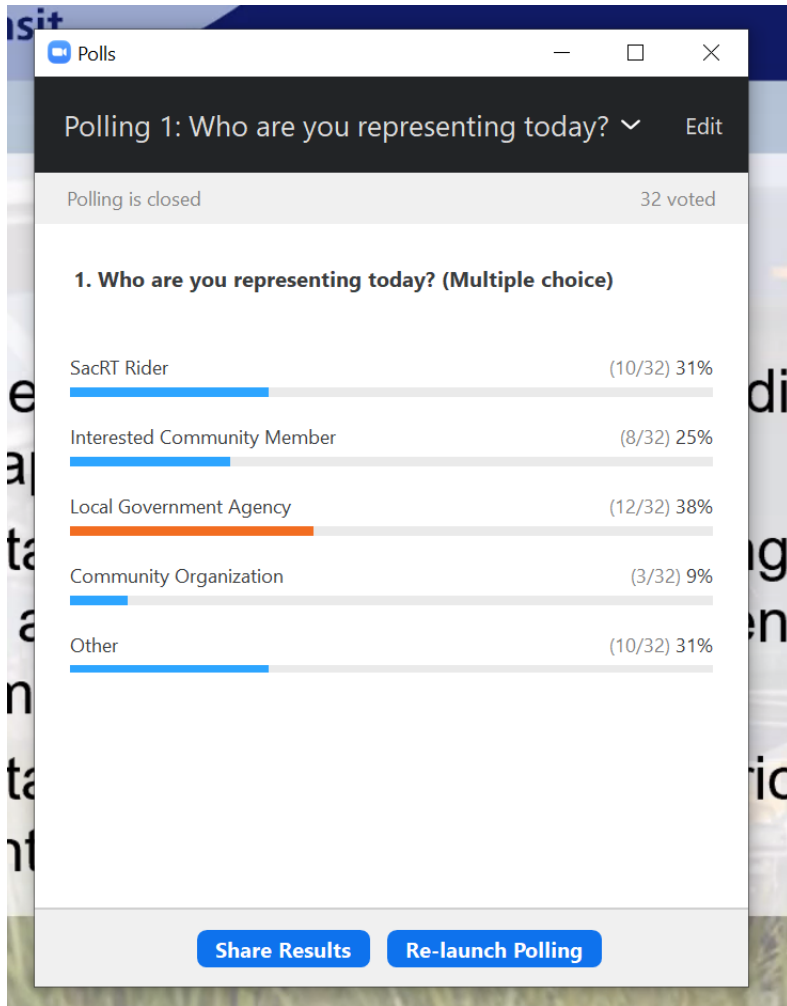
### **Unaddressed Questions from the Workshop:**

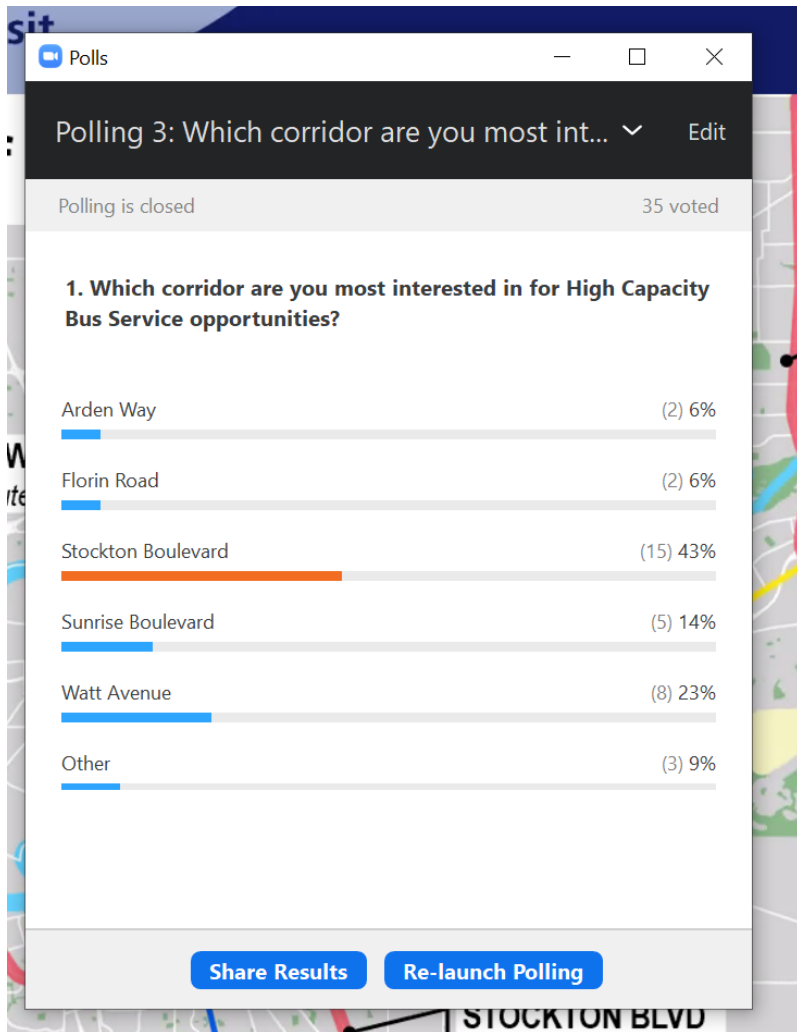
1. Will the goals of realigning routes result in a recommendation for bus stop relocation or removal?
2. Will the report include a review of RT's previous BRT attempts?
3. Because Greenback Road (in Citrus Heights) already has the bus #1 line which has 15-minute service, is it not part of the conversation anymore?
4. What is SacRT doing to promote public interest and support for high capacity systems? Also, what efforts are being made to show the public that the high capacity bus system will be a viable alternative to get around the Sac Metro area instead of using automobiles?

## Appendix A: Zoom Participants Screenshots



## Appendix B: Zoom Poll Screenshots





# SacRT High Capacity Bus Service Survey Results

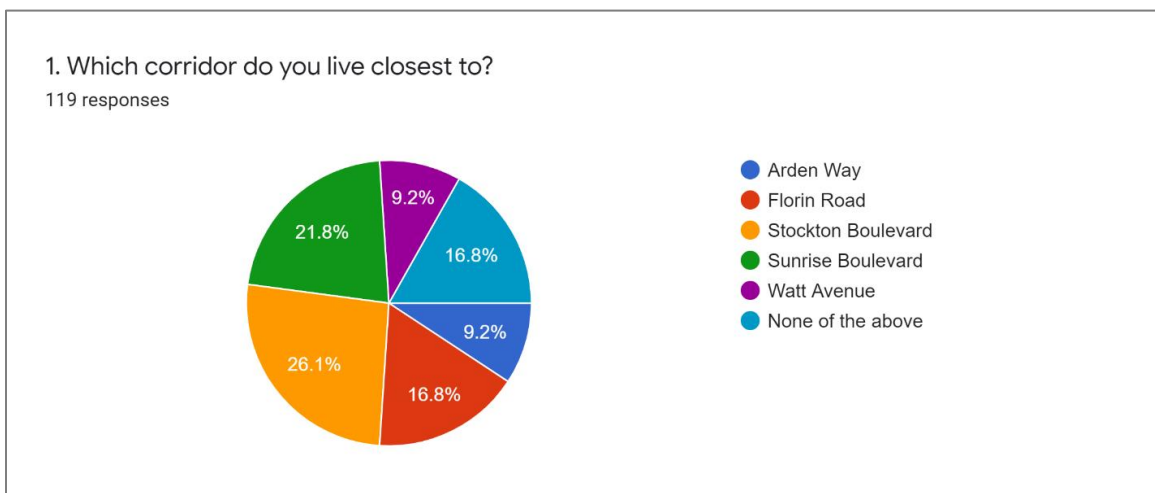
Sacramento Regional Transit (SacRT) developed an online survey as part of the High Capacity Bus Service study, with the goal of identifying opportunities to improve bus service along congested corridors. The survey included a series of 14 questions focused on understanding priorities for improved bus service, existing challenges with bus routes along congested corridors, and preferences for different types of high capacity strategies.

The survey was distributed through the project website, e-newsletters, and email communications throughout the community. In total, 120 responses were collected during the survey period, which began October 7<sup>th</sup> and ended November 20<sup>th</sup> 2020.

Key takeaways from the survey include priorities for improving riders' transit experience (higher frequency of buses, reliable schedules, and faster travel times); current challenges and barriers (wait times at stops, traffic, and congestion at stop lights); and priorities for high capacity bus service improvements (dedicated bus lanes, improving pedestrian access, and traffic signal priority at stoplights).

## I. General Information

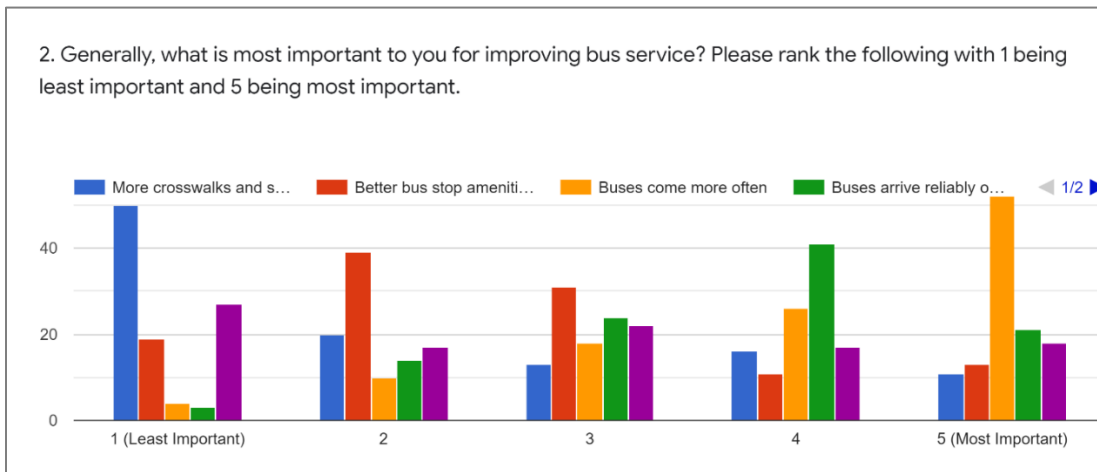
To gain a better understanding of where riders are located along or around the five corridors, the survey began by asking respondents to identify which corridor they live closest to. Most respondents reported living closest to Stockton Boulevard (26.1%), Sunrise Boulevard (21.8%), and Florin Road (16.8%), and Arden Way (9.2%).



Respondents were then asked to rank five factors for improving bus service, including more crosswalks and sidewalks to get to bus stops, better bus stop amenities, buses coming more often, buses arriving reliably on schedule, and faster trips while onboard the bus. Of the factors respondents ranked as “most important,” the top three responses were “Buses come more often” (52 respondents), “Buses arrive reliably on schedule” (21 respondents), and “Faster trips



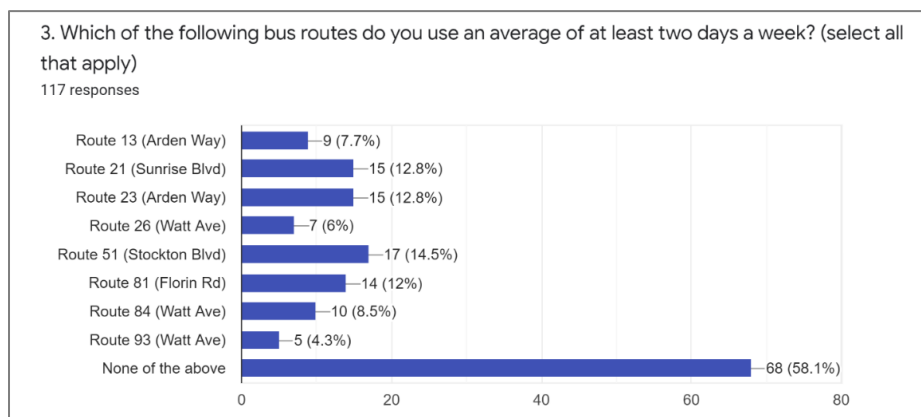
while onboard the bus” (18 respondents). Of the factors that respondents ranked as “least important,” the top three responses were “More crosswalks and sidewalks to get to bus stops” (50 respondents), “Faster trips while onboard the bus” (27 respondents), and “Better bus stop amenities (shelters, bench, lighting, trees, etc.)” (19 respondents). Thus, “Faster trips while onboard the bus” appears to be somewhat of a polarizing factor, with some riders viewing it as most important and other riders viewing it as least important. Overall, focusing on reducing total trip time (including wait time and travel time) appear to be of higher priority than investing in infrastructure improvements (i.e., pedestrian facilities and amenities).



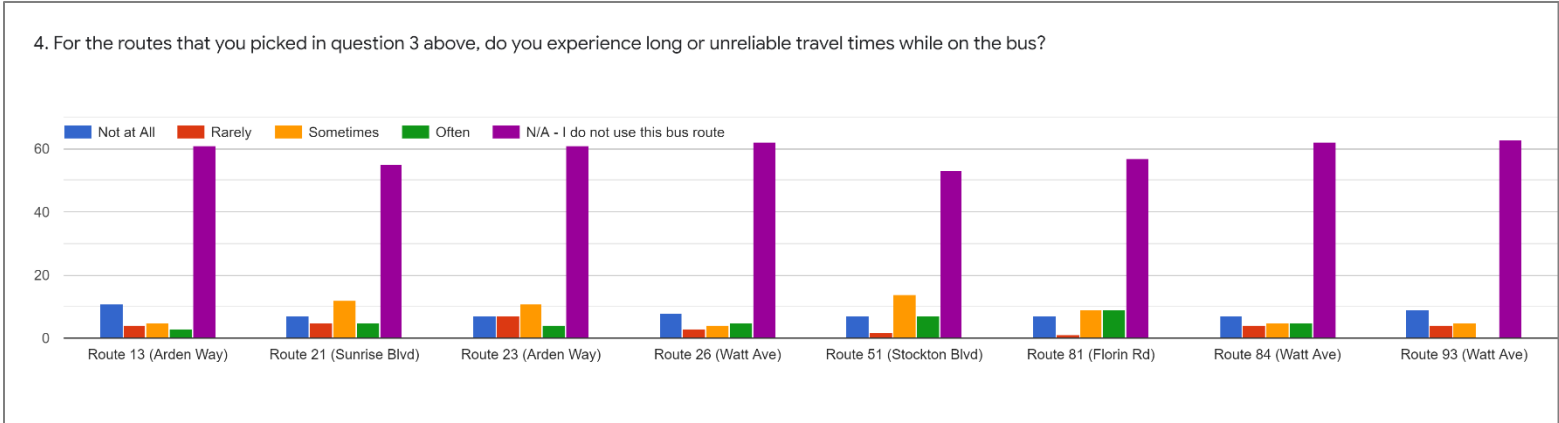
## II. Bus Route Travel Time

The next set of questions sought to gain a better understanding of how often are riders using the bus, which routes are they primarily using, and how their experience is in terms of travel time.

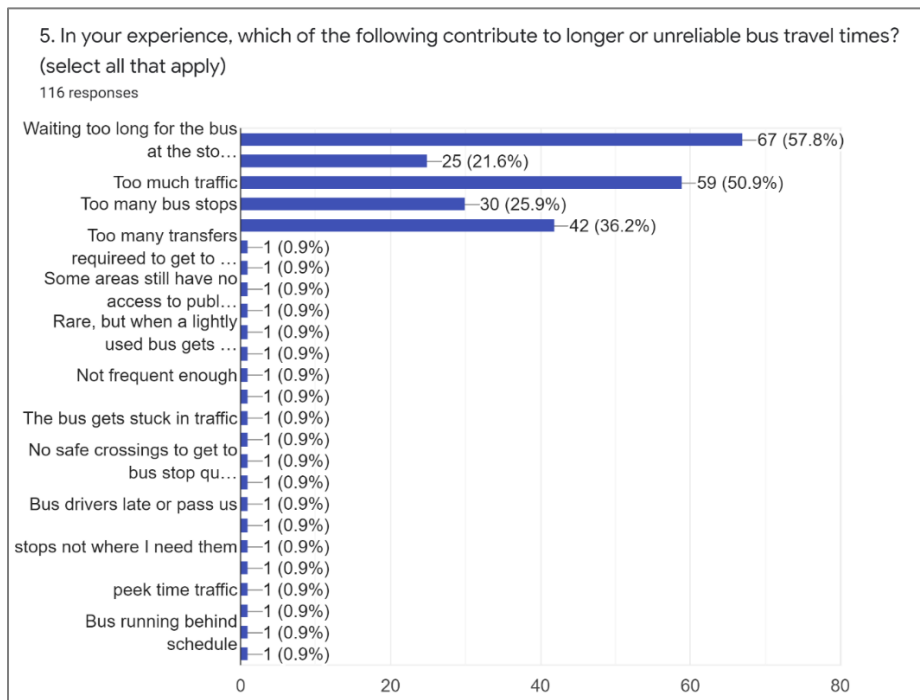
To begin, respondents selected which bus routes they use on an average of at least two days a week. The majority of respondents selected “None of the above” (68 respondents), indicating they either use bus routes that were not listed or they use the listed bus routes less frequently than two days a week. Of the options provided, the top three routes most frequently used were Route 51 (Stockton Boulevard) and a tie between Route 21 (Sunrise Boulevard) and Route 23 (Arden Way).



As a follow up, respondents were asked if they experience long or unreliable travel times while on any of the bus routes. The majority of the routes received “Sometimes” (Routes 21, 23, and 51) or “Not at all” (Routes 13, 26, 84, and 93) as the highest response—with the exception of Route 81 (Florin Road), which was tied between “Sometimes” and “Often.”



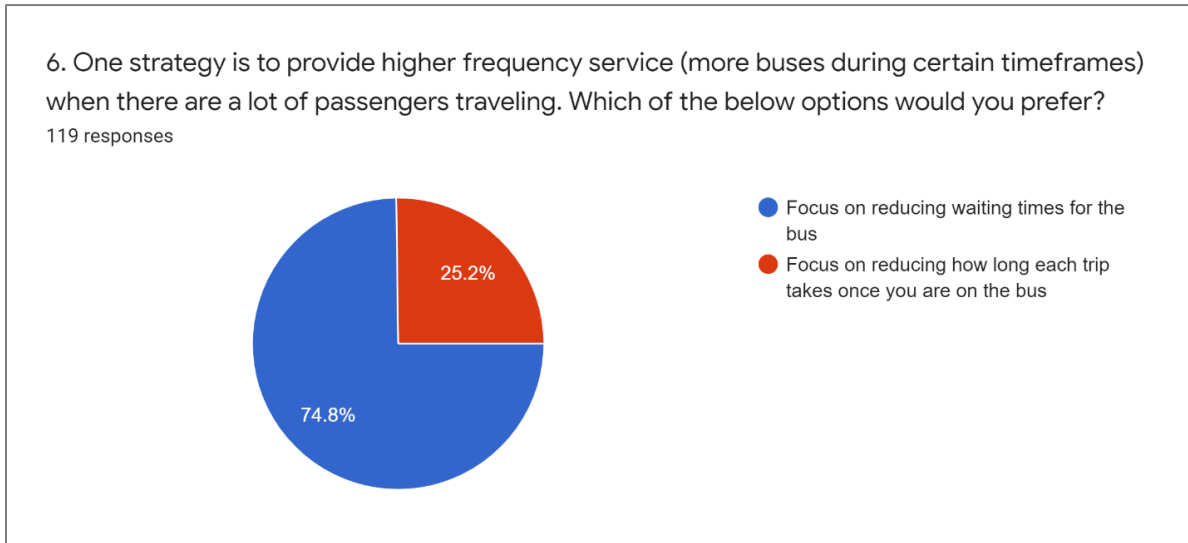
Lastly for this section of the survey, respondents were asked to reflect upon their experience riding the bus to indicate which of factors contributed to longer or unreliable bus travel times. The vast majority of respondents identified “Waiting too long for the bus at the stops” (57.8%) as the greatest contributing factor. The second and third highest factors were “Too much traffic” (50.9%) and “It takes too long to get through the stoplight at intersections” (36.2%). High capacity improvements such as increasing frequency of buses and traffic signal priority are potential strategies to mitigate these top concerns. Questions 8, 9, and 12 below provide more insight into preferred timeframes, frequency, and other improvements that can help inform these strategies.



### III. Service Span and Frequency

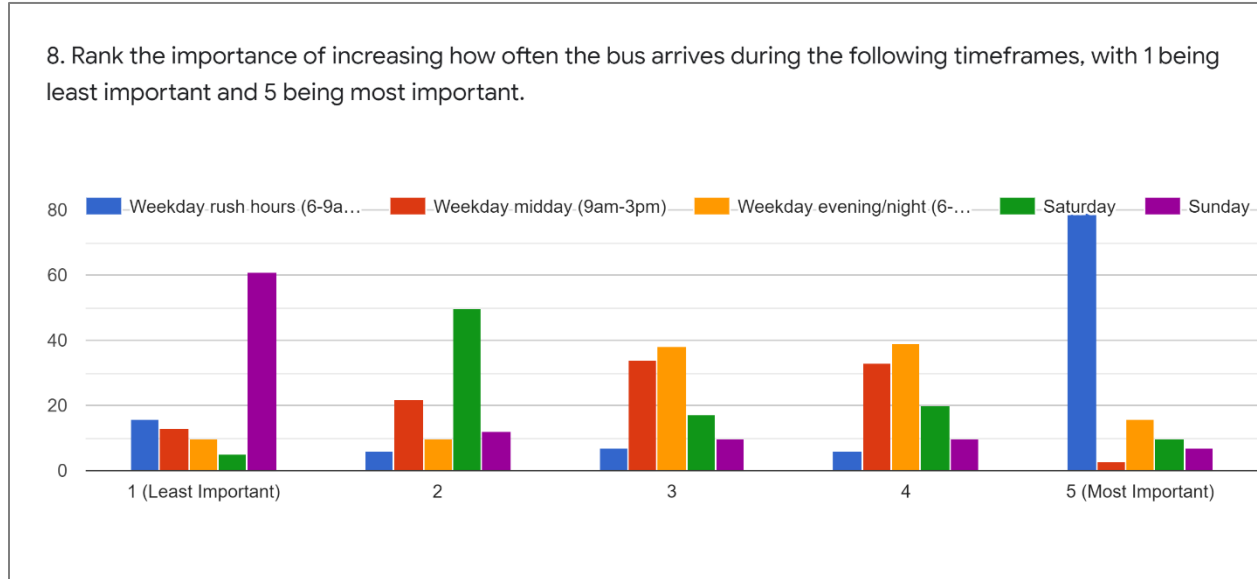
This section of the survey focused on higher frequency service as one potential strategy for high capacity bus service. The goal was to understand priorities for higher frequency bus service, including desired timeframes and how often buses arrive.

Respondents were asked to choose between focusing on reducing wait times or reducing travel times. The vast majority of respondents (74.8%) indicated reducing wait times for the bus as a higher priority than reducing how long each trip takes while on the bus.

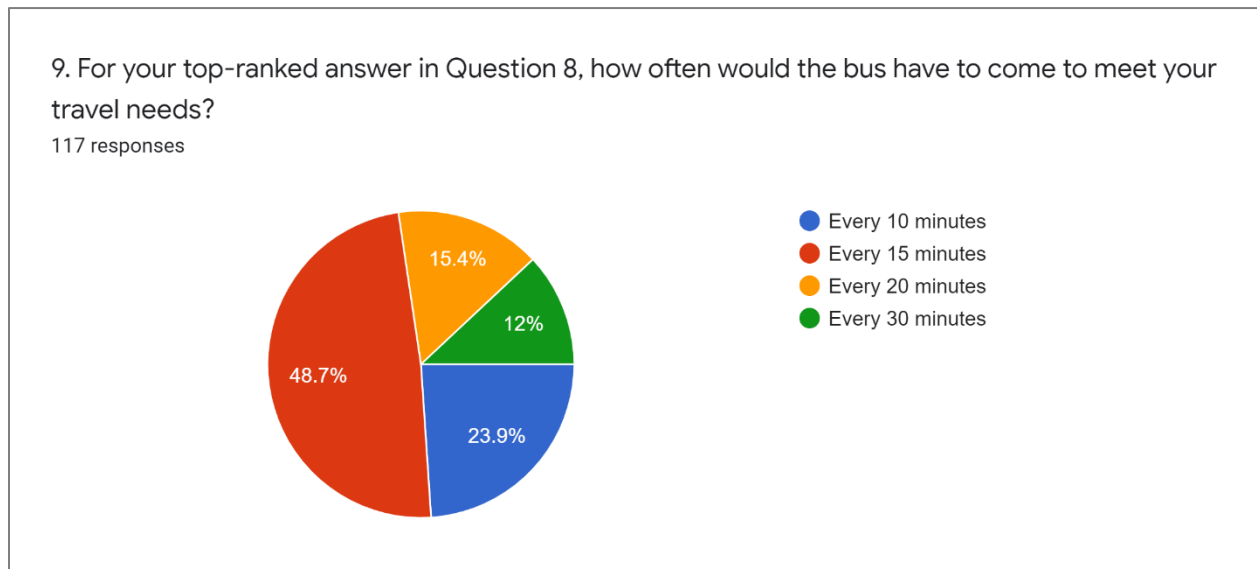


As a follow up, respondents were given the opportunity to expand upon their previous answer. The responses were overwhelmingly in favor of focusing on reducing wait times over onboard travel times, which is consistent with the response breakdown from question six. Those who were in favor of reducing wait times primarily discussed how this would help reduce exposure to the elements (especially at stops without shelters) and potential safety threats (i.e., robbery, harassment, etc.). Several respondents mentioned how higher bus frequency (resulting from shortened wait times) was more important to them than faster travel times because more frequent buses could reduce crowding and mitigate the need for trip planning according to unpredictable schedules. However, even though the majority of respondents were in favor of reducing wait times, several people expressed that both options should be emphasized because riders consider both wait times *and* travel times when planning trips.

Expanding upon the topic of bus frequency, respondents were asked to rank the following timeframes in terms of when to target higher frequency service. Of the timeframes that were ranked “Most important,” the top three options selected were “Weekday rush hours” (79 respondents), “Weekday evening/night” (16 respondents), and “Saturday” (10 respondents).



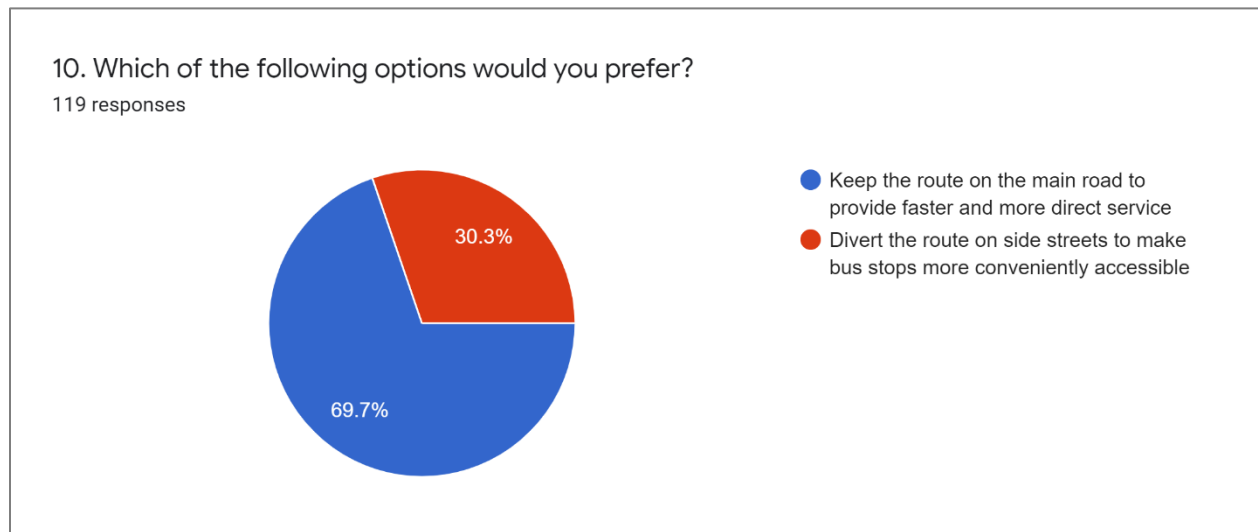
As a follow up to question eight, respondents were asked to expand upon their answer by indicating how often the bus would have to come to meet their travel needs. Nearly half of respondents (47.8%) selected “Every 15 minutes.” The second two most popular choices were “Every 10 minutes” (23.9%) and “Every 20 minutes” (15.4%).



#### IV. Route Alignment

The second strategy of focus for this study is route alignment/straightening (keeping routes along main roads, as opposed to diverting routes to side streets). This strategy has the potential to reduce travel times by making routes more direct, however, it could also lead to increased distances for walking, biking, or rolling to stops.

Respondents were asked to choose whether they prefer keeping routes on main roads or diverting routes to side streets. The overwhelming majority of respondents (69.7%) were in favor of keeping routes on main roads, while 30.3% of respondents were in favor of diverting routes to side streets.



Respondents were then asked to share any additional thoughts they had regarding question ten above. Those who were in favor of keeping routes on main roads voiced potential benefits of this strategy, including reduced travel times, promotion of active transportation to access stops from neighborhoods, and increased perception of personal safety. However, several of these respondents qualified their comments by requesting routes be paired with additional improvements, including proper lighting and bus-only lanes, to ensure safety and efficiency. On the other hand, proponents of diverting routes to side streets cited improved accessibility for older adults and people with disabilities as well as shortened distances to stops (which also helps to reduce exposure to the elements, especially heat) as potential benefits of this method.

Regardless of the type of route alignment, respondents shared general concerns related to system connectivity, including safe and seamless integration with bicycle and pedestrian facilities (i.e., no shared lanes between buses and bikes, bike racks on buses, secure bike parking at stops, consistent sidewalk networks), direct access to key destinations (i.e. shopping, entertainment, schools, medical centers), and longer-term planning for transit-oriented development along corridors.

## V. Priority Improvements

In order to ensure resources are used efficiently and improvements align with riders' topmost needs, respondents were asked to rank five possible high capacity bus service improvements from lowest priority to highest priority. Options included improving sidewalks and crosswalks to access bus stops, improving bus stop amenities, traffic signal priority and short bus lanes, dedicated bus lanes to bypass traffic stopped at red lights, and route alignment/straightening. Of the improvements that were ranked the highest, "Dedicated bus lanes" received the most votes (49). The second and third highest priority improvements—"Traffic signal priority and short bus lanes" and "Route alignment/straightening"—were nearly tied with 19 and 17 votes respectively. The factors that were ranked as lowest priority were "Improving sidewalks and crosswalks" (36 votes), "Route alignment/straightening" (34 votes), and "Improving bus stop amenities" (28 votes). Again, "route alignment/straightening" appears to be somewhat of a polarizing factor as it was ranked as both lowest and highest priority by respondents. However, Question 10 above provides more nuance in terms of perceived benefits and drawbacks of this strategy. Overall, the responses indicate that reducing wait and travel times are highest priority for high capacity bus service, which is consistent with the factors ranked as "most important" to improving riders' transit experience from Question 2.



## **VI. Additional Comments**

The final question of the survey gave participants the opportunity to provide any additional comments they may have related to high capacity bus service in Sacramento. Responses generally fell under the following key themes and were consistent with many of the comments regarding route alignment.

### Enthusiastic Support

Overall, respondents were very excited at the prospect of high capacity bus service coming to Sacramento. Several survey participants mentioned that, if done effectively, they would be more inclined to use the bus if there was a reliable high capacity bus network. Many respondents see this project as an opportunity not only to improve bus service but also as a way to improve multimodal connectivity throughout the region.

### Reliability

Frequent and reliable connections, with minimal transfers, was mentioned as a top priority for high capacity bus service.

### Direct Access to Key Destinations

Many riders feel existing bus and light rail networks do not provide direct or efficient access to key destinations, including shopping, medical facilities, entertainment, job centers, etc.

### Accessibility

Floating bus stops were strongly opposed as a potential improvement due to concerns surrounding accessibility for those with disabilities and safety of pedestrians in general by increasing exposure to vehicular traffic. Sidewalks and street-level boarding were mentioned as more favorable methods for promoting accessibility.

### Equity

Future service should prioritize access to and from underserved and low-income neighborhoods, particularly south of Highway 50 in Rancho Cordova.

### Technological Advancements

Investing in technological advancements such as a SacRT app with real-time bus tracking capabilities as well as an electric bus fleet will help improve the rider experience and promote climate resilience throughout the region.

### Additional Corridors for Future Study

Marconi Avenue, Freeport Boulevard, Franklin Boulevard, Laguna Boulevard, Fair Oaks Boulevard, and the region's freeways, were recommended as additional corridors for future study.



# HIGH CAPACITY TRANSIT

Sacramento Regional Transit is assessing opportunities for high capacity bus service and bus rapid transit along congested corridors, including Stockton Boulevard, Florin Road, Sunrise Boulevard, Arden Way, and Watt Avenue.

## WHAT IS HIGH CAPACITY TRANSIT?

The goal of high capacity transit is to provide faster, more convenient, and more reliable service to a larger number of passengers. High capacity transit improvements may include strategies such as:

### BUS-ONLY LANES

### SIGNAL PRIORITY

### STATION AMENITIES



Photo Credits: NACTO

## SHARE YOUR THOUGHTS!

## VIRTUAL PUBLIC WORKSHOP

Wednesday, October 21st

4:00 - 5:30 PM

RSVP at: [bit.ly/SacRT-HCT-Workshop](https://bit.ly/SacRT-HCT-Workshop)

TAKE THE SURVEY: [bit.ly/SacRT-HCT-Survey](https://bit.ly/SacRT-HCT-Survey)

### Questions or Comments?

Contact Alicia Brown at [abrown@walksacramento.org](mailto:abrown@walksacramento.org)  
For SacRT Customer Service visit [www.sacrt.com](http://www.sacrt.com) or call 916-321-BUSS (2877)



# Sacramento Regional Transit

August 20, 2020



# Stockton Boulevard Conceptual Plan

# CONTENTS

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5. HIGH-LEVEL OPPORTUNITIES (pg. 41)
6. IMPLEMENTATION (pg. 54)
7. CONCLUSION (pg. 63)

# INTRODUCTION

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The primary purpose of this project is to develop a high-level corridor plan for Stockton Boulevard that evaluates and addresses the potential for enhancements that would support future Bus Rapid Transit/high-frequency bus service. This plan addresses short-term enhancements that are responsive to the needs of customers today and are also compatible with and supportive of potential changes in the future.

Today, the corridor is primarily served by the 51 bus, SacRT's highest ridership route, which runs between Florin Town Centre and Broadway every 15 minutes. A smaller section of the corridor on the northern end is served by the 38 bus, which runs between Broadway and T Street and serves significantly fewer customers.

This plan discusses existing conditions, provides high-level analysis of operating conditions, and recommends a 3-tiered framework for considering corridor enhancements (Policy & Operational, Minor Capital, and Major Capital).

# EXECUTIVE SUMMARY

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The primary purpose of this project is to develop a high-level corridor plan for Stockton Boulevard that addresses the potential for Bus Rapid Transit/high-frequency bus service. This plan addresses short-term enhancements that are responsive to the needs of customers today and are also compatible with and supportive of potential changes in the future.

Based on the analysis conducted, the following is a summary of key themes and recommendations.

1. **Enhanced Safety** considerations are a shared interest and priority among SacRT, other governmental agencies, and the business community.
2. **Policy and Operational Initiatives** provide a significant opportunity for enhanced service that meets customers' needs in an affordable and timely manner.
3. **Stop-Level Amenities** are a relatively inexpensive way to improve customer experience, enhance safety, and provide enhancements compatible with larger capital investments in the future.
4. **Partnerships and Coordination** are key to success in this corridor, with an opportunity for SacRT to shape decisions affecting the customer experience and greater community.
5. **Long-Term Potential** exists in the corridor for more intensive development that may warrant more major capital investment; this will require a greater degree of integration between land use, economic development, and transit planning.

# METHODOLOGY

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The next section describes the methodology used to conduct analysis and develop the recommendations in the plan.

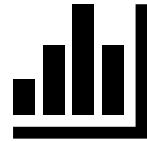
# METHODOLOGY

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## Existing Plans and Studies Review

- Short and Long-Range Plans
- Service and Design Standards



## Data Analysis and GIS Visualizations

- Demographics
- Ridership, boarding and alightings by stop
- Transit speed, delay, dwell, and schedule deviation
- Customer fare payment types
- Amenities (shelters, benches) by stop



## Onboard Customer Survey (Rt. 51)

- Travel patterns
- Customer priorities
- Satisfaction with current service
- Challenges and barriers



## Application of Best Practices

- Gap analysis
- Case studies
- Tiered approach

# EXISTING CONDITIONS

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This section describes the existing conditions along the corridor to provide context and understanding of the current and longer term transit needs and opportunities. Existing conditions were analyzed within the following five broad categories:

- Existing Studies and Reports
- Demographics
- Land Use
- Customer Satisfaction and Priorities
- Operations

# COMMUNITY AND CORRIDOR PRIORITIES

The table below summarizes key themes and priorities addressed in the selection of reports, plans, and studies reviewed as part of this project. This review helped the study team to gain a better understanding of the stated priorities of the community as a whole, and Stockton Boulevard specifically. By recognizing common interests and alignment of goals, SacRT can continue to build strong partnerships that will be necessary for both major and minor investments in the Stockton Boulevard corridor and others.

Organization	Report	Mobility	Safety	GHG/Air Pollution	Economic Development
SacRT	TransitAction Plan	X	X	X	X
SacRT	Short-Range Transit Plan	X	X	X	
SACOG	MTP/SCS, Blueprint	X	X	X	X
City of Sacramento	Stockton Boulevard Corridor Study: Existing Condition Report	X	X		
County of Sacramento	Sacramento County General Plan	X		X	X
Stockton Boulevard Partnership	Annual Report		X		X
Urban Land Institute	Stockton Boulevard		X		X



## Previous Work Addressing Stockton Boulevard

Organization	Report	Date	Themes
City of Sacramento	Stockton Boulevard Corridor Study: Existing Condition Report	November 2019	<p>The report identified 3 major priorities for the corridor:</p> <ul style="list-style-type: none"> <li>• Transportation Safety: Stockton Boulevard contains several high-collision intersections.</li> <li>• Mobility: With the highest ridership route in the SacRT system (Route 51), access to bus stops is crucial.</li> <li>• Community: Stockton Boulevard connects many residents and jobs, making it an important local and regional thoroughfare for the city.</li> </ul>
Sacramento County	Sacramento County General Plan	2011 (Amended 2017)	Stockton Boulevard is identified in the Plan as a corridor for BRT/ Hi-Bus - Mixed Use Lanes (pre-2030). In general, the Plan discusses the need to invest in transit to provide additional mobility options and improve air quality. It also discusses the intent to concentrate commercial development in areas supported by transit.
Stockton Boulevard Partnership	Annual Report	2018	The Stockton Boulevard Partnership reports on their activities in the corridor, including promoting economic development, advocating for business and property owners, and provision of services and programs, including maintenance, amenities and security.
Urban Land Institute, Advisory Services Program	Stockton Boulevard	2009	ULI, in partnership with the City of Sacramento and the Sacramento Housing and Redevelopment Authority, evaluated the market potential of Stockton Boulevard, with recommendations to reduce blight through enactment of design guidelines and code enforcement, demolish deteriorated motels and other buildings, implement a new streetscape program, and improve public safety in order to transform the corridor's current land uses.

## Census Data

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Population data was collected and mapped to better understand demographic patterns along Stockton Boulevard compared to Sacramento County as a whole.

Block group data for Sacramento County is from the 2010 Decennial Census and the 2013-2017 American Community Survey 5-Year Estimate. For the purposes of the demographic analysis, block groups were selected using a half-mile buffer along Stockton Boulevard from Florin Road to T Street.

### **Population Density**

Stockton Boulevard Corridor has a higher population density than Sacramento County, and density increased from 2010 to 2017. Specific areas of population growth vary, but some clusters include the east side of Stockton near 14<sup>th</sup> Avenue and Gerber Road, as well as west of Stockton and south of Fruitridge.

### **Commuting**

The highest share of transit commuters is east of Stockton near 14<sup>th</sup> Avenue and south of Elder Creek Road. Those block groups also experienced increases in transit commuters from 2010 to 2017. Average commute time is especially long in the block group west of Stockton between 14<sup>th</sup> Avenue and 21<sup>st</sup> Avenue.

# Census Data

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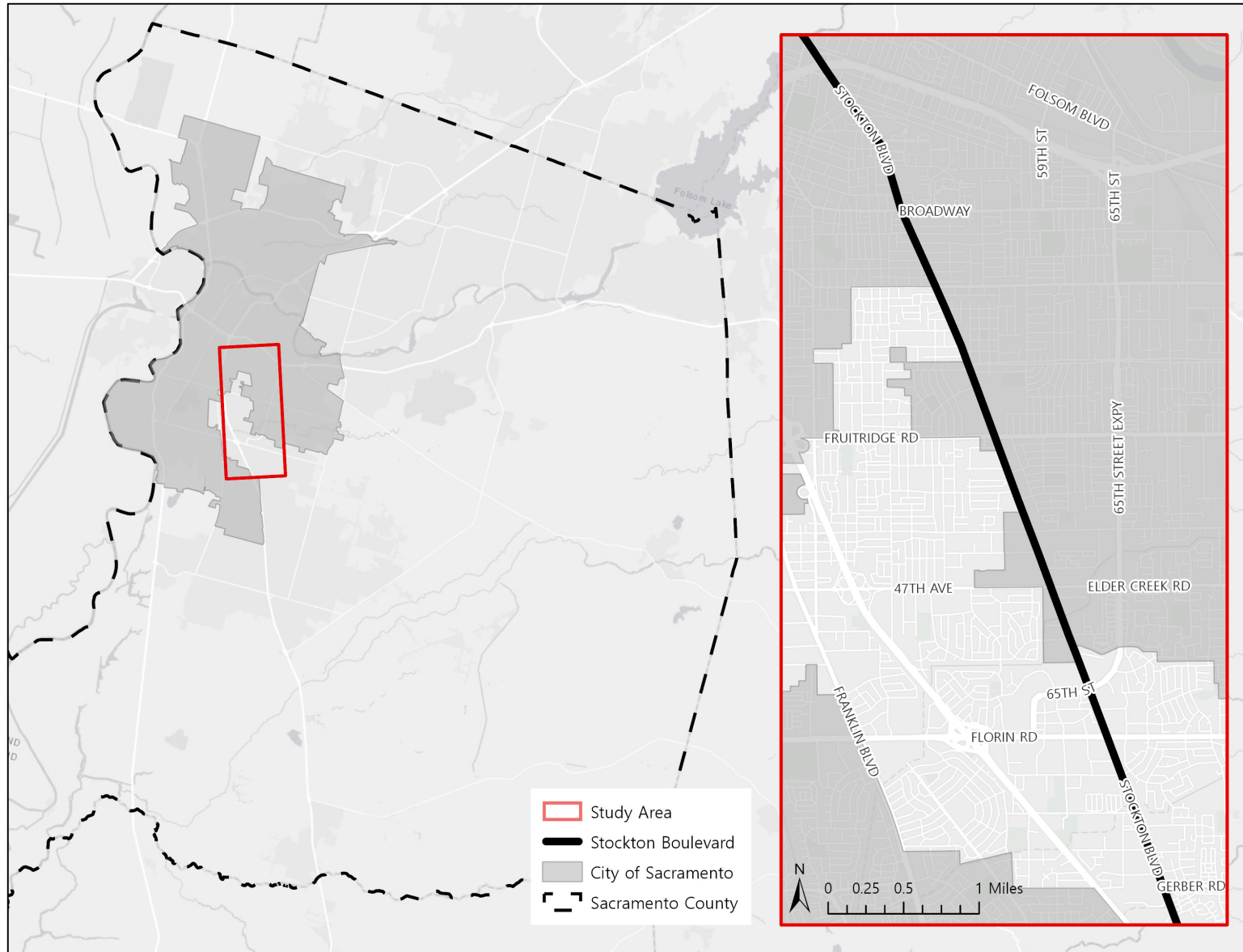
## **Other Demographic Variables**

The area surrounding Stockton Boulevard contains lower-income households compared to the rest of Sacramento County. The 2017 median income of corridor area was \$48,225, compared to \$64,206 for the rest of the county. Poverty is especially concentrated near 12<sup>th</sup> Avenue, Fruitridge Road, Elder Creek, and Florin Road. There are also higher concentrations of households without vehicles, although no-vehicle households have been declining since 2000 in the corridor, but increasing in the county as a whole.

The area surrounding Stockton Boulevard has a much higher density of minority populations than the county, although the minority population declined between 2010 and 2017. The geographic distribution of renters follows a similar pattern. The senior population increased in Stockton Boulevard between 2010 and 2017, with specific concentrations near 12<sup>th</sup> Avenue and Elsie Avenue.

The following pages consist of demographic maps that visualize key characteristics and trends along Stockton Boulevard.

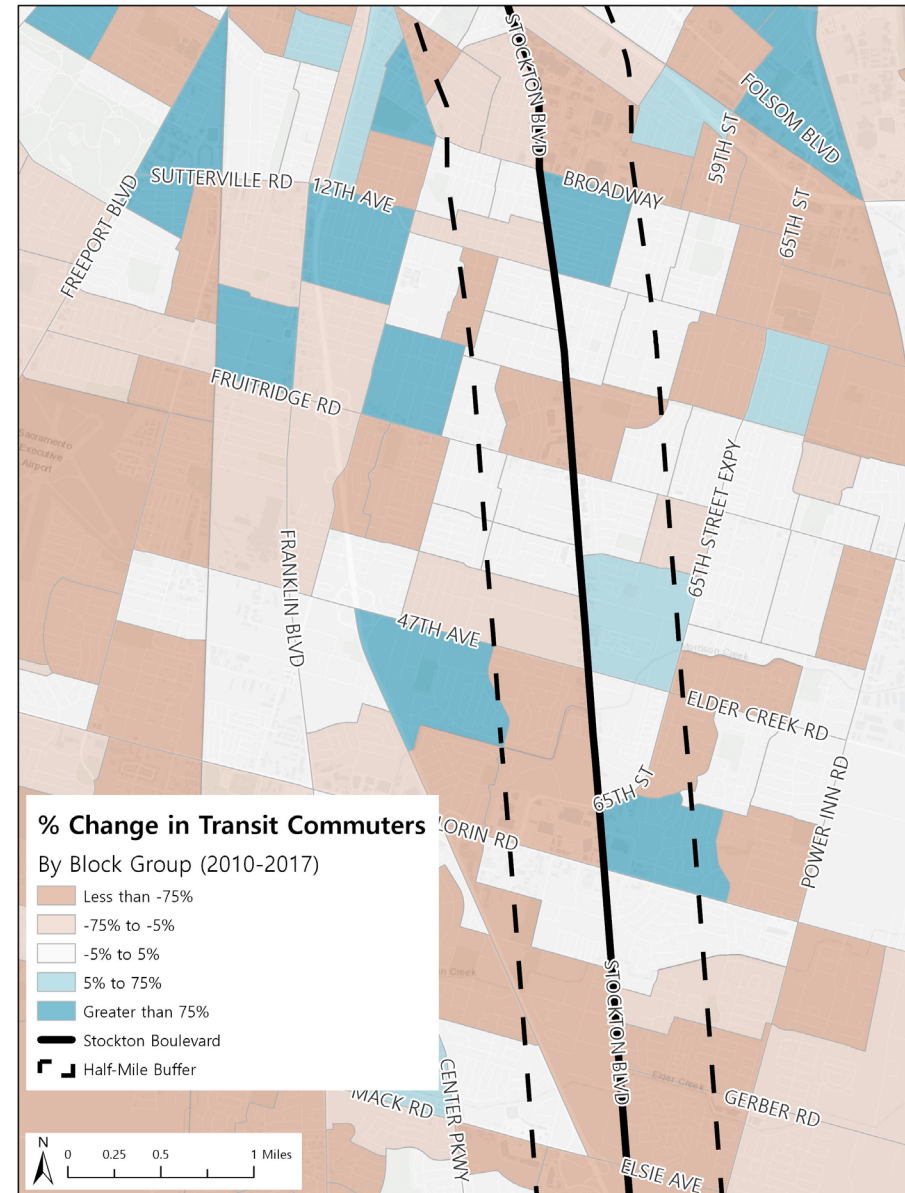
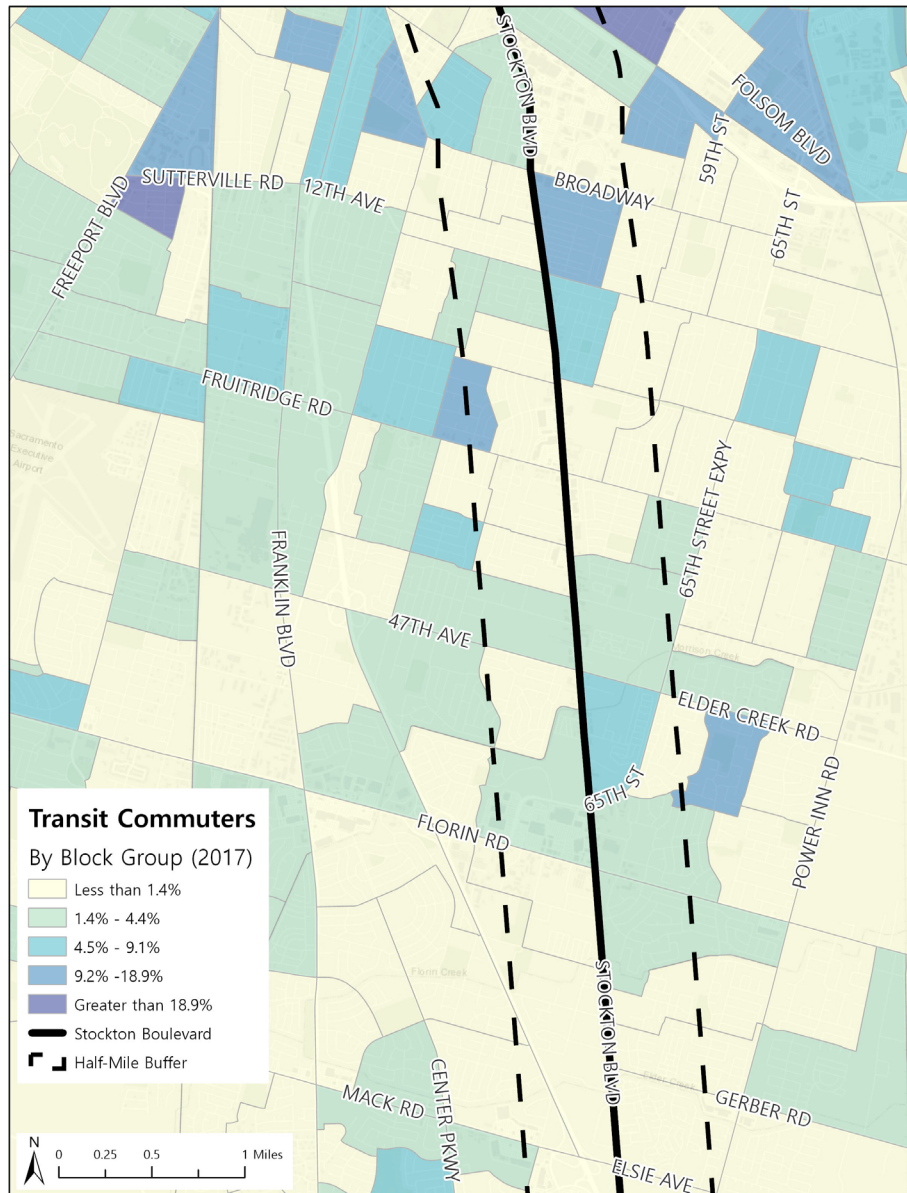
# MAPS – STUDY AREA



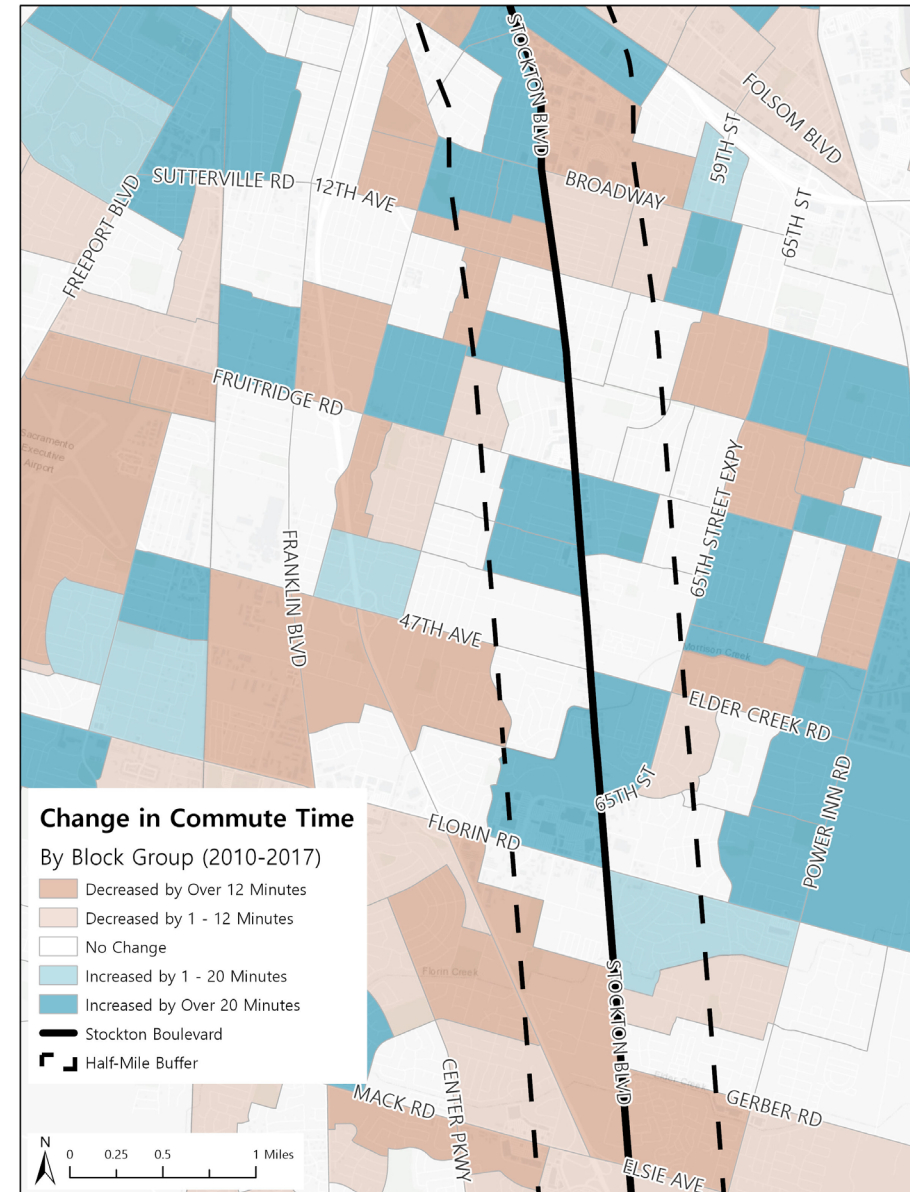
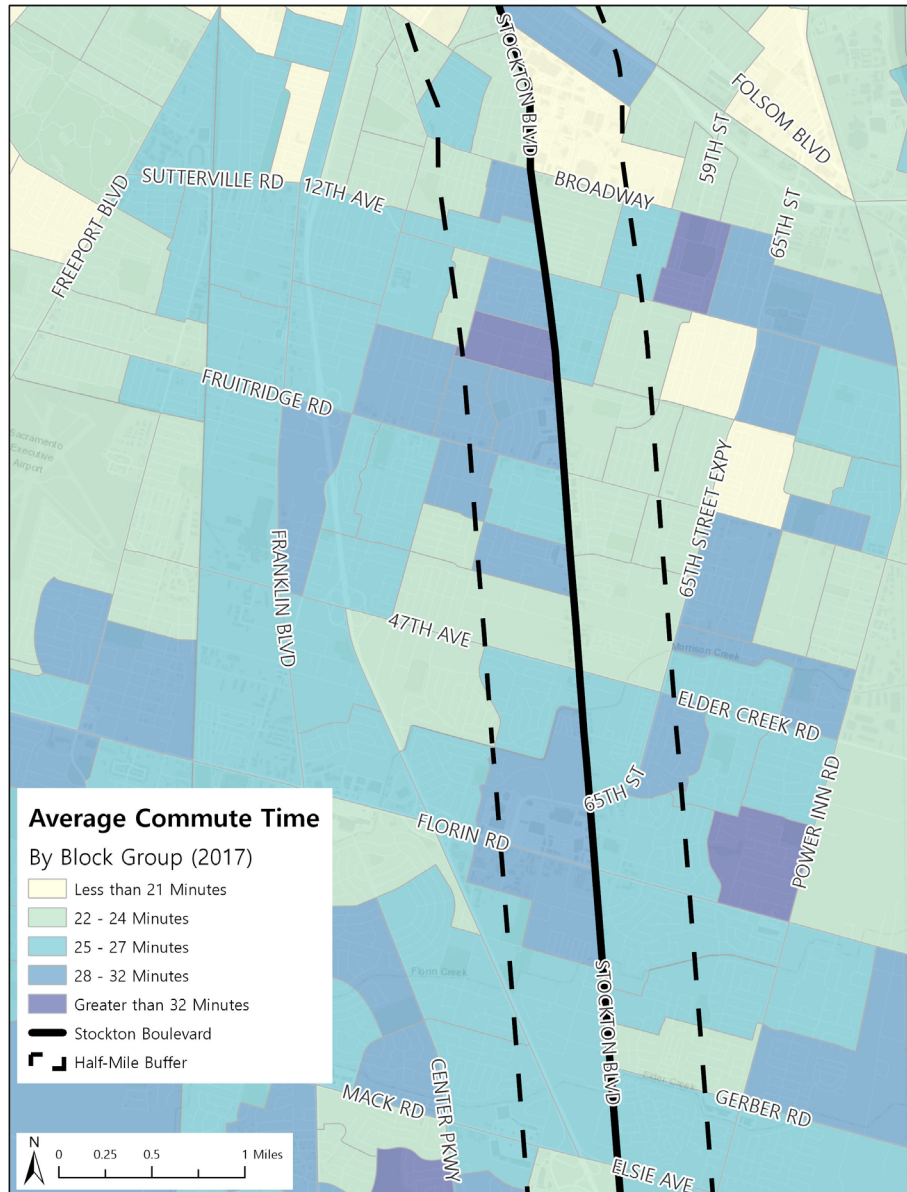
# MAPS - POPULATION DENSITY



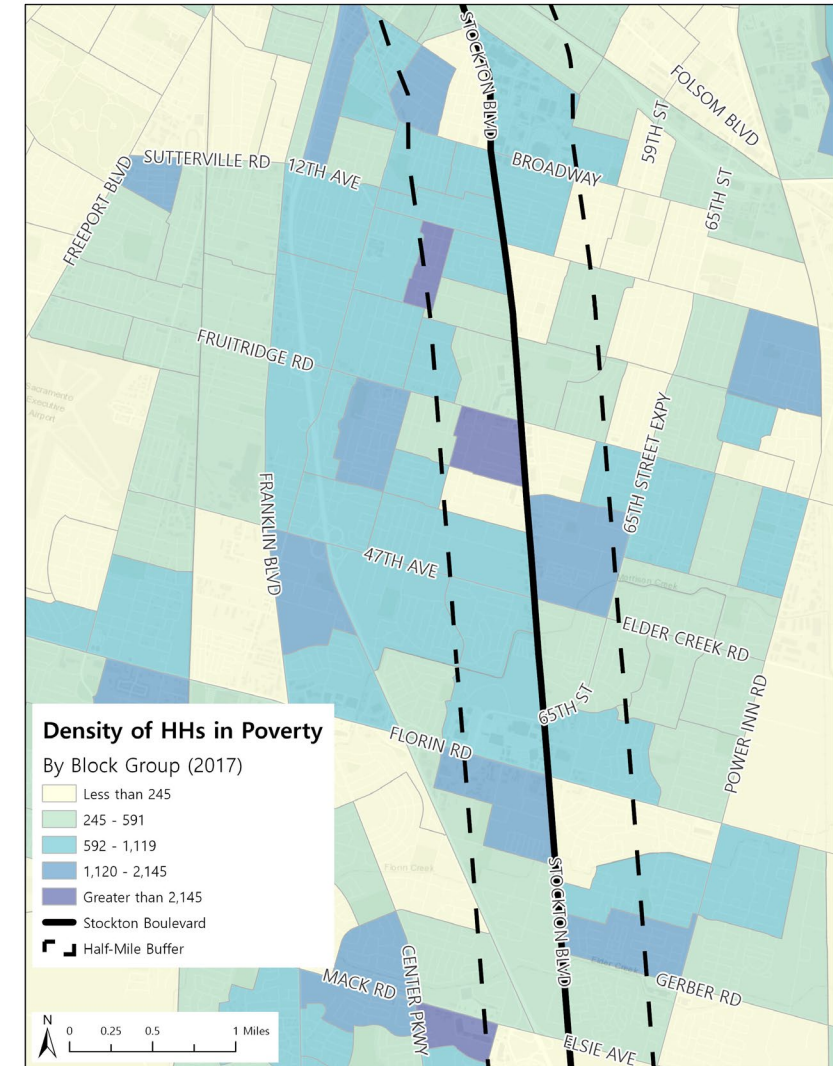
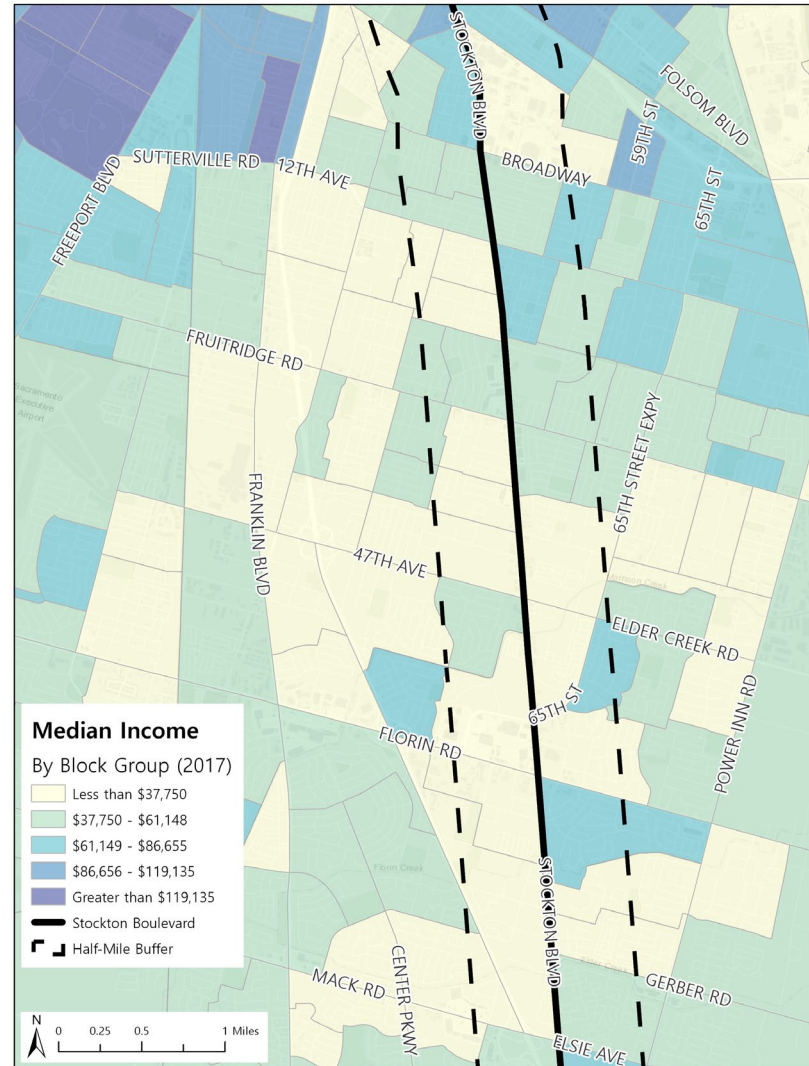
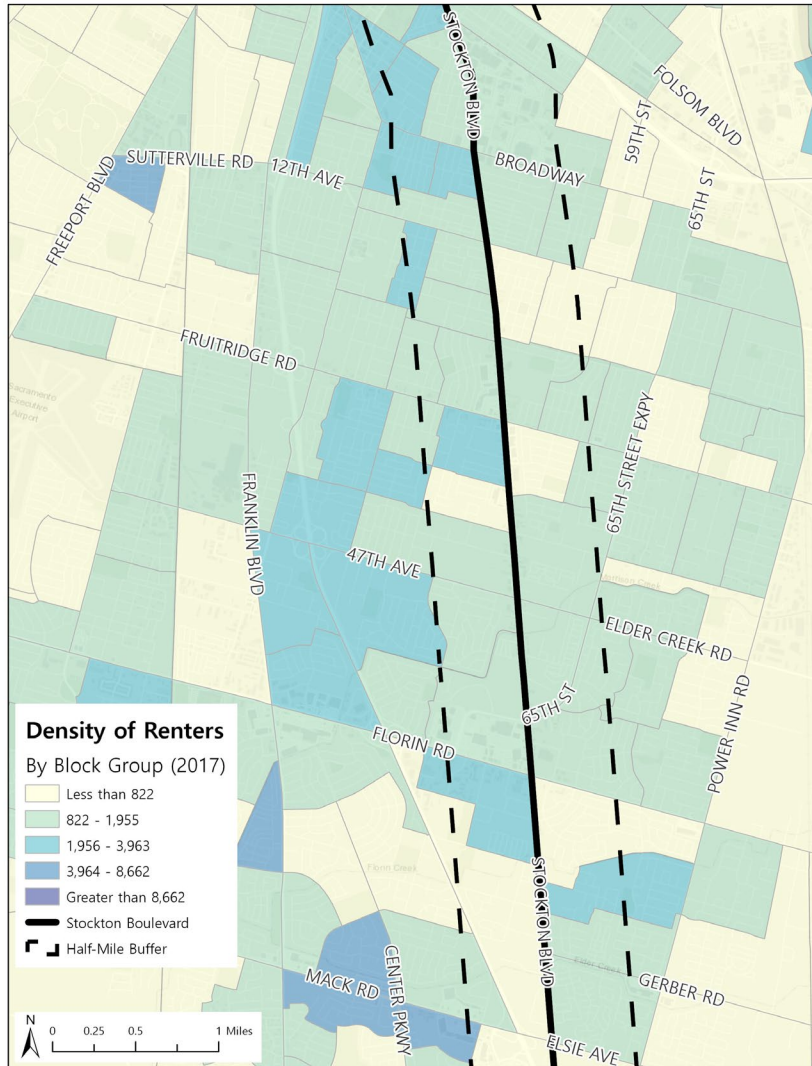
# MAPS - TRANSIT COMMUTING



# MAPS - COMMUTE TIMES

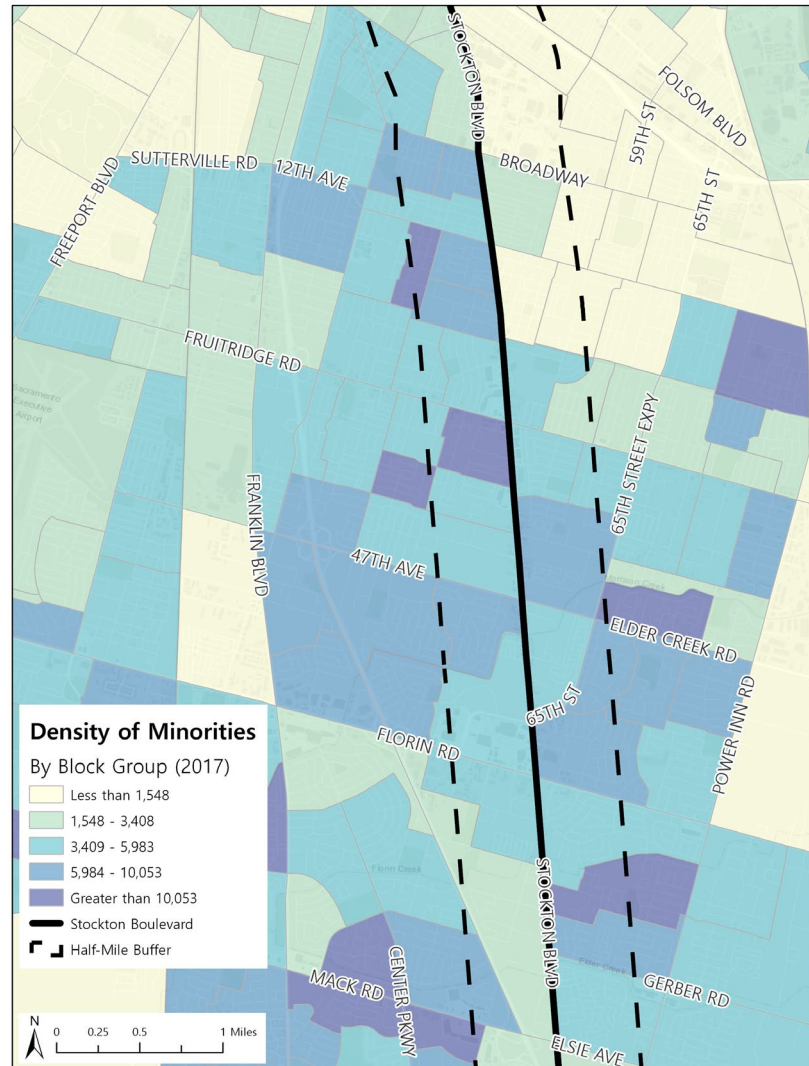
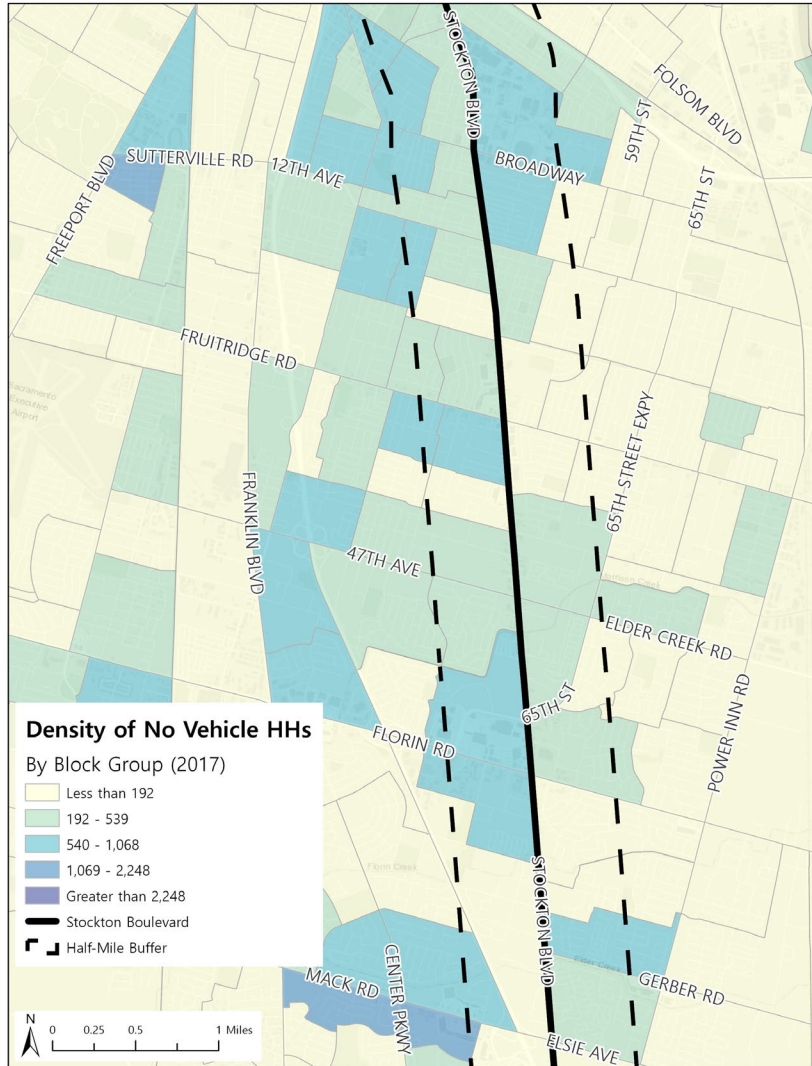


# MAPS - DEMOGRAPHICS





# MAPS - DEMOGRAPHICS



# LAND USE

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The land use along Stockton Boulevard varies from low-density residential, to retail/commercial, industrial, and office uses. The stretch of Broadway between Highway 99 and Stockton Boulevard is mostly retail/commercial and office land uses with some residential areas. From Broadway to Florin Road on Stockton Boulevard is similarly residential, retail/commercial with some light-industrial uses as well. Florin Towne Centre specifically consists of approximately 484,500 square feet of commercial uses with major retailers, banks and a gym. Between the Florin Towne Centre and Mack Road, there is a mix residential, light-industrial, and retail/commercial areas.

The following are major destinations within a 1/2-mile distance of Stockton Boulevard corridor:

## **Libraries**

Southgate Community Library  
Valley Hi – North Laguna Library  
Colonial Heights Community Library

## **Parks**

Sky Park  
Lawrence Park  
Colonial Park

4<sup>th</sup> Ave Park  
McClatchy Park  
Oak Park Community Center

## **Medical Centers**

Sacramento County Mental Health Treatment Center  
University of California Davis Medical Center  
Florin Dialysis Center  
Sierra Vista Hospital  
Kaiser Fund Hospital – South Sacramento  
Methodist Hospital of Sacramento

## SURVEY DATA

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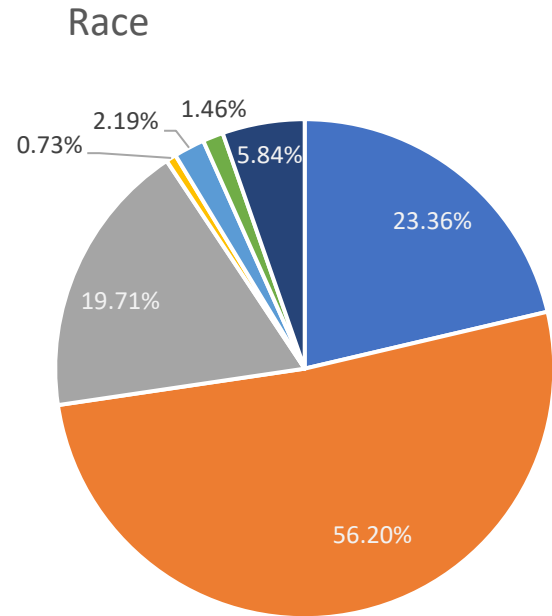
An on-board survey was conducted on January 13 – January 17, targeting 9 SacRT routes of interest for the High Capacity Bus Corridor Study.

The survey included questions about origins and destinations, trip purpose, access (and barriers to access), customer satisfaction with various service characteristics, and priorities.

Of 542 total completed surveys, 137 surveys were completed by customers on Route 51.

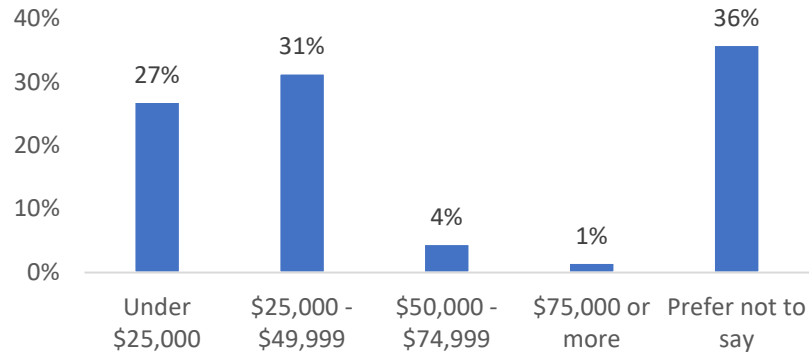
# SURVEY DATA – Demographic Information

- White/Caucasian
- Black/African American
- Spanish/Hispanic/Latino
- Asian/Pacific Islander
- American Indian/Alaskan Native
- Other
- Prefer not to say

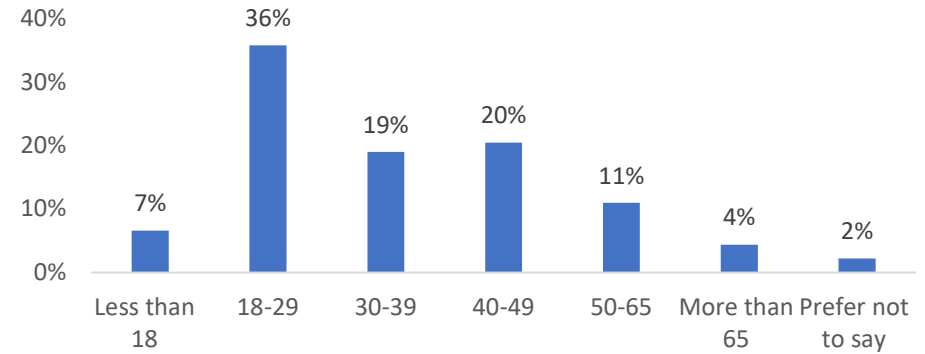


- The majority of respondents identify as Black/African American.
- Over half of respondents make less than \$50,000 per year.
- The highest proportion of respondents are 18-29 years old.

Income

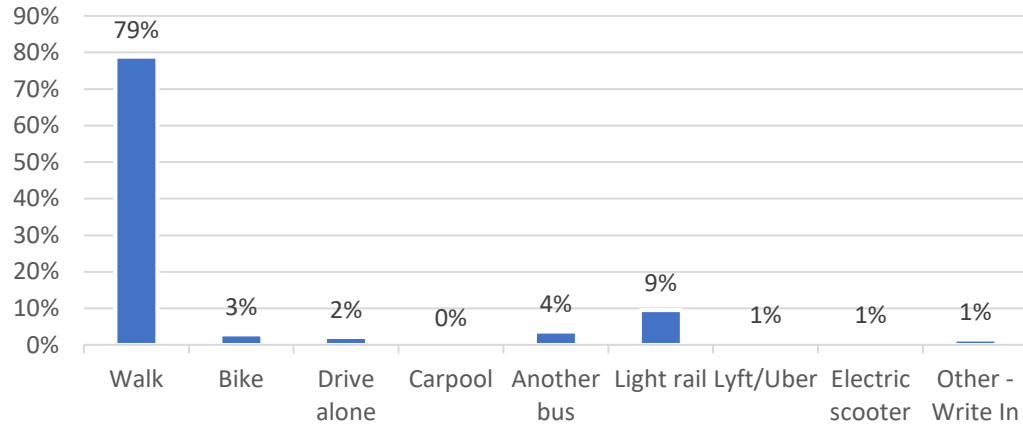


Age

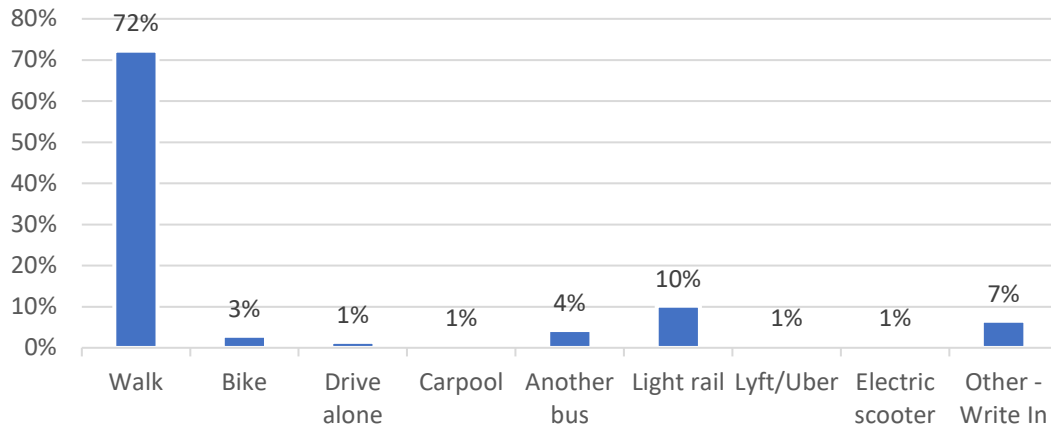


# SURVEY DATA – Access

How do you typically get to the bus stop when using this route?

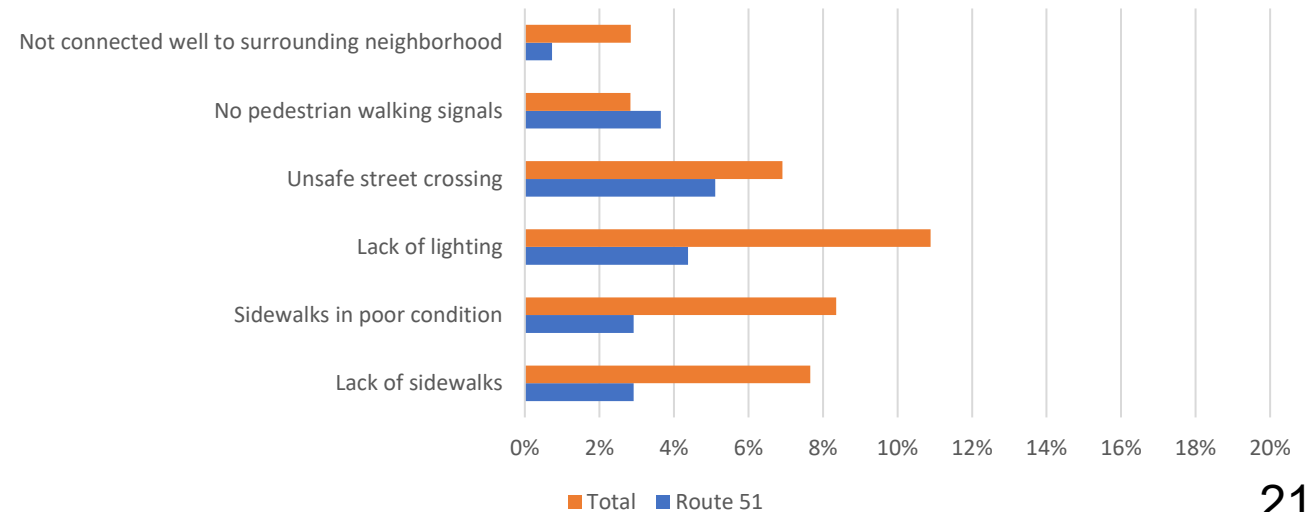


How do you typically get to your final destination when getting off this route?



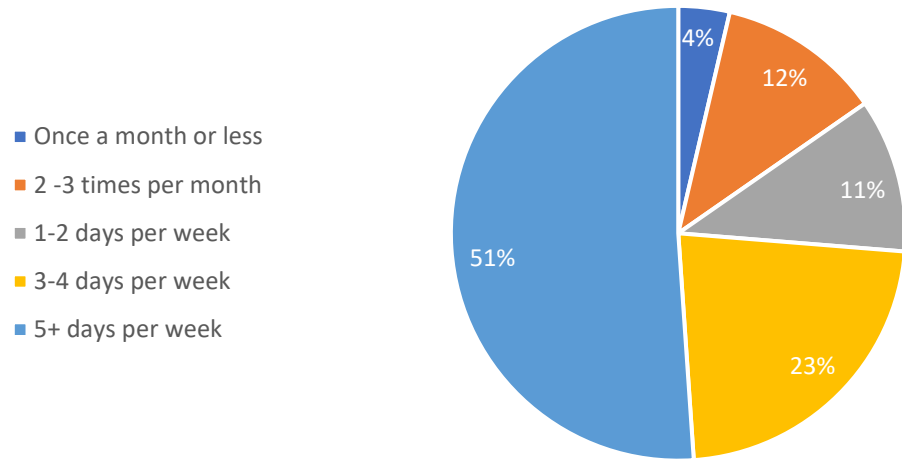
- A vast majority of respondents get to the bus stop and their final destination by walking, followed by the light rail.
- Respondents have few issues with accessing bus stops, especially compared to other bus routes.

Do you experience any issues in accessing transit stops on this route?



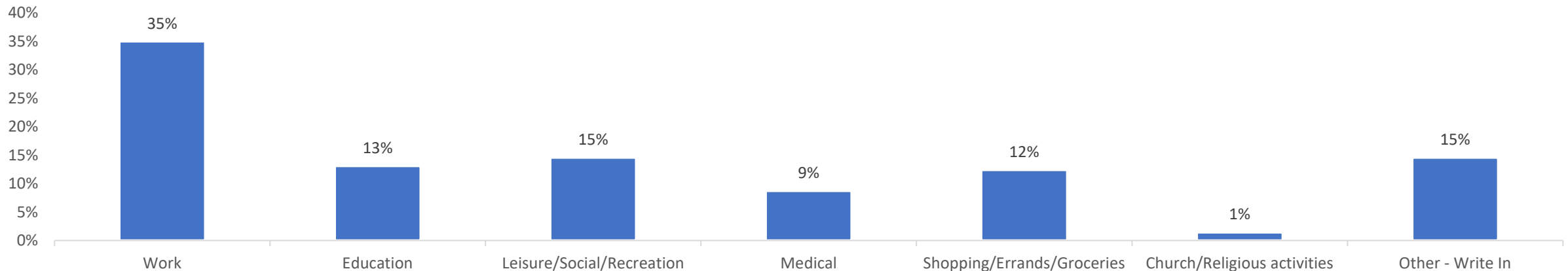
# SURVEY DATA – Purpose and Frequency

How often do you ride this route?



- Most respondents ride the bus 5+ days per week.
- 35% use Route 51 to get to work, which is a relatively low proportion compared to industry as a whole. Most of the 15% write-in responses noted that they use Route 51 for all of the purposes listed.

For what primary purpose do you ride this route most frequently?



# SURVEY DATA – Satisfaction and Importance

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Respondents are generally very satisfied with Route 51, especially compared to respondents on other bus routes.

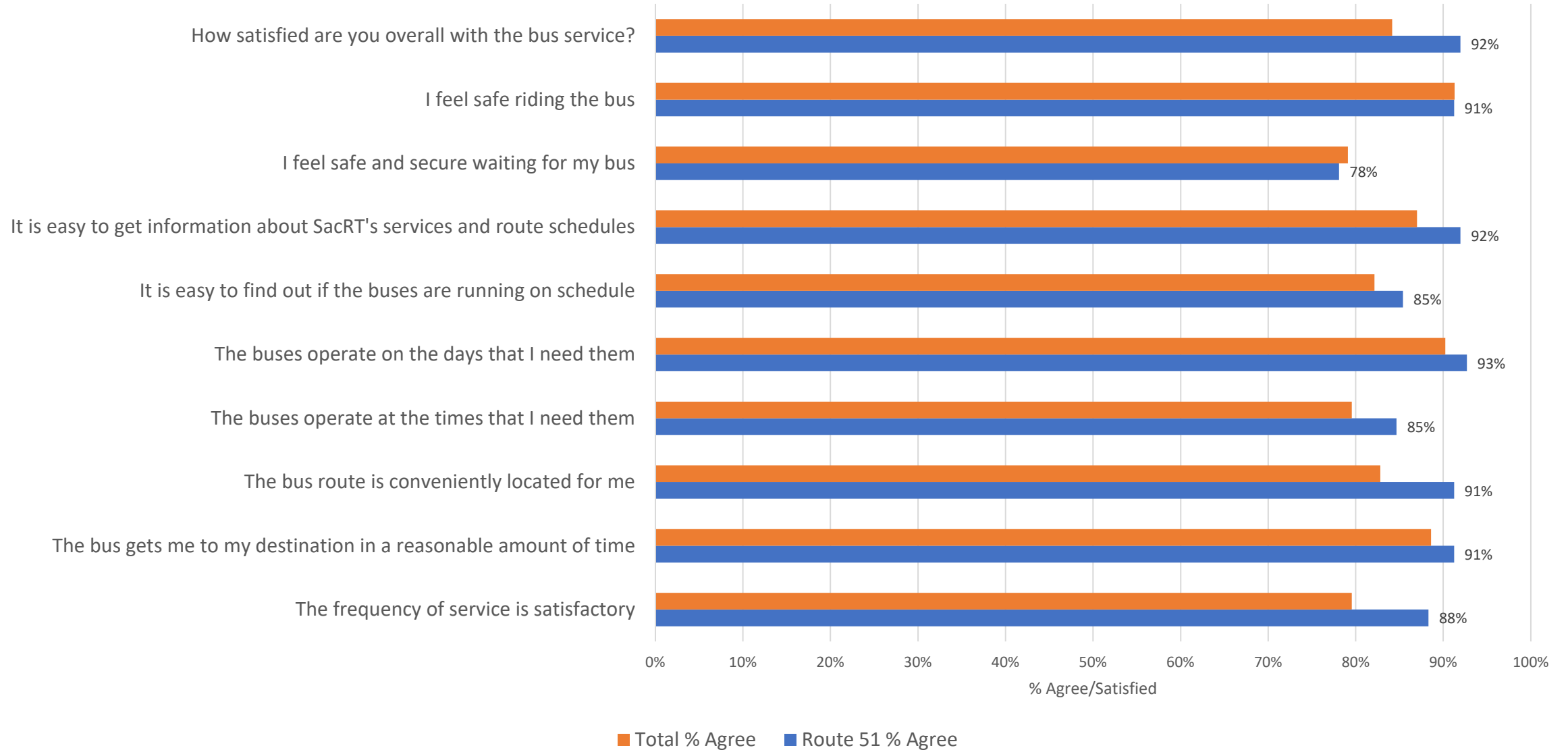
<b>Top 3 Most Important Areas of Service</b>	<b>Top 3 Most Important Amenities/Features</b>
<ul style="list-style-type: none"><li>• Frequency</li><li>• Buses arrive on time</li><li>• Travel time</li></ul>	<ul style="list-style-type: none"><li>• Wi-fi</li><li>• Benches/shelters at stops</li><li>• USB charging stations</li></ul>

## **Bottom 3 Statements (Respondents were least satisfied in these areas)**

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- I feel safe and secure waiting for my bus
- It is easy to find out if the buses are running on schedule
- The buses operate at the times that I need them

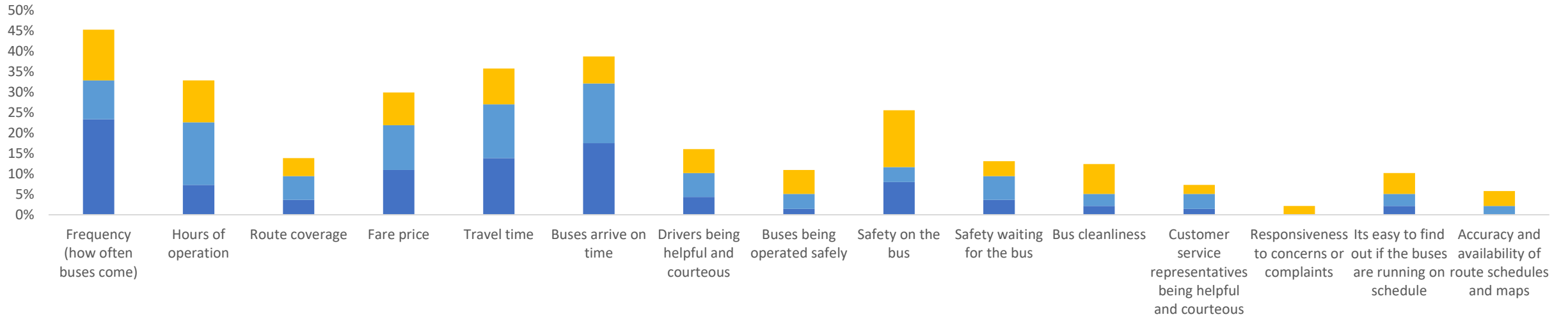
# SURVEY DATA – Satisfaction Statements



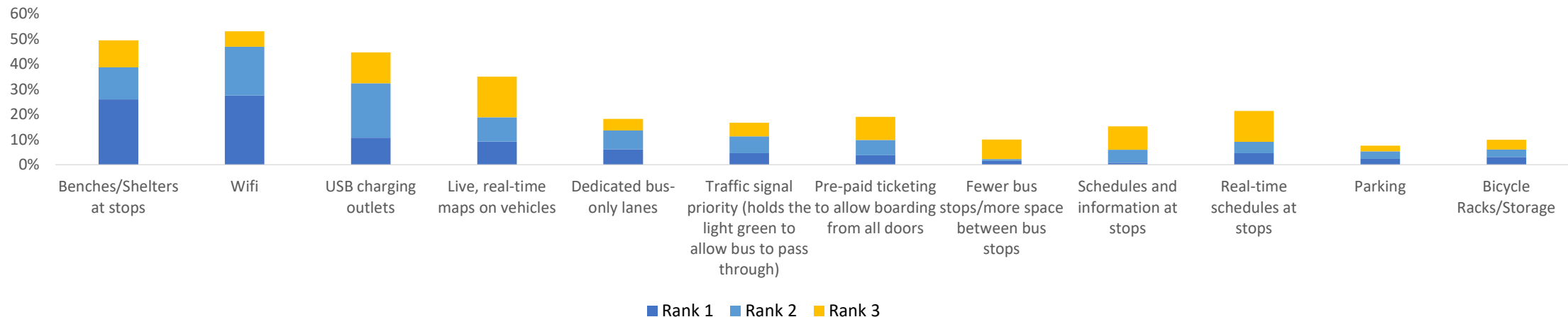


# SURVEY DATA – Importance Rankings

What are the top 3 most important areas of service for you as a user of public transportation?



What are the top 3 amenities/features that you feel are most important when providing high-capacity transit?



■ Rank 1 ■ Rank 2 ■ Rank 3

# SURVEY DATA – Net Promoter Score

As part of the survey, we gathered information to calculate the Net Promoter Score (NPS), which is considered a key metric across all industries to gauge word-of-mouth favorability and overall customer experience.

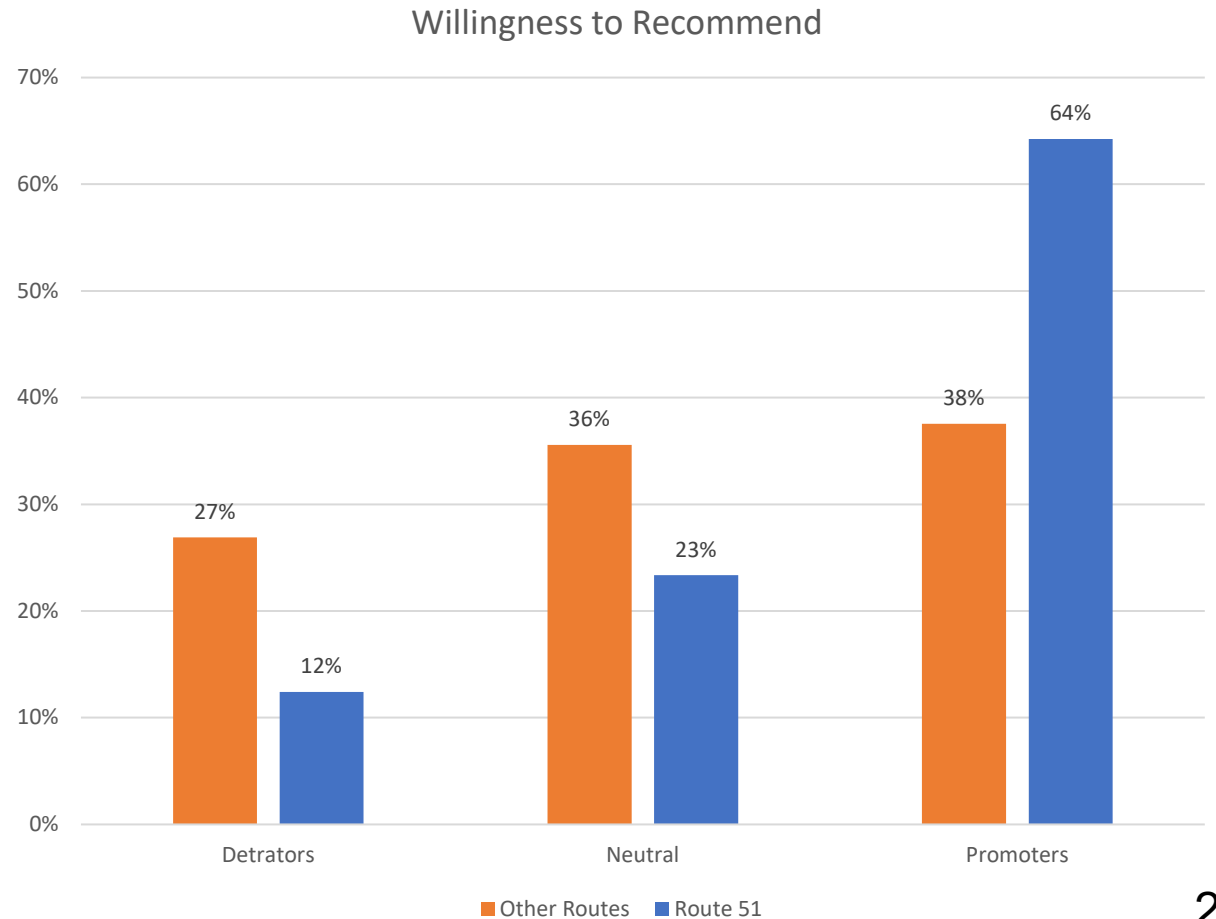
Customers were asked:  
“How likely would you be to recommend riding a SacRT bus to a friend or neighbor, on a scale of 0-10?”

0-6 are Detractors  
7-8 are Neutral  
9-10 are Promoters

**NPS = % Promoters**  
minus the % Detractors

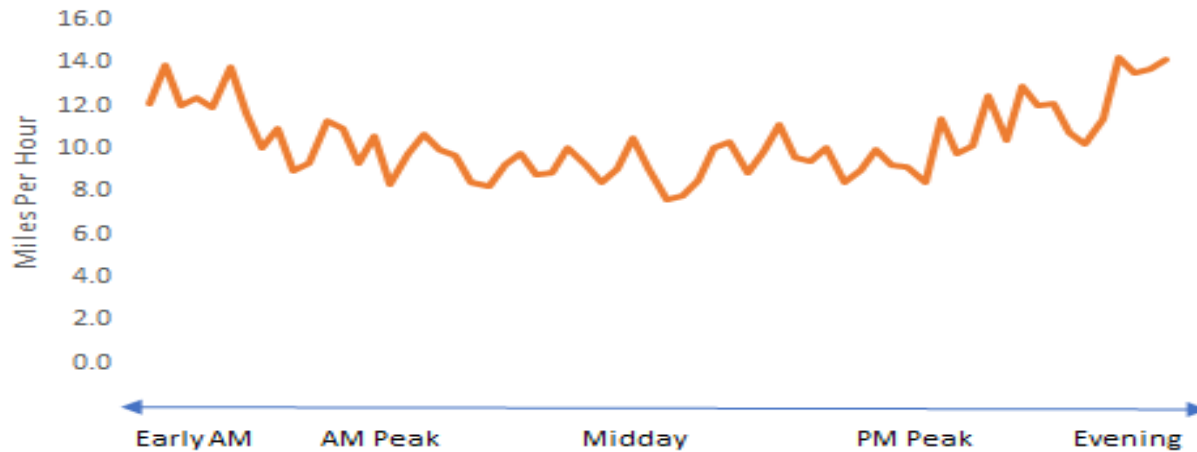
A much higher proportion of Route 51 customers would recommend SacRT than the average of all other routes surveyed.

**52%** is the NPS for Route 51



# OPERATIONAL DATA - AVG SPEED BY TIME OF DAY

Rt. 51 Outbound - Average Velocity (MPH)

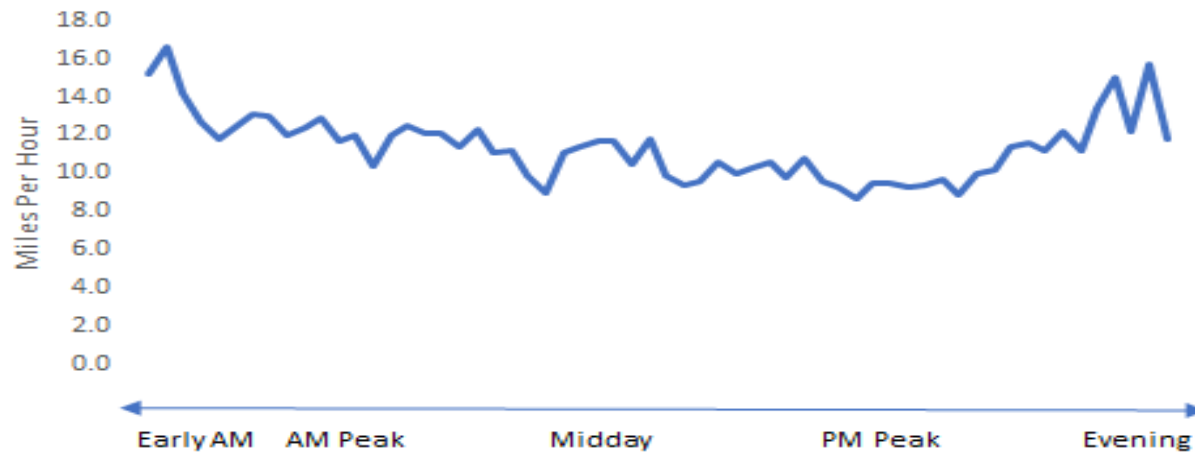


The total average speed is 10.9 miles per hour.

The slowest speed is 7.8 miles per hour on the 1:15/1:30pm trips traveling from Florin Towne Centre into Downtown.

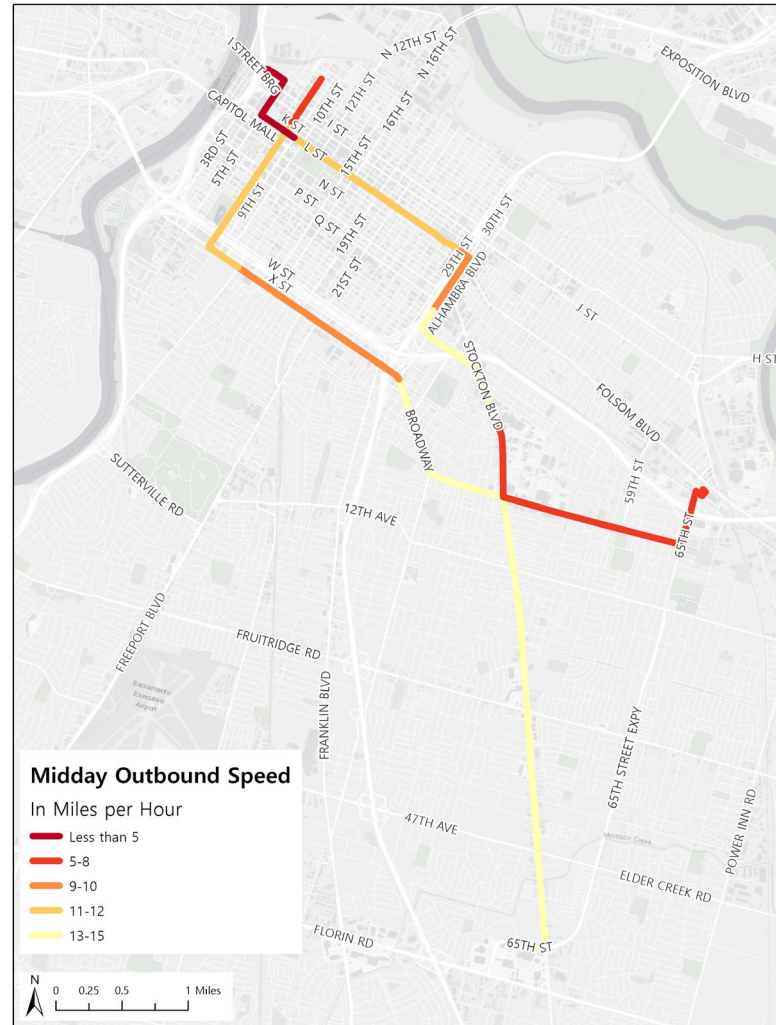
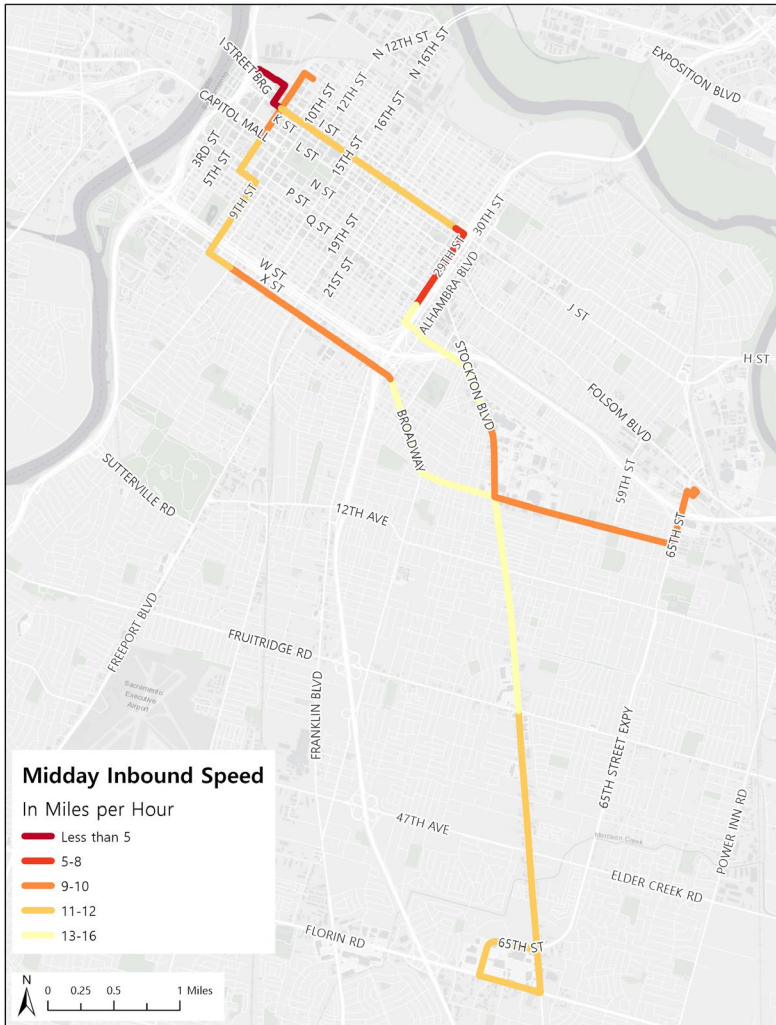
The fastest speed is 16.6 miles per hour on the 6:20am trip from Downtown to Florin Towne Centre.

Rt. 51 Inbound - Average Velocity (MPH)



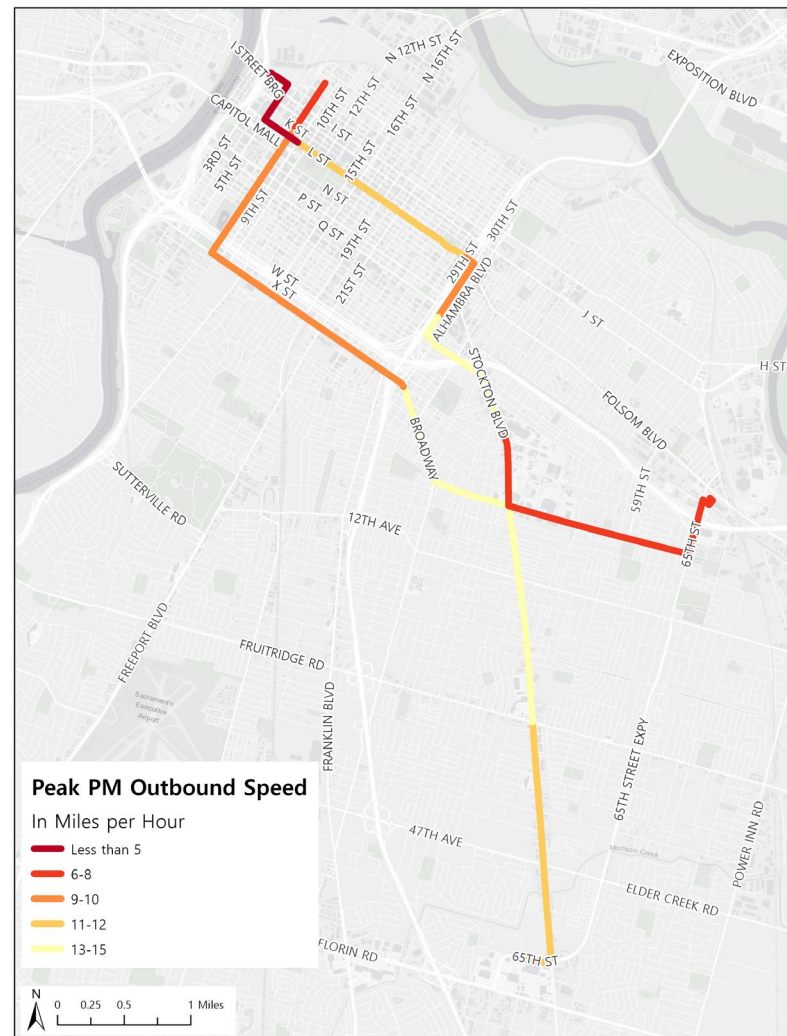
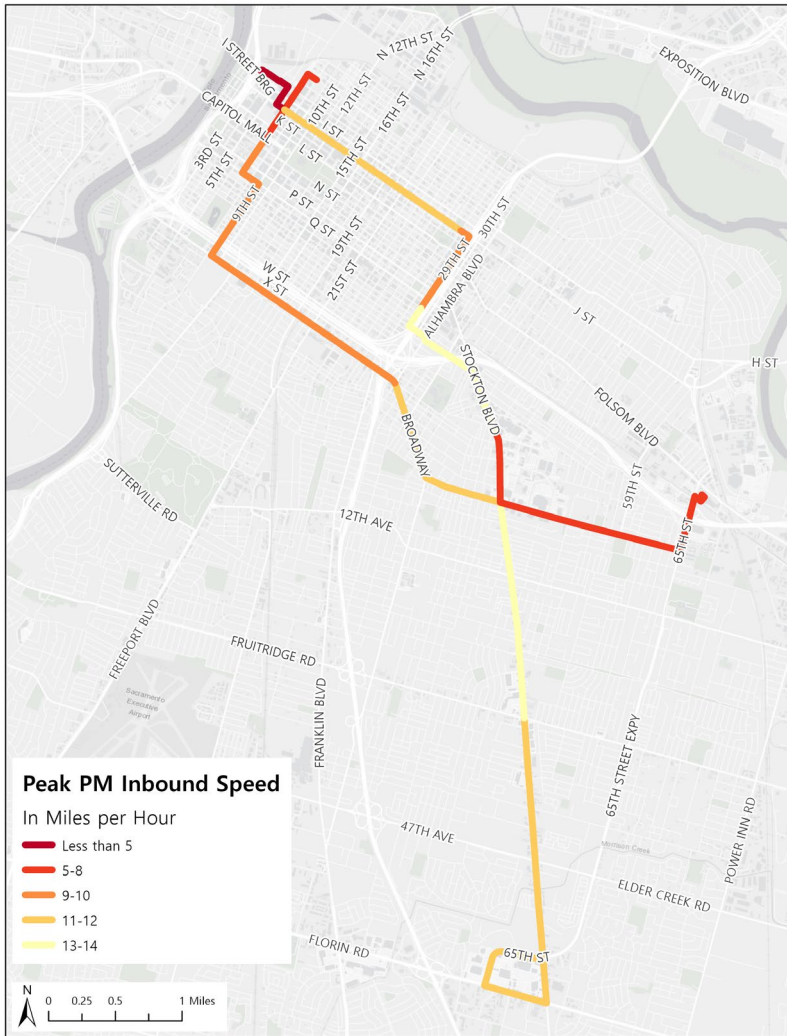


# OPERATIONAL DATA - AVG SPEED Midday



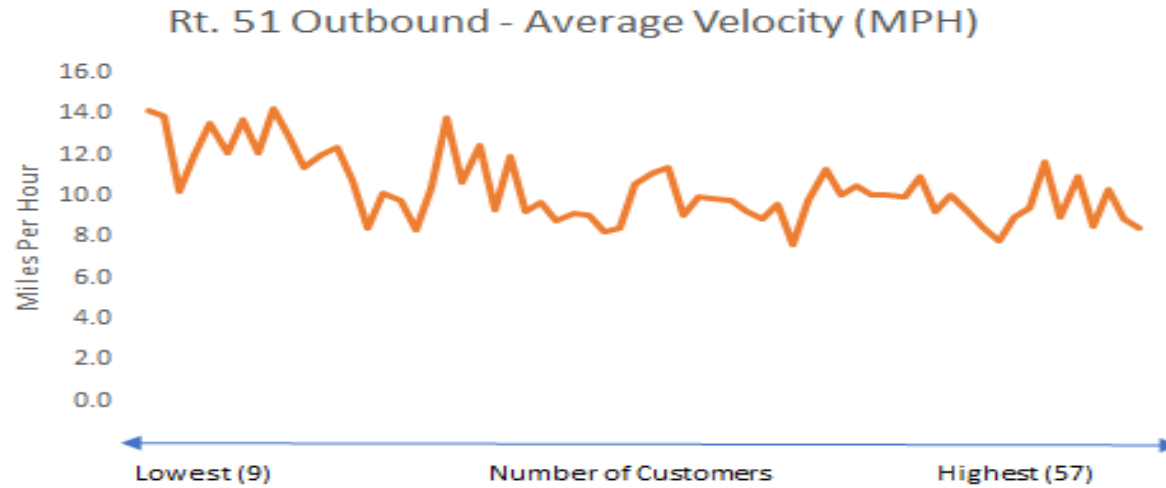
Inbound Midday speeds are slower between Florin Road and Fruitridge Road.

# OPERATIONAL DATA - AVG SPEED Peak PM

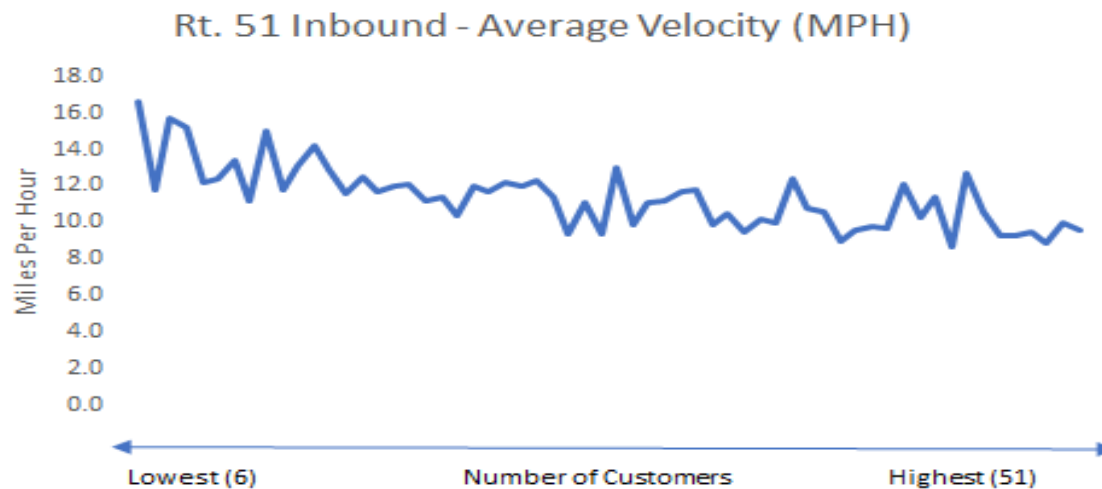


Inbound and Outbound Peak PM speeds are slowest between Florin Road and Fruitridge Road, and north of Broadway.

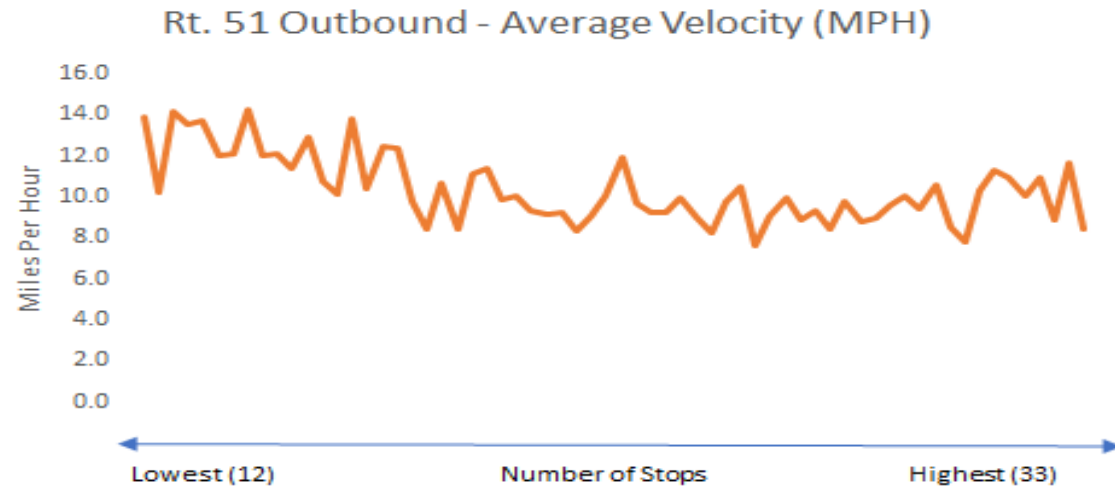
# OPERATIONAL DATA - AVG SPEED BY RIDERSHIP LEVELS



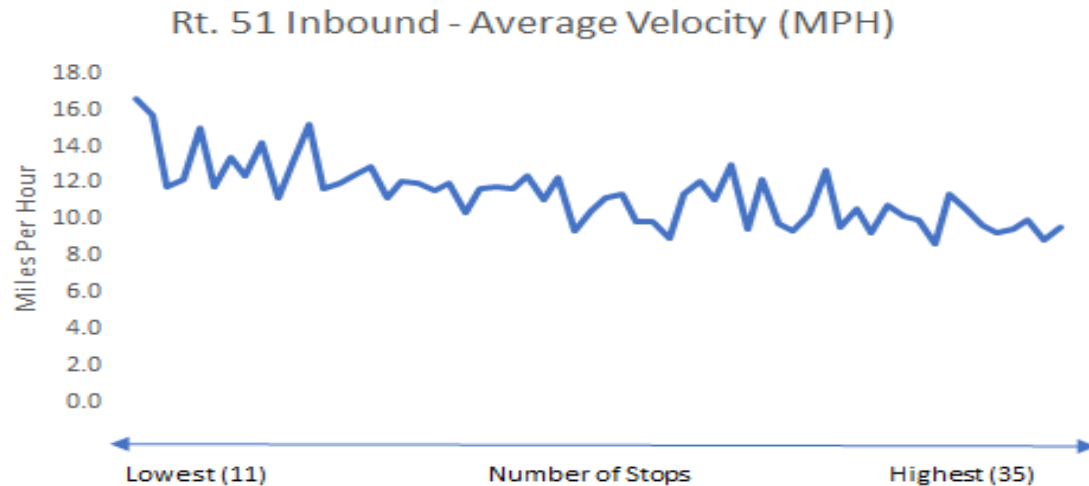
In general, both inbound and outbound speed decreases as ridership levels increase.



# OPERATIONAL DATA - AVG SPEED BY NUMBER OF STOPS

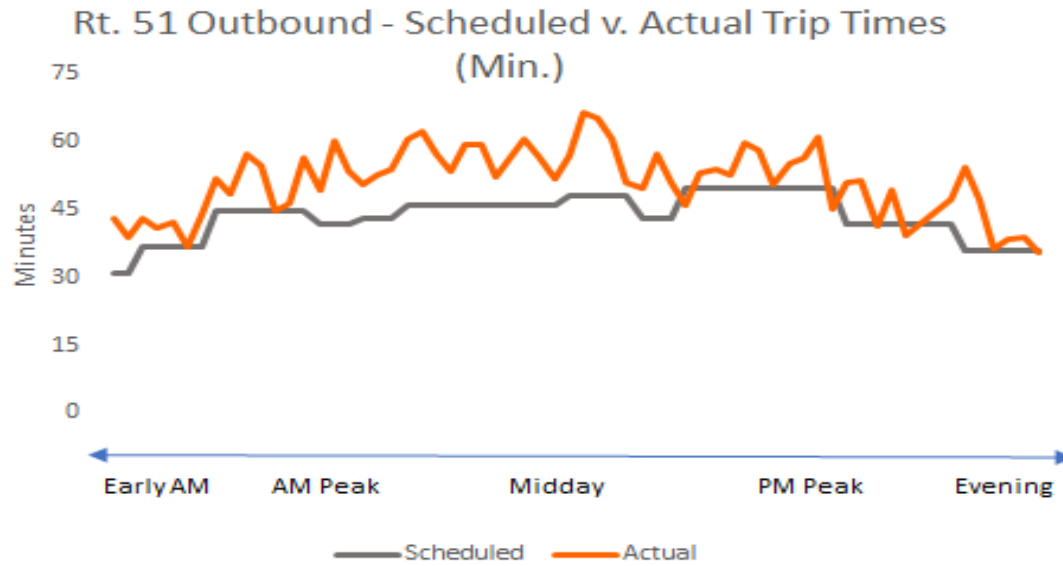


Similarly, inbound and outbound speeds decrease as number of stops increase.

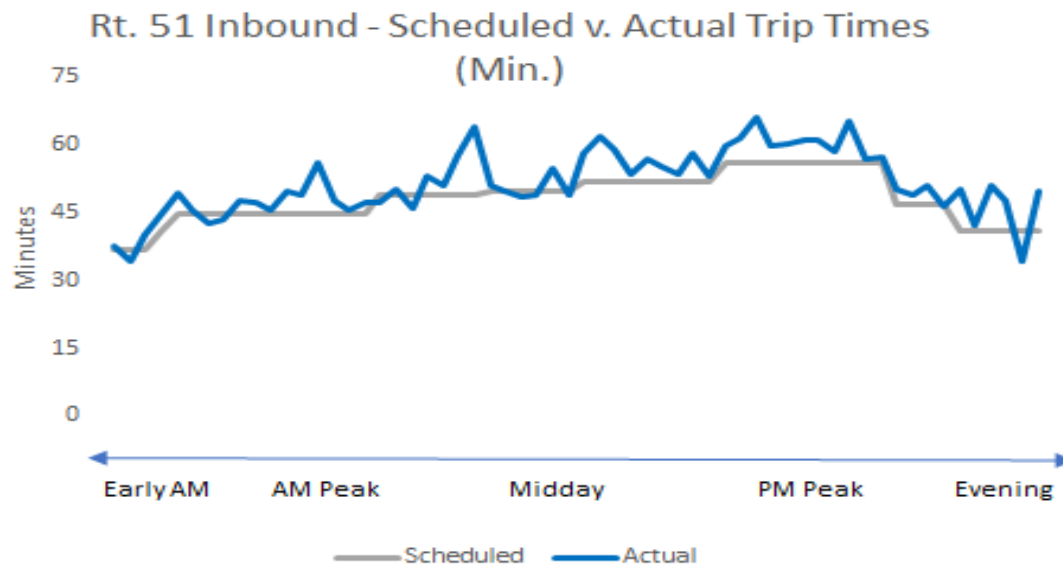




# OPERATIONAL DATA - SCHEDULE DEVIATION BY TIME OF DAY

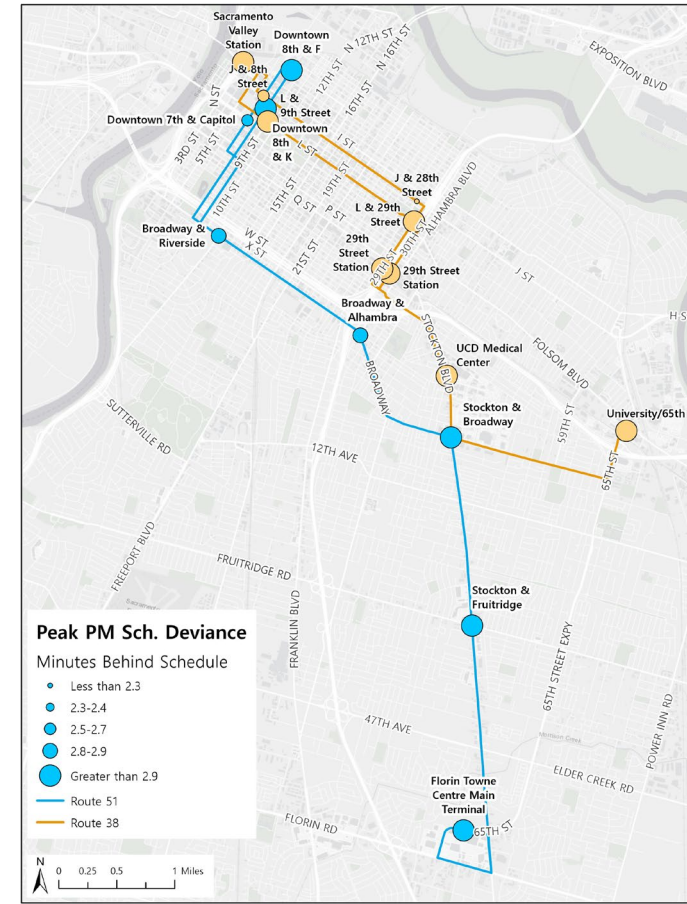
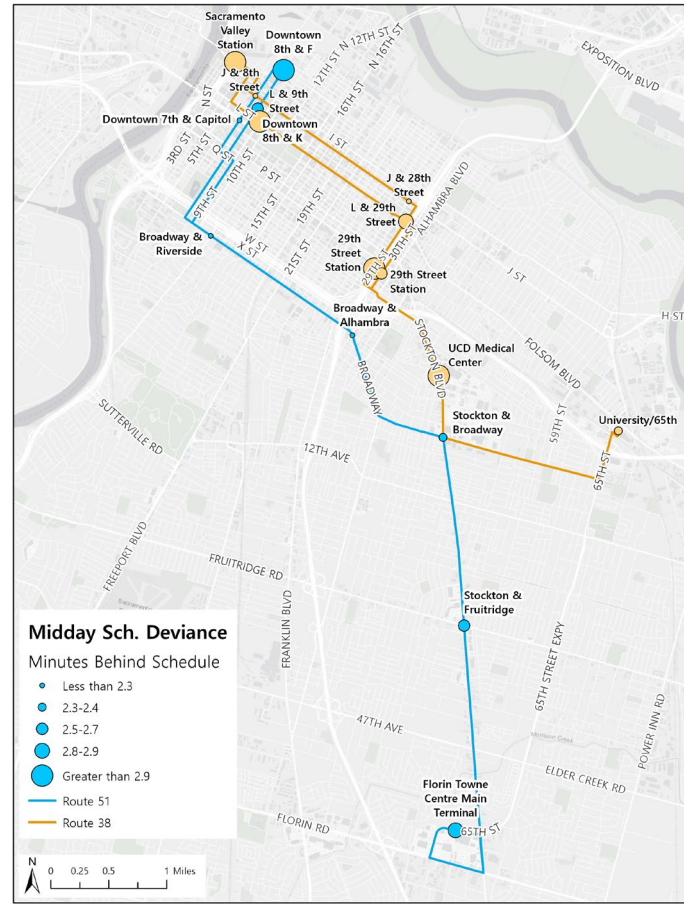
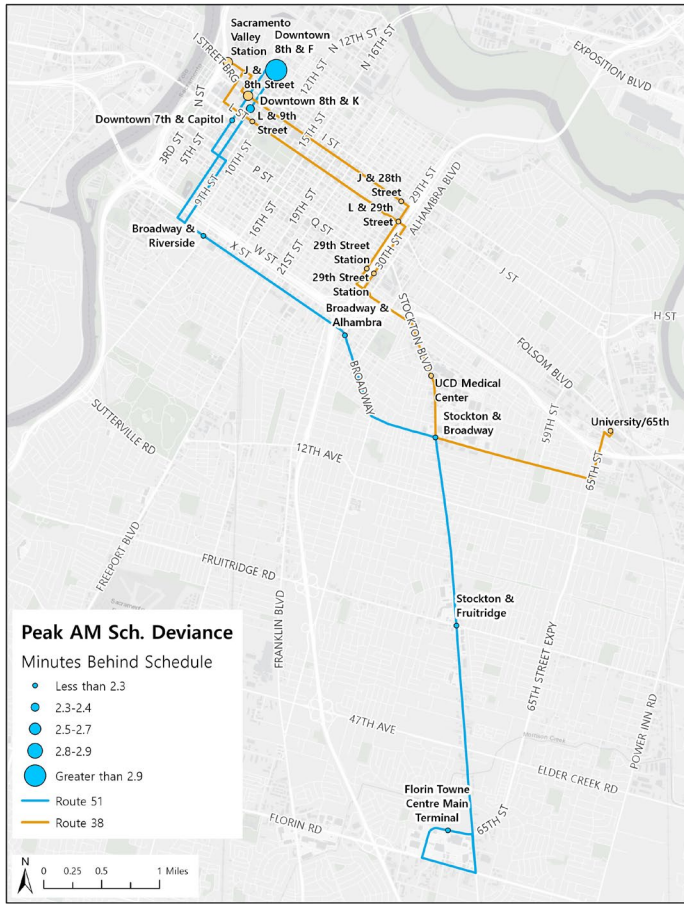


The greatest schedule deviations – shown in the chart as the gap between the gray and orange lines – is during the Midday period for Outbound trips.



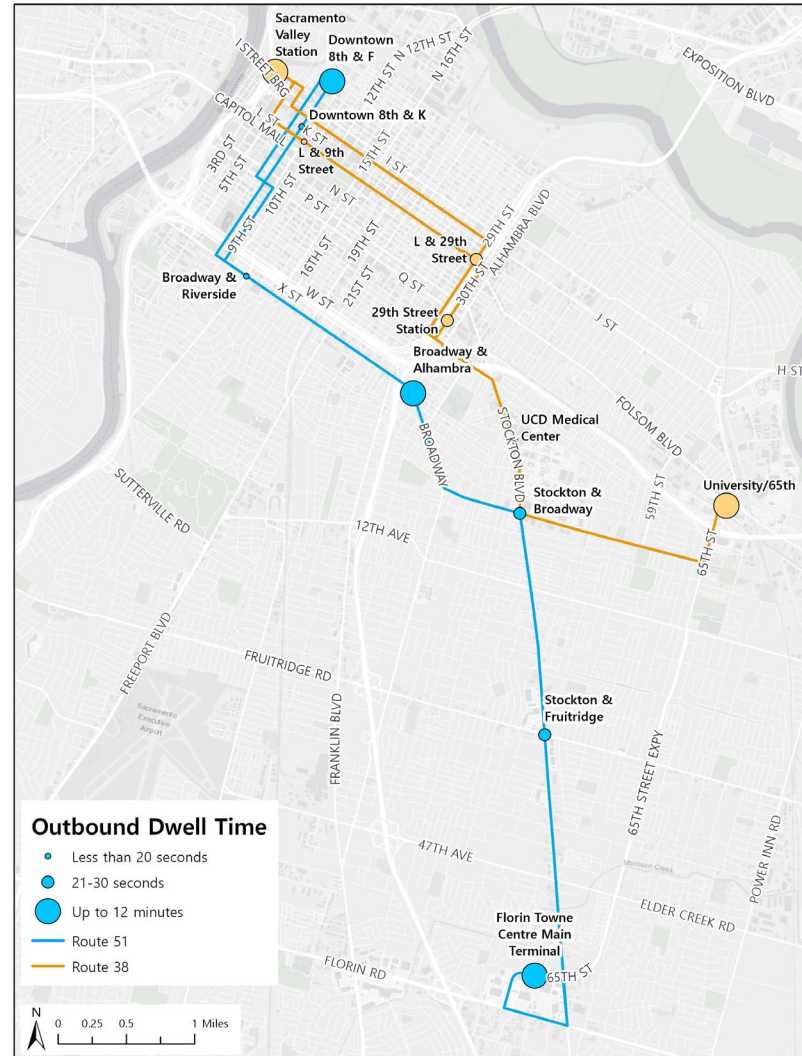
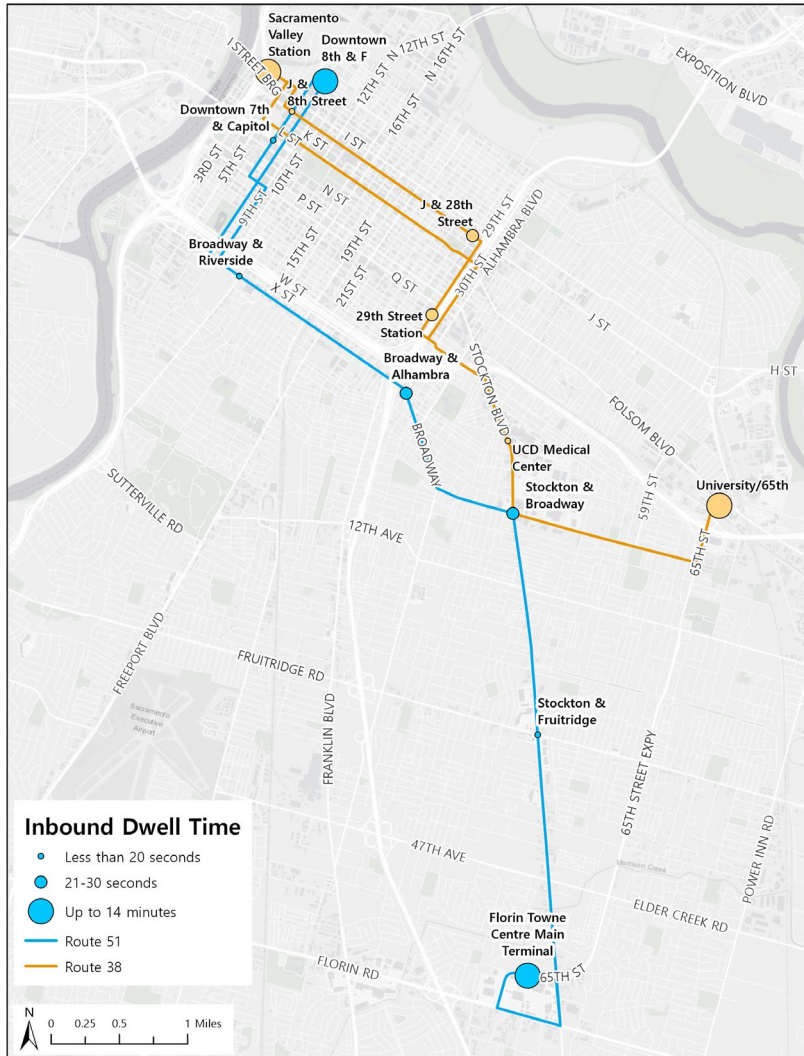
Inbound trip schedule deviation is smaller overall than Outbound trip schedule deviation.

# OPERATIONAL DATA - SCHEDULE DEVIATION BY TIME OF DAY



The greatest schedule deviations occur during the Peak PM time period.

# OPERATIONAL DATA – Dwell Time

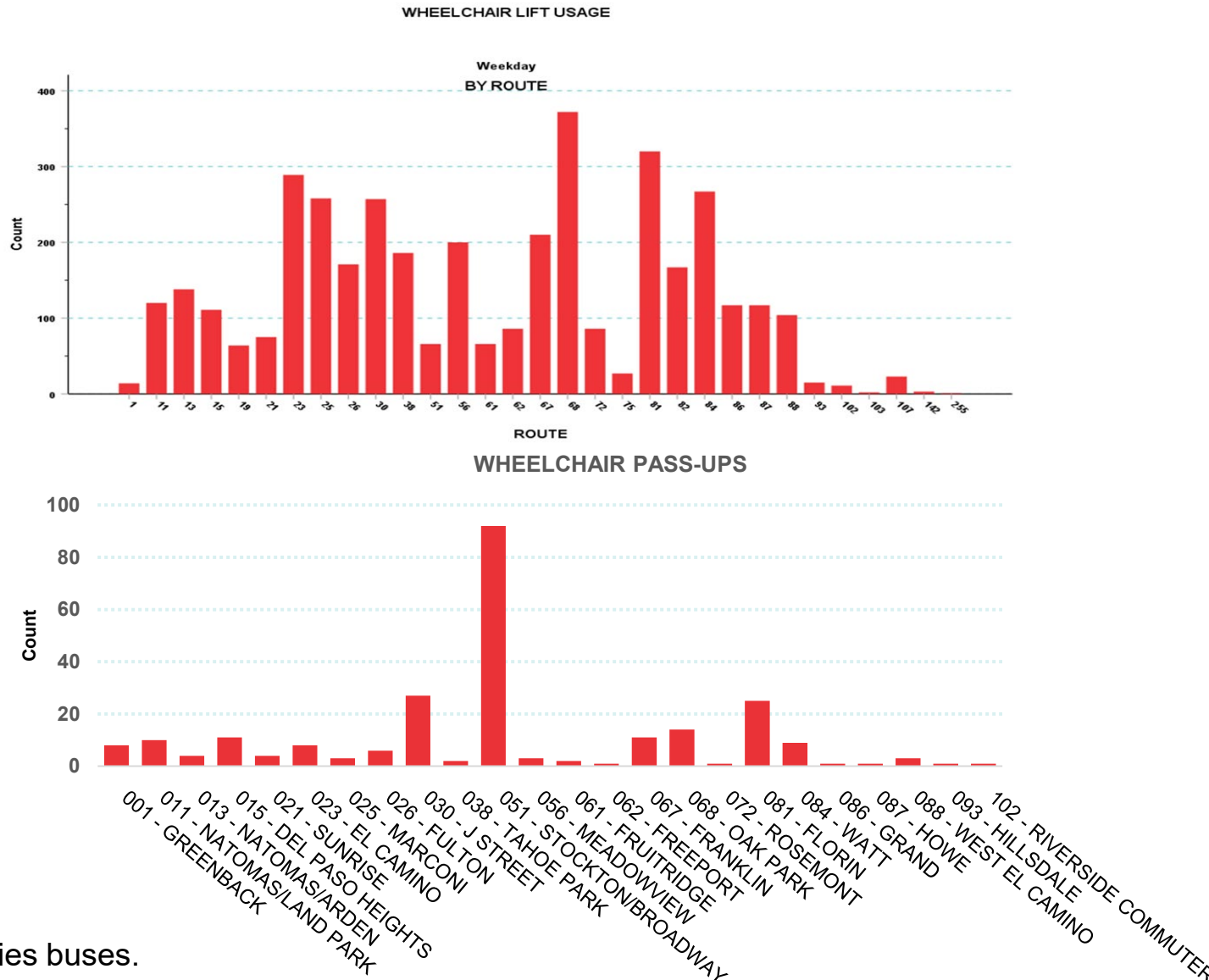


Florin Towne Centre Main Terminal has the longest dwell times along the corridor, followed by Stockton & Broadway.

# CUSTOMERS WITH WHEELCHAIRS BOARDING ACTIVITY

Although data may be skewed due to type of bus operating on the route\*, fewer customers using wheelchair lifts were recorded on Route 51 than Route 38 and many other routes in the network. Route 51 sees a higher number of pass-ups than other routes due to designated ADA areas being full.

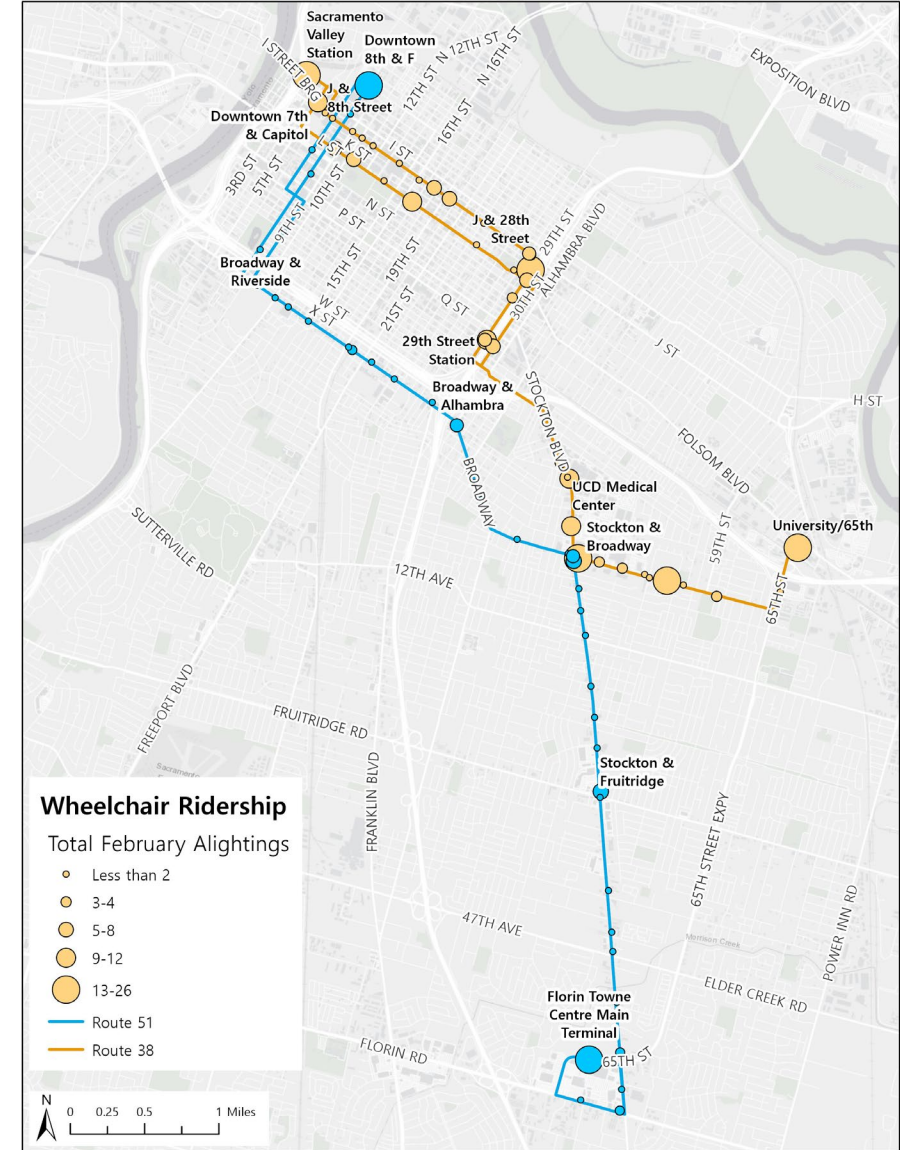
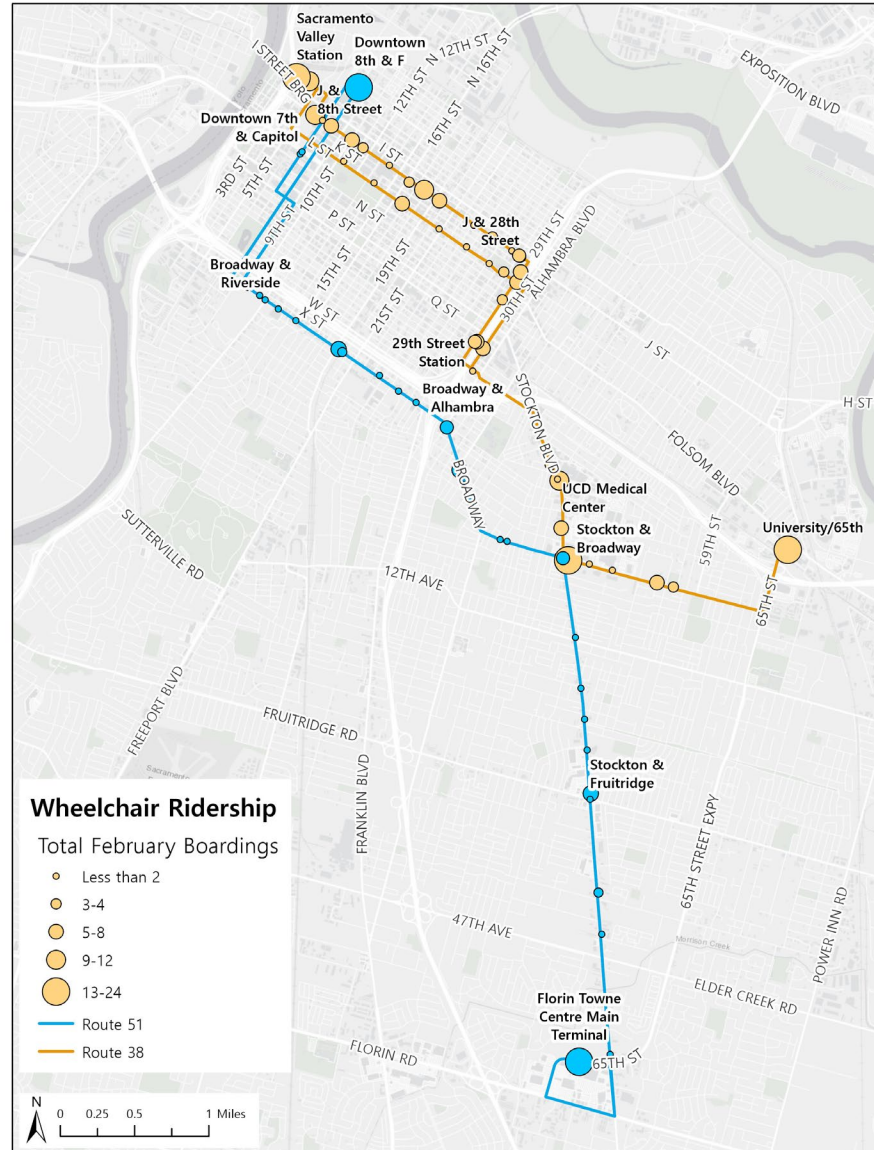
- 66 customers with wheelchairs were recorded boarding Route 51 during the month of February; 18 pass-ups were reported during this period.
- 186 were recorded on Route 38, though many of those were recorded on portions of the route outside of the Stockton Blvd corridor; no pass ups were recorded during this period.



\*Wheelchair lift usage may only be counted on the 1500 series buses.

# WHEELCHAIR ACTIVITY

UCD Medical Center, Stockton Boulevard, and Florin Towne Centre have the greatest wheelchair alightings and boardings.

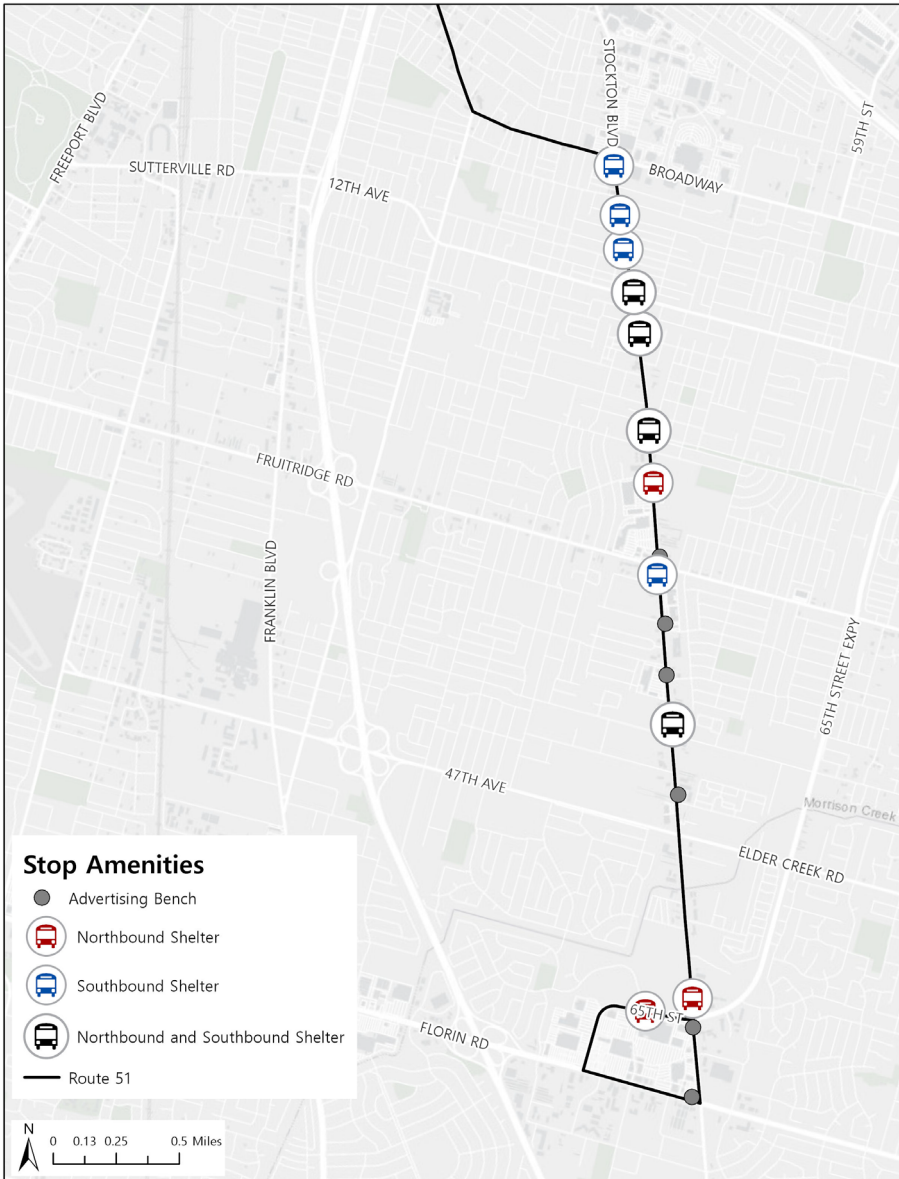


# FARE USAGE

Only 15% of customers on the 51 bus pay for their trip in cash, while 2x as many pay using Connect Card taps. This indicates that there is likely less opportunity for SacRT to realize en route travel time savings related to fare payment or significant improvements from any future offboard payment investments.

Fare Type	Feb Riders	% of Total
Connect Card Taps	24,112	30%
Students	17,864	22%
Cash	11,735	15%
Other Prepaid	7,747	10%
ZipPass	5,626	7%
Los Rios	3,845	5%
DHA	3,173	4%
Transfer	2,002	2%
Sr/Disable Monthly	1,321	2%
CSUS	993	1%
Daily pass Swipe	885	1%
Monthly Passes	556	1%
Discount Daily Pass	376	0.5%
Amtrak	139	0.2%
Total	80,374	

# BUS STOP AMENITIES



SacRT currently has an advertising contract with Clear Channel for bus shelters and benches. SacRT provides locations for these amenities, and Clear Channel determines whether it will be an ad shelter or bench primarily based on ad salability.

## Overall

- 23 bus stops (southbound); 8 have shelters
- 17 stops (northbound); 7 have shelters

## Northbound & Southbound Shelters

- Stockton and 13<sup>th</sup>/14<sup>th</sup> Avenues
- Stockton and 17<sup>th</sup> Avenue/San Francisco Boulevard
- Stockton and Perry/21<sup>st</sup> Avenues
- Stockton and Lemon Hill Avenue

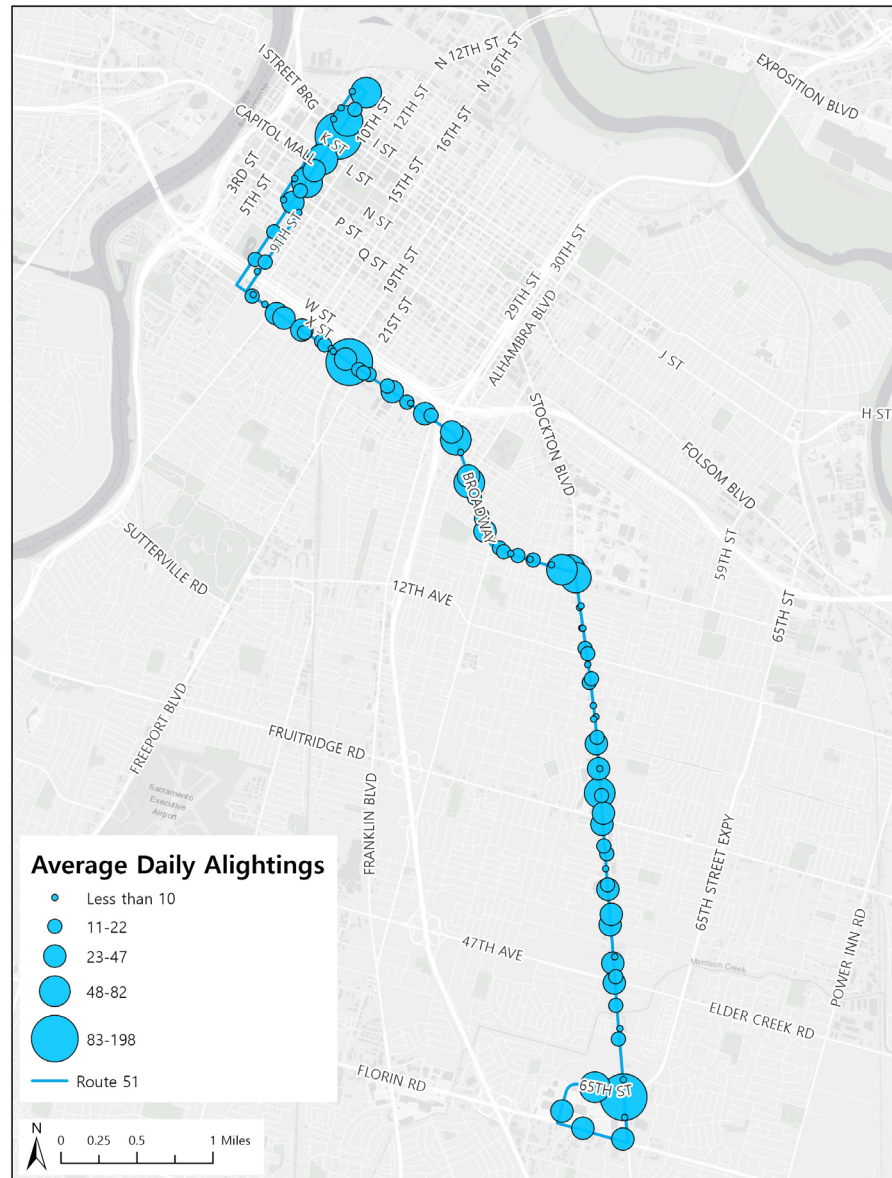
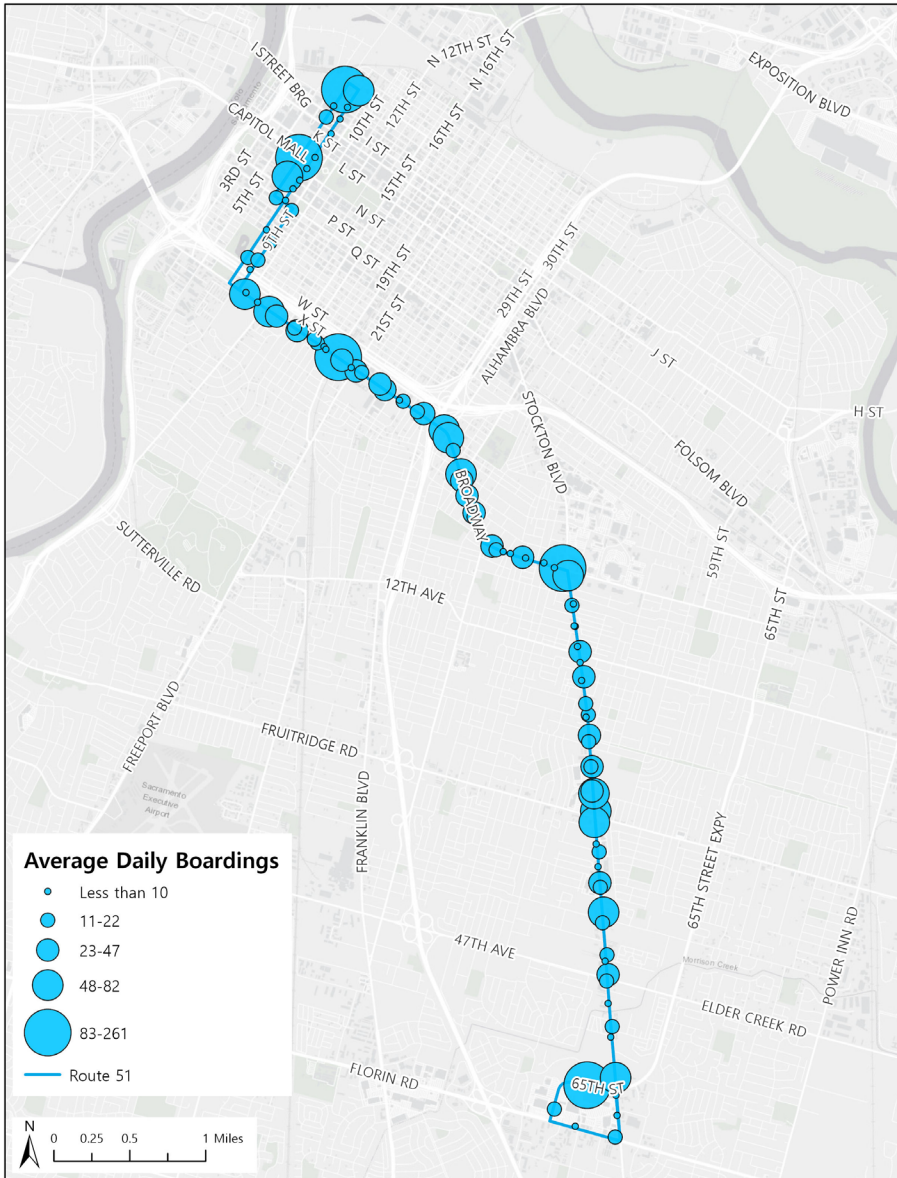
## Northbound-Only Shelters:

- 65<sup>th</sup> Street and Sky Parkway
- Stockton and 65<sup>th</sup> Street
- Stockton and Lawrence Drive

## Southbound-Only Shelters:

- Stockton and Broadway
- Stockton and 9<sup>th</sup> Avenue
- Stockton and 11<sup>th</sup> Avenue
- Stockton and Fruitridge Road

# RIDERSHIP



The greatest average daily boardings and alightings along Stockton Boulevard occur at 65<sup>th</sup> Street & Sky Parkway, Stockton & 65<sup>th</sup> Street, Stockton & Broadway and Stockton & Fruitridge Road.



# HIGH-LEVEL OPPORTUNITIES

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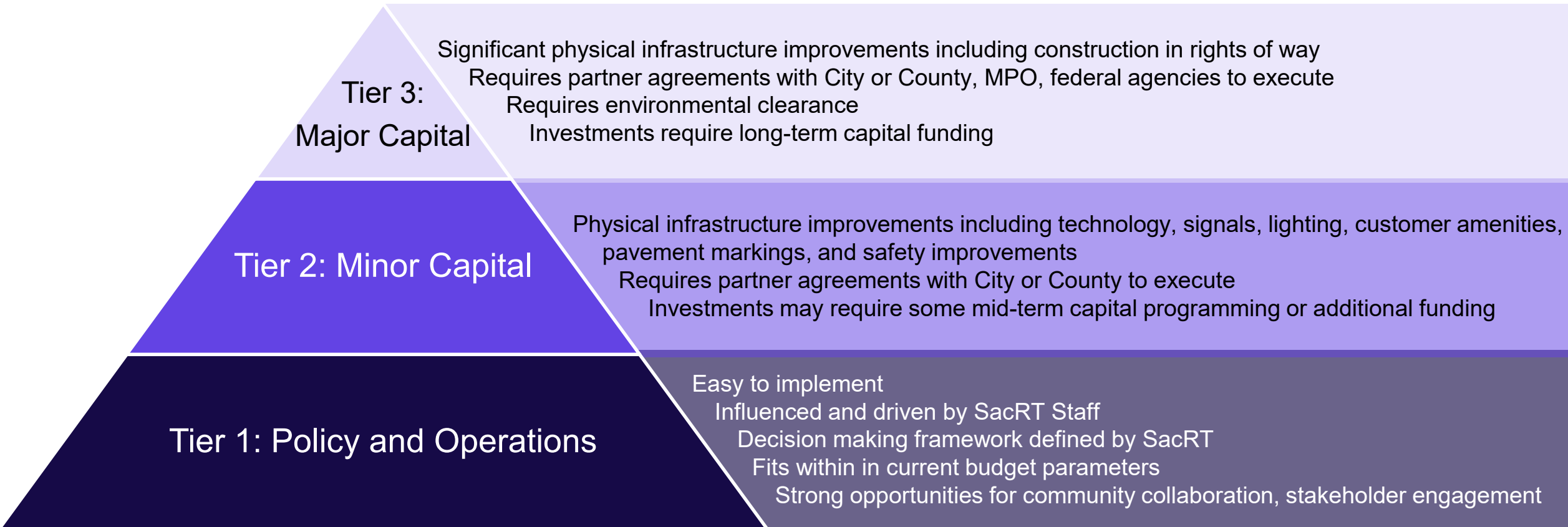


The opportunities identified are designed to link mobility outcomes, transit service, and customer experience into a coordinated vision through partnership with the City of Sacramento and stakeholders in the corridor.

These opportunities align safety and infrastructure investments with City of Sacramento Vision Zero, while optimizing transit operational performance.

Opportunities are defined within a tiered investment strategy.

# HIGH-LEVEL OPPORTUNITIES: TIERED INVESTMENT STRATEGY



Recommendations respond to customer feedback from field surveys and observation of physical and operating conditions of the corridor. This framework allows SacRT flexibility and adaptability to pursue strategies that build upon each other in a coordinated fashion to optimize limited resources creating objective triggers of performance and funding for pilots and long-term solutions.

# HIGH-LEVEL OPPORTUNITIES

## Tier 1: Policy and Operations Opportunities

a. Establish corridor working group with City of Sacramento and community partners and stakeholders. Work towards mutually defined vision of success. Examples may include customer safety, pedestrian safety, and economic development.

g. Develop a comprehensive passenger access and amenities program.

b. Identify and develop operating and capital tactics around priorities defined by customers: Frequency; on-time performance; travel time; and span of service.

h. Evaluate and deploy stop spacing program, with special adherence to pedestrian safety vision of the City of Sacramento.

c. Improve quality of operator training to improve schedule adherence.

i. Develop partnerships with law enforcement, mental health, veteran affairs and ambassador programs for homeless and vagrant population.

d. Increase frequency to 10 minutes (peak or all day).

j. Enhance bus stop cleaning programming.

e. Update and enhance the transit amenity policy with greater objective criteria defining when and what amenities should be installed at bus stops.

k. Align bus stop and station design standards with City of Sacramento Vision Zero investments in the corridor.

f. Enforcement of on-street parking restrictions and turning movements.

l. Deploy skip stop service, minimal stops at: 65th, Fruitridge, Broadway, 21st, Capitol Mall, Downtown.

# HIGH-LEVEL OPPORTUNITIES

Recognizing the ridership in the corridor, Stockton does have long term potential as a high capacity transit corridor. Care should be taken to collaborate with community partners to maintain the option for increased investment over time. As a strategy, SacRT should pursue investment strategies that build towards that scale in the future. The following table identifies infrastructure investments that could incrementally create capacity and direction towards arterial or bus rapid transit solutions over the next 20 to 30 years.

Tier 2: Minor Capital Investments	Tier 3: Major Capital Investments
a. Sidewalk and shelter amenity program	a. All-stop level boarding
b. Real time customer information resources at stops	b. All off-board fare collection
c. Improved street lighting at key stops and stations	c. Partial lane dedication
d. Rear door boarding, payment integration	d. Full corridor lane dedication
e. Super stops – level boarding, signage, and branding features at skip stops	
f. Transit Signal Priority	
g. Partial lane dedication in widened areas	
h. Queue by-pass	

# CASE STUDY: ACCESSIBLE SHELTERS

**Location:** San Antonio, TX

**Intervention:** Covered shelters with comfortable seating, sidewalk connections and ADA accessibility

**Actors:**

VIA Metropolitan Transit  
City of San Antonio  
Texas DOT

**Description:**

VIA uses thresholds for ridership and wheelchair user activity to prioritize stop improvements—giving first priority to highest ridership stops without shelters, followed by stops without sidewalk access or a shelter. Because VIA coordinated bus stop changes with the DOT, shelter foundations and ADA improvements were included and paid for in planned roadway projects.

**Cost:** ~\$6,000 per shelter

**Timeline:** 3 years



Source: <https://transitcenter.org/taking-bus-stops-from-sorry-to-superb/>

**Results: 1,000 shelters.  
95% of trips now begin at an accessible stop.**

# CASE STUDY: BUS BULBS/PLATFORMS

**Location:** Los Angeles, CA

**Intervention:** Modular, recycled plastic elevated platforms.

**Actors:**

City of Los Angeles – Department of Transportation, Bureau of Street Services

**Description:**

Modular bus platforms were installed on 2 intersections on First Street between Main and Spring in Downtown LA. The platforms allow buses to avoid merging with traffic after stopping and decrease boarding and alighting times.

Ramps were provided to share the platforms with an existing bike lane.

**Cost:**

Bus platforms: \$20,000 - \$50,000

**Timeline:** 6 months



Source: <https://la.streetsblog.org/2017/10/18/eyes-on-the-street-bus-platform-pilot-on-first-street-in-dtla/>

## Immediate Opportunity

SacRT owns four (4) modular bus stops. SacRT could coordinate with the City of Sacramento to pilot the use of modular bus stops at one or more high-use stops, such as Stockton and Fruitridge. A pilot will allow observation and measurement of impacts on traffic and transit speeds, as well as feedback from customers, operators, and the general community.

# CASE STUDY: BUS-ONLY LANE DURING PEAK PERIODS\*

**Location:** Everett, MA

**Intervention:** AM peak bus-only lane pilot and permanent striping.

**Actors:**

City of Everett – Planning and Development Department, Public Works Department  
MBTA

**Pilot Description:**

The City of Everett and MBTA created a temporary southbound, AM peak-hour bus lane on Broadway between Glendale Square and Sweetser Circle. Cones were installed from 4AM-9AM. Flashing signs and public work officers were used to enforce bus-only traffic. The pilot helped determine that 12' is an optimal width for a bus lane.

**Permanent Lane:**

After favorable results in the pilot, the bus-only lane was made permanent through striping and a Transit Signal Priority. Along with the bus-only lane, 2 modular, plastic boarding platforms were added to key intersections. A shared bike lane was included in the final design.

**Cost:**

Pilot: Labor

Permanent Lane: Striping Cost: \$130,000; Bus Platforms: \$50,000 each

**Timeline:** 1.5 months

\*Based on Stockton Blvd data, PM Peak lanes would be recommended over AM Peak lanes.



Source: <https://www.bostonglobe.com/metro/regionals/north/2016/12/21/everett-hails-bus-only-lane-broadway-success/9wDjozXVlbCkz2ziPf9lJ/story.html>

**Results: Travel time was reduced by 20-30% during first week of the pilot. Trips were made more consistent and public feedback was very favorable.**

# CASE STUDY: QUEUE JUMP LANES

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**Location:** New York, NY

**Intervention:** Queue jump lanes are short bus lane segments that allow buses to cut ahead of other traffic at signal intersections.

**Actors:**

MTA

NYC DOT

**Description:** NYC DOT installed 3 queue jumps along 86<sup>th</sup> Street in Manhattan, served by route M86.



Source: <https://nyc.streetsblog.org/2015/07/02/eyes-on-the-street-queue-jump-bus-lanes-await-delayed-m86-sbs/>

**Results: Travel time decreased by 10%.  
Ridership up by 7%.**



# CASE STUDY: OFF-BOARD FARE COLLECTION

**Location:** Chicago, IL

**Intervention:** Pre-paid bus boarding pilot during the afternoon peak.

**Actors:**

CTA

**Description:**

To improve bus boarding time, the CTA started a pilot program to test off-board fare collection in 4 locations in Chicago. The CTA installed fencing to create a “paid” area, as well as a Ventra vending machine and mobile fare validators.

**Cost:**

\$77,000 (includes labor, Ventra vending machine, mobile barriers, sandwich boards) + annual costs to enforce fare

**Timeline:** 3-6 months



Source: <https://activetrans.org/blog/prepaid-bus-boarding-pilot-program-expandsoverlay-contextblog-prepaid-bus-boarding-pilot-program-expands>

**Results: 54% reduction in boarding times across the four pilots. 90% of customers who staff surveyed were satisfied with the prepaid process.**

# CASE STUDY: TRANSIT SIGNAL PRIORITY

**Location:** AC Transit – Oakland, CA

**Intervention:** Gives transit vehicles priority at traffic lights. Cost-effective method to improve transit travel time and reliability.

**Actors:**

AC Transit

ACCMA

San Pablo SMART Corridor

**Project Description:**

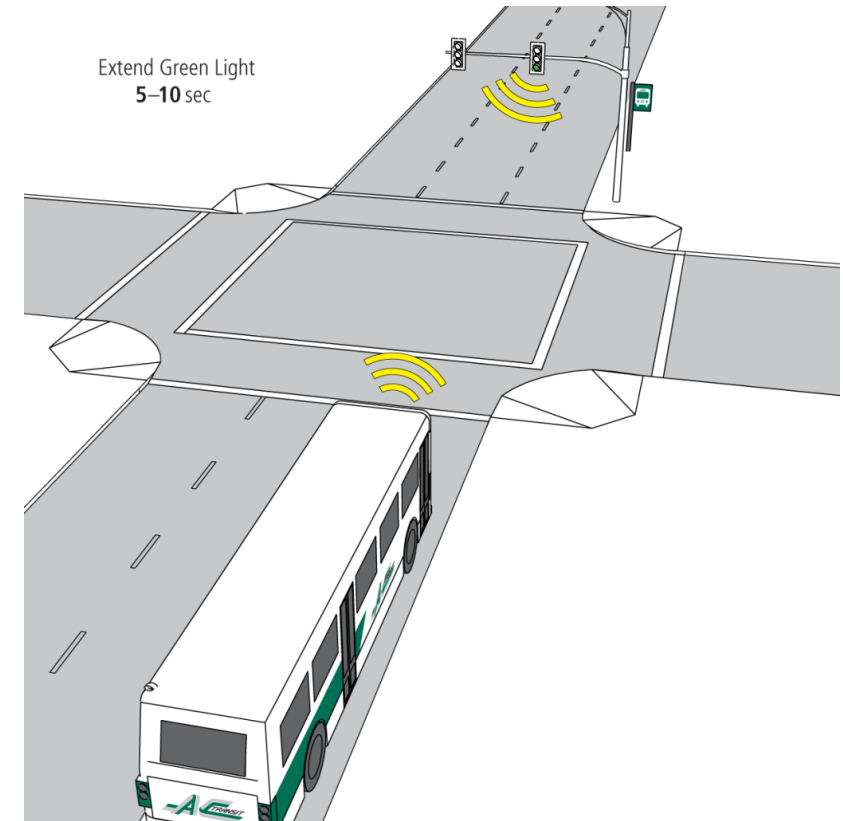
AC Transit installed emitters on 21 buses and ACCMA installed TSP at 62 intersections along San Pablo, a 14-mile corridor. Most bus stops were already far-side, but some were relocated to ensure TSP was utilized correctly.

**Cost:**

Emitter per bus: \$600

Intersection: \$35,000

**Timeline:** 18 months for total implementation



Source: [http://www.actransit.org/?attachment\\_id=38122](http://www.actransit.org/?attachment_id=38122)

**Results: 9% Time Savings**

# CASE STUDY: CORRIDOR PREPARATION FOR BRT

**Location:** Indianapolis, IN

**Intervention:** Blue Line Bus Rapid Transit

**Actors:**

IndyGO

Indianapolis MPO

Central Indiana Regional Transportation Authority

Indianapolis Department of Public Works

**Description:**

The Blue Line is a planned BRT project serving a 24-mile corridor that is currently served by IndyGO's highest ridership route. It will include increased frequency (every 10 minutes), level boarding, proof-of-payment fare collection, and 0.5-1 mile stop spacing. The corridor includes residential and commercial, with some auto-centric commercial portions. Transitioning of the corridor for BRT will be a 10+ year process.

**Cost:** \$200 million

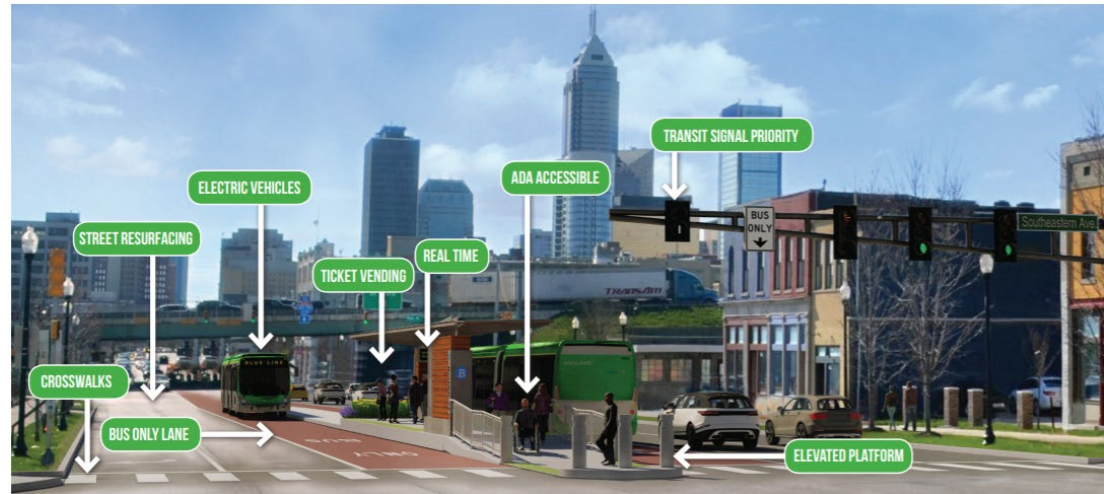
**Timeline:**

Alternatives Analysis - 2013

5%-10% Design - 2018

30% Design – 2019

Estimated launch - 2025



**Expected Results: As much as 30% reduction in travel times. Supports identified TOD nodes and economic development areas.**

# CASE STUDY: CORRIDOR PREPARATION FOR BRT

**Location:** Atlanta, GA

**Intervention:** Campbellton Road Bus Rapid Transit

**Actors:**

MARTA

City of Atlanta

**Description:**

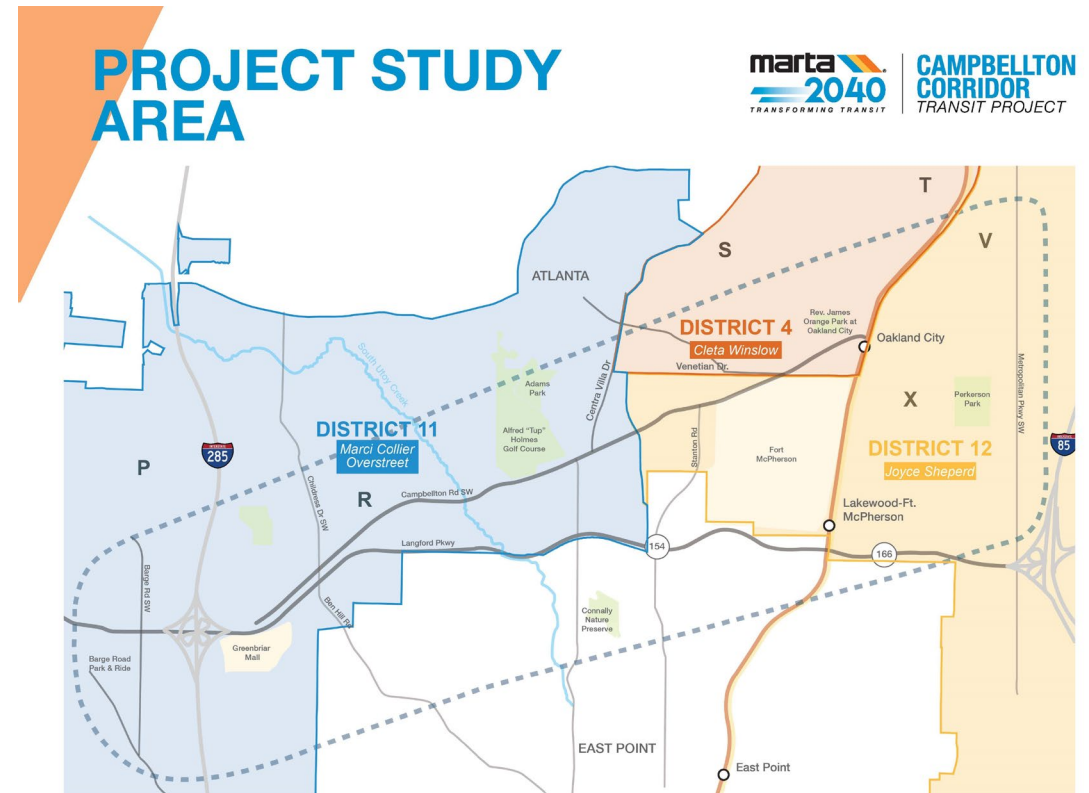
High-capacity transit improvements are planned for a 5.7-mile segment of Campbellton Road, a mixed residential and commercial corridor targeted for redevelopment efforts and currently served by one of MARTA's busiest routes. The project includes evaluation of transit-oriented development and joint-development strategies to spur economic development. MARTA increased frequency of local bus service in 2018 as a precursor to BRT.

**Cost:** \$125 million

**Timeline:**

Alternatives Analysis – 2020/2021

Estimated launch – 2031



**Expected Results: Economic redevelopment, safety improvements, equity**

# CASE STUDY: CORRIDOR PREPARATION FOR BRT

**Location:** Detroit, MI

**Intervention:** Gratiot Avenue Bus Rapid Transit

**Actors:**

RTA of Southeast Michigan

**Description:**

Gratiot Avenue is the 2<sup>nd</sup> highest priority corridor in the region for BRT and is planned to have increased frequency (10 minutes peak/15 minutes off peak), stations spaced 1-1.5 miles apart, and dedicated lanes. In the interim, they have been able to increase frequency in the corridor through interlining with SMART and DDOT, co-branded buses, skip stops, and expanded span of service. The corridor has experienced a spike in ridership as a result.

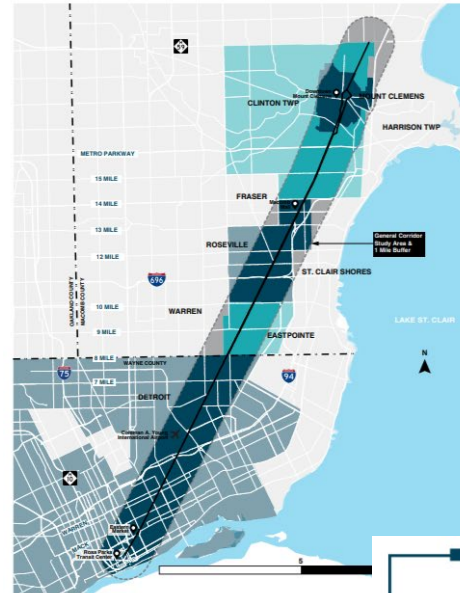
**Cost:** \$255 million (\$10 million-\$11 million per mile)

**Timeline:**

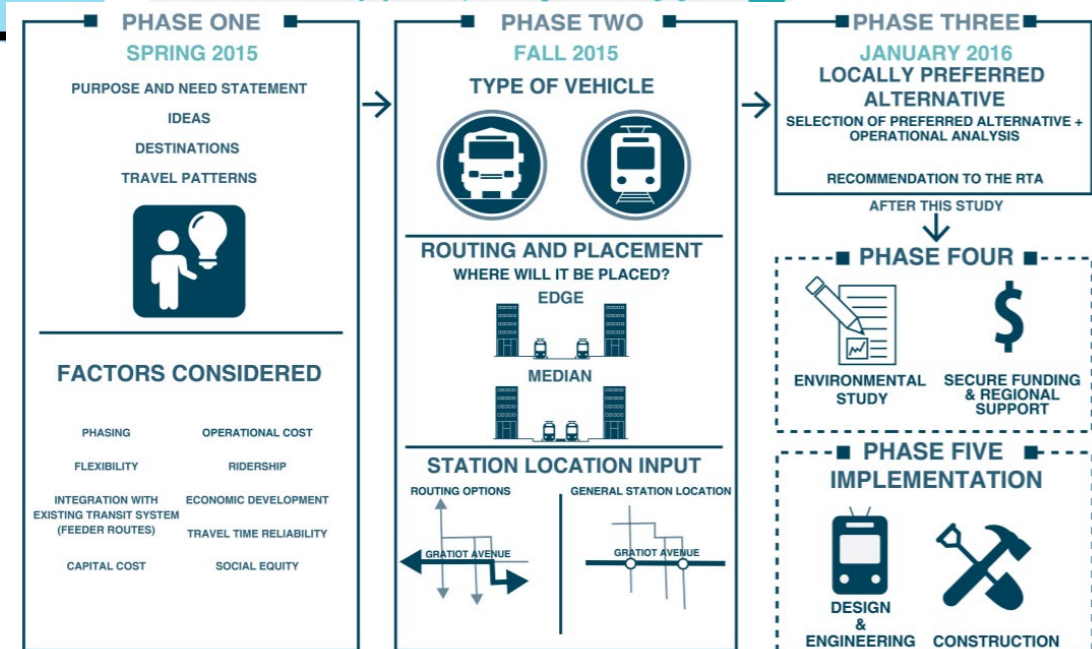
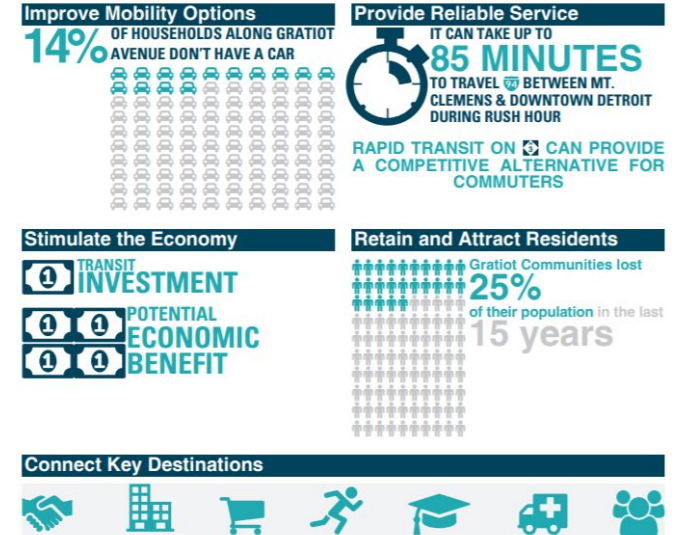
Planning – 2016

Estimated launch - TBD

Study Area



**Why Rapid Transit on Gratiot Avenue?**



# IMPLEMENTATION

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An initial opportunity for implementation brings SacRT's Stockton Boulevard strategy into alignment with the City of Sacramento's Vision Zero initiative for the corridor.

The City of Sacramento has conducted analysis to improve pedestrian safety along Stockton Boulevard. This moment creates an opportunity for collaboration with the City, promotes the safety of SacRT customers, and creates opportunities to make customer-focused service improvements.

SacRT should give attention to the recommendations and work in partnership to preserve opportunities for flexibility and future expansion through the relationship in this corridor.

# HIGH-LEVEL OPPORTUNITIES – Vision Zero Collaboration

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TransPro completed a review of a presentation developed by Nelson Nygaard for the City of Sacramento, which included options under consideration by the City for a segment of the Stockton Boulevard corridor selected for Vision Zero improvements. TransPro reviewed the information in the presentation and cross referenced it with Service and Design standards of SacRT. Following are observations that SacRT may wish to consider in determining its approach to aligning service and investment with the City's Vision Zero initiative on Stockton Boulevard. Resolution of conflicts in standards will give clarity to SacRT in its long-term approach to service in the corridor while working collaboratively with the goals of the City in this segment of Stockton.

## Vision Zero Corridor Solutions Impacting SacRT

- **Driveway consolidation** – this should have a positive impact on transit operations, with fewer opportunities for conflict or delays with other vehicles pulling in or out of driveways.
- **Bus stop consolidation** – while this may be possible in some targeted areas, this was one of the lowest rated options by Route 51 customers for high-capacity corridor improvements.
- **Signal cycle changes and infrastructure** - this should be assessed for impact on transit operations, and to extent possible, accommodate priority for transit vehicles at key intersections.
- **Additional pedestrian/bicyclist scale lighting** – while Route 51 customers were less likely to cite issues with lighting than other potential high-capacity corridor routes, these interventions would benefit SacRT customers, who primarily access the stops by walking.
- **More protected crossings** – Route 51 customers cited unsafe crossings as their number one barrier to accessing bus stops, though the percentage reporting this as a barrier was lower than in other corridors.
- **Speed up transit at major intersections** – based on segments of high ridership and highest transit delay, the potential queue jumps at Broadway, 21st, Fruitridge, 47th appear to be in alignment with where SacRT would target improvements.
- **Better bus stop amenities** – Route 51 customers rated benches and shelters at stops as a top priority and investments in permanency of stops can support longer-term high-capacity transit investments.

# HIGH-LEVEL OPPORTUNITIES – Vision Zero Collaboration

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In addition to overall considerations, a number of specific design-related observations are noted below. As the City of Sacramento makes final determinations regarding design and allocation of street space, it is important that the needs and implications for transit be fully understood.

## **Shared Bus/Bike Lanes**

One of the City of Sacramento's options includes a 13' shared bike and transit facility. Due to the potential conflicts between buses and cyclists that could pose a risk to safety, this type of design should be carefully reviewed by SacRT Operations and Safety Divisions before final determinations made. The only shared lane bike and bus facility speculated in SacRT design guidelines is a shared cyclotrack in one concept of a mid-block bus stop configuration.

## **Lane Widths**

SacRT design guidelines assume 12' lane widths, while the General Purpose (GP) lane width in the City's design work is 11'. Additional design configuration options assume a 10' lane width for various mid-block bus stop, but without a bike facility. This is an element that should also be reconciled before final design.

SacRT design guidelines have clear specifications about parking in lanes for right turn movements, which should be reflected in any City design recommendations.

## **Queue Jumps**

SacRT has queue jump guidelines that require reconciliation with the City's designs on accel lane length, taper, near/far side location, specifications, safety and mobility objectives at each proposed instance. Our recommendation is that SacRT leverage the Complete Streets/Vision Zero opportunity to increase far side operation.



## HIGH-LEVEL OPPORTUNITIES – Vision Zero Collaboration

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The Vision Zero improvements also provide an opportunity for shared goals and investment in the Stockton Boulevard corridor. Below are opportunities of potential alignment on locations and the share of investment in infrastructure to execute:

- Alignment of SacRT's standard for midblock crossing with proposed instances by the City in the study area
- For future skip stop, ART-like service, or stops with all door boarding – consider special branding of stop signage infrastructure (update standard accordingly)
- Potential alternative configuration for mid-block bus stop and bike/ped facility spacing
- Floating transit island between bus/GP lane and bike/ped facility appears to align with one of the City's proposed options with features for configurations with on-street parking
- Alignment of City's accommodations of parallel berth requirements for 40' & 60' vehicles

# IMPLEMENTATION: POLICY AND OPERATIONS

Opportunity	Cost Range	Timeframe	Partners Needed	Potential Revenue Sources	Next Actions	Trigger Conditions
Establish a clear purpose and vision for Stockton Blvd. Corridor	<\$25,000	<6 months	City of Sacramento, SACOG, Sacramento County	General fund; 5307; STP Funds	Convene working group	<ul style="list-style-type: none"> <li>Condition met</li> </ul>
Define and prioritize corridor in the context of the SacRT network	<\$25,000	<6 months	City of Sacramento, SACOG, Sacramento County	General fund; 5307; STP Funds; CMAQ	Complete High-Capacity Transit Study	<ul style="list-style-type: none"> <li>Capital Program Plan</li> <li>High-Capacity Transit Study</li> </ul>
Prioritize customer and stakeholder tactics	<\$25,000	<6 months	City of Sacramento, corridor stakeholders	General fund	Develop tactics for addressing findings of Rt. 51 customer survey	<ul style="list-style-type: none"> <li>Customer Satisfaction Survey Results (ongoing)</li> </ul>
Improve quality of operator training for schedule adherence	<\$25,000	<6 months	None	General fund	Meet w/ Ops staff to update training	<ul style="list-style-type: none"> <li>Condition met</li> </ul>
Increase frequency to 10 minutes (peak or all day)	\$140,000-\$380,000	<6 months	None	General fund; 5307; STP Funds	Continue to monitor customers per revenue hour	<ul style="list-style-type: none"> <li>Several months of increased customers per revenue hour</li> </ul>

# IMPLEMENTATION: POLICY AND OPERATIONS

Opportunity	Cost Range	Timeframe	Partners Needed	Potential Revenue Sources	Next Actions	Trigger Conditions
Update and enhance the transit amenity policy with greater objectivity for amenities	<\$25,000	<6 months	City of Sacramento, corridor stakeholders	General fund; 5307; STP Funds	Review bus amenities policy in alignment with customer priorities	<ul style="list-style-type: none"> <li>Condition met</li> </ul>
Enforcement of on-street parking restrictions and turning movements	<\$25,000	Ongoing	City of Sacramento	N/A	Observe areas of corridor with highest delay to identify any enforcement issues; discuss with City	<ul style="list-style-type: none"> <li>Ongoing</li> </ul>
Deploy skip stop service, minimal stops at: 65th, Fruitridge, Broadway, 21st, Capitol Mall, Downtown	Varies – potential to be revenue neutral if reduce headways on non-skip stop trips	12-24 months	None	General fund; 5307; STP Funds	Develop list of priority stops for targeted boardings and alightings	<ul style="list-style-type: none"> <li>Increases in proportion of customers traveling between major stops (or within .25 mile of major stops)</li> </ul>

# IMPLEMENTATION: MINOR CAPITAL

Opportunity	Cost Range	Timeframe	Partners Needed	Potential Revenue Sources	Next Actions	Trigger Conditions
Super stops – level boarding, signage, and branding features at skip stops	Modular bus platforms (free – already owned by SacRT)	6 months-1 year	City of Sacramento, corridor stakeholders	For additional stops: General fund; Capital Grants; 5339	Meet with City of Sacramento and corridor stakeholders to identify pilot location(s)	<ul style="list-style-type: none"> <li>Condition met</li> </ul>
Queue by-pass	\$2,000 - \$400,000 (if existing roadway can be re-purposed with signage and striping vs. completely new construction)	Pilot – 6 months  Permanent – 1-2 years	City of Sacramento	STP Funds; General fund; CMAQ	Meet with City of Sacramento and corridor stakeholders to identify pilot location(s) in conjunction with modular bus stops	<ul style="list-style-type: none"> <li>Conditions met for pilot</li> <li>Pursue permanent solution if pilot successful</li> </ul>
Transit Signal Priority	Depending on technology Intersection: \$2,500-\$40,000 Bus: \$50-\$2,500	1-2 years	City of Sacramento	General fund; Capital Grants; 5339	Meet with City of Sacramento to discuss TSP priorities and SacRT Ops to discuss onboard vehicle technology needs	<ul style="list-style-type: none"> <li>Peak hour bus volume of 10-15 buses/hour and/or 400-600 customers/hour</li> </ul>

# IMPLEMENTATION: MAJOR CAPITAL

Opportunity	Cost Range	Timeframe	Partners Needed	Potential Revenue Sources	Next Actions	Trigger Conditions
Partial lane dedication	\$50,000-\$100,000 per mile	Pilot – 6 months to 1 year  Permanent – 2 years minimum	City of Sacramento	STP Funds; General fund; CMAQ; Small Starts (less competitive for partial lanes)	Work with City of Sacramento to pilot application in conjunction with modular bus stops	<ul style="list-style-type: none"> <li>• Conditions met for pilot</li> <li>• Pursue permanent solution if pilot successful</li> </ul>
Full corridor lane dedication	\$50,000-\$100,000 per mile	5-10 years	City of Sacramento	STP Funds; General fund; CMAQ; Small Starts	See above	<ul style="list-style-type: none"> <li>• Shared vision of BRT in the corridor</li> <li>• Momentum on redevelopment that is transit-friendly</li> </ul>

# IMPLEMENTATION: MAJOR CAPITAL

Opportunity	Cost Range	Timeframe	Partners Needed	Potential Revenue Sources	Next Actions	Trigger Conditions
Off board fare collection	Fare collector/validator machines: \$25,000-\$35,000 per TVMs: \$3M-\$8M (total estimated for corridor)	1-2 years	City of Sacramento	STP Funds; General fund; CMAQ	Identify systemwide goals and strategy for offboard fare payment	<ul style="list-style-type: none"> <li>Investment in “Super Stops” (see page 59)</li> </ul>
Level boarding	Permanent bus bulbs: \$40,000-\$80,000 depending on site constraints and length and width of extension	1-2 years	City of Sacramento	STP Funds; General fund; CMAQ	Test location(s) and outcomes through pilot installation of modular bus stops	<ul style="list-style-type: none"> <li>Successful pilot of modular bus stops</li> </ul>

# CONCLUSION

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Partnerships and coordination are key to success in this corridor, with an opportunity for SacRT to shape decisions affecting the customer experience and greater community. As the entity with primary responsibility for right-of-way, the City of Sacramento is an especially critical partner in efforts to enhance transit service along Stockton Boulevard, and there is opportunity to leverage the shared interest in enhanced safety and mobility for users of the corridor. The following recommendations address the immediate opportunities for increased coordination between the City of Sacramento and SacRT.

- 1. Programmatic/Operating Agreement/Memorandum of Understanding** – This would formalize how SacRT and the City of Sacramento engage with one another as partners in the corridor. For example, this agreement could address standards for investment, how the City is engaged before SacRT makes major operational changes in this corridor, how SacRT would be engaged before the City makes major changes to the right-of-way, and other key elements affecting the corridor. Early and clear definitions of success for both partners will assure long-term success for safe mobility throughout the corridor.
- 2. Pedestrian Safety Enhancements** – Unsafe street crossings and lack of lighting were identified in the customer survey as barriers to customers accessing transit in this corridor, while safety waiting for the bus was one of the lowest rated areas of satisfaction. Customers also rated amenities like benches, Wi-Fi, and USB charging outlets as being most important to their experience. Improving the environment in the vicinity of major stops and crossings would benefit SacRT as well as support the City’s Vision Zero goals. Recommended areas of focus and shared investment include:
  - Stockton and 65<sup>th</sup> St
  - Stockton and Broadway
  - Stockton and Fruitridge
- 3. Demonstration Project Opportunities** – As a high-ridership transit corridor, there are opportunities to test enhancements like bus bulbs and queue jumps as pilots, allowing the City and SacRT to evaluate whether any improvements to customer experience, mobility, or safety warrant further investment in more permanent solutions. SacRT has 4 modular bus stops ready to deploy. These could be deployed for several months at stops such as Stockton/Fruitridge and Stockton/Broadway. In general, data suggests that enhancements to the corridor between Stockton/Fruitridge and Florin Towne Centre would have the biggest impact on customers based on the combination of existing ridership levels and level of delay.

# APPENDIX: POTENTIAL SEGMENTS FOR BUS-ONLY LANES

## Location: Between Florin and Fruitridge

**Purpose:** To overcome peak delays, particularly in the afternoon, a dedicated lane in this segment will expedite bus travel time and boarding at key loading and unloading areas. This segment of the corridor experiences the most consistent amount of schedule deviation.

**Potential Applications:** SacRT and the City of Sacramento can collaborate on a full dedication of the segment or initially start with afternoon peak segments via a pilot using temporary lane marking, signage, and soft barriers.

## Location: North of Broadway, in the Central Business District (CBD)

As Stockton links into the traditional grid of the CBD, bus speeds reduce significantly with increased stops, cross streets, traffic signals, and vehicular and pedestrian traffic. This segment offers SacRT the potential to explore lane dedication in downtown Sacramento and serve as a pilot for other vehicles operating in the downtown.

**Potential Applications:** Identifying one segment of the downtown routing on the 1-way pair of 8<sup>th</sup> and 9<sup>th</sup> Streets offer a highly visible pilot application to test and collect safety, speed and other relevant data to inform future bus only applications in the system.

## Additional Benefits:

- Increase visibility of transit service in the corridor
- Influence calming of motorized vehicle traffic in the remaining general purpose lanes
- Expedite boarding and alighting at congested stops such as Stockton & Fruitridge and Stockton and Broadway
- Works best in tandem with signal priority or preemption. Initial lane dedication investment sets the stage for a higher tier infrastructure investment



Dedicated Curbside Bus Lane

Source: <https://nacto.org/publication/urban-street-design-guide/street-design-elements/transit-streets/dedicated-curbside-offset-bus-lanes/>



Dedicated Offset Bus Lane

Source: <https://nacto.org/publication/urban-street-design-guide/street-design-elements/transit-streets/dedicated-curbside-offset-bus-lanes/>



RESOLUTION NO. 21-05-0049

Adopted by the Board of Directors of the Sacramento Regional Transit District on this date:

May 10, 2021

**APPROVING THE HIGH CAPACITY BUS CORRIDOR STUDY**

NOW, THEREFORE, BE IT HEREBY RESOLVED BY THE BOARD OF DIRECTORS OF THE SACRAMENTO REGIONAL TRANSIT DISTRICT AS FOLLOWS:

THAT, the Board hereby approves and adopts the High-Capacity Bus Corridor Study for the Capital Region, attached hereto as Exhibit A, as prepared by staff and directs staff to move forward with the recommendations presented in the report.

\_\_\_\_\_  
STEVE MILLER, Chair

A T T E S T:

HENRY LI, Secretary

By: \_\_\_\_\_  
Cindy Brooks, Assistant Secretary



# High Capacity Bus Service Study

*Task 3.5 - Final Report*

May 2021

DRAFT



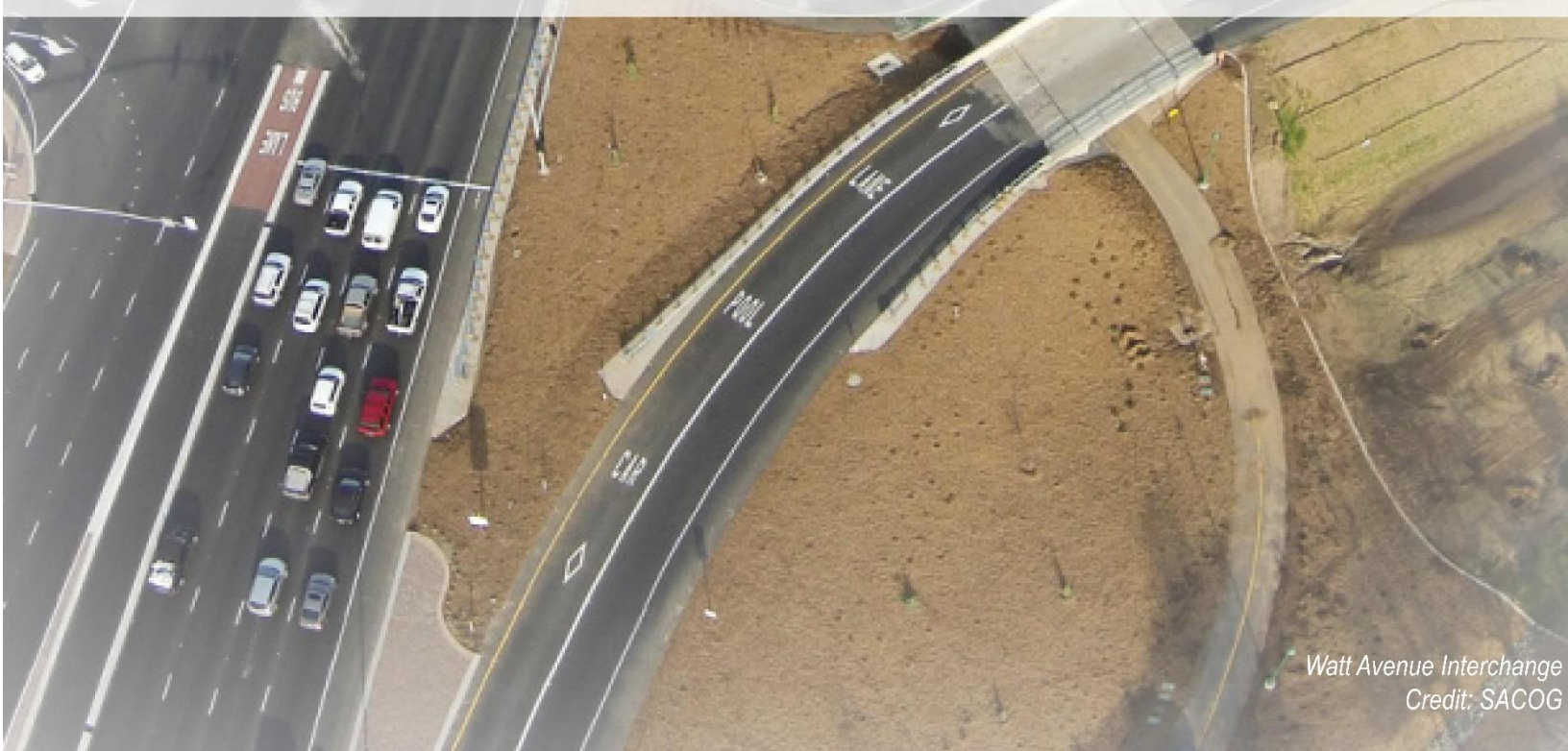
**Regional  
Transit**

Produced by





# INTRODUCTION



# INTRODUCTION

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Sacramento Regional Transit (SacRT) has been investing in initiatives to promote and improve transit throughout its service area. In 2018, Caltrans awarded SacRT with funding from the Sustainable Transportation Planning Grant Program to develop, prioritize and conceptually plan for an effective high capacity bus system in the Sacramento Region. Work funded through this award will be completed through the SacRT High Capacity Bus Service Study.

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**High capacity transit** is characterized by fixed routes, higher frequency, faster speeds, limited stops, efficient operations, traffic signal prioritization, and branding infrastructure. When compared to light rail, high capacity transit is less infrastructure intensive, provides more flexibility and has lower capital and operating costs.

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“Hi-Bus” and “Bus Rapid Transit” networks were prominently featured in SacRT’s 2009 Transit Action Plan, and in Sacramento Area Council of Government’s (SACOG) 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS). In 2018, SacRT undertook a comprehensive look at the

existing transit system, which resulted in the SacRT Forward Network Plan and began implementation of recommendations in September 2019. This High Capacity Bus Service Study builds off existing policies, regulations, and findings from previous studies.

The following corridors have been identified for further examination in this study:

- Sunrise Boulevard
- Watt Avenue
- Florin Road
- Arden Way
- Stockton Boulevard<sup>1</sup>

## Which Corridors in the SacRT Service Area are Best Suited for High Capacity Bus Service?

Over the past decade, the Sacramento Region has developed a transit vision that includes enhanced bus service, as seen in the **2009 SacRT Transit Action Plan** and the **SACOG 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS)**. Both plans contain a network of

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<sup>1</sup> Stockton Boulevard, since it is part of a broader effort with the City of Sacramento Corridor Project, was taken out of this study and was analyzed through a separate review process in collaboration with the City of Sacramento.

corridors that are potential candidates for high frequency service and complementary capital investments to improve speed, reliability, and customer experience. There are **eleven corridors** that both the SacRT Transit Action Plan and the SACOG MTP/SCS identify as candidates for high-capacity improvements.

## Screening Criteria

The eleven corridors were screened based on the following criteria:



**Transit Supportive Land Uses:** Located in an area that can support high capacity transit – with higher residential or employment density, potential for future development,



**Transportation Network Connectivity:** Potential for connection with existing high capacity transit (e.g. light-rail) or links to an existing transit center.







**Existing SacRT Service:** Corridor already supports 15-minute service or has existing transit service.



**Geographic Distribution:** Potential to serve different markets in SacRT service area. For example, the list of corridors should include a mix of north-south and east-west corridors and represent a mix of locations in the SacRT service area.

Table 1: Screening of the Corridors

	Orientation	 Transit Supportive Land Use	 Transportation Network Connectivity	 Existing SacRT Service	 Geographic Distribution
★ Watt Avenue	North-South	✓	✓	✓	✓
★ Sunrise Boulevard	North-South	✓	✓	✓	✓
★ Arden Way	East-West	✓	✓	✓	✓
Bradshaw Road	North-South		✓		
Elk Grove Boulevard	East-West				
Laguna Boulevard	North-South				
★ Stockton Boulevard [1]	East-West	✓	✓	✓	✓
★ El Camino Avenue [2]	East-West	✓		✓	
Calvine Road	East-West		✓		
Fair Oaks Boulevard	East-West				
★ Florin Road	East-West	✓	✓	✓	✓

[1] Stockton Boulevard is being studied as part of a separate effort, and thus is not included in this report.

[2] El Camino Avenue was included as part of the study because it is close and parallel to Arden Way, even though it only has two check marks.



Figure 1: Corridors Identified for Screening and Selected as part of the Study

## Key Findings

This study takes the high capacity bus corridors identified in the regional planning documents to the next step by identifying spot improvements, defining a long-term vision for High Capacity Bus Service (HCBS) in the corridors, and identifying potential partners for implementation.

**Watt Avenue** and **Arden Way** warrant improvements to existing service and spot improvements to increase transit speed and reliability in the short term. These two corridors could be good candidates for HCBS in the future as each corridor develops. Watt Avenue would be a particularly good candidate, as an increased number of projects and political support has been accelerating development along the corridor. **Florin Road** has bus service that would support HCBS but struggles to get political buy-in to move improvements forward. **Sunrise Boulevard** is a candidate for mid- and long-term investments in service and capital improvements, which would lay the foundation for HCBS. **El Camino Avenue** is well-positioned for spot treatments to improve speed and reliability but would not support HCBS. Therefore, it was not carried forward into the recommendation stage of the study.

## Report Organization

This report is separated into six sections:

- **Corridor Review:** This section gives an overview of the five corridors that were selected through the screening process. It highlights key opportunities and challenges for each corridor. This section

summarizes *Technical Report 1: Existing Conditions*.

- **Stakeholder Engagement:** This section presents the key outreach activities that took place during the project. They include stakeholder interviews, on-board surveys, online surveys, and a virtual public workshop. This section summarizes *Technical Report 2: Outreach*.
- **Corridor Evaluation:** This section reviews the key elements that were evaluated to determine which corridors would support HCBS. This section summarizes *Technical Report 3.1: Corridor Prioritization*.
- **Phasing and Improvements:** This section recommends incremental improvements along each corridor to build faster, more direct, and more reliable service in order to prepare the corridor for HCBS. It also suggests multimodal improvements to make the corridor more accessible for pedestrians and cyclists. Finally, this section includes a long-term vision for each corridor, including potential transfer points, terminal points, and phasing for the future HCBS service. This section summarizes *Technical Report 3.2: Development of Routes*.
- **Implementation Strategies:** This section reviews capital and operating costs, potential funding sources, and partnership strategies.
- **Next Steps:** This section highlights actionable items that SacRT can do to implement the strategies and improvements recommended in this report.



# CORRIDOR REVIEW



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# CORRIDOR REVIEW

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This section presents an overview of the corridors. For more information, please refer to *Technical Report Task 3.1: Existing Conditions* in the appendix. Each overview includes a summary of the corridor and a review of existing transit services. It also includes demographic data for employment<sup>2</sup> and housing<sup>3</sup>. A summary table of opportunities and challenges is also presented at the end of each corridor section. The five corridors reviewed include:

- Arden Way
- El Camino Avenue
- Florin Road
- Sunrise Boulevard
- Watt Avenue



*Figure 2: Sunrise Boulevard*



*Figure 3: Arden Way at Arden Fair*

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<sup>2</sup> US Census Bureau – Workplace characteristics in Longitudinal Employment Household Dynamics Program 2017

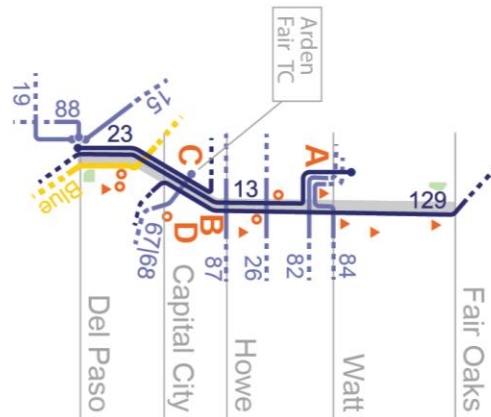
<sup>3</sup> U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates, Table B-01003

# Arden Way

## Overview

**Length:** 6.3 miles

**Boundaries:** Del Paso Road to Fair Oaks Boulevard



### Destinations

- Kaiser Permanente Sacramento Medical Center and Medical Offices (A)
- Howe Bout Arden Shopping Center Arden Fair Mall (B)
- Arden Fair Transit Center (C)
- Cal Expo - Fairgrounds (D)
- Blue Line Arden/Del Paso Station



### Transit Connections

- Bus 22, 23, 29, 67, 68, 13, 15, 19, 22, 23, 88, 129
- Blue Line







Not to scale



*Note: El Camino Avenue and Arden Way serve similar markets since they are parallel corridors located one mile apart. This analysis will determine which one has the greatest potential of success.*

### Community Characteristics:

	Corridor Total
Total Number of Jobs	48,131
Total Number of Residents	50,407

<b>Disadvantaged Communities</b> 	<b>Opportunity Zones</b> 	<b>Low-Income Communities</b> 	<b>Commercial Corridors</b>  <i>From Ethan Way to Watt Avenue</i>	<b>Smart Growth Street</b> 	<b>Transit Priority Area</b> 
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## Existing Transit

	Weekdays	Saturdays	Sundays & Holidays
13	<b>Every 45 minutes</b> <i>between 5:53 AM and 9:21 PM</i>	<b>Every 45 minutes</b> <i>between 8:01 AM and 8:55 PM</i>	<b>Every 45 minutes</b> <i>between 9:01 AM and 7:40 PM</i>
23	<b>Every 30 minutes</b> <i>between 5:12 AM and 11:15 PM</i>	<b>Every 30 minutes</b> <i>between 6:27 AM and 7:37 PM</i>	<b>Every 45 minutes</b> <i>between 8:43 AM and 8:08 PM</i>
129	<b>Every 30 minutes</b> <i>during peak hours</i>	<b>No Service</b>	<b>No Service</b>



### Boardings

- |  |   |  |
|--|---|--|
| <p><i>Route 13</i></p> <ul style="list-style-type: none"> <li>• 267 weekday</li> </ul> | <p><i>Route 23</i></p> <ul style="list-style-type: none"> <li>• 1,568 weekday</li> <li>• 1,145 Saturday</li> <li>• 674 Sundays</li> </ul> | <p><i>Route 129</i></p> <ul style="list-style-type: none"> <li>• Too new for data</li> </ul> |
|--|---|--|

Arden Way is an east-west roadway with high traffic flow (with an AADT of over 25,000) and transit volume.

Arden Fair Transit Center, located near the intersection of Arden Way and Heritage Lane, serves as a bus stop or terminal to Routes 22, 23, 29, 67, and 68. In addition, the Blue Line Arden/Del Paso Station serves as a transit hub, connecting Routes 13, 15, 19, 22, 23, 88, and the Blue Line. Within the study corridor, Arden Way is served by Routes 13 and 129, with a smaller portion also covered by Route 23.

SacRT Forward improvements rerouted a portion of Route 13, changing its path from North Market Boulevard to San Juan Road. A commuter route (Route 129) was introduced

during peak hours to provide service between Arden Arcade Area and Downtown Sacramento.

As for employment density, the portion between Del Paso Boulevard and Watt Avenue shows moderate to high employment density and the area east of Watt Avenue shows low employment density. It should be noted that Arden Way between Howe Avenue and Watt Avenue has a significantly higher concentration of commercial uses compared to adjacent east-west corridors.

*Table 2: Arden Way Corridor Opportunities and Challenges*

	<b>Opportunities</b>	<b>Challenges</b>
<b>Existing Transit Service</b>	<ul style="list-style-type: none"> <li>• High level of combined frequency on Lines 13 and 23</li> <li>• Express bus to Downtown Sacramento with stops on Arden Way</li> </ul>	<ul style="list-style-type: none"> <li>• Overlapping bus routes serving different parts of the corridor</li> <li>• Most productive route (23-El Camino) does not travel the entire corridor</li> <li>• Continuous route (13-Natomas/Arden) is infrequent and has low productivity</li> </ul>
<b>Network Connectivity</b>	<ul style="list-style-type: none"> <li>• Connections to the Gold Line</li> <li>• Connections to north-south bus lines</li> </ul>	
<b>Land Use</b>	<ul style="list-style-type: none"> <li>• Significant employment along corridor</li> <li>• High employment density around Arden Fair Mall</li> </ul>	<ul style="list-style-type: none"> <li>• Low residential density east of Watt Avenue</li> <li>• Large parking lots between street and front of buildings</li> </ul>
<b>Pedestrian and Bicycle Environment</b>	<ul style="list-style-type: none"> <li>• Pedestrian amenities (shelters and benches) for transit riders at Del Paso/Arden Station</li> </ul>	<ul style="list-style-type: none"> <li>• Gaps in sidewalks and bike lanes along the corridor</li> </ul>
<b>Street Configuration</b>	<ul style="list-style-type: none"> <li>• Wide street with median and turn lanes could increase feasibility of transit priority lanes (business access transit, queue jump or bus-only lanes)</li> </ul>	<ul style="list-style-type: none"> <li>• Large intersections for pedestrian crossings</li> </ul>
<b>Equity</b>	<ul style="list-style-type: none"> <li>• High incidence of zero-car households</li> </ul>	
<b>Stakeholder Support</b>		<ul style="list-style-type: none"> <li>• Not mentioned in stakeholder interviews</li> </ul>
<b>Project Development</b>	<ul style="list-style-type: none"> <li>• High traffic levels means that spot treatments such as traffic signal priority would be valuable time-savers</li> </ul>	<ul style="list-style-type: none"> <li>• SACOG does not specify Arden Way projects that would allow HCBS in their 2020 MTP/SCS, showing a lack of political support for HCBS in this corridor</li> </ul>

# El Camino Avenue

## Overview


**Length:** 4.7 miles

**Boundaries:** Howe Avenue to Fair Oaks Boulevard



**Destinations**

- Country Club Plaza (A)

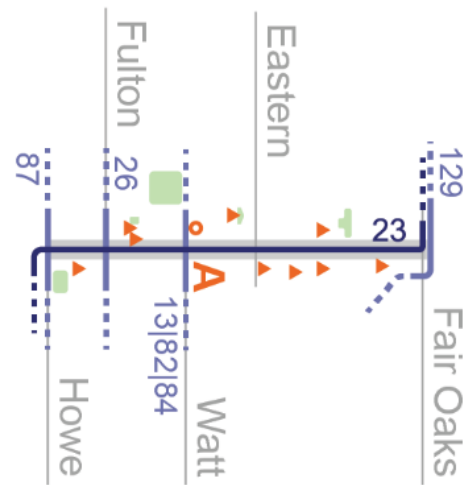


**Transit Connections**

- Bus 87, 26, 13, 82, 84, 129







**Community Characteristics:**


	Corridor Total
Total Number of Jobs	10,756
Total Number of Residents	40,356








Not to scale

**El Camino Avenue**

-  Light Rail
-  SacRT Bus
-  Elk Grove e-tran
-  Schools
-  Public Services
-  Key Locations



*Note: El Camino Avenue and Arden Way serve similar markets since they are parallel corridors located one mile apart. This analysis will determine which one has the greatest potential of success.*

Disadvantaged Communities	Opportunity Zones	Low-Income Communities	Commercial Corridors	Smart Growth Street	Transit Priority Area
			 <i>From Ethan Way to Watt Avenue</i>		

**Existing Transit**

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	<i>Route 13</i>
<i>Weekdays</i>	<b>Every 45 minutes</b> between 5:53 AM and 9:21 PM
<i>Saturdays</i>	<b>Every 45 minutes</b> between 8:01 AM and 8:55 PM
<i>Sundays &amp; Holidays</i>	<b>Every 45 minutes</b> between 9:01 AM and 7:40 PM



**Boardings**

- 1,568 weekday
- 1,145 Saturday
- 674 Sunday

El Camino Avenue provides an east-west connection for the region, intersecting with major roads such as Watt Avenue and Howe Avenue. However, it does not connect to any light rail stations. Route 23 serves El Camino Avenue for its entire length. Route 23 can offer important connections between the

Sunrise Transit Center and the Arden/Del Paso Blue Line Station.

Small schedule improvements were made to Route 23 as part of the SacRT Forward Network changes.

**Table 3: El Camino Avenue Opportunities and Challenges**

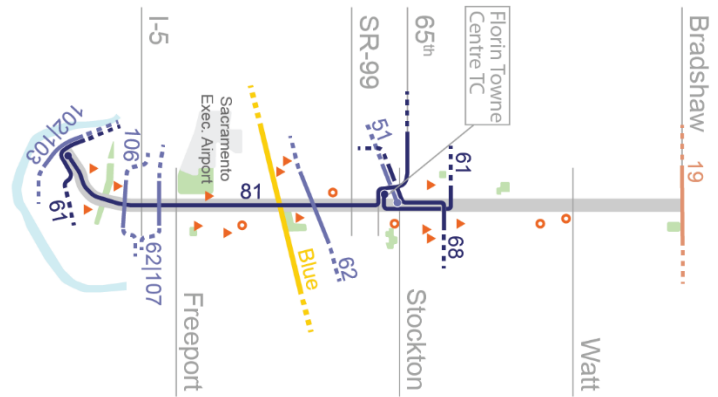
	<b>Opportunities</b>	<b>Challenges</b>
<b>Existing Transit Service</b>	<ul style="list-style-type: none"> <li>• Relatively productive route with 30-minute midday service</li> <li>• Opportunity to improve frequency on Route 23 travels along El Camino between Ethan and Fair Oaks</li> </ul>	<ul style="list-style-type: none"> <li>• Below average on-time performance of Route 23</li> </ul>
<b>Network Connectivity</b>	<ul style="list-style-type: none"> <li>• Connects with several north-south routes</li> </ul>	<ul style="list-style-type: none"> <li>• No direct connection to light rail via El Camino Avenue; Route 23 connects with light rail at Arden Way</li> </ul>
<b>Land Use</b>	<ul style="list-style-type: none"> <li>• Mixed use land uses with commercial nodes at major intersections</li> </ul>	<ul style="list-style-type: none"> <li>• Low density residential land use</li> <li>• Auto-oriented uses west of Ethan Way</li> </ul>
<b>Pedestrian and Bicycle Environment</b>	<ul style="list-style-type: none"> <li>• Bike lanes and sidewalks along parts of El Camino</li> </ul>	<ul style="list-style-type: none"> <li>• Gaps in sidewalks and bike lanes along the corridor</li> </ul>
<b>Street Configuration</b>	<ul style="list-style-type: none"> <li>• Center turn lane and frontage road could increase feasibility of transit priority treatments</li> </ul>	<ul style="list-style-type: none"> <li>• No on-street parking limits, opportunity for transit facilities (e.g., bus lanes, bulb-outs)</li> </ul>
<b>Equity</b>	<ul style="list-style-type: none"> <li>• High incidence of low-income residents and zero-car households</li> </ul>	
<b>Stakeholder Support</b>	<ul style="list-style-type: none"> <li>• Stakeholders suggested that El Camino would likely be a better alignment than Arden due to its 15-minute service.</li> </ul>	
<b>Project Development</b>		<ul style="list-style-type: none"> <li>• SACOG does not specify El Camino Avenue projects that would allow HCBS in their 2020 MTP/SCS, showing a lack of political support for HCBS in this corridor</li> </ul>

# Florin Road

## Overview

**Length:** 11.7 miles

**Boundaries:** Riverside Boulevard to Bradshaw Road through Meadowview, Parkway, Florin, I-5 and SR-99

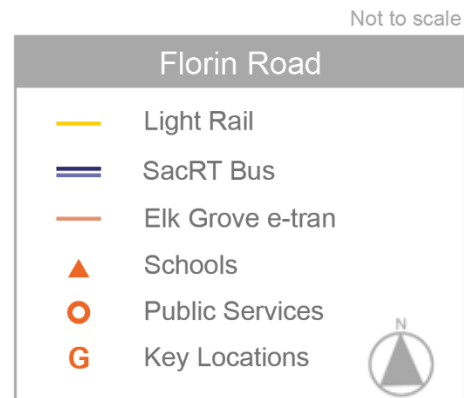


**Destinations**

- Florin Towne Centre
- Riverfront
- Luther Burbank High School

**Transit Connections**

- Florin Towne Centre Transit Center
- Bus: 51, 61, 68, 81
- Blue Line



**Community Characteristics:**

	Corridor Total
Total Number of Jobs	20,417
Total Number of Residents	106,447

Disadvantaged Communities	Opportunity Zones	Low-Income Communities	Commercial Corridors	Smart Growth Street	Transit Priority Area
✓	✓	✓	✓ <i>Between Franklin and Stockton Boulevard</i>	✓	✓



**Existing Transit**

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<i>Route 81</i>	
<i>Weekdays</i>	<b>Every 15 minutes</b> between 5:19 AM and 11:00 PM
<i>Saturdays</i>	<b>Every 30 minutes</b> between 6:18 AM and 8:48 PM
<i>Sundays &amp; Holidays</i>	<b>Every 30 minutes</b> between 8:18 AM and 6:18 PM



**Boardings**

- 2,466 weekday
- 1,087 Saturday
- 593 Sunday

Route 81 was the fourth most productive route in the SacRT system, and the third for 15-minute headways. Florin Towne Centre Transit Center located at the intersection of Florin Road and Stockton Boulevard serves as a bus stop for routes 51, 61, 68, and 81.

The land use along Florin Road varies from low-density residential to commercial and heavy-industrial to agricultural uses. Most parcels adjacent to the corridor are zoned for commercial and mixed-use uses east of 24<sup>th</sup> Street to the Florin Towne Centre.

*Table 4: Florin Corridor Opportunities and Challenges*

	<b>Opportunities</b>	<b>Challenges</b>
<b>Existing Transit Service</b>	<ul style="list-style-type: none"> <li>• Continuous route (81-Florin) travels on Florin Road</li> <li>• Existing high-frequency(15-minute) and high-ridership (over 25 BR/VH) service</li> </ul>	<ul style="list-style-type: none"> <li>• Weekday on-time performance is below system average and SacRT's goal</li> </ul>
<b>Network Connectivity</b>	<ul style="list-style-type: none"> <li>• Connection to the Blue Line LRT and to other bus lines, including frequent service on Route 51-Stockton</li> </ul>	
<b>Land Use</b>	<ul style="list-style-type: none"> <li>• Medium to high density planned east of Stockton Boulevard</li> </ul>	<ul style="list-style-type: none"> <li>• Mostly low-density residential or commercial west of Stockton Boulevard</li> <li>• Parking lots between buildings and the street</li> </ul>
<b>Pedestrian and Bicycle Environment</b>	<ul style="list-style-type: none"> <li>• Continuous sidewalk west of Stockton Boulevard</li> <li>• Safety improvement for pedestrians and bicyclists planned by Sacramento County between Franklin Boulevard and Power Inn Road</li> </ul>	<ul style="list-style-type: none"> <li>• Non-continuous bicycle facilities</li> <li>• Non-continuous sidewalk east of Stockton Boulevard</li> <li>• Considered a “high-injury corridor” in Sacramento’s Vision Zero Plan</li> </ul>
<b>Street Configuration</b>	<ul style="list-style-type: none"> <li>• On-street parking gives the opportunity for transit facilities (e.g., bus lanes, bulb-outs) west of I-5</li> </ul>	
<b>Stakeholder Support</b>	<ul style="list-style-type: none"> <li>• Multiple Disadvantaged Communities and a high minority population</li> </ul>	<ul style="list-style-type: none"> <li>• Sense of a lack of safety and lack of amenities at stops due to homeless population along the route</li> </ul>
<b>Project Development</b>	<ul style="list-style-type: none"> <li>• Corridor crosses one jurisdiction (City of Sacramento)</li> </ul>	<ul style="list-style-type: none"> <li>• City of Sacramento’s focus is on implementing improvements on Stockton Boulevard, which is in the same vicinity</li> <li>• Lack of political support</li> </ul>

# Sunrise Boulevard

## Overview

**Length:** 18.7 miles

**Boundaries:** Douglas Boulevard in the City of Roseville to Grant Line Road in unincorporated Sacramento County through the cities of Citrus Heights and Rancho Cordova, and the community of Fair Oaks



### Destinations

- Sunrise Mall Transit Center
- Oakridge Healthcare Center
- B. MED7 Urgent Care Center & Planned Parenthood – Roseville Health Center
- C. Sun Oak Senior Living
- Tempo Park
- Marketplace at Birdcage
- American River Trail Recreation Area



### Transit Connections

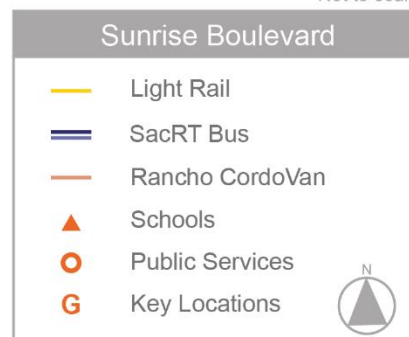
- Louis Orlando Transit Center
- Bus: 25, 93, 193, 1, 23, 175, 177
- Gold Line




### Community Characteristics:

	Corridor Total
Total Number of Jobs	52,327
Total Number of Residents	93,042



Not to scale



Disadvantaged Communities	Opportunity Zones	Low-Income Communities	Commercial Corridors	Smart Growth Street	Transit Priority Area
			 <i>Near Folsom Boulevard and Fair Oaks Boulevard</i>	 <i>Complete Street Project in the City of Citrus Heights</i>	

## Existing Transit

	Weekdays	Saturdays	Sundays & Holidays
21	<b>Every 30 minutes</b> <i>between 5:52 AM and 10:48 PM</i>	<b>Every 45 minutes</b> <i>between 8:57 AM and 7:48 PM</i>	<b>Hourly Service</b> <i>between 6:58 AM and 9:52 PM</i>
175*	<b>Hourly Service</b>	<b>No Service</b>	<b>No Service</b>
176*	<b>Hourly Service</b>	<b>No Service</b>	<b>No Service</b>

\* Operated by Rancho CordoVan Shuttle Service



### Boardings (Route 21 only)

- 1,000 weekday
- 495 Saturday
- 302 Sundays

Route 21 is one of the least productive routes in the SacRT system for routes with 30-minute headways. The number of boardings per vehicle hour is lower than other bus routes with the same or higher frequency. However, Route 21 boardings are still significantly higher than other routes with 60-minute headways or lower frequencies<sup>4</sup>.

In September 2019, SacRT implemented systemwide changes based on findings from

the SacRT Forward Network Plan. The changes to Route 21 consist of:

- Operate all trips the full length of the route from Mather/Mills station to Louis Orlando transit center.
- Discontinue weekday trips beginning at Sunrise Mall at 4:41 AM, 5:11 AM, and 5:41 AM and leaving Mather station at 5:22 AM
- Operate at 45-minute frequency on Saturdays from approximately 10:00 AM to 7:30 PM and 60 minutes until approximately 10:00 PM
- Eliminate Saturday/Sunday trip beginning from Sunrise Mall at 6:12 AM

<sup>4</sup> SacRT, Jarrett Walker + Associates, SacRT Forward Network Plan – Transit Choices Report, April 2018, p. 55

*Table 5: Sunrise Corridor Opportunities and Challenges*

	<b>Opportunities</b>	<b>Challenges</b>
<b>Existing Transit Service</b>	<ul style="list-style-type: none"> <li>• Continuous route (21-Sunrise) travels most of the corridor</li> <li>• Above average on-time performance</li> </ul>	<ul style="list-style-type: none"> <li>• Existing service is infrequent and has low productivity</li> </ul>
<b>Network Connectivity</b>	<ul style="list-style-type: none"> <li>• Connections to the Gold Line LRT at Sunrise Station and Routes 1 and 23 at Sunrise Mall Transit Center</li> </ul>	<ul style="list-style-type: none"> <li>• Only connecting services are at Louis and Orlando/Sunrise Mall Transit Centers and Gold Line LRT- no other east-west routes connect with Sunrise</li> </ul>
<b>Land Use</b>	<ul style="list-style-type: none"> <li>• Moderate to high residential density from the I-80 to the Gold Line</li> <li>• Large office park (trip generator) south of the Gold Line</li> <li>• Current plans to redevelop Sunrise Mall (100-acre property)</li> <li>• TOD-friendly land uses mainly at Sunrise/Folsom Boulevard</li> <li>• Access to the American River Park</li> <li>• Proposed plan to redevelop Sunrise Mall into a high-density mixed use development</li> </ul>	<ul style="list-style-type: none"> <li>• Auto-oriented uses south of the Gold Line LRT (industrial, low-density residential development and large parking lot on façade) are not supportive of transit</li> </ul>
<b>Pedestrian and Bicycle Environment</b>	<ul style="list-style-type: none"> <li>• Existing Class I bike path parallel to Sunrise Boulevard connecting to the Sunrise LRT Station</li> <li>• Improvements done by the City of Citrus Heights on increasing safety on sidewalks and at bus stops</li> </ul>	<ul style="list-style-type: none"> <li>• High speeds and 3 lanes in each direction along most of the corridor create an unfriendly pedestrian and bicycle environment</li> <li>• Limited number of bike lanes cross the corridor</li> <li>• Very few buildings have frontage on Sunrise Boulevard (walls and parking lots mainly)</li> </ul>
<b>Street Configuration</b>	<ul style="list-style-type: none"> <li>• 4 to 6 lanes in most of the corridor could make transit priority lanes more feasible</li> <li>• Complete Street Improvements in the City of Citrus Heights</li> </ul>	<ul style="list-style-type: none"> <li>• High traffic speeds, especially south of Arcadia Drive (40-45 mph)</li> <li>• Possible pinch points on Twin Oaks Lane where there are only 2 lanes</li> </ul>
<b>Stakeholder Support</b>	<ul style="list-style-type: none"> <li>• Support from the Cities of Citrus Heights, Roseville, and Rancho Cordova to improve service on Sunrise</li> </ul>	<ul style="list-style-type: none"> <li>• Corridor crosses multiple jurisdictions, could be difficult to get political support from multiple cities</li> </ul>
<b>Project Development</b>	<ul style="list-style-type: none"> <li>• Support from SACOG to create two enhanced bus corridors in the area, including articulated buses</li> <li>• Redevelopment of the Sunrise Mall area, which would include higher-density and mixed-use development</li> </ul>	<ul style="list-style-type: none"> <li>• Stakeholders indicated that dedicated bus-only lanes would not be politically feasible</li> </ul>

# Watt Avenue

## Overview

**Length:** 23.2 miles

**Boundaries:** Baseline Road in Placer County to Bond Road in unincorporated Sacramento County through the cities of Roseville and Sacramento



### Destinations

- Gibson Ranch Country Park
- Aerospace Museum of California & McClellan Conference Center
- Del Paso Regional Park
- Powerhouse Science Center
- Del Paso Country Club
- American River Bike Trail
- Camden Park
- Elk Grove Regional Park
- Kaiser Permanente Morse Medical Center

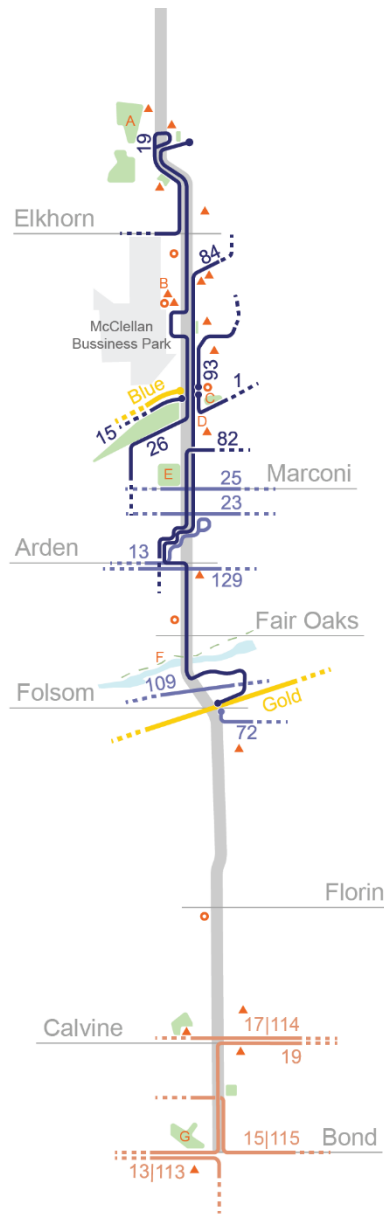


### Transit Connections

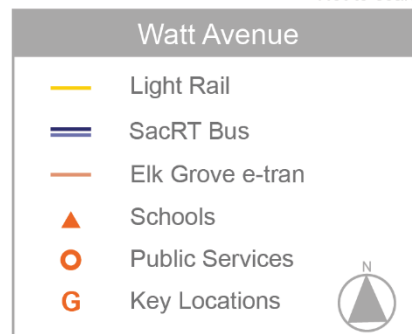
- Bus: 19, 26, 82, 84, 93, Elk Grove e-tran
- Gold Line and Blue Line






### Community Characteristics:

	Corridor Total
Total Number of Jobs	39,838
Total Number of Residents	150,627



Not to scale



<b>Disadvantaged Communities</b> 	<b>Opportunity Zones</b> 	<b>Low-Income Communities</b> 	<b>Commercial Corridors</b>  <i>Near McClellan Airfield, El Camino Avenue and Arden Way</i>	<b>Smart Growth Street</b>	<b>Transit Priority Area</b> 
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## Existing Transit

	Weekdays	Saturdays	Sundays & Holidays
26	<b>Every 30 minutes</b> between 5:16 AM and 8:00 PM	<b>Every 30 minutes</b> between 7:58 AM and 7:28 PM	<b>Hourly Service</b> between 7:58 AM and 9:19 PM
82	<b>Every 30 minutes</b> between 5:08 AM and 11:11 PM	<b>Every 45 minutes</b> between 8:08 AM and 7:47 PM	<b>Every 45 minutes</b> between 9:10 AM and 7:17 PM
84	<b>Every 30 minutes</b> between 5:38 AM and 8:26 PM	<b>Every 30 minutes</b> between 7:05 AM and 6:37 PM	<b>Hourly Service</b> between 7:05 AM and 9:14 PM



### Boardings

- Route 26*
- 989 weekday
  - 268 Saturday
  - 183 Sundays

- Route 82*
- 1,601 weekday
  - 447 Saturday
  - 362 Sundays

- Route 84*
- 762 weekday
  - 337 Saturday

Watt Avenue, because of its central location, offers a significant number of routes and possible transfers within the SacRT system. The corridor is served by a variety of bus routes, including routes 19, 26, 82, 84, 93, as well as the Gold and Blue light rail lines. South of the Gold Line, there is a gap in service and this area is only served by the Elk Grove e-tran in the City of Elk Grove.

In September 2019, SacRT implemented systemwide changes based on findings from the SacRT Forward Network Plan, including:

- Route 84 was realigned, and service frequency was improved to 30 minutes from 6:00 A.M to 8:30 PM during the weekday. Saturday service was improved to a 30-minute headway between 7:00 AM

and 6:00 PM New Sunday service with a 60-minute frequency was added beginning in both directions at 7:00 AM, with last trips in both directions beginning around 8:00 PM

- Route 82 was rerouted and the weekend frequency was improved to 45 minutes between 9:00 AM to 7:00 PM
- Route 26 was extended north, on Watt Avenue, to Elverta Road, and the service frequency on Saturdays was improved to 30-minute headways.

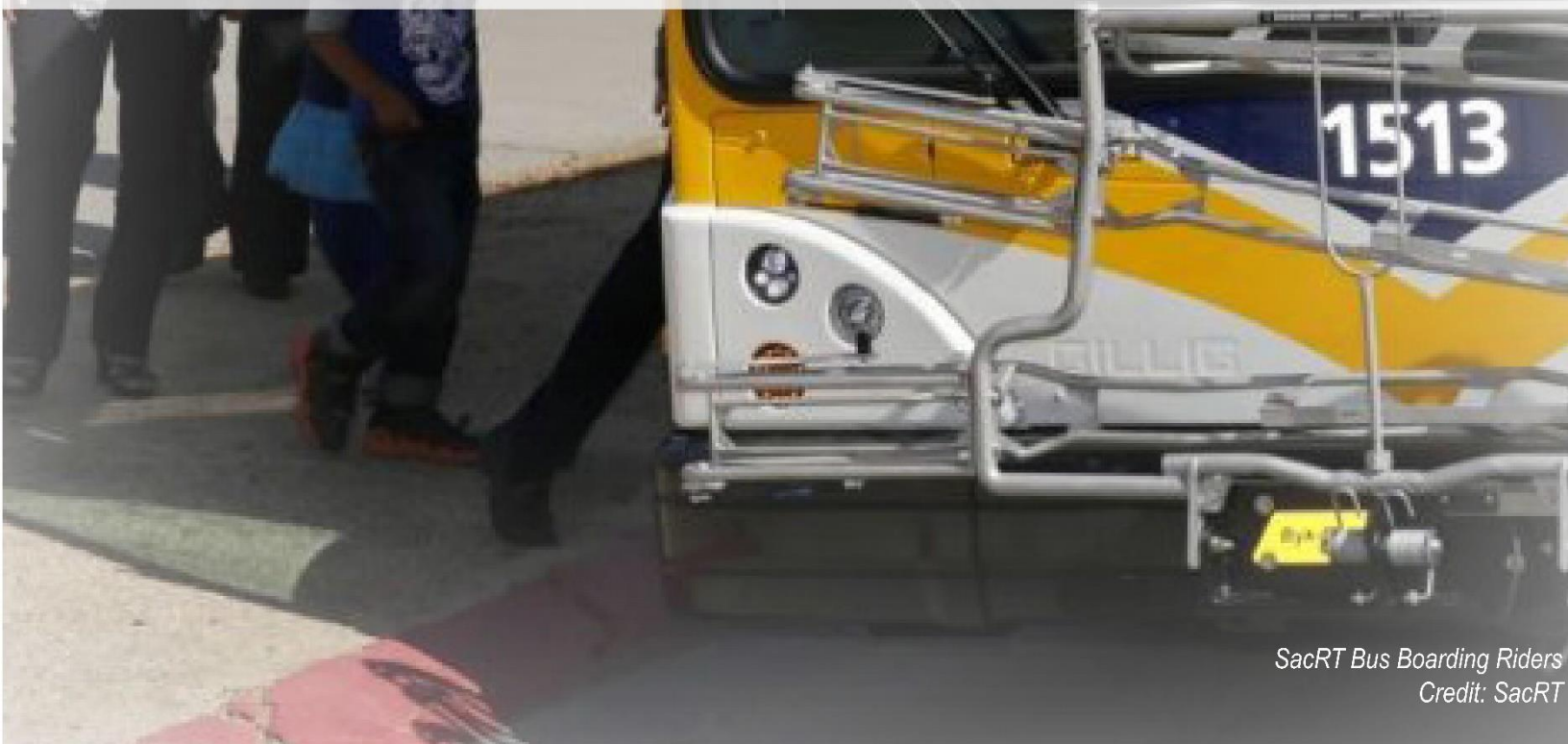
*Table 6: Watt Avenue Corridor Opportunities and Challenges*

	<b>Opportunities</b>	<b>Challenges</b>
<b>Existing Transit Service</b>	<ul style="list-style-type: none"> <li>• Continuous route (84-Watt) travels most of Watt Avenue</li> <li>• High transit mode share</li> <li>• Route 84 frequency was improved to every 30 minutes in September, 2019</li> </ul>	<ul style="list-style-type: none"> <li>• Below on-time performance on Route 84</li> <li>• Overlapping bus routes serve different parts of the corridor</li> <li>• Most productive route (Route 82) only travels a short distance on Watt Avenue</li> </ul>
<b>Network Connectivity</b>	<ul style="list-style-type: none"> <li>• High level of service in some segments due to multiple routes</li> <li>• Connection to the Blue Line LRT at the Watt I-80 Station and to the Gold Line LRT at Watt/Manlove Station</li> </ul>	
<b>Land Use</b>	<ul style="list-style-type: none"> <li>• New development planned at the North end at Baseline Road</li> <li>• Access to the American River Park (Transit to Parks)</li> </ul>	<ul style="list-style-type: none"> <li>• Industrial and low-density development south of Florin Road</li> </ul>
<b>Pedestrian and Bicycle Environment</b>	<ul style="list-style-type: none"> <li>• Class II bike lanes in both directions of Watt Avenue; however, they are interrupted in some areas</li> </ul>	<ul style="list-style-type: none"> <li>• Inconsistent sidewalks</li> <li>• Inconsistent bike infrastructure</li> </ul>
<b>Street Configuration</b>	<ul style="list-style-type: none"> <li>• Existing bus only lanes south of American River</li> <li>• 4 to 6 lanes in most of the corridor could make transit priority lanes more feasible</li> </ul>	<ul style="list-style-type: none"> <li>• Possible pinch points where the road narrows from 4 to 2 lanes</li> </ul>
<b>Equity</b>	<ul style="list-style-type: none"> <li>• Multiple Disadvantaged Communities</li> </ul>	
<b>Stakeholder Support</b>	<ul style="list-style-type: none"> <li>• Planning underway by other agencies for BRT on Watt Avenue</li> <li>• Route 84 is the second busiest route</li> </ul>	<ul style="list-style-type: none"> <li>• Corridor crosses multiple jurisdictions, could be difficult to get political support from multiple cities</li> <li>• Poor OTP and peak-hour traffic conditions need to be addressed, as well as faster boarding and alighting for the large number of passengers in wheelchairs</li> </ul>
<b>Project Development</b>	<ul style="list-style-type: none"> <li>• Support from SACOG to create a HI Bus corridor, including articulated buses; BRT/Hi Bus exclusive lanes; and capital funding for a BRT system</li> <li>• The County recently replaced all signal Opticom GPS controllers for traffic signal priority</li> </ul>	<ul style="list-style-type: none"> <li>• Equipment for buses will need to be purchased in order to benefit from County's GPS controllers</li> </ul>





# STAKEHOLDER ENGAGEMENT



# STAKEHOLDER ENGAGEMENT

Between December 2019 and December 2020, SacRT completed four major outreach efforts: a series of stakeholder interviews, an on-board survey, an online survey focused on HCBS strategies, and a virtual public workshop. Community members were also invited to submit comments via email at any

point throughout the study period. Outreach efforts generally sought to engage the public in the planning process, share project information, and gather feedback on HCBS priorities and opportunities. A brief summary of each of the outreach efforts is included below.

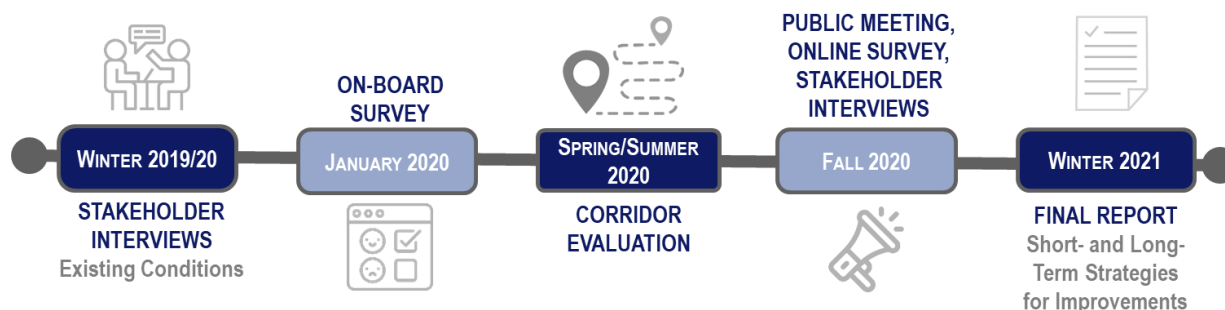


Figure 4: Stakeholder Engagement Timeline

## Stakeholder Interviews

Stakeholder interviews were conducted in two rounds and targeted a variety of stakeholders located along the five study corridors (Arden Way, Florin Road, Stockton Boulevard, Sunrise Boulevard, and Watt Avenue). The questions sought to gather more detailed information on preferences, opportunities, concerns, and other considerations for HCBS. The first round of interviews was held from mid-December 2019 through March 2020 and focused on engaging neighborhood associations, business associations, and

community-based organizations. A total of eleven interviews were conducted, including two neighborhood associations, three business associations, and six community-based organizations. The second round of interviews were held during December 2020 and primarily focused on engaging additional neighborhood associations and transportation staff from school districts whose jurisdictions included a portion of at least one of the five corridors. A total of six additional interviews

were conducted, including three neighborhood associations and three school districts.

answers were collected from nine different bus routes.

## Key Takeaways

- Overall, major themes included transit reliability, system connectivity, safety, improved bus stop amenities, and accessibility for people with disabilities and older adults.
- Corridor-Specific Opportunities:
  - On **Arden Way**, major priorities included improved pedestrian and cyclist access to stops, connected sidewalk networks, and expanded transit services.
  - On **Florin Road**, major priorities included alleviating traffic congestion, bus stop maintenance and amenities, improved pedestrian and cyclist access to stops, and expanded infrastructure for microtransit.
  - On **Stockton Boulevard**, major priorities included access to fresh food and employment centers, decreased trip times, expanded evening service, and enhanced bicycle facilities.
  - On **Sunrise Boulevard**, major priorities included higher frequency bus service to alleviate congestion, improved access to fresh food, and closing first and last mile gaps.
  - On **Watt Avenue**, major priorities included improved multimodal connections (particularly bus and light rail), bus stop maintenance, and smoother bus loading and layovers.

*Table 7: On-Board Surveys by Bus Route*

Bus Route	Number of Answers
13	44
21	58
23	45
25	54
26	53
51	137
81	107
84	40
129	32
<b>Total</b>	<b>570</b>

The purpose of the survey was to:

- Identify travel patterns,
- Learn about riders’ priorities,
- Understand customer satisfaction with current service, and
- Challenges and barriers.

## Key Takeaways

- **Arden Way & El Camino Avenue:** Riders have low satisfaction with bus on-time performance, bus frequency, and hours of operation. Riders are satisfied with travel times to get to their destination.
- **Florin Road:** Riders are generally satisfied with the service on Florin Road.
- **Sunrise Boulevard:** Riders have low satisfaction with the service on Sunrise Boulevard, especially with on-time performance, bus frequency, and hours of operation.
- **Watt Avenue:** Riders are somewhat satisfied with the service on Watt Avenue but are very satisfied with the hours of operation.

## On-Board Survey

The on-board transit survey was conducted between January 28, 2020 and February 1, 2020 aboard SacRT routes that serve the segments analyzed in this study. A total of 570 riders responded to the survey and

## Online Survey

An online survey was developed in the fall of 2020 with the goal of identifying opportunities to improve bus service along congested corridors. The survey included a series of fourteen questions focused on understanding priorities for improved bus service, existing challenges with bus routes along congested corridors, and preferences for different types of high capacity strategies. The survey was distributed through the project website, e-newsletters, and email communications to community partners along the five study corridors. In total, 120 responses were collected during the survey period, which began October 7, 2020 and ended November 20, 2020.

## Key Takeaways

- Top priorities included higher frequency bus service, reliable schedules, and improving travel times while on the bus.
- Preferred types of improvements included dedicated bus lanes, traffic signal priority and short bus lanes, and route alignment/straightening.
- Additional comments included a desire for direct access to popular destinations (i.e. medical facilities, shopping, entertainment), accessibility for people with disabilities and older adults, improved service in low-income and Environmental Justice communities, and improved system connectivity.

## Virtual Public Workshop

A public workshop for SacRT's High Capacity Bus Service Study was held via Zoom on Wednesday, October 21, 2020. The workshop

was intended to increase knowledge and understanding of HCBS strategies; understand current barriers for using bus service and the types of improvements that would make it more attractive; and understand priority corridors and priority segments along those corridors. In total, there were 46 participants who represented a wide range of interests, including SacRT riders, local government agencies, and community organizations.

## Key Takeaways

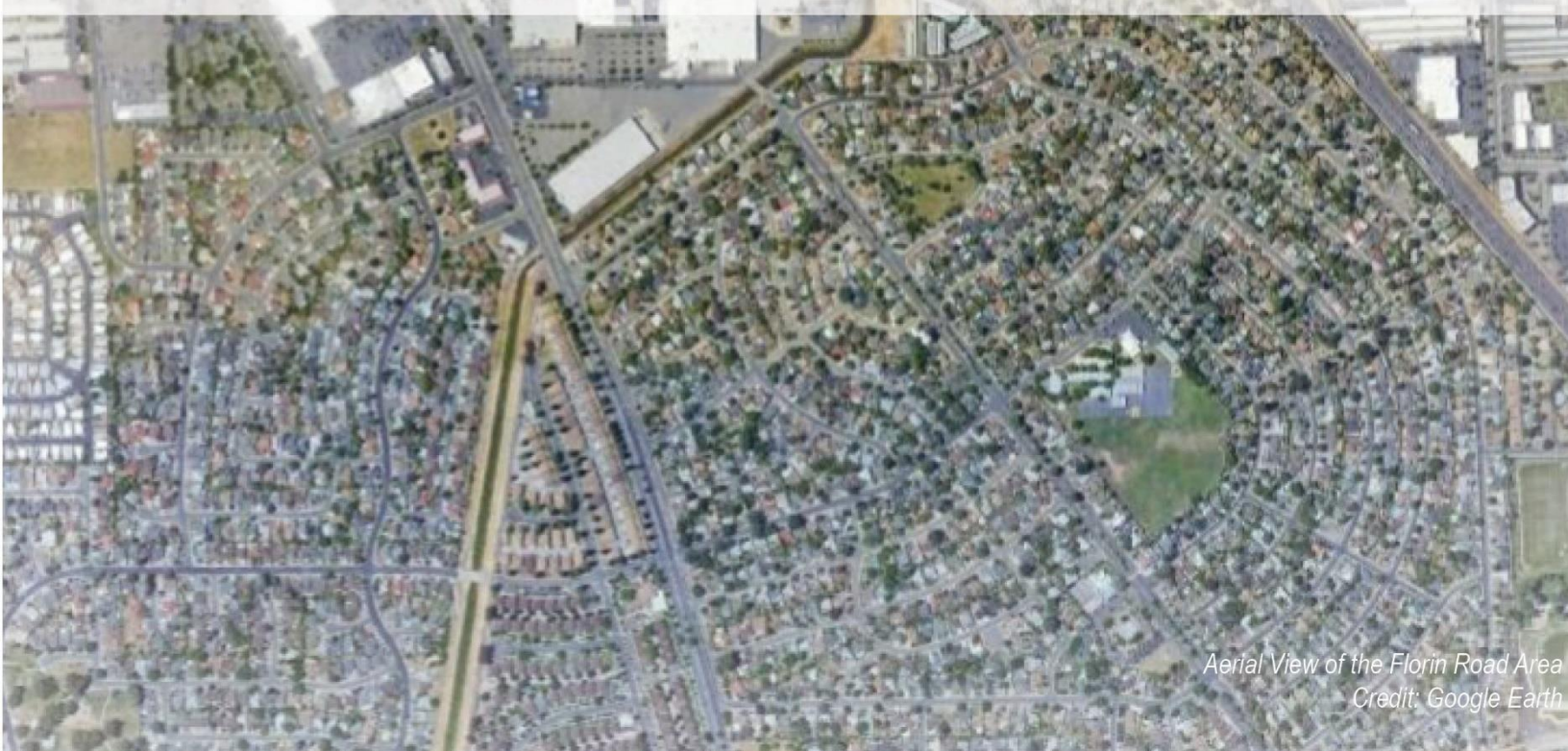
- Out of the five corridors, Watt Avenue and Stockton Boulevard received the most interest for HCBS improvements.
- Top considerations for improving bus service included frequency, reliability, and pedestrian access.
- Top priorities for improving the overall transit experience included bus shelters; separate, clearly designated HCBS stops; and accessibility, particularly for riders who have mobility disabilities or are blind or low-vision.

## Email Submissions

Two community members submitted comments via email during the study period. The two comments were generally concerned with improving the study's process and methods, including consulting past studies by SacRT and conducting origin-destination survey research to improve route planning.



# CORRIDOR EVALUATION



# CORRIDOR EVALUATION

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This section evaluates the corridors and identifies the corridors that have the highest potential for a successful HCBS based on information collected in the existing conditions task. HCBS is a form of corridor-based Bus Rapid Transit (BRT), which the Federal Transit Administration (FTA) defines as:

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*“Investments in a defined corridor as demonstrated by features that emulate rail including stations, traffic signals priority and short headway bidirectional services for a substantial part of weekdays.”*

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Key information from the existing conditions report is summarized and organized by matching service types that are the most appropriate for the corridors based on several criteria:

- Existing bus service,
- Ridership,
- Roadway characteristics,
- Customer perceptions,
- Travel markets, and
- Equity considerations.

This section also includes an analysis of the future projected land use and density along each corridor to determine which corridor’s land use will best support HCBS.

This study and suggested improvements act as a prelude to a fully coordinated capital investment by SacRT and other jurisdictions in these corridors. This partnership can be a powerful tool for achieving local and regional land use, transportation plans, and multimodal transit corridors. High-frequency, high-quality transit service reduces dependence on automobiles, improves safety, increases access to opportunities, and attracts development that is aligned with active transportation modes. Investments that make transit trips faster and more reliable in these corridors will make transit a more attractive choice compared to cars. This includes not just rush hour commuter trips, but trips throughout the day and to a variety of destinations. In short, it is a way to make transit a more relevant lifestyle choice for many residents, not just commuters.

Transit use in high travel demand corridors can be increased substantially by offering service features such as:

- Consistent and reliable travel times,
- Faster travel times,
- Direct and simple routes,
- Frequent service all day, every day.

Enhancing connectivity between HCBS and other routes, as well as improving pedestrian and bicycle access to stops or stations, increases the reach of a high capacity transit

line’s benefits to a wider area. An integrated network boosts the overall usefulness of transit services to the public by increasing the accessibility of origins and destinations.

This evaluation considered five corridors for near-term, multi-modal investments.

A range of transit improvements are considered in each corridor. These improvements can be divided into the following three categories:

- **Streamline existing standard and express bus routes** – Improve frequency, realign routes for continuous service on the arterial street, provide spot improvements for stops and transit prioritization
- **Enhanced transit corridors** – Improve frequency, remove route diversions, relocate stops for speed/reliability and passenger access. Implement spot and near-term transit priority treatments such as queue jumps, traffic signal priority, right-turn-except bus, and business access transit lanes.
- **High Capacity Bus Service** – Features such as raised boarding platforms at stations, transit-preferred treatments including traffic signal priority, off-board fare collection, and advanced bus technology.

Figure 5 shows the range of modes and right-of-way improvements. Streamlining existing bus services to provide more frequent and direct service, with limited improvements in the public right-of way, is relatively inexpensive and could be implemented more quickly than the other two categories. More intensive investments to achieve a HCBS are relatively more expensive and are likely to take longer to plan and implement. The

intermediate category is the Enhanced Transit Corridor concept.

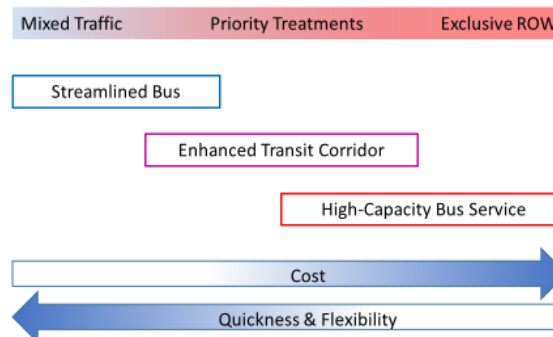










Figure 5: Improvement Levels and Modes

## Evaluation Questions

This evaluation addresses eight overarching questions regarding the readiness of each corridor and segment for transit investments including:

1.  How can improvements enhance the existing service?
2.  How well is the corridor integrated with multimodal networks?
3.  What do rider surveys and stakeholder outreach indicate about HCBS?
4.  What do current projects and political support indicate about HCBS?
5.  Which corridor has the physical characteristics that could facilitate HCBS implementation?
6.  Which corridor best addresses equity?
7.  Which corridor has the largest potential travel market and geographic value?
8.  Which segment has land use that best supports HCBS?

## Evaluation Summary

The following provides a summary of each segment's readiness according to the eight questions listed above.



### How well does the existing service provide a foundation for HCBS?

**Florin Road** has the highest service level (15-minute headways for weekday service) and ridership among the five segments. **Arden Way and El Camino** have good ridership, but do not have 15-minute headways for weekday service. **Watt Avenue and Sunrise Boulevard** have relatively lower ridership and lower frequency.



### How well is the segment integrated with multimodal networks?

**Watt Avenue** has the greatest number of connecting transit lines, including connection to two frequent LRT lines (Blue Line and Gold Line). Florin Road, Sunrise Boulevard, and Arden Way connect to one LRT line. Only the El Camino Avenue Corridor does not connect to LRT. Integration with active transportation modes varies. The Watt Avenue segment has the highest density of intersecting bike lanes. Florin Road has the best sidewalk coverage. Arden Way has the highest concentration of protected pedestrian crossings, but also the highest pedestrian collisions per mile.



### What do rider surveys and stakeholder outreach indicate about HCBS?

Riders on **Watt Avenue and Florin Road** appear to be the most satisfied with current transit service based on on-board surveys on bus lines serving the segments. Stakeholder comments for each segment included: traffic safety concerns on **Arden Way and El Camino Avenue**; concerns about a lack of pedestrian and bicycle connections to transit stops on **Florin Road**; interest in increased bus service on **Sunrise Boulevard**; and concerns about personal safety, as well as need to serve affordable housing along **Watt Avenue**.

The online survey highlighted riders' demand for a higher frequency of buses, particularly during weekday rush hours; reliable schedules; and faster travel times along **Sunrise Boulevard and Arden Way**. They also indicated current challenges and barriers including wait times at stops, traffic, and congestion at stop lights and priorities for HCBS improvements to address these barriers, including dedicated bus lanes, improving pedestrian access, and signal priority at stop lights. Stakeholder interest along these corridors indicate buy-in for HCBS.

Stakeholder interviews indicated that there is development along the **Sunrise Boulevard** corridor that would be conducive to HCBS, including the Citrus Heights Sunrise Mall plan, which would increase the intensity of uses and encourage dense, mixed-use development



within the 100-acre area. Dense, transit-oriented development is crucial to increase the ridership that encourages HCBS. stakeholder interviews indicated that increased frequency from Rancho Cordova to major employment centers during peak hours was a priority and that signal prioritization and real-time monitoring would improve service. The corridor also has two projects that focus on enhanced bus corridors, which would support HCBS in the long term.



### What do current projects and political support indicate about HCBS?

**Watt Avenue** has the greatest number of projects that would support HCBS according to the 2020 Sacramento Area Council of Governments (SACOG) Metropolitan Transportation Plan/Sustainable Communities Strategy. These include a BRT route that would serve CSUS Placer and Placer Vineyards to Watt/I-80 LRT station; exclusive BRT/Hi Bus lanes along Watt Avenue; and a 12.5-mile HI bus corridor on Watt Avenue. This focus shows that there is political will to create HCBS for the community.



### Which segment has street characteristics that could facilitate HCBS?

All five corridors have sufficient right of way – with four to six travel lanes and center turn lanes for a large portion of the corridor. Sunrise Boulevard is the corridor that crosses the highest number of jurisdictions (5 for the corridor), which can make implementation of improvements more difficult as of **El Camino Avenue** and **Arden Way** are within the limit of the City of Sacramento. However, **Sunrise Boulevard** has characteristics that would

support HCBS, including improved traffic, pedestrian, and bicycle mobility; road rehabilitation; and aesthetic continuity thanks to the Citrus Heights Sunrise Boulevard Complete Streets project.



### Which segment best addresses equity?

**Arden Way** and **El Camino Avenue** have the largest number of zero-car households and the largest concentration of residents earning less than 200% of the federal poverty level. **Florin Road** has the largest concentration of minority residents, followed by **Arden Way**. These numbers were compared to the system average.



### Which segment has the largest travel market and geographic value?

On a per mile basis, **Arden Way** has the highest weekday person-trip density and by far the highest number of jobs within a quarter mile of the corridor. **El Camino Avenue** and **Florin Road** have the largest population within a quarter mile of the corridors closely followed by **Arden Way**. Overall, **Arden Way** ranks the highest in term of travel market.

In term of geographic value, **Watt Avenue** and **Sunrise Boulevard** are the corridors that serve a more diversified geographic location within the SacRT Service Area and creating a more regional network.



### Which segment has land use that best supports HCBS?

**Arden Way** and **Watt Avenue** have land use characteristics that best support HCBS now

















































and in the future. Current plans for redevelopment on **Sunrise Boulevard** may support high-capacity transit in this corridor.




## Recommendations

**Watt Avenue** and **Arden Way** warrant improvements to existing service and spot improvements to increase transit speed and reliability in the short term. These two corridors could be candidates for HCBS in the future, as each corridor develops, particularly on Watt Avenue, where an increased number

of projects and political support is accelerating development. **Florin Road** has bus service that would support HCBS but struggles to get political buy-in to move improvements forward. **Sunrise Boulevard** is a candidate for mid- and longer-term investments in service and capital improvements, which would lay the foundation for HCBS. **EI Camino Avenue** might be well-positioned for spot improvements to improve speed and reliability but not HCBS and should not be carried forward in the next phase of this analysis. Table 8 shows how each corridor fared for each of the eight questions.

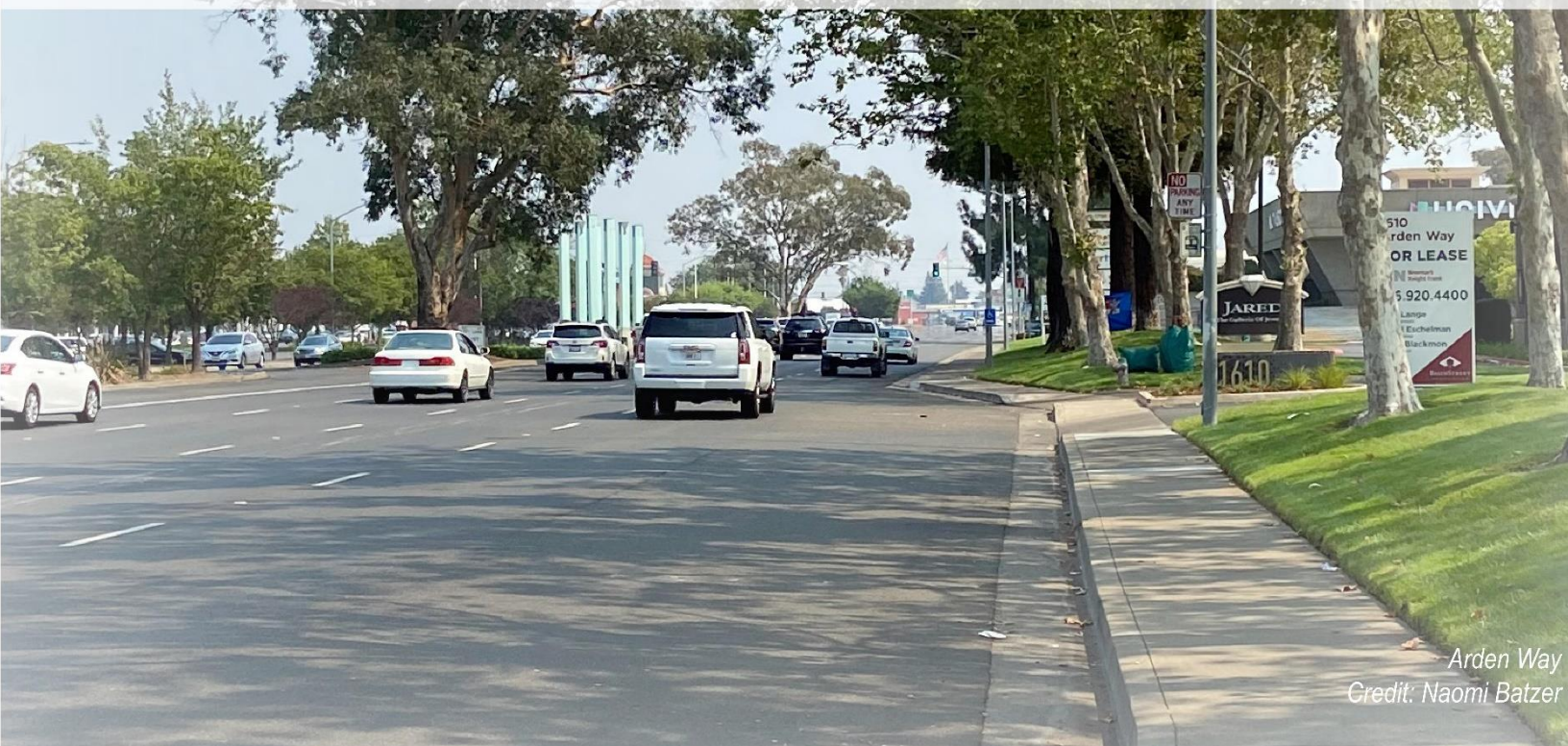
Table 8: Corridor Evaluation Matrix

Evaluation Criteria	Arden Way	Florin Road	Sunrise Boulevard	Watt Avenue	El Camino Avenue
 Existing service					
 Integration with multimodal networks					
 Rider surveys and stakeholder outreach					
 Current projects and political support					
 Physical characteristics					
 Equity					
 Potential travel market and geographic value					
 Land use					

Ranking:  Low  Medium  High



# PHASING AND IMPROVEMENTS



# PHASING AND IMPROVEMENTS

Based on the evaluation presented in the previous section, the following four corridors were further analyzed to identify short-term improvements and to define a long-term vision:

- Arden Way
- Florin Road
- Sunrise Boulevard
- Watt Avenue

This section is separated into two subsections:

1. **Initial Focus or Pre-HCBS improvements** – reviews potential incremental improvements for each corridor to build faster, more direct, and more reliable service; to increase ridership; and to build right-of-way and multimodal improvements to get the corridor ready for HCBS.
2. **HCBS Vision** – includes a long-term vision for each corridor including potential transfer points, terminal points and phasing for future HCBS.

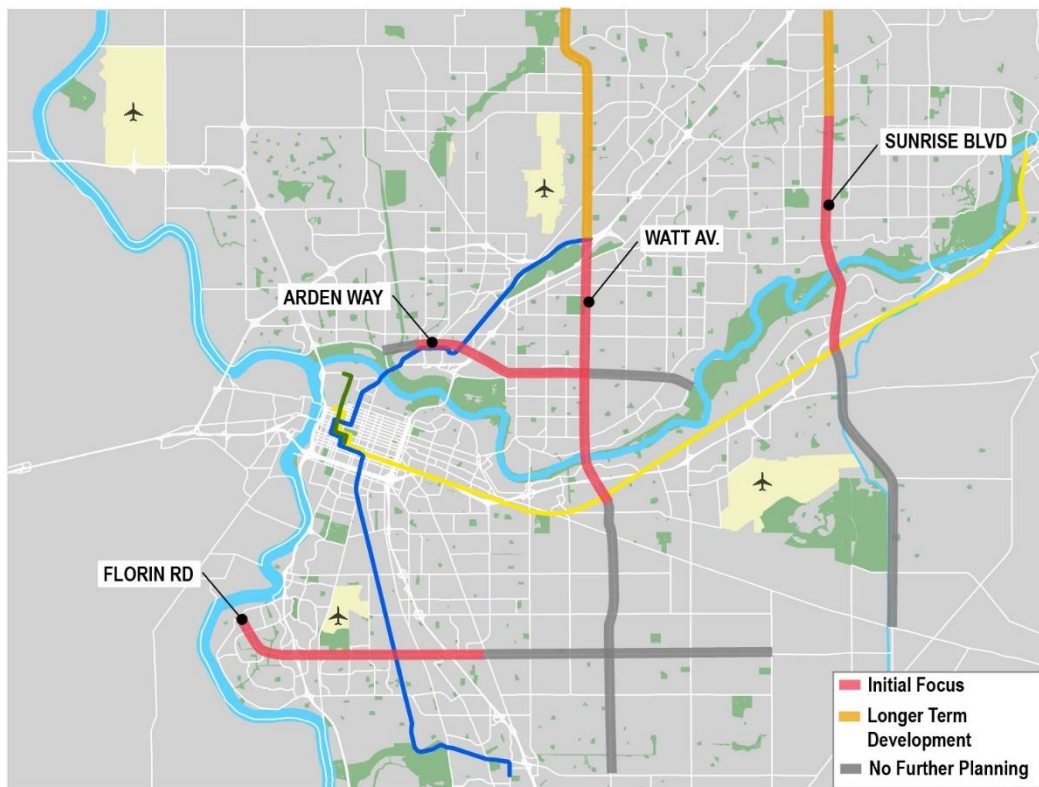


Figure 6: Recommendation and Phasing Map

## **Building for a Long-Term HCBS Vision**

The pre-HCBS improvements to the existing service can make the service more direct, faster, and more reliable. It also includes ways to make the streets more welcoming for pedestrians and cyclists, transform the corridors into multimodal streets, and encourage more transit-oriented development. These improvements represent lower-cost, incremental steps toward the longer-term HCBS vision. These improvements can be considered along with other planning and design efforts for streets and properties along the corridor. They can be implemented in conjunction with land development and redevelopment along the corridors and as part of right-of-way improvements planned by other jurisdictions. Some of the improvements could be planned and completed within the next several years. It is also possible to develop low-cost, temporary “tactical transit” pilot projects to test and measure the impact of changes before committing funding for final design and construction. Partnerships between SacRT and jurisdictions that manage the public right-of-way can tie investments in transit service and facilities with mutually-supportive multimodal improvements in the street’s right-of-way. The objective is to provide the tools needed to strengthen the corridors in the short term in order to prepare them for HCBS in the future.

The three levels of improvements identified during the study are shown in the table below. Each level of improvement builds upon the previous level and culminates in the longer-term creation of HCBS routes. Elements can be assembled in different combinations over time, with each element incrementally adding to service quality and increasing bus speeds and reliability.

Timeframe	Potential Improvements
<b>Pre-HCBS</b>	<ul style="list-style-type: none"> <li>• <b>Streamline existing bus routes</b> <ul style="list-style-type: none"> <li>○ Improve frequency</li> <li>○ Realign routes for continuous service on the arterial</li> <li>○ Make spot transit priority improvements (e.g., queue jumps, right-turn-except bus, traffic signal priority)</li> <li>○ Relocate stops for better speed/reliability and passenger access</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>• <b>Enhanced transit corridors</b> <ul style="list-style-type: none"> <li>○ Improve pedestrian and bicycle access</li> <li>○ Provide transit priority treatments the length of the corridor (e.g., continuous bus lanes, business access transit lanes)</li> <li>○ Improve pedestrian access throughout the corridor, particularly to high-ridership stops</li> <li>○ Branding</li> </ul> </li> </ul>
<b>HCBS</b>	<ul style="list-style-type: none"> <li>• <b>High-Capacity Bus Service (HCBS)</b> <ul style="list-style-type: none"> <li>○ Space stations farther apart at main intersections, key destinations</li> <li>○ Provide larger shelters, boarding platforms, other amenities at stations</li> <li>○ Use all-door bus boarding</li> <li>○ Use advanced bus technology, larger buses</li> </ul> </li> </ul>

## Pre-HCBS Improvements

Pre-HCBS improvements represent lower-cost, incremental steps towards a long-term vision of HCBS along the four corridors. Each corridor was analyzed using the Swiftly software<sup>5</sup> to evaluate bus operations. Data was analyzed for weekdays between October 1, 2019 – February 29, 2020. Swiftly provided statistical charts and maps of bus speeds by route segment, dwell times at stops, and on time performance by stop. This information was used to identify locations for potential incremental improvements along each route as initial steps toward full HCBS.

## Methodology

Each corridor was reviewed to find the locations where implementing a HCBS tool (see sidebar) could provide the most benefit in the short/mid-term and prepare the corridor to move towards a full HCBS. Each corridor analysis is presented in the following order:

1. **Speed Map:** Review of slow segments along the corridor and a map summarizing the slow segments and long dwell times at bus stops.
2. **Improvements Map and Narrative:** Divides each corridor into segments and identifies the toolkit techniques most appropriate for each segment.
3. **Time Savings:** Presents the potential time savings from the improvements.

Some of the proposed improvement concepts could be tested using tactical transit before a

final decision is made to make a permanent change. This approach uses inexpensive, temporary materials and short-term tactics to implement projects in the short-term.

### *Developing Tools to Implement HCBS in the SacRT Service Area*

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As part of the study, a **High Capacity Bus Service Toolkit** was developed to identify key categories of improvements to prepare each corridor for HCBS. The toolkit addresses individual corridor needs. The improvement categories are listed below:



**Transit priority lanes** provides quicker and more reliable service



**Traffic control** facilitates bus movements



**Stop and station improvements** provides better passenger amenities and a quicker service



**Street design** changes to enhance transit operations and the active transportation environment



**Operational changes** to streamline service

---

For each corridor, a combination of these improvements is identified to provide quicker, more reliable bus service and to improve the customer experience.

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<sup>5</sup>Swiftly is a data analytics software package that summarizes GTFS data so it can be used to evaluate the speed, reliability, and on-time performance of bus routes.

## Arden Way

The Arden Way corridor includes Route 13-Natomas/Arden between Del Paso Boulevard and Watt Avenue.

### Speed Map

Figure 7 shows the weekday average speed map for Route 13. Many parts of the route have average speeds less than 15 miles per hour on weekdays. The slowest eastbound route segments are:

- Near the end of the route on Watt Avenue
- The left-hand turn from Arden Way onto Morse Avenue
- In front of the Arden Fair Mall

Westbound slow speeds include:

- In front of the Arden Fair Mall
- Along Arden Way between the Royal Oaks and Arden/Del Paso stations
- The loop going into the Arden/Del Paso Light Rail Station

The stops at the Arden Fair Mall and the Arden/Del Paso Station also see long dwell times, which could be due to the relatively large volume of passengers boarding and alighting at those locations. Both locations are timepoints; so, it is also possible that buses are holding at those locations because of early arrivals.

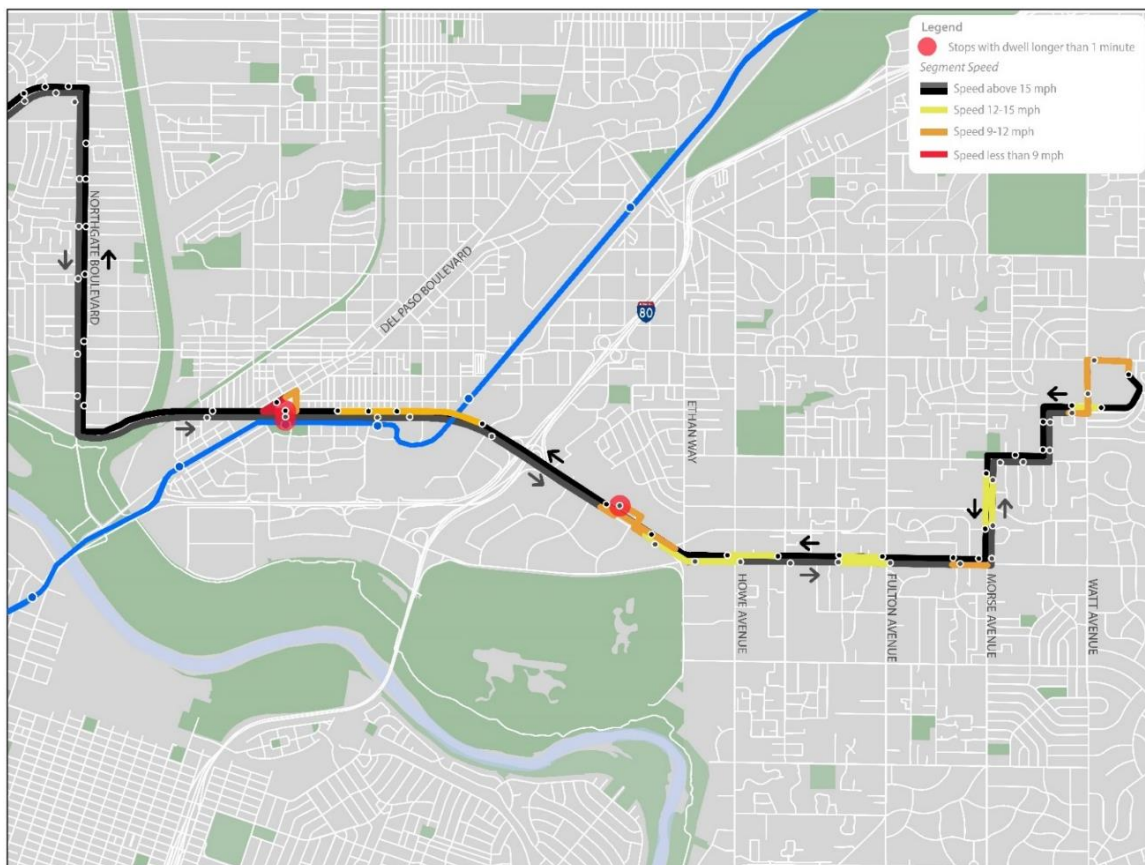


Figure 7: Arden Way Speed Map

## Improvements

Suggested improvements for Arden Way are presented in Figure 8 below. The potential HCBS corridor is highlighted in yellow and the

existing Route 13 is the gray line. The route is divided into four segments and proposed applications of toolkit techniques are depicted with icons from the sidebar above for each of the four segments.

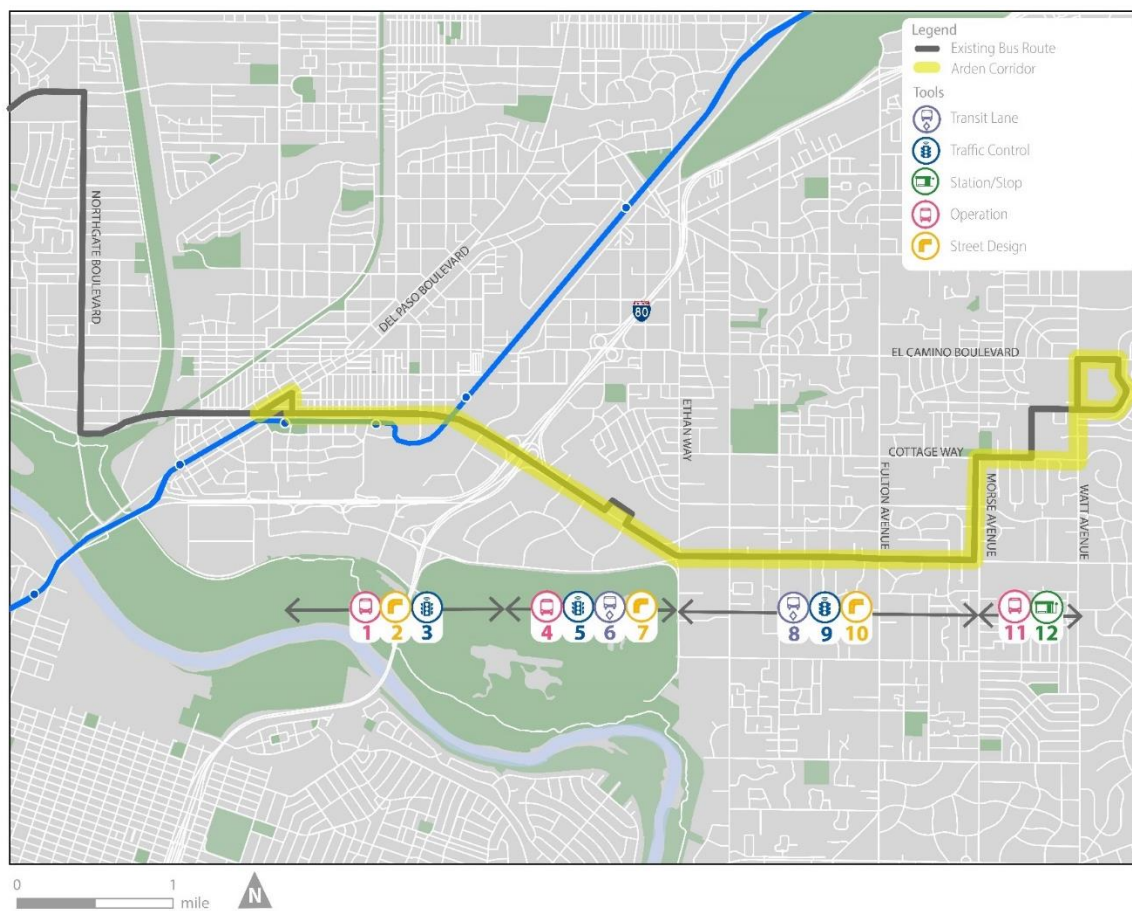


Figure 8: Arden Way Potential Improvements Map

### Segment 1: Del Paso Boulevard to I-80

These improvements aim to increase safety and efficiency at the Del Paso LRT station. Route 13 currently deviates off of Arden Way and loops past the station in the eastbound direction due to a lack of a safe pedestrian crossing between the north side of Arden Way and the light rail station on the south side. The improvements will also offer a faster and more

reliable service through signalized intersections in this segment.

- Streamline route:** Keep through buses on Arden Way between Oxford and Del Paso.
- Improve pedestrian infrastructure:** Provide a crosswalk between the new bus stop and Arden/Del Paso Station between Del Paso Boulevard and Oxford Street.



- 3. Transit signal priority:** Add eastbound queue bypass lane/leading green signal at Evergreen and I-80 WB on-ramp; and build a westbound Right-Turn-Only Except Bus at Harvard Street and queue bypass lane/leading green signal at I-80 WB off-ramp.

### **Segment 2: I-80 to Ethan Way:**

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These improvements aim to reduce travel times for through passengers and to increase pedestrian access. Proposed route streamlining and infrastructure improvements will prepare the service for HCBS, reduce delays at unsignalized intersections, and increase speeds near the Arden Fair Mall.

- 4. Streamline route:** Remove loop through Arden Fair mall parking lot and keep eastbound buses on Arden Way.
- 5. Transit signal priority:** Add signal and pedestrian crossing on I-80 EB off ramp. Add bus-only lane from I-80 to off ramp and add crosswalk and traffic signal on off-ramp. Convert right-hand eastbound through lane at Ethan Way to Right-Turn-Only-Except-Bus/leading green signal for buses.
- 6. Business access transit lanes:** Add Business Access Transit (BAT) lane eastbound between Point Way West and Chase Bank driveway and westbound between Ethan Way and at the eastern mall driveway through Heritage Lane.
- 7. Pedestrian infrastructure:** Improve crosswalks around Arden Fair Mall including new crosswalk on east side of Arden Way at Challenge Way and Heritage Lane intersections.

### **Segment 3 Ethan Way to Morse Avenue:**

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These improvements will decrease travel time, by prioritizing buses in congested areas, and

thus, increase bus speeds through the seven signalized intersections along this 1.8-mile stretch. Crosswalk improvements would increase pedestrian safety and access.

- 8. BAT lanes:** Add BAT lanes between shopping center driveway and Bell Street, and between Fulton Avenue and Hilldale Road.
- 9. Transit signal priority:** Provide signal priority, queue bypass lanes, and right-turn-only-except-bus lane at signalized intersections.
- 10. Pedestrian infrastructure:** Complete all four legs of the signalized intersections at shopping center driveways, west side of Bell Street/Arden Way, and east side of Professional Drive/Arden Way.

### **Segment 4: Morse Avenue to Watt Avenue:**

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These improvements will decrease travel time while still serving the Kaiser Medical Center by eliminating a diversion. There is also an opportunity to enhance mobility within the area by linking transit, active transportation, and micromobility options.

- 11. Streamline route:** Remove eastbound turn by using Cottage Way between Butano Drive and Watt Avenue.
- 12. Enhance network connectivity:** Potential mobility hub in collaboration with the Kaiser Medical Center. This improvement also provides a tactical transit opportunity.

## Time Savings

Current scheduled eastbound run times are 21 minutes (noon and 5PM) between the Arden/Del Paso Station and Kaiser Permanente Sacramento Medical Center. The

## SacRT High Capacity Bus Service Study – Final Report

improvements listed below could save up to 3-4 minutes running time eastbound.

Streamlining the route at Arden Fair mall to stay on Arden Way instead of looping into the mall parking lot would save 2 of the 3-4 minutes (and 0.1 mile of route distance).

Other transit priority treatments could save up to 1-2 minutes (5-10% of the running time), for the total potential savings of 3-4 minutes eastbound.

Current westbound scheduled running times are 21 minutes (noon)-23 minutes (5 PM).

Keeping westbound Route 13 buses on Arden Way at the Arden/Del Paso Station could save 3 minutes and 0.6 miles. Coupled with the other transit priority treatments, total westbound savings could be up to 4-5 minutes. Table 9 is a summary of potential travel time savings.

*Table 9: Time Saving Estimation (in minutes) for Arden Way*

Direction	Route Streamlining	Transit Priority Treatments	Total	Current Run Times*	Percent
<b>Eastbound</b>	2	1-2	3-4	21	14-19%
<b>Westbound</b>	3	1-2	4-5	21	19-24%
<b>Round Trip</b>	5	2-4	7-9	42	17-21%

\*Weekday noon

## Florin Road

The Florin Road corridor analysis includes a review of Route 81, which travels between Riverside Boulevard and Stockton Boulevard.

### Speed Map

Figure 9 below shows the weekday speed map for Route 81 on Florin Road.

There are a few parts of the route with speeds less than 15 miles per hour. The slowest eastbound route segments are around Franklin Boulevard, Stockton Boulevard, and near the Florin LRT Station at Indian

Lane/29th Street. Slow speeds could be due to signal delays, particularly for left turns into the Florin LRT Station and off Stockton Boulevard onto 65th Street (used by trips that end at Florin Town Centre). Westbound speeds exceed 15 miles per hour everywhere except for the part of the route off Florin Road at the Florin LRT Station.

Long dwell times exist at the Florin LRT Station and at the stop at 65th and Florin. Both locations are timepoints, buses could be holding at those locations due to early arrivals.

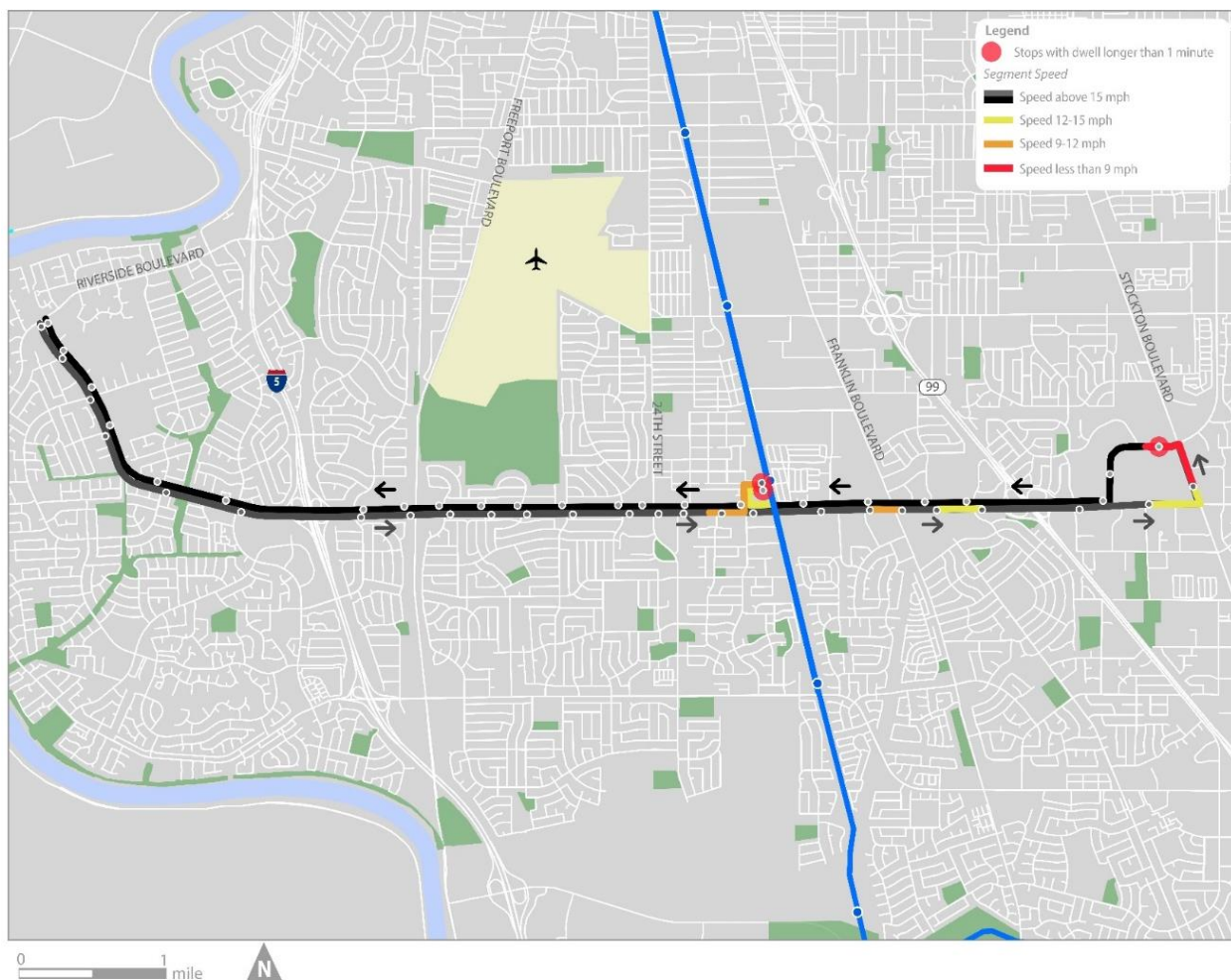


Figure 9: Florin Road Speed Map

## Improvements

Figure 10 below presents key improvements for the Florin Road corridor. The potential HCBS corridor is highlighted in yellow and the

existing Route 81 is the gray line. The route is divided into three segments and proposed application of techniques from the toolkit are shown for each of the three segments.

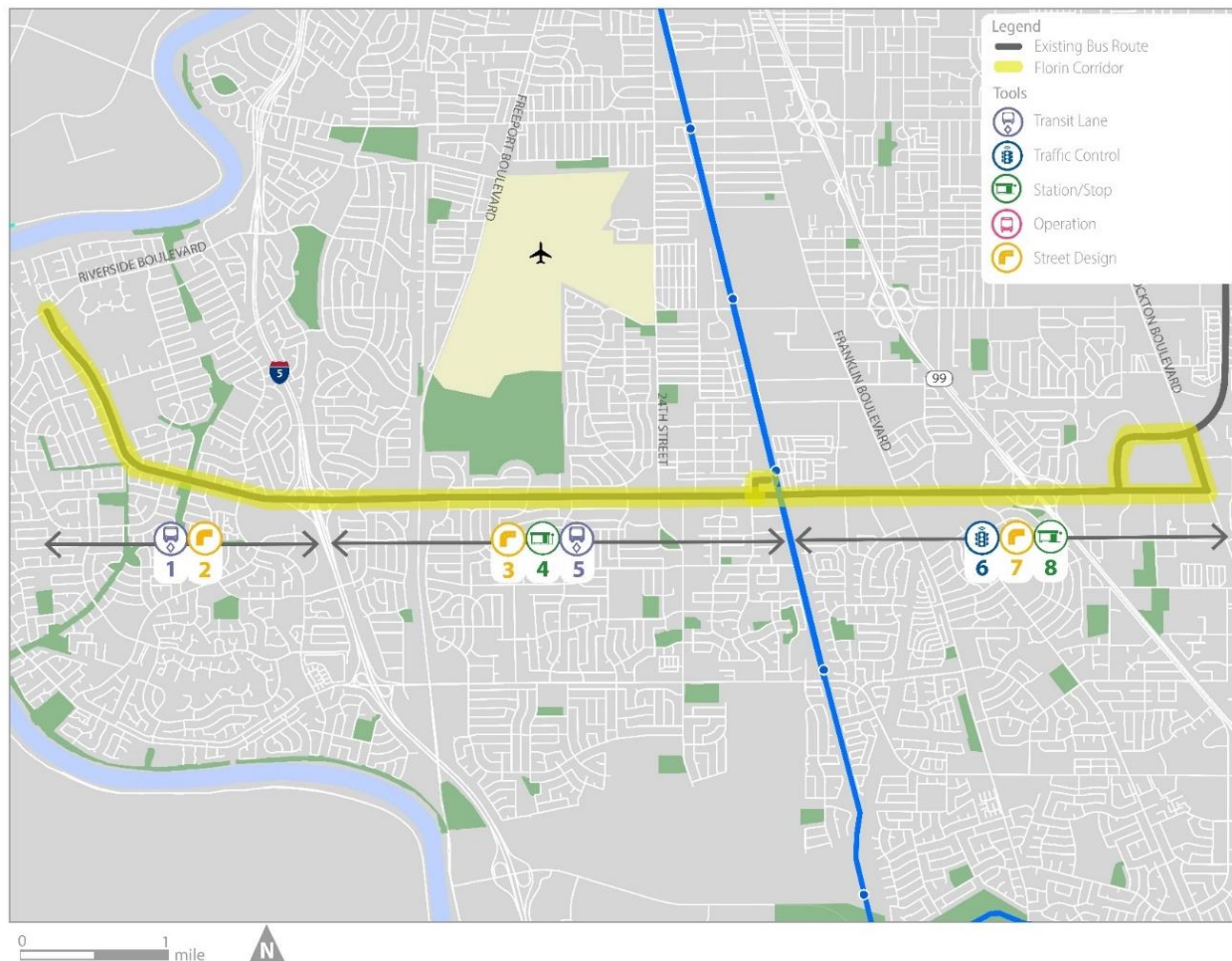


Figure 10: Florin Road Potential Improvements Map

### Segment 1: Riverside Boulevard to I-5

These improvements would help reduce travel times by introducing right-turn-only-except-bus treatments at some signalized intersections and reducing queuing at lights before stops. They will also create a safe multimodal corridor by maximizing the utilization of the right-of-way for all users by filling gaps in crosswalks, sidewalks, and bicycle lanes.

1. **Bus only turn lane:** Transit turn lane (ex.: Gloria Drive and Havenside Drive).
2. **Pedestrian infrastructure and multimodal improvements:** Safety and multimodal improvements including new crosswalk and protected bike lanes.

### Segment 2: I-5 to Florin LRT Station

These improvements would help reach the City of Sacramento’s Vision Zero goals by increasing safe access to the bus network and

improving existing pedestrian and cycling infrastructure. They will also improve speeds along the corridor, particularly for eastbound buses along Indian Road, and into the LRT station.

- 3. Multimodal improvements:** Close gaps in sidewalks, add new crosswalks, and ADA improvements (e.g., at Freeport Boulevard). Evaluate the possibility of using the parallel service lane between Ahmerst and Tamoshanter Way as a dedicated bike route.
- 4. Pedestrian infrastructure:** In-lane bus stop to provide more space for riders at bus stops at Ahmerst Street, 17th Street, Cromwell Way, 21st Street and Tamoshanter (westbound only).
- 5. Bus only turn lane:** Evaluate Transit Only Turn Lane at Indian Road to reduce delay for service at Florin Station or keep bus on Florin Road at the LRT Station with a new crosswalk at the intersection with the LRT tracks.

### **Segment 3: Florin LRT Station to Stockton Boulevard:**

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These improvements will decrease travel time, by prioritizing buses in congested areas, and increase bus speeds through the nine signalized intersections along this 1.6-mile stretch. They will also improve delays on the eastbound route for buses that short-turn at the Florin Town Centre and buses making a left-hand turn off of Florin and onto Stockton Boulevard. These improvements will also increase pedestrian safety and access by adding pedestrian crossings on both sides of the streets crossing Florin Road, and by widening sidewalks, particularly near bus stops. Finally, as longer-term plans are realized and Route 81 extends to 65th Street or stops at Florin Town Centre, this node

would be a prime location for a mobility hub – increasing connections in the area.

- 6. Transit signal priority:** Signal Priority Treatments to reduce bus delays (ex.: Franklin Boulevard, Stockton Boulevard).
- 7. Pedestrian infrastructure:** Safety improvements at bus stops that could include restriping, pavement, and sidewalk improvements (ex.: 65th Street) to better define the areas. Crosswalk improvements at major intersections (e.g., 65th Street, Franklin Boulevard).
- 8. Enhance network connectivity:** Potential mobility hub at Florin Towne Center in collaboration with local businesses.

## Time Savings

Current scheduled running times eastbound are 23 minutes (noon) and 27 minutes (5 PM) between Sault Park Lane and the Florin Towne Centre Main Terminal. The improvements listed below could save a total of 4-5 minutes running time eastbound. Streamlining the route to stay on Florin Road at the Florin Station instead of looping into the station would save 3 of the 4-5 minutes (and 0.5 mile of route distance). Other transit

priority treatments could save an additional 1-2 minutes (5-10% of the running time), for a total savings of 4-5 minutes eastbound.

Current westbound scheduled running times are 19 minutes (noon)-23 minutes (2-5 PM). Keeping westbound Route 81 buses on Florin Road at the Florin Station would save 2 minutes and 0.5 miles. Coupled with the other transit priority treatments, total westbound savings could be 3-4 minutes. Table 10 is a summary of potential travel time savings.

*Table 10: Time Saving Estimation (in minutes) for Florin Road*

Direction	Route Streamlining	Transit Priority Treatments	Total	Current Run Times*	Percent
<b>Eastbound</b>	2	1-2	3-4	21	14-19%
<b>Westbound</b>	3	1-2	4-5	21	19-24%
<b>Round Trip</b>	5	2-4	7-9	42	17-21%

## Sunrise Boulevard

The Sunrise Boulevard corridor analysis includes Route 21- Sunrise (currently Louis Lane and Orlando Transit Center to the Mather Field/Mills LRT Station) between the Roseville Transit Center and the Sunrise LRT station.

### Speed Map

Figure 11 shows the speed map for the north end of the corridor between the Louis Lane and Orlando Transit Center and the Sunrise Mall. There are a few parts of the route with speeds less than 15 miles per hour. Slowdowns occur due to the route diversion off of Sunrise onto Arcadia Drive/Greenback Lane, particularly in the southbound direction. Long dwell times occur along this diversion at the Arcadia and Greenback Stop at the

Sunrise Mall. The long dwell at Arcadia and Greenback could be due to operators dwelling at this timepoint to meet the scheduled run time, although it is not a timepoint.

Figure 12 shows the speed map for the south end of the corridor between the Sunrise Mall and the Mather Field/Mills Light Rail Station. There are few segments with speeds less than 15 miles per hour. Northbound slowdowns occur near Trinity River Drive due to the left-hand turn onto Sunrise Boulevard and at the beginning of the route leaving the Mather Field/Mills Light Rail Station along Mills Station Road, Mather Field Road, and Folsom Boulevard in Rancho Cordova. Long dwell times occur southbound at the Fair Oaks and Sunrise Station.

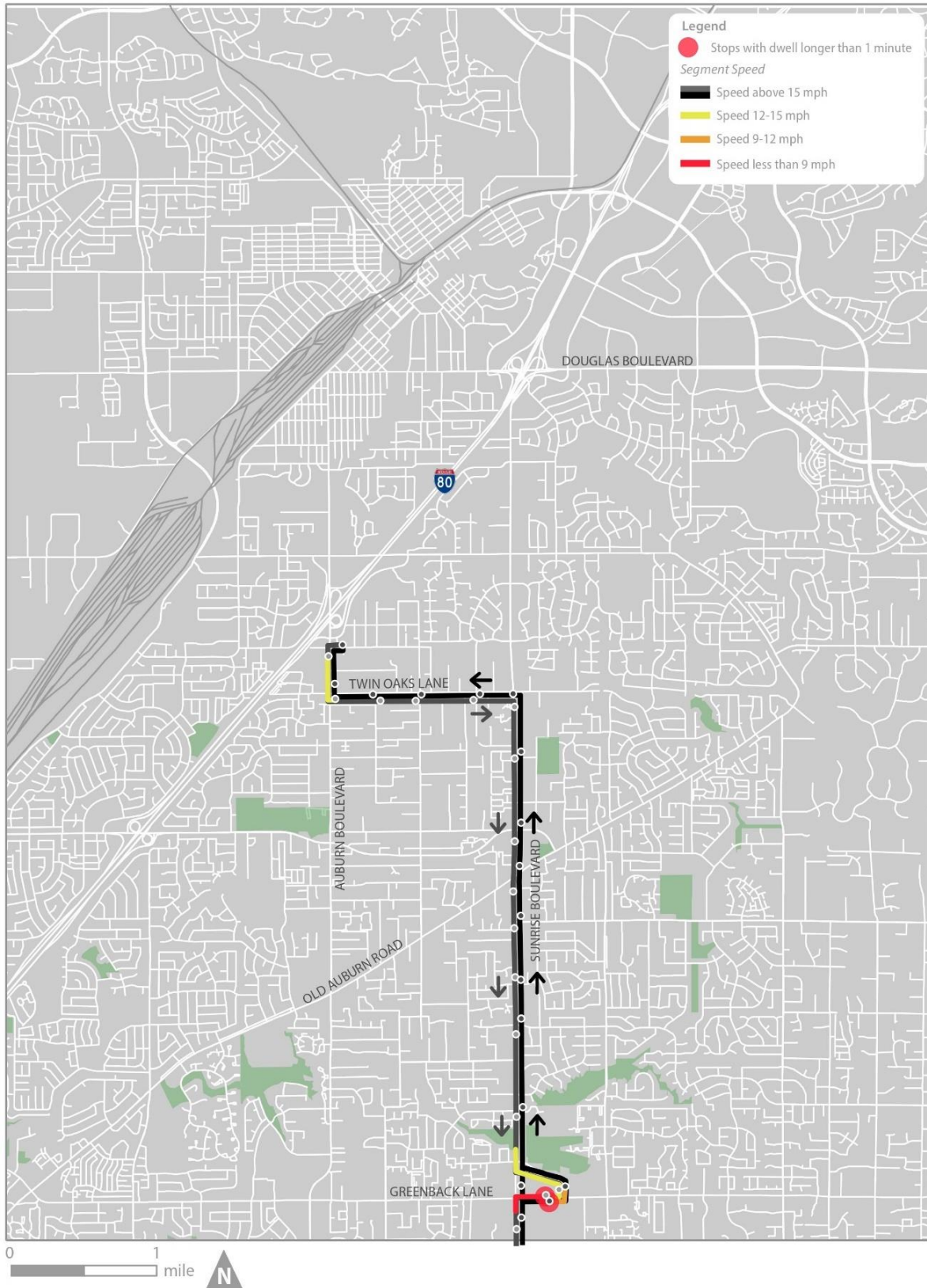


Figure 11: Sunrise Boulevard (North Section) Speed Map



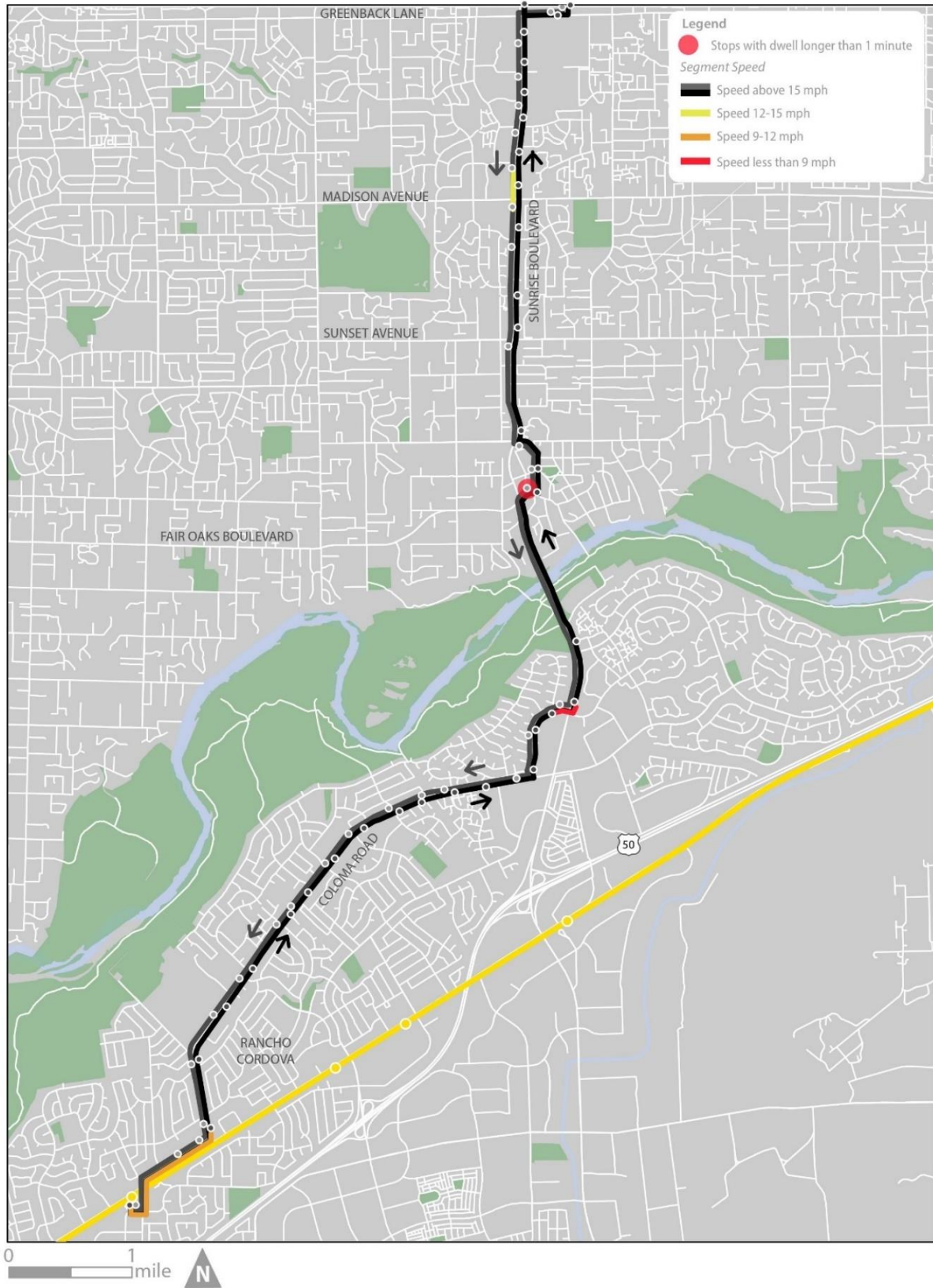


Figure 12: Sunrise Boulevard (South Section) Speed Map

## Improvements

Figure 13 and Figure 14 present key improvements that are proposed for the Sunrise Boulevard corridor. The potential

HCBS corridor is highlighted in yellow and the existing Route 21 is the gray line. The route is divided into five segments and proposed application of techniques from the toolkit are shown for each of the five segments.

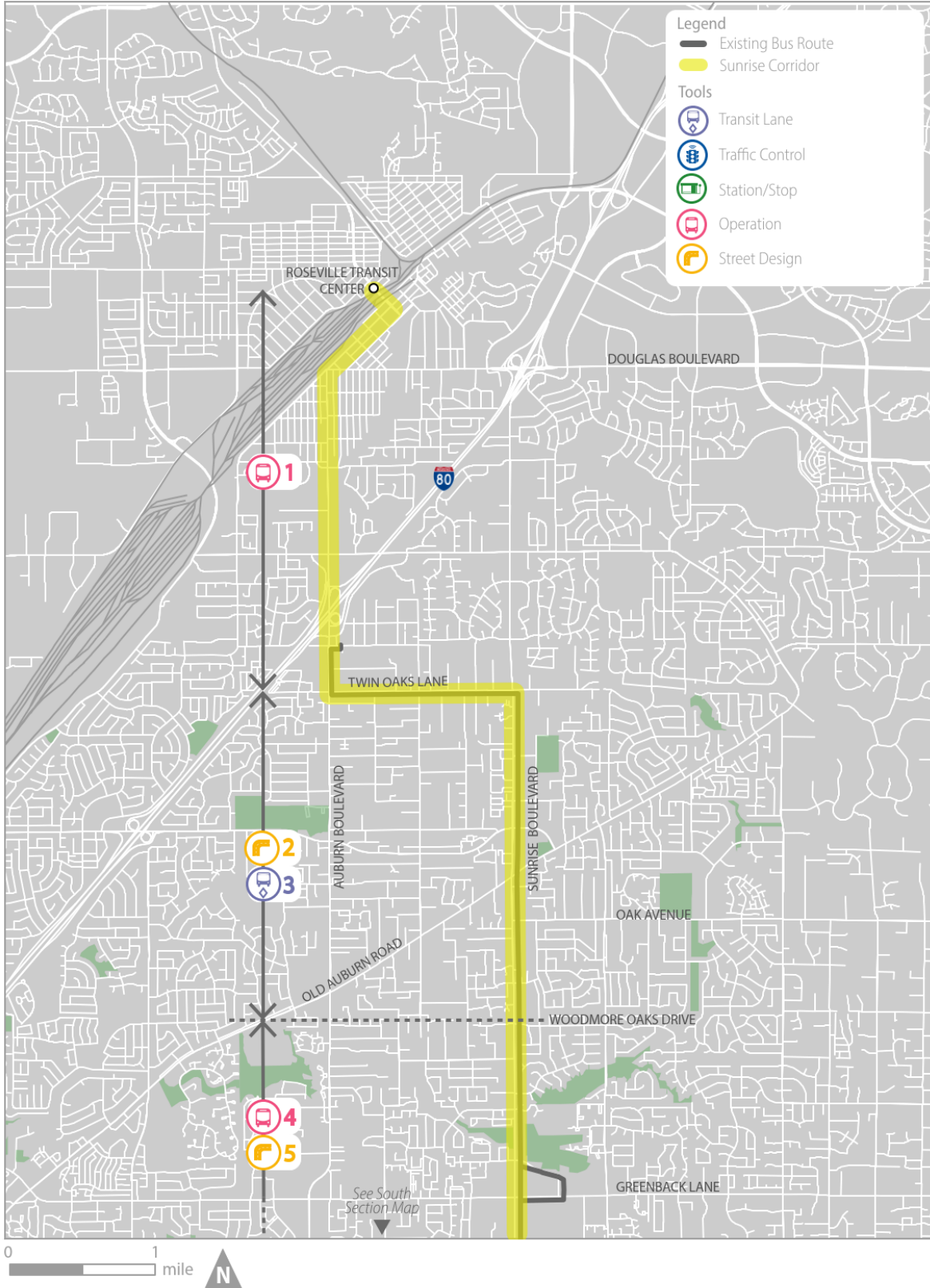


Figure 13: Sunrise Boulevard (North Section) Potential Improvements Map

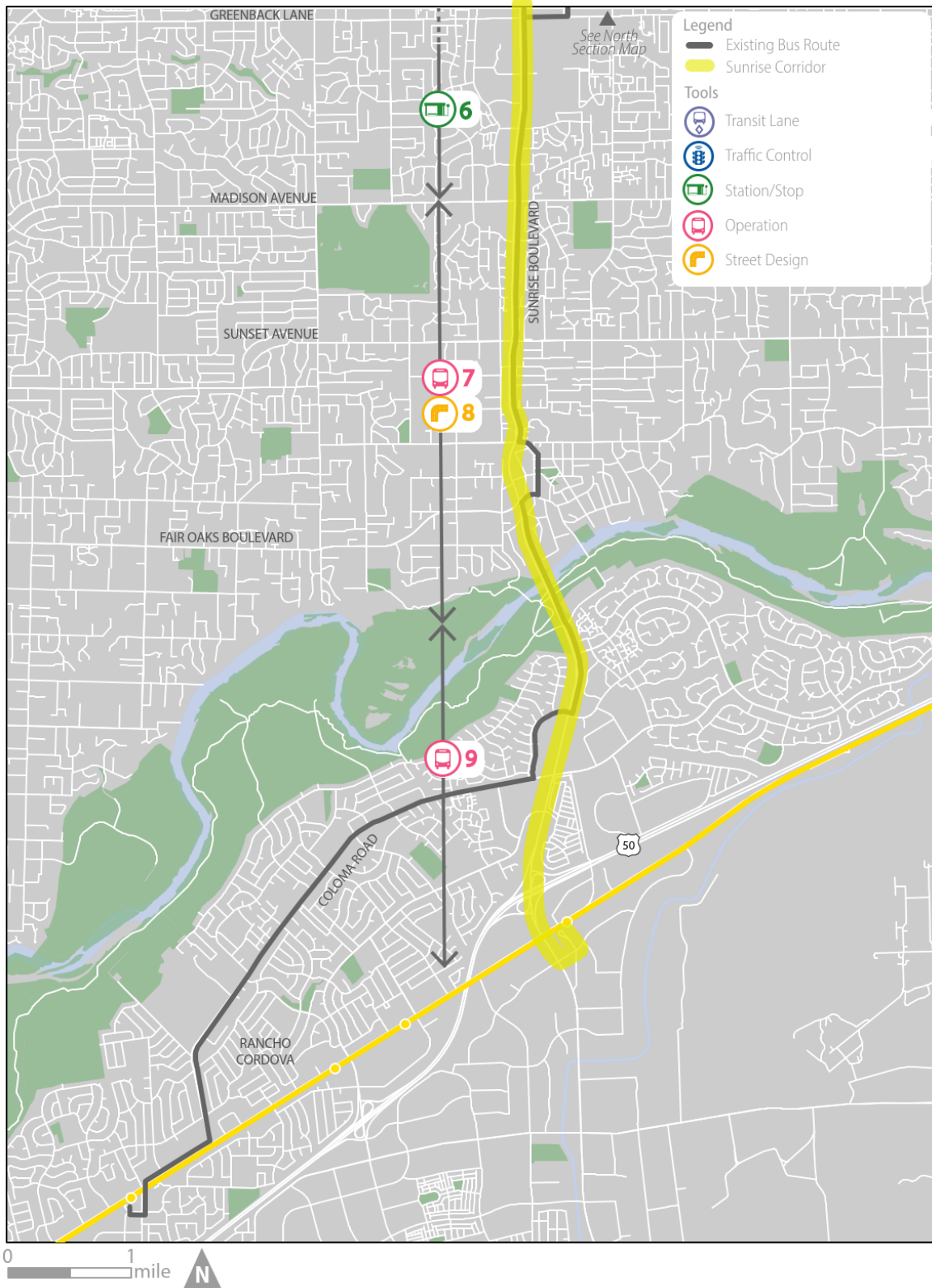


Figure 14: Sunrise Boulevard (South Section) Potential Improvements Map

### Segment 1: Roseville Transit Center to Twin Oaks Avenue

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These improvements would improve regional connectivity, as the Roseville Transit Center provides connections to Placer County Transit, Amtrak, and intercity bus services.

Route 21 currently runs on Twin Oaks Avenue between Sunrise and Auburn Boulevard to connect to the Louis and Orlando Transit Center. The available right-of-way of Twin Oaks Avenue is narrow with low-density developments. In the short term, service could remain on Twin Oaks Avenue. In the long term, as Route 21 move to HCBS, the limited right-of-way and existing land use could create a barrier to extend the service and might need to be re-routed. Multiple options are available, including moving service to Cirby Road to provide service to the new Kaiser Roseville Medical Center at the corner of Cirby Road and Riverside Boulevard in Roseville.

1. **Extend route:** Extend service north to the Roseville Transit Center and/or the Roseville Kaiser Medical Center.

### Segment 2: Twin Oaks Avenue to Woodmore Oaks Drive

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These improvements would capitalize on the work from the Sunrise Boulevard Complete Streets project in Citrus Heights by providing more continuous pedestrian access. The improvements will also reduce traffic delays by using the turn-only lane to reach stops on the far side of the intersection.

2. **Pedestrian infrastructure improvements:** Close gaps in the sidewalk between the new ADA-compliant sidewalk improvements and accessible transit spots and shelters, improve pedestrian crosswalks and pedestrian amenities at bus stops.
3. **Bus only and turn lane:** Evaluate bus only, bike, and turn lane at intersections (ex.: Oak Avenue, Sungarden Drive, and Woodmore Oaks Drive).

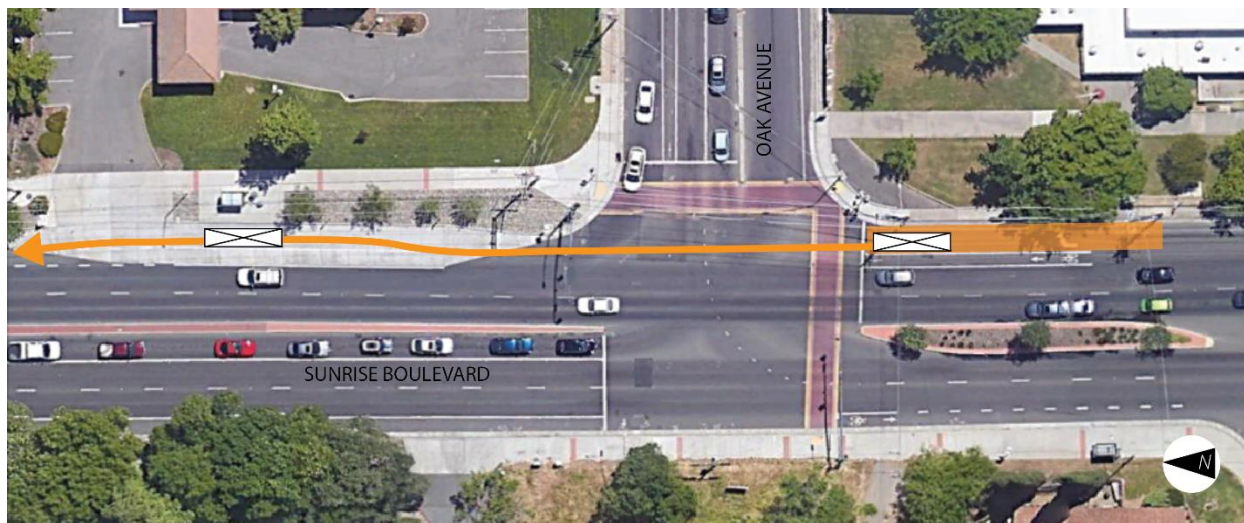


Figure 15: Example of potential Use of the Turn Lane for Quicker Access to Farside Stops

### **Segment 3: Woodmore Oaks Drive to Madison Avenue**

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These improvements would increase speeds and reduce delays by streamlining the route and removing three turns northbound along the route; create a more multimodal environment; and increase connectivity between modes.

4. **Streamline route:** Eliminate the diversion at Arcadia Drive and Greenback Lane and realign the bus route on Sunrise Boulevard. Collaborate with the City of Citrus Heights for the implementation of the transit center at the Sunrise Mall redevelopment.
5. **Multimodal improvements:** Safety improvements at major intersection such as new island to reduce length of crossing (ex.: Greenback Lane and Madison Avenue) and improve side street bicycle network to access Sunrise Boulevard (ex.: Greenback Lane, Madison Avenue). This improvement will enhance bike connectivity to adjacent neighborhoods and make the intersections between major arterials accessible for pedestrians, as these wide streets with long exposure times, multileg crossings, and large corner radii make the area unattractive for pedestrians.
6. **Enhance network connectivity:** Collaboration with the City of Citrus Height for potential mobility hub in conjunction with Sunrise Mall redevelopment to link key transportation modes, including transit, active transportation, and smart mobility.

### **Segment 4: Madison Avenue to the American River**

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These improvements would decrease travel times by eliminating two turns and streamlining the route; would enhance

pedestrian access to bus stops; and would improve safety at the intersections of Sunrise Boulevard with Winding Way, California Avenue, and Fair Oaks Boulevard.

7. **Streamline route:** Eliminate the diversion on Winding Way/Fair Oaks Boulevard and realign the bus route on Sunrise Boulevard.
8. **Improve pedestrian infrastructure:** Multimodal improvements between Winding Way and Fair Oaks Boulevard to accommodate new bus stops including better sidewalk and pedestrian crossing.

### **Segment 5: American River to Sunrise LRT Station**

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There is an opportunity to streamline service along the southern portion of Sunrise Boulevard. Current service deviates from Sunrise to serve Rancho Cordova. New service could continue on Sunrise Boulevard to connect to the Sunrise LRT Station. This would increase efficiency of the route and allow passengers to have direct access to the LRT station. A local route could serve Coloma Road through Rancho Cordova. New stops could be added along Sunrise Boulevard and SacRT could use existing stops from the discontinued Route 28 at Coloma Road and Zinfandel Drive to serve the mobile home park.

9. **Streamline route:** New terminal point at the Sunrise LRT Station with connection to local service to Rancho Cordova and new stops along Sunrise Boulevard.

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*For Sunrise Boulevard, cross sections showing existing and proposed lane configuration were developed to demonstrate the potential use of the right-of-way. These are presented on the following pages.*

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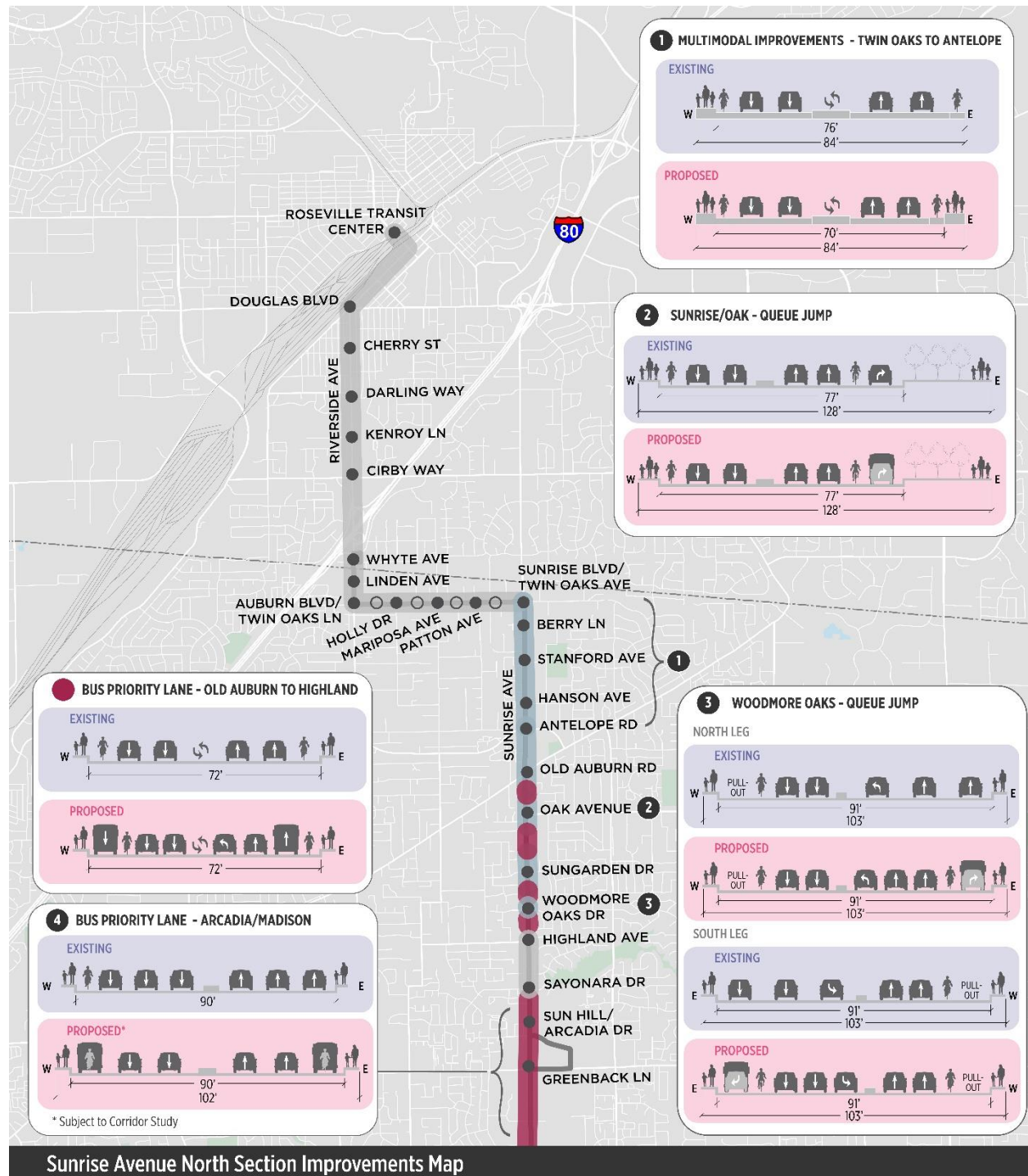
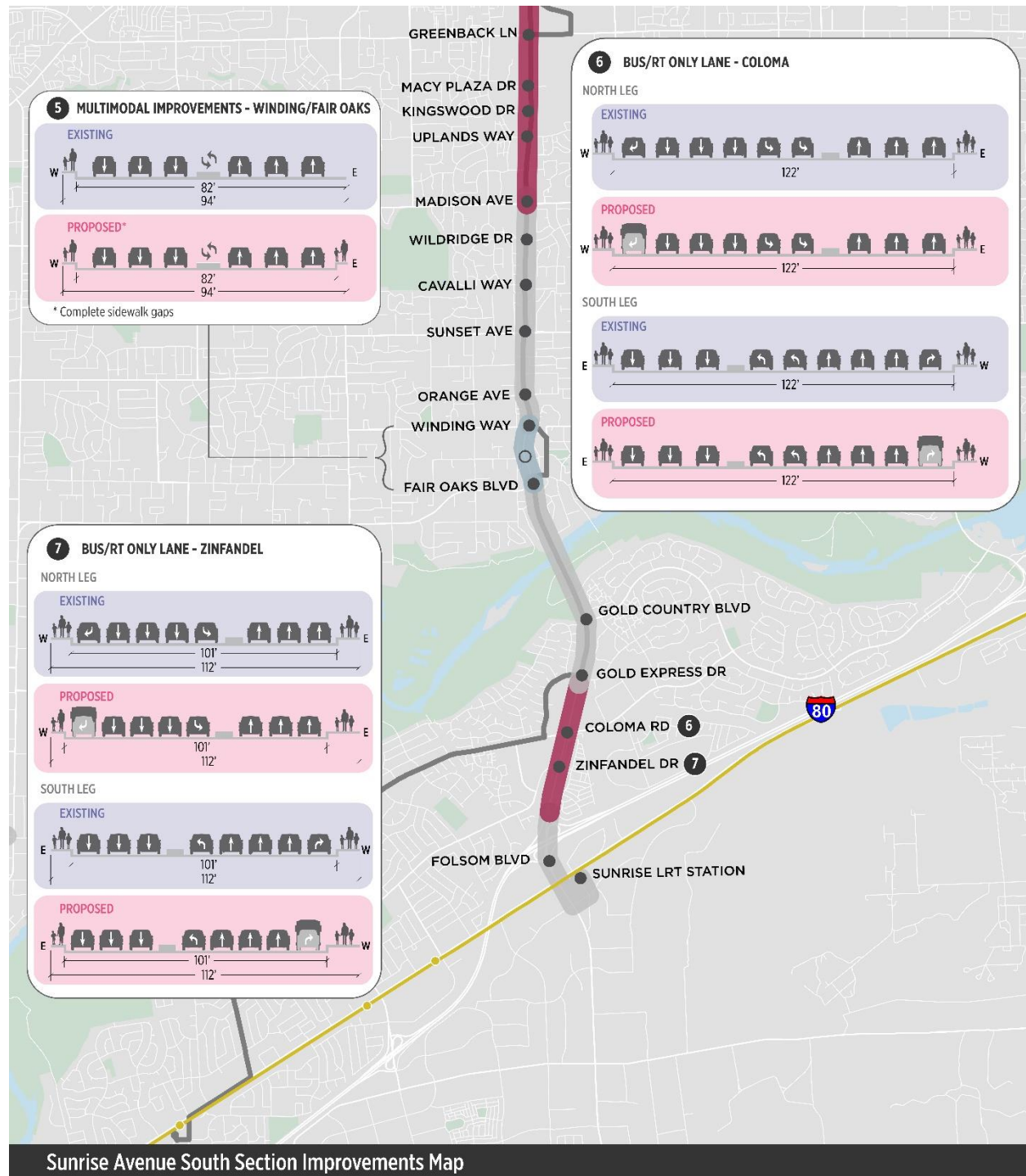


Figure 16: Sunrise Boulevard (North Section) Cross Sections Map



- Sunrise Corridor
- Stop Location
- Crossing
- Existing Bus Route
- Existing Bus Priority Lane
- Proposed Bus Priority Lane
- Multimodal Improvements



Figure 17: Sunrise Boulevard (South Section) Cross Sections Map



## Time Savings

Current southbound scheduled run times between Louis and Orlando Transit Center and Mather Field/Mills Station are 49 minutes (noon)-51 minutes (5 PM). Northbound running times are 46 minutes (noon) and 49 minutes (5 PM). Keeping Route 21 buses on Sunrise Boulevard, instead of the diverting at

Arcadia and Greenback Lane, Fair Oaks Boulevard and Coloma Road would save 9 minutes and 3.4 miles northbound and 6 minutes and 2.7 miles southbound. Coupled with the other transit priority treatments, total roundtrip savings could be 19-24 minutes. Table 11 below is a summary of potential travel time savings.

**Table 11: Time Saving Estimation (in minutes) for Sunrise Boulevard**

Direction	Route Streamlining	Transit Priority Treatments	Total	Current Run Times*	Percent
<b>Southbound</b>	6	2-5	8-11	49	16-22%
<b>Northbound</b>	9	2-4	11-13	46	24-28%
<b>Round Trip</b>	15	4-9	19-24	95	20-25%

\* Weekday noon between Louis & Orlando and Mather Field/Mills

## Watt Avenue

The primary route in the Watt Avenue corridor is Route 84, which operates between Elverta Road and Watt/Manlove Station and includes diversions off of Watt Avenue in Antelope, Arden-Arcade, and Rosemont. Other routes along Watt include 26-Fulton between Elverta Road and James Way and between Peacekeeper Way and Auburn Boulevard. Routes 13 and 82 also serve short stretches of Watt Avenue.

## Speed Map

Figure 18 shows the speed map for the north portion of the corridor between Baseline Road and the I-80/Watt LRT Station. There are only a couple of slowdowns – one after I-80 in the northbound direction and one after the Watt/I-80 Station in the southbound direction. The I-80 LRT station is the only location with average weekday dwells longer than a minute. This dwell is not scheduled and could be due to volume of passengers boarding and alighting at the light rail connection point.

Figure 19 shows the speed map for the south portion of the Watt Avenue corridor between I-80/Watt LRT Station and Watt/Manlove LRT Station. There are more slowdowns in the south portion of the corridor, compared to the north. Northbound slowdown locations include the left-hand turn onto Arden Way from Watt Avenue and the left turn from Butano Avenue onto Watt Avenue after serving the Kaiser Medical Center. Southbound slow speeds are evident in front of Kaiser Hospital on Morse Avenue. Significant delays also occur around the Watt/Manlove Station.

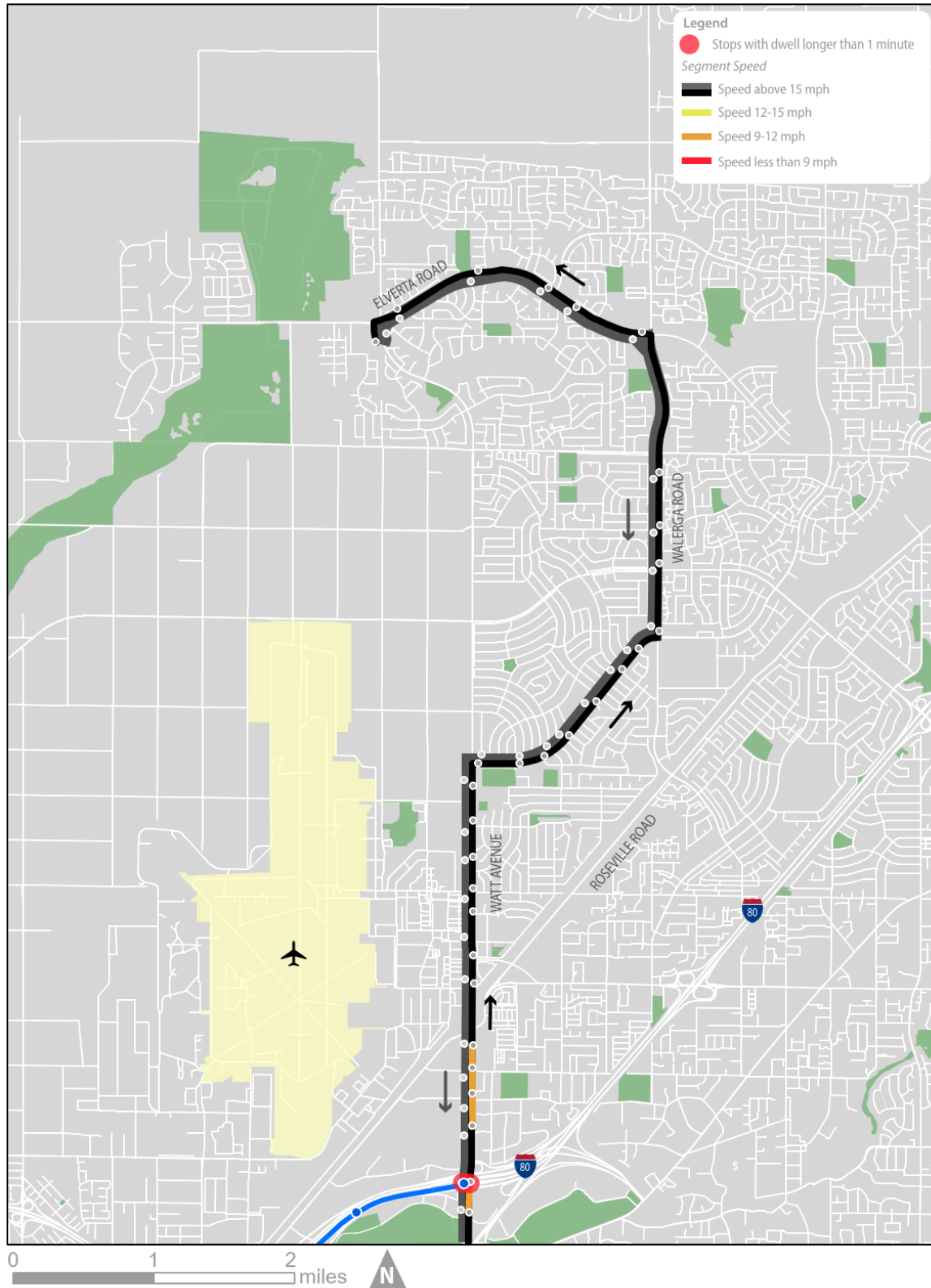


Figure 18: Watt Avenue (North Section) Speed Map

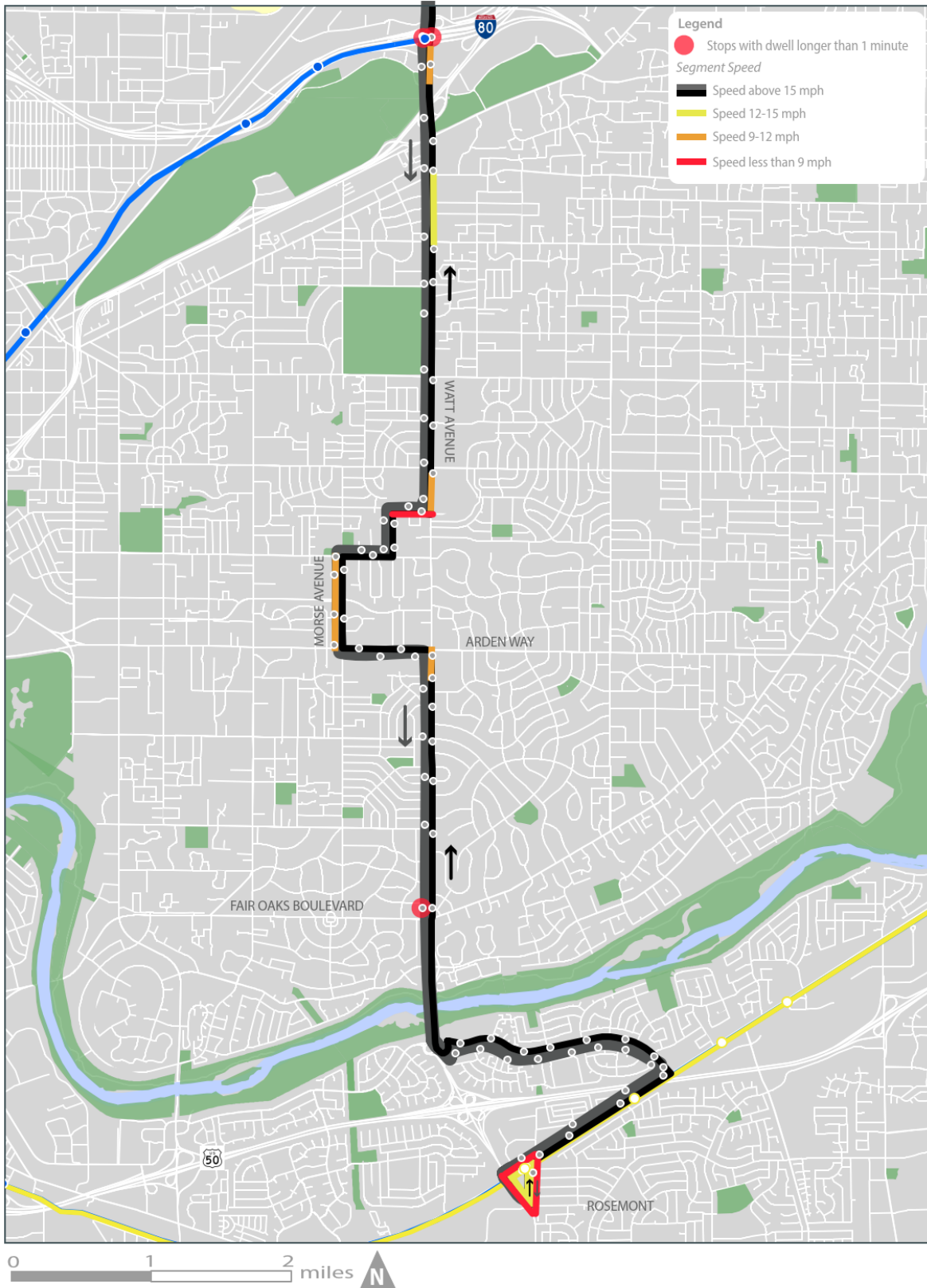


Figure 19: Watt Avenue (South Section) Speed Map

## Improvements

Figure 20 and Figure 21 present key improvements that are proposed for the Watt Avenue corridor. The potential HCBS corridor

is highlighted in yellow and the existing Route 84 is the gray line. The route is divided into seven segments and proposed application of techniques from the toolkit are shown for each of the seven segments.

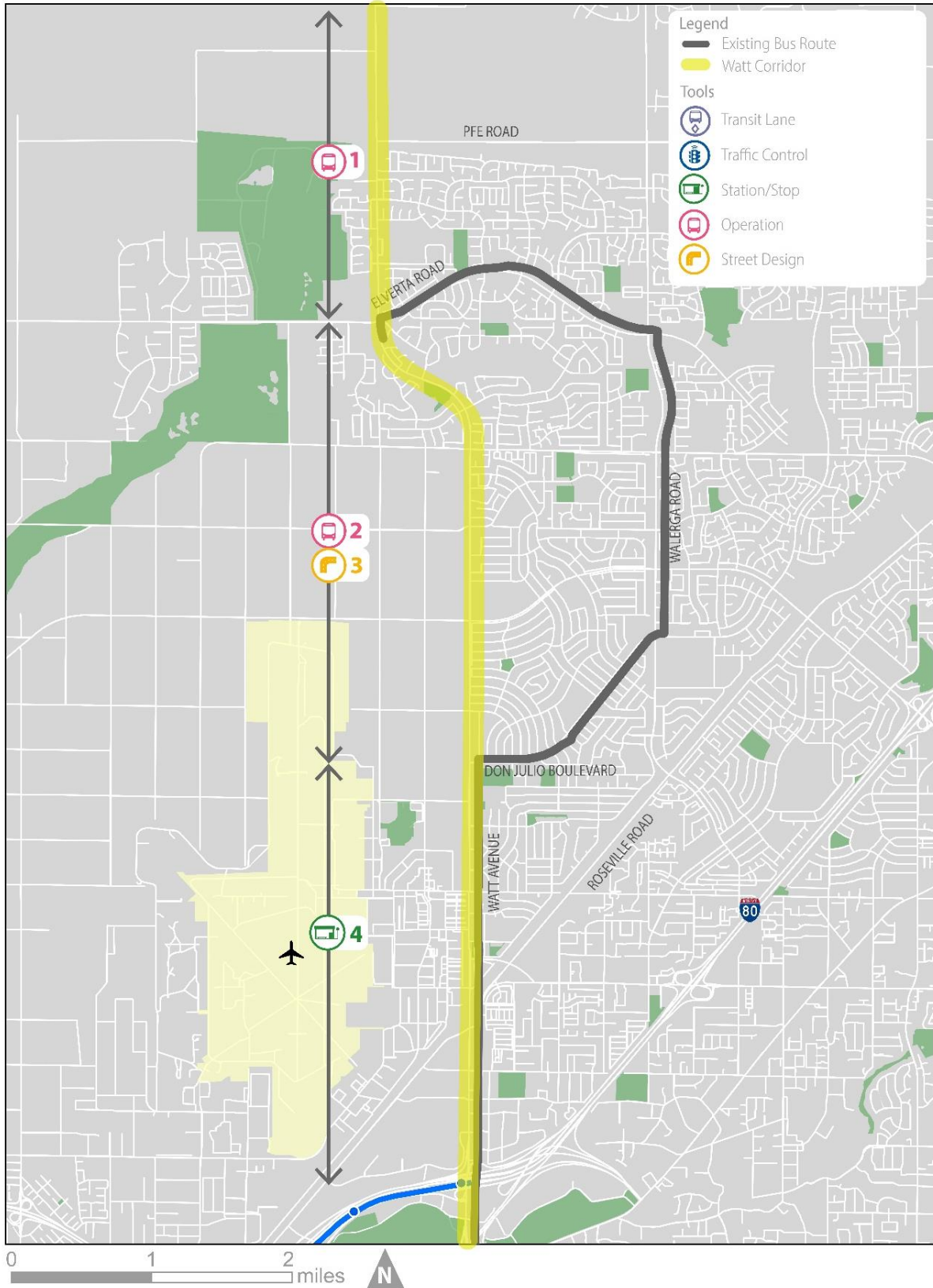


Figure 20: Watt Avenue (North Section) Potential Improvements Map

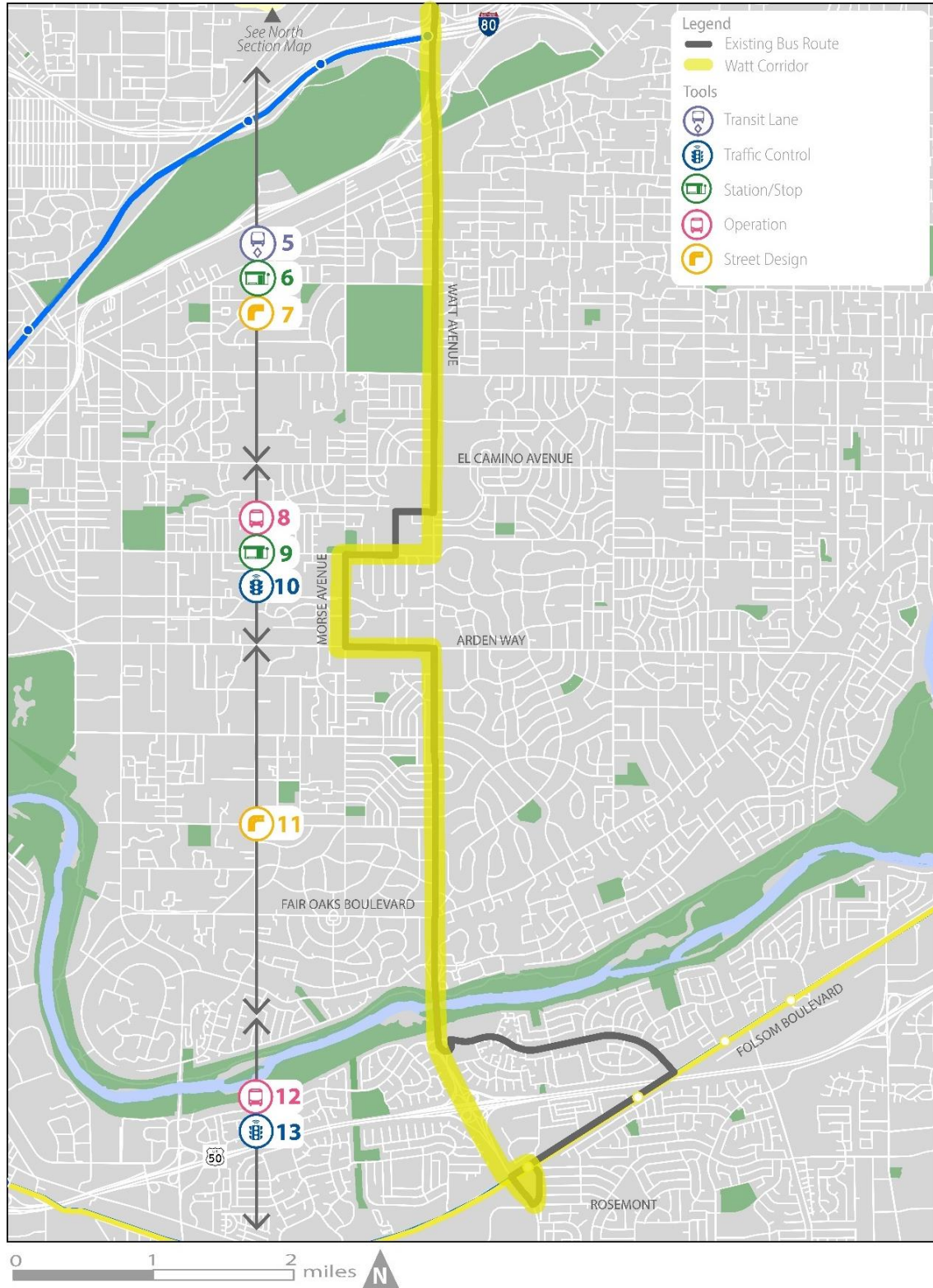


Figure 21: Watt Avenue (South Section) Potential Improvements Map

### **Segment 1: Baseline Road to Elverta Road**

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This improvement would increase regional connectivity and serve new developments in the area, including future development at Placer Vineyards on Baseline Road, and the current development between Elverta Road and PPE Road.

- 1. Extend service to Placer County:**  
Provide direct connection to Placer County by extending Route 84 north.

### **Segment 2: Elverta Road to Don Julio Boulevard**

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These improvements would increase the intuitiveness of service in the Watt Avenue corridor and increase multimodal access to stops. Keeping service on Watt Avenue for Route 84, while using Route 26 to cover local service, would prepare Watt Avenue for HCBS. Providing multimodal improvements will increase access for active transportation, increase safety, and passenger amenities.

- 2. Straighten service along Watt Avenue:** provide continuous service along Watt Avenue by integrating service on Route 84 with Route 26. Route 84 would continue along Watt Avenue to Elverta Road, while Route 26 would continue to run as a local route and cover service on Don Julio Boulevard and Walgera Road.
- 3. Multimodal improvements:** Multimodal improvements including evaluating multimodal lane through restriping, closing gaps in the sidewalk, and improving pedestrian crossing; evaluate using the parallel service lane as a dedicated bike route.

### **Segment 3: Don Julio Boulevard to I-80 LRT Station**

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This improvement would reduce travel time and provide more consistent run times along the corridor by consolidating stops. SacRT could focus on the reduced number of stops and install extra amenities such as shelters and benches. Figure 22 shows an existing stop at the intersection of Myrtle Avenue and Watt Avenue without any shelter or bench.

- 4. Stop consolidation:** Consolidate stops and improve stop amenities in this segment of Watt Avenue.



*Figure 22: Existing bus stops on Watt Avenue (Northbound) at the intersection with Myrtle Avenue*

### **Segment 4: I-80 LRT Station to Cottage Way**

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These improvements would reduce bus delays, improve amenities for passengers, and provide better access to bus stops. Furthermore, as multiple routes travel on this segment (Route 26, 84 and 93) there is an opportunity to increase safety and comfort for riders for multiple routes. Evaluate a Complete Streets option, including multimodal lanes, enhancing sidewalks, and improving pedestrian crossings to better access bus stops. It would also create a more pleasant experience for riders and potentially attract more riders if there were more amenities at stops.



- 5. Right turn only except bus:** Right turn only except bus lane at northbound at Auburn Boulevard and southbound at El Camino Avenue to reduce delays at intersections.
- 6. Stop consolidation:** consolidate stops and provide better amenities at stops. This would reduce stopping and going and provide more consistent run times.
- 7. Multimodal improvements:** Evaluate complete street options including a multimodal lane, enhancing sidewalks, and pedestrian crossing to better access bus stops.

### Segment 5: Cottage Way to Arden Way

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These improvements will speed up the service, prepare the corridor for HCBS, and make it more attractive to riders. It includes improving multimodal access and inter-modal travel, streamlining the route, evaluate potential locations for signal priority treatments, and enhance network connectivity.

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**Mobility hubs** showcase the connections among different transportation modes by linking transit, active transportation, micromobility and other transportation services (ex.: carshare) at a specific location. They can be combined with other amenities such a community gathering place for nearby employees, residents, and visitors.

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- 8. Streamline route:** Remove deviation on Butano Drive and straightening the route along Cottage Way. SacRT would decrease travel time while continuing service to the Kaiser Medical Center.

- 9. Enhance network connectivity:** Evaluate implementation of a mobility hub in partnership with the medical center, other local businesses and the City, including connection with the Arden Way Services to provide a more seamless transition between routes.
- 10. Transit signal priority:** Evaluate signal priorities on Watt to speed up service at the diversion. Signal timing adjustments, bus detection or queue jump lanes could be used in the Arden-Arcade area to reduce the amount of time that buses wait to make left turns, further speeding up service and making it more attractive to riders.

### Segment 6: Arden Way to American River

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This section is characterized by residential areas, fewer traffic lanes, and slower speeds. However, it is not pedestrian friendly, as there are gaps in the sidewalks and bicycle lanes and a lack of crosswalks. The improvements aim to make the corridor safer and more inviting for passengers. Improving pedestrian access would also improve bus access. For example, some stops don't have any sidewalks, which makes the bus stop relatively unsafe and inaccessible for persons with disabilities..



Figure 23: Bus Stop at San Ysidrio Way and Watt Avenue

**11. Street design:** Pedestrian and multimodal improvements, including closing gaps in the sidewalk to improve access to transit and restripe to use bike and parking lane to create multimodal lanes for transit and bikes.

**Segment 7: American River to Watt/Manlove LRT Station**

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These improvements will prepare the corridor for HCBS and reduce travel times. An express service could be provided with peak overlay service on Watt Avenue and continued service on La Riveria Drive in order to meet local service needs. Transit signal priority will address the left-turns delays into the Watt/Manlove Station from Watt Avenue. In addition, it would use the existing bus only lane to speed up time at the intersection and to create direct bus access to the light rail.

**12. Streamline route:** Provide Express Service to the Watt/Manlove Station by removing the Route 84 diversion onto La Riviera Drive and continue directly to the Watt/Manlove LRT Station.

**13. Transit signal priority:** Signal priority to access the Watt/Manlove Station using the bus only lane.

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*For Watt Avenue, cross sections showing existing and proposed lane configuration were developed to demonstrate the potential use of the right-of-way. These are presented on the following pages.*

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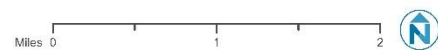
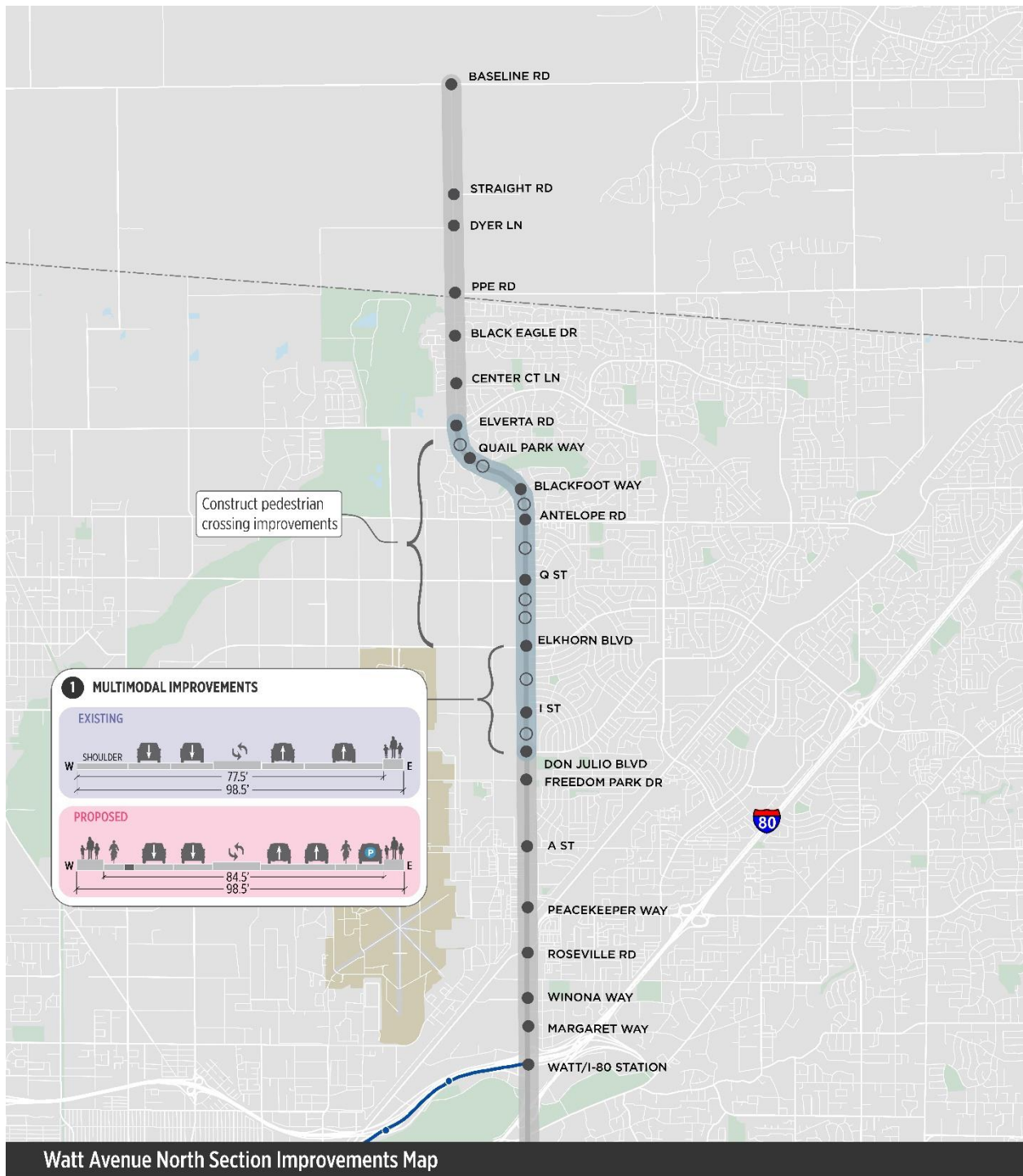


Figure 24: Watt Ave (North Section) Cross Sections Map

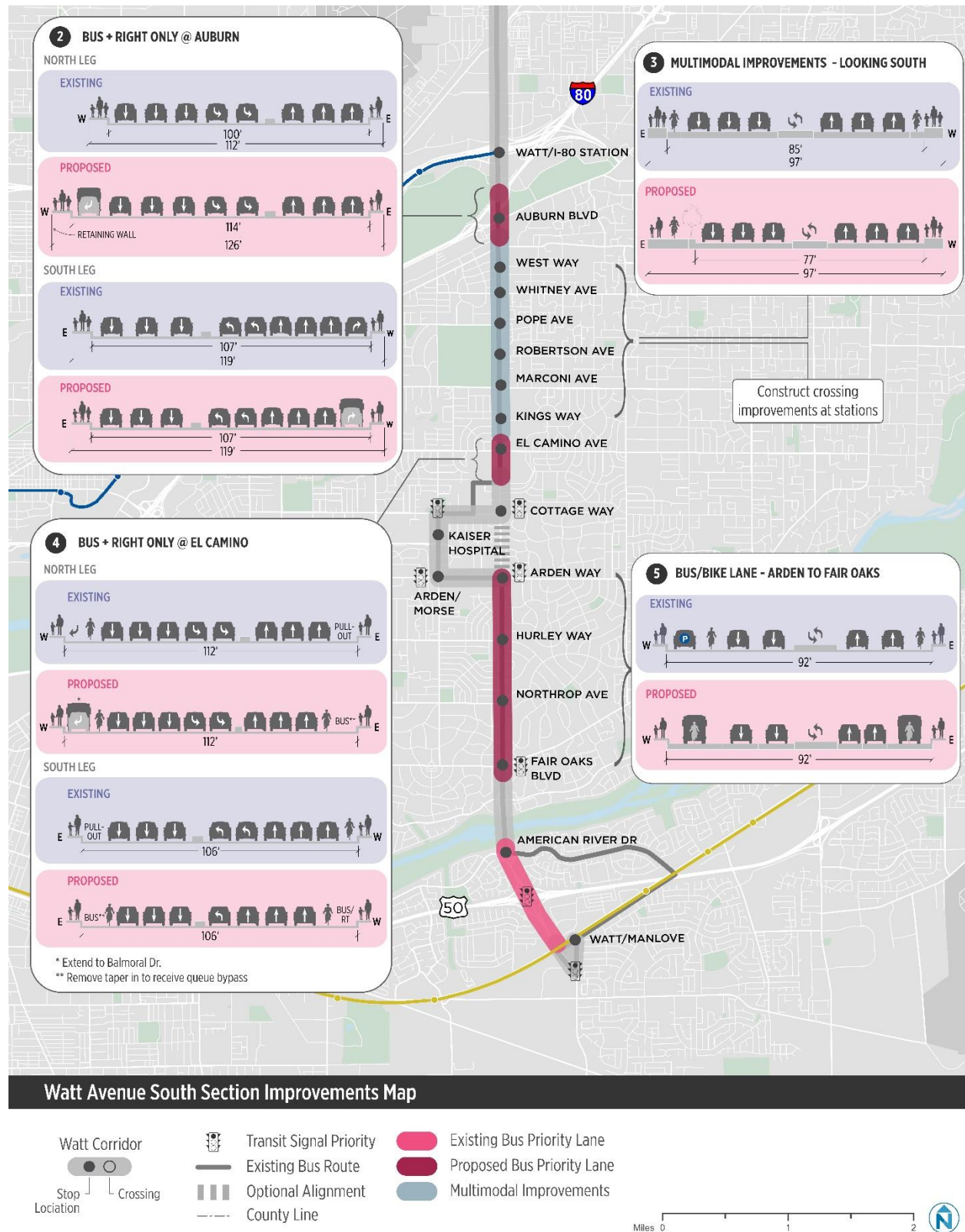


Figure 25: Watt Avenue (South Section) Cross Sections Map

## Time Savings

Current southbound scheduled running times are 67 minutes (noon) – 65 minutes (5 PM). Northbound run times are 66 and 78 minutes, at noon and 5 PM Keeping northbound and southbound Route 84 buses on Watt Avenue instead of the deviations at Don Julio

Boulevard, Cottage Way and La Riviera Drive would save 17 minutes southbound and 4.8 miles. It would save 12 minutes and 4.6 miles northbound. Coupled with the other transit priority treatments, total southbound savings could be 20-23 minutes; northbound savings could be 15-19 minutes. Table 12 below shows a summary of potential travel time savings.

**Table 12: Time Saving Estimation for Watt Avenue**

Direction	Route Streamlining	Transit Priority Treatments	Total	Current Run Times*	Percent
<b>Southbound</b>	17	3-6	20-23	67	30-34%
<b>Northbound</b>	12	3-7	15-19	66	23-29%
<b>Round Trip</b>	39	6-13	35-42	133	26-32%

\* Weekday noon between Watt & Elverta and Watt/Manlove

## Long-Term Vision

As transit speed, reliability, and service improve in each corridor and as streets become multimodal through the incremental improvements proposed, HCBS (which involves higher capital cost improvements) will become a more viable option. Starting with baseline, incremental improvements towards HCBS will allow SacRT to seek funding through FTA Small Starts. FTA guidelines requires the following elements:

1. The route must have **defined stations** that comply with the Department of Transportation standards for buildings and facilities under the Americans with Disabilities Act, offer shelter from the weather, and provide information on schedules and routes.
2. The route must provide **faster passenger travel times** through congested intersections by using active signal priority in a separated guideway, if it exists, and either queue-jump lanes or active signal priority in a non-separated guideway.
3. The route must provide **short headways and bidirectional service for at least a fourteen-hour span of service on weekdays**. Short headway service on weekdays consists of either (a) fifteen-minute maximum headways throughout the day, or (b) ten-minute maximum headways during peak periods and twenty-minute maximum headways at all other times.
4. The provider must apply a separate and consistent **brand identity to stations and vehicles**.

In addition to the transit priority and access improvements described above, HCBS includes more widely-spaced stations,

including main intersections, transfer connections, key destinations, and other high-need locations; larger shelters, boarding platforms, other amenities at stations; all-door bus boarding; and advanced bus technology and larger buses.

## Service Standards

The following service standards are based on FTA guidelines and should be the minimum service requirement for a successful HCBS:

- Bi-directional service
- 15-minute all day service (weekday)
- Minimum 14-hour span of service

## Terminal Points and Stop Locations

For the four corridors, there is an opportunity to consolidate stops since most (50%+) of the ridership is concentrated among a small number of stops. By removing some of the stops along the route, the riders will get faster and more reliable travel times. SacRT could then focus on providing better amenities and access at the remaining stops.

The maps below identify the potential alignment of HCBS on the four corridors with key connection points to other services or transit centers. The maps do not show all stops along the route but stops should be located at connecting points to other transit lines, major trip generators, or in a location with high transit needs.

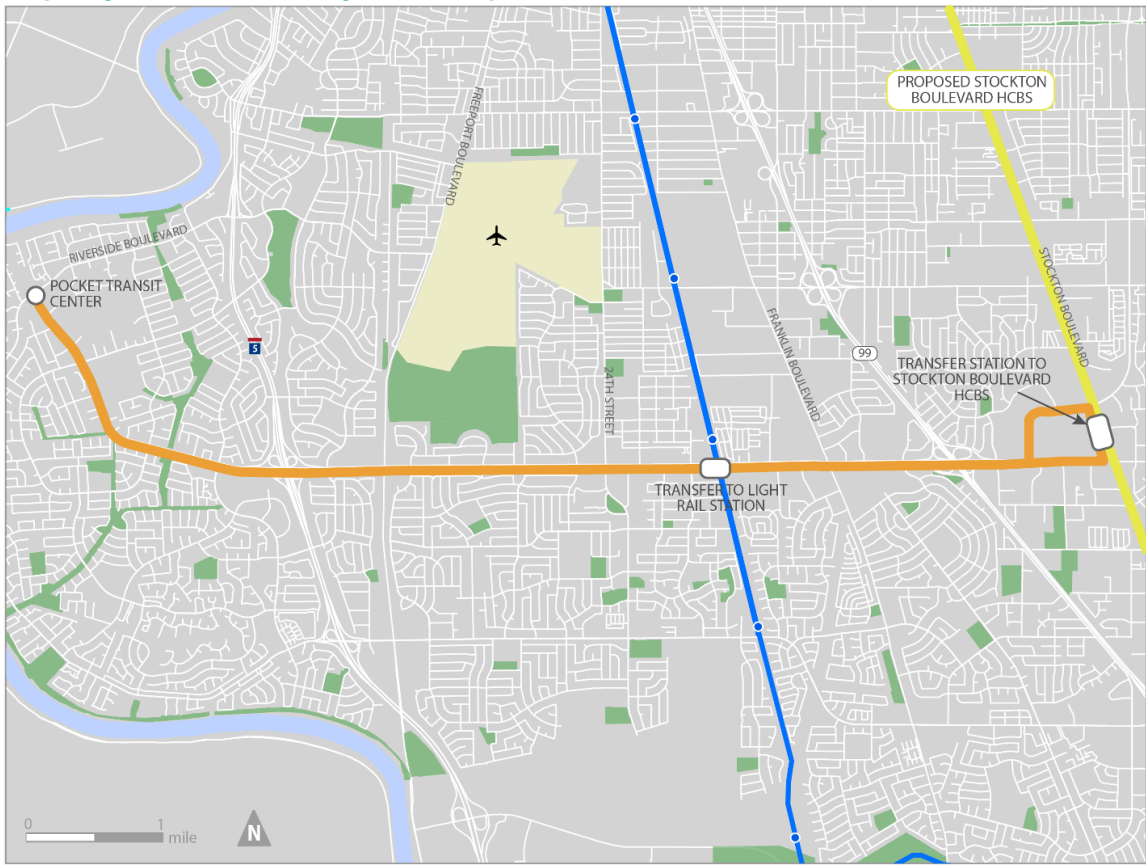


Figure 26: Proposed HCBS Alignment for Florin Road

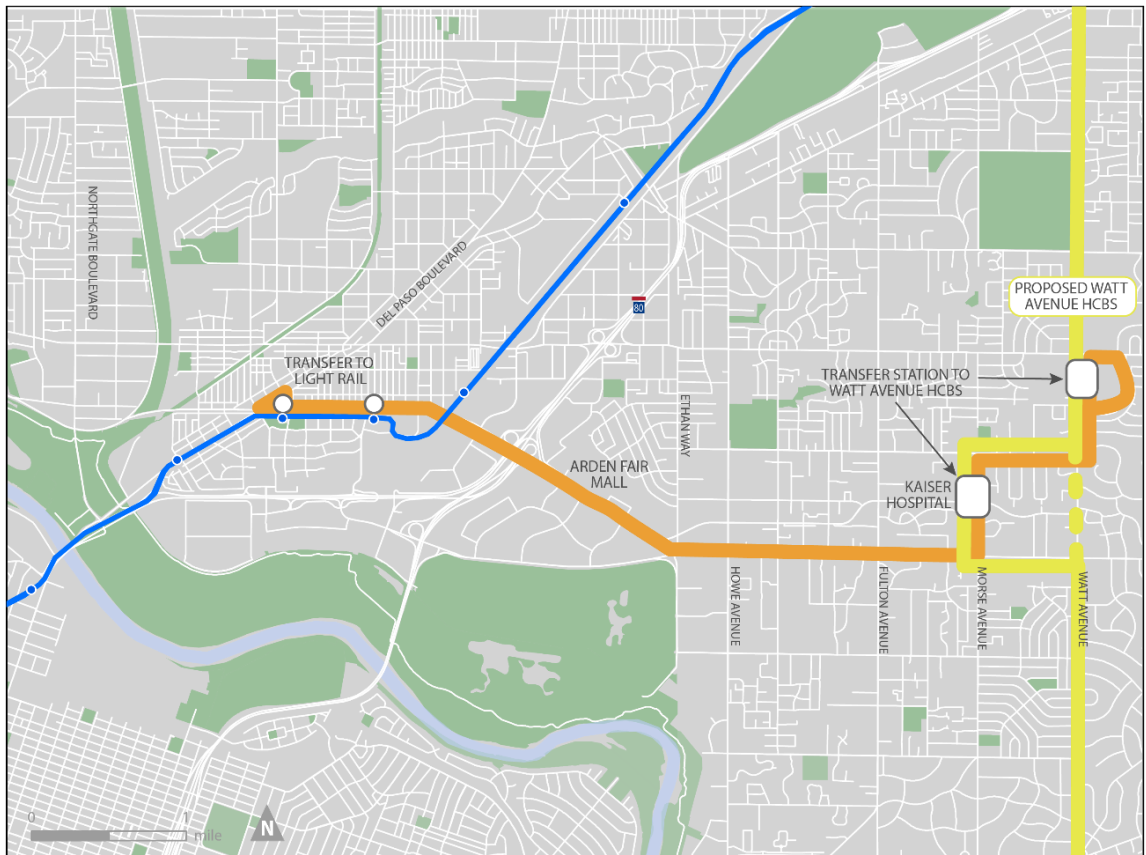


Figure 27: Proposed HCBS Alignment for Arden Way

There is an opportunity to introduce HCBS on **Sunrise Boulevard** in two distinct phases:

- **Phase 1:** Louis and Orlando Transit Center to Sunrise Light Rail Station
- **Phase 2:** Louis and Orlando Transit Center to Roseville Transit Center

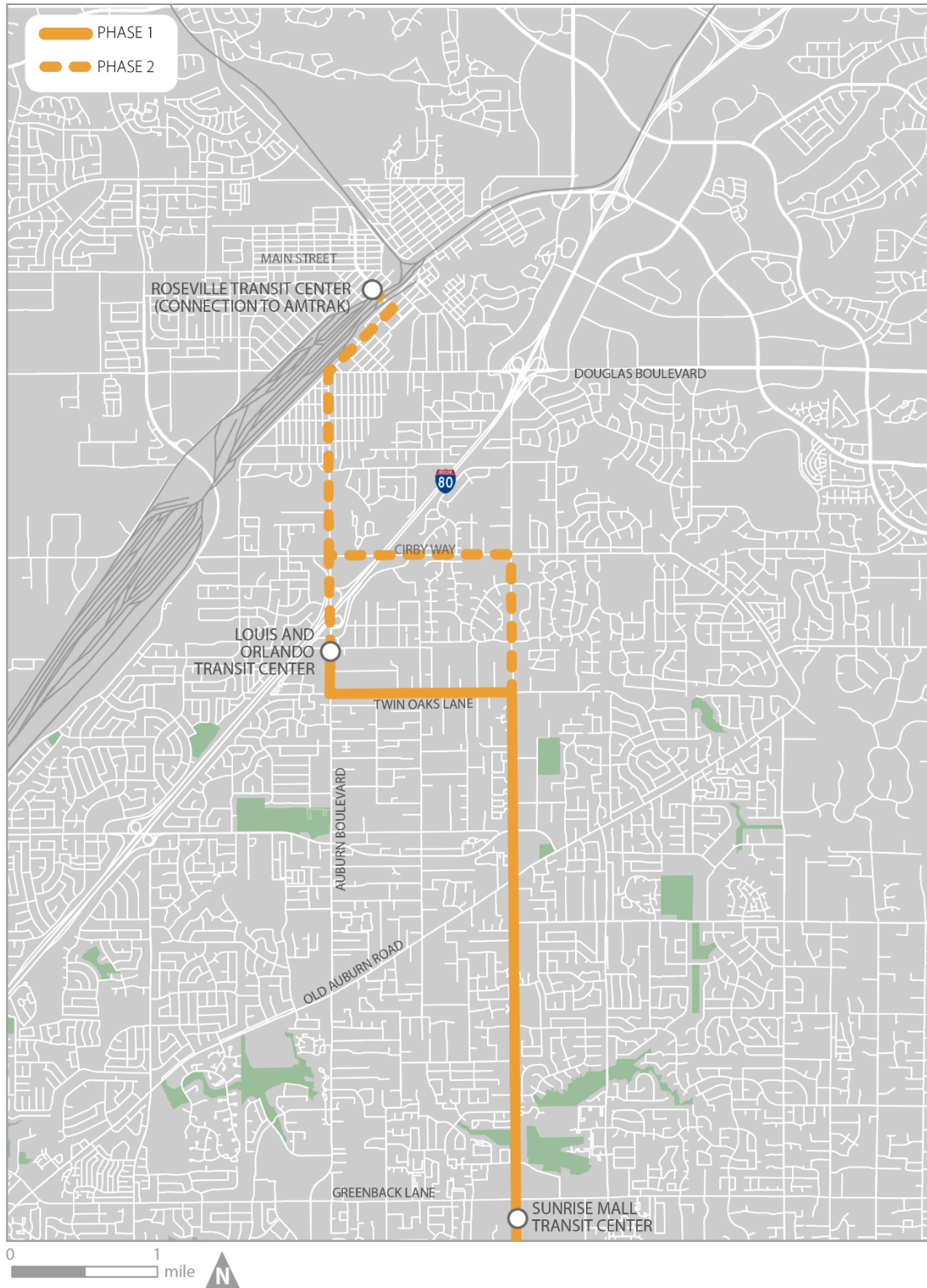


Figure 28: Proposed HCBS Alignment for Sunrise Boulevard (North Section)





Figure 29: Proposed HCBS Alignment for Sunrise Boulevard (South Section)

There is an opportunity to introduce HCBS on **Watt Avenue** in three phases:

- Phase 1: I-80/Watt Light Rail Station to Watt/Manlove Light Rail Station
- Phase 2: Elverta Road to I-80/Watt Light Rail Station
- Phase 3: Elverta Road to Baseline

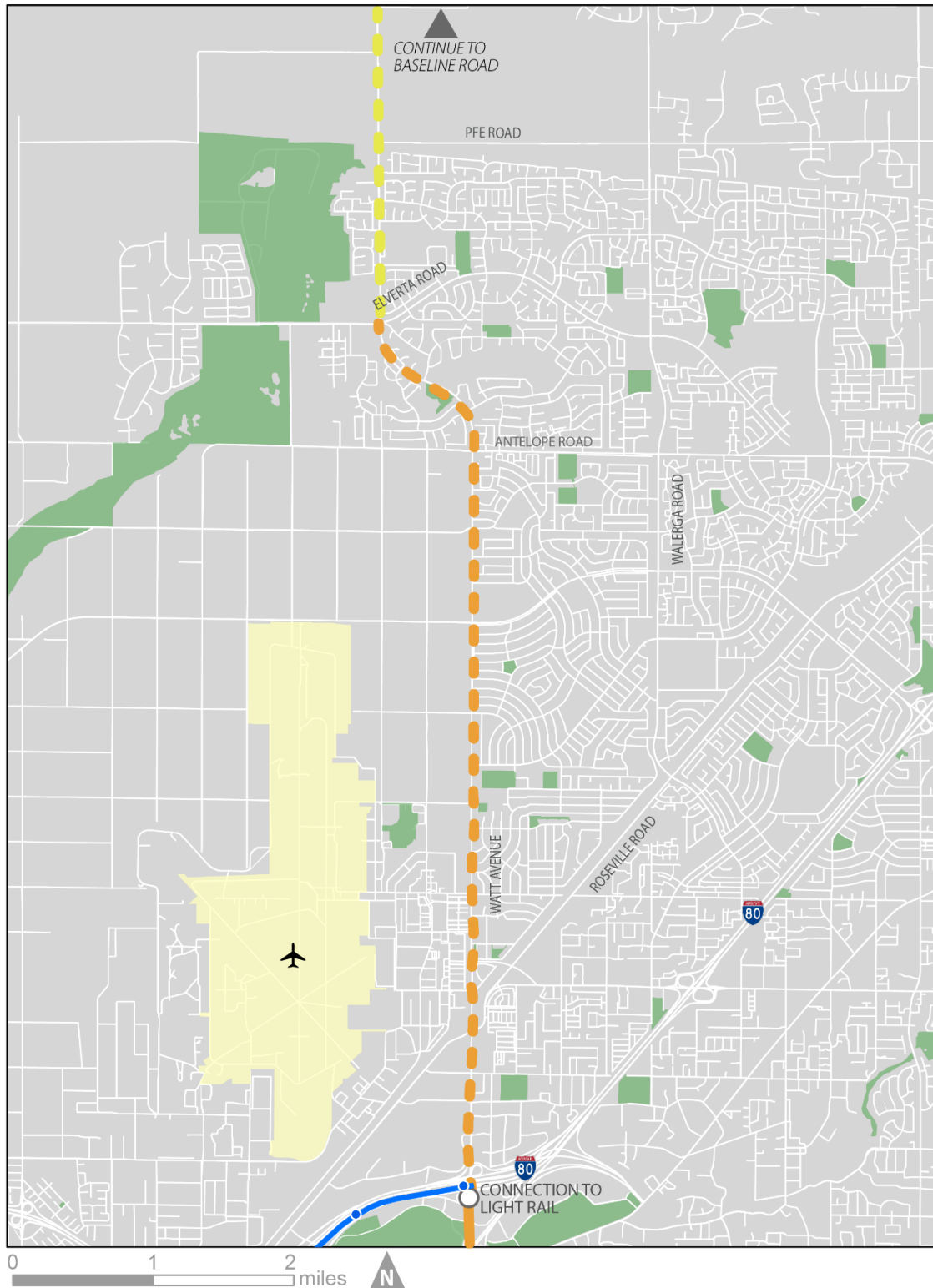


Figure 30: Proposed HCBS Alignment for Watt Avenue (North Section)

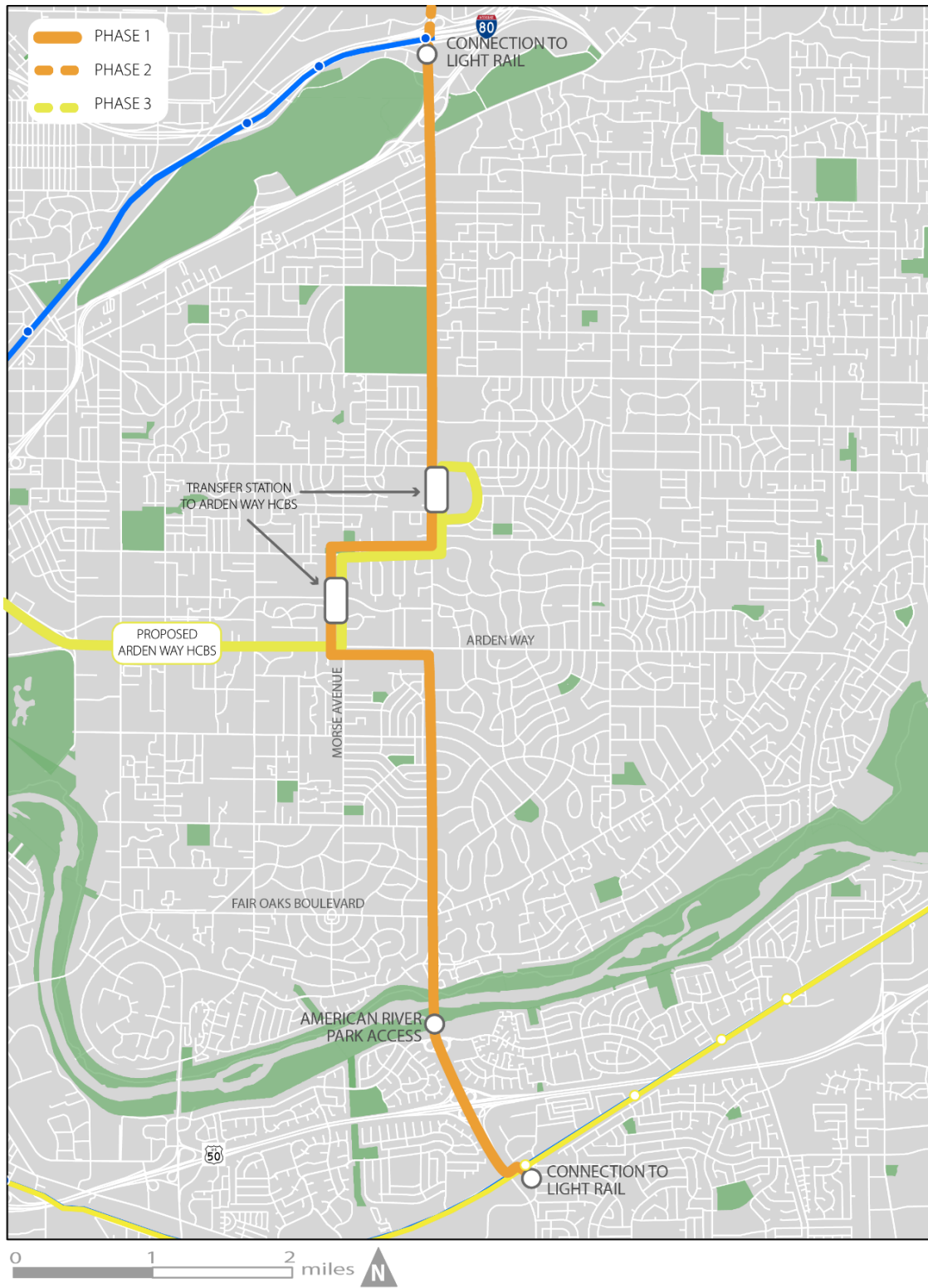


Figure 31: Proposed HCBS Alignment for Watt Avenue (South Section)



# IMPLEMENTATION STRATEGIES

# IMPLEMENTATION STRATEGIES

Implementing the recommendations for HCBS in the four corridors identified would require financial resources and both internal and external coordination. These requirements will vary from one corridor to another depending on the jurisdictions they traverse, on-going planning efforts, and political support. The following section estimates the operating and capital costs for implementation of HCBS in each corridor, suggests potential funding strategies, and provides sources that SacRT could use for implementation.

## Operating Costs for HCBS

Operating costs for HCBS were calculated using the software Remix. The operating costs are based on the alignments presented in the previous section with the following assumptions:

- Hourly operating cost of \$155<sup>6</sup>,
- 15-minute headways,
- All day service between 6 AM and 10 PM (unless the previous service began earlier),
- Minimum layover set at 18 percent of one-way run time, and
- 10 percent savings in addition to the Remix run time based on the

proposed alignments of the route to account for stop spacing and various transit priority treatments.

*Table 13: Annual Operating Costs for HCBS*

Route	Vehicle Count	Operating Cost (\$/year)
Arden Way	4	3,309,638
Florin Road	5	4,155,098
Sunrise Boulevard Phase 1	6	5,087,035
Sunrise Boulevard Phase 2	7	6,167,373
Watt Avenue Phase 1	5	3,643,792
Watt Avenue Phase 2	7	6,104,592
Watt Avenue Phase 3	9	7,325,511

## Capital Costs

An order-of-magnitude HCBS capital cost for each corridor was calculated based on the cost per mile for other bus rapid transit projects. The costs assume no land acquisition or other situations that could increase costs (e.g., contaminated soils, utility relocation). Recent BRT project costs per

<sup>6</sup> Sacramento Regional Transit District, FY 2020 – Key Performance Report, September 2019, <https://sacrt.com/documents/Performance/KPR0919.pdf>

## SacRT High Capacity Bus Service Study – Final Report

mile, which includes buses, have averaged over \$11 million per mile in 2020 dollars. Costs can vary widely depending on local situations and the extent of improvements. The proportion of total costs needed to purchase buses also varies depending on the number of buses needed and the cost of right-of-way and other improvements.

Table 14 assumes an average cost, including buses, of \$15 million per mile, about 30% higher than the \$11 million. This is appropriate at this early stage of the planning process given the wide variation in each corridor, and the uncertainty around the locations, types and levels of improvements, and the varying complexity of right-of-way. These cost estimates can be refined as planning for each corridor advances.

**Table 14: High-Level Capital Cost Estimates for HCBS**

<b>Corridor</b>	<b>Extent</b>	<b>Length (in miles)</b>	<b>Total Cost (in millions)</b>
<b>Arden Way</b>	<i>Del Paso Boulevard to Watt Avenue</i>	5.6	\$84
<b>Florin Road</b>	<i>Riverside Boulevard to Stockton Boulevard</i>	6.9	\$104
<b>Sunrise Boulevard Phase 1</b>	<i>Louis and Orlando Transit Station to Sunrise LRT Station</i>	9.7	\$146
<b>Sunrise Boulevard Phase 2</b>	<i>Louis and Orlando Transit Station to Roseville Transit Center</i>	2.3	\$35
<b>Sunrise Boulevard (Total)</b>	<i>Roseville Transit Center to Sunrise LRT Station</i>	12.0	\$180
<b>Watt Avenue Phase 1</b>	<i>Watt/I-80 LRT Station to Watt/Manlove LRT Station</i>	6.7	\$101
<b>Watt Avenue Phase 2</b>	<i>Watt/I-80 LRT Station to Elverta Road</i>	5.0	\$75
<b>Watt Avenue Phase 3</b>	<i>Elverta Road to Baseline Road</i>	2.5	\$38
<b>Watt Avenue (Total)</b>	<i>Baseline Road to Watt/Manlove LRT Station</i>	14.2	\$213

## Funding Strategies

For implementation of the first phase of the long-term vision – which includes HCBS on Arden Way, Florin Road, Sunrise Boulevard (Phase 1) and Watt Avenue (Phase 1) - SacRT must identify \$433 million in grants to fund one-time capital needs and \$16.2 million in annual operations funding. The following strategies were identified to close the funding gap and are discussed in further details below:

1. Seek additional state and regional funding
2. Pursue federal grant funding and financing
3. Use farebox for operating costs
4. Partner and coordinate with local jurisdictions through on-going projects along the corridor
5. Implement tactical transit solutions that require low capital costs

### 1. Seek Additional State and Regional Funding

#### State Funding

The State of California funding programs administered by Caltrans, the California State Transportation Agency (CalSTA), or the California Transportation Commission (CTC) that could support the Project include:

#### *California Transportation Development Act (TDA)*

The TDA funds a wide variety of activities, including planning, pedestrian and bicycle facilities, community transit services, public transportation, and bus and rail projects. SacRT could rely on TDA funds to pay the

operating costs associated with express bus services once implemented.

#### *Cap-and-Trade Program*

The Transit and Intercity Rail Capital Program (TIRCP), supported by the cap-and-trade program, funds transformative capital improvements to reduce emissions of greenhouse gases by reducing congestion and vehicle miles traveled throughout California.

The Low Carbon Transit Operations Program (LCTOP), also funded by the cap-and-trade program, supports transit projects and operations that reduce GHG emissions.

#### *Caltrans' Sustainable Transportation Planning*

Caltrans' Sustainable Transportation Planning Grant includes two pathways for potential funding. The Sustainable Communities Grants are intended to advance projects that align with goals established in the Regional Transportation Plan Guidelines and can vary in focus from year to year. The Strategic Partnerships Grants are focused on statewide, interregional, or regional transportation deficiencies, and include a sub focus on transit planning projects to address multimodal transportation deficiencies. Projects funded by these sources are generally limited to planning studies and cannot include engineering design or capital infrastructure activities.

#### Regional Funding

The Sacramento Area Council of Governments (SACOG) is the region's Metropolitan Planning Organization (MPO)

and the Council of Governments. SACOG is an association of local governments in the six-county Sacramento region. Its members include the counties of El Dorado, Placer, Sacramento, Sutter, Yolo, Yuba and the 22 cities within the region.

SACOG provides transportation planning and funding for the region and serves as a forum for the study and resolution of regional issues.

### ***Congestion Mitigation and Air Quality Improvement Program (CMAQ)***

SACOG is responsible for sending Caltrans a “Congestion Mitigation and Air Quality Improvement Program (CMAQ) Implementation Plan,” as required by the Federal Highway Administration (FHWA). This plan documents how SACOG’s CMAQ funded projects support reaching Statewide CMAQ performance targets set by Caltrans. The CMAQ fund

## **2. Pursue Federal Grant Funding and Financing**

### ***FTA Mobility for All Pilot Program***

This program aims to improve mobility options through the innovative coordination of transportation strategies and builds partnerships to enhance mobility and access to vital community services for older adults, individuals with disabilities, and low-income individuals.

### ***FTA Discretionary Grant Programs***

FTA also offers discretionary grant programs, such as FTA 5307 Urbanized Area Formula Grants for transit capital and operating assistance in urbanized areas and for transportation-related planning or FTA 5310 Enhanced Mobility for Seniors and Persons with Disabilities Program to improve the mobility of seniors and individuals with disabilities by removing barriers to transportation services and expanding the transportation mobility options available.

## **3. Use Farebox for Operating Costs**

This strategy focuses on applying user fees such as transit fares as a funding source for covering operating costs of increasing services in the proposed corridors. Unfortunately, transit has significantly increased costs and has experienced revenue losses because of COVID-19. An economic analysis determined a \$23.8 billion funding shortfall through the end of 2021, in addition to the \$25 billion allocated for public transportation in the CARES Act.<sup>7</sup> This is mainly due to losses of ridership caused by the statewide shelter-in-place. As economy re-opens, travel patterns might change which create opportunities for some corridors in the service area to provide shorter trips such as Sunrise and Watt.

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<sup>7</sup> American Public Transportation Association, “American Public Transportation Association Urges Lawmakers and Administration to Provide Additional COVID-19 Emergency Response and Recovery Funding” <https://www.apta.com/news-publications/press-releases/releases/american-public-transportation-association-urges-lawmakers-and-administration-to-provide-additional-covid-19-emergency-response-and-recovery-funding/>



#### 4. Partner and Coordinate with Local Jurisdictions through On-Going Projects Along the Corridor

Some of the local jurisdictions have implemented improvements to their right-of-way that benefits SacRT. It is the case of the City of Citrus Heights, through its Sunrise Boulevard Complete Street Project, has implemented safety improvements at bus stops and closed gaps in the sidewalk. Other win-win partnerships include the Stockton Boulevard Corridor Study that evaluates complete street designs in Stockton.

Other opportunities for partnerships include Vision Zero efforts by the City of Sacramento on Florin Road; a proposed Complete Streets project on Watt Avenue near Roseville Road in unincorporated Sacramento County; and the Arden Way Complete Streets project programmed in the 2021 MTP.

There are also opportunities to partner with developers. An example includes the Sunrise Mall redevelopment project on Sunrise Boulevard. The redevelopment will include a new transit center for Route 21, among others. There is the opportunity to improve the right-of-way for all modes at this location by partnering with local jurisdictions.

#### 5. Implement Tactical Transit Solutions that Require Low Capital Costs

Tactical transit projects use lower-cost, temporary materials and short-term tactics to pilot, test, or expedite projects while longer-term planning occurs. Tactical transit projects:

- Are implemented within 1 to 2 years;
- Use impermanent or low-cost materials;
- Have a smaller budget (often less than \$100,000) than a typical capital project;
- Are short-duration projects, but are part of a larger or longer-term effort; and
- Accelerate the implementation of permanent infrastructure.

Benefits from tactical transit projects include:

- **Speed & Reliability:** Faster and more reliable bus travel times
- **Access & Safety:** Improved access to stops for pedestrians, disabled individuals, and bicycles
- **Rider Experience:** Enhanced sense of place around transit stops.<sup>8</sup>

This funding strategy aims to test concepts within the region before dedicating more funding and allows SacRT to monitor the results of the project. It will provide quickly-realized results without doing long-term planning and seeking large amounts of funding. This allows for greater flexibility.

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<sup>8</sup> National Academies of Sciences, Engineering, and Medicine 2019. Fast-Tracked: A Tactical Transit Study. Washington, DC: The National Academies Press.

## Monitoring Results

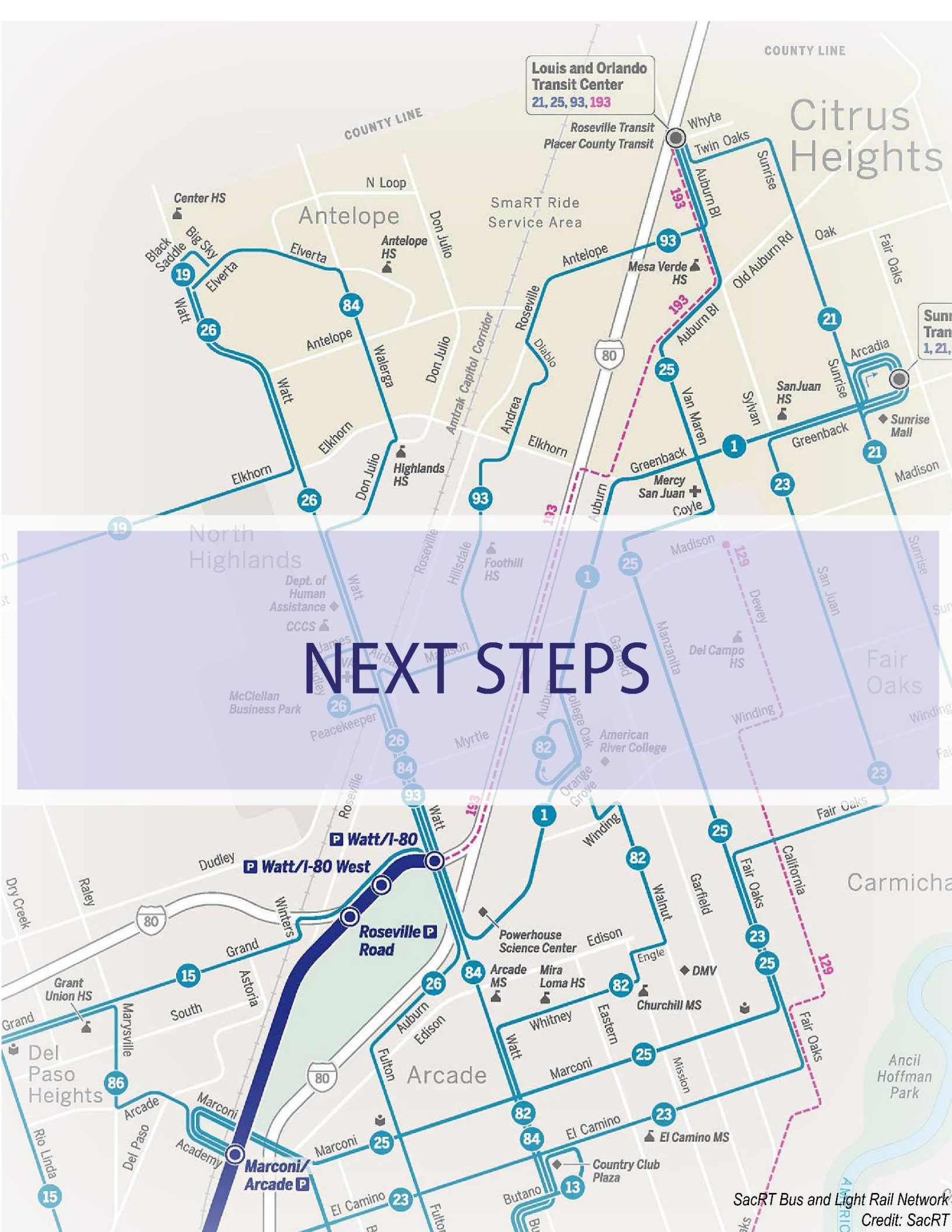
The following performance metrics are recommended for regular evaluation of the initial focus improvements. Baseline data points for each metric should be established prior to the launch of new service – post-implementation metrics will be compared to pre-service levels where data is available.

SacRT’s Operations and Customer Service teams will undertake the regular evaluation of operations and productivity of the proposed new service. The following metrics will be examined on schedule defined in Table 15.

Staff will need to monitor and be prepared to scale or adjust service levels and other factors as appropriate. If improvements fail to meet desired outcomes, staff may need to consider ways to adjust the service to maintain cost effectiveness. This includes reducing service frequency, span, or adjusting other operation levels that affect the cost to run the service. SacRT should seek to stay nimble in adjusting service design and levels based on how the service performs against the stated goals of the service and against the performance metrics.

*Table 15: Performance Monitoring*

Metric	Success Criteria	Reporting Schedule	Source
<b>On-Time Performance</b>	Increased OTP	Monthly	SacRT Operations
<b>Cost per passenger</b>	Stable	Monthly	SacRT Operations
<b>Farebox Recovery</b>	Stable	Monthly	SacRT Operations
<b>Route Ridership</b>	Increased	Monthly	SacRT Operations
<b>Customer Feedback</b>	Positive customer feedback to staff, customer service	Monthly	SacRT Customer Service
	Positive customer feedback on on-board surveys	Annually	On-Board Survey



**Louis and Orlando  
Transit Center**  
21, 25, 93, 193

# NEXT STEPS

**Watt/I-80**

**Watt/I-80 West**

**Roseville Road**

**Marconi/Arcade**

# NEXT STEPS

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This study takes the high capacity bus corridors identified in regional planning documents to the next phase by identifying focused improvements, defining a long-term vision for HCBS in the corridors, and highlighting potential partners for implementation. The following can help guide next steps:

- **Work with regional partners and agencies.** Regional support is critical for successful implementation of the long-term vision, as most of the corridors cover multiple jurisdictions. Developing synergies with other transportation authorities and transit providers in the region, such as Placer County, will be key to building support and pursuing potential grant funding for implementation.
- **Develop partnerships with local jurisdictions.** SacRT will have to connect with local jurisdictions in order to understand projects in their pipeline for these specific corridors; to identify potential common interest areas; and to develop funding strategies. For example, SacRT could leverage the City of Sacramento's Vision Zero efforts to improve bus stop amenities and pedestrian and bicycle safety on Florin Road.
- **Implement tactical urbanism solutions.** These small, low-cost spot improvements are a simple way to demonstrate efficacy of improvements to safety and transit reliability.
- **Implement spot improvements to build ridership over time.** Use incremental improvements for each corridor to build a faster, more direct, and more reliable service. These improvements will capture more riders and prepare for HCBS.
- **Launch Pilot Enhanced Bus Service on Watt Avenue between I-80 LRT and Manlove LRT station.** Watt Avenue is a key corridor to prioritize for spot improvements to reduce bus delays, increase frequency, and streamline the route to provide a more direct connection between key destinations.
- **Work with the cities and Caltrans to develop a plan for signal priorities along corridors.** Using this report, SacRT can identify slow transit segments and start having discussions with local jurisdictions and Caltrans regarding transit signal priorities at key locations.
- **Create a more detailed funding strategy.** A more detailed funding strategy for each corridor will be needed to leverage State and federal funds. General funding strategies have been identified, but they will need more detailed plans for capital and operating improvements and refined cost estimates.
- **Adjust service as needed.** As development and travel patterns change, partnerships materialize, or funding sources become available, priorities might change. Developing the HCBS network will require ongoing adjustments based on real-world experiences and changing mobility needs.

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