Sacramento Regional Transit District

# Stockton Boulevard Implementation Plan

July 2023





This page intentionally left blank.

# **Table of Contents**

Exe	ecutive Summary	
1	Introduction	
	Background and Study Area	1-7
2	Existing Conditions	2-12
3	Proposed Treatments	
	Bus Stop Amenitites	
	Access Treatments	
	Transit Speed and Reliability Treatments	
	Proposed Bus Stop Types	
	Tier 1 vs. Tier 2 Improvements	
	Environmental Clearance	
4	Community Coordination	
	Spotlight on Stockton Boulevard	
	Community Survey	
5	Evaluation and Prioritization	
	Evaluation	
	Prioritization	
6	Proposed Station Improvements	6-39
7	Appendix A – Station Summary Tables	7-68

# **Table of Figures**

### Page

Figure 1 Bus Routes along Stockton Blvd	1-7
Figure 2 Existing Transit Service on Stockton Blvd	1-8
Figure 3 Existing Typical Cross Section: Alhambra Blvd to Broadway	2-12
Figure 4 Existing Typical Cross Section: Broadway to 21st Ave	2-12
Figure 5 Existing Typical Cross Section: 21st Ave to Florin Rd, Gerber Rd to Elsie Ave	2-13
Figure 6 Stockton Blvd Right-of-Way	2-14
Figure 7 Existing Bus Stop Conditions	2-15
Figure 8 SacRT Bus and Light Rail Design Guidelines Recommend Amenities	3-17
Figure 9 Proposed Amenities for Stockton Blvd Station Improvements	3-18

Figure 10 Boarding Area Layout with Minimum Dimensions	3-19
Figure 11 Rectangular Rapid Flashing Beacon	
Figure 12 Pedestrian Hybrid Beacon Sequencing	3-23
Figure 13 FHWA RRFB and PHB Recommended Thresholds	3-23
Figure 14 Spotlight on Stockton Blvd Public Feedback	4-29
Figure 15 Spotlight on Stockton Flyer	4-30
Figure 16 Bus Stop Priority Metrics	5-33
Figure 17 Bus Stop Improvement Projects by Priority	5-37
Figure 18 Legend of Proposed Improvements	6-39
Figure 19 Stockton Blvd & Broadway NB Tier 1 Improvements	6-40
Figure 20 Stockton Blvd & Broadway SB Tier 1 Improvements	6-40
Figure 21 Stockton Blvd & Broadway NB Tier 2 Improvements	6-41
Figure 22 Stockton Blvd & Broadway SB Tier 2 Improvements	6-41
Figure 23 20 <sup>th</sup> Ave NB Tier 1 Improvements	6-43
Figure 24 Roosevelt Ave SB Tier 1 Improvements	6-43
Figure 25 20 <sup>th</sup> Ave NB Tier 2 Improvements	6-44
Figure 26 Roosevelt Ave SB Tier 2 Improvements	6-44
Figure 27 Lawrence Dr NB & SB Tier 1 Improvements	6-45
Figure 28 Lawrence Dr NB & SB Tier 2 Improvements	6-46
Figure 29 Fruitridge Rd (Plaza) NB & SB Tier 1 Improvements	6-47
Figure 30 Fruitridge Rd (Plaza) NB & SB Tier 2 Improvements	6-48
Figure 31 Southwest Ave SB/Jansen Dr NB Tier 1 Improvements	6-49
Figure 32 Gordon Dr SB Tier 1 Improvements	6-50
Figure 33 Southwest Ave SB/Jansen Dr NB Tier 2 Improvements	6-50
Figure 34 Gordon Dr SB Tier 2 Improvements	6-51
Figure 35 McMahon Dr NB Tier 1 Improvements	6-52
Figure 36 McMahon Dr SB Tier 1 Improvements	6-52
Figure 37 McMahon Dr NB Tier 2 Improvements	6-53
Figure 38 McMahon Dr SB Tier 2 Improvements	6-53
Figure 39 Eldercreek Rd NB Tier 1 Improvements	6-54
Figure 40 47 <sup>th</sup> Ave SB Tier 1 Improvements	6-55
Figure 41 Eldercreek Rd NB Tier 2 Improvements	6-55
Figure 42 47 <sup>th</sup> Ave SB Tier 2 Improvements	6-56
Figure 43 65 <sup>th</sup> St Tier 1 NB Improvements	6-57
Figure 44 65 <sup>th</sup> Tier 1 SB Improvements	6-57
Figure 45 65 <sup>th</sup> St Tier 2 NB Improvements	6-58
Figure 46 65 <sup>th</sup> St Tier 2 SB Improvements	
Figure 47 Gerber Rd SB Tier 1 Improvements	
Figure 48 Suncountry Ln NB Tier 1 Improvements	6-60

Figure 49 Gerber Rd SB Tier 2 Improvements	6-61
Figure 50 Suncountry Ln NB Tier 2 Improvements	. 6-61
Figure A- 1 Stockton Blvd & Alhambra Blvd	
Figure A- 2 Stockton Blvd & 34 <sup>th</sup> St	7-69
Figure A- 3 Stockton Blvd & Miller Way SB	7-70
Figure A- 4 Stockton Blvd & Colonial Way	7-71
Figure A- 5 Stockton Blvd & X St	7-72
Figure A- 6 Stockton Blvd & 2 <sup>nd</sup> Ave	
Figure A- 7 Stockton Blvd & 3rd Ave	7-74
Figure A- 8 Stockton Blvd & Broadway	
Figure A- 9 Stockton Blvd & 9th Ave	
Figure A- 10 Stockton Blvd & 11th Ave	
Figure A- 11 Stockton Blvd & 14th Ave	
Figure A- 12 Stockton Blvd & 15th Ave	7-80
Figure A- 13 Stockton Blvd & San Francisco Blvd NB/17th Ave SB	7-81
Figure A- 14 Stockton Blvd & Parker Ave SB	
Figure A- 15 Stockton Blvd & 20th Ave NB/ Roosevelt Ave SB	
Figure A- 16 Stockton Blvd & 21st Ave	
Figure A- 17 Stockton Blvd & Lawrence Dr	. 7-85
Figure A- 18 Stockton Blvd and Fruitridge Rd (Plaza)	. 7-86
Figure A- 19 Stockton Blvd & Fruitridge Rd	
Figure A- 20 Stockton Blvd and Southwest Ave	
Figure A- 21 Stockton Blvd & Jansen Dr NB/Gordon Dr SB	. 7-89
Figure A- 22 Stockton Blvd & McMahon Dr	. 7-90
Figure A- 23 Stockton Blvd & Lemon Hill Ave	7-91
Figure A- 24 Stockton Blvd & Dias Ave	
Figure A- 25 Stockton Blvd & Eldercreek Rd/47th Ave	. 7-93
Figure A- 26 Stockton Blvd & 48th Ave	7-94
Figure A- 27 Stockton Blvd & Fowler Ave NB/ Riza Ave SB	
Figure A- 28 Stockton Blvd & 65 <sup>th</sup> Ave	7-96
Figure A- 29 Stockton Blvd & Florin Ave NB/ Lindale Ave SB	. 7-97
Figure A- 30 Stockton Blvd & Gerber Rd SB/ Suncountry Ln NB	. 7-98
Figure A- 31 Stockton Blvd & Massie Ct 1 (SB)	. 7-99
Figure A- 32 Stockton Blvd & Elsie Ave NB/ Massie Ct 2 SB	7-100

# **EXECUTIVE SUMMARY**

# Introduction

Stockton Boulevard (Blvd) has been consistently identified as a high priority corridor of investment. Given that there have been multiple studies to improve the corridor, with no funding identified to make these improvements, Sacramento Regional Transit District (SacRT) is looking for improvement opportunities at bus stops along the corridor for when smaller amounts of funding become available.

# Study

The purpose of this study is to identify the top improvement projects along Stockton Blvd. Initial studies and community outreach events identified that many of the bus stops along the corridor lack accessibility and amenities that provide comfort and safety to passengers. This study identified the following proposed treatments to consider for implementation at bus stops to address community concerns:

- Amenities: Benches, route maps at a minimum at each bus stop, shelters with benches, pedestrian lighting, trash receptacles, real time information signs (RTIS) at higher ridership stops.
- Accessibility: ADA compliant curb ramps leading to bus stops, boarding and alighting area at each bus stop, adequate sidewalks.
  - Added pedestrian crossings with pedestrian hybrid beacons for safety and visibility.
- Transit Speed and Reliability: Transit Signal Priority to prioritize buses getting through intersections and increase speed and reliability, consolidated or relocated bus stops.

To respond to these concerns, the below considerations are studied at each bus stop:

- Accessibility: ADA compliant curb ramps leading to bus stops, boarding and alighting area at each bus stop, 4' minimum wide sidewalks (6' preferred).
- Safety: Existing lighting at each bus stop.

- Comfort: Level of existing amenities and what amenities might make the passenger experience more enjoyable.
- Ridership: How many people use each bus stop.
- Built Environment Impacts: How improvements might affect right-of-way (ROW) or existing roadway.

# Prioritization

To determine which improvement projects to pursue, a data-oriented study was completed based on observed and measurable metrics. Each metric was allocated points based on the level of need at each bus stop. The bus stops with the highest points are identified as the recommended improvement projects. The metrics listed below were evaluated to determine high priority projects and are in order from most to least points:

- Accessibility: Bus stops without adequate accessibility can be a deterrent or barrier to using bus stops. As a result, accessibility is given the highest number of points for consideration in prioritization. Accessibility is measured in two parts:
  - ADA compliant curb ramps and sidewalks leading to each bus stop,
  - Compliant boarding and alighting area.
- Right of Way: This measures the impact that proposed improvements have on the existing right of way.
- Ridership: This measures the number of daily passengers at each bus stop.
- Cost: This considers how much each improvement project costs. Cost was given the fewest points since the highest need bus stops likely required more improvements.

# **Cost Summary**

The combined total cost of all identified Tier 1 improvement projects is \$8,050,000. Of this total, \$550,000 are allocated as engineering costs while construction costs total \$7,500,000. All Tier 1 improvement projects in Sacramento city limits total \$5,200,000. The rest of the Tier 1 projects along Stockton Blvd in Sacramento County total \$2,800,000.

# **Recommended Improvement Projects**

The figure below shows the top recommended improvement projects resulting from this study.

Location of Improvement Project	Improvement Projects
Stockton Blvd &	Tier 1 Improvements
Broadway NB/SB	<b>NB:</b> Maintain existing conditions, add Braille signage and pedestrian scale lighting.
	<b>SB:</b> Maintain existing conditions, add Braille signage and pedestrian scale lighting.
	Tier 2 Improvements
	NB: N/A (extra sidewalk/cycle track work would have to extend length of block)
	<b>SB:</b> Create shared cycle track stop, add Braille signage and pedestrian scale lighting.
Parker Ave SB /	Tier 1 Improvements
Roosevelt Ave SB/ 20 <sup>th</sup> Ave NB	Parker Ave SB: Remove bus stop.
	<b>20<sup>th</sup> Ave NB:</b> Widen station area at back of sidewalk to accommodate accessible landing area, shelter with bench, and route map.
	<b>Roosevelt Ave SB:</b> Relocate stop to far-side of Roosevelt Ave. Add shelter with bench, Braille signage, and route map.
	Tier 2 Improvements
	Parker Ave SB: Remove bus stop.
	<b>20</b> <sup>th</sup> <b>Ave NB:</b> Widen station area at back of sidewalk to accommodate accessible landing area, shelter with bench, Braille signage, and route map. Create cycle track stop, midblock crossing with pedestrian refuge, and a pedestrian signal.
	<b>Roosevelt Ave SB:</b> Tier 1 with cycle track stop, midblock crossing, including two new curb ramps, pedestrian refuge, and pedestrian signal.
Lawrence Dr NB/SB	Tier 1 Improvements
	Lawrence Dr NB: Add RTIS, pedestrian scale lighting, and Braille signage.
	<b>Lawrence Dr SB:</b> Widen sidewalk into existing landscaping to accommodate station platform with accessible landing area, shelter with bench, pedestrian scale lighting, trash receptacle, and Braille signage.
	Tier 2 Improvements
	<b>Lawrence Dr NB:</b> Create shared cycle track and widen sidewalk into existing landscaping and parking lot to accommodate more pedestrian waiting space, RTIS, pedestrian scale lighting, and Braille signage.
	<b>Lawrence Dr SB:</b> Create shared cycle track stop and widen sidewalk into existing landscaping to accommodate accessible landing area, shelter with bench, pedestrian scale lighting, trash receptacle, and Braille signage.

Emitridae Del (Diana)	Tion 4 Immuno anto
Fruitridge Rd (Plaza) NB/SB	Tier 1 Improvements
ND/3D	<b>Fruitridge Rd (Plaza) NB:</b> Extend station platform along back of sidewalk to accommodate shelter with bench, RTIS, trash receptacle, system and route maps, Braille signage, and pedestrian scale lighting.
	<b>Fruitridge Rd (Plaza) SB:</b> Extend station platform along back of sidewalk to accommodate shelter with bench, RTIS, trash receptacle system and route maps, Braille signage, and pedestrian scale lighting.
	Tier 2 Improvements
	Fruitridge Rd (Plaza) NB: Maintain Tier 1 improvements. Create a shared cycle- track stop.
	<b>Fruitridge Rd (Plaza) SB:</b> Create a transit island routing bike lane behind bus stop. Add shelter with bench, RTIS, trash receptacle system and route maps, Braille signage, and pedestrian scale lighting. Straighten midblock crossing, add a pedestrian refuge and two new curb ramps.
Southwest Ave SB/	Tier 1 Improvements
Gordon Dr SB/ Jansen Dr NB	<b>Jansen Dr NB:</b> Extend sidewalk into existing landscaping to accommodate shelter with bench, Braille signage, system and route maps. Remove existing curb ramp in middle of sidewalk since it does not lead to a safe crossing and create a level boarding and alighting area. Upgrade two curb ramps at NE corner of Jansen Dr.
	<b>Southwest Ave SB:</b> Remove bus stop. Stop will be consolidated with Gordon Dr stop and located at far-side of Jansen Dr.
	<b>Gordon Dr SB:</b> Relocate stop to far-side of Jansen Dr. Close driveway of current empty lot to provide space for station footprint. Assuming consolidated stop will bring higher ridership, add shelter with bench, Braille signage, system and route maps. Upgrade existing curb ramp on north leg of Jansen Dr. intersection.
	Tier 2 Improvements
	<b>Jansen Dr NB</b> : Create shared cycle track stop with station platform behind sidewalk to accommodate shelter with bench, Braille signage, system and route maps. Upgrade two curb ramps at NE Corner of Jansen Dr.
	Southwest Ave SB: No Tier 2 project identified due to removal of bus stop.
	<b>Gordon Dr SB:</b> Relocate stop to far-side of Jansen Dr. Close driveway of current empty lot to provide space for station footprint. Assuming consolidated stop will bring higher ridership, add shelter with bench, Braille signage, system and route maps. Upgrade existing curb ramp on north leg of Jansen Dr. intersection. Create shared in-lane stop at new location. Add crossing on south leg of Jansen Dr intersection with 2 new curb ramps and 4 upgraded curb ramps.

McMahon Dr NB/SB	Tier 1 Improvements
	<b>McMahon Dr NB:</b> Extend station area along back of sidewalk to accommodate shelter with bench, RTIS, system and route map, Braille signage, and pedestrian scale lighting. Upgrade 3 curb ramps at NE and SE corner of McMahon.
	<b>McMahon Dr SB:</b> Extend station area along back of sidewalk to accommodate shelter with bench, RTIS, system and route map, Braille signage, and pedestrian scale lighting.
	Tier 2
	<b>McMahon Dr NB:</b> Create shared cycle track stop and maintain all Tier 1 improvements.
	<b>McMahon Dr SB:</b> Create shared cycle track stop and maintain all Tier 1 improvements.
Eldercreek Rd NB/	Tier 1 Improvements
47 <sup>th</sup> Ave SB	<b>Eldercreek Rd NB:</b> Shift stop further north to existing light pole. Remove existing fence to allow for a widened station area at back of sidewalk to accommodate shelter with bench, RTIS, trash receptacle, system and route maps, Braille signage, and pedestrian scale lighting.
	<b>47</b> <sup>th</sup> <b>Ave SB:</b> Widen sidewalk into adjacent property to accommodate shelter with bench, RTIS, trash receptacle, system and route maps, Braille signage, and pedestrian scale lighting.
	Tier 2 Improvements
	Eldercreek Rd NB: Tier 1 improvements with the addition of shared cycle track stop.
	47 <sup>th</sup> Ave SB: Tier 1 improvements with the addition of shared cycle track stop.
65 <sup>th</sup> St NB/SB	Tier 1 Improvements
	<b>65<sup>th</sup> St NB:</b> Extend station platform along back of sidewalk and create shared cycle track stop. Due to high daily ridership, add two shelters with benches, bench, RTIS, pedestrian scale lighting, system and route maps, and Braille signage.
	<b>65</b> <sup>th</sup> <b>St SB:</b> Extend station platform at back of sidewalk and create shared in-lane stop. Due to high daily ridership, add two shelters with benches, bench, RTIS, pedestrian scale lighting, system and route maps, and Braille signage.
	Tier 2 Improvements
	<b>65<sup>th</sup> St NB:</b> Create transit island routing bike lane behind bus stop. Due to high daily ridership, add two shelters with benches, bench, RTIS, pedestrian scale lighting, system and route maps and Braille signage.
	<b>65</b> <sup>th</sup> <b>St SB:</b> Create transit island routing bike lane behind bus stop. Due to high daily ridership, add two shelters with benches, bench, RTIS, pedestrian scale lighting, system and route maps, Braille signage. Add 2 curb ramps for access to transit island.

Gerber Rd SB/	Must:
Suncountry Ln NB/ Masie Ct SB	<b>Suncountry Ln NB:</b> Add/widen sidewalk in missing section between Gerber Rd and NB Suncountry Ln bus stop. Upgrade 2 existing curb ramps on NE and SE corners of Gerber Rd and Stockton Blvd.
	<b>Gerber Rd SB:</b> Add/widen sidewalk in missing section between Gerber Rd and SB Gerber Rd bus stop. Upgrade 1 existing curb ramp on NW corner of Gerber Rd and Stockton Blvd intersection and add one curb ramp to SW corner of intersection.
	Tier 1 Improvements
	Suncountry Ln NB: Add Braille signage. No additional changes to existing bus stop.
	<b>Gerber Rd SB:</b> Relocate existing stop to near-side of Whispering Palms Ln. Close or relocate existing driveway to accommodate station platform with accessible landing area, bench, system and route maps. At Gerber Rd intersection upgrade 3 existing curb ramps and add new curb ramp on SW corner of intersection.
	Tier 2 Improvements
	<b>Suncountry Ln NB:</b> Create shared cycle track stop. Add pedestrian crossing on north leg of Massie Ct with two new curb ramps.
	<b>Gerber Rd SB:</b> Maintain Tier 1 improvements with the addition of upgrading station to a shared cycle track stop.

# **1 INTRODUCTION**

Sacramento Regional Transit District (SacRT) is looking to identify major capital and operational improvements along Stockton Boulevard (Blvd) to support existing ridership and encourage new ridership by making transit service along the corridor more accessible and equitable, and by providing greater mobility to underserved communities.

This document identifies and prioritizes proposed improvements that may be implemented as funding becomes available or in conjunction with nearby development projects and City/County street improvements.

# **BACKGROUND AND STUDY AREA**

# **Study Area**

The Stockton Boulevard Implementation Plan project focuses specifically on improving bus stops along Stockton Blvd from Alhambra Blvd on the north end to Elsie Ave on the south end. SacRT runs eight different bus routes on various sections of Stockton Blvd from Alhambra Blvd to Florin Rd, and Gerber Rd to Elsie Ave. Figure 1 summarizes the bus routes serving Stockton Blvd and **Error! Reference source not found.**shows a map of the bus routes and their interaction with Stockton Blvd.

Bus Route	Location
38	T St to Broadway
51	Broadway to Florin Rd
61	65th St to Florin Rd
68	47th Ave to Florin Rd, Gerber Rd to Mack Rd
109	Alhambra Blvd to El Dorado Freeway
138	El Dorado Freeway to X Street
213	Miller Way to Fruitridge Rd
214	Miller Way to Broadway

#### Figure 1 Bus Routes along Stockton Blvd

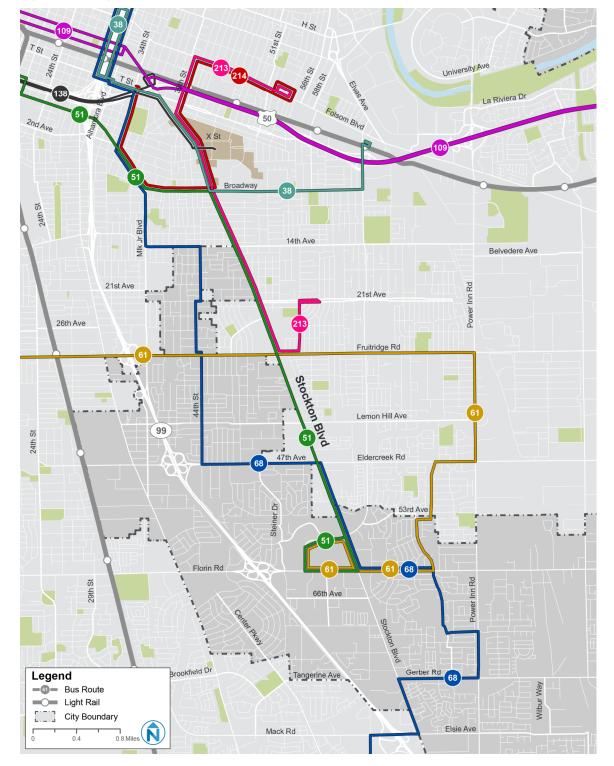


Figure 2 Existing Transit Service on Stockton Blvd

## Community

Stockton Blvd is parallel to State Route 99 with access to US 50 at the north end of the corridor. SacRT's Gold Line light rail crosses Stockton at 34<sup>th</sup>Ave. Outside of the commercial areas on Stockton Blvd a majority of the lots are low- and medium-density residential. Population and job density is higher towards the northern end of the corridor.

Stockton Blvd is further summarized in the below segments:

- Alhambra Blvd to Broadway includes the eastern edge of the Midtown Association business district, the US 50 overpass, UC Davis Medical Center, Sacramento High School, and a retail node at Broadway. There are no bike lanes on this section, and the area intersecting US 50 is a major barrier with high-speed highway ramps and missing sidewalks.
- Broadway to 21<sup>st</sup> Ave has the feeling of an historic main street, with small-scale, street-fronting retail (including the Colonial Theater). Single-family housing with alley access is present along much of the east side. The sidewalks are narrow with inconsistent tree buffers and an unbuffered bike lane runs along this segment.
- 21<sup>st</sup> Ave to Florin Rd has high traffic volumes and high-speed drivers, making this section feel loud and uncomfortable for people walking or biking. Land uses are generally big box or strip mall retail, with wide setbacks, many driveways, and large parking lots. Unbuffered bike lanes continue along this stretch on both sides of the roadway.
- Gerber Rd to Elsie Ave has missing sidewalk segments on both sides of the road from Gerber Rd to Suncountry Ln. The east side of the road consists of residential communities and the west side is primarily businesses with a mobile home lot and hotels near Elsie Ave. Bike lanes continue in both directions on this segment with larger lane widths and undedicated roadway space.

# **Other Related Projects**

The Stockton Blvd Implementation Plan is a standalone project but related to other studies performed along Stockton Blvd. This section expands upon a number of related projects and how they differ from and relate to the Stockton Blvd Implementation Project.

 The City of Sacramento's Stockton Blvd Corridor Plan (2021) identified existing conditions of the corridor and surrounding neighborhoods, as well as land use and travel patterns, with the goal of addressing safety through multimodal improvements. The resulting complete streets conceptual plan proposed various bike lane configurations, improved pedestrian spaces, Business Access and Transit (BAT) lanes, and optimized and enhanced bus stop locations along the corridor. The project limits were from Alhambra Blvd to 47<sup>th</sup> Ave within the limits of the City of Sacramento. Implementation of the corridor plan requires subsequent environmental and engineering phases and identification of significant funding.

- The Community Working Version Stockton Blvd Plan (2022) is a community-wide plan that identifies corridor and neighborhood-wide improvements, including housing, jobs, infrastructure, and business-related initiatives. The goal of this plan is to accommodate growth and revitalize the commercial corridor. This is a two-part study, focusing Stockton Blvd and adjacent properties from Alhambra Blvd to 65<sup>th</sup> St, as well as a neighborhood study of the neighborhoods surrounding Stockton Blvd. This plan was completed by the City of Sacramento.
- The City of Sacramento completed the Vision Zero Top 5 Corridors Study (2021), which addresses the top five corridors in the city with the highest number of fatal crashes involving pedestrians, bicyclists, and motorists. Two of the top five corridors are a part of Stockton Blvd: the Broadway/Stockton corridor spanning from Broadway to 14<sup>th</sup> St and the South Stockton corridor spanning from Patterson Way to McMahon Dr. The results of this project identified countermeasures to create a safer environment for all users traveling on each corridor.
- In 2023, the City of Sacramento, SacRT, Sacramento County, and the Sacramento Transportation Authority submitted a joint application to the Sacramento Area Council of Governments (SACOG) 2022-2023 Regional Funding Round for the Stockton Boulevard Multimodal Partnership and BRT Corridor, in the Transformative category for projects that have significant regional benefit and realize the performance benefits of the Metropolitan Transportation Plan/Sustainable Communities Strategy. The proposed project will include multimodal and safety improvements, including bus lanes and/or other transit enhancements, bicycle lanes, and pedestrian upgrades. The project will also include an alternatives analysis phase for the bus rapid transit (BRT) and BRT-lite treatments along the longer Sacramento Regional Transit District's Route 51 alignment between South Sacramento and the Sacramento Valley Station, which includes Stockton Blvd (between Florin Rd and Broadway), Broadway (between Stockton Blvd and 8<sup>th</sup> Street), and segments of 7<sup>th</sup>, 8<sup>th</sup> and 9<sup>th</sup> Streets. The project was recommended for \$5.2 million in funding to support alternatives analysis and the environmental phase of the project.

In comparison the above-mentioned projects, the Stockton Blvd Implementation Plan identifies near-term opportunities for isolated improvements to existing bus stops with the goal of making them more accessible and equitable and to encourage new ridership, that may be addressed as funding becomes available or identified. However, SacRT would be excited to partner with developers or other agencies in a larger improvement that impacts the community beyond just one bus stop.

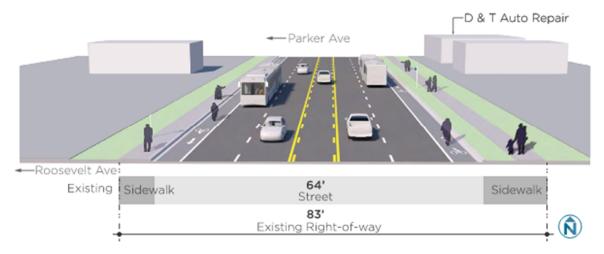
# **2 EXISTING CONDITIONS**

Stockton Blvd is mostly a five-lane arterial consisting of two lanes in each direction separated by a two-way left turn lane. The existing curb-to-curb distance for the majority of the midblock locations range from 60' to 65' with intersection crossing distances ranging between 80' and 100'. Figure 3 through Figure 5 show existing typical roadway and sidewalk cross sections found along Stockton Blvd. As shown in the typical cross sections, the existing right of way (ROW) width varies along the corridor between 65' and 120'. Figure 6 shows a graphic of the ROW for Stockton Blvd.

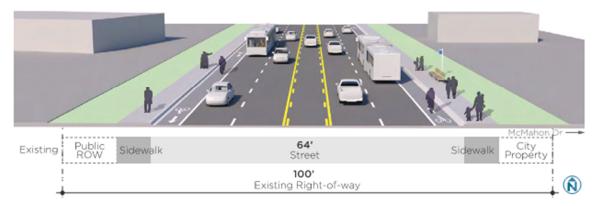


### Figure 3 Existing Typical Cross Section: Alhambra Blvd to Broadway

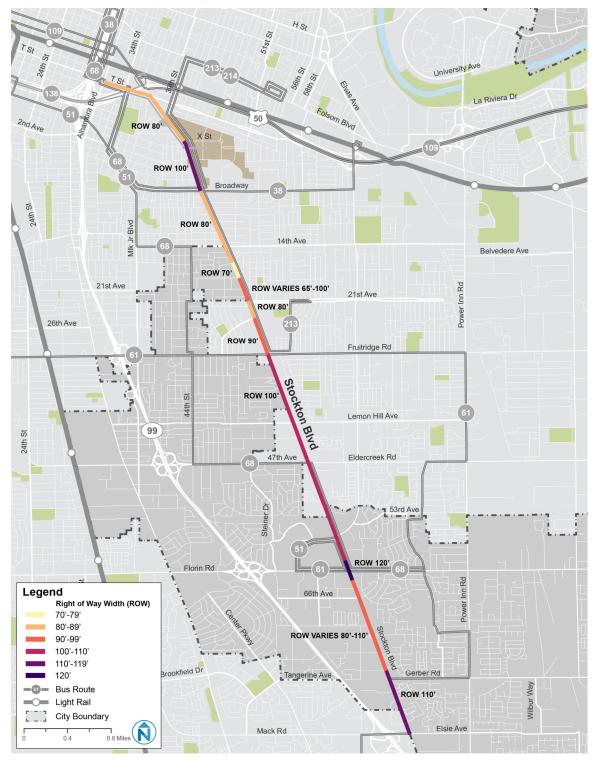
Figure 4 Existing Typical Cross Section: Broadway to 21st Ave



### Figure 5 Existing Typical Cross Section: 21st Ave to Florin Rd, Gerber Rd to Elsie Ave



Note: ROW width varies



### Figure 6 Stockton Blvd Right-of-Way

The Stockton Blvd Corridor Plan completed an Existing Conditions Report on Stockton Blvd identifying street uses within the ROW, traffic studies, and distances between pedestrian crossings. This project utilizes information from that Existing Conditions Report to help guide proposed solutions related to improving bus stops.

The bus stops along Stockton Blvd were reviewed based on observed conditions to identify each bus stop location, amenities, and existing conditions. Of the 57 bus stops along Stockton Blvd, the visibility of many bus stops is limited, with only a bus flag present on the existing sidewalk, sometimes hidden in trees or in a mix of various utilities, and no extra space made available for boarding and alighting.

Accessible boarding and alighting areas, referred to in this report as landing areas, are required by Public Rights-of-Way Accessibility Guidelines (PROWAG) R308.1.1 at all bus stops to provide a stable surface for users with accessibility needs. The full study of existing conditions can be found on the City of Sacramento's website for the <u>Stockton Boulevard</u> <u>Corridor Plan</u>. Figure 7 below is a summary table of additional existing conditions.

Bus Stop Existing Conditions	Bus Stop Total
Total Bus Stops	57
Bus stops lacking Accessible Landing Area (5'-6' sidewalk or grass strip between sidewalk and curb)	29
Bus stops with no amenities (except for bus flag)	23
Bus stops with shelters and benches	17
Bus stops with benches	30

#### Figure 7 Existing Bus Stop Conditions

# **3 PROPOSED TREATMENTS**

This section highlights various amenities and technological treatments that are used to provide safer environments for pedestrians, increase transit speed and reliability, and improve the overall user experience. Proposed treatments for this project are specific to improving bus stops and access to bus stops.

# **BUS STOP AMENITITES**

# **Amenity Thresholds**

Bus stop amenities along Stockton Blvd vary depending on each location. A significant number of comments from community outreach events identified certain bus stops that are not welcoming and hard to locate. Comments also revealed a desire for shelters at bus stops to protect users from weather elements. SacRT's Design Guidelines for Bus and Light Rail Facilities (2018) provides a table showing suggested amenities based on ridership thresholds. This table, shown in Figure 8, is used as a base guideline for the proposed treatments for bus stops along Stockton Blvd. The identification of proposed improvements occurred in the fall of 2022 and were based on the applicable guidelines at that time which was the 2018 version of SacRT's Design Guidelines for Bus and Light Rail Facilities.

	Daily Boardings				
Feature	<25	25-50	50-100	100-250	>250
Public roadway/street	S	S	S	S	
Non-public roadway/street					S
Expanded sidewalk (>6')	0	0	S	S	S
Seating <sup>2</sup> (# benches)	O (1)	S (1)	S (1)	S (2)	S (>2)
Passenger shelter structure <sup>3</sup>	0	0	S	S	S
Electronic dynamic message			0	0	0
Timetable	0	0	0	S	S
Route map	0	0	S	S	S
System map		0	0	0	S
Braille signage	0	0	S	S	S
Trash receptacle			0	S	S
Emergency telephone			0	0	0
Individual bus bays					0
Park and ride			0	0	0
Red curbs	S	S	S	S	0
Bike racks			0	0	0
Bike lockers/parking facilities				0	0
SCR/FVM				0	0
Security Camera			0	0	0
<ol> <li><u>Notes:</u></li> <li>Bus stop signing and lighting are required at all stops. Refer to Sections 18 and 19 respectively for placement and design requirements.</li> <li>Refer to Section 10 "Bus Benches" for placement and design guidelines.</li> <li>Refer to Section 9 "Bus Shelters" for placemen and design guidelines.</li> </ol>					

#### Figure 8 SacRT Bus and Light Rail Design Guidelines Recommend Amenities

O - Optional

Source: Design Guidelines for Bus and Light Rail Design Facilities

The recommended amenities identified in Figure 8 are expansive and do not all align with the plan's objective of identifying cost-effective projects with the potential of near-term implementation. To better align with the project goals, the plan recommends the following amenities as proposed treatments based on the daily boardings:

- Passenger shelter structures
- Seating (benches)
- RTIS (Real Time Information Sign, i.e. Electric Dynamic Message)
- . System and Route maps
- Timetables
- Braille signage
- Trash receptacles

While Figure 8 provides suggested thresholds for amenities at SacRT bus stops, Figure 9 shows the summary of the standard approach for proposing new amenities at bus stops along Stockton Blvd. The approach largely follows SacRT's Bus and Light Rail Design Guidelines, while adding pedestrian scale lighting and determining thresholds of other optional amenities.

Daily Ridership	Proposed Amenities		
<25	6' sidewalk, Bench, Braille Signage, Route Maps		
25 – 50	6' sidewalk, Shelter with Bench, Braille Signage, System and Route Maps		
50 – 100	6' sidewalk, Shelter with Bench, Trash Receptacle, RTIS, System and Route Maps, Braille Signage, Pedestrian Scale Lighting		
100 – 250	6' sidewalk, Shelter with Bench, Extra Bench, Trash Receptacle, RTIS, System and Route Maps, Braille Signage, Pedestrian Scale Lighting		
>250	6' sidewalk, Two Shelters with Benches, Extra Bench, Trash Receptacle, RTIS, System and Route Maps, Braille Signage, Pedestrian Scale Lighting		

Figure 9 Pro	posed Amenities	for Stockton Blvg	d Station Improvements
inguic vino			

The proposed amenities identified in Figure 9 are the minimum improvements proposed for the Stockton Blvd Implementation Plan. For the purposes of this study, daily ridership includes both boarding and alighting. Additional shelters are proposed at locations where the Stockton Blvd Corridor Plan (2021) identified new shelters. Pedestrian scale lighting is an additional amenity that is identified in SacRT's Design Guidelines that helps to improve safety, comfort, and visibility at bus stops. Concrete work is inevitable for the installation of both pedestrian scale lighting and RTIS, requiring a larger level of investment. Due to the larger level of construction and investment required for RTIS and pedestrian scale lighting, these amenities are only proposed for higher ridership bus stops. At locations where an improved bus stop is expected to significantly increase ridership, additional amenities are proposed beyond the recommended threshold to accommodate the anticipated increase in ridership.

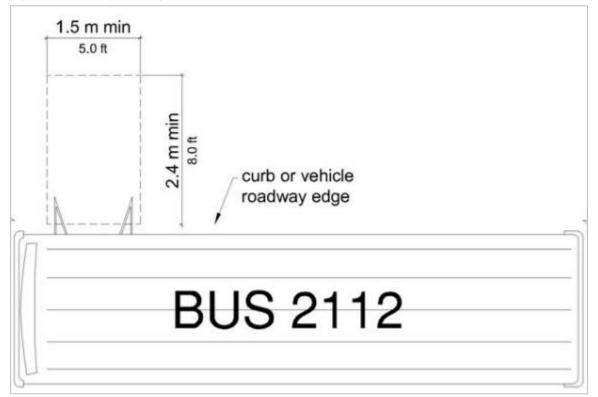
# RTIS

Real time information signs (RTIS) use GPS-based automatic vehicle location (AVL) technology to track and predict the location of transit vehicles in real time. RTIS systems provide transit users with estimated arrival and departure times and service disruptions or delays. These systems are often installed at higher ridership transit stops and provide information for the next few arriving buses. RTIS systems require sidewalk construction and conduiting to support the electronic components of the system. As noted above, RTIS is proposed for bus stops with a daily ridership of 50 passengers per day, consistent with other amenities that require concrete work.

# **ACCESS TREATMENTS**

# **Boarding and Alighting**

All bus stops must be compliant with the Americans with Disabilities Act of 1990 (ADA). Public Right of Way Accessibility Guidelines (PROWAG) are supplemental guidelines used to improve accessibility to pedestrian spaces and are used as guidance for this study. PROWAG R308 identifies accessibility guidelines for transit stops and transit shelters. Each transit stop is required to have an accessible boarding and alighting area that includes an absolute minimum five-foot wide by eight-foot-deep clear space, free of all vertical obstructions at the designated accessible loading door, shown in Figure 10. This clear space is specific to the area adjacent to the curb where passengers board and alight the bus and can encroach into the sidewalk. This clear space facilitates ramp deployment and allows people to maneuver with mobility devices. When the boarding and alighting areas are improved, it is recommended that the improvements include a minimum 26' (30' preferred) long by 8' wide path along the length of the bus stop to accommodate boarding and alighting at both doors of the bus.



### Figure 10 Boarding Area Layout with Minimum Dimensions

Source: <u>U.S. Access Board, *PROWAG*, R308.1.1.1</u>. Note: Diagram shows bus with one door but some transit buses would likely have multiple doors for boarding and alighting. These boarding area guidelines should apply to boarding areas for all doors.

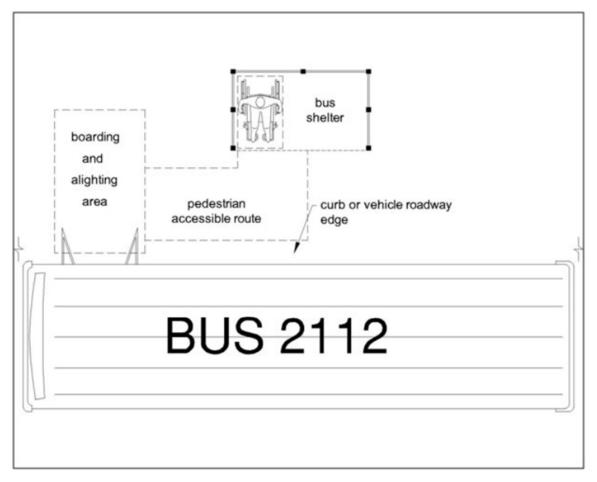
Boarding height is also important for accessibility and dwell-time reduction reasons. Boarding height refers to a platform's curb height in the boarding area. Providing near-level or level platforms with respect to the height of the floor of the bus reduces vertical stepping distance for people boarding and alighting transit vehicles, thereby reducing boarding and alighting times and improving accessibility for all users. Six-inch curb height is typical in the United States, with a low-floor bus floor being approximately 13" high<sup>1</sup>, creating a seven-inch vertical distance between the top of typical curbs and floor of a low-floor bus. Minimizing this distance where possible by using eight- to ten-inch-high curb for a reduced step provides benefits in improved access and reducing dwell time.

Increasing curb height at transit platforms may take more physical space, increasing the amount of design and engineering required to raise the station platform. Additionally, utility relocation, additional environmental reviews, or ROW acquisition may be triggered. When curbs are above the typical curb height of six inches at transit boarding and alighting areas, a detectable warning surface, such as truncated domes, are recommended to be added to provide a fall warning, and to clearly identify boarding/alighting locations. Given the potential for increased impacts resulting from implementation, near-level or level boarding is not suggested as a global treatment in this study, however the benefit of near-level or level boarding should be explored on a stop-by-stop based as potential improvements are further analyzed in subsequent phases of design.

# **Accessible Paths**

Similar to boarding and alighting requirements at bus stops, PROWAG also specifies that boarding and alighting areas shall be connected to streets, sidewalks, or pedestrian circulation paths by pedestrian access routes complying with PROWAG R302. PROWAG R302 lists specifications that make pedestrian paths accessible including, but not limited to, ADA compliant curb ramps, 4' minimum wide continuous widths for all areas of access. While 4' wide is the minimum width that is legally required by jurisdictions to provide for pedestrian access, many cities and transportation agencies have more conservative requirements to allow for greater accommodation to pedestrians. SacRT has a recommended 6' sidewalk width that this study follows when requiring upgraded or new sidewalk. The below image shows a connected access path from a bus stop to a boarding and alighting area.

<sup>&</sup>lt;sup>1</sup> 13" level height based on New Flyer Xcelsior vehicle. Actual level platform height may vary depending on the make and model of transit vehicle procured.



Source: U.S. Access Board, PROWAG, R308.1.3.2.

# **RRFBs and PHB/HAWKS**

## **Rectangular Rapid Flashing Beacons**

Rectangular Rapid Flashing Beacons (RRFB) are pedestrian-activated beacons used to enhance safety at uncontrolled, marked crosswalks. RRFB's have two rectangular LED-arraybased light sources that flash at alternating high frequency when activated. Since RRFB's are activated by push button or passive pedestrian detection and are unlit while not in use, they are more conspicuous and increase driver awareness. The FHWA estimates RRFBs range in cost from \$4,500 to \$52,000 each, with an average cost of \$22,500.

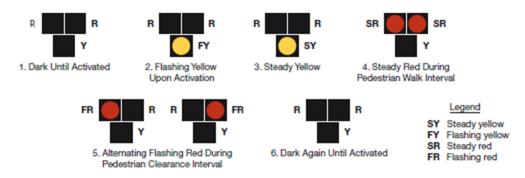


Figure 11 Rectangular Rapid Flashing Beacon

Source: <u>MUTCD Interim Approval for Optional Use of Pedestrian-Actuated Rectangular Rapid-Flashing</u> <u>Beacons</u>.

## **Pedestrian Hybrid Beacons**

Pedestrian Hybrid Beacon signals (PHB) (also known as High intensity Activated crossWalK (HAWK)), similar to RRFB's, are pedestrian-activated beacons meant to increase awareness for motorists that a pedestrian is in the crosswalk. PHBs consist of three lights, two horizontal red lights on top of one yellow light, with a series of sequences warning the driver that the light has been activated, stop while the pedestrians cross, then proceed once the pedestrians are cleared of the crosswalk. Figure 12 shows the sequencing of a PHB. PHBs may be used at unsignalized crosswalks, typically on multi-lane, high-volume, high-speed roadways. The California Manual on Uniform Traffic Control Devices (MUTCD) provides criteria, based on pedestrian crossings per hour and vehicles per hour, as thresholds for installing a PHB. The City of Sacramento identifies the cost of a PHB at approximately \$85,000. The City of Sacramento has found that installing PHB's confuses drivers when mixed with operating signals and prefers to install pedestrian signals along signalized corridors such as Stockton Blvd.



#### Figure 12 Pedestrian Hybrid Beacon Sequencing

Source: MUTCD 2009 Edition Chapter 4F. Pedestrian Hybrid Beacons.

## Recommendation

The City of Sacramento Pedestrian Crossing Guidelines details conditions for installing RRFBs versus PHBs per the FHWA's Field Guide in Figure 13 below. The Stockton Blvd Corridor Plan Existing Conditions Report (2019) identified an average ADT of greater than 15,000 vehicles per day along Stockton Blvd. As a result, Rapid Rectangular Flashing Beacons are not recommended for Stockton Blvd. As Stockton Blvd is a signalized corridor, Pedestrian Hybrid Beacons are not preferred by the City of Sacramento, and pedestrian signals are the recommended treatment to improve safety at existing unsignalized crosswalks.

#### Figure 13 FHWA RRFB and PHB Recommended Thresholds

#### **ROADWAY AND SITE INFORMATION**

Per the FHWA Field Guide, this treatment should be considered if the roadway(s) are described by one of the following sets of conditions:

- ADT ≤ 15,000 + 2 lanes or 3 lanes (with a raised median) + ≥ 40 mph speed limit
- ADT 9,000-15,000 + 3 or more lanes (with or without median) + ≥ 35 mph speed limit

The FHWA Field Guide suggest strongly considering a PHB instead of an RRFB for the following:

 ADT 9,000-15,000 + 3 lanes (without raised median) or more lanes + ≥ 40 mph speed limit

Source: City of Sacramento: 2021 Pedestrian Crossing Guidelines Treatment Application Guide.

# TRANSIT SPEED AND RELIABILITY TREATMENTS

# TSP

Transit Signal Priority (TSP) gives special treatment to buses at signalized intersections. There are two ways to provide TSP: optimizing signal timing corridor wide so that signal progression is set based on the average bus speed, or adding signal detectors that can detect when a bus is approaching an intersection and adjusts the signal timing to reduce the amount of time a bus spends waiting at a red light. Both alternatives to TSP are beneficial in providing faster and more reliable transit throughout a corridor, if implemented corridor-wide.

The City of Sacramento has attempted to deploy older generations of TSP that use hardwarebased solutions in the past that have not been successful. As a result, future deployment of TSP should be cloud-based, using AVL data of the buses and confirming the buses are behind schedule before requesting the priority. These systems do not require integration of hardware on the bus or signal cabinet and only require integration of the central systems managing the Automatic Vehicle Locating (AVL) and the traffic signal control.

The City of Sacramento's central traffic control system can operate a cloud-based TSP system, ingesting TSP data and transmitting it out to the signals, however of the 23 City of Sacramento traffic signals within the study area, a minimum of 14 signals would require significant upgrades and connections to a fiber optic backbone to support a cloud-based TSP deployment.

As deploying TSP along Stockton Blvd results in significant cost implications to upgrade existing signals and communications connections and would require implementation along the entire corridor to be effective, deploying TSP along Stockton Blvd is not within the scope of this study's recommendations. However, TSP would be a fundamental part in improving transit speed and reliability on any potential future corridor-wide project for Stockton Blvd.

# **Queue Jumps**

Queue jumps reduce transit delays at intersections by allowing buses to bypass queues at signalized intersections and travel through the intersection ahead of general traffic. Buses can bypass the queue with a bus-only lane or a shared bus/right turn pocket (where there are low volumes of right turns) in advance of a signal and get a head start at the beginning of the next signal cycle. Modifying signal phases may be useful to provide a transit-only signal

phase when a bus is detected so that the bus can travel through the intersection into receiving general purpose lanes ahead of general traffic.

## **Bus Stop Relocations and Consolidations**

The location of bus stops impacts the convenience and accessibility of the transit system. Farside bus stops are preferable for a number of reasons: far-side stops allow for the bus to get through traffic signals before stopping, improving speed and reliability. They also eliminate conflicts with drivers attempting to make right turns (eliminating dangerous maneuverability of drivers trying to pull around a stopped bus and turn right in front of a bus) and allow pedestrians to cross behind the bus instead of in front of the bus. Near-side bus stops are typically used at locations where buses serving far-side stops frequently block the intersection, at stop-controlled intersections where a near-side station would help buses avoid stopping twice, or to facilitate a transfer between two intersecting routes. Relocating a bus stop from near-side to far-side has potential to improve speed and reliability of the route for all users, making this a recommended improvement for bus stops along Stockton Blvd for existing near-side bus stops.

The distance between bus stops also significantly impacts travel times. Stops that are located closer to each other provide shorter walk times, but they also increase travel times and are a major reason that transit is slower than automobile travel. Every time the bus stops, it has to slow down, let passengers on and off, and speed back up. Customers typically want transit service that balances convenience and speed, and the number and location of stops is a key component of determining that balance.

There are three locations along Stockton Blvd where three consecutive bus stops are located in close proximity to each other with low ridership at one or multiple of the stop locations. Proposed improvements at these locations recommend consolidating two of the bus stops and relocating them to be more evenly spaced or in a better location near businesses or in a denser area. The new or consolidated bus stops will also have improved accessibility and amenities to provide increased passenger comfort. Removing these three bus stops will improve the speed and reliability of the existing bus routes and provide an overall better passenger experience.

# **PROPOSED BUS STOP TYPES**

# Shared Cycle Track Stop

Stockton Blvd has numerous locations where the bus maneuvers into the bike lane to access the bus stop. At these locations, a shared cycle track stop can be developed, which ramps a bike lane up to sidewalk level, creating physical separation between the bike lane and the bus at the stop.

Shared cycle track stops provide a safer through area for people biking, removing the risk that a bus will pull into a bike lane and potentially forcing the bike to maneuver in traffic around the bus. Instead, people biking may ride through the bus stop when no bus is present but must yield to pedestrians who are boarding and alighting the bus.

Shared cycle track stops allow the bus to stop in-lane and should only be applied when the speed limit is less than 40 mph. As a result, these stops are only identified as potential Tier 2 improvements due to the larger conversation required around modifying the look and feel of Stockton Blvd.

# **Transit Island Stop**

Stockton Blvd currently has a number of large pull-out stops where the bus pulls completely out of the existing traffic flow, through a bike lane, and into a bus pull-out for passengers to board and alight. While these types of stops may be beneficial for the general flow of traffic, they also slow down bus service and reliability by requiring the bus to wait for a break in traffic before being able to pull back in the general-purpose lanes. Filling in the pull out and creating a transit island stop would improve bus speed and reliability at these locations.

Transit island stops provide a dedicated space for passengers to wait for the bus that is separated from the sidewalk area by a bike lane that is routed between the bus stop and sidewalk. These stops remove the conflict point between people biking and buses, while also creating an in-lane stop, improving speed and reliability for transit service. The dedicated island space for passengers often allows for more space than a typical sidewalk stop, allowing for increased maneuverability between passengers and added amenities. Similar to shared-cycle track stops, transit island stops are only identified as Tier 2 improvements as they require additional conversations around global modifications to Stockton Blvd.

# **TIER 1 VS. TIER 2 IMPROVEMENTS**

Two tiers of improvements were identified at each location.

Tier 1 improvements include minimum improvements to bring stations up to the SacRT Bus and Light Rail Design Guidelines (2018) and to provide PROWAG compliant accessibility within the existing bus stop footprint. Proposed amenities focus on specific improvements to the passenger experience at stations. These amenities include shelter with bench, bench, route maps, system maps, Braille signage, trash receptacle, Real Time Information Signs (RTIS), and pedestrian scale lighting. Tier 1 improvements are the base level of improvements to be implemented when funding is available.

Tier 2 improvements are more ambitious improvements that improve the overall experience around the bus stop. Many of these improvements reflect a scaled down version of what is proposed in the Stockton Boulevard Complete Streets plan, adding infrastructure to separate pedestrian, bicycle, and transit users, or improved pedestrian crossings by adding pedestrian refuges or a pedestrian signal. Tier 2 improvements represent preferred improvements to be implemented if there are opportunities beyond the Tier 1 improvements. It is assumed that if Tier 2 improvements are considered, they will be part of a larger discussion around Stockton Blvd, including techniques to reduce speeds and improving the overall look and feel of the corridor. These improvements would require SacRT to engage with local stakeholders in discussions about what would be necessary to make these improvements.

A complete summary table with existing conditions, proposed Tier 1 and Tier 2 improvements, and prioritization for each bus stop location can be found in Appendix A. Concept layouts of both Tier 1 and Tier 2 improvements for High Priority bus stop locations can be found in Section 6.

# **ENVIRONMENTAL CLEARANCE**

To be eligible for funding, improvement projects must go through various environmental clearance processes to study the impacts on the surrounding environment. There are two initial considerations that should be made before moving forward with the proposed projects. The California Environmental Quality Act (CEQA) requires agencies to determine the environmental consequences of the proposed work and prevent significant, avoidable environmental damage. This is a required consideration for all projects in the State of California.

If federal funds are being considered to fund the proposed work, SacRT must conform to the National Environmental Policy Act (NEPA), a federal environmental process for proposed federally funded projects.

# **CEQA Documentation**

Based on the type of improvements recommended through this study, it is assumed that individual projects would apply for a Categorical Exemption (CE) under the California Environmental Quality Act. To support issuance of the CE, a CE Support Memo could be developed that describes why a CE is the appropriate level of documentation for the project, documents the investigations completed during the review, and includes statements confirming absence of exceptions to the categorical exemption. This includes a records search for hazardous materials through the EnviroStor database maintained by the Department of Toxic Substances Control (DTSC) and background research at the California Historical Resources Information System North Central California Information Center (NCIC) and review the project corridor and adjacent structures to identify known historic properties.

## **NEPA Documentation**

If the project receives federal funding, environmental clearance under the National Environmental Policy Act (NEPA) will be required. Caltrans has performed federal responsibilities for environmental decisions and approvals under NEPA for highway projects in California that are funded by the Federal Highway Administration. A Preliminary Environmental Study would be required to confirm the anticipated environmental technical studies and level of environmental documentation required. It is anticipated that this project would be approved as a Categorical Exclusion (CE) under NEPA.

# 4 COMMUNITY COORDINATION

The project team completed three community engagement events with the objective of providing information to the public about the project and identifying deficiencies with the existing bus stops. Community engagement is essential to transit priority projects and help encourage more people to ride transit.

# **SPOTLIGHT ON STOCKTON BOULEVARD**

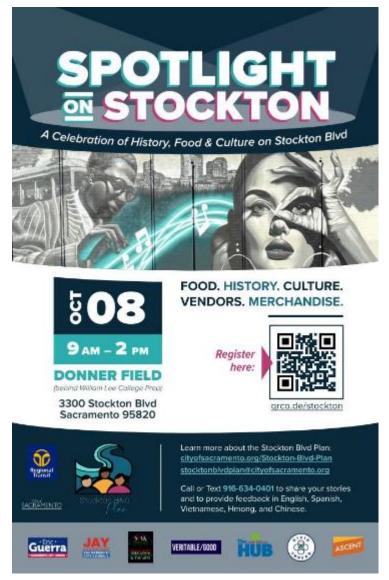
Members of the project team joined the greater Stockton Blvd Community Working Version Plan project engagement team for an afternoon event along Stockton Blvd called "Spotlight on Stockton." At this event, the project team presented a poster board showing the project limits, existing pedestrian crossings, and bus stops with no amenities, benches, or shelters.

The community was generally excited about the project, with productive feedback to improve the safety and comfort of the bus stops along Stockton Blvd. Figure 14 below shows a summary of the feedback provided from this event.

Spotlight on Stockton Blvd Public Feedback		
Desire for more shelters and shade		
Upgrade crosswalks		
Lighting along sidewalk and at stations		
More benches		
General safety/security concerns		
Desire to slow traffic down		
More bike infrastructure/separated bike lanes/bike racks		

#### Figure 14 Spotlight on Stockton Blvd Public Feedback

### Figure 15 Spotlight on Stockton Flyer



# **COMMUNITY SURVEY**

## **Survey Overview**

The project team hosted an online community survey to gain insight into community identified needs and preferences along the corridor. The survey was open from March 13<sup>th</sup> through April 13<sup>th</sup>, 2023 and publicized on the SacRT website, Twitter feed, and along Stockton Blvd with the SacRT Street Team.

The survey was provided in both English and Spanish, and gathered information on how often respondents ride the bus, the bus stops most used by respondents, and information about existing and proposed bus stop amenities along the corridor.

# **Survey Results**

## Respondents

In total, there were 70 respondents to the survey. Nearly 40% of the respondents ride the bus every day, and an additional 25% of respondents ride the bus at least 2-3 days per week.

Over half of the respondents ride the bus along Stockton Blvd at least one day a week, with 25% riding the bus along Stockton Blvd every day, and another 25% riding the bus along Stockton Blvd at least 2-3 days per week.

The bus stops most frequented by respondents include:

- X St
- Broadway
- 21<sup>st</sup> Ave
- 51<sup>st</sup> Ave
- Fruitridge Rd

## Amenities

The most common responses when asked which stops respondents would use more if they had better amenities were:

- 2<sup>nd</sup> Ave
- Broadway
- 21<sup>st</sup> Ave
- Fruitridge Rd

In response to specific transit amenity improvements, additional shelters/shade was noted as benefiting the respondents most at 65%, followed by both benches and higher frequency bus service at 57%, information on when the next bus will arrive at 55%, lighting at 51%, and trash cans at 48%.

## Access

When asked which stops respondents would use more if access was easier, there were not any stops that garnered more responses than the others, however there were several responses that noted the need for better and safer access throughout the corridor at all bus stops.

In response to specific access amenities, both more pedestrian crossings and more signals were noted as benefiting the respondents the most, at 59%, followed by wider sidewalks at 47%.

### **Additional Suggestions**

The following themes were noted in the responses to additional suggestions or feedback to make the bus along Stockton Blvd more accommodating and encourage more ridership:

- Future shelters should avoid glass as it is often broken.
- Bus stops should be cleaned more frequently.
- Bus stops are often frequented by the unhoused.
- Increase the frequency and reliability of the bus service and reduce bus travel times.
- All bus stops should have benches and shelters.

# 5 EVALUATION AND PRIORITIZATION

# **EVALUATION**

Four metrics were used to evaluate and determine the priority ranking of each bus stop. The overall evaluation and prioritization process weighted each of the metrics based on level of importance. All evaluation metrics are based on existing conditions and Tier 1 improvement projects. Figure 16 identifies the metrics and their score.

Priority Metric	Weight	Description
ADA Compliance	40%	Cumulative score consisting of: <ul> <li>Landing Area compliance: 20%</li> <li>Sidewalks/curb ramps adjacent to bus stop: 20%</li> </ul>
Right of Way	30%	Level of impact on ROW by bus stop improvement projects
Ridership	20%	Boardings and alightings at each bus stop
Cost	10%	Estimated implementation costs for Tier 1 improvements

#### Figure 16 Bus Stop Priority Metrics

### **ADA Compliance**

The first metric is identifying whether each station is ADA compliant. Compliance, as defined in the "Accessibility Treatments" section of this report, is determined through measuring sidewalks at each station location and assessing the conditions of curb ramps leading at the nearest intersections.

The conditions of the accessible path and boarding and alighting areas vary. Accessible paths for each bus stop are separated into three categories and assigned points as described below:

- Fully ADA compliant with plenty of space for a user to board and alight the bus: 0 Points.
- Technically ADA compliant meeting the minimum requirements of a 5'x8' landing area with no extra space to give: 10 Points.
- Not ADA compliant meaning there is no landing area available either the stop is directly on a sidewalk that is not wide enough to accommodate the clear space required for the boarding and alighting area, or there is a grass strip between the

sidewalk and curb where the bus stop is located, meaning there is not a smooth surface leading to the stop: 20 points.

For the purposes of this report, bus stops are only deemed non-compliant if the front door does not meet PROWAG standards for an adequate boarding and alighting landing area. However, all proposed improvement projects that include reconstruction of the bus stop area include an accessible boarding and alighting landing area at the front and back doors of the bus.

Similarly, the conditions of curb ramps and sidewalks leading to each bus stop vary and are separated into three categories and assigned points as described below:

- Fully ADA compliant 4' minimum sidewalks and fully compliant curb ramps at all legal crossings: 0 Points.
- Functional, non-compliant Curb ramp may need a detectable warning surface, but is present. Sidewalk is available, but cracked or requires rebuilding: 10 Points.
- Not compliant curb ramps or sidewalk are not compliant or missing adjacent to bus stop: 20 Points.

As identified above, for accessible paths and curb ramps/sidewalks, worse conditions receive higher points, which are compounded to create an overall ADA score. High points for a given bus stop raise the priority of that bus stop, meaning that if a stop location is lacking in ADA compliance, it moves up in the priority ranking list.

# **Right of Way (ROW)**

Right of way is the second highest weighted metric due to its cost and impact to adjacent properties. For the majority of Stockton Blvd, the proposed Tier 1 improvements will occur between the face of curb and ROW line. Where the existing ROW line is significantly close to the roadway, there may be proposed improvements that extend beyond the ROW. The amount of impact to the ROW varies between temporary easements required to construct a station and permanent easements that affect the pieces of the existing property. The ROW limits were provided to the project team and the impact to the ROW at each bus stop was evaluated and assigned points based on four categories. More points are awarded to projects with fewer impacts to the ROW, increasing that project's priority. The ROW categories and allocated points are defined below:

- No ROW Impacts: 30 Points.
- Minor ROW Impact or Easement Required: improvements are contained to the existing sidewalk which is currently beyond the ROW line – minor easement is required, but footprint of the existing sidewalk is not changing: 20 Points.

- Medium Impact to ROW: Improvements require minor changes to the existing sidewalk footprint with minor impacts to grass or minor landscaping: 10 Points.
- Major Private ROW Impact: Improvements require major impacts beyond the ROW line, including impacts to existing trees, parking lot or utilities: 0 Points.

# Ridership

While every bus stop should be accessible, additional improvements may be prioritized by the number of passengers that use each stop location. As a result, ridership is the third metric used in determining high priority bus stop improvement projects. Ridership counts used for proposed improvements in this report are based on existing ridership data from Fall of 2019.

High ridership is determined to be at least 50 daily riders (boarding and alighting) along Stockton Blvd. Ridership at each bus stop is given points as a function of the high ridership threshold, as detailed below:

- Ridership > 50 daily riders: 20 Points.
- Ridership <50 daily riders: Points are reduced with respect to the number of riders (25 passengers = 10 points; 40 passengers = 16 points).

### Cost

Cost is the fourth and last metric used to determine bus stop improvement project priorities. The goal of this study is to recommend the highest priority bus stops, and while cost is always a factor when proposing new projects, it is understood that sometimes the locations with the most needs may have higher costs for improvements. As a result, cost is the least weighted metric to avoid being too much of a deterrent for a project or location that may severely need to be updated.

High project cost for this study is set at a threshold of \$100,000. The cost for improvements at each bus stop is given points as a function of the high ridership threshold, as detailed below:

- Cost < \$100,000: 10 Points.
- Cost > \$100,000: Points are reduced with respect to the increased cost (\$200,000 = 5 points; \$125,000 = 8 points).

High-level cost estimates were produced for each Tier 1 project to help determine their points value and where each project stands in the priority list. Unit costs for all station amenities were assumed using similar bus stop projects and adding additional contingencies to account for inflation. Additional costs for overall bus stop design and construction costs,

lump sum ROW, curb and gutter, sidewalk, and sidewalk removal were provided by SacRT. An additional 20% design contingency and 30% construction contingency were added onto each bus stop improvement project due to the high-level nature of these cost estimates and to account for unknowns and inflation. Tier 1 improvement costs were used to determine the priority of each bus stop improvement project. Tier 2 costs were only calculated for the high priority projects highlighted as a result of this study.

# PRIORITIZATION

Each bus stop improvement project was evaluated and scored based on the metrics and weights discussed above. Scores for individual bus stops ranged from 13 to 85 and scores for bus stop pairs ranged from 56 to 152 Projects were ranked based on scores for both individual bus stops and bus stop pairs and then assigned one of four different priority levels based on natural breakpoints in the scoring and overall project characteristic, as further described below.

# **High Priority Projects**

Bus stop pairs that scored high cumulatively in both directions (above 120) or scored very highly in one single direction (above 75) are designated as High Priority projects. These stops tend to have higher ridership and lack ADA compliance. There are nine bus stop pairs that received this designation.

### **Medium Priority Projects**

Bus stop pairs that scored in the middle range cumulatively in both directions (between 105 and 120) or in one single direction (between 50 and 75 are designated as Medium Priority projects. These stops tend to lack ADA compliance but have higher cost of proposed improvements. There are eight bus stop pairs that received this designation.

### **Low Priority Projects**

Bus stop pairs that scored in the lowest cumulatively in both directions (below 105) or in one single direction (below 50) are designated as Low Priority projects. These stops tend to be mostly ADA compliant, require ROW for improvements, and have less ridership. There are seven bus stop pairs that received this designation.

### **Quick Implementation Projects**

A fourth group includes quick implementation projects. These are locations where little is needed to bring the stop up to the desired condition or standard and could be implemented on an accelerated timeline at relatively low costs. There are six bus stop pairs that received this designation.

The below figure shows a summary of each bus stop improvement project by priority.

Priority	Bus Stop Improvement Projects
High Priority Projects	Broadway NB/SB Parker Ave SB / Roosevelt Ave SB/ 20 <sup>th</sup> Ave NB Lawrence Dr NB/SB Fruitridge Rd (Plaza) NB/SB Southwest Ave SB/ Gordon Dr SB/ Jansen Dr NB McMahon Dr NB/SB Eldercreek Rd NB/ 47 <sup>th</sup> Ave SB 65 <sup>th</sup> St NB/SB Gerber Rd SB/ Suncountry Ln NB/ Masie Ct SB
Medium Priority Projects	Alhambra Ave EB 34 <sup>th</sup> St EB/WB 3 <sup>rd</sup> Ave NB/SB Fruitridge Rd NB/SB Lemon Hill Ave NB/SB Dias Ave NB/SB Lindale Ave SB/Florin Rd NB Elsie Ave NB/Massie Ct 2 SB
Low Priority Projects	Colonial Way NB/SB X St NB/SB 9 <sup>th</sup> Ave NB/SB 11 <sup>th</sup> Ave NB/SB 14 <sup>th</sup> Ave NB/SB 21 <sup>st</sup> Ave NB/SB Fowler Ave NB

Figure 17 Bus Stop Improvement Projects by Priority

Quick Implementation Projects	Miller Way SB 2 <sup>nd</sup> Ave NB/SB 15 <sup>th</sup> Ave SB San Francisco Blvd NB/ 17 <sup>th</sup> Ave SB
	48 <sup>th</sup> Ave SB
	Riza Ave SB

# 6 PROPOSED STATION IMPROVEMENTS

### **Project Descriptions for High Priority Projects**

This section describes the proposed station improvements for the nine identified High Priority projects located along Stockton Blvd. The projects in this section represent the highest ranked projects identified from the prioritization metrics. Each improvement project is accompanied by a plan view showing improvements. These plans are conceptual in nature and are intended to illustrate Tier 1 and Tier 2 improvements. Detailed plans will need to be developed at a subsequent phase. Figure 18 shows the legend for the figures. Tables in Appendix A summarize details on each proposed improvement location, including improved accessibility, ROW requirements, proposed amenities, and cost estimates.

#### Figure 18 Legend of Proposed Improvements



#### Broadway

Broadway northbound (NB) and southbound (SB) (stop IDs 1807 and 1839, respectively) have high daily ridership of 68 and 132 daily riders, respectively. Both existing bus stops are on the far-side of Broadway with concrete landing areas and have a shelter with bench and trash receptacle. The NB stop has existing RTIS in place, and the SB stop has existing plans of RTIS being installed, per coordination with SacRT. Both stops are fully ADA compliant.

The proposed Tier 1 improvements for the NB and SB bus stops are to maintain each existing location while adding, pedestrian scale lighting and Braille signage.

Due to the roadway narrowing at the NB bus stop location, pedestrian and bike improvements would require adjustments along the whole block. As a result, there are no additional recommended Tier 2 improvements. The proposed Tier 2 improvements for the SB stop include creating a shared cycle track stop and adding RTIS, pedestrian scale lighting, and Braille signage. The Broadway station pair received priority designation due to its high daily ridership and relatively low cost of improvements within the ROW. The anticipated cost for the Tier 1 improvements is \$167,400: \$83,700 for the NB stop and \$83,700 for the SB stop. The anticipated cost for the Tier 2 improvements is \$254,600: \$83,700 for the NB stop and \$170,900 for the SB stop.



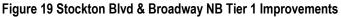


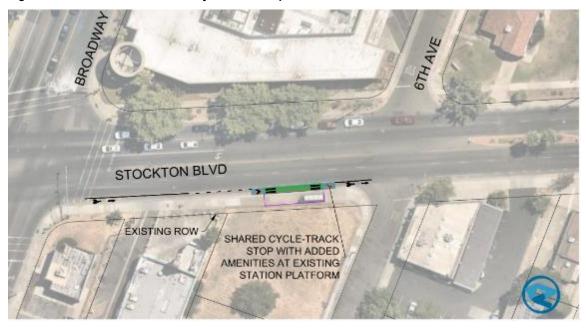
Figure 20 Stockton Blvd & Broadway SB Tier 1 Improvements





Figure 21 Stockton Blvd & Broadway NB Tier 2 Improvements

Figure 22 Stockton Blvd & Broadway SB Tier 2 Improvements



#### Parker Ave SB/ Roosevelt Ave SB/ 20th Ave NB

Parker Ave and Roosevelt Ave both have SB transit stops (stop IDs 1846 and 1847, respectively) with low daily ridership counts of 20 daily riders for Parker Ave and 11 daily riders for Roosevelt Ave. These two stops are located 430' apart from each other on the same block with no existing amenities at either location. The nearest SB stop to the north of Parker

Ave is 800' away at the far-side of 17<sup>th</sup> Ave and the nearest SB stop to the south of Roosevelt Ave is 890' away at 21<sup>st</sup> Ave. Roosevelt Ave SB stop has a NB station pair at 20<sup>th</sup> Ave (stop ID1896). All three bus stops lack an accessible landing area and any type of transit amenity other than a bus flag.

To allow for better stop access and more reliable service, it is recommended to consolidate the Parker Ave and Roosevelt Ave bus stops into one bus stop at the far side of Roosevelt Ave. The resulting SB stop is spaced 1370' south of the 17<sup>th</sup> Ave stop and 800' north of the 21<sup>st</sup> Ave stop. Additional Tier 1 improvements for the new Roosevelt Ave SB Stop and station pair at 20<sup>th</sup> Ave NB locations include widening the sidewalk to accommodate an accessible landing area, a shelter with a bench, Braille signage, and system and route maps.

The proposed Tier 2 improvements at the NB stop at 20<sup>th</sup> Ave and the new SB stop location at the far side of Roosevelt Ave include all Tier 1 improvements with the addition of creating a shared in-lane cycle track stop to ramp the bike lane up to the sidewalk level in both directions, which removes conflict points between people biking and buses. An additional Tier 2 improvement at this stop pair includes creating a midblock crossing north of the NB station location with a pedestrian refuge and a pedestrian signal. These improvements require two new curb ramps to provide an accessible crossing.

The consolidation of the Parker Ave and Roosevelt Ave bus stops received priority designation due to the low cost of improvements, lack of accessible landing area, and the ability to complete all work within the limits of the existing ROW. These justifications are also applicable for the 20<sup>th</sup> Ave NB stop, allowing it to be included as a part of the priority designation project. The anticipated cost for the Tier 1 improvements is \$308,600: \$208,800 for the NB stop, \$99,500 for the SB stop, and \$300 to remove the sign at Parker Ave. The anticipated cost for the Tier 2 improvements is \$1,389,200; \$1,179,800 for the NB stop, \$209,200 for the SB stop, and \$300 to remove the sign at Parker Ave.

#### Figure 23 20th Ave NB Tier 1 Improvements



Figure 24 Roosevelt Ave SB Tier 1 Improvements



Figure 25 20th Ave NB Tier 2 Improvements

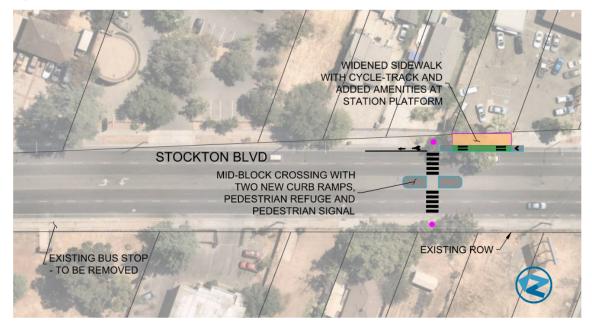


Figure 26 Roosevelt Ave SB Tier 2 Improvements



#### Lawrence Drive

The Lawrence Dr bus stop pair (stop IDs NB 1894 and SB1849) has relatively high daily ridership with 50 and 43 daily passengers, respectively. The bus stops are located near large commercial shopping centers and both lack accessible landing areas. The NB stop is located on the near side of Lawrence Dr with an existing shelter with a bench and trash receptacle.

The SB stop is located on the far side of Lawrence Dr with a bench at the back of the sidewalk, likely making the clear path less than 4' wide.

Proposed Tier 1 improvements to the NB Lawrence Dr stop are to add RTIS, Braille signage, and pedestrian scale lighting. The proposed Tier 1 improvements to the SB Lawrence Dr stop are to widen the sidewalk to create a formal station platform that allows space for an accessible landing area, a shelter with a bench, pedestrian scale lighting, trash receptacle, system and route maps, and Braille signage. While the daily ridership for the SB stop is lower than this report's threshold for pedestrian scale lighting, trash receptacle, and Braille signage, these improvements will help to encourage increased ridership.

The proposed Tier 2 improvements for the NB Lawrence Dr stop are to create a shared cycle track stop and widen the sidewalk at the bus stop to allow more space for pedestrians waiting, RTIS, Braille signage, and pedestrian scale lighting. The proposed Tier 2 improvements for the SB stop are to create a shared cycle track stop, widen the station platform to allow adequate space for an accessible landing area, a shelter with a bench, system and route maps, and a trash receptacle.

The Lawrence Drive bus stop pair received a priority designation due to the lack of an accessible landing area on the SB stop, high ridership, and relatively low cost to improve the stations. The anticipated cost for the Tier 1 improvements is \$302,400: \$143,800 for the NB stop and \$158,600 for the SB stop. The anticipated cost for the Tier 2 improvements is \$460,900: \$232,400 for the NB stop and \$228,500 for the SB stop.

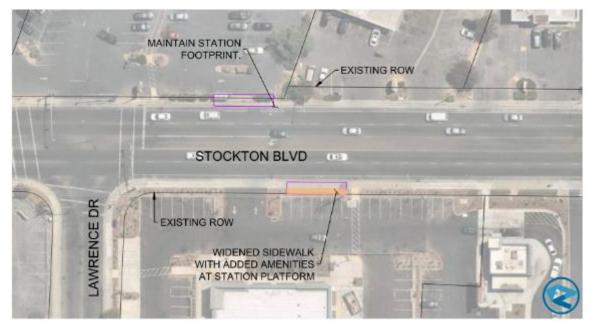
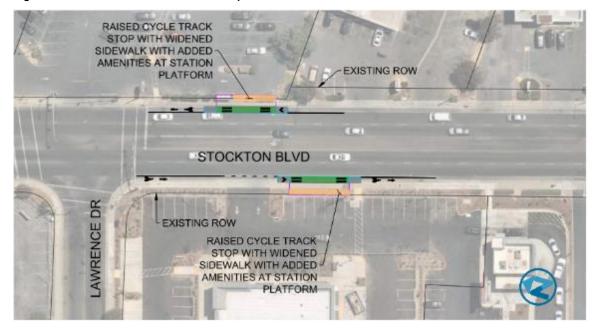


Figure 27 Lawrence Dr NB & SB Tier 1 Improvements



#### Figure 28 Lawrence Dr NB & SB Tier 2 Improvements

#### Fruitridge Rd (Plaza)

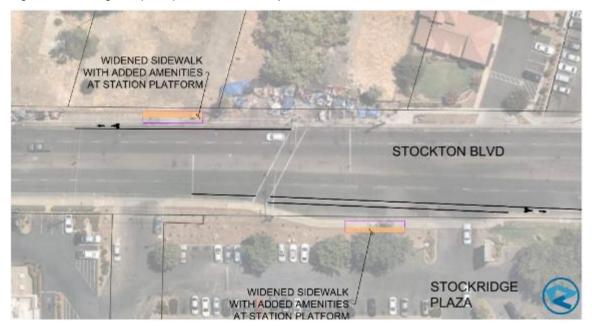
The Stockridge Plaza, at Stockton Blvd and Fruitridge Rd currently has a midblock station pair (NB 1893, SB 1850). Both stops have a high existing ridership of 64 daily riders for the NB direction and 103 daily riders for the SB direction. There is an existing half signal at this midblock location that gives pedestrians a formal crossing. Both stops are on the far side of the half signal with no amenities and have 5' and 6' sidewalk widths for NB and SB directions, respectively. Neither stop has an accessible landing area. The NB stop is an in-lane stop and the SB stop is a pull-out stop that shares a right turn pocket for a driveway accessing Stockridge Plaza.

The proposed Tier 1 improvements for both the NB and SB stops are to maintain the current station locations while widening the sidewalk at each location to allow space for an accessible landing area, shelter with a bench, RTIS, pedestrian scale lighting, system and route maps, and Braille signage. An additional shelter with a bench is proposed at the SB stop due to the high existing ridership.

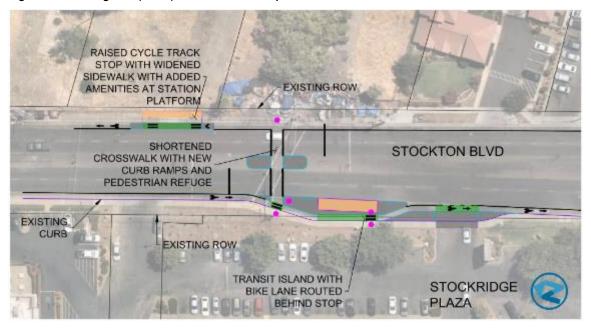
The proposed Tier 2 improvements for the NB stop include all Tier 1 improvements with the addition of creating a shared in-lane cycle track stop, ramping the bike lane to sidewalk level to remove any conflict points between people biking and buses. The proposed Tier 2 improvements for the SB stop include creating a transit island that routes the bike lane behind the bus stop. The proposed amenities are maintained for both the NB and SB stops. Additional Tier 2 improvements to this station pair include straightening the midblock

crossing at the half signal and creating a pedestrian refuge to shorten the crossing. In total, five new curb ramps are proposed to accommodate these improvements.

The Fruitridge Rd Plaza bus stops received priority designation due to the lack of an accessible landing area, very high ridership, and relatively low cost of the Tier 1 improvements. The anticipated cost for the Tier 1 improvements is \$335,300; \$170,600 for the NB stop and \$164,700 for the SB stop. The anticipated cost for the Tier 2 improvements is \$1,070,700; \$272,700 for the NB stop and \$798,000 for the SB stop.



#### Figure 29 Fruitridge Rd (Plaza) NB & SB Tier 1 Improvements



#### Figure 30 Fruitridge Rd (Plaza) NB & SB Tier 2 Improvements

#### Southwest Ave SB/Gordon Dr SB and Jansen Dr NB

Southwest Ave and Gordon Drive currently both have SB transit stops (1852 and 1853, respectively) with relatively low daily ridership counts of 17 and 15 passengers per day, respectively. These two stops are 850' apart from each other and both are located between two driveways with minimal space for additional amenities. The Southwest Ave bus stop is located 840' from the Fruitridge Rd stop to the north and Gordon Dr bus stop is located 730' from the McMahon Drive stop to the south. Neither stop currently has a NB station pair, however there is a singular NB bus stop at the far side of Jansen Drive.

To provide a bus stop with a more comfortable waiting area, improved accessibility, and proximity to a signalized crossing, it is recommended to consolidate the Southwest Ave and Gordon Dr stops to one bus stop on the far side of Jansen Drive, resulting in SB stop spacing of 1,400' to the Fruitridge stop to the north and 980' to the McMahon Drive stop to the south. Additional Tier 1 improvements include adding a shelter with bench, Braille signage and upgrading the existing curb ramp on the NW corner of the Jenson Drive intersection.

The new SB Jansen Dr bus stop will create a station pair to the NB Jansen Dr bus stop. While is being completed in this area, it is recommended to improve the NB Jansen Drive bus stop as part of the overall improvement project. The NB Jansen Drive bus stop (stop ID 1891) has an existing daily ridership of 29 passengers per day. It is currently a far-side stop with a bench and lacks an ADA compliant landing area.

The minimum Tier 1 proposed improvements for the NB Jansen Drive bus stop include widening the sidewalk to provide an adequate station platform with an ADA compliant landing area and space for a shelter with a bench, Braille signage, and system and route maps. An additional improvement includes upgrading three curb ramps on the east side of the Jansen Drive intersection.

Tier 2 proposed improvements for the new SB Jansen Dr bus stop maintain the new station location with the addition of creating a shared cycle track stop to remove conflict points between the bus and people biking. The proposed Tier 2 improvements for the existing NB Jansen Dr bus stop move the station platform behind the sidewalk for a separate space for the stop and amenities and create a shared cycle track stop. Tier 2 improvements maintain the amenities and curb ramp upgrades proposed in Tier 1 improvements.

The consolidation of the Southwest Ave and Gordon Dr bus stops into an improved bus stop received a priority designation due to the ability to containing proposed improvements in the existing ROW and a need to upgrade existing curb ramps, along with the stop's proximity to nearby shopping plazas and residential neighborhoods, despite slightly lower combined existing ridership. It is anticipated that the improved location and additional amenities will help make this stop more comfortable and convenient, which will help to increase ridership. The anticipated cost for the Tier 1 improvements is \$435,300; \$197,600 for the NB stop, \$237,700 for the SB stop, and \$300 for the removal of the stop at Southwest Ave. The anticipated cost for the Tier 2 improvements is \$648,700; \$341,000 for the NB stop, \$307,400 for the SB stop, and \$300 for the removal of the stop at Southwest Ave.



#### Figure 31 Southwest Ave SB/Jansen Dr NB Tier 1 Improvements

Final Report

Figure 32 Gordon Dr SB Tier 1 Improvements



Figure 33 Southwest Ave SB/Jansen Dr NB Tier 2 Improvements





Figure 34 Gordon Dr SB Tier 2 Improvements

#### **McMahon Drive**

The McMahon Dr bus stops (NB 1890, SB 1854) are located near restaurants and shopping plazas with a relatively high daily ridership of 63 and 62 daily passengers for NB and SB, respectively. Existing amenities include a trash receptacle and a bench at the NB station and a trash receptacle at the SB station. The NB stop lacks an ADA compliant landing area and several curb ramps at the intersection require upgrades or replacement, including two on the northeast corner and one on the southeast corner.

The Tier 1 proposed improvements for the station pair include upgrading the three curb ramps to be ADA compliant and widening the sidewalk at the NB station to provide an adequate landing area. Additional Tier 1 improvements for both the NB and SB stations include additional widening of the sidewalk at each station to accommodate a shelter with a bench, RTIS, system and route maps, Braille signage, and pedestrian scale lighting.

Tier 2 proposed improvements for the NB and SB stations maintain the proposed amenities identified in Tier 1 while creating shared cycle track stops, extending the curb to the outside of the bike lane, and bringing the bike lane to sidewalk level to remove the conflict points between the bus and people biking.

McMahon Drive Tier 1 bus stop improvements received a priority designation due to the lack of adequate ADA infrastructure for the NB bus stop, high ridership, and the ability to complete all improvements in the existing ROW with no additional easements. The anticipated cost for the Tier 1 improvements is \$347,900; \$189,700 for the NB stop and \$158,200 for the SB stop. The anticipated cost for the Tier 2 improvements is \$537,200; \$291,900 for the NB stop and \$245,300 for the SB stop.

Figure 35 McMahon Dr NB Tier 1 Improvements

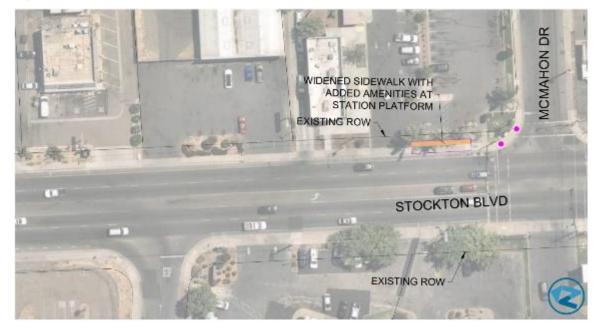


Figure 36 McMahon Dr SB Tier 1 Improvements

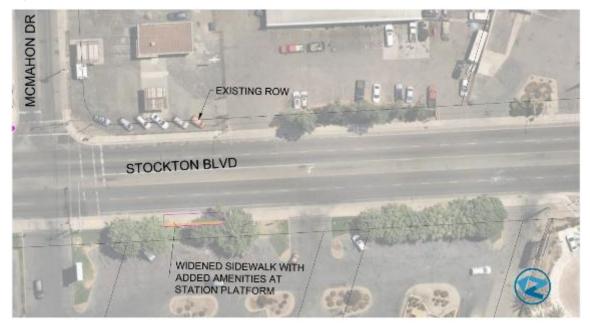
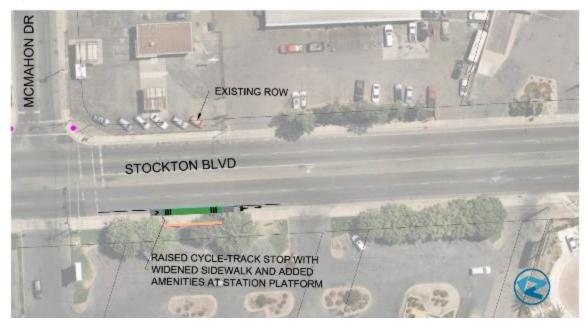




Figure 37 McMahon Dr NB Tier 2 Improvements

Figure 38 McMahon Dr SB Tier 2 Improvements



#### Eldercreek Rd NB/47<sup>th</sup> Ave SB

Eldercreek Rd NB and 47<sup>th</sup> Ave SB (NB 1887, SB 1857) have an existing high ridership of 58 daily riders for the NB direction and 65 daily riders for the SB direction. The NB stop is a farside near a drive-thru exit with a 5' sidewalk and no existing landing area and no amenities. The SB stop is a far-side stop at an open lot with a sign and no amenities. The landing area on the SB stop extends past the sidewalk, so it is currently recommended to reconstruct the stop to allow for a more accessible landing area.

The proposed Tier 1 improvements for the NB stop are to shift the station further north and widen the sidewalk to accommodate a shelter with a bench, RTIS, pedestrian scale lighting, system and route maps, and Braille signage. Proposed Tier 1 improvements for the SB stop maintain the existing station location while widening the sidewalk to create a formal station platform that accommodates a shelter with a bench, RTIS, pedestrian scale lighting, system and route maps, and Braille signage.

The proposed Tier 2 improvements for the NB and SB stops include all Tier 1 improvements with the addition of creating a shared in-lane cycle track stop, ramping the bike lane to sidewalk level, which removes any conflict points between buses and people biking.

The Eldercreek Rd and 47<sup>th</sup> Ave bus stops received priority designation due to the high existing ridership, lack of accessible landing area, and relatively low cost for the overall improvements. The anticipated cost for the Tier 1 improvements is \$334,900; \$171,800 for the NB direction and \$163,100 for the SB direction. The anticipated cost for the Tier 2 improvements is \$509,300; \$259,000 for the NB stop and \$250,300 for the SB stop.



#### Figure 39 Eldercreek Rd NB Tier 1 Improvements

#### Figure 40 47<sup>th</sup> Ave SB Tier 1 Improvements

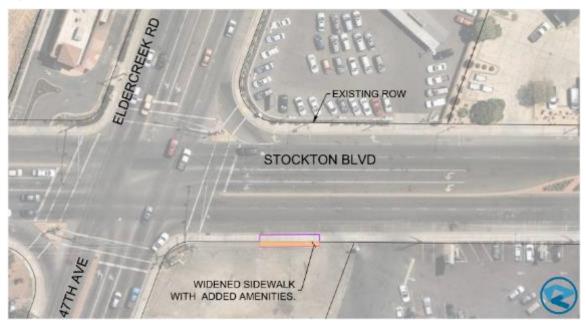
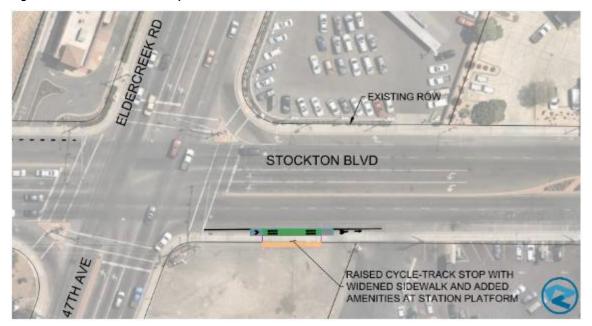


Figure 41 Eldercreek Rd NB Tier 2 Improvements





#### Figure 42 47th Ave SB Tier 2 Improvements

#### 65<sup>th</sup> St

The 65<sup>th</sup> Street bus stops (NB 1884, SB 1860) have the highest ridership on the Stockton Blvd corridor with 252 daily riders for the NB direction and 407 daily riders for the SB direction. These stops are located in a mix of shopping plazas and have potential east-west transfer points on 65<sup>th</sup> Street. Both stops are currently located at bus pull-outs on the far-side of 65<sup>th</sup> Street with a shelter with a bench and trash receptacle at the NB stop and a bench and trash receptacle at the SB stop. The SB bus stop does not currently have an accessible landing area.

The proposed Tier 1 Improvements for the NB stop are to extend the station footprint and sidewalk to create a shared in-lane cycle track stop, add an additional shelter with a bench, RTIS, pedestrian scale lighting, system and route maps, and Braille signage. Proposed Tier 1 improvements to the SB stop include extending the curb to the edge of the existing bike lane to create a shared in-lane stop, allowing for a formal station platform and wider sidewalk. Additional amenities for the SB stop include adding 2 shelters with benches, additional bench, RTIS, pedestrian scale lighting, system and route maps, and Braille signage.

The proposed Tier 2 improvements for both the NB and SB stops include creating a transit island routing the bike lane behind the bus stop with the same additional amenities located on the transit island. A railing may also be added to the transit island to provide a barrier between the bike lane and transit island and create a more hospitable space. This creates an in-lane stop for transit and removes any conflict points between people biking and buses. Two additional curb ramps may be required for access at each transit island.

The 65<sup>th</sup> Street bus stops received a priority designation due to high existing ridership, lack of accessible landing area, and ability to complete all improvements within the existing ROW, despite the higher costs of the improvements. The anticipated cost for the Tier 1 improvements is \$494,700; \$307,500 for the NB stop and \$187,200 for the SB stop. The anticipated cost for the Tier 2 improvements is \$1,012,400; \$554,900 for the NB stop and \$457,500 for the SB stop.

#### Figure 43 65th St Tier 1 NB Improvements



#### Figure 44 65th Tier 1 SB Improvements



#### Figure 45 65th St Tier 2 NB Improvements



Figure 46 65<sup>th</sup> St Tier 2 SB Improvements

		E E		
			00	
or of		STOCKTON BLVD		And in the second se
INP			TRANSIT ISLAND WITH	
1 8 8 8 <sup>8</sup>	EXISTING CURB		BIKE LANE ROUTED BEHIND STOP	
65TH ST	J.			
E-E	1			

#### Gerber Rd SB/ Suncountry Ln NB/ Massie Ct 1 SB

Gerber Rd SB, Suncountry Ln NB, and Massie Ct 1 SB (stop ID 2408, 2376, and 2409 respectively) are located near residential areas with some shopping plazas nearby. They all have relatively low ridership at 10, 12, and 8 daily riders, respectively. Between Gerber Rd and Suncountry Ln, roughly 400' of sidewalk is missing on the east side of Stockton Blvd and

roughly 450' of sidewalk is missing on the west side of Stockton Blvd. The Gerber Rd SB and Massie Ct 1 SB bus stops are both missing accessible landing areas and have no existing amenities. Suncountry Ln NB currently has a shelter with a bench and a tight accessible landing area.

The proposed Tier 1 improvements for the Gerber Rd SB stop include relocating the stop to near-side of Whispering Palms Drive. This would require formally closing or relocating the existing driveway on the southeast corner of the adjacent lot and creating a new station platform to accommodate an accessible landing area, bench, Braille signage, and system and route maps. Additional improvements for this stop include installing a 6' wide sidewalk from Gerber Rd to Whispering Palms Drive, one new curb ramp on the SW corner of Gerber Rd and Stockton Blvd and one upgraded curb ramp on the NW corner of the intersection. While there are no Tier 1 improvements to Suncountry Ln NB bus stop due to the existing shelter and landing area, proposed Tier 1 improvements to this block include filling in a 6' wide sidewalk in the area around Elder Creek where an accessible sidewalk is not present. These improvements include upgrading the two existing curb ramps on the NE and SE corners of Stockton Blvd and Gerber Road. Tier 1 improvements of the Massie Ct 1 SB bus stop include widening the sidewalk at the existing station location to accommodate a formal landing area and adding a bench, Braille signage, and system and route maps.

The proposed Tier 2 improvements for all three bus stops in the priority project include maintaining all proposed Tier 1 improvements with the addition of creating a shared cycle track stop at each location. This would ramp the bike lane up to sidewalk level and remove the conflict between people biking and buses. Tier 2 improvements also add a pedestrian crossing on the north leg of the Suncountry Ln/Stockton Blvd intersection with two new curb ramps.

This location received priority designation largely due to the lack of ADA accessibility in the area, from missing sections of sidewalk, curb ramps that require upgrading, and missing accessible landing areas from the two SB stops. Additionally, all improvements can be completed within the existing ROW. The anticipated cost for the Tier 1 improvements is \$1,623,800; \$659,400 for the NB stop, \$837,300 for the SB Gerber Rd stop, and \$127,100 for the SB Massie Ct 1 stop. The anticipated cost for the Tier 2 improvements is \$1,981,600; \$798,500 for the NB stop, \$946,400 for the SB Gerber Rd stop, and \$236,700 for the SB Massie Ct 1 stop.

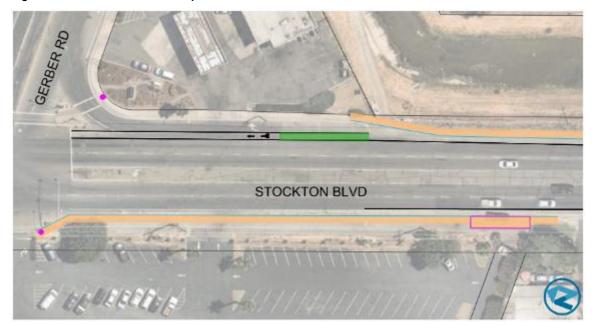


Figure 47 Gerber Rd SB Tier 1 Improvements

Figure 48 Suncountry Ln NB Tier 1 Improvements



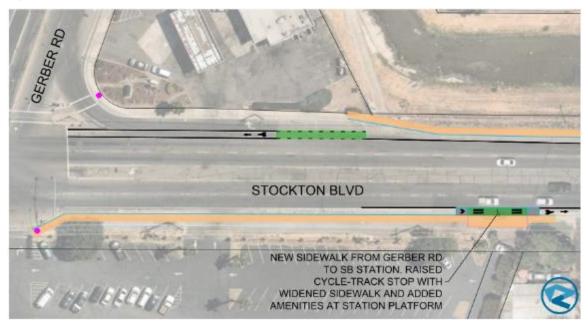


Figure 49 Gerber Rd SB Tier 2 Improvements

Figure 50 Suncountry Ln NB Tier 2 Improvements



### **Medium Priority Projects**

This section identifies projects that scored in the middle range of our evaluation and are classified as medium priority projects. A summary table of the medium priority projects is

provided in Appendix A. These projects are detailed at a high and general level why they received a medium priority below:

- Alhambra Blvd (stop ID 1792) is an existing EB bus stop averaging less than one passenger per day. This EB stop is far-side of Alhambra Blvd with no amenities, and lacks an accessible landing area due to a grass strip located between the curb and sidewalk. Proposed Tier 1 improvements to the Alhambra Blvd bus stop include extending the sidewalk to the curb to create an accessible landing area and adding a bench, Braille signage, and a route map. This bus stop ranks in the medium priority group due to its low ridership and cost of improvements.
- The 34<sup>th</sup> St EB and WB (stop IDs 1793 and 1824) bus stops have an existing daily ridership averaging less than 1 passenger per day for both directions. The EB bus stop location is a near-side stop with no amenities and the WB stop location is a far-side stop location with no amenities, each lacking an accessible landing area. Tier 1 improvements for both locations include widening the sidewalk to accommodate an accessible landing area and adding benches, Braille signage, and system and route maps. The 34<sup>th</sup> St bus stops rank in the medium priority group due to their low ridership and cost of improvements.
- The 3<sup>rd</sup> Ave NB and SB (stop s 1808 and 3721, respectively) bus stops are proposed to be improved with the anticipation that ridership from the 2<sup>nd</sup> Ave bus stop location will be redirected to the 3<sup>rd</sup> Ave stop location. The NB bus stop is a midblock stop with a large station area, shelter with bench, system and route maps, and trash receptacle. The SB bus stop is on the near-side of 3<sup>rd</sup> Ave with a bench in the grass strip between the sidewalk and curb and no landing area. Tier 1 improvements to the NB bus stop at 3<sup>rd</sup> Ave include relocating the shelter with a bench to the back of the sidewalk to create a clear accessible path, both on the sidewalk and for boarding and alighting of passengers on the bus and adding Braille signage. Tier 1 improvements to the SB bus stop include widening the sidewalk at the station area to accommodate an accessible landing area, shelter with a bench, Braille signage, and system and route maps. 3<sup>rd</sup> Ave ranked as a medium priority project due to its low existing ridership, higher cost of improvements, and because only one direction is lacking a landing area. As a result, the combined score is not enough to push this project onto the high priority list.
- Fruitridge Rd NB and SB (stop IDs 1892 and 1851, respectively) bus stops are both far-side stops with high daily ridership at 118 daily riders for the NB stop location and 102 daily riders for the SB stop location. The NB bus stop has a bench and trash receptacle and is located between two driveways, while the SB bus stop has a shelter and a bench, trash receptacle, and system and route maps. Both locations have accessible landing areas with minor improvements required to upgrade

existing curb ramps and widen the pedestrian area at the NB bus stop location. Proposed Tier 1 improvements for the NB bus stop include widening the existing sidewalk into the landscaped area to allow for additional pedestrian space, a shelter with a bench, RTIS, pedestrian scale lighting, system and route maps, and Braille signage. The bus pull-out is currently used as layover space at the SB bus stop. Due to this space being required to pull a bus out of the flow of traffic without impacting traffic operations, there are no additional Tier 2 improvements proposed on for the SB bus stop.

- Lemon Hill NB and SB (stop IDs NB 1889 and SB 1855) bus stops have existing daily ridership of 85 daily riders for the NB direction and 59 daily riders for the SB direction. Both bus stops are far-side stops with shelter and bench, system and route maps, and trash receptacles, and each location has a dedicated station area between 11' and 12' wide, which allows for adequate space for an accessible landing area. Proposed Tier 1 improvements for the NB and SB directions include widening the sidewalk to accommodate RTIS, pedestrian scale lighting, and Braille signage. Additional improvements for this bus stop pair include upgrading all 8 curb ramps at the Stockton Blvd and Lemon Hill Ave intersection to be ADA compliant. This bus stop pair ranks in the medium priority group due to the high cost of improvements and the existing ADA compliance, with only minor improvements required for the adjacent curb ramps.
- Dias Ave NB and SB (stop IDs NB 1888 and SB 1856) bus stops have existing daily ridership of 22 riders for the NB bus stop and 29 riders for the SB stop. The NB bus stop is a far-side pullout stop with a bench and trash receptacle, and the SB stop is a far-side stop with no amenities. Each location lacks an accessible landing area. Tier 1 improvements for both bus stops include widening the sidewalk to accommodate an accessible landing area, adding a shelter with a bench, Braille signage, and system and route maps. The Dias Ave station pair ranks in the medium priority group due to its low ridership and higher cost of Tier 1 improvements.
- Lindale Ave SB and Florin Rd NB bus stop pair (stop IDs SB 1861 and NB 2166) have daily ridership of 10 daily riders for the SB direction and 70 daily riders for the NB direction. The SB stop is a far-side stop with no amenities and no landing area. The NB stop is a midblock stop with a bench. With 5' wide sidewalks in both directions and no extra space made available at each bus stop location, neither stop has an accessible landing area. Proposed Tier 1 improvements for the SB Lindale Ave bus stop include widening the sidewalk to accommodate an accessible landing area, a shelter with a bench, Braille signage, trash receptacle, and system and route maps. Tier 1 improvements to the NB Florin Rd bus stop include extending the sidewalk to create an accessible landing area, a shelter with a bench, RTIS, pedestrian scale

lighting, trash receptacle, Braille signage, and system and route maps. This station pair ranks in the medium priority group due to the low SB ridership and the Tier 1 improvements for both directions requiring additional ROW.

Elsie Ave NB and Masie Ct 2 SB (stop IDs NB 2375 and SB 2410) have daily ridership of 55 and 30 riders, respectively. The Elsie Ave NB is a far-side stop with no amenities, and the SB Massie Ct 2 stop is an in-lane stop on the near-side of Massie Ct with no amenities. Tier 1 improvements to the NB stop include upgrading the curb ramp on the NE corner of Elsie Ave and Stockton Blvd, adding a shelter with bench, RTIS, pedestrian scale lighting, trash receptacle, Braille signage, and system and route maps. Tier 1 improvements for the SB stop include relocating the stop to the far-side of Massie Ct, widening the sidewalk to accommodate a station footprint with accessible landing area, adding a shelter with bench, Braille signage, and system and route maps.

### **Low Priority Projects**

This section describes the projects that scored in the lowest range in our evaluation therefore are identified as low priority projects. These projects are all ADA compliant and all but one location has relatively low daily ridership. A summary table detailing low priority projects, including ROW requirements, proposed amenities, and cost estimates is provided in Appendix A.

- Colonial Way bus stops (Stop IDs NB 1811, SB 3718) have low daily ridership with each stop at the far-side location. Both stops have accessible landing areas and compliant curb ramps. Improvements to this station pair include widened bus stops to accommodate shelters and Braille signage, as proposed by the Stockton Blvd Complete Streets Plan. The Colonial Way bus stop improvements are ranked low priority due to their existing ADA compliance, low ridership, and the high cost of improvements to widen the sidewalks.
- X Street NB and SB (Stop IDs NB 1810 and SB 3719) have existing ridership of 18 and 12 daily riders, respectively. The NB location is a far-side stop with 2 benches, and the SB location is a midblock stop with no amenities, and both locations are fully ADA compliant. Due to the low ridership, recommended improvements at the NB stop include adding a shelter with bench, Braille signage, and system and route maps. The SB stop location is a midblock location 410' south of the Colonial Way SB bus stop and 1910' north of the 3<sup>rd</sup> Ave bus stop. To better space these bus stops, it is recommended to relocate the SB X St bus stop and 1270' north of the SB 3<sup>rd</sup> Ave bus stop. This station pair is ranked with low priority due to its low ridership, existing ADA compliance, and high cost to relocate the SB X St bus stop.

- 9<sup>th</sup> Ave NB and SB bus stop (stop IDs 1902 and 1841) have existing ridership of 23 daily riders for the NB bus stop and 33 daily riders for the SB bus stop. Both are fully ADA compliant. This station pair is ranked with low priority due to its low ridership, and high cost of improvements and ROW requirements for the Tier 1 NB improvements.
- 11<sup>th</sup> Ave NB and SB (Stop IDs 1901 and 1842) bus stops have existing ridership of 16 and 14 daily riders, respectively. The NB stop is a far-side stop with no amenities and is not ADA compliant and the SB stop is a far-side stop with a shelter with a bench and trash receptacle and is fully ADA compliant. Improvements to the NB stop include widening the sidewalk to accommodate an accessible landing area and adding a shelter with a bench and route map. Assuming the existing landing area of the SB bus stop is ADA compliant, the only Tier 1 improvement includes adding Braille signage. The 11<sup>th</sup> Ave bus stops are ranked low priority due to their low ridership and high cost of improvements for the NB stop to make it ADA compliant.
- 14<sup>th</sup> Ave NB and SB (Stop IDs NB 1899 and SB 1843) bus stops have existing
  ridership of 37 and 24 daily riders, respectively. The NB stop is a far-side stop with a
  shelter with a bench, trash receptacle and system and route maps, and is fully ADA
  compliant. The SB stop is a near-side stop with shelter with bench, trash receptacle,
  system and route maps and is also fully ADA complaint. This station pair is a low
  priority stop due to its existing high ridership, amenities, and ADA compliance.
- 21<sup>st</sup> Ave NB and SB (stop IDs 1895 and 1848, respectively) are both far-side stops with shelter and benches and are fully ADA compliant. The daily ridership for the NB bus stop is 52 passengers, and the daily ridership for the SB bus stop is 42 passengers. Improvements to bring this station pair up to the standards identified in this report are to add RTIS, Braille signage, and pedestrian scale lighting at both locations, and add system and route maps that are currently missing from the SB bus stop. While the SB bus stop is under the threshold for RTIS and pedestrian scale lighting, these amenities are recommended with the anticipation that improving the bus stop will create a better station environment and bring additional passengers.
- Fowler Ave NB (Stop IDs NB 1885) has an existing ridership of 53 daily riders, It is a far-side stop with no amenities and no accessible landing area. This bus stop ranked low priority due to its high cost of improvements to make it ADA compliant and the need to acquire ROW for the proposed Tier 1 improvements.

### **Quick Implementation Projects**

This section describes projects that do not meet high priority thresholds due to existing accessibility or ridership but may require some minimal improvements to bring up to SacRT standards. Projects identified as quick implementation projects can be implemented on an accelerated timeline at low cost, often by adding simple amenities. This section will identify the bus stop locations with a description of the recommended improvements. These improvements will be summarized in Appendix A.

- Miller Way has an existing SB far-side bus stop (Stop ID 3717) with two benches. This stop has a low daily ridership of 5 passengers per day but is fully ADA compliant and completely within the ROW. The minor improvement of adding Braille signage and system and route maps will bring this bus stop up to SacRT standards and the standards identified in this report.
- 2<sup>nd</sup> Ave NB and SB (stop IDs 1809 and 3720, respectively) bus stops are both farside stops. The NB stop has a bench and small landing area. The bench is likely blocking the accessible path of the sidewalk and landing area. The SB stop has no amenities and is located in the grass strip between the sidewalk and road with no landing area. The NB stop located 640' north of the 3<sup>rd</sup> Ave bus stop and 880' south of the X St bus stop. The SB stop is located 480' north of the 3<sup>rd</sup> Ave bus stop and 1420' south of the X St bus stop. With the low ridership of this station pair at 10 daily riders for each direction, and the close proximity to 3<sup>rd</sup> Ave station pair, it is recommended that this bus stop be removed and improvements will be consolidated to the 3<sup>rd</sup> Ave bus stop location
- 15<sup>th</sup> Ave SB (stop ID 1844) is an existing far-side bus stop with no amenities, no station pair, and no accessible landing area. This bus stop is location 575' south of the 14<sup>th</sup> Ave bus stop and 640' north of the 17<sup>th</sup> Ave bus stop. Due to the low daily ridership of this bus stop at 14 people per day, and the proximity to both the 14<sup>th</sup> Ave and 17<sup>th</sup> Ave bus stops, it is recommended that this bus stop be removed and consolidated with the 14<sup>th</sup> Ave bus stop.
- San Francisco Blvd NB and 17<sup>th</sup> Ave SB (stop IDs NB 1898 and SB 1845) bus stops have existing ridership of 41 and 31 daily riders, respectively. The NB bus stop is a far-side stop with a shelter and a bench, trash receptacle, and system and route maps. Similarly, the SB stop is a far-side stop with a shelter with bench and trash receptacle. Both bus stops are fully ADA compliant and have amenities that meet SacRT standards. As a result, the only proposed Tier 1 improvements for the NB bus stop is to add Braille signage, and for the SB stop is to add Braille signage and system and route maps.

- 48<sup>th</sup> Ave SB (stop ID 1858) is a midblock stop with no station pair and no amenities but it is fully ADA compliant. The bus stop flag is located at the back of the sidewalk and is not easily visible from the roadway. Due to its proximity to nearby shopping plazas and restaurants, it is recommended to add a shelter with a bench to provide a more comfortable waiting environment and increase ridership. Improvements to this location include adding a shelter with a bench, Braille signage, and system and route maps, and relocating the bus stop flag to more easily identify the bus stop.
- Riza Ave SB (stop ID 1859) is an existing midblock stop near Patterson Way with no amenities. This location is fully ADA compliant. The existing lot is no longer occupied at this location, but in the event that a new property comes to this location, station improvements would include a shelter with bench, Braille signage, and system and route maps.

# 7 APPENDIX A – STATION SUMMARY TABLES

#### Figure A- 1 Stockton Blvd & Alhambra Blvd

	Alhambra Blvd Southbound	
Stop ID	1792	
Daily Ridership	Boarding: 0 Alighting: 0	
Cost	Tier 1: \$126,825 Tier 2: N/A	
Key Considerations (ADA, ROW)	<ul><li>No Landing Area</li><li>Tier 1 and Tier 2: 0' ROW Required</li></ul>	
Proposed Improvements	Tier 1: Widen sidewalk up to curb at bus flag for adequate landing area. Add Braille signage, bench, and route map. Tier 2: No additional Tier 2 improvements due to low ridership.	
Image Credit: Google Maps		

Figure A- 2 Stockton Blvd & 34
--------------------------------

	34 <sup>th</sup> St Eastbound	34 <sup>th</sup> St Westbound
Stop ID	1793	1824
Daily Ridership	Boarding: <1 Alighting: <1 Total: 1	Boarding: <1 Alighting: <1 Total: <1
Cost	Tier 1: \$127,000 Tier 2: N/A	Tier 1: \$127,000 Tier 2: N/A
Key Considerations (ADA, ROW)	<ul><li>No Landing Area</li><li>Tier 1 and Tier 2: 0' ROW Required</li></ul>	<ul><li>No Landing Area</li><li>Tier 1 and Tier 2: 0' ROW Required</li></ul>
Proposed Improvements	<ul> <li>Tier 1: Widen station area at back of sidewalk for accessible landing area, Braille signage, route map, and bench.</li> <li>Tier 2: No additional Tier 2 improvements due to low ridership.</li> </ul>	Tier 1: Widen station area at back of sidewalk for accessible landing area, Braille signage, route map, and bench. Tier 2: No additional Tier 2 improvements due to low ridership.
Image Credit: Google Maps		

	Miller Way Southbound	
Stop ID	3717	
Daily Ridership	Boarding: 2 Alighting: 3 Total: 5	
Cost	Tier 1: \$300 Tier 2: \$300	
Key Considerations (ADA, ROW)	<ul> <li>Landing Area and Curb Ramp Accessible</li> <li>Low ridership and no station pair</li> <li>Tier 1 and Tier 2: 0' ROW Required</li> </ul>	
Proposed Improvements	<ul> <li>Tier 1: Add Braille signage, and system and route maps.</li> <li>Tier 2: Add striped crosswalk on south leg of intersection, Braille signage, and system and route maps.</li> </ul>	
<b>Image</b> Credit: Google Maps	A Contraction of the second se	

# Figure A- 3 Stockton Blvd & Miller Way SB

	Colonial Way Northbound	Colonial Way Southbound
Stop ID	1811	3718
Daily Ridership	Boarding: 5 Alighting: 2 Total: 7	Boarding: 1 Alighting: 3 Total: 4
Cost	Tier 1: \$155,800 Tier 2: \$470,000	Tier 1: \$164,300 Tier 2: \$164,300
Key Considerations (ADA, ROW)	<ul> <li>Landing Area and Curb Ramp Accessible</li> <li>Tier 1: 5' ROW Required</li> <li>Tier 2: 0' ROW Required</li> </ul>	<ul> <li>Landing Area and Curb Ramp Accessible</li> <li>Tier 1 and Tier 2: 0' ROW Required</li> </ul>
Proposed Improvements	<ul> <li>Tier 1: Widen station platform to the south at the back of sidewalk accommodate shelter with bench, Braille signage, and route map.</li> <li>Tier 2: Fill in pullout to create in-lane stop. Create station platform with shelter with bench, Braille signage, and route map. Add pedestrian crossing on north leg of intersection and 2 new curb ramps.</li> </ul>	<ul> <li>Tier 1: Extend station platform between curb and sidewalk to the south to accommodate shelter with bench, Braille signage, and route map.</li> <li>Tier 2: Maintain Tier 1 improvements. Shift stop bar on west leg of intersection back and add crosswalk striping</li> </ul>
<b>Image</b> Credit: Google Maps		

# Figure A- 4 Stockton Blvd & Colonial Way

Figure	A- 5	Stockton	Blvd	& X St
--------	------	----------	------	--------

	X St Northbound	X St Southbound
Stop ID	1810	3719
Daily Ridership	Boarding: 10 Alighting: 8 Total: 18	Boarding: 5 Alighting: 7 Total: 12
Cost	Tier 1: \$15,300 Tier 2: \$179,600	Tier 1: \$152,600 Tier 2: \$182,600
Key Considerations (ADA, ROW)	<ul> <li>Landing Area and Curb Ramp Accessible</li> <li>Tier 1 and Tier 2: 0' ROW Required</li> </ul>	<ul> <li>Landing Area and Curb Ramp Accessible</li> <li>Tier 1 and Tier 2: 0' ROW Required</li> </ul>
Proposed Improvements	<ul><li>Tier 1: Add shelter with bench, Braille signage, and route map.</li><li>Tier 2: Relocate stop and benches closer to X Street intersection. Add shelter with bench, Braille signage, and route map.</li></ul>	Tier 1: Relocate to far-side of Y Street. Extend sidewalk to accommodate shelter with bench, Braille signage, and route map. Tier 2: Relocate bus stop to far-side Y St. Provide crossing on south leg of X St intersection with 2 new curb ramps. Extend sidewalk to accommodate shelter and bench, Braille signage, and route map.
Image Credit: Google Maps		

	2 <sup>nd</sup> Ave Northbound	2 <sup>nd</sup> Ave Southbound
Stop ID	1809	3720
Daily Ridership	Boarding: 8 Alighting: 2 Total: 10	Boarding: 3 Alighting: 2 Total: 5
Cost	Tier 1: \$2,300 Tier 2: N/A	Tier 1: \$300 Tier 2: N/A
Key Considerations (ADA, ROW)	<ul> <li>Existing landing area potentially blocked by bench.</li> <li>Cost assumed for maintenance crew to remove amenities.</li> <li>Tier 1 and Tier 2: 0' ROW Required</li> </ul>	<ul> <li>No Landing Area</li> <li>Tier 1 and Tier 2: 0' ROW Required</li> </ul>
Proposed Improvements	<ul><li>Tier 1: Propose remove stop. Remove bench and flag.</li><li>Tier 2: No additional improvements due to removed stop.</li></ul>	Tier 1: Propose remove stop. Tier 2: No additional improvements due to removed stop.
Image Credit: Google Maps		

# Figure A- 6 Stockton Blvd & 2<sup>nd</sup> Ave

	3 <sup>rd</sup> Ave Northbound	3 <sup>rd</sup> Ave Southbound
Stop ID	1808	3721
Daily Ridership	Boarding: 3 Alighting: 2 Total: 5	Boarding: 2 Alighting: 3 Total: 5
Cost	Tier 1: \$4,800 Tier 2: \$1,115,700	Tier 1: \$166,000 Tier 2: \$181,000
Key Considerations (ADA, ROW)	<ul> <li>Landing Area and Curb Ramp Accessible</li> <li>Tier 1 and Tier 2: 0' ROW Required</li> </ul>	<ul><li>No landing area</li><li>Tier 1 and Tier 2: 0' ROW Required</li></ul>
Proposed Improvements	<ul> <li>Tier 1: Relocate shelter to back of sidewalk and add Braille signage.</li> <li>Tier 2: Relocate stop and amenities closer to far-side 3<sup>rd</sup> Ave. Add Braille signage, pedestrian crossing with a pedestrian signal, 3 new curb ramps.</li> </ul>	<ul> <li>Tier 1: Create a formal station area by widening sidewalk up to curb to accommodate accessible landing area, shelter with bench, Braille signage and route map.</li> <li>Tier 2: Maintain Tier 1 improvements. Upgrade curb ramp on the south corner of 3<sup>rd</sup> and Stockton Blvd.</li> </ul>
Image Credit: Google Maps		

#### Figure A- 7 Stockton Blvd & 3rd Ave

	Broadway Northbound	Broadway Southbound
Stop ID	1807	1839
Daily Ridership	Boarding: 20 Alighting: 47 Total: 68	Boarding: 78 Alighting: 54 Total: 132
Cost	Tier 1: \$83,700 Tier 2: \$83,700	Tier 1: \$83,700 Tier 2: \$170,900
Key Considerations (ADA, ROW)	<ul> <li>Landing Area and Curb Ramp Accessible</li> <li>Tier 1 and Tier 2: 0' ROW Required</li> </ul>	<ul> <li>Landing Area and Curb Ramp Accessible</li> <li>Tier 1 and Tier 2: 0' ROW Required</li> </ul>
Proposed Improvements	<ul><li>Tier 1: Maintain existing conditions, add Braille signage and pedestrian scale lighting.</li><li>Tier 2: No additional Tier 2 Improvements.</li></ul>	<ul> <li>Tier 1: Maintain existing conditions, add Braille signage and pedestrian scale lighting.</li> <li>Tier 2: Create shared cycle track stop, add Braille signage and pedestrian scale lighting.</li> </ul>
Image Credit: Google Maps		Har

#### Figure A- 8 Stockton Blvd & Broadway

	9 <sup>th</sup> Ave Northbound	9 <sup>th</sup> Ave Southbound
Stop ID	1902	1841
Daily Ridership	Boarding: 13 Alighting: 10 Total: 23	Boarding: 19 Alighting: 14 Total: 33
Cost	Tier 1: \$223,800 Tier 2: \$458,000	Tier 1: \$300 Tier 2: \$200,200
Key Considerations (ADA, ROW)	<ul> <li>Landing Area and Curb Ramp Accessible</li> <li>Tier 1 and Tier 2: 6' ROW Required</li> </ul>	<ul> <li>Landing Area and Curb Ramp Accessible</li> <li>Tier 1 and Tier 2: 0' ROW Required</li> </ul>
Proposed Improvements	<ul> <li>Tier 1: Extend station platform to the south to accommodate shelter with bench, Braille signage, and route map. Station area can be improved while maintaining existing tree.</li> <li>Tier 2: Relocate stop to far-side of existing pedestrian signal. Create shared cycle track stop and widen sidewalk to accommodate a formal station area. Maintain all proposed Tier 1 amenities and add a pedestrian refuge at the existing pedestrian crossing.</li> </ul>	<b>Tier 1:</b> Add Braille signage. <b>Tier 2:</b> Relocate stop to far- side of existing pedestrian signal. Create shared cycle track stop and widen sidewalk for formal station area. Relocate shelter with bench and trash receptacle. Add Braille signage.
Image Credit: Google Maps		

# Figure A- 9 Stockton Blvd & 9th Ave

	11 <sup>th</sup> Ave Northbound	11 <sup>th</sup> Ave Southbound
Stop ID	1901	1842
Daily Ridership	Boarding: 11 Alighting: 5 Total: 16	Boarding: 6 Alighting: 8 Total: 14
Cost	Tier 1: \$234,300 Tier 2: \$1,188,300	Tier 1: \$300 Tier 2: \$226,400
Key Considerations (ADA, ROW)	<ul> <li>No landing area</li> <li>Tier 1 and 2: 1' ROW Required</li> </ul>	<ul> <li>Landing Area and Curb Ramp Accessible</li> <li>Tier 1: 0' ROW Required</li> <li>Tier 2: 6' ROW Required</li> </ul>
Proposed Improvements	<ul> <li>Tier 1: Create a formal station area by widening sidewalk up to curb to accommodate accessible landing area, shelter with bench, Braille signage, and route map.</li> <li>Tier 2: Maintain Tier 1 improvements. Upgrade crossing with pedestrian refuge and a pedestrian signal.</li> </ul>	<b>Tier 1:</b> Add Braille signage. <b>Tier 2:</b> Relocate station and amenities to far-side of crosswalk. Close driveway for additional space. Add Braille signage and upgrade crossing with pedestrian refuge and a pedestrian signal.
Image Credit: Google Maps		

# Figure A- 10 Stockton Blvd & 11th Ave

	14 <sup>th</sup> Ave Northbound	14 <sup>th</sup> Ave Southbound
Stop ID	1899	1843
Daily Ridership	Boarding: 26 Alighting: 11 Total: 37	Boarding: 8 Alighting: 16 Total: 24
Cost	Tier 1: \$300 Tier 2: \$206,000	Tier 1: \$300 Tier 2: \$87,500
Key Considerations (ADA, ROW)	<ul> <li>Landing Area and Curb Ramp Accessible</li> <li>Tier 1 and Tier 2: 0' ROW Required</li> </ul>	<ul> <li>Landing Area and Curb Ramp Accessible</li> <li>Tier 1: 0' ROW Required</li> <li>Tier 2: 8' ROW Required</li> </ul>
Proposed Improvements	<b>Tier 1:</b> Add Braille signage. <b>Tier 2:</b> Close driveway closest to intersection to provide pedestrian crossing on north leg of intersection and add Braille signage.	<b>Tier 1:</b> Add Braille signage. <b>Tier 2:</b> Relocate stop to far-side 14 <sup>th</sup> Ave. Relocate existing shelter and trash receptacle to new location. Add Braille signage.
Image Credit: Google Maps		

# Figure A- 11 Stockton Blvd & 14th Ave

Figure A- 12 Stockton Blvd & 15th Ave

	15 <sup>th</sup> Ave Southbound
Stop ID	1844
Daily Ridership	Boarding: 5 Alighting: 11 Total: 16
Cost	Tier 1: \$300 Tier 2: \$0
Key Considerations (ADA, ROW)	<ul><li>No landing area</li><li>Tier 1 and Tier 2: 0' ROW Required</li></ul>
Proposed Improvements	<b>Tier 1:</b> Remove bus stop. <b>Tier 2:</b> Consolidate 14 <sup>th</sup> Ave SB and 15 <sup>th</sup> Ave SB stops by relocating these stops to one stop on far-side of 14 <sup>th</sup> Ave.
Image Credit: Google Maps	

	San Francisco Blvd Northbound	17 <sup>th</sup> Ave Southbound
Stop ID	1898	1845
Daily Ridership	Boarding: 30 Alighting: 11 Total: 41	Boarding: 10 Alighting: 21 Total: 31
Cost	Tier 1: \$300 Tier 2: \$1,424,700	Tier 1: \$300 Tier 2: \$171,500
Key Considerations (ADA, ROW)	<ul> <li>Landing Area and Curb Ramp Accessible</li> <li>Tier 1 and Tier 2: 0' ROW Required</li> </ul>	<ul> <li>Landing Area and Curb Ramp Accessible</li> <li>Tier 1: 0' ROW Required</li> <li>Tier 2: 13' ROW Required</li> </ul>
Proposed Improvements	<b>Tier 1:</b> Add Braille signage. <b>Tier 2:</b> Remove midblock signal and add full signal with pedestrian crossings at 17 <sup>th</sup> Ave and Stockton Blvd intersection. Add Braille signage.	<ul> <li>Tier 1: Add Braille signage, system and route map.</li> <li>Tier 2: Add Braille signage, system and route map. Remove midblock signal and add full signal with pedestrian crossings at 17<sup>th</sup> Ave and Stockton Blvd intersection.</li> </ul>
Image Credit: Google Maps		

Figure A- 13 Stockton Blvd & San Francisco Blvd NB/17th Ave SB

Figure A- 14 Stockton Blvd & Parker Ave SB

	Northbound	Parker Ave Southbound
Stop ID		1846
Daily Ridership		Boarding: 11 Alighting: 10 Total: 21
Cost		Tier 1: \$300 Tier 2: \$300
Key Considerations (ADA, ROW)		<ul><li>No landing area</li><li>Tier 1 and Tier 2: 0' ROW Required</li></ul>
Proposed Improvements		Tier 1: Remove bus stop. Tier 2: Remove bus stop.
Image Credit: Google Maps		

	20th Ave Northbound	Roosevelt Ave Southbound
Stop ID	1896	1847
Daily Ridership	Boarding: 10 Alighting: 11 Total: 21	Boarding: 4 Alighting: 7 Total: 11
Cost	Tier 1: \$208,800 Tier 2: \$1,179,800	Tier 1: \$99,500 Tier 2: \$209,200
Key Considerations (ADA, ROW)	<ul><li>No landing area</li><li>Tier 1 and Tier 2: 0' ROW Required</li></ul>	<ul><li>No landing area</li><li>Tier 1 and Tier 2: 10' ROW required</li></ul>
Proposed Improvements	<ul> <li>Tier 1: Create a formal station area by widening sidewalk up to curb to accommodate accessible landing area, shelter with bench, Braille signage, and route map.</li> <li>Tier 2: Maintain Tier 1 improvements. Create cycle track stop, midblock crossing, including pedestrian refuge and a pedestrian signal.</li> </ul>	<ul> <li>Tier 1: Relocate stop to far-side of Roosevelt Ave. Add shelter with bench, Braille signage, and route map.</li> <li>Tier 2: Tier 1 with cycle track stop, midblock crossing, including two new curb ramps, pedestrian refuge, and a pedestrian signal.</li> </ul>
Image Credit: Google Maps		

# Figure A- 15 Stockton Blvd & 20th Ave NB/ Roosevelt Ave SB

	21st Ave Northbound	21st Ave Southbound
Stop ID	1895	1848
Daily Ridership	Boarding: 34 Alighting: 18 Total: 54	Boarding: 15 Alighting: 27 Total: 42
Cost	Tier 1: \$100,200 Tier 2: \$389,900	Tier 1: \$300 Tier 2: \$224,700
Key Considerations (ADA, ROW)	<ul> <li>Landing Area and Curb Ramp Accessible</li> <li>Tier 1: 13.5' ROW Required</li> <li>Tier 2: 6' ROW Required</li> </ul>	<ul> <li>Landing Area and Curb Ramp Accessible</li> <li>Tier 1 and Tier 2: 0' ROW Required</li> </ul>
Proposed Improvements	<ul> <li>Tier 1: Add RTIS, Braille signage, and pedestrian scale lighting.</li> <li>Tier 2: Create transit island, routing bike lane behind bus stop. Relocate existing amenities and add pedestrian scale lighting.</li> </ul>	<ul> <li>Tier 1: Add Braille signage, system and route maps.</li> <li>Tier 2: Create dedicated bike lane with shared cycle track stop. Add Braille signage, system and route maps.</li> </ul>
Image Credit: Google Maps		

# Figure A- 16 Stockton Blvd & 21st Ave

	Lawrence Dr Northbound	Lawrence Dr Southbound
Stop ID	1894	1849
Daily Ridership	Boarding: 38 Alighting: 12 Total: 50	Boarding: 13 Alighting: 30 Total: 43
Cost	Tier 1: \$143,800 Tier 2: \$232,400	Tier 1: \$158,600 Tier 2: \$228,500
Key Considerations (ADA, ROW)	<ul><li>No Landing Area</li><li>Tier 1: 0' ROW Required</li><li>Tier 2: 3' ROW Required</li></ul>	<ul><li>No Landing Area</li><li>Tier 1 and Tier 2: 0' ROW Required</li></ul>
Proposed Improvements	<ul> <li>Tier 1: Add RTIS, pedestrian scale lighting and Braille signage.</li> <li>Tier 2: Create shared cycle track and widen sidewalk into existing landscaping and parking lot to accommodate more pedestrian waiting space, RTIS, pedestrian scale lighting, and Braille signage.</li> </ul>	<ul> <li>Tier 1: Widen sidewalk into the existing landscaping to accommodate station platform with accessible landing area, shelter with bench, pedestrian scale lighting, trash receptacle, and Braille signage.</li> <li>Tier 2: Create shared cycle track stop and widen station area along back the of sidewalk to accommodate accessible landing area, shelter with bench, pedestrian scale lighting, trash receptacle, and Braille signage.</li> </ul>
Image Credit: Google Maps		

# Figure A- 17 Stockton Blvd & Lawrence Dr

	Fruitridge Rd (Plaza) Northbound	Fruitridge Rd (Plaza) Southbound
Stop ID	1893	1850
Daily Ridership	Boarding: 50 Alighting: 14 Total: 64	Boarding: 25 Alighting: 78 Total: 103
Cost	Tier 1: \$170,600 Tier 2: \$272,700	Tier 1: \$164,700 Tier 2: \$798,000
Key Considerations (ADA, ROW)	<ul><li>No Landing Area</li><li>Tier 1 and Tier 2: 0' ROW Required</li></ul>	<ul><li>No Landing Area</li><li>Tier 1 and Tier 2: 4' ROW Required</li></ul>
Proposed Improvements	<b>Tier 1:</b> Extend station platform along back of sidewalk to accommodate shelter with bench, RTIS, trash receptacle, system and route maps, Braille signage, and pedestrian scale lighting. <b>Tier 2:</b> Maintain Tier 1 improvements. Create a shared cycle track stop.	<ul> <li>Tier 1: Extend station platform along back of sidewalk to accommodate shelter with bench, RTIS, trash receptacle system and route maps, Braille signage, and pedestrian scale lighting.</li> <li>Tier 2: Create a transit island routing bike lane behind bus stop. Add shelter with bench, RTIS, trash receptacle system and route maps, Braille signage, and pedestrian scale lighting. Straighten midblock crossing, add a pedestrian refuge and two new curb ramps.</li> </ul>
Image Credit: Google Maps		

## Figure A- 18 Stockton Blvd and Fruitridge Rd (Plaza)

	Fruitridge Rd Northbound	Fruitridge Rd Southbound
Stop ID	1892	1851
Daily Ridership	Boarding: 76 Alighting: 42 Total: 118	Boarding: 53 Alighting: 49 Total: 102
Cost	Tier 1: \$199,100 Tier 2: \$397,400	Tier 1: \$216,700 Tier 2: \$216,700
Key Considerations (ADA, ROW)	<ul> <li>Landing Area Accessible</li> <li>Curb ramps require minor upgrades</li> <li>Tier 1: 7' ROW Required</li> <li>Tier 2: 3' ROW Required</li> </ul>	<ul> <li>Landing Area accessible</li> <li>Curb ramps require minor upgrades</li> <li>Tier 1 and Tier 2: 4' ROW Required</li> </ul>
Proposed Improvements	Tier 1: Use existing landscaping space for additional amenities without affecting existing driveways. Add shelter with bench, RTIS, System and route map, Braille signage, and pedestrian scale lighting. Will require additional ROW. Widen station area along the back of the sidewalk at north end of bus stop to minimum 4' width around utility pole. Upgrade 2 curb ramps on NE corner of intersection Tier 2: Close driveway north of bus stop. Create shared cycle track stop. Widen station area along the back of the sidewalk towards the north to create a minimum 4' width around utility pole. Add shelter with bench, RTIS, System and route map, Braille signage, and pedestrian scale lighting. Upgrade 2 curb ramps on NE corner of intersection.	<ul> <li>Tier 1: Add bench, RTIS, Braille signage, and pedestrian scale lighting. Widen station area along the back of the sidewalk towards the south to accommodate a 4' path around existing utility pole. Upgrade 4 curb ramps on NW and SW corner of intersection.</li> <li>Tier 2: Maintain Tier 1 improvements. Due to existing bus pullout being space for operational/layover space, no additional Tier 2 improvements are proposed.</li> </ul>
Image Credit: Google Maps		

## Figure A- 19 Stockton Blvd & Fruitridge Rd

Figure A- 20 Stockton Blvd and Southwest Ave

	Southwest Ave SB
Stop ID	1852
Daily Ridership	Boarding: 6 Alighting: 11 Total: 17
Cost	Tier 1: \$300 Tier 2: N/A
Key Considerations (ADA, ROW)	<ul> <li>Landing Area and Curb Ramp Accessible</li> <li>Tier 1 and Tier 2: 0' ROW Required</li> </ul>
Proposed Improvements	Tier 1: Remove bus stop. Stop will be consolidated with Gordon Dr stop and located at far-side of Jansen Dr. Tier 2: No Tier 2 project identified
Image Credit: Google Maps	

Note: SB Southwest Ave is recommended to be implemented with improvements at Gordon Dr /Jansen Dr as part of the proposed project.

	Jansen Dr NB	Gordon Dr SB
Stop ID	1891	1853
Daily Ridership	Boarding: 17 Alighting: 12 Total: 29	Boarding: 3 Alighting:12 Total: 15
Cost	Tier 1: \$197,600 Tier 2: \$341,000	Tier 1: \$237,700 Tier 2: \$307,400
Key Considerations (ADA, ROW)	<ul><li>No ADA Landing Area</li><li>Tier 1 and Tier 2: 0' ROW Required</li></ul>	<ul> <li>Landing Area and Curb Ramp Accessible</li> <li>Tier 1 and Tier 2: 0' ROW Required</li> </ul>
Proposed Improvements	Tier 1: Extend sidewalk into existing landscaping to accommodate shelter with bench, Braille signage, system and route maps. Remove existing curb ramp in middle of sidewalk since it does not lead to a safe crossing and to create a level boarding and alighting area. Upgrade two curb ramps at NE Corner of Jansen Dr. Tier 2: Create shared cycle track stop with station platform behind sidewalk to accommodate shelter with bench, Braille signage, system and route maps. Upgrade two curb ramps at NE Corner of Jansen Dr.	<ul> <li>Tier 1: Relocate stop to far-side of Jansen Dr. Close driveway of current empty lot to provide space for station footprint.</li> <li>Assuming consolidated stop will bring higher ridership, add shelter with bench, Braille signage, system and route maps.</li> <li>Upgrade existing curb ramp on north leg of Jansen Dr. intersection.</li> <li>Tier 2: Relocate stop to far-side of Jansen Dr. Close driveway of current empty lot to provide space for station footprint.</li> <li>Assuming consolidated stop will bring higher ridership, add shelter with bench, Braille signage, system and route maps.</li> <li>Upgrade existing curb ramp on north leg of Jansen Dr. intersection. Create shared in- lane stop at new location. Add crossing on south leg of Jansen Dr intersection with 2 new curb ramps and 4 upgraded curb ramps.</li> </ul>
<b>Image</b> Credit: Google Maps		YANGS WE REPORTED TO THE REPORT OF THE REPOR

#### Figure A- 21 Stockton Blvd & Jansen Dr NB/Gordon Dr SB

	Northbound	Southbound
Stop ID	1890	1854
Daily Ridership	Boarding: 45 Alighting: 18 Total: 63	Boarding: 21 Alighting: 41 Total: 62
Cost	Tier 1: \$189,700 Tier 2: \$291,900	Tier 1: \$158,200 Tier 2: \$245,300
Key Considerations (ADA, ROW)	<ul><li>No Landing Area</li><li>Tier 1 and Tier 2: 0' ROW Required</li></ul>	<ul> <li>Landing Area and Curb Ramp Accessible</li> <li>Tier 1 and Tier 2: 0' ROW Required</li> </ul>
Proposed Improvements	Tier 1: Extend station area along back of sidewalk to accommodate shelter with bench, RTIS, system and route map, Braille signage, and pedestrian scale lighting. Upgrade 3 curb ramps at NE and SE corner of McMahon. Tier 2: Create shared cycle track stop and maintain all Tier 1 improvements.	<ul> <li>Tier 1: Extend station area along back of sidewalk to accommodate shelter with bench, RTIS, system and route map, Braille signage, and pedestrian scale lighting.</li> <li>Tier 2: Create shared cycle track stop and maintain all Tier 1 improvements.</li> </ul>
Image Credit: Google Maps		

## Figure A- 22 Stockton Blvd & McMahon Dr

	Lemon Hill Ave Northbound	Lemon Hill Ave Southbound
Stop ID	1889	1855
Daily Ridership	Boarding: 62 Alighting: 23 Total: 85	Boarding: 22 Alighting: 37 Total: 59
Cost	Tier 1: \$193,900 Tier 2: \$229,400	Tier 1: \$208,300 Tier 2: \$232,400
Key Considerations (ADA, ROW)	<ul> <li>Landing Area and Curb Ramp Accessible</li> <li>Tier 1 and Tier 2: 0' ROW Required</li> </ul>	<ul> <li>Landing Area and Curb Ramp Accessible</li> <li>Tier 1 and Tier 2: 2' ROW Required</li> </ul>
Proposed Improvements	<ul> <li>Tier 1: Extend station area around back of sidewalk to accommodate RTIS, Braille signage, and pedestrian scale lighting. Upgrade 4 curb ramps at NE and SE corner of intersection.</li> <li>Tier 2: Create shared cycle track stop and route sidewalk behind bus stop. Add RTIS, Braille signage, and pedestrian scale lighting. Upgrade 4 curb ramps at NE and SE corner of intersection.</li> </ul>	<ul> <li>Tier 1: Widen station platform into existing landscaping area to accommodate RTIS, Braille signage, and pedestrian scale lighting. Upgrade 4 curb ramps at NW and SW corner of intersection.</li> <li>Tier 2: Create shared cycle track stop. Widen station platform to accommodate RTIS, Braille signage, and pedestrian scale lighting. Upgrade 4 curb ramps at NW and SW corner of intersection.</li> </ul>
Image Credit: Google Maps		

## Figure A- 23 Stockton Blvd & Lemon Hill Ave

	Dias Ave Northbound	Dias Ave Southbound
Stop ID	1888	1856
Daily Ridership	Boarding: 16 Alighting: 6 Total: 22	Boarding: 4 Alighting: 26 Total: 30
Cost	Tier 1: \$144,300 Tier 2: \$476,000	Tier 1: \$144,600 Tier 2: \$231,700
Key Considerations (ADA, ROW)	<ul><li>No Landing Area</li><li>Tier 1 and Tier 2: 0' ROW Required</li></ul>	<ul><li>No Landing Area</li><li>Tier 1 and Tier 2: 4' ROW Required</li></ul>
Proposed Improvements	<ul> <li>Tier 1: Extend station area along back of sidewalk to accommodate accessible landing area, shelter with bench, Braille signage, and route maps.</li> <li>Tier 2: Create transit island for in-lane stop routing bike lane and sidewalk behind bus stop. Add shelter with bench, Braille signage, and route map.</li> </ul>	<b>Tier 1:</b> Extend station area along back of sidewalk to accommodate accessible landing area, shelter with bench, Braille signage, system and route maps. Tier 2: Create shared cycle track stop. Add shelter with bench, Braille signage, system and route maps.
Image Credit: Google Maps		

## Figure A- 24 Stockton Blvd & Dias Ave

	Eldercreek Rd Northbound	47 <sup>th</sup> Ave Southbound
Stop ID	1887	1857
Daily Ridership	Boarding: 41 Alighting: 17 Total: 58	Boarding: 22 Alighting: 43 Total: 65
Cost	Tier 1: \$171,800 Tier 2: \$259,000	Tier 1: \$163,100 Tier 2: \$250,300
Key Considerations (ADA, ROW)	<ul> <li>No Landing Area</li> <li>Tier 1 and Tier 2: 0' ROW Required</li> </ul>	<ul> <li>No Landing Area</li> <li>Tier 1 and Tier 2: 4' ROW Required</li> <li>Stop is currently located south of Patterson Way, approximately 560' south of Riza Way.</li> </ul>
Proposed Improvements	<ul> <li>Tier 1: Shift stop further north to existing light pole. Remove existing fence to allow for a widened station area at back of sidewalk to accommodate shelter with bench, RTIS, trash receptacle, system and route maps, Braille signage, and pedestrian scale lighting.</li> <li>Tier 2: Create shared cycle track stop. Shift stop further north and widen sidewalk to accommodate shelter with bench, trash receptacle, RTIS, System and Route signage, Braille signage, and pedestrian scale lighting.</li> </ul>	<ul> <li>Tier 1: Widen sidewalk into adjacent property accommodate shelter with bench, RTIS, trash receptacle, system and route maps, Braille signage, and pedestrian scale lighting.</li> <li>Tier 2: Create shared cycle track stop.</li> <li>Widen sidewalk into adjacent property to accommodate shelter with bench, trash receptacle, RTIS, System and Route signage, Braille signage, and pedestrian scale lighting.</li> </ul>
Image Credit: Google Maps		

## Figure A- 25 Stockton Blvd & Eldercreek Rd/47th Ave

Figure A- 26 Stockton Blvd & 48th Ave

	Northbound	48 <sup>th</sup> Ave Southbound
Stop ID		1858
Daily Ridership		Boarding: 6 Alighting: 10 Total: 16
Cost		Tier 1: \$15,300 Tier 2: \$183,700
Key Considerations (ADA, ROW)		<ul> <li>Landing Area and Curb Ramp Accessible</li> <li>Tier 1 and Tier 2: 0' ROW Required</li> </ul>
Proposed Improvements		<b>Tier 1:</b> Relocate sign to face of curb. Add shelter with bench, Braille signage, system and route maps.
		<b>Tier 2:</b> Create shared cycle track stop with bench, Braille signage, and route map.
Image Credit: Google Maps		85

	Fowler Ave Northbound	Riza Ave Southbound
Stop ID	1885	1859
Daily Ridership	Boarding: 35 Alighting: 18 Total: 53	Boarding: 6 Alighting: 34 Total: 40
Cost	Tier 1: \$185,000 Tier 2: \$272,200	Tier 1: \$99,300 Tier 2: \$1,354,400
Key Considerations (ADA, ROW)	<ul> <li>No ADA Landing Area</li> <li>Tier 1 and Tier 2: 6' ROW Required</li> </ul>	<ul> <li>Landing Area and Curb Ramp Accessible</li> <li>Tier 1: 1' ROW Required</li> <li>Tier 2: 0' ROW Required</li> </ul>
Proposed Improvements	Tier 1: Extend station platform to accommodate accessible landing area. Add Shelter with Bench, Trash Receptacle, RTIS, System and route map, Braille Signage, Pedestrian Scale Lighting. Tier 2: Create shared cycle track stop. Extend station platform to accommodate accessible landing area. Add Shelter with Bench, Trash Receptacle, RTIS, System and route map, Braille Signage, Pedestrian Scale Lighting.	<ul> <li>Tier 1: There are no occupied lots abutting this location. Maintain station location. Add Shelter with Bench, Braille signage, system and route map.</li> <li>Tier 2: If new development comes in, there is an opportunity to create transit island routing bike lane behind bus stop. Add shelter with bench, Braille signage, system and route signage. Add midblock crossing with pedestrian refuge and a pedestrian signal.</li> </ul>
<b>Image</b> Credit: Google Maps		

# Figure A- 27 Stockton Blvd & Fowler Ave NB/ Riza Ave SB

	Northbound	Southbound
Stop ID	1884	1860
Daily Ridership	Boarding: 168 Alighting: 85 Total: 252	Boarding: 144 Alighting: 264 Total: 407
Cost	Tier 1: \$307,500 Tier 2: \$554,900	Tier 1: \$187,200 Tier 2: \$457,500
Key Considerations (ADA, ROW)	<ul> <li>Landing Area and Curb Ramp Accessible</li> <li>Tier 1: 8' ROW Required</li> <li>Tier 2: 0' ROW Required</li> </ul>	<ul> <li>No ADA Landing Area</li> <li>Tier 1 and Tier 2: 0' ROW Required</li> </ul>
Proposed Improvements	<ul> <li>Tier 1: Extend station platform along back of sidewalk and create shared cycle track stop. Due to high daily ridership, add two shelters with benches, bench, RTIS, pedestrian scale lighting, system and route maps, and Braille signage.</li> <li>Tier 2: Create transit island routing bike lane behind bus stop. Due to high daily ridership, add two shelters with benches, bench, RTIS, pedestrian scale lighting, system and route maps and Braille signage.</li> </ul>	<ul> <li>Tier 1: Extend station platform at back of sidewalk and create shared in-lane stop. Due to high daily ridership, add two shelters with benches, bench, RTIS, pedestrian scale lighting, system and route maps, and Braille signage.</li> <li>Tier 2: Create transit island routing bike lane behind bus stop. Due to high daily ridership, add two shelters with benches, bench, RTIS, pedestrian scale lighting, system and route maps, and route maps, and two shelters with benches, bench, RTIS, pedestrian scale lighting, system and route maps, Braille signage. Add 2 curb ramps for access to transit island.</li> </ul>
Image Credit: Google Maps		

## Figure A- 28 Stockton Blvd & 65th Ave

	Florin Ave Northbound	Lindale Ave Southbound
Stop ID	1861	2166
Daily Ridership	Boarding: 2 Alighting: 8 Total: 10	Boarding: 17 Alighting: 53 Total: 70
Cost	Tier 1: \$173,600 Tier 2: \$303,500	Tier 1: \$205,100 Tier 2: \$291,500
Key Considerations (ADA, ROW)	<ul><li>No ADA Landing Area</li><li>Tier 1 and Tier 2: 0' ROW Required</li></ul>	<ul> <li>No ADA Landing Area</li> <li>Tier 1 and Tier 2: 4.5' ROW Required</li> </ul>
Proposed Improvements	<ul> <li>Tier 1: Extend station area along back of sidewalk to accommodate landing area, shelter with bench, trash receptacle, Braille signage, system and route maps.</li> <li>Tier 2: Create shared in-lane cycle track stop. Extend station area along back of sidewalk to accommodate landing area, shelter with bench, trash receptacle, Braille signage, system and route maps. Upgrade 3 curb ramps on NW and SW corner of Florin Rd and Stockton Blvd intersection.</li> </ul>	<ul> <li>Tier 1: Extend station area along back of sidewalk to accommodate accessible landing area. Add shelter with bench, RTIS, trash receptacle, Braille signage, system and route map and pedestrian scale lighting.</li> <li>Tier 2: Create shared in-lane cycle track stop. Extend station area along back of sidewalk to accommodate accessible landing area. Add shelter with bench, RTIS, trash receptacle, Braille signage, system and route map and pedestrian scale lighting.</li> </ul>
Image Credit: Google Maps		

# Figure A- 29 Stockton Blvd & Florin Ave NB/ Lindale Ave SB

	Suncountry Ln Northbound	Gerber Rd Southbound
Stop ID	2376	2408
Daily Ridership	Boarding: 5 Alighting: 5 Total: 10	Boarding: 8 Alighting: 4 Total: 12
Cost	Tier 1: \$659,400 Tier 2: \$798,500	Tier 1: \$837,300 Tier 2: \$946,400
Key Considerations (ADA, ROW)	<ul><li>No Landing Area</li><li>Tier 1 and Tier 2: 0' ROW Required</li></ul>	<ul><li>No Landing Area</li><li>Tier 1 and Tier 2: 0' ROW Required</li></ul>
Proposed Improvements	Must: Add/widen sidewalk in missing section between Gerber Rd and NB Suncountry Ln bus stop. Upgrade 2 existing curb ramps on NE and SE corners of Gerber Rd and Stockton Blvd. Tier 1: Add Braille signage. No additional changes to existing bus stop Tier 2: Create shared cycle track stop. Add Braille signage and crossing on north leg of Massie Ct with two new curb ramps.	<ul> <li>Must: Add/widen sidewalk in missing section between Gerber Rd and SB Gerber Rd bus stop. Upgrade 1 existing curb ramp on NW corner of Gerber Rd and Stockton Blvd intersection and add 1 curb ramp to SW corner of intersection.</li> <li>Tier 1: Relocate existing stop to near-side of Whispering Palms Ln. Close or relocate existing driveway to accommodate station platform with accessible landing area, bench, Braille signage, system and route maps. At Gerber Rd intersection.</li> <li>Tier 2: Create a shared cycle track stop. Relocate existing stop to near-side of Whispering Palms Ln. Close or relocate a shared cycle track stop. Relocate existing stop to near-side of Whispering Palms Ln. Close or relocate existing driveway to accommodate station platform with accessible landing area, bench, Braille signage, system and route maps. At Gerber Rd intersection.</li> </ul>
<b>Image</b> Credit: Google Maps		

#### Figure A- 30 Stockton Blvd & Gerber Rd SB/ Suncountry Ln NB

	Northbound	Massie Ct 1 Southbound
Stop ID		2409
Daily Ridership		Boarding: 2 Alighting: 6 Total: 8
Cost		Tier 1: \$127,100 Tier 2: \$236,700
Key Considerations (ADA, ROW)		<ul><li>No Landing Area</li><li>Tier 1 and Tier 2: 0' ROW Required</li></ul>
Proposed Improvements		<b>Tier 1:</b> Extend station area at back of sidewalk to accommodate accessible landing area, bench, Braille signage, system and route maps.
		<b>Tier 2:</b> Create a shared cycle track stop with and extend station area at back of sidewalk at bus stop to accommodate accessible landing area, bench, Braille signage, system and route maps.
Image Credit: Google Maps		

Figure A- 31 Stockton Blvd & Massie Ct 1 (SB)

	Elsie Ave Northbound	Massie Ct 2 Southbound
Stop ID	2375	2410
Daily Ridership	Boarding: 36 Alighting: 19 Total: 55	Boarding: 15 Alighting: 15 Total: 30
Cost	Tier 1: \$156,500 Tier 2: \$264,700	Tier 1: \$155,000 Tier 2: \$1,150,425
Key Considerations (ADA, ROW)	<ul> <li>Landing Area and Curb Ramp Accessible</li> <li>Tier 1 and Tier 2: 7.5' ROW Required</li> </ul>	<ul><li>No Landing Area</li><li>Tier 1 and Tier 2: 0' ROW Required</li></ul>
Proposed Improvements	<ul> <li>Tier 1: Add shelter with bench, trash receptacle, RTIS, system and route maps, pedestrian scale lighting and Braille signage. Upgrade curb ramp on NE corner of Elsie Ave and Stockton Blvd.</li> <li>Tier 2: Create shared in-lane cycle track stop. Add shelter with bench, trash receptacle, RTIS, system and route maps, pedestrian scale lighting and Braille signage. Upgrade curb ramp on NE corner of Elsie Ave and Stockton Blvd.</li> </ul>	<ul> <li>Tier 1: Relocate stop to far-side Massie Ct. Extend station area at back of sidewalk to accommodate station footprint, shelter with bench, Braille signage, system and route maps.</li> <li>Tier 2: Maintain existing station location. Extend station area at back of sidewalk to accommodate accessible landing area, shelter with bench, Braille signage, system and route maps and create shared cycle track stop. Add a pedestrian signal with pedestrian refuge and two new curb ramps south of the bus stop.</li> </ul>
Image Credit: Google Maps		

#### Figure A- 32 Stockton Blvd & Elsie Ave NB/ Massie Ct 2 SB