

NORTHGATE BOULEVARD TRANSPORTATION PLAN

Public Review Draft | January 2023

City of
SACRAMENTO



ACKNOWLEDGMENTS

City of Sacramento

City Staff

Leslie Mancebo, Project Manager
Jennifer Donlon Wyant, Transportation Planning Manager

Project Development Team

Matthew Ilagan, Assistant Engineer
John Matoba, Electrical Engineer
Cecilyn Foote, Associate Civil Engineer
Alex Goloveshkin, Associate Civil Engineer
James Sellards, Senior Design Technician
William Shunk, Senior Engineer
James Kragh, Associate Civil Engineer

Neighborhood Associations

Gardenland Northgate Neighborhood Association
South Natomas United Neighborhood Association

Project Consultants

MIG

Mukul Malhotra, Principal
Rishi Dhody, Project Manager
Dan Amsden, Project Director
Jose Leal, Senior Landscape Designer
Phoenix Alfaro, Urban Planner
Ellie Gertler, Urban Planner
Fernanda Suarez, Urban Planner
Marco Hinojosa, Urban Planner
Saul Vazquez, Urban Planner
Ryan Mottau, Outreach Manager
Farah Tekbali, Project Associate

Nelson/Nygaard

Stephanie Wright, Transit Planner
Tracy McMillan, Senior Associate
Michael Riebe, Traffic Modeling
Monique Ho, Associate
Alejo Alvarado, Associate

DIYSL

Isaac Gonzalez, Public Engagement

Stanford Settlement

Julie Rhoten, Executive Director
Megumi Storms, Assistant Director

Greater Sacramento Urban League, Sacramento

DeNelle Ellison, Vice President, Marketing
Lisa N. Reece, Executive Assistant

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1. INTRODUCTION

IN THIS CHAPTER

- PROJECT BACKGROUND
- SAFETY
- PURPOSE AND GOALS
- RECENT AND CONCURRENT PLANNING PROCESSES
- COMMUNITY PLANNING PROCESS
- COMMUNITY ENGAGEMENT TOOLS
- PROJECT SCHEDULE
- DOCUMENT REVIEW

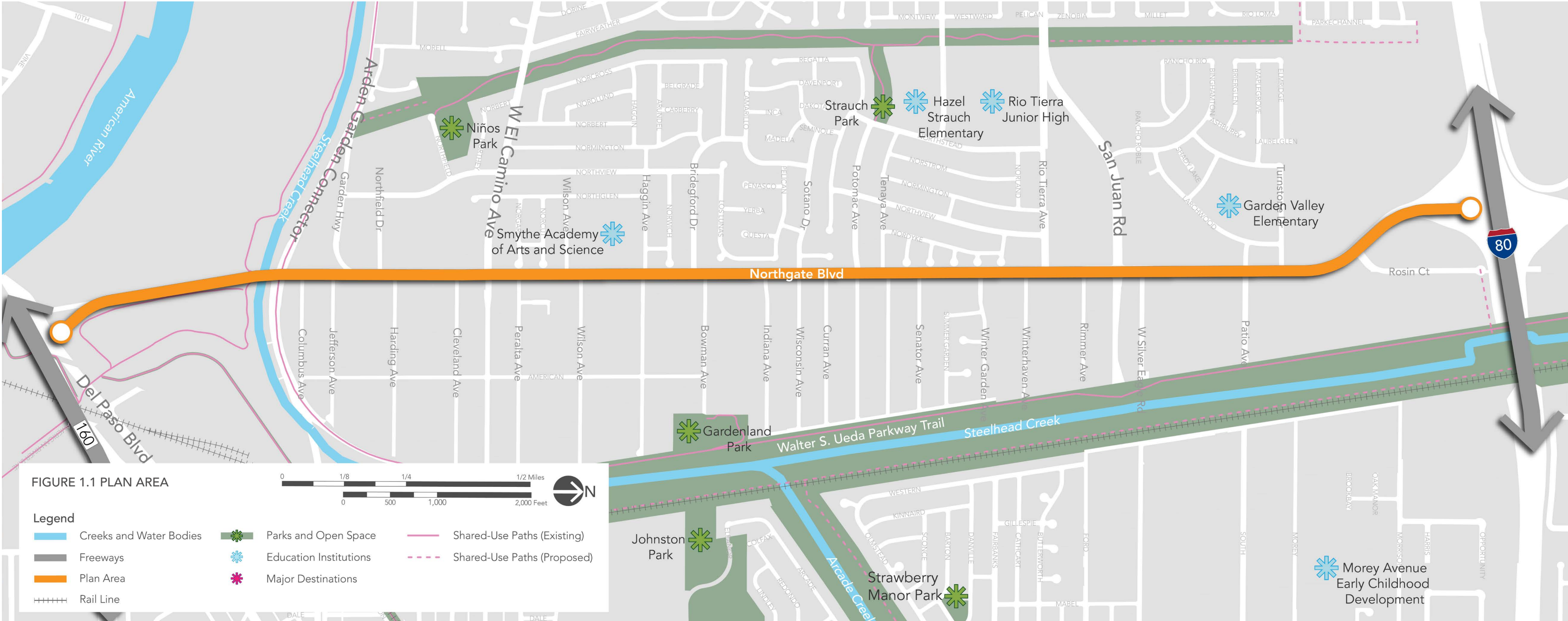
PROJECT BACKGROUND

The **Northgate Boulevard Transportation Plan** was initiated in response to community interest in improving transportation, safety, and mobility on Northgate Boulevard. Identified as a top 10 corridor in the Vision Zero High Injury Network (HIN), Northgate Boulevard is a commercial corridor with frequent crash patterns identified in the Vision Zero Action Plan. The corridor provides access to a mix of retail, restaurant, and community services and has a rich diversity of Hispanic residents and businesses. Multiple community groups have self-organized to give voice to the transportation, mobility, and safety concerns of the corridor that have culminated the new designs, strategies, and concepts included in this plan. All modes of transportation receive attention in the Plan, which address improving active transportation, maximizing transit usage, movement of goods and services, and the need for personal vehicles.

Plan Area

The Plan Area on Northgate Boulevard is from I-80 in the North to Del Paso Boulevard in the South. The Plan Area is surrounded by a mix of neighborhoods with a variety of housing types, vibrant and diverse businesses, and a range of community services, as shown in **Figure 1.1**. In addition, the Plan Area includes several schools and connects to various parks, open spaces, and trails including Gardenland Park and Walter S. Ueda Parkway Trail.

(Note: due to the length of the Plan Area and the need to clearly present information, all figures in this plan orient Northgate Boulevard so north is facing to the right of the page, except for Figure 1.2)



SAFETY

The priority objectives of this project are to improve transportation **safety** and **mobility** on Northgate Boulevard for all users of the street.

In 2018, the City of Sacramento developed a Vision Zero Action Plan to prioritize safety improvements and make progress toward eliminating all traffic fatalities. Northgate Boulevard is one of the 10 corridors in Sacramento with the highest number of fatal and severe injuries involving people walking, bicycling, and driving (see **Figure 1.2**).

Northgate Boulevard also intersects with other High Injury Network (HIN) corridors. Between January 2016 and December 2020, 261 crashes and **17 killed or seriously injured (KSI) crashes** occurred in the Plan Area. There was a **slight decrease** in injury crashes between 2016 and 2017 yet crashes **gradually increased** again between 2017 and 2020.

Of all crashes along Northgate Boulevard, the proportion of vehicle-only crashes has **steadily increased** since 2017. The proportion of crashes involving people walking also **increased** during this time period from 7% in 2017 to 27% in 2019. The proportion of crashes involving people

driving has **steadily increased** since 2017. The proportion of crashes involving people walking also **increased** during this time period from 7% in 2017 to 27% in 2019. Crashes involving people walking **dropped** to 20% in 2020. For more details on crash data, reference **Appendix A**.

The Vision Zero Action Plan identified a disproportionate number of crashes occurring on commercial corridors, and includes a crash typology and a series of countermeasures to reduce those crashes. Countermeasures tackle crash reduction from multiple angles: street design, enforcement, and education.

The Vision Zero Action Plan outlines short-term and long-term actions to reach desired Vision Zero outcomes including the following strategies:

- » Incorporate Vision Zero safety principles into all future City plans and design documents.
- » Provide ongoing safety-related training and support to City staff responsible for street design and enforcement activities.
- » Continue building the enhanced bikeway network consistent with the Bicycle Master Plan.

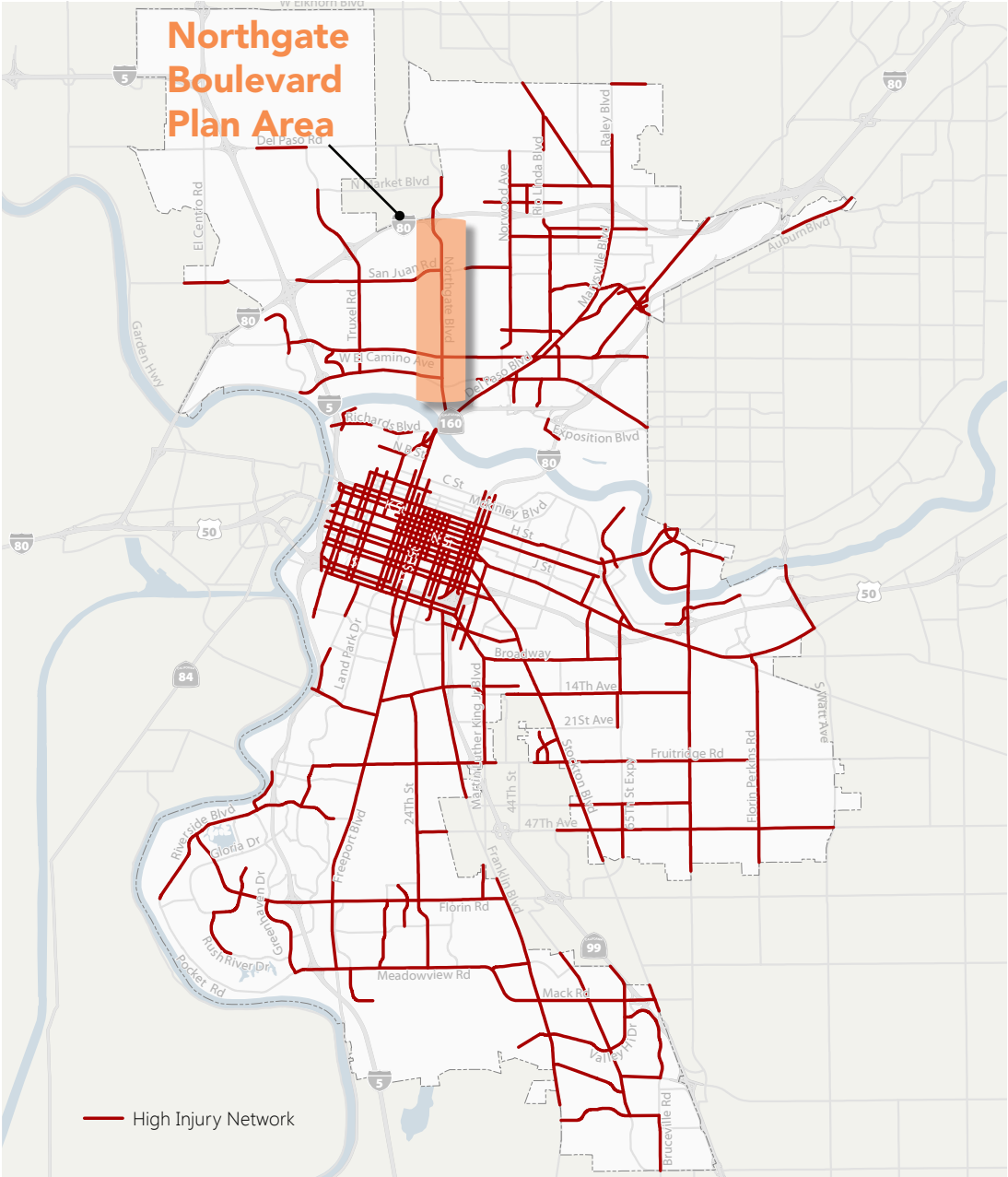


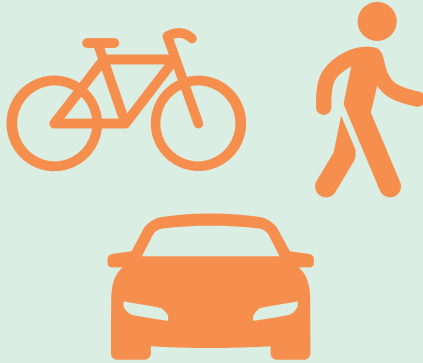
FIGURE 1.2 HIGH INJURY NETWORK AS IDENTIFIED IN THE VISION ZERO ACTION PLAN

PURPOSE AND GOALS

The City launched a comprehensive, community-focused planning effort in early 2021. This planning effort has resulted in a series of community-supported conceptual street designs for Northgate Boulevard. Each design is organized by planning level design concepts and cost estimates. This will help the City and partner agencies pursue funding to implement street improvements. To achieve these outcomes, the City has identified the following five overarching project goals shown on the right.



Goal A
Address safety concerns for all users through the design of the corridor



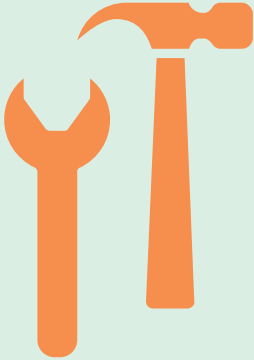
Goal B
Transform Northgate Boulevard into a multimodal corridor that



Goal C
Integrate community identity through this



Goal D
Coordinate meaningful equitable community and stakeholder engagement



Goal F
Build upon previous and concurrent studies and initiatives

RECENT AND CONCURRENT PLANNING PROCESSES

Numerous previous and current planning projects are informing the Northgate Boulevard Transportation Plan. These efforts include a combination of citywide planning efforts, community efforts, and corridor plans (for a more comprehensive list of plans, see **Appendix A**):

- » **Sacramento General Plan Update 2040:** In 2019, the City initiated an update to the General Plan. A Draft Land Use Map, Proposed Roadway Changes, and 10 Key Strategies were approved by City Council in January 2021. Plan production is currently underway.
- » **Gardenland Northgate Strategic Neighborhood Action Plan, 2003:** The Strategic Neighborhood Action Plan (SNAP) is a planning and decision-making guide informed by neighborhood priorities to uplift place and community health. The Plan is short-range (three-five years) and identifies actions to achieve established priorities.
- » **Northgate Streetscape Master Plan, 2006:** The Northgate Boulevard Streetscape Master Plan was created in response to needs expressed by the community through the Northgate SNAP. The Plan Area spans from Rosin Court to Arden Garden Connector.

COMMUNITY PLANNING
PROCESS

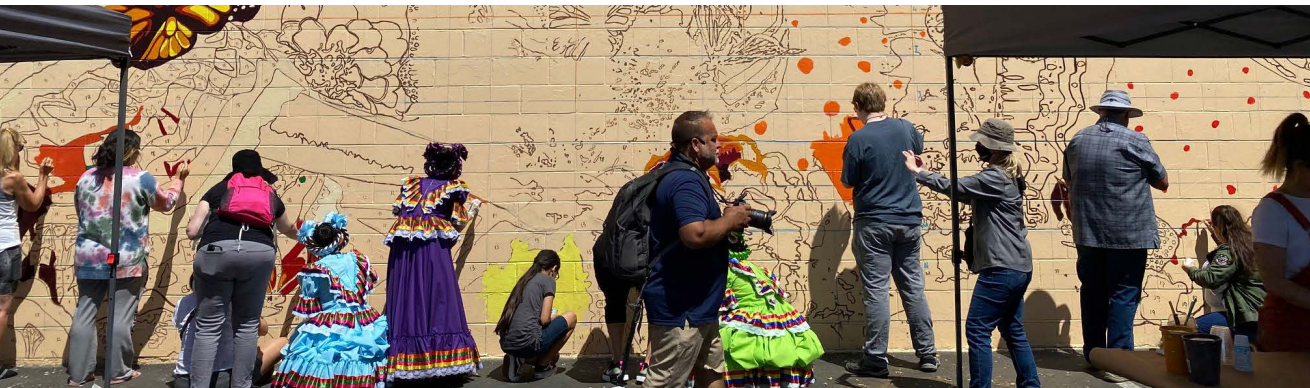
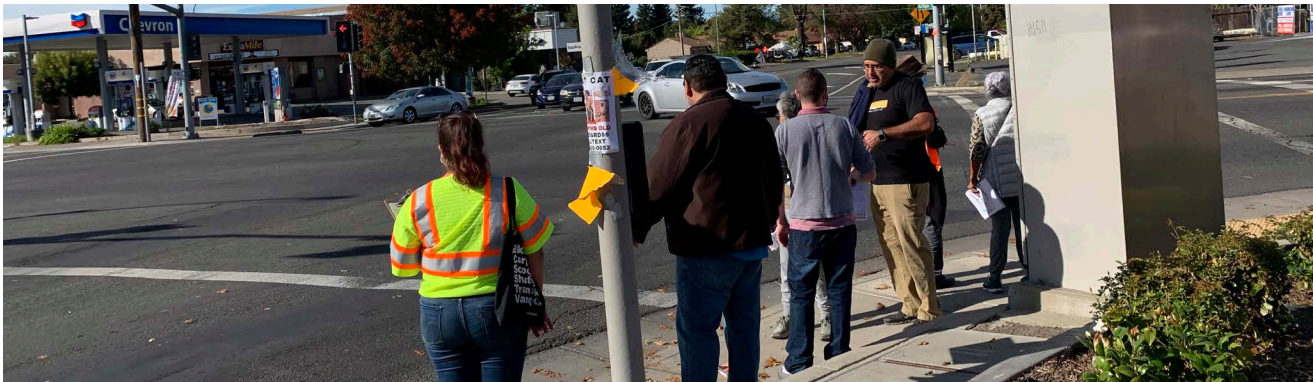
The Northgate Boulevard Transportation Plan underwent an extensive community engagement process, which included a variety of engagement methods and activities (see Community Engagement Methods section) that encouraged City residents who live, work, or visit Northgate Boulevard to actively participate in the planning process.

Community engagement for the project was designed to:

- » Listen to and understand community feedback and needs,
- » Create community awareness of the project,
- » Utilize a variety of tools to record community needs,
- » Gather input reflecting the diversity of the project area population,
- » Result in design recommendations that reflect community priorities, preferences and value, and
- » Result in community buy-in to support future plan adoptions and implementations.

The project’s three milestones were:

- » **Milestone #1 Community Vision:** Understand existing conditions and develop community vision.
- » **Milestone #2 Emerging Design Concepts:** Develop design concepts based on community feedback.
- » **Milestone #3 Public Draft Design Concepts:** Confirm design concepts based on community feedback.



The community outreach strategy included a variety of engagement tools and activities that encouraged City of Sacramento residents who live, work, or visit Northgate Boulevard to actively participate in the planning process.

COMMUNITY ENGAGEMENT METHODS

The City used a variety of engagement methods to share information and solicit meaningful feedback from the community. This ensured community members were able to conveniently and authentically contribute to the Plan.

Project Webpage

The City launched a project webpage that included all project information and electronic materials such as flyers, maps, and surveys.

Flyers

Multi-lingual (English and Spanish) electronic and paper flyers were developed with hyperlinks to the project webpage. Electronic flyers were posted on the project webpage and shared by neighborhood associations, schools, and other community partners. Paper flyers were placed at key destinations such as busy retail complexes and schools in the project area, and shared directly in person with business owners.

Community Walking Workshop

The project team hosted a 1-mile community walking workshop between Jefferson Avenue to Haggin Avenue. This workshop provided an opportunity to discuss key issues and opportunities. See **Appendix C** for Walking Workshop summary.

Business Owner Engagement

Business owners in and around the project area were identified to solicit their feedback and participation in the outreach campaign. This included meeting in person with business owners along the Plan Area and encouraging them to participate in engagement and outreach activities to get their feedback on the corridor. This engagement was done in English and Spanish.

Interactive Surveys

A map-based community survey was administered to gather feedback on potential road design changes for the first two milestones of the project. The survey asked for input about general areas in need of attention, as well as the preferred palette of improvements for different modes of travel. The survey was conducted in English and Spanish. It was also available online and in print.

Virtual Community Workshops

Virtual community workshops were held for all three phases of the project. For the **Community Vision** workshop, the purpose was to develop an overall vision for the corridor and gave an opportunity for the project team to brief the public on the project and to identify key improvements that would help develop concepts for different corridor segments. Key findings from the Existing Conditions Report were

also shared in this workshop. For the **Emerging Design Concepts** workshop the purpose was to allow people to become familiar with the emerging design framework and provide feedback on specific roadway designs. Lastly, the **Public Draft Design Concepts** workshop allowed people to affirm the designs and provide final input. Workshop summaries were prepared after each workshop to provide an overview of the comments and questions received from the public. (See **Appendix B**).

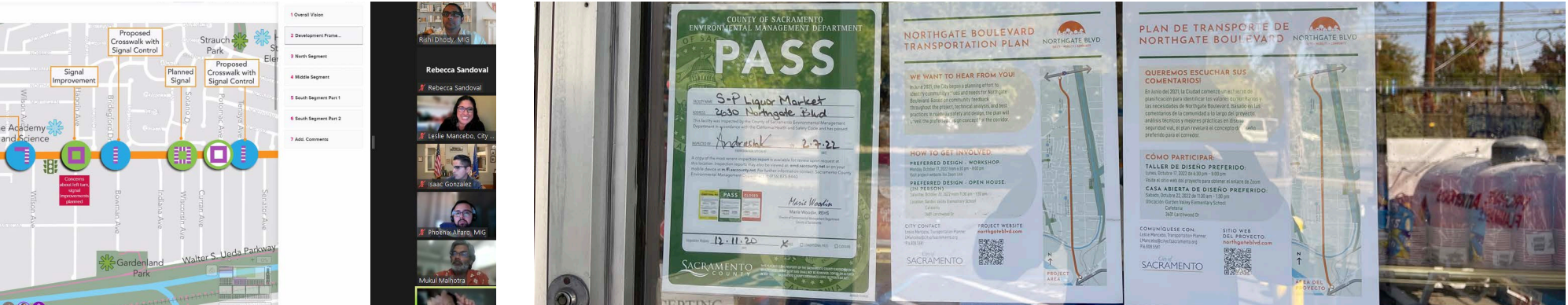
In addition to community engagement, the project team met with the Technical Advisory Group (TAG) at all key milestones of the project. The TAG consisted of key representatives of different City departments including transportation design review, city design, traffic operations.

Open House

The project team held an in-person Open House that provided an opportunity for the community to review and confirm the preferred design concepts. See **Appendix B** for Open House summary.

Active Transportation Commission

The project team met with the Active Transportation Commission at all three milestones of the project to share community feedback, design concepts, and preferred concepts.

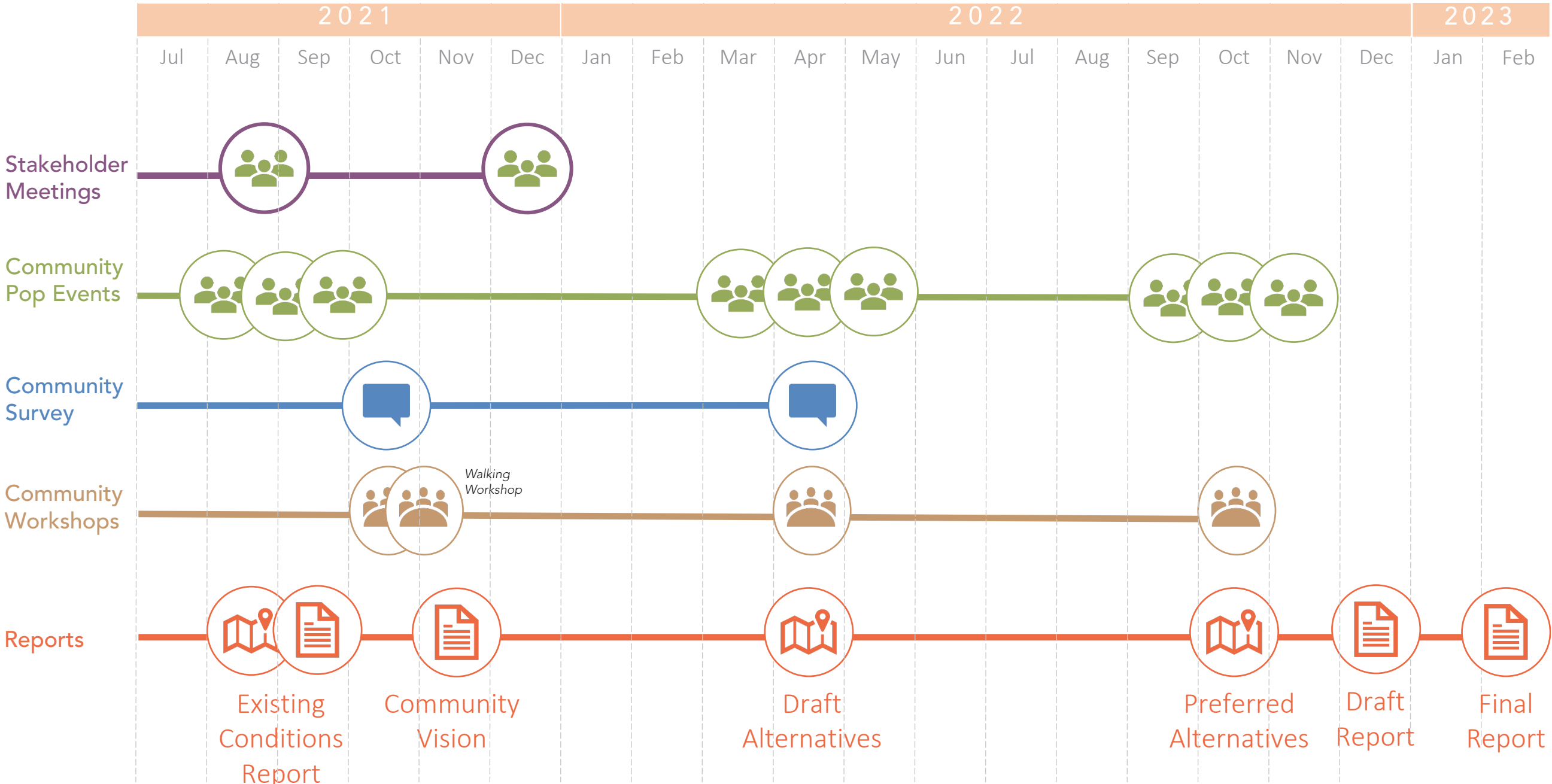


Engagement activities included a community walking workshop, interactive surveys, and community workshops and an open house

PROJECT SCHEDULE

The Northgate Boulevard Transportation Plan was prepared over approximately one and a half years. Since this was a community-driven project, the City developed an approach to ensure the local community was heavily involved and had opportunities to provide input during all stages of the project. The graphic to the right provides an overview of the project schedule. Major stages included:

- 1. Project Kick-Off, July 2021
- 2. Milestone #1 Community Vision, July 2021 - October 2021
- 3. Milestone #2 Emerging Design Concepts, March 2022 - May 2022
- 4. Milestone #3 Public Draft Design Concepts, September 2022 - November 2023
- 5. Public Review Draft, December 2022
- 6. Final Report, February 2023





2

2. EXISTING CONDITIONS AND OPPORTUNITIES

IN THIS CHAPTER

COMMUNITY DESTINATIONS

WELL ESTABLISHED
NEIGHBORHOODS

COMMUNITY INVESTMENTS

FUTURE DEVELOPMENT PROJECTS

DISTINCT CORRIDOR SEGMENTS

SAFETY

DRIVING

WALKING

BICYCLING

TRANSIT

Northgate Boulevard is a five-lane, north-south oriented roadway that serves many different land uses and modes of transportation. Given the variety of development, the curb-to-curb width, unprotected and disconnected bikeways, and narrow and obstructed sidewalks, mobility for people walking, biking, and using wheelchairs is compromised along Northgate Boulevard. However, the right-of-way, the roadway and sidewalk space owned and managed by the City, and range of uses provide an important opportunity to reconfigure the street to incorporate safety improvements and create a more enjoyable multi-modal corridor that meets the needs of all mobility users.

A key first step toward identifying potential opportunities for the Plan Area is understanding the existing conditions. The following section summarizes key information and key findings related to the existing physical conditions along the corridor. The project team also prepared a series of technical studies that provide additional detail and information. Following the existing conditions analysis is a summary of emerging opportunities developed from the community outreach process (see **Appendices A through E** for technical data and community input from the various forums).

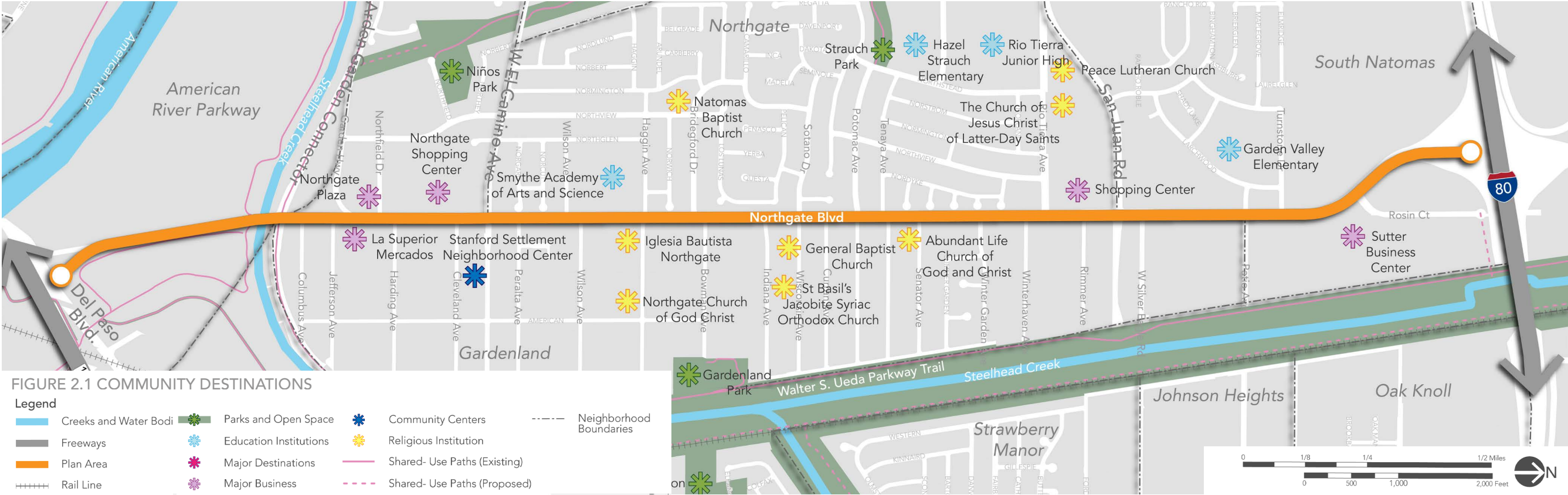
COMMUNITY DESTINATIONS

Many destinations attract people to Northgate Boulevard, as identified on **Figure. 2.1**. This includes key assets that serve many needs for the local and regional community, such as large shopping centers, business parks, public schools, religious establishments, parks, and community open spaces.

Many locally-owned stores and businesses along Northgate have been owned and operated by the same families for generations and are a key part of the corridor’s character. This includes smaller stores, restaurants, auto repair shops, grocery stores, and many other businesses.

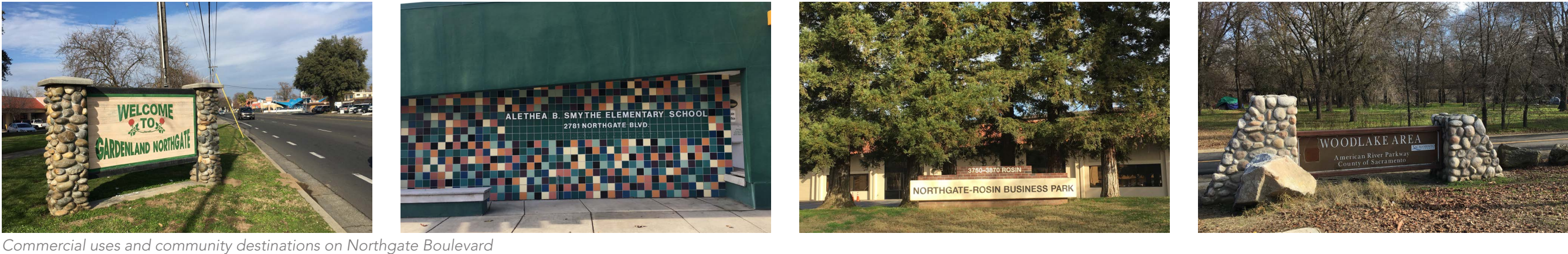
WELL ESTABLISHED NEIGHBORHOODS

Major neighborhoods abutting the corridor include Northgate, South Natomas, Gardenland, and River Gardens, all of which have been around for a number of decades and have longstanding history and intergenerational families. These neighborhoods are close to public parks such as the Niño’s Park, Strauch Park, Gardenland Park, and include a number of schools such as Smythe Academy of Arts and Science Hazel Strauch Elementary, Rio Tierra Junior High, Garden Valley Elementary.





Northgate has a variety of DESTINATIONS that serve a number of WELL ESTABLISHED neighborhoods



COMMUNITY INVESTMENTS

In addition to the physical assets along Northgate Boulevard, there is also significant community investment in the area that have resulted in streetscape enhancements and public art improvements. This Plan will incorporate and build on the work completed by previous efforts.

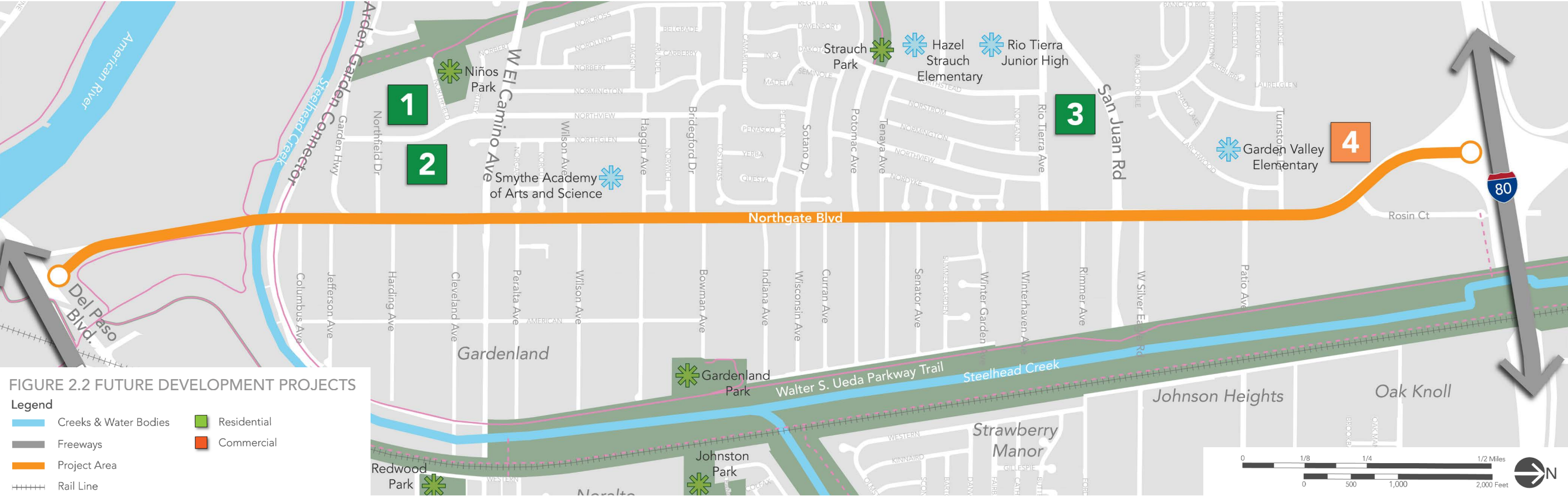
Some on-going improvements which are currently under construction include adding **new signals** at Rio Tierra and Wisconsin, **improving the existing signal** at Haggin Ave, and **creating a community mural** at 2630 Northgate Boulevard. Elected and appointed officials, City staff, and community groups are invested in finding short- and long-term design solutions that meet the needs of the community, provide for multi-modal transportation, and are financially feasible and implementable.

FUTURE DEVELOPMENT PROJECTS

Future developments were also examined as part of understanding the planning context and increased activity and demand for travel to and through Northgate Boulevard (see **Figure 2.2**).

Development permits and types of development as of December 2021 are shown in the map on the right. There will be a total of **160 new residential units** in the Northgate Boulevard area, including a **mix of townhouses, duplexes, single-family, and multifamily residences**.

All planned development will occur on the west side of Northgate Boulevard. Residential sites 1, 2, and 3 will be behind existing retail; creating an opportunity for a walking connection between housing and retail. San Juan Road, along site 3, is also served by a bus route.



- 1** **11-unit townhouses Development**
0.61 acres of vacant land
2300 Northview Dr.
- 2** **82-unit single-family and duplex development**
On vacant 9.17-acre parcel
920 San Juan Rd.

- 3** **67-unit multifamily development**
100% affordable housing on 1.24-acre site
2314 Northview Dr.
- 4** **Sonic Restaurant, Chevron Gas, and KFC Restaurant**
0.72-acre empty lot
3801 Northgate Blvd.



2630 Northgate Boulevard Community Mural



Site of 2314 Northview Drive

160+ 
As of December 2021, 160 NEW RESIDENTIAL UNITS are planned along Northgate

DISTINCT CORRIDOR SEGMENTS

The corridor has three distinct segments based on character and available right-of-way (see **Figure 2.3**):

NORTH SEGMENT

Between I-80 and San Juan Road

This segment has a 90 - 120 foot right-of-way with a curb-to-curb distance of 72-74 feet with four travel lanes (two in either direction), a center turn lane, unprotected bikeways, and mostly connected sidewalks.

Mobility Facilities

- Sidewalks: 5 feet wide
- Bikeways: 6 feet wide
- Transit: Route 113
- Travel Lanes: 13-15 feet wide

MIDDLE SEGMENT

Between Rio Tierra and Arden Garden Connector

The middle segment is the longest, from San Juan to Arden Garden. The right-of-way is 80', with a curb-to-curb distance is 64 feet with two travel lanes in either direction, a center turn lane, unprotected bikeways and sidewalks.

Mobility Facilities

- Sidewalks: 5 feet wide
- Bikeways: 5 feet wide
- Transit: Route 13 and 113
- Travel Lanes: 11 feet wide

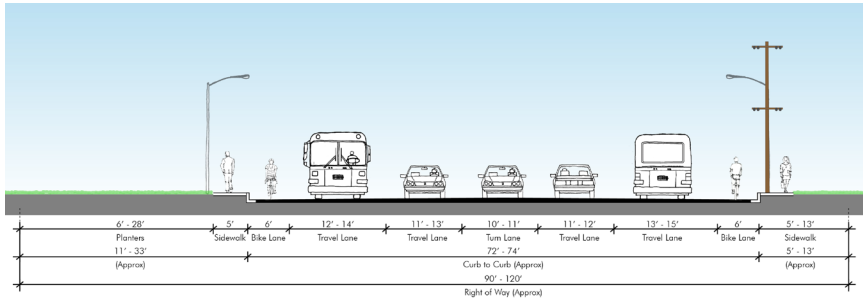
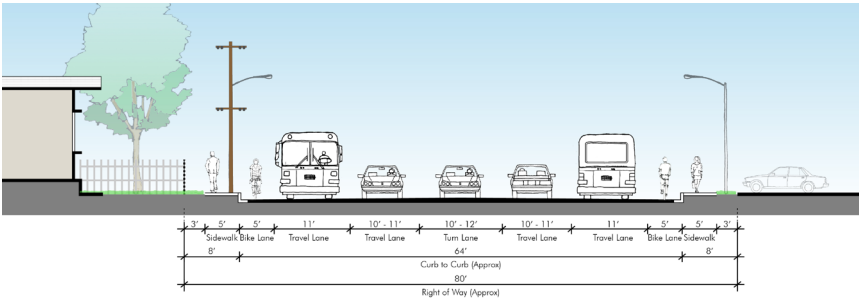
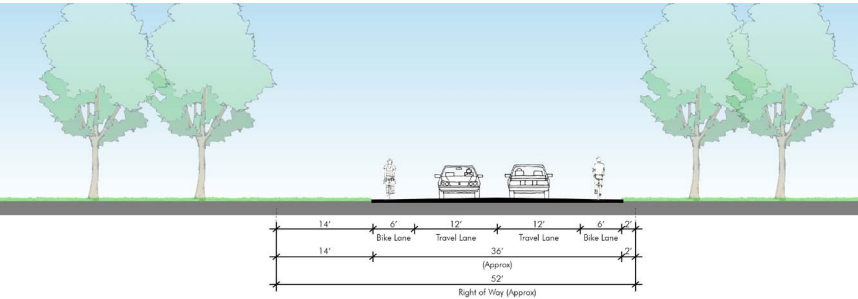
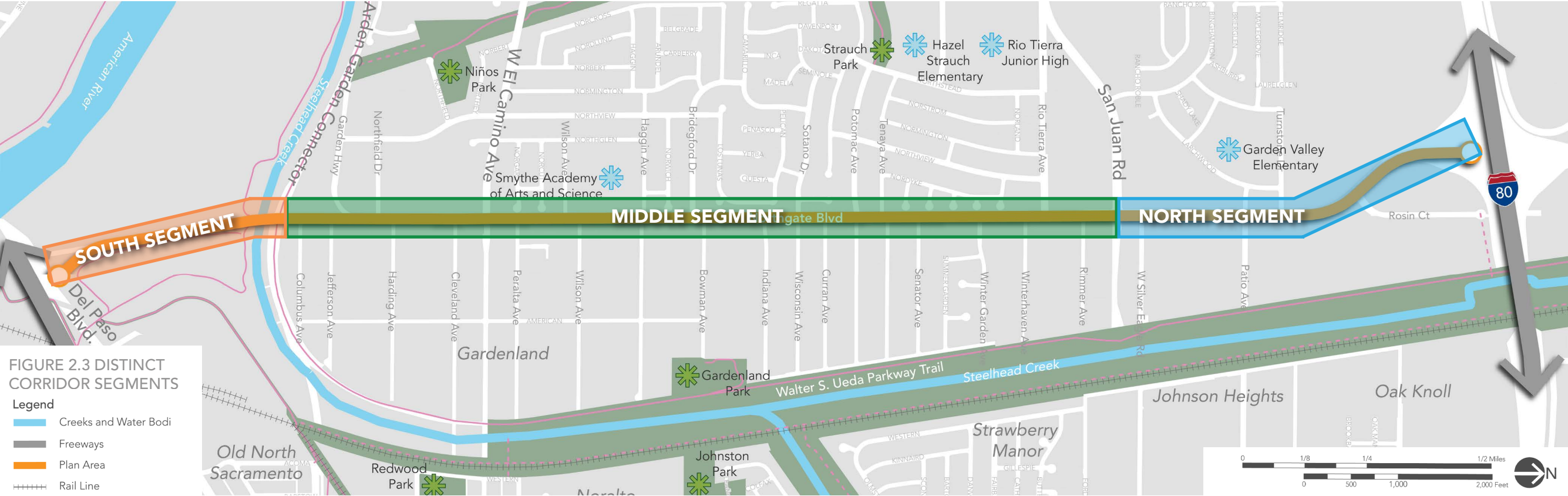
SOUTH SEGMENT

Between Arden Garden Connector and Del Paso Boulevard

The southern segment has a curb-to-curb distance of 52 feet with one travel lane in either direction, unprotected bikeways, and no sidewalks.

Mobility Facilities

- Sidewalks: No
- Bikeways: 6 feet wide
- Transit: No
- Travel Lanes: 12 feet wide



SAFETY

Improving safety is a key goal of this plan. The top five intersections on Northgate Boulevard for all injury crashes between January 2016 and December 2020 were:

- » W El Camino Ave.
- » Arden Garden Connector
- » Jefferson Ave.
- » San Juan Rd.
- » Haggin Ave.
- » Patio Ave

These intersections are listed by the highest density of crashes and noted with orange arrows on **Figure 2.4**.

During this same period, Killed or Seriously Injured (KSI) crashes involving people walking or bicycling occurred at Del Paso Blvd., Arden Garden Connector, Harding Ave., W El Camino Ave., Bridgeford Dr., Winter Garden Ave., Northgate Boulevard (between Rosin and 80), and Northgate Boulevard at the I-80 overpass (noted in blue circles on **Fig. 2.4**). For more safety information, reference **Appendix A**.

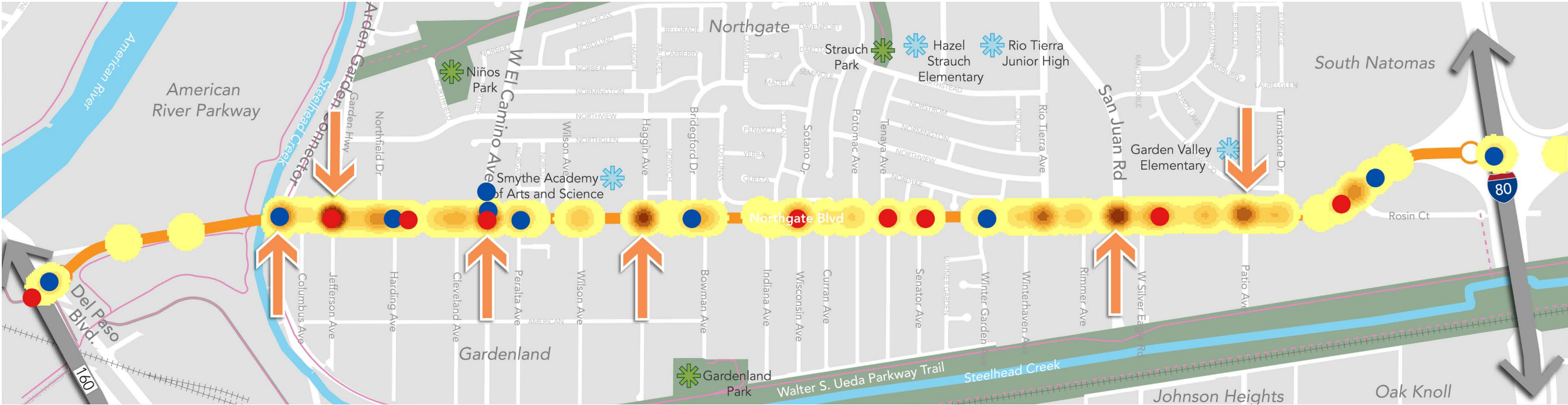




FIGURE 2.4 CRASH HOT SPOTS





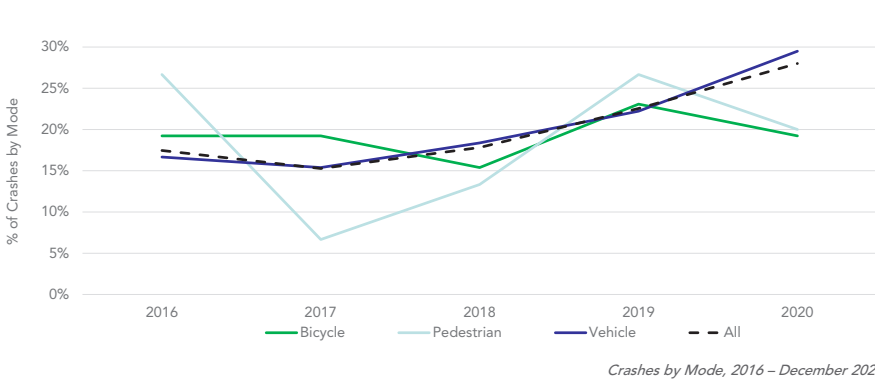
**Ranked
#6
Citywide**

For Corridors with highest number of KSI involving people walking, bicycling, and driving



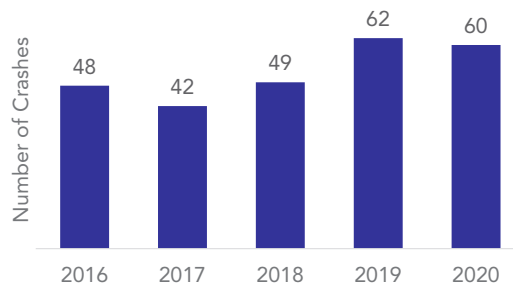
**261
Crashes
& 17 KSI
Crashes**

Between January 2016 and January 2020



Crashes by type of user on Northgate Boulevard from Del Paso Blvd. to I-80

Sources: (1) Statewide Integrated Traffic Records System (SWITRS), January 2016 to December 2020 and (2) Crossroads, March 2020 to December 2020



Total crashes per year on Northgate Boulevard from Del Paso Boulevard to I-80

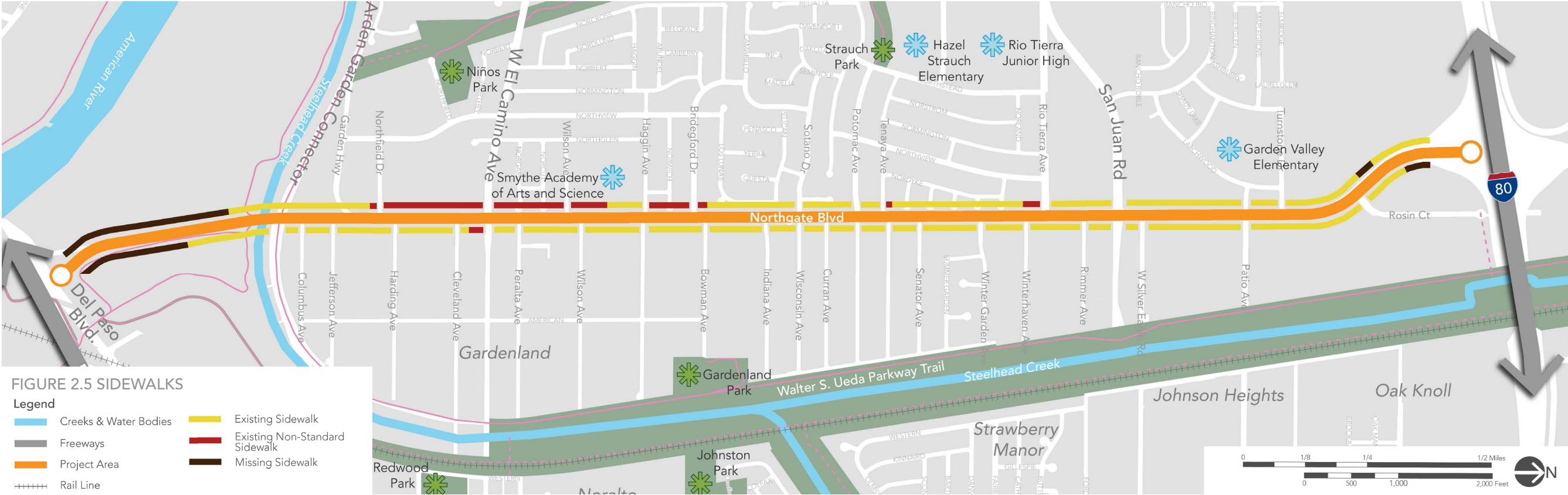
WALKING

Sidewalks

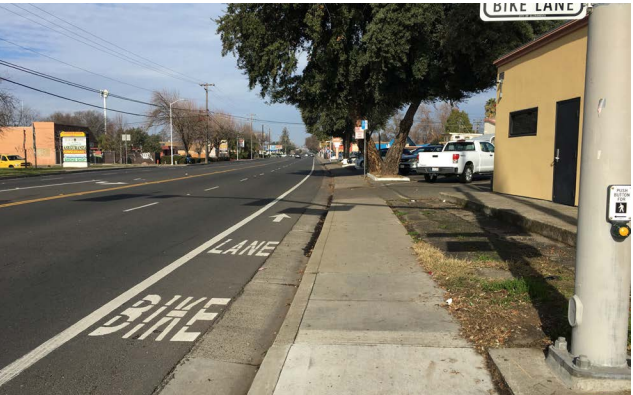
Sidewalks are a critical part of the street and, when well designed, provide convenience, safety, and a comfortable environment. While some portions of the Plan Area include sidewalks, there are locations that lack infrastructure or have infrastructure that does not meet current standards and/or community needs (see **Figure 2.5**). This includes **missing sidewalks, wide driveways, a lack of landscape strips and trees, and no pedestrian lighting**.

Mobility for people with disabilities is a priority for the City. Older sidewalks built before the Americans with Disabilities Act (ADA), and gaps in the sidewalk network make it challenging for people with disabilities to travel along this corridor.

- In addition, the engagement process revealed that people want to walk more along Northgate Boulevard. As a result, the following sidewalk improvements were recommended by the community to make walking along Northgate Boulevard more comfortable (see **Appendix B and C** for more sidewalk information):
- » Street and pedestrian lighting
 - » Wider and unobstructed sidewalks
 - » Streets trees and shade
 - » Direct walking paths to destinations



Portions of the Plan Area **LACK SIDEWALK INFRASTRUCTURE** or do not meet current standards and community needs



Existing conditions - sidewalks

Crosswalks

Crosswalks provide opportunities for people walking and bicycling to cross a street. They also serve as a visual representation to drivers that vulnerable road users are in the area and may be using the space. Currently, there are excessive distances between marked crosswalks that **do not meet adopted guidance of 1,200 feet or less** on the High Injury Network (HIN) and **within 100 feet of a transit stop** (see **Figure 2.5**). Other crosswalk features that increase the likelihood and severity of pedestrian collisions include marked crosswalks missing enhancements such as high visibility markings or curb extension, pedestrian crosswalks ranging from **65 feet to 95 feet in length**, and no curb extensions or refuge islands.

In addition, the engagement process revealed that the community would like to visit destinations on both sides of the street and expressed interest in **improved crosswalks and new crosswalks for frequent crossings** to make crossing more convenient. The following intersections were identified by the community as hotspots for priority location improvements (see **Appendix B and C**):

- » Del Paso Blvd.

» Arden Garden Connector

» Harding Ave.

» El Camino Ave.

» Wilson Ave.

» Haggin Ave.

» Bridgeford Dr.
- » Wisconsin Ave.

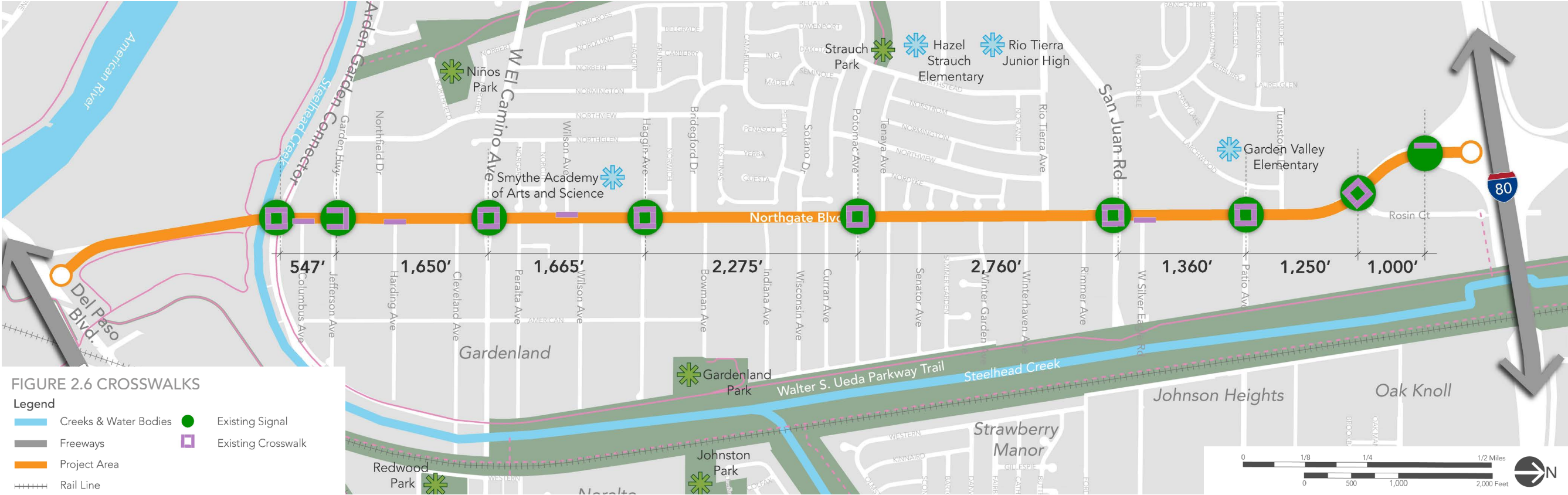
» Potomac Ave.

» Winter Garden Ave.

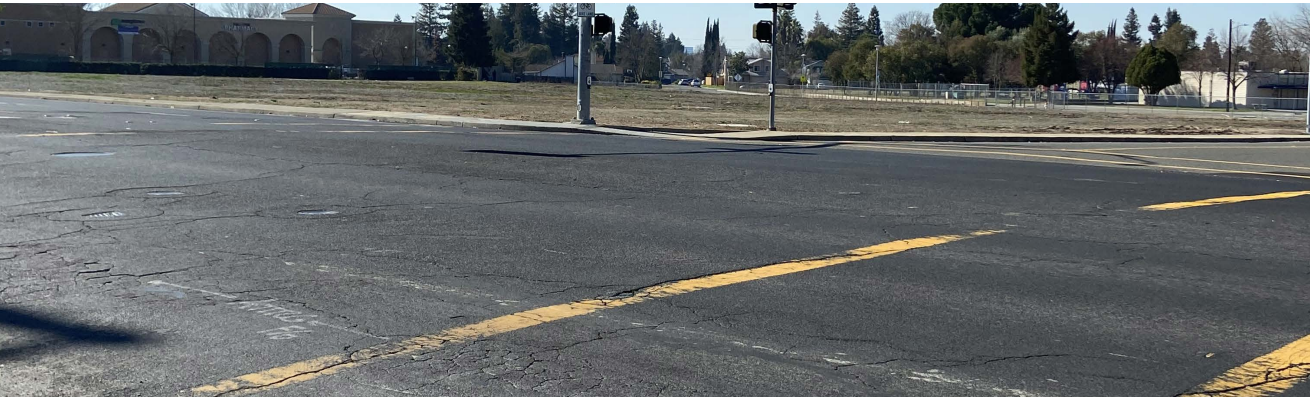
» Winterhaven Ave.

» San Juan Rd.

» Patio Ave.



Existing conditions - crosswalks

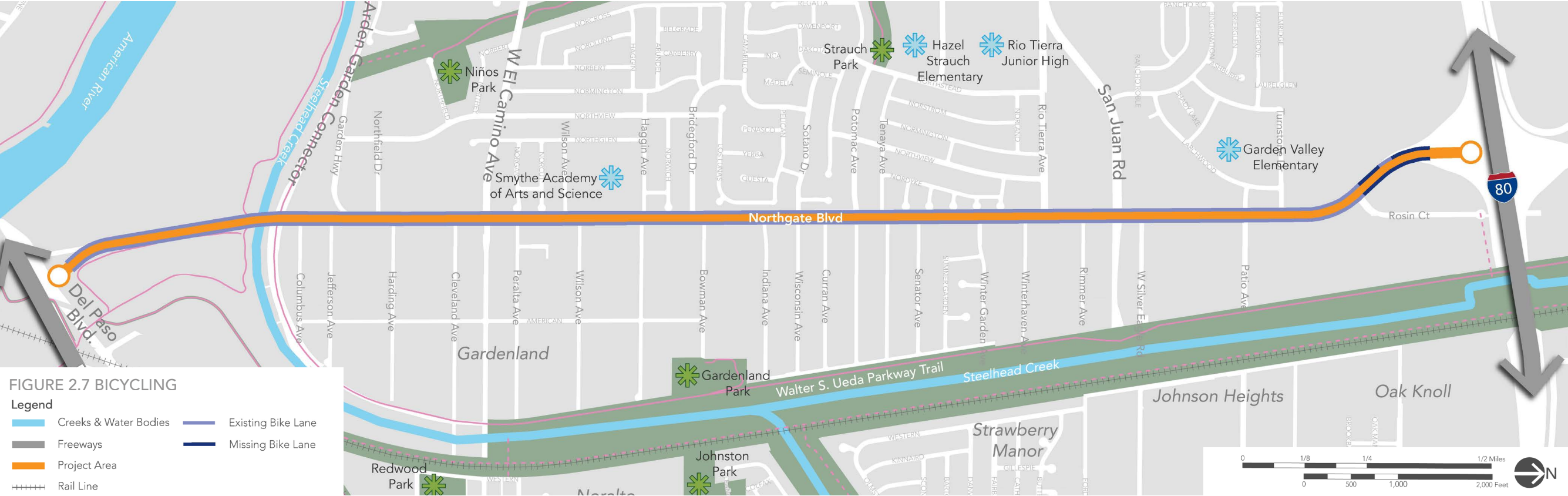



BICYCLING

Currently, bike lanes exist along Northgate Boulevard with gaps mostly near intersections and where bus stops occur along the corridor (see **Figure 2.7**). Existing bikeways **do not currently meet the City’s bikeway selection guidelines**. Bikeways also **do not offer sufficient separation** from vehicle traffic for a low-stress and comfortable experience.


According to the Bikeway Facility Selection Guidelines in the Bicycle Master Plan, Northgate **should have separated bikeways** due to vehicle volumes and speeds. Similarly, there are opportunities to provide **bike boxes, green markings at conflict points, or bikeway markings** through intersections along this corridor. There are **no known bike racks or lockers** on the corridor, which can discourage bicycling to businesses.

- Currently, participants do not feel comfortable bicycling along Northgate Boulevard. However, the engagement process revealed a huge community desire to enhance bike facilities for people of all ages. The following bikeway improvements were suggested to make bicycling more comfortable for all users (see **Appendix B and C** for more bicycling information):
- » Improved bicycling connections to destinations
 - » Separated bikeways
 - » Continuous bikeways through intersections
 - » Secured bike parking at destinations





Unprotected bike lanes exist along the corridor



37%

Percentage of survey respondents who would like to bike along the corridor



Bicycling- existing conditions

TRANSIT

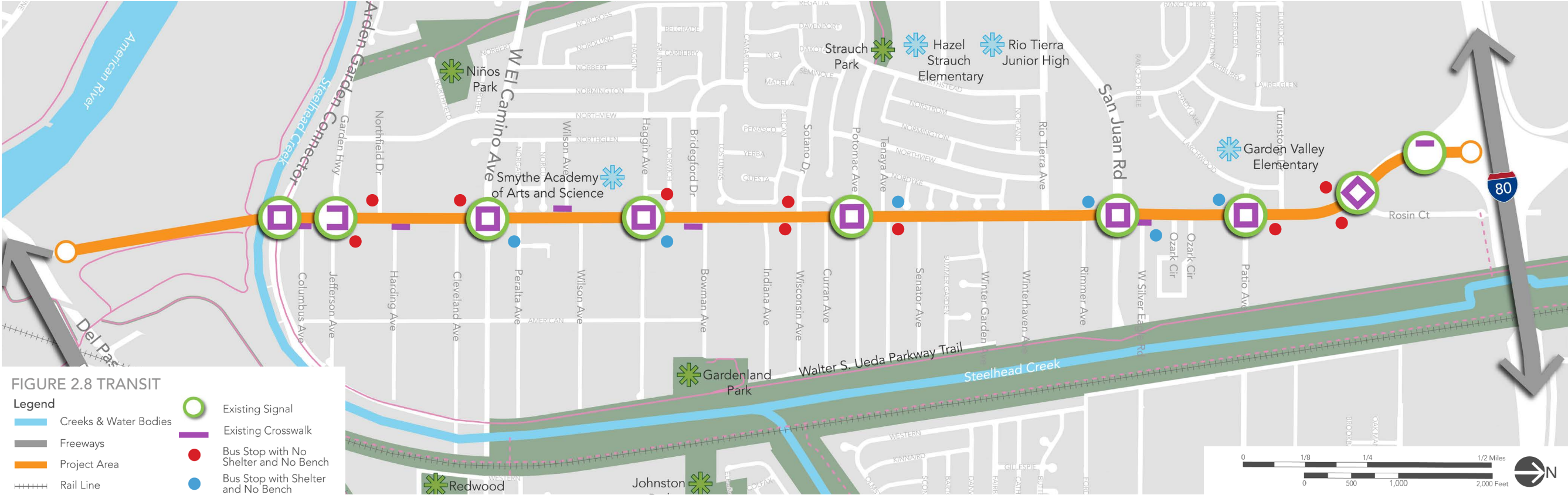
Bus routes 13 and 113 are the two bus routes that travel along the corridor and connect to other destinations in the city. SacRT operates the buses, but the City owns the streets upon which buses run. According to survey respondents, transit is the **least used mode of travel** along the corridor. There are **16 bus stops** along the corridor, with only six stops having either a shelter or bench (see **Figure 2.8**). Survey respondents also mentioned that the physical conditions contributing to low transit use include obstructed sidewalks, unmarked crosswalks, numerous driveways, and a lack of bus stop shelters (see **Appendix B** for more technical details).


In addition, the engagement process revealed that people want to improve transit facilities and convenience all along Northgate Boulevard. Even though specific

transit improvements are outside this project’s scope of work, survey responses showed support for: improved existing bus stops with shelters, additional bus stops with shelters, better transit connections, and access to regional facilities.

The following intersections were identified as hotspots for priority location improvements (see **Appendix B and C** for more transit information):


- » El Camino Ave.
- » Wisconsin Ave.
- » San Juan Rd.
- » Patio Ave.





363

Route #13's number of boardings per day along the corridor



63%

Percentage of bus stops that lack shelter or seating along the corridor



Bikeways - existing conditions

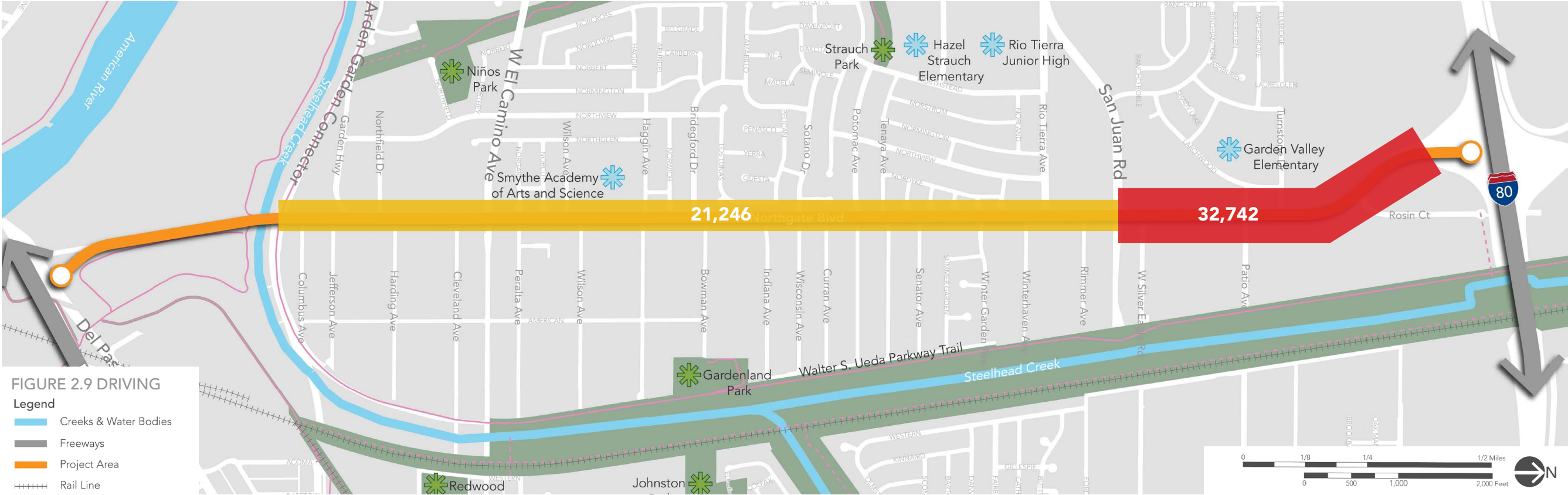
DRIVING

Northgate Boulevard is a five-lane corridor designed to move people through — not to, or across — the corridor. As a result, Northgate Boulevard is mostly traveled by people driving. Specific design features that encourage high driving speed and/or increase the likelihood and severity of collisions include wide curb radii, long crossing distance, and wide travel lanes. Vehicle counts found that driving volumes over time have **increased** in the middle of the corridor and **decreased** at the northern end, although remain greater in the northern end (see **Figure 2.9**). Data also revealed that **87%** of drivers were going above 30 mph, and **3.4%** were going over 50 mph. The highest speeds recorded were at night and early morning when there was less driving with **Rosin Ct.** showing the highest speeds. See **Appendix A** for more information on vehicle counts.

In addition, the engagement process revealed that people want to see more driving efficiency through the following improvements: **improved existing traffic signals, manage traffic speed with traffic calming alternatives, manage traffic flow with medians, left turn lanes at Hagen Avenue.**

The following intersections were identified as hotspots for priority location improvements:

- » Del Paso Blvd.
- » Arden Garden Connector
- » El Camino Ave.
- » Haggin Ave.
- » Wisconsin Ave.
- » Potomac Ave.



87%

of people driving go over 30 mph



Existing conditions - driving





3

3. COMMUNITY VISION

IN THIS CHAPTER

COMMUNITY VISION

COMMON DESIGN ELEMENTS

The vision for the area included in the Northgate Boulevard Transportation Plan was developed through input from the engagement events and tools outlined in Chapter 1. By sharing their experiences navigating the corridor, and responding to a series of emerging design concepts, the Northgate Boulevard community has developed a unique, context-specific vision that addresses multi-modal mobility and safety issues along the corridor. This chapter summarizes the community vision and common community design elements.

COMMUNITY VISION

The Northgate community and City have developed a bold vision for the Plan Area. Building upon extensive community input received, Vision Elements, summarized to the right, have been identified that have guided the development of Plan concepts and design options. These Vision Elements are important to align community desires and are incorporated into all future improvements (see **Appendix B and C** for more community input details).



1. SAFETY

Promote safety through new and improved crosswalks and bicycle facilities, and ensure the corridor meets current standards and is accessible for all users



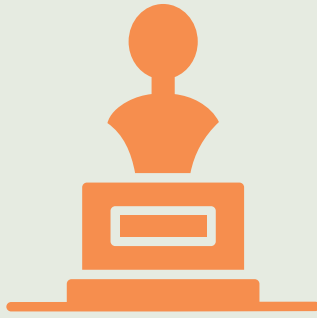
2. BETTER WALKING/
BIKING CONNECTIONS

Promote comfortable and aesthetically-pleasing walking and bicycling experiences and increase connections to adjoining neighborhoods and destinations



3. TRANSIT EFFICIENCY

Improve transit service by enhancing bus stop amenities and relocating stops to more efficient locations



6. NEIGHBORHOOD
IDENTITY

Celebrate the unique history and characteristics of Northgate Boulevard through gateway elements and public art



7. BUSINESS AND
ECONOMIC DEVELOPMENT

Encourage multi-modal access to existing destinations and attract new private investment through proposed physical improvements

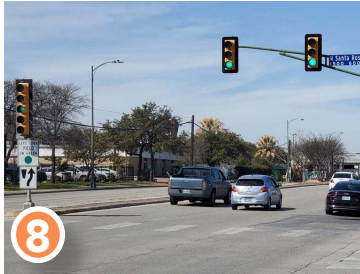
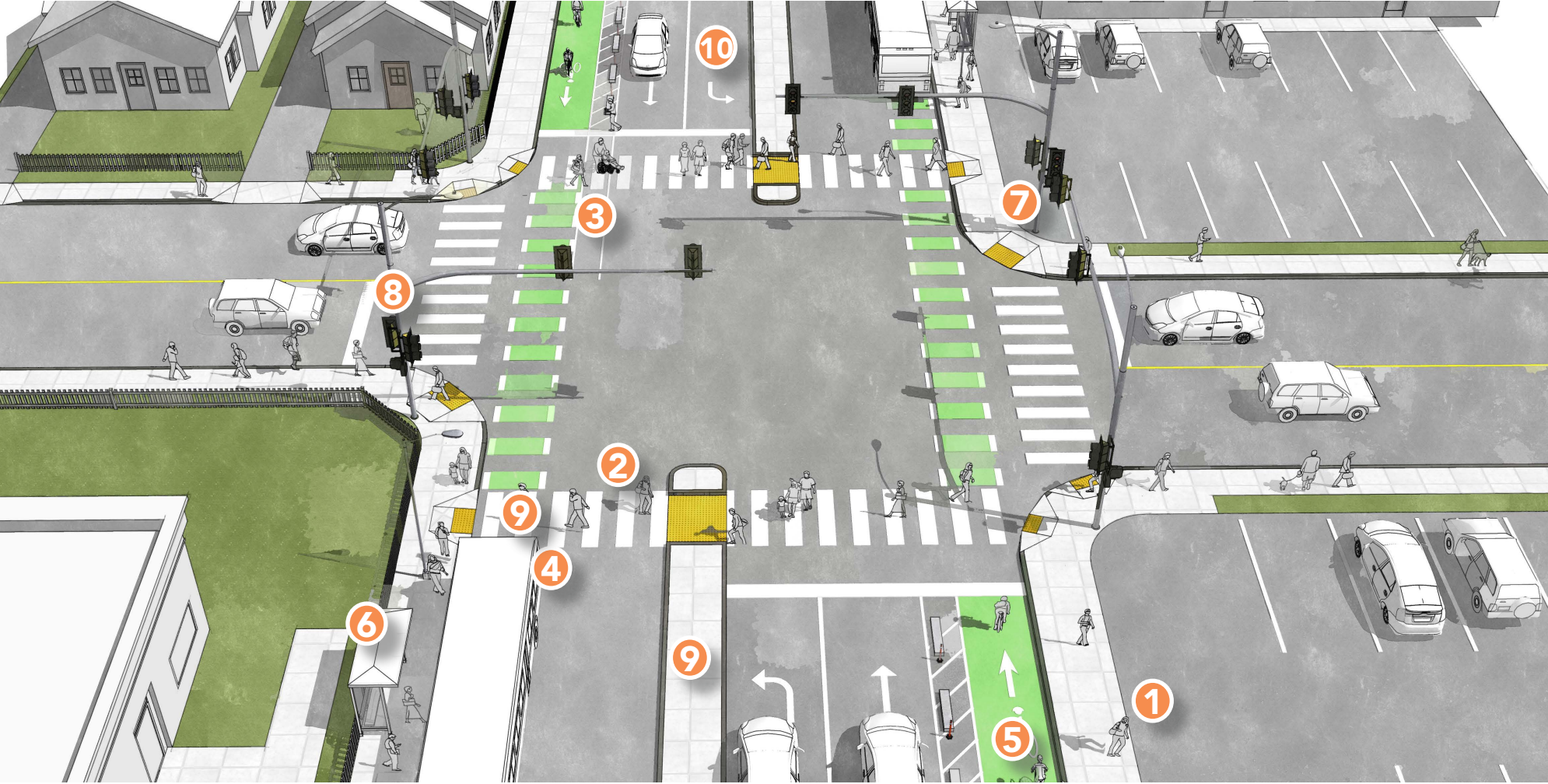
COMMON DESIGN ELEMENTS

Part of identifying the Vision Elements and developing the design concepts involved gauging community interest in specific design elements. The following section outlines and describes the preferred design elements that have been incorporated into the emerging design concepts.

- 1 Continuous and comfortable sidewalks:** Existing sidewalk networks are widened where feasible and made continuous by adding new sidewalks where there gaps exist to allow people of all ages and abilities to comfortably walk.
- 2 Enhanced existing crosswalks:** Existing crosswalks are improved with enhanced striping and directional ramps for ADA accessibility, improving crossing safety for all people who are walking. Enhanced crossings also include pedestrian refuge islands and reduced crossing distances.

- 3 New crosswalks:** Proposed crosswalks along the corridor will enhance accessibility with new pedestrian signals and provide additional and safe opportunities for people to cross the street.
- 4 Separated bike facilities/two-way separated bikeway (cycle track):** Bike facilities are enhanced by providing wide bike lanes buffered by striping from moving traffic, including a two-way cycle track with vertical protection that provides safety and separation from vehicles.
- 5 Minimized bus and bike conflicts:** Bike lanes are enhanced with better signage and striping to ensure bus drivers and people bicycling are aware of conflict zones.
- 6 Enhanced bus stops:** Bus stops are improved by ensuring ADA compliance, adding amenities like shelters and seating to provide comfort and protect from the rain and sun and co-locating transit stops and pedestrian crossings.

- 7 Additional pedestrian signals:** New pedestrian signals improve safety and traffic flow by providing better traffic control for people to cross the street and minimize pedestrian and car conflicts.
- 8 Synchronized existing signals:** Signal times are improved to synchronize with people who are driving to alleviate congestion.
- 9 Managed traffic flow with medians:** Medians enhance traffic flow and safety by providing separation between opposing travel lanes as well as a refuge for people walking across the road.
- 10 Maintained necessary travel lanes, turn lanes, and parking:** Maintaining travel lanes and turn lanes ensures that drivers traveling along the corridor will not be compromised, and preserving parking spaces where the utilization is higher so it serves better adjoining businesses.



4. CORRIDOR DESIGN CONCEPTS

IN THIS CHAPTER

- DESIGN FRAMEWORK
- NORTHERN SEGMENT
- MIDDLE SEGMENT
- SOUTH SEGMENT A
- SOUTH SEGMENT B

DESIGN FRAMEWORK

Northgate Boulevard is poised for significant improvements to make the roadway feel safer and more functional and efficient for the local community and the broader region, regardless of mode of travel. The coordination, timing, and implementation of these improvements will be critical to ensure changes are made efficiently and address core community needs. Community ideas and desires collected throughout the duration of the project were used to develop a Development Framework for Northgate Boulevard (see **Figures 4.1 - 4.5**). This framework provides a common set of design improvements that will be incorporated into each segment along the corridor. Building from the Community Vision and Design Framework, the following chapter identifies specific improvements envisioned for each of the corridor segments. For the complete design concept, please see **Appendix G**.

Existing and Planned Signals

Excessive distances of up to **2,700 feet** currently exist between signals on Northgate Boulevard, making it extremely difficult and dangerous to cross the street. Existing crosswalks on Northgate Boulevard will be supported by **two planned signals** and **one signal improvement** that are under construction as of 2022. See **Figure 4.1**.

Proposed Pedestrian Signals

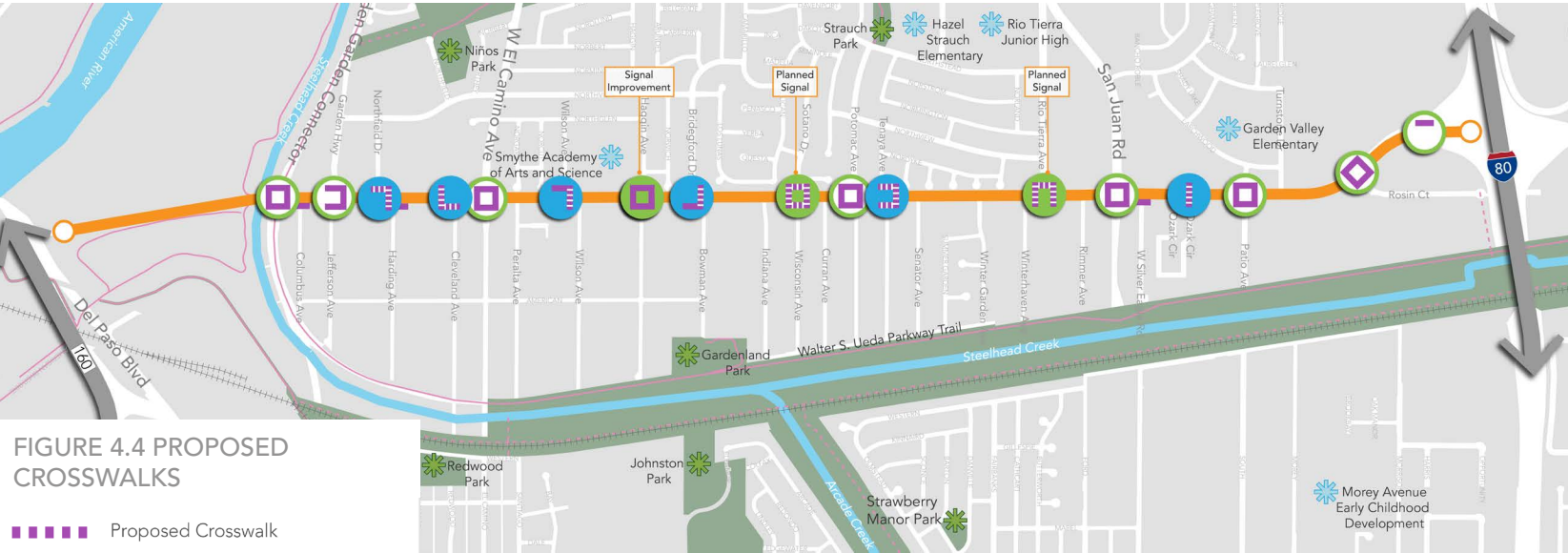
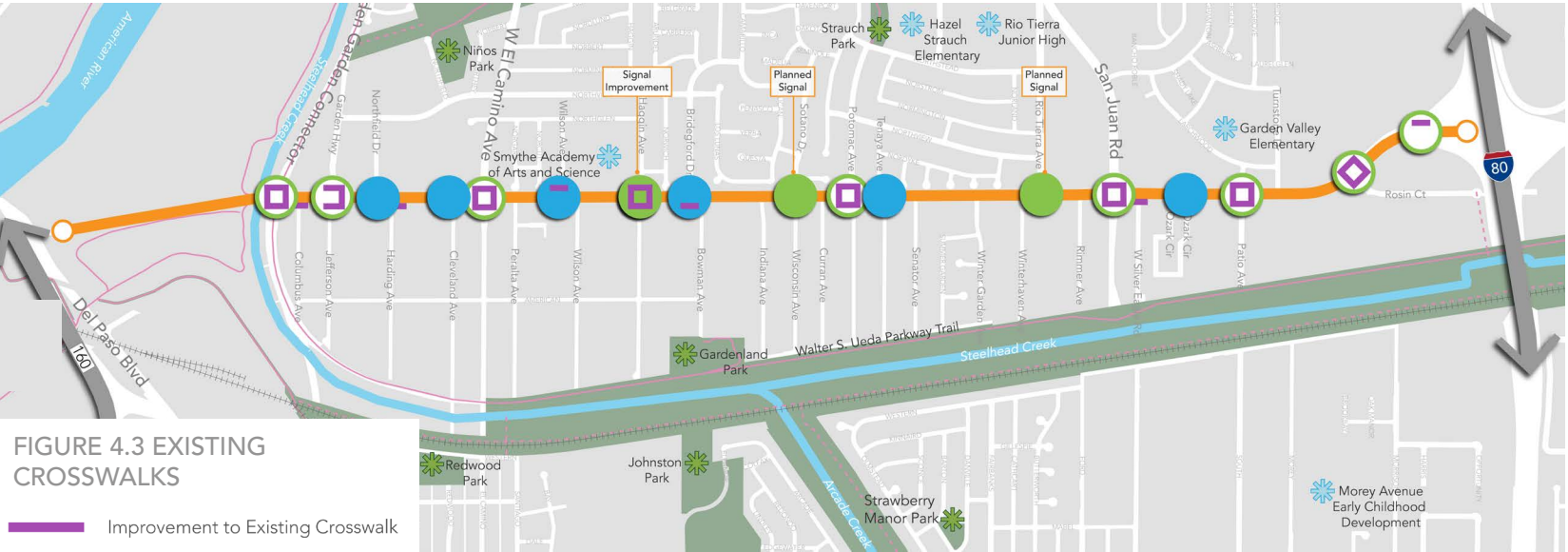
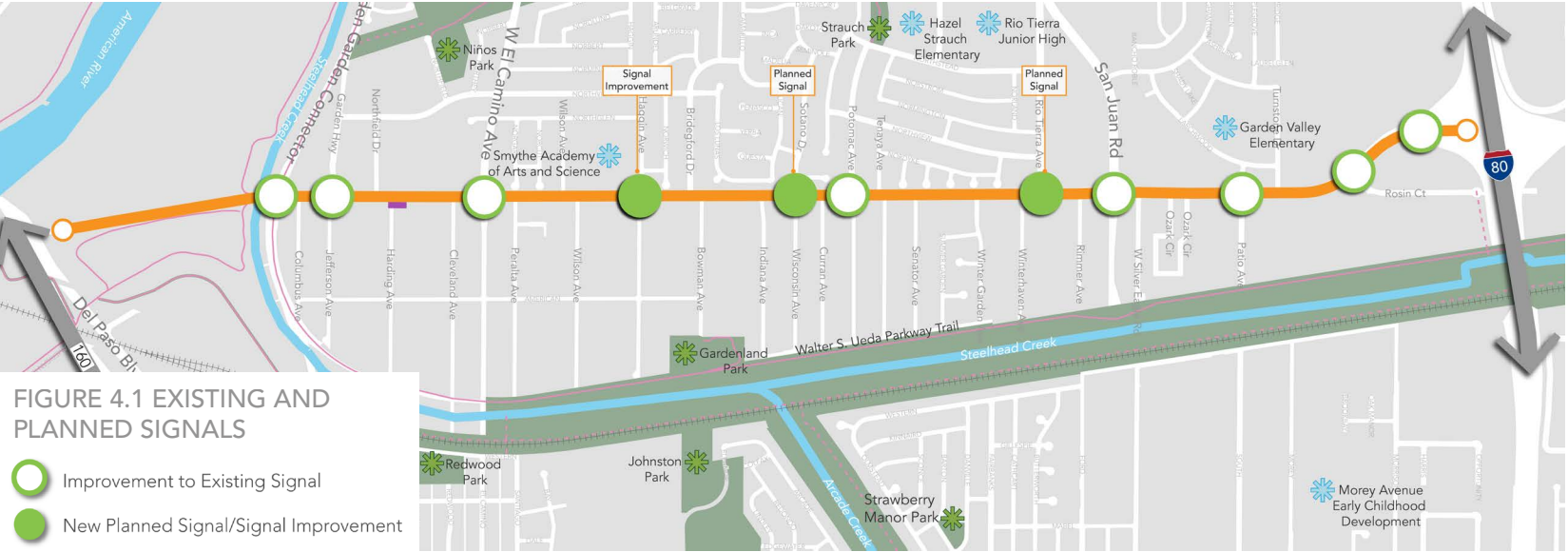
Based on traffic analysis and community feedback, seven new pedestrian signals are being proposed. The new planned and proposed signals will increase the total number of signals in the area from 8 to 18 - **a 125% increase**. See **Figure 4.2**.

Existing Crosswalks

Existing crosswalks will be improved with better signage and striping, and will be updated to **ADA compliance and standards**. See **Figure 4.3**.

Proposed Crosswalks

For all of the proposed pedestrian signals, a crosswalk is also proposed. This will **increase the number of crosswalks** along Northgate Boulevard and **decrease excessive distances** one will have to travel to cross the street. See **Figure 4.4**.



Transit Stops

Some existing transit stops will be moved to the far side of the intersection to make it safer, more convenient, and will improve overall traffic flow. The addition of new signals and crosswalks will also serve better the transit stops. See **Figure 4.5**.

Vehicle Design

Goods movement and access supports the local economy as well as community needs. Proposed concepts ensure large vehicles have the ability to make right turns into and out of local streets and commercial centers. This allows:

- » Accommodating CA-Legal (65’ truck) at major arterials and specific commercial parcels where large vehicles are used, based on community feedback
- » Designing for 40’ buses at all other intersections

This accomodation means that drivers of extra large vehicles may make their turns utilizing all available pavement. This provides access to service local businesses, buses, emergency vehicles and freight, while still ensuring the design meets the desire for better safety on the corridor.



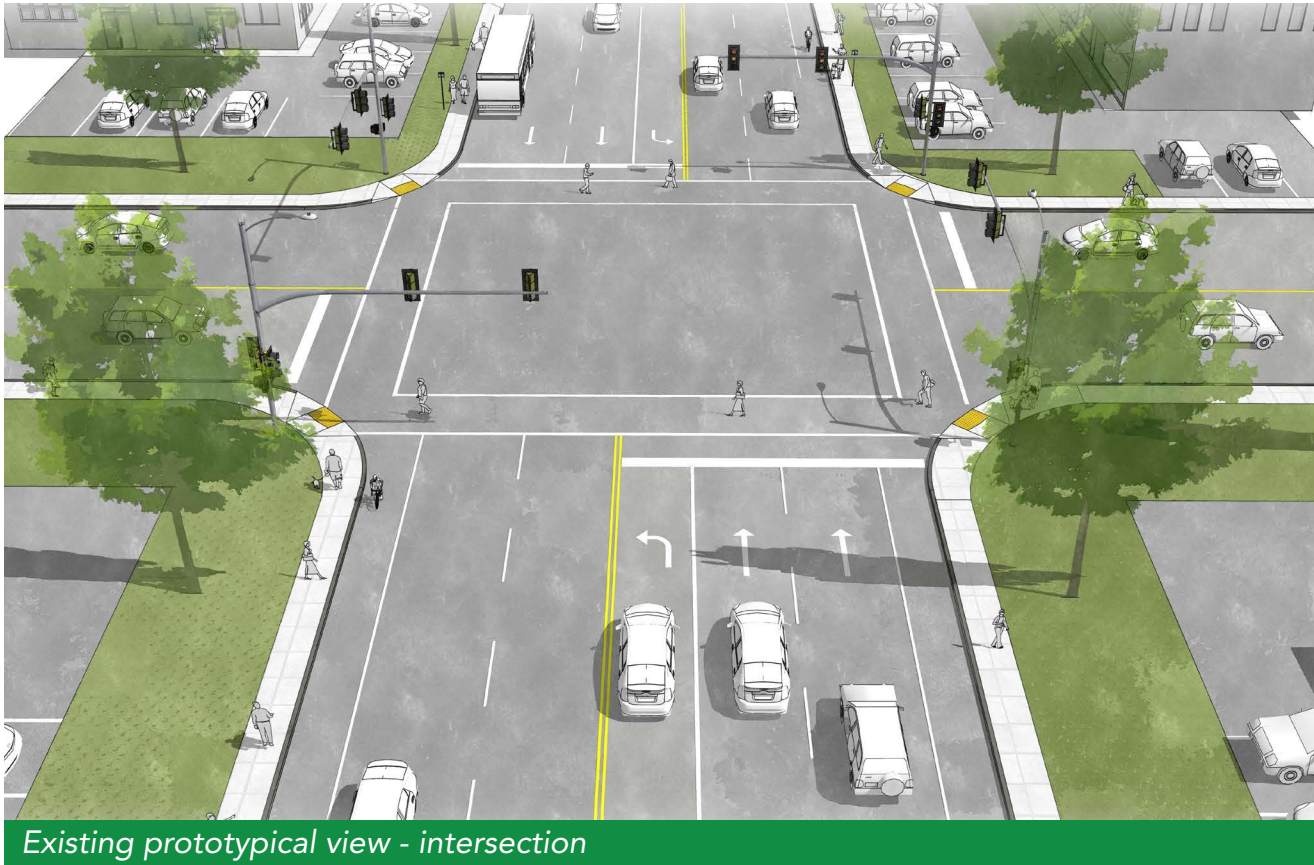
NORTH SEGMENT

Proposed Design Concepts - Separated Bikeway

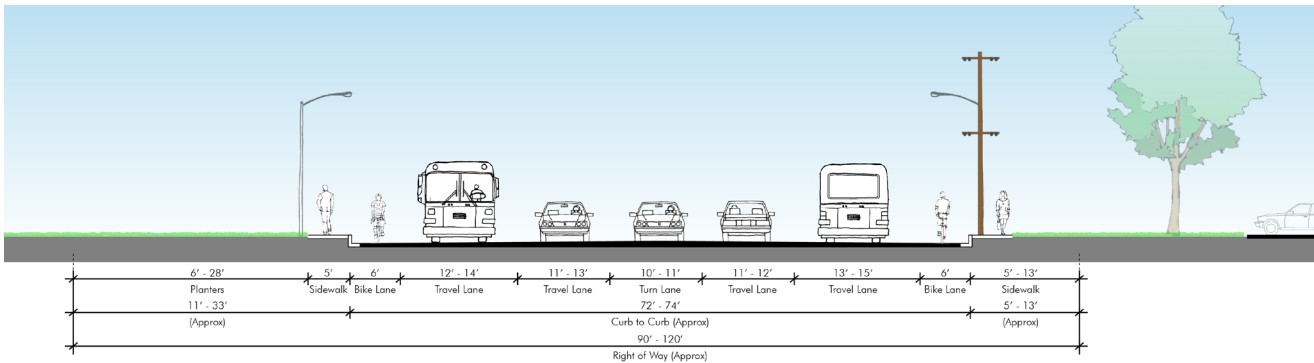
Between I-80 and San Juan Road

The roadway lanes are reconfigured to 11-foot standard width travel lanes that can accommodate buses, and creates space for separated bikeways on both sides of the street to further improve connectivity with adjacent neighborhoods. The reconfiguration also allows for a wider physical median in the center of the road and wider sidewalks. Transit stops are improved with bus shelters, adequate sidewalk space for ADA compliance, and other supportive amenities. Two new signals with crosswalks are added are Ozark Circle and Turnstone Drive, along with improved existing signal times that are synchronized with vehicle traffic.

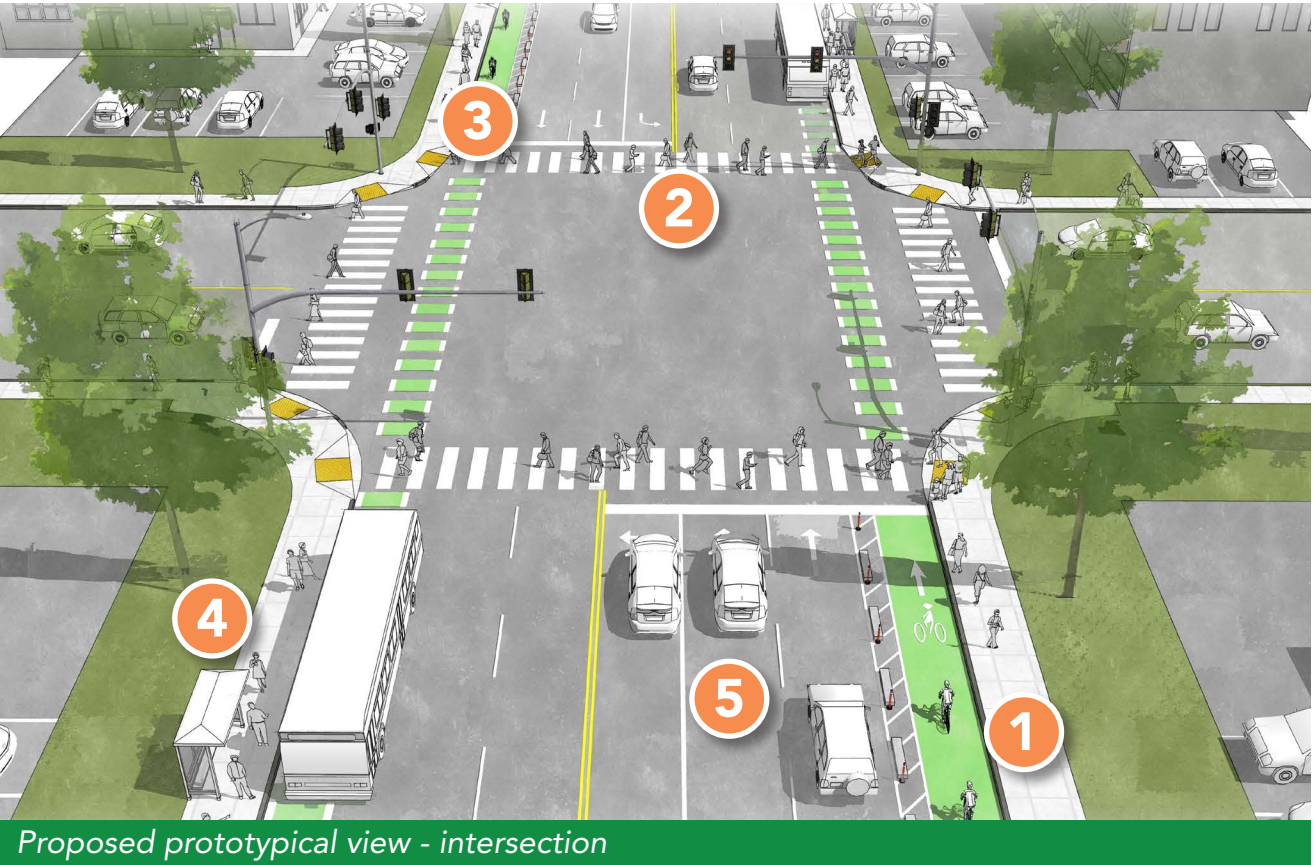
- 1 New continuous sidewalks
- 2 New crosswalks
- 3 New separated bikeways
- 4 Enhanced transit facilities
- 5 2 travel lanes in each direction with left turn lanes



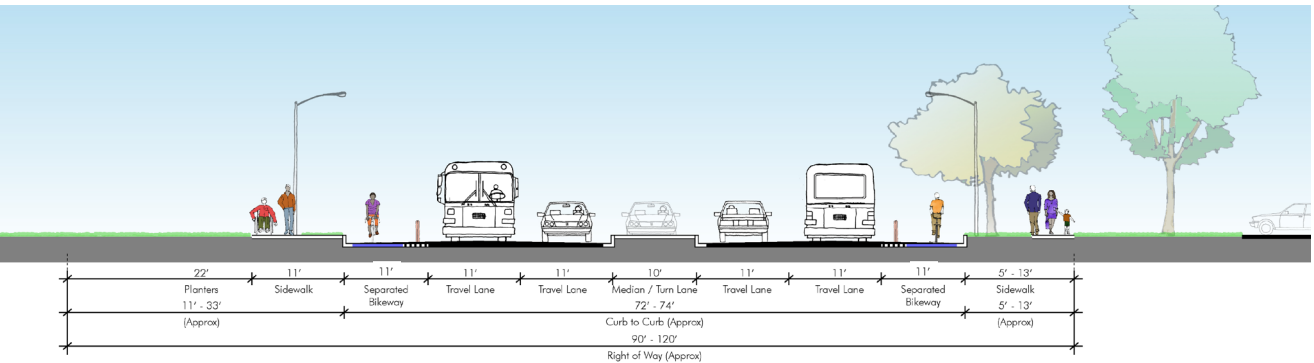
Existing prototypical view - intersection



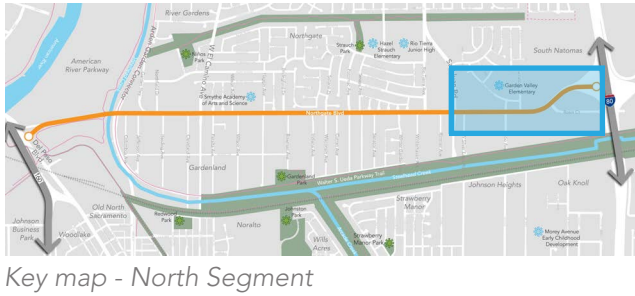
Existing prototypical section - mid-block



Proposed prototypical view - intersection



Proposed prototypical section - mid-block



Continuous sidewalks



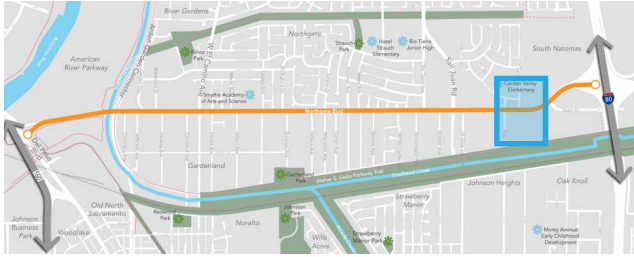
Separated bikeways with two travel lanes



Improved existing and new crosswalks

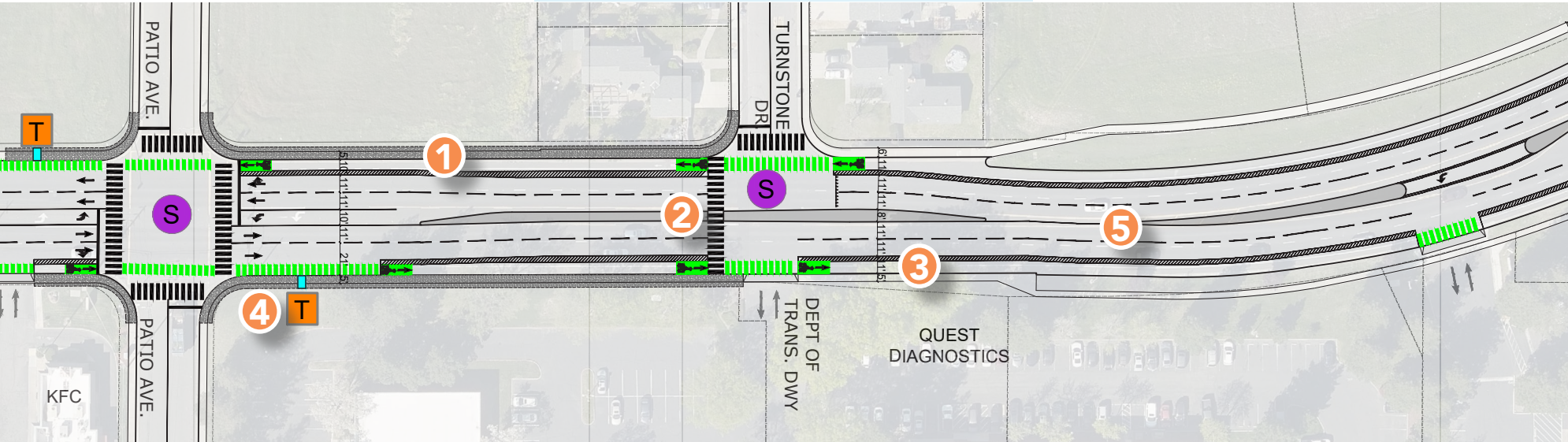
Turnstone Drive

Proposed improvements at the Turnstone Drive intersection are intended to improve east-west connections for people walking and bicycling, especially for students trying to get to Garden Valley Elementary School. This is achieved by adding a new pedestrian signal and crosswalk at Turnstone Drive on the south side of the street and creating a center median will allow for a pedestrian refuge. For people biking, a separated bikeways with bike crosswalks through the intersection will be created. To ensure existing traffic volumes are not impacted, two travel lanes are maintained.



Key map - Turnstone Drive

- 1 New continuous sidewalks
- 2 New crosswalks with pedestrian signal
- 3 New separated bikeways
- 4 Enhanced transit facilities
- 5 2 travel lanes in each direction



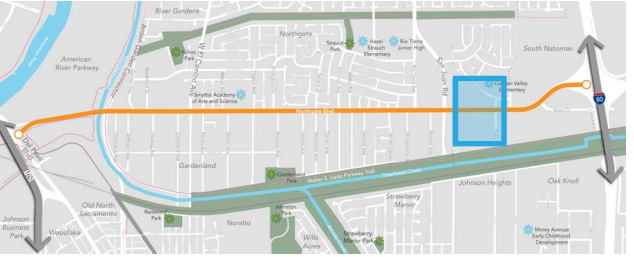
Turnstone Avenue



Ozark Circle

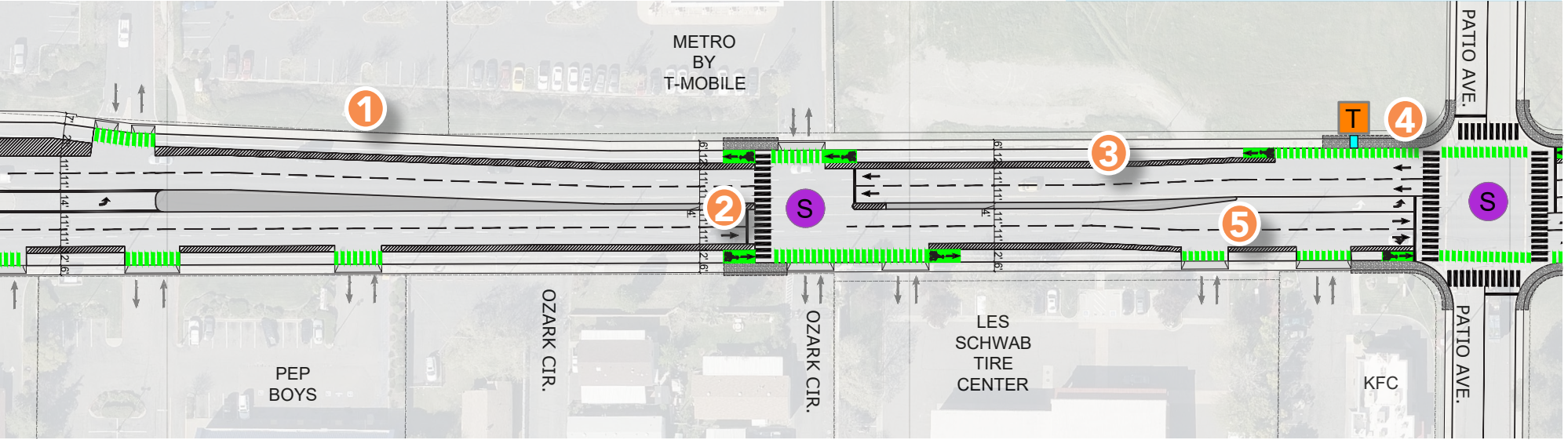
The proposed improvements at the Ozark Circle intersection will continue the same enhancements at Turnstone Drive and improve east-west connections for people walking and bicycling through this area. A new pedestrian signal and crosswalk will be placed at Ozark Circle on the south side of the street, and a center median will be created to provide a pedestrian refuge. This will better connect businesses on both sides of Northgate.

For people biking, a separated bikeways with bike crosswalks through the intersection will be created. To ensure existing traffic volumes are not impacted, two travel lanes in each direction are maintained.

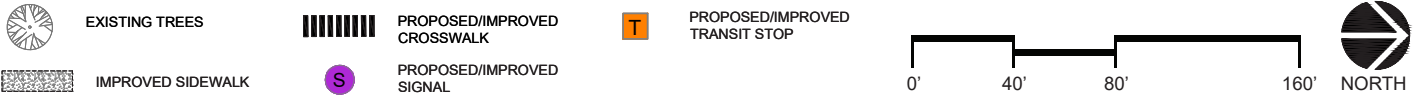


Key map - Ozark Circle

- 1 New continuous sidewalks
- 2 New crosswalks with pedestrian signal at Ozark Cir
- 3 New separated bikeways
- 4 Enhanced transit facilities
- 5 2 travel lanes in each direction



Bridgeford Drive



MIDDLE SEGMENT

Proposed Design Concepts - Separated Bikeway

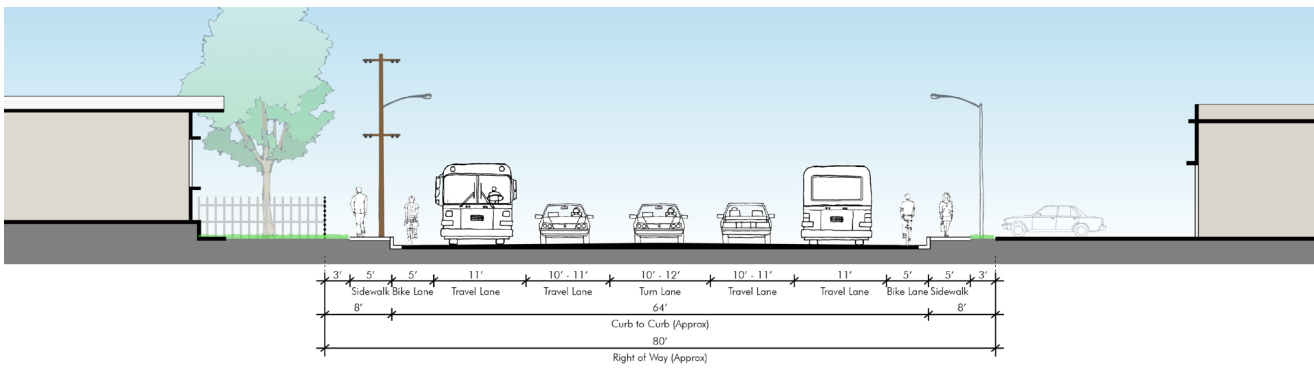
Between San Juan Road and Garden Highway

The roadway lanes are reconfigured to 11-foot standard width travel lanes, with one lane in each direction, that can accommodate buses, and creates space for separated bikeways on both sides of the street to further improve connectivity with adjacent neighborhoods. The reconfiguration also allows for a wider physical median in the center of the road and wider sidewalks. Transit stops are improved with bus shelters, adequate sidewalk space for ADA compliance, and other supportive amenities. Five new signals with crosswalks are added in this segment, along with improved existing signal times that are synchronized with vehicle traffic.

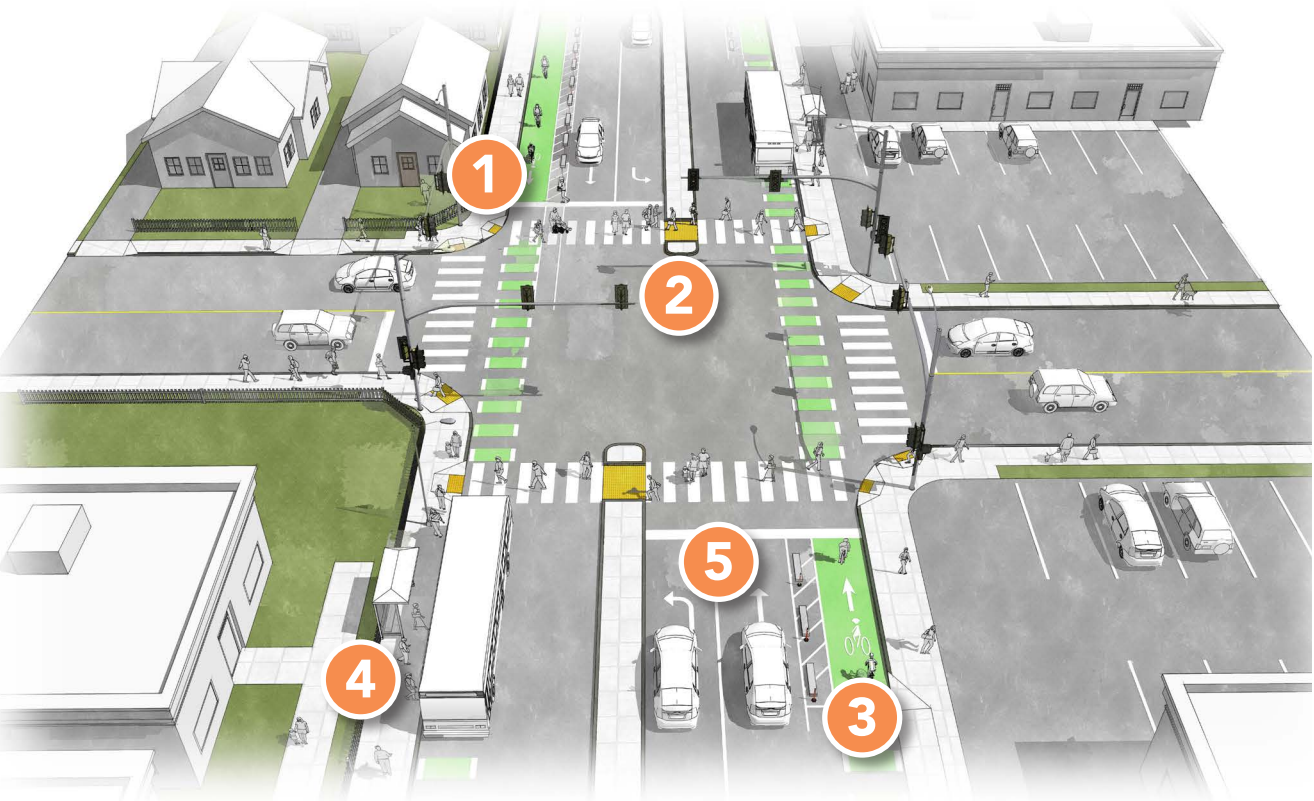
- 1 New continuous sidewalks
- 2 New crosswalk with a pedestrian traffic signal at 5 locations
- 3 New separated bikeways
- 4 Enhanced transit facilities
- 5 1 travel lane in each direction with a turn lane



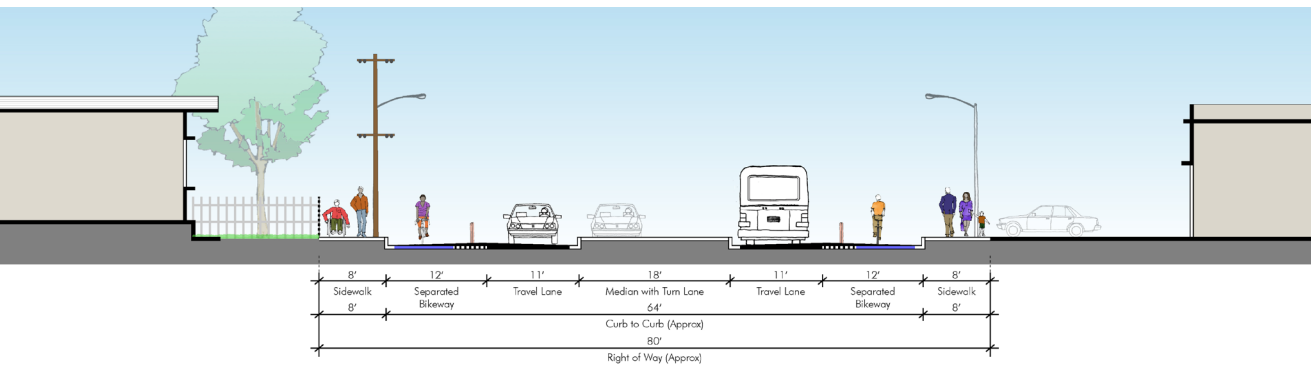
Existing prototypical view - intersection



Existing prototypical section - mid-block



Proposed prototypical view - intersection



Proposed prototypical section - mid-block



Key map - Middle Segment



Managed traffic flow with medians



New crosswalks

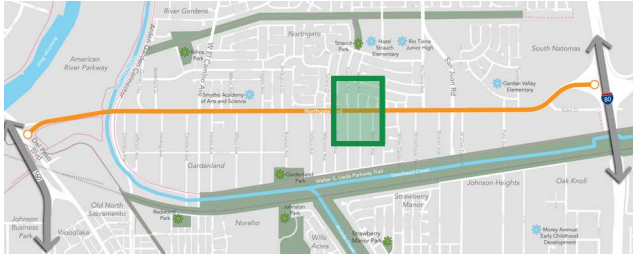


Enhanced transit facilities

Tenaya Avenue

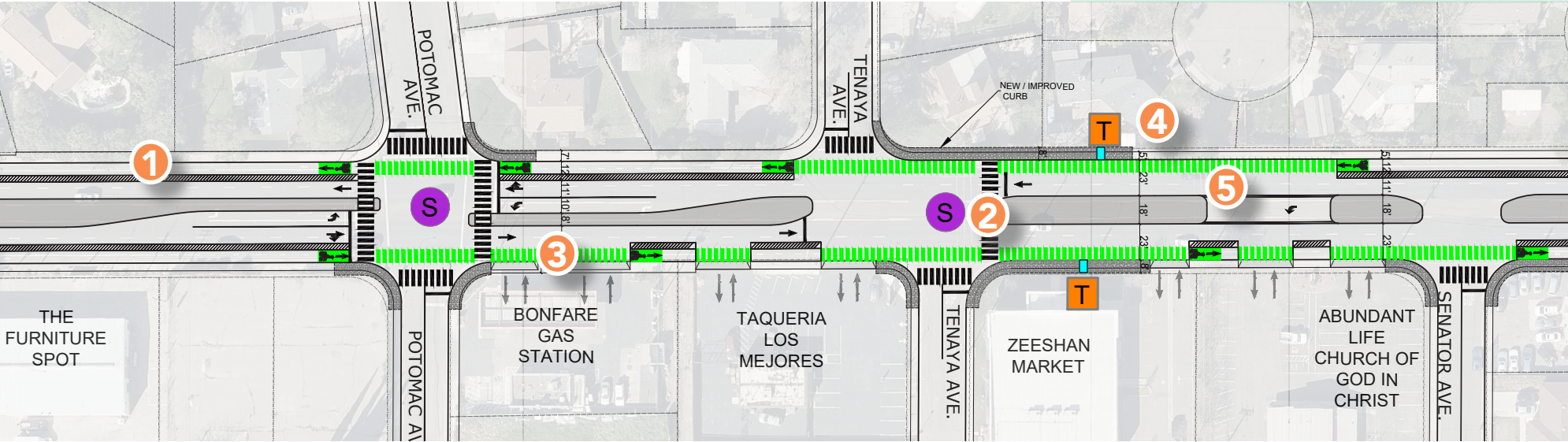
Tenaya Avenue is a staggered intersection with proposed improvements that include a new pedestrian signal and crosswalk at Tenaya Avenue on the north side of the street, and widened sidewalks on the west side of the street. This allows residents in the adjacent neighborhood to better traverse Northgate Boulevard. For people bicycling, separated bikeways with bike crosswalks through the intersection are proposed. Transit facilities are also improved by positioning transit stops closer to crosswalks. To ensure enough space is available to develop these improvements, travel lanes will be reduced to one travel lane in either direction.

A wide center median will also be added to provide a pedestrian refuge. The median has been designed to incorporate proper turning movement of all vehicles and median cut-throughs are provided to maintain business access on the east side. This ensures connectivity to establishments such as the Abundant Life Church of God in Christ.



Key map - Tenaya Avenue

- 1 New continuous sidewalks
- 2 New crosswalks with pedestrian signal
- 3 New separated bikeways
- 4 Enhanced transit facilities
- 5 1 travel lane in each direction



Tenaya Avenue



Bridgeford Drive

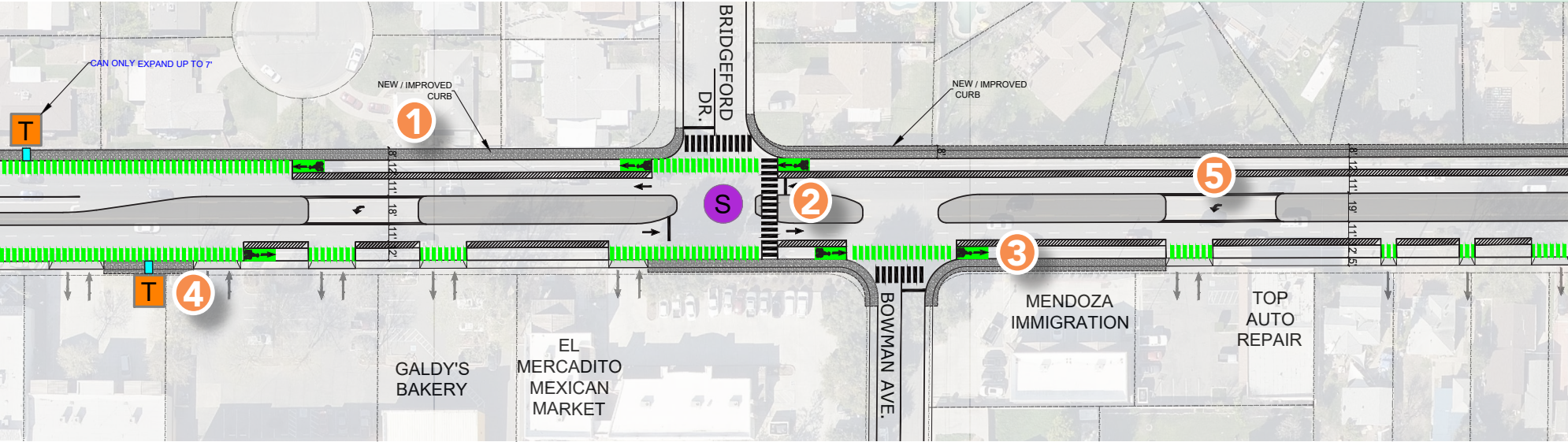
Similar to Tenaya, Bridgeford is a staggered intersection with proposed improvements that enhance east-west connections for people walking and bicycling. This includes widened sidewalks on the west side of the street adjacent to the Northgate neighborhood, and a new pedestrian signal and crosswalk at Bridgeford Drive on the north side of the street. For people bicycling, separated bikeways will continue through this intersection. Transit facilities are also improved by positioning transit stops closer to crosswalks. Travel lanes will also be reduced to one travel lane in either direction to allow for these proposed improvements.

A wide center median will continue through this intersection and be designed to incorporate proper turning movement of all vehicles and provide median cut-throughs to maintain access to businesses such as Galdy's Bakery and Top Auto Repair. A pedestrian refuge will also be provided for people walking from Bridgeford Drive to Bowman Avenue on the east side.



Key map - Bridgeford Drive

- 1 New continuous sidewalks
- 2 New pedestrian signal with crosswalk
- 3 New separated bikeways
- 4 Enhanced transit facilities
- 5 1 travel lane in each direction



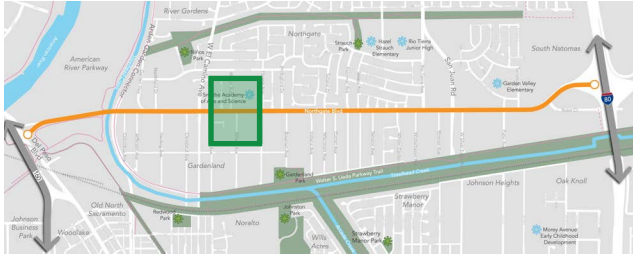
Bridgeford Drive



Wilson Avenue

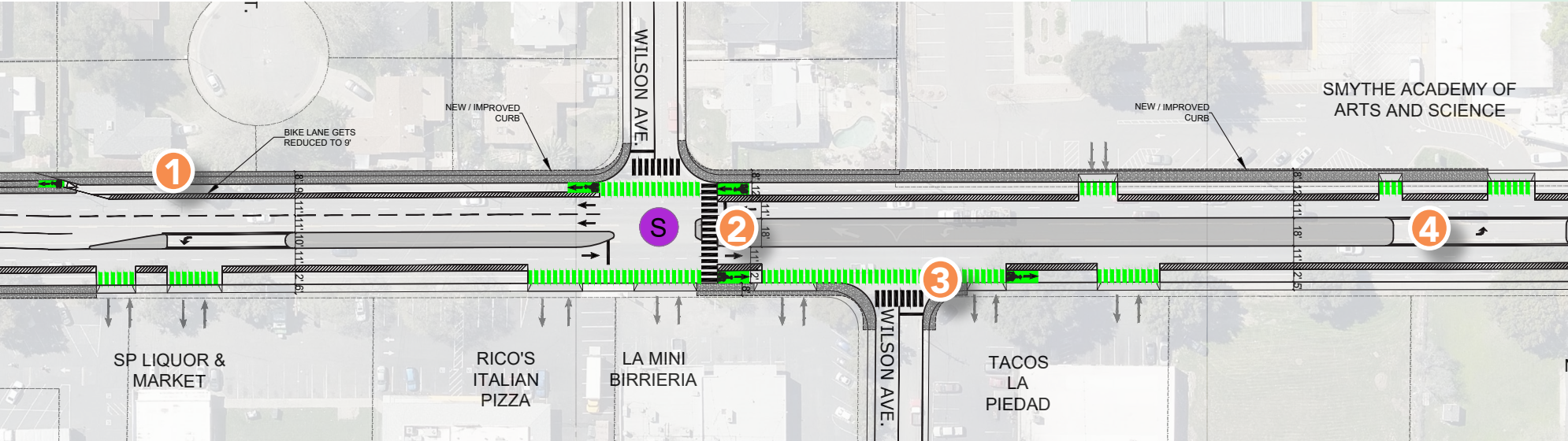
Wilson Avenue is another staggered intersection that reduces travel lanes from two to one travel lane in either direction to enhance east-west connections for people walking and bicycling. Improvements for people walking includes a new pedestrian signal and crosswalk at Wilson Avenue on the north side of the street, and widened sidewalks on the west side of the street. This allows for safer walking conditions for students attending Smythe Academy of Arts and Science. To ensure safer cycling conditions for these students and other users, separated bikeways with bike crosswalks through the intersection are proposed.

A wide center median will also be added to provide a pedestrian refuge for pedestrians continuing to walk from eastern side of Wilson Avenue to the western side. The median has been designed to incorporate proper turning movement of all vehicles. Median cut-throughs are provided to maintain access to the Smythe Academy of Arts and Science and shopping strips on the east side.



Key map - Wilson Avenue

- 1 New continuous sidewalks
- 2 New crosswalks with pedestrian signal
- 3 New separated bikeways
- 4 1 travel lane in each direction



Wilson Avenue

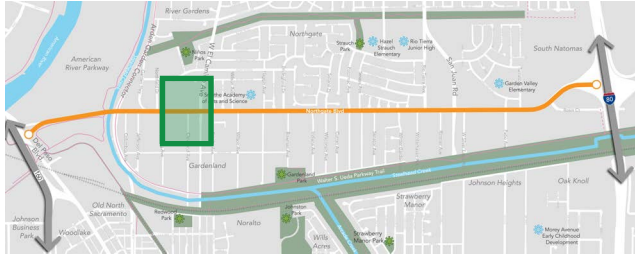
- EXISTING TREES
- IMPROVED SIDEWALK
- PROPOSED/IMPROVED CROSSWALK
- PROPOSED/IMPROVED SIGNAL
- PROPOSED/IMPROVED TRANSIT STOP



Cleveland Avenue

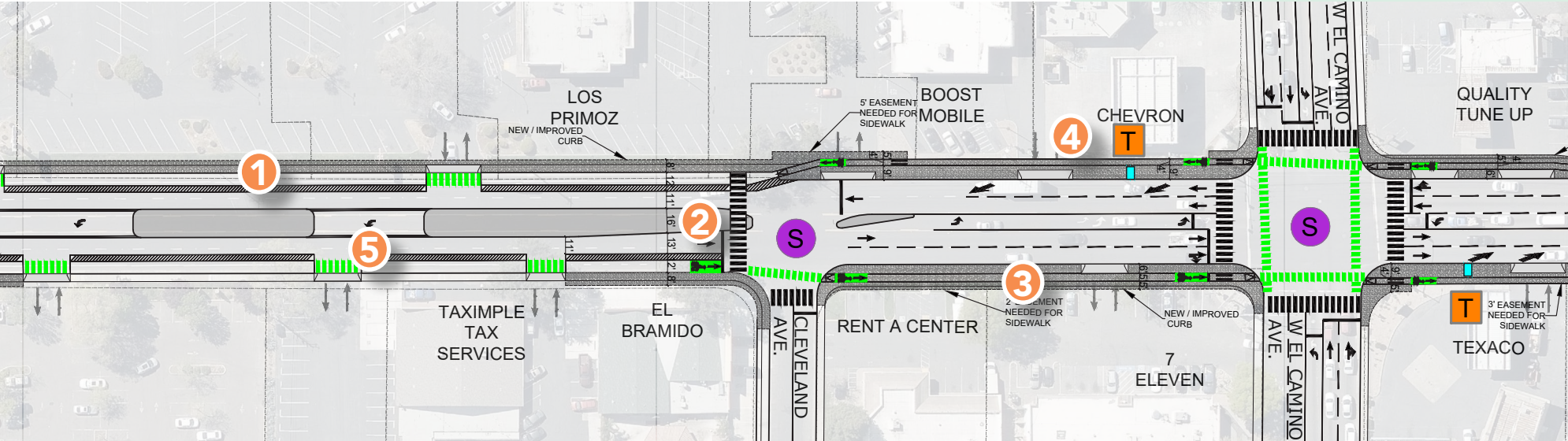
Cleveland Avenue is a T-intersection with similar improvements that include widening the sidewalks on both sides of the street to El Camino and adding a new pedestrian signal and crosswalk at Cleveland Avenue on the south side of the street. Cycling conditions are improved by creating separated bikeways with bike crosswalks through the intersection. To ensure enough space is available to develop these improvements, travel lanes will be reduced to one travel lane in either direction.

A wide center median will also be added to provide a pedestrian refuge for people accessing the numerous retail establishments on both sides of Northgate. The median has been designed to incorporate proper turning movement of all vehicles and median cut-throughs are provided to maintain vehicular access to businesses.



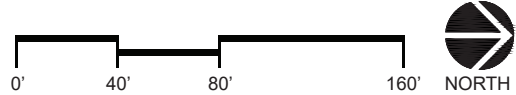
Key map - Cleveland Drive

- 1 New continuous sidewalks
- 2 New pedestrian signal with crosswalk
- 3 New separated bikeways
- 4 Enhanced transit facilities
- 5 1 travel lane in each direction



Cleveland Avenue

- EXISTING TREES
- IMPROVED SIDEWALK
- PROPOSED/IMPROVED CROSSWALK
- PROPOSED/IMPROVED SIGNAL
- PROPOSED/IMPROVED TRANSIT STOP



Northfield Drive

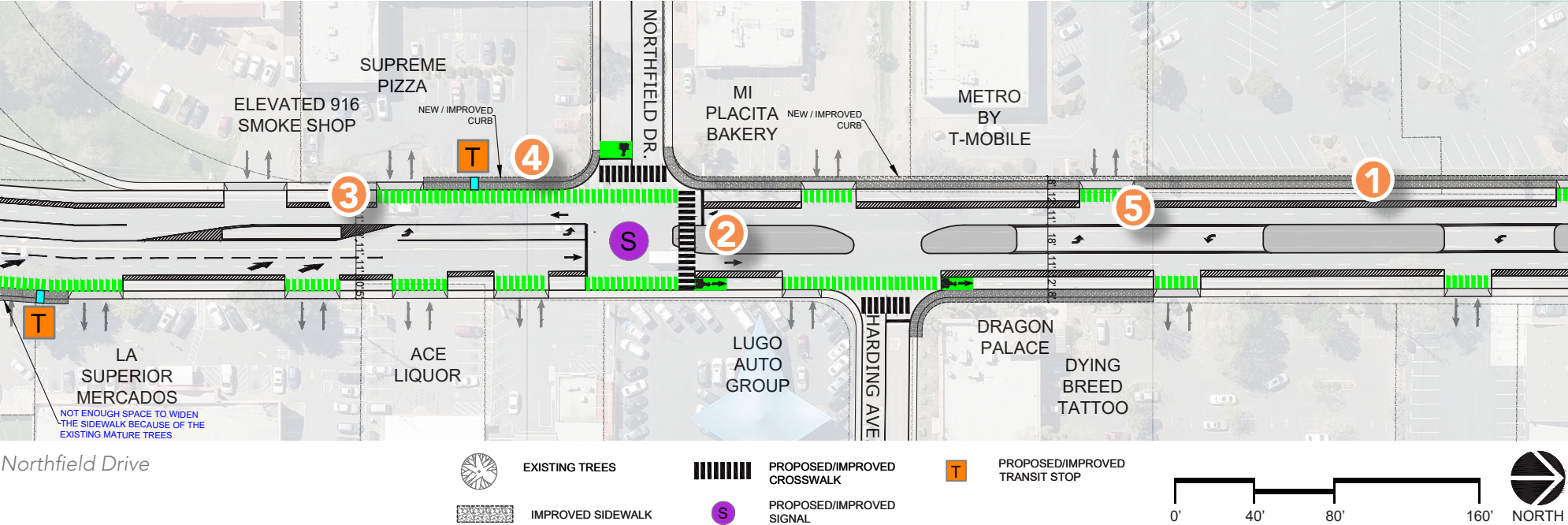
Northfield Drive is also a T-intersection that reduces travel lanes from two to one travel lane in either direction to enhance east-west connections for people walking and bicycling. This includes widened sidewalks on the west side of the street adjacent to shopping strips, and a new pedestrian signal and crosswalk at Northfield Drive on the north side of the street. For people bicycling, separated bikeways will continue through this intersection. Transit facilities are also improved by positioning transit stops closer to crosswalks.

The median has also been designed to incorporate proper turning movement of all vehicles, and median cut-throughs are provided to maintain vehicular business access. A wide center median will also be added to provide a pedestrian refuge for people accessing retail on both sides of the road.



Key map - Northfield Drive

- 1 New continuous sidewalks
- 2 New crosswalks with pedestrian signal
- 3 New separated bikeways
- 4 Enhanced transit facilities
- 5 1 travel lane in each direction



Northfield Drive

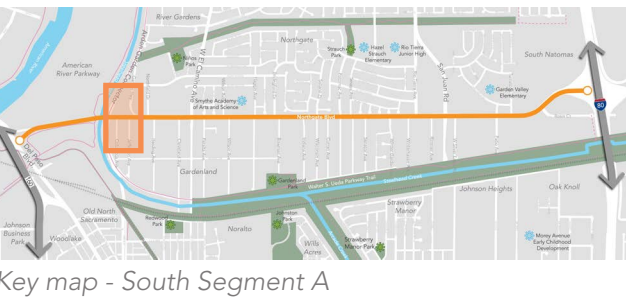
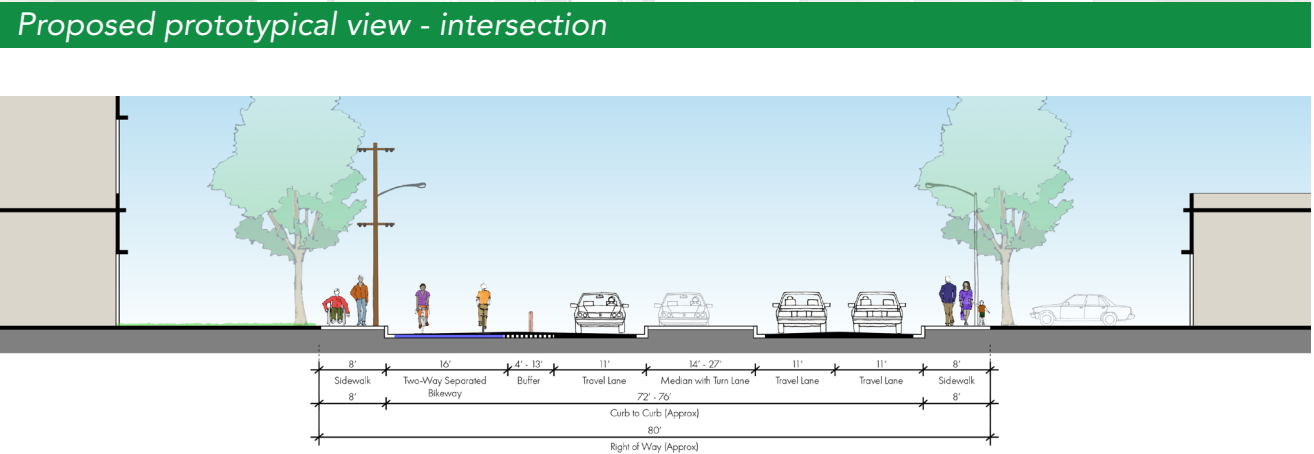
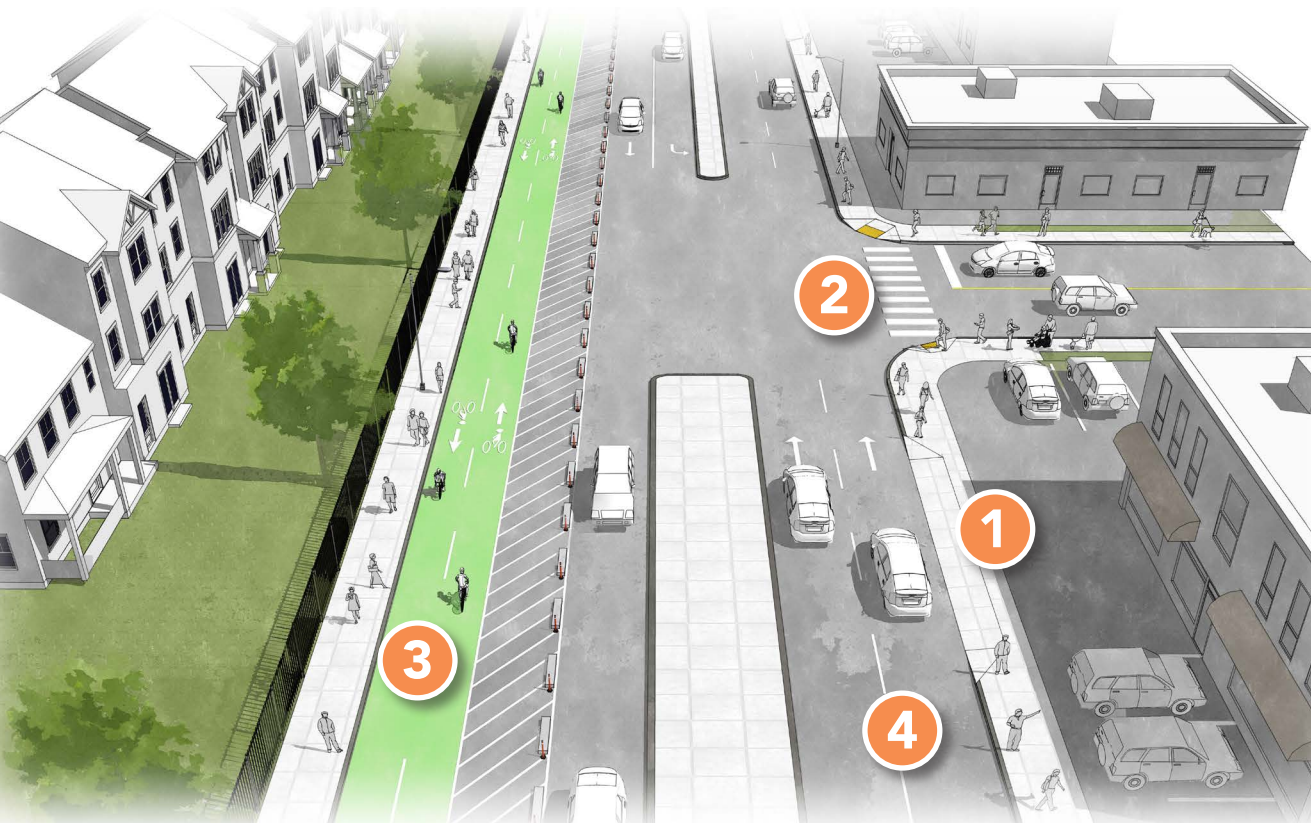
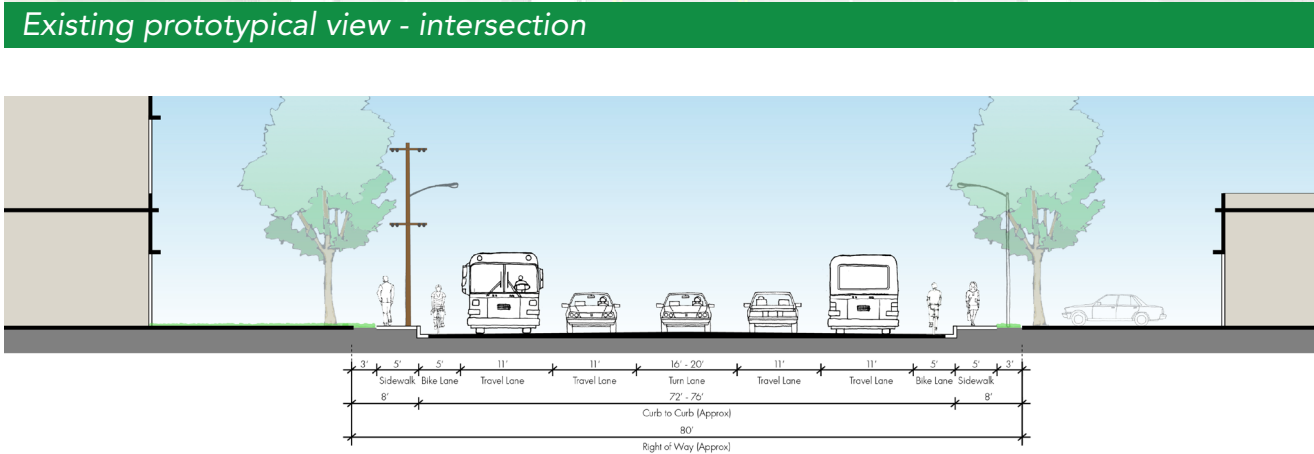
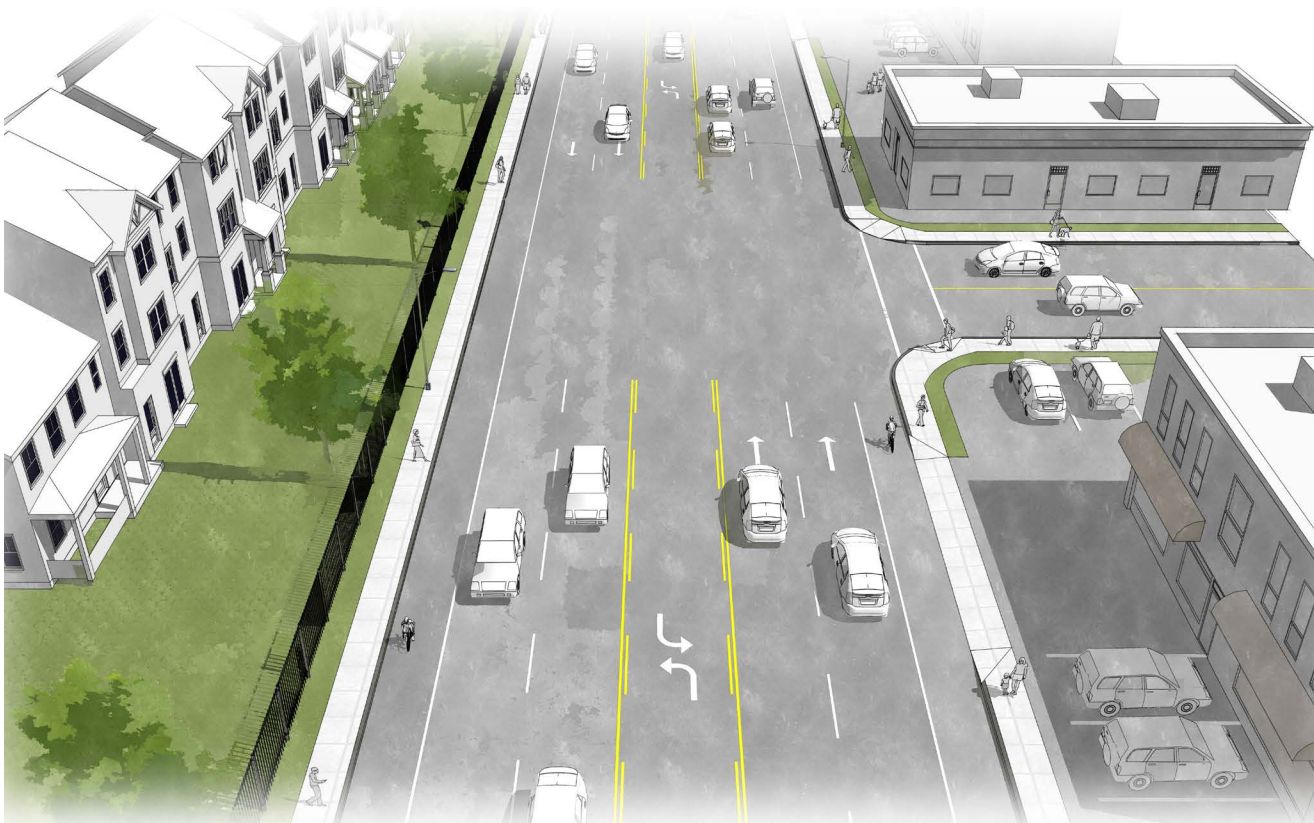
SOUTH SEGMENT A

Proposed Design Concepts - Two-Way Separated Bikeway

Between San Juan Road and Garden Highway

The roadway lanes are reconfigured to 11-foot standard width travel lanes, with travel lanes that transition from one to two lanes as we go further South, that can accommodate buses, and creates space for a two-way separated bikeway on the west side of the street to further improve connectivity with adjacent neighborhoods. The reconfiguration also allows for a wider physical median in the center of the road and wider sidewalks. Transit stops are improved with bus shelters, adequate sidewalk space for ADA compliance, and other supportive amenities. Additionally, existing signal times are improved by synchronizing with vehicle traffic.

- 1 New continuous sidewalks
- 2 Improved existing crosswalks
- 3 Two-way separated bikeways (cycle-track)
- 4 1-2 travel lane in each direction with left turn lanes



Between Arden Garden Connector to Garden Highway

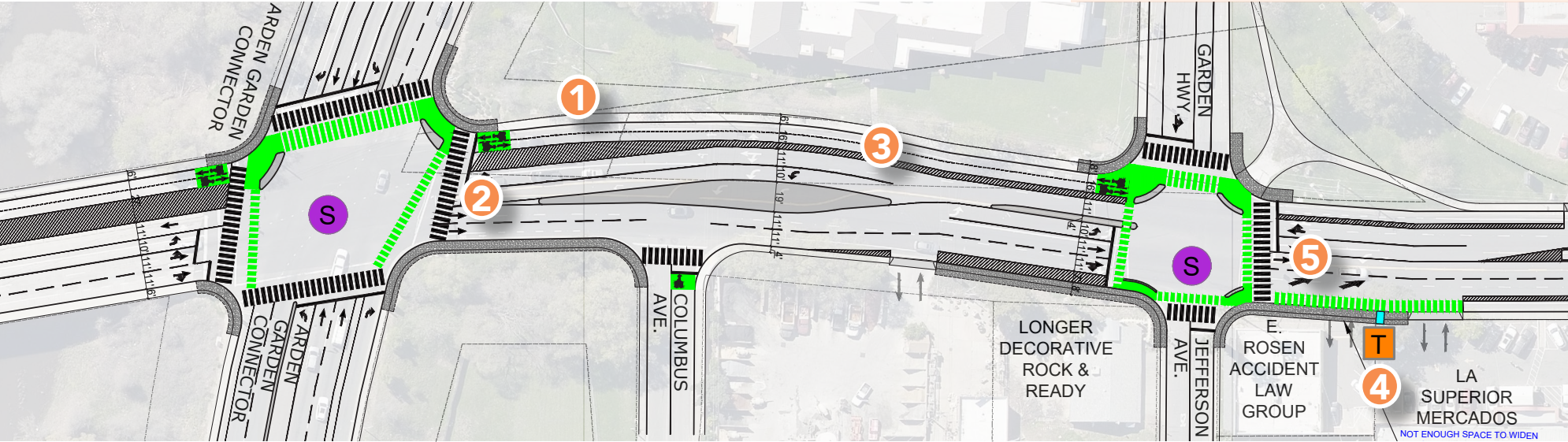
The design concept includes new continuous and ADA compliant sidewalks on both sides of the street. For areas where there are gaps in the sidewalks, new sidewalks will be added. Existing signals and crosswalks will be improved to enhance pedestrian safety. A two-way cycle track will be located on the west side to enhance comfort and connection for people bicycling to and from the Niño’s Parkway and the American River Parkway.

Additional proposed improvements include wider medians that separate people driving from people walking and bicycling and provide opportunities for future landscaping improvements, and travel lanes transitioning from one lane to two lanes with necessary left turn lanes that allow proper turning movement and access to adjoining properties.



Key map - Arden Garden Connector to Garden Highway

- 1 New continuous sidewalks
- 2 New pedestrian signal with crosswalk
- 3 New separated bikeways
- 4 Enhanced transit facilities
- 5 2 travel lanes in each direction



Arden Garden Connector to Garden Highway



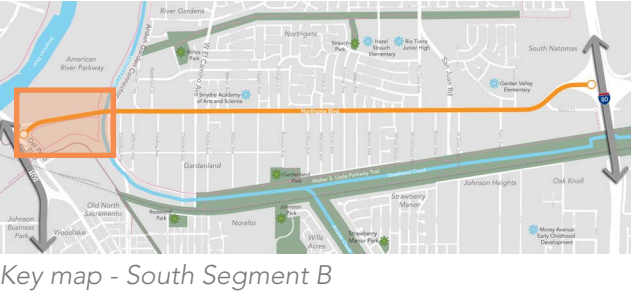
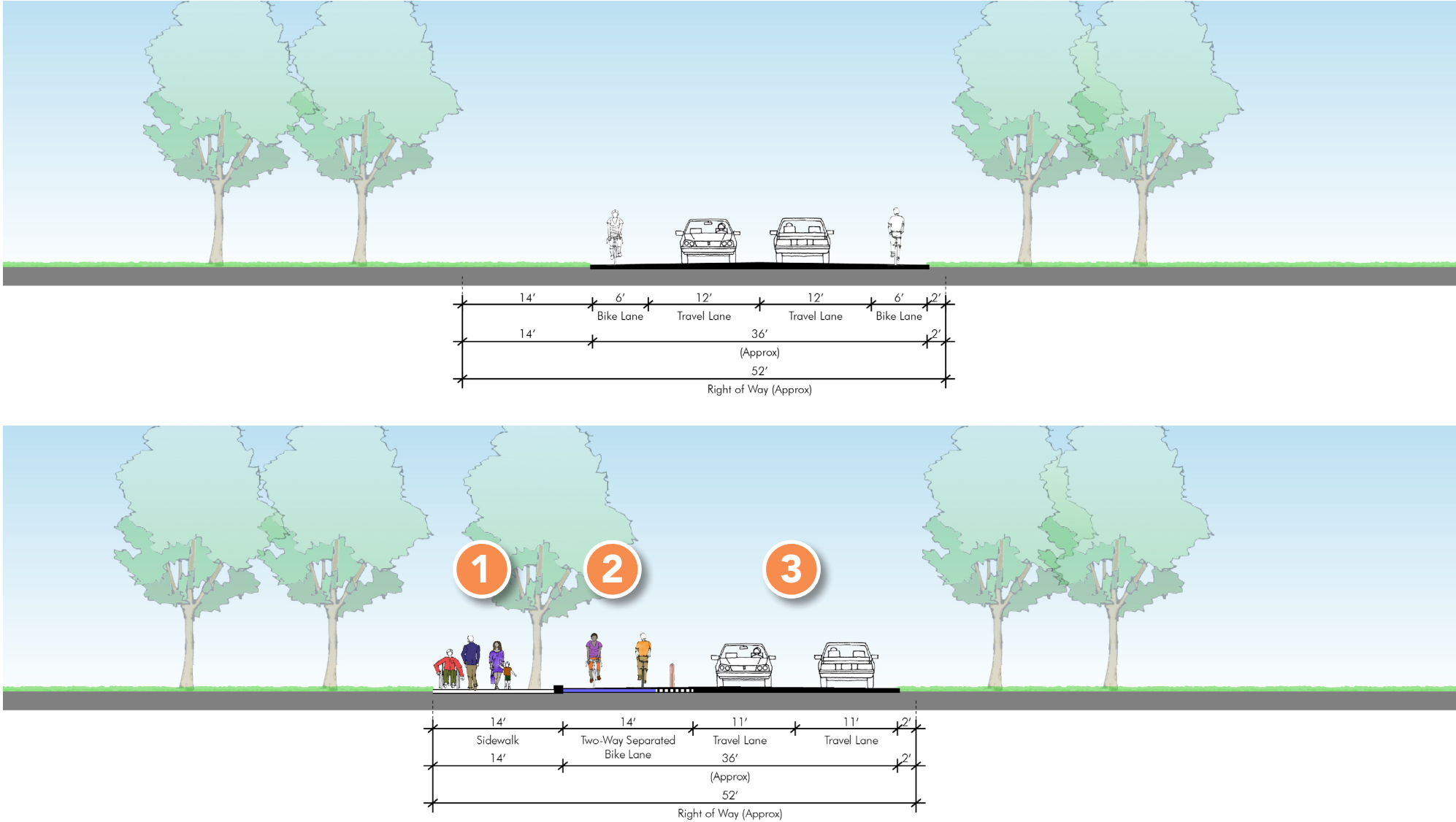
SOUTH SEGMENT B

Proposed Design Concepts - Two-Way Separated Bikeway

Between Arden Garden Connector and Del Paso Boulevard

The roadway lanes are reconfigured to 11-foot standard width travel lanes, with one lane in each direction, and continues the two-way separated bikeway on the west side of the street to further improve connectivity with adjacent neighborhoods. There are no signals in this segment except at Arden Garden Connector.

- 1 New continuous sidewalks on west side
- 2 Two-way separated bikeways (cycle-track)
- 3 Reduced travel lane widths for traffic calming



Riverdale Midblock

Going further south towards Arden Garden, the two-way separated cycle track continues on the West side of the street until Del Paso Boulevard. The new concept proposes improved existing signals and crosswalks, new and wider sidewalks on the west side, a two-way cycle track on the west side, and maintained travel lanes with reduced lane widths to accommodate the cycle track and wider sidewalks.



Key map - Riverdale Midblock

- 1 New continuous sidewalks on west side
- 2 Two-way separated bikeways (cycle track)
- 3 Reduced travel lane widths for traffic calming



Riverdale Midblock



5. IMPLEMENTATION

IN THIS CHAPTER

- PROJECT COST
- MAJOR COST CATEGORIES
- IMPLEMENTATION PATH

PROJECT COST

To bring a project of this magnitude from concept to reality will cost a significant amount of money. Projects like Northgate Boulevard rely on local funds and grants from the state and federal government to take this concept further. There are many grant sources available, but competition is strong and grants still require matching local funds.

State and federal funds are made available through competitive funding rounds which are typically announced every two to three years. Typical awards for corridor improvements range from three to nine million dollars, depending on the administering agency. When the grant programs become available, the City will identify a segment for which to request funding based on the program and its typical award amounts. For this planning document, the corridor has been described as three different segments, but the actual implementation phasing may occur differently based on the funding being pursued.

Construction

The construction cost of \$70,110,000 was estimated based on the preliminary design concepts and recent construction bid unit costs with an escalation factor to account for future construction. Major cost items include roadway, bike, and sidewalk improvement, as well as new traffic signals. A contingency factor was included to account for refinement of project design, changes in project details, or unforeseen changes in construction costs.

Actual project costs will be determined by surveyed base mapping, geotechnical reports, concept refinement, environmental reviews, right of way availability, project phasing, and bid conditions at the time of advertisement. Project costs would be reviewed prior to any grant application or initiation of a Capital Improvement Project to revalidate and update the assumptions in this study as necessary.

Right-of-Way

In addition to construction costs, right of way costs were assumed that include temporary construction easements for items such driveway modifications, curb ramps reconstruction, signal equipment poles and cabinets. It is assumed that the project be constructed almost exclusively within the roadway prism and right of way acquisition would not be needed along the entire project frontage. Further refinement in subsequent phases of design will more accurately identify specific right of way needs.

Delivery

Project delivery costs are included in the estimates provided in this study. These costs encompass all of the work to complete subsequent phases including preliminary engineering, environmental documentation, final design, right of way engineering, and construction oversight. These costs have been based on an analysis of historical delivery costs.

MAJOR COST CATEGORIES

Preliminary Design and Environmental Clearance

- » Conducts public and stakeholder engagement to refine the proposed concepts developed from the planning study, and ensure it meets the community and stakeholder needs.
- » Advances the engineering and design of the project to a 30% level of completion. Better defines project solutions, footprint, feasibility and costs.
- » Identifies a project’s potential impacts and mitigates significant impacts on the community and the environment.
- » Determines implementation pathways, including how the project will be phased and built.

Final Design Documentation

- » Advances the engineering and design of the project to a 60%, 90% and 100% level of design.
- » Public and stakeholder engagement continues during the final design phase, to inform the community of the proposed project and what to anticipate during construction.
- » Obtains necessary rights of way and permissions and permits to construct the project.

Construction, Inspection and Certification

- » Includes hiring contractors and building the work to city standards.
- » Includes opportunities for local contractors and businesses to work on the proposed project and what to anticipate during construction.

IMPLEMENTATION PATH

The City will continue to engage with the community in the future phases of design and implementation and ensure their vision for Northgate Boulevard continues to advance. **Figure 5.1** outlines the implementation path that will allow for the delivery of improvements that the community deserves.

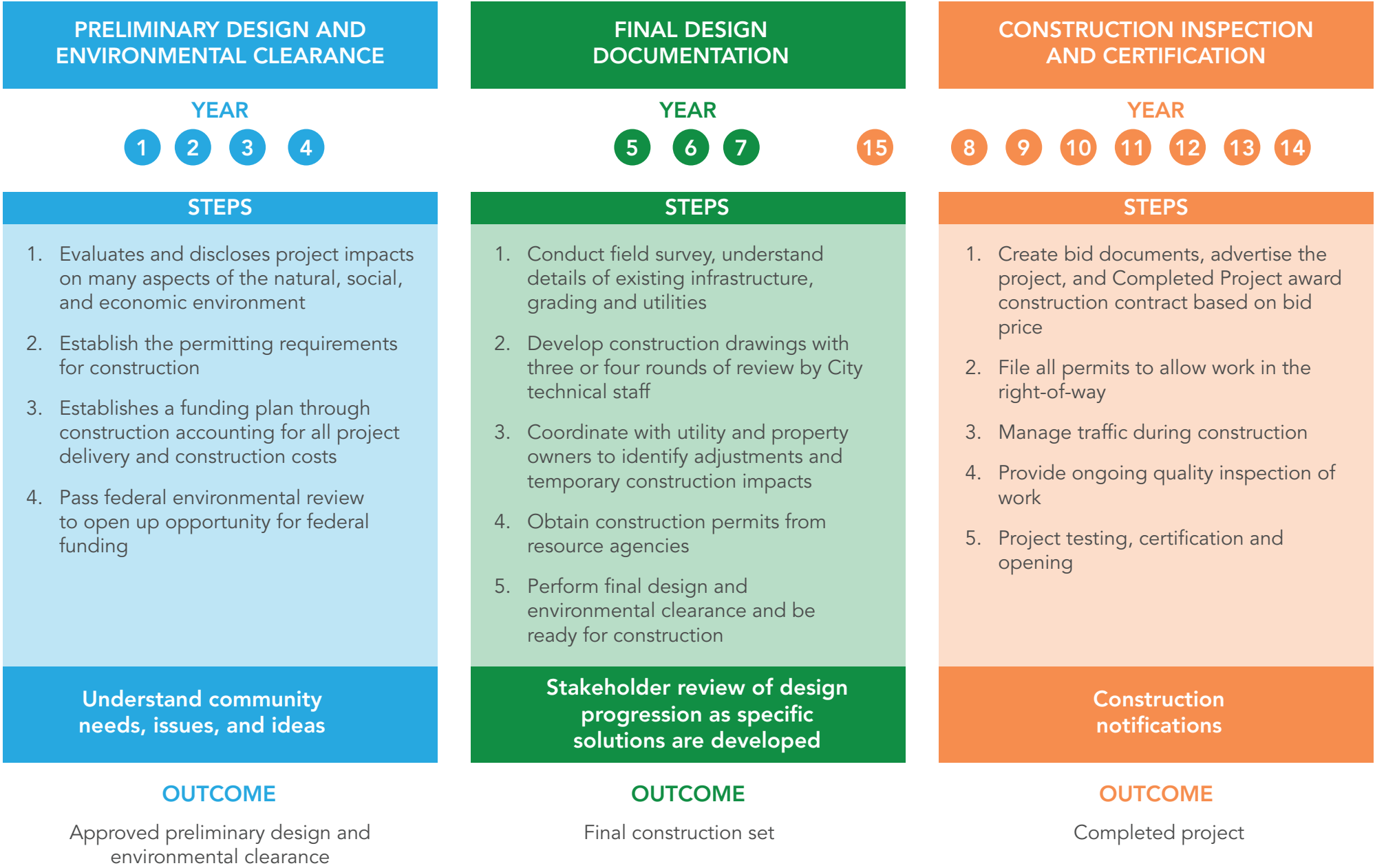


FIGURE 5.1 IMPLEMENTATION PATH