Los Angeles County
Metropolitan Transportation Authority

Supplemental Alternatives Analysis

RAIL TO RIVER SEGMENT B

June 2022

Metro


STOP

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Los Angeles County Metropolitan Transportation Authority (Metro)

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City of Commerce

City of Huntington Park

City of Los Angeles

City of Maywood

City of Vernon

County of Los Angeles

ACRONYMS

AA – Alternatives Analysis

AT – Active Transportation

ATC – Active Transportation Corridor

ATSP – Active Transportation Strategic Plan

CAC – Community Advisory Committee

CDP – Census-Designated Place

EFC – Equity Focus Community

HAWK – High-Intensity Activated Crosswalk Beacon

HPI – California Healthy Places Index

LA River – Los Angeles River

LAX –Los Angeles International Airport

LOS – Level of Service

LPA – Locally Preferred Alternative

LPI – Leading Pedestrian Interval

LRT – Light Rail Transit

LTS – Level of Traffic Stress

MAT – Metro Active Transportation

ROW – Right of Way

SAA – Supplemental Alternative Analysis

TIMS – Transportation Injury Mapping System

TWG – Technical Working Group

UP – Union Pacific Railroad

VMT – Vehicle miles traveled

WSAB – West Santa Ana Branch

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EXECUTIVE SUMMARY

INTRODUCTION

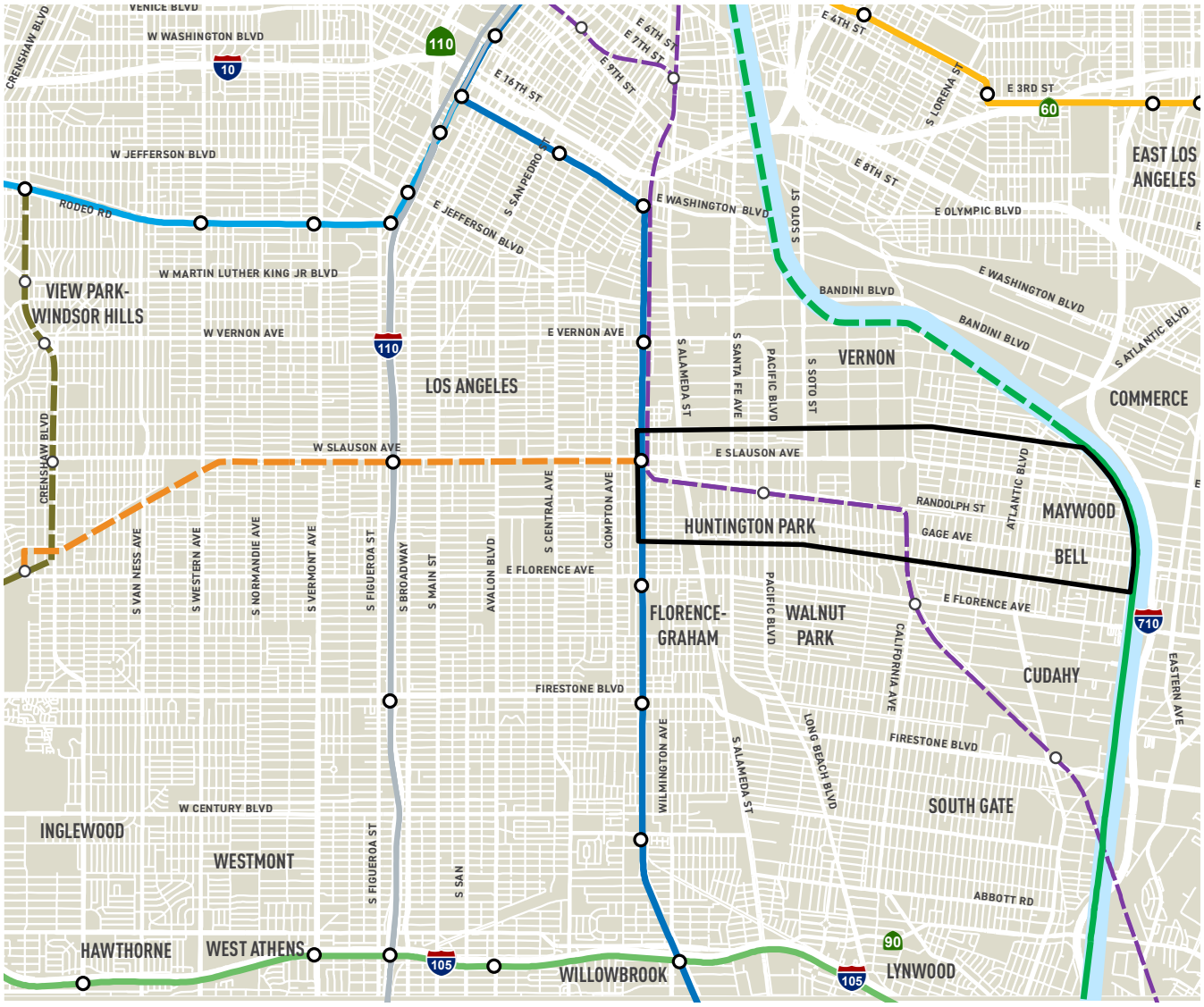
Background

The Rail to River Active Transportation Corridor (ATC) Project is the eastern segment (or "Segment B") of the larger east-west Rail to Rail/River ATC. Segment A of the project is referred to as "Rail to Rail" because it connects the future Metro K Line (Crenshaw/LAX) Fairview Heights Station to the Metro A Line (Blue) Slauson Station (approximately 6.4 miles). Segment B is referred to as "Rail to River" because it extends the project an additional 4.3 miles east from the Metro A Line to the LA River path, traversing the community of Florence-Graham (unincorporated area County of Los Angeles), as well as the Cities of Huntington Park and Bell (Figure Ex–1).

Segment B of the Rail to River project will provide improved active transportation options for regional connectivity and improved access to jobs, education, health, and other recreational activities. Through its connections to the Metro J Line (Silver) and K Line via Segment A, and direct connections to the Metro A Line and the LA River path, Segment B will create a critical connection for communities to access important regional destinations including downtown Los Angeles, the City of Long Beach, and the Los Angeles International Airport (LAX).

In 2017, Metro concluded the Segment B Alternatives Analysis (AA), which analyzed four different alternatives: Malabar; Utility Corridor; Slauson Avenue; and Randolph Street (Figure Ex–2). The Metro Board of Directors adopted Randolph Street as the Locally Preferred Alternative (LPA) for Segment B, which included a Class I shared-use bike and pedestrian path within the existing street median owned and operated by Union Pacific Railroad (UP). The West Santa Ana Branch (WSAB) Transit Corridor (light rail project) is also planned along Randolph Street, sharing approximately 2.3 miles with the Segment B LPA. Technical analyses of the WSAB and the original Randolph Street LPA determined that the existing UP right-of-way (ROW) could not accommodate both projects. The proposed Class I shared-use path along the Randolph Street median is no longer feasible, resulting in the need for this study.

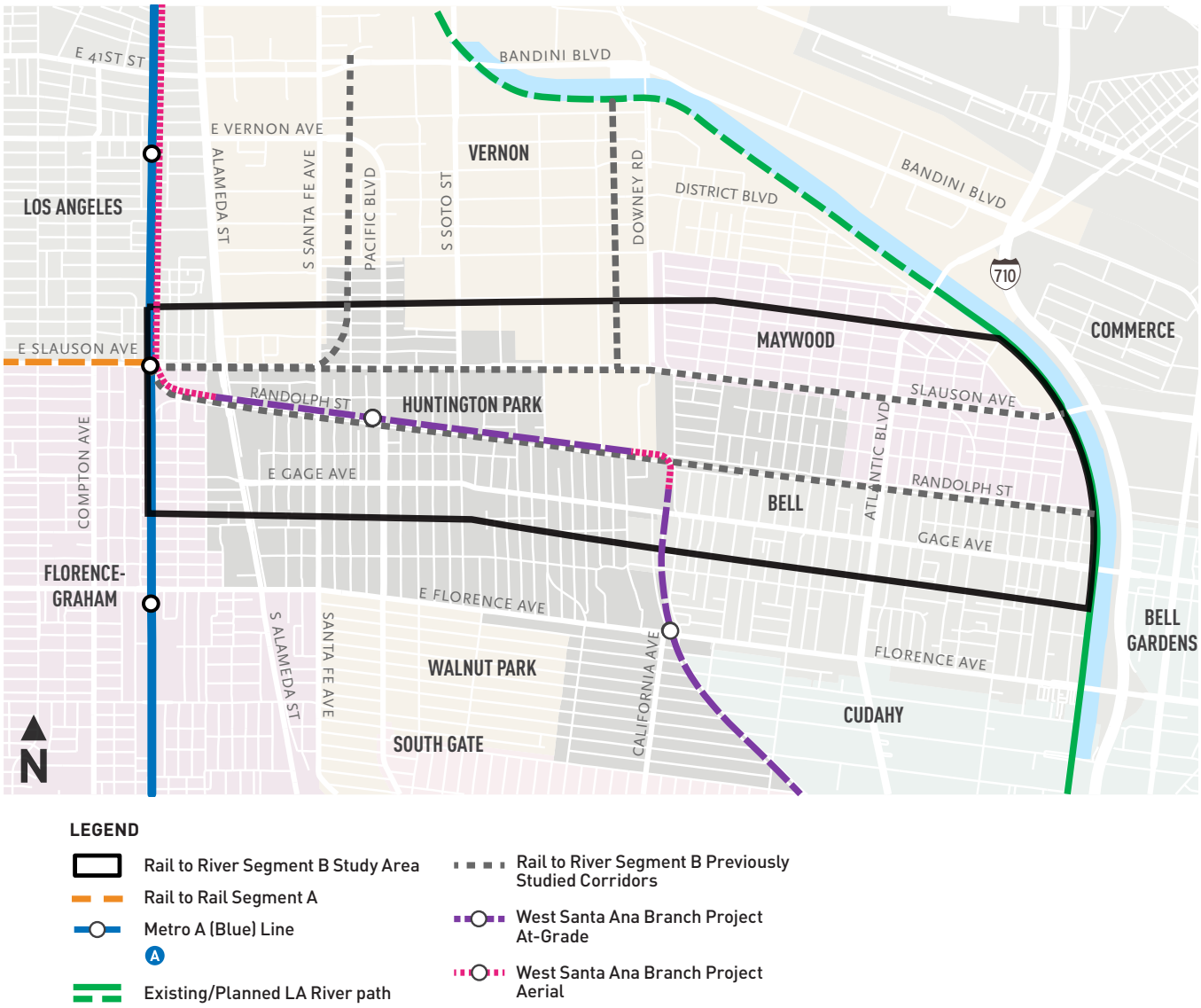
Figure Ex–1. *Rail to Rail/River Active Transportation Corridor*



LEGEND

- Rail to River Segment B Study Area
- Rail to Rail Segment A
- Metro Rail Line & Station (A C E L J)
- Existing/Planned LA River path
- West Santa Ana Branch Project

Figure Ex–2. *Segment B Study Area and Previously Studied Alternatives*



LEGEND

- Rail to River Segment B Study Area
- Rail to Rail Segment A
- Metro A (Blue) Line
- Existing/Planned LA River path
- Rail to River Segment B Previously Studied Corridors
- West Santa Ana Branch Project At-Grade
- West Santa Ana Branch Project Aerial

PURPOSE OF STUDY

The intent of the Rail to River Segment B Supplemental Alternative Analysis (SAA) study was to re-evaluate Randolph Street as the LPA and/or identify and evaluate any other potential active transportation alternatives that would continue to provide connections from the Slauson A Line station to the LA River.

The SAA describes the evaluation and screening process used to develop and evaluate a set of four viable project alternatives. On-going stakeholder input throughout the process was also key in developing the four alternatives and recommendations, including input from the affected cities along the corridor, the general community at large, and a special project Community Advisory Committee (CAC) and Technical Working Group (TWG). While Metro led the early planning and SAA effort, the local jurisdictions will be responsible for the implementation of Segment B.

Purpose and Need

This project aims to identify an alignment that will provide a safe, comfortable, and continuous active transportation route between the Metro A Line (Blue) Slauson station and the LA River path, enhancing mobility and regional connectivity for local communities.

The Segment B SAA purpose and need builds upon the 2017 AA. The project team worked closely with stakeholder agencies to build consensus for the purpose and need and project goals to ensure they are still relevant for the local agencies that have jurisdiction within the project study area.

The project goals are shown in Table Ex–1.

Based on input from stakeholders and an analysis of existing conditions in the study area, this ATC will:

- Provide investments in Equity Focus Communities
- Help people adapt to a changing climate and support an integrated regional development pattern and transportation network
- Support regional and local land-use and active transportation policies including increased access and improved safety and mobility
- Provide safer access for people walking and bicycling to employment centers and transit
- Provide safer active transportation facilities in a heavily used auto and truck-oriented corridor
- Reduce greenhouse gas emissions and improve air quality
- Increase regional mobility options
- Complete regional walking and bicycling connections for Metro's ATC from Rail to Rail/River

Table Ex–1. *Project Goals*

Goal	Description
Safety 	Provides a safe and comfortable route
Access 	Provides access to community destinations and transit
Sustainable Mobility 	Reduces vehicle miles traveled (VMT) by providing active transportation route options
Equity 	Supports community needs
Viability 	Is cost effective and easy to implement and maintain

CONTEXT

Segment B Study Area

The Rail to River Segment B study area covers an approximately 4.3-square-mile area between the Metro A Line Slauson Station and the LA River (Figure Ex–3). The study area is bounded by the cities of Vernon and Maywood to the north, the cities of Huntington Park and Bell to the south, the LA River to the east, and the Metro A Line Slauson Station (unincorporated area of Los Angeles County) to the west. The WSAB light rail transit (LRT) project is planned to travel through the study area, first north along Salt Lake Avenue and, then west along Randolph Street where it will primarily operate at-grade prior to reaching the Slauson Station.

Approximately 73,000 people live within the study area, or about 16,850 per square mile. The highest concentrations of population are located in two distinct areas, on the west side of the study area near downtown Huntington Park and on the east side of the study area within the cities of Bell and Maywood.

Over 715,000 people live within 3 miles of the study area, or approximately 13,275 per square mile. Because Segment B will connect to both the LA River path as well as numerous transit lines, it will provide access to local and regional destinations for residents beyond those who live within the study area.

Equity Platform

The Rail to River Segment B SAA uses Metro's Equity Focus Communities (EFCs) to help identify where populations, that may have specific mobility needs or have historically been disadvantaged, live within the study area.

Metro's framework to identify EFCs, or those communities that are most heavily impacted by gaps in equity in Los Angeles County, uses the following thresholds:

- At least 40% Low Income (those with annual incomes of $35,000 or less) and
- 80% People of Color or 10% Zero Car Access

Based on the EFC components and thresholds, the majority (85%) of the study area qualifies as an EFC (Figure Ex–4). The Rail to River Segment B (ATC) will close a critical transportation gap for these communities, providing access to major regional destinations, employment centers, and other community destinations by offering a safe connection to the LA River path, the Metro A Line (Blue), and the future WSAB light rail corridor.

Figure Ex–3. *Segment B Study Area*

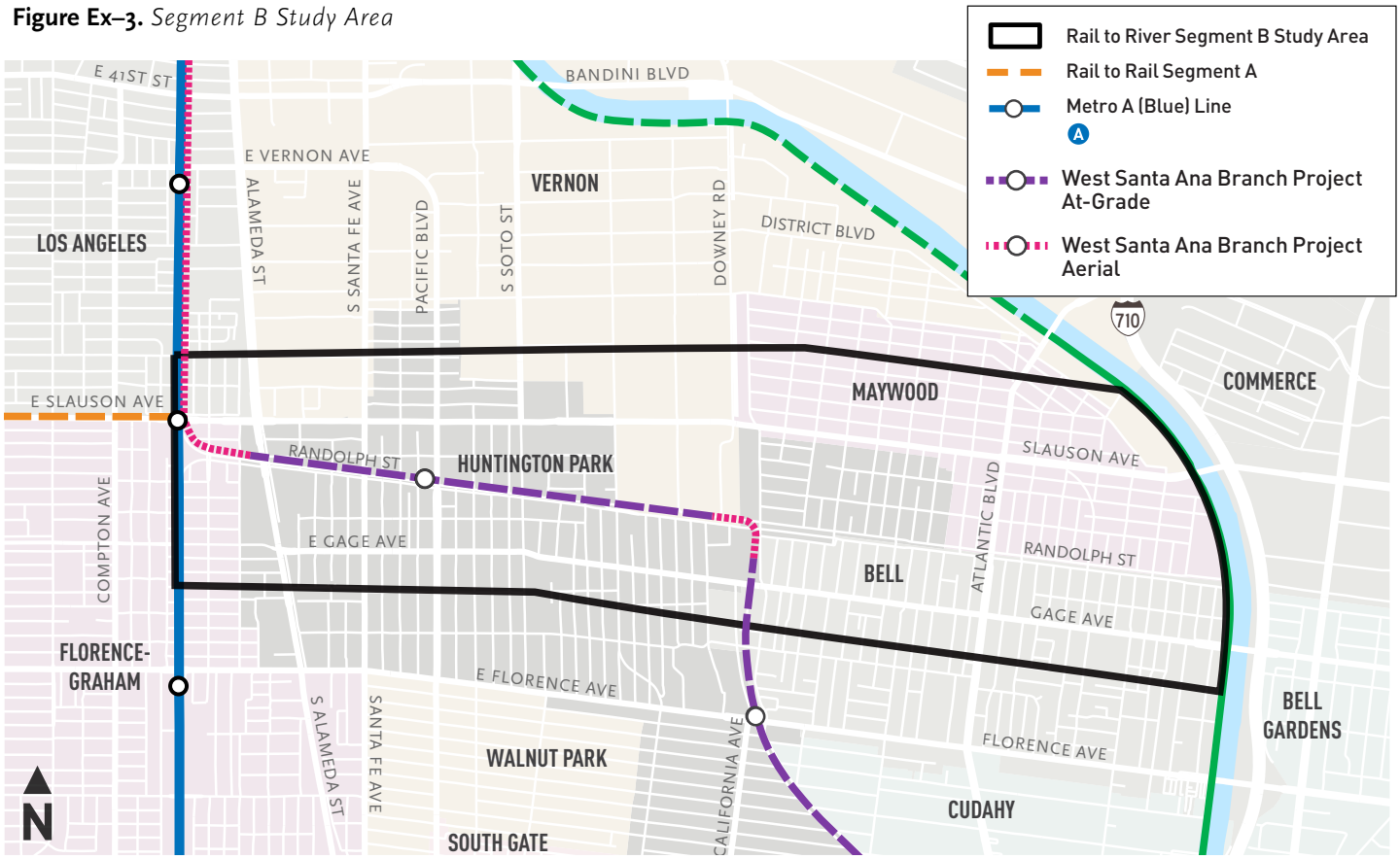
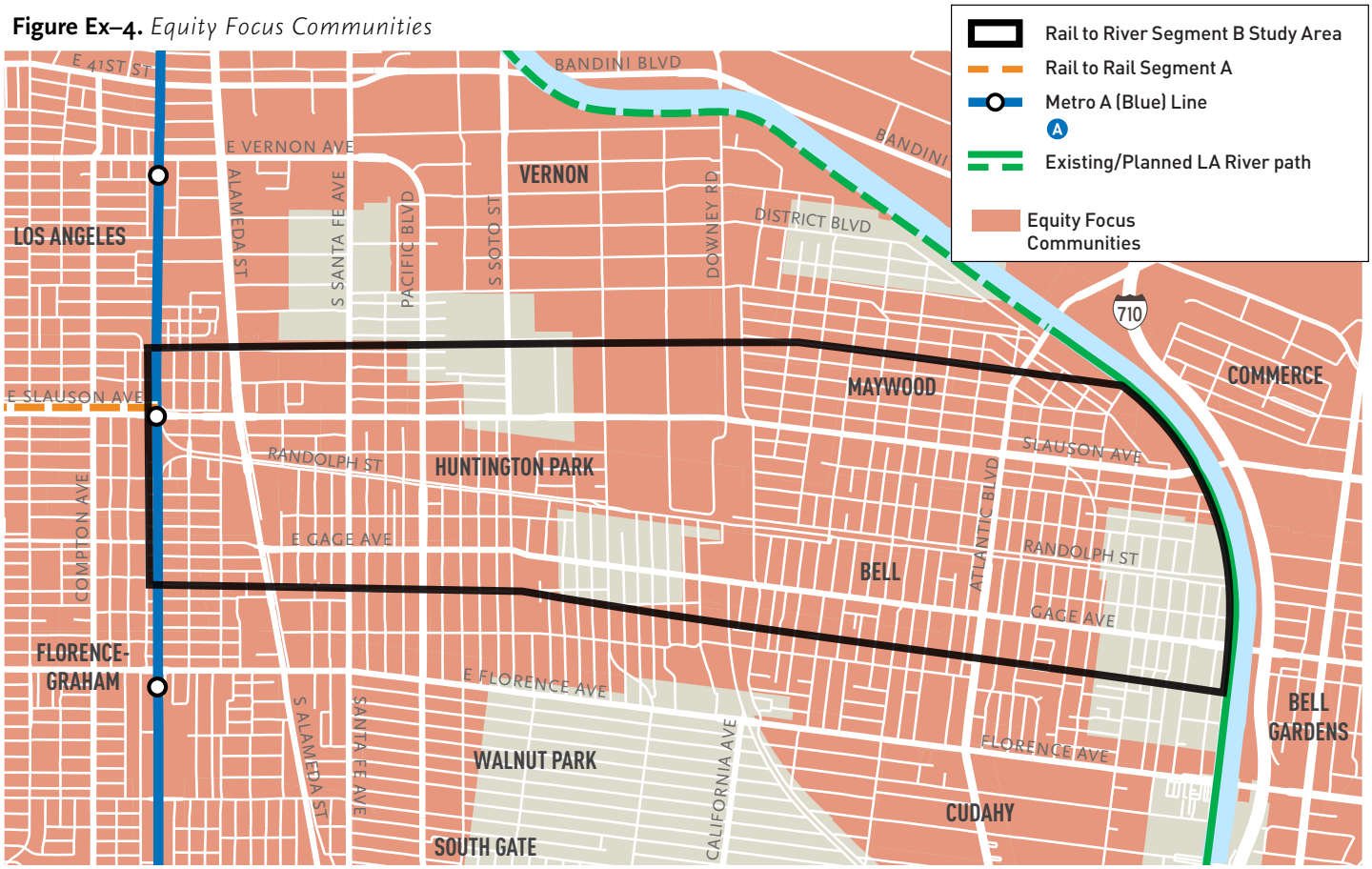


Figure Ex–4. *Equity Focus Communities*



Other Related Projects

There are several related regional and local plans and projects that influenced the Segment B SAA. The most notable regional project is the West Santa Ana Branch as well as projects funded through the Metro Active Transport (MAT) Cycle 1 Program.

West Santa Ana Branch (WSAB)

The WSAB Transit Corridor project will connect southeast Los Angeles County with downtown Los Angeles via a 19-mile light rail transit (LRT) line. The northern alignment of the WSAB project travels north through the study area parallel to Salt Lake Avenue and then west along Randolph Street's center median (Union Pacific (UP) ROW) to the A Line Slauson Station. The alignment will include two new at-grade light rail tracks along with one existing at-grade freight line track. The WSAB will include two stations within the study area, one at Pacific/Randolph and the other at the existing A Line Slauson Station.

Currently, Randolph Street consists of two travel lanes in each direction in most sections, along with parking and a wide center median with a UP freight rail line, where a Class I shared-use bike path was initially proposed (Figure Ex–5). The posted travel speed limit ranges between 25 to 35 mph along the corridor. It is anticipated that the WSAB will require that Randolph Street be reconfigured (Figure Ex–6) in order to accommodate the tracks, which will be at-grade and separate from the UP tracks in the center median. This configuration limits the ability for a dedicated bikeway facility along the shared section with both the WSAB and Rail to River Segment B projects. Additional traffic safety measures and roadway improvements to safely allow drivers and bicyclists to share one lane will be identified for future consideration. Overall, the WSAB project has the potential to transform the Randolph corridor from a car-oriented roadway to a complete street that accommodates pedestrians, bicyclists, public transit users, and drivers alike. Post-WSAB, the roadway may be able to safely allow drivers and bicyclists to share one lane.

First/Last Mile (FLM) planning for WSAB will also identify improvements along important pathways for walking, biking, or rolling to future WSAB stations. Two WSAB stations related to Segment B will include the future Pacific/Randolph and the existing Slauson A line stations.

Metro Active Transport Program

Metro Active Transport, Transit and First/Last Mile Program (also known as MAT) is a competitive grant program available to municipalities in LA County to fund improvements that expand and grow active transportation and transit connections. Key policies advanced by MAT include the Active Transportation Strategic Plan (ATSP), First/Last Mile (FLM) policy, and the Equity Platform Framework. Two specific categories in MAT are 1) First/Last Mile Priority Network around major transit stations and 2) Active Transportation Corridor Priority Network countywide. The first cycle of the MAT grant program and recommended projects were approved by the Metro Board in January 2021, which included projects for the Slauson A Line Station in the FLM category and the Randolph Corridor in the Active Transportation Corridor category.

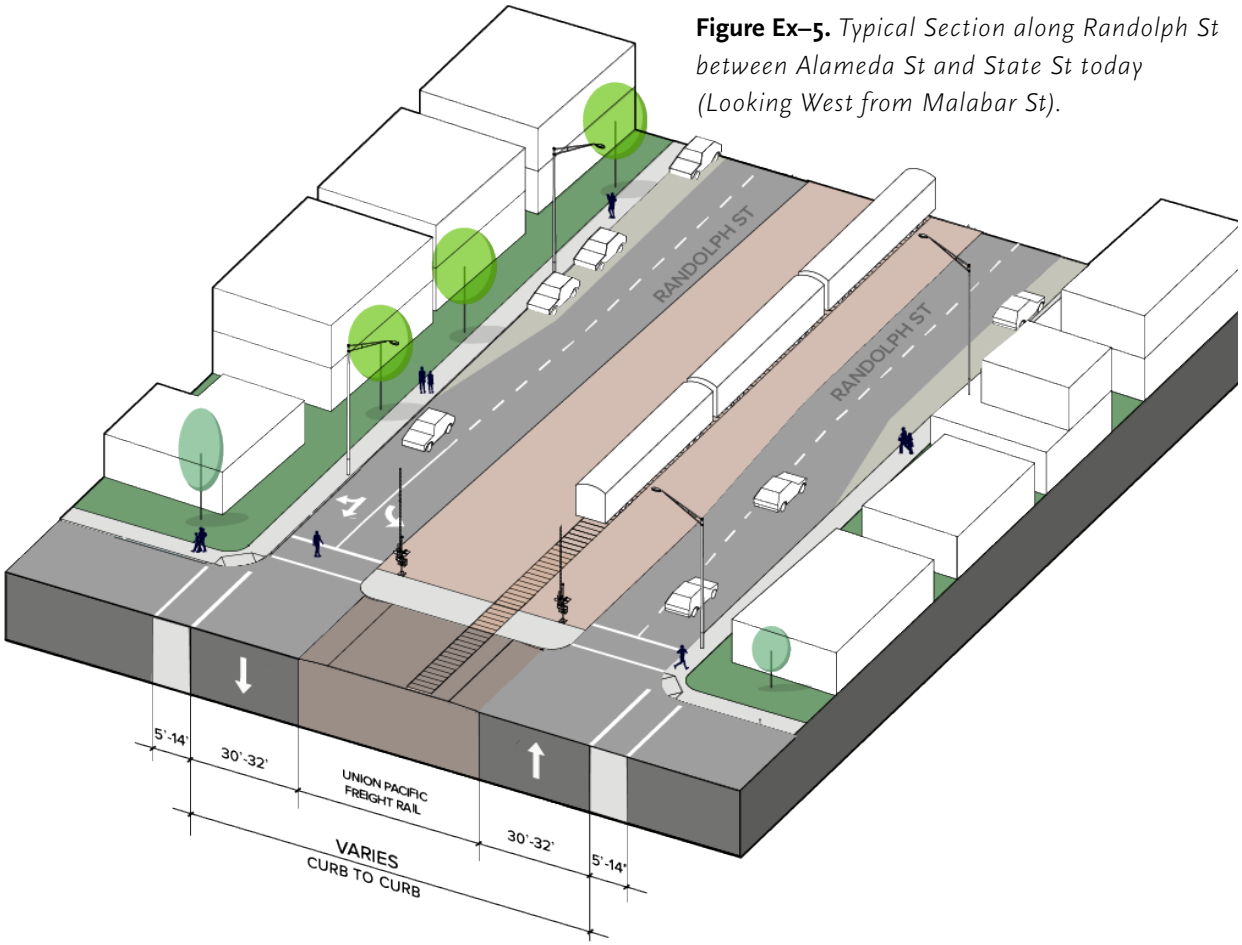


Figure Ex–5. *Typical Section along Randolph St between Alameda St and State St today (Looking West from Malabar St).*

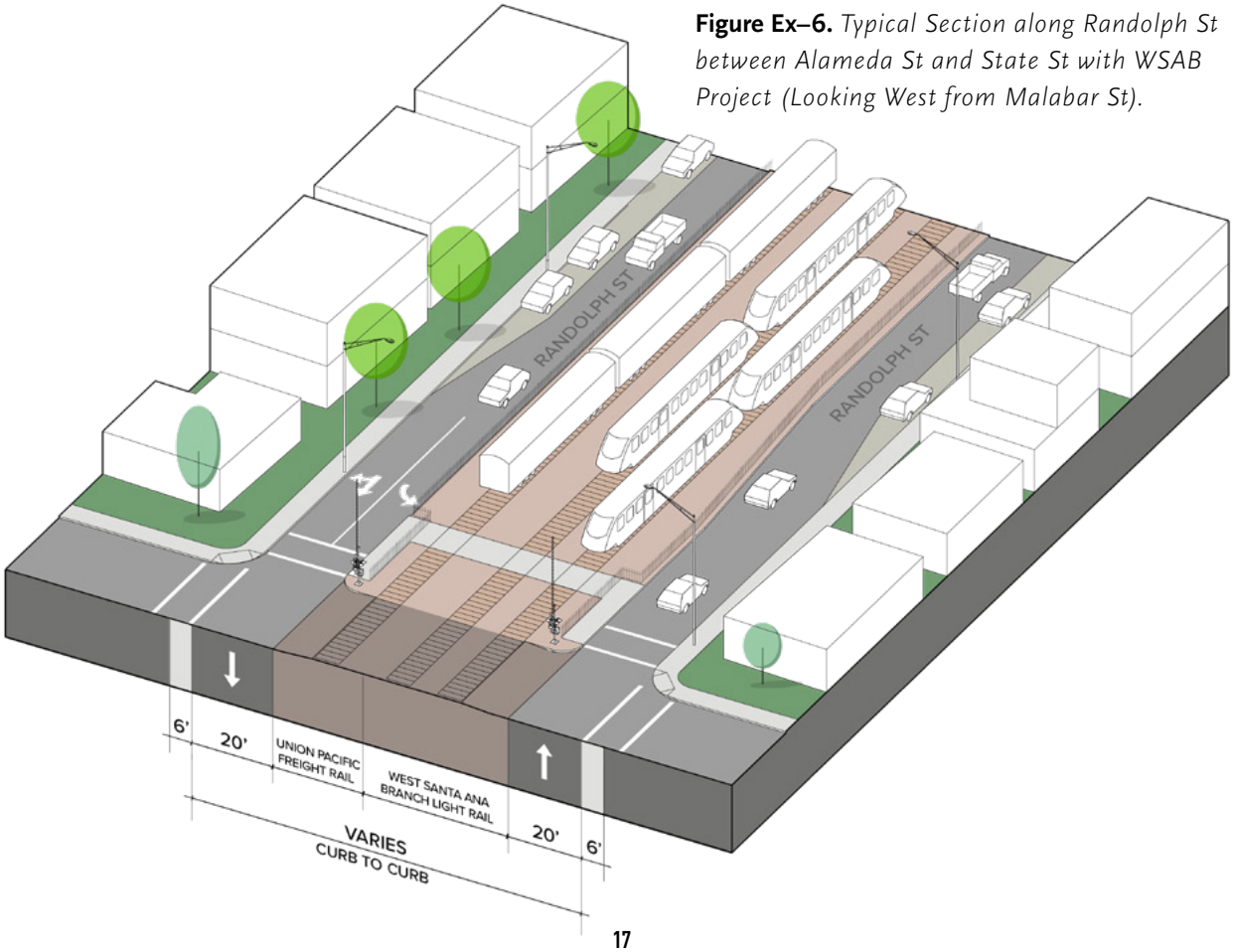


Figure Ex–6. *Typical Section along Randolph St between Alameda St and State St with WSAB Project (Looking West from Malabar St).*

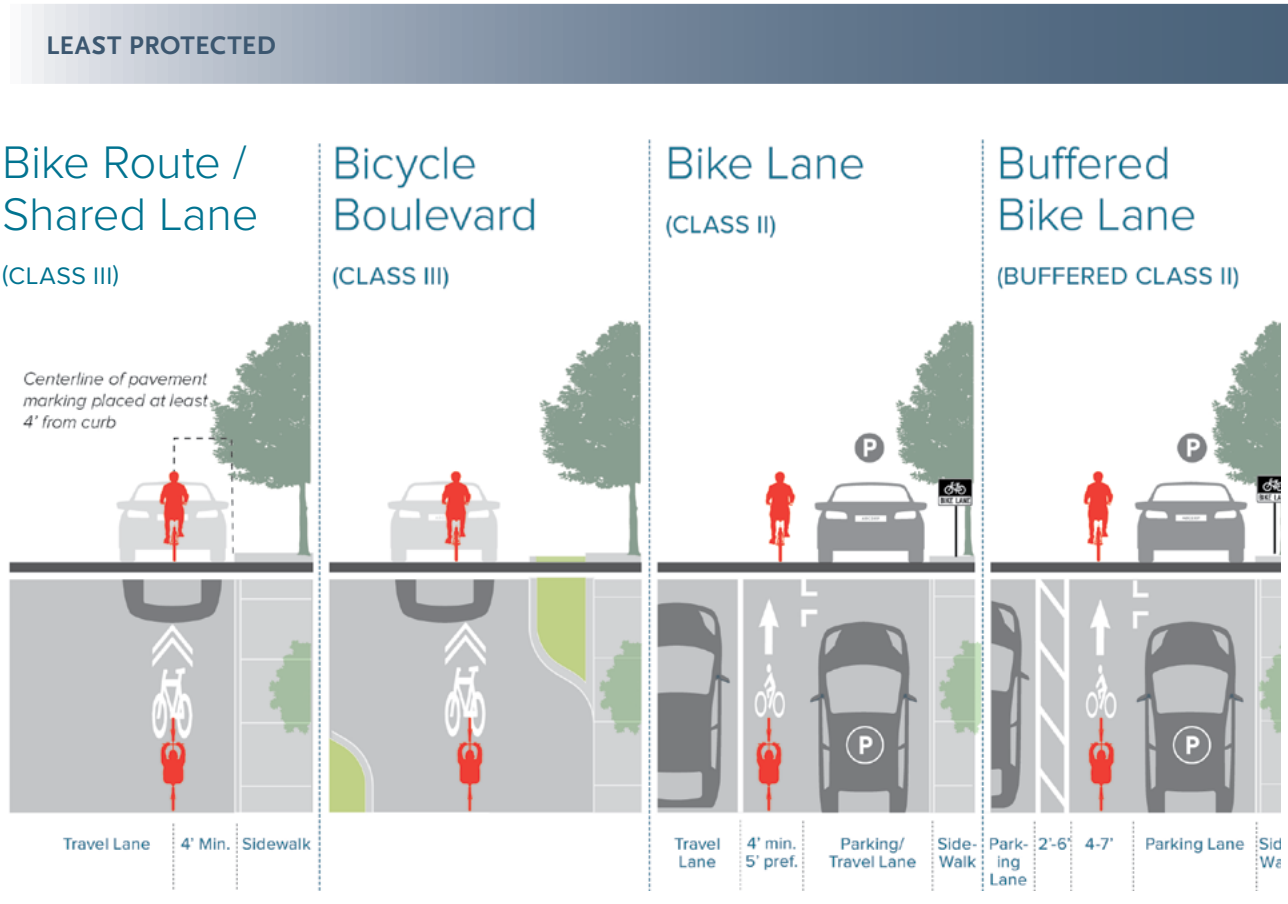
The Slauson FLM Project is led by the Los Angeles County Department of Public Works with the goal to improve pedestrian access to and from the Slauson A Line Station and to encourage active modes of transportation and the use of public transit. The Randolph Corridor project is led by the City of Commerce, in partnership with the City of Huntington Park, City of Bell, and Los Angeles County Department of Public Works. The Randolph Corridor Project proposes 7.03 miles of active transportation improvements along Randolph Street from the Metro A Line Slauson Station to the City of Commerce.

PROPOSED IMPROVEMENTS

Pedestrian Infrastructure Improvements

Segment B will be designed to accommodate people walking. This may include, but is not limited to, improvements to existing sidewalks, lighting updates, new pedestrian signals, curb treatments such as curb ramps and curb extensions, enhanced crosswalks, shade trees and landscaping, and benches and shade structures. Details on all proposed improvements are included in Chapter 1.

Figure Ex–7. *Bicycle Facility Types and Levels of Protection*

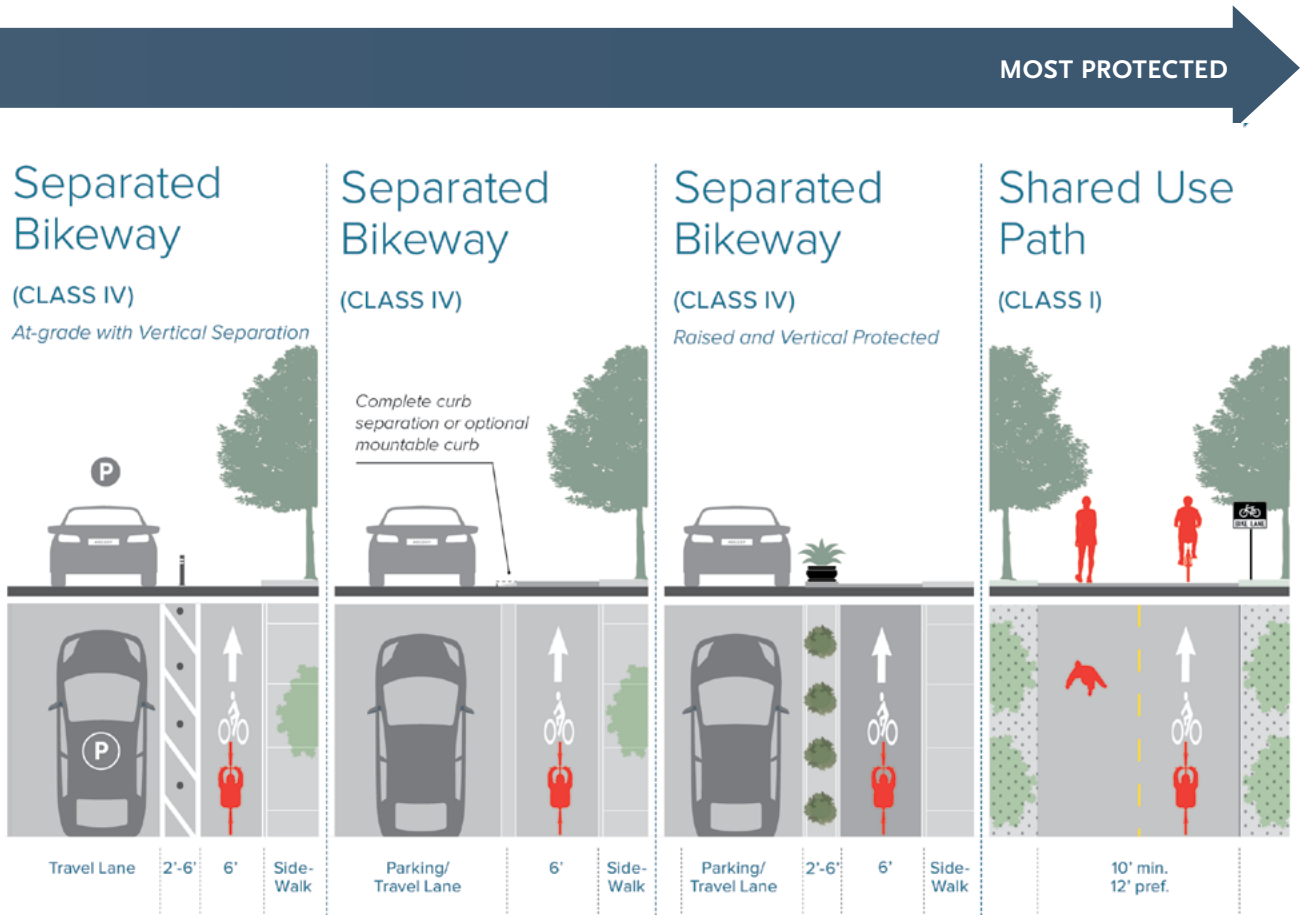


Bicycle Facility Types

A range of bicycle typologies were considered for Segment B. The project team considered Class I shared-use paths or Class IV separated bikeways with adjacent pedestrian facilities along major roadways. Along streets with low traffic volumes, Class III bicycle boulevards with traffic calming elements were also considered. Class II bike lanes or buffered bike lanes were considered where implementing Class IV bikeways would not be feasible due to traffic or parking impacts.

All on-street bicycle facility types can be implemented in the short-term using a cost-effective quick-build approach (e.g., materials such as paint and bollards). For long term solutions, more durable materials or road reconfiguration may be required.

Figure Ex–7 identifies the different bicycle facility options in order of user separation. Class I shared-use paths require the largest amount of right-of-way for the path and buffer, and were considered along existing railroad corridors.



TECHNICAL EVALUATION

Overview

The project goals set the stage for the alternatives analysis. The project team used a goal-based evaluation approach to develop and evaluate four viable project alternatives to measure how well they met the project vision and goals. Alternatives from the 2017 AA that ranked below the Randolph alternative were not brought forward because of safety concerns and ROW constraints. The project alternatives are described on page 20.

Evaluation criteria were developed to help measure how each alternative performed for each of the project goals. The criteria were used to evaluate the trade-offs between each alternative as part of the technical evaluation.

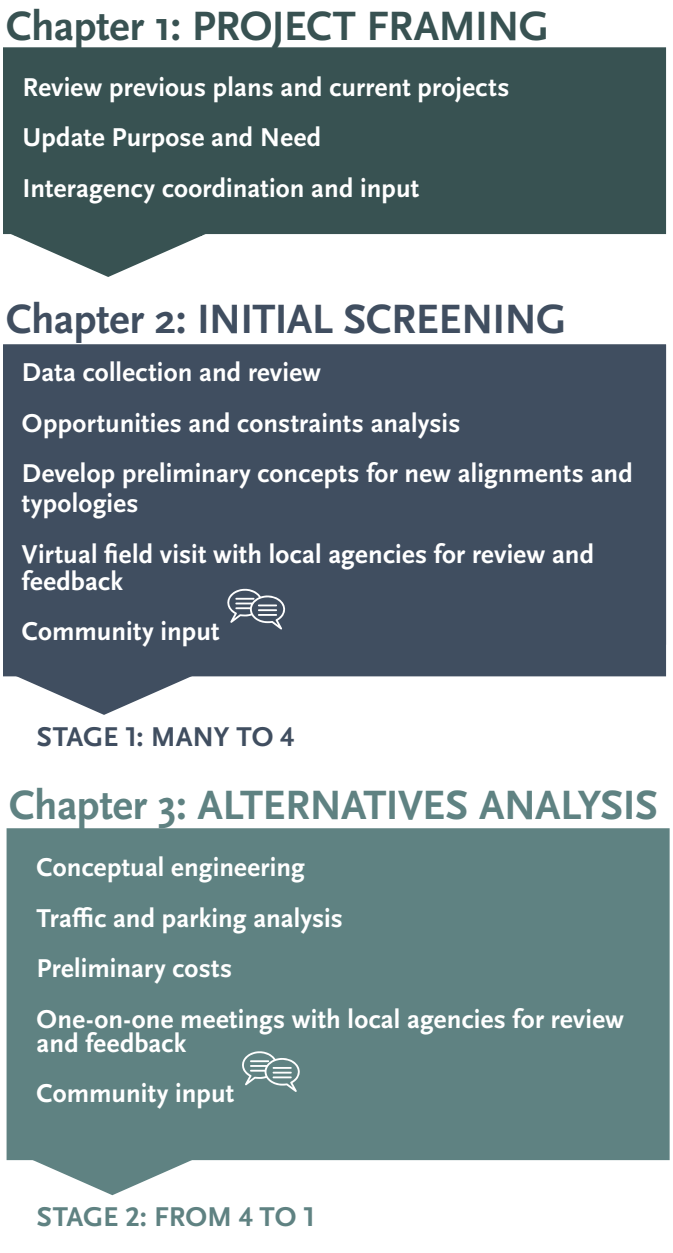
Each of the four alternatives include several trade-offs, summarized in the following pages and described in more detail in later chapters. The process used to develop and evaluate the alternatives is described in detail in Chapters 2 and 3.

Process

The Segment B SAA technical evaluation process was built upon the project goals. Screenings were conducted in two stages (Figure Ex–8). First, an initial screening examined the study area as a whole, and identified potential alignments based on previous planning efforts, current projects, existing conditions, opportunities and constraints, as well as input from local jurisdictions and the community. This first stage used Tier 1 fatal flaw criteria, such as connectivity between Slauson Station and the LA River, and connectivity to key destinations and EFCs, to help to identify alternatives for further study. Stage 1 took place in winter 2020-2021 and is described in detail in Chapter 2.

The second stage was the Alternatives Analysis which used detailed qualitative and quantitative evaluation criteria to assess the trade-offs between the four alternatives. These Tier 2 criteria measured how well the alternatives met the project purpose and need, project goals, and stakeholder and community needs. Stage 2 took place during spring and early summer 2021. Both Tier 1 and Tier 2 criteria built upon the initial criteria utilized as part of the 2017 Segment B AA study. The alternatives analysis process is described in detail in Chapter 3.

Figure Ex–8. *Technical Evaluation Process*



PROPOSED ALTERNATIVES

The four project alternatives are described in Table Ex–2 and shown in Figure Ex–9.

Table Ex–2. *Summary of Project Alternatives*

Alternative	Length	Description
1: Randolph Street	4.33 miles	Alternative 1 follows Randolph Street from the Slauson A Line (Blue) Station to the LA River. The alternative utilizes a Class III bicycle boulevard with traffic calming between Holmes Avenue and State Street where Segment B will overlap with the WSAB project. At State Street, the alternative transitions to a Class IV separated bikeway. This alternative would require the fewest changes to the existing roadway following the construction of the WSAB project.
2: Slauson/Belgrave/ Randolph	4.52 miles	Alternative 2 uses local corridors to circumvent some of the physical constraints along Randolph. This alternative begins along Slauson Avenue to Alameda Street East to Belgrave Avenue, where it utilizes a Class III bicycle boulevard to connect to Miles Avenue. It then transitions to Class II bike lanes south down Miles Avenue to a Class IV separated bikeway along Randolph Street.
3A: Holmes/Gage/ Randolph	4.99 miles	Alternative 3A utilizes Gage to circumvent the physical constraints posed by the WSAB project along the western end of Randolph Street. This option connects to Gage via Slauson and Holmes Avenues. It utilizes Class II bike lanes along Gage Avenue before connecting back up to Randolph Street at Maywood Avenue. It continues as a Class IV separated bikeway along Randolph Street to the LA River.
3B: Slauson/Holmes/ Gage	4.74 miles	Alternative 3B also utilizes Gage to circumvent the physical constraints posed by the WSAB project along the western end of Randolph Street. This option connects to Gage via Slauson and Holmes Avenues and continues down Gage to the LA River as Class II bike lanes.

Figure Ex–9. *Project Alternatives*

SUMMARY OF TECHNICAL EVALUATION

Evaluation Criteria

A series of goal-based evaluation criteria were used to evaluate the four alternatives. These criteria are summarized in Table Ex–3 and described in detail in Chapter 3. In addition to the five goals, a Feasibility / Implementation screening was used to compare the alternatives, which analyzed their potential environmental impacts, permitting & coordination needs, and funding opportunities. The Feasibility / Implementation criteria largely helped compare between different bikeway facility types to help identify top-scoring alternatives. For example, in this study, alternatives with Class I shared bike/pedestrian paths generally scored lower than alternatives that were entirely within the public ROW because they are likely to have greater environmental impacts and permitting requirements.

Trade-offs

Each of the alternatives have a number of trade-offs related to the criteria under each of the project goals (Table Ex–4). Alternatives 3A and 3B scored highest for the Safety and Access goals, as they provide an opportunity for a dedicated bikeway facility that is separated from cars and a direct connection to the many community destinations along Gage Avenue. These alternatives score lower for Sustainable Mobility and Viability, as they provide a less direct route and have more traffic impacts.

Table Ex–3. *Summary of Technical Evaluation*

Alt #	Alternative	Safety	Access	Sustainable Mobility	Equity	Viability	Feasibility / Implementation
	Goal Weight	3	2	1	2	2	1
1	Randolph	◐	◔	◕	◐	●	●
2	Slauson/ Belgrave/ Randolph	◕	◐	●	◕	●	●
3A	Holmes/Gage /Randolph	●	●	◐	●	◕	◕
3B	Holmes/Gage	●	●	◐	●	◐	●

Overall, Alternative 1 scores best for Viability. The alternative would have the fewest impacts to existing traffic operations because it would not require a lane reconfiguration. It would also have a lower cost than the alternatives along Gage Avenue, with fewer expected operations and maintenance needs. Finally, this alternative aligns best with existing planning efforts such as the MAT Randolph project. Detailed summaries of the trade-offs between the alternatives can be found in Chapter 3.

Table Ex–4. *Summary of Evaluation Criteria*

GOAL	DESCRIPTION	CRITERIA
Safety 	**Does the alternative improve safety for bicyclists and pedestrians?**	• Collision History • Degree of Separation • Intersections & Exposure to Vehicles
Access 	**Does the alternative provide access to key destinations?**	• Activity Centers • Transit Access • Access to Employment
Sustainable Mobility 	**Does the alternative provide a direct route that would help reduce vehicle miles traveled (VMT)?**	• Directness • Level of Traffic Stress • Supports Regional Active Transportation Network • Connection to LA River • User Demand
Equity 	**Does the alternative support community needs?**	• Equity Focused Communities • Community-Identified Destinations • Community-Supported Alternative
Viability 	**Is the alternative viable?**	• Traffic Impacts • Parking Impacts • Aligns with Planning Efforts • Operations & Maintenance • Capital Cost

COMMUNITY + STAKEHOLDER COORDINATION

Community Engagement

Community members provided input throughout the planning process (Figure Ex–10). The project team held three rounds of community meetings, with two meetings per round. In addition, two community surveys were issued to gather feedback beyond the community meetings. All meetings and materials were provided in both English and Spanish. Because of the COVID-19 pandemic, the majority of engagement activities were conducted virtually. However, the project team participated in three in-person community pop-up events hosted by the WSAB project team to gather community preferences on the four alternatives.

Chapter 4 details the community engagement process and the feedback received from the community.

Figure Ex–10. *Community Engagement*

6 community meetings

315 attendees at community events

3 community pop-ups

518 survey responses

2 languages

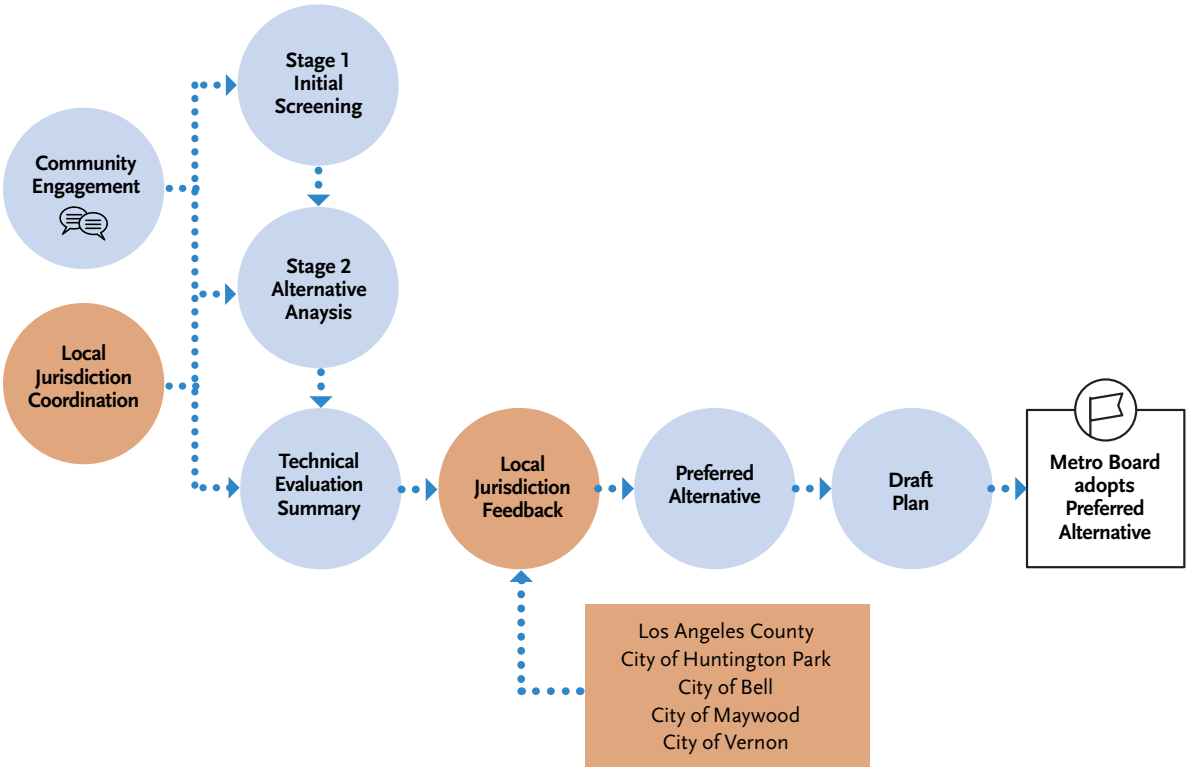
28 stakeholder meetings

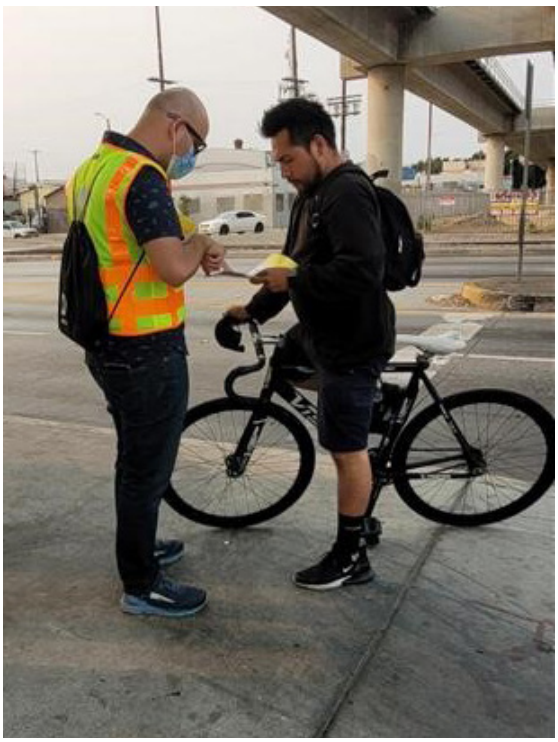
Stakeholder Coordination

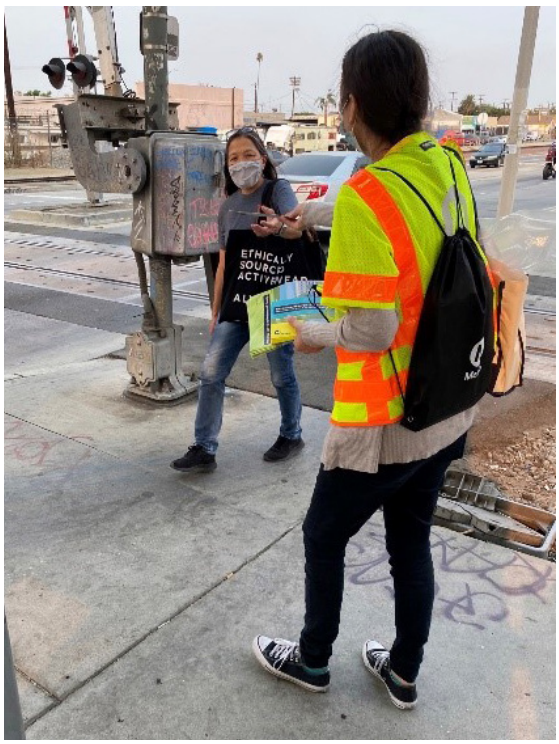
Local jurisdictions also provided input throughout the planning process (Figure Ex–11). These project partners included the City of Los Angeles, County of Los Angeles, City of Huntington Park, City of Vernon, City of Maywood, and City of Bell. The City of Commerce was also included as the lead sponsor for the MAT Randolph project. The project team engaged with project partners via five Technical Working Group (TWG) meetings, as well as in one-on-one meetings. Because of the COVID-19 pandemic, all coordination meetings were conducted virtually.

Metro presented the results of the technical evaluation at the City of Huntington Park, City of Maywood, and City of Bell's City Council meetings in September 2021. Local jurisdictions expressed their support for Alternative 1 because of its alignment with the MAT Randolph project and fewer road reconfiguration and potential parking tradeoffs than on Gage Avenue associated with Alternatives 3A and 3B. This feedback was used to identify a recommended alternative for the corridor.

Figure Ex–11. *Community and Stakeholder Feedback*







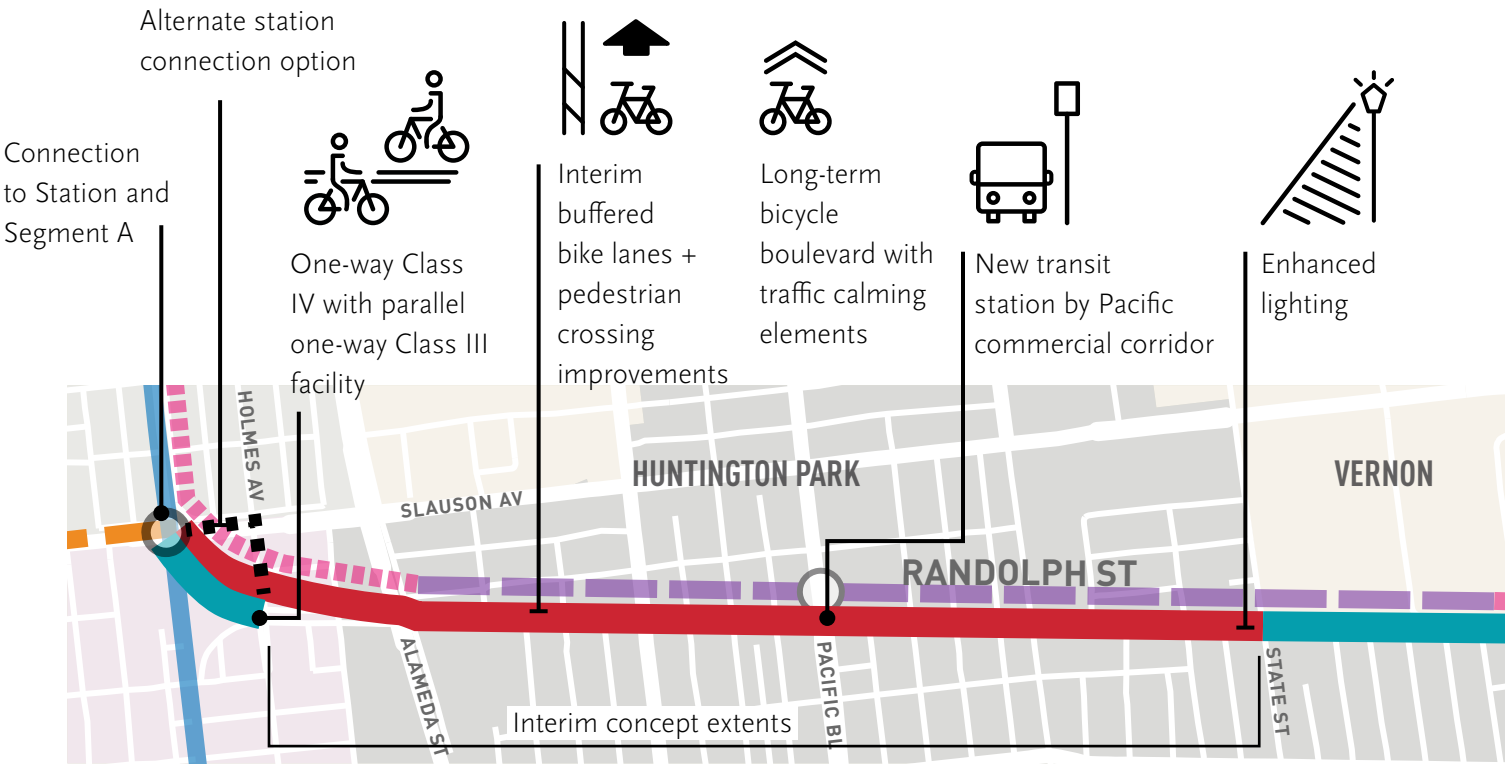
RECOMMENDATIONS + NEXT STEPS

Overview

Overall, the Viability goal (i.e., traffic impacts and alignment with planned projects) drove the recommendations for this study (Alternative 1). Alternative 1 also scored high through the Feasibility / Implementation screen due to minimal environmental impacts, ability for permitting and coordination streamlining and opportunities for funding. In this regard, Alternative 1 improvements could be considered in related projects.

Additionally, the affected local jurisdictions expressed significant concern over the traffic impacts resulting from Alternatives 3A and 3B along Gage Avenue. They also expressed strong support for the Randolph corridor (Alternative 1). Because local jurisdictions would be responsible for implementing and maintaining Segment B, Alternative 1 (Randolph Street) is recommended as the preferred alignment. Alternative 1 also provides the most direct route between Segment A at the Slauson A Line Station and the LA River and shares many similarities with the related projects, including the project area and active transportation goal.

Figure Ex–12. *Alternative 1*

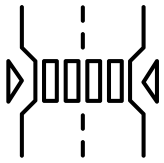


Alternative 1

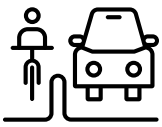
The WSAB light rail project is currently under environmental review. This study considered the built condition of Randolph Street following construction of WSAB. After completion of WSAB and its proposed Pacific Boulevard station, Randolph's two existing traffic lanes will be reduced to one lane in each direction, with fewer intersecting north-south through streets, which will result in lower traffic volumes and travel speeds along the corridor. The recommended speed limit along Randolph within the WSAB project area could be lowered to 20-25 mph to further improve safety for bicyclists sharing the travel lane with motor vehicles. Randolph Street can accommodate all modes, including people biking, walking, and taking transit.

Prior to WSAB construction there is an opportunity for an interim condition along the overlapping at-grade WSAB segment of Randolph between Holmes Avenue and State Street to improve walking and biking conditions in a shorter time frame. This interim condition is described in detail on pages 30-31.

Figure Ex–12 provides an overview of potential improvements along Alternative 1. Pedestrians could use existing and new sidewalks adjacent to the street, with new crossing

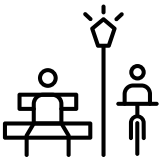


Pedestrian crossing improvements

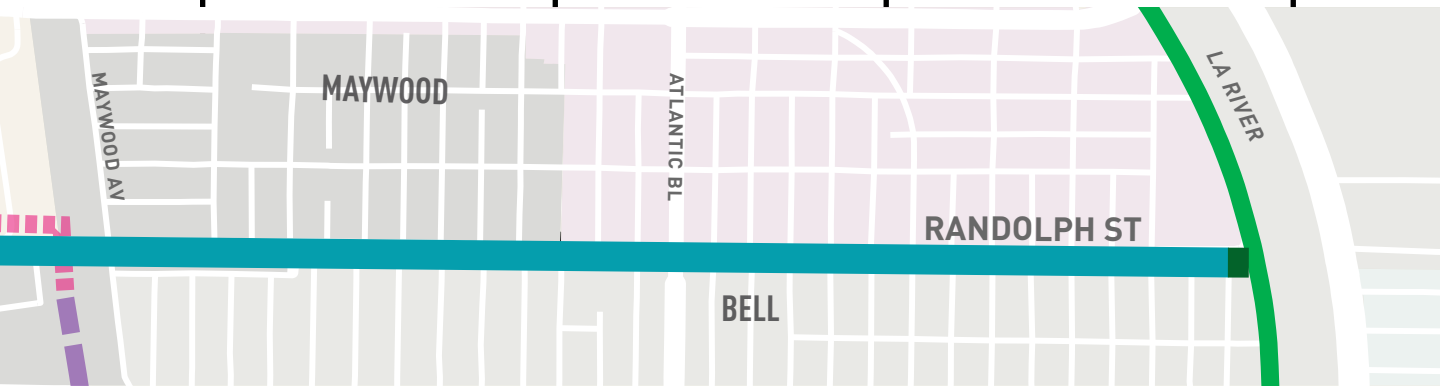


Protected Class IV two-way bikeway

New landscape and shade trees in buffer between bikeway and street



Connection to LA River



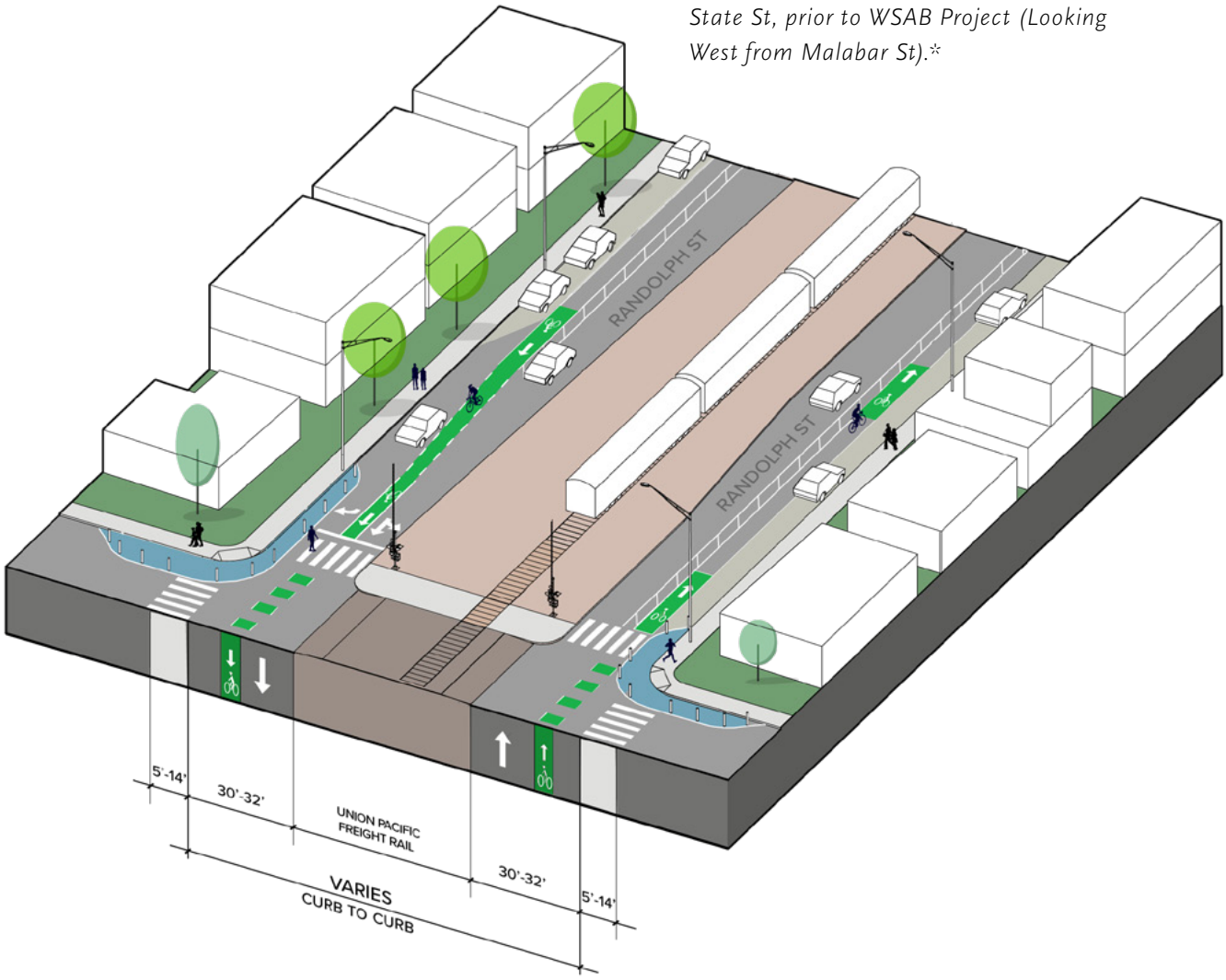
improvements such as curb extensions, high visibility crosswalks, and improved or new pedestrian signals. Amenities such as lighting, street trees, wayfinding, shade structures, and bicycle racks may be provided at strategic locations (See examples of potential improvements and amenities on page 33). Following WSAB construction, people riding bikes would use a shared lane Class III bike boulevard between Slauson Station and State Street. Because a short segment of Randolph between Slauson Station and Holmes Avenue is a one-way eastbound road, a one-way westbound Class IV bikeway would run parallel to the Class III bike boulevard. East of State Street a two-way Class IV bikeway would provide a protected bikeway to the LA River creating opportunities for new shade trees and landscape in the buffer between the bikeway and the street.

There are also opportunities for local jurisdictions to consider alternative options if preferred. For example, LA County could consider an alternative connection to the Slauson Station via Class IV separated bikeways on Slauson and Holmes Avenues rather than the one-way road segment along Randolph. Similarly, the City of Huntington Park may consider implementing Class II bike lanes or a Class III bicycle boulevard along Randolph Street east of State Street in areas where a Class IV facility would require parking removal. Concept design plans were developed for three alternatives (Alternatives 1, 3A, and 3B) and are included as Appendix J.

Interim Concept

Prior to construction of the WSAB project, interim Class II bike lanes could be installed by reducing the existing four-lane road to one lane in each direction, matching the future WSAB roadway configuration. A buffer between the bike lane and the roadway could be accommodated where space allows. In addition, pedestrian improvements including painted curb extensions and high visibility crosswalks at intersections could be installed using quick-build materials (Figure Ex–13). The interim condition would be removed once WSAB project construction begins, after which the roadway would transition to its long-term condition.

Figure Ex–13. *Typical interim concept along Randolph St between Holmes Av and State St, prior to WSAB Project (Looking West from Malabar St).**



**Buffer can be accommodated where space allows*

Long-Term Vision

The long-term vision for the Randolph corridor includes a Class III bicycle boulevard between Holmes Avenue and State Street (Figure Ex–14), where it would transition to a two-way protected Class IV bikeway east of State Street to the LA River (Figure Ex–15). Pedestrian improvements could include new sidewalks, crossing improvements, lighting, shade trees, and wayfinding. The quick-build curb extensions installed as part of the interim concept could be reconstructed using more durable materials to make them permanent features at sidewalk level. In this long-term condition, the Randolph corridor is designed to ensure all users – including people walking, biking, and taking transit – can comfortably travel through the space.

Figure Ex–14. *Typical long-term vision along Randolph St between Holmes Av and State St, after WSAB Project (Looking West from Malabar St).*

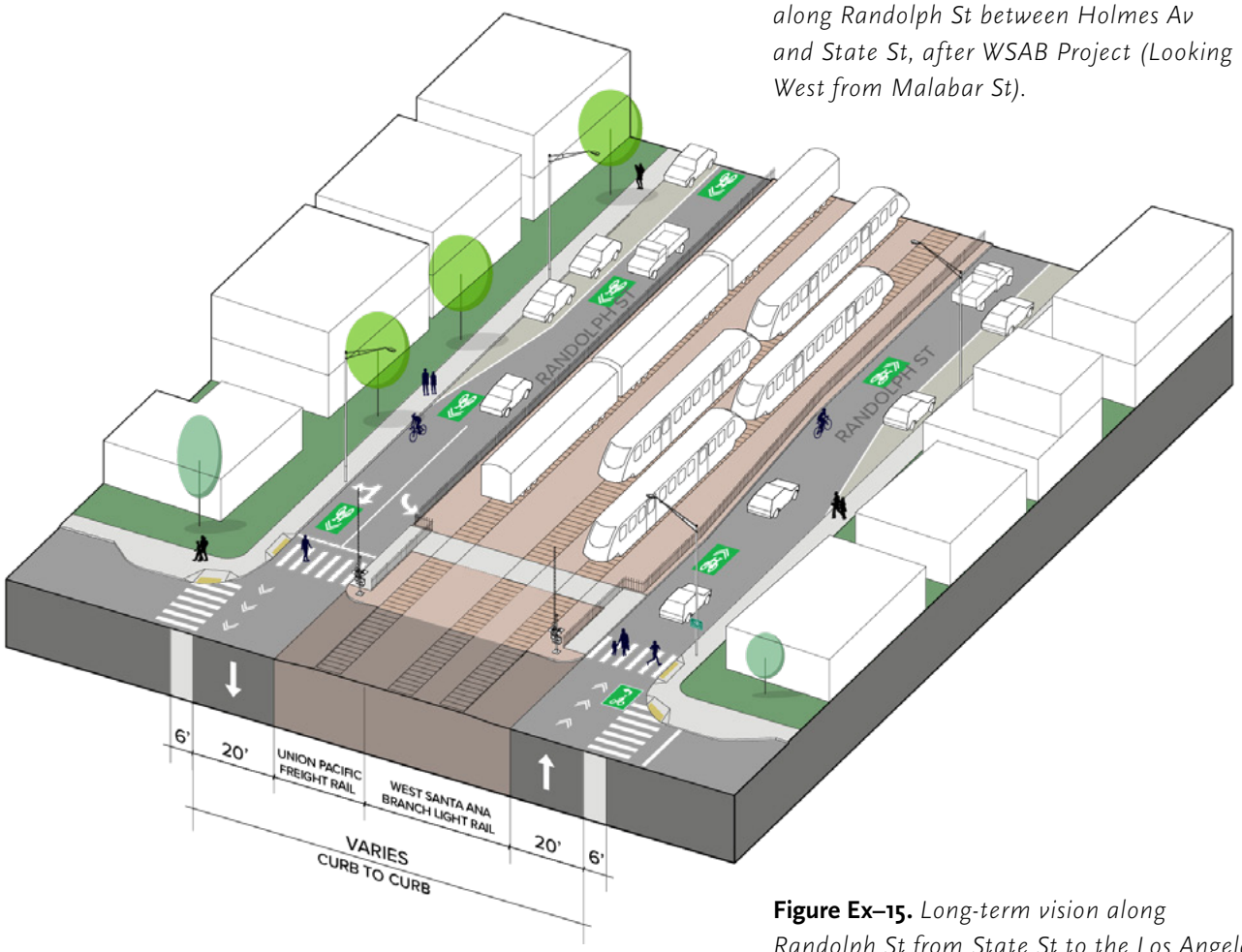
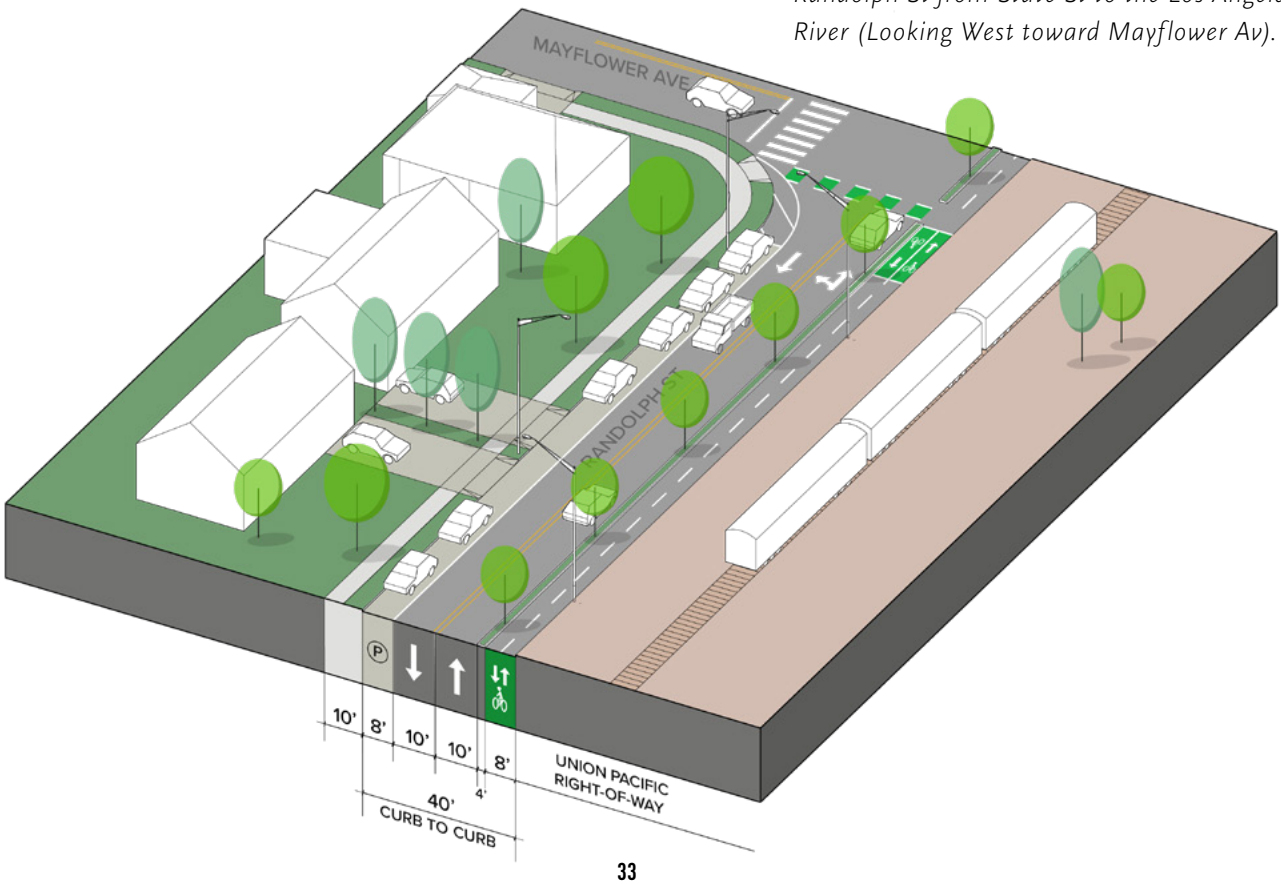


Figure Ex–15. *Long-term vision along Randolph St from State St to the Los Angeles River (Looking West toward Mayflower Av).*



Next Steps

Alternative 1 Randolph has broad support from local jurisdictions along the corridor. Because of this support, Metro staff is recommending a refined Randolph alternative to the Metro Board of Directors, which maintains the same alignment with the 2017 Segment B Locally Preferred Alternative (LPA). Following the Board recommendation, Metro staff will continue to coordinate with the cities on related projects. Local jurisdictions could consider and incorporate any of the proposed recommendations and elements. Additionally, WSAB FLM planning will be underway in late spring 2022, which could also consider active transportation improvements in the study area.

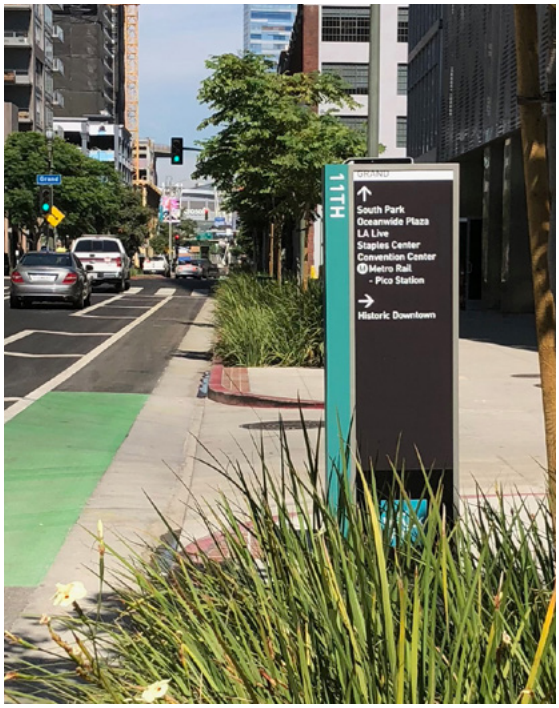
Sidewalk

Pedestrian-scale lighting

Pedestrian signal

Curb extension and crosswalk

Street trees



Wayfinding

01
INTRODUCTION

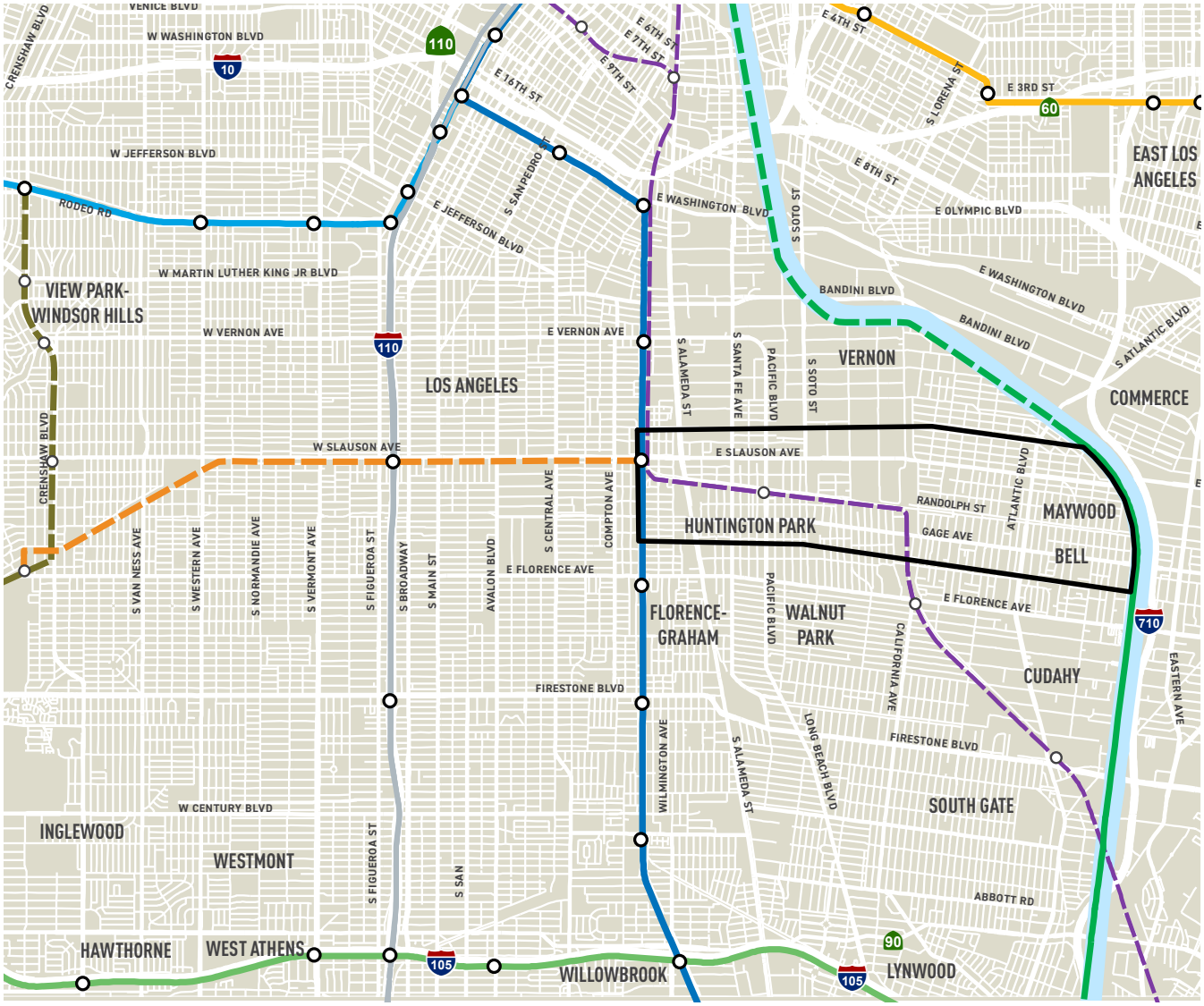
BACKGROUND

The Rail to River Active Transportation Corridor Project is the eastern segment (or "Segment B") of the larger Rail to Rail/ River Active Transportation Corridor (ATC). Segment A of the project is referred to as "Rail to Rail" because it connects the future Metro K Line (Crenshaw/LAX) Fairview Heights Station to the Metro A Line (Blue) Slauson Station (approximately 6.4 miles). Segment B is referred to as "Rail to River" because it extends the project an additional 4.3 miles east from the Metro A Line (Blue) to the LA River, traversing the community of Florence-Graham (unincorporated area County of Los Angeles), as well as the Cities of Huntington Park and Bell (Figure 1 on page 38).

In 2017, Metro concluded the Segment B Alternatives Analysis (AA) which analyzed four different alternatives: Malabar; Utility Corridor; Slauson Ave; and Randolph Street, see Figure 2 on page 39. The Metro Board of Directors adopted Randolph Street as the Locally Preferred Alternative (LPA) for Segment B, which included a Class I shared-use bike and pedestrian path within the existing street median owned and operated by Union Pacific Railroad (UP). The West Santa Ana Branch (WSAB) Transit Corridor is also planned along Randolph Street, sharing approximately 2.3 miles with the Segment B LPA. Technical analyses of the WSAB and Randolph LPA determined that the existing UP right-of-way (ROW) on Randolph Street could not accommodate both projects. The proposed Class I shared-use path along the Randolph Street median is no longer feasible, resulting in the need for this study.

The Rail to River Segment B Supplemental Alternatives Analysis (SAA) study re-evaluates Randolph Street and looks for additional alternatives to continue the ATC further east to the LA River. Alternatives from the 2017 AA that scored below the Randolph alternative were not brought forward. The Slauson alternative, the next highest ranked alternative, was ruled out due to safety concerns on Slauson Avenue associated with high traffic including commercial trucks that serve the surrounding areas, planned roadway capacity enhancements and a significant amount of parking removal needed to install bikeway facilities. The Utility alternative was also eliminated due to significant infrastructure improvements needed including the removal of existing industrial buildings and crossing numerous active rail lines. The lowest ranked alternative, the Malabar alternative that utilized Metro ROW, was also not brought forward due to major infrastructure needs, lack of connection to LA River, and non-existing path as previously mentioned. Further challenges for the Malabar alternative include low population density, safety concerns with numerous mid-block crossings, security issues associated with lack of sight lines due to the ROW being behind buildings, crossing active rail lines, and rail yard improvements associated with the Link Union Station project.

Figure 1. *Rail to Rail/River Active Transportation Corridor*

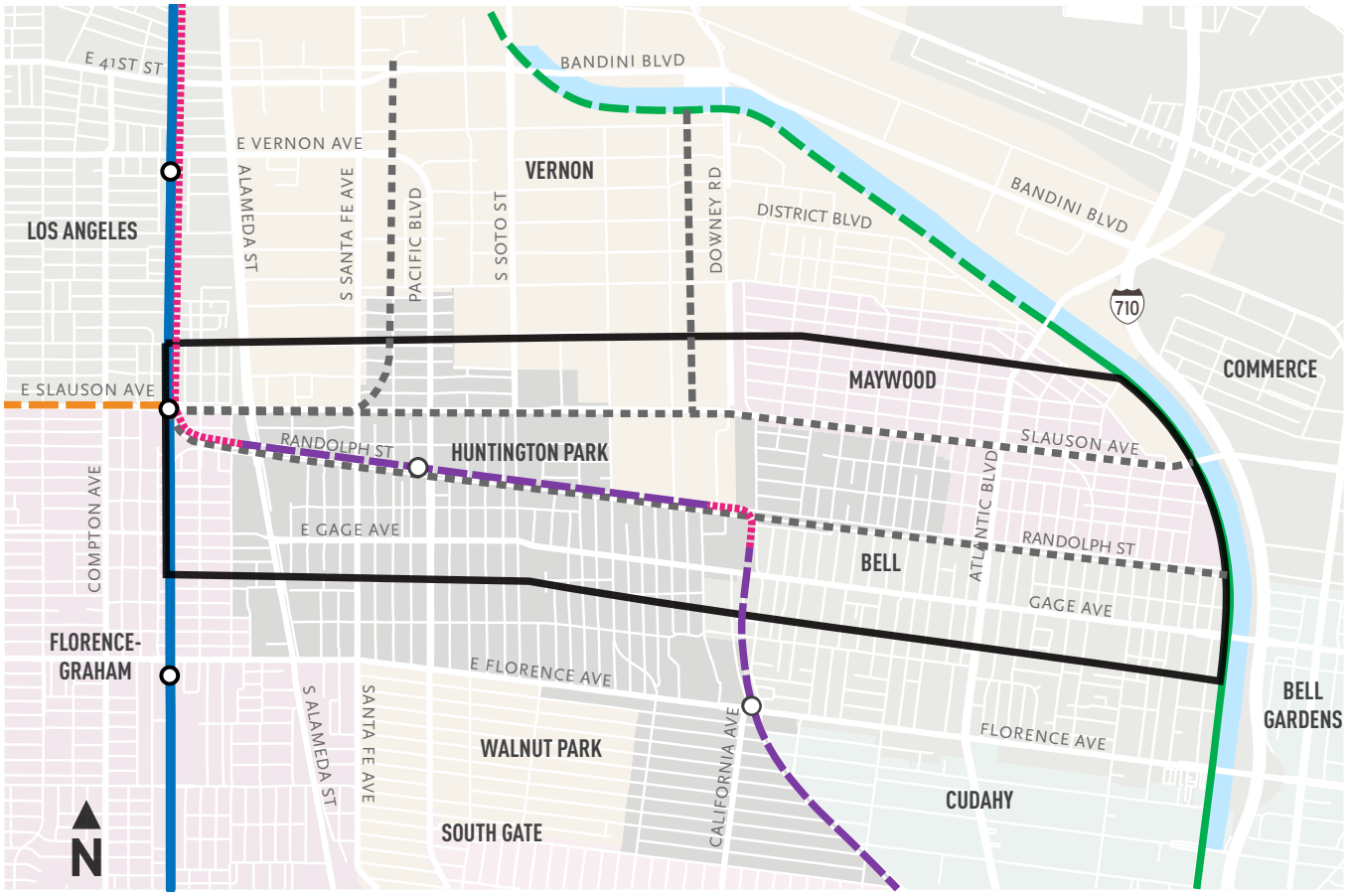


LEGEND

- Rail to River Segment B Study Area
- Rail to Rail Segment A
- Metro Rail Line & Station (A C E L J)
- Existing/Planned LA River path
- West Santa Ana Branch Project

The SAA incorporates technical analysis, feedback from local jurisdictions, the project's Technical Working Group (TWG), and the community to evaluate alternatives, develop recommendations, and outline next steps for consideration. While Metro led this SAA effort, it is envisioned that local jurisdictions will manage the continued implementation of Segment B.

Figure 2. *Segment B Study Area and Previously Studied Alternatives*



Segment B Study Area

The Rail to River Segment B SAA study area covers an approximately 4.3-square-mile area between the Metro A Line Slauson Station and the LA River. The study area is bounded by the cities of Vernon and Maywood to the north, the LA River to the east, the cities of Bell and Huntington Park to the south, and the Metro A Line Slauson Station (unincorporated area of Los Angeles County) to the west.

Unlike the 2017 AA, the SAA did not begin with predefined alternatives. Instead, the full extent of the study area was considered when developing alternatives.

PURPOSE OF STUDY

The intent of the Rail to River Segment B Supplemental Alternatives Analysis (SAA) study was to re-evaluate Randolph Street as the LPA and/or identify and evaluate any other potential active transportation alternatives that would continue to provide connections from the Slauson A Line station to the LA River.

The SAA describes the evaluation and screening process used to develop and evaluate a set of four viable project alternatives. On-going stakeholder input throughout the process was also key in developing the four alternatives and recommendations, including input from the affected cities along the corridor, the general community at large, and a special project Community Advisory Committee (CAC) and Technical Working Group (TWG). While Metro led the early planning and SAA effort, the local jurisdictions will be responsible for the implementation of Segment B.

Purpose and Need

This project aims to identify an alignment that will provide a safe, comfortable, and continuous active transportation route between the Metro A Line (Blue) Slauson station and the LA River path, enhancing mobility and regional connectivity for local communities.

The Segment B SAA purpose and need builds upon the 2017 AA. The project team worked closely with stakeholder agencies to build consensus for the purpose and need and project goals to ensure they are still relevant for the local agencies that have jurisdiction within the project study area.

The project goals are shown in Table 1.

Based on input from stakeholders and an analysis of existing conditions in the study area, this ATC will:

- Provide investments in Equity Focus Communities
- Help people adapt to a changing climate and support an integrated regional development pattern and transportation network
- Support regional and local land-use and active transportation policies including increased access and improved safety and mobility
- Provide safer access for people walking and bicycling to employment centers and transit
- Provide safer active transportation facilities in a heavily used auto and truck-oriented corridor
- Reduce greenhouse gas emissions and improve air quality
- Increase regional mobility options
- Complete regional walking and bicycling connections for Metro's ATC from Rail to Rail/River

Table 1. *Project Goals*

Goal	Description
Safety 	Provides a safe and comfortable route
Access 	Provides access to community destinations and transit
Sustainable Mobility 	Reduces vehicle miles traveled (VMT) by providing active transportation route options
Equity 	Supports community needs
Viability 	Is cost effective and easy to implement and maintain

CONTEXT

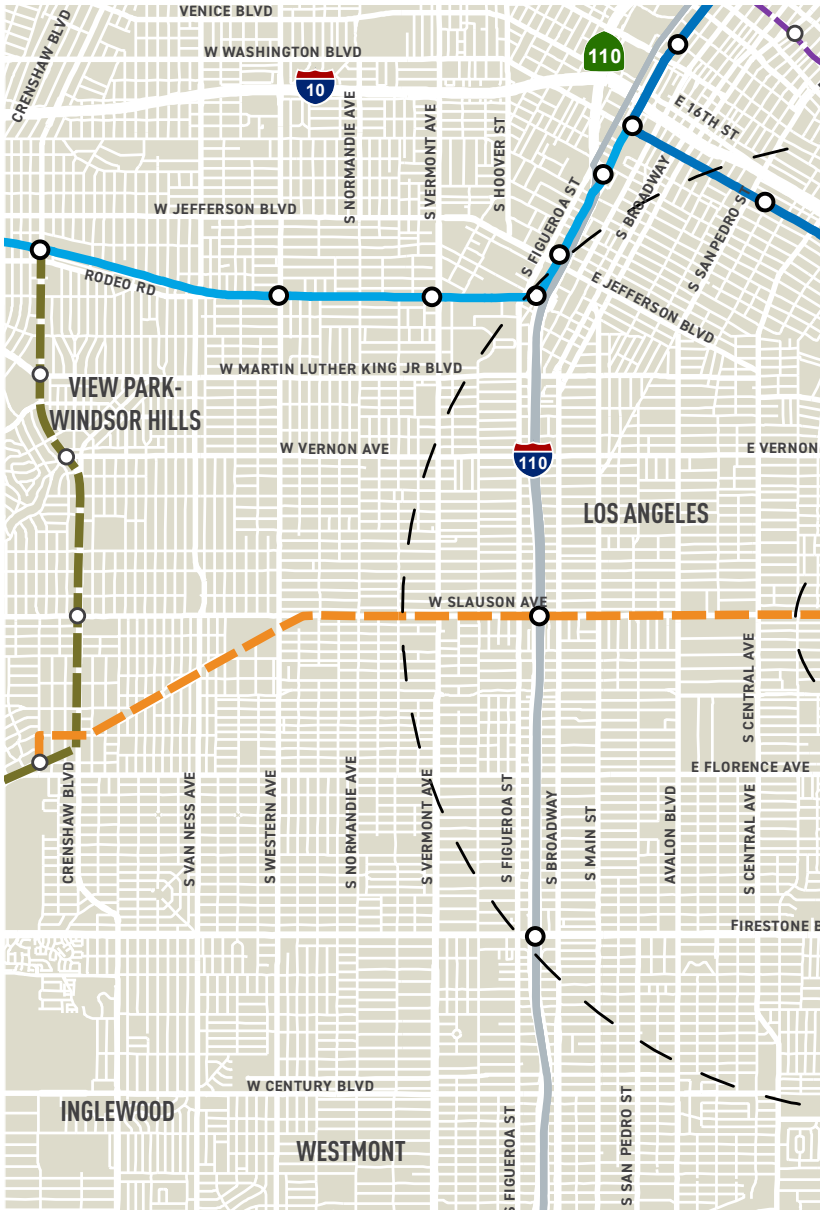
Once complete, the Rail to Rail/River ATC will be approximately 10.7 miles long. Segment A (Rail to Rail) will be a 6.4-mile long active transportation corridor, including a Class I shared-use path connecting Slauson Station west to the future Metro K Line (Crenshaw/LAX). The Segment A project features an off-street path for people walking and bicycling with new lighting, shade trees, and landscaping located within the Metro-owned Harbor Subdivision ROW.

The 4.3-mile Segment B SAA study area is under the jurisdiction of several Gateway Cities, including the City of Vernon, the City of Maywood, the City of Huntington Park, the City of Bell, the City of Los Angeles, and County of Los Angeles through the census-designed place (CDP) of Florence Graham.

Approximately 73,000 people live within the study area, and approximately 85% of the study area qualifies as an Equity Focus Community (EFC), as defined in Chapter 2. Approximately 715,000 people live within 3 miles of the study area. Because Segment B will connect to both the LA River path as well as numerous transit lines, it will provide access to local and regional destinations for residents beyond those who live within the study area.

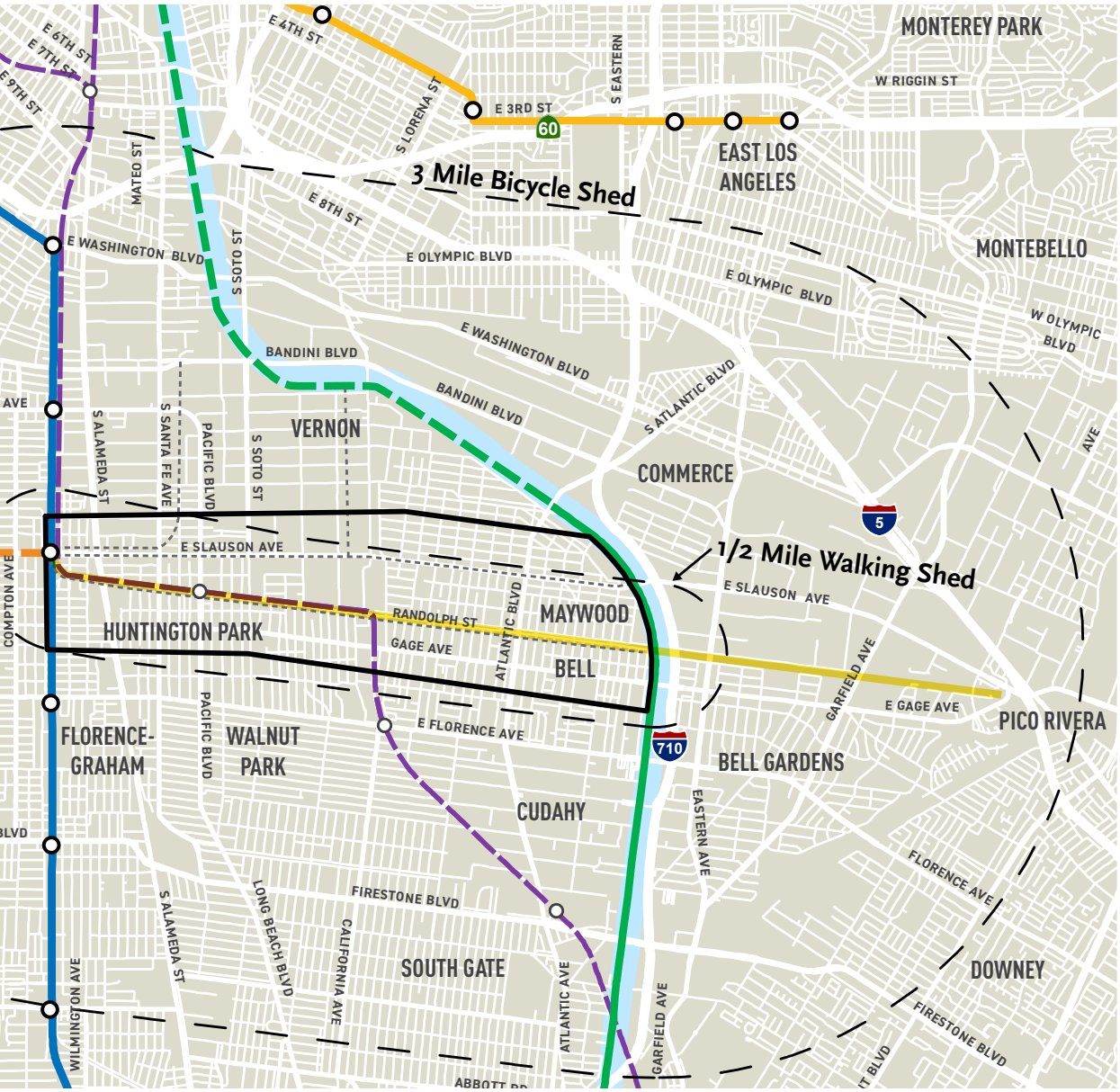
Figure 3 outlines the regional context of the study area, including a half-mile and a three-mile buffer area (distances typically considered comfortable for a walk or a bicycle ride) around the project area. Just north of the three-mile buffer lies downtown Los Angeles, which is an important employment destination for the region.

Figure 3. *Regional Context*



Other Related Projects

There are several related regional and local plans and projects that influence the Segment B SAA. The most notable regional projects include the WSAB as well as projects funded through the Metro Active Transport (MAT) Cycle 1 Program. Local efforts include land use plan updates, first-last mile planning efforts, active transportation plans and safety improvement projects. A comprehensive review can be found in Appendix C.



Rail to River Segment B Study Area

Rail to Rail Segment A

Metro Rail Line & Station

A E L J

Existing/Planned LA River path

Rail to River Segment B Previously Studied Corridors

West Santa Ana Branch Project (under environmental phase)

Crenshaw/LAX Transit Corridor (under construction)

MAT Randolph project extents

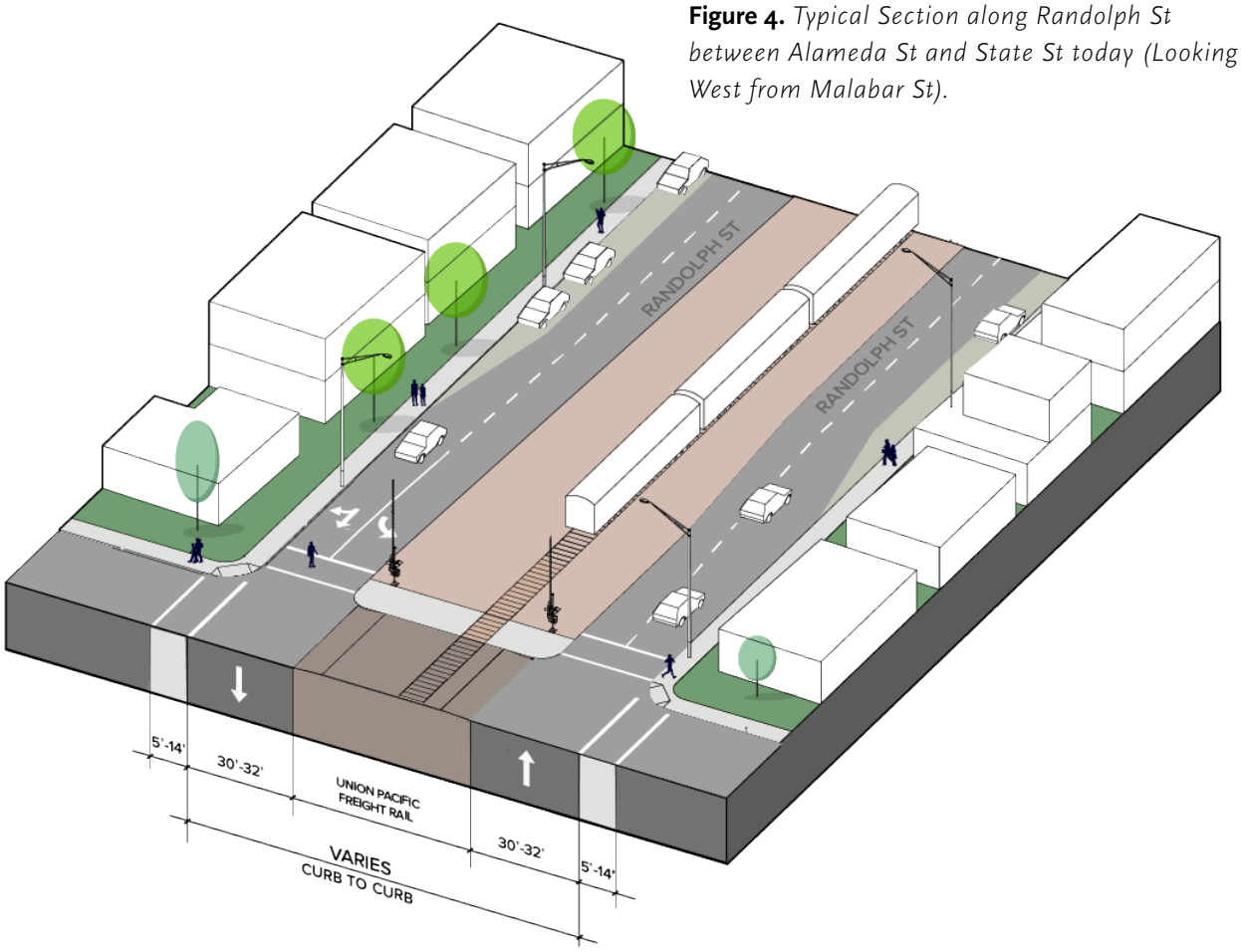
West Santa Ana Branch (WSAB)

The WSAB Transit Corridor project will connect southeast Los Angeles County with downtown Los Angeles via a 19-mile light rail transit (LRT) line. The northern alignment of the WSAB project travels north through the study area parallel to Salt Lake Avenue and then west along Randolph Street's center median (Union Pacific (UP) ROW) to the A Line Slauson Station. The alignment will include two new at-grade light rail tracks along with one existing at-grade freight line track. The WSAB will include two stations within the study area, one at Pacific/Randolph and the other at the existing A Line Slauson Station. The alignment utilizes a portion of Randolph Street originally slated to serve as the LPA for Segment B. At the time of this report, the project is undergoing environmental review.

Randolph Street Today

Randolph Street was chosen as the LPA during the 2017 Segment B AA. Currently, Randolph Street consists of two travel lanes in each direction, parking, and a wide center median with a UP freight rail line where a Class I shared-use bike path was initially proposed (Figure 4). The posted travel speed limit ranges between 25 to 35mph along the corridor. It is anticipated that the WSAB will require that Randolph Street be reconfigured (Figure 5) in order to

Figure 4. *Typical Section along Randolph St between Alameda St and State St today (Looking West from Malabar St).*



accommodate the tracks, which will be at-grade and separate from the UP tracks in the center median. This configuration limits the ability for a dedicated bikeway facility along the shared section with both the WSAB and Rail to River Segment B projects. Additional traffic safety measures and roadway improvements to safely allow drivers and bicyclists to share one lane will be identified for future consideration.

Randolph Street Post-WSAB

The WSAB project is anticipated to result in the reconfiguration of Randolph Street; one travel lane will be removed in each direction.

Overall, the WSAB project has the potential to transform the Randolph corridor from a car-oriented roadway to a complete street that accommodates pedestrians, bicyclists, public transit users, and drivers alike. Post-WSAB, the roadway may be able to safely allow drivers and bicyclists to share one lane. FLM planning for WSAB will also identify improvements along important pathways for walking, biking, or rolling to future WSAB stations. Two WSAB stations related to Segment B will include the future Pacific/Randolph and the existing Slauson A Line stations.

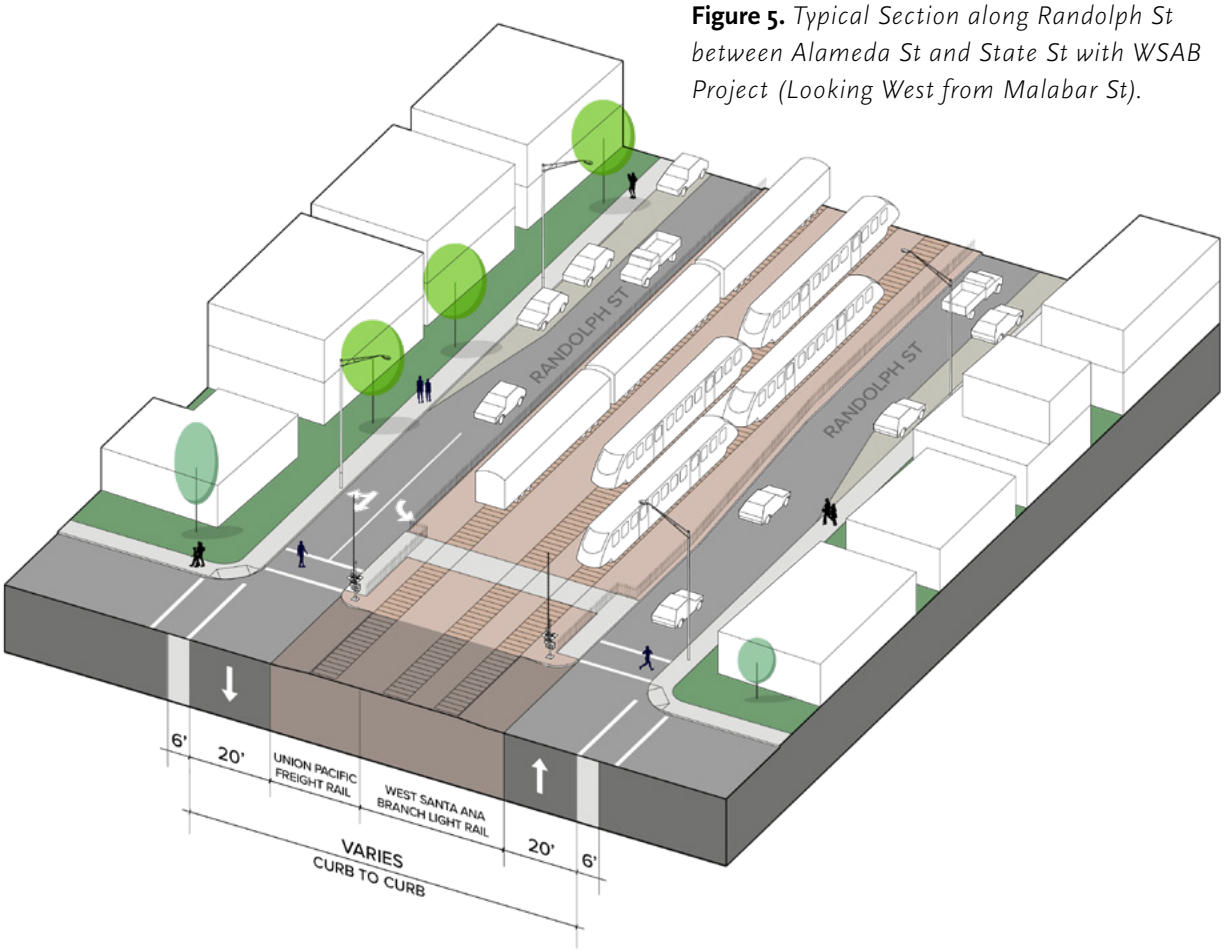


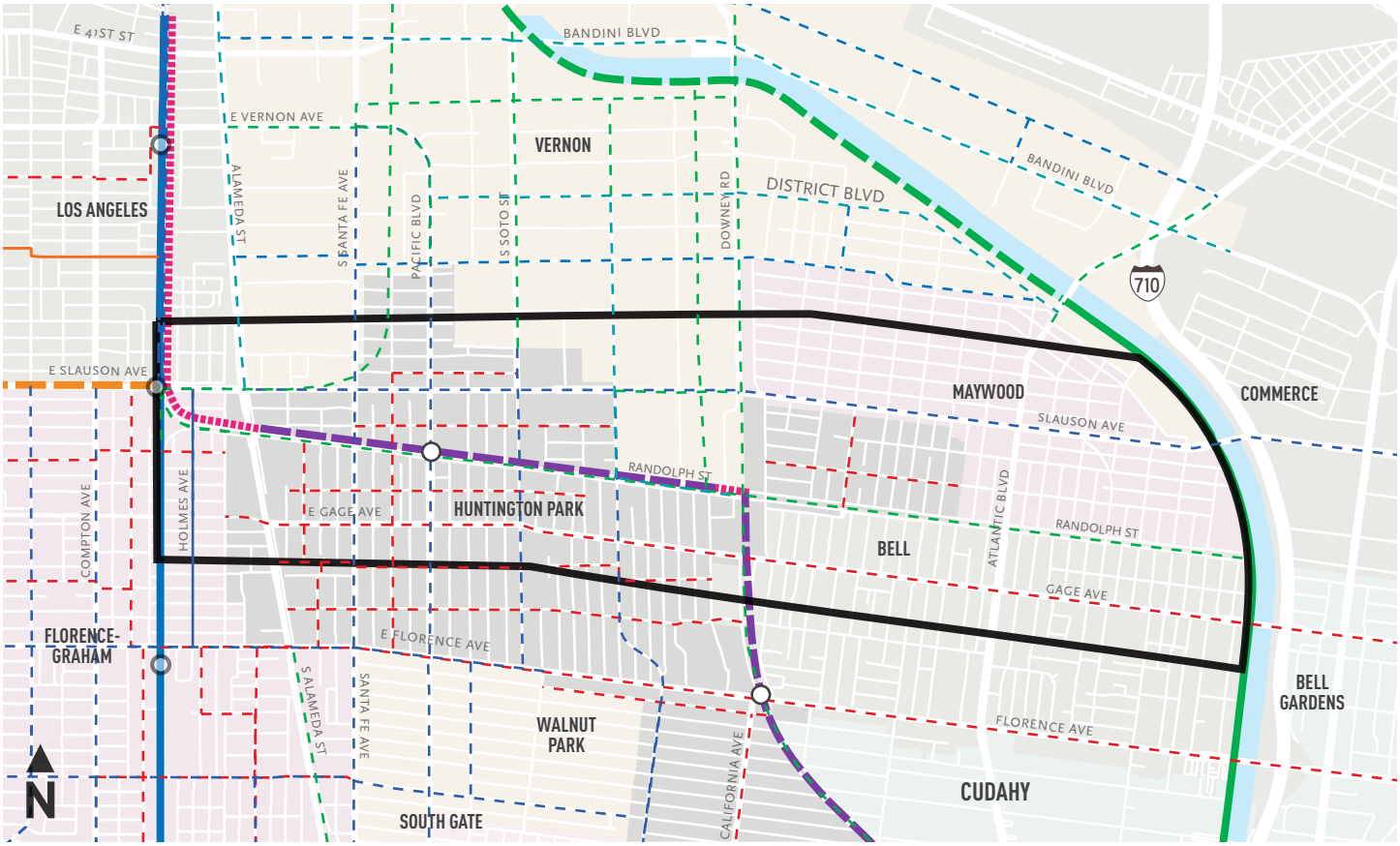
Figure 5. *Typical Section along Randolph St between Alameda St and State St with WSAB Project (Looking West from Malabar St).*

Metro Active Transport Program

Metro Active Transport, Transit and First/Last Mile Program (also known as MAT) is a competitive grant program available to municipalities in LA County to fund improvements that expand and grow active transportation and transit connections. Key policies advanced by MAT include the Active Transportation Strategic Plan (ATSP), First/Last Mile (FLM) policy, and the Equity Platform Framework. Two specific categories in MAT are 1) ***First/Last Mile Priority Network around major transit stations*** and 2) ***Active Transportation Corridor Priority Network countywide.*** The first cycle of the MAT grant program and recommended projects were approved by the Metro Board in January 2021, which included projects for the Slauson A Line Station in the FLM category and the Randolph Corridor in the Active Transportation Corridor category.

The Slauson FLM Project is led by the Los Angeles County Department of Public Works with the goal to improve pedestrian access to and from the Slauson A Line Station and to encourage active modes of transportation and the use of public transit. The Randolph Corridor project is led by the City of Commerce, in partnership with the City of Huntington Park, City of Bell, and Los Angeles County Department of Public Works. The Randolph Corridor Project proposes 7.03 miles of active transportation improvements along Randolph Street from the Metro A Line Slauson Station to the City of Commerce.

Figure 6. *Existing and Planned Bicycle Facilities within Study Area*



Rail to River Segment B Study Area

Rail to Rail Segment A

Metro Rail Line & Station

A

Existing/Planned LA River path

EXISTING AND PLANNED BICYCLE FACILITIES WITHIN STUDY AREA

Metro ATSP (2016)
Vernon Bicycle Master Plan (2017)

Class I: Path
Planned

Class II: Bicycle Lane
Planned

Class III: Bicycle Route
Planned

Class IV: Separated Bikeway
Planned

PROPOSED IMPROVEMENTS

Pedestrian Infrastructure Improvements

Rail to River Segment B will be designed to accommodate people walking. Pedestrian improvements will be included along each of the alternatives to improve the safety and comfort of people walking. This may include, but is not limited to, improvements to existing sidewalks, lighting, pedestrian signals, curb treatments such as curb ramps and curb extensions, enhanced crosswalks, shade trees and landscaping, benches, and shade structures.

Walkways

Walkways are the most fundamental element of the pedestrian network, as they provide an area for pedestrian travel separated from vehicle traffic. People walking along Segment B would use sidewalks adjacent to on-street bikeways. A sidewalk is a paved space along the side of a road, dedicated for pedestrian use. A shared-use path is dedicated space that supports multiple types of non-motorized travel, such as walking, bicycling, skating, and more; they are typically paved and may include separate spaces for pedestrian and bicycle use.

Existing walkways that do not currently meet Americans with Disabilities Act (ADA) standards will need repair. Sidewalks and paths can be more than areas for travel; they can provide places for people to interact. There can be spaces for standing, visiting, and sitting. They can contribute to the character of neighborhoods and business districts, strengthen their identity, and be areas where adults and children can safely participate in public life.

Lighting

Lighting is a critical factor in the quality of the nighttime pedestrian environment by reducing injures from collisions and improving perceived walking comfort. Pedestrian-scale lighting improves visibility for people walking,

Sidewalk

Pedestrian-scale lighting

as opposed to street lights intended to light the roadway. Pedestrian-scale lighting can be particularly important at crosswalks to ensure people walking can cross safely. Upgrading existing street lighting to adaptive street lights with LEDs can improve existing illumination to increase pedestrian visibility.

Pedestrian-scale lighting may require additional maintenance from local jurisdictions. Any new lighting features for Segment B will need to be coordinated with local jurisdictions to ensure they are able to be properly maintained.

Crossing Facilities

Every intersection along Segment B needs to be designed for pedestrian safety and comfort, with pedestrian enhancements appropriate to motor vehicle speed, motor vehicle volume, pedestrian crossing distance, and other considerations.

Curb Ramps

Curb ramps are required by the ADA at all crosswalks, including those that are unmarked. They allow users of all abilities to transition from the street to the sidewalk.

Two-ramp corner installations, also known as paired curb or dual curb ramps allow pedestrians to be aligned with the crossing direction while waiting to cross the street which is especially beneficial for those in wheelchairs, with vision impairment, or pushing strollers or carts. Single shared curb ramps are aligned diagonally with the intersection and provide access where factors such as available right-of-way, turn radius, drainage, and sight distance preclude the use of paired curb ramps.

Enhanced Crosswalks

Enhanced crosswalks make crossing the street at intersections and midblock safer and more comfortable. High visibility crosswalks are more visible to approaching vehicles and have been shown to improve yielding. Advance yield markings, or "shark teeth," warn drivers they are approaching a crosswalk.

Median Refuge Island

Median refuge islands provide a space within a median, mid-way through a crosswalk for people to wait while crossing a wide street. They enhance comfort for people crossing the street by enabling pedestrians to focus on one direction of vehicle traffic at a time and wait for an acceptable gap in traffic. Refuge islands are best used to enhance marked crosswalks on multi-lane roadways, particularly those with higher motor vehicle speeds and volumes.

Paired curb ramp with adjacent green infrastructure

Median refuge island

Traffic Control Devices

Pedestrian Countdown Signal Heads

Pedestrian countdown signals create a more predictable crossing environment and give adequate warning to pedestrians attempting to cross a roadway.

Pedestrian-Activated Warning Systems

Beacons and signals make crosswalks safer for people walking by alerting drivers that there are pedestrians crossing the street.

The High-Intensity Activated Crosswalk Beacon (HAWK), also referred to as a Pedestrian Hybrid Beacon System, remains dark until activated by pressing the crossing button. Once activated, the signal responds immediately with a flashing yellow pattern which transitions to a solid red light, providing unequivocal 'stop' guidance to motorists. HAWK signals have been shown to elicit high rates of motorist compliance.

Leading Pedestrian Intervals

Leading pedestrian intervals allow people walking to begin crossing the street before the traffic signal turns green, giving them additional time to cross. LPIs enhance the visibility of pedestrians in the crosswalk, and reinforce their right-of-way over turning vehicles. LPIs are most useful in areas where pedestrian travel and turning vehicle volumes are both high.

Traffic Calming

Traffic calming is the process of using physical design and other measures to enhance the safety of all roadway users. Some traffic calming devices include speed humps/speed cushions, reducing curb radii, curb extensions, chicanes, and speed feedback signs. These devices tend to reduce vehicle speeds along a street, thus enhancing safety by allowing drivers and other parties more time to react and minimize damages and injury if a collision were to occur.

Curb Extensions

Curb extensions can help slow vehicle traffic by visually narrowing the roadway, creating safer and shorter crossings for pedestrians. Curb extensions can also increase the available space for street furniture, plantings, and street trees.

Pedestrian signal

Curb extension and crosswalk

Streetscape

Landscaping, street trees, and street furniture such as shade structures, benches, tables, and chairs can have a profound positive effect on the feel of a corridor.

Street Trees and Green Infrastructure

Street trees and green infrastructure can make walking more comfortable by creating a visual buffer from the roadway, providing shade and helping to reduce the urban heat island effect.

Wayfinding

Wayfinding can enhance the walking and biking experience – in some cases, it can encourage people to choose walking or biking as their first choice of transportation.

Street signs provide the most basic wayfinding information for transportation users. As people walking and biking are using human power, additional information on distance and time to significant landmarks can be helpful to inform route choice.

Wayfinding signage can also be used to create a local identity and complement placemaking/placekeeping efforts in downtowns or along paths. Further, wayfinding signs can provide important non-business contact information for local law enforcement if requested by a community.

A wayfinding system consists of comprehensive signing and/or pavement markings to guide pedestrians to their destinations along the Rail to River route.

Street trees

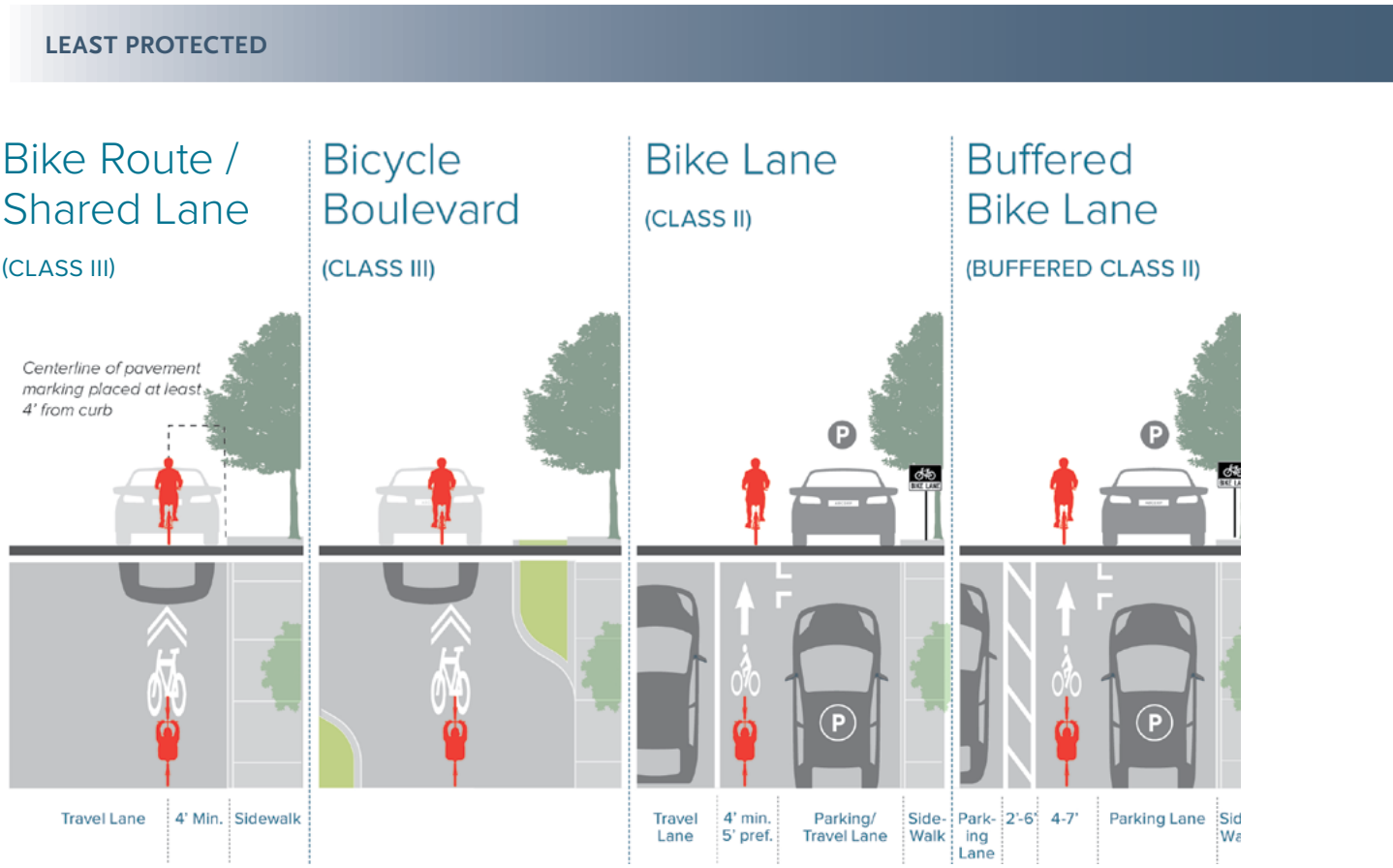
Wayfinding

Bicycle Facility Types

A range of bicycle typologies were considered for Segment B. The project team considered Class I shared-use paths or Class IV separated bikeways with adjacent pedestrian facilities along major roadways. Along streets with low traffic volumes, Class III bicycle boulevards with traffic calming elements were also considered. Class II bike lanes or buffered bike lanes were considered where implementing Class IV bikeways would not be feasible due to traffic or parking impacts.

All on-street bicycle facility types can be implemented in the short-term using a cost-effective quick-build approach (e.g., materials such as paint and bollards). Quick build is a method to help implement active transportation facilities on a compressed timeline using lower-cost materials that can be installed quickly. Quick build projects are flexible and designed to be easily changed or even removed if necessary. Most quick build projects can go from conception to

Figure 7. *Bicycle Facility Types and Levels of Protection*

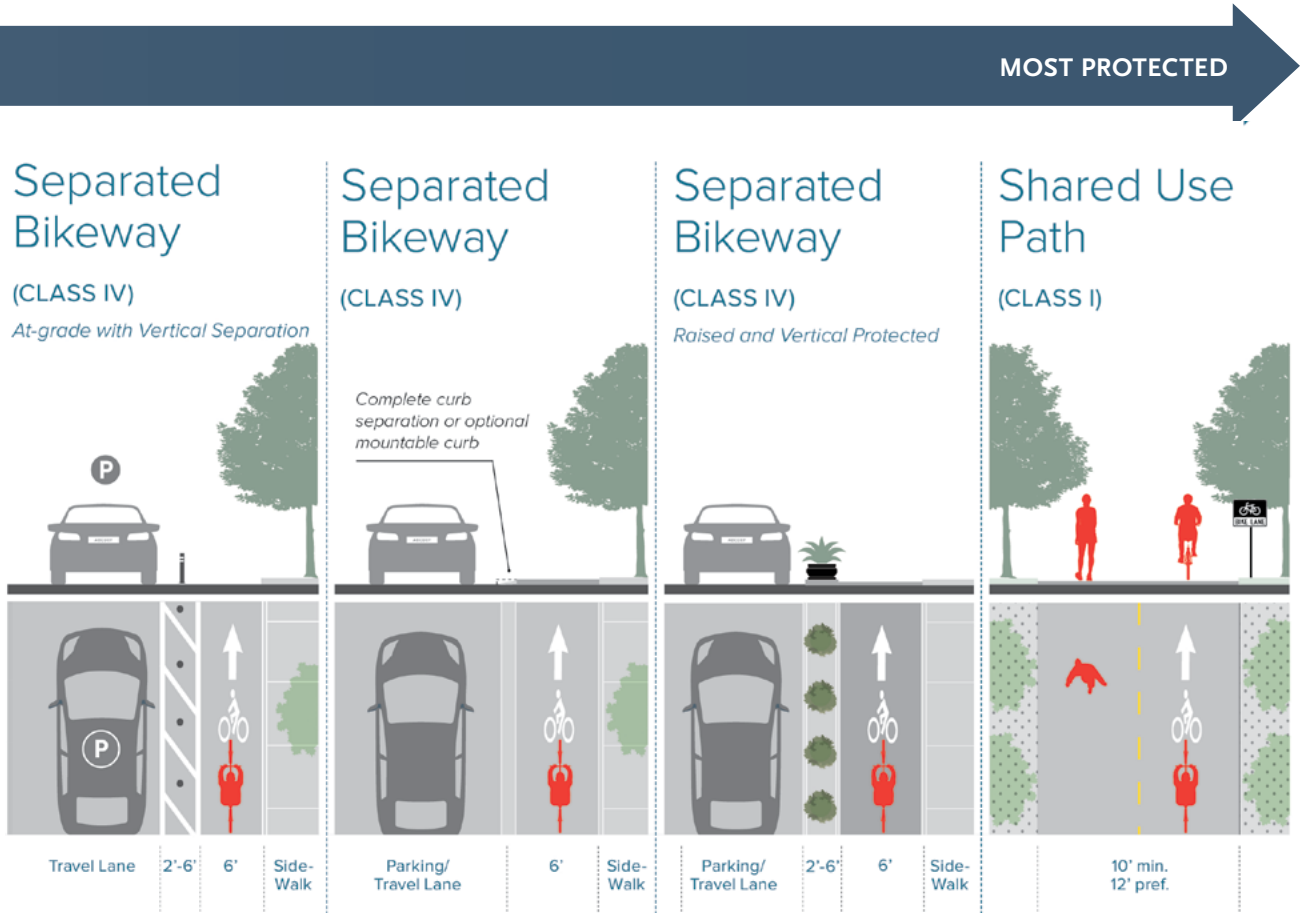


reality within months, rather than years. While quick build projects are constructed with less heavy-duty materials, they can be designed to last in place for multiple years.

For long term solutions, more durable materials or road reconfiguration may be required.

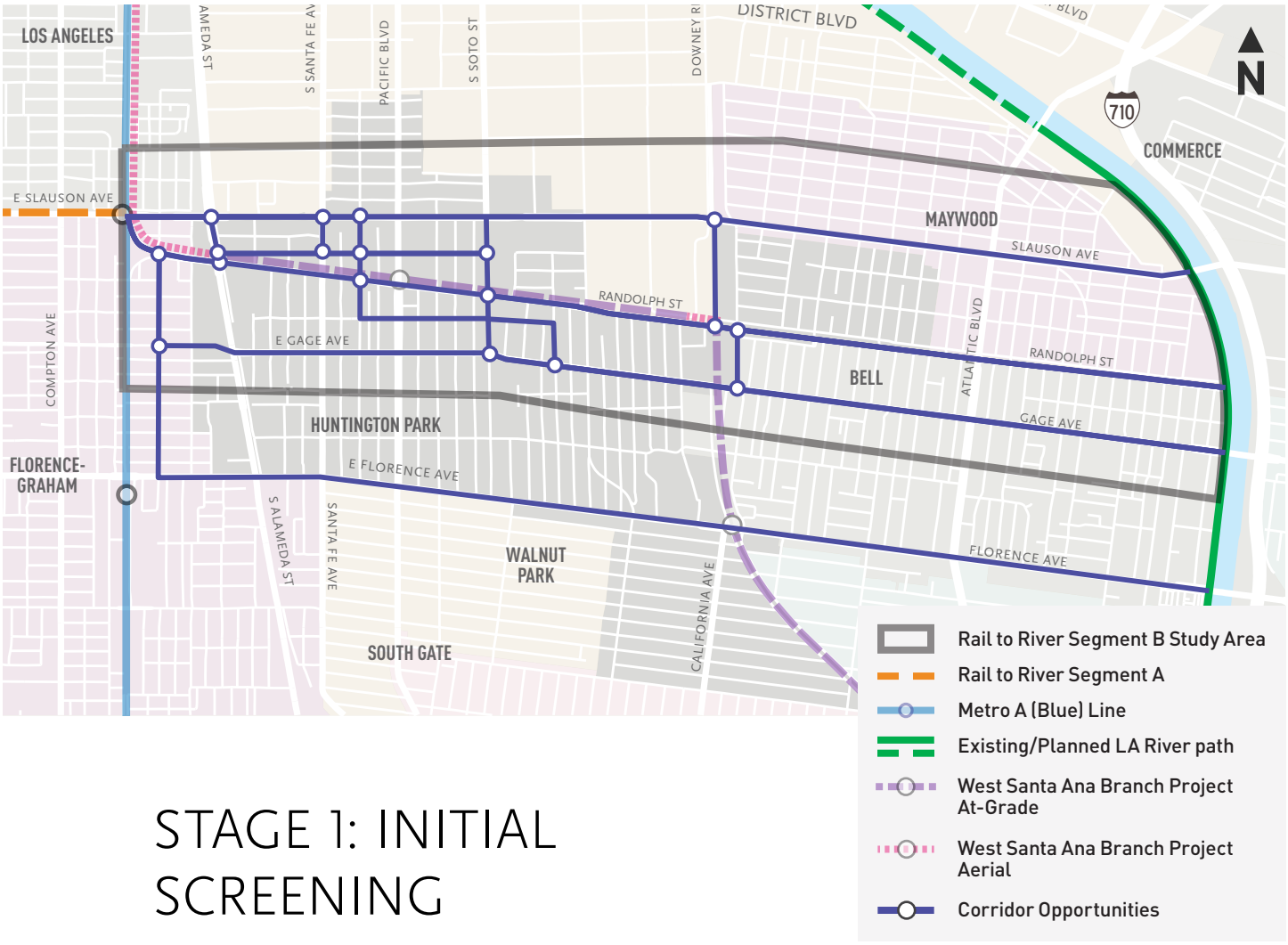
Figure 7 identifies the different bicycle facility options in order of user separation. Class I shared-use paths require the largest amount of right-of-way for the path and buffer, and were considered along existing railroad corridors.

Class I paths can either be at-grade or elevated on structure. Elevated paths typically cost 8 to 12 times more than at-grade alignments. An elevated structure was not considered financially feasible for the purposes of this study.



02
INITIAL SCREENING

Figure 8. *Network of Corridor Opportunities*



STAGE 1: INITIAL SCREENING

Overview

Stage 1 of the evaluation process identified four preliminary concepts from multiple potential alignments.

Potential alignments included various combinations of corridor opportunities identified during an analysis of previous planning efforts and existing conditions in the study area.

The corridor opportunities are shown in Figure 8 and include Slauson Avenue, Randolph Street, Gage Avenue, Florence Avenue, local parallel routes including Belgrave and Clarendon Avenues, and north-south connectors including Holmes and Miles Avenues and the Alameda Rail Corridor.

The project team developed a network of the corridor opportunities based on existing conditions. The potential corridor opportunities illustrated in Figure 8 form a network of streets that serve as potential alignments for Segment B.

The project team evaluated existing conditions, opportunities, and constraints in the study area as a whole as well as between segments to help identify alternatives for further study. Alternatives evaluated were considered to accommodate safer active transportation corridors with proposed improvements.

The following pages describe existing demographics, land use, transit, and collision history data within the study area conducted in 2021. Additional existing conditions data is summarized in Appendix D.

DEMOGRAPHICS

Approximately 73,000 people live within the study area, or about 16,850 people per square mile. The highest concentrations of population are located in two distinct areas, on the west side of the study area near downtown Huntington Park and on the east side of the study area within the cities of Bell and Maywood. Population density is shown based on 2014-2018 ACS 5 Year Estimates data in Figure 9.

Over 715,000 people live within 3 miles of the study area, or approximately 13,275 people per square mile. Population growth is expected around several of the more populous areas of the study area, particularly around downtown Huntington Park and Maywood. According to growth trend data from the Southern California Association of Governments (SCAG), by 2040 the study area is expected to be home to approximately 80,000 people, or 18,500 people per square mile.

Equity Platform

Transportation facilities are essential for creating access to opportunity. Often, historically vulnerable populations, such as older adults, people of color, people with limited English proficiency, and low-income individuals rely heavily on affordable transportation options — specifically walking, bicycling, and transit — as these are the lowest cost forms of transportation. According to the California Healthy Places Index (HPI), some study area census tracts, including the majority of those in Los Angeles and Huntington Park (7 census tracts within the study area), have higher percentages of workers who commute to work by transit, walking, or cycling than over 90% of other California census tracts.

All census tracts in the study area have active commuting percentages that are in the top 35% of all California census tracts. On average, 17% of residents within the study area census tracts commute to work by biking, walking, or transit. In California as a whole, 2.6% of residents walk to work, 1% ride a bike, and 5.1% take transit.

Equity Focus Communities

There are many different ways to measure equity. The Rail to River Segment B SAA uses Metro's Equity Focus Communities (EFCs) to help identify where populations that may have specific mobility needs or have historically been disadvantaged live within the project area.

Metro's 2019 framework to identify EFCs, or those communities that are most heavily impacted by gaps in equity in Los Angeles County are identified using the following thresholds:

- At least 40% Low Income (those with annual incomes of $35,000 or less) ***and***
- 80% People of Color ***or***
- 10% Zero Car Access

A 2022 EFC update is forthcoming. Based on the 2019 EFC components and thresholds, the majority (85%) of the study area census tracts qualify as an EFC. EFCs exist within each jurisdiction, including the County of Los Angeles, City of Vernon, City of Huntington Park, City of Maywood, and City of Bell. There are also several EFCs located just west of the study area near the Metro A Line in the City of Los Angeles and Florence-Graham, as well as south of the study area in Walnut Park, South Gate, and Cudahy. EFCs within and near the study area are shown in Figure 10. The Rail to River Segment B (ATC) will close a critical transportation gap for these communities, providing access to major regional destinations, employment centers, and other community destinations by offering a safe connection to the LA River path, the Metro A Line (Blue), and the future WSAB light rail corridor.

Figure 9. *Population Density*

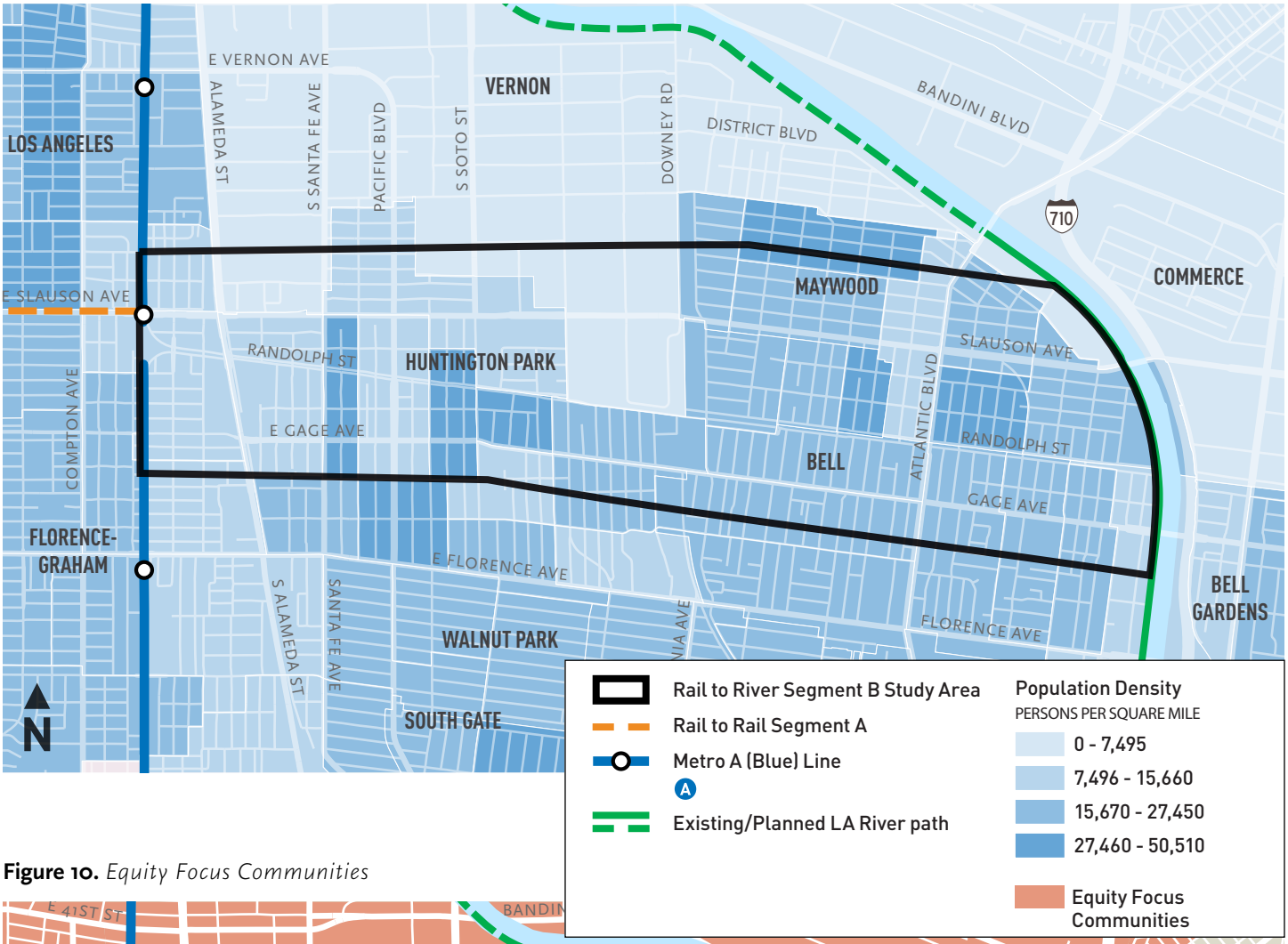
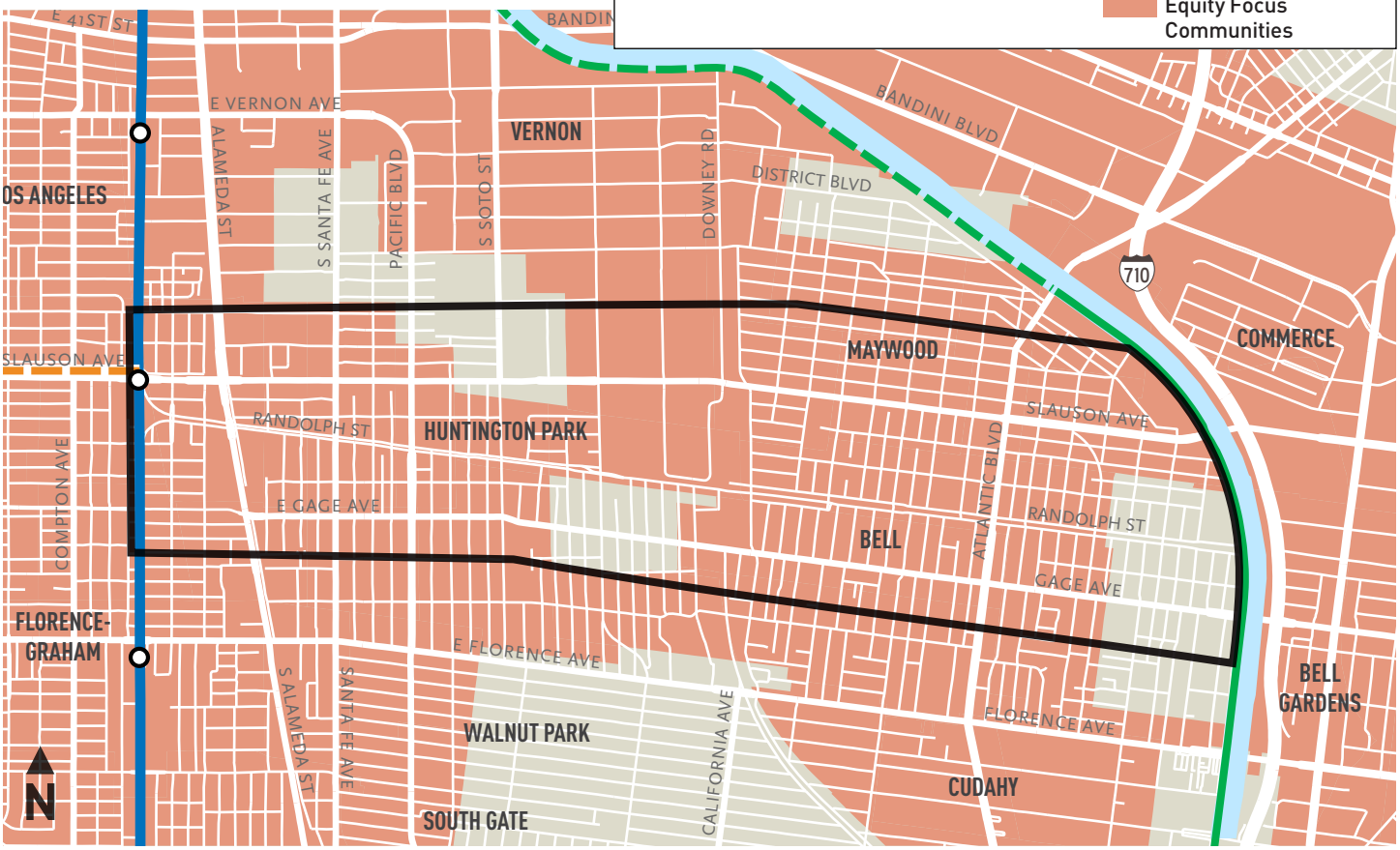


Figure 10. *Equity Focus Communities*



EXISTING CONDITIONS

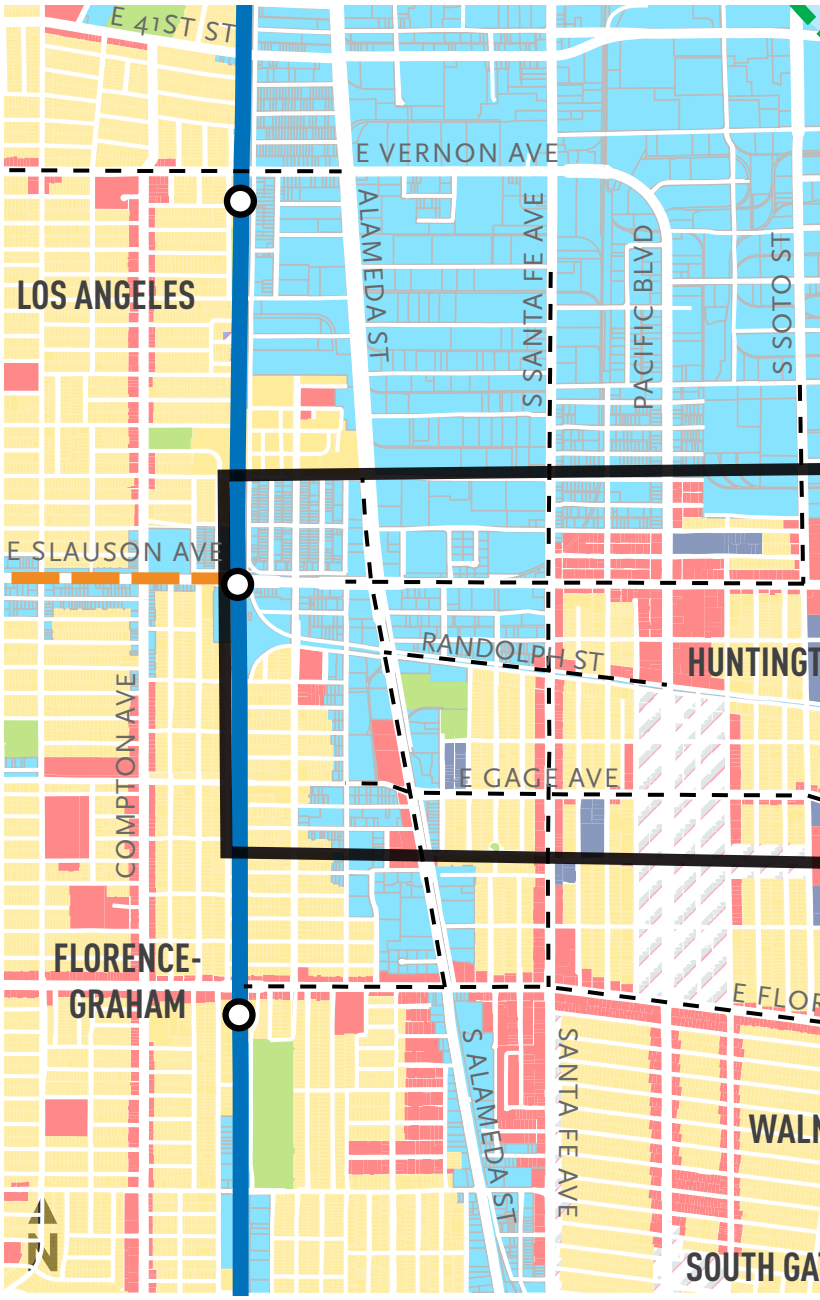
Land Use

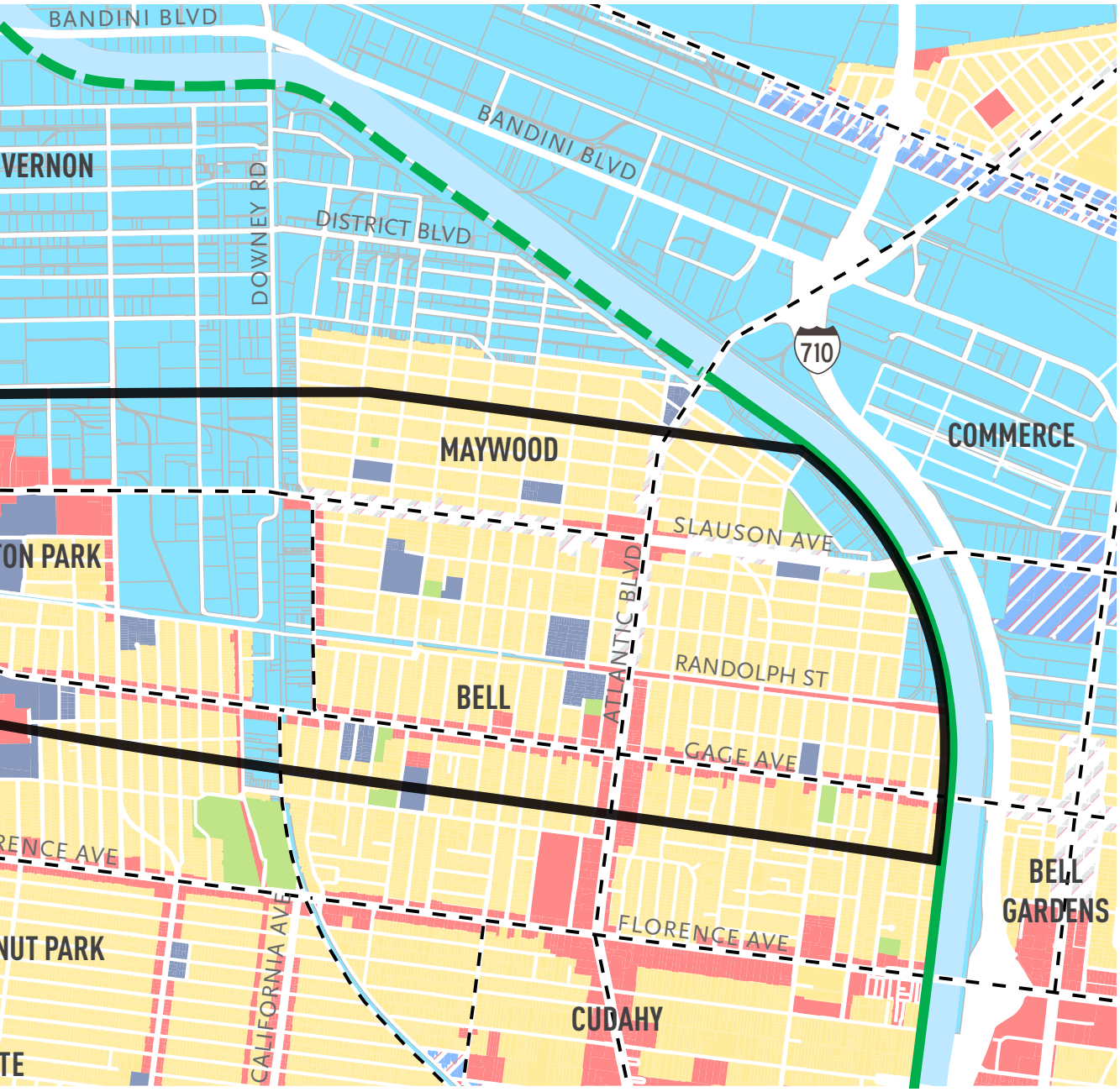
The study area is made up of residential, commercial, industrial, and mixed land uses. Approximately 62% of the study area is residential, particularly along the eastern end in the cities of Maywood and Bell and south of Randolph Street. Industrial land uses make up approximately 19% of the study area, and are located primarily along the northern end of the study area near the border with the City of Vernon. A significant section of Slauson Avenue travels adjacent to industrial land use. The majority of land uses to the north and east of the study area in the cities of Vernon and Commerce are also industrial. Commercial land use makes up approximately 16% of the study area, and is centered along portions of Slauson Avenue, Randolph Street, and the majority of Gage Avenue.

In Huntington Park, Pacific Boulevard south of Randolph Street serves as the City's primary commercial corridor, and also functions as its downtown and central business district. High-density and medium-density residential land uses surround much of Randolph Street, while Gage is surrounded primarily by commercial land use and (further south) by low density residential land use.

The truck routes that traverse the study area are important corridors for the industrial centers located within the Gateway Cities region. Truck routes exist along several of the major corridors in the study area, including Slauson Avenue, Gage Avenue, Florence Avenue, and a section of Randolph Street. In addition, the I-710 Freeway runs parallel to the LA River to the east of the Segment B study area, bringing truck traffic from the south, including the Port of Long Beach.

Figure 11. *Land Use*





- Rail to River Segment B Study Area
- Rail to Rail Segment A
- Metro Rail Line & Station (A)
- Existing/Planned LA River path
- Residential
- Open Space
- Mixed (Urban)
- Mixed (Commercial Industrial)
- Industrial
- Educational
- Commercial
- Truck Route

Travel Patterns

Within the study area, the majority of residents drive alone to work, followed by take public transit. Many of the residents who take public transit live near the Metro A Line. Biking and walking to work are less popular modes, though present throughout the study area.

With the addition of Segment B, local communities will be provided with a new safe and comfortable active transportation route with which to connect to transit and the LA River path, providing access to employment centers and other key destinations beyond the study area.

Transit

The study area is bounded by the Metro A Line to the west and includes the WSAB Transit Corridor, which will one day connect southeast LA County with downtown Los Angeles.

In addition to light rail at the Metro A Line Slauson Station and the future WSAB corridor, there are several Metro bus lines that traverse the study area. These include Metro Rapid Lines 751, 760, and 762, Metro Local Lines 60, 108, 110, 251, 260, and the Metro Community Circulator Line 611. Both Slauson Avenue (Line 108) and Gage Avenue (Line 110) serve as key transit corridors within the study area. Figure 10 illustrates the Metro transit lines within and near the study area.

NextGen Bus Plan

In October 2020, the Metro Board of Directors approved the NextGen Bus Plan which reimagines the existing Metro bus service to provide more frequent, reliable, and accessible service for LA County. Changes to various lines include new routes, added trips, replaced and discontinued service. Schedule changes began on December 13, 2020.

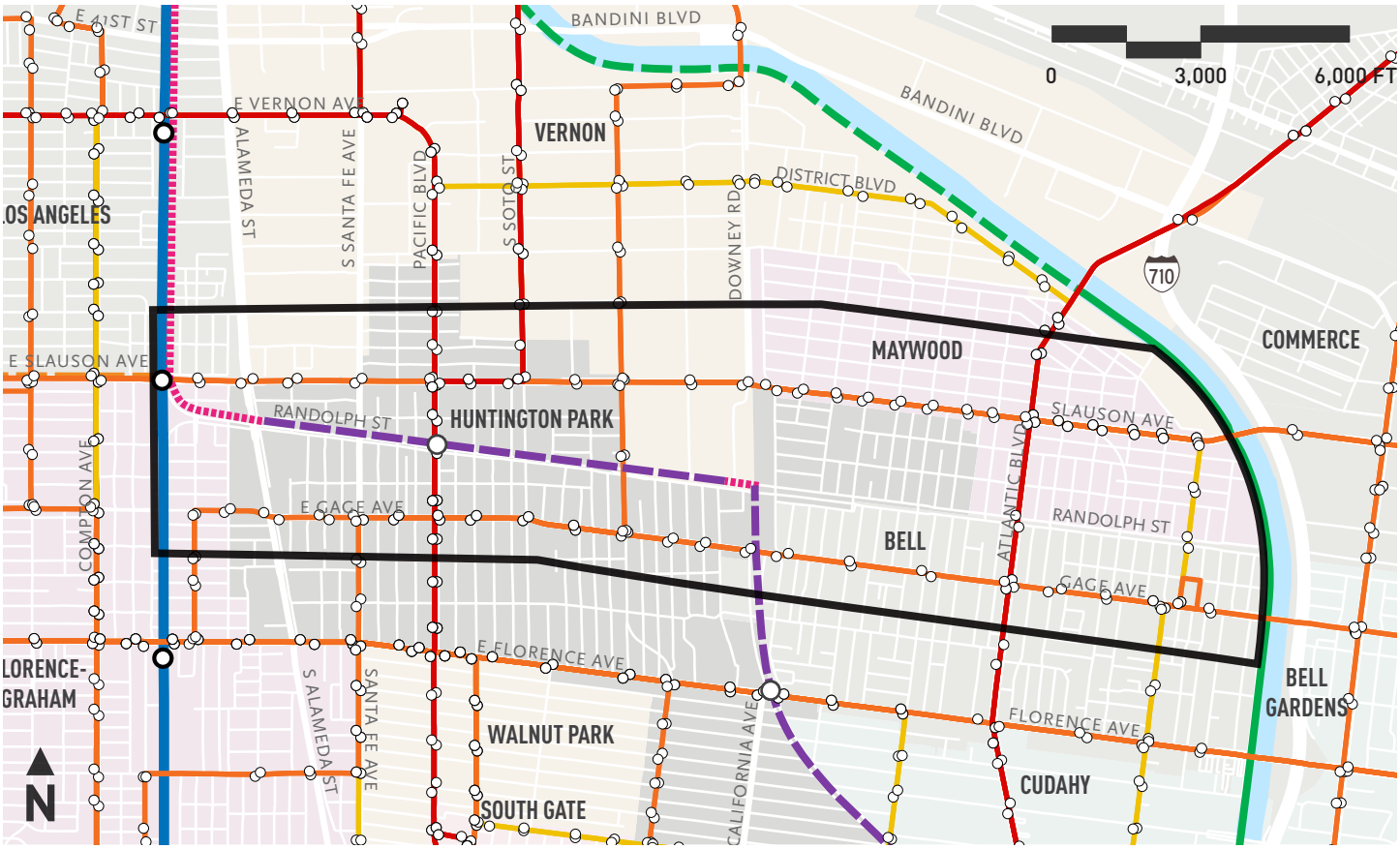
Along Slauson Avenue, Bus Line 108 is now accommodating additional trips and has replaced the trips previously accommodated by Bus Line 358 which has been discontinued. Along Gage Avenue, Bus Line 110 is now accommodating additional trips. Bus Line 254, which previously ran along Gage Avenue, has been discontinued due to low ridership.

Before the onset of the COVID-19 pandemic, Metro ridership figures from 2018 show that the Metro A Line served approximately 65,000 riders per weekday and approximately 30,000 riders per weekend day.[1] Ridership data for calendar years 2020 and 2021 indicate that ridership has since slowed to approximately 28,000 weekday riders and under 20,000 weekend day riders.

Metro's Blue Line First Last Mile Plan evaluates Blue Line stations on a 1-5 scale based on four factors: Safety, Accessibility, Transfers, and Aesthetics. According to the Metro Blue Line First Last Mile Plan, Slauson Station has one of the lowest station area scores (1.7/5), indicating that it could benefit from active transportation infrastructure improvements. The Plan proposes several bicycle and pedestrian improvement projects that would enhance the station area, creating safer connections for bicyclists and pedestrians (see Appendix D for more information).

1 *https://isotp.metro.net/MetroRidership/IndexRail.aspx*

Figure 12. *Transit Service Context*



Rail to River Segment B Study Area

Rail to Rail Segment A

Metro Rail Line & Station

A

Existing/Planned LA River path

Metro Bus Stop

Metro Rapid Lines

Metro Local Lines

Metro Community Circulator Lines

West Santa Ana Branch Project At-Grade

West Santa Ana Branch Project Aerial

Vehicle

The study area is bisected by several east-west and north-south roadways that serve as key truck, bus, and vehicle corridors for the area. These include Slauson Avenue, Gage Avenue, S Alameda Street, and Atlantic Boulevard, among others.

Of the potential corridor opportunities identified for the study area, Slauson Avenue has among the highest historic daily traffic volumes, with approximately 45,000 vehicles per day. Table 2 lists the daily traffic volumes along several of the potential corridor opportunities identified for Segment B.

Freight Rail Operations

There are several freight rail lines that traverse the study area. West of Alameda Street, rail lines are present along Slauson Avenue (Metro), Randolph Street (UP), and Alameda Street (Alameda Corridor).

The Metro-owned rail line along Slauson Avenue continues to Albany Street just west of Santa Fe Avenue where it turns north.

The UP-owned rail line within the Randolph Street median continues to the LA River. The new WSAB line will be within the Randolph Street median until the line turns south along Salt Lake Avenue.

Along Randolph Street east of Salt Lake Avenue, where there is no overlap with WSAB, the wide existing UP-owned ROW provides an opportunity to accommodate a Class I path alongside the rail line.

Table 2. *Daily Traffic Volumes*

Corridor	Street Classification	Daily traffic volume	Source
Slauson Avenue	Major Arterial	31,000 - 45,000	Metro Rail to River Intermediate Active Transportation Corridor Feasibility Study (2014); City of Huntington Park General Plan (2017)
Randolph Street	N/A	< 15,000	City of Huntington Park Complete Streets Plan (2016)
Gage Avenue	Second Arterial	23,400 - 27,600	City of Huntington Park General Plan (2017)
Potential East-West and North-South Connectors			
Miles Avenue	Secondary Arterial	20,000 - 25,000	City of Huntington Park Complete Streets Plan (2016)
State Street	N/A	15,000 - 25,000	City of Huntington Park Complete Streets Plan (2016)
Pacific Boulevard	Major Arterial	< 20,000	City of Huntington Park Complete Streets Plan (2016)
Santa Fe Avenue	Major Arterial	26,600 - 27,000	City of Huntington Park General Plan (2017)

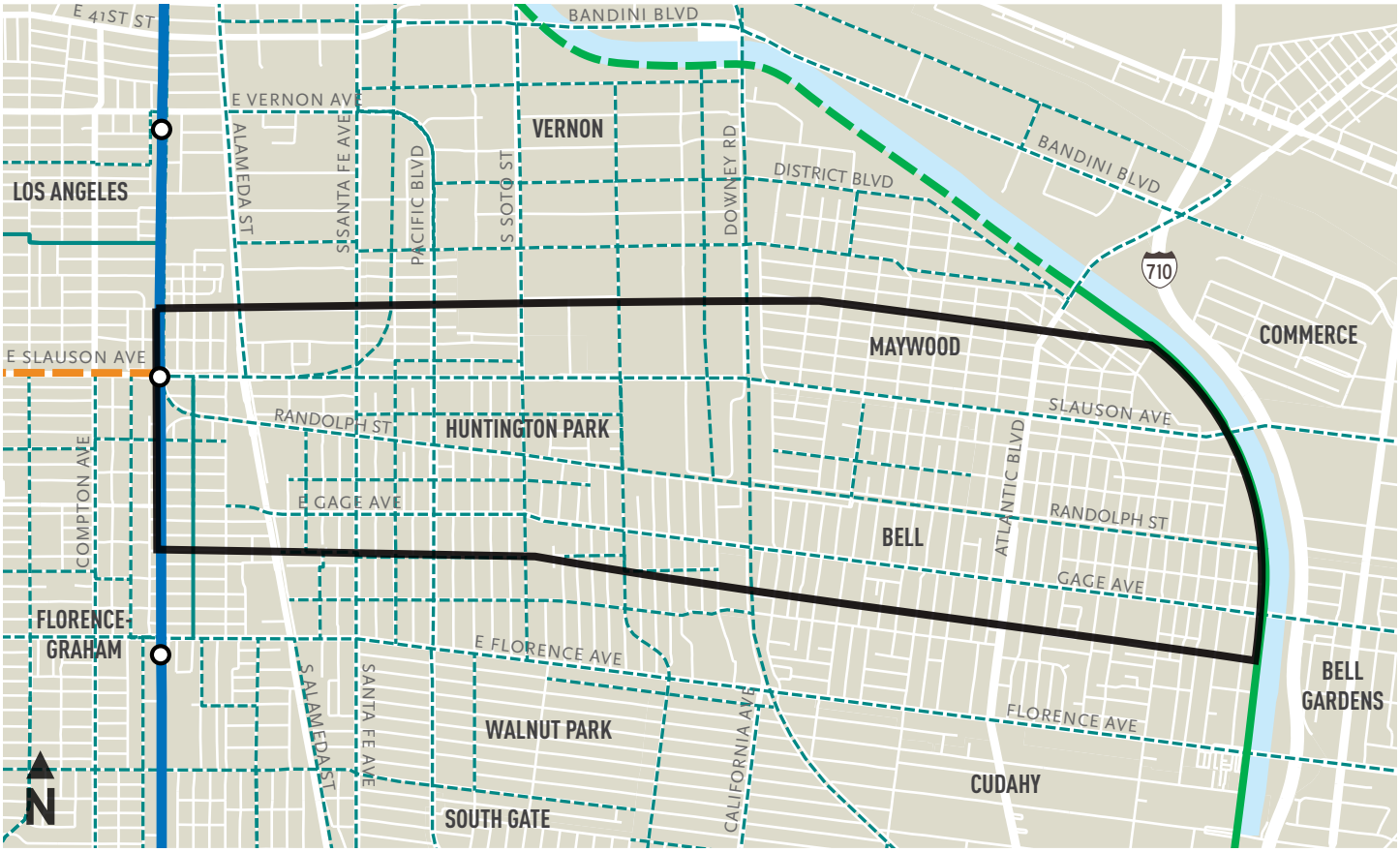
Metro-owned rail line along Slauson

Rail line at Randolph and Holmes

Rail line at Slauson and Downey looking south

Rail line along Randolph east of Salt Lake Avenue

Figure 13. *Existing and Planned Bikeways*



Active Modes

There are several planned and proposed bikeways within and near the study area. Table 3 identifies the bikeway facility types that have been identified for each of the primary potential corridor opportunities following a review of previous planning documents.

Figure 13 identifies the existing and previously proposed bikeways within and near the study area. Because there have been several different facility types proposed for each of the major corridors, proposed bikeways are shown without facility type. There are two existing bikeways in the study area. A Class II buffered bike lane on Holmes Avenue between Florence Avenue and Slauson Avenue, and a Class III bike route on 51st Street west of Long Beach Avenue.

As shown in Table 3, of the potential corridor opportunities for Segment B, Randolph Street has been identified most frequently in previous planning documents. Gage Avenue has been identified the least frequently.

Table 3. *Planned Bikeways*

Corridor	Class	Source
Slauson Avenue	Class I (along bridge)	City of Bell Bicycle Master Plan (2016)
	Class I, II, or III	Rail to Rail/River Active Transportation Corridor Project Alternative Analysis – Segment B (2017)
	Class II	Commerce Bicycle & Pedestrian Plan (2020); Metro Blue Line First/Last Mile: A Community-Based Process and Plan (2018); Vernon Bicycle Master Plan (2019)
	Class II or III	Gateway Cities Strategic Transportation Plan (2016)
	Class III	Huntington Park Complete Streets Plan (2016); Rail to River Intermediate Active Transportation Corridor Feasibility Study (2014)
Randolph Street	Class I	Huntington Park Bicycle Transportation Master Plan (2014)
	Class I or II	Rail to River Intermediate Active Transportation Corridor Feasibility Study (2014)
	Class I or IV	Randolph Street Rail to Trail Feasibility Study (Rethink Randolph) (2016); Huntington Park Complete Streets Plan (2016); City of Bell Bicycle Master Plan (2016)
	Class I, II, or IV	Rail to Rail/River Active Transportation Corridor Project Alternative Analysis – Segment B (2017)
	Class I, II, or III	Metro Active Transport Cycle 1 - Randolph (Sponsor: Commerce; Co-sponsors: Bell, Huntington Park, LA County Public Works) (2021)
	Class II	Metro Blue Line First/Last Mile: A Community-Based Process and Plan (2018); Commerce Bicycle & Pedestrian Plan (2020)
	Class II or III	Gateway Cities Strategic Transportation Plan (2016)
Gage Avenue	Class IV	City of Bell Bicycle Master Plan (2016)
	Class IV, II, or III	Huntington Park Complete Streets Plan (2016)
	Class III	Gateway Cities Strategic Transportation Plan (2016); Huntington Park Bicycle Transportation Master Plan (2014)

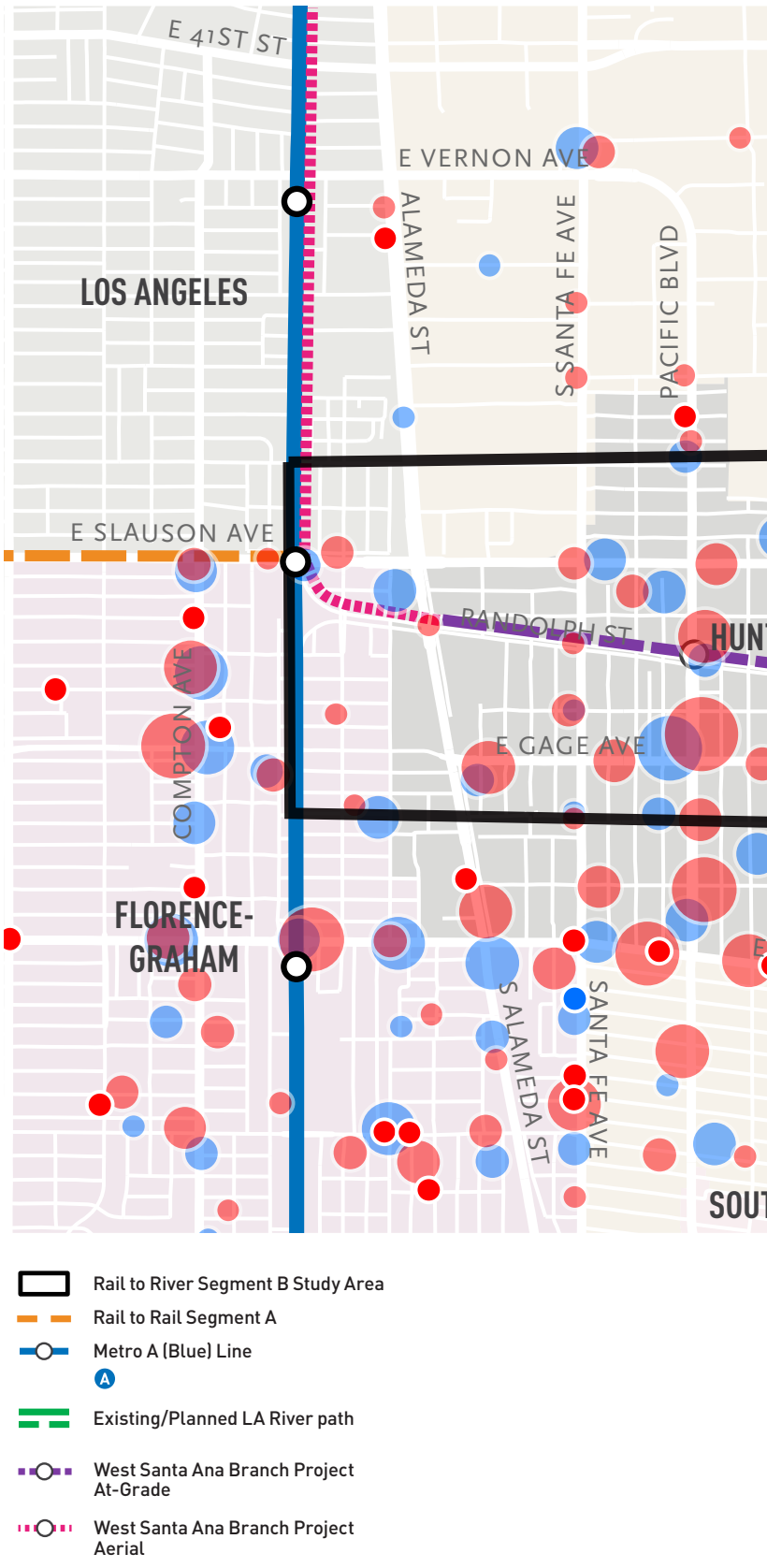
In addition, numerous pedestrian improvements have been proposed as part of previous planning efforts, including the Metro Rail to River Intermediate Active Transportation Corridor Study, Huntington Park Complete Streets Plan, Metro Blue Line First/Last Mile Plan, and West Santa Ana Branch Transit Oriented Development Strategic Implementation Plan, among others. Pedestrian improvements include sidewalk widening, crosswalk improvements, pedestrian-scale lighting, and bus stop improvements, among other projects. A complete list of previous planning efforts is included in Appendix C.

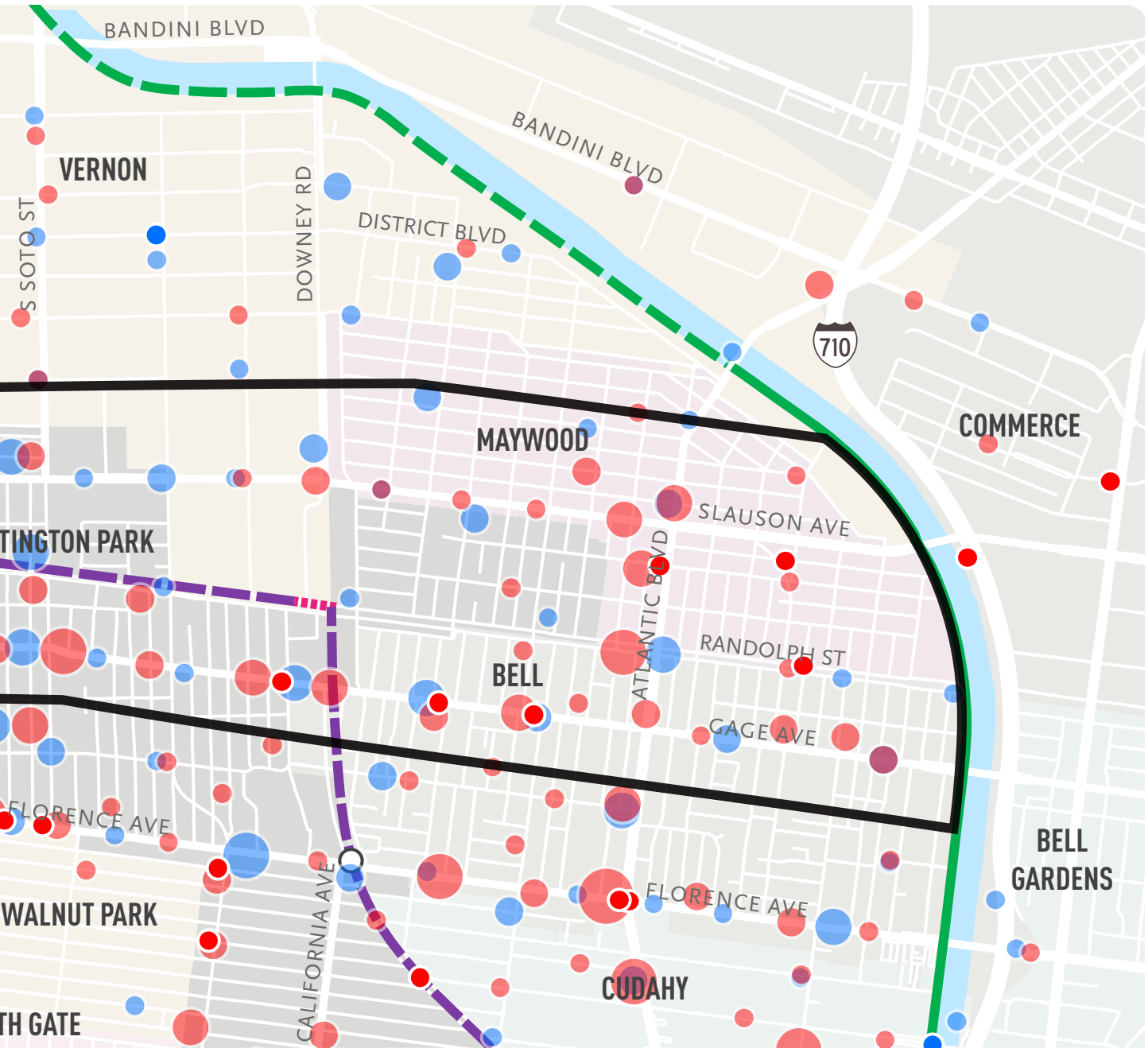
Pedestrian and Bicyclist Collision History

According to Transportation Injury Mapping System (TIMS) data, there were several bicycle and pedestrian collisions in the study area between 2015-2019 (Figure 14). There were 167 pedestrian collisions during this time, with 15 resulting in severe injury, and 6 in a fatality. In addition, there were 118 bike collisions, with three resulting in severe injury.

The majority of these collisions within the study area were clustered along Gage Avenue, Slauson Avenue, Pacific Boulevard, and Atlantic Boulevard. There were also several collisions clustered around Randolph Street, as well as along Florence Avenue south of the study area. The most common type of collision was vehicle/pedestrian collision followed by broadside collision.

Figure 14. *Bicycle & Pedestrian Collisions*





Pedestrian Fatality

Pedestrian Collisions

- 1 - 2
- 3 - 4
- 5 - 6
- 7 - 8
- 9 - 11
- 12 - 15

Bicyclist Fatality

Bicyclist Collisions

- 1 - 2
- 3 - 4
- 5 - 6
- 7 - 8
- 9 - 11

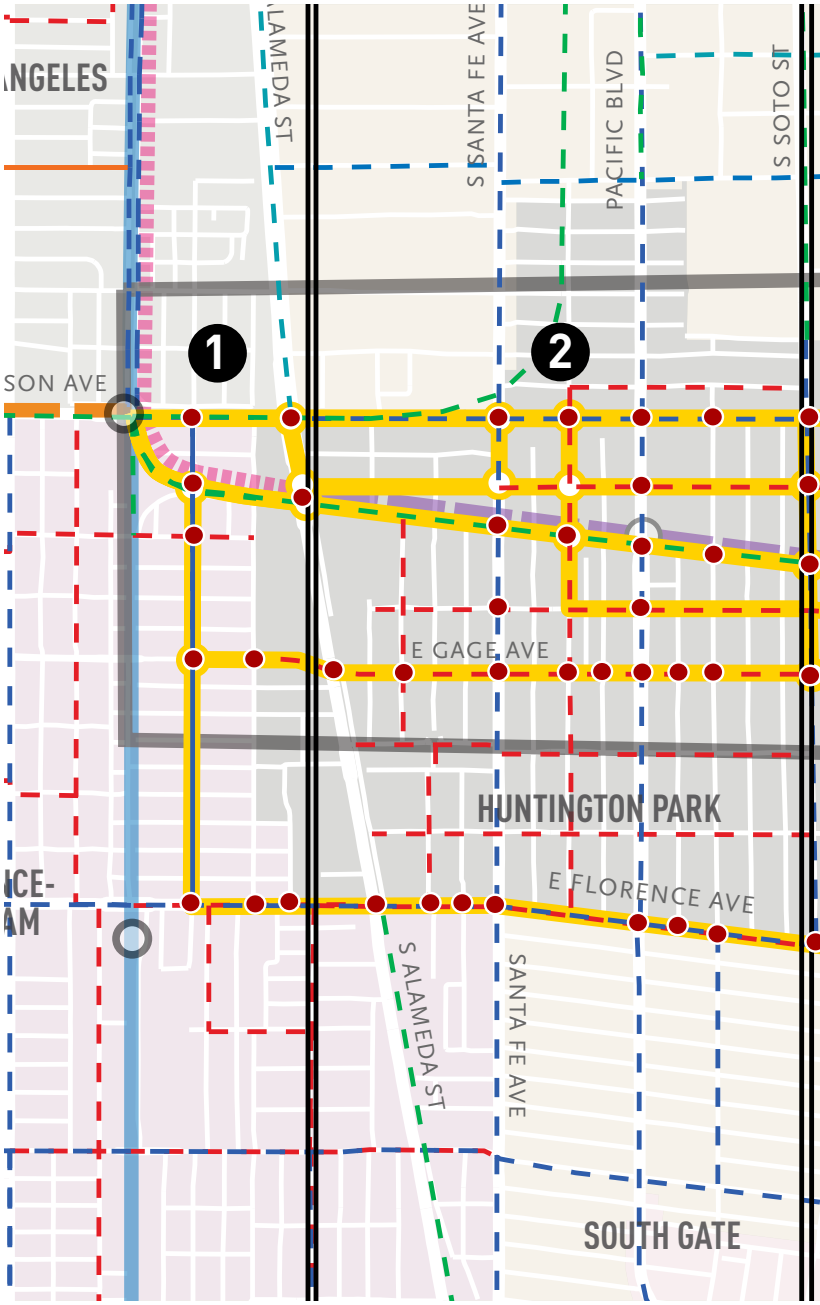
OPPORTUNITIES AND CONSTRAINTS

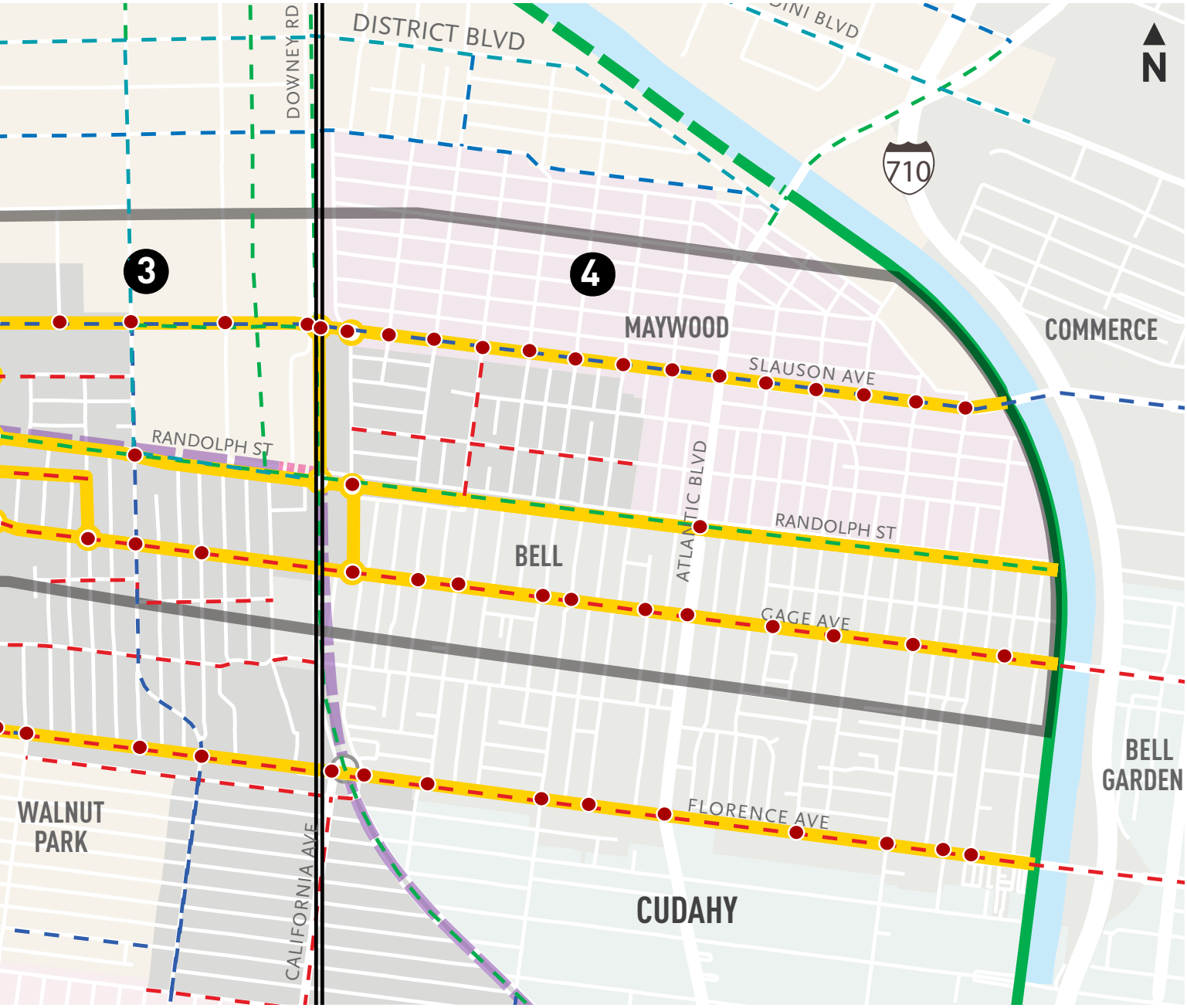
The project study area was divided into four segments to document opportunities and constraints and help identify preliminary concepts for further study (Figure 15). Segmentation was important for comparing different sections of the alignments, as certain sections face greater ROW or other design-related challenges than others. For example, only sections 2 and 3 of Randolph Street are constrained by the at-grade segment of the planned WSAB alignment.

The following section summarizes the opportunities and constraints associated with each segment of the study area. The section is organized by segment, and includes a summary of relevant opportunities and constraints along the corridors located within that segment. Each segment description concludes with a summary of key takeaways related to the new ROW constraints along Randolph, as well as existing and feasible potential bicycle facility cross sections along several key corridors. Appendix E includes additional cross sections that were determined to be technically or politically infeasible.

Figure 15 provides an overview of potential alignment options within each of the segments, as well as the existing and planned bicycle network and signalized intersections along each corridor. Each potential alignment option was assessed based on initial screening criteria related to the five project goals (Safety, Access, Sustainable Mobility, Equity, and Viability). The alignment options were compared for each segment, and the top 3 alignments per segment were chosen to move on to become preliminary concepts. This initial screening process is described in detail in Appendix E.

Figure 15. *Study Area Segments*





Rail to River Segment B Study Area

Rail to Rail Segment A

Metro Rail Line & Station

A

Existing/Planned LA River path

EXISTING & PLANNED BICYCLE NETWORKS

Metro ATSP (2016)

Vernon Bicycle Master Plan (2017)

Class I: Path

Planned

Class II: Bicycle Lane

Planned

Class III: Bicycle Route

Planned

Class IV: Separated Bikeway

Planned

Potential Alignments

Signalized Intersections along Potential Corridors

SEGMENT 1

Segment 1 spans from the Metro A Line (Blue) Slauson Station to Alameda Street where the WSAB alignment is proposed as an aerial configuration. Segment 1 consists of four potential alignment options (Figure 16).

- Slauson Avenue to Alameda Street
- Randolph Street
- Randolph Street to Holmes Avenue to Gage Avenue
- Randolph Street to Holmes Avenue to Florence Avenue

Opportunities

- Potential to enhance existing bike lane along Holmes Avenue, connecting to residential areas
- Opportunity for Class IV or Class II bikeway along Slauson or Gage with lane reconfiguration
- Opportunity for a one-way Class IV bikeway along Randolph
- Opportunity for street trees and pedestrian-scale lighting along Slauson and Gage

Constraints

- Bikeway crossing of Alameda Street will require signal phasing changes and further analysis
- Separated bikeways along Slauson, Gage, and Florence would require parking removal or travel lane reconfiguration
- Environmental consideration within the rail ROW will likely require soil cleanup and hazardous waste remediation
- The future WSAB alignment along Randolph poses a constraint for a continuous Class I path along Randolph

Adjacent Land Uses

The two main land uses in Segment 1 are residential and industrial. The largest concentration of residential use is located south of Randolph along Holmes. Commercial land use is located in small clusters around Slauson and Gage, as well as along Florence. Segment 1 along Randolph and Slauson is largely industrial.

Slauson Avenue looking east

Key Map

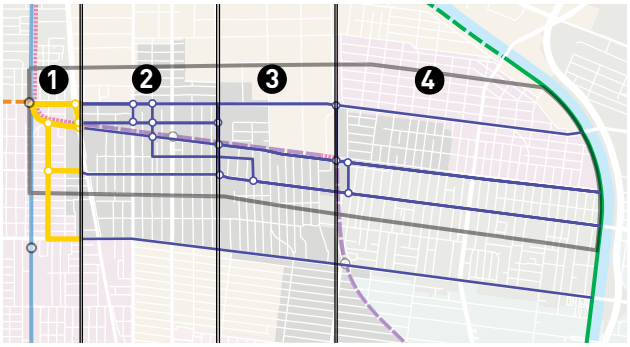
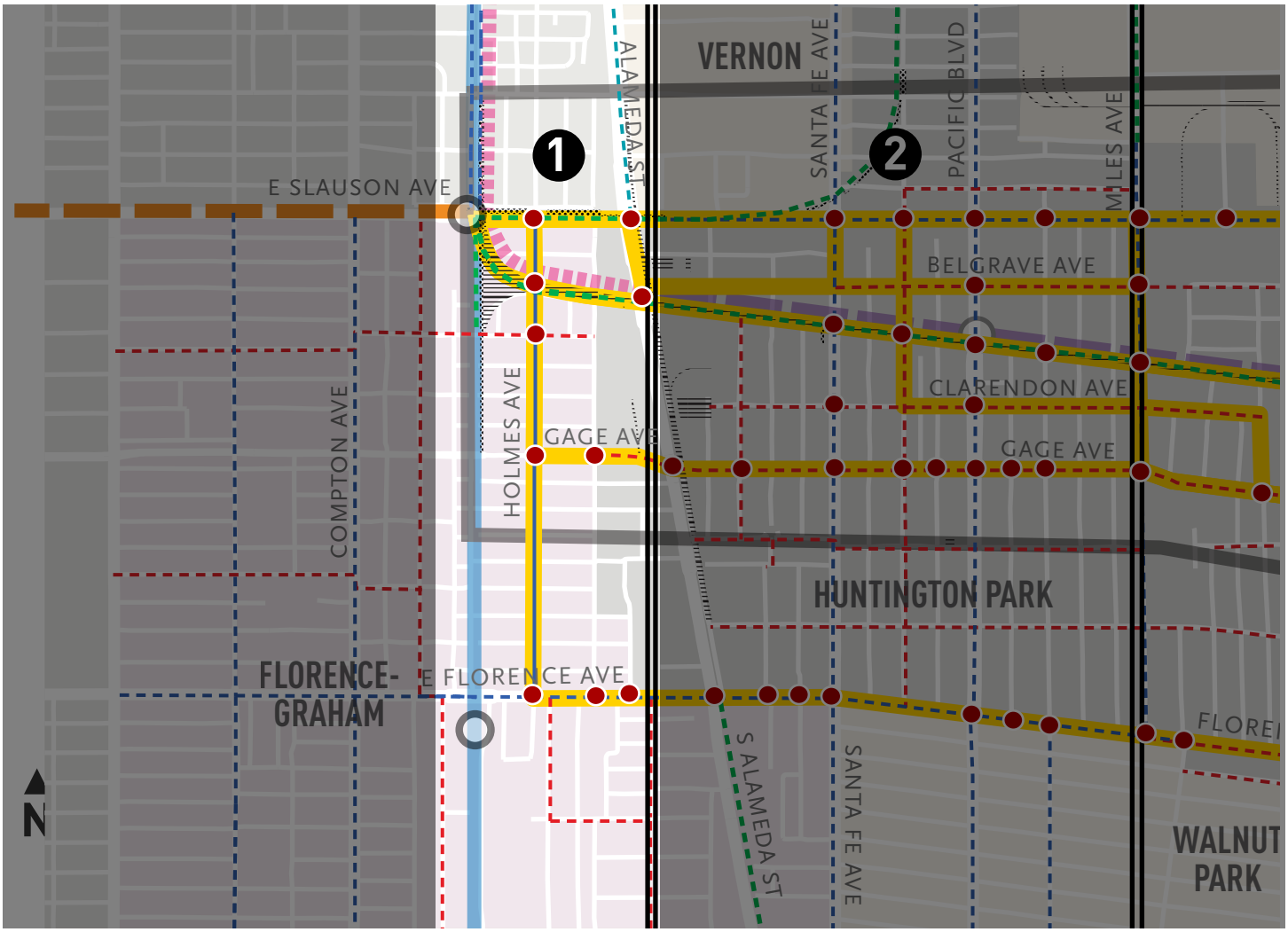


Figure 16. *Segment 1 Overview*



Rail to River Segment B Study Area

Rail to Rail Segment A

Metro Rail Line & Station

A

Existing/Planned LA River path

EXISTING & PLANNED BICYCLE NETWORKS

Metro ATSP (2016)

Vernon Bicycle Master Plan (2017)

Class I: Path
Planned

Class II: Bicycle Lane
Planned

Class III: Bicycle Route
Planned

Class IV: Separated Bikeway
Planned

Potential Alignments

Signalized Intersections along Potential Corridors

Rail/Utility Owned Right-of-way

Metro Owned Right-of-Way

Transit & Active Transportation Connections

An existing buffered Class II bike lane travels along Holmes Avenue from Slauson Avenue to Florence Avenue. While there is only one existing bikeway connection in Segment 1, there are Class II bike lanes proposed for Alameda north of Slauson, a Class I, II, or III facility proposed for Randolph, and a Class IIIbike route proposed for E 60th Street west of Holmes. A proposed Class IV along Holmes would enhance the existing buffered Class II bike lane between Slauson Avenue and Florence Avenue.

The Metro A Line (Blue) runs north-south along the western edge of the study area. In addition, Metro Local Bus Lines run along Slauson, Gage, Holmes, and Florence within Segment 1.

Key Destinations

The Metro A Line (Blue) Slauson Station is located at the corner of Slauson and Randolph. Lillian Street Elementary School is located at the corner of Randolph and Holmes in Segment 1, and Florence Avenue Elementary School is located along Florence Avenue in Segment 1. Both Gage and Florence are lined with several commercial destinations. See Appendix D for a map of key destinations.

Crossings & Intersections

There are 11 signalized intersections in Segment 1. Gage Avenue and Florence Avenue have the greatest numbers of signalized intersections. The intersection with Alameda Street would likely require improvements at any crossing location.

Utilities

Rail lines are present along Slauson Avenue, Randolph Street, and Alameda Street. The rail line along Alameda Street is subgrade.

Potential Bikeway and Pedestrian Improvements

Along Slauson, the rail ROW provides a potential opportunity for a Class I path and a Class IV bikeway can be accommodated through parking removal or lane reconfiguration.

Along Randolph Street, a one-way Class IV separated bikeway with one-way Class III bike route could be accommodated.

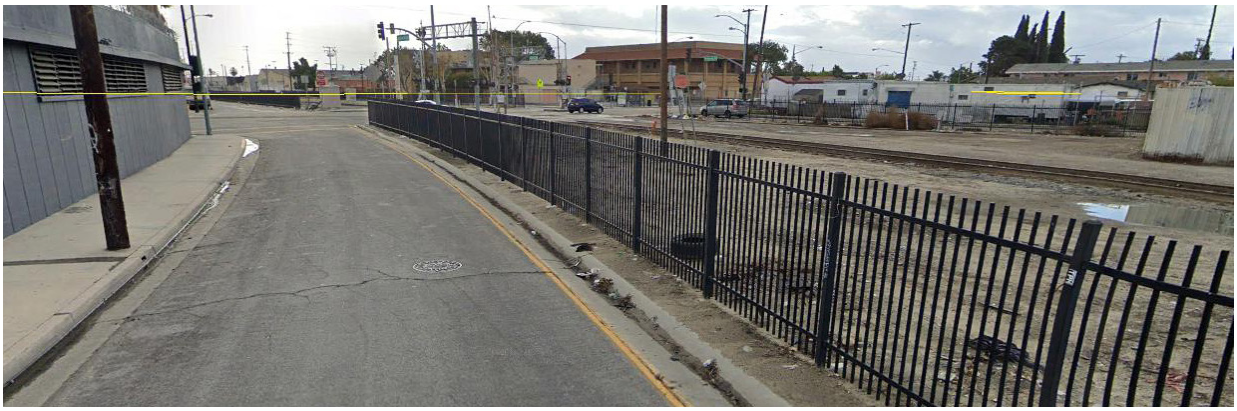
The existing buffered bike lanes on Holmes Avenue could be upgraded to one-way Class IV separated bikeways with minimal roadway impacts except in some constrained locations. This has been identified as feasible by Los Angeles County from Slauson Avenue to 67th Street. Gage and Florence would both require the removal of parking or lane reconfiguration to accommodate Class IV separated bikeways.

Potential pedestrian improvements include enhanced crossings, curb improvements, landscaping, and lighting, as recommended in the Metro Blue Line First/Last Mile Plan for Slauson and Randolph.

Key Takeaways: WSAB

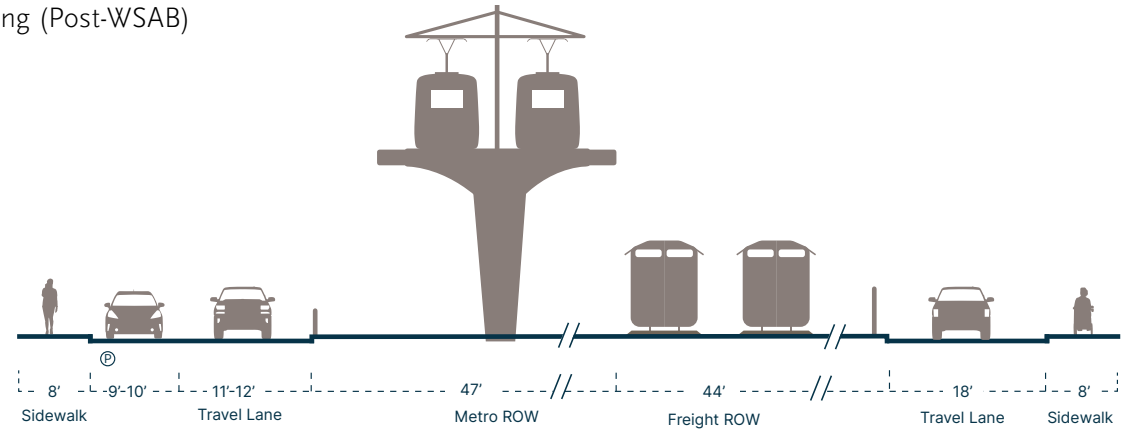
The Randolph corridor was chosen as the Rail to River Segment B LPA during the 2017 AA because of the wide ROW along the existing rail line. However, because of physical constraints the median cannot accommodate the planned WSAB project, the UP line and Segment B. Post-WSAB, Randolph along Segment 1 could potentially accommodate a one-way Class IV separated bikeway within the rail ROW with an adjacent Class III bike route without parking removal. Potential pedestrian improvements could include enhanced crosswalks, street trees, and landscaping.

Randolph Street

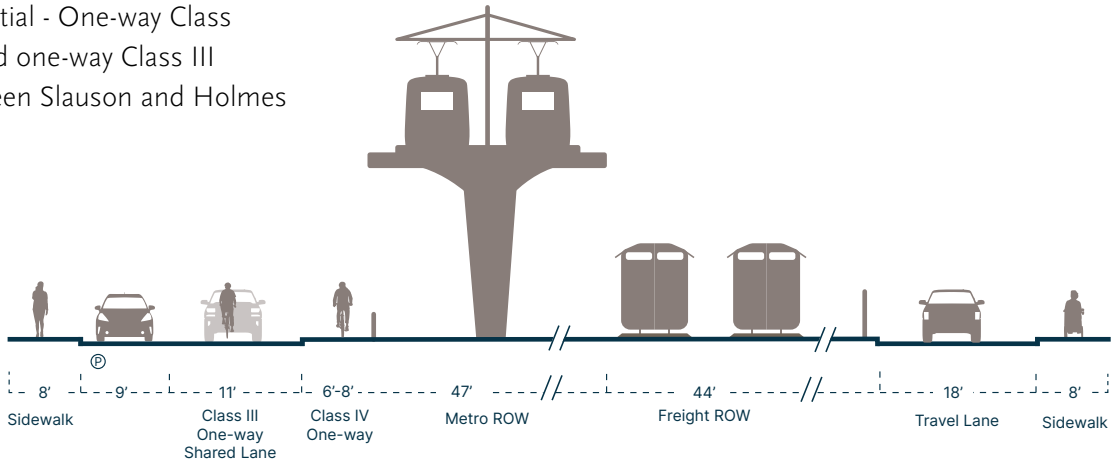


Randolph Street looking east

Existing (Post-WSAB)



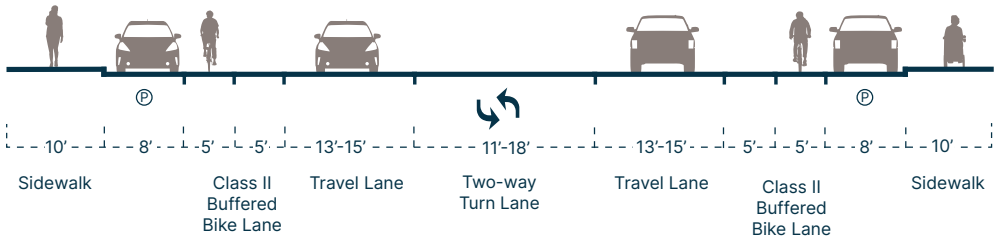
Potential - One-way Class IV and one-way Class III between Slauson and Holmes



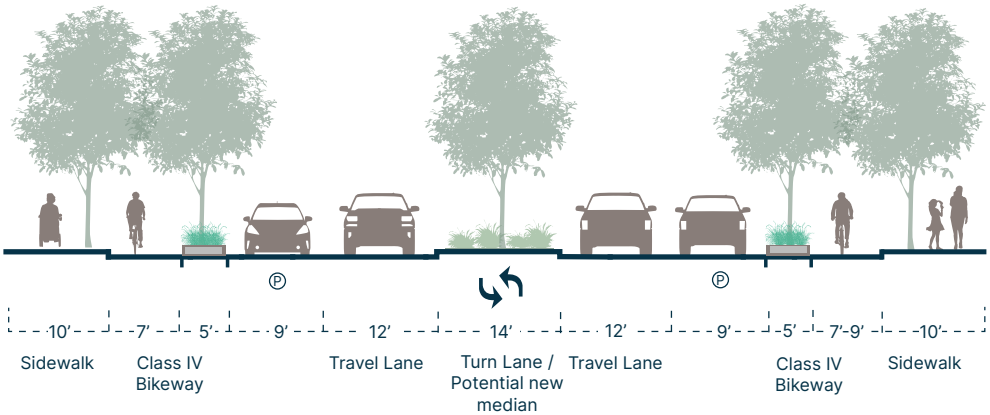
Holmes Avenue

Holmes Avenue looking south

Existing (Typical)



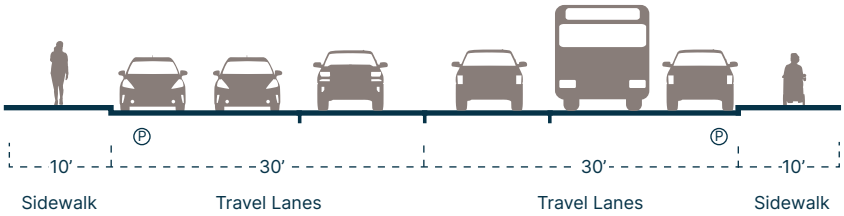
Potential - One-way Class IV Bikeway



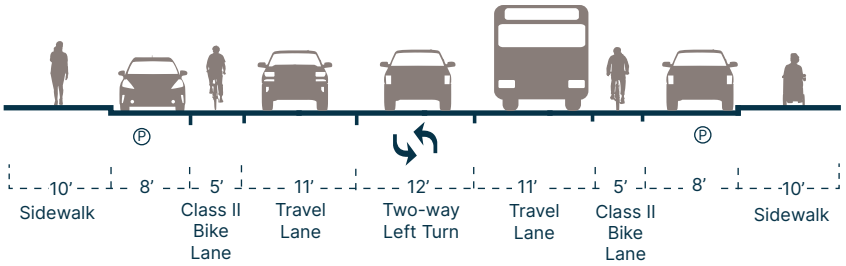
Gage Avenue

Gage Avenue looking east

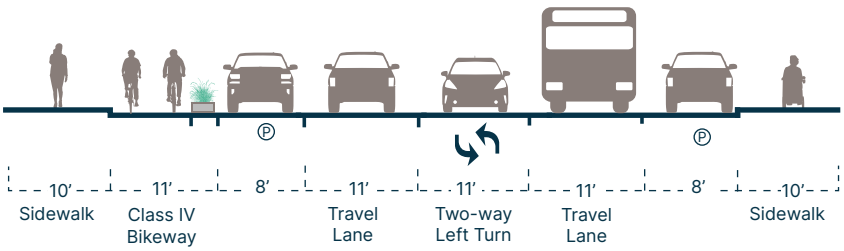
Existing (Typical)



Potential - Class II Bike Lanes



Potential - Two-way Class IV Bikeway



SEGMENTS 2 & 3

Segments 2 and 3 share many of the same constraints due to the at-grade WSAB alignment proposed for this stretch of Randolph Street. The two segments are therefore analyzed together.

Segment 2: Alameda Street to Miles Avenue

Segment 2 spans from Alameda Street to Miles Avenue where the WSAB alignment is proposed as an at-grade configuration. Segment 2 faces several potential constraints due to ROW constraints and consequently consists of seven potential alignment options (Figure 17).

- Slauson Avenue
- Randolph Street
- Gage Avenue
- Florence Avenue
- Belgrave / Miles Avenues
- Slauson / Malabar / Clarendon / Miles Avenues

Opportunities

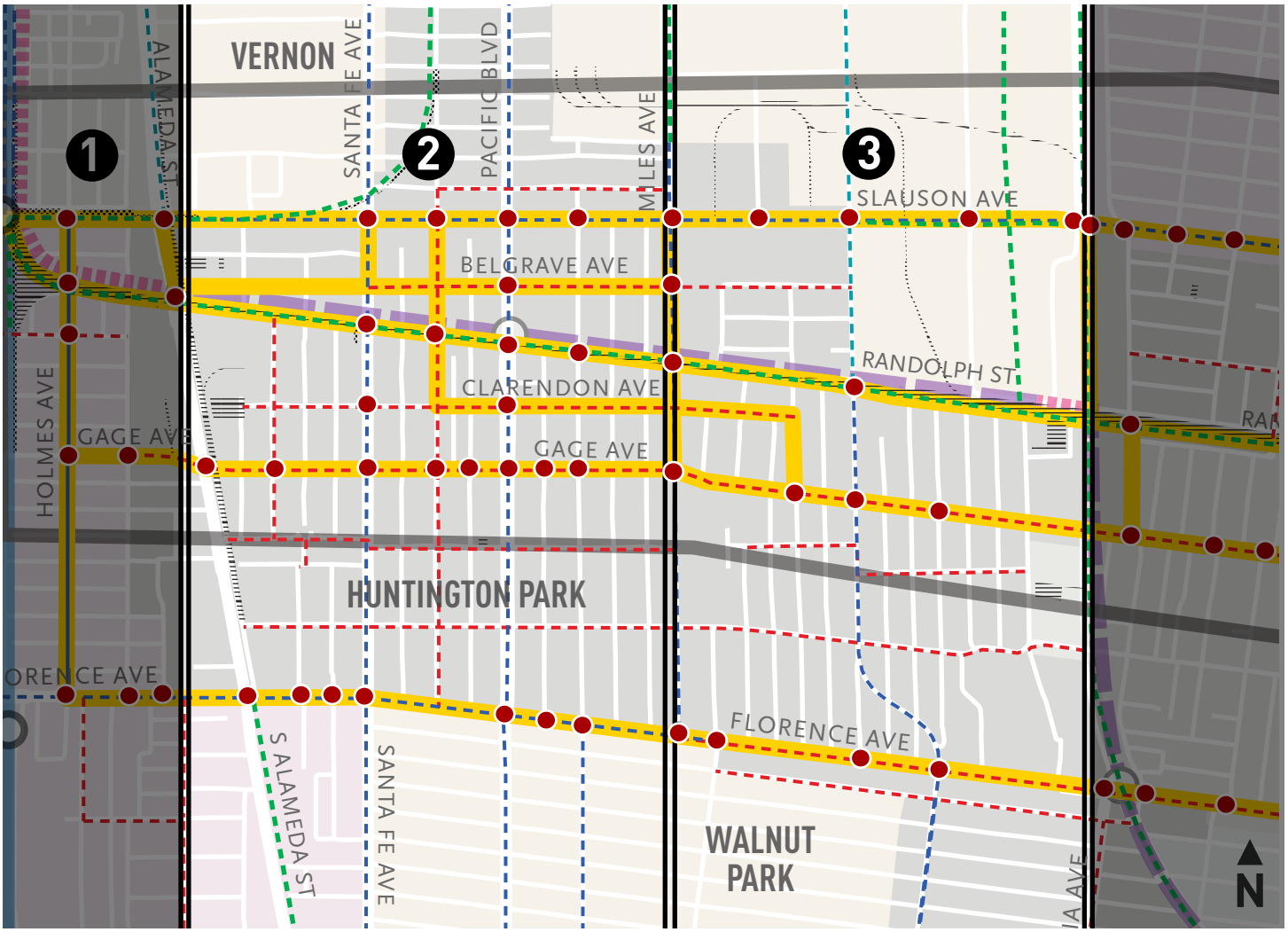
- Belgrave and Clarendon provide opportunities to create Class III bicycle boulevards (due to predominantly residential uses that generate lower traffic and speeds). However, the WSAB traffic impact report shows Clarendon may experience additional traffic, which could make a Class III facility along Clarendon less viable than Belgrave.
- Potential to create Class IV bikeway along Gage with roadway reconfiguration
- Opportunity for high visibility crosswalks along Randolph Street crossings

Constraints

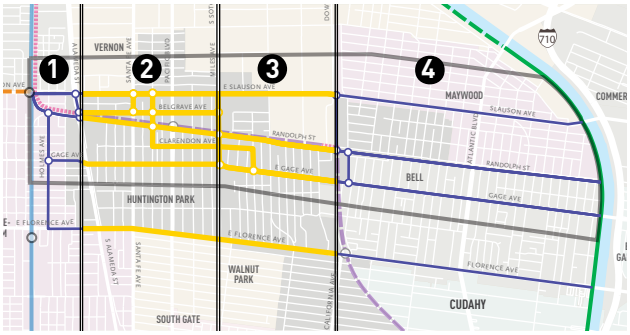
- Along Slauson, rail line ends at Albany Street, ending opportunity for Class I path
- High traffic and truck volumes along Slauson and Florence pose challenges for comfortable on-street connection east of Albany Street
- Planned capacity improvement project along Slauson Avenue in Huntington Park limits the opportunity for a dedicated bikeway
- Proposed at-grade WSAB configuration along Randolph Street eliminates opportunity for a Class I path due to new ROW space constraints.

Randolph Street looking east

Figure 17. *Segments 2 & 3 Overview*



Key Map



Rail to River Segment B Study Area

Rail to Rail Segment A

Metro Rail Line & Station

A

Existing/Planned LA River path

EXISTING & PLANNED BICYCLE NETWORKS

Metro ATSP (2016)

Vernon Bicycle Master Plan (2017)

Class I: Path
Planned

Class II: Bicycle Lane
Planned

Class III: Bicycle Route
Planned

Class IV: Separated Bikeway
Planned

Potential Alignments

Signalized Intersections along Potential Corridors

Rail/Utility Owned Right-of-way

Metro Owned Right-of-Way

Adjacent Land Uses

There is a significant concentration of industrial land use in Segment 2 west of Santa Fe Avenue. Clusters of commercial land uses are concentrated along Slauson Avenue, Miles Avenue, Gage Avenue, and Florence Avenue, as well as along Pacific Boulevard south of Slauson Avenue. In addition, there are concentrations of residential land uses primarily south of Randolph Street.

Transit & Active Transportation Connections

No bike lanes currently exist within Segment 2, however, several streets in this segment have proposed bike lanes. Class II bike lanes are proposed on Santa Fe Avenue and Pacific Boulevard. Several Class III bike routes are also planned through this segment. Class I, II, or III bikeways have been proposed along Slauson, Randolph, Gage, and Florence (see Appendix D).

Like Segment 1, potential alignments through Segment 2 connect to Metro Local Lines on Slauson, Gage, and Florence Avenue. Additionally, Metro Rapid Lines on Pacific Boulevard and Miles Avenue are accessible via Slauson, Gage, and Florence.

Key Destinations

Pacific Center Shopping Center and Community Hospital of Huntington Park are located at Slauson and Pacific. Raul R. Perez Memorial Park is accessible via Randolph, as is UEI College of Huntington Park and several commercial establishments. Both Gage and Florence are lined with several restaurants and other commercial establishments. At the eastern border of the segment, Miles Avenue offers connections to several schools (e.g., Huntington Park High School and Gage Middle School) and civic destinations.

ROW Limitations

The Metro-owned rail ROW along Slauson turns north at Albany Street, ending the opportunity for a Class I path along this alignment. East of this point, Slauson would require parking removal or travel lane conversion in order to accommodate Class IV bikeways. A planned roadway widening project to increase vehicular capacity along Slauson also limits the opportunity for a bikeway.

Due to ROW space constraints, a Class I path through this segment is infeasible. Class IV bikeways would only be feasible along certain stretches with the removal of parking. At intersections, only shared-use conditions would be feasible due to WSAB mitigation measures which will extend the length of right turn pockets.

Crossings & Intersections

There are 31 signalized intersections in Segment 2. Major intersections that may require crossing improvements include Santa Fe Avenue, Pacific Boulevard, and Miles Avenue.

Utilities

Rail lines are present along Slauson Avenue until Albany Street and along Randolph Street.

Potential Bikeway and Pedestrian Improvements

Along Slauson, the Metro-owned rail ROW provides a potential opportunity for a Class I shared-use path until Albany Street. Class IV bikeways could be accommodated on Slauson (east of Albany Street), Alameda, Santa Fe, Gage, or Florence with the removal of parking or reconfiguration of travel lanes. Belgrave, Malabar, and Clarendon Streets could accommodate Class III bike routes.

Following the construction of WSAB, Randolph Street could accommodate a Class III bicycle boulevard. There is an opportunity for an interim Class II bike lane by reducing or narrowing a travel lane on Randolph prior to WSAB.

Pedestrian improvements including enhanced high-visibility crosswalks, pedestrian-scale lighting, landscaping, and shade trees could be accommodated along each of the potential alignments.

Segment 3: Miles Avenue to Salt Lake Avenue

Segment 3 spans from Miles Avenue to Salt Lake Avenue where the WSAB alignment is proposed as an at-grade configuration. Segment 3 faces several potential constraints due to the WSAB alignment and consequently consists of six potential alignment options (Figure 17).

- Slauson Avenue
- Randolph Street
- Clarendon
- Gage Avenue
- Florence Avenue

Opportunities

- Rail ROW north of Salt Lake Avenue could potentially accommodate a Class I path connecting Slauson and Randolph
- Clarendon Street and Arbutus Avenue could accommodate Class III bike routes
- Opportunities for pedestrian scale lighting and landscaping along each alignment

Constraints

- High traffic volumes and road widening project along Slauson pose challenges for comfortable on-street connection east of Albany Street
- Proposed at-grade WSAB configuration along Randolph Street eliminates opportunity for Class I path alignments due to new ROW space constraints.

Adjacent Land Uses

The area north of Randolph in Segment 3 is largely industrial. South of Randolph to Gage is mainly residential, with commercial activity located along Gage and industrial land use surrounding the rail ROW that connects Randolph to Slauson. Continuing south, the dominant land use is residential until Florence, which is surrounded by commercial activity.

Transit & Active Transportation Connections

Class II bike lanes are planned along Boyle Avenue. Several Class III bike routes are also planned in this segment. Class I, II, or III bikeways have been proposed along Slauson, Randolph, Gage, and Florence (see Appendix D).

Metro Local Lines run on Slauson Avenue, Boyle Avenue, Gage Avenue, and Florence Avenue.

Key Destinations

Several schools and civic destinations are located within Segment 3. Miles Avenue provides access to Huntington Park High School between Slauson and Randolph, and Gage Middle School and Miles Avenue Elementary School south of Gage, as well as the Huntington Park Library, Huntington Park City Hall, and Huntington Park Police Department south of Gage.

Randolph Street provides access to San Antonio Elementary School.

Along Florence Avenue is Mission Hospital of Huntington Park, and the roughly 30-acre Salt Lake Park. There are also several restaurants and other commercial establishments located along Randolph, Gage, and Florence Avenue. See Appendix D for a map of key destinations.

ROW Limitations

Segment 3 experiences the same ROW limitations as Segment 2. The addition of Class IV bikeways along Slauson, Randolph, Gage, or Florence would require either parking removal or travel lane conversion.

Mitigation measures from the WSAB project require extending the length of right turn pockets resulting in shared-use facilities along Randolph Street at intersections.

Crossings & Intersections

There are 12 signalized intersections in Segment 3. Major intersections that may require crossing improvements include Miles Avenue, State Street, and Salt Lake Avenue.

Utilities

In addition to the rail ROW along Randolph Street, a rail line travels north of Salt Lake Avenue, connecting Randolph and Slauson.

Potential Bikeway and Pedestrian Improvements

Like Segment 2, Class IV bikeways could be accommodated on Slauson, Gage, or Florence with the removal of parking or travel lanes. Similar typical conditions exist along Randolph in this segment. Following construction of WSAB, a Class III bicycle boulevard could be accommodated. There is an opportunity for an interim Class II bike lane on Randolph by reducing or narrowing a travel lane prior to WSAB.

Clarendon Street and Arbutus Avenue could accommodate Class III bike routes.

The existing rail line north of Salt Lake Avenue could potentially accommodate a Class I shared-use path that could serve as a connector between Slauson Avenue and Randolph Street.

Pedestrian improvements including enhanced high-visibility crosswalks, pedestrian-scale lighting, landscaping, and shade trees could be accommodated along each of the potential alignments.

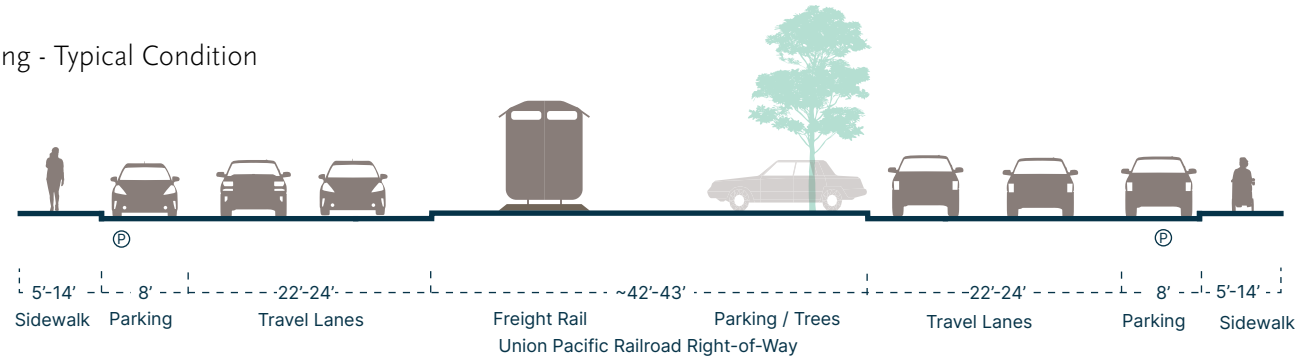
Key Takeaways: WSAB

The Randolph corridor was chosen as the Rail to River Segment B LPA during the 2017 AA because of the wide ROW along the existing rail line. However, because of physical constraints the median cannot accommodate the planned WSAB project, the UP and Segment B. Post-WSAB, Randolph Street along Segments 2 and 3 could only accommodate a Class III bike route without parking removal. Belgrave Avenue and Gage Avenue provide potential alternate routes to circumvent this section of Randolph and avoid parking impacts.

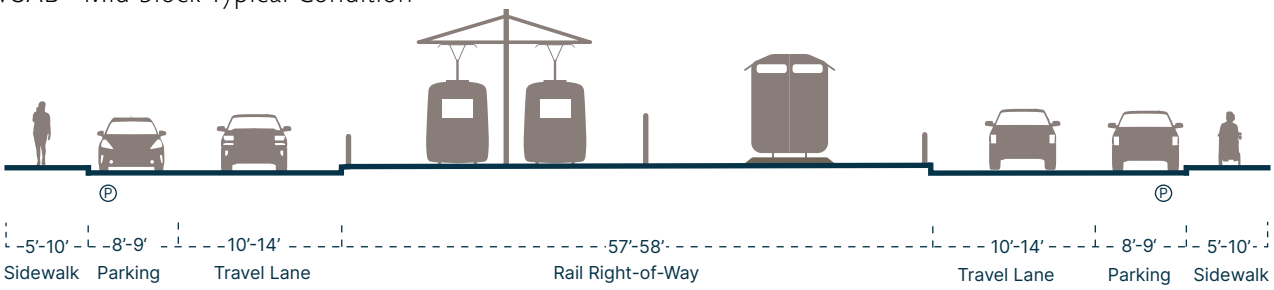
Potential pedestrian improvements could include enhanced crosswalks, curb treatments, street trees, and landscaping.

Randolph Street

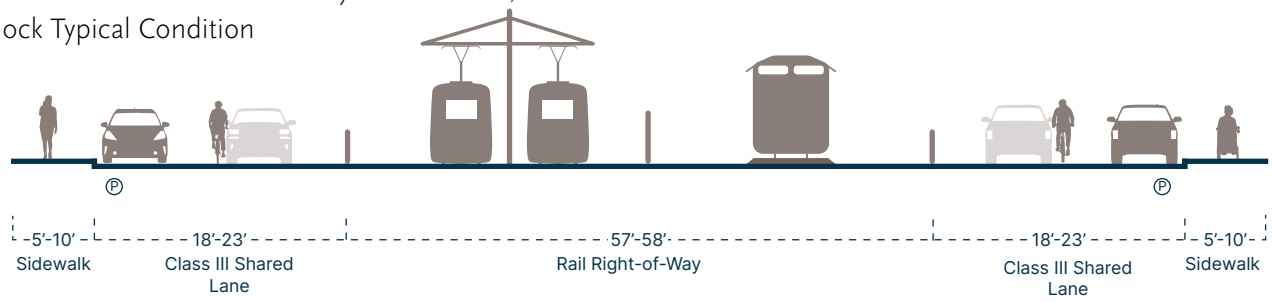
Existing - Typical Condition



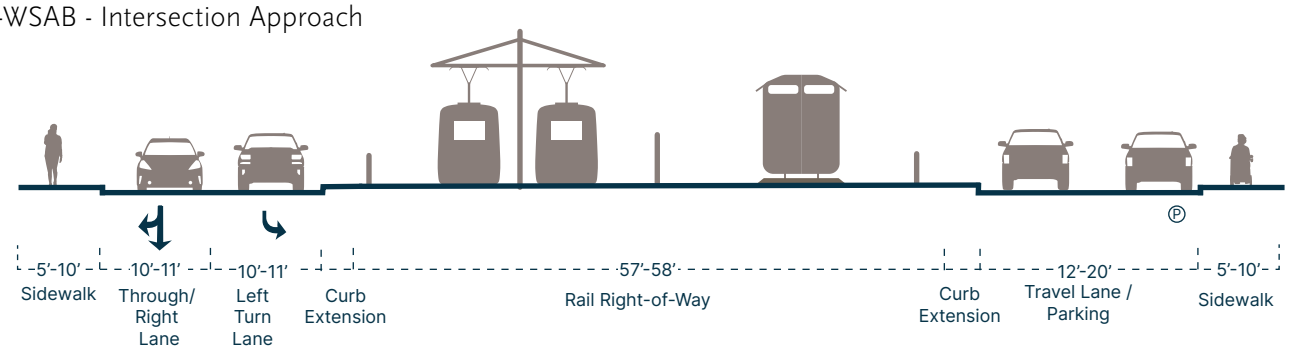
Post-WSAB - Mid-block Typical Condition



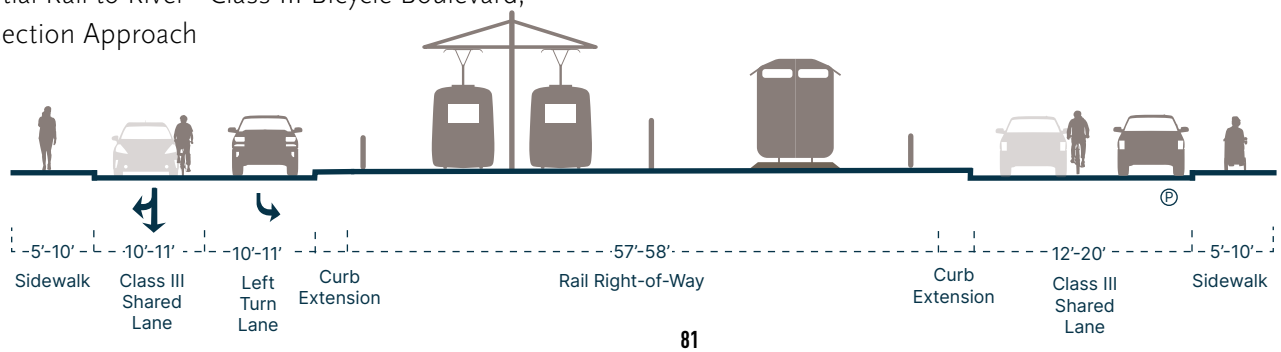
Potential Rail to River - Class III Bicycle Boulevard, Mid-block Typical Condition



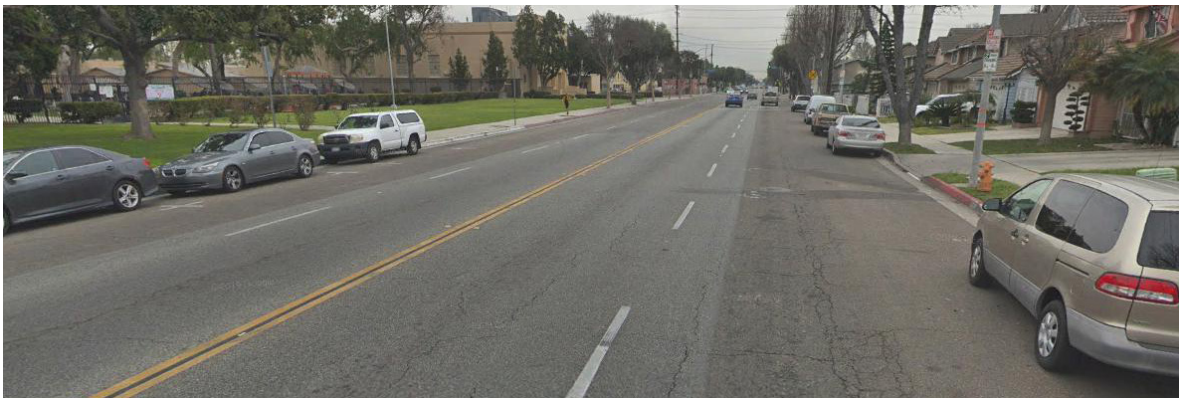
Post-WSAB - Intersection Approach



Potential Rail to River - Class III Bicycle Boulevard, Intersection Approach

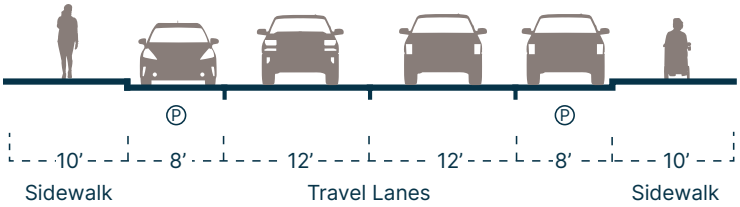


Belgrave / Miles Avenue

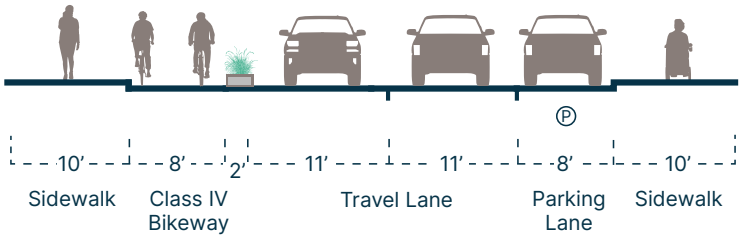


Miles Avenue looking south

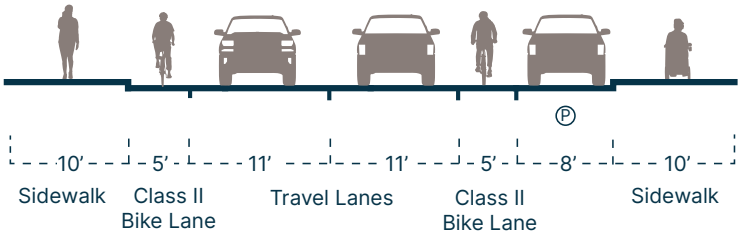
Existing (Typical)



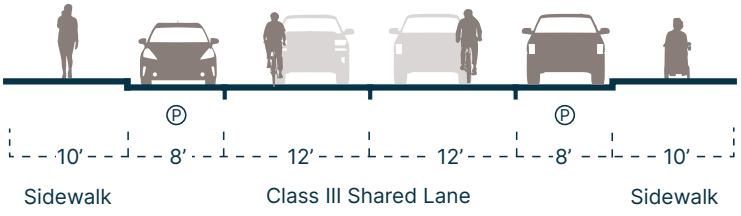
Potential - Two-way Class IV Bikeway



Potential - Class II Bike Lanes



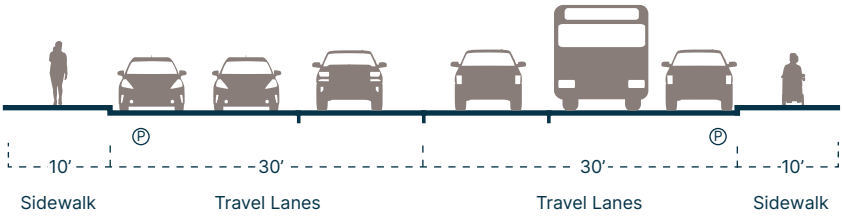
Potential - Class III Bicycle Boulevard



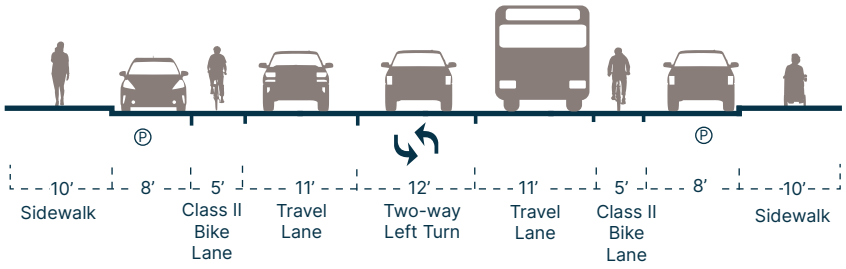
Gage Avenue

Gage Avenue looking east

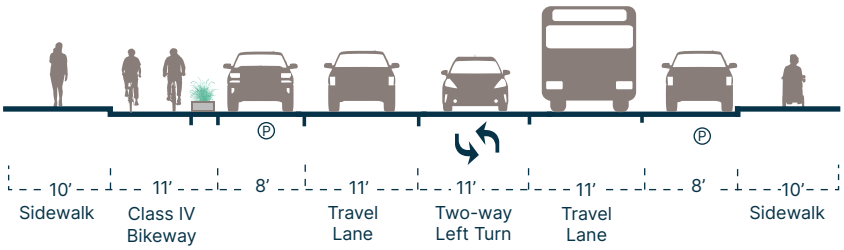
Existing (Typical)



Potential - Class II Bike Lanes



Potential - Two-way Class IV Bikeway



SEGMENT 4

Segment 4: Salt Lake Avenue to LA River

Segment 4 spans from Salt Lake Avenue to the LA River and does not face the same ROW challenges as the previous segments. Segment 4 consists of five potential alignment options (Figure 18).

- Slauson Avenue
- Randolph Street
- Maywood Avenue to Randolph Street
- Gage Avenue
- Florence Avenue

Opportunities

- Randolph Street faces fewer ROW constraints in this section and can accommodate a Class I path without altering the roadway configuration
- Randolph Street was chosen as the LPA in 2017 and was most desired by the community in the previous plan's outreach
- Potential for coordination with funded Measure W stormwater improvement projects
- Opportunity aligns with Randolph MAT project

Constraints

- Environmental consideration within the rail ROW will likely require soil cleanup and hazardous waste remediation
- Implementing a Class I path along the rail ROW would require extensive coordination with UP
- Florence is too far out of direction to be used as a pedestrian route to access the LA River

Adjacent Land Uses

The majority of Segment 4 is covered by residential land use, with clusters of commercial activity along Slauson Avenue, Atlantic Boulevard, Randolph Street, Gage Avenue, and Florence Avenue. There is some industrial land use present along the LA River adjacent to Slauson Avenue and Randolph Street.

Transit & Active Transportation Connections

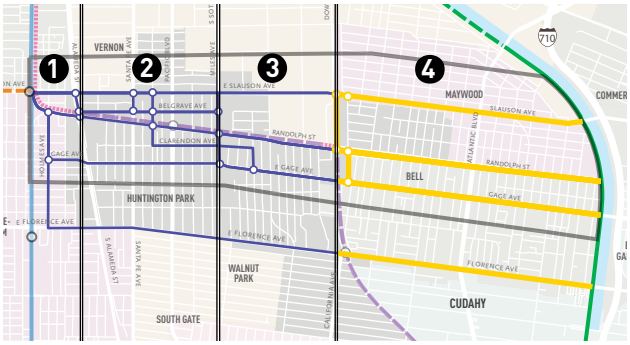
A Class III bike route is proposed on Carmelita Avenue connecting Slauson with Randolph. Class I, II, or III bikeways have been proposed along Slauson, Randolph, Gage, and Florence (see Appendix D).

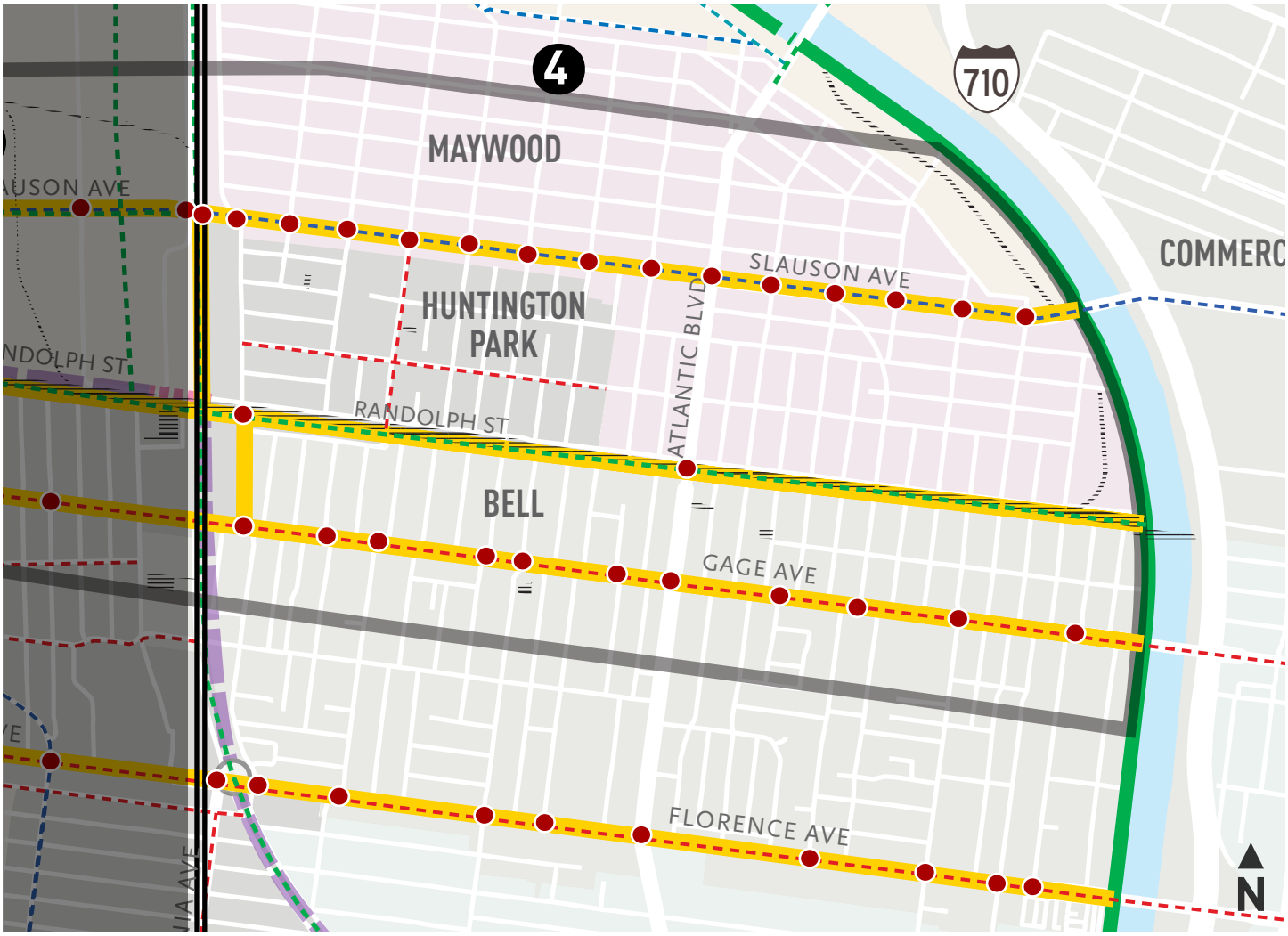
Metro local lines extend down Slauson, Gage, and Florence through Segment 4. Additionally, a Metro Rapid Line is located along Atlantic Boulevard and a Metro Community Circulator line is located on Alamo Avenue which runs south from Slauson Avenue.

Existing access points to the LA River Path exist at Slauson, Randolph, and Gage Avenues.

Figure 18. *Segment 4 Overview*

Key Map





Rail to River Segment B Study Area
Rail to Rail Segment A
Metro Rail Line & Station
A
Existing/Planned LA River path

EXISTING & PLANNED BICYCLE NETWORKS

Metro ATSP (2016)
Vernon Bicycle Master Plan (2017)

Class I: Path
Planned
Class II: Bicycle Lane
Planned
Class III: Bicycle Route
Planned
Class IV: Separated Bikeway
Planned

Potential Alignments
Signalized Intersections along Potential Corridors
Rail/Utility Owned Right-of-way
Metro Owned Right-of-Way

Key Destinations

Two shopping centers are located along the Atlantic Boulevard commercial corridor. An additional shopping center is located on Florence near the Eastern terminus.

There are nine schools located in Segment 4, including South Region High School, and Heliotrope Avenue Elementary School along Slauson, Maywood Academy High School and Nueva Vista Elementary School along Randolph, Orchard Academies, Martha Escutia Primary Center, Woodlawn Avenue Elementary School, and Alhadi School along Gage, and Ellen Ochoa Learning Center along Florence. Two schools, Corona Avenue Elementary School and Bell High School are located along Bell Avenue between Gage and Florence.

Seven parks are located within Segment 4. The largest park–Riverfront Park–is located adjacent to Slauson Avenue and the LA River waterfront.

Additional destinations include the Maywood Cesar Chavez Library on Slauson Avenue, the City of Bell City Hall adjacent to Gage Avenue, and the City of Maywood City Hall on Slauson Avenue.

See Appendix D for a map of key destinations.

ROW Limitations

Slauson Avenue, Gage Avenue, and Florence Avenue are subject to the same ROW limitations in Segment 4 as in other segments, i.e., they would require some level of road reconfiguration to accommodate Class IV bikeways. Alternatively, the rail ROW along Randolph Street faces fewer constraints because the WSAB alignment turns south near Salt Lake Avenue.

Crossings & Intersections

There are 38 signalized intersections in Segment 4. Major intersections that may require crossing improvements include Maywood Avenue and Atlantic Avenue.

Utilities

The rail ROW along Randolph Street extends to the LA River.

Potential Bikeway and Pedestrian Improvements

Like Segment 2, Class IV bikeways could be accommodated on Slauson, Gage, or Florence with the removal of parking or travel lanes. Maywood Avenue could accommodate a Class III bike route. Randolph Street could accommodate a Class I shared-use path along its existing rail ROW or a Class IV bikeway with parking removal or lane reconfiguration.

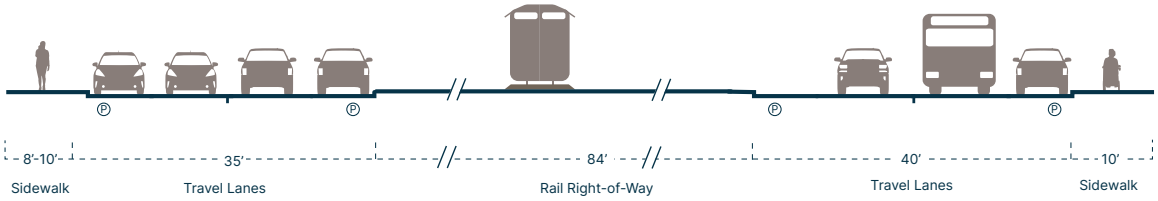
Pedestrian improvements including enhanced high-visibility crosswalks, pedestrian-scale lighting, landscaping, and shade trees could be accommodated along each of the potential alignments.

Key Takeaways: WSAB

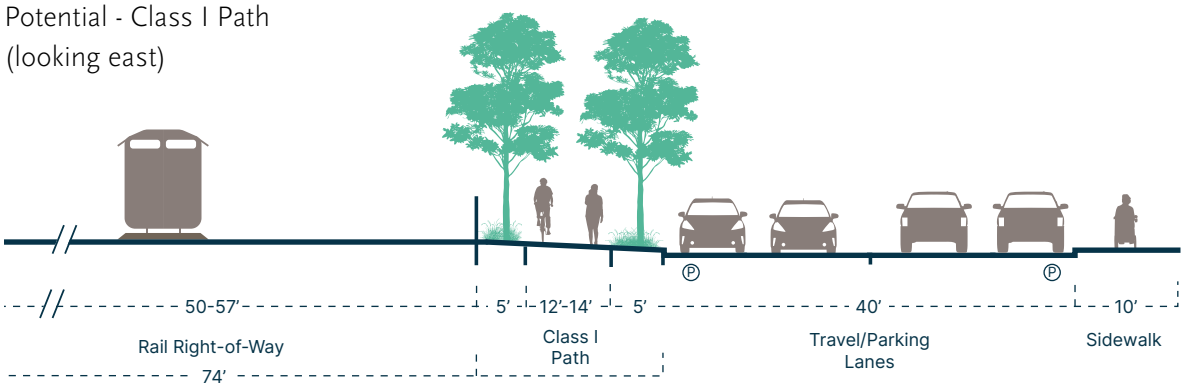
The Randolph corridor may be able to accommodate a Class I path along the rail ROW or a Class IV bikeway within the roadway, as identified in the 2017 AA and the MAT Randolph project. However, extensive coordination with UP is required to explore the implementation of a Class I path within the median.

Randolph Street

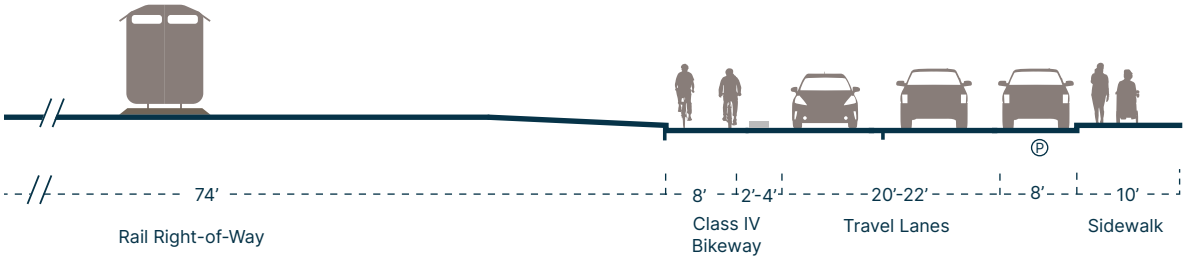
Existing (Typical)



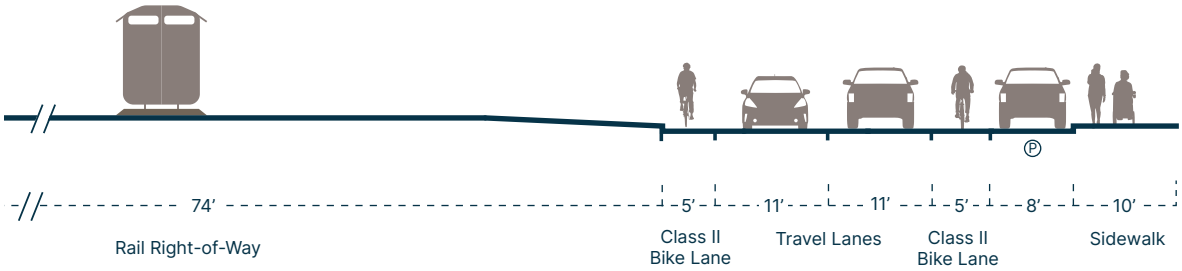
Potential - Class I Path
(looking east)



Potential - Class IV bikeway
(looking east)



Potential - Class II bike lanes
(looking east)



PRELIMINARY CONCEPTS TO ALTERNATIVES

Overview

The project team considered feasible bikeway and pedestrian improvement opportunities for each potential corridor, and then evaluated these potential alignments using fatal flaw criteria, which included a number of qualitative criteria including, but not limited to:

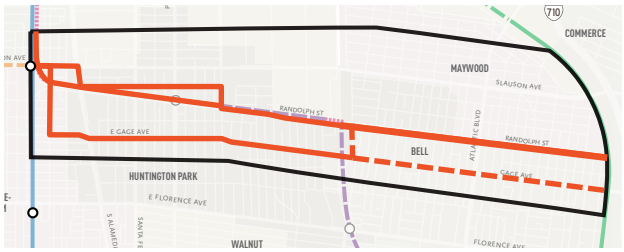
- The alignment provides a continuous route between Segment A and the LA River
- The alignment serves historically disadvantaged communities
- The alignment is consistent with existing plans, policies, and funding opportunities

For more information on initial screening criteria, see Appendix E.

This initial screening process resulted in four preliminary concepts for Segment B. These prelimary concepts were subsequently refined to include additional elements such as ROW and parcel impacts, transit compatibility, parking, and other roadway and transportation impacts, and preliminary costs. The refined concepts then became the four project alternatives.

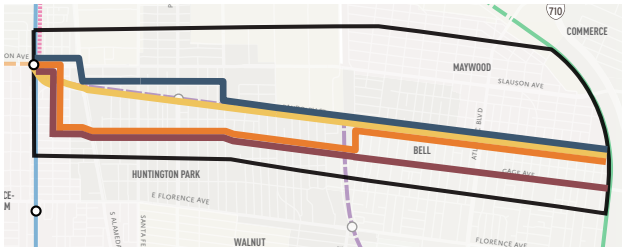
ALIGNMENT OPTIONS

ALL POSSIBLE CORRIDOR OPPORTUNITIES



PRELIMINARY CONCEPTS

COHESIVE ROUTES BETWEEN SLAUSON STATION AND THE LA RIVER



FOUR ALTERNATIVES

REFINED CONCEPTS THAT CONSIDER ROW, TRANSPORTATION IMPACTS, AND PROJECT COSTS

Guidelines for Building Preliminary Concepts

There are dozens of different ways to combine segments to produce continuous alignments that connect Segment A to the LA River. In selecting the four preliminary concepts for Segment B, the design team used the following guidelines.

- **The concepts should be supported by the evaluation process.** The Stage 1 screening process provides a baseline assessment of the options for each segment. The four preliminary concepts should consist of higher-performing options within each segment. However, careful consideration was made to combine options from each segment that work as part of a complete concept and are supported by the remaining guidelines.
- **The concepts should be direct.** The concepts should avoid excessive turns (maximum 6 turns) and should minimize length (maximum 25% longer than the most direct option). For these reasons, Florence Avenue, despite a generally favorable evaluation, was discounted as a viable option.
- **The concepts should be distinct, where possible.** The four concepts should provide variety for segments where there are multiple desirable and viable options that merit additional study. However, in segments where there is a clear preferred alignment there is no need to bring forward additional options for the sake of variety. For the latter reason, Randolph in Segment 4 is featured in all four concepts.

Alternatives

The following pages illustrate the four alternatives for the project. These alternatives are refined versions of the preliminary concepts that performed best during the initial screening process. The alternatives were evaluated during the alternative analysis process, as described in Chapter 3.

The four alternatives included top-scoring alignments from the Initial Screening process that were carried forward in their entirety, or combinations of some of the top-scoring alignments so that the alternatives include the strongest alignment options from each segment. These combined alternatives were stitched together based on initial screening results for each segment as well as stakeholder and community feedback.

Each alternative includes three sub-alternatives that utilize different bikeway typology combinations. These sub-alternatives were evaluated as part of the Alternatives Analysis process using criteria which involved additional qualitative and quantitative analysis.

ALTERNATIVE 1

Randolph

Alternative 1 follows Randolph Street from the Slauson A Line (Blue) Station to the LA River. Alternative 1 consists of three sub-alternatives. Only a Class III facility is likely feasible between Holmes Avenue and Maywood Avenue due to ROW constraints. Considerations for the proposed WSAB improvements at the intersection at Randolph and State Streets could allow for the consideration of a two-way Class IV bikeway on Randolph Street beginning at State Street as shown in Alternative 1B.

Alternative 1A

A two-way Class IV bikeway along Randolph Street from Slauson Avenue to Holmes Avenue that transitions to a Class III facility from Holmes Avenue to Maywood Avenue and then to a Class I facility along the UP-owned ROW to the LA River (Figure 19).

Alternative 1B

A one-way Class IV bikeway and one-way Class III bicycle boulevard along Randolph Street from Slauson Avenue to Holmes Avenue that transitions to a Class III facility from Holmes to State Street and then to a two-way Class IV facility from State Street to the LA River (Figure 20).

Alternative 1C

A one-way Class IV bikeway and one-way Class III bicycle boulevard along Randolph Street from Slauson Avenue to Holmes Avenue that transitions to a Class III facility from Holmes to Maywood and then to a Class I facility from Maywood to the LA River (Figure 21).

Figure 19. *Alternative 1A*

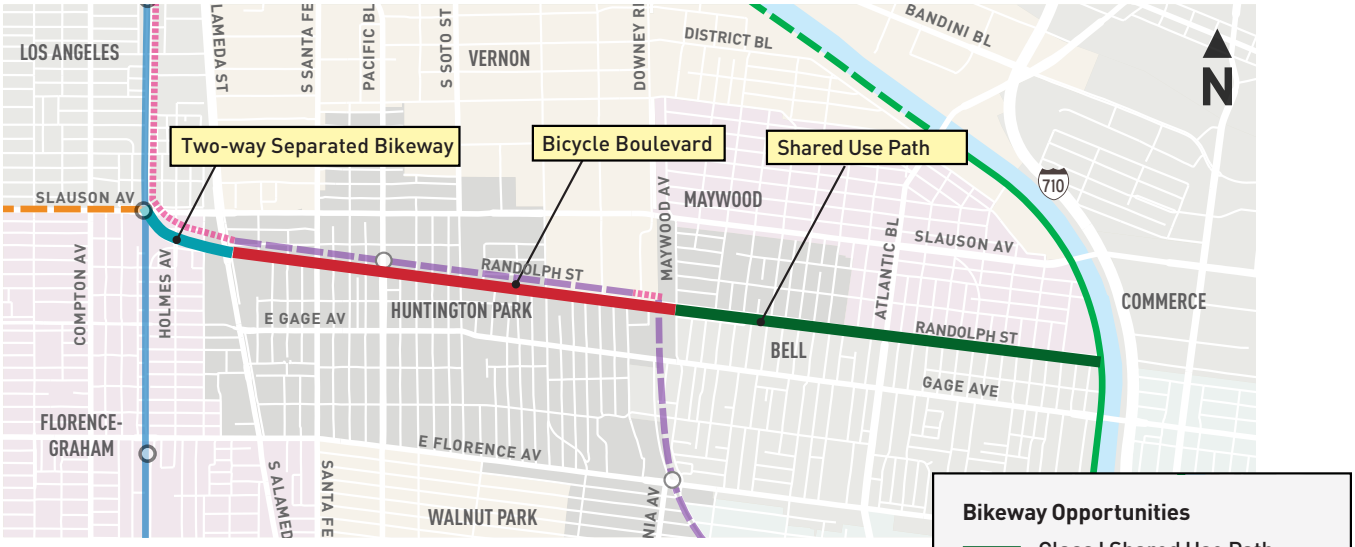


Figure 20. *Alternative 1B*

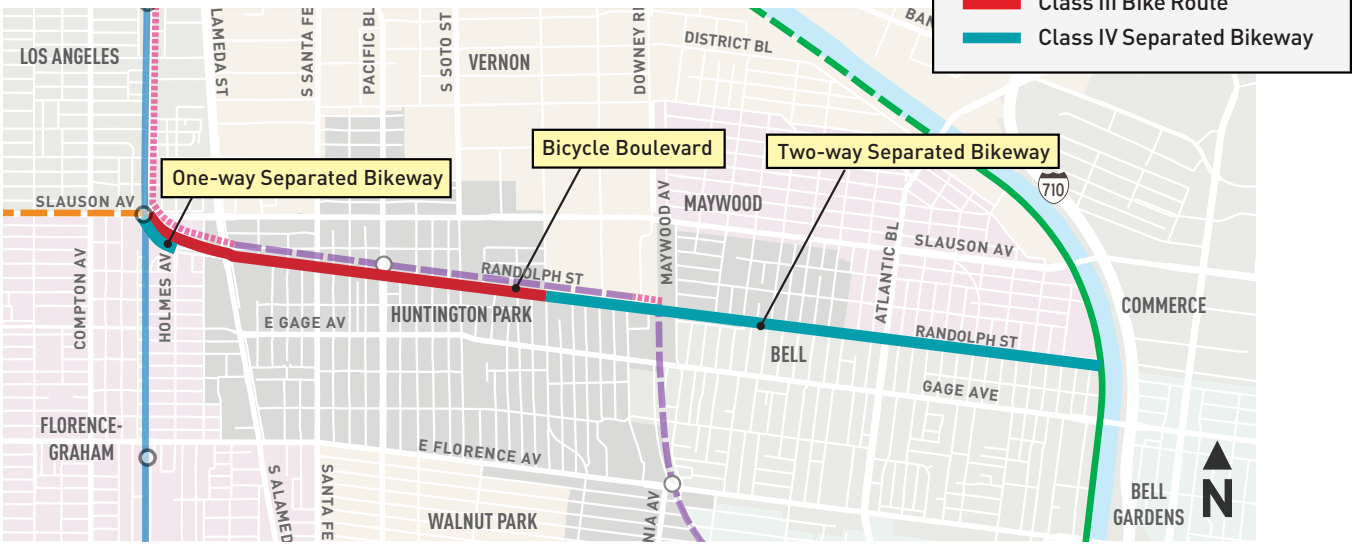
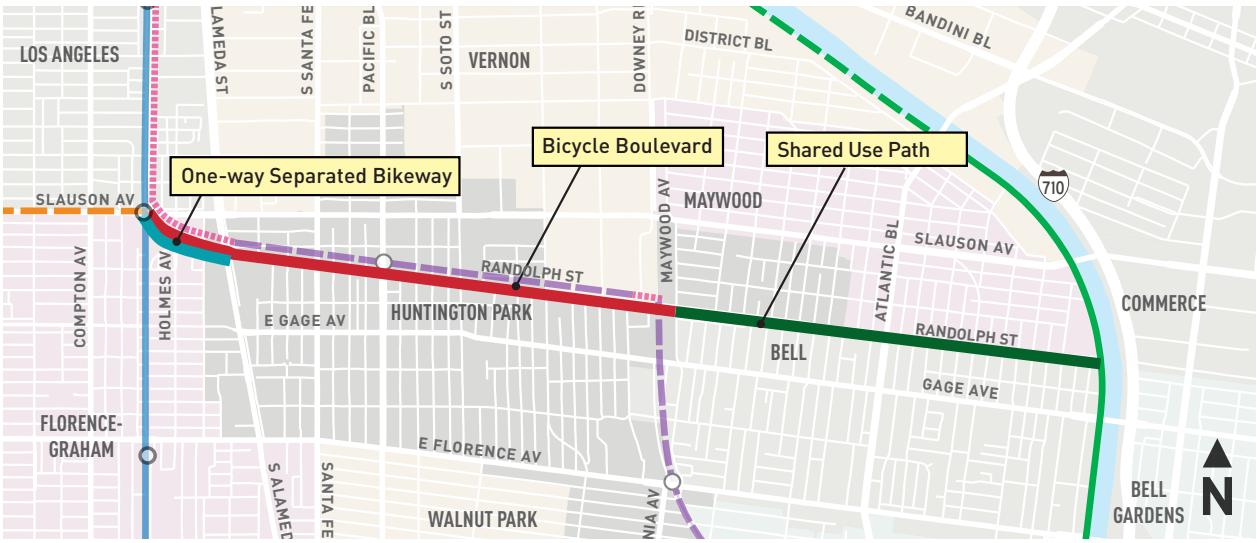


Figure 21. *Alternative 1C*



ALTERNATIVE 2

Slauson/Belgrave/Randolph

Alternative 2 follows several roadways, including neighborhood streets, to connect the Slauson A Line (Blue) Station to the LA River. Alternative 2 begins along Slauson Avenue where it connects to Belgrave Avenue via Alameda Street. The alternative continues along Belgrave to Miles, where it connects back to Randolph Street to the LA River. Alternative 2 consists of three sub-alternatives.

Alternative 2A

A two-way Class IV bikeway along Slauson Avenue and Alameda Street that connects to a Class II facility along Belgrave Avenue from Alameda to Santa Fe Avenue. The alternative transitions to a Class III bicycle boulevard along Belgrave from Santa Fe to Miles Avenue, where it transitions to Class II bike lanes (after lane reconfiguration) to connect back to Randolph Street. The alternative continues as a Class III bicycle boulevard until State Street where it transitions to a two-way Class IV bikeway on the north side of the street to the LA River (Figure 22).

Alternative 2B

A Class I path along the Metro-owned rail ROW on the north side of Slauson Avenue that transitions to a two-way Class IV bikeway on the south side of the street from Holmes Avenue to Alameda Street. The alternative continues as a two-way Class IV bikeway along Alameda to Belgrave, where it transitions to a Class III bicycle boulevard to Miles Avenue. The alternative continues south along Miles Avenue as Class II bike lanes (after lane reconfiguration) to connect back to Randolph Street. The bikeway continues as a Class III facility along Randolph Street until Maywood Avenue where it transitions to a Class I shared use path to the LA River (Figure 23).

Alternative 2C

A two-way Class IV bikeway along Slauson Avenue and Alameda Street that connects to a Class III bicycle boulevard along Belgrave Avenue from Alameda Street to Miles Avenue. Along Miles the alternative transitions to Class II bike lanes (after lane reconfiguration) to connect back to Randolph Street. The alternative continues as a two-way Class IV facility along Randolph Street to the LA River (Figure 24).

Figure 22. *Alternative 2A*

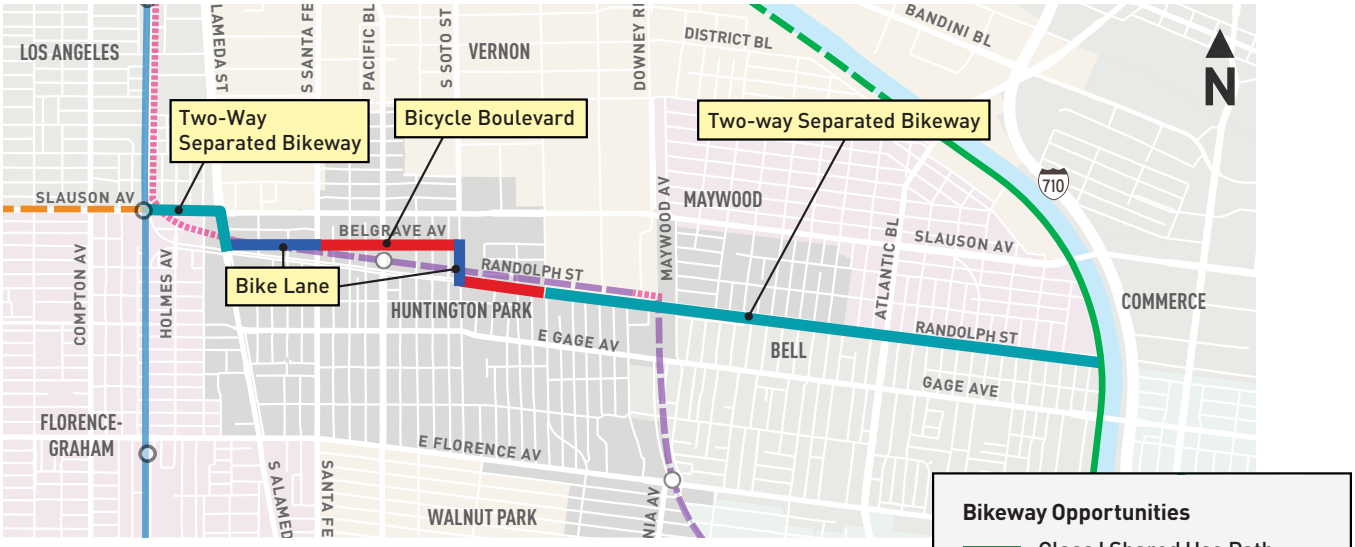


Figure 23. *Alternative 2B*

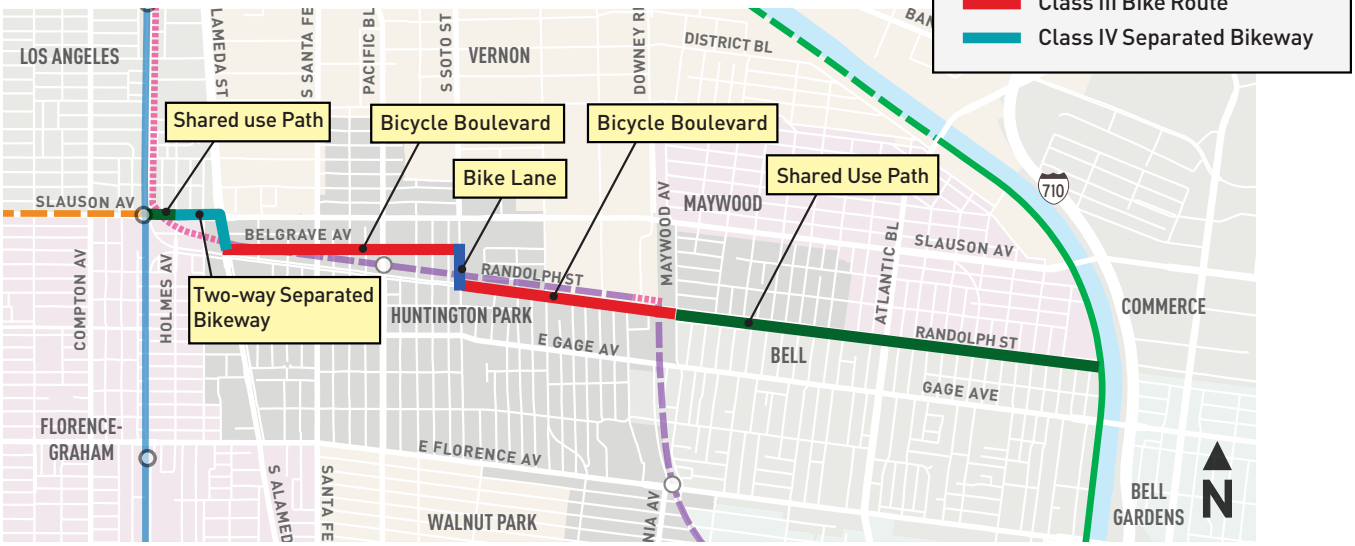
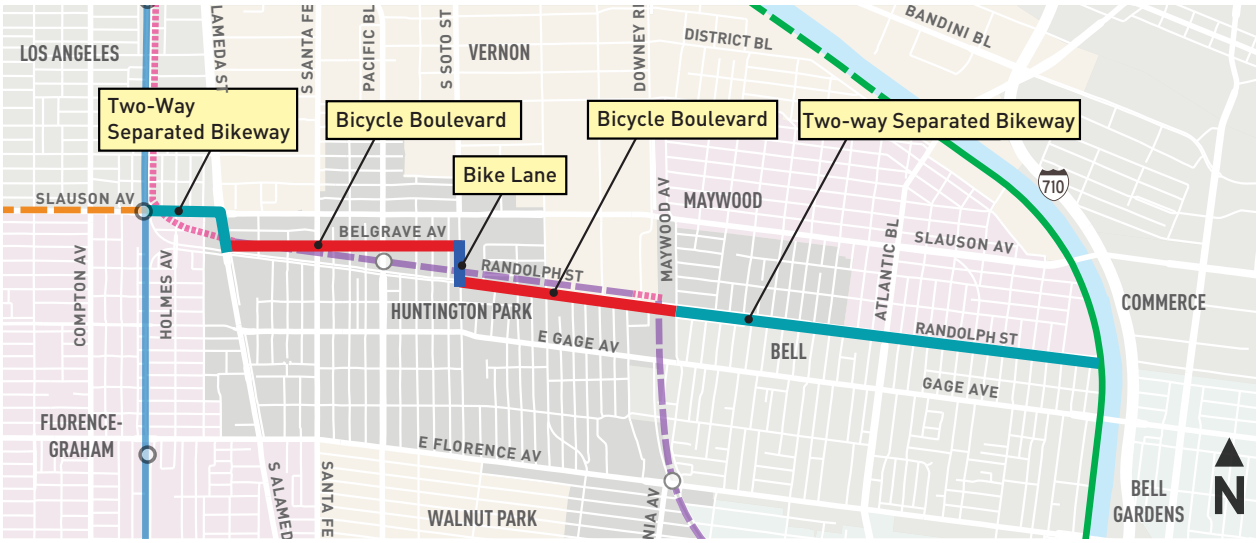


Figure 24. *Alternative 2C*



ALTERNATIVE 3A

Holmes/Gage/Randolph

Alternative 3A utilizes a combination of Gage Avenue and Randolph Street to connect the Slauson A (Blue) Line Station to the LA River. Alternative 3A begins along Slauson Avenue where it connects to Gage Avenue via Holmes Avenue. The alternative continues along Gage Avenue to Maywood Avenue where it connects back to Randolph Street to the LA River. Alternative 3A consists of three sub-alternatives.

Alternative 3A-A

A Class I path along Slauson Avenue that connects to a two-way Class IV facility along Holmes Avenue. The alternative continues as a two-way Class IV bikeway (after roadway reconfiguration) along Gage Avenue to Maywood Avenue, where it transitions to a Class III facility for 0.23 miles. The alternative continues as a Class I facility along the UP-owned ROW to the LA River (Figure 25).

Alternative 3A-B

A two-way Class IV bikeway along the south side of Slauson Avenue that connects to a one-way Class IV facility along Holmes Avenue. The alternative continues as a two-way Class IV bikeway (after roadway reconfiguration) along Gage Avenue to Maywood Avenue, where it transitions to a Class III facility for 0.23 miles. The alternative continues as a two-way Class IV facility along Randolph Street to the LA River (Figure 26).

Alternative 3A-C

A Class I path along Slauson Avenue that connects to a one-way Class IV facility along Holmes Avenue. The alternative continues as Class II bike lanes (after roadway reconfiguration) along Gage Avenue to Maywood Avenue, where it transitions to a Class III facility for 0.23 miles. The alternative continues as a two-way Class IV facility along Randolph Street to the LA River (Figure 27).

Figure 25. *Alternative 3A-A*

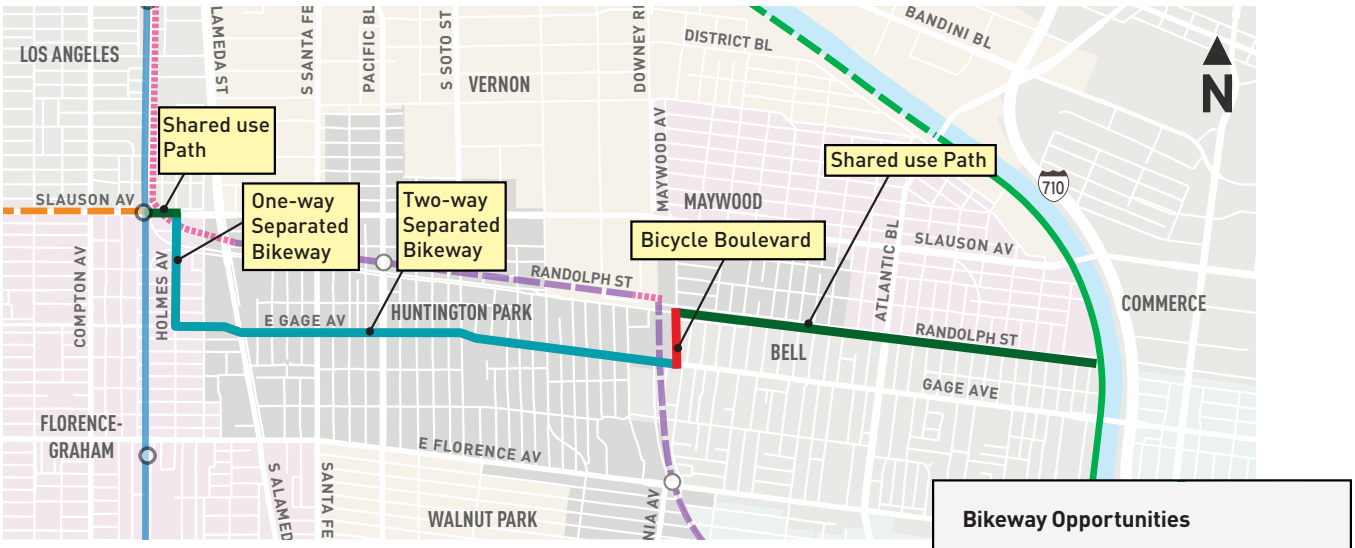


Figure 26. *Alternative 3A-B*

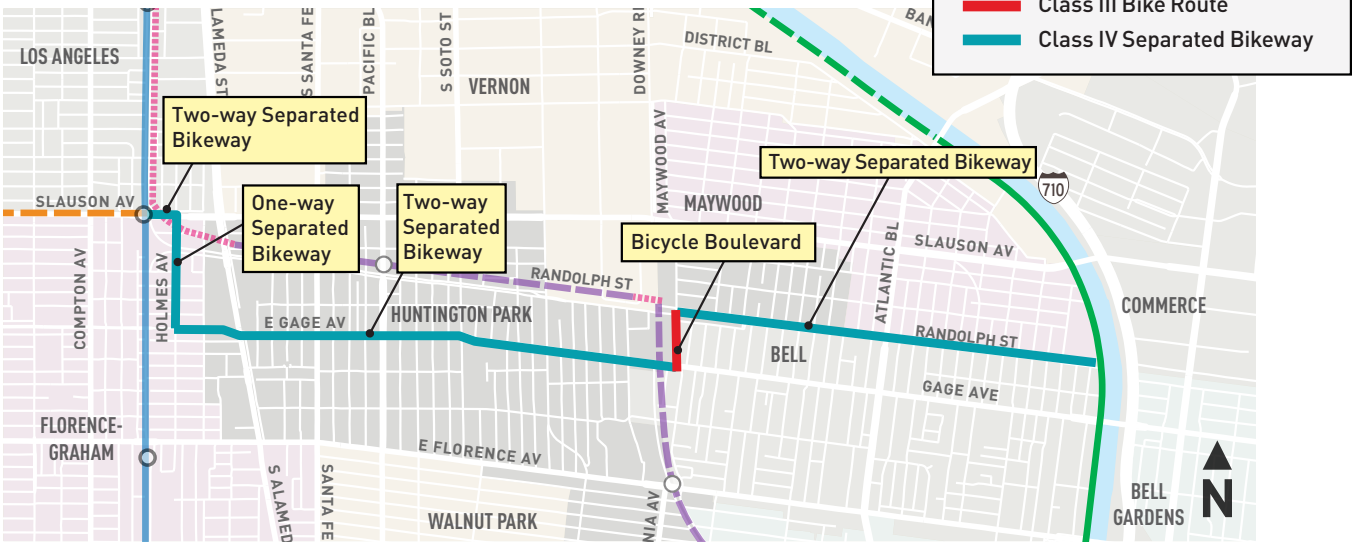
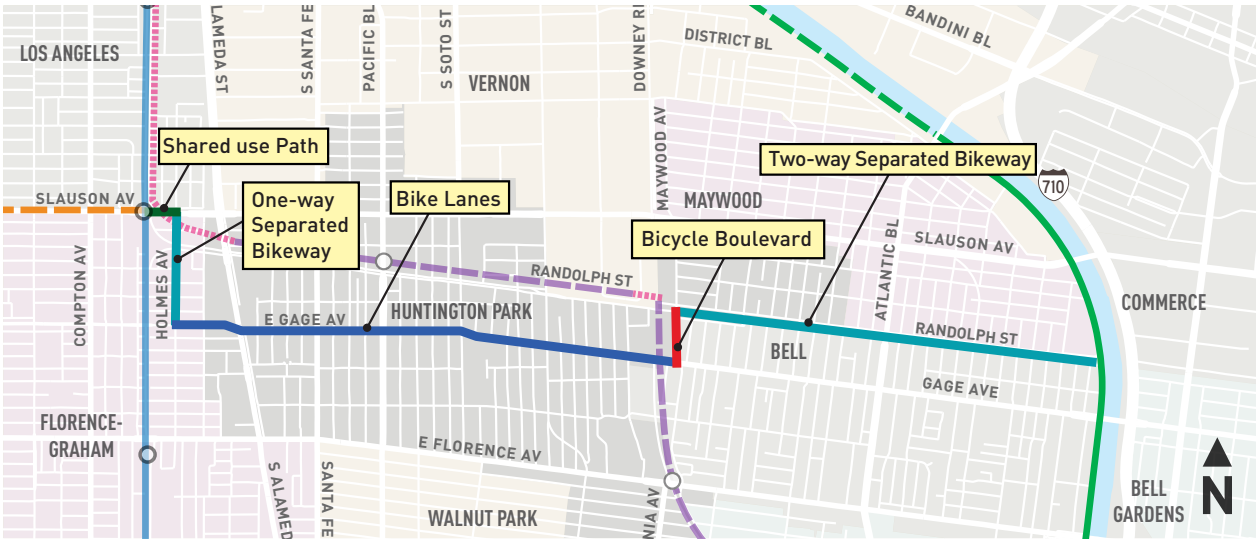


Figure 27. *Alternative 3A-C*



ALTERNATIVE 3B

Holmes/Gage

Alternative 3B primarily utilizes Gage Avenue to connect the Slauson A (Blue) Line Station to the LA River. Alternative 3B begins along Slauson Avenue where it connects to Gage Avenue via Holmes Avenue. The alternative continues along Gage Avenue to the LA River. Alternative 3B consists of three sub-alternatives.

Alternative 3B-A

A Class I path along Slauson Avenue that connects to a one-way Class IV facility along Holmes Avenue. The alternative continues as a two-way Class IV bikeway (after roadway reconfiguration) along Gage Avenue to the LA River (Figure 28).

Alternative 3B-B

A two-way Class IV bikeway along the south side of Slauson Avenue that connects to a one-way Class IV facility along Holmes Avenue. The alternative continues as a two-way Class IV bikeway (after roadway reconfiguration) along Gage Avenue to the LA River (Figure 29).

Alternative 3B-C

A two-way Class IV bikeway along Slauson Avenue that connects to a one-way Class IV facility along Holmes Avenue. The alternative continues as Class II bike lanes (after roadway reconfiguration) along Gage Avenue to the LA River (Figure 30).

Figure 28. *Alternative 3B-A*

Figure 29. *Alternative 3B-B*

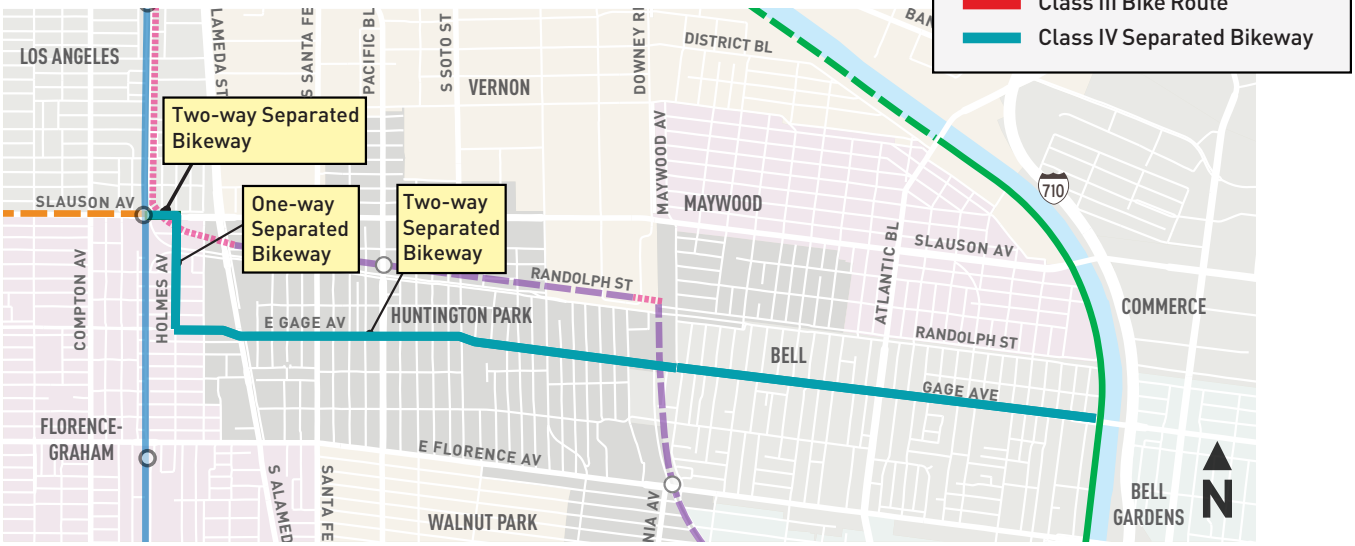
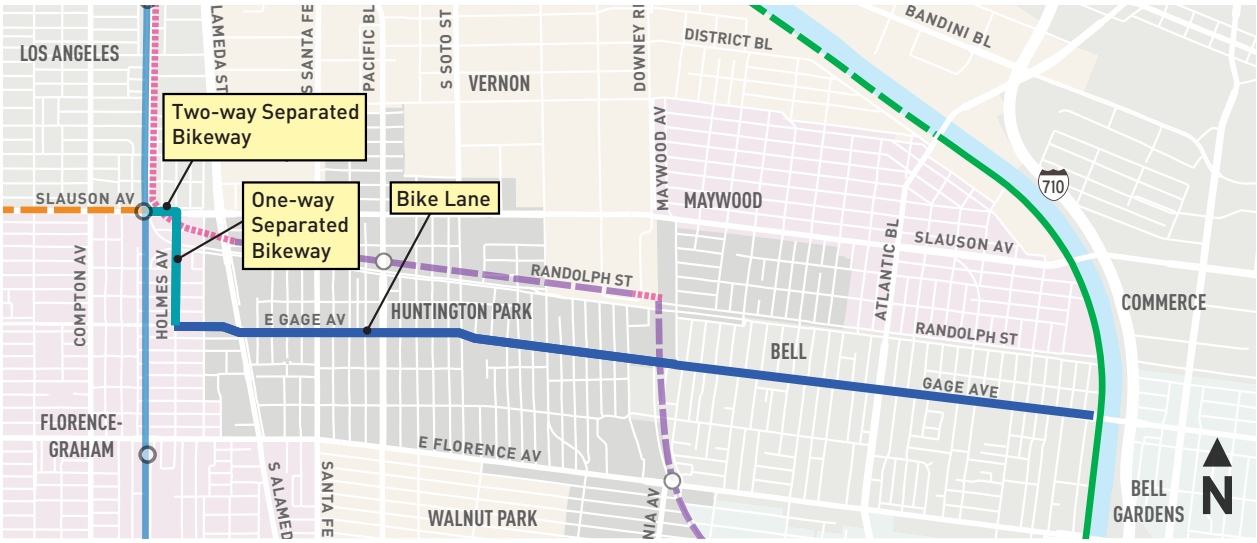


Figure 30. *Alternative 3B-C*



03
ALTERNATIVES ANALYSIS

STAGE 2: ALTERNATIVES ANALYSIS

Overview

The four alternatives developed through the Initial Screening stage were brought forward to the Alternatives Analysis. This second stage screening used detailed qualitative and quantitative evaluation criteria to identify the trade-offs between the alternatives and compared the alternatives in greater detail, introducing elements such as feasibility, cost, and transportation impacts. Evaluation criteria were used to evaluate the alternatives to understand how well they responded to the project goals and community and stakeholder needs.

Planning-level conceptual design (up to 5%) plans were developed for the alternatives, which include design typologies, intersection treatments, typical cross sections, ROW requirements, parking impacts, and street configuration impacts and allowed for a more detailed evaluation than the Initial Screening.

Goal Setting

Project goals were established early on in the project by Metro and the Technical Working Group (TWG) and were shared with the public for feedback. The project goals include:

- **Safety**: Provides a safe and comfortable route.
- **Access**: Provides access to community destinations and transit.
- **Sustainable Mobility**: Reduces Vehicle Miles Traveled by providing active transportation route options.
- **Equity**: Supports community needs.
- **Viability**: Is cost effective and easy to implement and maintain.

In addition, several criteria related to Feasibility / Implementation were included in the analysis to evaluate the relative ease of implementation of each alternative.

Evaluation Criteria

Criteria were developed to help measure how each alternative performed for each of the 5 project goals. Criteria are measurable, can be compared between alternatives, and are either quantitative or qualitative in nature. For this evaluation, there were a total of 22 evaluation criteria for the 5 project goals and feasibility screen. An analysis was performed for each criterion based on its predefined metric for each sub-alternative. Thresholds were set for each criterion to determine how each alternative performed. These resulted in scores of high performing, medium, or low performing. Thresholds were set to draw distinctions between alternatives where there is a statistically significant variation and were not set to draw differentiation between very similar results.

The following section in this chapter provides more detail for each of the evaluation criteria.

The majority of criteria, including all Access and Equity-related criteria, are related to the route itself, and show the same score across all sub-alternatives. Several criteria, including all Viability and Feasibility / Implementation-related criteria are related to the specific facility types, and show varying scores across the sub-alternatives. For example, a one-way Class IV facility along Randolph Street will have more parking impacts than a Class III facility because it requires eliminating street parking along one side of the roadway. These criteria are indicated in the "Facility Typology" column in Table 4.

A summary of all criteria by goal is shown in Table 4.

Weighting

Criteria were weighted by project goal to reflect stakeholder and community feedback on the goals. In addition, criteria were weighted based on feedback from the TWG. Stakeholder and community engagement efforts and feedback are summarized in Chapter 4.

Not all goals have the same number of criteria or the same cumulative value of criteria weights. To correct for this, all goals were normalized based on the maximum possible criteria scores. This helps to mitigate any duplicative criteria that may have overlap within a goal and ensure that important goals with only a couple of criteria do not get discounted.

Each criterion is described in detail in the following pages.

Stakeholder Priorities

The goal and criteria weighting used in this technical planning process were based on feedback from the TWG, which favored alternatives that responded best to the Safety and Access goals. As the project developed, during TWG meetings, local jurisdictions clarified the importance of the Viability and Feasibility / Implementation goals, and notably, the importance of aligning the Rail to River corridor with other planning efforts such as the MAT Randolph project. These priorities are reflected in the recommendations outlined in Chapter 5.

Table 4. *Summary of Evaluation Criteria*

Goal	Goal Weight	Criteria	Criteria Weight	Quantitative / Qualitative	Facility Typology
Safety	**3**	Collision History	2	*Quant*	
		Degree of Separation	2	*Quant*	●
		Intersections & Exposure to Vehicles	2	*Quant*	
Access	**3**	Activity Centers	3	*Quant*	
		Transit Access	2	*Quant*	
		Access to Employment	2	*Qual*	
Sustainable Mobility	**1**	Directness	3	*Quant*	
		Level of Traffic Stress	2	*Quant*	●
		Supports Regional Active Transportation (AT) Network	1	*Quant*	
		Connection to LA River	1	*Qual*	
		User Demand	2	*Qual*	
Equity	**2**	Equity Focused Communities	2	*Quant*	
		Community-Identified Destinations	2	*Quant*	
		Community-Supported Alternative	2	*Quant*	
Viability	**2**	Traffic Impacts	2	*Qual*	●
		Parking Impacts	2	*Qual*	●
		Aligns with Planning Efforts	3	*Qual*	●
		Operations & Maintenance	3	*Qual*	●
		Capital Cost	2	*Quant*	●
Feasibility / Implementation	**2**	Environmental Impacts	2	*Qual*	●
		Permitting & Coordination	2	*Qual*	●
		Opportunities for Funding	2	*Qual*	●

Collision History

The alternative provides a crash reduction factor (CRF) that can reduce future collisions along a roadway that has had high numbers of bicycle or pedestrian injuries or fatalities.

Quantitative Metric:
Number of bicycle or pedestrian injuries or fatalities along the route based on 2015-2019 Transportation Injury Mapping System (TIMS) data

LOWER PERFORMING → **HIGHER PERFORMING**

The alternative provides a CRF along a roadway with few bicycle or pedestrian injuries or fatalities (<18)	The alternative provides a CRF along a roadway with some bicycle or pedestrian injuries or fatalities (18-25)	The alternative provides a CRF along a roadway with high numbers of bicycle or pedestrian injuries of fatalities (>25)

Collision History

Crash reduction factors represent the percentage crash reduction of specific collision types after a particular countermeasure is installed. The higher a CRF is, the more the countermeasure is mitigating the factors that lead to collisions of that type. Pedestrian and bicycle infrastructure countermeasures may include signalization, geometric, and signs/markings/operational design elements. Table 5 on the next page identifies countermeasures and their respective CRFs per the Federal Highway Administration (FHWA) that correspond to potential Rail to River Segment B improvements. Potential CRFs were evaluated in relation to the number of collisions that have historically occurred on a given roadway between 2015-2019.

Table 5. *Crash Reduction Factors*

Countermeasure	CRF	Collision Types	Crash Severity
All Users			
Narrow roadway cross section from four lanes to three lanes (two through lanes with center turn lane)	29	All	All
Add intersection lighting	27	All	Injury
Bicycle			
Install Bicycle Lanes	20	Vehicle / Bicycle	All
Install Two-Way Class IV Bikeway	15	Vehicle / Bicycle	Severe & Minor Injuries
Install Sidepath	45	Vehicle / Bicycle	All
Install Bicycle Signal Phase	45	Vehicle / Bicycle	All
Pedestrian			
Modify signal phasing (implement a leading pedestrian interval)	5	Vehicle / Pedestrian	All
Convert permissive or permissive/protected to protected only left-turn phasing	99	Left-turn	All
Add exclusive pedestrian phasing	34	Vehicle / Pedestrian	All

Sources:

FHWA CMF Clearinghouse http://www.cmfclearinghouse.org/index.cfm

FHWA Toolbox of Countermeasures and their Potential Effectiveness for Pedestrian Crashes https://safety.fhwa.dot.gov/ped_bike/tools_solve/ped_tctpepc/

SAFETY

Degree of Separation

The alternative provides a dedicated bikeway route that is separated from vehicular traffic.

Quantitative Metric:
Percentage of route with dedicated bikeway (Class I, II, or IV)

LOWER PERFORMING		HIGHER PERFORMING
Less than 55% of route offers opportunity for dedicated bikeway	Between 55%-90% of route offers opportunity for dedicated bikeway	Over 90% of the route offers opportunity for dedicated bikeway

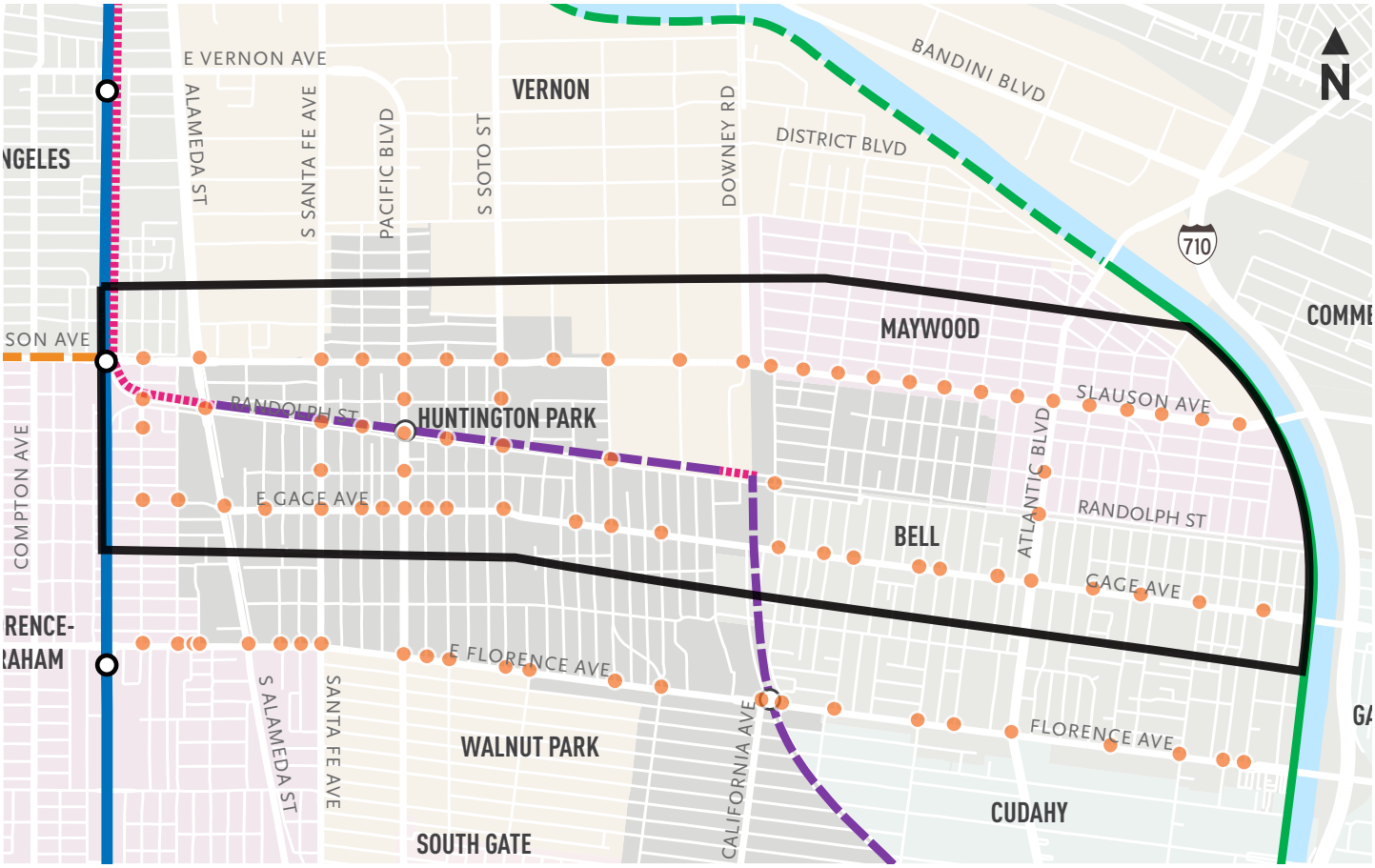
Intersections and Exposure to Vehicles

The alternative minimizes exposure to vehicles.

Quantitative Metric:
Cumulative route score where 10 is applied for large intersections (Figure 31), 8 for minor, and 0.5 for driveways

LOWER PERFORMING		HIGHER PERFORMING
More intersections and driveways (Score >500)	Some intersections and driveways (Score 400-500)	Fewer intersections and driveways (Score <400)

Figure 31. *Intersections*

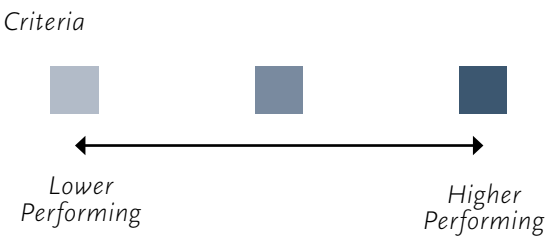


Rail to River Segment B Study Area
Rail to Rail Segment A
Metro Rail Line & Station
A
Existing/Planned LA River path
Signalized Intersections along Potential Corridors
West Santa Ana Branch Project At-Grade
West Santa Ana Branch Project Aerial

SAFETY

Key Takeaways for Safety

Overall, Alternatives 3A and 3B performed best for the Safety goal because they provide greater opportunities for safety improvements, given their higher collision histories (Table 6). Both Alternatives 3A and 3B have fewer ROW-related constraints and therefore provide an opportunity for a mostly dedicated bikeway, whereas Alternatives 1 and 2 would provide a bikeway which includes a large portion (approximately 43% for Alternative 1, and 48% for Alternative 2) that shares a lane with vehicular traffic. However, Randolph Street features fewer intersections and driveways than Gage Avenue and therefore Alternatives 1 and 2 scored higher for the Intersections & Exposure to Vehicles criterion.



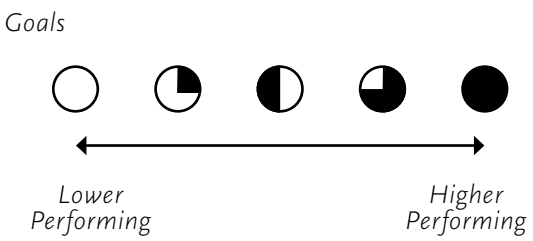
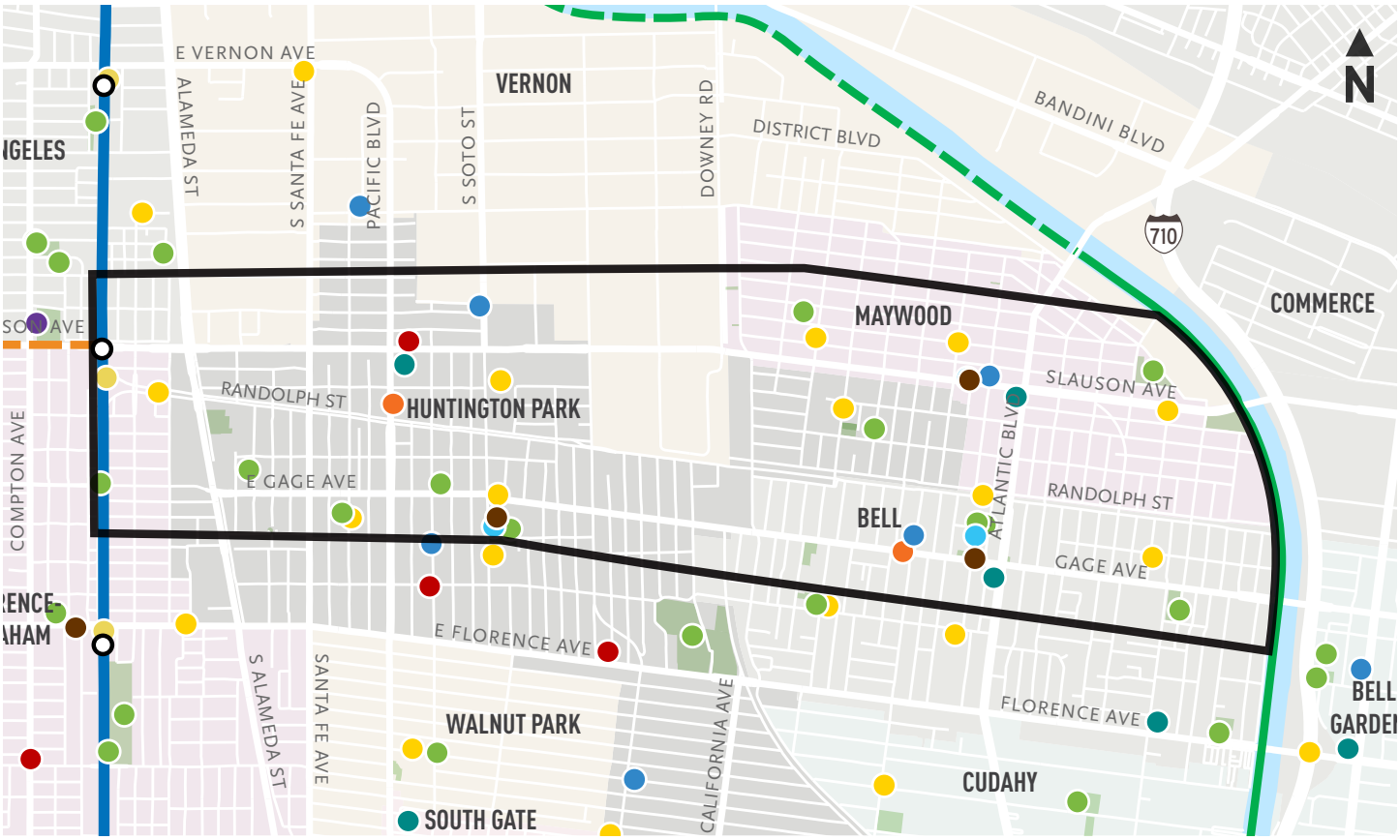


Table 6. *Safety Sub-Alternative Screening*

	Collision History	Degree of Separation	Intersections & Exposure to Vehicle	SAFETY SCORE
Weight	2	2	2	
Alternative 1: Randolph				
1A				◐
1B				◐
1C				◐
Alternative 2: Slauson - Belgrave - Randolph				
2A				◕
2B				◕
2C				◕
Alternative 3A: Slauson/Holmes/Gage/Maywood/Randolph				
3A-A				●
3A-B				●
3A-C				●
Alternative 3B: Slauson/Holmes/Gage				
3B-A				●
3B-B				●
3B-C				●

Figure 32. *Points of Interest*



Destination Type

- Government Offices
- Post Offices
- Hospitals / Medical Centers
- Libraries
- Parks / Rec Centers
- Schools
- Colleges / Universities
- Museums / Aquariums
- Shopping Centers
- Parks and Open Space

- Rail to River Segment B Study Area
- Rail to Rail Segment A
- Metro Rail Line & Station (A)
- Existing/Planned LA River path

Activity Centers

The alternative provides access to points of interest that serve as activity centers.

Quantitative Metric:
Number of points of interest along the route (Figure 32)

LOWER PERFORMING →		HIGHER PERFORMING
Few points of interest located along the route (<15)	Some points of interest located along the route (15-30)	Many points of interest located along the route (>30)

Transit Access*

The alternative provides access to Metro transit services.

*See Transit map on page 57.

Quantitative Metric:
Cumulative route score for number of Metro transit stops where 5 is applied for WSAB (light-rail) and 1 for all other bus stops

LOWER PERFORMING →		HIGHER PERFORMING
Few transit stops along the route (Score <14)	Some transit stops along the route (Score 14-25)	Many transit stops along the route (Score >25)

Access to Employment

The alternative provides access to major employment destinations.

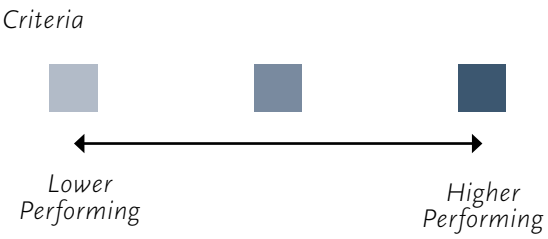
Qualitative Metric:
Qualitative score based on how well the alternative connects users to major employment centers

LOWER PERFORMING →		HIGHER PERFORMING
Does not provide strong access to employment centers	Provides strong access to major employment destinations	Provides exceptional access to major employment destinations

ACCESS

Key Takeaways for Access

Overall, Alternatives 3A and 3B performed best for the Access goal because they are located along corridors with higher numbers of activity centers and transit stops (Table 7). Gage Avenue includes a greater number of schools, parks, and shopping areas, as well as bus stops, than Randolph Street. There was no difference between the alternatives for providing access to employment.



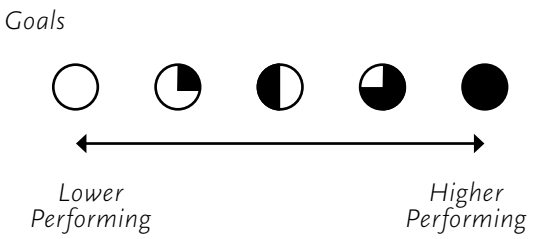


Table 7. *Access Sub-Alternative Screening*

	Activity Centers	Transit Access	Access to Employment	ACCESS SCORE
Weight	3	2	2	
Alternative 1: Randolph				
1A				◔
1B				◔
1C				◔
Alternative 2: Slauson - Belgrave - Randolph				
2A				◐
2B				◐
2C				◐
Alternative 3A: Slauson/Holmes/Gage/Maywood/Randolph				
3A-A				●
3A-B				●
3A-C				●
Alternative 3B: Slauson/Holmes/Gage				
3B-A				●
3B-B				●
3B-C				●

Directness

The alternative provides an efficient route between the Metro A Line (Blue) Station and the LA River.

Quantitative Metric:
Minutes of travel time for walking and biking based on an average walking speed of 3 mph and biking speed of 12 mph with delays accounted for based on size and control of intersection, driveways, and grades.

LOWER PERFORMING		HIGHER PERFORMING
Longest travel time (>108 minutes walking or >33 minutes biking)	Longer travel time (106-108 minutes walking or 32-33 minutes biking)	Quickest travel time (<106 minutes walking or <32 minutes biking)

Level of Traffic Stress (LTS)

The alternative provides a route that has a low average LTS score.

Quantitative Metric:
Average LTS score along the route based on the LTS score (1-4) of the facility by mile

LOWER PERFORMING		HIGHER PERFORMING
Higher average LTS score (LTS >2)	Medium average LTS score (LTS 1.1-2)	Lower average LTS score (<LTS 1.1)

Supports Regional AT Network*

The alternative connects to several existing and planned AT routes.

Quantitative Metric:
Number of AT connections along the route based on existing plans (see Appendix C)

LOWER PERFORMING → **HIGHER PERFORMING**

Fewer AT connections (<12)	Some AT connections (12-13)	More AT connections (>13)

*See Existing and Planned Bikeways by Class map on page 43.

User Demand

The alternative serves a high number of expected users.

Qualitative Metric:
Qualitative score based on proximity to activity centers and existing bicycle and pedestrian counts.

LOWER PERFORMING → **HIGHER PERFORMING**

Lowest expected number of users	Medium expected number of users	Highest expected number of users

Connection to LA River

The alternative provides a comfortable connection to the LA River path.

Qualitative Metric:
Degree of space available to create a comfortable connection to the LA River with opportunities to support walking and biking amenities

LOWER PERFORMING → **HIGHER PERFORMING**

Existing connection to the LA River path does not provide a comfortable connection

Existing connection to the LA River path provides a comfortable connection

Connection to the LA River

Randolph Street and Gage Avenue both have existing access points to the LA River path. However, the amount of space available to create a safe and comfortable connection varies significantly between the two.

The amount of space available at an access point brings potential for features such as shade structures, landscaping, seating, and bicycle amenities that create a more welcoming and comfortable environment for people walking and bicycling.

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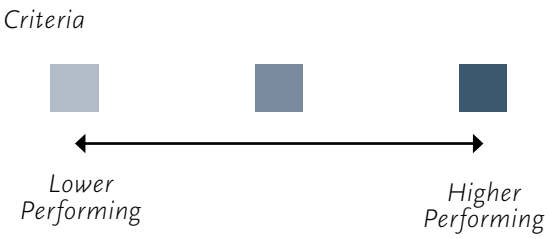
Key Takeaways for Sustainable Mobility

Overall, Alternatives 1 and 2 performed best for the Sustainable Mobility goal because they provide the most direct route between Slauson Station and the LA River, and connect to the greatest number of existing and planned bikeway facilities (Table 8). Alternatives 1, 2, and 3A all utilize Randolph Street to connect to the LA River, which offers more opportunities to create a comfortable connection because of the space available to create an access point to the existing LA River path.



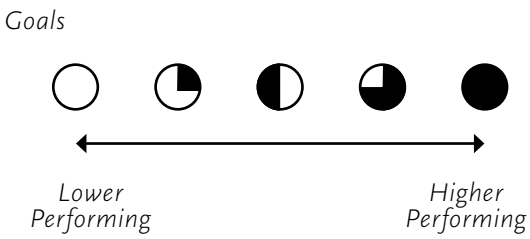


Table 8. *Sustainable Mobility Sub-Alternative Screening*

	Directness	Level of Traffic Stress	Supports Regional AT Network	Connection to LA River	User Demand	SUSTAINABLE MOBILITY SCORE
Weight	3	2	1	1	2	
Alternative 1: Randolph						
1A						◕
1B						◕
1C						◕
Alternative 2: Slauson - Belgrave - Randolph						
2A						●
2B						●
2C						●
Alternative 3A: Slauson/Holmes/Gage/Maywood/Randolph						
3A-A						◕
3A-B						◕
3A-C						◐
Alternative 3B: Slauson/Holmes/Gage						
3B-A						◐
3B-B						◐
3B-C						◐

EQUITY

Equity Focus Communities (EFCs)*

The alternative provides access for EFCs.

Quantitative Metric:
Percentage of route that travels through an EFC

LOWER PERFORMING → **HIGHER PERFORMING**

Lower percentage of route travels through an EFC (<93%)	Medium percentage of route travels through an EFC (93-99%)	High percentage of route travels through an EFC (>99%)

*See EFC map on page 53.

Community-Identified Destinations

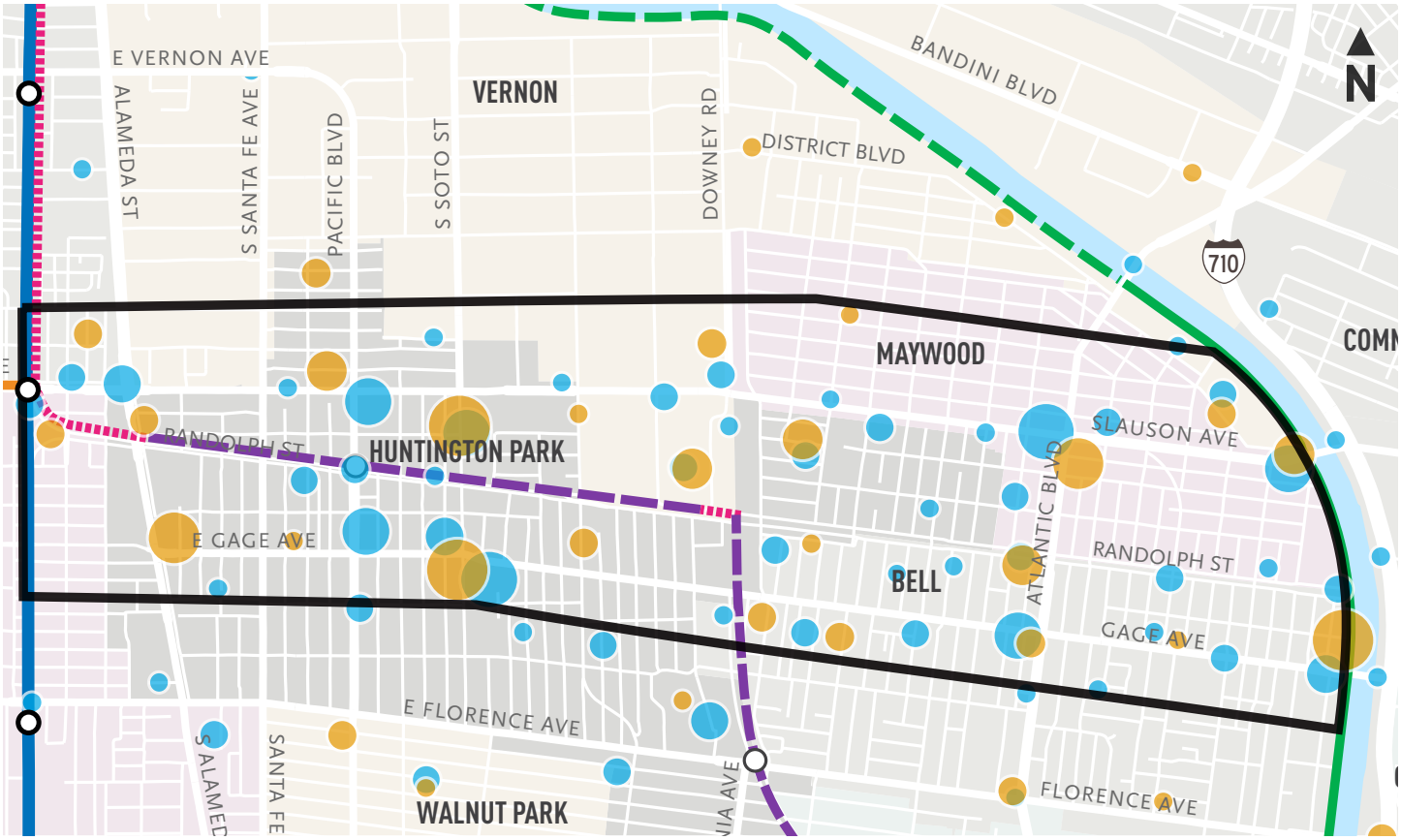
The alternative provides access to community-identified destinations.

Quantitative Metric:
Number of community-identified destinations along route (from Round 01 of engagement) (Figure 33)

LOWER PERFORMING → **HIGHER PERFORMING**

Lower number of community-identified destinations along route (<42)	Medium number of community-identified destinations along route (42-58)	High number of community-identified destinations along route (>58)

Figure 33. *Community-Identified Destinations*



EQUITY

Community-Supported Alternative*

The alternative is supported by the community.

Quantitative Metric:
Percentage of community members to select alternative as top choice (from Round 02 of engagement)

LOWER PERFORMING → **HIGHER PERFORMING**

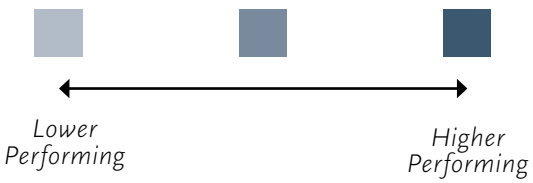
Lower percentage of community members to select alternative (<20%)	Medium percentage of community members to select alternative (20-35%)	Higher percentage of community members to select alternative (>35%)

*See Round 2 Community Engagement Results, Chapter 4 and Appendix A.

Key Takeaways for Equity

Overall, Alternatives 3A and 3B performed best for the Equity goal because they connect to the greatest number of community-identified destinations, and were ranked highest by the community during Round 02 of engagement (see Chapter 4 for more information on community and stakeholder engagement).

Criteria



Goals

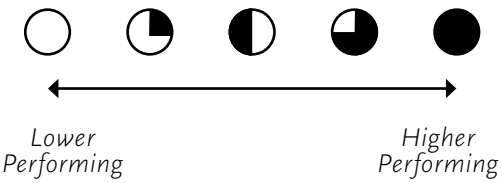


Table 9. *Equity Sub-Alternative Screening*

	Equity Focused Communities	Community-Identified Destinations	Community-Supported Alternative	ACCESS SCORE
Weight	2	2	2	
Alternative 1: Randolph				
1A				◐
1B				◐
1C				◐
Alternative 2: Slauson - Belgrave - Randolph				
2A				◕
2B				◕
2C				◕
Alternative 3A: Slauson/Holmes/Gage/Maywood/Randolph				
3A-A				●
3A-B				●
3A-C				●
Alternative 3B: Slauson/Holmes/Gage				
3B-A				●
3B-B				●
3B-C				●

Traffic Impacts

The alternative has minimal traffic impacts.

Qualitative Metric:
Qualitative score based on degree of impacts to existing traffic operations derived from capacity and Level of Service (LOS) analysis

LOWER PERFORMING		HIGHER PERFORMING
The alternative would have significant impacts to existing traffic operations	The alternative would have some impacts to existing traffic operations	The alternative would have minimal impacts to existing traffic operations

Traffic Analysis

Daily traffic volumes (24 hours) along each alternative were collected on May 11 and May 12, 2021. These traffic counts were used to determine existing Level of Service (LOS) at key intersections along each alternative and analyze peak hour traffic LOS impacts along roadways that would require lane reconfiguration (Miles Avenue and Gage Avenue). Table 10 shows lane reduction impacts to intersection LOS, and Table 11 shows average delay per vehicle and intersection LOS.

The traffic impact criteria were scored based on the traffic analysis completed as part of the SAA project. See Appendix G for details on the approach and results of the analyses.

Table 10. *Lane Reduction Impacts to Intersection Level of Service*

	Current volume/capacity & LOS		With project volume/capacity & LOS	
Intersection	**AM Peak**	**PM Peak**	**AM Peak**	**PM Peak**
Gage Ave / Alameda St	0.547 A	0.744 C	0.709 c	0.989 E
Gage Ave / State St	0.866 D	1.079 F	0.959 E	1.148 F
Gage Ave / Maywood Ave	0.686 B	0.807 D	0.812 D	0.856 D
Miles Ave / Randolph St	0.497 A	0.751 C	0.531 A	0.919 E

Table 11. *Average Delay per Vehicle (sec) / Level of Service*

	Without Project		With Project	
Intersection	**AM Peak**	**PM Peak**	**AM Peak**	**PM Peak**
Gage Ave / Alameda St	25.6 / C	34.3 / C	32.5 / C	49.9 / D
Gage Ave / State St	13.3 / B	17.5 / B	54.3 / D	95.3 / F
Gage Ave / Maywood Ave	8.5 / A	11.5 / B	22.1 / C	30.5 / C
Miles Ave / Randolph St	14.6 / B	21.3 / C	15.0 / B	86.9 / F

Parking Impacts

The alternative has minimal parking impacts.

Qualitative Metric:
Qualitative score based on degree of impacts to existing parking derived from a parking utilization study

LOWER PERFORMING → **HIGHER PERFORMING**

The alternative would have significant impacts to existing parking	The alternative would have some impacts to existing parking	The alternative would have minimal impacts to existing parking

Parking Analysis

The parking analysis included a detailed parking load study conducted on June 2, 2021 and June 8, 2021 to determine the utilization of parking spaces along each alternative during working hours (11:00am-1:00pm) and non-working hours (6:00am-7:15am). Total curb parking capacity along the study streets was identified using Google Earth imagery.

The parking impacts criteria was scored based on the parking analysis completed as part of the SAA project. See Figure 34, Figure 35, Table 12, and Appendix G for details on the approach and results of the analyses.

Figure 34. *On-street Parking Utilization During Working Hours (11:00am-1:00pm)*

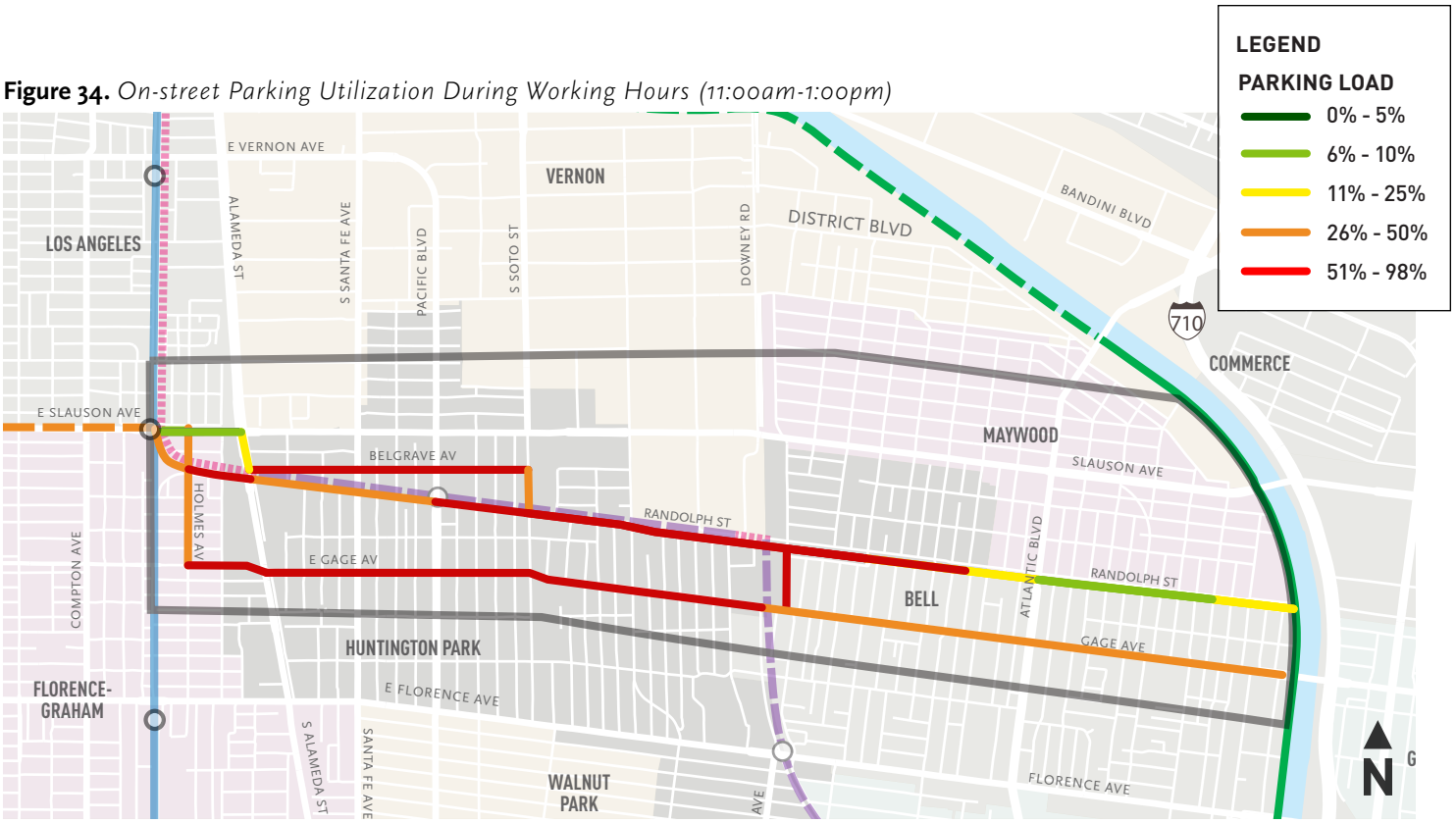


Figure 35. *On-street Parking Utilization During Non-Working Hours (6:00am-7:15am)*

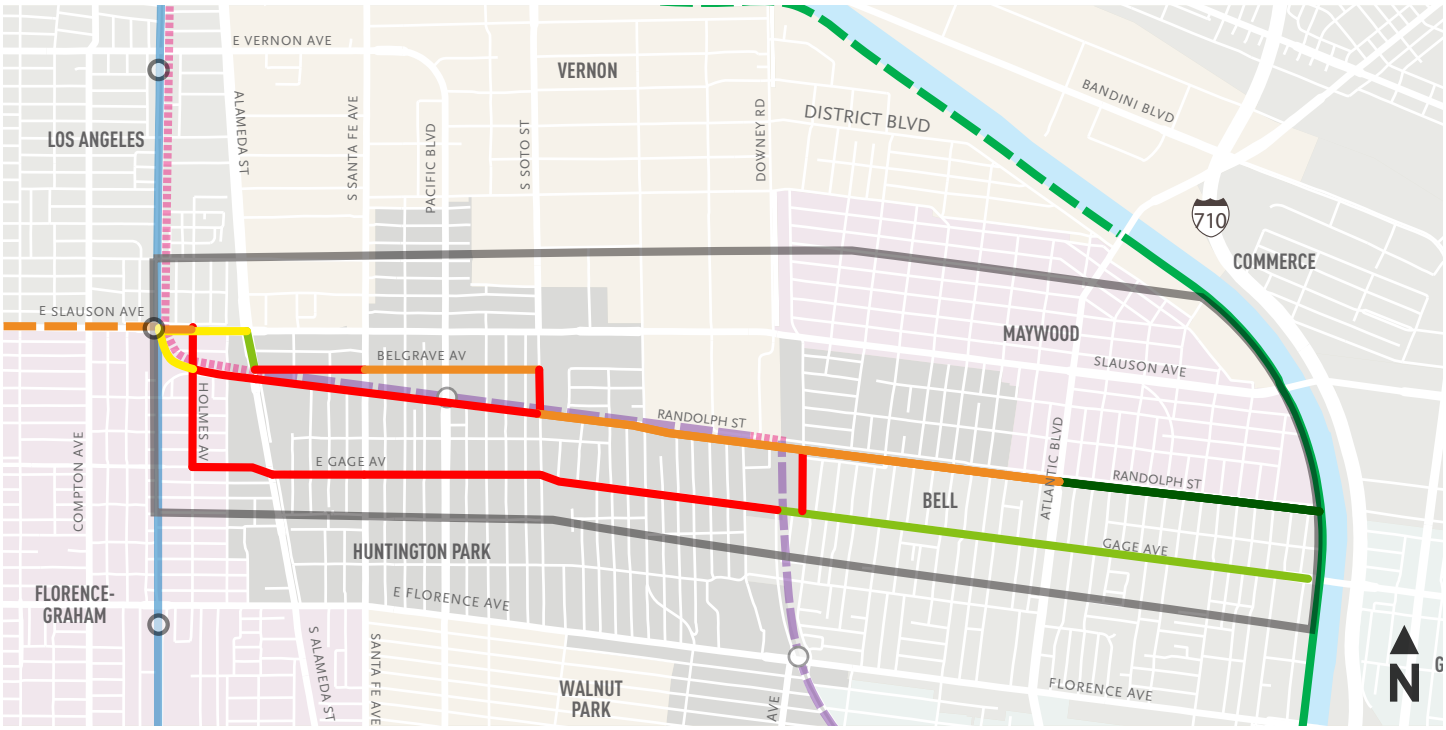


Table 12. *Summary of Parking Impacts*

Alternative	Existing parking (post-WSAB)	Range of potential spaces lost	% Parking Loss	Highlights
1	1,116	46-477	4% - 43%	Greatest parking impacts along Randolph east of Maywood with two-way cycle track (Class IV)
2	1,210	200-583	17% - 48%	Greatest overall parking loss with two-way cycle track (Class IV) on Slauson and bike lanes (Class II) on Belgrave (between Alameda East and Santa Fe)
3A	1,173	16-394	1% - 34%	Lowest parking loss with bike path (Class I) compared to two-way cycle track (Class IV) bikeway
3B	564	56	10%	Lowest parking loss overall assuming bike lanes (Class II) along Gage

Aligns with Planning Efforts

The alternative aligns with previous and ongoing planning efforts by project partners and should have support from local jurisdictions.

Qualitative Metric:
Qualitative score based on degree of alignment with existing and previous planning efforts

LOWER PERFORMING → **HIGHER PERFORMING**

The alternative is not closely aligned with existing and previous planning efforts (identified in few plans and/or does not align with any funded project)	The alternative is somewhat aligned with existing and previous planning efforts (identified in some plans and may align with funded project)	The alternative is closely aligned with existing and previous planning efforts (identified in numerous plans and aligns with funded project)

Operations & Maintenance*

The alternative should be feasible to operate and maintain.

Qualitative Metric:
Qualitative score based on degree of anticipated operations and maintenance needs

LOWER PERFORMING → **HIGHER PERFORMING**

The alternative would require significant additional operations and maintenance needs from local jurisdictions	The alternative would require some additional operations and maintenance needs from local jurisdictions	The alternative would require few additional operations and maintenance needs from local jurisdictions

*Anticipated operations and maintenance needs are based on the alternative's bicycle facility type(s). Class I shared use paths and one or two-way Class IV separated bikeways with new signals are expected to require the greatest level of additional maintenance by local jurisdictions. Alternatively, Class III bicycle boulevards are expected to require the least amount of additional maintenance work because they can be maintained as part of regular roadway maintenance.

Planning-Level Cost Estimates*

The alternative should be cost-sensitive to construct.

Qualitative Metric:
Qualitative score based on order-of-magnitude cost estimates (Table 13)

LOWER PERFORMING → **HIGHER PERFORMING**

The alternative has a higher planning-level cost estimate

The alternative has a medium planning-level cost estimate

The alternative has a lower planning-level cost estimate

*Cost estimates do not currently include potential ROW costs. A more detailed cost estimate was completed for Alternatives 1, 3A, and 3B, and is included in Appendix I.

Table 13. *Summary of Planning-level Cost Estimates**

Alternative	Cost (Low)	Cost (High)
1A	$$	$$
1B	**$**	**$$$**
1C	$$	$$
2A	$	$$
2B	$$	$$$
2C	**$**	**$$**
3A-A	$$$	$$$
3A-B	$$	$$$
3A-C	**$$**	**$$$**
3B-A	$$$	$$$
3B-B	$$$	$$$
3B-C	**$$**	**$$**

Planning-Level Cost Estimates

Planning-level cost estimates were developed for each sub-alternative based on typical unit costs for the various bicycle facility types. Because these were preliminary cost estimates, they are shown as a range instead of a dollar figure.

Pedestrian improvements were not included in the planning-level cost estimates as these projects had not yet been determined.

*Cost estimates are derived from recent local bids, City of Los Angeles historical bid data, and Caltrans District 7 historic data, including:

- Culver City 2020
- City of LA Historic Bids 2020-2021
- Caltrans D7 Contract Cost Data 2019-2021
- Generalized Bicycle Facilities Cost Estimates November 2019

However, they are included in the Cost Estimate Report completed for the alternatives (Appendix I).

All planning-level unit costs include 25% contingency, 5% mobilization, and 5% traffic control. Design, environmental, and construction management costs are not included in this estimate. Additionally, storm drain and utility relocations are not included.

For comparison purposes, costs were developed based on bicycle typologies. Each unit cost includes a low and high cost range based on the following assumptions:

- Class IV: Low unit costs include striping removal, signage, pavement markings, and a painted buffer with flexible delineators. High unit costs include conflict striping, traffic signal modification, and a raised concrete buffer with landscape/hardscape.
- Class II: Low unit costs include striping removal, striping, and pavement markings. High cost estimates include bike loops, traffic calming elements, signage, signal modifications, and green conflict striping.
- Class III: Low unit costs include striping, signage, and pavement markings. High cost estimates include bike loops and wayfinding signage.

See Appendix I for more information on planning-level unit costs and assumptions.

Capital Cost Estimates

More detailed cost estimates were developed for Alternatives 1, 3A, and 3B. These cost estimates include a high and low cost range. The high costs consider a heavier infrastructure such as new curb and gutter, approach with enhanced streetscape and landscape opportunities. The low costs incorporate lower cost materials such as striping and flexible bollards, that can be installed more quickly to improve bicyclist and pedestrian safety.

Table 14 summarizes the capital cost estimates by alternative.

Table 14. *Summary of Capital Cost Estimates*

Alternative	High Cost	Low Cost
1	$6,300,000	$3,400,000
3A	$10,400,000	$6,100,000
3B	$8,000,000	$5,350,000

See Appendix I for a detailed cost estimate for the alternatives.

VIABILITY

Key Takeaways for Viability

Overall, Alternative 1 performed best for the Viability goal (Table 15). Although it would have significant parking impacts east of State Street where the alternative is proposed as a Class IV separated bikeway, the alternative would have the fewest impacts to existing traffic operations because it would not require a lane reconfiguration. It would also have a lower cost than the alternatives along Gage Avenue, with fewer expected operations and maintenance needs. Finally, Randolph Street aligns best with existing planning efforts such as the MAT Randolph project.

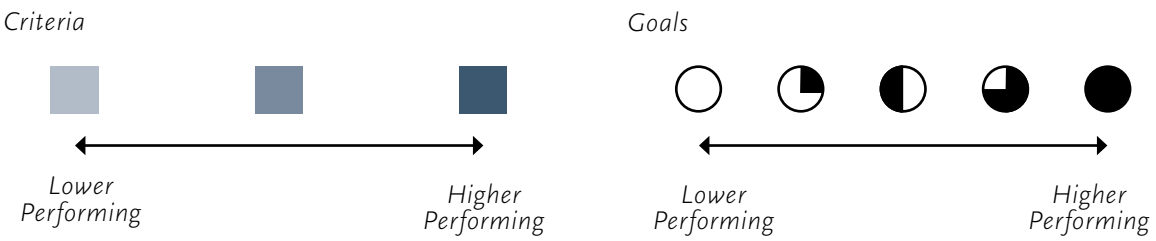


Table 15. *Viability Sub-Alternative Screening*

	Traffic Impacts	Parking Impacts	Aligns with Planning Efforts	Operations & Maintenance	Capital Costs	**VIABILITY SCORE**
Weight	2	2	3	3	2	
Alternative 1: Randolph						
1A						●
1B						●
1C						●
Alternative 2: Slauson - Belgrave - Randolph						
2A						◕
2B						◕
2C						●
Alternative 3A: Slauson/Holmes/Gage/Maywood/Randolph						
3A-A						◐
3A-B						◔
3A-C						◕
Alternative 3B: Slauson/Holmes/Gage						
3B-A						◔
3B-B						○
3B-C						◐

FEASIBILITY / IMPLEMENTATION

Environmental Impacts

The alternative should minimize environmental and community impacts.

Qualitative Metric:
Qualitative score based on degree of environmental impacts (visual, hazardous materials, water quality, and sensitive uses) (See Environmental Next Steps Memo, Appendix H)

LOWER PERFORMING → **HIGHER PERFORMING**

A significant section of the alternative may have some potentially significant environmental impacts	A small section of the alternative may have some potentially significant environmental impacts	The alternative would have no significant environmental impacts

Permitting & Coordination

The alternative should minimize additional permitting and/or lengthy coordination where feasible.

Qualitative Metric:
Qualitative score based on whether the alternative can be built within public ROW

LOWER PERFORMING → **HIGHER PERFORMING**

A significant portion of the alternative is outside of public ROW (alternative utilizes UP-owned ROW east of Maywood Avenue)	The alternative could mostly be constructed within public ROW (part of alternative utilizes Metro-owned rail ROW)	The alternative could be constructed entirely within public ROW (entire alternative utilizes street network)

Opportunities for Funding

The alternative should qualify for funding opportunities.

Qualitative Metric:
Qualitative score based on degree of qualification for funding opportunities

LOWER PERFORMING → **HIGHER PERFORMING**

The alternative qualifies for a below average number of grant programs

The alternative qualifies for an average number of grant programs

The alternative qualifies for an above average number of grant programs

Key Takeaways for Feasibility/Implementation

There was significant variation among sub-alternatives for Feasibility/Implementation due to varying bikeway typologies (Table 16). Alternatives with a proposed Class I path typology generally scored lower for environmental impacts and permitting & coordination, as this typology would require additional coordination and potential mitigation.

Table 16. *Implementation Sub-Alternative Screening*

	Environmental Impacts	Permitting & Coordination	Opportunities for Funding	ACCESS SCORE
Weight	2	2	2	
Alternative 1: Randolph				
1A				◔
1B				●
1C				◔
Alternative 2: Slauson - Belgrave - Randolph				
2A				●
2B				◔
2C				●
Alternative 3A: Slauson/Holmes/Gage/Maywood/Randolph				
3A-A				◔
3A-B				●
3A-C				◕
Alternative 3B: Slauson/Holmes/Gage				
3B-A				◕
3B-B				●
3B-C				●

SUMMARY OF TECHNICAL EVALUATION

The evaluation was conducted on 12 potential sub-alternatives based on the four alternatives with varying bicycle facility types. This allowed the team to identify the most feasible typology combination option for each alternative.

Table 17 presents a summary of the results of the evaluation. The top performing sub-alternatives within each alternative 1B, 2C, 3A-C, and 3B-C are shown in black.

Overall, sub-alternatives that utilize the street network scored higher than those that use a Class I path typology along rail ROW because of challenges related to Implementation. For Alternatives 3A and 3B along Gage Avenue, sub-alternatives with Class II bike lanes scored higher than those with Class IV two-way bikeways because of lower costs and fewer traffic and parking impacts.

In general, alternatives 3A and 3B scored higher for Safety because they provide the greatest level of separation from vehicular traffic and have the potential to improve existing roadway safety the most relative to existing conditions.

These alternatives also scored highly for Access and Equity due to the presence of activity centers such as shopping areas and schools and frequent bus stops along Gage Avenue. These alternatives also had strong support from community members. Alternatives 3A and 3B scored lower for Viability given their higher costs and impacts to existing traffic conditions.

Alternatives 1 and 2 generally scored well for Sustainable Mobility and Viability. These alternatives are more direct than those along Gage, and also have generally lower costs and strong alignment with existing and previous planning efforts.

Table 17 illustrates a summary of all results by goal. The following pages provide a summary of each of the four alternatives.

Table 17. *Summary of Technical Evaluation*

	Safety	Access	Sustainable Mobility	Equity	Viability	Feasibility / Implementation
Weight	3	3	1	2	2	2
Alternative 1: Randolph						
1A						
1B						
1C						
Alternative 2: Slauson - Belgrave - Randolph						
2A						
2B						
2C						
Alternative 3A: Slauson/Holmes/Gage/Maywood/Randolph						
3A-A						
3A-B						
3A-C						
Alternative 3B: Slauson/Holmes/Gage						
3B-A						
3B-B						
3B-C						

ALTERNATIVE 1

Randolph

Alternative 1 provides the most direct route between the Metro A Line (Blue) and LA River, aligns best with existing planning efforts, and would have the fewest impacts to existing traffic operations (Figure 36). However, it provides access to fewer destinations than the alternatives along Gage Avenue.

+ ***Sustainability Mobility:*** Most direct route between Segment A and the LA River
+ ***Viability:*** Aligns well with previous planning efforts, is a lower cost alternative with few traffic impacts, and considers the built condition of Randolph following construction of the WSAB project. Prior to the full implementation of the WSAB, the local jurisdiction can consider implementing an interim quick-build concept–installing Class II bike lanes along Randolph Street between Holmes Avenue and State Street. This scenario would require some lane reconfiguration to reduce the existing four-lane road to one lane in each direction, matching the future WSAB roadway configuration (see pages 166-169 for proposed cross-sections). Note: This interim condition was not considered as part of the evaluation. Post-WSAB implementation, the project could transition to its long-term vision with a Class III bicycle boulevard between Holmes Avenue and State Street.
+ ***Implementation:*** Limited permitting and coordination needs because the alternative is entirely within the street network
– ***Safety:*** A portion of the route includes a bicycle boulevard where people riding bikes share a lane with vehicles
– ***Access:*** Provides access to the lowest number of community-identified destinations and bus stops
– ***Equity:*** : While the community supported the directness of the route, this alternative was not highly ranked by the community because of its proposed bikeway types. Overall, community members preferred alternatives with a dedicated bikeway option, which was not possible along a significant portion of this route due to ROW constraints.

Key Destinations

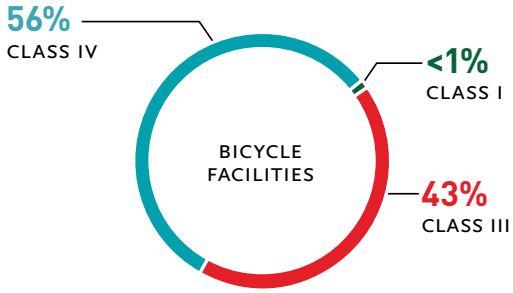
- Slauson A Line (Blue) Station
- Future WSAB Pacific Station
- Raul R. Perez Memorial Park

Community Feedback

- Community members raised safety concerns with having a shared roadway between bicycles and vehicles; 43% of bikeway would share a lane with vehicles
- Uses Randolph alignment east of State Street, which has historically had strong community support
- Incorporates crosswalk improvements, landscape, and street trees, which were voted as important by the community

Figure 36. *Alternative 1*

Corridor Statistics



ALTERNATIVE 2

Slauson/Belgrave/Randolph

Alternative 2 uses Belgrave to circumvent a section of Randolph Street (Figure 37). While the route would provide a higher degree of separation from vehicles than Alternative 1, the alternative would have more traffic and parking impacts due to impacts along Slauson Avenue and Miles Avenue.

+ ***Sustainability Mobility:*** Direct connection between Segment A and the LA River
+ ***Viability:*** Aligns well with previous planning efforts and is a lower cost alternative. Considers the built condition of Randolph following construction of the WSAB project. Would require travel lane reconfiguration along small segment of Miles Avenue, which would have some impacts to traffic operations
+ ***Implementation:*** Limited permitting and coordination needs because the alternative is entirely within the street network
– ***Safety:*** A portion of the route includes a bicycle boulevard where people riding bikes share a lane with vehicles
– ***Access:*** Provides access to fewer activity centers and bus stops than Gage Avenue
– ***Equity:*** Not highly ranked by the community

Key Destinations

- Slauson A Line (Blue) Station
- Huntington Park High School
- Raul R. Perez Memorial Park

Community Feedback

- 52% separated bikeway, which was the top-ranked bikeway typology by community members
- Uses Randolph alignment east of Maywood Avenue, which has historically had strong community support
- Incorporates crosswalk improvements, street trees, and landscaping, which were voted as important by the community

Figure 37. *Alternative 2C*

Corridor Statistics

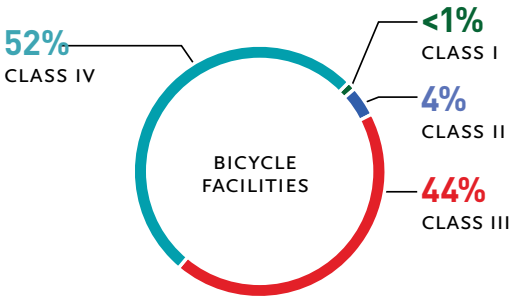
DIRECTNESS

LOCAL DESTINATIONS

PEDESTRIAN OPPORTUNITIES

ROADWAY CHANGES

COST



ALTERNATIVE 3A

Holmes/Gage/Randolph

Alternative 3A uses a portion of Gage Avenue to circumvent Randolph Street (Figure 38). Unlike Alternatives 1 and 2, the majority of this alternative would provide a dedicated bikeway for users, except for a short stretch along Maywood Avenue. While it connects to more destinations, it would have the most traffic impacts and would be the most expensive to construct.

+ ***Safety:*** Lane reconfiguration along Gage Avenue improves historic safety issues along the roadway; majority of route includes a dedicated bikeway
+ ***Access:*** Connects to a high number of community-identified destinations
+ ***Equity:*** Highly ranked by community
– ***Sustainability Mobility:*** Most indirect route with longest travel time between Segment A and the LA River
– ***Viability:*** Requires travel lane reconfiguration along a segment of Gage Avenue, which would impact traffic operations and it's the highest cost alternative
– ***Implementation:*** Shared-use path along Slauson Avenue would require some additional permitting and coordination needs

Key Destinations

- Slauson A Line (Blue) Station
- Gage Middle School
- Huntington Park Library

Community Feedback

- 96% dedicated bikeway, which was strongly supported by community members
- Connects to major destinations along Gage Avenue
- Uses Randolph alignment east of Maywood Avenue, which historically had strong community support
- Incorporates crosswalk improvements, street trees, lighting, and landscaping, which were voted as important by the community

Figure 38. *Alternative 3A-C*

Corridor Statistics

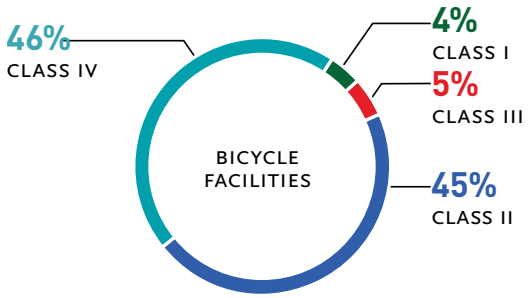
DIRECTNESS

LOCAL DESTINATIONS

PEDESTRIAN OPPORTUNITIES

ROADWAY CHANGES

COST



ALTERNATIVE 3B

Slauson/Holmes/Gage

Alternative 3B uses the entirety of Gage Avenue to circumvent Randolph Street (Figure 39). While the alternative connects to the greatest number of community destinations along Gage Avenue, it would have the greatest traffic impacts along the roadway.

+ ***Safety:*** Lane reconfiguration along Gage Avenue improves historic safety issues along the roadway; entire route includes a dedicated bikeway
+ ***Access:*** Connects to a high number of community-identified destinations
+ ***Equity:*** Ranked highest by community
+ ***Implementation:*** Limited environmental impacts and permitting and coordination needs because the alternative is entirely within the street network
– ***Sustainability Mobility:*** More indirect route between Segment A and the LA River
– ***Viability:*** Requires travel lane reconfiguration along the entire length of Gage Avenue from Holmes Avenue to the LA River, which would have the greatest impact on traffic operations and is a higher cost alternative

Key Destinations

- Slauson A Line (Blue) Station
- Gage Middle School
- Ernest Debs Park
- Veterans' Memorial Park

Community Feedback

- 100% dedicated bikeway, which was strongly supported by community members
- Connects to the most key destinations along Gage Avenue
- Would have limited parking impacts, which was important to community members

Figure 39. *Alternative 3B-C*

Corridor Statistics

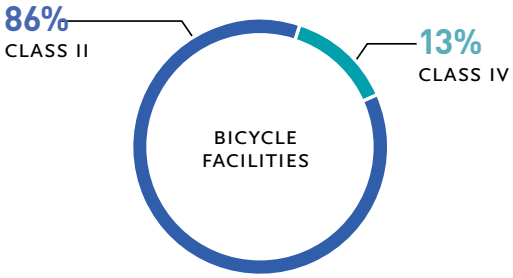
DIRECTNESS

LOCAL DESTINATIONS

PEDESTRIAN OPPORTUNITIES

ROADWAY CHANGES

COST



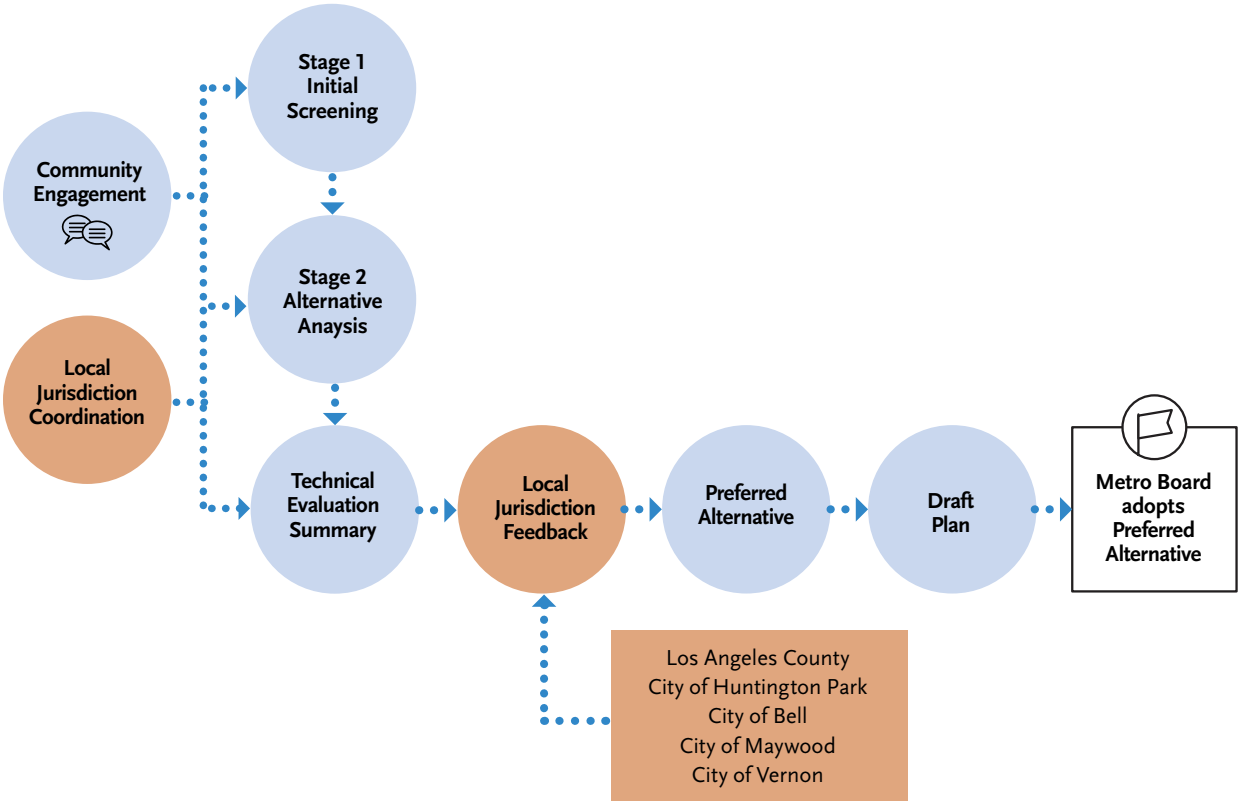
04

COMMUNITY + STAKEHOLDER ENGAGEMENT

OVERVIEW

Community and stakeholder engagement occurred during all stages of the Segment B SAA (Figure 40). The feedback received was used to inform the development and evaluation of the alternatives outlined in Chapter 3. Feedback from local jurisdictions on the results of the technical evaluation was then used to determine next steps and recommendations for Segment B (Chapter 5).

Figure 40. *Community and Stakeholder Feedback*



Community and Stakeholder Engagement Activities

Public engagement and agency coordination took place through several channels, including a Technical Working Group (TWG), Community Advisory Committee (CAC), and via public community meetings. The SAA carried forward the focus and intention of the 2017 AA by providing opportunities for public input from a wide range of stakeholders. Due to COVID-19, most public engagement took place virtually.

Technical Working Group (TWG)

Like the 2017 AA, the local cities and jurisdictions including the cities of Los Angeles, Huntington Park, Vernon, Bell, Maywood, and the County of Los Angeles were invited to participate as members of the TWG for the Segment B SAA. The project team held five TWG meetings over the course of the project, along with two rounds of one-on-one meetings with each agency.

Community Advisory Committee (CAC)

Similarly, organizations that took part in the CAC during the AA were invited to participate as CAC members during the SAA phase. Additional community-based organizations serving the study area were identified and invited to join the CAC.

The CAC included organized community and advocacy groups and individuals invested in the community with interests in active transportation or other activities within the study area. CAC participants had an important role in providing input from a community-based perspective. CAC participants helped to increase project awareness and share project information with their respective interest groups.

CAC members included the following organizations:

- Communities for a Better Environment
- Community & Neighbors for Ninth District Unity Council
- Crenshaw Chamber of Commerce
- East Yard Communities for Environmental Justice
- Friends of Hyde Park Library
- Homeless Outreach Program Integrated Care System (HOPICS)
- Hub Cities Worksource Center
- LA Streetsblog
- Linear City/FoLAR
- Los Angeles County Bicycle Coalition
- Los Angeles Unified School District
- Los Angeles Walks
- Office of Los Angeles County Supervisor Hilda L. Solis, District 1
- River LA
- Southeast Churches Service Center
- Southeast Los Angeles (SELA) Collaborative
- Southern California Resource Services for Independent Living
- USC Cecil Murray Center
- Vernon Chamber of Commerce

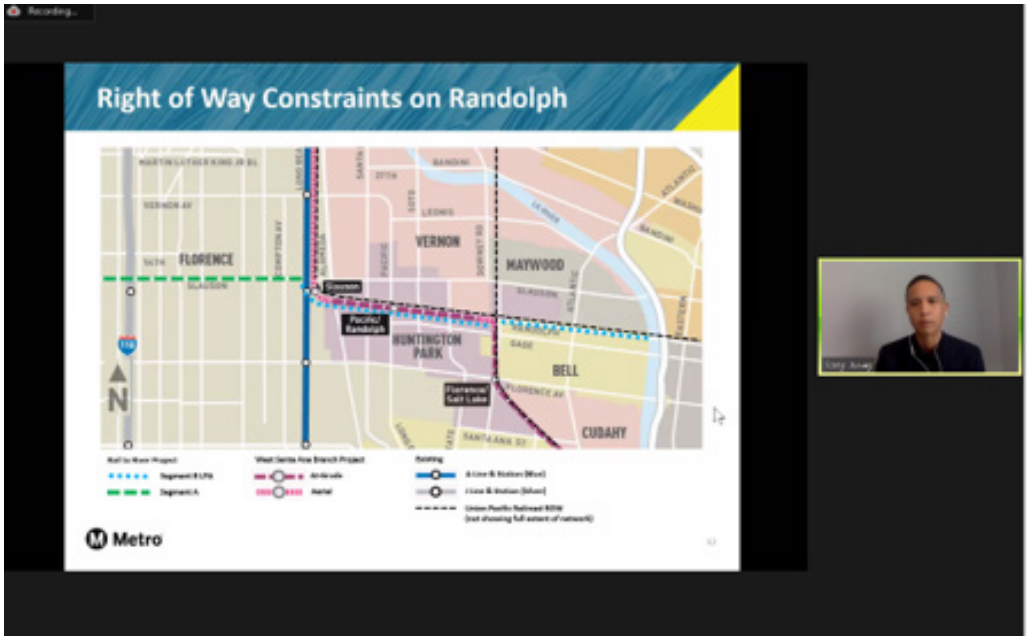
Community Meetings

The community had the opportunity to provide feedback during three different rounds of engagement in winter 2020-2021, spring 2021, and summer-fall 2021 which coincided with key project milestones. Two community meetings were held during each round.

During round one, the project team collected feedback on the proposed project purpose and need and project goals. Participants also weighed in on potential routes for consideration. The second round of meetings focused on gathering feedback on the proposed alternatives and the proposed evaluation criteria. During the third round of meetings, the project team collected feedback on the results of the alternatives analysis and conceptual designs.

Other Outreach Efforts

Two community surveys, during the first and second rounds of engagement, were also used to gather public input. The surveys were conducted both virtually and in person. Additionally, the project team attended three WSAB pop-up events in the City of Huntington Park, City of Bell, and in front of Slauson Station to share project information and gather input on the three alternatives. The project team also held project briefings with several individual public agencies.



Notification Efforts

The project team used traditional and innovative outreach methods to increase awareness of the project and notify the community about opportunities to get involved. Outreach efforts included direct mass mailings, electronic notices and email blasts, newspaper and social media advertisements, street banners, and text message campaigns. Printed materials included a QR code that linked to project and meeting information.

For each round of meetings the project team mailed a postcard to 26,348 addresses that included property owners and residents within the study area. E-blast notifications were also sent for each round of meetings, totaling to almost 900 unduplicated email addresses.

The project team also created an electronic communications toolkit enclosed with copy-ready text, graphics and links with details about the community meetings. Prior to the first community meeting, this toolkit was sent to key stakeholders, cities, county departments, businesses, chambers of commerce, and community groups. The toolkit encouraged stakeholders to play an integral part in encouraging their community to attend the community meetings by posting information on the project and meetings to their websites, newsletters, e-blasts, and social media platforms.

Finally, Metro hosted a bilingual English and Spanish project helpline, providing community members with the opportunity to call in, leave a message, and receive a brief project update, including information on upcoming meetings.

An informational street banner

WHO DID WE HEAR FROM?

The bilingual English and Spanish public engagement campaign for the Segment B SAA project offered the opportunity for a wide range of stakeholders including those living, working and traveling in the study area to have a voice during all stages of the SAA process.

During each round of engagement, the project team heard from stakeholders including residents of the study area, elected official representatives, community groups, local and county agencies, and community-based organizations, among others. Over 800 stakeholders provided input at over 37 agency, technical, and community meetings, briefings, pop-up events, and via two community surveys.

Survey respondents were asked to voluntarily provide their demographic information. Of those who responded, approximately 56% were women and 41% were men. The majority (62%) of respondents were between 25 and 49 years of age. Approximately 71% of respondents identified themselves as Latino/Latinx/Hispanic, followed by 11% who identified as White/Caucasian and 7% who identified as Black/African American.

Meeting participants were asked to identify where they live in relation to the project area. Of the participants who answered, 85% lived in the project area, including the City of Los Angeles (37%), City of Huntington Park (21%), Unincorporated County (21%), City of Bell (3%) and City of Maywood (3%). The remaining respondents (15%) selected "Other."

6
community meetings

315
attendees at community events

2
languages

3
community pop-ups

518
survey responses

28
stakeholder meetings

WHAT DID WE HEAR?

Round 01 of Engagement: Project Background, Vision, and Goals (Winter 2021)

The first round of engagement focused on clarifying why a SAA was needed and why the 2017 Segment B LPA was no longer possible. The project team provided background on the project's history, status, and timeline, and collected feedback on the proposed project purpose and need, project vision, and project goals. In addition, input was collected on existing barriers to biking and walking in the study area, key destinations, and potential routes to consider as part of Stage 1 of the evaluation process. This feedback was used to inform the development of three preliminary concepts.

Goals

- Share project background, history, and timeline
- Gather input on proposed project purpose and need, vision, and goals
- Gather input on existing barriers to biking and walking, key destinations, and potential routes

Round 01 Activities

- TWG Meeting #1: December 3, 2020; 35 attendees
- CAC Meeting #1: January 27, 2021; 18 attendees
- Community Meeting #1: February 11 and 13, 2021; 78 attendees
- Community Survey #1: 261 responses

What did we hear?

Overall, there was support for the proposed project vision and goals from both community and agency stakeholders. The TWG identified personal safety, safety from traffic, funding, and rail coordination as the biggest challenges for the project.

Randolph Street was most frequently identified as a preferred route for Segment B (Figure 41). However, community members expressed a preference for a dedicated bikeway that is separated from traffic, as well as a route that connects to the most destinations such as schools, parks, recreational facilities, and shopping areas (Figure 42).

How was this feedback incorporated?

The project purpose and need, vision, and goals were finalized following this round of engagement given the positive feedback received. Input on the preferred route, existing barriers, and key destinations was used to inform the initial screening and identify four preliminary concepts for further study.

Figure 41. *Community-Preferred Route*

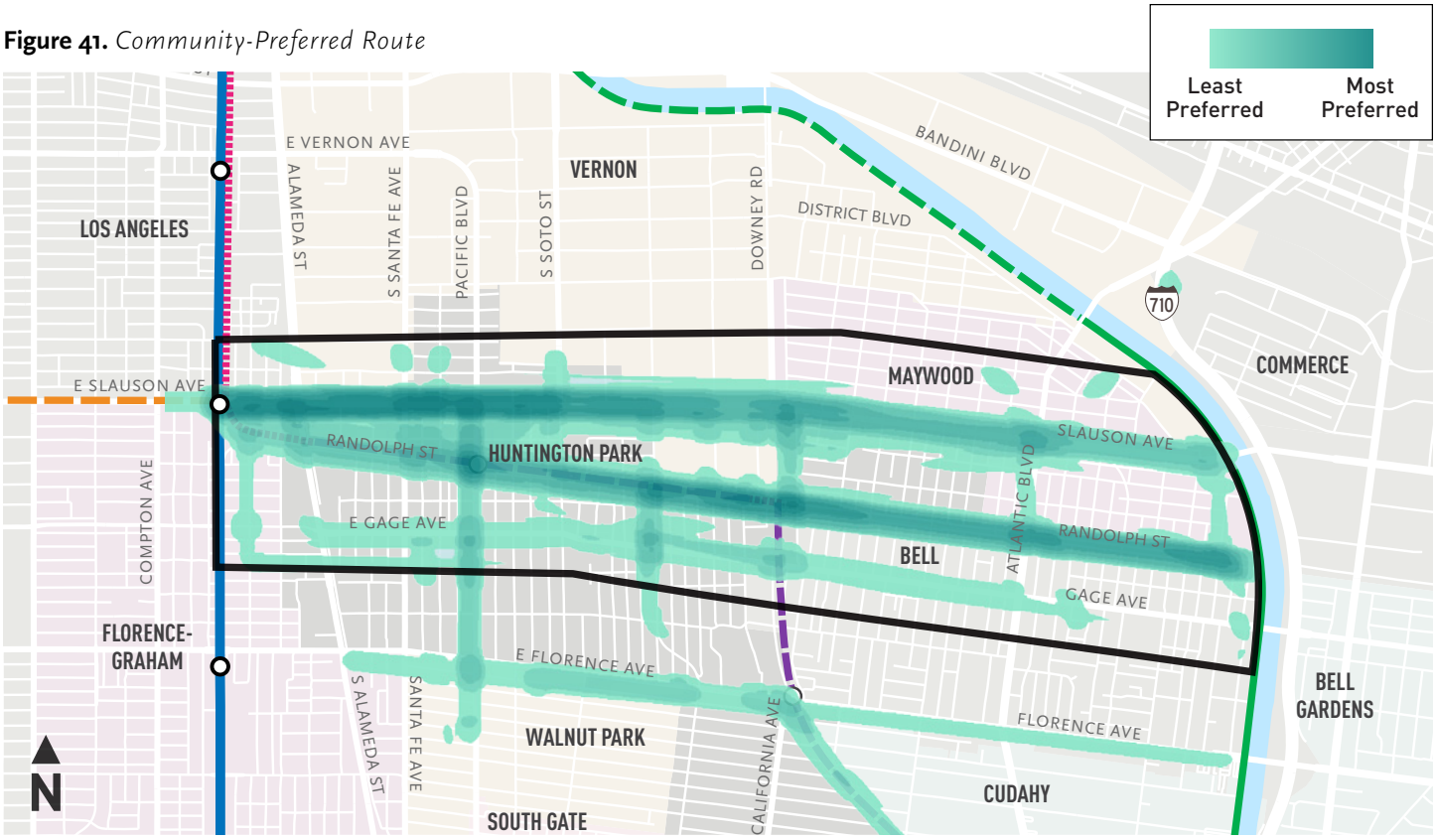
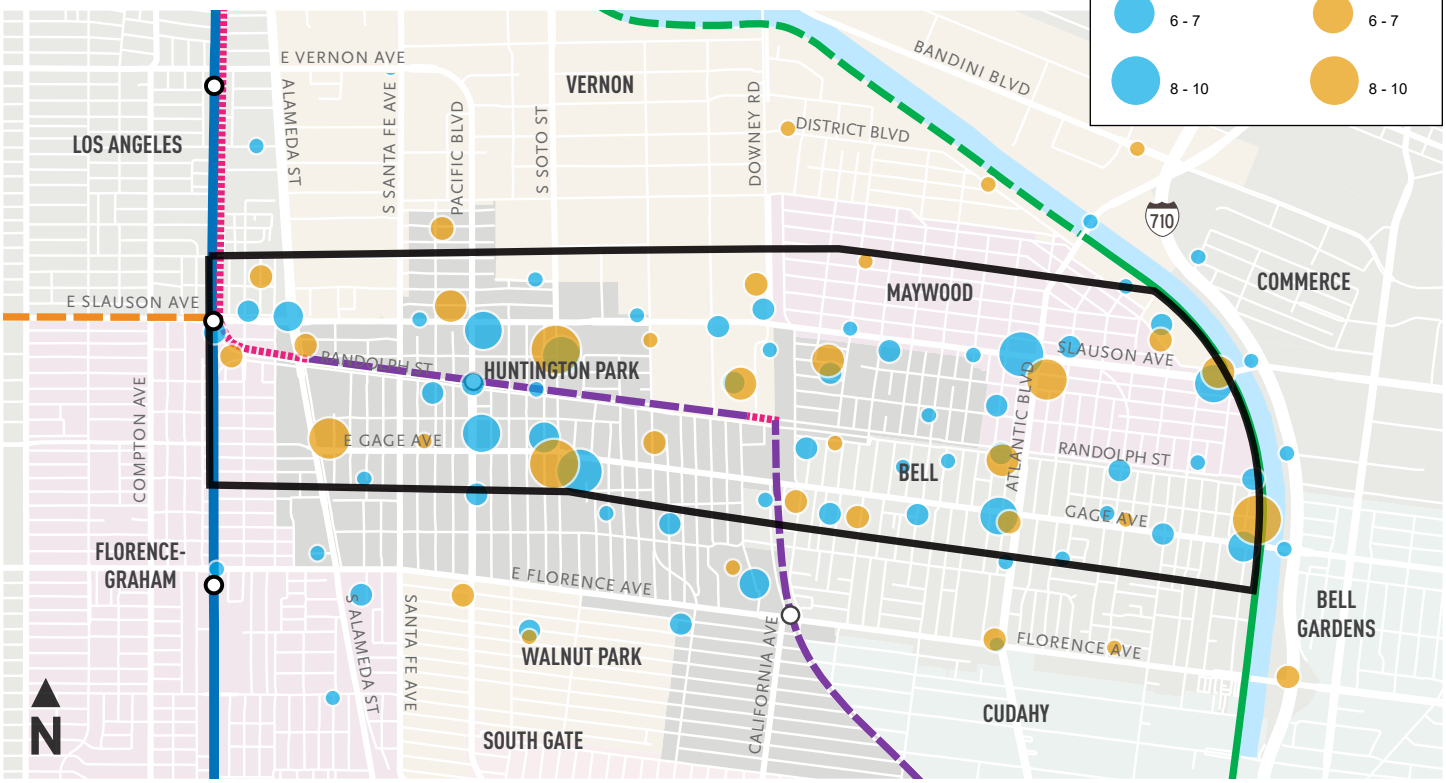


Figure 42. *Community-Identified Destinations*



Round 02 of Engagement: Three Alternatives and their Trade-offs (Spring 2021)

The second round of engagement focused on gathering input on the three alternatives and proposed evaluation criteria. The project team shared the proposed alternatives, including potential bikeway typologies and the trade-offs between the different options. Additionally, the project team shared and gathered feedback on the proposed criteria for evaluating the alternatives.

Goals

- Gather input on the proposed alternatives
- Gather input on the trade-offs between the alternatives
- Gather input on proposed evaluation criteria

Round 02 Activities

- TWG Meeting #2: March 25, 2021; 35 attendees
- CAC Meeting #2: April 29, 2021; 9 attendees
- Community Meeting #2: May 11 and 15, 2021; 71 attendees
- Community Survey #2: 257 responses

What did we hear?

Feedback received during the second round of engagement centered around the three alternatives and their trade-offs. Overall, most participants preferred a route that could incorporate a dedicated bikeway (Figure 43) and could connect to the most destinations within the study area (Alternative 3A or 3B) (Figure 44).

Overall, Alternative 3B was ranked highest by the community, followed by 3A, 2, and 1.

Community members noted that safety, traffic impacts, and parking impacts were most important in choosing an alternative. Additional feedback included the importance of maintenance along the corridor. Community members also expressed a desire for bicycle safety and driver education programs, lighting, and fix-it stations along the Segment B corridor.

How was this feedback incorporated?

The community's preferences were directly incorporated into the alternative evaluation model under the Equity goal. This feedback helped inform the evaluation of the trade-offs between the alternatives, as community input was one of several criteria used for the analysis.

Figure 43. *Dedicated Bikeway vs. Shared Bikeway*

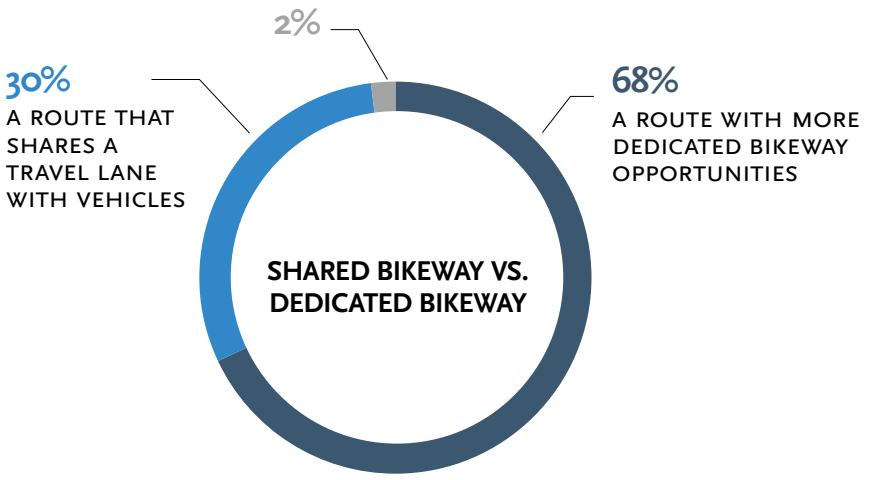
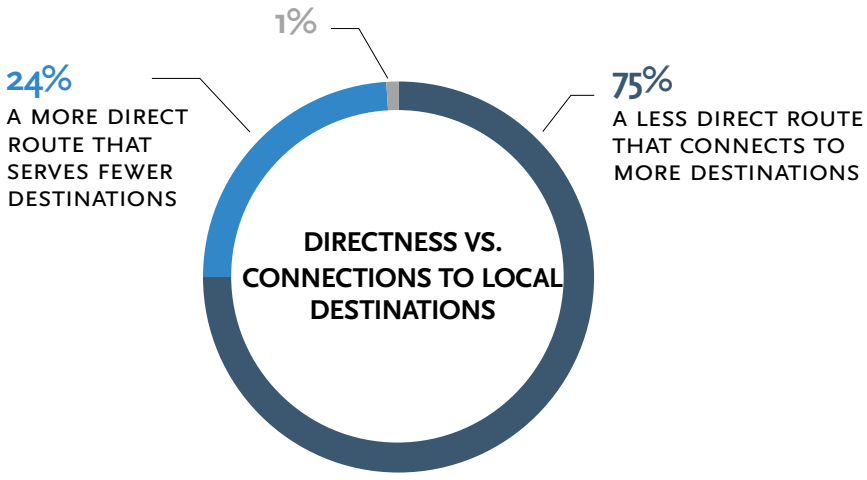


Figure 44. *Connections to Local Destinations vs. Directness*



Round 03: Alternatives Analysis Results and Design Features (Summer/Fall 2021)

During the final round of outreach, the project team shared the results of the alternatives analysis, including the trade-offs between the alternatives. The project team shared conceptual designs of Alternatives 1 and 3A, which were identified as the highest scoring alternatives based on the technical evaluation and stakeholder input. Project stakeholders were invited to provide feedback on the alternatives, including opportunities to weigh in on their preferred alternative before one was formally recommended to the Metro Board.

Goals

- Share results of technical analysis
- Gather feedback on trade-offs between alternatives
- Gather feedback on conceptual designs

Round 03 Activities

- TWG Meeting #3: June 29, 2021; 39 attendees
- TWG Meeting #4: August 24, 2021; 31 attendees
- CAC Meeting #3: August 31, 2021; 7 attendees
- Community Meeting #3: September 9 and 11, 2021; 56 attendees

What did we hear?

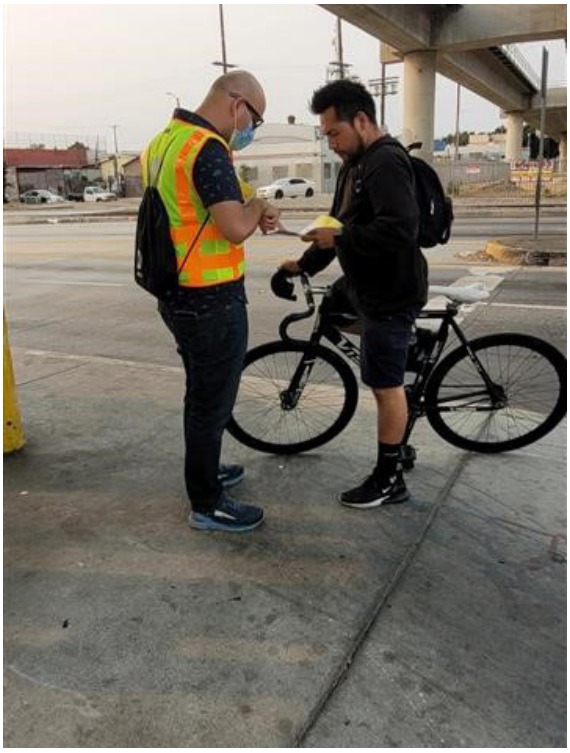
Community members expressed support for the order in which the goals were ranked and used in the evaluation model (Safety, Access, Equity, Viability, Sustainable Mobility, and Feasibility/Implementation).

Overall, community members were supportive of the results of the technical evaluation. Approximately 42% of community meeting participants expressed support for the reconfiguration of Gage Avenue to accommodate a dedicated bike lane. Additionally, there was some support for the loss of parking along Randolph Street east of State Street to accommodate a separated bikeway (Alts 1, 2, and 3A). Shade, lighting and street crossing improvements were identified as the top priorities for pedestrian improvements.

The Cities of Huntington Park, Bell, and Commerce expressed support for Alternative 1, noting its consistency with the MAT Randolph project and limited traffic impacts. Several TWG members requested that Metro present to their city councils before the jurisdictions could formally support one alternative.

How was this feedback incorporated?

The feedback from the TWG was used to inform the recommended next steps for the project. While the community expressed support for alternatives along both Gage Avenue and Randolph Street, the TWG's concerns led the project team to highlight the alternative that scored best for Viability as the alternative recommended to move forward. Recommendations and next steps are outlined in Chapter 5.



STAKEHOLDER COORDINATION

Five TWG meetings were held throughout the course of the project in December 2020, March, June, and August 2021, and February 2022. In addition to these meetings, the project team met one-on-one with TWG members at two key points during the SAA project. In March 2021, the project team hosted virtual field visits with each TWG member agency to review existing conditions and gather feedback on potential alignment options. In August 2021, the project team held one-on-one meetings with member agencies to discuss the results of the technical analysis and gather feedback prior to meeting with the larger TWG. Due to COVID-19, most stakeholder coordination took place virtually.

Local jurisdictions provided their feedback on the project verbally during TWG and other stakeholder meetings and formally via letters of support following their respective City Council meetings.

Technical Working Group Meeting #1

The first TWG meeting was held in December 2020 and focused on the development of the project vision and goals, as well as a discussion of potential challenges for the project. TWG members were asked to rank the project goals in order of their importance.

Overall, TWG members concurred with the draft project goals. The Access goal was ranked first, followed by Safety, Equity, Viability, and Sustainable Mobility. This feedback was used to inform the weighting used for the technical evaluation later in the alternative analysis process.

Virtual Field Visits with Project Partners

Virtual field visits were held with each TWG member agency in March 2021. The project team reviewed existing conditions, opportunities, and constraints along each corridor under each member agency's jurisdiction.

The local jurisdictions shared their preferred alignments for Segment B, information on existing and planned projects along the corridors, and their priorities for the roadways within their jurisdictions. For example, the importance of maintaining on-street parking was shared by several project partners. This feedback was used to inform the development of preliminary concepts for consideration, including the possible bikeway typologies that could be accommodated to ensure that on-street parking could be preserved. Detailed feedback can be found in Appendix F, Field Visit Summary.

Technical Working Group Meeting #2

The second TWG meeting was held in March 2021 and focused on the preliminary concepts developed for Segment B. The project team discussed the potential collaboration with the MAT Randolph project. Several member agencies noted their preference for the Randolph corridor because it aligned with the funded MAT Randolph project. Overall, all jurisdictions concurred that the preliminary concepts could move forward as alternatives for evaluation as part of the alternative analysis.

Technical Working Group Meeting #3

The third TWG meeting was held in June 2021. The project team provided an overview of the traffic and parking analysis results, as well as the goal-based evaluation approach for the alternative analysis. TWG members were

asked to vote on which goals and criteria were most important for the alternative analysis. This feedback was then used to weight the goals and criteria in the evaluation model to ensure the technical results best reflected stakeholder feedback.

Overall, TWG members ranked the Safety goal as the most important goal for selecting an alternative. Safety received 43% of the votes, followed by Equity (27%) and Access (17%).

On-on-One Meetings with Project Partners

One-on-one meetings were held with each TWG member agency in July and August 2021. The project team shared the trade-offs between the four alternatives and asked for feedback from each local jurisdiction. The project team also shared preliminary conceptual designs for the alternatives.

While all project partners accepted the results of the technical analysis, some jurisdictions expressed their preference for the Randolph Street corridor. Notably, the City of Huntington Park expressed concern regarding traffic impacts, potential parking impacts, and costs for Alternative 3A. The City of Commerce similarly expressed these concerns, and noted their support for the Randolph Street alternative (Alternative 1) which aligned with the MAT Randolph grant application.

Several jurisdictions noted that they could not formally support an alternative without approval from their respective leadership, and requested that Metro present at their September City Council meetings.

Technical Working Group Meeting #4

The fourth TWG meeting was held in late August 2021. The project team provided a summary of the feedback received from local jurisdictions during the one-on-one meetings. The Cities of Commerce and Bell requested more information on the traffic and parking analyses completed as part of the project, which Metro shared following the meeting. Metro also shared information about next steps for the project, including scheduled City Council briefings.

City Council Meetings

Metro presented the results of the technical evaluation at the City of Huntington Park, City of Maywood, and City of Bell's City Council meetings in September 2021.

The City of Huntington Park noted their preference for Alternative 1 and commented that additional outreach efforts to schools along Gage Avenue would be needed if they were to support Alternative 3A as the locally preferred alternative.

Following the presentations, the City of Huntington Park, Bell, and Commerce issued letters of support for Alternative 1.

Technical Working Group Meeting #5

The fifth TWG meeting was held in late February 2022. The project team provided a summary of the feedback received from local jurisdictions and the community over the course of the project, and shared design options for the recommended alternative (Alternative 1). Metro clarified that the design options were recommendations only, and that local jurisdictions could determine their preferred design when implementing the improvements. Metro also shared information about next steps for the project, including the plan to present the study findings to the Metro Board.

05
RECOMMENDATIONS + NEXT STEPS

OVERVIEW

Community and stakeholder feedback on the alternatives was used throughout the study to inform the development of the four alternatives and the recommendations for next steps for Segment B. Community members expressed some support for all four alternatives, with a slight overall preference for the alignment along Gage Avenue because of its ability to provide a dedicated bikeway. However, community members also expressed the importance of minimizing traffic impacts in the area, which would be highest along Gage Avenue.

The alternative analysis process identified the trade-offs between the four alternatives. While all four alternatives would provide a safe active transportation corridor, the biggest trade-offs were between the Viability and Access goals. Alternatives along Randolph would better align with existing projects and would be easier, quicker, and less expensive to construct (i.e., Viability), and alternatives along Gage Avenue would connect to more activity centers and community-identified destinations (Access) but have more traffic and cost implications.

Overall, the Viability goal (i.e., traffic impacts and alignment with planned projects) drove the recommendations for this study. TWG member agencies noted their concern with the traffic impacts of Alternatives 3A and 3B along Gage Avenue and expressed their strong support for the Randolph corridor (Alternative 1). TWG members were particularly interested in aligning the Segment B project with the MAT Randolph project along the corridor.

Because TWG members will be responsible for implementing Segment B, Alternative 1 (Randolph Street) is recommended to move forward for implementation.

Randolph Street

Alternative 1 provides the most direct route between Segment A and the LA River and overlaps with the MAT Randolph project alignment. The alternative considers the built condition of Randolph Street following construction of the WSAB project. A portion of the route includes a bicycle boulevard where people riding bikes share a lane with vehicles, which is only recommended in the future post-WSAB roadway condition. Post-WSAB, the current two-lane condition will be reduced to a one-lane condition with traffic calming improvements. Prior to WSAB, there is an opportunity for interim active transportation improvements.

This chapter outlines both an interim and long-term vision for the Randolph Street corridor, specific improvements associated with the Randolph Street alternative, and strategies for implementation.

ALTERNATIVE 1

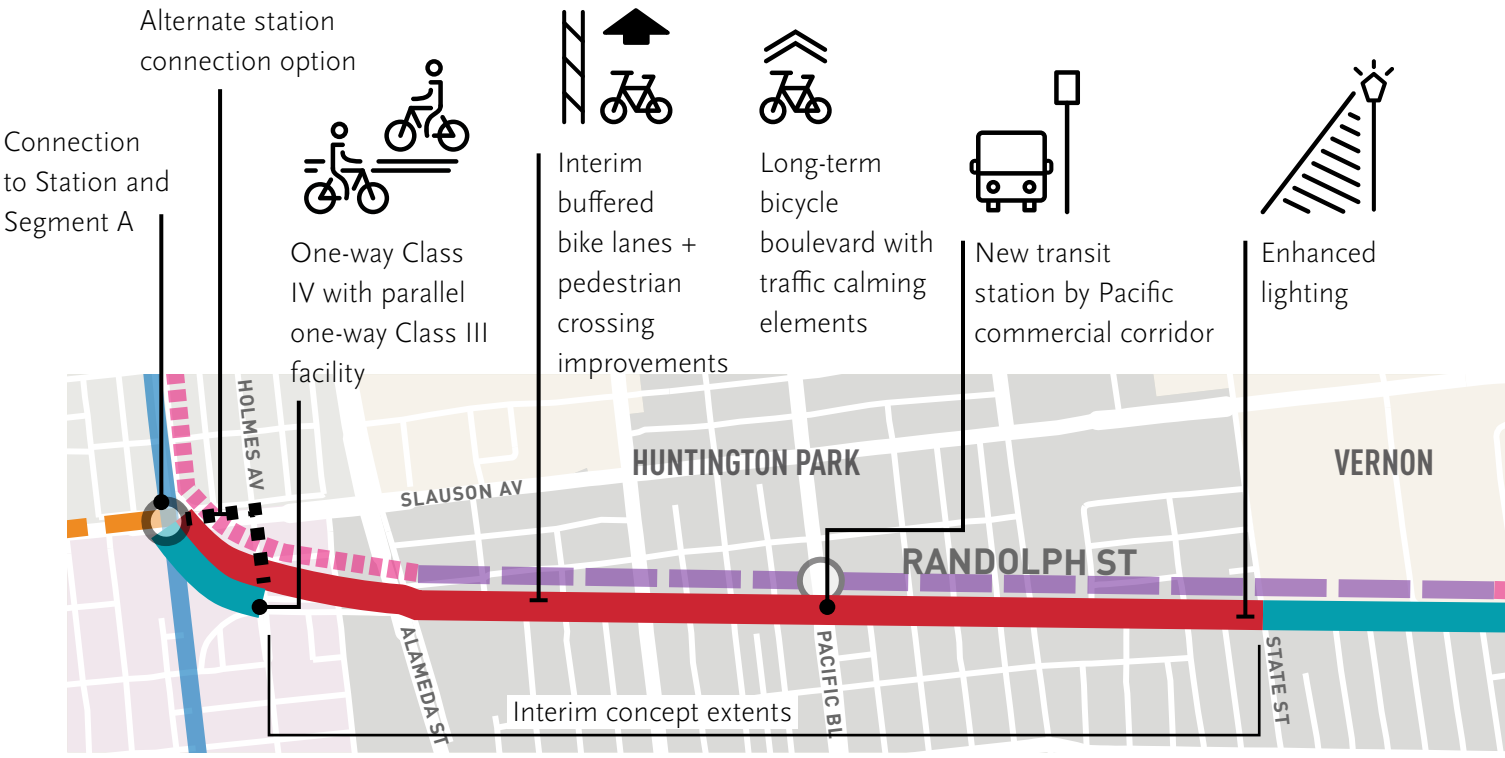
Vision

The WSAB light rail project is, at the time of this report, currently under environmental review. This study considered the built condition of Randolph Street following construction of WSAB. After completion of WSAB and its proposed Pacific Boulevard station, Randolph's two existing traffic lanes will be reduced to one lane in each direction, with fewer intersecting north-south through streets, which will result in lower traffic volumes and travel speeds along the corridor. The recommended speed limit along Randolph within the WSAB Project area could be lowered to 20-25 mph to further improve safety for bicyclists sharing the travel lane with motor vehicles. Randolph Street can accommodate all modes, including people biking, walking, and taking transit.

Prior to WSAB construction there is an opportunity for an interim condition along the overlapping at-grade WSAB segment of Randolph between Holmes Avenue and State Street to improve walking and biking conditions in a shorter time frame. This interim condition is described in detail on the following pages.

Figure 45 provides an overview of potential improvements along Alternative 1. Pedestrians could use existing and new sidewalks adjacent to the street, with new crossing improvements such as curb extensions, high visibility crosswalks, and improved or new pedestrian signals. Amenities such as lighting, street trees, wayfinding, shade structures, and bicycle racks may be provided at strategic locations. Following WSAB construction,

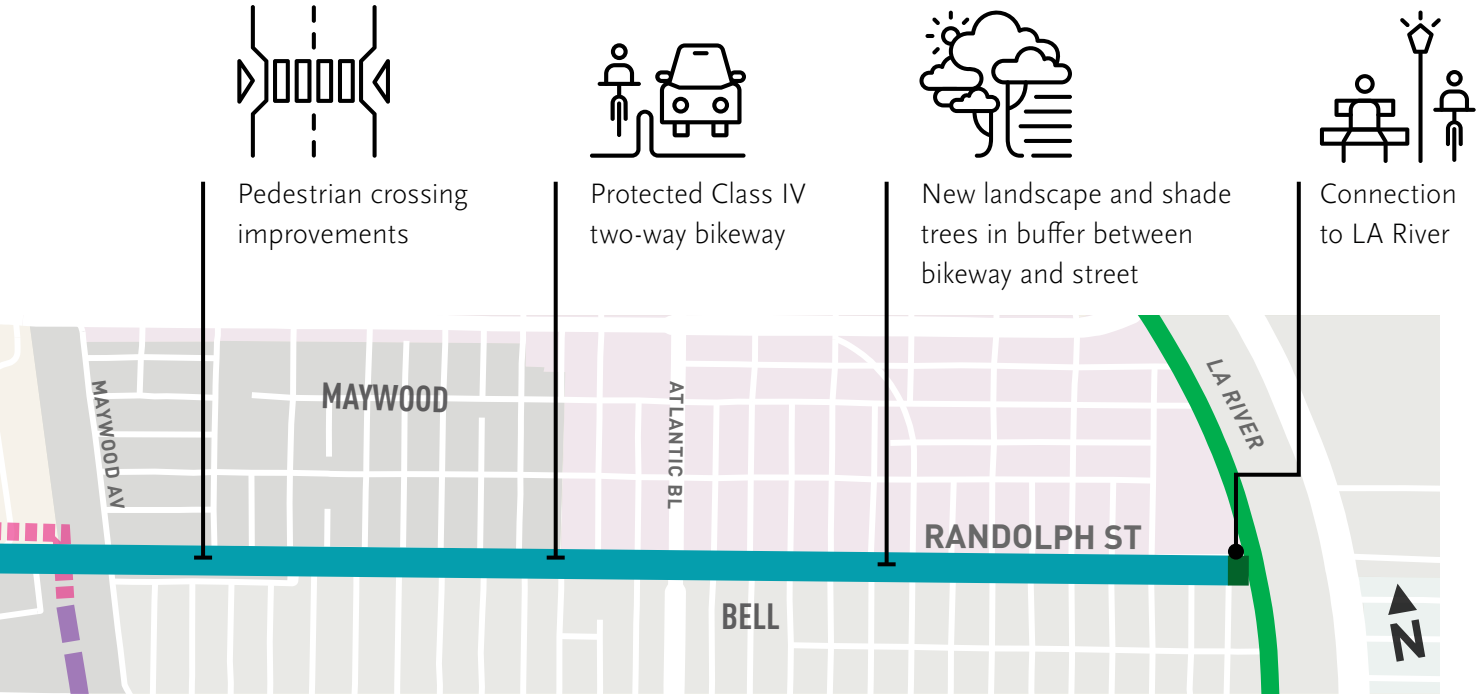
Figure 45. *Alternative 1*



people riding bikes would use a shared lane Class III bike boulevard between Slauson Station and State Street. Because a short segment of Randolph between Slauson Station and Holmes Avenue is a one-way westbound road, a one-way eastbound Class IV bikeway would run parallel to the westbound Class III bike boulevard. East of State Street a two-way Class IV bikeway would provide a protected bikeway to the LA River creating opportunities for new shade trees and landscape in the buffer between the bikeway and the street.

This project recommends using the space available in the public ROW for early action walking and biking improvements. East of State Street there are opportunities for future negotiations with Union Pacific to acquire space in the rail ROW. This may take many years and can be pursued by local jurisdictions to accommodate a future off-street Class I shared-use path.

There are also opportunities for local jurisdictions to consider alternative options if preferred. For example, LA County could consider an alternative connection to the Slauson Station via Class IV separated bikeways on Slauson and Holmes Avenues rather than the one-way road segment along Randolph. Similarly, the City of Huntington Park may consider implementing Class II bike lanes or a Class III bicycle boulevard along Randolph Street east of State Street in areas where a Class IV facility would require parking removal. Concept design plans were developed for three alternatives (Alternatives 1, 3A, and 3B) and are included as Appendix J.

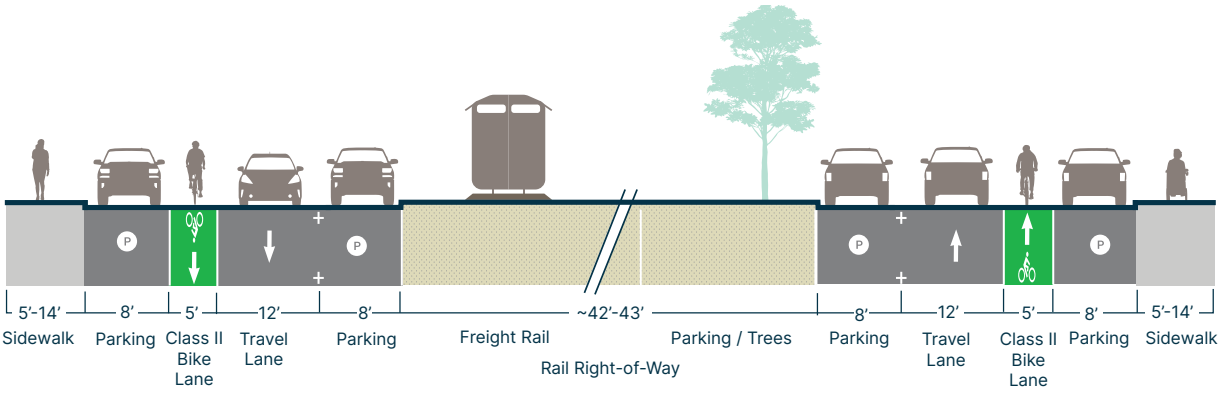


INTERIM CONCEPT

Prior to the construction of the WSAB project, interim Class II bike lanes could be constructed between Holmes Avenue and State Street using quick-build materials to reduce the existing typical four-lane road to one lane in each direction. A buffer between the bike lane and the roadway could be accommodated where space allows. This interim condition could include additional pedestrian improvements such as painted curb extensions and high visibility crosswalks at intersections. The interim condition would be removed once WSAB project construction begins, after which the roadway would transition to its long-term condition. The connection between Slauson Station and Holmes Avenue would follow the long-term vision for the corridor, as described on pages 168-169.

Randolph Street between Alameda Street and Santa Fe Avenue (Section I-1)

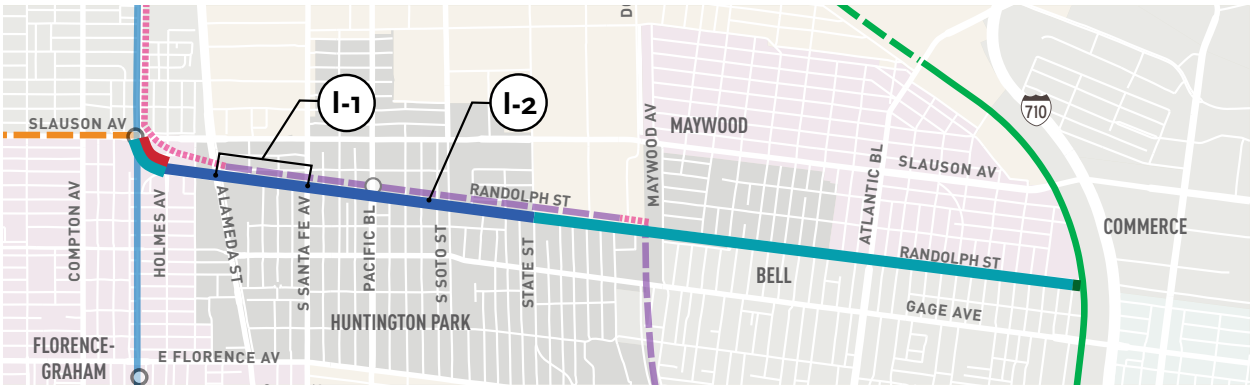
Section I-1 covers Randolph Street between Alameda Street and Santa Fe Avenue. In Spring of 2022, the City of Huntington Park reconfigured this stretch of Randolph Street from two traffic lanes in each direction to one traffic lane to accommodate an additional parking lane along the roadway median. The speed limit has also been lowered from 35mph to 25mph. Prior to construction of the WSAB project, this section of the traffic lane could be narrowed to include a 5-foot bike lane and 12-foot travel lane. Adjacent pedestrian improvements such as painted curb extensions and high visibility crosswalks could also be included to improve conditions for people walking. See Figure 47 on page 166.



Typical Proposed Cross Section: Randolph Avenue between Alameda Street and Santa Fe Avenue

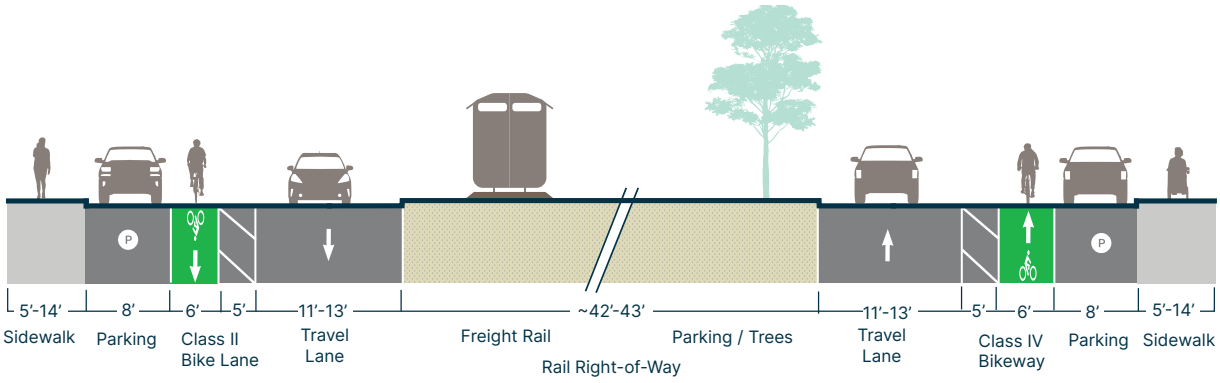
I-1

Figure 46. *Alternative 1 Section 1 Key Map*



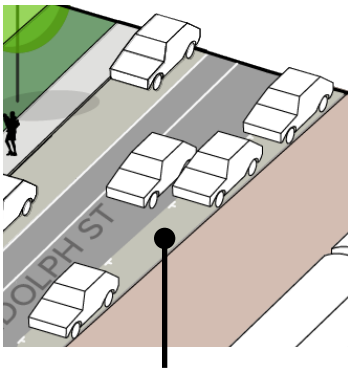
Randolph Street between Holmes Avenue and Alameda Street, and Santa Fe Avenue and State Street (Section I-2)

Section I-2 covers Randolph Street between Holmes Avenue and Alameda Street, and Santa Fe Avenue and State Street. Prior to construction of the WSAB project, this stretch of Randolph could be reconfigured using interim 6-foot Class II bike lanes with 5-foot buffers with adjacent pedestrian improvements to create a safe route for people walking and bicycling. This would convert the existing roadway from two lanes of traffic in each direction to one, creating a dedicated space for people biking. See Figure 48 on page 167.

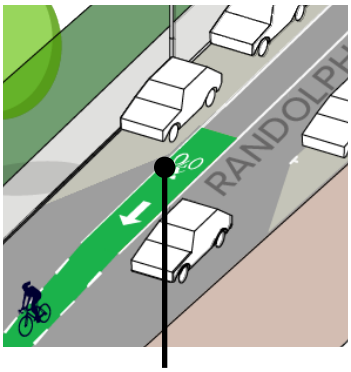


Typical Proposed Cross Section: Randolph Avenue between Santa Fe Avenue and State Street

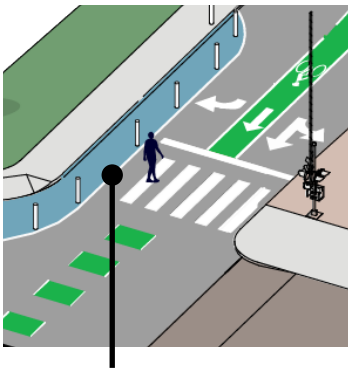
I-2



1 On-street parallel parking adjacent to sidewalk and median

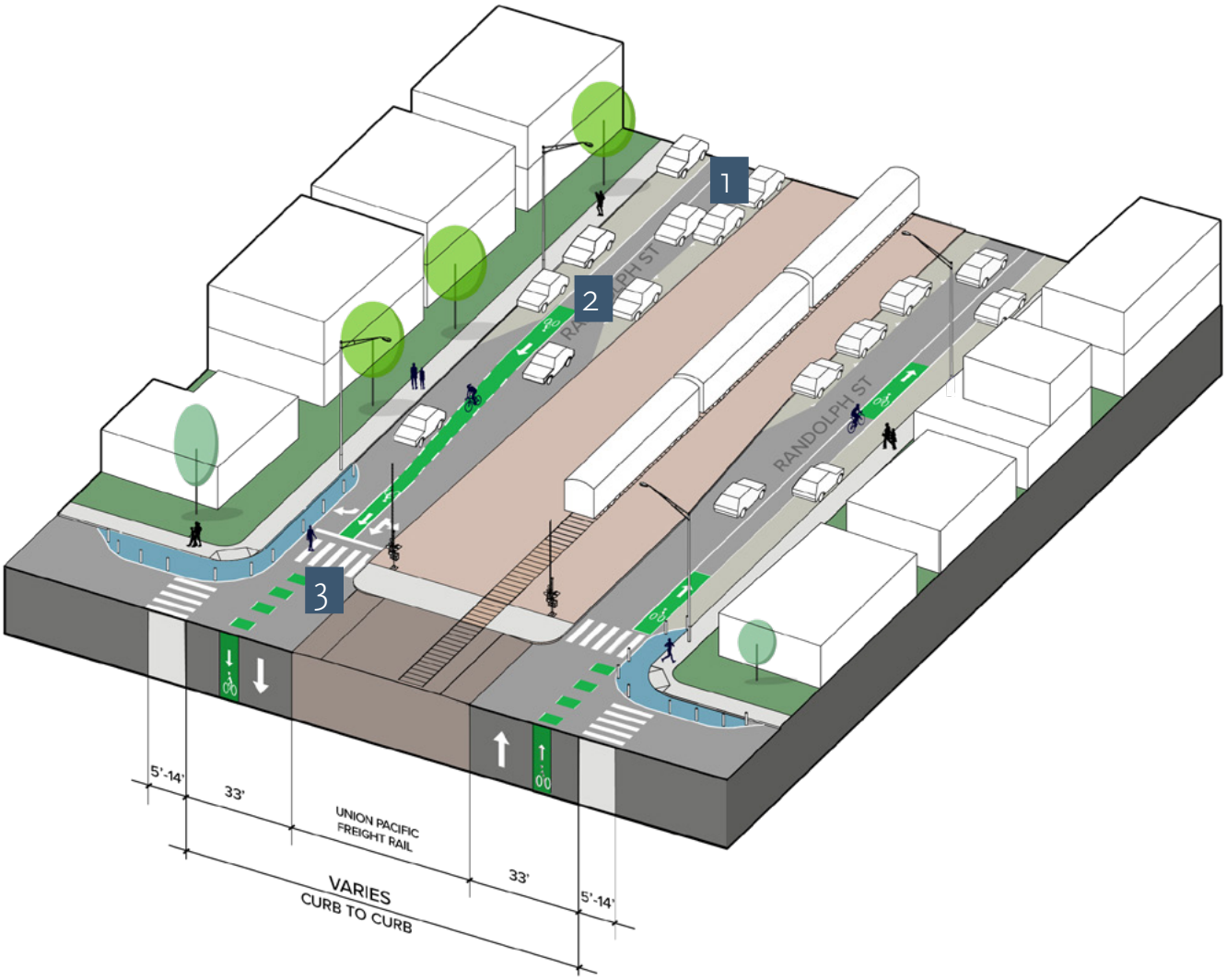


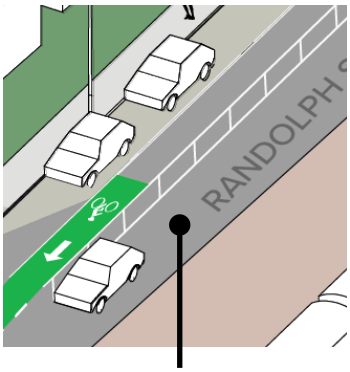
2 Class II bike lanes with adjacent parking



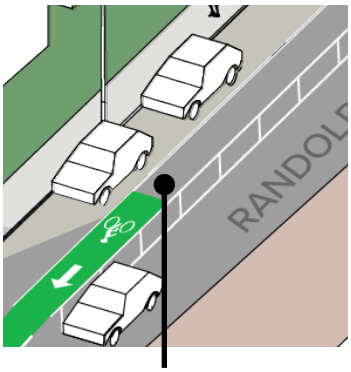
3 Pedestrian crossing improvements can include high visibility crosswalks and painted curb extensions

Figure 47. *Potential (Pre-WSAB) between Alameda St and Santa Fe Av*

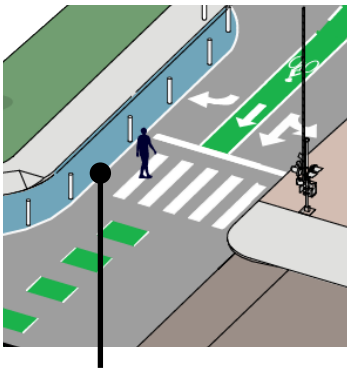




1 Traffic lane reduction from 2 to 1 through buffered bike lanes

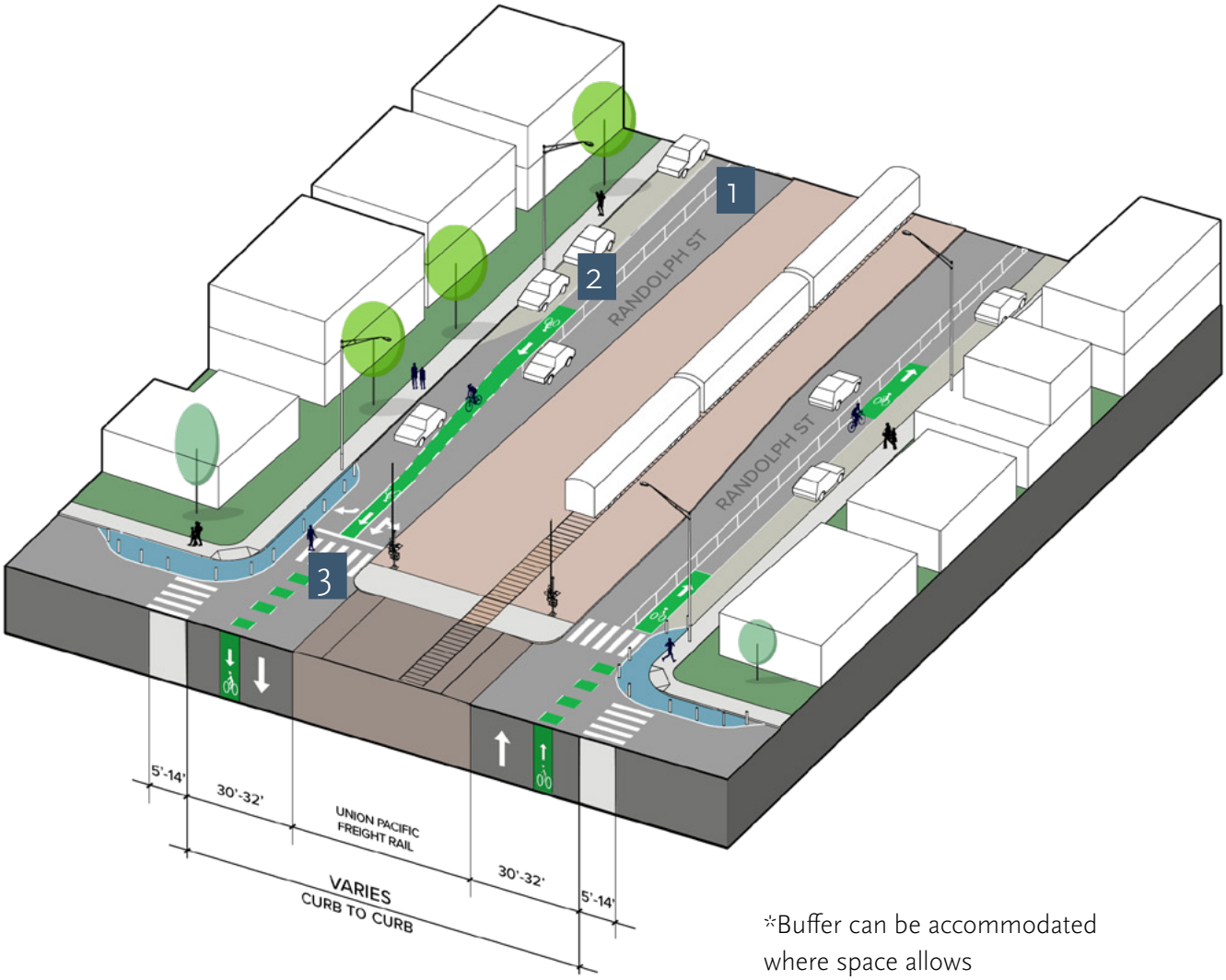


2 Class II buffered bike lanes with adjacent parking



3 Pedestrian crossing improvements can include high visibility crosswalks and painted curb extensions

Figure 48. *Potential (Pre-WSAB between Holmes Av and Alameda St, and Santa Fe Av and State St*)*



*Buffer can be accommodated where space allows

LONG-TERM VISION

The long-term vision for the Randolph corridor includes a Class III bicycle boulevard between Holmes Avenue and State Street, where it would transition to a two-way protected Class IV bikeway east of State Street to the LA River. Pedestrian improvements could include new sidewalks, crossing improvements, lighting, shade trees, and wayfinding. The quick-build curb extensions installed as part of the interim concept could be reconstructed using more durable materials to make them permanent features at sidewalk level. In this long-term condition, the Randolph corridor is designed to ensure all users – including people walking, biking, and taking transit – can comfortably travel through the space.

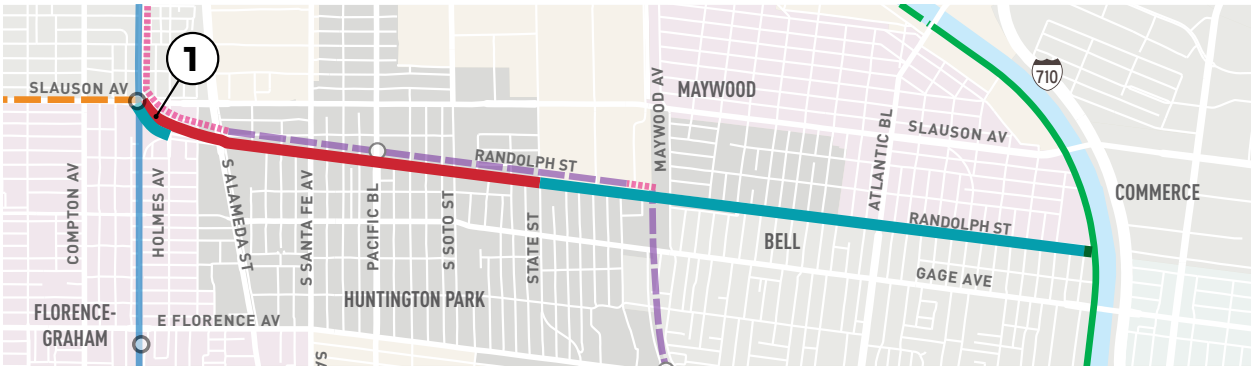
Preliminary Concept Design

The following pages provide an overview of the improvements proposed for the three typical conditions (post-WSAB) along Alternative 1. See the conceptual design plans for proposed improvements along the entire corridor (Appendix J).

Randolph Street West of Holmes Avenue (Section 1)

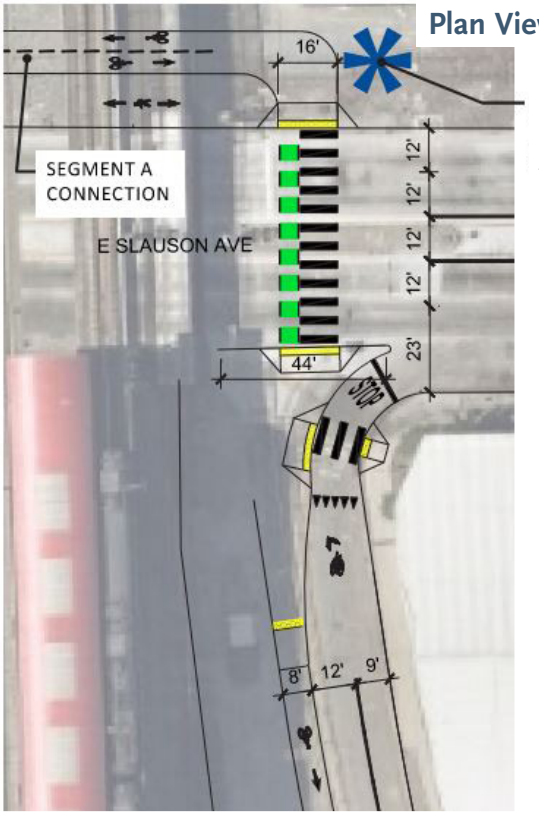
Section 1 follows a 0.20 mile stretch of Randolph Street from the Metro A Line (Blue) Slauson Station to Holmes Avenue where the WSAB alignment is proposed as an aerial configuration. This section features a one-way Class III bicycle boulevard and parallel one-way Class IV separated bikeway. This section offers opportunities for new pedestrian crossing improvements, street trees, and wayfinding signage. A lighting study is also recommended.

Figure 49. *Alternative 1 Section 1 Key Map*



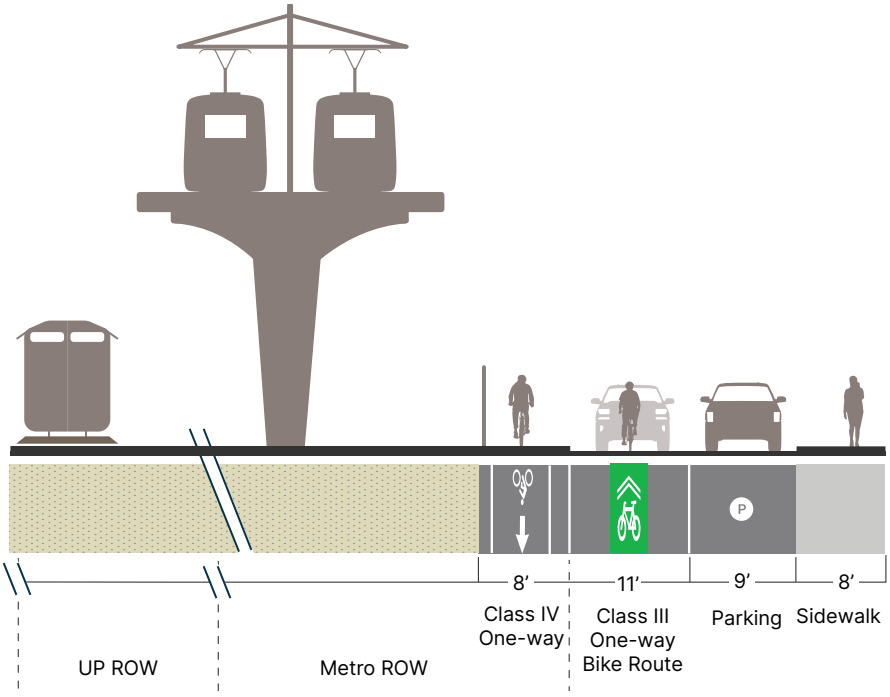
Section 1 Key Elements: Randolph Street West of Holmes Avenue

- Pedestrian crossing improvements: ADA curb ramp improvements, curb extensions, high visibility crosswalks, and upgrade of selected pedestrian signals
- Southeast-bound Class IV one-way separated bikeway and northwest-bound Class III bicycle boulevard
- Opportunities to infill street trees where feasible
- Lighting study
- Wayfinding



Plan View

REST AREA FURNISHINGS MAY INCLUDE HYDRATION STATION, SEATING, AND TRASH RECEPTACLE.

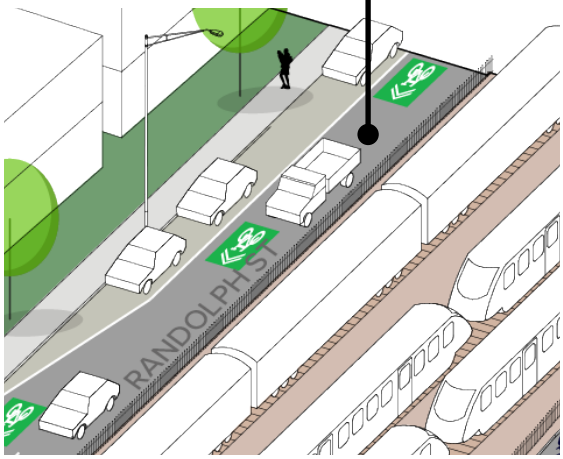


Typical Cross Section: Randolph Avenue west of Holmes 1

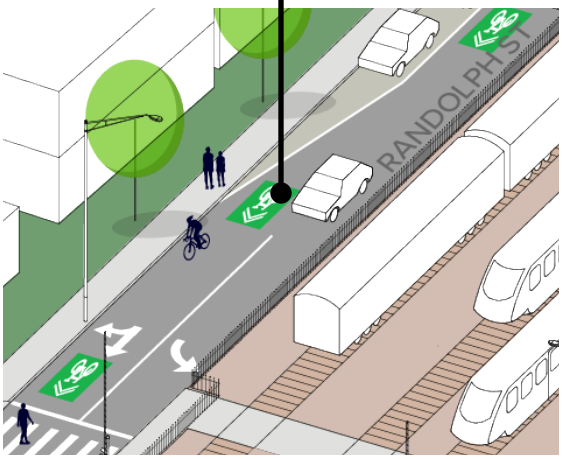
Randolph Street Between Holmes Avenue and State Street (Section 2)

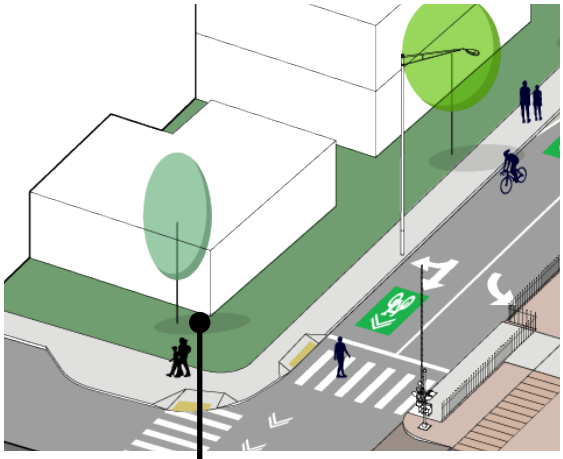
Section 2 spans a 1.65-mile stretch of Randolph from Holmes Avenue to State Street. Section 2 considers a Class III bicycle boulevard where the existing street is reduced from two lanes to one not as a result of the proposed Segment B improvements. This section offers opportunities for pedestrian crossing improvements, new street trees, and wayfinding signage. A lighting study is also recommended.

1 Traffic lane reduction from 2 to 1 through WSAB



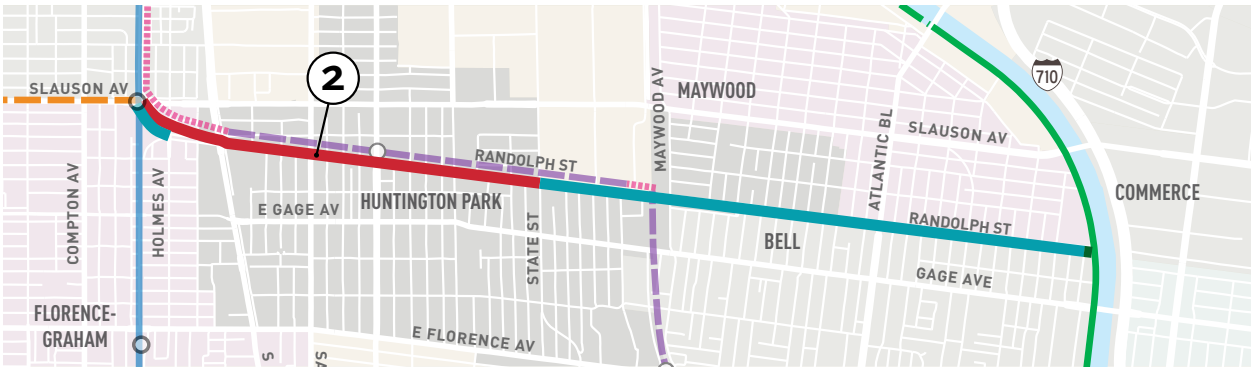
2 Class III bicycle boulevard with traffic calming elements





3 Pedestrian crossing improvements can include high visibility crosswalks, curb extensions, and wayfinding to improve pedestrian safety and connectivity

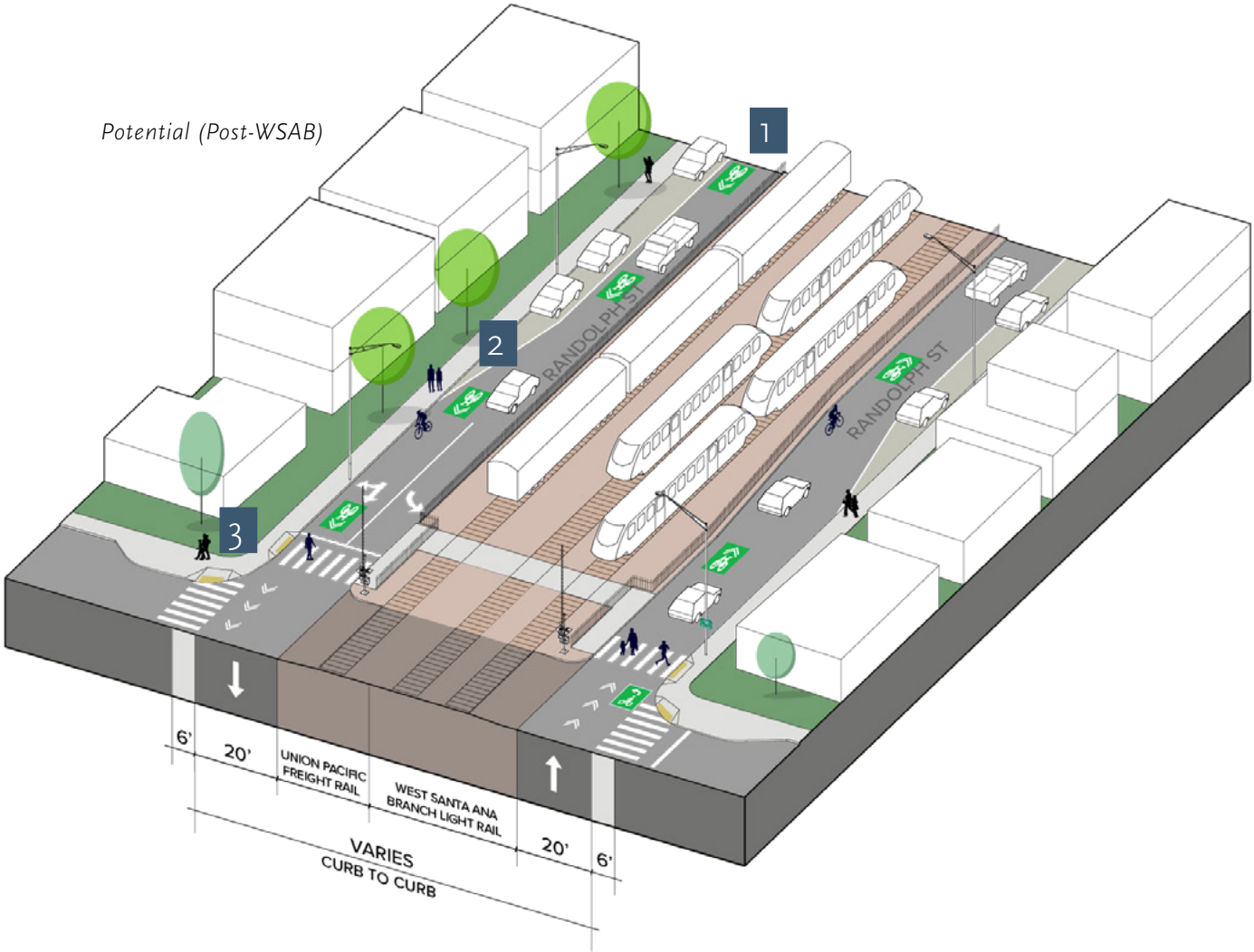
Figure 50. *Alternative 2 Section 2 Key Map*



Bikeway Opportunities

- Class I Shared Use Path
- Class II Bike Lane
- Class III Shared Lane
- Class IV Separated Bikeway

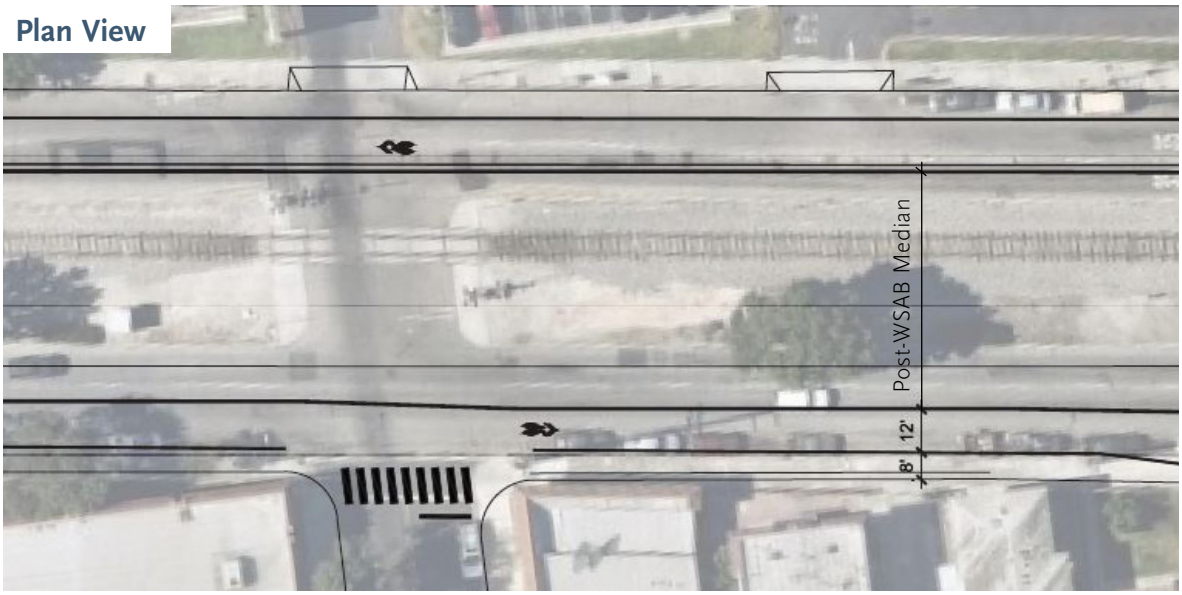
Potential (Post-WSAB)

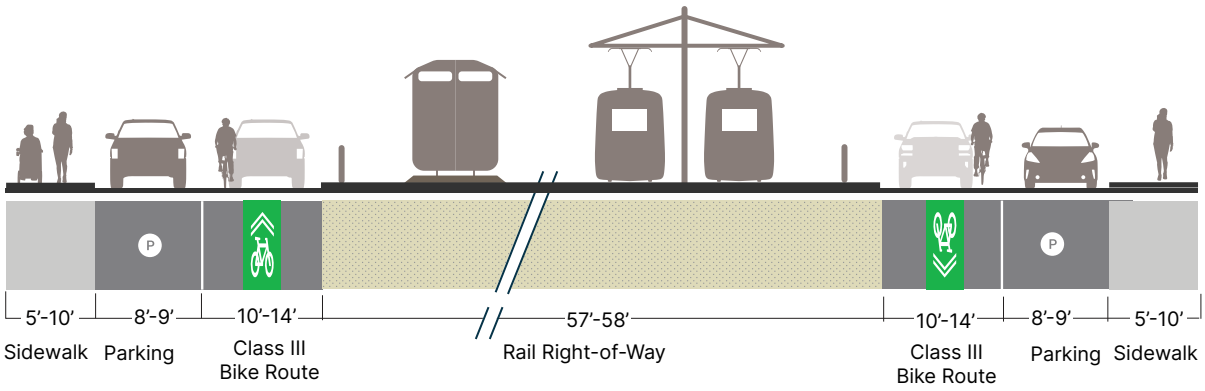


Section 2 Key Elements: Randolph Street Between Holmes Avenue and State Street

- Lane reconfiguration through WSAB project and proposed speed limit reduction to 20 mph
- Pedestrian crossing improvements: ADA curb ramp improvements, curb extensions, high visibility crosswalks, and upgrade of selected pedestrian signals
- Class III bicycle boulevard
- Opportunities to infill street trees where feasible
- Lighting study
- Wayfinding

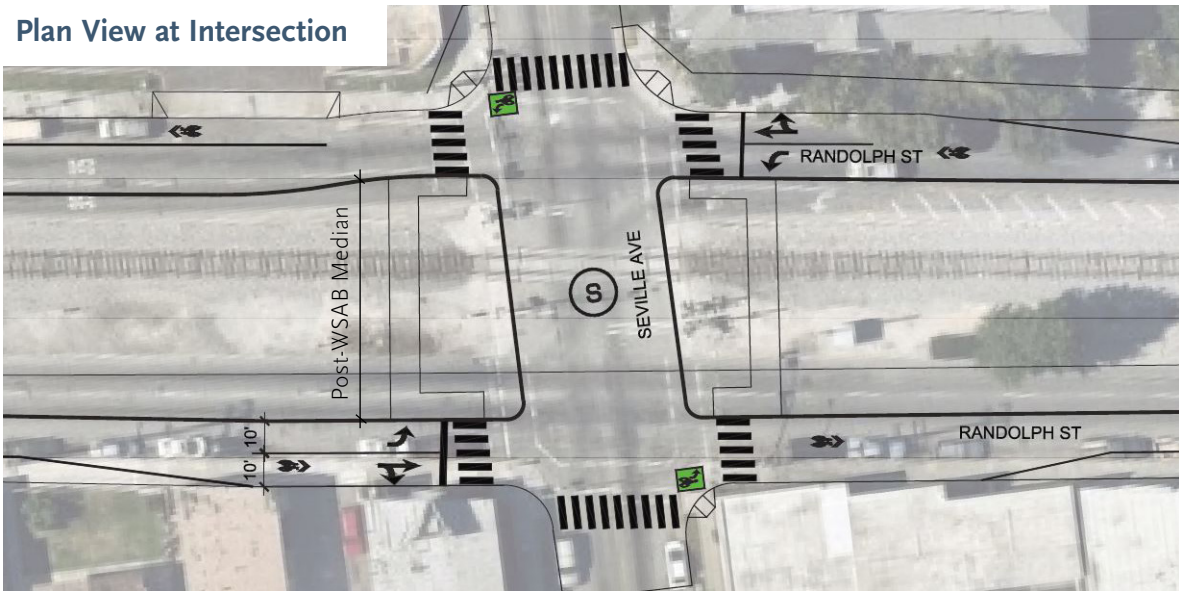
Plan View





Typical Cross Section: Randolph Avenue between Holmes Avenue and State Street 2

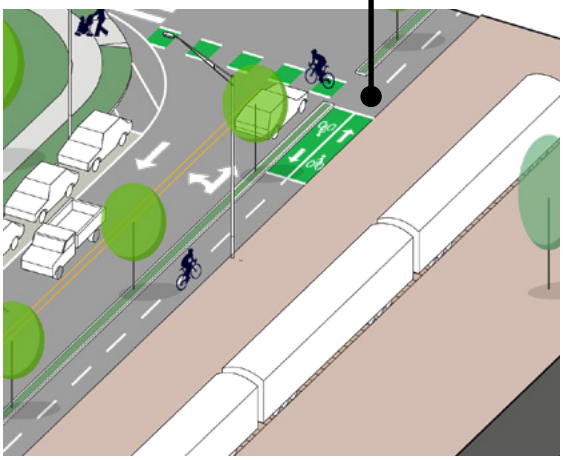
Plan View at Intersection



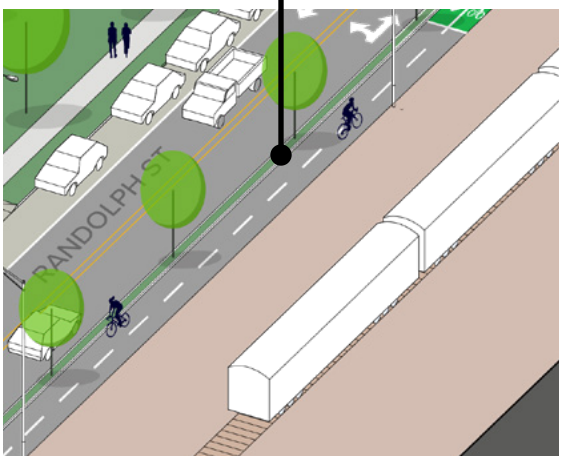
Randolph Street East of State Street (Section 3)

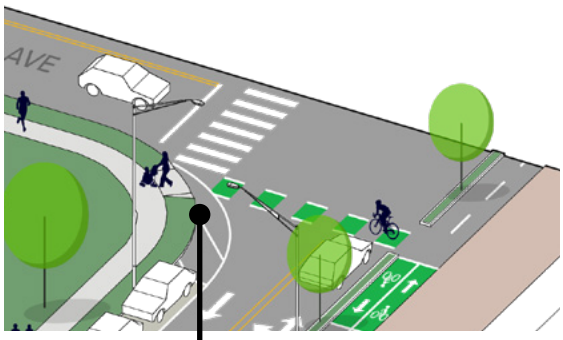
Section 3 spans a 2.48-mile stretch of Randolph Street from State Street to the LA River. This section features a Class IV separated bikeway within the road ROW, new landscape and street trees between the bikeway and the street, pedestrian crossing improvements, and wayfinding signage. This section also recommends upgrading the existing street lights east of Otis Avenue to LED. See Figure 52.

1 Class IV separated bikeway



2 Shade trees and landscape, lighting, and amenities along the corridor

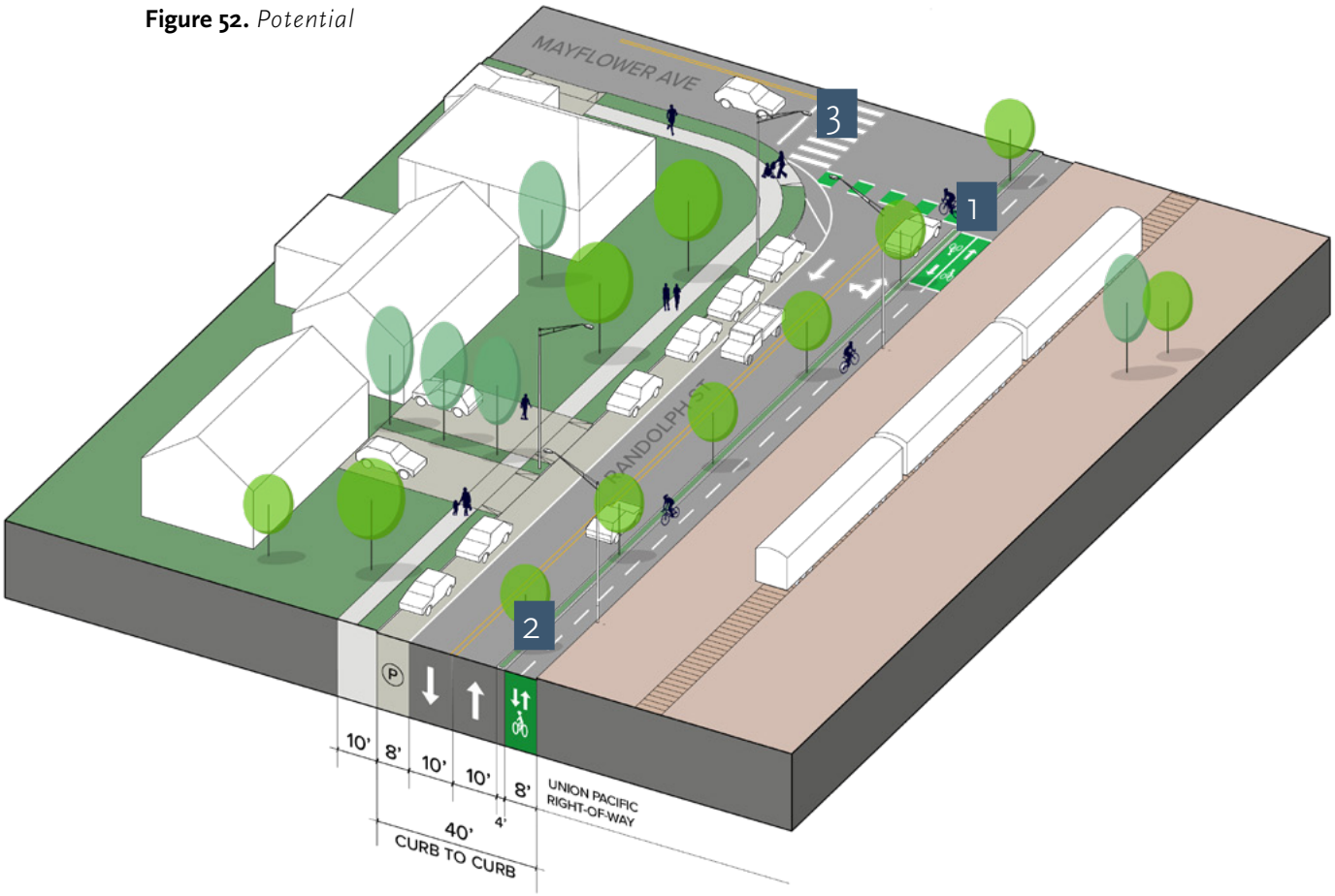




3 Pedestrian crossing improvements can include high visibility crosswalks, curb extensions, and wayfinding to improve pedestrian safety and connectivity

Figure 51. *Alternative 1 Section 3 Key Map*

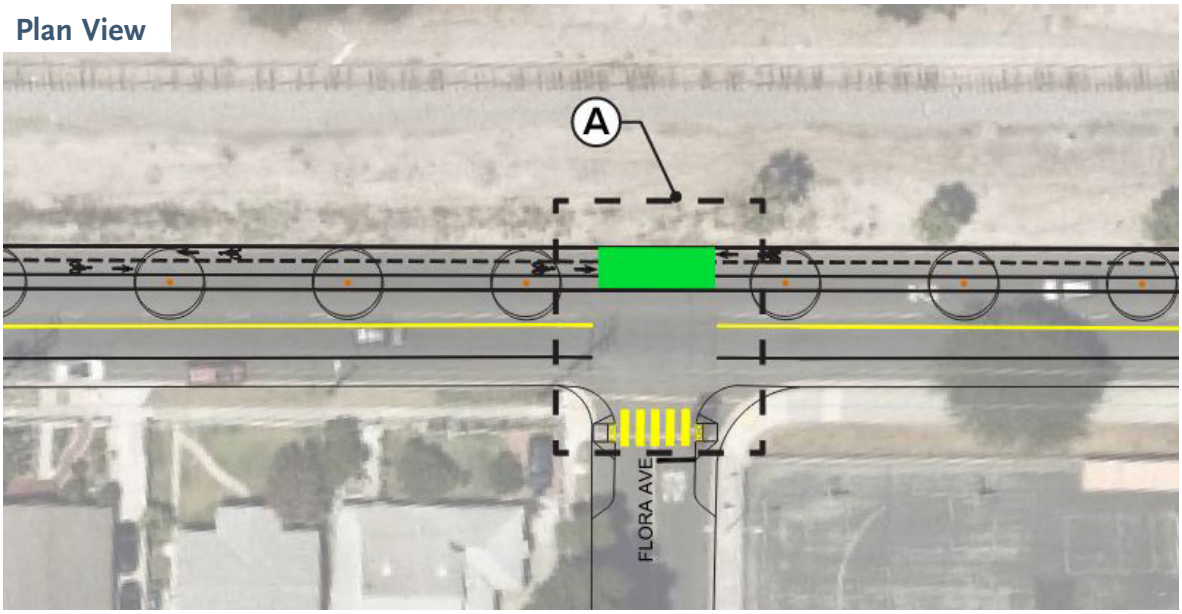
Figure 52. *Potential*

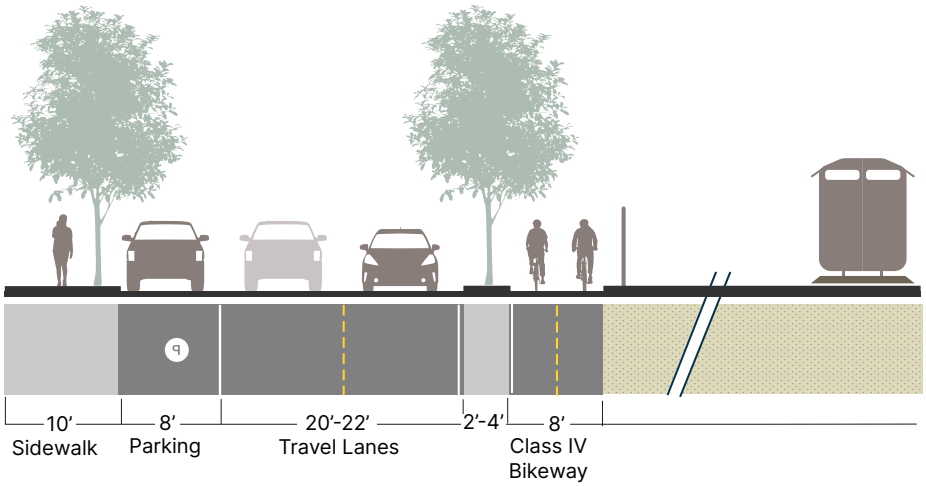


Key Elements: Randolph Street East of State Street (Section 3)

- Curb extensions and high visibility crosswalks
- Class IV two-way separated bikeway
- New landscape and street trees in buffer between bikeway and street
- Upgrade existing street lights east of Otis Avenue to LED
- Wayfinding
- Connection to LA River

Plan View





Typical Cross Section: Randolph Avenue east of State Street 3

Proposed Amenities

A number of amenities are proposed for Rail to River Segment B to make this active transportation corridor a more comfortable place to walk and bike. These include elements such as bike racks, new lighting fixtures, shade structures, landscape and street trees, hydration stations, and furnishings. Metro recommends these amenities as part of this early planning stage only. Local jurisdictions should explore the possibility of adding these amenities as they design, construct, and prepare to maintain this active transportation corridor.

Shade Structures

While trees provide the greatest measurable cooling benefits, shade structures are a great tool to use when planting trees is infeasible in a particular location. Shade structures can provide a year-round solution by functioning as a freestanding structure or affixed to existing buildings.

Hydration Stations

Hydration stations may be placed near highly trafficked areas and destinations to provide pedestrians with clean and safe drinking water. Stainless steel hydration stations that are resistant to vandalism are suited for urban environments and bring down maintenance costs.

Lighting

Pedestrian-scale lighting is an essential streetscape element that defines the visual environment, improves traffic and pedestrian safety, and creates a sense of place and warmth for people at nighttime.

Bike Racks

Bicycle racks should be co-located with shade elements whenever possible and provided near points of interest, workplaces, and transit stops in order to encourage a mode shift from driving to bicycling.

NEXT STEPS

Stakeholder Support

Alternative 1 has broad support from local jurisdictions along the corridor. Metro presented a summary of the Segment B Alternatives Analysis at TWG member agencies' city council meetings in fall 2021. Following these meetings, the City of Huntington Park, City of Bell, and City of Commerce issued letters voicing their support for Alternative 1.

Present Findings to Metro Board & Continue Coordination with Cities

Because of broad stakeholder support, Metro staff is recommending a refined Randolph alternative to the Metro Board of Directors, which maintains the same alignment with the 2017 Segment B Locally Preferred Alternative (LPA). Following the Board recommendation, Metro staff will continue to coordinate with the cities on related projects. Local jurisdictions could consider and incorporate any of the proposed recommendations and elements. Additionally, WSAB FLM planning will be underway later in 2022, which could also consider active transportation improvements in the study area.

Environmental Next Steps

Based on the findings presented in the Preliminary Environmental Assessment, the Rail to River Segment B project could potentially pursue a categorical exemption as long as the project does not involve the removal of healthy, mature, scenic trees, and would not have impacts on air quality, noise, historical resources, or other impact categories. The project would be required to follow applicable permit requirements, standards and regulations during project construction and operation. The project could pursue the categorical exemption category of Class 1: Existing Facilities, as long as project improvements are contained within the existing roadway ROW. However, should local jurisdictions choose to construct a Class I shared-use path within the railroad ROW at a later time, the potential for impacts may arise due to the hazardous materials typically found within railroad corridors.

In addition, new impervious surface areas introduced as a result of the alternatives could pose additional impacts on the environment, which may require mitigation measures to reduce impacts to less than significant levels. In such cases, an Initial Study/Mitigated Negative Declaration would be recommended to analyze any potential impacts and offer mitigation measures to reduce any potentially significant impacts to less than significant levels.

Although preparing a categorical exemption would greatly streamline the environmental process, Alternative 1 could still be challenged by project opponents. Should the project pursue an Initial Study/Mitigated Negative Declaration, an initial study based on the 2021 CEQA Guidelines Appendix G Environmental Checklist Form would be required. In the highly unlikely event that a significant and unavoidable impact is discovered as a result of the initial study, the project would then need to prepare an Environmental Impact Report.

Table 18 lists the anticipated permits and approvals that may be applicable to the Rail to River Segment B project for full compliance with the applicable environmental regulations and requirements for acquiring said permits and/or agreement.

Several of the listed permits and approvals are only relevant if local jurisdictions choose to implement a Class I path along the railroad ROW, which is not currently recommended as part of Alternative 1.

Table 18. *Potential Permits and Approvals*

Level of Government	Agency	Potential Permit or Approval
Federal	Federal Emergency Management Agency	100-year Floodplain Encroachment
State	California State Water Resources Control Board	Water Quality Order 2012-0006-DWQ (General Construction Permit and SWPPP)
	California Department of Fish and Wildlife	Section 1602 Lake or Streambed Alteration Permit
	Regional Water Quality Control Board	Section 401 Water Quality Certification Permit and Waste Discharge Requirement
	California Public Utilities Commission	Grade crossing/project design review
Regional	Los Angeles County Department of Public Works	Project design review
	Los Angeles County Flood Control District	Flood Encroachment Permit
	Los Angeles County Metropolitan Transportation Authority	Project design review (WSAB)
Local	City of Bell	Project design review
	City of Huntington Park	Project design review
	City of Los Angeles	Project design review
	City of Maywood	Project design review
	City of Vernon	Project design review
Other	Union Pacific Railroad	Project design review

POTENTIAL FUNDING SOURCES

A full list of potential funding sources can be found in Appendix H.

Federal Funding Sources

Rivers, Trails, and Conservation Assistance Program

The Rivers, Trails, and Conservation Assistance Program is part of the National Parks Service. The Rivers, Trails, and Conservation Assistance Program provides conservation and recreation planning professionals to partner with community groups, nonprofits, and state and local governments to design and establish trails, conserve and improve access to rivers, protect special places, improve parks and create recreation opportunities. Projects are prioritized for assistance based on criteria that include conserving significant community resources, fostering cooperation among agencies, serving a large number of users, encouraging public involvement in planning and implementation, and focusing on lasting accomplishments. The Rail to River project aims to serve numerous community members and have long-lasting community impacts. The annual application is available on the National Park Service official website, and the 2021 deadline was March 1st.

Highway Safety Improvement Program

The Highway Safety Improvement Program (HSIP) aims to reduce traffic fatalities and serious injuries on public roads. HSIP funds can be used for projects such as bike lane or sidewalk projects on local roadways, improvements to Class I shared-use paths or traffic calming measures. Applications that identify a history of incidents and demonstrate their project's improvement to safety are most competitive for funding. HSIP funds are eligible for work on any public road or publicly owned bicycle or pedestrian pathway. The Rail to River project qualifies for HSIP funding due to the implementation of bicycle infrastructure. The maximum federal HSIP reimbursement amount for a single HSIP project is $10 million. The minimum federal HSIP reimbursement amount for any single HSIP project is $100,000. Generally, the maximum federal reimbursement ratio for an HSIP project is 90 percent. Funds are allocated in application cycles to cities based on a formula. Most recently, Cycle 10 called for projects in May of 2020.

State Funding Sources

Active Transportation Program

Active Transportation Program (ATP) funds are available for projects that encourage increased use of active modes of transportation. The Rail to River project qualifies for ATP funding due its expected outcomes of increasing the number of trips accomplished by walking and biking, increasing safety for non-motorized users and enhancing public health. Furthermore, Rail to River is eligible for ATP funding on account of being an infrastructure project that will further the goals of ATP while supporting the development of a community-wide bicycle and pedestrian plan. ATP funds are allocated in 2-year cycles, with the call for projects occurring in spring of even-numbered years; and each program must be adopted no later than the date designated of each odd-numbered year. Cycle 5 for 2021 called for projects in spring of 2020, and selected projects were announced in June 2021. The Rail to River project will qualify for ATP Cycle 6; the call for projects will be announced in spring of 2022, and selected projects will be chosen by June 2023.

Environmental Enhancement and Mitigation Program

Environmental Enhancement and Mitigation Program funds are allocated to projects that either directly or indirectly offset environmental impacts of modified or new public transportation facilities including streets, mass transit guideways, park & ride facilities, transit stations and tree planting to offset the effects of vehicular emissions and the acquisition or development of roadside recreational facilities, such as trails. Environmental Enhancement and Mitigation Program funds can apply to the Rail to River project on account of new public transportation facilities and the development of roadside recreational facilities. Grants for individual projects are generally limited to $500,000 each upon completion of the three-step application process. The yearly application consists of first submitting a project proposal that is reviewed and evaluated, followed by a field inspection; selected projects must submit further documentation.

Local Funding Sources

Measure M/Metro Active Transportation Program

Measure M is a half-cent sales tax increase and an extension of Measure R sales tax to fund transportation improvements in LA County over 4 decades. This measure was passed in November 2016. Measure M is expected to generate an estimated $120 billion over the next 40 years. Two percent of all Measure M funds will be dedicated to fund active transportation projects, known as the Metro Active Transportation program. The Metro Active Transportation program is included in the Measure M Expenditure Plan and allocated $857 million for investment in active transportation infrastructure over 40 years, with dedicated funding for active modes. Cycle 1 of the Metro Active Transportation program included 28 total submittals that underwent a selection process resulting in 16 projects recommended for the award and 8 projects recommended for the waitlist. The Randolph corridor received grant funding as did the Slauson A Line Station project in the FLM category. The next steps are to execute agreements, initiate projects and provide annual updates to adjust programming as needed.

Toll Road Revenue

The LA County Metro Board of Directors adopted a Toll Road Revenue Action Plan that targets 40 percent of revenues for investment in active transportation projects within 3 miles of the Interstate 110 and Interstate 10 corridors. The policy will help ensure communities, stakeholders and travelers along these corridors benefit from projects that include congestion reduction, improved safety and access, transportation options and air quality/environmental improvements. The Rail to River project aims to reduce congestion and improve safety and access for those traveling via walking and/or biking.

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