Blackstone/Shaw Activity Center
Summary Report

June 10, 2020

Fresno Council of Governments

Better Blackstone Association Fresno, CA

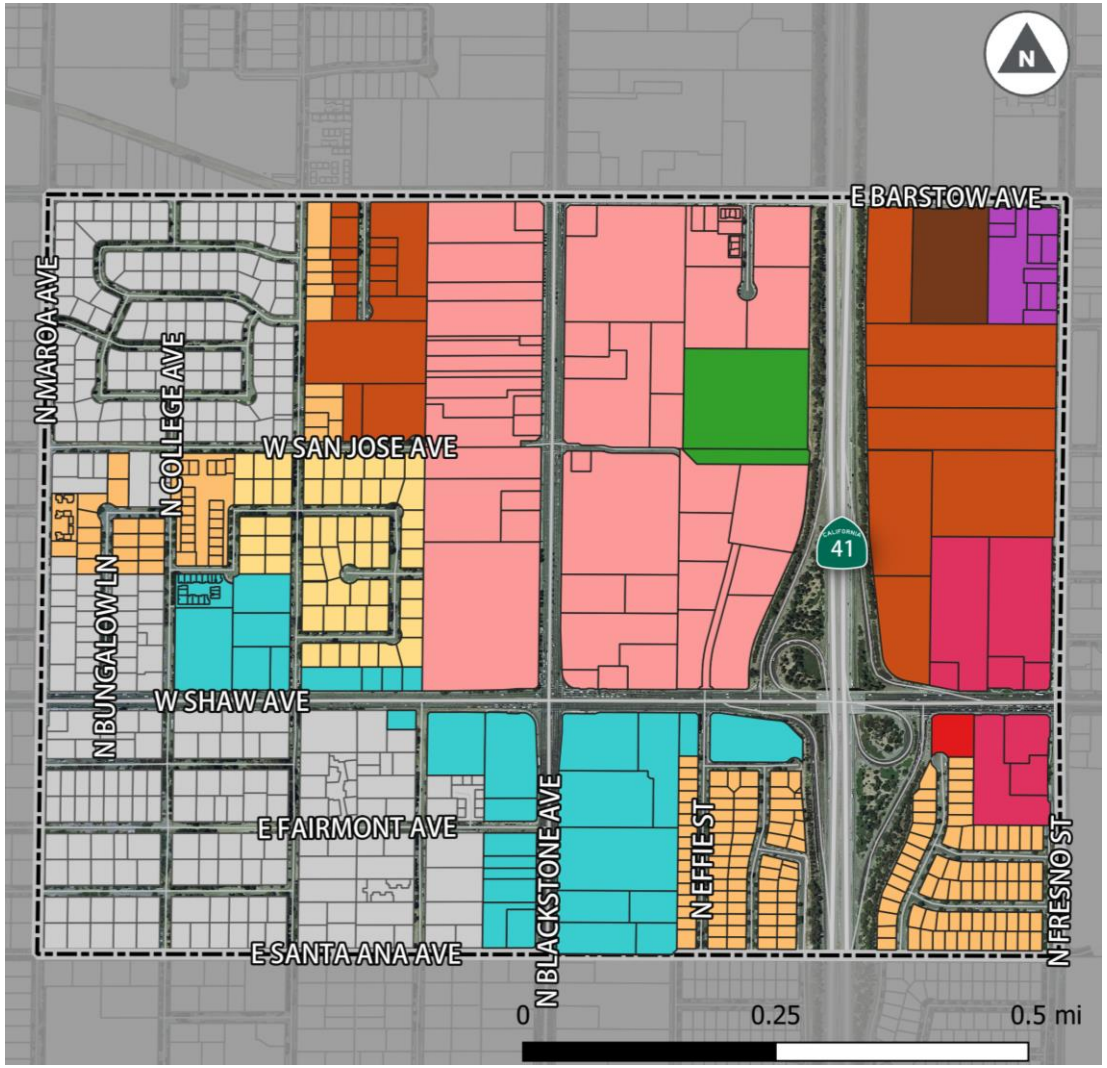
TOOLE DESIGN

KITTELSON & ASSOCIATES

OPTICOS

Study Goal

Identify and assess **transportation projects** that are in service of **mixed-use development** in the Blackstone-Shaw Activity Center as envisioned in the Fresno General Plan



Project Area Zoning

- Commercial General
- Commercial Regional
- Corridor/Center Mixed Use
- Office
- Open Space
- Regional Mixed Use
- Residential Multi-Family, High Desnity
- Residential Multi-Family, Medium High Density
- Residential Single-Family, Medium Density
- Residential Single-Family, Medium Low Density
- Unincorporated Fresno County

Value of Study

Show **what kinds of improvements are needed to encourage development** for this area as envisioned in the General Plan

- Denser, mixed-use development supports and is supported by a more connected and comfortable pedestrian environment
- Projects listed here are ones that should be considered for developer-funded improvements and/or inclusion in the CIP and/or pursuits of grant funding
- Projects may be funded through a capital project that could help spur development, by developers at the time of development, or after development spurs changes in travel patterns in the area

Use of Study Outputs

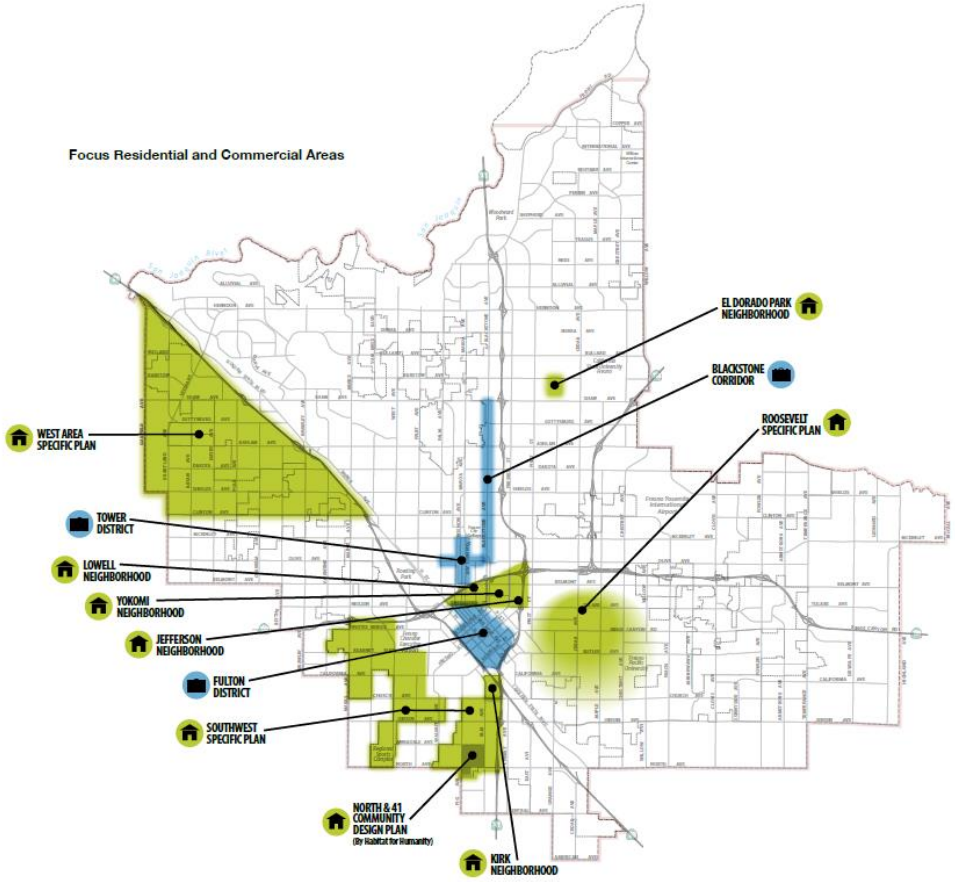
- The City of Fresno is not planning to implement infrastructure changes as a result solely of this study, though they will **continue to plan, design, and install** facilities that create a transportation system that balances **safety, access and mobility for all users**.
- Study provides ideas and cost estimates that allow the City to **pursue funding in the future for implementation** of development-supportive infrastructure, and to **work with developers** to implement infrastructure projects.

Change and Challenges

- **Currently, the project area is a place for driving**. It is not comfortable or inviting for people to walk and bike.
- **Major infrastructure investments are needed** to increase the comfort, convenience, and safety of walking, bicycling, and riding transit on Blackstone and Shaw.
- The project area is a sprawling, auto-oriented place that **requires more compact redevelopment, placemaking, and extensive community outreach** to encourage people to **walk, bike, and use transit.**

Opportunities: Policy and Community Support

- **Many existing policies and plans support active transportation** as a key tool for improving quality or life, resident health, and economic growth.
  - General Plan calls for more intense, mixed-use infill development on Blackstone and Shaw Aves in this area
  - Old Fig Garden Community Transportation Study called for multimodal connections through and to the neighborhood
- **The community is interested in improvements** to make the project area a more comfortable and safer place to walk, bike, and take transit.



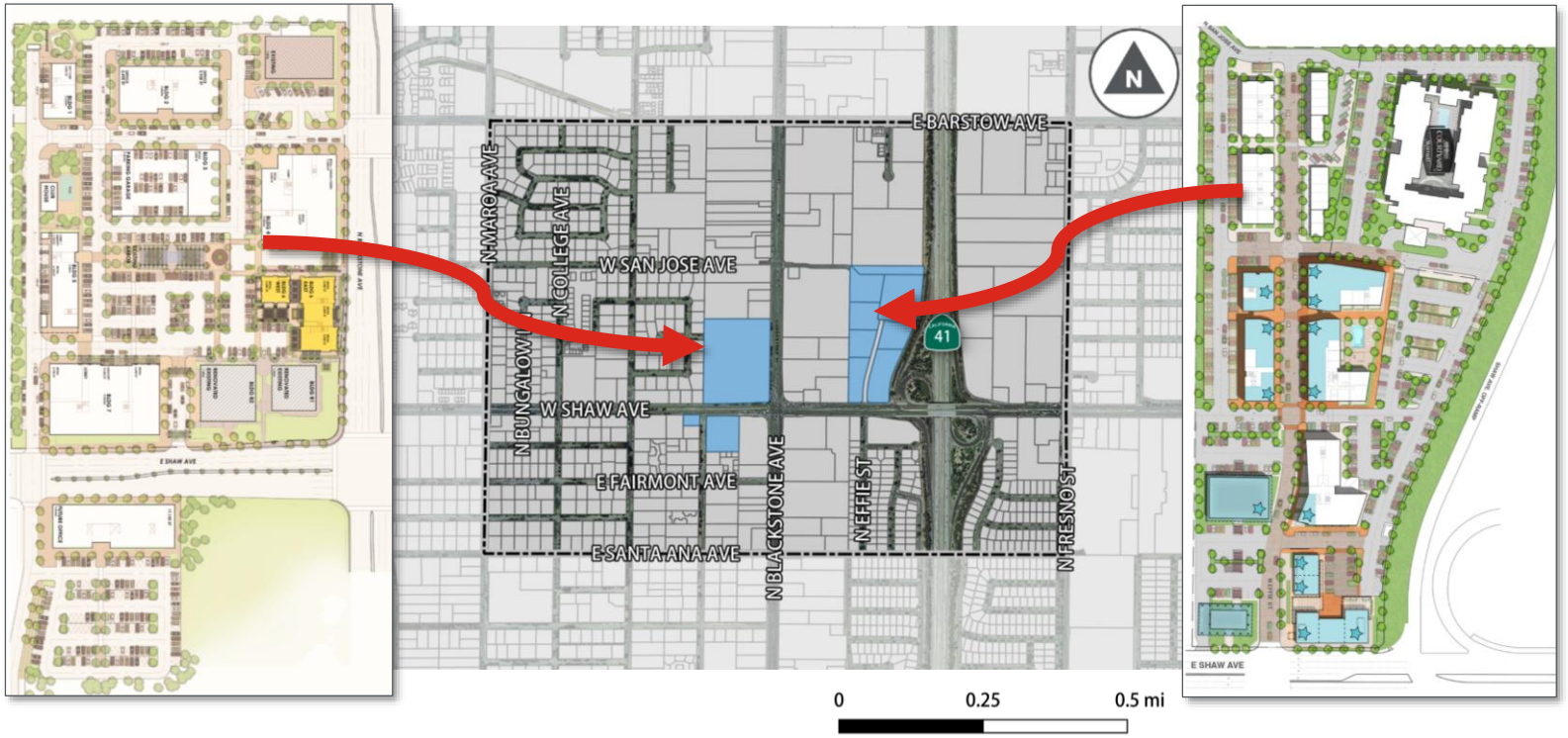
"Restore Fresno" identified Blackstone as one of three citywide Commercial Focus areas and supports revitalization and enhancement of infrastructure.

Opportunities: Policy and Community Support

- **The BRT recently began operation on Blackstone**, creating an opportunity to reimagine the corridor and its connections within the City and region.
- **Blackstone Avenue has more space devoted to automobile throughput than currently necessary**, offering opportunities for reconfiguring the right-of-way to allow more comfortable and safer multimodal uses.
- The **Better Blackstone Initiative** continues to **build community support** for Transit-Oriented Development and multimodal streetscapes along Blackstone - **working intensely and inclusively** with public agencies, nonprofits, businesses, and community stakeholders

Opportunities: Development

- Environments geared toward **pedestrian activity**
- New street network with increased connectivity for **all modes of transit,** utilizing new **BRT access**
- **A mix of uses** including retail, office, and residential

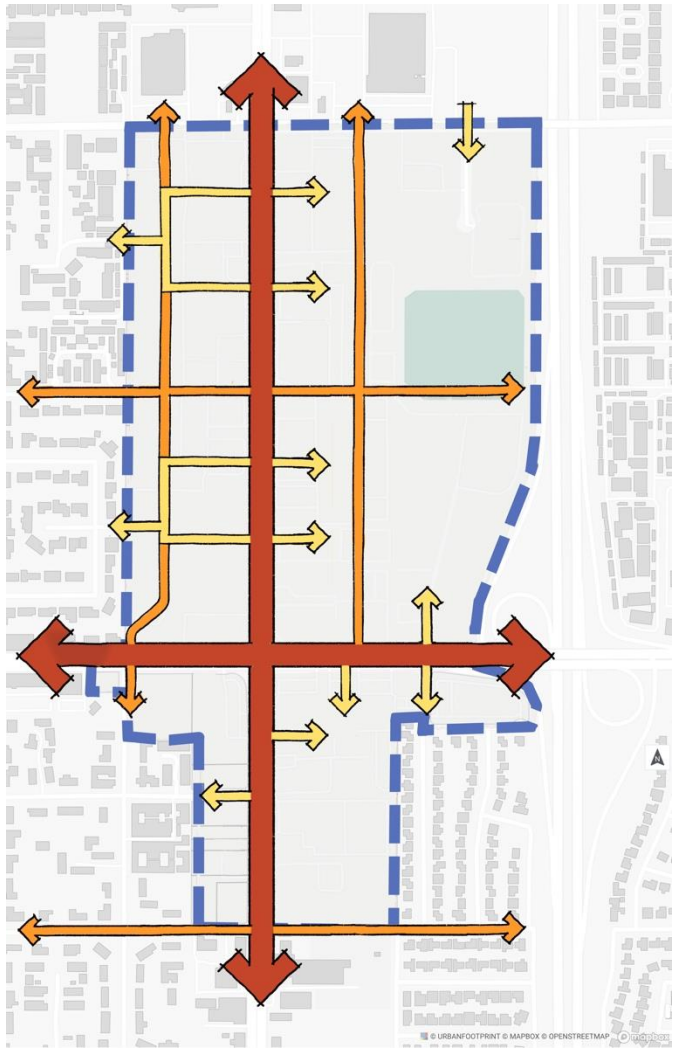


Key

Properties engaging with City

Opportunities: Development

- Redevelopment provides opportunity for **increased connectivity** within and to the study area
- Design principles developed for the Better Blackstone Design Challenge encourage planning of through and local connections that **provide access to adjacent neighborhoods** and **increase opportunities for short trips** to be made by biking and walking



**Principles are provided as an appendix to this report.*

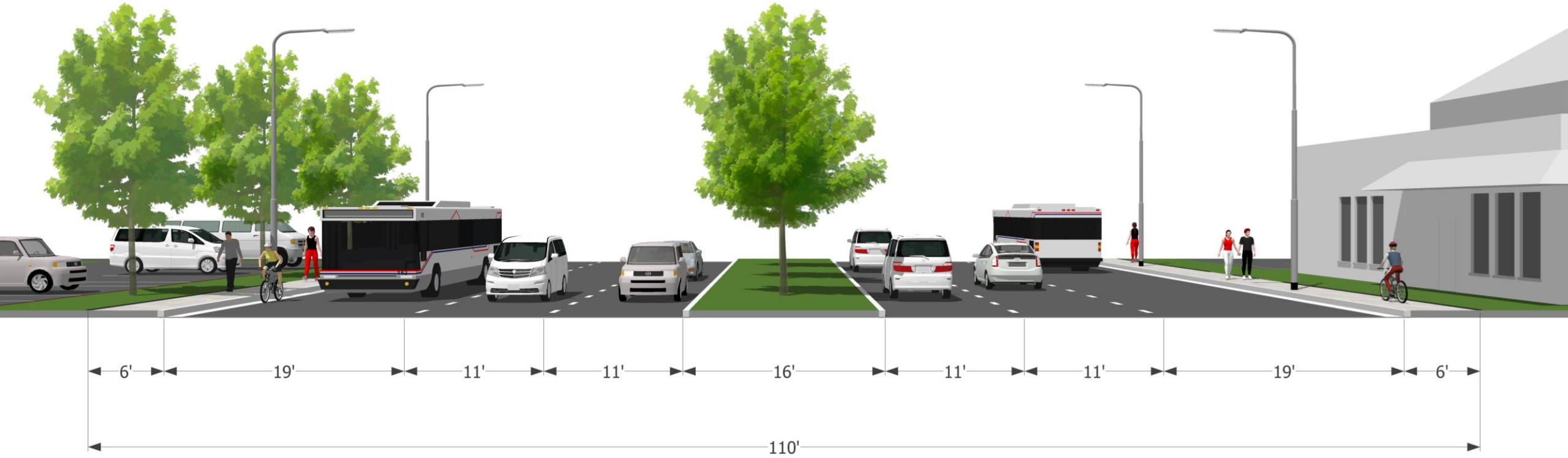
Supportive Transportation Projects

1

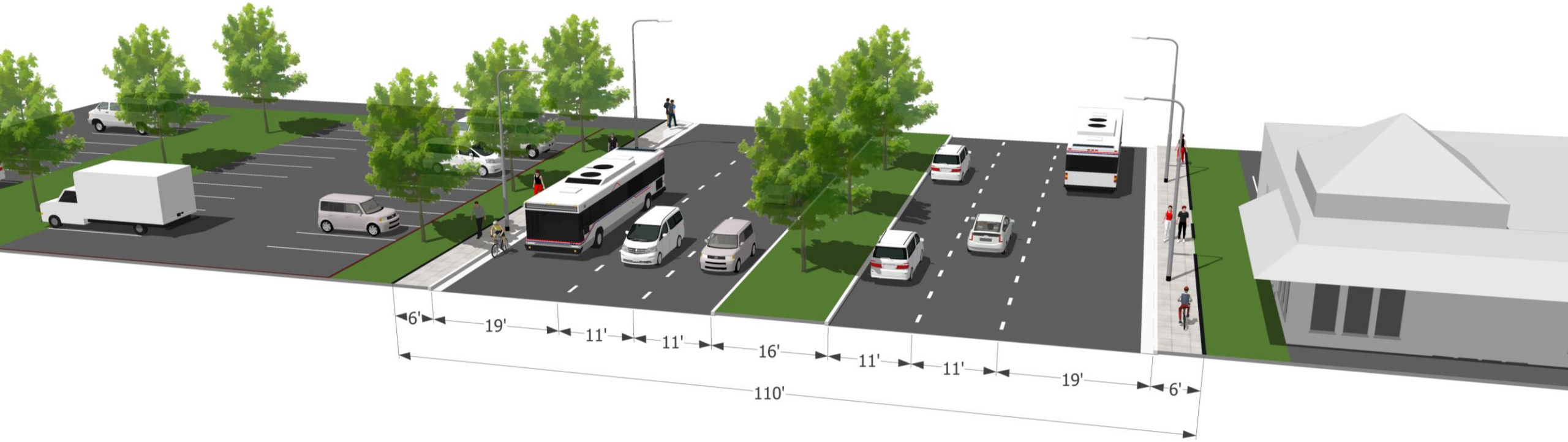
Multimodal Transportation to Support Development

- Vibrant, mixed-use development relies on **thoughtful public realm and transportation system design.**
- Businesses and higher-density residential rely on **a balanced multimodal approach to thrive.**
- Blackstone-Shaw Activity Center already has **excellent transit access and service,** but **pedestrians are currently an afterthought**, and roadway design and signalization make some **parcel access challenging for automobiles**.

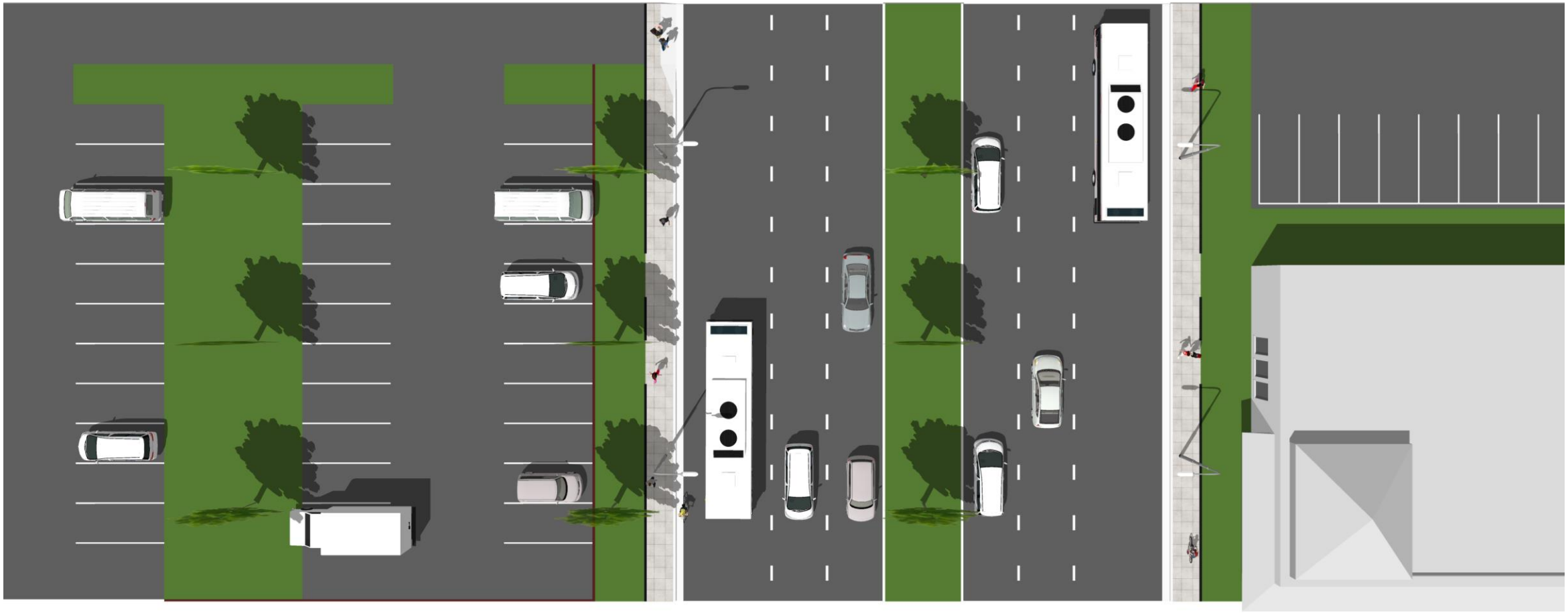
Blackstone Avenue Existing Conditions



Blackstone Avenue Existing Conditions



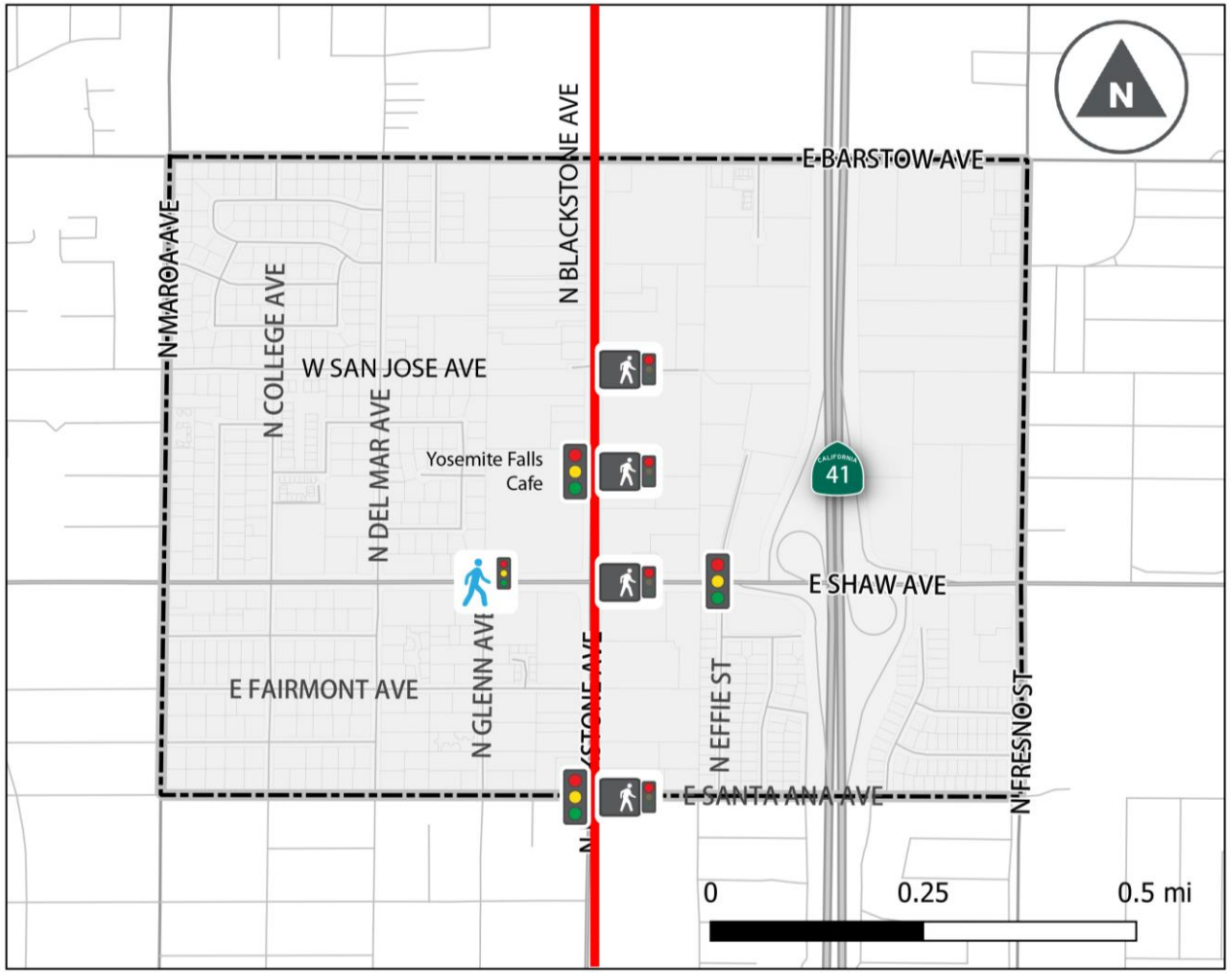
Blackstone Avenue Existing Conditions



Identifying Transportation Projects

- **Reviewed existing conditions** in the study area for travelers of all modes: **people walking, taking transit, biking, and driving**
- **Consulted stakeholders** regarding their interests in transportation projects in this area
- **Identified projects** that could improve the experience **of people traveling in the area, no matter the mode, and their ability to access destinations**
  - Projects may be implemented at the time of development through **partnership with property owners**, or as **standalone capital projects** once funding sources are identified, or as a combination of **both**

Transportation Project Locations



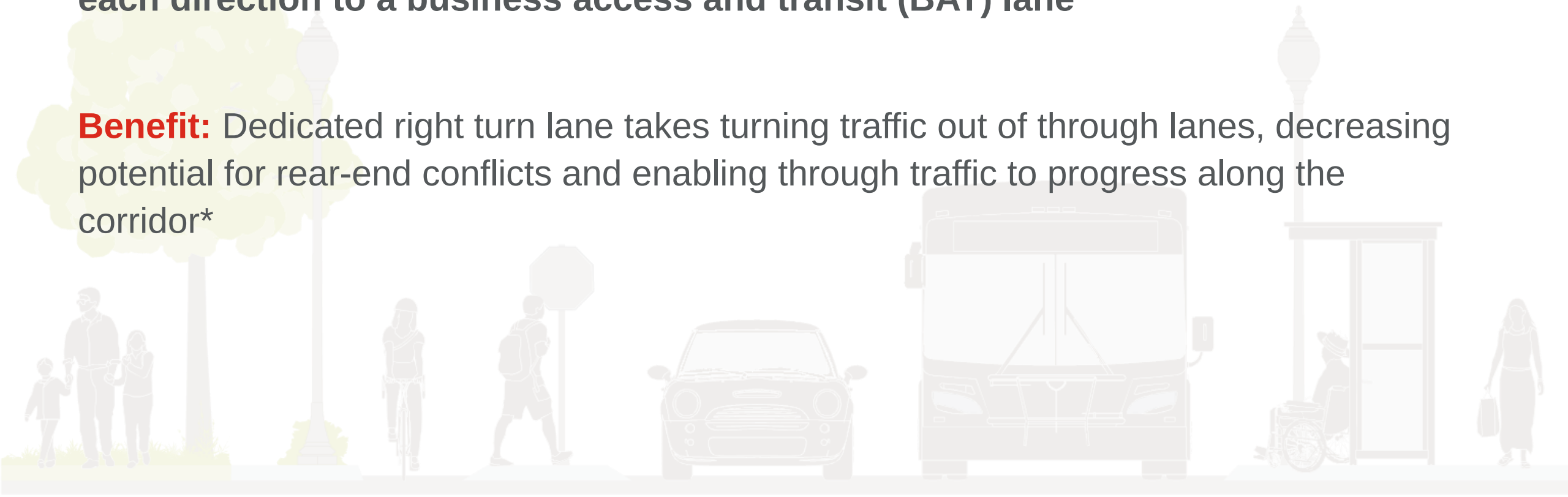
Key

- BAT lane
- New signal
- Pedestrian half signal
- Leading pedestrian interval

Access Improvement Project 1

Project: Converting outside through motor vehicle lane on Blackstone Avenue in each direction to a business access and transit (BAT) lane

Benefit: Dedicated right turn lane takes turning traffic out of through lanes, decreasing potential for rear-end conflicts and enabling through traffic to progress along the corridor*



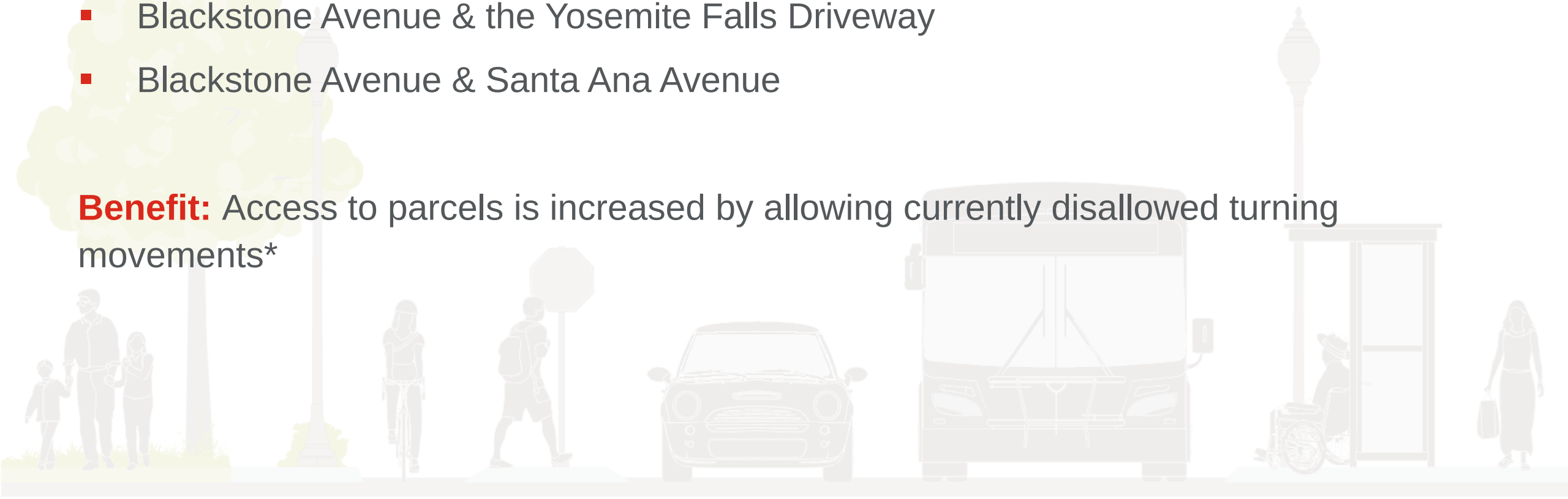
**Full assessment of BAT lane impacts are shown in accompanying Traffic Impact Study and summarized on slides 53-64*

Access Improvement Project 2

Project: Adding traffic signals at the following intersections:

- Blackstone Avenue & the Yosemite Falls Driveway
- Blackstone Avenue & Santa Ana Avenue

Benefit: Access to parcels is increased by allowing currently disallowed turning movements*

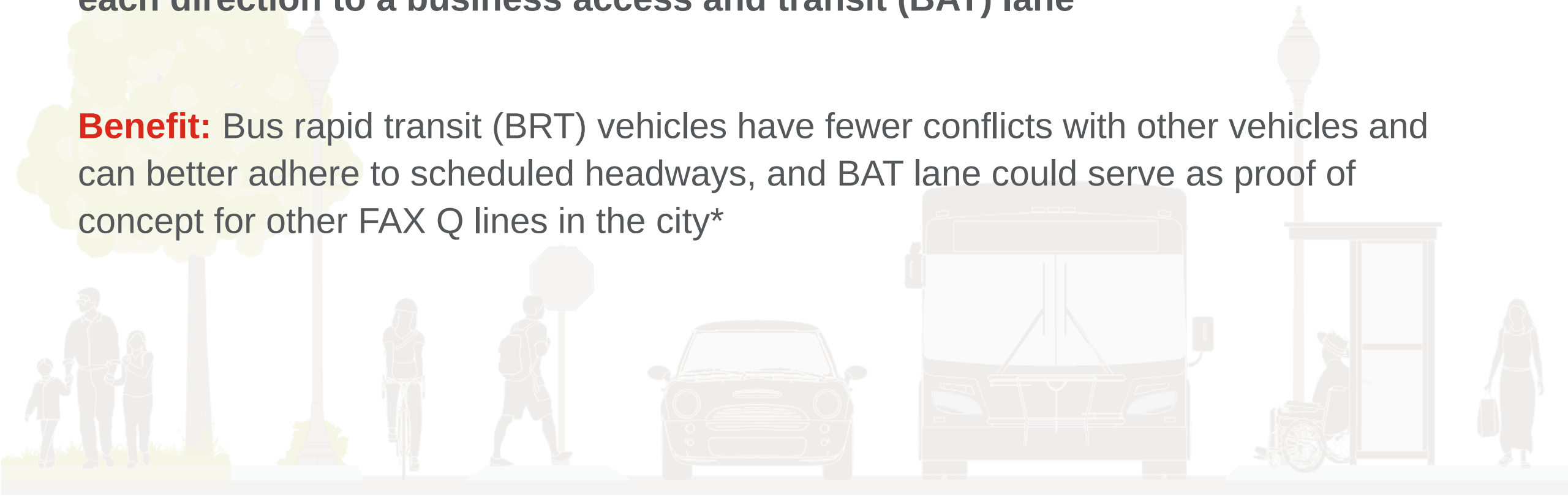


**Full assessment of signal impacts are shown in accompanying Traffic Impact Study and summarized on slides 53-64*

Transit Improvement Project 1

Project: Converting outside through motor vehicle lane on Blackstone Avenue in each direction to a business access and transit (BAT) lane

Benefit: Bus rapid transit (BRT) vehicles have fewer conflicts with other vehicles and can better adhere to scheduled headways, and BAT lane could serve as proof of concept for other FAX Q lines in the city*

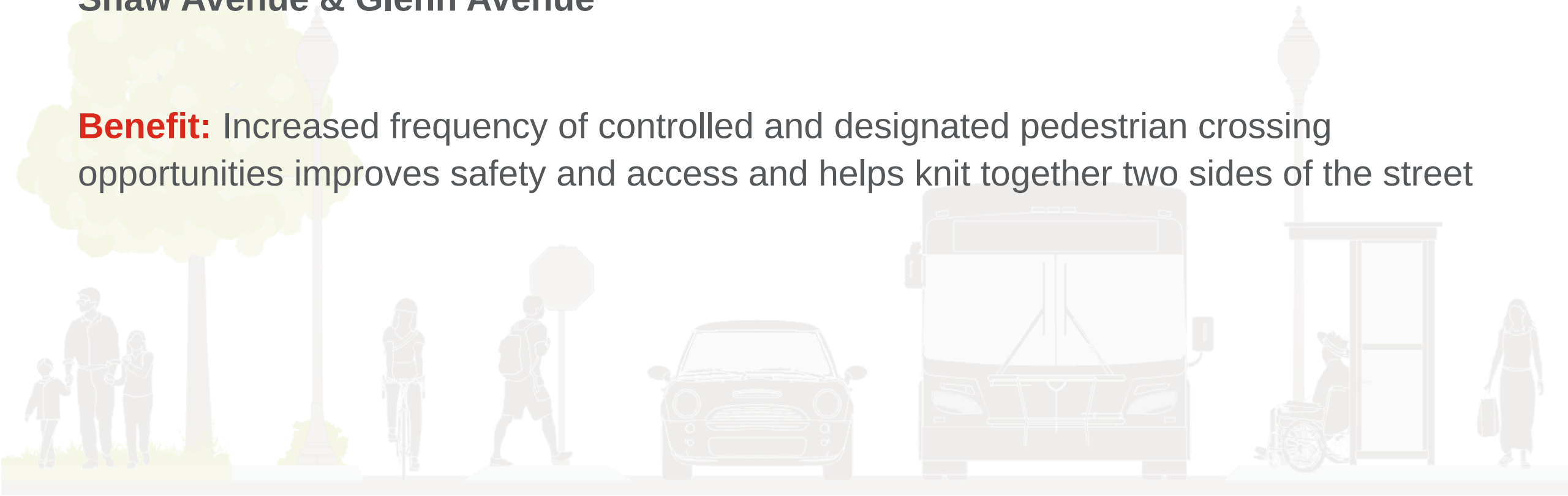


**Further study is needed to evaluate feasibility of potential BAT lanes and impact on transit operations*

Pedestrian Improvement Project 1

Project: Traffic signal additions and installation of a pedestrian half-signal at Shaw Avenue & Glenn Avenue*

Benefit: Increased frequency of controlled and designated pedestrian crossing opportunities improves safety and access and helps knit together two sides of the street

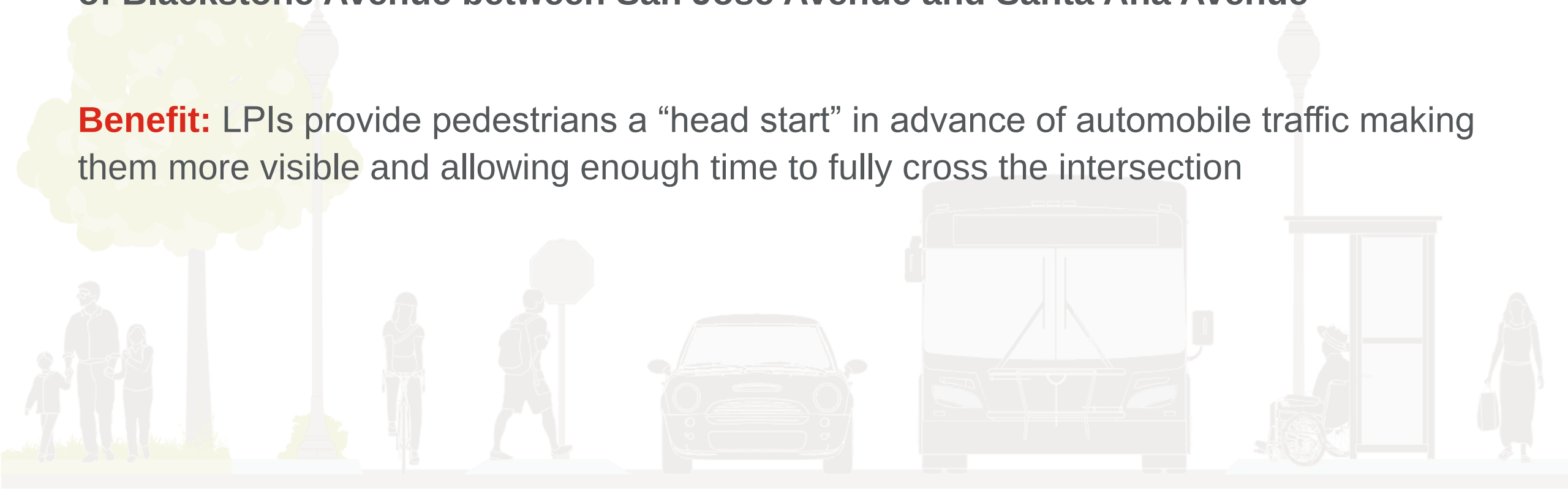


**Details on addition of signals and necessary studies and warrants are included in the Traffic Impact Study report.*

Pedestrian Improvement Project 2

Project: Adding leading pedestrian intervals (LPIs) for the signalized intersections of Blackstone Avenue between San Jose Avenue and Santa Ana Avenue*

Benefit: LPIs provide pedestrians a “head start” in advance of automobile traffic making them more visible and allowing enough time to fully cross the intersection



**For existing conditions assessment, LPIs were modeled at the Shaw Avenue and San Jose Avenue intersections. LPIs were also modeled in the “plus project scenarios” for new signals at Yosemite Falls driveway and Santa Ana Avenue.*

Pedestrian Improvement Project 3

Project: Widening sidewalks along Blackstone Avenue to meet current standards*

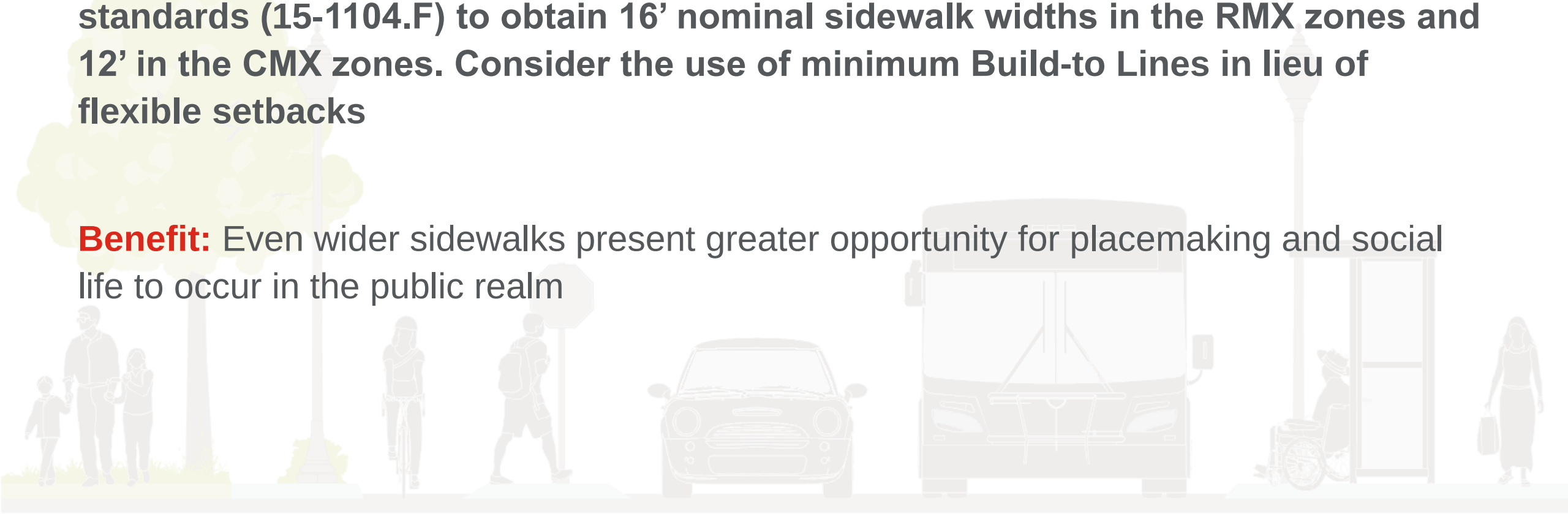
Benefit: Wider sidewalks provide greater pedestrian comfort by further separating people walking from moving traffic and providing more space to navigate around obstructions (utility poles, etc.) that exist today

**Wider sidewalks along Shaw Avenue would encounter more constraints in the private realm (topography, existing buildings at parcel line, parking impacts) without redevelopment*

Pedestrian Improvement Project 4

Project: Assessing existing development standards (15-1103) and sidewalk standards (15-1104.F) to obtain 16’ nominal sidewalk widths in the RMX zones and 12’ in the CMX zones. Consider the use of minimum Build-to Lines in lieu of flexible setbacks

Benefit: Even wider sidewalks present greater opportunity for placemaking and social life to occur in the public realm



Bicycle Improvement Projects

- **No specific bicycle infrastructure projects were analyzed in this study,** but high-level guidance regarding appropriate bicycle facilities, facility interaction with transit, and estimates of probable cost are included on slides 39-53.
- Without dedicated bicycle facilities, people will likely continue to ride on the sidewalk due to high traffic volumes and speeds along Blackstone and Shaw.

Pedestrian Infrastructure Concepts

2

Crossing Improvements

New signals should:

- Give **pedestrians of all abilities adequate time to cross** either Blackstone Avenue or Shaw Avenue in one signal phase
- Include **leading pedestrian intervals**
- **Shorten signal phasing** in off-peak hours **to reduce pedestrian wait time** to cross, leading to less crossing against the signal

Sidewalk Improvements

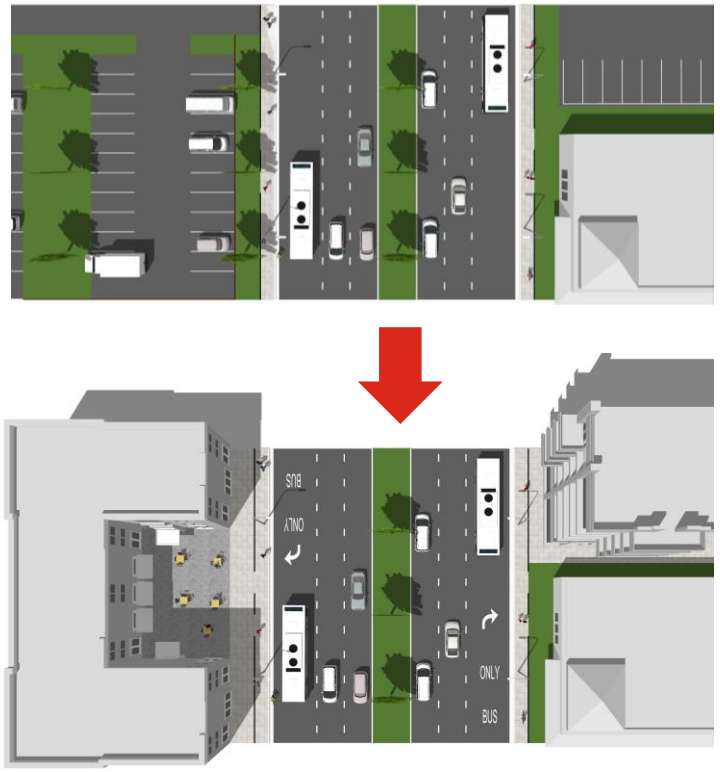
City of Fresno standards call for **12’ sidewalks** in this area.

- Wider sidewalks are more supportive of **the mixed-use, higher-density uses** envisioned for this area

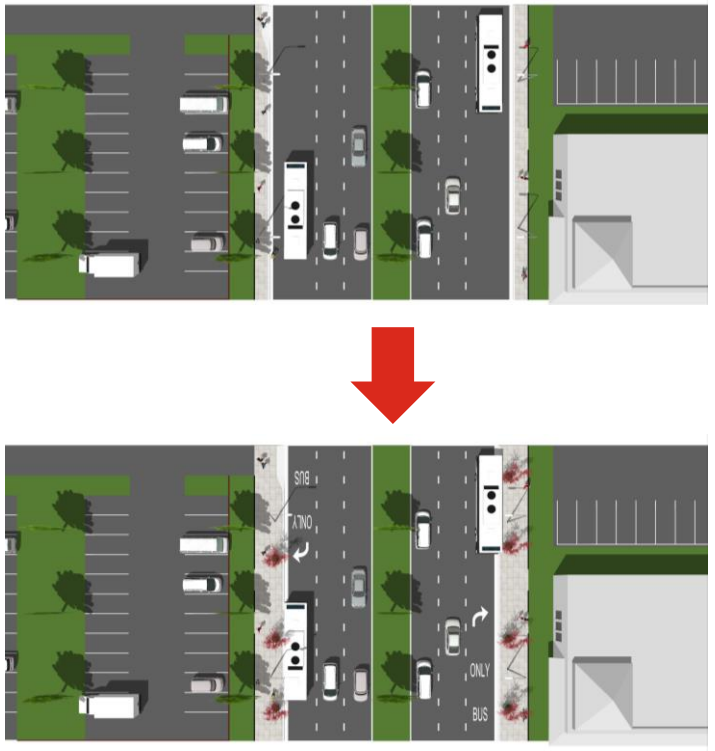
Development standards state that **parcel owners are responsible for creating the 12’ sidewalk** if a sidewalk is substandard at the time of redevelopment

Sidewalk Widening Alternatives Overview

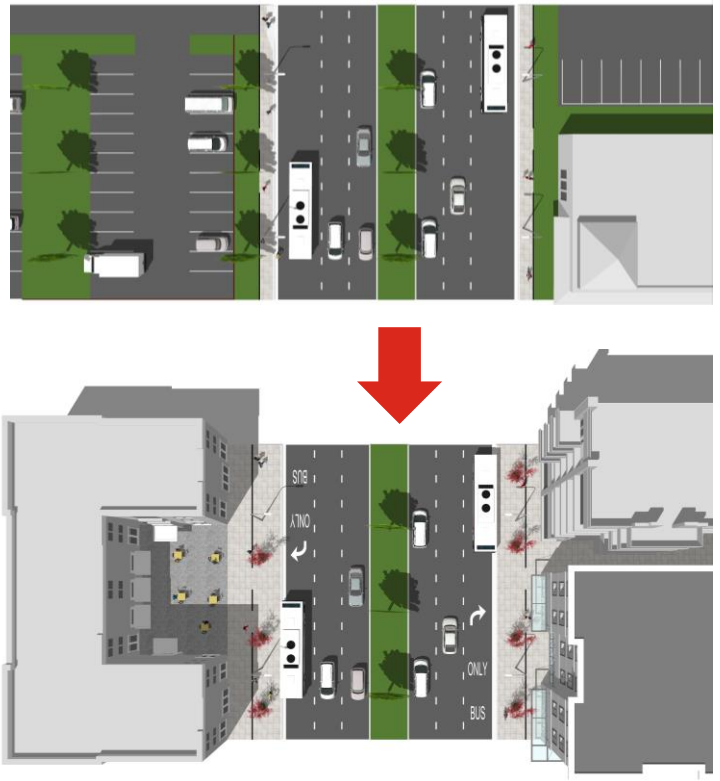
Alternative A:
Through Development



Alternative B:
Pre-development Capital Project



Alternative C:
Post-development Capital Project



Sidewalk Widening Alternative A: Through Development

- Widen existing sidewalk **6’ into parcels** as they redevelop
- Results in **inconsistent sidewalk width along the corridor** with pinch points and **does not change overall feel of corridor in pedestrian environment or contribute to traffic calming** through narrowing of outside lane
- **Cost of widening borne by developer** as part of their overall parcel redevelopment cost

Existing 6’ sidewalk (foreground) is still constrained, while redeveloped sidewalk (background) provides more space.

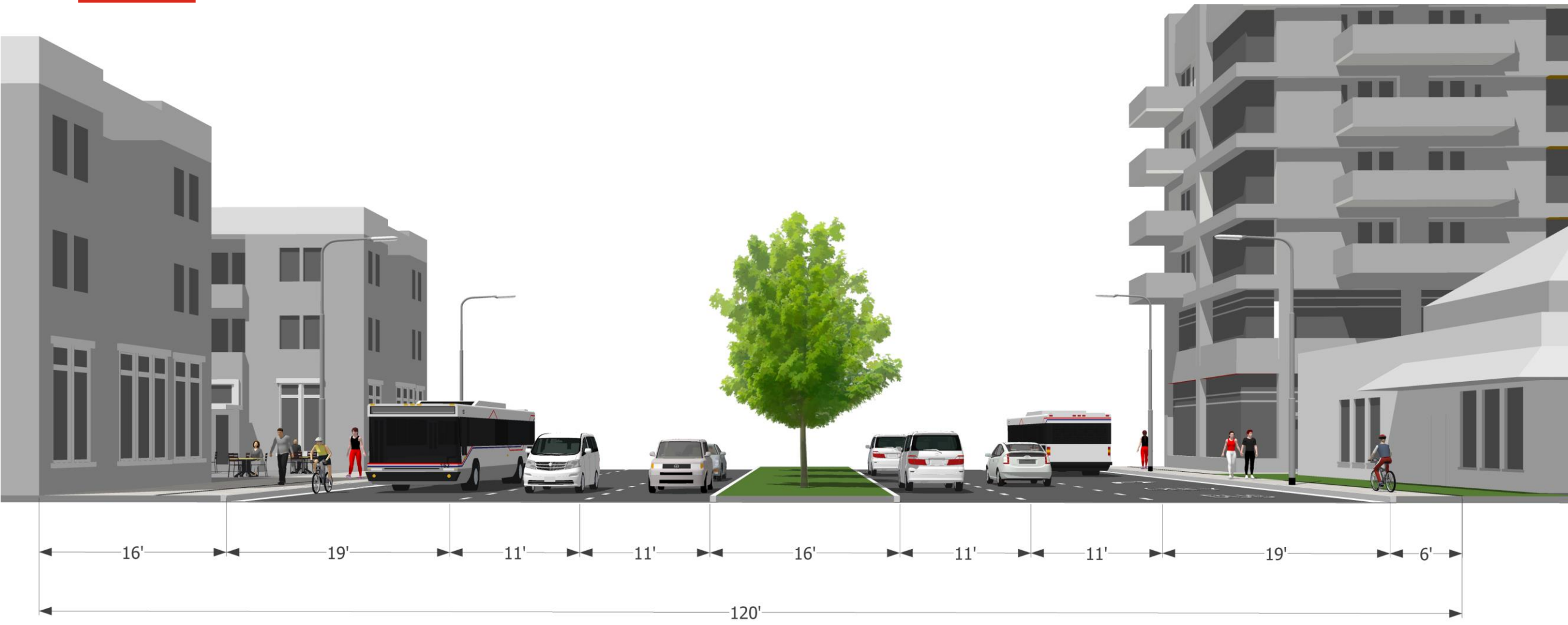
Sidewalk Widening Alternative A: Through Development

- With recommended reassessment of development code* to call for **16’ sidewalk**, widening into parcel would require 10’ dedication or easement
- Lefthand side of the following images show this condition
- Righthand side of the following images shows **inconsistent sidewalk width resulting from development progression along corridor**

**See slide 18*

Sidewalk Widening Alternative A: Through Development

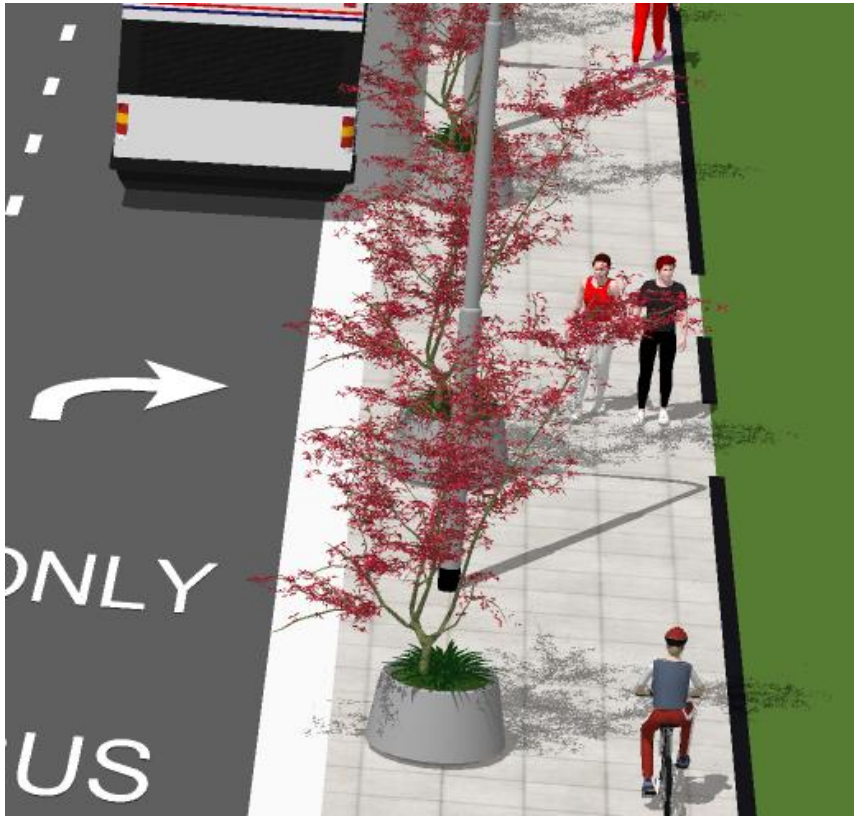
Sidewalk Widening Alternative A: Through Development



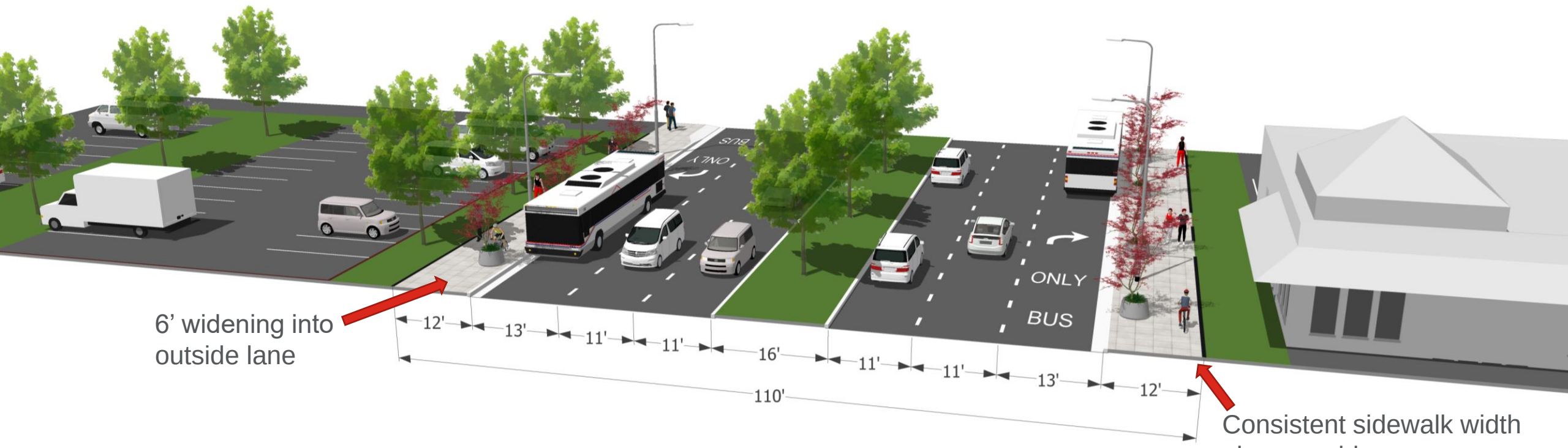
Sidewalk Widening Alternative A: Through Development

Sidewalk Widening Alternative B: Pre-development Capital Project

- **Widen existing sidewalk 6’ into outside travel lane** from Barstow Avenue to Santa Ana Avenue
- Results in a **consistent sidewalk width** that meets City standards throughout the corridor and is possible to accomplish **without impacting traffic operations** because outside lane is currently 17-19’ wide
- **Major capital expense** to the City (and any project partners) that is not in any current project list or budget



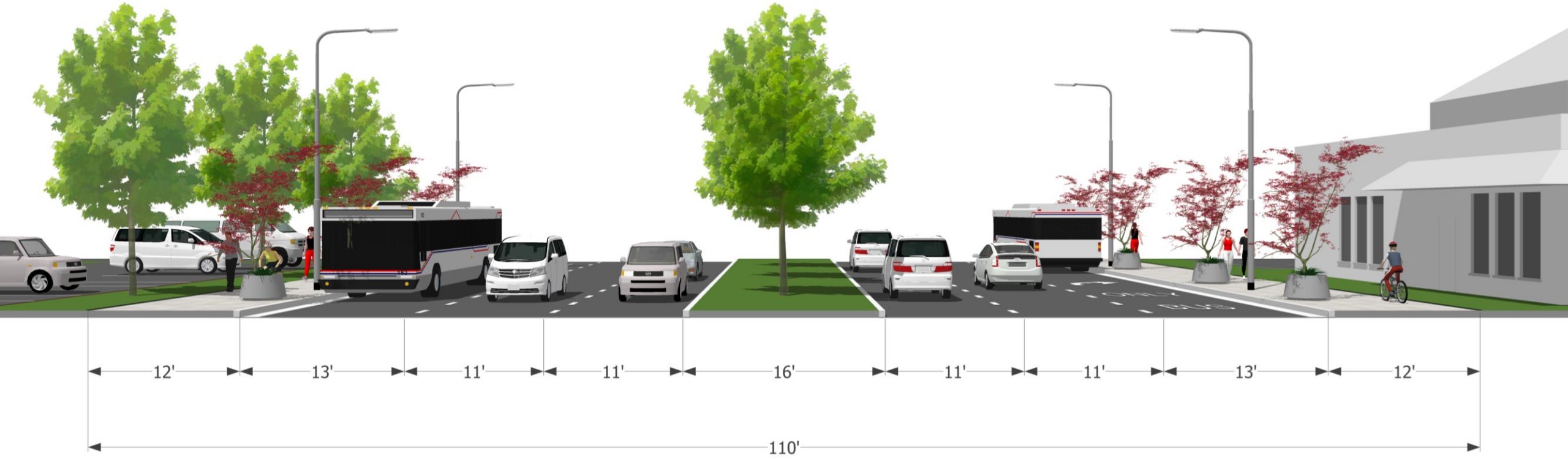
Sidewalk Widening Alternative B: Pre-development Capital Project



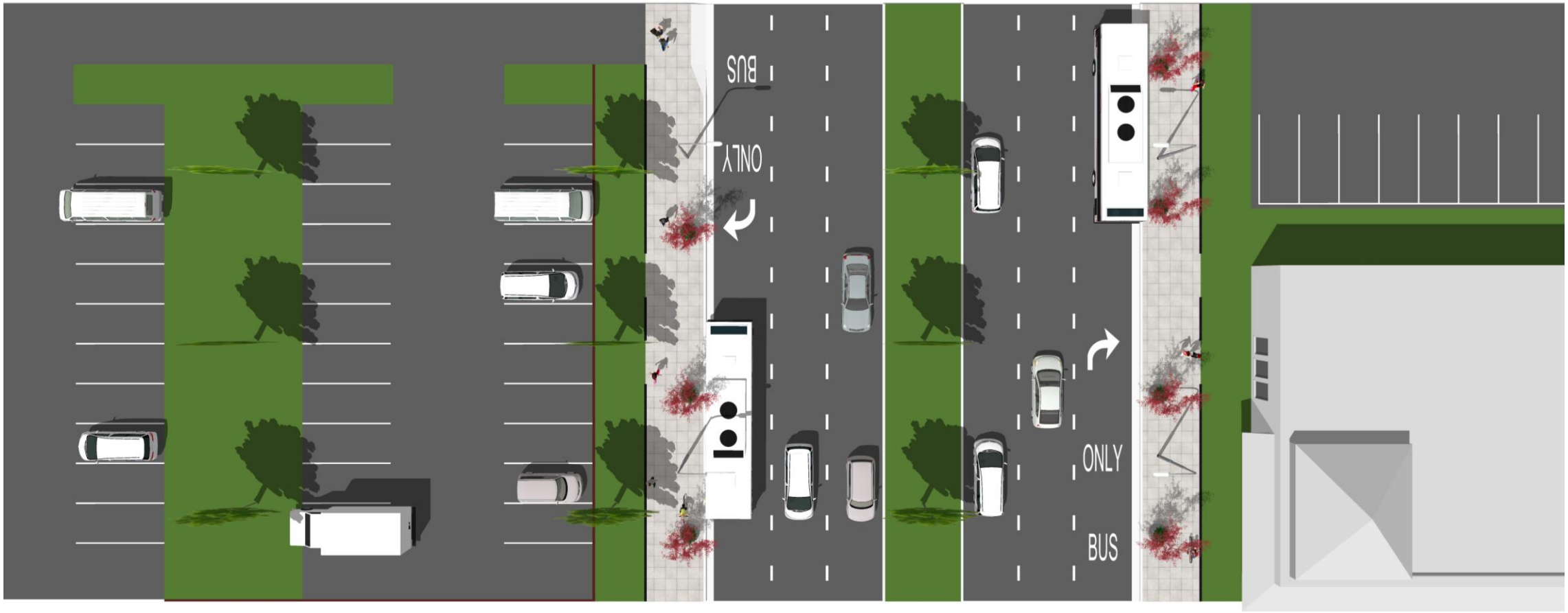
6’ widening into outside lane

Consistent sidewalk width along corridor

Sidewalk Widening Alternative B: Pre-development Capital Project



Sidewalk Widening Alternative B: Pre-development Capital Project



Sidewalk Widening Alternative C: Post-development Capital Project

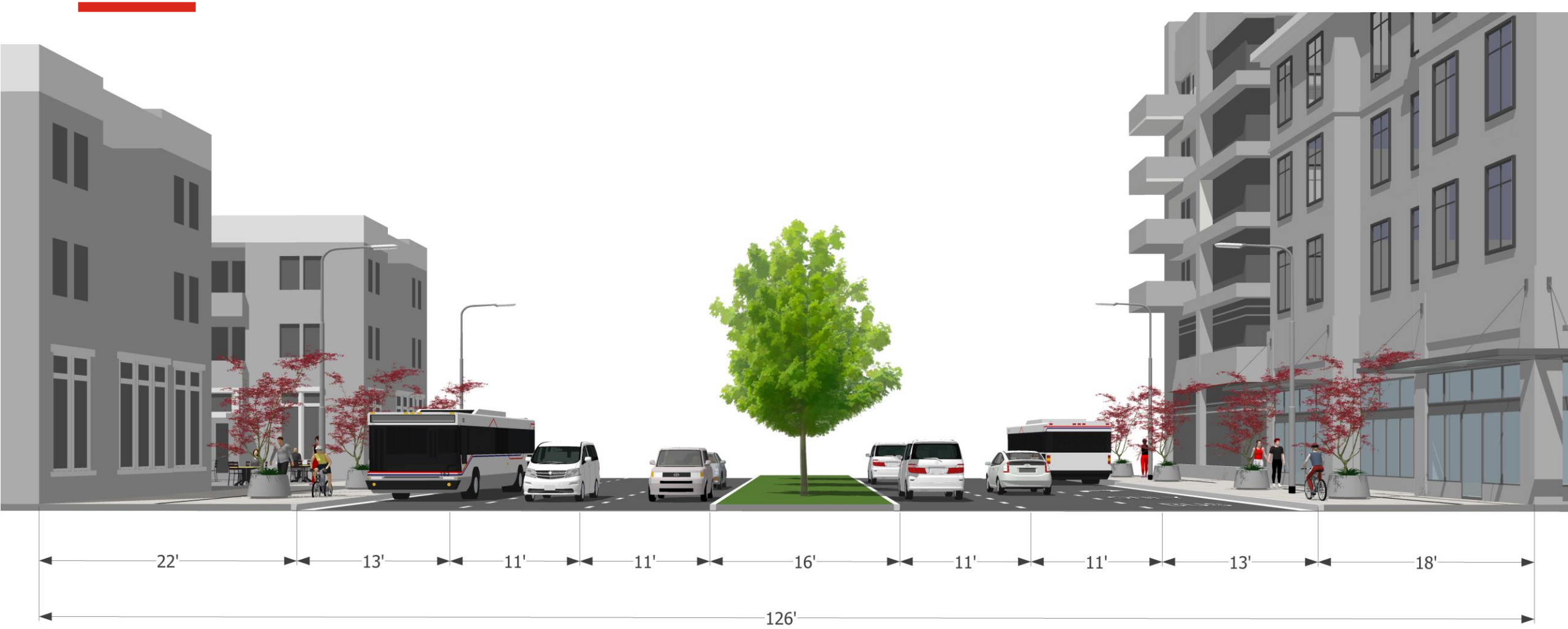
- Widen sidewalk **6’ into outside lane** after redevelopment
- **Results in an 18’ sidewalk** that can accommodate more placemaking components such as plantings and street furniture, and permitted private uses such as café seating
  - Space at roadway edge could also instead serve as **sidewalk-level separated bike lane**
- **Major capital expense** to the City (and any project partners) that would be far in the future and respond to increased pedestrian activity as a result of redevelopment

Sidewalk Widening Alternative C: Post-development Capital Project

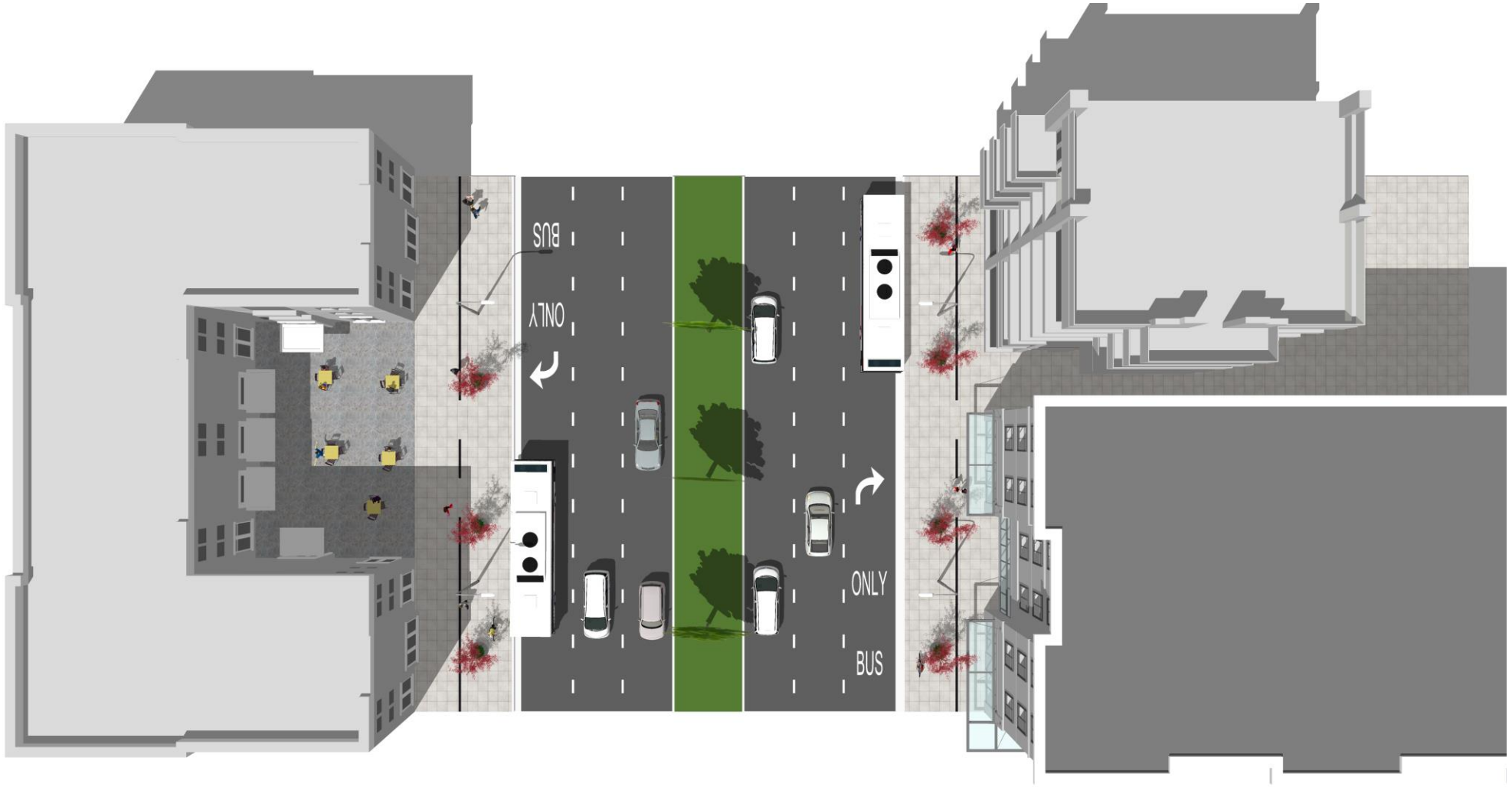
10’ widening into parcel during redevelopment

6’ widening into roadway after development

Sidewalk Widening Alternative C: Post-development Capital Project



Sidewalk Widening Alternative C: Post-development Capital Project



Note on Opinions of Probable Cost

- This opinion of probable construction cost was developed by identifying pay items and establishing quantities based on the current draft concept documents. Additional pay items have been assigned approximate lump sum prices based on a percentage of the anticipated construction cost. Preliminary cost opinions include a contingency to cover items that are undefined or are typically unknown prior to final design.
- Unit costs are based on 2020 dollars and were assigned based on historical cost data from sources listed by each item in the Bid Items tab. This cost opinion does not include easement and right-of-way acquisition; permitting, inspection, or construction management; escalation; or the cost for ongoing maintenance. This cost opinion is provided for the Client's information, and is based on the design professional's recent experience, adjusted for factors known at the time of preparation. Toole Design Group, LLC has no control over the cost of labor and material, competitive bidding, or market conditions; and makes no warranties, expressed or implied, concerning the accuracy of the opinion as compared to actual bids or cost to the Client.

Pedestrian Improvement Costs*

- **Corridor-length 6’ sidewalk widening into roadway on both sides of Blackstone from Barstow Avenue to Santa Ana Avenue: $3,100,000**
  - Demolition and reconstruction of curb, demolition of 8’ of roadway, updating of drainage system, trees in planters at approximately 30’ spacing, 25% for soft costs, and 30% contingency
- **Average per-parcel cost of 6’ sidewalk widening into parcel: $130,000 per parcel**
  - Assumes average parcel frontage of 250’, removal

**Detail sheets on opinions of probable cost accompany this document in an Excel spreadsheet.*

Bicycle Infrastructure Concepts

3

Bicycle Facilities for BSAC

- **Neither Blackstone nor Shaw Avenues are planned for bicycle facilities** in the City of Fresno Active Transportation Plan.
- Without a bike facility in place, **people will continue to ride on sidewalks,** and given the speed and volume of traffic, **most people would not be comfortable riding in a standard Class II bike lane either.**

Existing conditions along Blackstone with cyclist riding on sidewalk

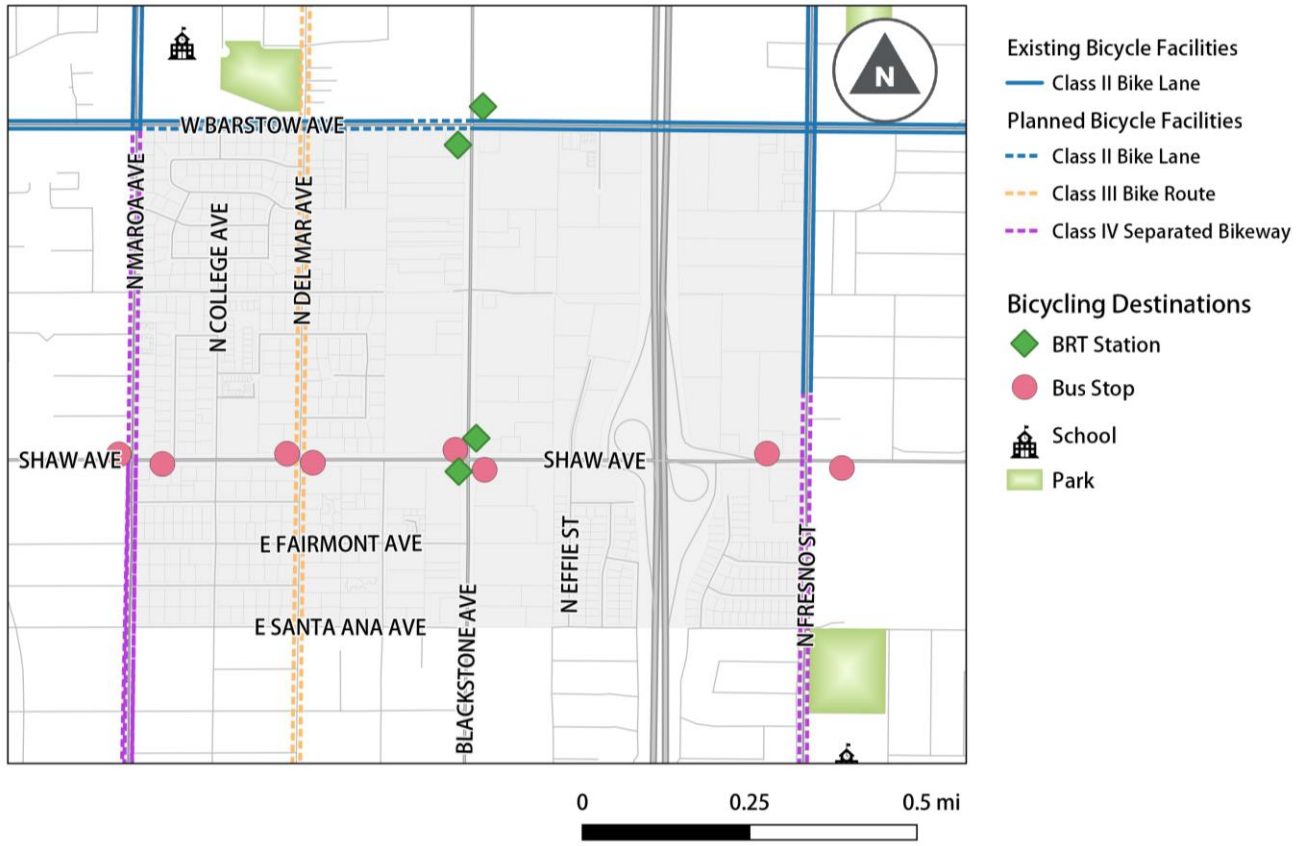
Bicycle Facilities for BSAC, cont.

- **The Southern Blackstone Avenue project** recently complete by the City of Fresno recommends a **Class IV separated bike lane**.
- The following slides present information about separated bike lane best practices, several options for implementation on Blackstone, and opinions of probable cost for these three options.

Existing conditions along Blackstone with cyclist riding on sidewalk

Area Bike Network

- Blackstone Ave connects to bike lanes on Barstow Ave
- Blackstone Ave is planned to have **separated bike lanes from Dakota Ave to Hwy 180** (approx. 1.3 miles south of study area)
- Planned **parallel bikeways** on Del Mar and Maroa Aves provide through routes, but **would not provide access** to businesses and new development on Blackstone Ave proper



Bicycle and Pedestrian Project Interaction

- The bicycle facility options presented in the following pages are **independent of Alternatives B and C** presented for pedestrian infrastructure in prior slides.
- Note that **widening the sidewalk into the roadway precludes addition of a bicycle facility** without further space reallocation.
  - Alternative C would present the option of a sidewalk-level separated bike lane as the 12’ sidewalk would have already been constructed through development.

What is a Separated Bike Lane?

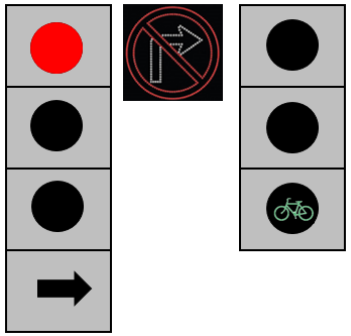
Separated bike lanes (SBLs) are on-street bicycle facilities that are **protected from vehicular traffic.** They can be one-way or two-way. Protection comes in many forms, including:

- Plastic bollards and striping
- Planters
- Parking lanes
- Concrete medians
- Landscaped medians
- Vertical separation (sidewalk-level SBLs)

Numerous configuration options mean that SBLs can be constructed **quickly with lower cost materials** or on **longer construction timelines with higher cost** materials, depending on available resources.

SBLs at Intersections

- **SBLs should be extended to intersections** to maintain bicyclist comfort and protection.
- At intersections, **corner islands** provide a protected space for bicyclists to queue and wait for a green signal.
- Through intersections, SBLs are oftentimes **phase-separated from conflicting turning vehicle movements** to separate bicyclists and vehicles temporally. Large intersections with heavy traffic volumes like Blackstone/Shaw necessitate phase-separation.



SBLs at Driveways

Driveways are a conflict zone between turning vehicles and through bicyclists; green pavement markings are oftentimes used at driveways to increase driver and bicyclist awareness of potential conflicts.

- **SBL protection buffers must temporarily end at driveways** to allow vehicle access to properties.
- **SBLs are less comfortable at driveways** since they are not protected; therefore, driveway width and density should be limited through access management to preserve the comfort of the SBL. ***For example,*** *the three driveways accessing the strip mall on the southeast corner of Blackstone/Barstow could be consolidated into a single driveway given that there is also access via Barstow Avenue.*

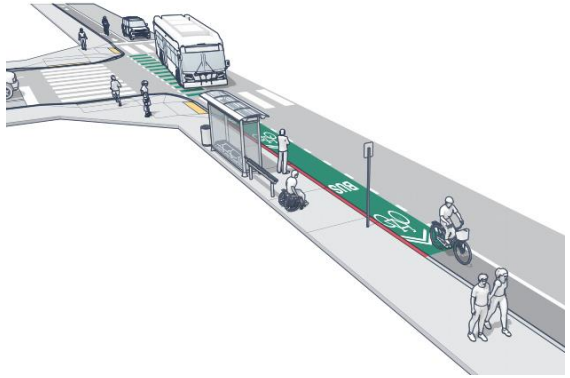
SBLs at Transit Stops

Transit stops are another type of conflict zone between bicyclists and vehicles where buses must access the curb for boarding/alighting

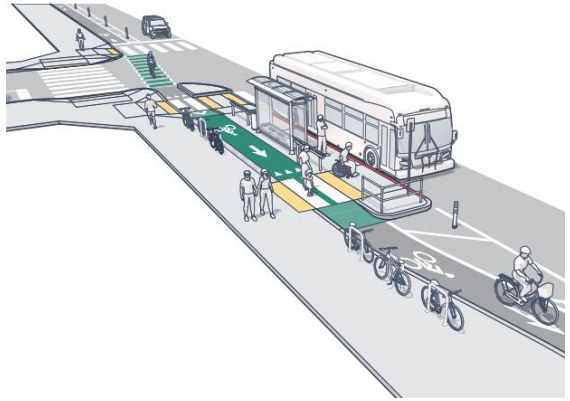
Different transit stop configurations mitigate transit/bike conflicts:

- **Unprotected mixing zone** (one-way SBLs only, see top images)
- **SBL protected by transit boarding island** (one-way or two-way SBLs, see bottom images)

Below: Unprotected mixing zone



Below: SBL protected by transit boarding island



Note on Opinions of Probable Cost

*The following costs should be used for **planning purposes only** as the provide high-level order of magnitude comparisons between the several design options for separated bike lanes.*

Cost Estimate Elements

- All estimates include **green pavement markings** at conflict areas, **bike lane symbol markings**, **bike lane signage**, and a **bike signal at Shaw Avenue**
- Estimates do **not** include right-of-way acquisition costs
- All estimates use the following percentage cost assumptions:
  - **Percentage of materials cost:** 8% for drainage, 10% for mobilization
  - **Percentage of materials plus above:** 25% soft costs, 30% contingency

- All cost estimates are for Blackstone Avenue from Barstow Avenue to Santa Ana Avenue

SBL Alternatives*: Low-Cost

The low-cost SBL alternative includes a protective buffer comprised of plastic bollards and striping. At bus stops, the SBL transitions to a mixing zone.

- **Pros include:**
  - Quick to implement
  - Inexpensive to construct
  - Easy to modify
  - Proof of concept opportunity
- **Drawbacks include:**
  - Separation style of paint and flexposts offers less user comfort than more robust materials
  - Less aesthetically attractive buffer materials
  - Mixed bus/bike traffic at bus stops exposes bicyclists to additional conflict with vehicles
  - Creates more conflicts for bus operators to navigate

**All alternatives are for one-way SBLs on each side of Blackstone Avenue.*

Low-Cost Estimate

- **Flexpost separated bike lane with bus mixing zone: $427,000**
  - Cost includes installation of striping and flexposts, bus stop conflict markings, removal and replacement of turn arrows as appropriate

**Detail sheets on opinions of probable cost accompany this document in an Excel spreadsheet.*

SBL Alternatives*: Mid-Cost

The mid-cost SBL alternative includes a protective buffer comprised of plastic bollards and striping. At bus stops, the SBL ramps up to sidewalk level and continues behind the transit shelter in a pedestrian/bicycle mixing zone, which requires widening the sidewalk to 8 feet minimum into private property.

- **Pros include:**
  - Quick to implement bollard/striping buffer
  - Inexpensive to construct bollard/striping buffer
  - Easy to modify bollard/striping buffer
  - Bike/vehicle separation at bus stops
- **Drawbacks include:**
  - Separation style of paint and flexposts offers less user comfort than more robust materials
  - Less aesthetically attractive buffer materials
  - Mixed ped/bike traffic at bus stops
  - Sidewalk widening construction and easement/ROW acquisition more expensive than mixing zone

**All alternatives are for one-way SBLs on each side of Blackstone Avenue.*

Mid-Cost Estimate

- **Flexpost separated bike lane with bike path behind bus stop: $509,900**
  - Cost includes installation of striping and flexposts, removal and replacement of turn arrows as appropriate, 8’ concrete sidewalk for bikes behind shelter, asphalt ramps to access sidewalk, appropriate markings
  - Cost does not include acquisition of approx. 1,440 sf (480 sf per bus stop) of right-of-way for path behind stop

**Detail sheets on opinions of probable cost accompany this document in an Excel spreadsheet.*

SBL Alternatives*: High-Cost

The high-cost SBL alternative includes a protective buffer comprised of a concrete median. At bus stops, curb lines are reconstructed to create a 10-foot wide bus boarding island adjacent to an 11-foot transit lane. The SBL ramps up to sidewalk level and continues behind the boarding island. The sidewalk is relocated away from the boarding island to accommodate the SBL. 12 feet is the preferred minimum width of the sidewalk and one-way SBL, with visual and physical delineation between the two.

- **Pros include:**
  - Concrete median buffer (more comfortable)
  - More aesthetically attractive buffer materials
  - Separation of all modes at bus stops
- **Drawbacks include:**
  - Slowest to implement
  - Most expensive
  - Difficult to modify

**All alternatives are for one-way SBLs on each side of Blackstone Avenue.*

High-Cost Estimate

- **Concrete curb separated bike lane with floating bus stop: $1,215,000**
  - Cost includes pavement removal and installation of 3’ concrete curb median (with breaks for drainage flow), 6’ wide asphalt trail behind bus shelter, 6’ concrete sidewalk behind bike lane, appropriate markings, and tactile strips. The estimate also includes a 60% contingency (significantly higher than normal) to approximate accounting for the cost to relocate all BRT station amenities (shelter, pay station, etc.) to the new boarding island location
  - Cost does not include acquisition of approx. 2,160 sf (720 sf per bus stop) of right-of-way for bike lane and sidewalk behind stop; figure could be decreased if stop infrastructure (shelter, payment kiosk, etc.) is relocated closer to curb.

**Detail sheets on opinions of probable cost accompany this document in an Excel spreadsheet.*

4

Traffic Analysis

Transportation Improvements Assessed

- Converting outside motor vehicle lane on Blackstone Avenue in each direction to **business access and transit (BAT) lanes**
- **New traffic signals** at the following intersections
  - Blackstone Avenue & the Yosemite Falls Driveway
  - Blackstone Avenue & Santa Ana Avenue
  - Shaw Avenue & Effie Street
- **Pedestrian half-signal** at Shaw Avenue & Glenn Avenue
- **Leading pedestrian intervals** for signalized intersections of Blackstone Avenue between San Jose Avenue and Santa Ana Avenue

Traffic Analysis Purpose

Assess impact of transportation projects that would:

- **Improve access** to parcels with redevelopment plans
- **Improve multimodal travel** in the study area

Projects were identified through conversation with stakeholders and by consultant team's assessment of existing multimodal transportation environment

Growth Assumptions: Future Development

- Based on proposed redevelopment activity within the study area, an **estimate of new development** was established, consisting of:
  - 383 new residential units
  - 148,700 square feet of new retail space
  - 75,600 square feet of new office space
- This new development is expected to generate **8,435 net new daily trips** and **up to 823 new trips during the highest peak hour**.*

**Details on the methods used for traffic assumptions are available in the accompanying Traffic Analysis Report.*

Growth Assumptions: Growth Evaluation

The expected BSAC development changes were evaluated by adding these additional trips in addition to existing trips within the study area as well as the expected trips based on the cumulative growth assumptions in the Fresno COG travel demand model.

Model year assessed was 2042.

Growth Assumptions: Growth Evaluation

The growth assumptions result in a conservative traffic growth scenario by layering the BSAC development changes on top of the 2042 Fresno COG model build-out scenario which already accounts for growth in the area consistent with the City of Fresno General Plan. This may result in expected traffic growth being overestimated by duplicating potential land use changes.

Additionally, no trips were reduced to account for pass-by trips, internal trip capture related to the mixed-use development, or proximity to the FAX Q bus rapid transit service.

Potential Benefits: Pedestrian and Transit

- **Pedestrian connectivity** within the study area would be improved with new protected crossings at the pedestrian half-signal and traffic signals evaluated.
- **Leading pedestrian intervals** would also help reduce potential vehicle-pedestrian conflicts by giving pedestrians a “head-start” crossing at the signals along Blackstone Avenue.
- **The BAT lanes on Blackstone Avenue** could help improve transit reliability along the corridor by reducing the number of vehicles sharing the lane with the BRT service.

Potential Benefits: Automobile

- **Several intersections** within the study area would have **a better level of service (lower congestion)** as a result of signal timing changes and the new signals reducing the delay associated with unsignalized minor street turn movements.
- **Access to the parcels within the BSAC study area would be improved** with the additional traffic signals and the BAT lane by easing turn movements into and out of the parcels.

Potential Impacts: Automobile

- **Some intersections** within the BSAC study area would operate **below the City of Fresno's level of service standards for congestion during peak hours**.
- **Vehicle queuing at several intersections** within the study area may exceed available storage and **could result in queues** spilling back through the prior intersection.

Benefits + Impacts Summary: Automobile

- **Traffic operations** will reduce delay at some intersections while others will exceed the City of Fresno level of service standards at others.
- Potential **queuing impacts** at:
  - Effie Street & Shaw Avenue
  - Blackstone Avenue and Shaw Avenue
- The table summarizes these potential benefits and impacts:

✓ Potential Delay Benefit

✘ Potential Delay Impact

* Potential Queueing Impact

Intersection	Existing Conditions	2042 Conditions
Blackstone Ave & Shaw Ave	--	✘*
Glenn Ave & Shaw Ave	✓	✓
Effie St & Shaw Ave	✓*	✓*
Blackstone Ave & Santa Ana Ave	--	✓
Blackstone Ave & Yosemite Falls Dwy	--	✓
Maroa Ave & Shaw Ave	--	--
Fresno St & Shaw Ave	--	✓
Blackstone Ave & Barstow Ave	--	✘

Feasibility: Additional Analysis

- **BAT lanes and traffic signals:** More detailed analysis may be necessary to determine corridor-wide impacts beyond the BSAC study area
- **Traffic signals:** Need to meet the California MUTCD warrants before moving forward
- Additional analysis could also help determine the extent of any queuing or congestion along corridor and help determine **signal progressions** to minimize congestion-related impacts

Feasibility: Contingent Improvements

- **Traffic signals and the pedestrian hybrid beacon improvements** may be **contingent on new development** within the BSAC study area that:
  - Generates additional automobile and pedestrian trips to meet warrants
  - Contributes funding for these high-dollar pieces of infrastructure
- Caltrans currently **opposes any signalization improvement at Shaw Avenue & Effie Street** due to the potential for queue spillback and impacts on the State Route 41 on- and off-ramps on Shaw Avenue.
  - Any signalized improvement at this intersection will need to clearly demonstrate that impacts to State Route 41 can be avoided and will be contingent on Caltrans approval.

Feasibility: Time Horizon

Shorter horizon:

- Leading pedestrian intervals require minor signal timing adjustments or limited signal modifications.

Longer horizon:

- New traffic signals, the pedestrian hybrid beacon, and the BAT lane would take further study and more time to meet applicable warrants, engage the community in the proposed changes, and develop improvements designs

Project Funding Options

5

City Funding and Developer Funding

- **City-funded projects** may receive funding from a variety of sources, and the City may also **partner with other agencies** such as Fresno COG to pursue project funding
- Projects in this area may also be **funded by developers and constructed as part of development** either on site or to improve transportation functions nearby, or developers may pay **in lieu fees** to construct these improvements

Active Transportation Grant Funding Sources

Caltrans

- Active Transportation Program
- Sustainable Communities Planning Grant

USDOT

- Congestion Mitigation and Air Quality Improvement Program

Fresno County Transportation Authority

- Measure C Transit Oriented Development Program
- Measure C Extension for:
  - Street Maintenance and Rehabilitation
  - Flexible Program
  - ADA Compliance
  - Bicycle Facilities

City dollars can be used to match these regional, state and federal funding sources

State Gas Taxes for Transportation Purposes

- **Special gas tax,** exclusively for traffic signals and street lights
- **Proposition 111,** Street Maintenance for street TSSL operations and capital grant match
- **BX8 6 Gas Tax,** Street Maintenance operations and the Neighborhood Street Program
- **SB 1 Gas Tax,** received on a per capita basis, used primarily for Street Maintenance operations and capital projects

Table of Funding Sources

Funding Sources	Administering Agency	Availability of Funding	Notes	Eligible Improvements	Weblink
Federal Funding (Administered Locally)					
Surface Transportation Block Grant	FHWA, FAST Act Program administered through the Fresno Council of Governments	Every two years	Projects must be in the Statewide Transportation Improvement Program (STIP) and be consistent with the Long-Range Statewide Transportation Plan and Metropolitan Transportation Plan. May require 11.47% local match.	Bicycle facilities, including trails	2019 application guidelines are here: https://www.fresnocog.org/wp-content/uploads/2016/06/A.-2019-20-Final-STBG-Guidelines.pdf
Congestion Mitigation and Air Quality Program	FHWA, FAST Act Program administered through the Fresno Council of Governments	Every four years	Projects approved the Fresno COG Policy Board are included in the Federal Transportation Improvement Program (FTIP) prior to federal reimbursement. The 2019-2020 CMAQ Call for Projects covers two years in the FTIP, 2020 – 2024. May require 11.47% local match.	Pedestrian and bicycle facilities eligible if they demonstrate impact of decreasing emissions	2019 application guidelines are here: https://www.fresnocog.org/project/congestion-mitigation-air-quality-cmaq-program/
State Funding Sources					
California Active Transportation Program	California Transportation Commission	Varies; Cycle 5 call for applications expected in the spring 2020	Consolidated several older grant programs, including State SRTS and Bicycle Transportation. Funds range of capital and non-capital projects. Some preference given to projects in disadvantaged communities. The state program is competitive among jurisdictions statewide; the regional program is competitive among Fresno Council of Governments member agencies.	Bikeways, crossing improvements and most programmatic activities (e.g., encouragement, education, and enforcement), and plans (including active transportation plans and Safe Routes to School plans)	https://dot.ca.gov/programs/local-assistance/fed-and-state-programs/active-transportation-program/cycle5

Table of Funding Sources, cont.

Funding Sources	Administering Agency	Availability of Funding	Notes	Eligible Improvements	Weblink
State Funding Sources (Continued)					
California Proposition 68 (Parks and Water Bond Act of 2018), Statewide Parks Program (SPP)	California Department of Parks and Recreation	Amount available is $395,333M; grant applications should be between $200K and $8.5M Round Four may occur in 2020 (see bottom of this document)	Eligible projects are from the Statewide Parks Program (SPP)	A variety of park facilities and types, including linear greenbelt parks, non-motorized trails, pedestrian and bicycle bridge	https://www.parks.ca.gov/pages/1008/files/Final_Prop._68_SPP_Application_Guide_1.22.2019.pdf
California Office of Traffic Safety Grants	California Office of Traffic Safety	Annually; applications due January 30.	For traffic-safety education, awareness and enforcement programs aimed at drivers, pedestrians and bicyclists.	Certain activities under the SRTS, safety/education and enforcement programs.	http://www.ots.ca.gov/Grants/default.asp
Highway Safety Improvement Program	Caltrans	Varies; From one to two years. Cycle 10 expected April or May 2020	For projects and programs that reduce traffic fatalities and serious injuries by correcting or improving a specific problem. Highly competitive at the state level.	Safety-related pedestrian, bikeway and crossing projects. Certain activities under the SRTS, safety/education and enforcement programs; also, certain spot improvements. Bike lanes, paved shoulders, crosswalks, intersection improvements and signage	http://www.dot.ca.gov/hq/LocalPrograms/hsip.html
Affordable Housing and Sustainable Communities Program	California Strategic Growth Council	Annually; next call for projects slated for November 2019 with applications due February 2020	Projects that facilitate compact development, including bicycle infrastructure and amenities, with neighborhood scale impacts. Available to government agencies and institutions (including local government, transit agencies and school districts), developers and non-profit organizations.	Bikeways and pedestrian improvements, particularly those in the area covered in specific plans. Must be paired with affordable housing development, cannot be submitted as a standalone project.	http://sgc.ca.gov/programs/ahsc/

Table of Funding Sources, cont.

Funding Sources	Administering Agency	Availability of Funding	Notes	Eligible Improvements	Weblink
State Funding Sources (Continued)					
Sustainable Transportation Planning Grants	Caltrans	Annually; last round due October 2019	Funds for communities to do planning and studies to identify and evaluate projects, including conducting outreach or implementing pilot projects.	Planning, community engagement, studies to improve bicycle and pedestrian connections.	https://dot.ca.gov/programs/transportation-planning/regional-planning/sustainable-transportation-planning-grants
Urban Greening Grants	California Natural Resources Agency	Annually; Round 4 call for applications anticipated March 2020	A statewide program that allocates cap-and-trade dollars to projects that reduce greenhouse gas emissions.	Projects that reduce commute vehicle miles traveled by constructing bicycle paths, bicycle lanes or pedestrian facilities that provide safe routes for travel between residences, workplaces, commercial centers, and schools.	http://resources.ca.gov/grants/urban-greening/
State Transportation Improvements Program	California Transportation Commission	Every 2 years	Projects need to be nominated in Regional TIP, but MTC may nominate fund categories.	Any transportation project eligible for State Highway Account or Federal Funds	https://dot.ca.gov/programs/local-assistance/fed-and-state-programs/state-transportation-improvement-program
California Gas Tax	California Transportation Commission	Annually	Ineligible expenses include decorative lighting, transit facilities, park features, and new utilities.	Construction, engineering, and maintenance	https://sco.ca.gov/Files-AUD/gas_tax_guidelines31219.pdf
Transformative Climate Communities Program	California Strategic Growth Council	Annually	Program's first year was 2017. Program focus is on reducing greenhouse gas emissions, improving public health, create economic opportunity, especially in disadvantaged communities. Fresno received a $66.5 million grant in the program's first round.	Bicycle and pedestrian facilities, as well as affordable and sustainable housing developments, transit stations and facilities, bicycle and car share programs, residential weatherization and solar projects, water-energy efficiency installations, urban greening projects, low-carbon transit vehicles and clean vehicle rebates, and health and well-being projects	http://sgc.ca.gov/programs/tcc/resources/application.html

Table of Funding Sources, cont.

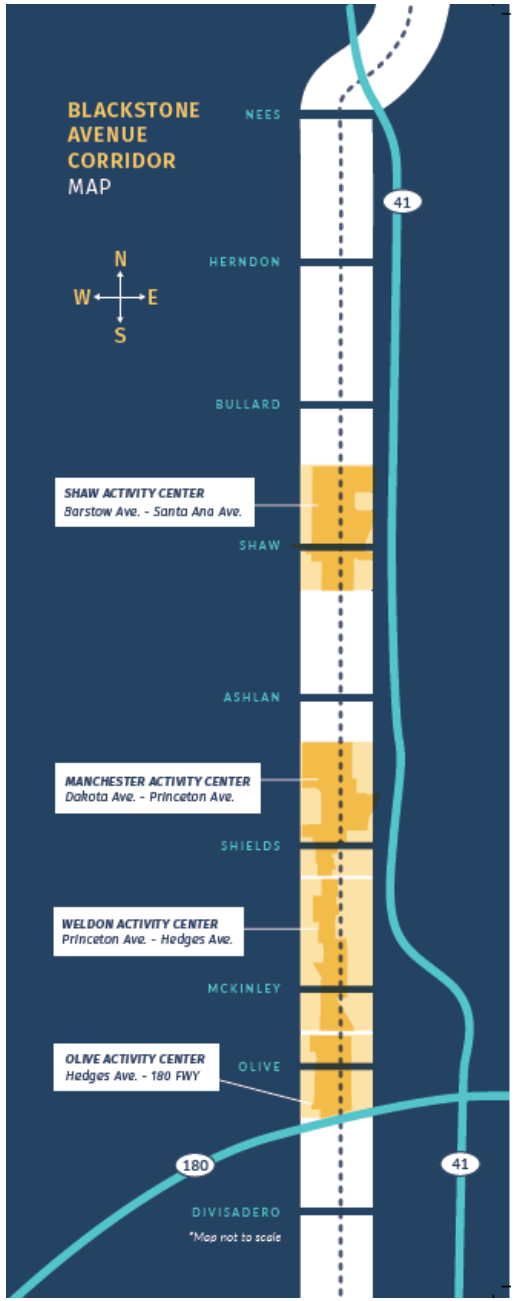
Funding Sources	Administering Agency	Availability of Funding	Notes	Eligible Improvements	Weblink
Regional and City Funding Sources					
Measure C, Transit Oriented Infrastructure	Fresno Council of Governments	Annually	Program created in the 2006 Measure C Extension Plan. TOD allocation support community-based transit projects aimed at increasing transit use.	Transit facility improvement, bicycle and pedestrian facility improvements, public plaza, streetscape enhancements	https://www.fresnocog.org/measure-c-transit-oriented-development/
Measure C, Local Transportation Program	Fresno County Transportation Authority	Project funding decisions made by the FCTA Board	The Measure C Extension Plan provides multi-modal funding from a percentage of local sales tax revenue in three programs: public transit, local transportation, and regional transportation.	The Local Transportation Program funds various projects including street maintenance and rehabilitation, ADA Compliance, and pedestrian trails and bicycle facilities.	City 2020 Adopted Budget, page 21: https://www.fresno.gov/finance/wp-content/uploads/sites/11/2019/10/FY2020AdoptedBudgetUpdated2.pdf
Regional Sustainable Infrastructure Planning Grant	Fresno Council of Governments	Annually; Cycle 3 grant application deadline was August 1, 2019	Program objective is to encourage local and regional multimodal transportation and land-use planning and addresses the needs of disadvantaged communities.	Planning studies, safe routes to school plans, complete streets plans, bicycle and pedestrian plans with safety enhancement focus (including Vision Zero).	https://www.fresnocog.org/project/fresno-cog-administered-grant-programs/
Local Funding Sources					
Pedestrian & Bicycle Facility	City of Fresno	Annual	This program in the Public Works Department implements and maintains walking and bicycling facilities. Funds can be used as match for grants.	On-road bicycle facilities and pedestrian infrastructure	

Table of Funding Sources, cont.

Funding Sources	Administering Agency	Availability of Funding	Notes	Eligible Improvements	Weblink
Local Funding Sources (Continued)					
General Fund	City of Fresno	Annually	A component of local general funds can be dedicated to transportation improvements through allocations to the City's Public Works, Parks and Recreation, or Police Departments. There are generally few restrictions on these funds.	Operating expenses such as staff time, outreach and education materials, facility maintenance and other small capital expenses	
Municipal Bonds	City of Fresno	n/a	Cities have the authority to issue municipal bonds to finance infrastructure projects.	All transportation improvements	
Parking Benefit Districts	City of Fresno	n/a	Parking Benefit Districts can finance infrastructure improvements in popular employment or commercial centers by dedicating parking fee and ticket revenue to bicycle and pedestrian enhancements. Within a parking benefit district, public parking spaces (on- and off-street) are charged hourly rates to aid turnover of spaces for customers.	Bikeways and crossing improvements	
Other Funding Opportunities					
Other local foundations, health organizations, and businesses			Local Foundations, Health Organizations, and Businesses can be good sources of funds for education and outreach, however, may not be suitable for the larger funding needs for trail network expansion.		

6

Next Steps



Next Steps

- Fresno Metro Ministry/Better Blackstone CDC provided community outreach and engagement work for the Blackstone-Shaw Activity Center Study
- Funded by Caltrans and in partnership with Fresno COG and many others – Metro/BBCDC is now conducting the **Better Blackstone Design Challenge**, focused on crafting design scenarios for **mixed-use TOD development** on over 500 mixed-use zoned parcels on Blackstone between Barstow Avenue and Hwy 180
- Major community open houses to share ideas and images, and receive property owner, business, and community resident input are planned for August and fall 2020

Appendix: Design Principles

7

Blackstone-Shaw Activity Center– Design Principles

Fresno, CA

Better Blackstone Design Challenge

February 2020

OPTICOS

Design Principles

1 **Plan for connectivity**

2 **Provide common open space**

3 **Shield parking from the street**

4 **Orient buildings toward pedestrian realm**

5 **Transition to context in form + scale**

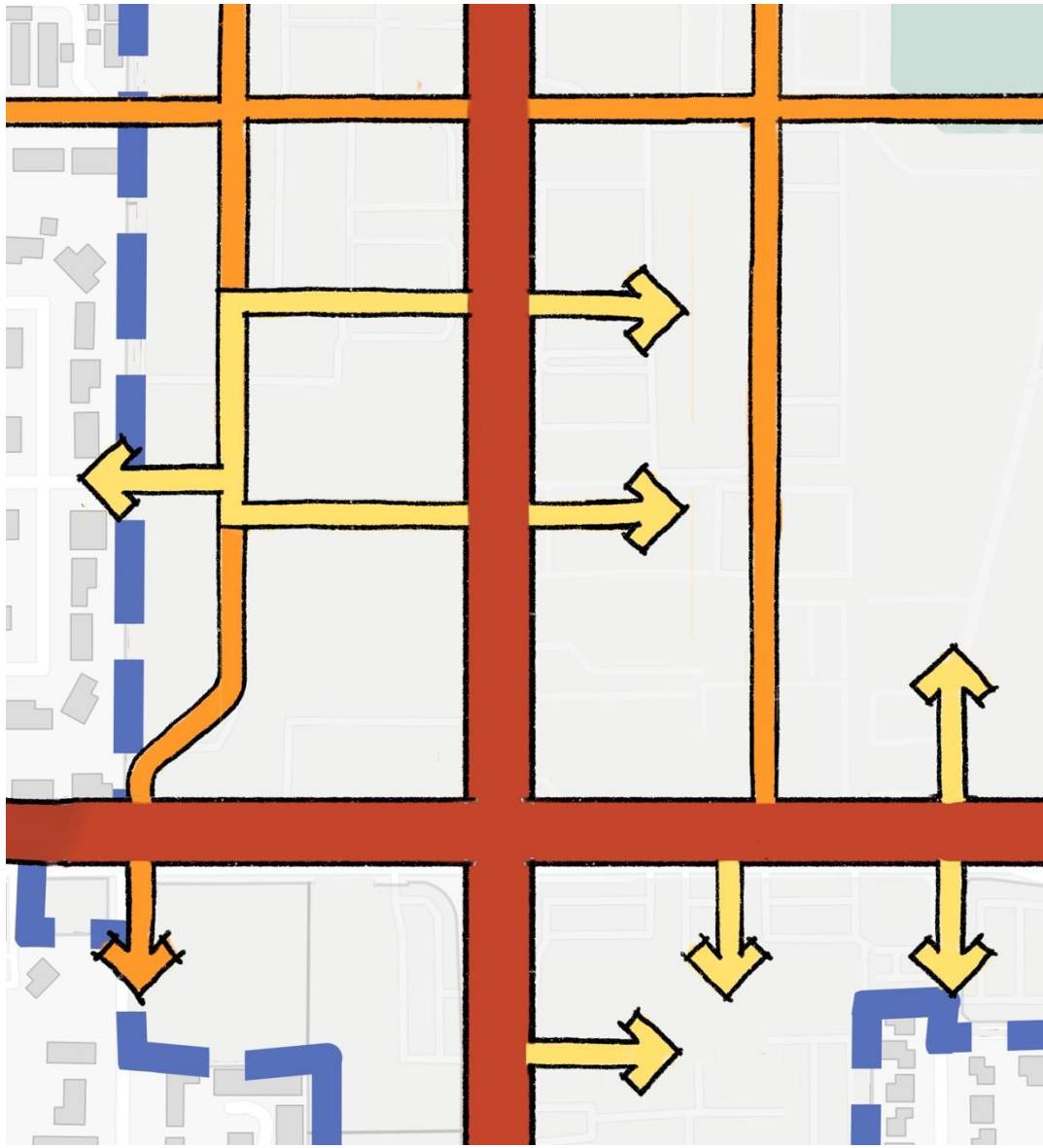
6 **Shape a legible public realm with frontages**

7 **Expand Blackstone sidewalk with setbacks**

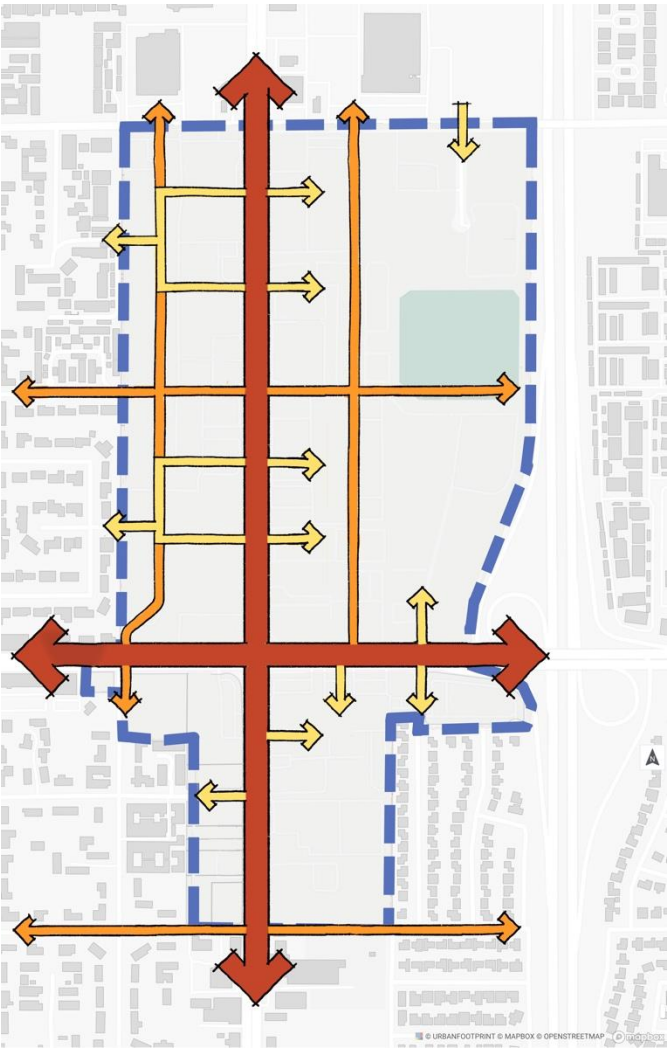
Block Scale

Building Scale

Block Scale

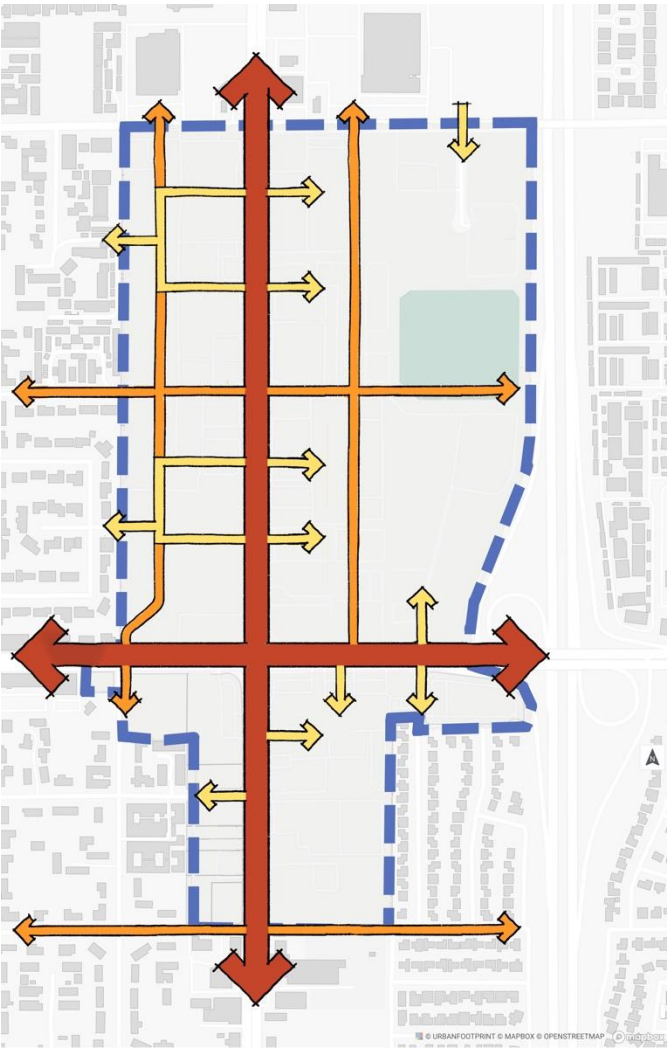


1 – Plan for connectivity



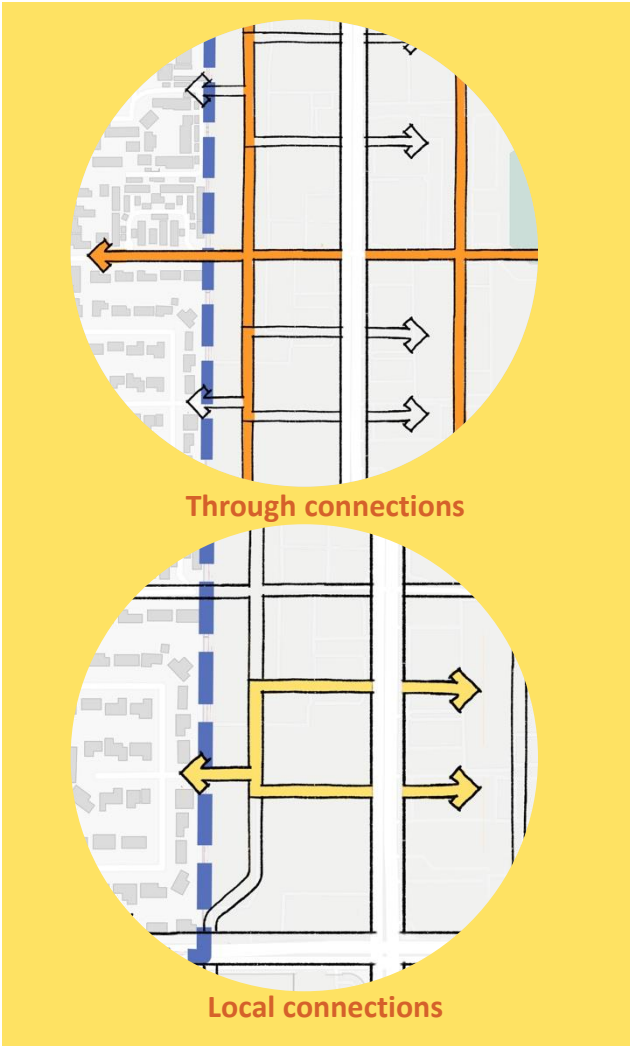
Compose an idealized grid of new streets and blocks before working on individual parcels.

1 – Plan for connectivity

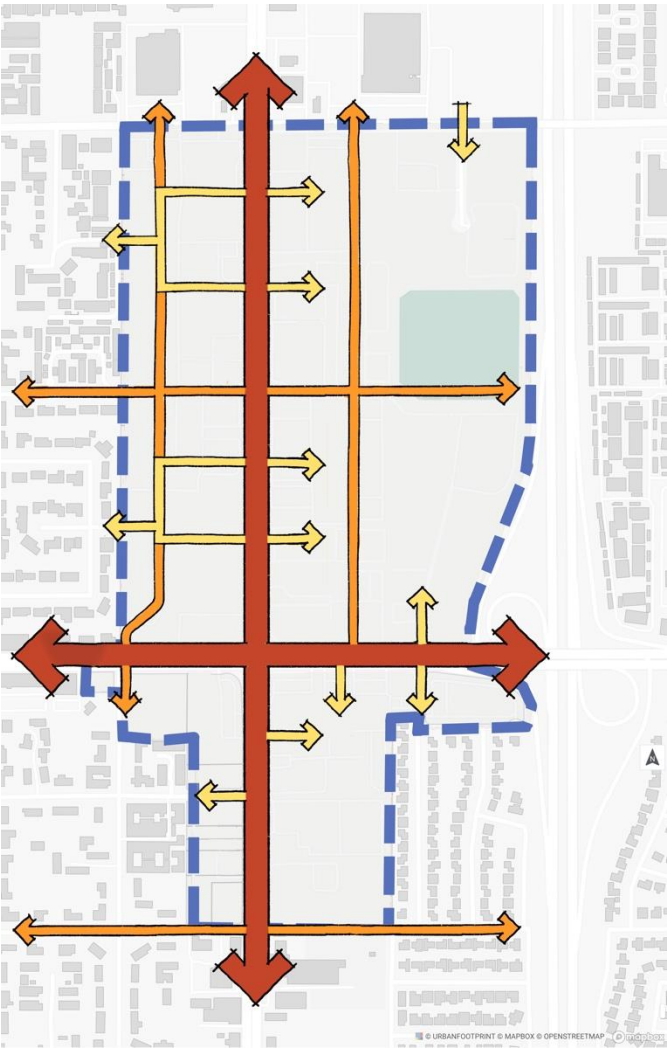


Distinguish between

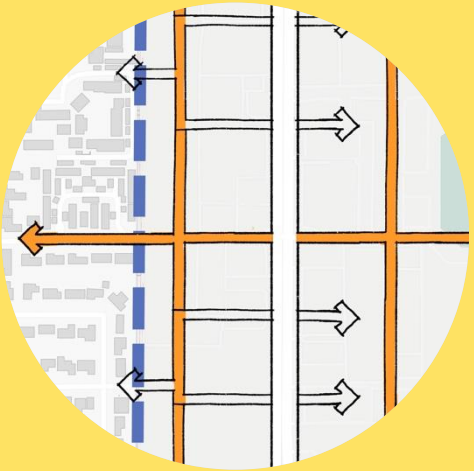
- **Through connections** (connecting to a through route at the back of the parcel)
- **Local connections** (connecting to a local or low-connectivity route at the back of the parcel)



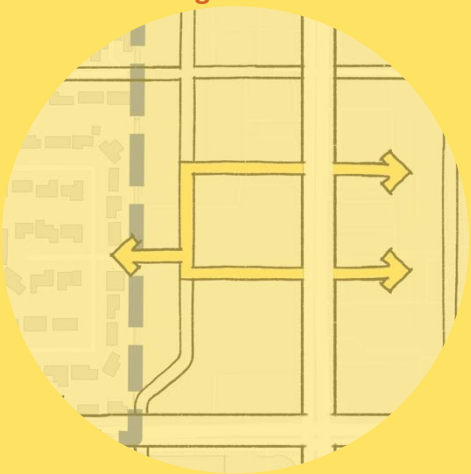
1 – Plan for connectivity



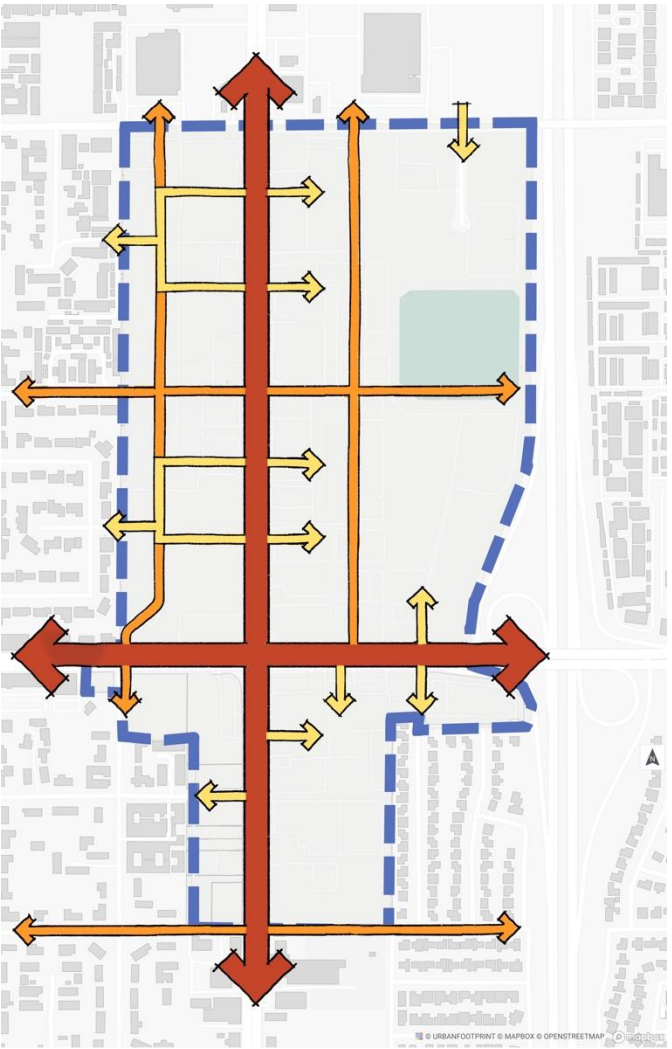
For **through connections**, plan for a direct path of travel connecting to Blackstone. Place active ground floor uses along the through connection perpendicular to Blackstone to create a pedestrian-oriented Main Street environment.



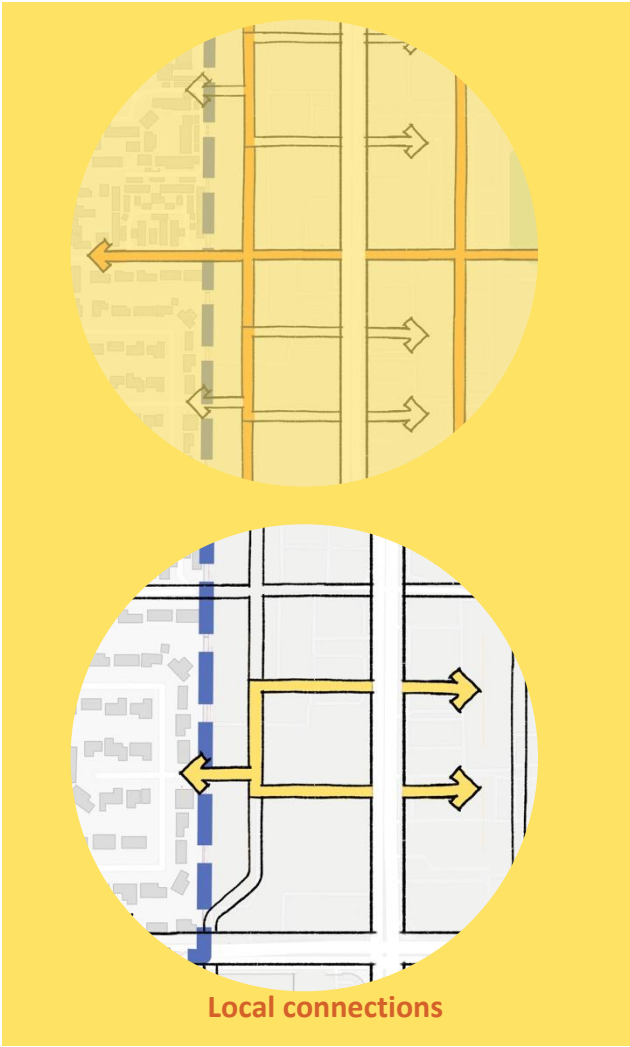
Through connections



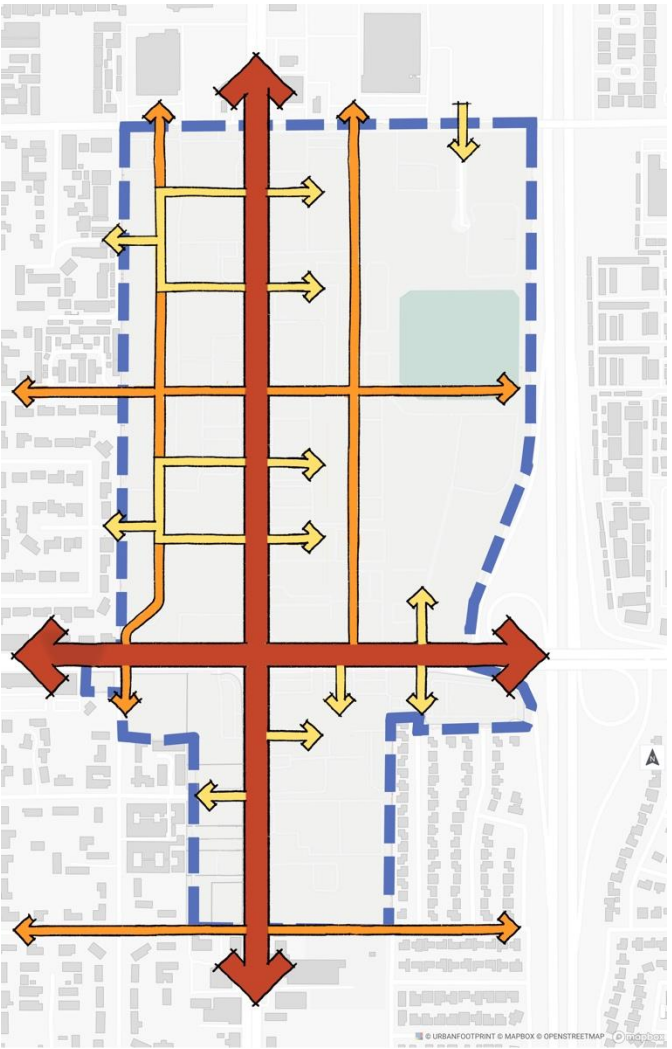
1 – Plan for connectivity



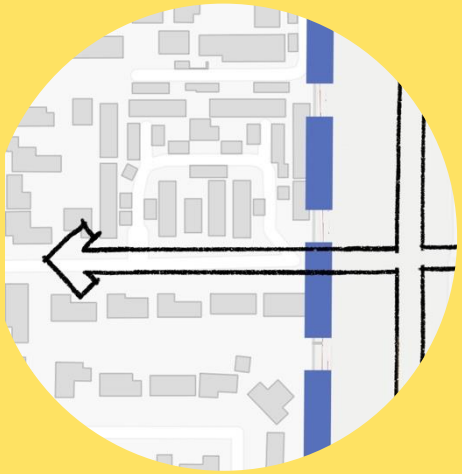
For **local connections**, plan for an indirect path of travel connecting to Blackstone. Deflect the path of travel to enclose the route from the back of the parcel to discourage excessive traffic shortcutting through the local streets.



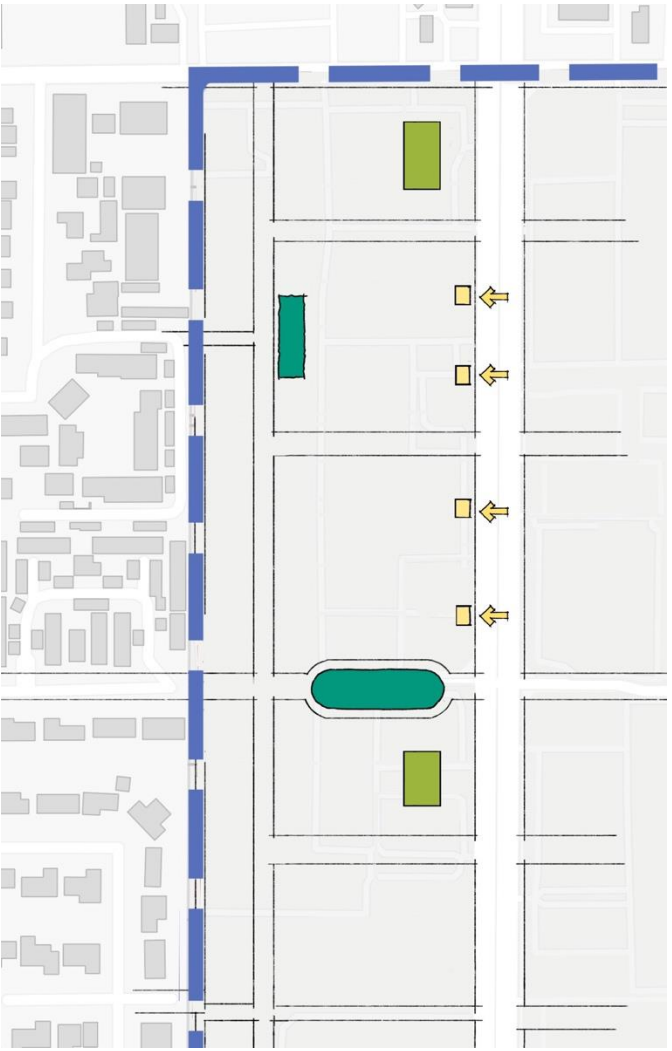
1 – Plan for connectivity



Provide **bicycle and pedestrian connections** to surrounding neighborhoods in the short term, and vehicular connections in the long term.



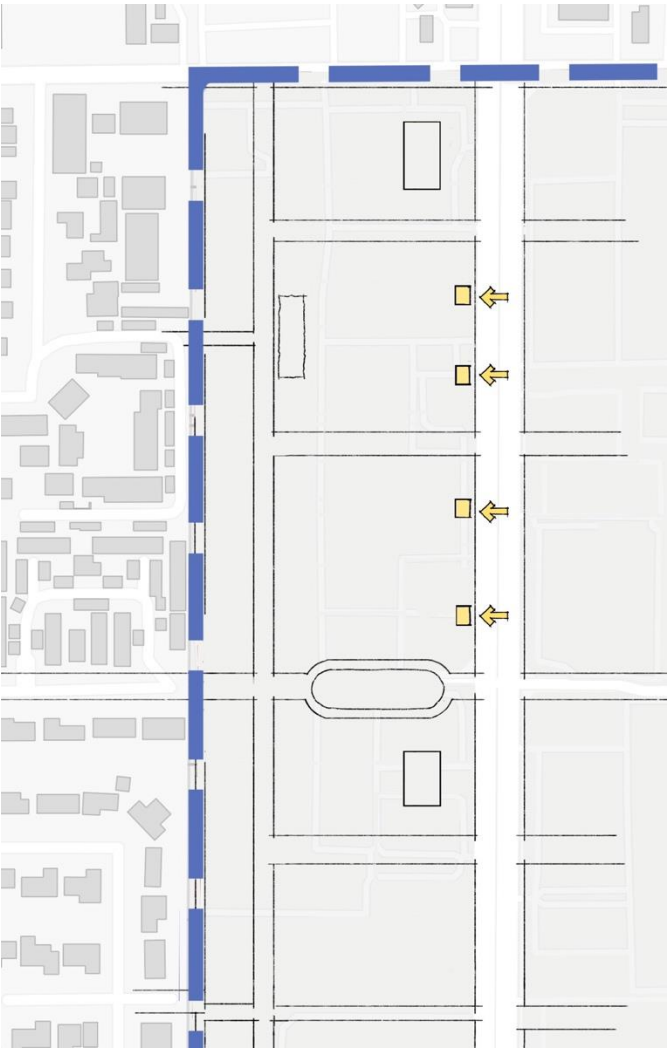
2 – Provide common open space



Compose an idealized open space network before working on individual parcels.

- Provide a variety of open space types and sizes.
- Aim to provide at least half of the required open space as common open space.

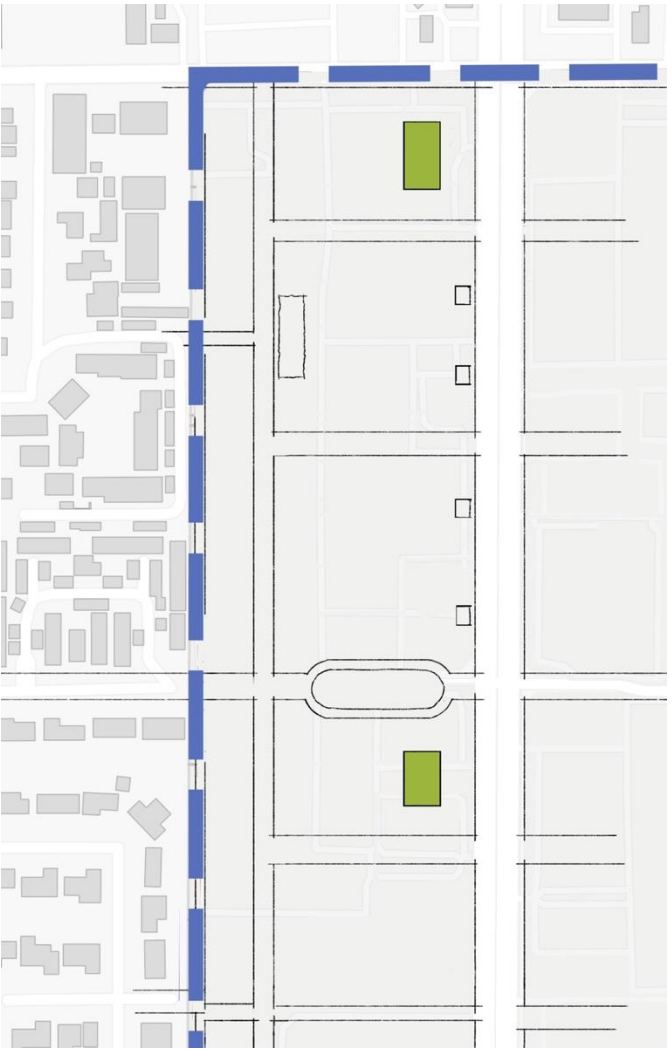
2 – Provide common open space



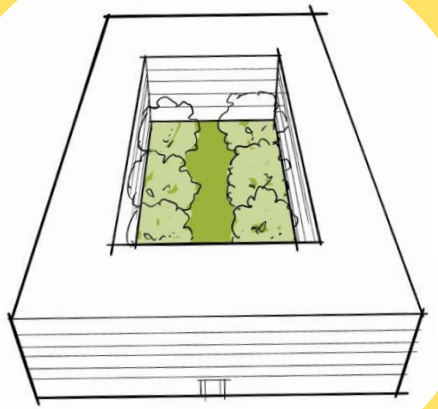
Along Blackstone, provide **semi-public open space** in the form of a forecourts or plazas. Building entrances may be accessed from these open spaces, still addressing the sidewalk but with a more comfortable entry sequence than directly adjacent to Blackstone.

Forecourt Semi-Public Open Space

2 – Provide common open space

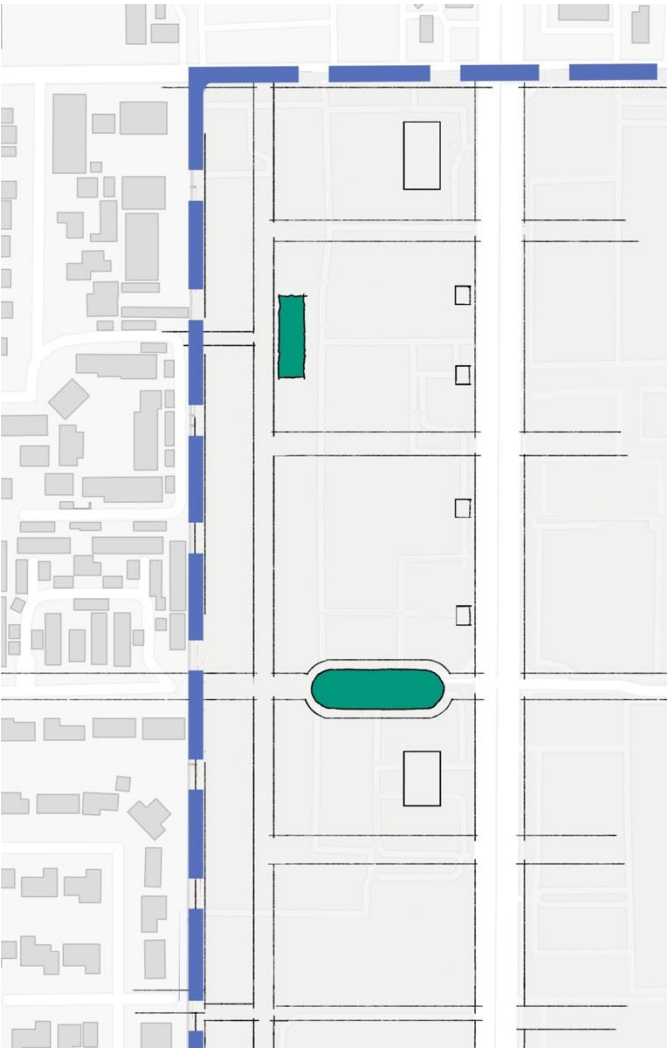


In large podium buildings, provide generous **semi-private** open space in the middle of the block shared among tenants.



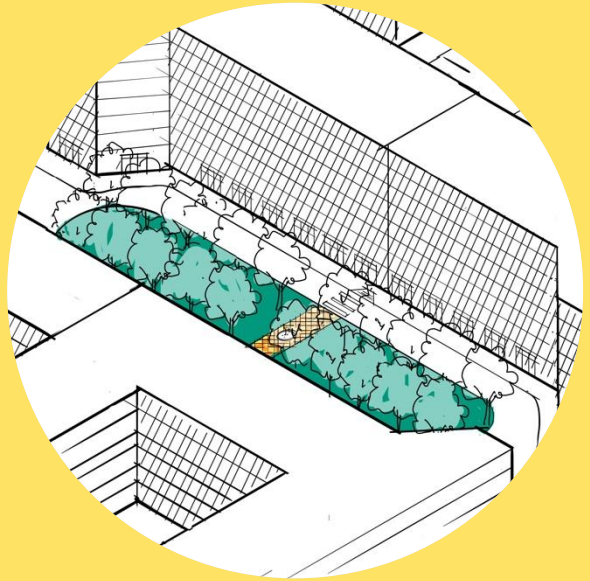
Podium Semi-Private Open Space

2 – Provide common open space



Provide **public open space** to be shared by residents, neighbors, and visitors – welcoming the entire community.

Create a comfortable and enclosed space; don't just use leftover space.

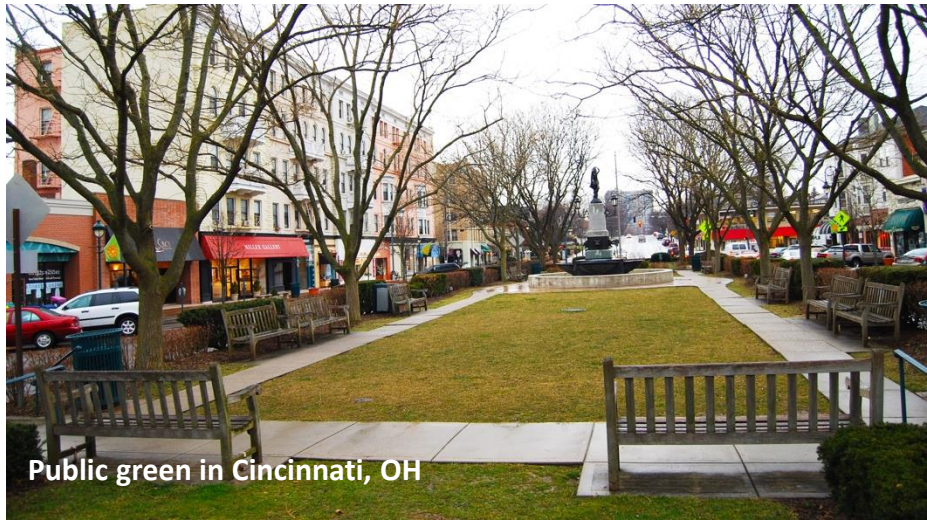


Green Public Open Space

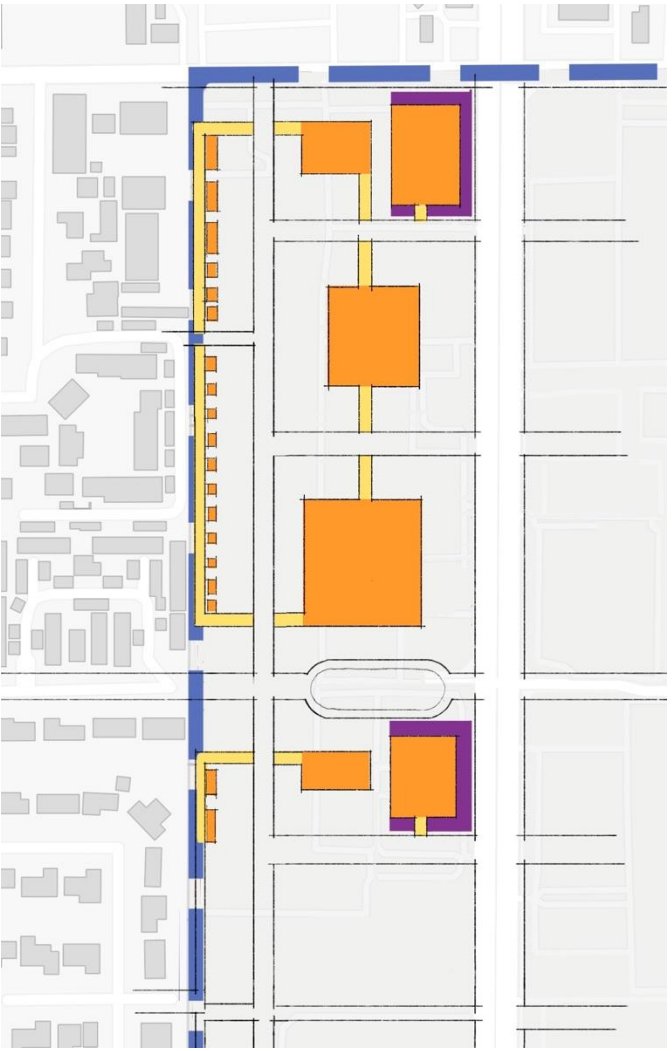
2 – Provide common open space

Semi-public forecourt in Concord, CA


Semi-private courtyard on podium in Vancouver, BC


Public green in Cincinnati, OH

3 – Shield parking from the street



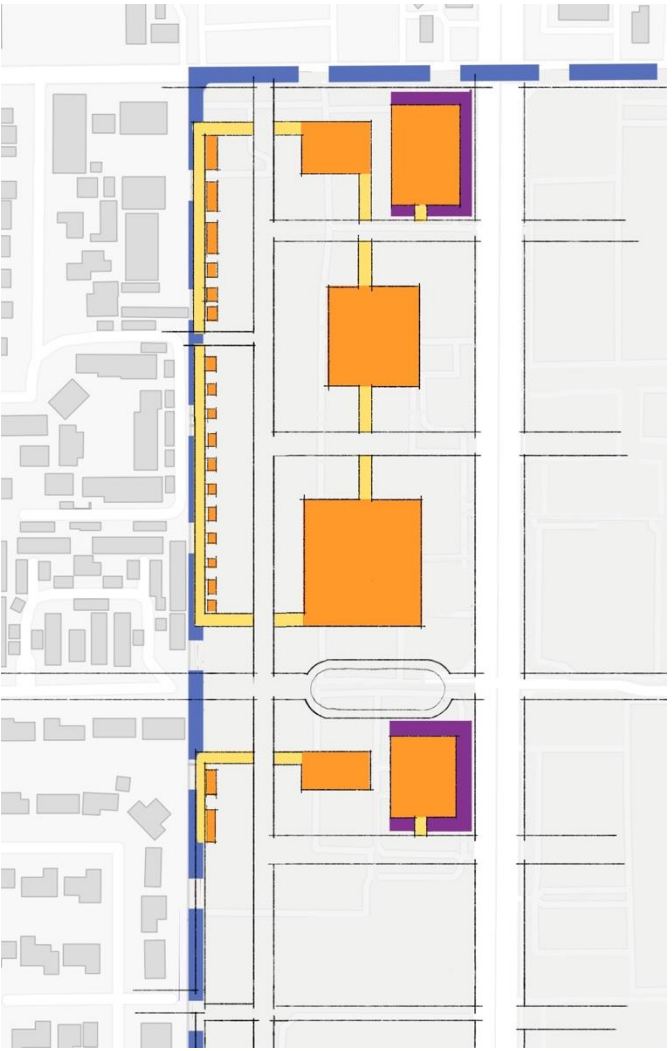
Place **surface lots** in the block interiors, lined by buildings.

Key

- Parking
- Alleys/parking access
- Ground-floor liner

Surface parking behind building

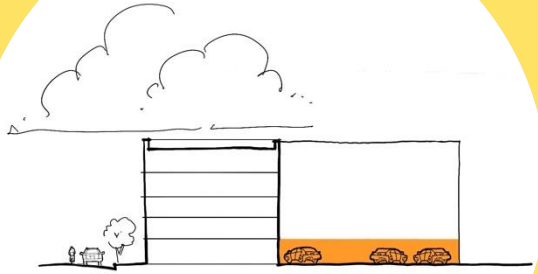
3 – Shield parking from the street



If parking is located within a **parking structure**, include a liner with an active use on the ground floor.

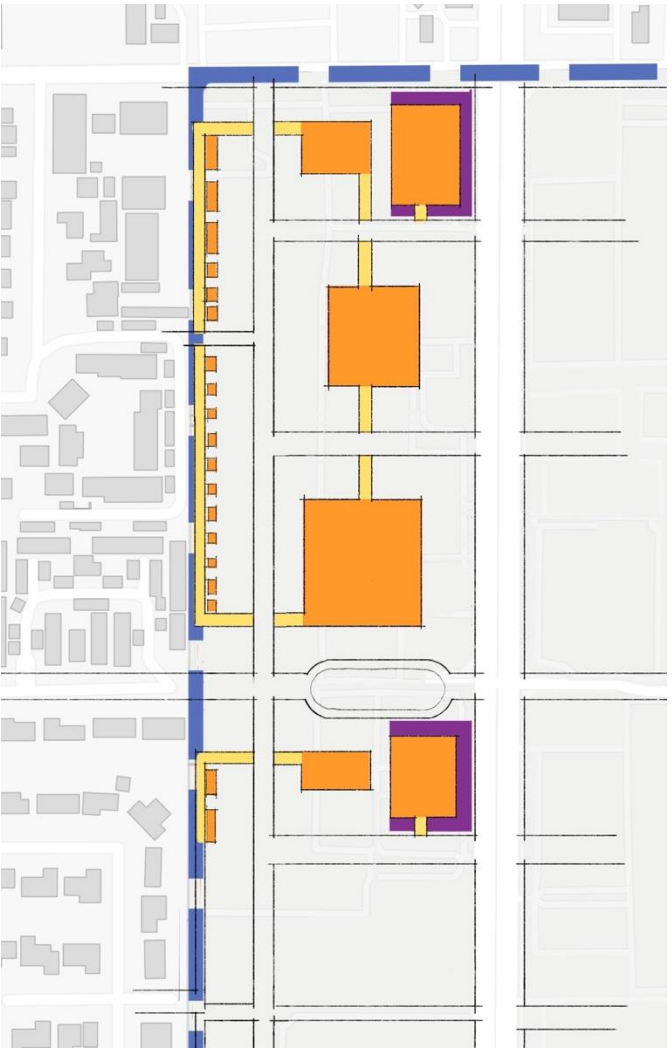
Key

- Parking
- Alleys/parking access
- Ground-floor liner



Structured parking with ground-floor liner

3 – Shield parking from the street



Design **alley-loaded** blocks rather than front-loaded driveways in order to minimize the number of curb cuts and enhance comfort and safety for pedestrians and cyclists.

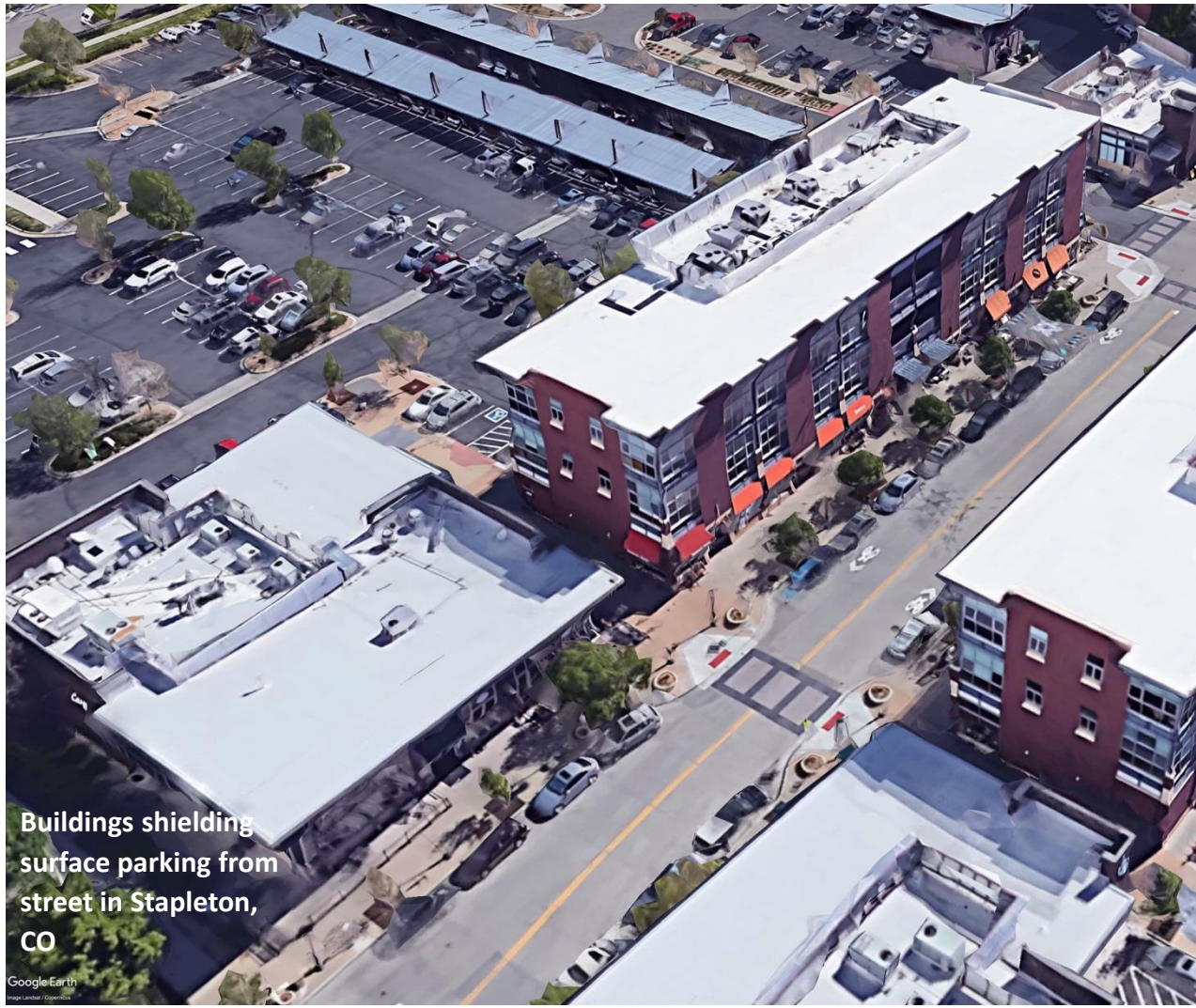
Key

- Parking
- Alleys/parking access
- Ground-floor liner

Alley-loaded detached garage

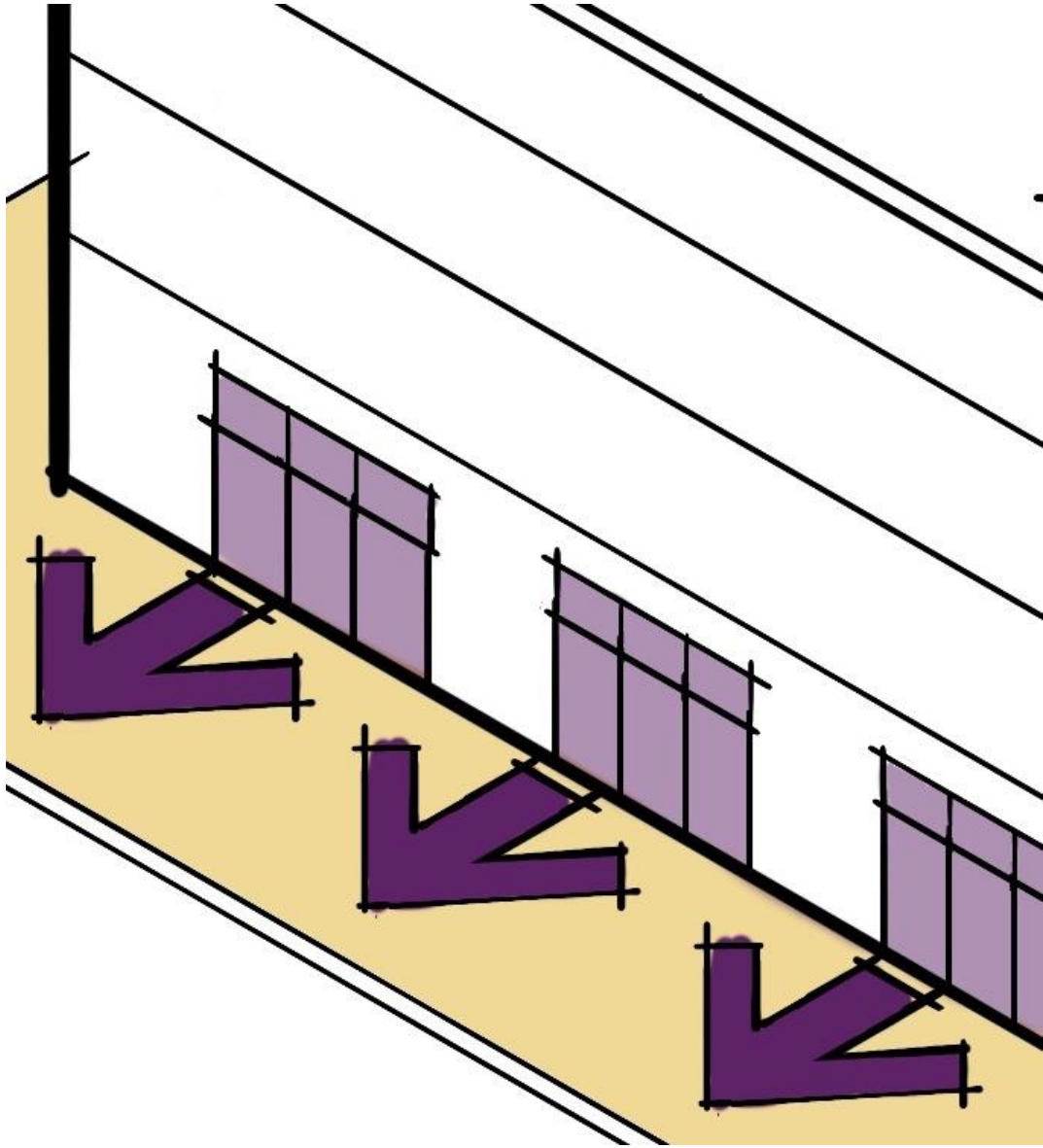
3 – Shield parking from the street

Structured parking lined with ground-floor active uses in Berkeley, CA

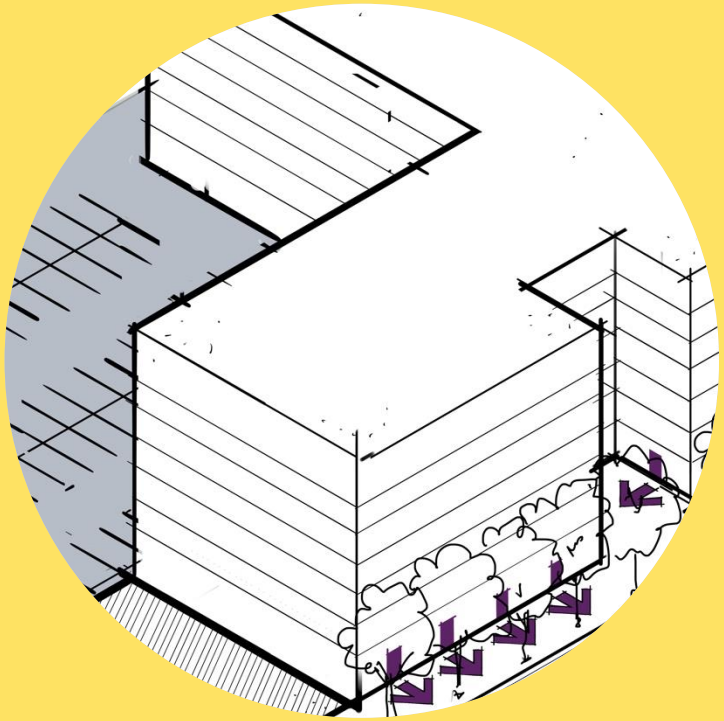


Buildings shielding surface parking from street in Stapleton, CO

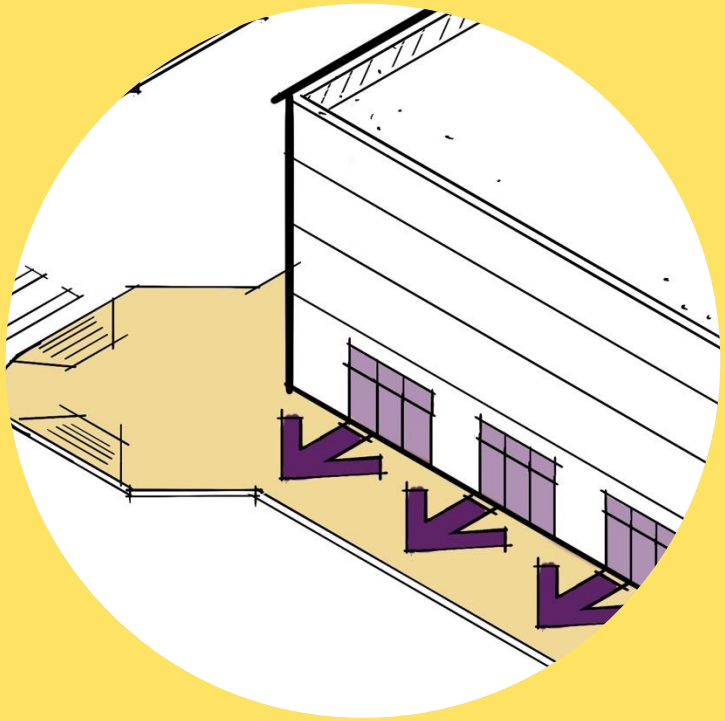
Building Scale



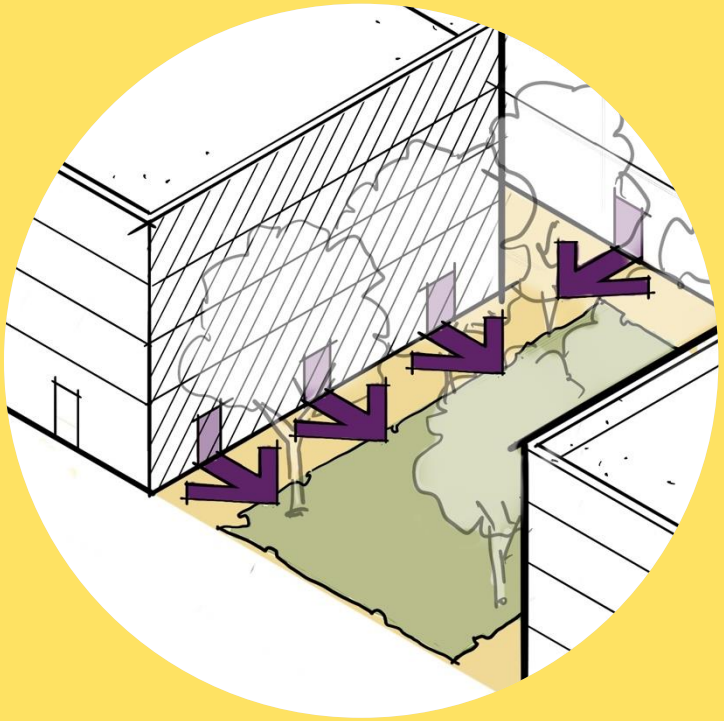
4 – Orient buildings toward pedestrian realm



Orient away from parking

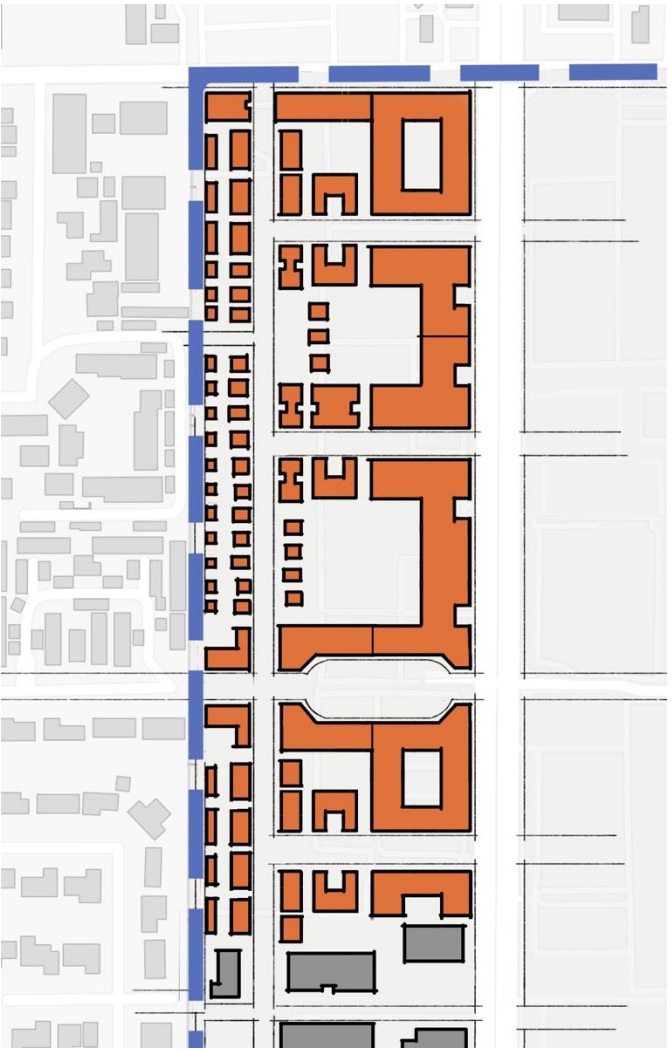


Orient toward sidewalk

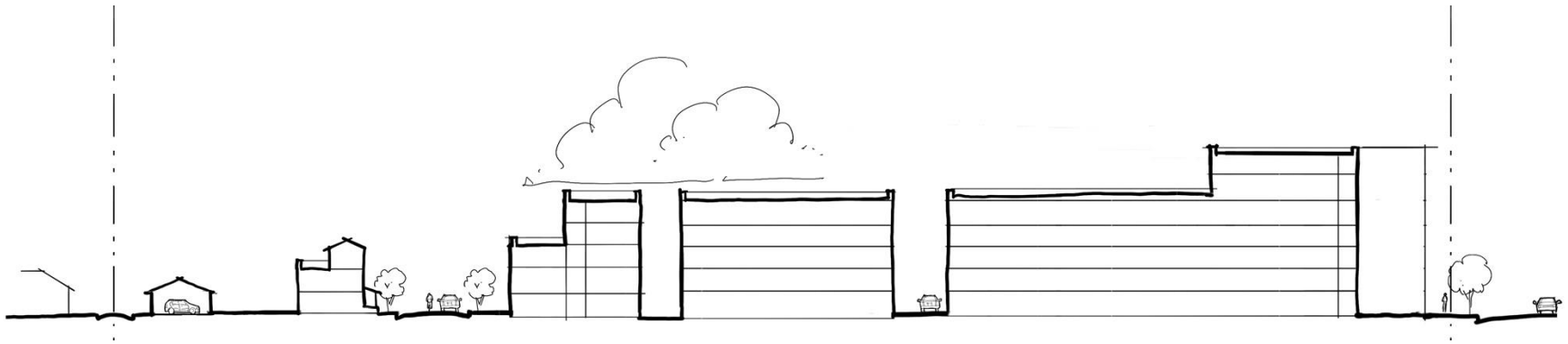


Orient toward common open space

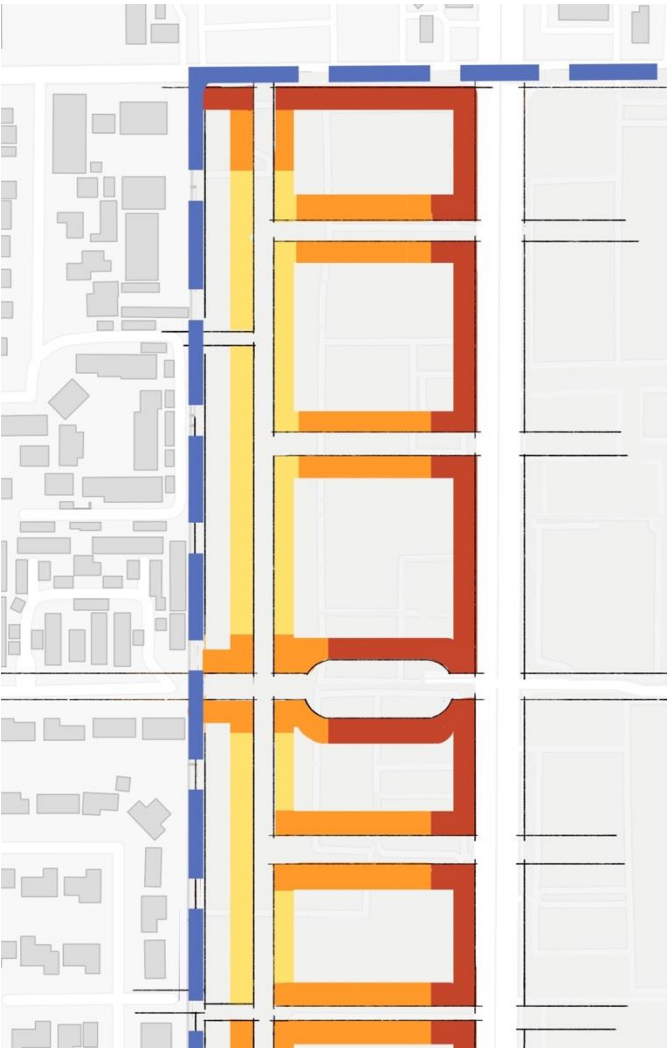
5 – Transition to context in form and scale



- Place **block form** buildings along Blackstone.
- **Step down** to form and scale of neighboring properties.
- Transition in form and scale **across alleys or rear property lines**, not across streets.



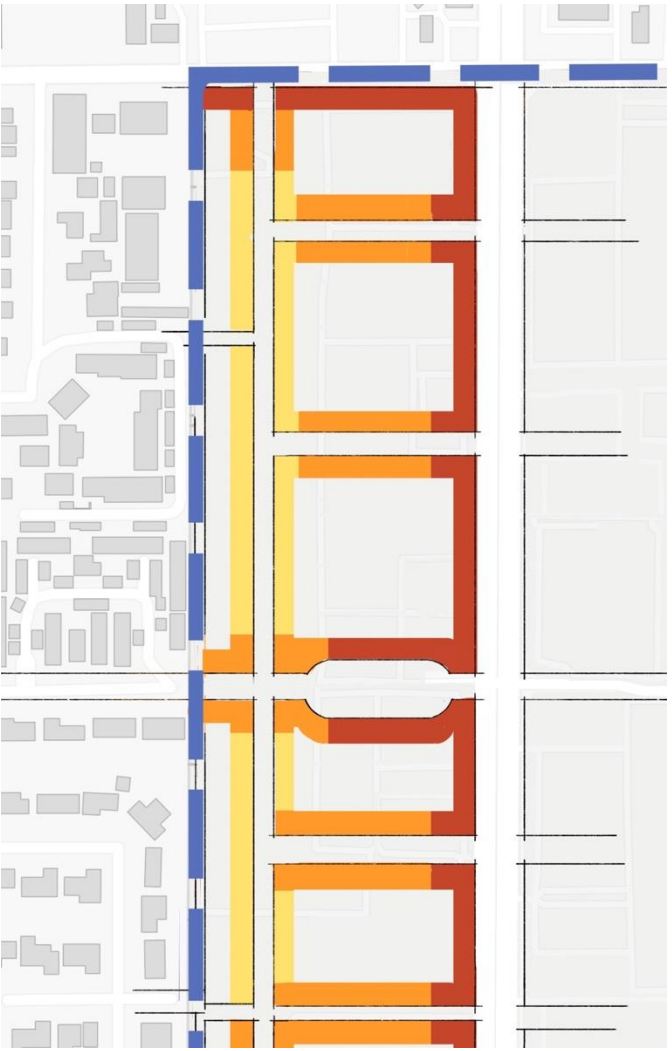
6 – Shape a legible public realm with frontages



Frontages are the interface between the public realm (street and sidewalk) and the private realm (building). Different frontage types shape different types of walkable environments—from low-intensity neighborhoods and main streets to higher-intensity corridors.

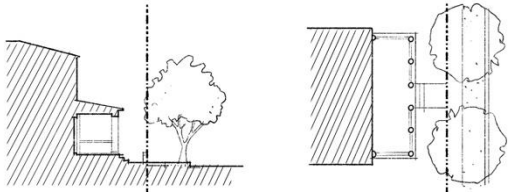
At left is an example of the way frontage types can reinforce the intent of a plan.

6 – Shape a legible public realm with frontages

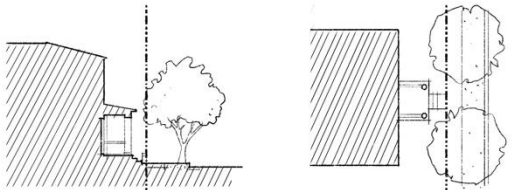


Examples of frontage types:

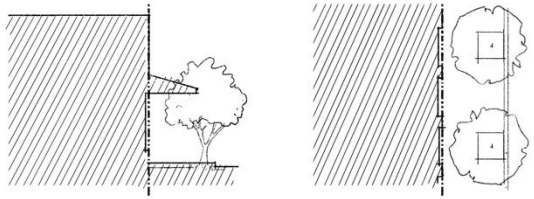
Porch



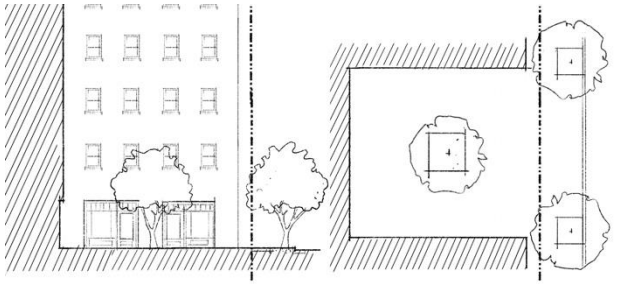
Stoop



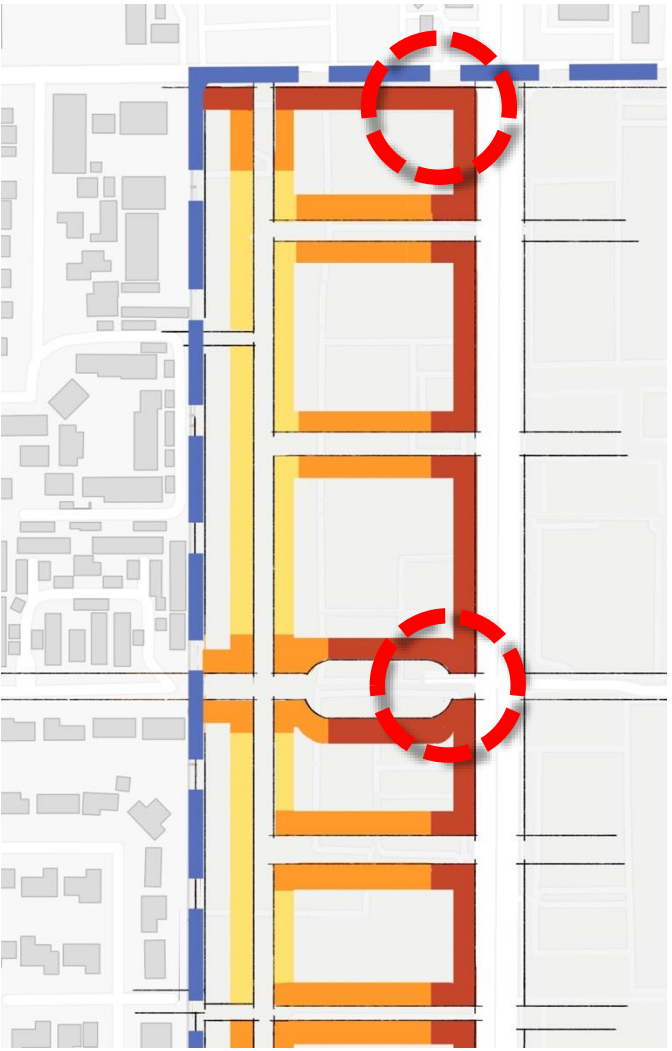
Shopfront



Forecourt



6 – Shape a legible public realm with frontages



Think about clustering retail and shopfronts at nodes (e.g. at important intersections or surrounding public open space) if continuous retail frontage is not viable.

6 – Shape a legible public realm with frontages

Porches

Stoops

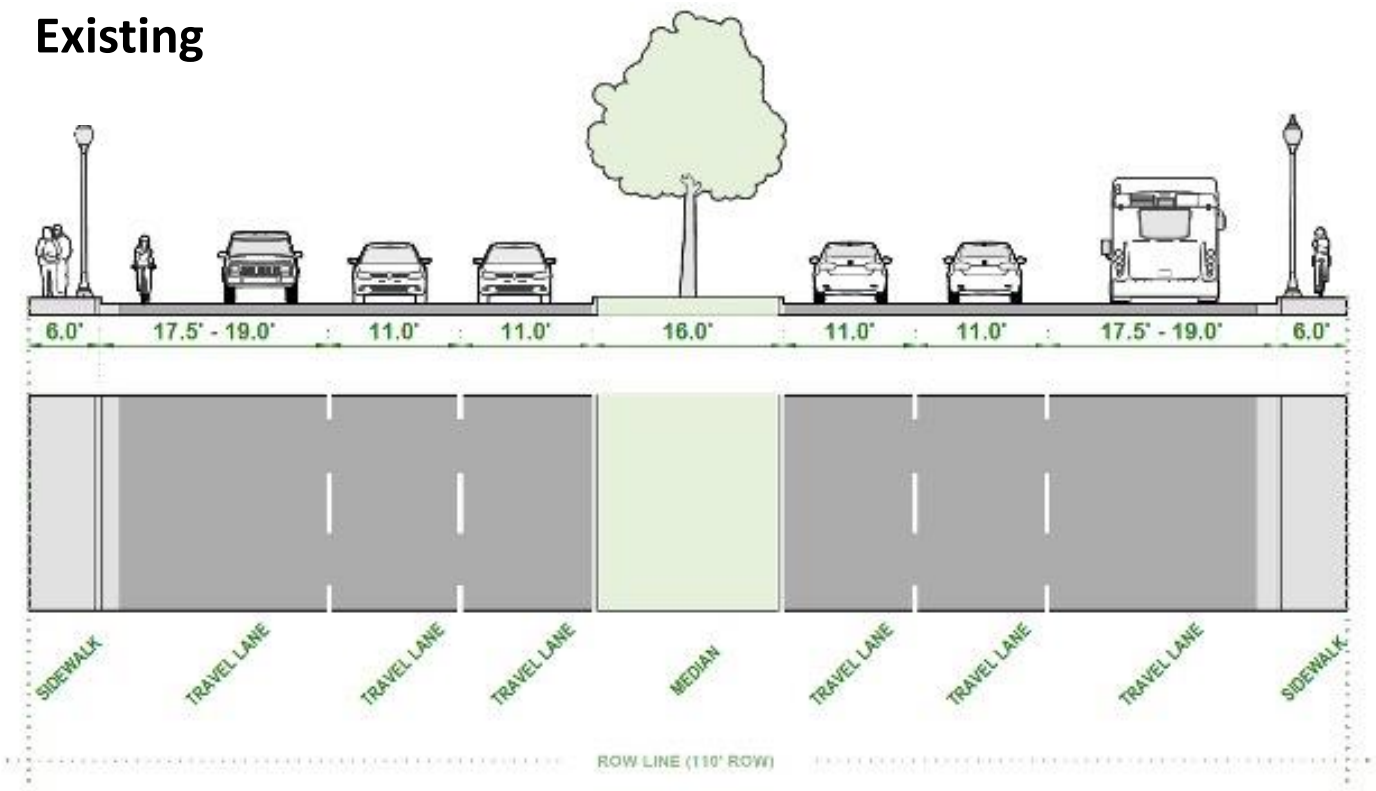
Shallow forecourt can serve as residential entrance

Shopfronts

Shopfront

7 – Expand Blackstone sidewalk with setbacks

On Blackstone, set back buildings as needed (within 0’-10’ zoning allowance) to create **a sidewalk at least 18’ wide**; extend sidewalk paving to building face.



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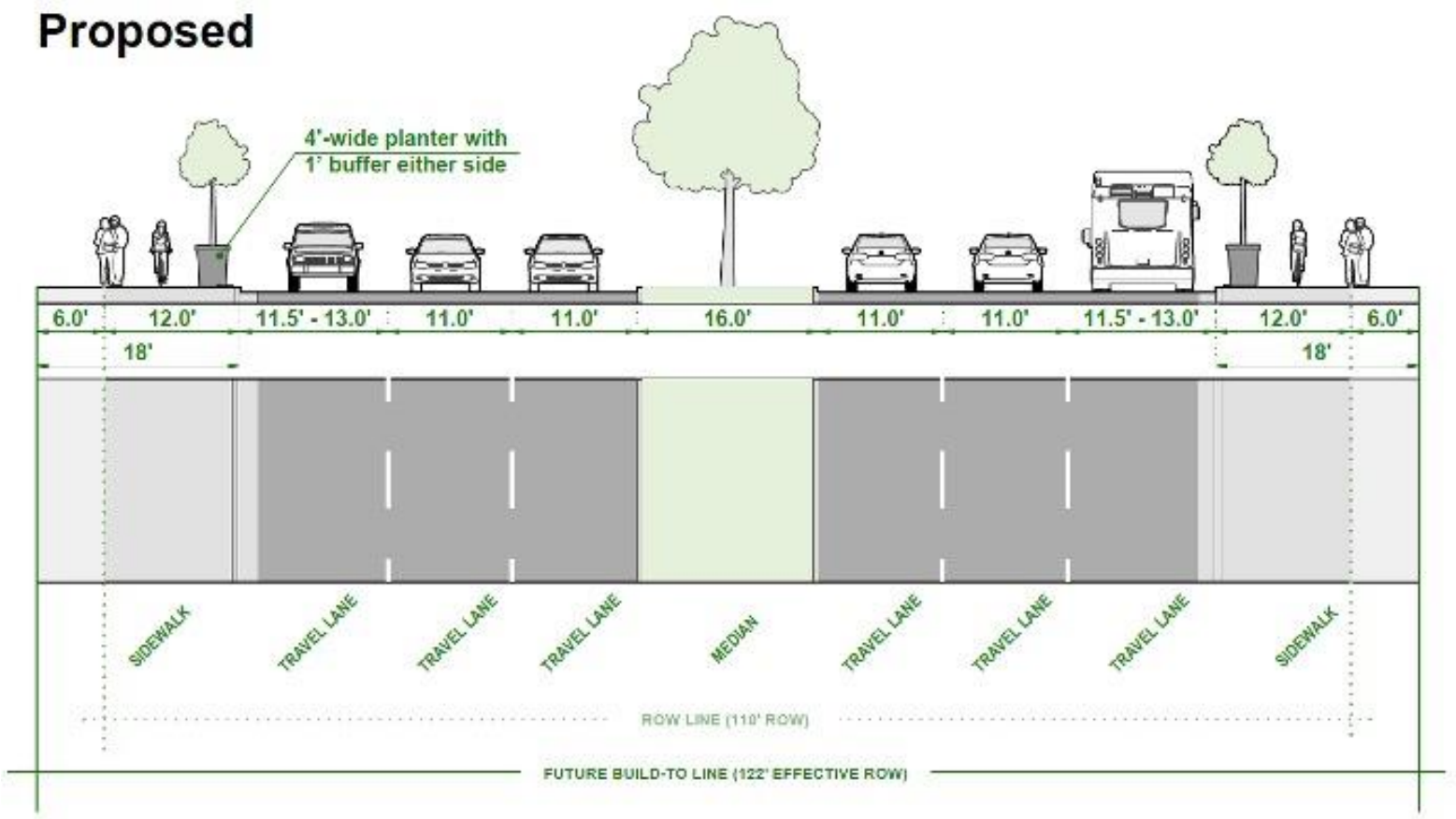

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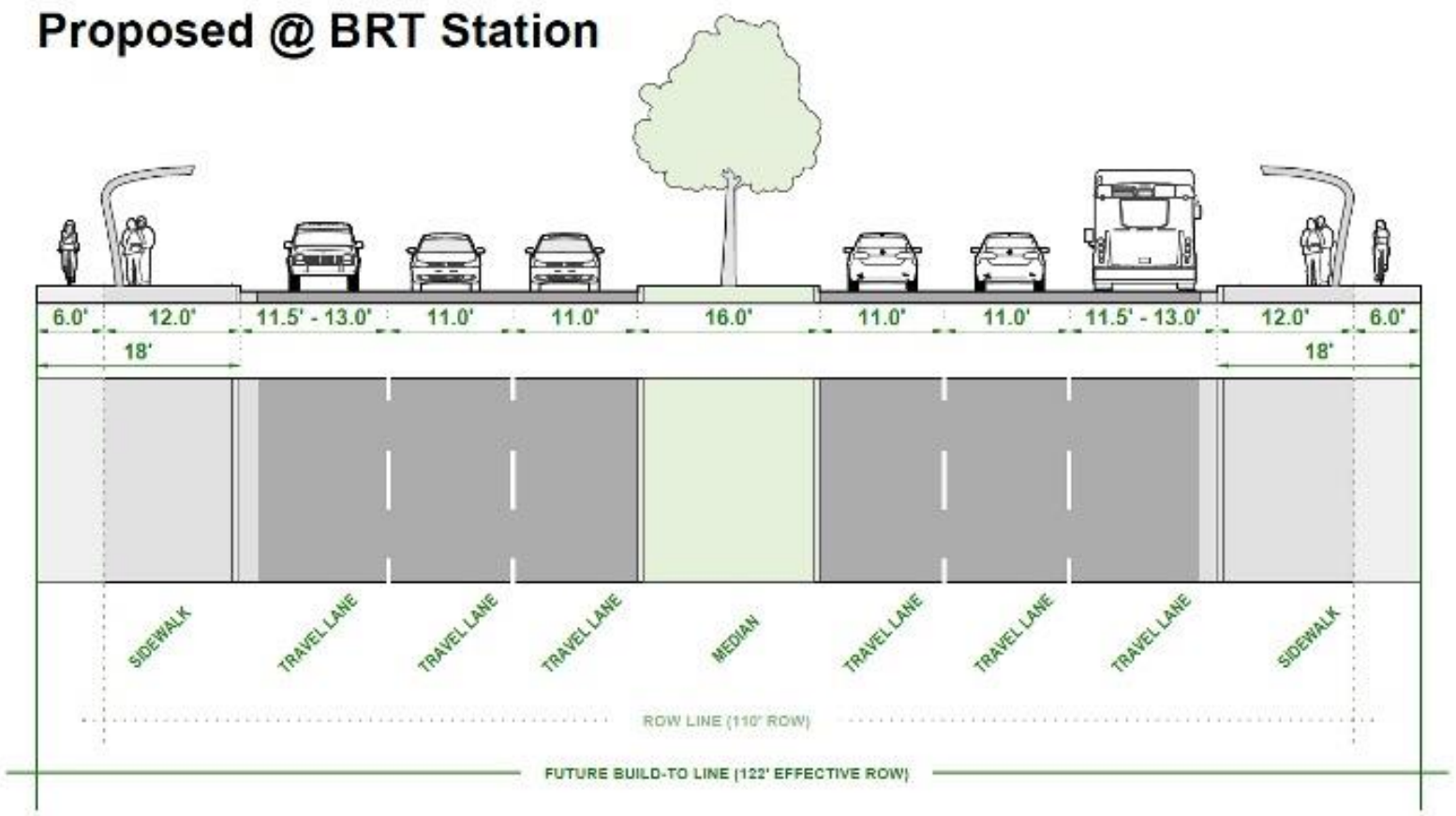

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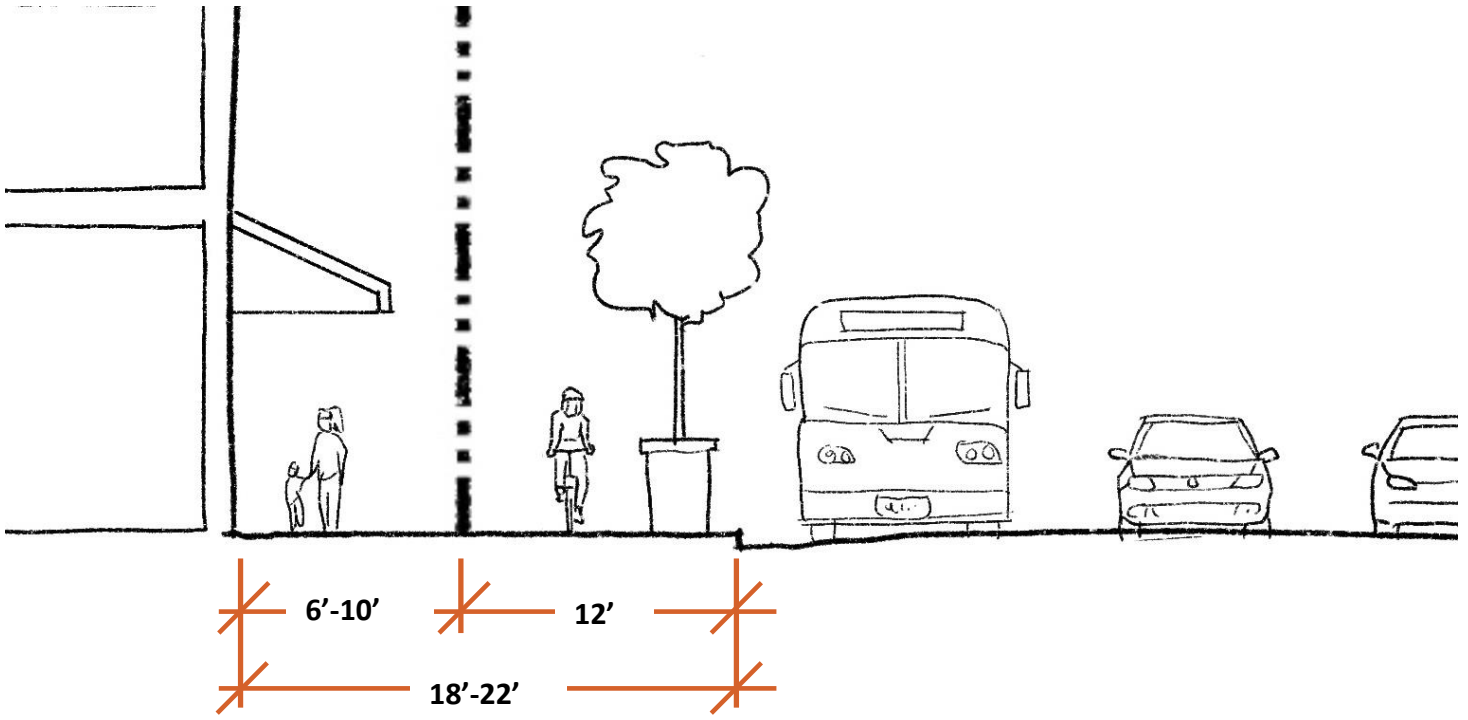

7 – Expand Blackstone sidewalk with setbacks

El Cerrito, CA

Los Angeles, CA