SFMTA

Mid-Valencia Bikeway Pilot Project 3-month Evaluation

SFMTA Board of Directors Meeting

February 20, 2024

Agenda

1. Project Background and How we Got to Today
2. 3-month Pilot Evaluation results
3. What We Heard Since Implementation and Next Short-Term Steps
4. Medium-Term Steps
5. Long-Term Plans

Project Background and How We Got to Today

Project Goals

1. Improve safety for all who travel on Valencia Street
2. Preserve economic vitality of Valencia Street
3. Ensure movement and access of goods and people

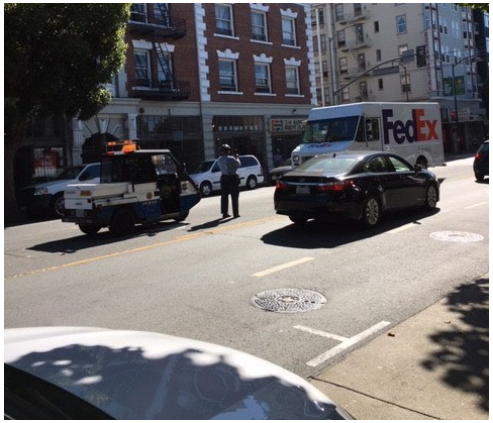
Project Background

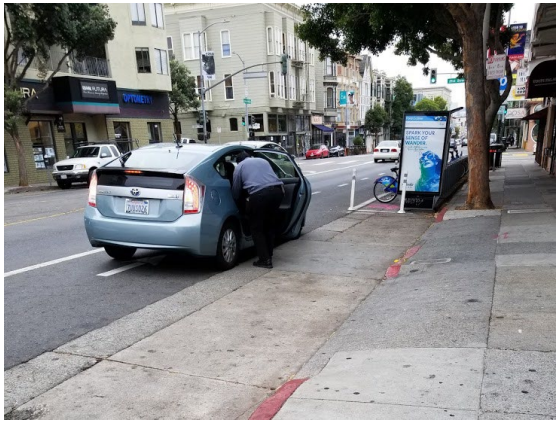
- **1999** – First bike lanes striped
- **2010** – Streetscape project, sidewalks widened 15th-19th
- **2019** – Side running protected bikeway implemented between Market and 15th streets.
- **2020** – Quick-build proposed between 19th Street and Cesar Chavez. Proposal paused due to COVID-19.
- **2021-2023** – COVID-19 and expansion of Shared Spaces added complexity, requiring reassessment of viable options.
- **Summer 2022 – Spring 2023**: mid-Valencia pilot planning, design and outreach
- **April 2023** – Pilot approved: center-running bikeway chosen to maintain parklets and parking.
- **May – July 2023** – Pilot construction
- **August 2023** – Pilot period officially started
- **Present** – Pilot evaluation and design revisions, additional merchant engagement, start of long-term studies

Pre-Pilot Conditions and Issues

- **Traffic Safety:** Immediate need for improvements because of high number of traffic collisions
  - Valencia Street is a major north-south route in the City's bike network
  - Street design created multiple conflict points, especially between people in vehicle and on bikes (dooring and vehicle-bike interactions along the street)
- **Limited curb space:** Imbalance between demand and supply
  - High volume and frequency of commercial loading and TNCs
  - Pre-pilot, 67% of loading was double-parking, 40% in the bike lane
  - Loading conditions further exacerbated vehicle-bike conflicts due to constant bikeway blockage

Pre-Pilot Conditions and Issues





Previous Pilot Design - Bikeway

Side-running bikeway

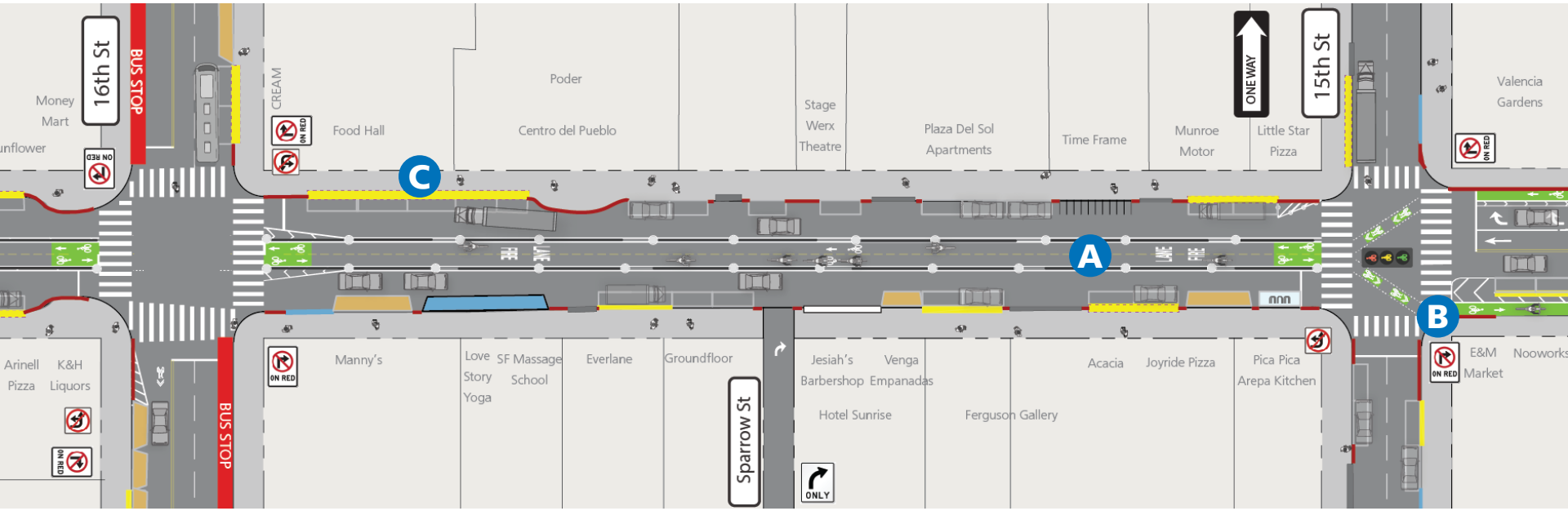
- Implemented on Valencia between Market and 15th Street
- Standard protected bikeway design that is seen throughout the city
- Considered for the mid-Valenca pilot

Design Constraints and Considerations

- **Space constraints:** Limited roadway space for most of the pilot area
- **Emergency response:** 26' of clear width requested for access and operations
- **Shared Spaces:** Parklets are vital to many businesses
    - Keeping them at the curb means losing additional spaces for the bike lane to go around
    - Moving them away from the curb adds costs and accessibility issues
- **Merchant feedback:** Expressed the importance of the curb lane to support commercial activities (i.e., Shared Space parklets and commercial loading)
- **Existing loading needs:** Higher concentration of businesses with competing loading needs along the corridor
    - Exemplified by the rampant double parking

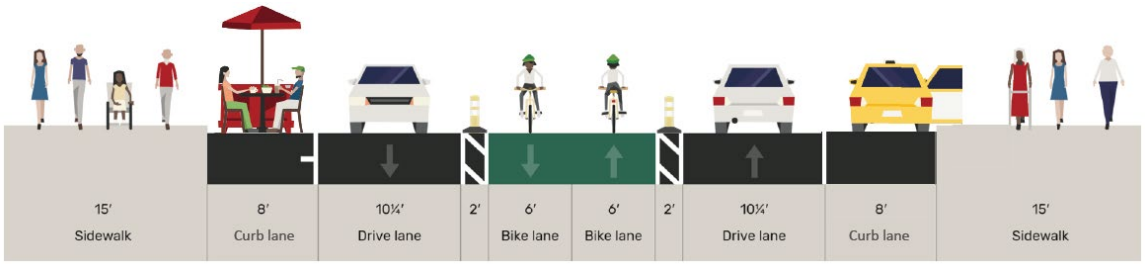
Mid-Valencia Pilot Design

15th to 19th Streets



Three main elements of the pilot design:

1. Center-running protected bikeway
2. Pedestrian improvements
3. Curb management plan



3-Month Pilot Evaluation Results

Pilot Evaluation Framework

Safe Behavior

- User compliance with left-turn restrictions and bicycle signals
- Vehicle speeds
- Bicycle and pedestrian conflicts at the intersection

Mobility

- Bicycle, pedestrian, and vehicle volumes
- Transit travel times – *6-month*
- Corridor access (origin and destinations) – *6-month*
- Change in vehicle congestion levels

Effective Design

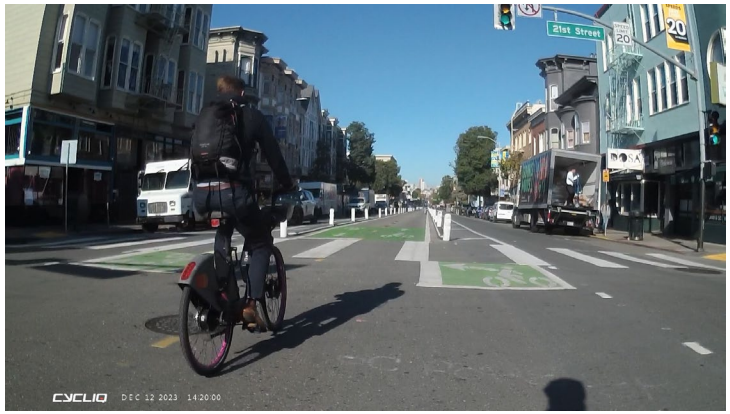
- Traffic collisions
- Vehicle loading behavior
- Bicycle positioning along the street
- Bikeway ease of access – *6-month*
- Emergency vehicle interaction with the bikeway – *6-month*

Data collection:

Pre-implementation timeframe – October 2022
Post-implementation timeframe – October 2023 (3-month)

Summary of Evaluation Findings (3-month)

- Biking experience that has **fewer multimodal conflicts** and is a **more predictable** experience, especially with vehicle behavior
    - Less bikeway blockage, which in the past forced bicyclists into the roadway to dodge parked or encroaching cars
    - Fewer instances of dooring
- Better accommodated **diverse loading needs** and reduction in illegal vehicle commercial loading behaviors
- New conflicts, which are less frequent than previous ones in the pre-pilot conditions, can be **mitigated with design adjustments** and continued coordination for enforcement from City partners

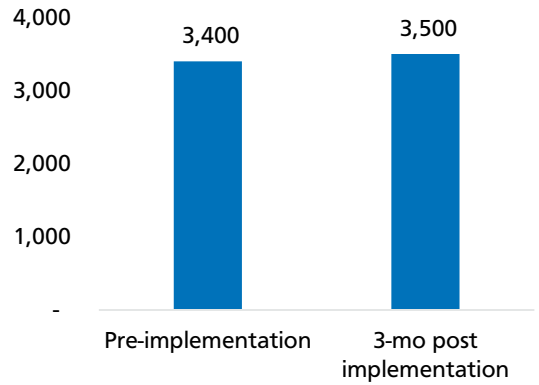


3-month Evaluation Findings

Mobility

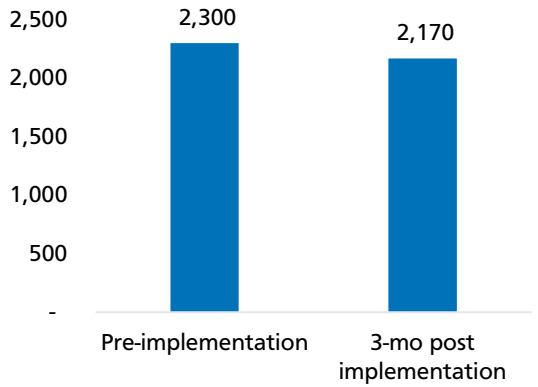
- Bicycle, pedestrian, and vehicle volumes
- Change in vehicle congestion levels

There are no significant changes to daily bicycle volumes.



Bicycle volume: **+3%**

There are no significant changes to daily pedestrian volumes.



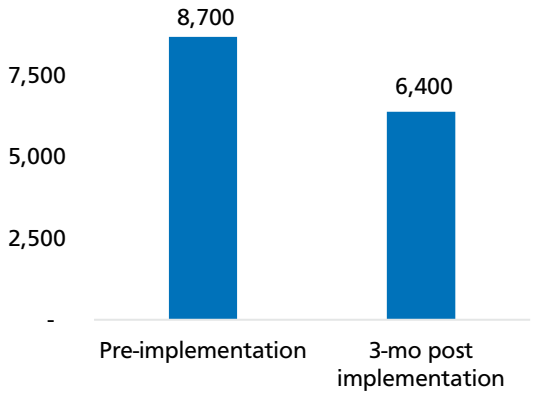
Pedestrian volume: **-5%**

3-month Evaluation Findings

Mobility

- Bicycle, pedestrian, and vehicle volumes
- Change in vehicle congestion levels

Daily vehicle volumes are down.



Vehicle volume: **-26%**

It is estimated that

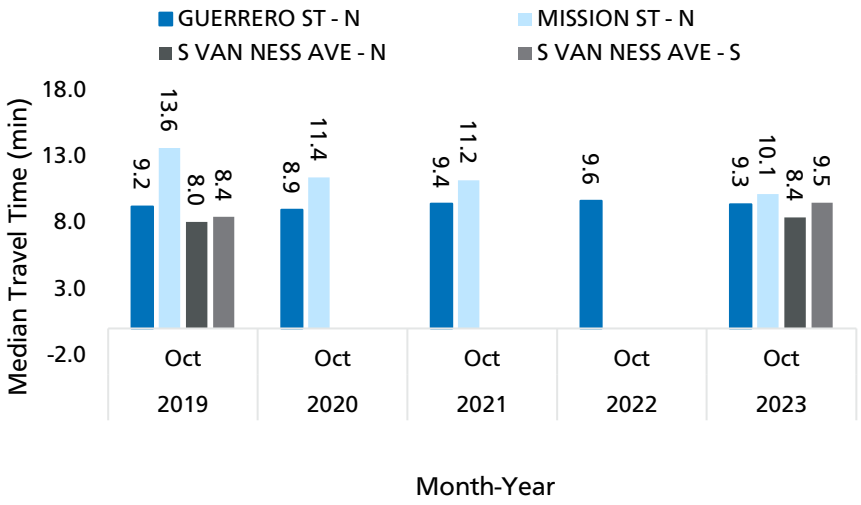
- Total loading events have increased by 27%
- Passenger drop-offs by ride hail services (Uber, Lyft, etc.) and taxis have increased by 126% on Fridays
- Passenger drop-offs by passenger vehicle and pick-up trucks have increased by 13% on all days observed
- Goods pick-up (potentially food delivery) has increase by 43%.

3-month Evaluation Findings

Mobility

- Bicycle, pedestrian, and vehicle volumes
- Change in vehicle congestion levels

- Vehicle congestion metrics (change in vehicle travel time and vehicle speed) **showed no significant changes on parallel neighboring streets** due to the pilot design on Valencia Street.
- We heard feedback that there has been observed increased congestion along Valencia at transition points at 15th and 23rd streets. This will be further examined in the 6-month evaluation.



Location	Average Vehicle Speed		
	Pre	Post 3-mo	Difference
16th Street	18	20	2
20th Street	18	19	1
22nd Street	21	21	0
Capp Street	16	15	-1
Guerrero Street	25	26	1
Hill Street	17	18	1
Liberty Street	15	15	0
Mission Street	20	21	1
South Van Ness Ave	22	24	2
Sycamore Street	14	14	0

3-month Evaluation Findings

Effective Design

- Review of traffic collisions
- Vehicle loading behavior
- Vehicle encroachment of bikeway
- Bicycle positioning along the street

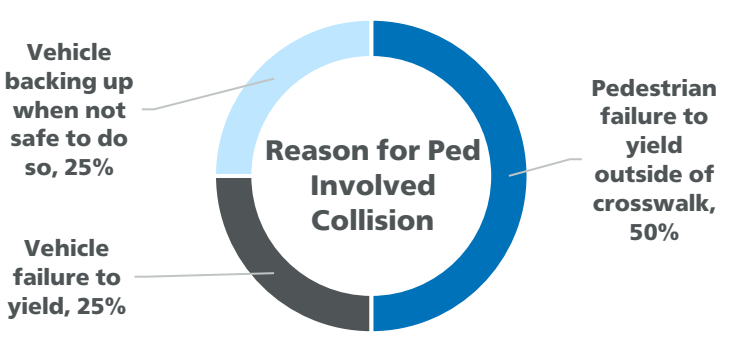
- Many of the factors that led to bicycle-related collisions in the pre-pilot conditions have been significantly reduced in the 3-month evaluation review of traffic collisions. This is true for both midblock and at the intersection.
- Of the 12 bicycle-related collisions that have occurred since the pilot was implemented, 6 of them were due illegal vehicle left/U-turns. The project team will work on mitigating this issue through design adjustments and coordination with SFPD for enforcement of the moving violations.
- None of the observed pedestrian collisions in post-pilot conditions are attributable to the pilot design.

Valencia at Sycamore intersection

3-month Evaluation Findings

Effective Design

- Review of traffic collisions (cont.)
- Vehicle loading behavior
- Vehicle encroachment of bikeway
- Bicycle positioning along the street



Valencia Collision Map

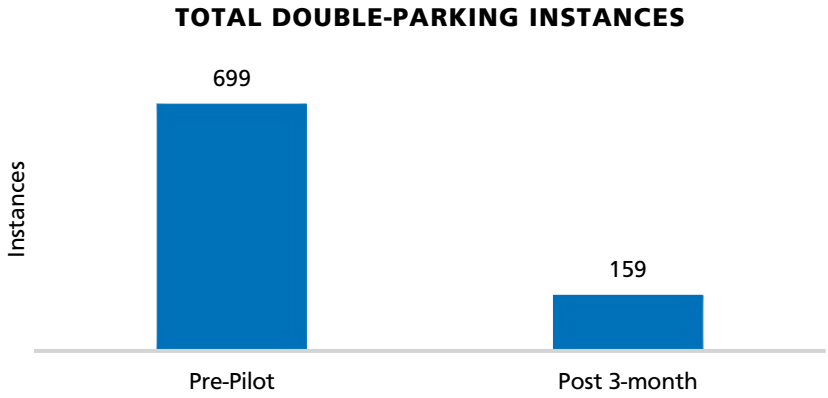
Legend: Bicycle/scooter involved | Pedestrian involved | Vehicle only | *Collision data is from Aug through Dec 2023.*

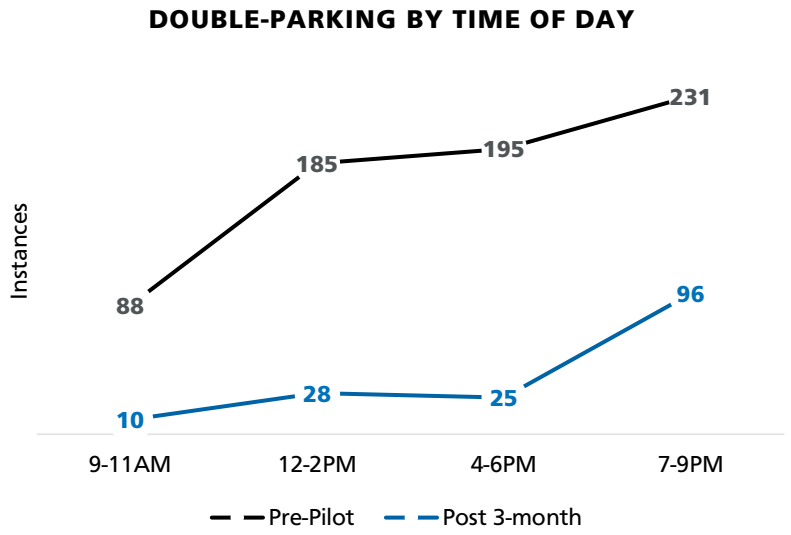
3-month Evaluation Findings

Effective Design

- Vehicle loading behavior
- Vehicle encroachment of bikeway
- Bicycle positioning along the street
- Review of traffic collisions

Of the total observed loading events, **double-parking instances decreased by 77%. 87% of loading is now done at the curb**. Double-parking is still the most common on the densest blocks and during the evening hours as dinner delivery services increase.

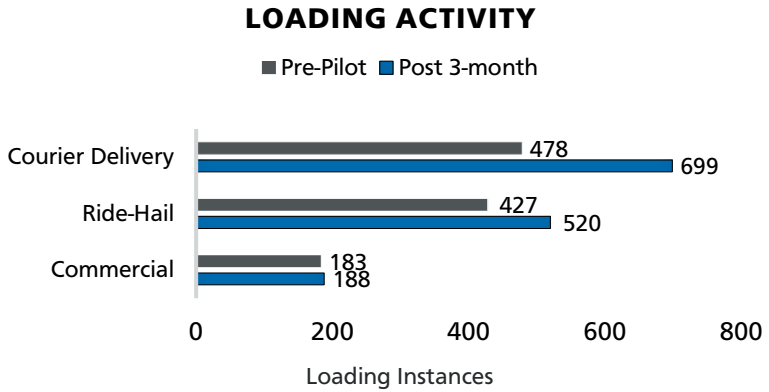




3-month Evaluation Findings

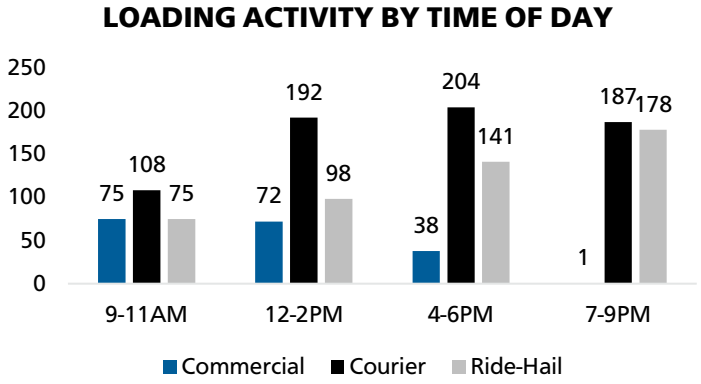
Effective Design

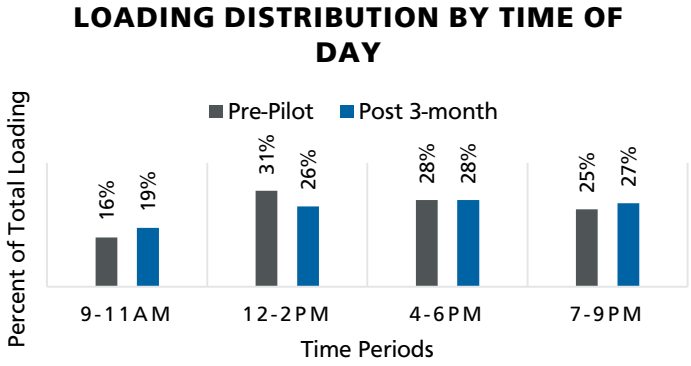
- Vehicle loading behavior (cont.)
- Vehicle encroachment of bikeway
- Bicycle positioning along the street
- Review of traffic collisions



Loading continues to occur at the same rates throughout the day into the evening hours.

Loading done with commercial vehicles did not change, and primarily occurs in the morning. **A 23% increase in goods and passenger pick-up and drop-offs** was observed, making up most of the evening loading activity. This supports the regulations set forth by the dual-use zones along the curbs.



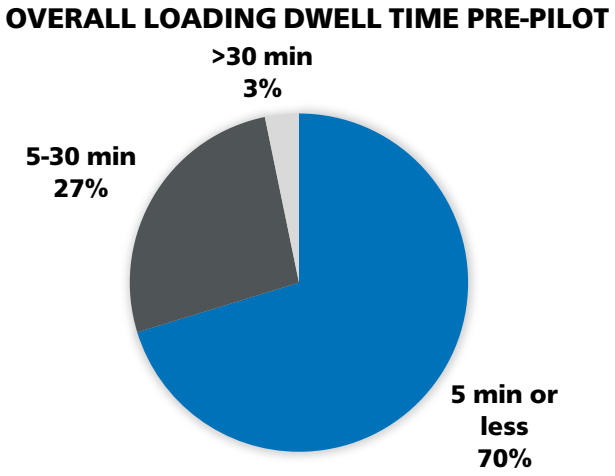


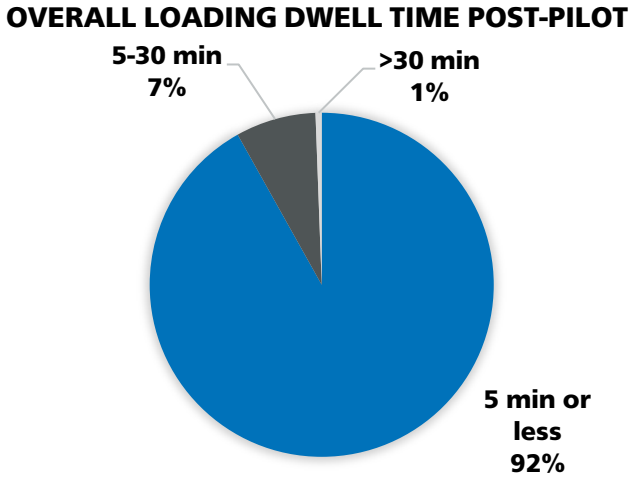
3-month Evaluation Findings

Effective Design

- Vehicle loading behavior (cont.)
- Vehicle encroachment of bikeway
- Bicycle positioning along the street
- Review of traffic collisions

Before the pilot, 30% of loading took more than 5 minutes. As on-demand loading activity increased, 92% of the loading now takes less than 5 minutes. This supports the use of the 5-minute general loading zones included in the curb plan.



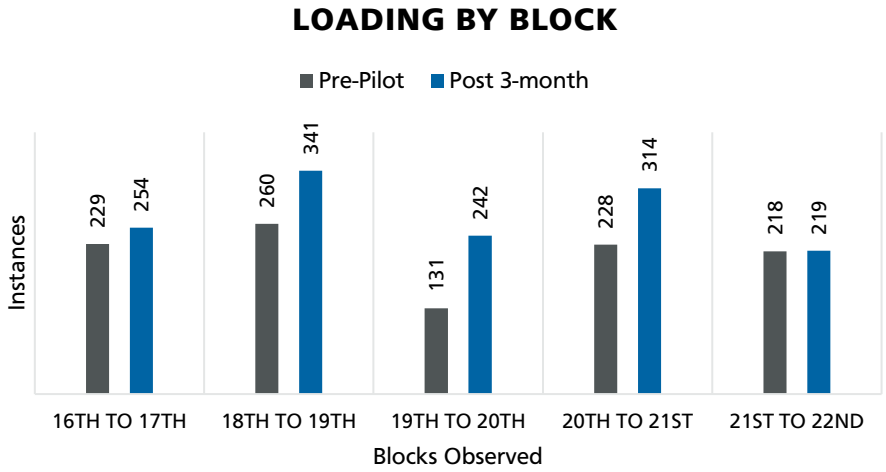


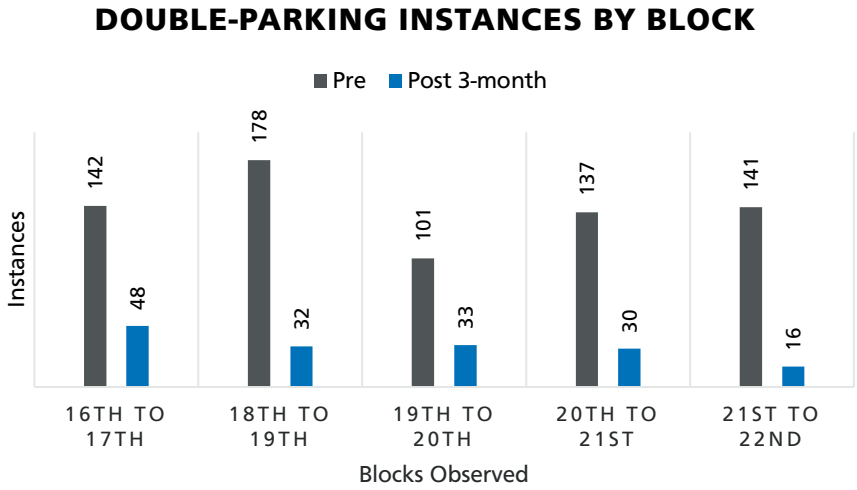
3-month Evaluation Findings

Effective Design

- Vehicle loading behavior (cont.)
- Vehicle encroachment of bikeway
- Bicycle positioning along the street
- Review of traffic collisions

Loading needs vary by block and while **double-parking significantly decreased** along the entire pilot area, it still occurs. We will continue to calibrate the curb management plan to meet business needs.



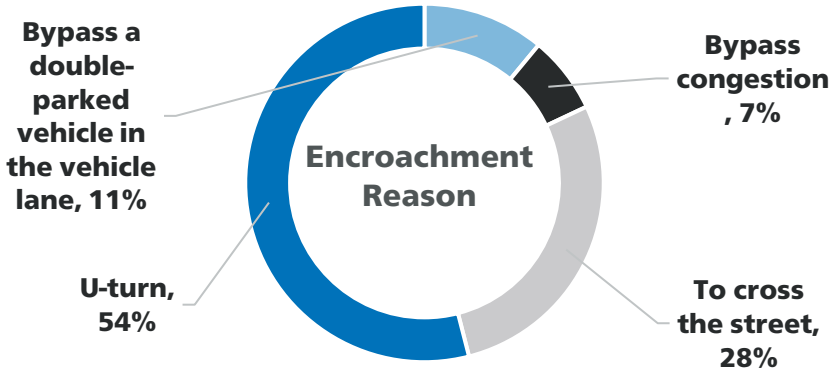


3-month Evaluation Findings

Effective Design

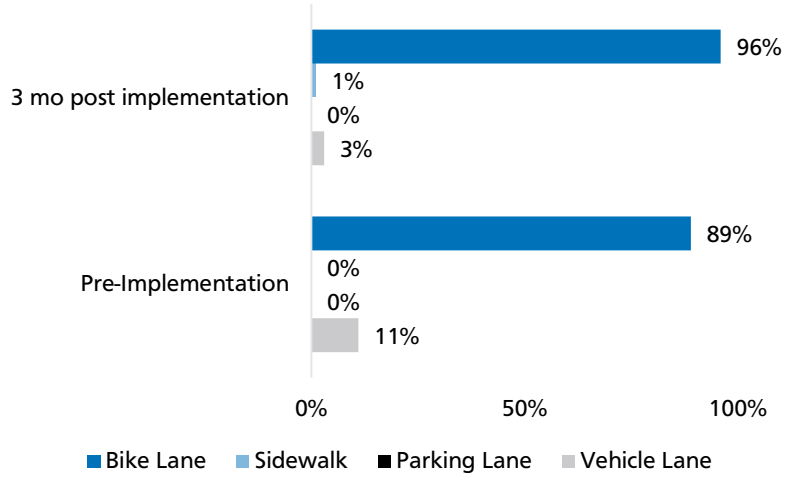
- Vehicle loading behavior
- Vehicle encroachment of bikeway
- Bicycle positioning along the street
- Review of traffic collisions

It is estimated that **1% of vehicles**, or about 3 to 4 vehicles, encroach the bikeway per hour. Encroachment is less severe than in pre-implementation conditions.



**U-turns are illegal in a business district*

Most people on bikes are bicycling in the bikeway when compared to pre-implementation conditions. More importantly, **fewer people are bicycling in the vehicle lane.**

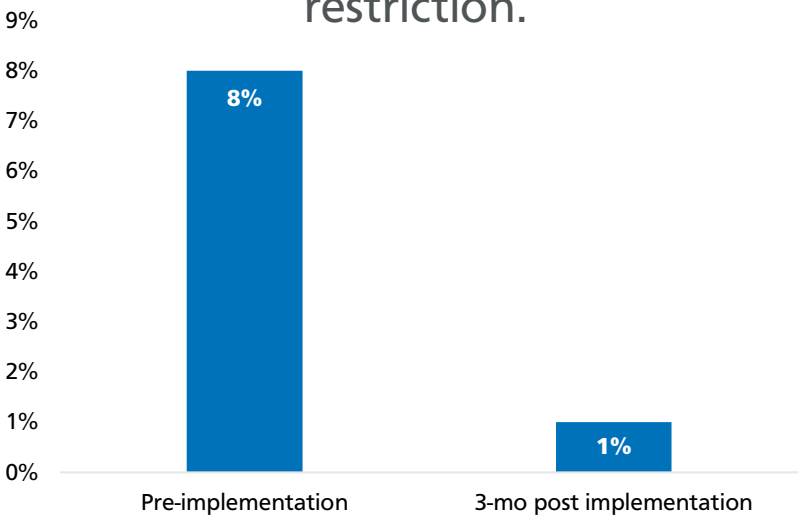


3-month Evaluation Findings

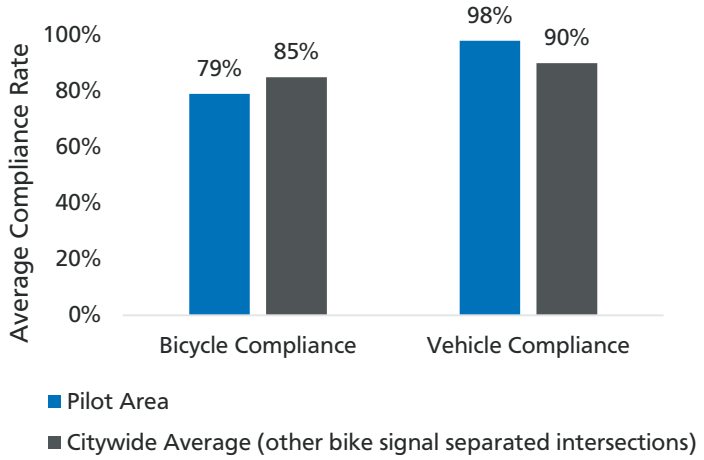
Safe Behavior

- User compliance with left-turn restrictions and bicycle signals
- Vehicle speeds
- Bicycle and pedestrian conflicts at the intersection

Overall, vehicle left-turn frequency has **decreased.** There is high compliance with the posted no vehicle left/U-turn restriction.



Bicycle signal compliance is lower than desired. Drivers show a higher compliance rate with intersection signals, posted restrictions, and only proceeding through while they have the right-of-way.



3-month Evaluation Findings

Safe Behavior

- User compliance with left-turn restrictions and bicycle signals
- Vehicle speeds
- Bicycle and pedestrian conflicts at the intersection

Most drivers are **driving at a safe speed** and all speed statistics show at least a 1 mph decrease after pilot implementation.

Vehicle Speed Statistic	Pre-Implementation	3-mo post implementation
Mean	20	18
Median	19	18
85th Percentile	24	23

**Posted speed limit: 20 mph*

3-month Evaluation Findings

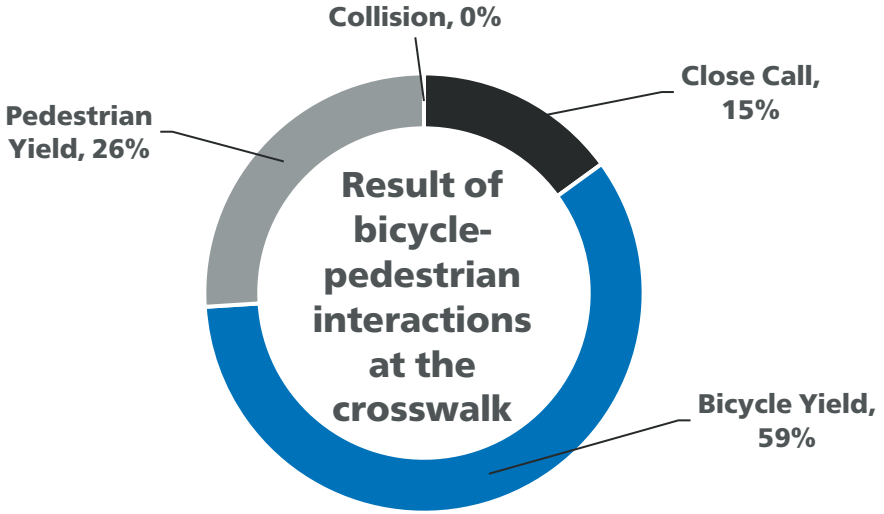
Safe Behavior

- User compliance with left-turn restrictions and bicycle signals
- Vehicle speeds
- Bicycle and pedestrian conflicts at the intersection

In terms of bicycle-pedestrian interactions, the center-running bikeway design did not differ much from a side-running design.

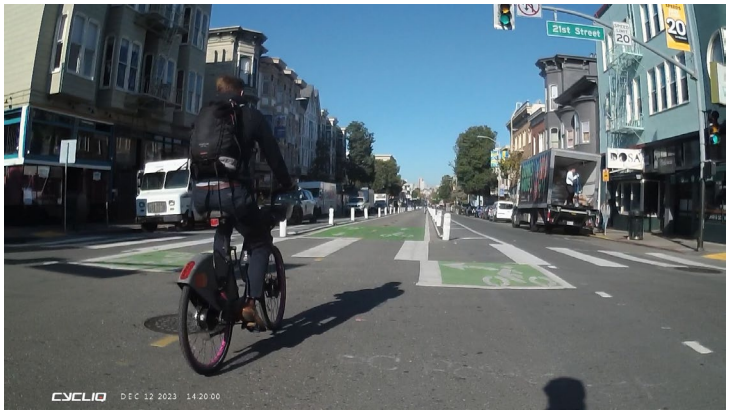
Estimated per hour bicycle-pedestrian interaction rate:

- Center-running: 5%
- Curbside (northern Valencia): 4%



3-month Evaluation Findings: Summary

- Biking experience that has **fewer multimodal conflicts** and is a **more predictable** experience, especially with vehicle behavior
    - Less bikeway blockage, which in the past forced bicyclists into the roadway to dodge parked or encroaching cars
    - Fewer instances of dooring
- Better accommodated **diverse loading needs** and reduction in illegal vehicle commercial loading behaviors
- New conflicts, which are less frequent than previous ones in the pre-pilot conditions, can be **mitigated with design adjustments** and continued coordination for enforcement from City partners



What we Heard Since Implementation and next Short-term Steps

What We Heard

- Businesses are struggling.
- Customers are confused about where and when they can park.
- Additional loading spaces means fewer customer parking spaces.
- Many businesses use personal vehicles and can’t access the commercial loading zones.
- The ability to double park has been significantly reduced.
- Motorists are confused about turn restrictions and generally how to navigate the street.
- Mixed reviews of the center-running protected bike lane in terms of safety – some feel it's significantly more comfortable and safer than before, others feel less safe (e.g., emergency responders speeding in the bike lane).
- Interest from some businesses to revert to pre-Covid bikeway configuration while the SFMTA works on another design.

Current Pilot Next Steps (short-term)

Continue making design adjustments while proceeding with the pilot evaluation

- In November, reallocated loading zones to more general meter parking.
  - 34% of new loading zones converted to general parking after noon.
  - 82% of new loading zones converted to general parking after 6 p.m.(previously ended at 10 p.m.)
  - 34% of 6-wheel loading spaces converted to regular commercial loading spaces.
- Will be converting multi-space meters back to single-space meters with decals that have clear parking regulation information.
- Investigating additional measures to direct people to SFMTA parking garages at 16th Street and 21st Streets
  - Designing posters for businesses' windows
  - Creating decals for parking meters
- Continue merchant outreach and other stakeholder engagement

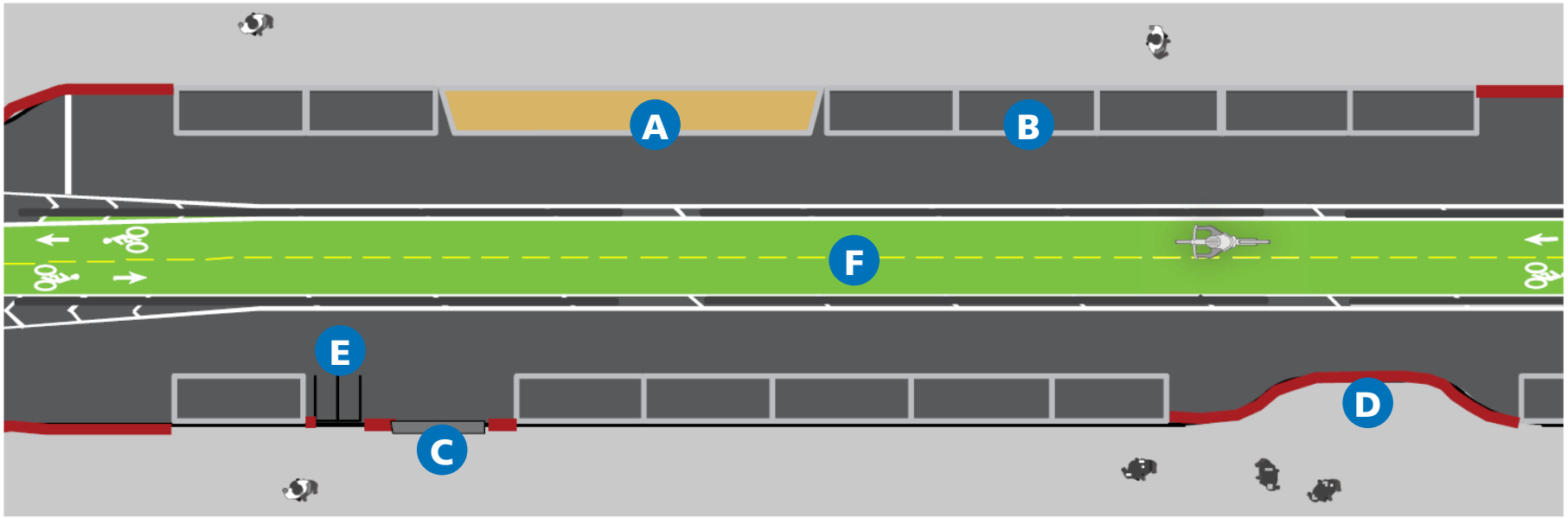
Medium-Term Steps

Alternative Side-Running Design

- Exploring various side-running configurations:
  - Floating parklet design
  - Curbside parklet design

Parklet Tradeoffs

Example Center–Running Bikeway Pilot (current design)

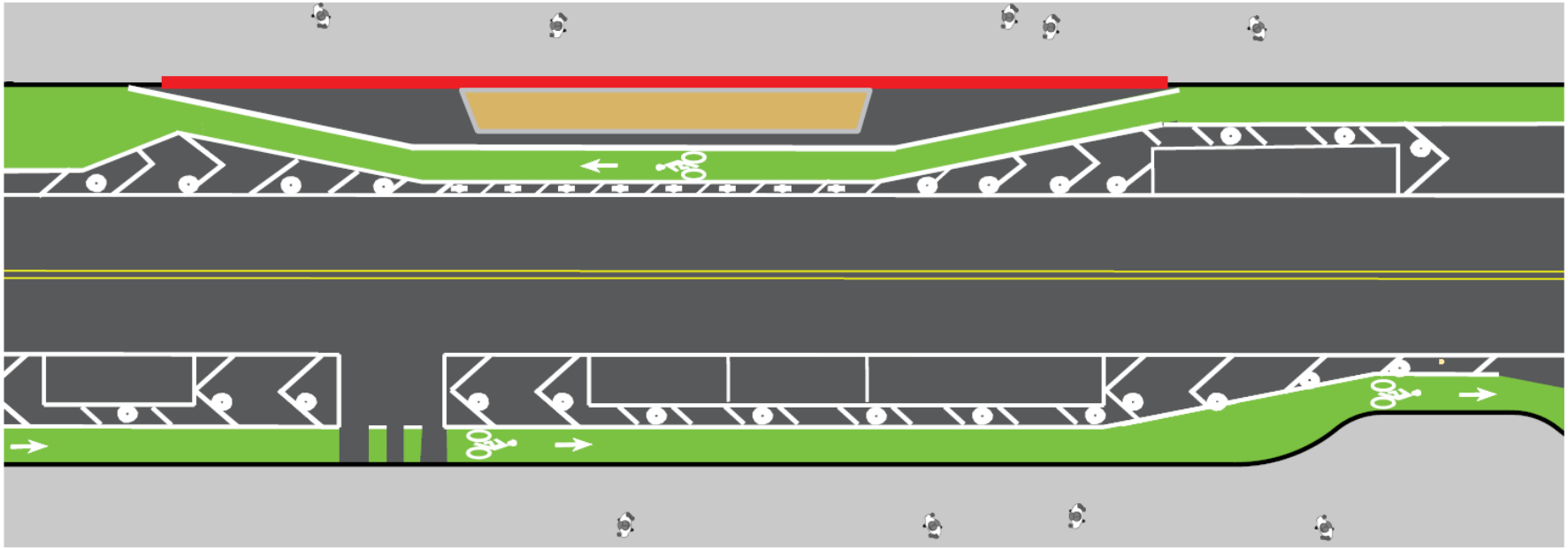


Legend:

- **A** Shared Spaces outdoor dining parklet
- **B** Parking/loading space
- **C** Driveway
- **D** Red zone
- **E** Motorcycle parking
- **F** Center-running protected bikeway

Parklet Tradeoffs

Example Side–Running Bikeway with Curbside Parklet

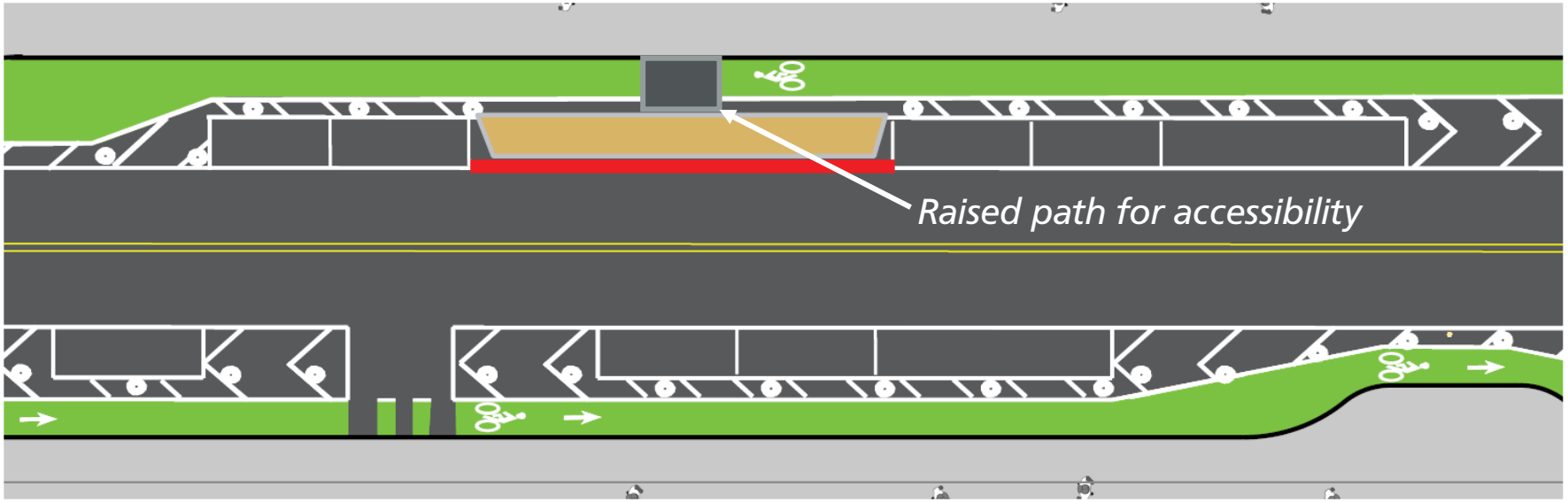


Considerations:

- Weaving is required so that people on bikes can go around the parklet
- Severely limits new parklets from being constructed on the corridor

Parklet Tradeoffs

Example Side–Running Bikeway with Floating Parklet



Considerations:

- Does not require the removal of additional parking for bikeway transitions
- Cost implications for relocating existing parklets
- Will require an accessible raised pathway to be constructed, which will impact the bicycling experience
- Will need to solve for access to parklet across a busy bikeway

Parklet Tradeoffs

**Images of dining parklets are from the city of Oakland*

Example Side-Running Bikeway with Floating Parklet

Side-Running Design Issues to Resolve

- Continue working with merchants and other stakeholders to better understand and manage the tradeoffs
  - Parklets and floating design
  - Loading and parking needs
- SFFD coordination on emergency response access
- Intersection design
- Muni overhead wire coordination

Long-Term Plans

Long-term Work

Today's pilot is a near-term effort chosen because it best addressed the two main issues: safety and keeping as many parking spaces and parklets as possible

The long-term capital project has restarted. It asks, What do we want Valencia to look like in the future? It looks at Valencia not just as a street but also as a destination. Three major studies are already underway or about to start, and they will inform the long-term project's planning and design phases.

- Traffic and circulation study
- Public life/public space study
- Curb study