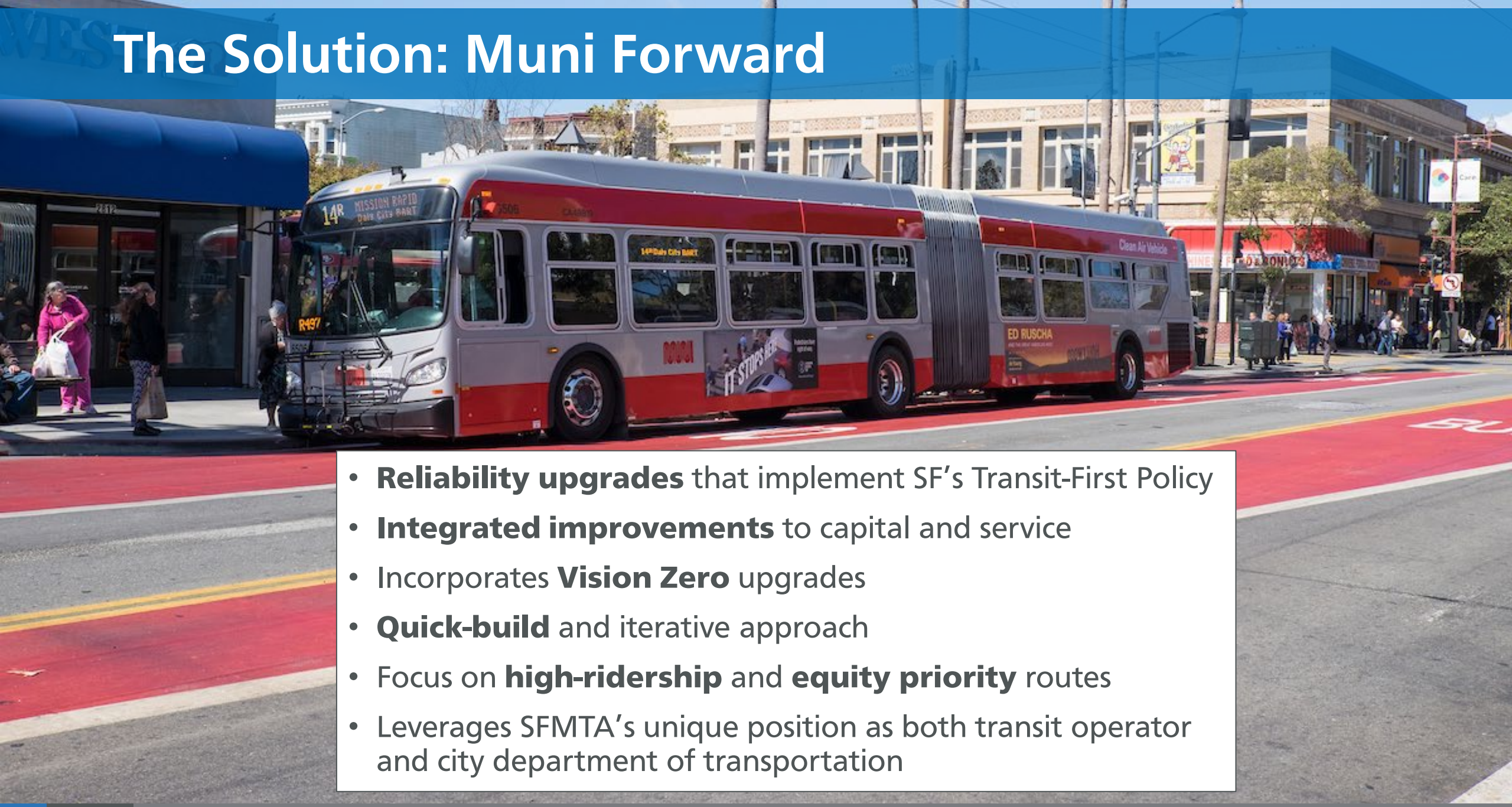
Transit Priority in San Francisco

Transit Challenges in San Francisco

- Over 80% of Muni trips are by bus or surface rail
- Congestion heavily impacts service quality and cost

The Solution: Muni Forward



- **Reliability upgrades** that implement SF's Transit-First Policy
- **Integrated improvements** to capital and service
- Incorporates **Vision Zero** upgrades
- **Quick-build** and iterative approach
- Focus on **high-ridership** and **equity priority** routes
- Leverages SFMTA's unique position as both transit operator and city department of transportation

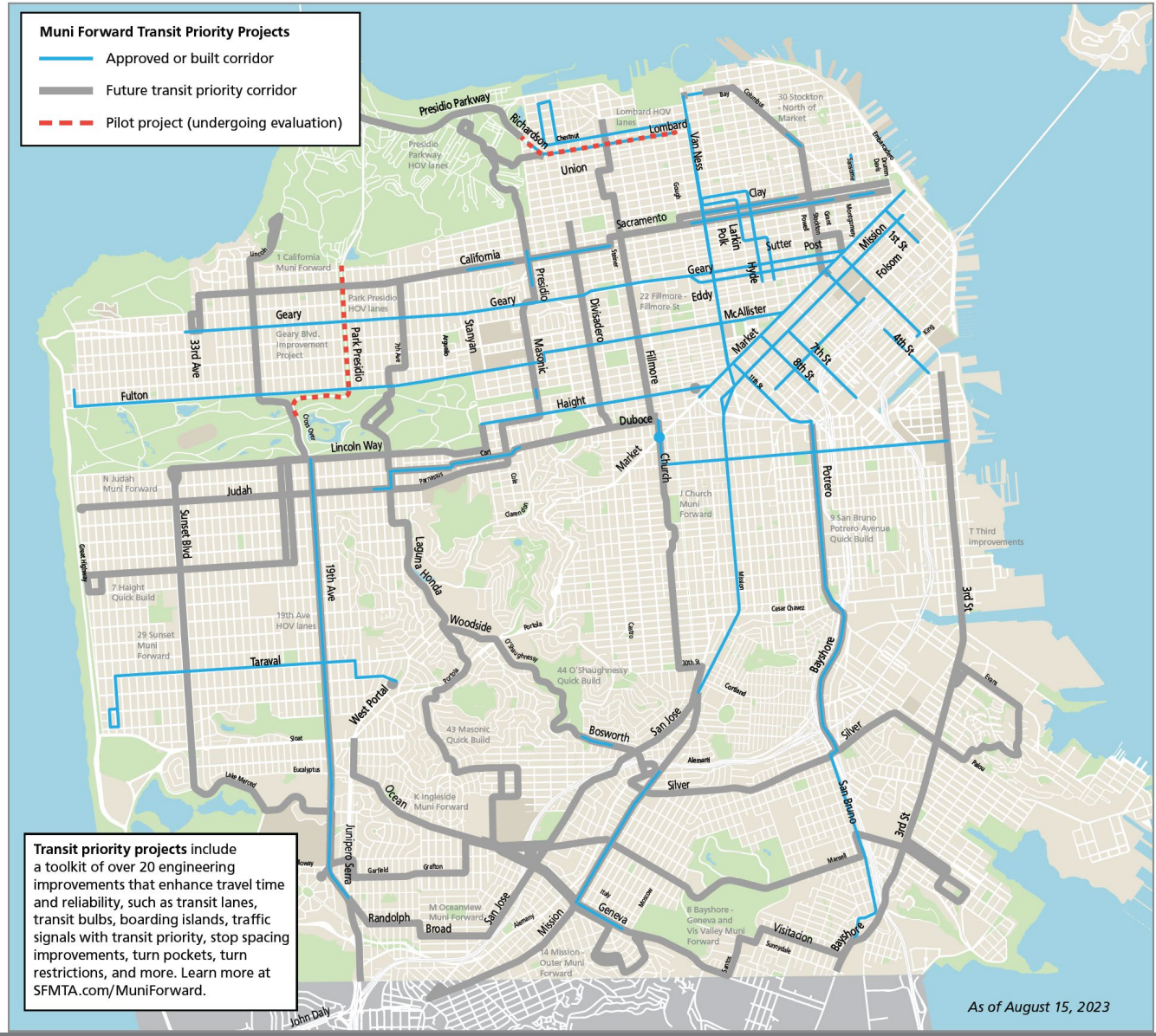
Muni Forward Improvements

About **90 miles** of reliability upgrades approved or built since 2014

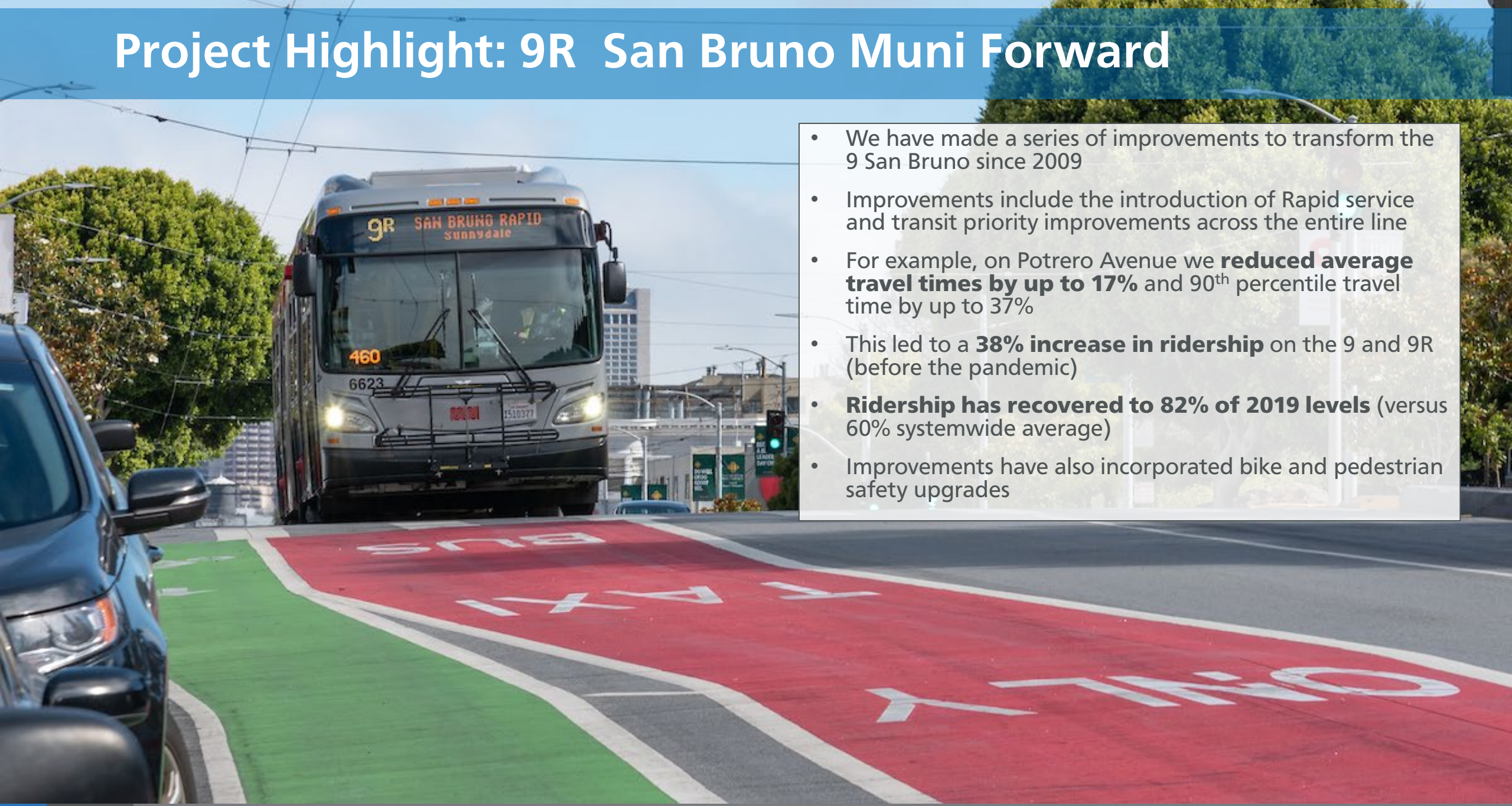
Toolkit of 20+ engineering measures to improve reliability and safety, such as:

- Transit lanes and queue jumps
- Transit signal priority
- Transit bulbs and boarding islands
- Stop rebalancing and optimization
- Turn pockets and restrictions
- Pedestrian bulbs on transit corridors
- Road diets

Results: Typical time savings of 10-20%, improved reliability, increased ridership

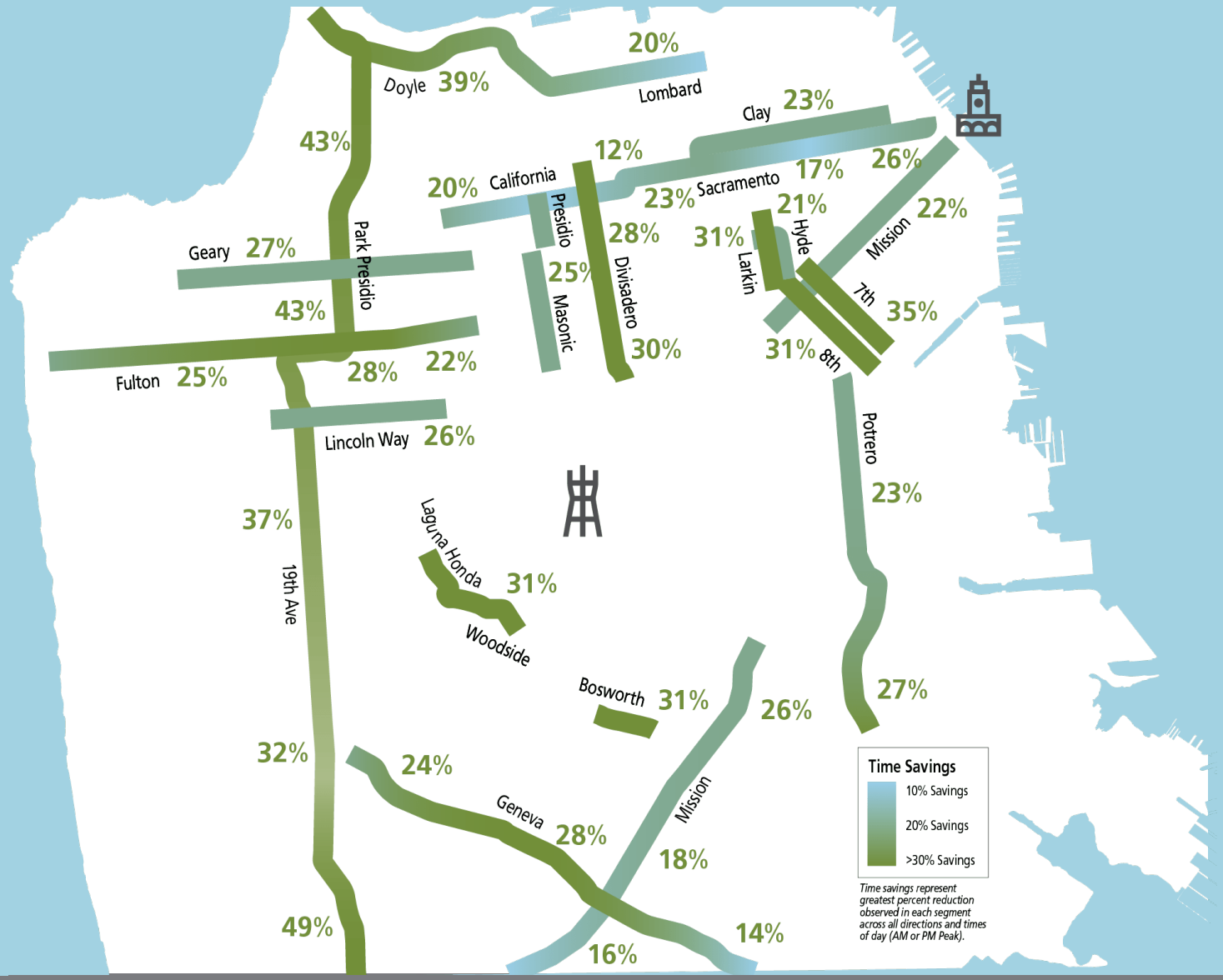


Project Highlight: 9R San Bruno Muni Forward

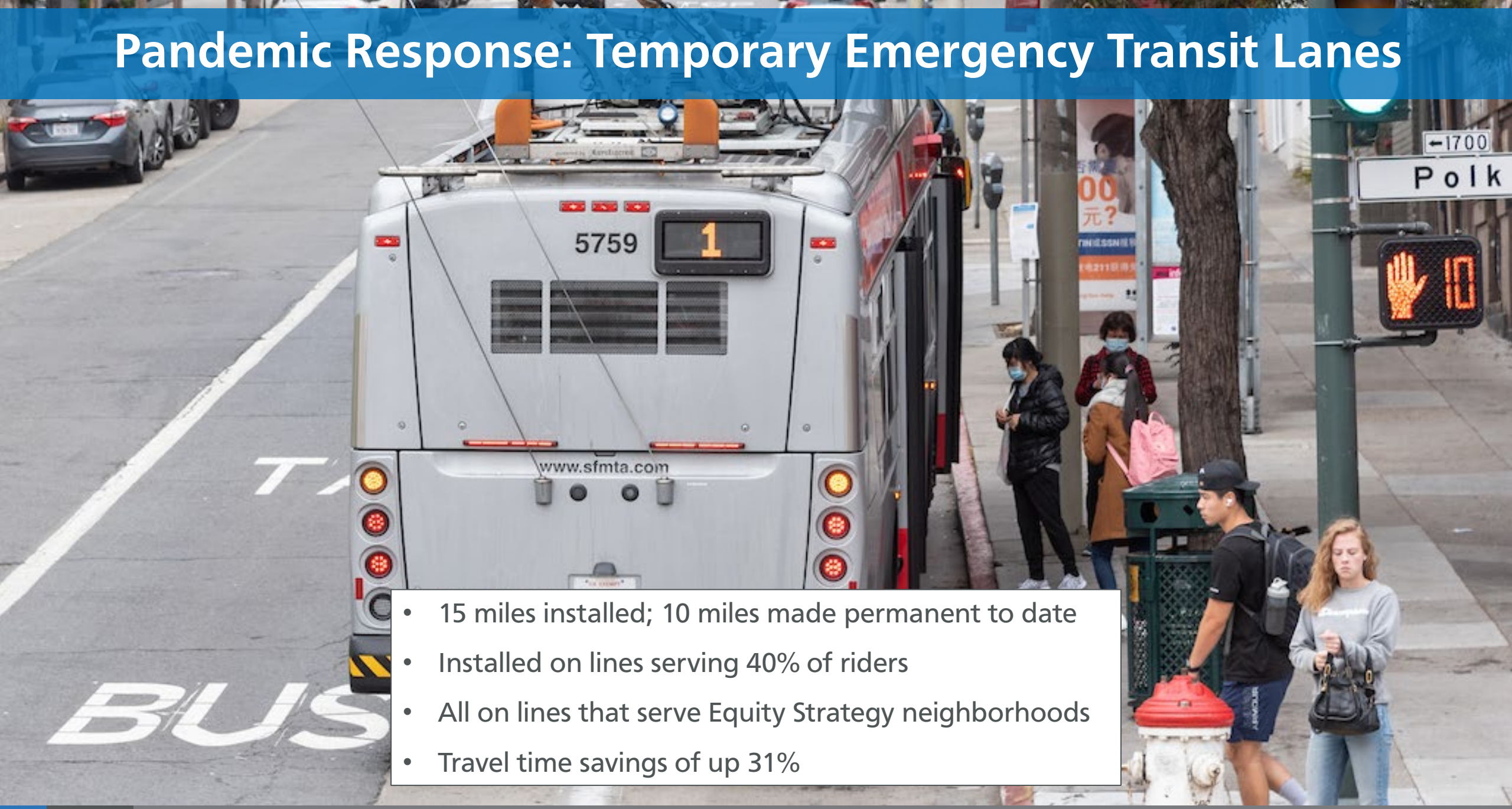


- We have made a series of improvements to transform the 9 San Bruno since 2009
- Improvements include the introduction of Rapid service and transit priority improvements across the entire line
- For example, on Potrero Avenue we **reduced average travel times by up to 17%** and 90th percentile travel time by up to 37%
- This led to a **38% increase in ridership** on the 9 and 9R (before the pandemic)
- **Ridership has recovered to 82% of 2019 levels** (versus 60% systemwide average)
- Improvements have also incorporated bike and pedestrian safety upgrades

Transit travel time savings during initial Shelter in Place
(April 2020 compared to February 2020)

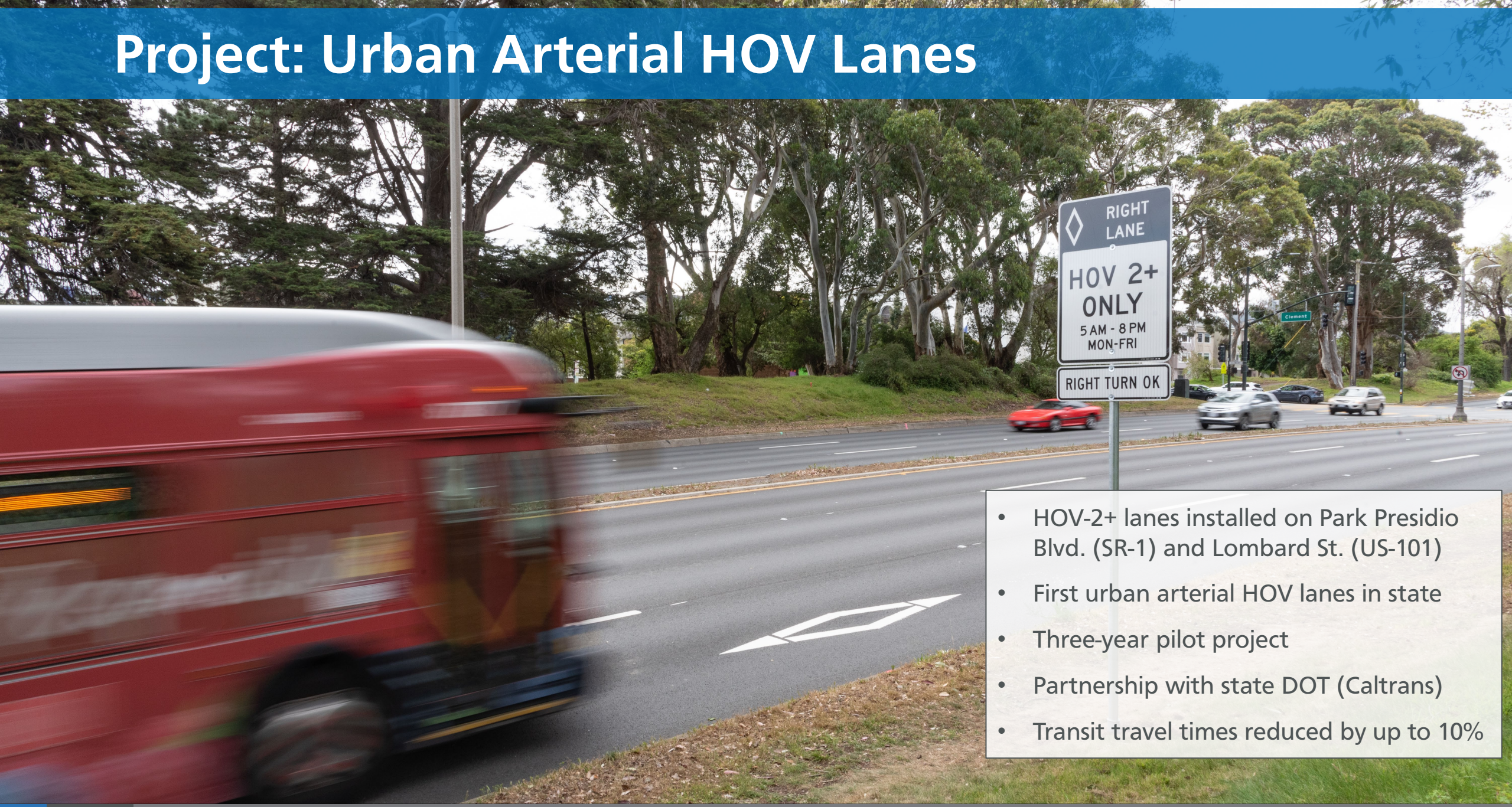


Pandemic Response: Temporary Emergency Transit Lanes



- 15 miles installed; 10 miles made permanent to date
- Installed on lines serving 40% of riders
- All on lines that serve Equity Strategy neighborhoods
- Travel time savings of up 31%

Project: Urban Arterial HOV Lanes

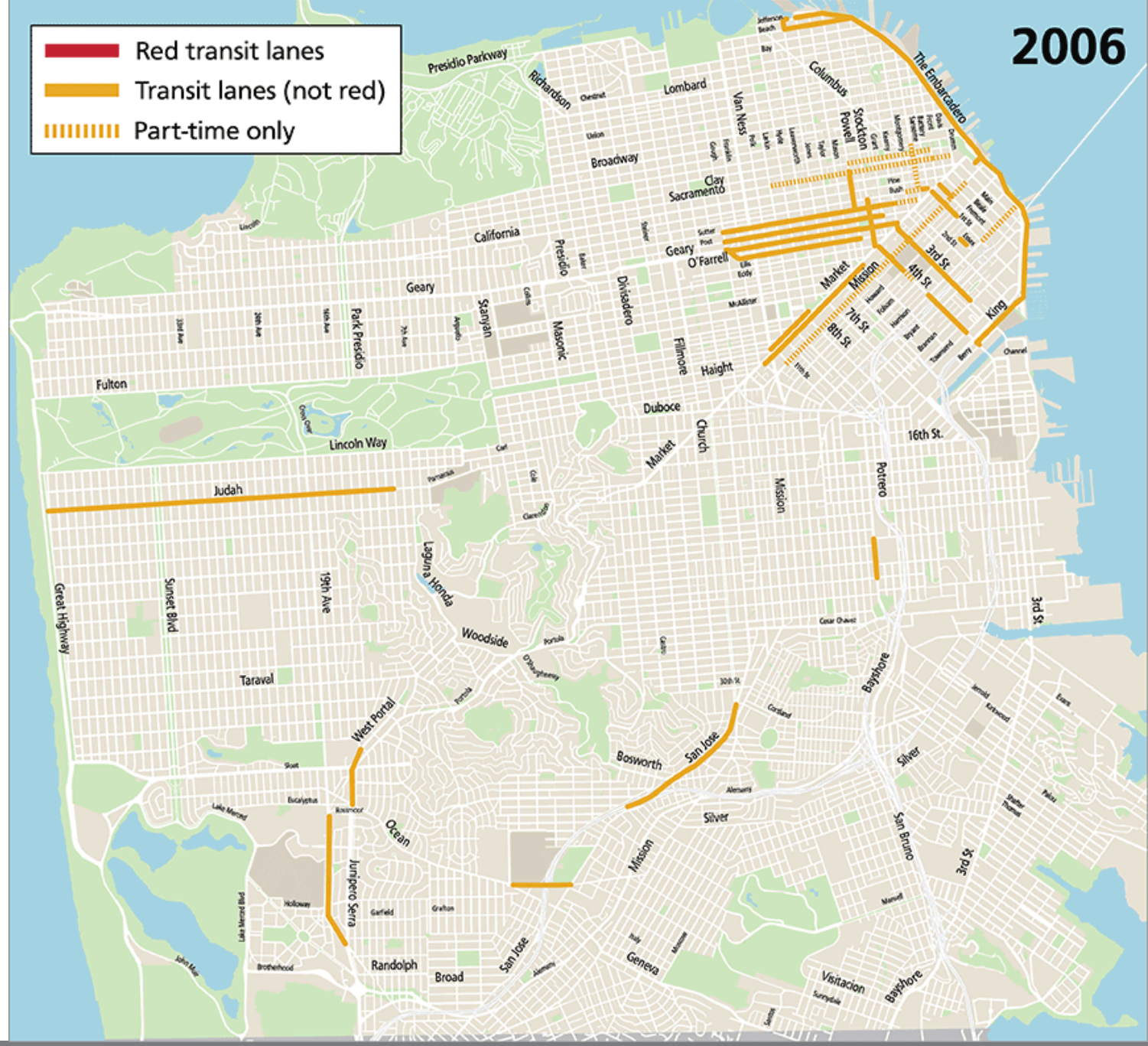


- HOV-2+ lanes installed on Park Presidio Blvd. (SR-1) and Lombard St. (US-101)
- First urban arterial HOV lanes in state
- Three-year pilot project
- Partnership with state DOT (Caltrans)
- Transit travel times reduced by up to 10%

San Francisco has **75 miles (104 km) of transit lanes**

We've **expanded transit lanes by over 39%** since 2020

Another **10 miles currently approved or proposed** – and more on the way



What's Next

- Implementation on 7 approved corridors
- Bring 3 more corridors for approval in coming months
- Start planning on 4 new corridors in 2024
- Install quick-build upgrades at delay hot spots
- Roll out red paint to more existing transit lanes

Challenges and Opportunities

Challenges	Opportunities
Intersection-level politics (e.g., parking and lane removal, stop consolidation)	• Promote successes to create support for future projects • Set ambitious vision to inspire support – "only stop at stops" on Five-Minute Network • Quick build approach with evaluation and adjustments
Emergency services approval	• Designing projects for "multiple winners": transit priority can benefit emergency vehicles too
Transit "fiscal cliff"	• Developing ambitious program to "save buses" through transit priority • State and regional funding partners currently very supportive of transit priority projects

Reference slides

Muni Forward Projects in Design and Construction

In Design/Preparing for Implementation

- 1 California Transit Lanes (Nob Hill)
- 5 Fulton: Arguello to Park Presidio
- 14 Mission: Mission District
- 14 Mission: SoMa (transit bulbs)
- 29 Sunset Phase 1
- 30 Stockton: 3rd Street (permanent project)
- Geary Boulevard Improvement Project

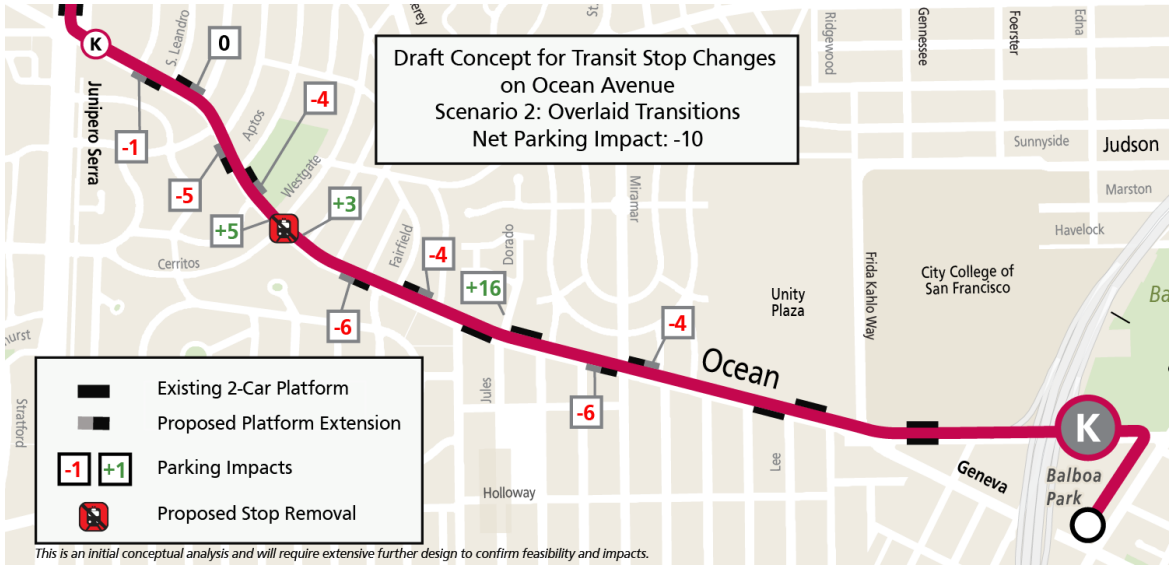
Under Construction

- 14 Mission: SoMa (red lanes)
- 22 Fillmore: 16th Street (Potrero to 3rd Street)
- 27 Bryant
- 28 19th Avenue: 19th Avenue
- L Taraval

N Judah Muni Forward (3-Car Trains)

K Ingleside (Ocean Avenue) Muni Forward

- Primary objectives: increase capacity and improve reliability for the K Ingleside
- Preliminary phase in conjunction with SFCTA mobility planning efforts
- Full outreach ~2023
- Quick Build ~ 2024



M Ocean View Muni Forward

- Capital project on the M line in the Ocean View Equity Strategy neighborhood aiming to improve:
  - Reliability and travel time
  - Muni accessibility
  - Traffic safety
- Construction funded by $20m TIRCP grant in 2024
- Prelim engineering ongoing with community-driven outreach approach
- Outreach coordinated with Geneva/San Jose terminal improvements
- Initial concept proposals: transit islands/lanes, ped bulbs, stop consolidations, TSP
- MTAB in Spring 2023

Scoped for surface-level enhancements along the M line from Junipero Serra Blvd to Balboa Park BART Station

Transit Quick Build Program

Quick-Build projects use even lower-cost materials and deliver projects more quickly such as:

- Transit lanes
- Temporary boarding islands and bulbs
- Stop spacing improvements
- Turn pockets and restrictions

Project: 5R Fulton Muni Forward

We have made a series of service and capital improvements on the 5 Fulton that have transformed this transit corridors for riders, leading to a **60% increase in ridership**:

- Launched the 5 Fulton Rapid, reducing travel times by up to 7 minutes
- Increased frequency and introduced 60’ buses to reduce crowding
- Implemented capital changes to reduce travel time along the entire line
- Made routing more direct by adding contraflow transit lane

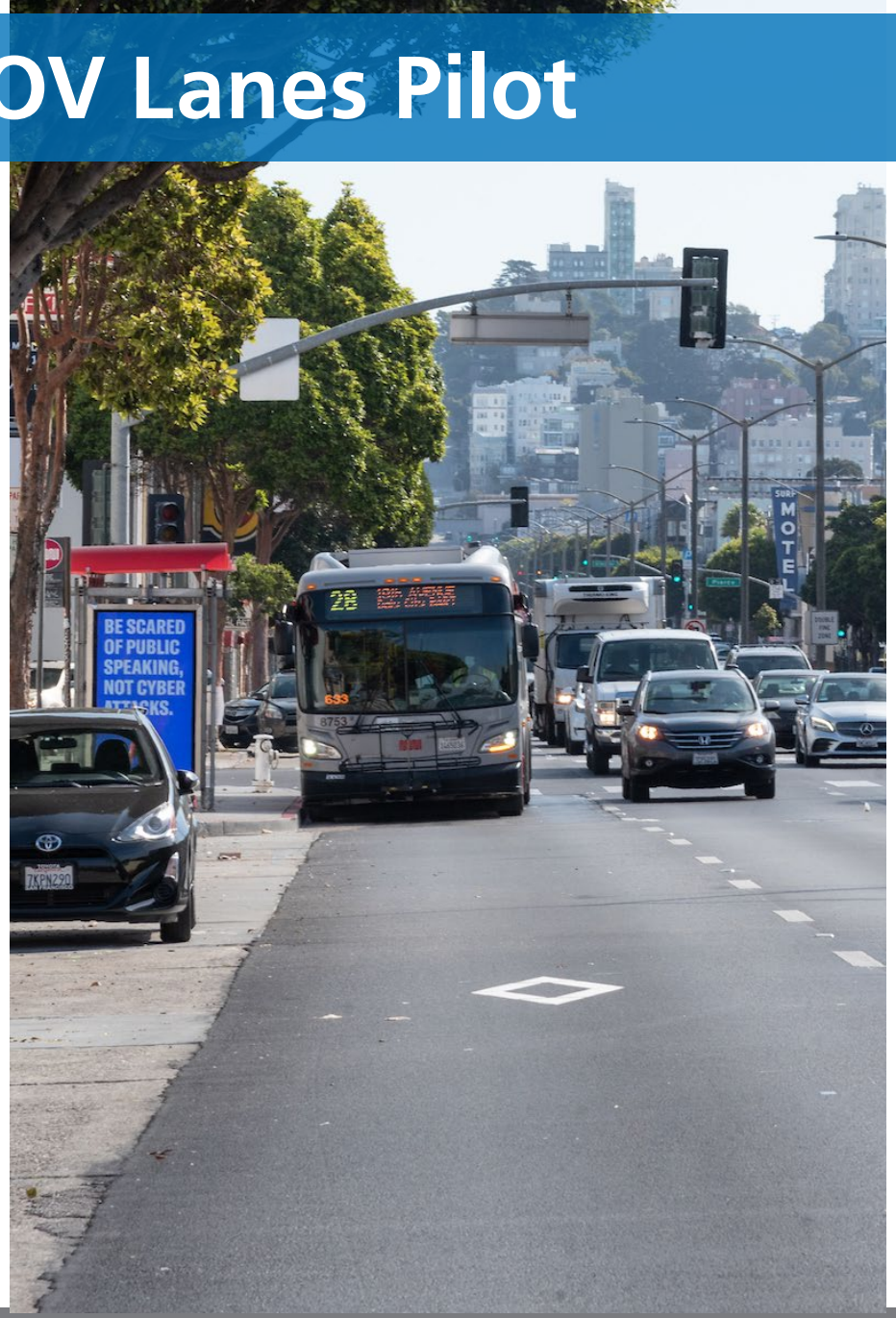
Project: 14R Mission Muni Forward

Why improve transit and walking on Mission?
85% of people get to Mission without a car.

- In 2016, SFMTA added transit lanes, required right turns, stop consolidation, left turn restrictions, and right turn pockets to improve Muni reliability and safety
- Travel times reduced by up to 13% – and riders perceived 5 times the actual time savings
- As a result, ridership went up by 11% in the project corridor
- Injury collisions decreased by 23%
- Sales tax revenue increased in the corridor by 5% – compared to 1% citywide

Project: 28 19th Avenue: HOV Lanes Pilot

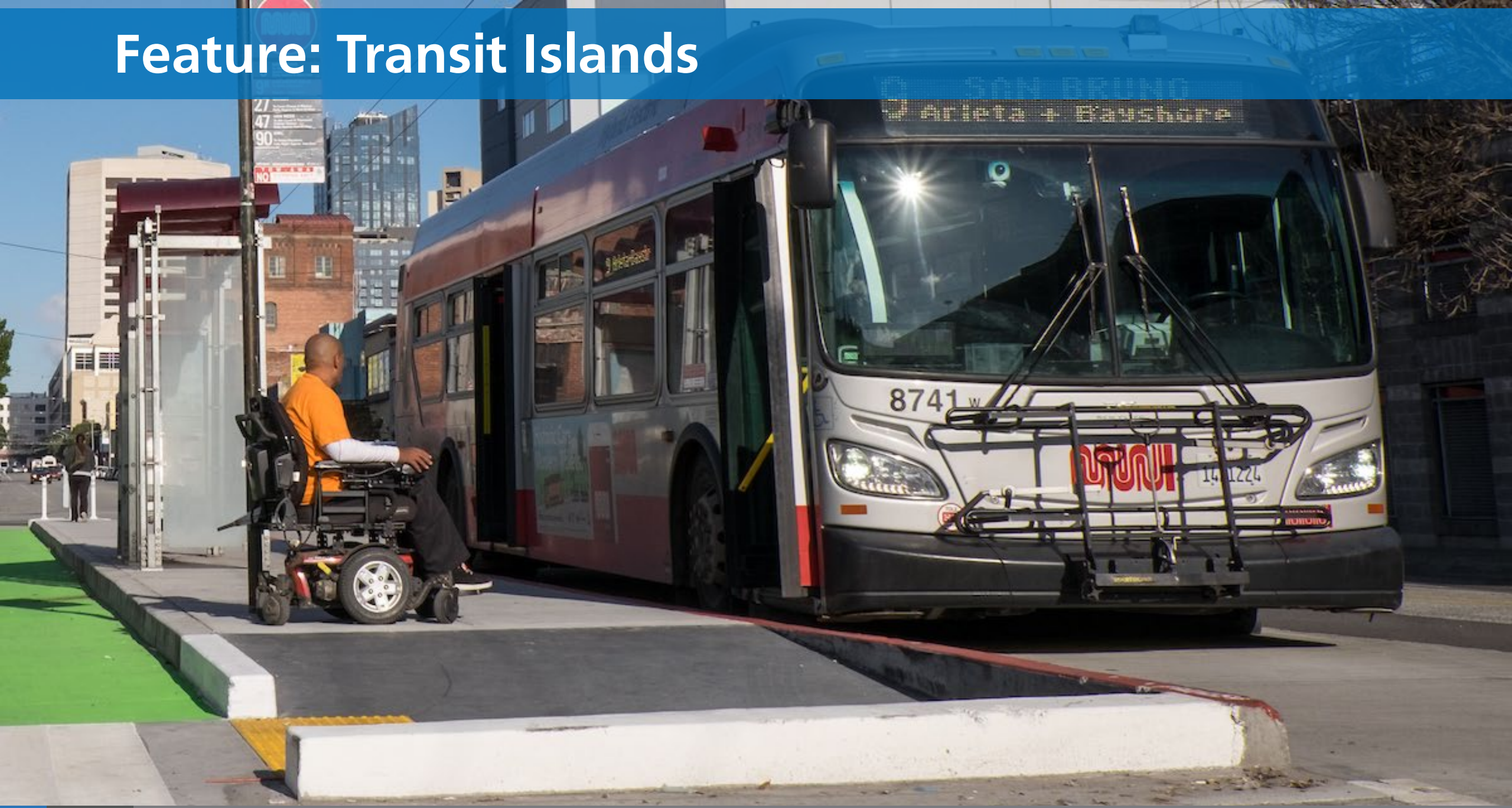
- Lombard/Park Presidio
- Partnership w/ Caltrans
- Recently extended thru mid-2025
- Two years of data collection
- Initial results promising



Feature: Red Transit Lanes

Feature: Transit Bulbs

Feature: Transit Islands



Temporary Emergency Transit Lanes (and Bulbs)

What's Next – Projects in Planning Phase

- 28 19th Avenue: HOV Lanes Pilot
- J Church
- K Ingleside (Ocean Avenue)
- M Ocean View
- N Judah (3-car trains)
- T Third

Transit Delay Hot Spots Program

- We mapped Muni's **10 slowest segments**
- Spot improvements can complement a corridor-based approach to reducing delay
- Next step: Implement plans to speed up Muni at initial locations, using turn pockets, queue jumps, signal timing changes, etc.

Congestion increasing operating costs

As congestion increases in areas where transit does not have traffic priority measures, transit service becomes slower and more expensive to provide.

EXAMPLE: Cost to Provide 10-Minute Bus Frequency, 6 AM – 12 AM, daily

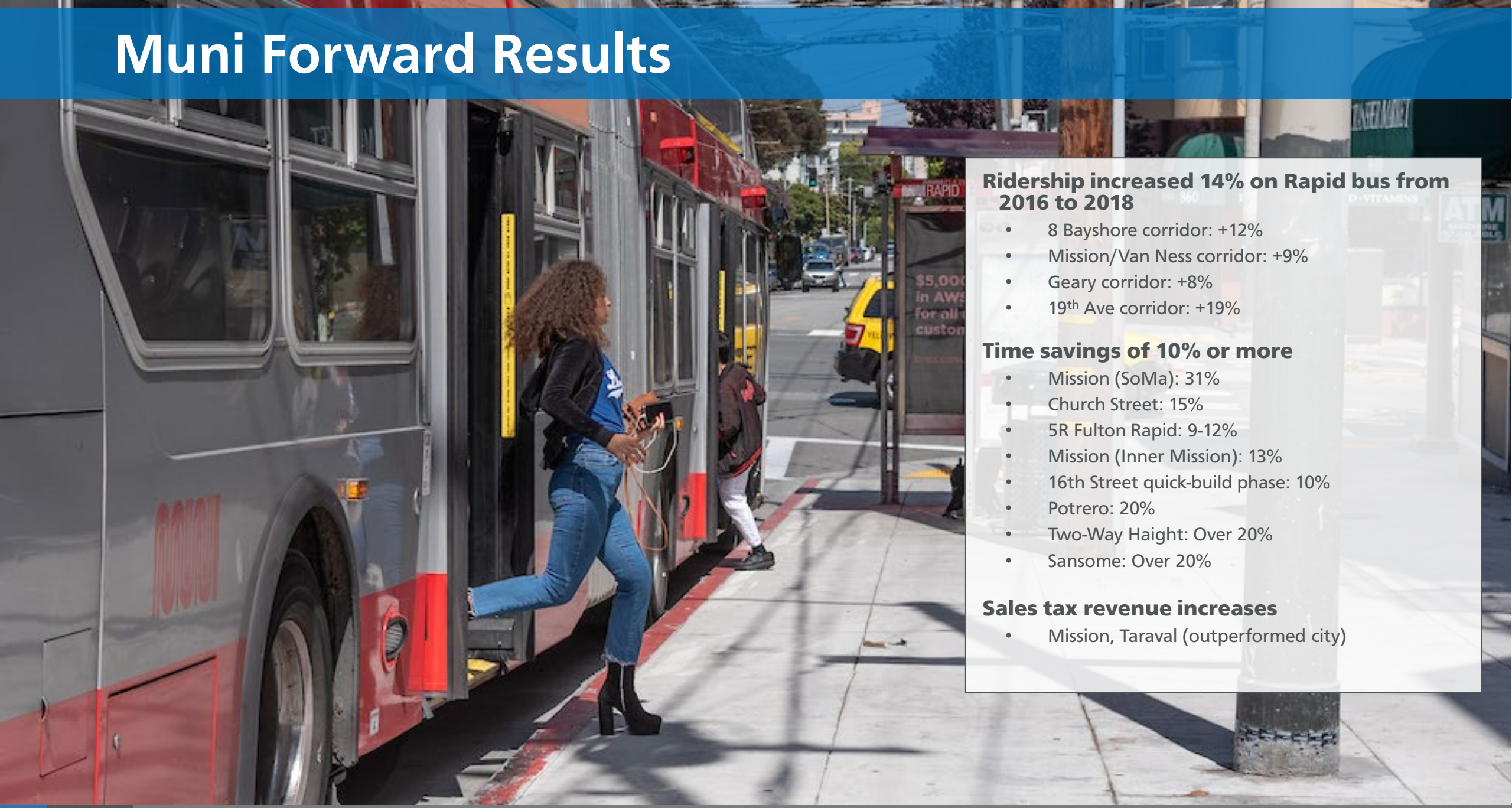
Travel Time (Minutes)	Buses Required	Annual Cost
30		$3.9 million
45		$5.9 million
60		$7.9 million
75		$9.9 million

Travel time and cost increase together

Assumes operating cost of $200/hour per vehicle. Actual costs vary by mode.

Quick-Build Approach

Muni Forward Results



Ridership increased 14% on Rapid bus from 2016 to 2018

- 8 Bayshore corridor: +12%
- Mission/Van Ness corridor: +9%
- Geary corridor: +8%
- 19th Ave corridor: +19%

Time savings of 10% or more

- Mission (SoMa): 31%
- Church Street: 15%
- 5R Fulton Rapid: 9-12%
- Mission (Inner Mission): 13%
- 16th Street quick-build phase: 10%
- Potrero: 20%
- Two-Way Haight: Over 20%
- Sansome: Over 20%

Sales tax revenue increases

- Mission, Taraval (outperformed city)