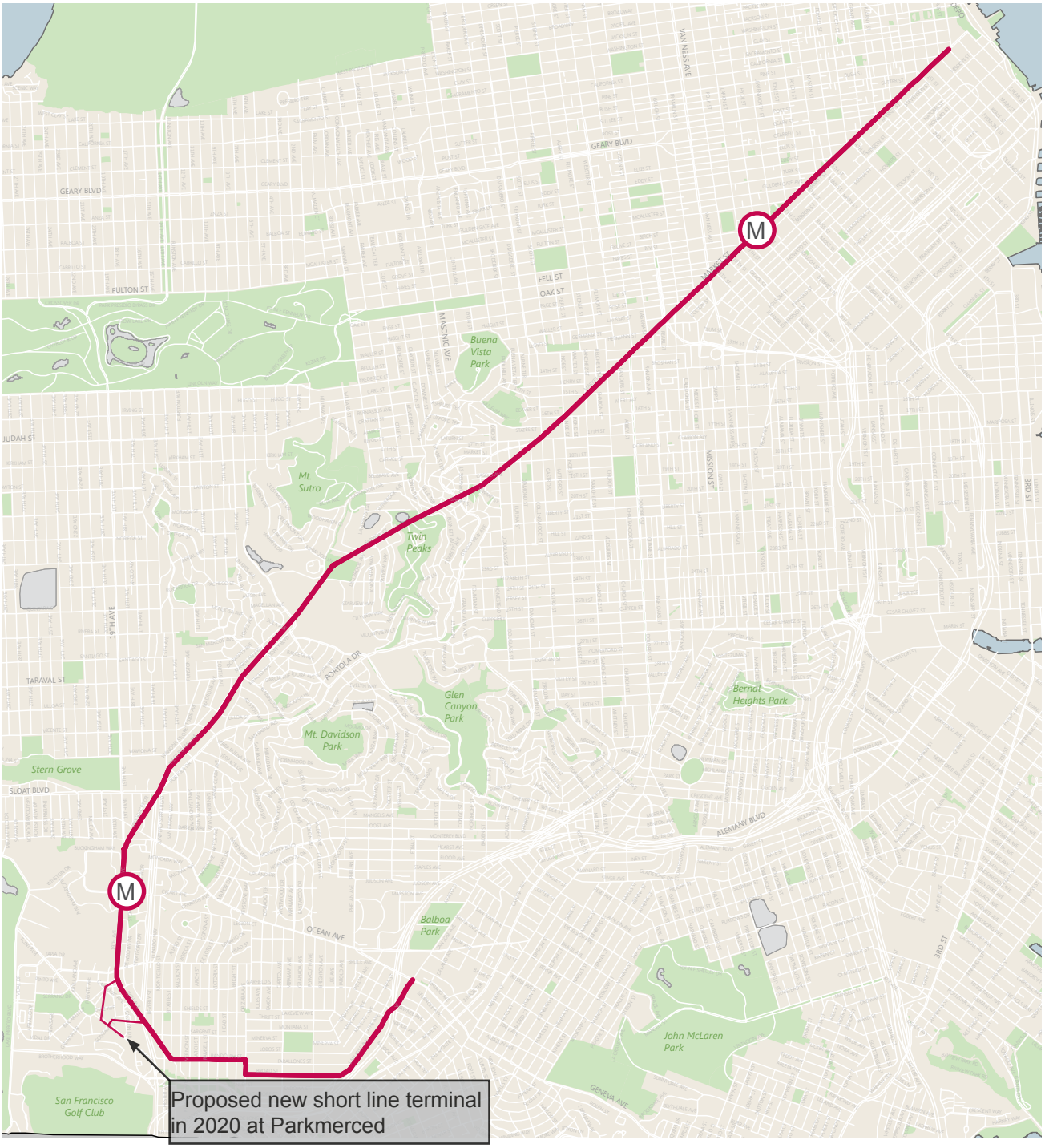
M Oceanview



Muni Metro

Recommended Route

Feature Summary

HC | BUS STOPS | SIG-NALS | ROAD-WAYS | CURB SPACE | PEDES-TRIAN

M Oceanview

Overview

- No route changes proposed.
- New terminal at Park Merced is planned and would be funded by the private developer with an estimated completion in 2020. During peak periods, alternate trips would originate/terminate from/to the Balboa Park Station and this new terminal.
- A Transit Priority Project is proposed for this corridor to reduce transit travel time.

M Ocean View Transit Priority Project Overview

For this proposal, the Transit Priority Features would be applied along the dedicated right-of-way south of St. Francis Circle, 19th Avenue, Park Merced local streets, Randolph Street, Orizaba Avenue, Broad Street and San Jose Avenue, from the intersection of 19th and Holloway avenues to Geneva and San Jose avenues near the Balboa Park Station. This corridor provides transit connections between West Portal Station and Balboa Park Station (Muni and BART), and includes transit service for the West Portal, St. Francis Wood, Stonestown/San Francisco State University, Ingleside and Park Merced neighborhoods. The M Ocean View continues along West Portal Avenue to West Portal Station, where inbound it enters the Muni System underground to Embarcadero Station providing connections from the above neighborhoods to Forest Hill, Midtown Terrace, the Castro/Eureka Valley/Corona Heights, Duboce Triangle, Church and Market streets vicinity, and destinations in the Civic Center and Downtown.

Frequency

Service during peak periods (headway between vehicles, in minutes)

	Current	Approved	Frequency
AM	9	8.5	+
PM	9	8.5	+

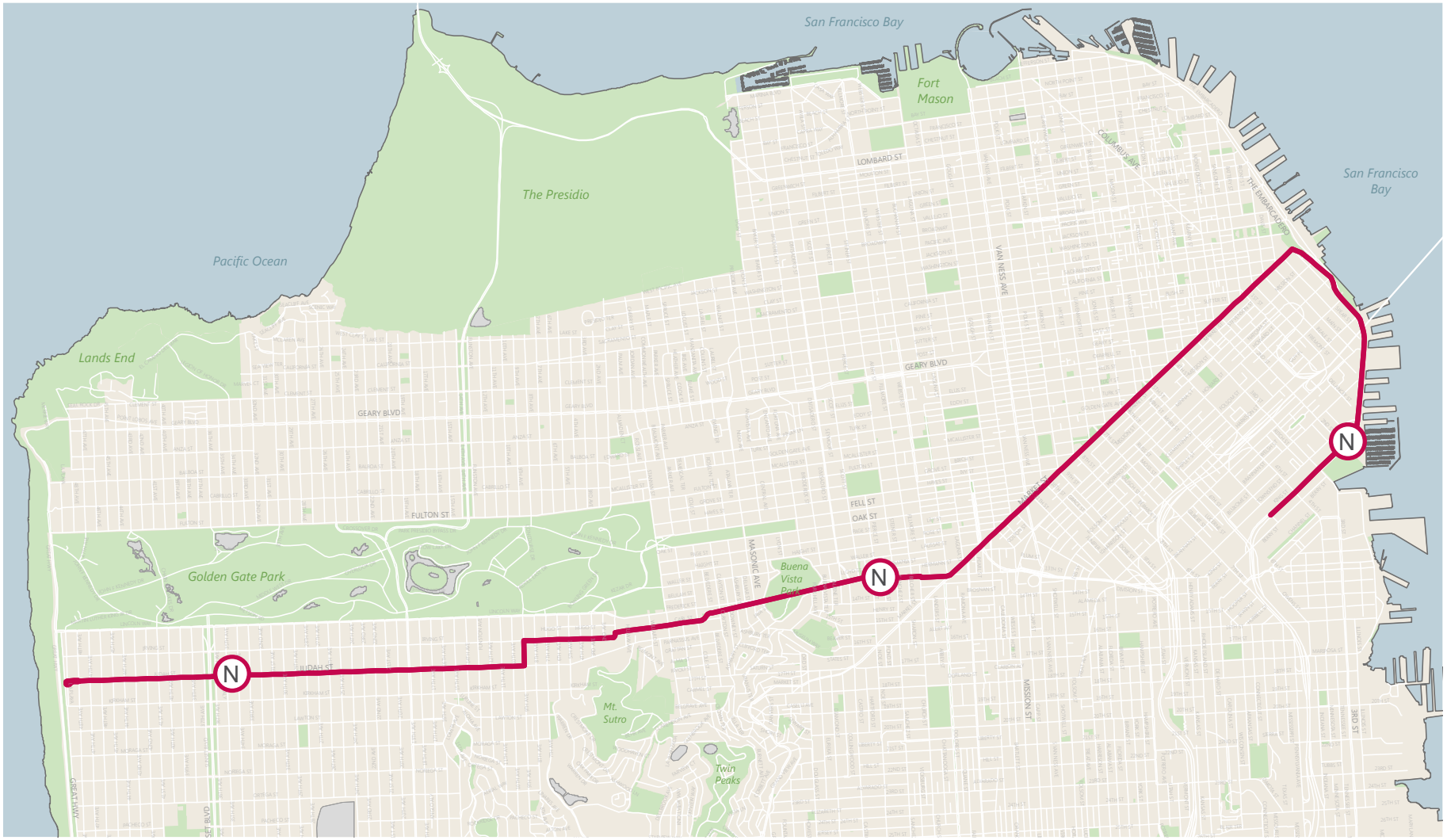
*Increasing light rail service is dependant upon vehicle availability. Fleet rehabilitation is underway and is scheduled for completion by the end of 2015.

Budget

Project Phase	Total
Design & Construction	$7,120,000

* No funding source identified for this project through 2018.

N Judah



Muni Metro

Recommended Route

Feature Summary

HC | BUS STOPS | SIG-NALS | ROAD-WAYS | CURB SPACE | PEDES-TRIAN

Overview

- Muni's N Judah rail line has one of the highest riderships in the Muni Network and carries approximately 45,000 daily customers on an average weekday. The main causes of delay to the N Judah include long passenger boarding and alighting times, a high number of stop signs along the route and areas of closely spaced transit stops.
- The N Judah Transit Priority Project is proposed to improve transit travel time, improve reliability, and decrease delay caused as a result of long passenger loading and unloading times, traffic signal delay, traffic congestion, a high number of STOP signs along the route and areas of closely spaced transit stops.
- The project study area extends between Carl and Cole and Judah and Great Highway. Within the study area, the N Judah operates at an average speed of 8 miles per hour during peak periods. There are 21 transit stops in each direction. The average transit stop spacing between Carl and Cole and Judah and Great Highway is 850 feet, with stops located at every two to three intersections.
- The proposed changes are anticipated to reduce the travel time of the N Judah rail service by about 5 minutes in each direction (10 minutes total) within the study area (19% reduction), improving average operating speed to 9.5 miles per hour and improving service reliability. Other changes such as transit signal priority improvements, operational improvements and network enhancements would further improve travel times along the corridor and add valuable customer amenities such as NextBus displays. The travel time savings would also reduce operating costs on the line and allow for service to be cost effectively increased.

N Judah Transit Priority Project

In order to reduce transit travel times and improve reliability, the SFMTA proposes a variety of improvements within the study area. These proposals include:

- Replacing all-way STOP-controlled intersections with traffic signals or traffic calming measures at eight intersections. Currently, the N Judah is delayed by having to come to a complete stop at multiple intersections with stop signs. These stop signs could be replaced with traffic signals equipped with transit signal priority. This would reduce delay at intersections because the signals could be programmed to hold green lights for approaching trains. Alternatively, traffic calming measures such as corner bulbs, raised crosswalks, and sidewalk extensions could be installed to provide improved pedestrian safety by reducing the roadway crossing distance, making pedestrians waiting to cross the street more visible to approaching motorists and reducing the speed of motorists turning from cross streets. Traffic calming measures would have a similar effect of reducing intersection delays for trains, by eliminating the need for the train to come to a complete stop.
- Optimizing transit stop locations at four intersections. Relocating transit stops from the near-side to the far-side of intersections at existing traffic signals would allow streetcars to take advantage of planned transit signal priority improvements. At all-way STOP-controlled intersections, transit stops would be relocated from the far-side of the intersection to the near-side, eliminating the need for streetcars to stop once for the STOP sign and again for customers to board the train. One of the relocated transit stops at Sunset and Judah would require new boarding islands and extend into the intersections of 36th Avenue and 37th Avenue. The

boarding island would block through traffic and drivers would only be allowed to turn right at these intersections.

- Increasing transit stop spacing from two to three blocks to three to four blocks. Currently the N Judah stops every two to three blocks within the study area. This proposal moves toward a three to four block spacing for most stops. By stopping fewer times, the train takes less time to move through the corridor.
- Adding transit bulbs at five intersections. Transit bulbs are sidewalk extensions alongside transit stops that allow passengers to get on and off without having to walk between parked cars and cross a lane of traffic. Transit bulbs enhance the ability of streetcars to take advantage of all-door boarding. Transit bulbs provide space for transit shelters and other customer amenities. Transit bulbs also improve pedestrian safety by reducing the roadway crossing distance, making pedestrians waiting to cross the street more visible to approaching motorists, and reducing the speed of motorists turning from cross streets.
- Extending boarding islands at 13 intersections. Boarding islands are dedicated waiting spaces for customers located between travel lanes. Extending existing boarding islands would cover the full length of two-car trains and allow for passengers to be picked up and dropped off without having to walk between parked cars and cross a lane of traffic when the train arrives.

N Judah

Frequency

Service during peak periods (headway between vehicles, in minutes)

	Current	Approved	Frequency
AM	7	5.5	+
PM	7	6	+

*Increasing light rail service is dependant upon vehicle availability. Fleet rehabilitation is underway and is scheduled for completion by the end of 2015.

Budget

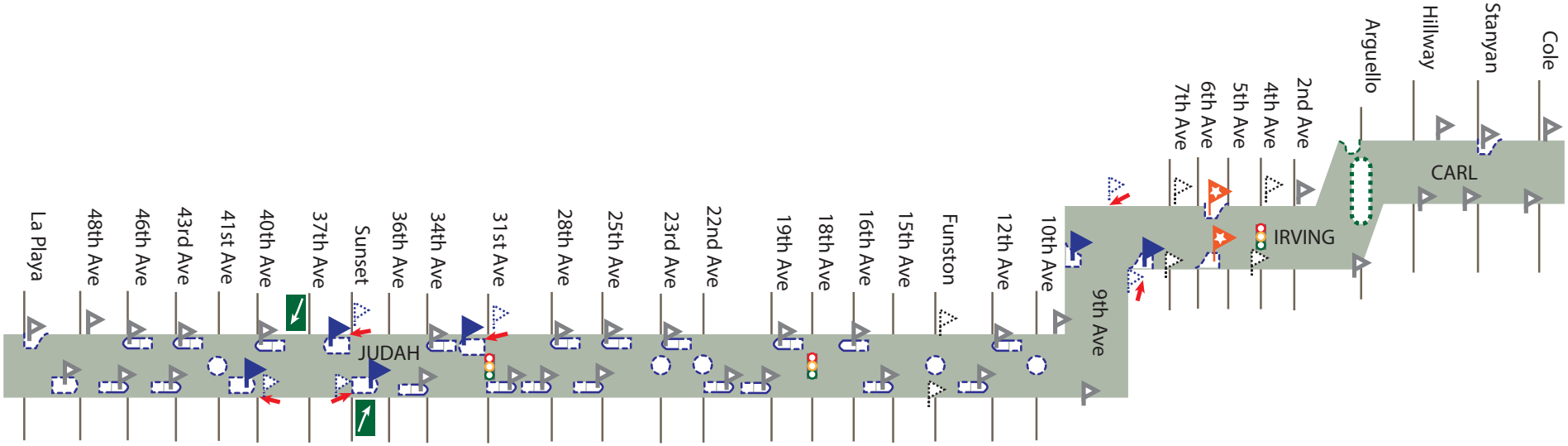
Project Phase	Total
Design & Construction	$26,841,000

* The budget displayed above will be supplemented by Proposition K local funds, which will be used for project planning, conceptual engineering, and design. MTC TPI funds will also be used to complete several fast-tracked improvements identified for Irving Street.

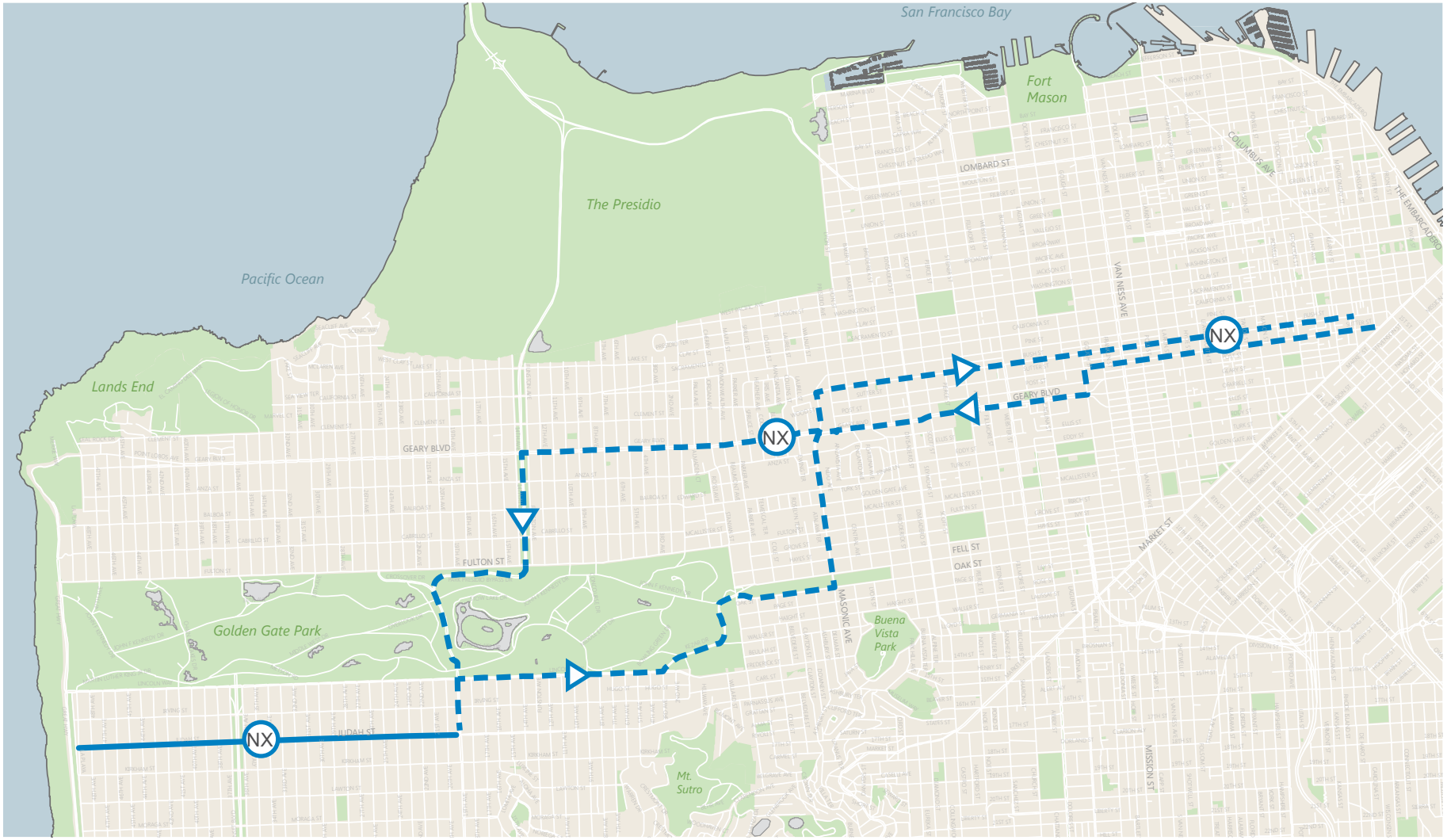
N Judah Transit Priority Project

Features

- Existing Stop
- Stop Removal
- Stop Relocation
- New Transit Bulb
- Extend Existing Boarding Island
- Proposed Transit Only Lane
- Traffic Calming
- New Traffic Signal
- New Boarding Island
- No Left Turn Restrictions
- New Pedestrian Bulbs
- Crosswalk



Nx Express



Express

- Recommended Route
- Express Segment (no stops)

Feature Summary

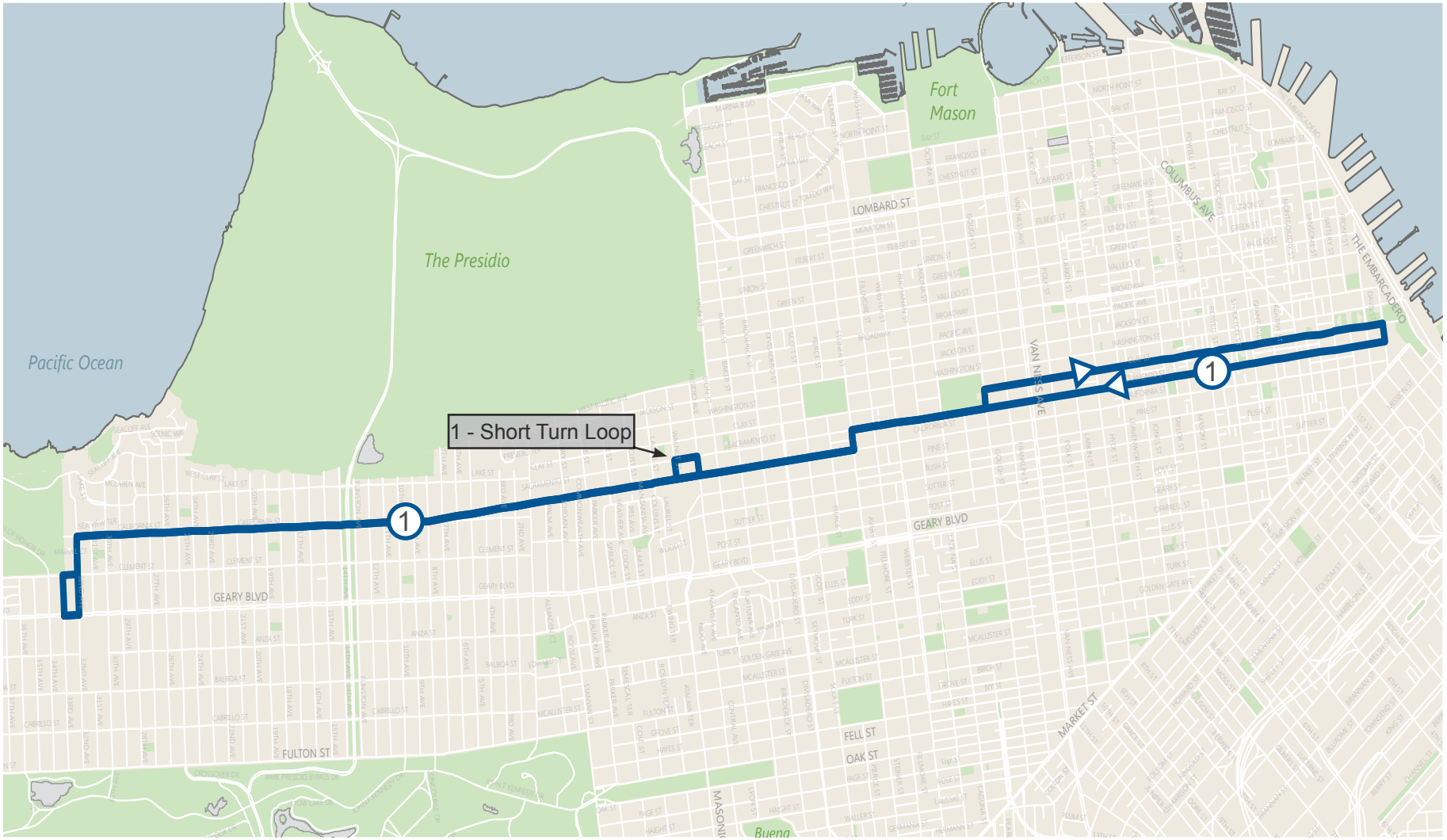
BUS STOPS | SIG-NALS | ROAD-WAYS | CURB SPACE | PEDES-TRIAN

Nx Express

Overview

- No route changes proposed.
- A Transit Priority Project for the N Judah will improve travel time and reliability on this route.

1 California



Frequent Local

Recommended Route

Feature Summary

HC | BUS STOPS | SIG-NALS | ROAD-WAYS | CURB SPACE | PEDES-TRIAN

Transit Priority Project

For this proposal, the Transit Priority Features would be applied along the 1 California route. These improvements would be implemented along the following streets: Drumm, Sacramento, Steiner, and California streets, 32nd Avenue and Geary Boulevard (outbound), and along Geary Boulevard, 33rd Avenue, Clement Street, 32nd Avenue, California, Steiner, Sacramento, Gough and Clay streets (inbound). The corridor extends from the intersection of Geary Boulevard and 33rd Avenue to the intersection of Clay and Drumm streets, providing transit improvements to a major east-west route in the Rapid Network. This Rapid Network corridor provides transit connections between the northern portion of the Richmond District and neighborhoods to the east, including Pacific Heights, Nob Hill, Chinatown, the Financial District and the Embarcadero.

California Bypass Wires at Terminal Location

This project would install bypass wires to improve terminal operations where multiple trolley coach routes share a terminal. This project would provide trolley coach access to and egress from terminals and would improve route reliability by preventing trolley coaches from one route from getting stuck behind trolley coaches from another route. Currently, at terminals shared by multiple trolley coach routes, operators must exit their vehicle and pull trolley poles in order to pass a coach already in the terminal. Including an additional terminal location for the 41 Union/ 45 Union Stockton, a combined total of about 1,200 linear feet of overhead bypass wires and the installation of about 50 poles is proposed also at the 1 California terminal location at Presidio Avenue and Sacramento Street (Terminal for Routes 1 California and 2 Clement short-line).

This proposal would provide a common inbound stop for the 1 California and its short-line and would also accommodate the western 2 Clement short-line terminal, which would use trolley coaches. New poles, overhead wires, and duct banks, would be constructed. Four new curb ramps to meet accessibility standards are proposed for both the Laurel Street and Walnut Street intersections with Sacramento Street; in addition, four curb ramps are proposed on the north side of California Street at its intersection with Laurel and Walnut streets for a total of eight curb ramps. The installation of poles and underground wiring may require minor utility relocation, such as moving catch basins.

1 California

Frequency

Service during peak periods (headway between vehicles, in minutes)

West of Presidio Ave.

	Current	Approved	Frequency
AM	7	7	=
PM	7	6	+

East of Presidio Ave.

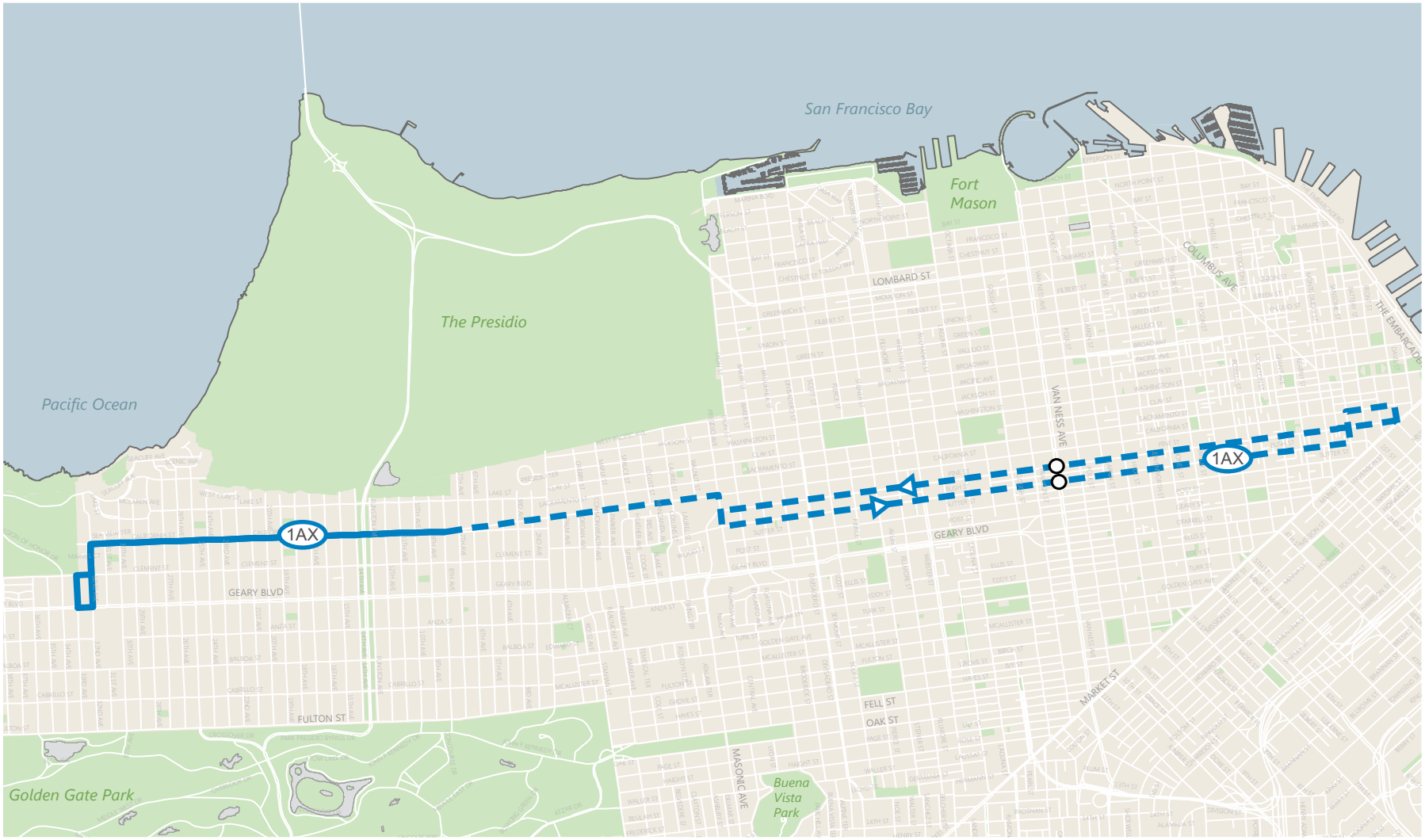
	Current	Approved	Frequency
AM	3.5	3.5	=
PM	3.5	3	+

Budget

Project Phase	Total
Design & Construction	$8,920,000

* No funding source identified for this project through 2018.

1AX California “A” Express



Express

- Recommended Route
- Express Segment (no stops)

Feature Summary

BUS STOPS | SIG-NALS | ROAD-WAYS | CURB SPACE | PEDES-TRIAN

1AX California “A” Express

Overview

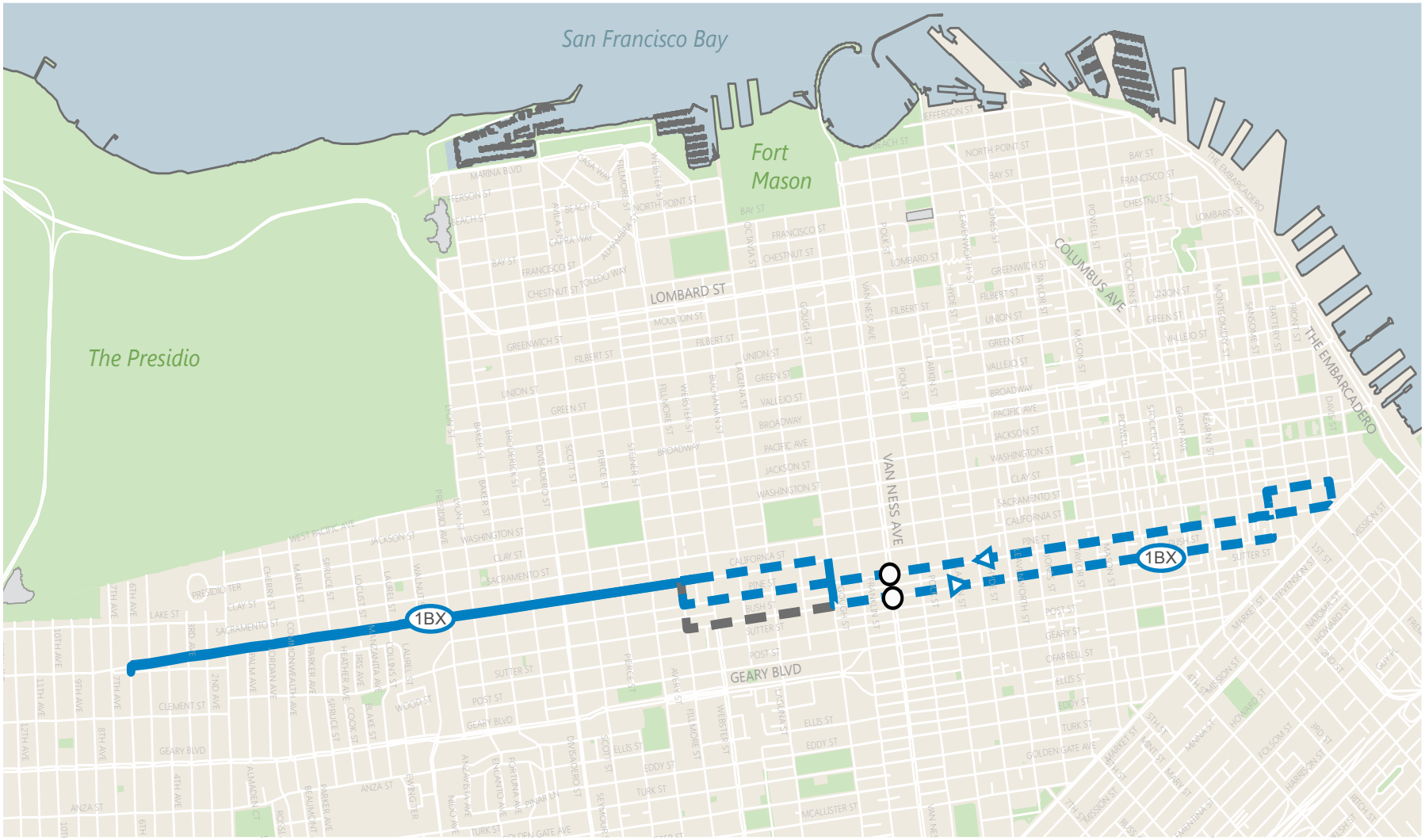
- No route changes proposed.
- New transit stop would be added on Pine Street (p.m.) and Bush Street (a.m.) at Van Ness Avenue to improve transit connections to the Civic Center and the northern waterfront.
- A Transit Priority Project is proposed for this corridor to reduce transit travel time.

Frequency

Service during peak periods (headway between vehicles, in minutes)

	Current	Approved	Frequency
AM	10	10	=
PM	13	13	=

1BX California “B” Express



Express

- Recommended Route
- Express Segment (no stops)
- Segment Proposed for Elimination

Features

HC RA BUS STOPS SIG-NALS ROAD-WAYS CURB SPACE PEDES-TRIAN

1BX California “B” Express

Overview

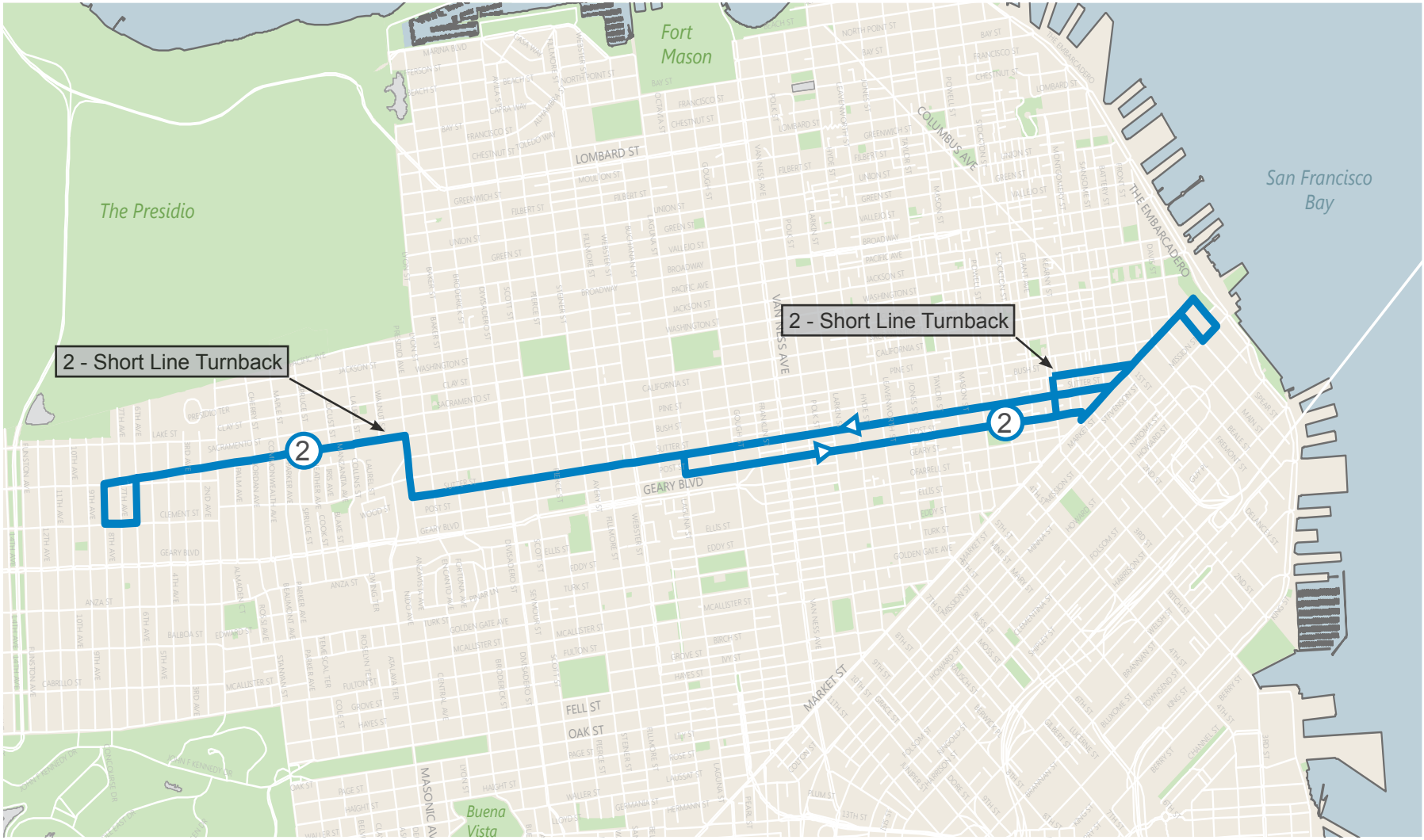
- No stops would be eliminated, but the route alignment would change. Where the inbound (eastbound) route currently turns south on Fillmore Street, the proposed route would continue on California Street and turn south on Gough Street to Bush Street. The route segment that extends south on Fillmore Street and east on Bush Street to Gough Street would be discontinued.
- New transit stop would be added on Pine Street (pm) and Bush Street (am) at Van Ness Avenue to improve transit connections to the Civic Center and the northern waterfront.
- A Transit Priority Project is proposed for the California Street corridor to reduce transit travel time.

Frequency

Service during peak periods (headway between vehicles, in minutes)

	Current	Approved	Frequency
AM	7	7	=
PM	11	11	=

2 Clement



Grid

Recommended Route

Feature Summary

RA HC VC EH

2 Clement

Overview

- To improve 2 Clement Service, it is recommend to use an alternative alignment that would utilize existing overhead wires for trolley coach service on the entire Sutter Street corridor. Instead of operating on Clement Street from Arguello Boulevard to Park Presidio Boulevard, the route would continue on California Street to Eighth Avenue, then south to Clement Street to Sixth Avenue. This service would include a terminal loop at Sansome Street in the Downtown area.
- Supplemental trolley coach service would be added between Downtown (Sansome/Market streets) and Presidio Avenue to improve current transit frequencies on Sutter and Post streets due to the reduced 3 Jackson service on this segment.
- A 2 Clement service would continue service to the current terminal on Clement Street and 14th Avenue.
- East of Fillmore Street during peak hours, the combined 2 Clement and 3 Jackson lines would operate with five minute headways. Between Fillmore Street and Presidio Avenue, the 2 Clement would operate with 7.5 minute headways.

Frequency

Service during peak periods (headway between vehicles, in minutes)

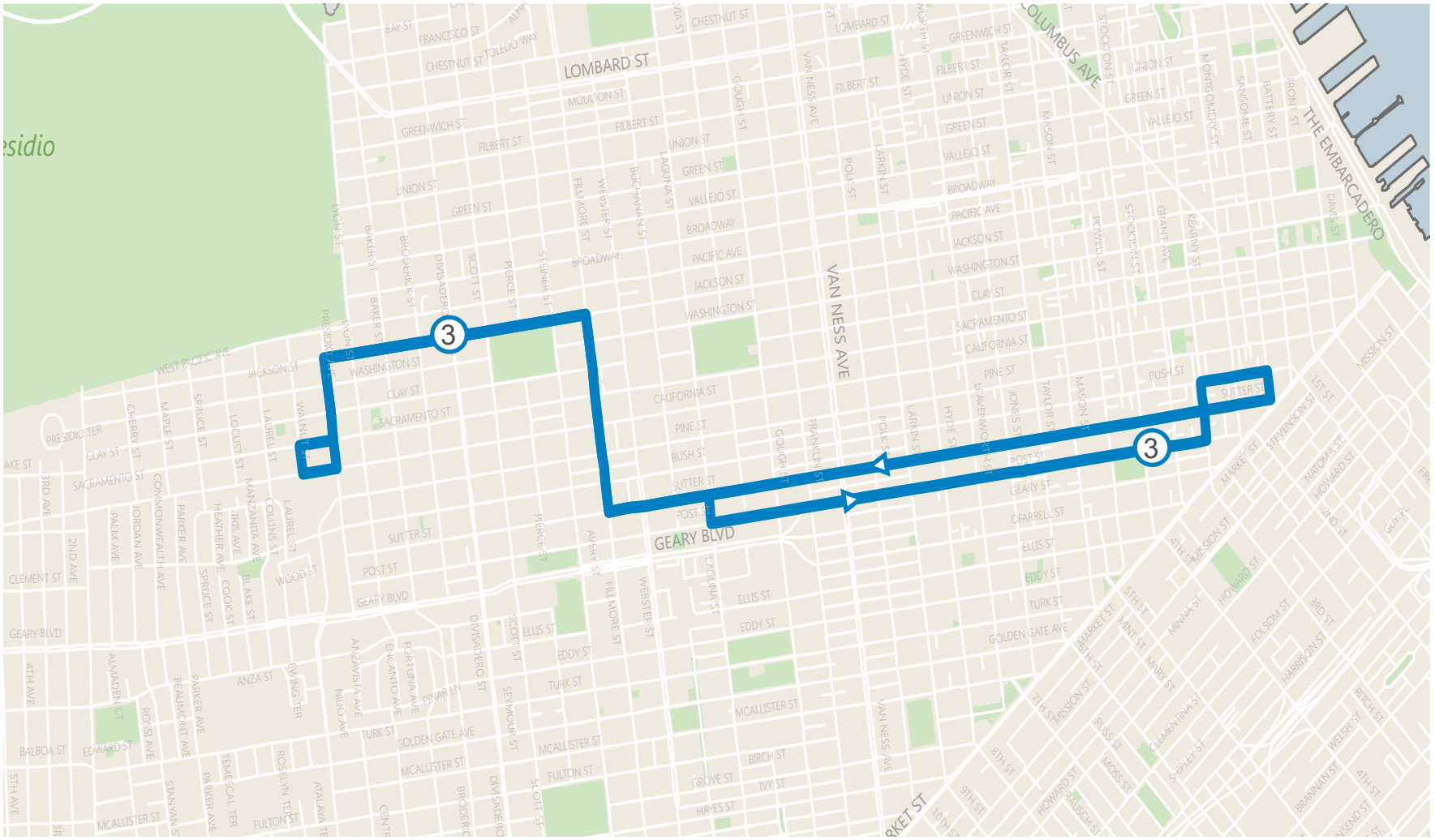
West of Presidio Ave.

	Current	Approved	Frequency
AM	12	15	–
PM	12	15	–

East of Presidio Ave.

	Current	Approved	Frequency
AM	12	7.5	+
PM	12	7.5	+

3 Jackson



Grid

Recommended Route

Feature Summary

HC

3 Jackson

Overview

- Route would be retained and its frequency would be reduced.
- Transit headways on Sutter Street would be increased by adding supplemental trolley coach service on the 2 Clement between Downtown and Presidio Avenue.
- Midday service frequency may be reduced from 20 minutes to 30 minutes.

Frequency

Service during peak periods (headway between vehicles, in minutes)

	Current	Approved	Frequency
AM	12	15	—
PM	12	15	—

5 Fulton / 5R Fulton Rapid

Rapid

Recommended Route

Feature Summary

NR RA HC VC BUS STOPS SIG-NALS ROAD-WAYS CURB SPACE PEDES-TRIAN

5 Fulton / 5R Fulton Rapid

Overview

Muni's 5 Fulton bus route carries about 19,000 daily customers on an average weekday. The route's study corridor is 5.6 miles long and includes Fulton Street between La Playa and Central Avenue, Central Avenue between Fulton and McAllister streets, and McAllister Street between Central Avenue and Market Street. Within the study corridor, the 5 Fulton serves over 13,000 customers on an average weekday.

Within the study area, the 5 Fulton operates at an average speed of 9.7 miles per hour during peak periods. Sources of delay include closely spaced bus stops, traffic congestion and frequent STOP signs along the route in the Western Addition.

- New Rapid Service route would make local stops west of Eighth Avenue, limited stops between Eighth Avenue and Market Street, and resume local stops on Market Street to the Transbay Terminal.
- 5R Fulton Rapid would be supplemented by 5 Fulton short-line with local service from Eighth Avenue to Downtown. Working together, the 5/5R would serve all local stops from Ocean Beach to Downtown; passengers who want to travel from a local stop west of Eighth Avenue to a local stop between Eighth Avenue and Market Street would need to transfer from the 5R Fulton Rapid to the 5 Fulton Short-line route.
- A Transit Priority Project is proposed for this corridor to reduce transit travel time.
- The 5 Fulton will operate the 5 Fulton short-line with motor coach service prior to the installation of bypass wires.

5 Fulton Transit Priority Projects

- Increasing bus stop spacing from 1.5 blocks to two blocks east of Arguello Boulevard and from two blocks to three blocks in the Richmond District. Currently, the 5 Fulton stops about every 1.5 blocks between Market Street and Arguello Boulevard and about every two blocks in the Richmond District. This proposal moves toward a two-block spacing between Market Street and Arguello Boulevard where blocks are longer and toward a three-block spacing in the Richmond District where blocks are shorter. By stopping fewer times, the bus would take less time to move through the corridor.
- Optimizing bus stop locations at 12 intersections. Relocating bus stops from the near-side to the far-side of intersections would allow buses to take advantage of planned transit signal priority improvements that could allow traffic signals to be programmed to hold green lights for approaching buses. Where the 5 Fulton turns at the STOP-controlled intersection of Central Avenue and McAllister Street, this proposal would relocate the bus stops to the near-side of the intersection, eliminating the need for buses to stop once for the STOP sign and again to pick-up and drop-off customers.
- Adding transit bulbs at 16 intersections. Transit bulbs are sidewalk extensions alongside bus stops that allow buses to pick-up and drop-off customers and reduce delay by preventing the bus from having to pull out of the travel lane into a bus stop and then wait for a gap to merge back into traffic. Transit bulbs enhance the ability of buses to take advantage of all-door

boarding and provide space for transit shelters and other customer amenities.

- Replacing all-way STOP-controlled intersections with traffic signals or traffic calming measures at nine intersections. Currently, the 5 Fulton is delayed by having to stop at multiple intersections with STOP signs. Some STOP signs could be replaced with traffic signals that could be programmed to hold green lights for approaching buses. At some intersections along McAllister Street, traffic calming measures could replace STOP signs and eliminate the need for buses to come to a complete stop while maintaining pedestrian safety. Potential traffic calming measures include traffic circles or sidewalk extensions.
- Adding right-turn pockets at 4 intersections. Right-turn pockets would reduce Muni delays associated with buses waiting behind right-turning motorists by providing a dedicated space for turning vehicles to queue.
- Implementing a road diet on Fulton Street between Stanyan Street and Central Avenue. Within this six block segment of Fulton Street, the travel lanes are too narrow to allow large vehicles such as buses to travel alongside other vehicles moving in the same direction. By removing one travel lane in each direction and widening the remaining travel lanes, delays would potentially be reduced.
- Adding peak-period parking restriction along east side of Central Avenue between Fulton and McAllister streets. Parking and loading along this block of Central Avenue delay Muni vehicles and make it difficult for buses traveling in opposite directions to pass each other. Restricting parking on the east side of Central Avenue during peak periods would provide more space for buses to maneuver and would reduce Muni delays.
- Adding pedestrian bulbs or islands at 3 intersections. Two treatments are being considered to shorten crossing distances and improve pedestrian safety. Pedestrian bulbs are sidewalk extensions at intersection corners that improve pedestrian safety by reducing the roadway crossing distance, making pedestrians waiting to cross the street more visible to approaching motorists, and reducing the speed of motorists turning from cross streets. Pedestrian islands provide a raised refuge area in the middle of the street for crossing pedestrians.

Summary

Together, the proposed changes are anticipated to reduce the travel time of the 5 Fulton by about six minutes in each direction (12 minutes total) within the study area (18 percent reduction), improving the average operating speed to 11.7 miles per hour and improving service reliability. Transit signal priority improvements are anticipated to save an additional 1.5 minutes in each direction. Other changes such as operational improvements and network enhancements would further improve travel times along the corridor and add valuable customer amenities such as NextBus displays. The travel time savings would also reduce operating costs on the line and allow for service to be cost effectively increased.

5 Fulton / 5R Fulton Rapid

Frequency

Service during peak periods (headway between vehicles, in minutes)

West of Eighth Ave.

	Current	Approved	Frequency
AM	6	6	=
PM	9	7	+

East of Eighth Ave.

	Current	Approved	Frequency
AM	4	3	+
PM	4.5	3.5	+

Budget

Project Phase	Total
McAllister St - Construction	$800,000
6th Ave to 25th Ave - Design & Construction	$22,700,000
East of 6th Ave - Design & Construction	$5,500,000
Total	$29,000,000

* The budget displayed above will be supplemented by Proposition K local funds, which will be used for project planning, conceptual engineering, and design.

5 Fulton Transit Priority Project