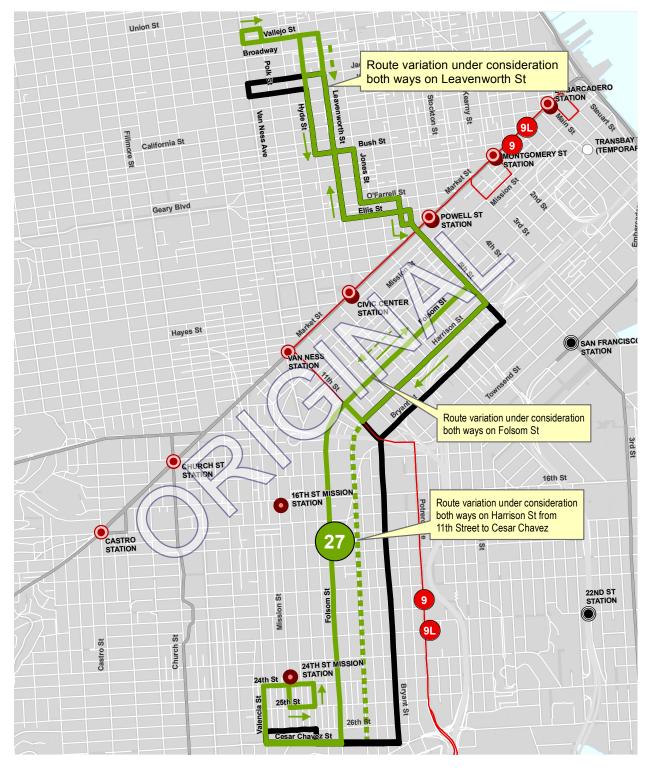
27 Bryant

- Original Proposal (See Revised Proposal on Pg 152)



Legend

- Recommended Route
 Potential Route Variation
- Rail Network
- Muni Metro Stations
 BART Stations
 Caltrain Stations

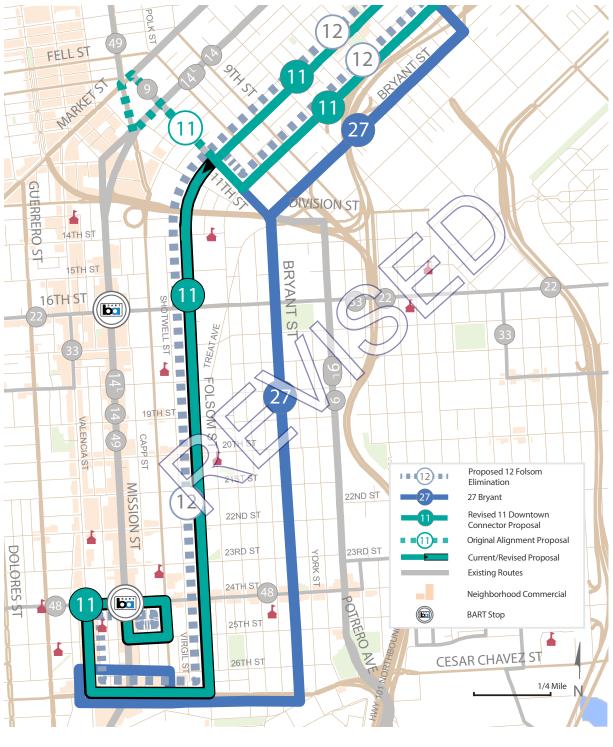
Proposed Changes



PROPOSALS BY ROUTE

27 Bryant

- Revised Proposal for South of 11th Street



Proposed Changes



27 Bryant

Overview

- Would be renamed the 27 Folsom since the route would no longer operate on Bryant Street. REVISED: 27 Bryant service will be retained in current alignment. No changes.
- Service would be extended north on Leavenworth Street and west on Vallejo Street to Van Ness Avenue, and would be moved from Bryant Street to Folsom Street to replace 12 Folsom service on Folsom Street from Fifth to Cesar Chavez streets, including the terminal loop to the 24th Street BART Station.
- Existing passengers on Bryant Street could use 9 San Bruno/9L San Bruno Limited rapid service on Potrero Avenue or local service on Folsom Street.
- The 27 Bryant Service Variant 1 would evaluate two-way service on Leavenworth and Ellis streets, and two-way service on Folsom Street, as proposed in the Tenderloin Community Plan and the Western SoMa Community Plan, respectively.
- 27 Folsom Service Variant 2 would evaluate transit service on Harrison Street in the Inner Mission from 11th to Cesar Chavez streets.
- New terminal loop would follow Vallejo Street, Van Ness Avenue, Green and Polk streets. The terminal would be located on Vallejo Street at Van Ness Avenue and would be 100 feet long, requiring a reduction of up to five parking spaces.

Frequency

	Current	Proposed	Frequency
AM	15	15	=
РМ	15	15	=

28 19th Avenue

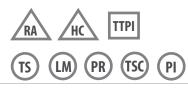
- Original Proposal (See Revised Proposal on Pg 155)



Legend

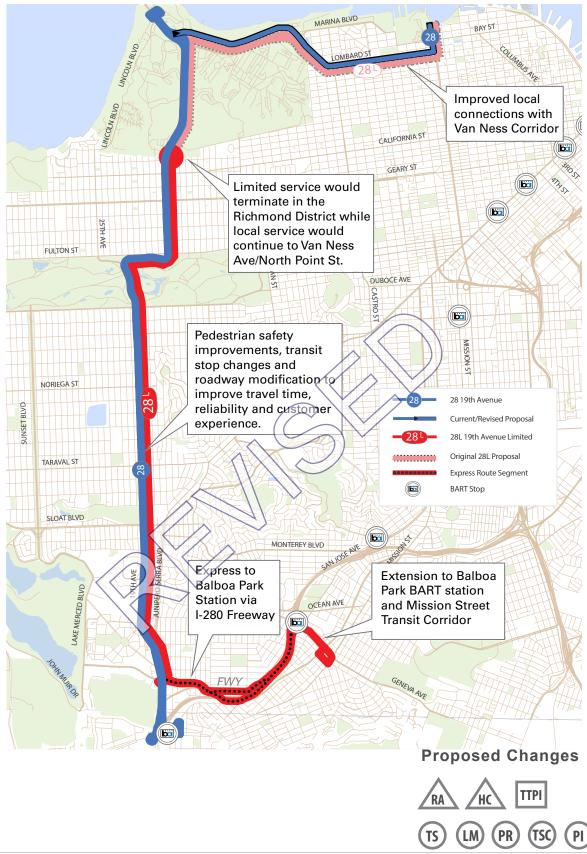
- Recommended Route
 Segment will be covered by another recommended route
 Rail Network
- Muni Metro Stations
 BART Stations
 Caltrain Stations

Proposed Changes



28 19th Avenue

- Revised Proposal



28 19th Avenue

Overview

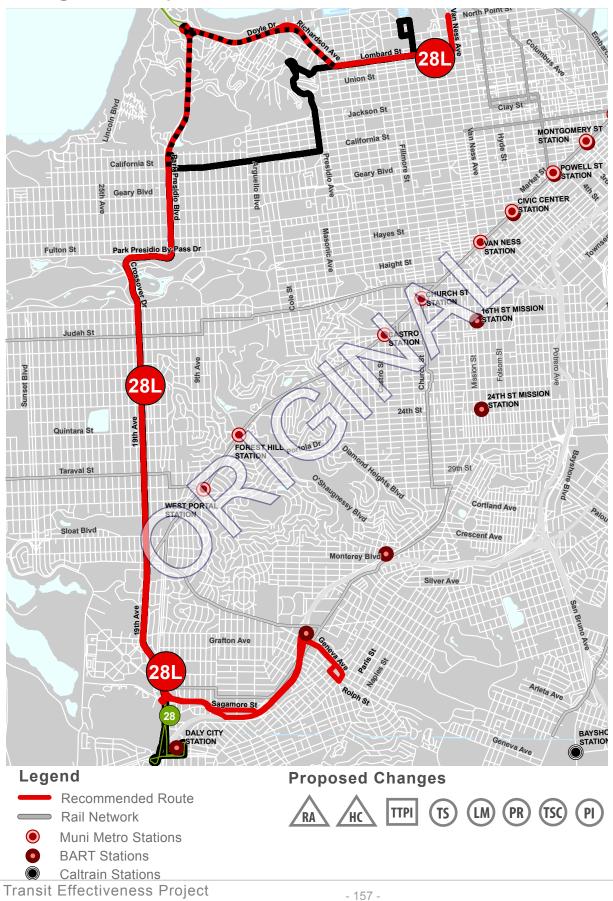
- Proposed alignment would terminate at Golden Gate Bridge (Toll Plaza Area) during daytime ours. Service to Van Ness Avenue and North Point Street via the Marina District would be provided by the 28L 19th Avenue Limited and service to Fort Mason would be provided by Route 43 Masonic. REVISED: 28 19th Avenue service to the Marina District via the Golden Gate Bridge would be retained.
- REVISED: The 28 19th Avenue would continue eastward on Lombard Street and serve a new northern terminal at Van Ness Avenue and North Point Street. Service to Fort Mason would be provided by Route 43 Masonic.
- When 28L 19th Avenue Limited is not in service, the 28 19th Avenue would provide evening service to Van Ness Avenue/North Point Street via Lombard Street.
- Midday frequency change from 10 to 9 minutes.
- To accommodate a new terminal at the northern segment of the route, the existing red curb in the eastern parking lot of the Toll plaza, adjacent to the new Pavilion building, would be designated as a bus terminal (the precise location would be selected in consultation with Golden Gate Bridge, Highway and Transportation District and Golden Gate National Recreation Area).
- TTRP.28_1 is proposed to reduce transit travel time on this corridor.

Frequency

	Current	Proposed	Frequency
AM	10	9	+
PM	10	9	+

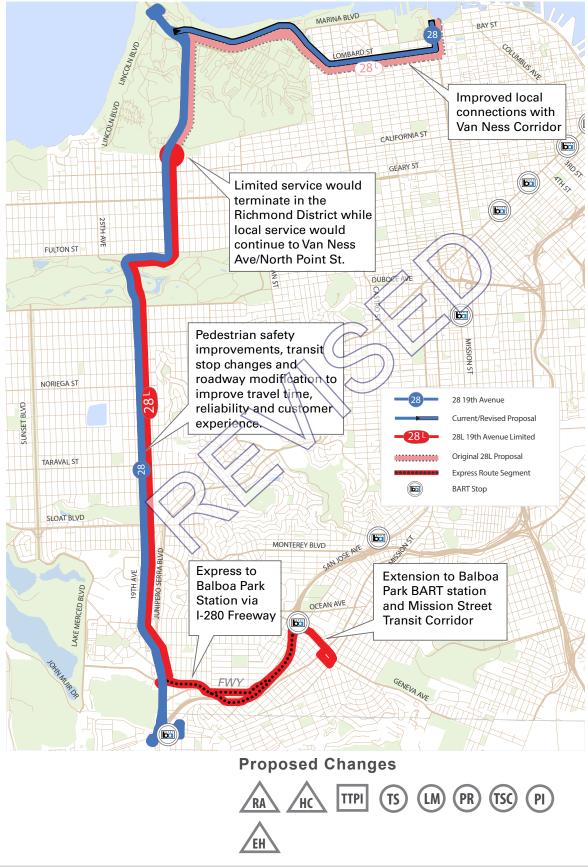
28L 19th Avenue Limited

- Original Proposal (See Revised Proposal on Pg 158)



28L 19th Avenue Limited

- Revised Proposal



Overview

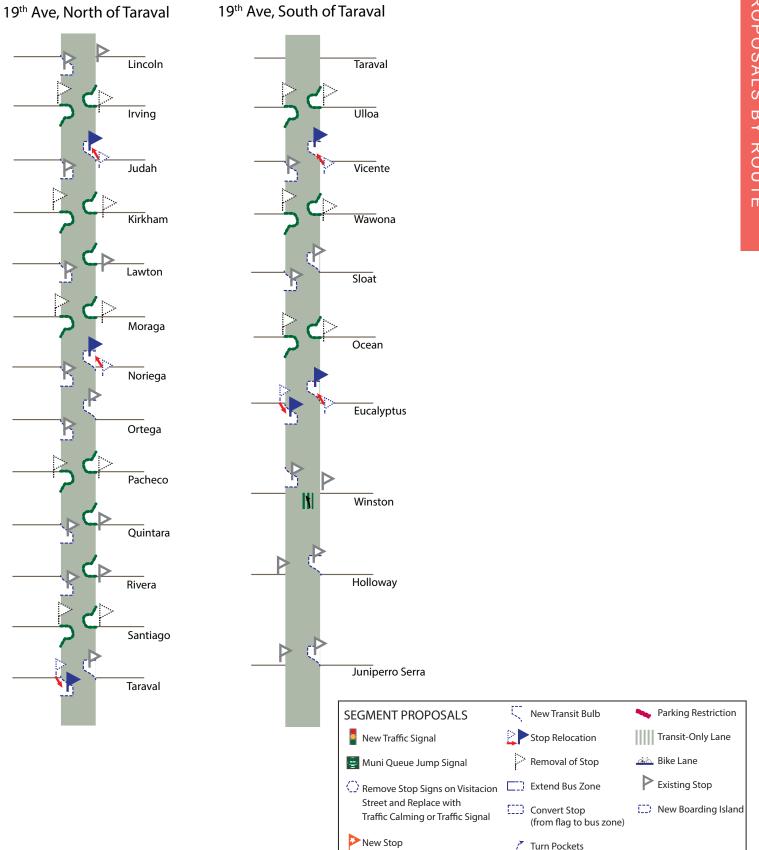
- Proposed alignment would provide all-day rapid, very limited-stop cross-town service, increasing access to San Francisco State University and CCSF from Van Ness Avenue/North Point streets and would provide better connections between the Marina, Richmond, Sunset, and Excelsior neighborhoods. REVISED: Proposed alignment would provide all-day rapid, very limited-stop cross-town service, increasing access to San Francisco State University and CCSF from Park Presidio/California Street and would provide better connections between the Richmond, Sunset, and Excelsior neighborhoods. Route would be extended to Van Ness Avenue/North Point Street from Lombard Street and to Mission Street/Geneva Avenue via I-280. (Note: Golden Gate Bridge Toll Plaza would not be served by this route.)
- REVISED: The 28L 19th Avenue Limited would serve a new northern terminal near California Street and Park Presidio, and would no longer serve the Marina District. A new terminal location is tentatively planned for Funston Street between California and Lake streets.
- New streets on northern segment are Lombard Street, between Laguna Street and Van Ness Avenue, and on sections of Alemany Boulevard, between Sagamore Street and San Jose Avenue; I-280 between Ocean and Sickles avenues exit, Brotherhood Way, between Junipero Serra Boulevard and Sagamore Street, on Niagara Avenue between Alemany Boulevard between Niagara and Geneva avenues (to accommodate the terminal loop). REVISED: New streets are on sections of Alemany Boulevard, between Sagamore Street and San Jose Avenue; I-280 between Ocean and Sickles avenues exit, Brotherhood Way, between Junipero Serra Boulevard and Sagamore Street, on Niagara Avenue between Alemany Boulevard between Niagara and Geneva avenues (to accommodate the terminal loop).
- Midday service would operate every 9 minutes.
- Limited-stop service would operate seven days a week from 6 a.m. to 8 p.m. with wider stop spacing than current 28L 19th Avenue Limited (currently limited-stop service operates weekdays only approximately 7 - 9 a.m. and 2 - 4 p.m.).
- TTRP.28_1 and TTRP.28_2 are proposed to reduce transit travel time on this corridor.
- The southern terminal would be located on Geneva Avenue midblock between Mission Street and Alemany Boulevard. The terminal loop would be right onto Mission Street, right onto Niagara Avenue, and right onto Alemany Boulevard. This would require a reduction of up to five parking spaces.
- Northern terminal will require a 160 foot extension of the current 30 Stockton short line service terminal located on North Point Street between Van Ness Avenue and Polk Street.

28L 19th Avenue Limited

Frequency

	Current	Proposed	Frequency
AM	10	9	+
PM	N/A	9	+

28 19th Avenue & 28L 19th Avenue Limited



28 19th Avenue Segment Proposal

28 19th Avenue Corridor Overview

Muni's 28 19th Avenue and 28L 19th Avenue Limited bus routes together carry about 17,500 daily customers on an average weekday. The route's study corridor is 3.4 miles of 19th Avenue between Lincoln Way and Junipero Serra Boulevard. The M Ocean View Line also travels through a portion of the study area.

Within the study corridor, 28 19th Avenue and 28L 19th Avenue Limited together serve over 8,500 customers on an average weekday and the M Ocean View Line serves an additional 5,400 customers at the stops located along 19th Avenue at Holloway Avenue and Winston Drive.

Within the study area during the p.m. peak period, the 28 19th Avenue local service operates at an average speed of 9.2 miles per hour and the 28 19th Avenue Limited operates at an average speed of 11.5 miles per hour. The main sources of delay are closely spaced bus stops and traffic congestion.

28 19th Avenue Travel Time Reduction Proposal Overview

In order to reduce transit travel times and improve reliability, the SFMTA proposes a toolkit of measures within the study area. The proposals include:

- Increasing bus stop spacing from one block to two blocks. Currently, the 28 19th Avenue local service stops at every block between Lincoln Way and Eucalyptus Drive. This proposal moves toward a two-block spacing for most stops. By stopping fewer times, the bus would take less time to move through the corridor.
- Reducing number of limited service stops. Currently, the 28L 19th Avenue Limited has seven stops in each direction within the study area. This proposal would provide stops at major transfer points and destinations, including Judah Street, Taraval Street, Winston Drive and Holloway Avenue.
- Optimizing bus stop locations at five intersections. Relocating bus stops from the near-side to the far-side of intersections allows buses to take advantage of planned transit signal priority improvements that will allow traffic signals to be programmed to hold green lights for approaching buses.
- Adding transit bulbs at 14 intersections. Transit bulbs are sidewalk extensions alongside bus stops that allow buses to pick-up and drop-off customers without 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 planned 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.

- Adding pedestrian bulbs at 11 intersections. 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. Reducing pedestrian crossing distances can provide flexibility in traffic signal timing that can reduce Muni delays.
- Shortening one left-turn lane on northbound 19th Avenue at Winston Drive. Shortening the leftturn lane that is currently shared with inbound M Ocean View trains would reduce delays for trains which currently must wait for the left turn queue to dissipate before proceeding through the intersection. By shortening the left-turn lane that is shared with the M Ocean View, the space for non-transit vehicles to queue in front of trains would be reduced, thereby allowing both the non-transit vehicles and trains to clear the intersection in one left-turn signal phase.

Summary

Together, the proposed changes are anticipated to reduce the travel time of the 28 19th Avenue local service by more than 5 minutes in each direction (11 minutes total) within the study area (25 percent reduction), improving the average operating speed to 12.2 miles per hour and improving service reliability. The proposed changes are anticipated to reduce the travel time of the 28L 19th Avenue Limited by 1.5 minutes in each direction (3 minutes total) within the study area (nine percent reduction), improving the average operating speed to 12.7 miles per hour. Transit signal priority improvements are anticipated to save an additional 40 seconds in each direction for the 28 19th Avenue local service and 1.5 minutes each direction for the 28L 19th Avenue Limited. 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.

San Francisco's Pedestrian Safety Task Force, created through Executive Directive 10-03: Pedestrian Safety In San Francisco, identified several high injury density corridors that encompass less than seven percent of City streets but account for over half of serious and fatal pedestrian injuries, including 19th Avenue. The transit bulbs and pedestrian bulbs recommended as part of this travel time reduction proposal can improve pedestrian safety and could be further enhanced with additional pedestrian safety treatments.

28_2 19th Avenue Travel Time Reduction Proposal

For this proposal, the TPS Toolkit elements would be applied along a segment of the 28L 19th Avenue Limited route (portion of U.S. 101). The TPS Toolkit elements would be implemented along the following streets: Van Ness Avenue, Lombard Street and Richardson Avenue. This part of the 28 19th Avenue Limited corridor extends from the intersection of Beach Street and Van Ness Avenue to the intersection of Lyon Street and Richardson Avenue (US 101 N). This would improve an east-west portion of the Rapid Network connecting the future Van Ness BRT with the 28L 19th Avenue Limited, which provides transit connections through the Marina and the Presidio to the Richmond and Sunset Districts.

TTPI.2 Lyon/ Richardson Transfer Point

This project would install a bus stop/transfer point at Lyon Street and Richardson Avenue to facilitate connections between the Rapid Network 28L 19th Avenue Limited and regional transit service provided by Golden Gate Transit. The new transfer point would replace the 28L 19th Avenue Limited transfer point currently located at the Golden Gate Bridge toll plaza, which would no longer be served by the 28L with implementation of the TEP. The 28 19th Avenue (local service) customers would continue to transfer at the Golden Gate Bridge toll plaza. Potential improvements may include changes to pedestrian access and the construction of a transit bulb.

Finance

Route	/ Fund Source	FY12-13	FY13-14	FY14-15	FY15-16	FY16-17	FY17-18	Total
28 19th	Avenue							\$12,760,000
TEP Capital Seg. 1	CCSF-GOBond SFCTA-PropK-EP1		\$1,020,000	\$1,900,000				\$1,900,000 \$1,020,000
oeg. i	Total		\$1,020,000	\$1,900,000				\$2,920,000
TEP Capital	CCSF-GOBond					\$7,200,000		\$7,200,000
Seg. 2	Total					\$7,200,000		\$7,200,000
TEP	MTC-TPI(MC)				\$2,640,000			\$2,640,000
Supportive	Total	\$10,440,000						\$10,440,000

29 Sunset



Legend

- Recommended Route
- Segment will be covered by another recommended route
- Rail Network
 - Segment Proposed for Elimination
- Muni Metro Stations
 BART Stations
 Caltrain Stations

Proposed Changes



29 Sunset

Overview

- Would provide a more direct route on Ocean Avenue to Balboa Park Station (instead of current route on Mission Street and Geneva Avenue).
- Route would extend from Persia Avenue to Ocean Avenue to Plymouth Avenue. New street segment on Persia Avenue between Mission Street and Ocean Avenue in association with TTPI.1 Persia Triangle Improvements.
- Service would be eliminated on Mission Street between Persia and Geneva avenues and on Geneva Avenue between Mission Street and Ocean Avenue.
- Two-way service on Gilman Avenue would simplify route to/from Candlestick Park; service on Fitzgerald Street would be discontinued.

TTPI.1 – Persia Triangle Improvements

The Persia Triangle Improvements (TTPI.1) would change the pedestrian and transit circulation along the intersections of Mission Street and Ocean Avenue, Mission Street and Persia Avenue, and Ocean and Persia avenues, which form the "Persia Triangle." The proposed project would include improvements to complement the realignment of the 29 Sunset route to travel along Ocean Avenue between Mission Street and the Balboa Park Station. Currently, the inbound 29 Sunset route turns left onto southbound Mission Street from Persia Avenue, turns right onto westbound Geneva Avenue from Mission Street, and proceeds along Geneva Avenue to the Balboa Park Station. The revised inbound (northbound) route would continue on Persia Avenue across Mission Street and turn left onto Ocean Avenue to proceed to the Balboa Park Station. The new segment of the 29 Sunset route would operate in both the inbound and outbound directions. The existing 29 Sunset route along Persia Avenue (east of Mission) would remain unchanged.

A new transit stop would be added on the east side of Persia Avenue between Mission Street and Ocean Avenue. There are two possible locations under consideration for this new stop on Persia Avenue; one would be nearside at the intersection with Ocean Avenue, and the other would be farside at the intersection with Mission Street. This transit stop would include the construction of a transit bulb. As part of the project, curb radii modifications at the T-intersection of Persia and Ocean avenues would also be completed by installing a pedestrian bulb at the southwest corner of the intersection to improve the turning radius for outbound buses traveling from Ocean Avenue to Persia Avenue. The new transit stops with transit bulbs would be approximately 60 feet in length by six feet in width and the pedestrian bulb approximately 20 feet in length by six feet in width.

In addition, two new transit zones with transit bulbs (approximately 60 feet in length by six feet in

width) would be constructed along Ocean Avenue at the intersection with Persia Avenue for the 49L Van Ness-Mission Limited route. One would be located on the north side of Ocean Avenue midblock between Persia Avenue and Mission Street. The other stop would be located on the nearside of the intersection of Ocean Avenue with Persia Avenue for the inbound 49L Van Ness-Mission Limited route. A pedestrian bulb approximately 20 feet in length by six feet in width would be added on the northwest corner of the intersection of Ocean Avenue and Mission Street and a new transit stop with a transit bulb would be added on the southwest corner of this intersection to serve the 14 Mission and 14L Mission Limited routes. Up to five existing parking spaces would need to be removed to construct the improvements for the Persia Triangle Improvements project.

Frequency

	Current	Proposed	Frequency
AM	9	8	+
РМ	10	10	=

30 Stockton

North Point St. Jefferson St 30 Chestnut S Union St Broadway St 30 Clay St Jackson St \bigcirc ome St arny Sacramento St S TRANSBAY TER (TEMPORARY) Sutter St nore St Map shows routing after Central Subway begins service. Geary Blvd Fulton St VAN NESS SAN FRANCISCO

Legend



- BART Stations
- Caltrain Stations

Transit Effectiveness Project



Proposed Changes

vc

НС

TS LM PR

TSC PI

Overview

- No route changes proposed.
- Subject to equipment availability, all service on Stockton Street would be provided by 60-foot articulated buses to reduce crowding and improve reliability.
- Currently, there is a temporary reroute in the southbound direction along Mason and Fifth streets to accommodate the Central Subway Project construction. The reroute is expected to be in place for several years.
- TTRP.30 is also proposed to reduce transit travel time along this corridor.

30 Columbus & Stockton Corridor Overview

Muni's 30 Stockton bus route carries about 28,000 daily customers on an average weekday. The route's study corridor is 2.2 miles long and includes Van Ness Avenue, North Point Street, Columbus Avenue, Stockton Street, Sutter Street, and Kearny Street. Portions of the 45 Union-Stockton and 8X/AX/BX Bayshore Expresses also travel through the study area and would benefit from the proposed improvements.

Within the study corridor, the 30 Stockton serves over 17,600 customers. Combined with the 45 Union-Stockton and the 8X/AX/BX Bayshore Expresses, within the study corridor the routes serve over 27,500 customers during an average weekday.

Within the study area, the 30 Stockton operates at an average speed of 5.6 miles per hour during peak periods. The main sources of delay are closely spaced bus stops, narrow traffic lanes in Chinatown, and traffic congestion.

30 Columbus & Stockton Travel Time Reduction Proposal Overview

In order to reduce transit travel times and improve reliability, the SFMTA proposes a toolkit of measures within the study area. The proposals include:

- Increasing bus stop spacing from one block to two blocks. Currently, the 30 Stockton stops at almost every block on Columbus Avenue and on North Point Street. This proposal moves towards at least a two-block spacing throughout the route. By stopping fewer times, the bus would take less time to move through the corridor.
- Optimizing bus stop locations at four locations. 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.
- Adding transit bulbs at 11 locations. Transit bulbs are sidewalk extensions alongside bus stops that allow buses to pick-up and drop-off customers without 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 planned all-door boarding and provide space for transit shelters and other customer amenities.

- Extending existing transit bulbs at four locations. Transit bulbs in the southbound direction on Stockton Street are currently sized for one articulated 60' bus. Often times due to the high frequency of transit service in this direction, two or more buses will arrive at a stop at the same time, delaying the second vehicle as it waits to service the stop. With a longer transit bulb, up to two articulated 60' buses would be able to serve the stop at the same time, reducing delays.
- Adding transit-only lanes at three locations. In areas of high traffic congestion, transit-only lanes can save significant travel time for the 30 Stockton by giving the bus its own exclusive lane.
- Widening travel lanes on Stockton Street between Broadway and Columbus Avenue. Within
 this two block segment of Chinatown, the travel lanes on Stockton Street are too narrow to
 allow large vehicles such as buses or delivery trucks to pass one another in opposite directions
 without one of the vehicles coming to a complete stop. For example, when a 30 Stockton bus
 is headed northbound within this segment, it generally has to drive over the double yellow line
 due to the narrow lane widths. If a large vehicle such as a bus or delivery truck is headed in
 the opposite direction, one vehicle must stop to let the other pass by. This condition has made
 Stockton Street between Broadway and Columbus Avenue the slowest segment of the route.
 By widening the travel lanes through parking removal on the east side of the street, delays to
 transit would potentially be reduced.

Summary

Together, the proposed changes are anticipated to reduce the travel time of the 30 Stockton by about 3.5 minutes in each direction (seven minutes total) within the study area (15 percent reduction), improving the average operating speed to 6.6 miles per hour and improving service reliability. Transit signal priority improvements are anticipated to save an additional two 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.

30_2 Chestnut Street Travel Time Reduction Proposal

For this proposal, the TPS Toolkit elements would be applied along a segment of the 30 Stockton route. The TPS Toolkit elements would be implemented along Chestnut, Broderick, Divisadero and Jefferson streets, from the intersection of Van Ness Avenue and Chestnut Street to the intersection of Jefferson and Broderick streets. This would improve an east-west portion of the Rapid Network connecting the future Van Ness BRT with the 30 Stockton to provide transit connections between the Marina, Russian Hill, Civic Center, the North Waterfront, North Beach, Chinatown, Union Square, the Financial District, SoMa and the Caltrain Station.

Frequency

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

East of Van Ness Ave.

	Current	Proposed	Frequency
AM	4	4	=
РМ	4	4	=

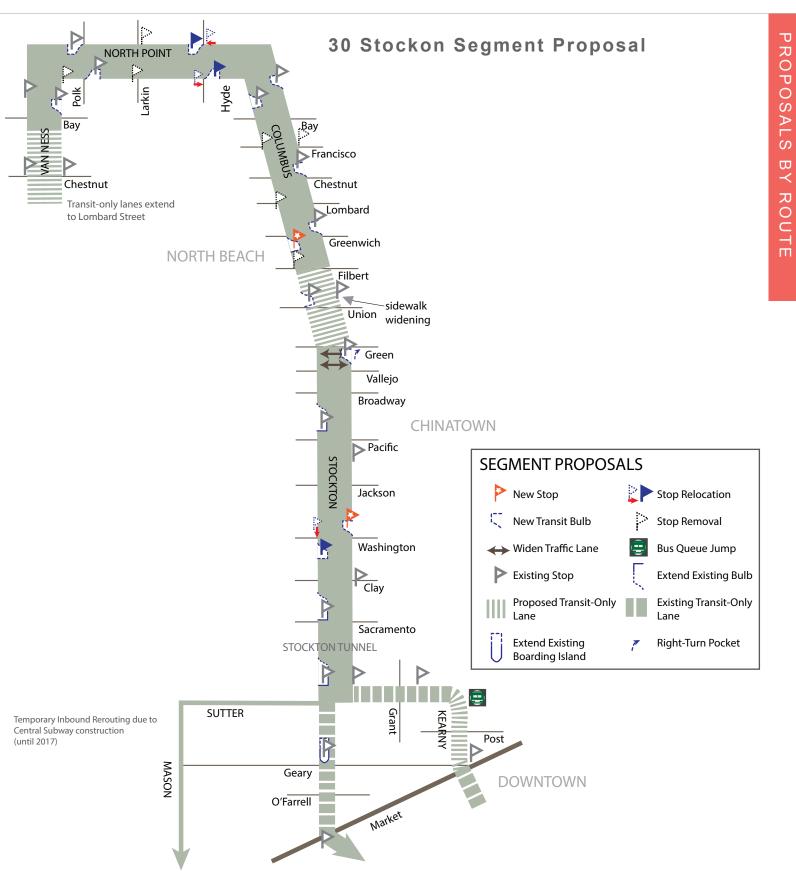
West of Van Ness Ave.

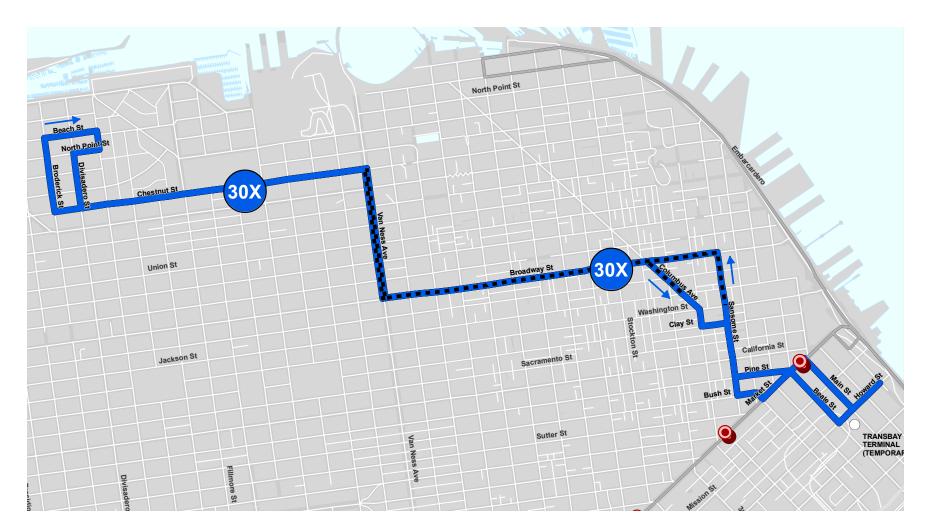
	Current	Proposed	Frequency
AM	8	7	+
РМ	12	12	=

Finance

Route /	Fund Source	FY12-13	FY13-14	FY14-15	FY15-16	FY16-17	FY17-18	Total
30 Stock	kton							\$32,880,000
TEP Capital Seg. 1	CCSF-GOBond SFCTA-PropAA					\$22,100,000 \$1,020,000		\$22,100,000 \$1,020,000
Seg. I	Total					\$23,120,000		\$23,120,000
TEP Capital	CCSF-GOBond SFCTA-PropK-EP1			\$560,000	\$3,360,000			\$3,360,000 \$560,000
Seg. 2	Total			\$560,000	\$3,360,000			\$3,920,000
TEP Supportive	No Funding Source SFCTA-PropK-EP16				\$2,375,373 \$333,000		\$3,131,627	\$5,507,000 \$333,000
	Total				\$2,708,373		\$3,131,627	\$5,840,000

30 Stockton





Legend

- Recommended Route
- Express Segment (No stops)
- Rail Network

- Muni Metro Stations
- BART Stations
- Caltrain Stations

Proposed Changes

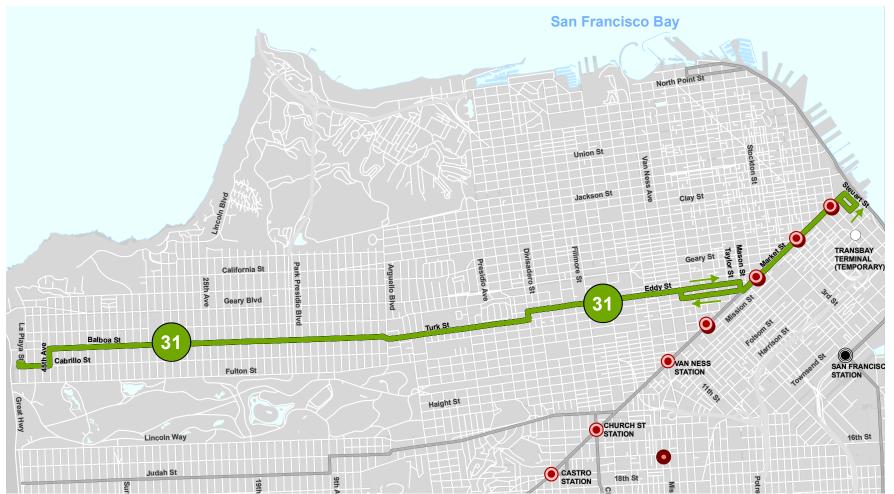


Overview

- No route changes proposed
- In the a.m. peak period, the 30X Marina Express would use 60-foot articulated motor coaches instead of standard 40-foot motor coaches.

Frequency

	Current	Proposed	Frequency
AM	4.5	4	+
РМ	7.5	7	+



Muni Metro Stations

BART Stations

Caltrain Stations

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Legend

- Recommended Route
- Segment will be covered by another recommended route
- Rail Network
 - Segment Proposed for Elimination

Proposed Changes

НС



31 Balboa

Overview

• No route changes proposed.

Frequency

	Current	Proposed	Frequency
AM	12	12	=
РМ	14	12	+



Legend

- Recommended Route
- Express Segment (No stops)Rail Network
- Muni Metro StationsBART Stations
- Caltrain Stations

Proposed Changes

None



Legend



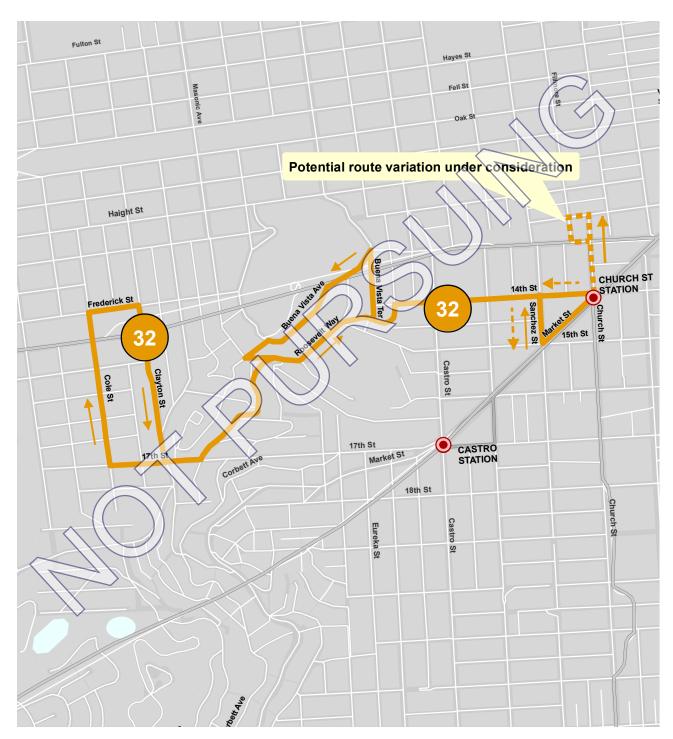
- Express Segment (No stops)
- Rail Network

- Muni Metro Stations
- BART Stations
- Caltrain Stations

Proposed Changes

None

32 Roosevelt - NOT PURSUING



Legend

- Recommended Route
- Segment will be covered by another recommended route
- Segment Proposed for Elimination Rail Network
- Muni Metro Stations BART Stations
- Caltrain Stations
- **Proposed Changes**



Overview

- Proposed route would replace Roosevelt Way segment of Route 37 Corbett but would not extend north of Cole/Frederick streets.
- Route would travel from Church and Market streets via Church Street left on Hermann Street, left on Fillmore Street, left on Duboce Avenue, right on Church Street, right on 14th Street, followed by Roosevelt Way, Buena Vista Terrace, Buena Vista East, Upper Terrace, Masonic Avenue, Roosevelt Way, then on 17th, Cole, Frederick, Clayton, and 17th streets, on Roosevelt Way onto to 14th Street and then, left onto Church Street. This would require modifying the existing no left turn restriction at Fillmore Street and Duboce Avenue to no left turns except Muni.
- Terminal would be on Church Street between Market and Reservoir streets. This would require a reduction of up to five parking spaces (when combined with the 37 Corbett terminal in the same location).
- 32 Roosevelt Service Variant would include an alternative alignment along Church Street, Hermann Street, Fillmore Street and Duboce Avenue.
- Recommended for van service, but the timeline for van procurement is uncertain.

Frequency

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

	Current	Proposed	Frequency
AM	N/A	20	N/A
PM	N/A	20	N/A

*Proposal is On Hold Pending Additional Community Outreach