MUNI FORWARD

5L Fulton Pilot Final Report

June 3, 2015

SFMTA
Municipal
Transportation
Agency

Contents

*** Note**

The name of the 5L Fulton Limited recently change to the 5R Fulton Rapid. This name change coincided with the launch of SFMTA's Rapid Network in April 2015. The below report uses the name of the pilot "5L" as this was the name used to launch the new service.

About the SFMTA

Vision

San Francisco: great city, excellent transportation choices.

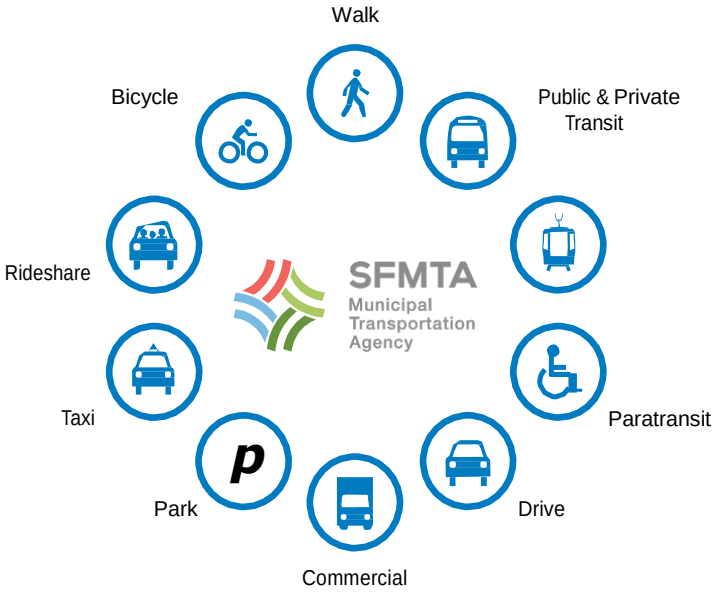
Mission Statement

We work together to plan, build, operate, regulate, and maintain the transportation network, with our partners, to connect communities.

Who We Are

The San Francisco Municipal Transportation Agency, a department of the City and County of San Francisco, is responsible for the management of all ground transportation in the city. The SFMTA keeps people connected through the San Francisco Municipal Railway (Muni), the nation's seventh largest public transit system. The agency's additional responsibilities include managing parking and traffic, bicycling, walking and the regulation of taxis. With a staff of more than 4,700, the SFMTA's diverse team of employees is one of the city's largest with representation by 18 labor organizations.

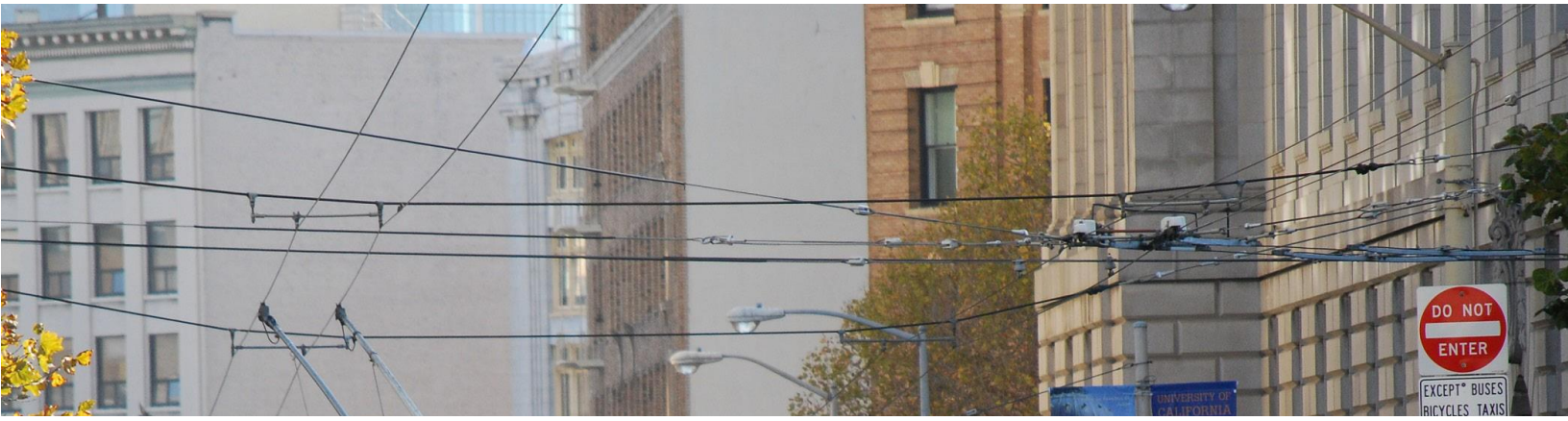
What We Do



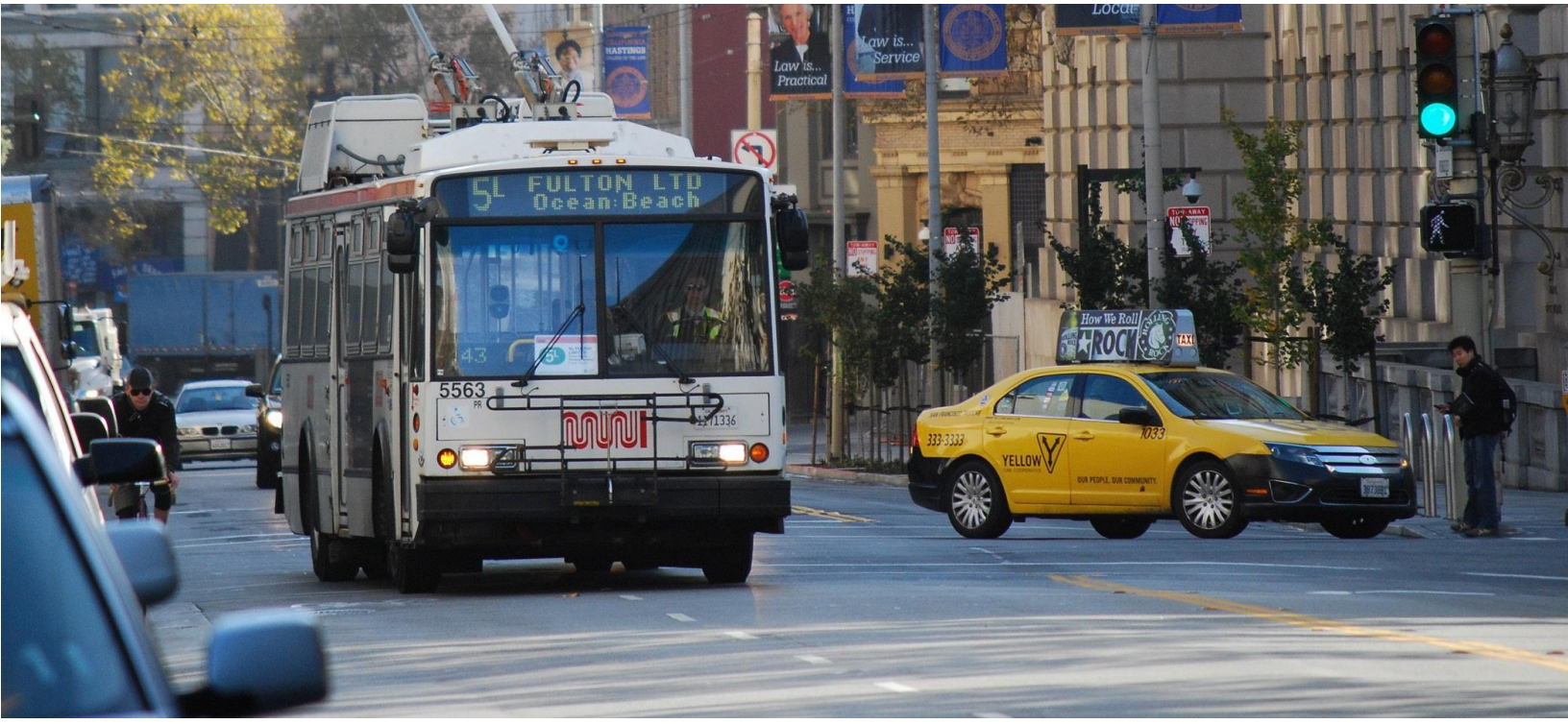
The SFMTA plans, designs, builds, operates, regulates and maintains one of the most comprehensive transportation networks in the world. The agency directly manages five types of public transit in San Francisco (motor coach, trolley coach, light rail, historic streetcar and cable car) and promotes other forms of transportation including walking, bicycling, taxi and auto use. In addition to overseeing paratransit service for those unable to use fixed-route transit service, the agency also regulates the taxi industry and oversees on- and off-street public parking spaces.

With more than 3,500 transit stops, Muni keeps people connected, delivering more than 700,000 passenger boardings on an average weekday and offering unmatched accessible transit service to San Francisco's 800,000 residents and a workday population of approximately 1.2 million.

The SFMTA also manages 450,000 on and off-street parking spaces, 19 public parking garages and lots, more than 28,000 meters, nearly 282,000 street signs and 1,200 traffic signals on 946 miles of city streets. The agency is responsible for traffic calming, pedestrian and bicycle safety, traffic enforcement and the painting and striping of roads, including those that define 217 miles of the city's growing bicycle network. As a part of the SFMTA's pedestrian safety initiatives, the agency also manages the School Crossing Guard Program to keep children safe when crossing city streets.



5L Fulton Final Report



5L Fulton Pilot - Final Report

Executive Summary

On October 28, 2013, the SFMTA implemented the 5L Fulton Pilot (5L Pilot) project along the 5 Fulton corridor. The pilot introduced limited-stop service intended to decrease travel time and increase service frequency to reduce crowding between 6th Avenue and the Transbay Terminal. This pilot provides the ability to analyze the benefits of the modified service to inform implementation of future Muni Forward Transit Priority Projects.

The components implemented as part of the pilot, including limited stop service, stop consolidation, a road diet along Fulton between Arguello and Baker that widened travel lanes, and parking removal along Central Avenue opposite the Lucky supermarket truck bays.

The two primary goals of the pilot include:

- Improve transit and pedestrian safety
- Improve customer experience by reducing crowding, reducing travel times, and enhancing service reliability

Analysis reveals that the pilot has achieved success in meeting the stated goals of the project. To quantify these goals, five metrics were analyzed.

Evaluation Metric	Result	Key Outcome
1 – Travel Time	Met Standard	Travel time dropped by 12% east of Sixth Avenue and overall travel time decreased by 9% on the 5L Fulton Limited as compared to the existing 5 Fulton local service
2 – Ridership	Ideal	Ridership increased by 17% on weekdays
3 – Crowding	Met Standard	The rate of vehicle crowding on weekdays did not change
4 – Safety	Ideal	Transit collision incidents were reduced by almost 40%
5 – Circulation	Ideal	No, to little change in intersection LOS or parallel street traffic volumes

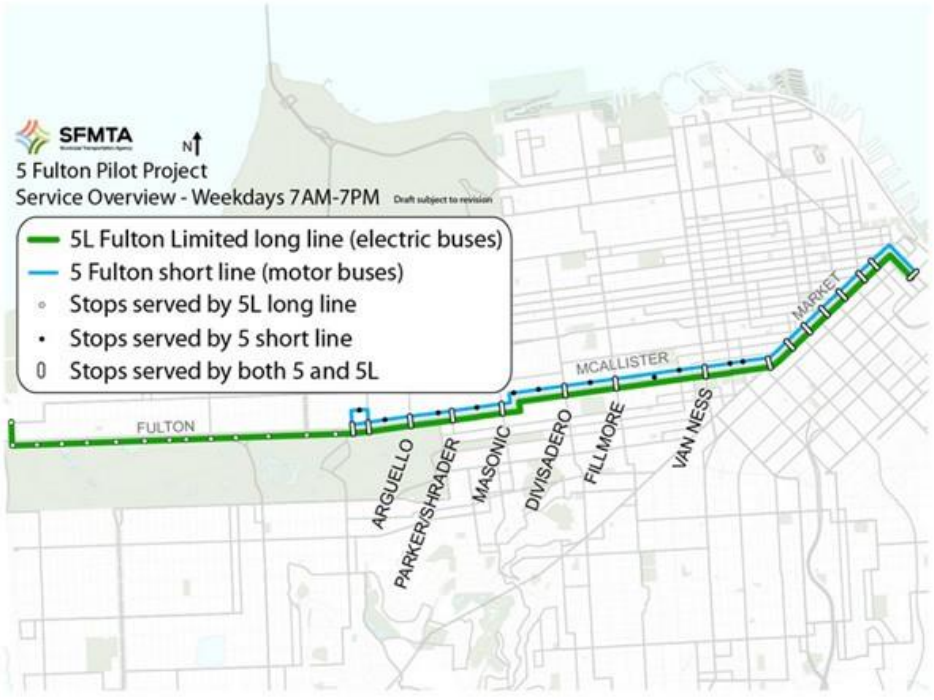


Figure 1: Pilot Study Area

Introduction

As part of the Transit Effectiveness Project (TEP), on October 28, 2013, the San Francisco Municipal Transportation Agency (SFMTA) implemented the 5L Fulton Limited Pilot Project along the 5 Fulton Corridor. The pilot introduced limited-stop service to decrease travel time and increased frequency to reduce crowding between 6th Avenue and the Temporary Transbay Terminal. The pilot enables the analysis of the modified service to understand the benefits of the associated changes.

Overall, this report focuses on project benefits and assesses the success of the pilot as it becomes incorporated into Muni's standard service delivery plan. Specifically, the assessment takes a detailed look at the benefits of what was implemented as part of the pilot. Lessons learned from the pilot will be used to guide implementation of future projects.

Project Goals and Details

The two primary goals of the pilot include:

- Improve transit and pedestrian safety
- Improve customer experience by reducing crowding, reducing travel times, and enhancing service reliability

To achieve these goals, SFMTA implemented as a part of the pilot various elements of the Muni Forward Transit Priority Features (details of these features are included in the Muni Forward Implementation Workbook). The elements employed as a part of the pilot include the following:

1 - Service Changes

5L Fulton Limited - Introduction of Limited-Stop Service

The pilot introduced the new 5L Fulton Limited route, which compliments the existing 5 Fulton local service on weekdays between 7:00 AM and 7:00 PM. Specifically, the new route provides local stop service between Ocean Beach and Fulton & 6th Avenue, limited stop service between 6th Avenue and Market (McAllister & Leavenworth inbound and McAllister & Jones outbound), and local service along Market Street to the Temporary Transbay Terminal at Howard and Main. Limited stops along Fulton are at Arguello, Parker/Shader, and Masonic, and along McAllister are at Divisadero, Fillmore, and Van Ness. The 5L is operated with trolley coaches. (See Figure 1 above)

5 Fulton - Modification of Local Service

The pilot also introduced a modified 5 Fulton local line. While the 5 Fulton has historically operated as a trolley coach on Fulton and McAllister Street corridors all the way from Market Street to La Playa, it now operates as a motor coach to Fulton Street and 6th Avenue during times when the 5L is in service, utilizing a new terminal loop consisting of Sixth Avenue, Cabrillo, and Eighth Avenue before returning to Fulton Street. When the 5L is not in service, the 5 Fulton resumes operation all the way to La Playa and provides local stop service to all stops.

Service Frequency Improvements

The pilot greatly improved the frequency of service east of Sixth Avenue (See Figure 2 below). The improved weekday frequency significantly reduces the chance of pass-ups and crowding which were identified as major problems for the 5 Line, especially during the morning peak period for inbound buses between Masonic and Van Ness, and outbound during the PM peak period in the Civic Center area and at Van Ness Avenue. The pilot program between 6th Avenue and Downtown increased peak-hour peak-direction frequencies by 33% in the AM and 13% in the PM, and doubled midday frequencies.

	Existing 5 Fulton Frequency	
	Beach / 6th Av	**6th Av / Downtown**
AM Peak Period	5-8 min	4-5 min
Midday	8 min	8 min
PM Peak Period	4.5-9 min	4.5-5 min

	5L Pilot Frequency	
	Beach / 6th Av	**6th Av / Downtown**
AM Peak Period	6 min	3 min
Midday	10 min	5 min
PM Peak Period	7.5 min	4 min

Figure 2: Service Frequency Changes

2 - Street Changes

In addition to increasing service frequency and adding limited service, numerous street and stop improvements were implemented to reduce bus delay and improve reliability. Additional detail for these stop and street improvements are given in the Appendix.

Bus Stop Consolidation

Consolidating bus stops that are spaced too closely improves transit travel times and reliability. Four bus stops were eliminated each way along Fulton west of Sixth Avenue that the 5L Fulton Limited serves. Also, five bus stops were removed each way along McAllister that the 5 Fulton local short line serves between 6th Avenue and Market Street.

Bus stops removed:

- McAllister & Polk bus stop (both directions)[1]
- McAllister & Octavia (both directions)
- McAllister & Webster (both directions)
- McAllister & Broderick (both directions)
- Central & McAllister (outbound far-side)
- McAllister & Central (inbound far-side)
- Fulton & 12th Avenue (both directions)
- Fulton & 16th Avenue (both directions)
- Fulton & 20th Avenue (both directions)
- Fulton & 36th Avenue (inbound)
- Fulton & 38th Avenue (outbound)

Two bus zones were added:

- McAllister & Lyon
- 5 Short Line terminal zone on Howard — A new 162-foot-long part-time terminal bus zone of the south side of Howard midblock between Fremont and Beale, used as terminal for 5 Short Line motor coaches buses working out of Woods.

Bus Stop Optimization and Extension

Bus zones were extended to make room at both local and limited buses at shared stops. The nearside bus zones at stop signs were typically extended to a 100 feet.

Bus stop changes to Improve pedestrian safety

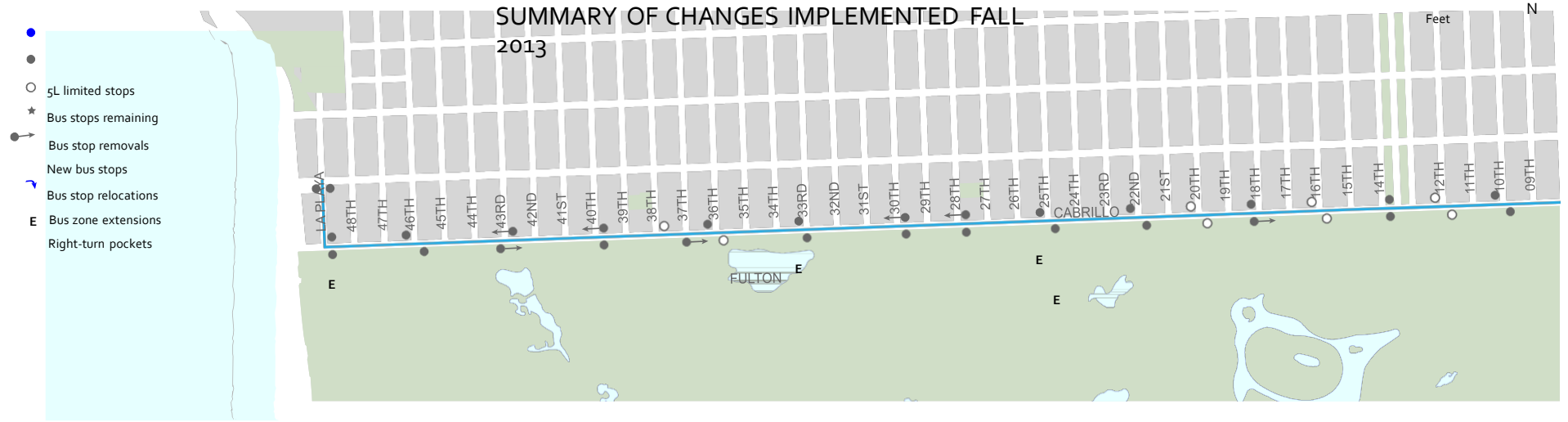
Along the four-lane and higher speed section of Fulton the pilot removed three bus stops each way that did not have traffic signals at 12th, 16th and 40th Avenues. Outbound on Fulton three bus stops at unsignalized 28th, 30th, 40th, and 43rd Avenues were moved from nearside to farside. The inbound stop at 47th Ave was moved to the farside at this unsignalized intersection to avoid having buses

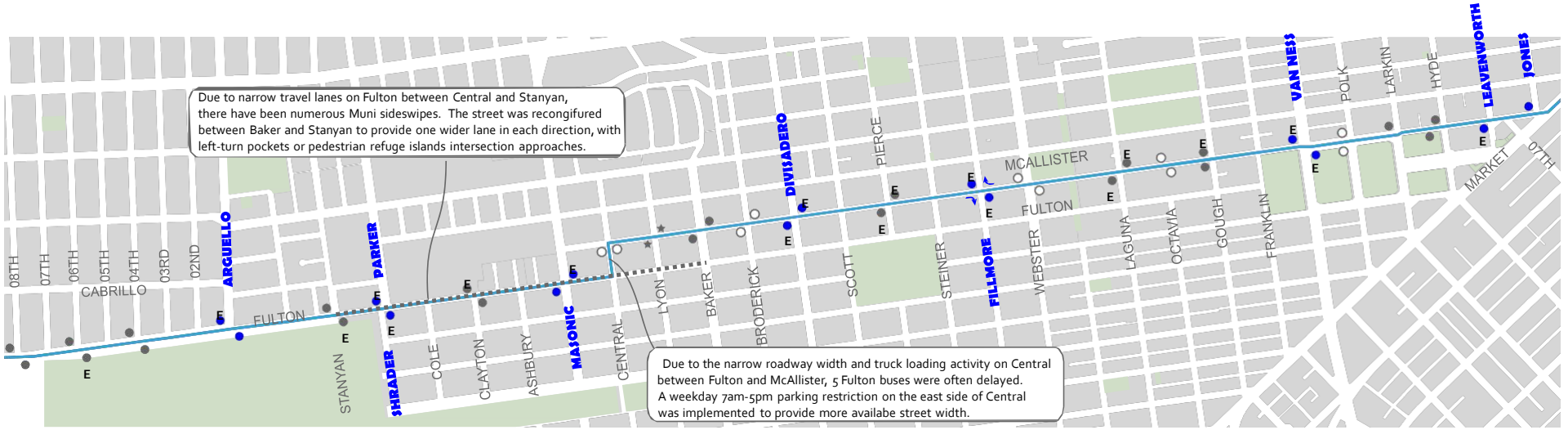
1 NOTE: The inbound bus zone was eliminated, but the outbound (westbound) far-side bus zone and shelter has been kept for Golden Gate Transit use.

SFMTA
Municipal Transportation Agency

5L FULTON LIMITED PILOT PROJECT
SUMMARY OF CHANGES IMPLEMENTED FALL 2013

July 17, 2014





block the crosswalk. Bus zone extensions were made to make room at both local and limited buses at shared stops, and at local stops the longer zones improve safety and accessibility since the rear of the bus can be closer to the curb, while allowing limited buses to pass.

3 - Lane Reconfiguration and Safety Improvements

Fulton Street Road Diet
As part of the proposed parking and traffic modifications, traffic lane reconfigurations were implemented on Fulton Street from Stanyan Street to Baker Street. On Fulton Street between Stanyan Street and Central Avenue, the number of travel lanes was be reduced from four lanes to three including one in each direction and a two-way center left-turn lane, with left-turn pockets or pedestrian refuge islands at intersection approaches. This reconfiguration provides wider travel lanes to both better accommodate the width of the buses, and help ensure safer travel through the area for all vehicles. In particular, the wider lane allows eastbound vehicles to safely pass the 21 Hayes terminal, located on Fulton at the nearside of the intersection with Shrader. Prior to the implementation of this change, there had been a number of sideswipe accidents associated with the 21 Hayes terminal.

On Fulton Street between Central Avenue and Baker Street, the number of travel lanes was reduced from three lanes to two, including one lane in each direction. This allowed reconfiguration of on-street parking on the north side of Fulton Street from parallel to perpendicular, to compensate for the loss of parking along Central Avenue, and lengthened bus zones.

Central Avenue Changes
Adding two blocks of perpendicular parking along Fulton helps to balance the part-time parking take needed to improve bus travel along Central Avenue between Fulton and McAllister, and the full-time parking take associated with the Masonic Avenue road diet, both of which take or will take parking from the neighborhood. A part time (7am to 5pm) tow-away red curb zone along the east side of Central Avenue reduces interference between buses and delivery trucks servicing the Luck supermarket loading docks.

Outreach and In-Reach

During the design and implementation of the pilot launch, extensive outreach was conducted to customers, community stakeholders, and internal stakeholders. The Appendix lists the detailed outreach to customers and the public along the corridor, briefings to policy makers, and the in-reach to SFMTA operating employees.

Prior to implementation, SFMTA conducted seven community meetings to review and receive comment on the design phase and held briefings with local members of the Board of Supervisors, as well as University of San Francisco representatives. During implementation, customer outreach included the installation of posters at all 5 Fulton stops describing the project overall, details on bus stop changes, and details on the project schedule. SFMTA Ambassadors distributed printed flyers to customers about the bus stop changes.

In-reach to SFMTA staff was conducted during the implementation and post-implementation phases of the project. The project team held meetings with representatives of affected bus divisions and the training department, and also conducted training classes at each bus division. After implementation, SFMTA staff held sessions with bus division supervisors and operators to discuss project-related successes, challenges, and solutions to initial operating challenges.

The outreach and in-reach activities resulted in several key adjustments to accommodate needs expressed by both customers and SFMTA employees. Specifically, the bus stop at McAllister and Baker Streets, which was initially removed as a part of the pilot along with two other nearby stops so that buses would stop in the area only once at a new Lyon Street stop, was restored a month after the pilot launch due to community member feedback about the ability of residents of a nearby multi-story senior low-income housing facility to access the stop, considering nearby street grades. Based on operator feedback about congestion and lack of space for bus layovers, the 5L terminal location near the Temporary Transbay Terminal was relocated to a new terminal location that can safely accommodate 5L buses and minimize interference with buses laying-over at other nearby terminal locations.

Pilot Evaluation Metrics

The below table summarizes the evaluations metrics for the pilot. The standards were defined prior to the pilot launch. The section below discusses the results of the pilots and compares them to the below metrics.

	Ideal	Meets Standards	Substandard
1 –Travel Time	Beyond six months after pilot implementation, travel times decrease by 17% for customers on the limited route, and 11% on the local route.	Beyond six months after pilot implementation, travel times decrease by less than 17% for customers on the limited route, and less than 11% on the local route.	Beyond six months after pilot implementation, travel times increase for customers on either the limited route or the local route.
2 - Ridership	Beyond six months after pilot implementation, when compared with observations made prior to pilot implementation, ridership increases by 3%.	Beyond six months after pilot implementation, ridership increases by less than 3%.	Beyond six months after pilot implementation, when compared with observations made prior to pilot implementation, ridership does not increase.
3 - Crowding	Crowding is reduced on both the local and limited routes	Crowding remains the same on both the local and limited routes	Crowding worsens on both the local and limited routes.
4 - Safety	Beyond six months after pilot implementation, collision rates decrease to a level below the citywide average.	Beyond six months after pilot implementation, collision rates decrease to the citywide average.	Beyond six months after pilot implementation, collision rates remain unchanged, or increase.
5 - Circulation	Beyond six months after pilot implementation, Fulton Street and adjacent corridors continue to operate at the same level of service.	Beyond six months after pilot implementation, Fulton Street and adjacent corridors operate at LOS E or better.	Beyond six months after pilot implementation, Fulton Street and adjacent corridors operate at LOS F.

Pilot Results & Analysis

Now that the 5L Fulton Limited has been in service for over one year, its effectiveness in achieving the goals of improving Fulton Street corridor transit travel times and reliability, reducing crowding, and improving safety can be assessed. The below analysis includes assessments of various route

performance indicators that provide key insights into how well the pilot has addressed its goals. Additionally, the analysis indicates the pilot's overall success and supports the SFMTA's intention to make the 5L Fulton Limited a permanent part of its Muni service.

1 – Travel Time

This section analyzes whether or not the introduction of the 5L Fulton Limited has resulted in faster transit travel times on the Fulton Street corridor. The aforementioned new limited-stop service, stop consolidation and optimization, road diet, and parking changes were each implemented to reduce travel times and provide more efficient transit service for the thousands of daily transit along the corridor. The analysis was conducted by using the Automatic Passenger Count (APC) data and considers the following evaluations for both the inbound and outbound directions:

Corridor Segment	Feb 2013 –Feb 2013	Feb 2013 –Feb 2013	Notes
Full Route	5 Fulton	5L Fulton Ltd	• Compares pre-pilot launch and post-pilot launch travel times for full corridor. • Assesses effects of limited-stop service, stop changes, and road diet together.
La Playa to 6th Ave	5 Fulton	5L Fulton Ltd	• Compares pre-pilot launch and post-pilot launch travel times for corridor portion that does not have limited stop service. • Assesses effects of stop changes in outer portion of route.
6th Ave to Van Ness	5 Fulton	5L Fulton Ltd	• Compares pre-pilot launch and post-pilot launch travel times for corridor portion that does have limited-stop service. • Assesses effects of limited-stop service, stop changes, and road diet together. • Results compare with La Playa - 6th results to indicate how different types of improvements affect travel times separately.
Stanyan to Masonic	5 Fulton	5 Fulton	• Compares pre-pilot launch and post-pilot launch travel times for corridor portion that received road diet. • Assesses how road diet alone affects travel times.
Masonic to Divisadero	5 Fulton	5 Fulton	• Compares pre-pilot launch and post-pilot launch travel times for corridor portion that received parking changes. • Assesses how parking changes alone affects travel times

Highlights of the analysis include the following:

- **For the entire route length in both directions, travel times decreased by an average of 9% when comparing the existing 5 Fulton local service to the new 5L Fulton Limited service**. Decreases were slightly greater for the inbound direction, and for both directions were the most significant during the midday and early afternoon hours.
- **Travel time savings between Sixth Avenue and Van Ness, where limited-stop service was implemented, is double that of the segment west of Sixth Avenue when**

comparison of pre-pilot 5 service with post-pilot 5+5L service. With a 6% travel time savings west of Sixth Avenue and a 12% savings east of Sixth Avenue, transit on Fulton Street benefited the most on the segment that includes both limited-stop and local service. While travel times were reduced somewhat by stop consolidation and optimization alone, they were reduced much more substantially in areas affected by all of the pilot's implemented improvements.

- **Between Stanyan and Masonic, where the road diet was implemented, travel times decreased by an average of 1.2% in the inbound direction and decreased by about 1% in the outbound direction.** The implementation of a road diet, which was mainly intended to address transit and pedestrian safety issues, did improve travel times inbound but at a more negligible rate.
- **Between Masonic and Divisadero, where parking changes were implemented on Central, travel times decreased by an average of 3.5% in the inbound direction and 14.8% outbound.** This indicates that the parking changes implemented on Central did help contribute to an overall improvement in travel times.

An analysis of travel time reduction on the Fulton Street corridor reveals that, based on the pilot evaluation metrics, the results of the pilot meet the standards for travel time reduction and indicate a sufficient level of overall pilot project success.

2 – Ridership

This section analyzes whether or not the introduction of the 5L Fulton Limited has resulted in higher transit ridership on the Fulton Street corridor. With its addition of a new limited-stop service, stop consolidation and optimization, road diet, and parking changes, the pilot project was intended to enhance 5 Fulton transit service and therefore make transit a more viable and attractive transportation mode choice for Fulton Street corridor travelers. Also analyzed is the ridership on the nearby 21 Hayes and 31 Balboa routes, which helps indicate whether or not riders of those lines have migrated to the Fulton Street corridor.

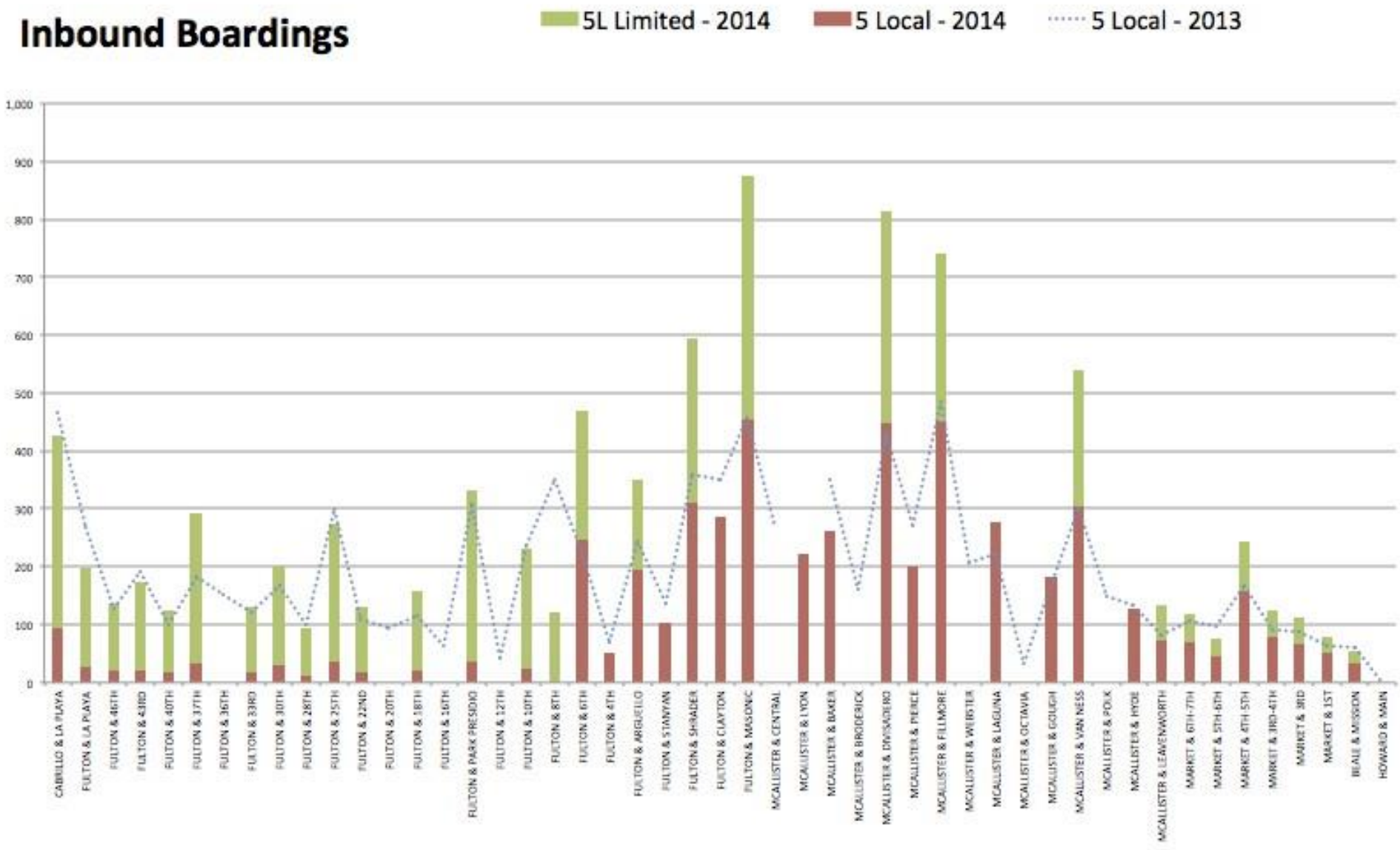
Specifically, the analysis, which was also conducted by using APC data, compares pre-pilot launch (fall 2012-winter 2013) and post-pilot launch (fall 2014-winter 2015) average total daily ridership of the 5/5L Fulton services, the 21 Hayes, and the 31 Balboa for weekday, Saturday, and Sunday/ holiday periods.

Highlights of the analysis include the following:

- **Ridership increased by 17% on weekdays when both the 5 and 5L are in service.** This represents a sharp increase in ridership, presumably resulting from the pilot's transit frequency increases, limited-stop service introduction, and other related improvements. Saturdays and Sundays saw a 5% decrease in transit ridership.
- **While 21 Hayes ridership decreased by 6% on weekdays, 31 Balboa ridership increased by 1%.** This indicates that 21 Hayes riders may be attracted to using nearby limited-stop service on the Fulton Street corridor. The 31 Balboa, on the other hand, is experiencing a slight ridership increase that is very comparable to other routes systemwide.
- **On Saturdays and Sundays, when the 5L is not in service ridership decreased slightly.** This 5% average decrease in ridership on weekends corresponds with a similar decrease on the nearby 21 Hayes route.

Overall, an analysis of transit ridership on the Fulton Street corridor reveals that ridership increases are sharply affected by the service hours of the 5L limited-stop route. For weekdays, when the 5L is in service, the ridership-related results of the pilot can be considered "ideal", based on the evaluation metrics discussed above. This indicates that the pilot project has enhanced the

attractiveness of Fulton Street transit services on the days when transit demand is highest, supporting the conversion of the pilot project's elements to permanent features of the Muni system. The below chart of inbound boarding shows the magnitude of ridership increases from pre-Pilot to post-Pilot with the additional 5L Fulton Limited service.



3 – Crowding

This section analyzes whether or not the introduction of the 5L Fulton Limited has resulted in reduced bus crowding on the Fulton Street corridor. With its introduction of an additional 30% of transit capacity through more frequent service and a brand new limited-stop route on the corridor, the pilot project intended to reduce vehicle crowding and contribute to enhanced transit safety and usability along the most crowed section of the 5 Fulton line.

Specifically, the analysis, which was conducted by comparing daily ridership counts with the total number of vehicles scheduled to operate during one full-day, compares pre-pilot launch (fall 2012-winter 2013) and post-pilot launch (fall 2014-winter 2015) average numbers of passengers per vehicle for weekday, Saturday, and Sunday/holiday periods.

Highlights of the analysis include the following:

- **The rate of vehicle crowding on weekdays did not change.** Even though transit frequency increased and ridership increased by 17%, weekday crowding levels remain unaffected.
- **Vehicle crowding rates on weekends also remain the same.** On Saturdays and Sundays, which do not feature 5L service and do not offer frequencies that were significantly modified upon pilot launch, crowding levels remain unchanged.

Overall, an analysis of crowding on the Fulton Street corridor reveals that the potential benefits of increased transit capacity, introduced by the pilot project's enhanced service frequencies, were offset by increased transit ridership on the corridor. Due to the fact that crowding levels did not increase on the corridor, the analysis indicates that, based on the pilot evaluation metrics, the results of the pilot meet the standards for crowding reduction and indicate a sufficient level of overall pilot project success.

4 – Safety

This section analyzes whether or not the introduction of a road diet on Fulton Street has resulted in greater safety for transit vehicles serving the Fulton Street corridor. By reducing the number of travel lanes from the two existing 9 foot lanes in each direction to one 12 foot travel lane in each direction and a center turn lane, the road diet on Fulton Street between Stanyan Street and Masonic Avenue, sought to reduce the number of collisions involving transit vehicles. By limiting the types of incidents that frequently cause sudden bus service interruptions, a reduction in transit collision incidents would not only promote a safer experience for transit riders and operators, but would also improve transit reliability across the corridor.

Highlights of the analysis include the following:

- **Transit collision incidents were reduced by almost 40% on the corridor segment that received the road diet.** This significant drop in incidents likely results from the road diet's introduction of wider lanes and wider bus zones, which provide for better separation between buses and other passing vehicles.
- **The number of transit collision incidents along the full corridor increased slightly.** This increase may be related to the fact that the pilot's frequency enhancements significantly raised the number of transit vehicles serving the corridor, creating more opportunities for incidents.

Overall, the analysis indicates the road diet segment of the pilot exceed the standards for transit collision reduction.

5 – Circulation

Overall, circulation changes as a result of pilot show little effect on nearby streets or along the 5 Fulton route. Automobile level of service (LOS) at three study intersections along the road diet segment show slight variations in intersection delay.

Golden Gate Avenue experienced an increase of 55 vehicles during the p.m. peak hour, which equates to a 19 percent increase. However, it's worth noting that during the same period, volumes on Fulton Street decreased by only 31 vehicles, so not all of the 55 vehicles could be attributed to Fulton Street.

Due to the fact that the LOS analysis depicts no significant adverse effect to nearby intersections, the results of the pilot exceed the standards for circulation and indicate a sufficient level of overall pilot project success.

Conclusion and Recommendations

The extensive analysis of the various transit enhancements and improvements applied to the Fulton Street corridor reveals that the pilot has achieved success in meeting its goals. In particular, its introduction of limited-stop transit service has allowed the pilot to effectively reduce travel times on the corridor, as well as make the 5 Fulton and 5L Fulton Limited transit services more attractive transportation mode choices, as indicated by increased ridership during periods of active limited-stop service. Additionally, the road diet that was implemented on Fulton Street between Stanyan Street and Masonic Avenue has been highly successful in reducing numbers of transit collision incidents along that line segment, contributing to that segment's enhanced safety and better transit reliability and travel times.

However, important to also note is that while the number of transit collision incidents decreased within the segment of the Fulton Street corridor that received the road diet, it actually increased slightly for the corridor as a whole. And ridership, which increased during times when the 5L Fulton Limited is in service, decreased slightly during periods when only the 5 Fulton local service was available. Ridership is up over 17% which is contributing to rates of crowding on 5/5L Fulton vehicles.

Overall, the strong successes in travel time reduction and safety enhancement, which both contribute to an improved transit customer experience, justify the transition of the pilot's newly-introduced improvements and enhancements into permanent elements of Muni's service package and San Francisco's transportation network in general. However, recommended is that SFMTA continues to explore tools and adjustments that would enhance the customer experience for Fulton Street corridor transit riders even more, with a primary focus on crowding reduction, expanded travel time reduction, and collision reductions corridor-wide. The pilot exemplifies how a number of the major issues affecting transit customer experience can be effectively addressed, and reveals enhancements and tools that can be applied to improve situations on other transit corridors. In addition, the results of the pilot indicate that to address even more transit-related issues, further transit improvements, both along the Fulton Street corridor and elsewhere, must be identified, implemented, and expanded.

Summary of Evaluation Metrics

Evaluation Metric	Result	Key Outcome
1 – Travel Time	Met Standard	Travel time dropped by 12% east of Sixth Avenue
2 – Ridership	Ideal	Ridership increased by 17% on weekdays
3 – Crowding	Met Standard	The rate of vehicle crowding on weekdays did not change
4 – Safety	Ideal	Transit collision incidents were reduced by almost 40%
5 – Circulation	Ideal	No, to little change in intersection LOS or parallel street traffic volumes

Now that the 5L Fulton Limited has been in service for over one year, its effectiveness in achieving the goals of improving Fulton Street corridor transit travel times and reliability, reducing crowding, and improving transit and pedestrian safety can be assessed. The below analysis includes assessments of various route performance indicators that provide key insights into how well the pilot has addressed its goals. Additionally, the analysis indicates the pilot's overall success and supports the SFMTA's intention to make the 5L a permanent part of its Muni service package.

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