# Geary Boulevard Improvement Project Quick-Build Evaluation Report



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# Contents

Executive summary	3
Introduction	5
Evaluation approach and objectives	8
Transit travel time	9
Reliability	11
Street space allocation and volumes	13
Transit collisions	18
Traffic safety	20
Impacts to people driving	25
Intercept survey	33
Sales tax receipts	39
Equity	40
Next steps	42

## **Executive summary**

The Geary Boulevard Improvement Project is bringing transit and safety improvements to the Geary corridor between the Richmond District and downtown San Francisco. It is the second phase of improvements to the corridor following the Geary Rapid Project east of Stanyan Street, which was substantially completed in 2021.

This evaluation estimates the benefits and impacts of the Quick-Build phase of improvements that were implemented in late 2023. The Quick-Build included transit lanes, bus stop changes, traffic signal re-timing, left-turn restrictions, daylighting, a new color curb plan, and new angled parking on cross streets. An additional evaluation will be done after completion of the construction phase of the project in 2027, after bus and pedestrian bulbs, traffic signal upgrades, median refuges and other enhancements have been installed and red color applied to the currently uncolored transit lanes.

The project evaluation considers metrics to understand how well the project achieved its goals related to transit performance and safety as well as monitors metrics related to potential impacts such as impacts to people driving. Overall, the evaluation found the Quick-Build successfully contributed to producing transit and safety benefits, while minimizing impacts. Key findings include:

## **Transit and safety benefits**

- Transit travel time decreased by 6-11% after Quick-Build implementation, collectively saving riders an estimated 235 hours of travel time every day.
- Of bus riders who noted a change after implementation, 85% felt their trip became more reliable.
- The collision rate of 38/38R buses decreased by 40% compared to the citywide transit collision rate.
- Traffic collisions in the project corridor decreased by 1/3.

## **Minimal impacts**

- Auto volumes on Geary generally remained steady, with some increases.
- People driving reported visiting Geary as often as before project implementation.
- There was a slight increase in left turn queues, but they remain within acceptable limits.
- Parking availability generally remains within acceptable ranges (over one space per block on average) during metered hours, but decreased since project implementation. Availability is below one space per block on Saturdays between 12-2pm when availability is between 0.7 and 0.9 spaces per block.

- Median parking search time is less than 1 minute.
- Geary sales tax receipts performed better than the citywide average, both of which declined slightly.

More information about the project is available at <u>SFMTA.com/ImproveGeary</u>.

# Introduction

The Geary Boulevard Improvement Project ("the project") is bringing transit and safety improvements to one of the busiest bus corridors in North America. The Geary Boulevard Improvement Project area includes Geary Boulevard between Stanyan Street and 34<sup>th</sup> Avenue. Similar improvements were made on the eastern half of the Geary corridor between Stanyan and Market streets via the Geary Rapid Project, which was substantially completed in 2021.

This evaluation estimates the benefits and impacts of implementation of the preliminary Quick-Build phase of the project in late 2023. An additional evaluation will be done after completion of the construction phase of the project in 2027.



More information about the project is available at SFMTA.com/ImproveGeary.

Figure 1: Map showing the new transit lanes installed as part of the Quick-Build

The Quick-Build phase of the Geary Boulevard Improvement Project added transit lanes on Geary Boulevard between 15<sup>th</sup> and 28<sup>th</sup> avenues, providing nearly continuous transit lanes for the 38 Geary and 38R Geary Rapid between 32<sup>nd</sup> Avenue and downtown (see Figure 1). Bus stops were lengthened to modern standards, allowing buses to pull fully to the curb at all stops. Traffic signals were retimed to increase the likelihood that buses get a green light at intersections and extend the amount of time for people walking to cross Geary Boulevard. Ten bus stops were moved to the far side of intersections, which allows transit signal priority to work better. The low-ridership 38 Geary bus stops at 12<sup>th</sup> Avenue were removed to reduce travel times. A map of the bus stop changes is shown in Figure 2.



Figure 2: Map of the bus stop changes made as part of the project

Several other safety improvements were implemented in the Quick-Build. <u>Daylighting</u> was installed at intersections to improve visibility between pedestrians and motorists. Left turns were restricted at eleven locations (6 eastbound and 5 westbound) where there previously were collision patterns involving left turns.

On the blocks where new transit lanes were added, angled parking was converted to parallel parking. Portions of some side streets were converted to angled parking to mitigate the loss of parking spaces from transit lanes, longer bus stops, and safety improvements.

The full construction portion of the project is being coordinated with work sponsored by other city agencies. San Francisco Public Utilities Commission-sponsored work will replace 1.4 miles of aging sewer lines and 6.7 miles of water lines as part of the Water System and Sewer System Improvement Programs. Roadway repaving sponsored by San Francisco Public Works will re-pave two miles of streets, giving drivers a smoother ride.

Additional transit and safety improvements will be constructed in 2026–2027 after underground utility work is complete. Bus bulbs, which are sidewalk extensions at bus stops, will be added at busy stops to add waiting area for passengers and to allow buses to pull up directly to the stops without leaving the travel lane. Pedestrian bulbs—curb extensions at intersection corners—will be added to shorten crossing distances, make people walking more visible to motorists and reduce vehicle turning speeds. Block-byblock designs of all project changes are available <u>online</u>.



*Figure 3: Timeline of the Geary Boulevard Improvement Project construction and coordinated work* 

# **Evaluation approach and objectives**

The Geary Boulevard Improvement Project has two primary goals:

- 1. **Transit performance:** Provide efficient and dependable service for 38 Geary/38R Geary Rapid riders by improving transit travel time and reliability.
- 2. **Safety:** Improve safety for all those travelling on Geary Boulevard.

Table 1 below summarizes each metric considered in the Geary Boulevard Improvement Project evaluation. This framework was developed to quantify relevant metrics that relate to the two main project goals, as well as monitoring additional metrics that are of interest to the SFMTA and/or community stakeholders.

#### **Evaluation Metrics**

- 1. Reduce Muni travel time
- 2. Improve Muni travel time reliability
- 3. Make street space allocation more consistent with usage
- 4. Decrease transit-involved collisions in the project area
- 5. Improve traffic safety and decrease the number of injury-causing collisions
- 6. Monitor impacts to people driving in the corridor (travel speeds, parking, left turn queues)
- 7. Monitor business performance in the corridor

8. Ensure that the project supports the SFMTA's equity goals

Table 1: Evaluation metrics for the Geary Boulevard Improvement Project

# **Transit travel time**

#### **Methods**

Transit travel time data for the 38 Geary and 38R Geary Rapid was processed from automated vehicle location (AVL) data collected in Muni's OrbCAD<sup>1</sup> system. 50<sup>th</sup> percentile (median) travel times were calculated, approximating the typical passenger experience, for both routes. Travel times include dwell times (the time that buses have their doors open at stops). Each direction was analyzed separately: inbound (IB; eastbound) and outbound (OB; westbound). Travel times from August 2023, January 2024, August 2024, and January 2025 were used to control for seasonal changes in ridership and traffic. Geary Boulevard is a busy corridor with substantial usage outside the typical peaks, so the travel times presented here are for all hours of the day.

#### **Key findings**

**Transit travel time improved after the Quick-Build phase of the project.** From August 2023 to August 2024, travel times between Arguello Boulevard and 33<sup>rd</sup> Avenue decreased about 54 seconds (6%-8%) for westbound buses and about 75 seconds (9%-11%) for eastbound buses. This decrease occurred despite a ridership increase of 7% on the two routes (increasing ridership can contribute to longer travel time as it increases the amount of dwell time). These results are shown in Figure 4.

Collectively, these improvements are saving Geary bus riders 9.8 days (235 hours) of travel time every day. This was calculated by multiplying the savings on each stop-to-stop section by the number of riders using that segment each day.

Travel times in January 2025 increased slightly from August 2024, likely due to the start of SFPUC utility construction within the roadway. However, travel times were still lower than August 2023, indicating that the Quick-Build improvements are keeping buses moving during construction.

Additional savings are likely from the relocation of the 6<sup>th</sup> Avenue outbound stop (planned for mid-2025), as well as the red colorization of the currently uncolored transit lanes as well as installation of bus bulbs that will be installed in the full construction phase of the project.

<sup>&</sup>lt;sup>1</sup> OrbCAD is a computer-aided dispatch (CAD) and automatic vehicle location system used by the Muni Operations Control Center.



Figure 4: Changes in transit travel time between Arguello Boulevard and 33<sup>rd</sup> Avenue between August 2023 and August 2024. Median travel times are for all 38/38R service hours. Percent savings are indicated. Source: SFMTA OrbCAD data

# **Reliability**

Reliability is key to high-quality transit service. Consistent travel times reduce the amount of time that riders have to schedule to complete their trip – they do not have to allow as much extra time in case of slower trips. By reducing variability in travel times, transit lanes and other transit priority features can also improve headway reliability.<sup>2</sup> Headway reliability is important for the passenger experience, as it affects both travel time (passengers must wait longer for a late bus) and crowding (more passengers will arrive to board at bus stops before the late bus arrives). Unreliable service is subject to bus bunching, wherein less-full early buses tend to catch up to more-full late buses, causing longer gaps between trips.

## **Methods**

Travel time reliability was measured using the same data sources as the analysis in the preceding travel time section. The difference between 10<sup>th</sup> percentile trips (slower than 90% of trips on the route) and 90<sup>th</sup> percentile trips (faster than 90% of trips on the route) was calculated to provide a measurement of typical variability in travel times. This analysis used the same time periods as travel time.

## Key findings

**Changes to travel time reliability in the Geary Boulevard Improvement Project corridor were mostly positive.** Variability decreased 8% for local and 7% for Rapid buses eastbound, and 17% for local buses westbound. Variability increased 13% for Rapid buses westbound – although the 90<sup>th</sup> percentile travel time decreased by 50 seconds, 10<sup>th</sup> percentile travel time decreased by 72 seconds. This means that the difference between the typical fastest and slowest trips has increased; however westbound Rapid buses were before, and now remain, less variable than local buses and eastbound Rapid buses, so there was less opportunity for improvement. This data is shown in *Figure 1*.

One challenge to improving reliability is the longer traffic signal cycles introduced by the project. All 34 traffic signals in the project area were changed from 90-second cycles to 108-second cycles. While this change was necessary to provide more time for pedestrians

<sup>&</sup>lt;sup>2</sup> Headway refers to the amount of time between when two buses arrive; for example, buses may be scheduled to arrive every 5 minutes during peak hours. Headway reliability refers to how close to that planned headway the buses actually arrive. So, for example, good headway reliability might mean buses at 5-minute headways are never more closely spaced than 4 minutes or further spaced than 6 minutes, while bad headway reliability might mean you sometimes wait more than 10 minutes for the bus.

of all abilities to cross Geary, it also increased the time that a bus may have to wait at a red signal. Transit signal priority technology active in the corridor reduces the likelihood of buses needing to stop at red signals, but it still does happen. Staff will continue to analyze this data to identify potential opportunities for further improvement, including potential additional adjustments to signal timing.



*Figure 5: Transit time variability between Arguello and 33<sup>rd</sup> Avenue for all 38/38R service hours. Lower variability indicates higher reliability. Source: SFMTA OrbCAD data* 

## Street space allocation and volumes

In its previous configuration, the allocation of street space on Geary Boulevard did not reflect actual usage of the street. The vast majority of street space in the Central Richmond was dedicated to private automobiles, even though non-auto modes account for over one-third of people traveling along Geary Boulevard. The Geary Boulevard Improvement Project reallocated some street space from parking to transit uses to better align street space with how it is used, and thus make the street more efficient. Figure 6 summarizes how the project changed street space allocation to better reflect transit and auto usage.



Figure 6: Private vehicle volumes and transit ridership on Geary Boulevard at 25<sup>th</sup> Avenue in April 2024, and street space allocation (not including sidewalks and medians) between 25<sup>th</sup> Avenue and 16<sup>th</sup> Avenue before and after the project. Source: SFMTA OrbCAD data for people on buses, measurements using project design drawings for street space, and August 2023/April 2024 vehicle tube counts for people in private vehicles. Occupancy of 1.4 people per private vehicle assumed based on SFCTA estimates.

## Transit ridership

As of October 2024, weekday ridership on the 38 and 38R averages 45,100 boardings – over 80% of typical pre-COVID ridership. This is above overall ridership trends; system ridership is at 71% of pre-COVID ridership. Table 2 shows a comparison of October 2019 (pre-COVID) and October 2024 ridership.

	38	38R	38+38R	All Muni routes	All Muni bus routes
Pre-COVID (October 2019)	21,900	33,700	55,600	733,100	534,000
October 2024	18,700	26,200	45,100	523,700	421,400
%	85%	78%	81%	71%	79%

Table 2: Comparison of pre-COVID and October 2024 ridership. Source: SFMTA OrbCAD data

Ridership at Park Presidio, 9<sup>th</sup> Avenue, and nearby stops was compared before and after the closure of the 12<sup>th</sup> Avenue stops. In September 2024, a larger proportion of inbound 38 and 38R riders boarded at Park Presidio and 9<sup>th</sup> Avenue than boarded at the three stops combined prior to October 2023 (Figure 7). This indicates that most riders who had used the 12<sup>th</sup> Avenue stops likely switched to using the Park Presidio and 9<sup>th</sup> Avenue stops.



*Figure 7: Percent of inbound riders on the 38 and 38R boarding at Park Presidio, 12th Avenue, and 9th Avenue before and after the Quick-Build* 

#### Vehicle volumes

Automated 24-hour vehicle volume counts were taken at three locations in the Geary Boulevard Improvement Project area in August 2023 and April 2024. Table 3 and Figure 8 show a comparison of 2023 and 2024 vehicle volumes. The largest increases were at Arguello Boulevard and westbound at 25<sup>th</sup> Avenue.

		25 <sup>th</sup> Avenue	Park Presidio Boulevard <sup>3</sup>	Arguello Boulevard
August 2023	Eastbound	7,000	11,300	12,500
daily volume	Westbound	5,800	6,300	11,400
April 2024	Eastbound	7,000	11,400	14,100
daily volume	Westbound	6,300	6,300	13,100

*Table 3: Comparison of 2023 and 2024 vehicle volumes (rounded to nearest 100). Source: August 2023/April 2024 7-day vehicle tube counts* 



*Figure 8: Change in recorded auto volumes from August 2023 to April 2024. Source: August 2023/April 2024 7-day vehicle tube counts* 

<sup>&</sup>lt;sup>3</sup> The counts at Park Presidio Boulevard do not include vehicles making westbound right turns onto Park Presidio Boulevard.

#### Pedestrian volumes

24-hour pedestrian counts at the intersection of 20<sup>th</sup> Avenue and Geary Boulevard, a representative location within the Central Richmond business district, were taken in August 2023 and April 2024. The 2024 counts were 5% to 13% higher depending on the day of the week, indicating an overall growth in pedestrian usage of the corridor. Table 4 and Figure 9 show a comparison of 2023 and 2024 pedestrian volumes.

		Wednesday	Saturday	Sunday
2023	East-west	3,763	4,292	3,285
	North-south	1,588	1,625	1,406
	Total	5,351	5,917	4,691
2024	East-west	4,036	4,468	3,753
	North-south	1,591	1,767	1,524
	Total	5,627	6,235	5,277
% change	East-west	+7%	+4%	+14%
	North-south	+0%	+9%	+8%
	Total	+5%	+5%	+13%

*Table 4: Comparison of 2023 and 2024 pedestrian volumes. Source: August 2023/April 2024 24-hour video counts* 



*Figure 9: Comparison of August 2023 and April 2024 pedestrian volumes. Source: 24-hour video counts* 

#### Street space allocation

On the central portion of the project corridor, the primary reallocation of street space was from parking to transit. Prior to the project, only about 6% of street space was dedicated to transit (as bus zones), while 32% was general traffic lanes and 30% was parking. About one-sixth of street space was reallocated to create bus lanes and larger bus zones<sup>4</sup>. Figure 10 shows how street space allocation changed on typical blocks (building face to building face, crosswalk to crosswalk) in this section. This was calculated using digital design drawings of the street between 25<sup>th</sup> and 16<sup>th</sup> avenues (the main street segment where transit lanes were installed).



*Figure 10: Change in street space allocation between 25<sup>th</sup> Avenue and 16<sup>th</sup> Avenue. Source: Measurements using project design drawings* 

There was comparatively little change in street space allocation in the western and eastern portions of the corridor where transit lanes were previously implemented as part of the <u>Emergency Transit Lanes project</u>. On those sections, the only changes to space allocation were where parking/curb space was re-allocated for lengthening bus zones or daylighting.

<sup>&</sup>lt;sup>4</sup> While the amount of street space used for parking decreased substantially, the number of available parking spaces decreased by a much smaller amount. This is because parallel parking uses space more efficiently than angled parking.

## **Transit collisions**

#### Methods

A secondary goal of the project is to reduce transit collisions, largely by providing dedicated transit lanes and eliminating the need for buses to merge into the traffic lane after stops. Transit collisions were monitored in the project area, with monthly rates calculated. Time periods used were pre-project (January 2021 – August 2023), during Quick-Build construction (September 2023 – November 2023), and post-Quick-Build (December 2023 – August 2024). The data was taken from the SFMTA's internal System Safety database. This includes all collisions involving transit vehicles in revenue service, the majority of which do not cause injuries.

#### Key findings

Transit collisions decreased by 20% after implementation of the Quick-Build

**Project.** The citywide transit collision rate increased during this period as the number of both transit vehicles and private vehicles on the road increased during pandemic recovery. The increase was proportional to the total number of hours that transit vehicles were on the road during the two periods and is still less than the pre-COVID rate. **Compared to the change in the citywide rate, the transit collision rate within the project area decreased by 40%.** 

The project specifically aimed to reduce the following collision types:

- Right hook collisions, where a vehicle attempts to make a right turn around a stopped bus just as the bus starts to move. This was part of the reason that the Quick-Build project moved several bus stops to the far side of the intersection.
- Collisions involving vehicles that are entering or exiting parking spots. Parallel parking provides better visibility of approaching traffic than angled parking.
- Collisions involving vehicles in the same lane as buses, such as rear-end collisions. Dedicated transit lanes separate buses from most private vehicles.

The rate of these three collision types decreased by 32% after the Quick-Build. Figure 11 shows changes in transit collision rates.



Figure 11: Change in transit collision rates from January 2021-August 2023 to December 2023-December 2024. (The citywide rate increased due to a comparable increase in transit service hours during this period and is still below pre-COVID rates.) Source: SFMTA transit incident database

# **Traffic safety**

Geary Boulevard east of 20<sup>th</sup> Avenue is part of the "High-Injury Network" – the 12% of San Francisco streets on which 68% of injury-causing traffic collisions and 74% of fatal traffic collisions occur.<sup>5</sup> The Geary Boulevard Improvement Project aims to improve safety for all users by implementing safety improvements that work together to decrease the frequency of injury-causing collisions. Several treatments were specifically designed to improve safety for people walking, as they are more vulnerable to serious injury or death in a collision.

## Speeds - methods

The Geary Boulevard Improvement Project did not change the number of general through travel lanes (two per direction) in the project area. The only significant change to lane widths was at locations with angled parking, where a traffic lane and angled parking area was converted to a travel lane, transit lane and parallel parking, which left the roadway with two travel lanes, a transit lane and parallel parking in each direction.

Because collisions at higher speeds are more likely to cause death or serious injury – with the risk of death for pedestrians increasing dramatically at collision speeds over 30 mph – changes to the speeds of the fastest vehicles tend to have the largest effect on collision severity. Because it did not change the number or general width of lanes, the Geary Boulevard Quick-Build was not expected to substantially change traffic speeds. However, the project did involve changes to traffic signal timing.

Tube counts of traffic speeds were taken at three locations – east of 25<sup>th</sup> Avenue, east of Park Presidio Boulevard, and east of Arguello Boulevard – for continuous one-week periods in August 2023 and April 2024. This allowed calculation of 85<sup>th</sup> percentile speeds<sup>6</sup> – a standard measure of traffic speeds used to set speed limits – and other metrics.

## Speeds - key findings

85<sup>th</sup> percentile and median speeds dropped slightly at Park Presidio Boulevard but increased slightly at the other two locations. The proportion of vehicles traveling faster than 30 mph and 40 mph also decreased at Park Presidio Boulevard and increased at the other two locations. These results are summarized in Table 5.

<sup>&</sup>lt;sup>5</sup> https://www.visionzerosf.org/wp-

content/uploads/2023/03/2022\_Vision\_Zero\_Network\_Update\_Methodology.pdf <sup>6</sup> The 85<sup>th</sup> percentile speed for a given segment of road is the speed that 85% of vehicles are traveling slower than.

		% over 30 mph	% over 40 mph	Median	85 <sup>th</sup> percentile
25 <sup>th</sup> Avenue	2023	10%	<1%	21	28
	2024	19%	1%	22	30
Park	2023	24%	2%	23	32
Presidio	2024	14%	1%	22	29
Arguello	2023	17%	1%	24	30
Boulevard	2024	30%	3%	26	32

Table 5: Summary of August 2023 and April 2024 speed surveys (Geary Boulevard speed limit in these locations is currently 25 mph)

These opposite changes in traffic speeds are likely the result of the changes in signal timing at adjacent traffic signals rather than overall changes across the project area.

While unrelated to the project, speed cameras were installed on Geary Boulevard between 6<sup>th</sup> Avenue and 9<sup>th</sup> Avenue in early 2025 as part of the first citywide rollout of speed cameras which may contribute to people driving lowering their speeds in this corridor. Additional speed data will be collected after the construction work is completed in 2027.

## **Collisions - methods**

The TransBASE Dashboard displayed the location and basic data for all traffic collisions in San Francisco involving injury or death. This data was provided by the SFMTA, San Francisco Police Department (SFPD), and San Francisco Department of Public Health (SFDPH). Collision data was updated quarterly, typically near the end of the following quarter.<sup>7</sup>

Collisions were monitored on the same road segments as for transit collisions, with monthly rates calculated. Time periods used were pre-project (March 2022 – August 2023), Quick-Build construction (September 2023 – November 2023) and post-Quick-Build (December 2023 – December 2024). Citywide and nearby streets (between California and Fulton, from Park Presidio east to Market) were used as controls.

This metric has a small sample size compared to others in the evaluation – there were tens (or fewer) of collisions in the project area during each sample period, versus tens of

<sup>&</sup>lt;sup>7</sup> Shortly after this data was pulled, TransBASE was replaced by a new dashboard on the SF Open Data portal: https://data.sfgov.org/Public-Safety/Traffic-Crashes-Resulting-in-Injury/ubvf-ztfx/about\_data

thousands of bus or auto trips. It also has longer time periods with more outside factors, including variation in vehicle volumes, weather events, various construction projects, driver behavior, and road conditions. These factors mean there is inherently a higher degree of randomness in these results than in others in this evaluation, with less data to analyze.

While the aggregated monthly averages provide some indication of overall trends, several years of data following project completion will be necessary to better understand the extent that the project contributed to a reduction in traffic collisions in the corridor. (Five years of collision data is the standard when engineers determine whether to propose traffic control devices).

## **Collisions - key findings**

**Overall injury traffic collision rates decreased by one-third after Quick-Build Project implementation.** The Geary Boulevard Improvement Project area averaged 2.2 injury collisions per month for all users before implementation, and 1.5 per month after. This represents a 30% reduction while Citywide rates increased by 4% and nearby neighborhood streets experienced a 6% reduction in collisions.

The limited data indicates that collisions causing injuries to pedestrians and bicyclists had a small increase from 0.3 to 0.4 per month; due to the small number of such collisions, the change is within typical random variation. Monthly collision rates by segment and mode are shown in Table 6, Table 7, and Figure 12.

Normal variation in collision rates occurred, but no segments or intersections showed a significant increase in collisions that would indicate a potential deterioration in safety. Collision reports were checked by SFMTA staff, with no collisions attributed to conditions that changed as part of the Geary Boulevard Quick-Build.

The project aimed to reduce collisions involving vehicles turning left off Geary Boulevard. As part of the project, left turns were prohibited at 11 locations. The rate of left-turn collisions dropped slightly (0.6 per month to 0.5 per month) after the Quick-Build. All such collisions during Quick-Build construction and afterward were the result of legal turns, while 20% of left turn collisions before the project involved illegal turns. This indicates that motorists are complying with the new turn restrictions.

		Before Quick-Build	After Quick-Build
		3/2022 – 8/2023	12/2023 – 12/2024
t	34 <sup>th</sup> Ave – 25 <sup>th</sup> Ave	0.3	0.3
Within Project Area	25 <sup>th</sup> Ave – Park Presidio	0.8	0.7
a nin P	Park Presidio – Stanyan	1.1	0.6
With Area	GBIP total	2.2	1.5
ro	Nearby streets	46.5	43.8
Control	Citywide	240	249

Table 6: Average monthly rates of injury-causing collisions for all users. Geary corridor and citywide rates are included for comparison. Source: Transbase

		Before Quick-Build	After Quick-Build
	-	3/2022 – 8/2023	12/2023 – 12/2024
ţ	34 <sup>th</sup> Ave – 25 <sup>th</sup> Ave	0.0	0.2
Project ea	25 <sup>th</sup> Ave – Park Presidio	0.1	0.1
Within F Are	Park Presidio – Stanyan	0.3	0.2
Wit	GBIP total	0.3	0.4
lo I	Nearby streets	26.7	22.8
Control	Citywide	122	112

Table 7: Average monthly rates of collisions involving injuries to pedestrians and bicyclists. Geary corridor and citywide rates are included for comparison. Source: Transbase



*Figure 12: Comparison of traffic collision rates within the Geary Boulevard Project area. Source: Transbase* 

## Impacts to people driving

During public outreach for the Geary Boulevard Improvement Project, some stakeholders raised concerns about potential impacts to people driving on the corridor, particularly the ability to find parking in the corridor. To be responsive to these concerns, potential impacts to people driving were monitored as a part of the project evaluation and are summarized here.

#### Automobile travel time

The project does not appear to have substantially changed automobile travel time. There was no reduction in the number of travel lanes (and the new transit lane means fewer buses traveling within the two general traffic lanes), and the traffic speed analysis indicates that changes to signal timing benefited autos at some locations.

#### Parking availability - methods

A variety of uses compete for limited curb space on busy corridors like Geary Boulevard: commercial loading, passenger loading, short-term parking, long-term parking, Shared Spaces dining areas, daylighting (red curb at intersection corners) and bulb-outs to improve pedestrian visibility, and bus stops.

In the Central Richmond segment of Geary Boulevard, angled parking was converted to parallel parking to create room for transit lanes on most blocks between 15<sup>th</sup> and 28<sup>th</sup> avenues. This reduced the number of parking spaces by about one per blockface (which represents about 30% of the total parking loss). At various locations throughout the project corridor, parking spaces were removed to accommodate safety improvements (representing about 40% of the total parking loss), and lengthening of bus stops to meet SFMTA standards (representing about 30% of the total parking loss). The SFMTA also added 39 parking spaces on cross streets near Geary by converting parallel parking to angled parking. When considering these new spaces on cross streets, the overall net parking loss was 31 spaces – less than one space per block on average, and less than 1% of all publicly available parking within one block of Geary.

SFMTA staff hired a data collection vendor to collect availability data for metered parking on Geary in the project area in August 2023 and April 2024, to monitor how the project may have affected parking availability. This analysis focused on the area between 14<sup>th</sup> Avenue and 28<sup>th</sup> Avenue where there were the more significant changes to parking supply and where commercial activity is greatest. Availability was checked hourly on Wednesdays and Saturdays from 12 pm to 8 pm, and Sundays from 9 am to 5 pm, which includes the times of highest demand. The same parking availability data was also used to determine parking occupancy to help standardize the results for comparison with other areas.

Availability data for SFMTA off-street parking facilities in the project area was also reviewed. That analysis used payment data rather than in-person counts and did not reflect occupancy associated with unpaid parking activity (e.g. ADA placard holders can park for free).

Under the SFMTA's <u>Demand Responsive Parking Pricing program</u>, citywide meter prices are adjusted quarterly to maintain average occupancy between 60% and 80%. This aims to strike a balance – metered parking is well-utilized, but would typically result in at least one spot being available on a blockface at any given time.

#### Parking availability - results

Despite some parking removal with the Geary Boulevard Quick-Build Project, parking availability on the corridor generally remained above 1 space per block face during metered hours (except on Saturdays between 12-2pm when availability ranged between 0.7 and 0.9 spaces per block). In April 2024, availability of general metered parking on Geary Boulevard averaged 1.9 spaces per blockface on weekdays and 1.2 spaces per blockface on Saturday during hours when meters were active. While this was lower than August 2023, parking availability generally remained about 1 space per block face. Availability of one space per block face was considered acceptable based on general professional best practices as it means someone driving could park near their destination without needing to circle the block. Looking at each hour, average availability remained above 1 space per blockface at all observed metered hours on weekdays and on Saturdays except between 12 and 2pm, with no hour having an average availability below 0.7 spaces per blockface. Availability of the first several spaces on cross streets remained similar after the project.

Meters are the primary way that the SFMTA can regulate parking availability. Across the city, availability tends to be lower when meters are not active. Extending metered hours to evenings and Sundays was considered during the outreach phase of the project but was not pursued as a part of the project due to negative public sentiment. In particular, there was concern around changing meter hours in the Geary corridor without making comparable changes to other similar commercial districts. Average general metered parking space availability on Geary was generally lower during non-metered hours: 1.1 spaces per blockface on weekday evenings (between 6 and 8pm), 1.2 on Saturday evenings (between 6 and 8pm), and 0.6 on Sundays (between 9am and 5pm) with significant variation by hour. Availability was lowest midday on Sundays because of high parking demand for businesses and religious services, without meter pricing to regulate

availability. Hourly average parking space availability before and after Quick-Build implementation is shown in Table 8 and Table 9.

	9am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm	Avg
Weekday				1.5	2.0	2.0	2.3	2.6	2.6	1.8	1.7	2.2
Saturday				0.8	1.0	1.7	3.2	3.3	2.4	0.9	1.2	2.0
Sunday	2.8	1.4	0.3	0.4	0.3	0.6	1.8	2.2			•	

Table 8: Average number of general metered parking spots available per blockface in August 2023. Hours where meters are active are outlined. Source: hourly counts (1 weekday, 1 Saturday, 1 Sunday)

	9am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm	Avg
Weekday				1.6	1.8	2.4	2.0	1.9	1.5	1.4	0.8	1.9
Saturday				0.9	0.7	0.9	1.5	1.8	1.5	1.4	1.0	1.2
Sunday	1.8	0.7	0.2	0.1	0.2	0.3	1.0	0.7				

Table 9: Average number of general metered parking spots available per blockface in April 2024. Hours where meters are active are outlined. Source: hourly counts (1 weekday, 1 Saturday, 1 Sunday)

Availability was also recorded for other types of parking spots, including commercial loading, general loading, passenger loading, and short-term loading. The number of these specialized spaces was increased as part of the project, with curb designations updated to better meet the needs of current businesses and therefore decrease the potential for double-parking. There is high demand on Geary for passenger or other quick pick-up and drop-off activities, which can be accommodated by various curb types, such as general meters, short-term (green) meters, passenger loading (white) zones, and 5-minute general loading zones. Availability of all spaces suitable for passenger loading is shown in Table 10 and Table 11. Availability of spots for passenger loading remained over 1 space per blockface at all times on weekdays and Saturdays.

	9am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm	Avg
Weekday				2.1	2.4	2.3	2.9	3.3	3.4	2.3	2.0	2.8
Saturday				1.2	1.4	2.1	3.8	3.8	3.0	1.2	1.4	2.5
Sunday	3.6	1.6	0.3	0.4	0.3	0.8	2.0	2.5				

Table 10: Average number of parking spots suitable for passenger loading available per blockface in August 2023. Hours where meters are active are outlined. Source: hourly counts (1 weekday, 1 Saturday, 1 Sunday)

	9am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm	Avg
Weekday				2.5	2.3	3.3	2.9	2.8	2.1	1.9	1.1	2.7
Saturday				1.4	1.2	1.4	2.3	2.7	2.4	2.2	1.6	1.9
Sunday	2.8	1.3	0.7	0.4	0.4	0.5	1.7	1.0				

Table 11: Average number of parking spots suitable for passenger loading available per blockface in April 2024. Hours where meters are active are outlined. Source: hourly counts (1 weekday, 1 Saturday, 1 Sunday)

Occupancy was also largely within desired ranges, averaging 70% on weekdays and 82% on Saturdays during hours that meters were active. Occupancy was higher during nonmetered hours: 85% on weekdays, 83% on Saturdays, and 91% on Sundays. These results are shown in Figure 13.



*Figure 13: Average occupancy of metered spots on Geary Boulevard in August 2023 and April 2024. Source: hourly counts (1 weekday, 1 Saturday, 1 Sunday) in each period* 

Two off-street SFMTA parking lots are available at 18<sup>th</sup> Avenue and at 21<sup>st</sup> Avenue, providing 55 spaces of additional parking capacity. In late 2024, these lots averaged 55% computed occupancy on weekdays and 63% on weekends, with a range from 42% to 79%. In mid-2022 (the latest pre-quick-build data available), they averaged 47% on weekdays and 54% on weekends, with a range from 37% to 83%. Private parking garages, such as the 118-space structure at 5200 Geary Boulevard, were not included in this evaluation.

## Parking search time

A methodology previously developed by the <u>SFPark</u> program was used to estimate the amount of time it takes drivers to find an available parking spot (metered or nonmetered).<sup>8</sup> Surveyors drove along predefined loops on Geary Boulevard and cross streets, simulating a driver searching for parking as close as possible to a specific location. Two loops starting at 22<sup>nd</sup> Avenue and 18<sup>th</sup> Avenue were used (see Figure 14). Each route was used for four periods (8-10 am, 12-2 pm, 4-6 pm, 8-10 pm) on a representative weekday in August 2023 and April 2024.



Figure 14: Routes used for parking search time data collection

At no time, before or after, did the surveyor ever require a complete loop (16 blocks) or more to find an available space. In April 2024, the median search time was less than one minute in all time periods. For all but one period (12-2 pm for the east route) in April 2024, a spot was available in the first block that was searched more than 50% of the time. The most significant change in search time was for the west route in the 12-2 pm period, where the median search took 2 minutes 38 seconds and 5 blocks in August 2023, but 16 seconds and 1 block in April 2024. The median number of blocks to find a spot is shown in Figure 15.

<sup>&</sup>lt;sup>8</sup> https://www.sfmta.com/sites/default/files/reports-anddocuments/2018/05/sfpark\_dataguide\_manualsurveydata\_parkingsearchtime.pdf



*Figure 15: Median number of blocks required to drive to find an available parking spot in August 2023 and April 2024. Source: 1 weekday of surveys per route* 

#### Left turn queues

The project prohibited left turns off Geary Boulevard at 11 locations to address a pattern of left-turn collisions. To ensure that this did not unduly affect other locations where left turns remain allowed, queue lengths were monitored at seven locations: at Palm and 12<sup>th</sup> avenues eastbound; and at 3<sup>rd</sup>, 11<sup>th</sup>, 18<sup>th</sup>, 22<sup>nd</sup>, and 27<sup>th</sup> avenues westbound. Monitoring consisted of one weekday morning peak and one afternoon peak period at each location in August 2023 and April 2024. All left turn pockets are 100 feet long; they are considered full with 4 vehicles and over-full with 5 or more vehicles queued to turn left. As part of the project, the traffic signal cycle at all signals east of 25<sup>th</sup> Ave was increased from 90 seconds to 108 seconds; the green phase for eastbound and westbound traffic was increased from 33-37 seconds to 41-43 seconds.

Despite the increase in overall traffic in the corridor, the left turn volumes at these seven locations decreased by about 6%. Due to the longer signal cycle, the average number of vehicles queued in each left turn pocket per cycle increased slightly: from 0.20 to 0.22 in the morning, and from 0.49 to 0.54 in the afternoon. The proportion of cycles with a full turn pocket also increased: from 0.0% to 0.1% in the morning, and from 1.1% to 1.8% in the afternoon. No over-full queues were seen in the morning; 0.7% of queues in the afternoon were over-full. This data is presented in Table 12 and Figure 16.

While the number of cycles with full queues increased, it is still well within acceptable bounds. No location saw more than 4 full cycles or 2 over-full cycles during the 3-hour afternoon peak period, and no queue was longer than 6 vehicles. The 20% increase in

green phase time also provides additional time for vehicles to make left turns. Dedicated left-turn phases have been added at two locations – 11<sup>th</sup> Avenue and 15<sup>th</sup> Avenue – since April 2024.

Peak period	Time period	Signal Cycle length (s)	Average queue	Maximum queue	% of cycles with full queue	% of cycles with over-full queue
Morning	August 2023	33-37	0.20	3	0.0%	0.0%
	April 2024	41-43	0.22	4	0.1%	0.0%
Afternoon	August 2023	31-37	0.49	4	1.1%	0.0%
	April 2024	41-43	0.56	6	1.9%	0.7%

Table 12: Changes to left-turn queues before and after Quick-Build. Source: video counts (1 weekday AM and 1 PM peak period per location)



*Figure 16: Average left turn queues in August 2023 and April 2024. Source: video counts (1 weekday AM and 1 PM peak period per location)* 

## **Intercept survey**

#### **Methods**

The project team conducted an intercept survey after the Quick-Build project was implemented to understand more about people traveling within the project area. SFMTA retained a professional surveying firm, Ewald & Wasserman, to conduct the survey. It was conducted in April and May 2024, focusing on the busiest hours of both weekends and weekdays.

A total of 1,152 surveys were completed – 79% in English, 5% in Russian, and 16% in Chinese. 33% were between Stanyan and Park Presidio, 44% between Park Presidio and 25<sup>th</sup> Avenue, and 24% between 25<sup>th</sup> Avenue and 34<sup>th</sup> Avenue.

All respondents were asked how they got to Geary, the purpose of their visit, how often they visit the corridor, and how much they expected to spend at Geary businesses during that visit. They were also asked whether they visited Geary more or less often than 6 months ago, whether they had noticed street changes made by the Quick-Build project, and how safe they felt crossing Geary. Those who reported driving were asked additional questions about parking; those who reported taking the bus were asked additional questions about transit performance.

#### Results

**Over 70% of respondents walked or rode the bus to reach Geary Boulevard for their visit and made trips for a variety of different purposes.** 41% reported walking, 30% reported taking the bus, and 22% reported driving. A small number reported using other modes including bike, taxi, scooter, and rideshare. These results are shown in Figure 17.



Figure 17: Responses to "How did you travel to Geary Boulevard today?" (N=1152)

About one-third of respondents (32%) reported living nearby, while 17% had work or school in the area and 3% were visiting friends or family. A significant number came for shopping (17%), food or drink (11%), services (13%) or community resources (4%). These results are shown in Figure 18.



Figure 18: Responses to "What is the primary reason you are in the area today?" (N=1152)

**Most people surveyed visited Geary multiple times per week.** 38% visited 5 or more times a week, 32% visited 2-4 times a week, 19% about weekly, and 10% once a month or less. Among those who were on Geary to go to businesses or services, 86% reported visiting Geary once a week or more. These results are shown in Figure 19 and Figure 20.

39%	32%	19%	10%
■ 5+ times a week ■ 2-4 time	s a week About weekly	Once a month o	or less



23%	33%	29%	14%
■ 5+ times a wee	k ■2-4 times a week ■	About weekly Once a mor	nth or less

Figure 20: Responses to "How often do you visit Geary Boulevard" among those who were visiting Geary for businesses or services (N=519)

**The majority of those surveyed planned to spend money at Geary businesses during their visit.** 80% of those surveyed indicated they planned to spend money – including many of those whose primary purpose was not visiting businesses. This data is shown in Figure 21.



Figure 21: Responses to "How much do you plan to spend at Geary Boulevard businesses this trip?" (N=1142)

#### Most respondents were visiting Geary as often or more often than before. 77%

reported visiting Geary about as often as 6 months before, while slightly more respondents reported visiting more frequently (14%) than less frequently (9%). These results varied slightly by mode: 19% of bus riders visited more often and 11% less, while 12% of drivers visited more often and 12% visited less. These results are shown in Figure 22.



Figure 22: Responses to "Compared to six months ago, do you come to Geary Boulevard more or less often?" (N=1135)

**Most respondents were aware of the Quick-Build changes.** 65% reported they were aware of the changes, 20% were not aware, and 15% were not sure. This data is shown in Figure 23. Figure 23



Figure 23: Responses to "Have you noticed any of the transit or roadway changes on Geary Boulevard such as new transit-only lanes or bus stop changes?" (N=1139)

**The majority of respondents felt safe travelling along or crossing Geary.** 88% reported feeling "very safe" or "mostly safe" crossing Geary, while less than 1% did not feel safe at all. Walkers, bus riders, and drivers all had similar perceptions of safety; bike riders felt slightly less safe. This data is shown in Figure 24.



Figure 24: Responses to "When you travelled along or crossed Geary Boulevard today, how safe did you feel in terms of avoiding a collision?" (N=1146)

Over half of drivers found it easier or about the same to find parking as compared to six months ago. While almost 40% of drivers reported more difficulty finding parking, they indicated they were visiting Geary about as frequently as before. This data is shown in Figure 25.

Of the drivers who reported it more difficult to find parking, 72% reported they visited Geary the same amount, 16% reported they visited less often, and 11% reported they visited more often. The total number of drivers who reported that they had more difficulty finding parking and also that they were visiting Geary less often was less than 2% of all survey respondents and less than 7% of all drivers. This indicates that most drivers are continuing to visit Geary businesses as often as before.



Figure 25: Responses to "Compared to six months ago, how was finding a parking space near Geary Boulevard?" (N=254)

**78% of drivers were able to find a parking space within two blocks of their destination.** 55% of drivers were able to find a spot within 1 block of their destination, and 92% were able to find a spot within 3 blocks. This data is shown in Figure 26.



*Figure 26: Responses to "How many blocks away from your destination did you park?"* (*N*=243)

Among bus riders who noticed a change from the project, the majority found that service quality improved after the Quick-Build. 30% of riders felt their trips were more reliable, while 5% felt they were less reliable. 21% of riders felt their trips were faster, while 7% felt their trips were slower. 25% reported riding the bus more, while 10% reported riding less. These results are shown in Figure 27.

30%		57%		5%	8%
More reliable	About the same	Less reliable	Not sure	е	

Figure 27: Responses to "Compared to six months ago, and because of the transit and roadway changes, would you say the bus service is...." (N=338)



Figure 28: Responses to "Compared to six months ago, would you say a typical ride takes more or less time as a result of the transit and roadway changes?" (N=335)



Figure 29: Responses to "Compared to six months ago, do you ride the 38 local and 38R Rapid buses more or less often?" (N=332)

**The Richmond is a citywide and regional destination.** About 60% of respondents had ZIP codes in the Richmond, 33% elsewhere in San Francisco, and 7% outside San Francisco.

# **Sales tax receipts**

#### Methods

Some Geary business owners were concerned that parking changes from the Geary Boulevard Improvement Quick-Build Project could impact the ability of customers to reach their businesses by car and therefore result in declining sales tax receipts. Sales tax receipts collected by the city Controller's Office were used to gauge overall sales in the Geary corridor, Clement Street, and citywide. The periods used were October 2022 to September 2023 (before Quick-Build) and October 2023 to September 2024 (during/after Quick-Build).

#### **Findings**

**Geary sales tax performed better than the citywide average, both of which declined slightly.** Sales tax receipts in the period after implementation were 97.2% of the period prior to implementation – as compared to 96.5% citywide. Inner Geary (Stanyan to 14<sup>th</sup> Avenue) and Outer Geary (14<sup>th</sup> Avenue to 28<sup>th</sup> Avenue) were nearly identical at 97.5% and 97.1% respectively. The nearby Clement Street corridor slightly outperformed both the Geary and citywide average, with sales tax in the after period at 99.3% of the before period. These results are shown in Figure 30.



*Figure 30: Change in sales tax data for the Geary and Clement corridors and citywide. Source: sales tax receipts collected by city Controller's Office* 

# Equity

## **Methods**

According to the SFMTA Strategic Plan, the agency must "identify and reduce disproportionate outcomes and resolve past harms towards marginalized communities." While the 38 and 38R routes serve equity populations including people of color and low-income riders, the Geary Boulevard Improvement Project area is not identified as either a Muni Equity Strategy neighborhood nor a regional Equity Priority Community. Therefore, this evaluation focuses on how project improvements affected the equity populations that ride the 38 and 38R.

Previous equity analysis for the same geography – the Geary Temporary Emergency Transit Lanes (TETL) evaluation<sup>9</sup> – found that the demographics of the beneficiaries of that project included a greater proportion of low-income individuals than the surrounding population as a whole. The 38 and 38R lines are also designated as a part of SFMTA's Equity Strategy lines because of their importance for seniors and people with disabilities for citywide accessibility.<sup>10</sup>

Data considered in this evaluation consists of Muni rider demographics collected through SFMTA's 2017 Onboard Survey, plus census data on Richmond District and North Bay demographics. Relevant results from other metrics in the evaluation are also included.

# **Findings**

Table 13 compares 38 Geary and 38R Geary Rapid customer demographics to Muni system-wide averages, and to Richmond District, San Francisco, and North Bay demographics. While a significantly greater proportion of 38/38R riders are low-income than the Richmond District as a whole, a slightly greater proportion of Richmond District residents are people of color than 38/38R riders. The same is true when comparing 38/38R riders and San Francisco as a whole.

Some traffic on Geary Boulevard east of Park Presidio Boulevard also consists of commuters from Marin and Sonoma counties entering San Francisco over the Golden

<sup>&</sup>lt;sup>9</sup> https://www.sfmta.com/sites/default/files/reports-anddocuments/2021/06/geary\_tetl\_evaluation\_final.pdf

<sup>&</sup>lt;sup>10</sup> SFMTA.com/Equity

Gate Bridge. The population of these counties has fewer people with low incomes and substantially fewer people of color than 38 Geary and 38R Geary Rapid riders.

	Percentage of residents with yearly household income below \$ 35,000	Percentage of residents who are People of Color
San Francisco County	17%	61%
Marin County	12%	30%
Sonoma County	15%	35%
Richmond District	12%	56%
Muni - systemwide	26%	57%
38 riders	31%	53%
38R riders	29%	51%

Table 13: Geary and systemwide customer demographics and Richmond Districtdemographics. Source: American Community Survey 2023 5-Year Estimates and SFMTA2017 On-Board Survey

The Quick-Build improvements contributed equity benefits to 38 and 38R riders who are more likely to be low-income than the surrounding neighborhood. Improved travel times discussed earlier in the report translate to better access to Geary businesses, medical services like the Kaiser French Campus and the VA Hospital for employees, customers, and patients.

An updated Onboard Survey with 2024 data is expected to be available later in 2025. The data from this survey will reflect changes after the COVID-19 pandemic and may show different ridership demographics than presented here.

## **Next steps**

The full construction portion of the project is being coordinated with work sponsored by the San Francisco Public Utilities Commission and San Francisco Public Works. Utility work began in early 2025.

Additional transit and safety improvements will be added in 2026–2027 after underground utility work is complete. Bus bulbs, which are sidewalk extensions at bus stops, will be added at busy stops to add waiting area for passengers and to allow buses to pull up directly to the stops without leaving the travel lane. Pedestrian bulbs—curb extensions at intersection corners—will be added to shorten crossing distances, make people walking more visible to motorists and reduce vehicle turning speeds. Red colorization will be applied within the transit lanes after roadway repaving. Block-byblock designs of all project changes are available <u>online</u>.

After completion of the safety and transit improvements, an additional evaluation will be conducted.