Mid-Valencia Pilot 6-Month Evaluation

July 2024

Executive Summary

The findings from the 6-month evaluation period remain consistent with those from the 3-month period. There was little to no change across the metrics used to evaluate the mid-Valencia pilot and the findings continue to indicate that the pilot design is an improvement over the pre-pilot conditions. Aspects like vehicle blockage of the bikeway are far lower than pre-pilot conditions, illegal vehicle left turns and U-turns remain low at intersections, and vehicle double-parking continues to be at a low level. Other metrics, like the rate of traffic collisions, showed an improvement in the 6-month findings.

The table below shows the key findings from the metrics used in the evaluation of the pilot project:

Metric	**Key Finding – *compared to pre-implementation***	
	3-Month Finding	6-Month Finding
Review of traffic collision factors	Factors related to the pre-pilot design have been significantly reduced.	Monthly collision rates for all modes, bike/scooter related and ped-related have all trended down when compared to post 3-months and post 5-months. Factors related to the pre-pilot design have continued to be significantly reduced.
Vehicle left turn frequency (turn restriction compliance)	1% of through volumes (pre-pilot: 8%)	1% of through volumes
Frequency of double parking / loading in the bikeway (vehicle loading)	13% of all loading activity / 0.1% of all loading activity	14% of all loading activity / 0.1% of all loading activity

Review of vehicle loading activity and loading characteristics	Implemented loading regulations better match user needs based on higher compliance of loading at the curb and observed vehicle dwell times	Implemented loading regulations better match user needs based on higher compliance of loading at the curb
Average rate of vehicle incursions in the bikeway	1% per hour; 3-4 vehicles per hour	1% per hour; 3-4 vehicles per hour
Average daily vehicle speed *Measured at the average, 50th (median) and 85th percentile*	-1 mph	-2 mph
Average daily vehicle volume	-26%	-23%
Average daily bicycle volume	+3%	-2%
Average daily pedestrian volume (2 -Hr AM and PM peak periods)	-5%	+4%
Bicycle signal compliance / vehicle compliance with bike signal restrictions	77% / 97%	76% / 97%
Bicycle and pedestrian interactions at the intersection	5% of crossing pedestrians interact with a person bicycling. When compared to the northern design (side-running), there is little difference between post-implementation bicycle-pedestrian interaction rates.	On average, 3.6% of pedestrians crossing at the crosswalk are expected to interact with a person bicycling through the intersection or making a turn from or to a cross street per hour.
Bike positioning	97% of bicyclists are in biking the in bikeway (pre-pilot: 88%)	97% of bicyclists are biking in the bikeway

Traffic Impacts on adjacent street *Measured by using vehicle speeds and vehicle travel time on parallel neighboring streets*	Insignificant to no change on all metrics evaluated	Insignificant to no change on all metrics evaluated
Congestion on Valencia Street ***PM-peak median travel time minutes*** ***PM-peak median travel time minutes at 23rd Street intersection***	N/A	Vehicle travel time on Valencia Street has decreased or not changed significantly in either direction: Northbound: 90 seconds faster Southbound: 20 seconds faster Valencia at 23rd Street NB: Slight decrease SB: Slight increase

Introduction

The mid-Valencia pilot was a near-term effort to improve traffic safety and transportation on Valencia Street between 15th to 23rd streets. The pilot aimed to address longstanding traffic safety conflicts and vehicle loading challenges exacerbated by the street's status as a major commercial corridor, major north-south bike route in the City's bike network, and an existing street design that did not meet the diverse needs of the varying users.

The pilot implemented a near-term design that consisted of the following features:

- Center-running protected bikeway
- Bike signal separation at the intersections of Valencia at 15th Street and Valencia at 23rd Street
- A new curb management plan
- Several pedestrian safety tools, such as intersection daylighting and corridor-wide vehicle left turn and U-turn restrictions

As part of the pilot process, the project team will evaluate the pilot design at various phases of the pilot lifecycle. This summary report provides findings from the 6-month evaluation period, which is a follow-up to the 3-month period that was completed in late fall 2023. This report provides an update to all of the metrics analyzed in the 3-month report and includes several new factors that were measured.

It is recommended that readers review the **3-month evaluation summary report** for a full detailed summary of project context and evaluation framework prior to reviewing the 6-month summary report. The 3-month evaluation summary report can be found on the project webpage at **SFMTA.com/Valencia**.

Metric 1 – Review of Traffic Collisions

This metric comprehensively reviews traffic collisions post-implementation to determine collision types and factors.

Note: Collision data for the months of November through December, which were used in the 3-month evaluation collision analysis, were not officially published in the city's traffic collision database. After the data was officially published, two collisions that were still under review (one in November 2023 and one in December 2023) were removed from the dataset and the traffic collision table below has been updated to reflect that.

The 6-month evaluation of the mid-Valencia pilot added three more months of collision data to the analysis (January through March 2024). Only four new collisions were added in the most recent three months, bringing the total recorded collisions since the start of the pilot to 22 (August 2023 through March 2024). The table below summarizes the collisions by types and factors:

Traffic Collisions and Collision Factors

Collision Month	Modes Involved	P1 movement	P2 movement	Party at Fault	Collision Location	Description of Collision
August 2023	Driver-Bicyclist	SB – U-turn	SB – Thru	Driver	Intersection – Valencia at Sycamore	*Unsafe turn or lane change prohibited – left/U-turn
	Scooter only	NB – Thru	N/A	Scooter	Midblock – Valencia between 18th Street and Sycamore	*Unsafe speed for prevailing conditions
	Driver-Bicyclist	NB – Left	NB – Thru	Driver	Intersection – Valencia at 18th Street	*Violating special traffic control markers – no vehicle left-turn
	Driver-Driver	NB – Thru	Stopped in traffic (facing NB)	Driver	Midblock – Valencia between 20th and Liberty	Improper passing
	Pedestrian-Driver	NB – Thru	NB – Thru	Pedestrian	Intersection – Valencia at 21st Street	Pedestrians must yield right-of-way outside of crosswalks

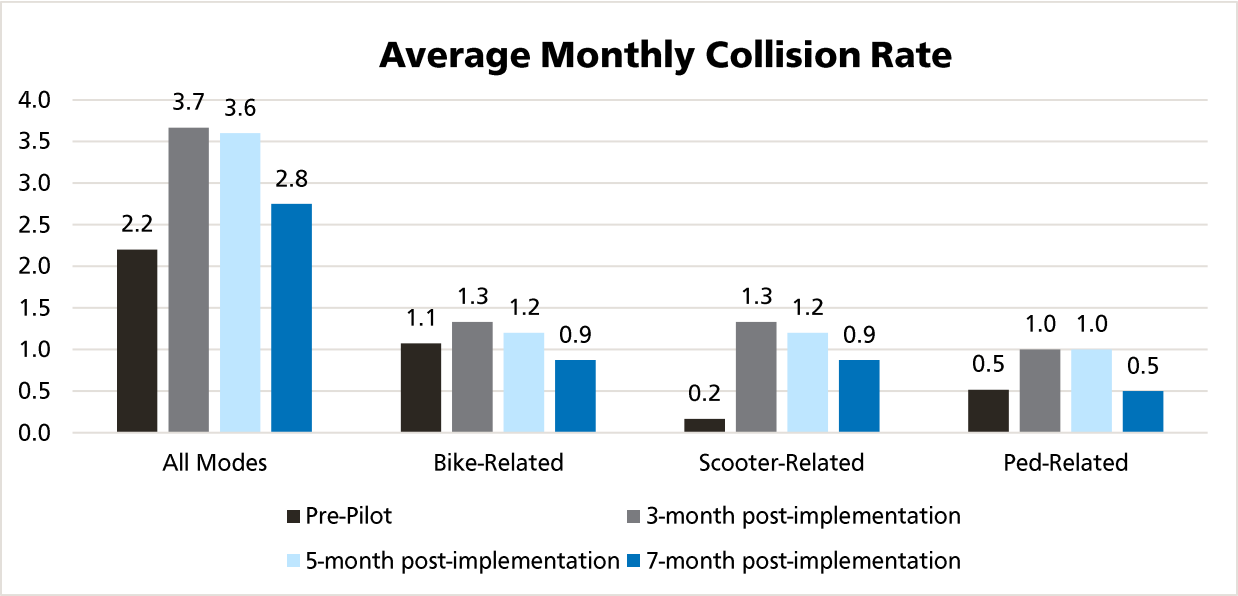
September 2023	Bicyclist-Driver	WB – Left	EB – Thru	Bicyclist	Intersection – 22nd Street at Valencia	Violation of right-of-way – left-turn without yielding to oncoming traffic
	Driver-Pedestrian	WB – Left	EB – Thru	Driver	Intersection – 18th Street at Valencia	Driver failing to yield right-of-way at crosswalk
	Driver-Bicyclist	NB – Left	NB – Thru	Driver	Intersection – Valencia at 18th Street	*Violating special traffic control markers – no vehicle left-turn
	Driver-Scooter	SB – U-turn	SB – Thru	Driver	Intersection – Valencia at Sycamore	*Violation of right-of-way – no vehicle left/U-turns
October 2023	Driver-Scooter	SB – U-turn	SB – Thru	Driver	Intersection – Valencia at Sycamore	*Illegal U-turn in business district
	Scooter-Driver	EB – Thru	WB – Left	Scooter	Intersection –17th Street at Valencia	Unsafe speed for prevailing conditions; failure to yield to the right-of-way
November 2023	Driver-Bicyclist	NB – Left	SB- Thru	Driver	Intersection – Valencia at 21st Street	*Violating special traffic control markers – no vehicle left-turn
	Scooter Only	NB – Thru	N/A	Unknown	Intersection – Valencia at 17th Street	Unknown
December 2023	Driver (motorcycle)	NB – Thru	N/A	Driver	Midblock – Valencia between 16th Street and 17th Street	Unsafe speed for prevailing conditions
	Driver (motorcycle)	SB – Left	N/A	Driver	Intersection – Valencia at Sycamore	Hitting fixed object
	Pedestrian-Driver	WB – Thru	NB – Thru	Pedestrian	Midblock - Valencia between Liberty and 21st Street	Pedestrians must yield right-of-way outside of crosswalks

	Bicycle-Scooter	NB- Thru	SB- Thru	Bicyclist	Intersection – Valencia at 16th Street	Bicyclist was swerving side to side before colliding with scooter
	Bicycle-Driver	NB-Thru	WB-Thru	Bicyclist	Intersection – Valencia at 17th Street	*Failing to yield right-of-way (red light noncompliance)
January 2024	Scooter only	EB – Thru	N/A	Scooter	Intersection – 16th Street at Valencia Street	Unsafe speed - pavement quality caused Scooter to lose control
February 2024	Driver-Driver	NB – Right	NB – Right	Vehicle	Intersection – Valencia at 16th Street	P1 bypassed P2, who was yielding at the intersection to peds
	Driver-Pedestrian	NB – Left	NB – Thru	Vehicle	Intersection – Valencia at 16th Street	Violating special traffic control markers - no vehicle left-turn
March 2024	Driver-Bicyclist	NB – Thru	SB – Thru	Vehicle	Midblock - Valencia between Sycamore and 18th Street	Intoxicated driver driving in the bikeway

From the most recently added collisions (January through March 2024) in the collision data, only two collisions were bicycle or scooter related. The scooter-related collision was a solo crash at the intersection of 16th and Valencia and it was due to uneven pavement surface. The bike-related collision involved a person in a vehicle who was intoxicated and drove northbound in the center-running protected bikeway.

The other two collisions included a vehicle and vehicle collision due to illegal bypassing and a vehicle and pedestrian collision due to an illegal vehicle left-turn on Valencia Street.

Overall, the average monthly collision rate for all modes, bike-related,scooter-related, and pedestrian-related collisions have all been on a downward trend, since the start of the pilot. Specifically for bike-related collisions, collision data from the latest three months (January through March 2024) show a monthly collision rate of only 0.3 collisions, which is 69% lower than the pre-pilot rate of 1.1 per month.



In terms of collision factors, such as cause and location, specifically for bike-related collisions, findings from the 3-month evaluation are still true. The major causes for bicycle-related collisions during the pre-pilot condition continues to be very minimally observed in post-pilot conditions. Illegal vehicle left or U-turn is still the major cause of bike-related collisions post-pilot (57%). However, zero bike-related collisions caused by an illegal vehicle left or U-turn were recorded in the latest three months of collision data.

Relatedly, the drastic reduction of midblock located bike-related collisions between pre-pilot and post-pilot conditions also remains true. In pre-pilot conditions, 44% of bike-related collisions were located mid-block versus 14% after the pilot was implemented.

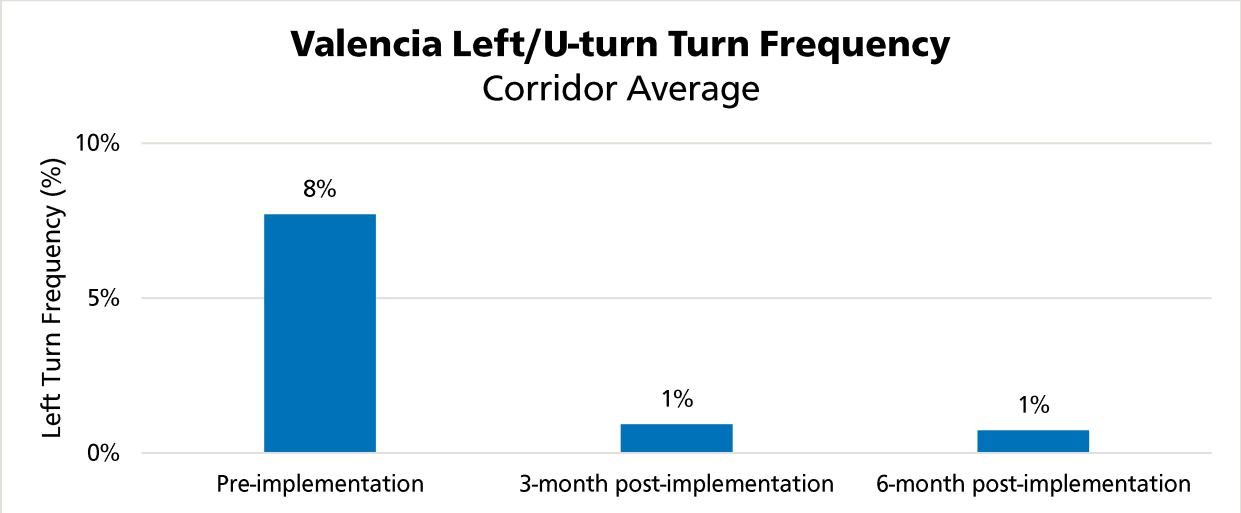
Regarding pedestrian related collisions, only one was recorded from the latest three months of traffic collision data. The collision was due to a vehicle making an illegal left turn on Valencia Street.

Metric 2 – Vehicle Left Turn Frequency (turn restriction compliance)

To determine effectiveness in design, vehicle left turn frequency (includes U-turns) was calculated (the number of vehicles turning left or making a U-turn compared to the total directional entering volume). Vehicle turning movement counts were collected during the 2-hour AM and PM peak periods.

Overall, vehicle left and U-turn frequency has remained at a low rate of 1% per hour, which is similar to the finding from the 3-month evaluation. In pre-implementation conditions, the average vehicle left turn frequency is 8% per hour, which about 38 left or U-turn movements in the AM period and 68 in the PM period. From the 6-month evaluation analysis,

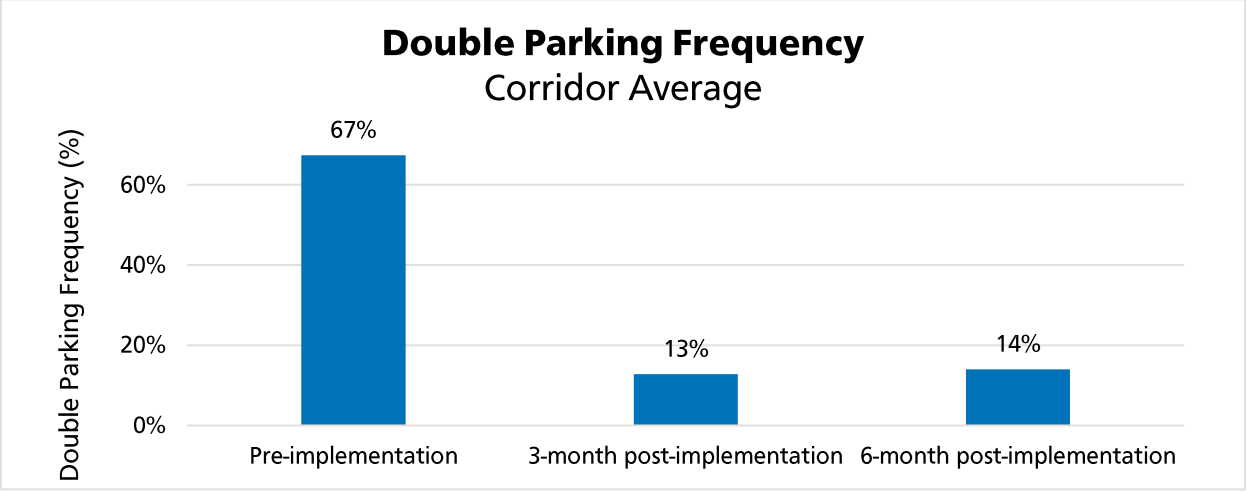
the average vehicle left turn frequency in post-implementation conditions is 1% per hour, or about four left/U-turn movements in the AM period and four in the PM period.

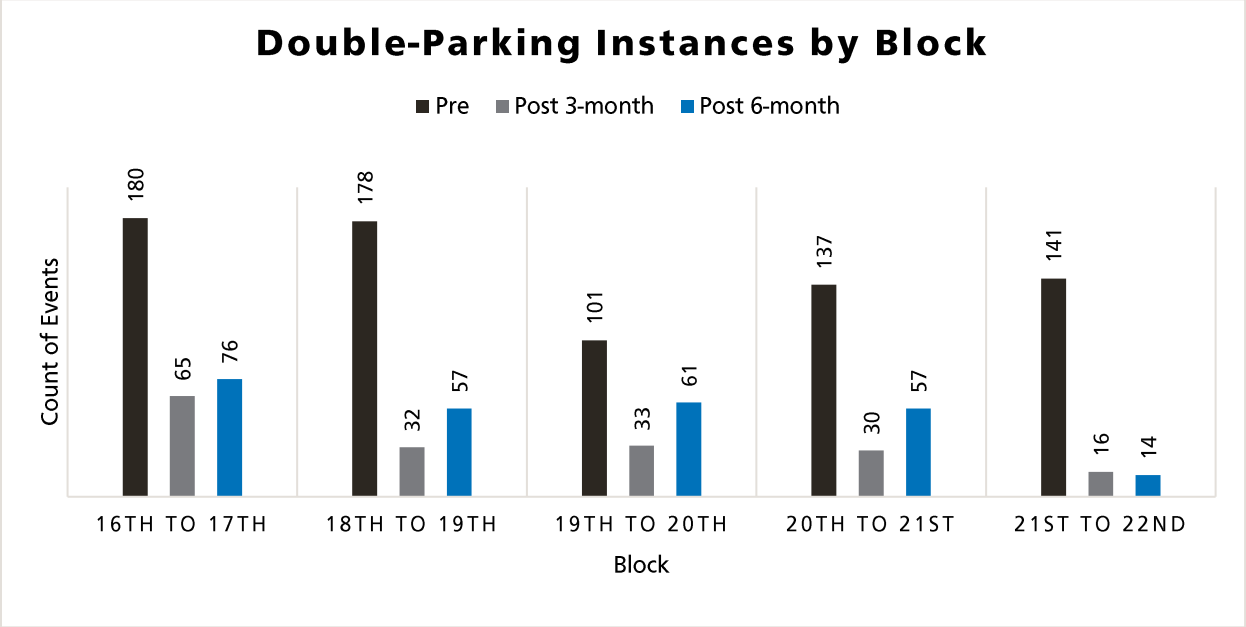


Metric 3 – Frequency of Double-Parking

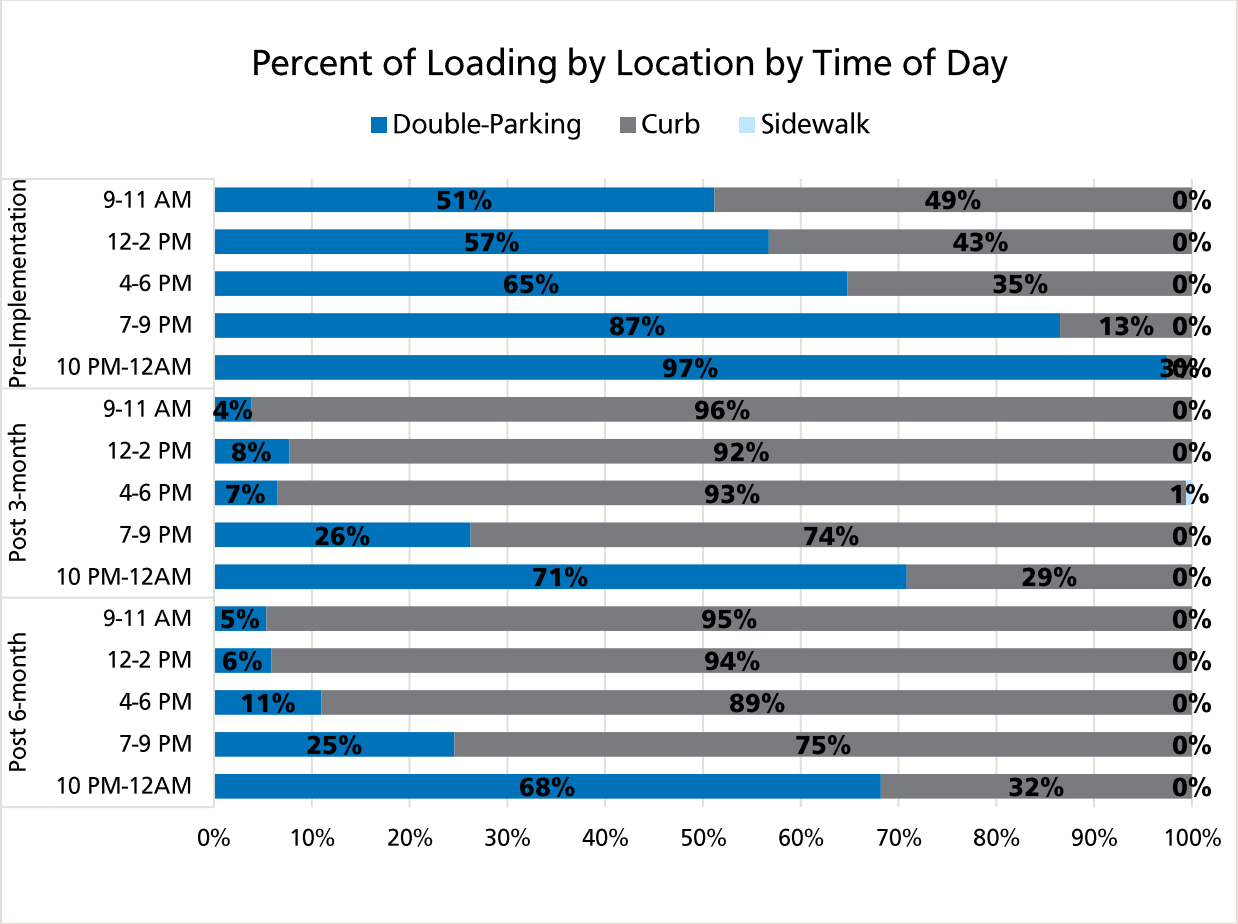
Frequency of double-parking is one of the primary metrics to assess the efficacy of the curb management plan. Double-parking occurs when there is not enough space for vehicles to pull up to the curb, either because the curb is fully occupied, and/or because the curb does not provide ample space for the vehicle to easily and quickly pull in and out of the curb. The result is a vehicle illegally and temporarily parked in the bicycle lane, travel lane or center turn lane.

Overall, of all the loading events observed, double-parking frequency shows a similar pattern to the 3-month evaluation finding. Double parking frequency has decreased from 67% to 14% of the time, which is a difference of 53 percentage points and a significant change between pre- to post-implementation conditions.

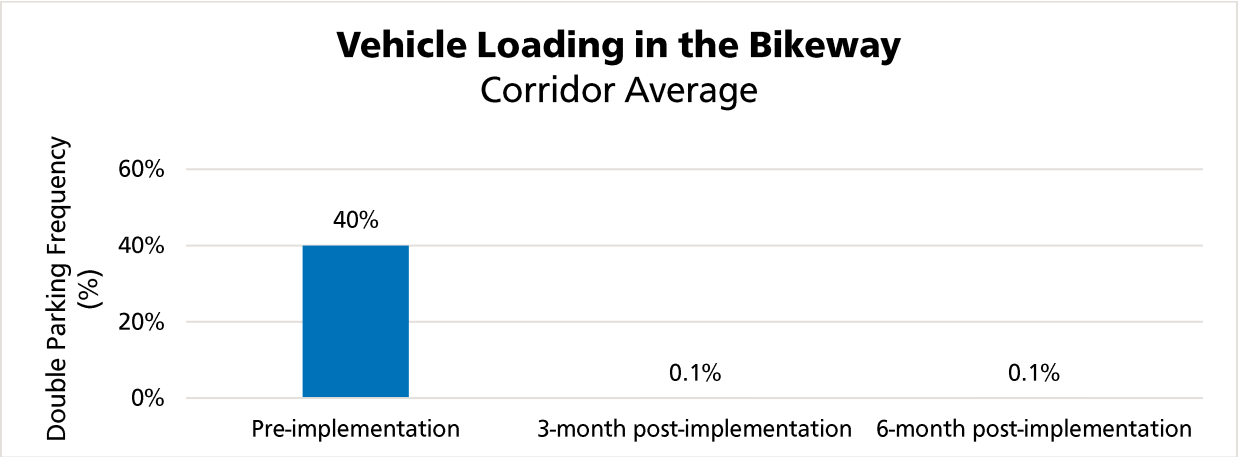




Although double-parking has improved overall, it still continues to be an issue later in the day and particularly late at night. The vast majority that continue to double-park at night are ride-hails and food delivery service vehicles.



Regarding vehicles double-parked and loading in the bikeway, which was a major traffic safety issue in pre-pilot conditions that led to many of the street's bicycle-related collisions, **the frequency drastically reduced from 40% to 0.1% of all loading events.**



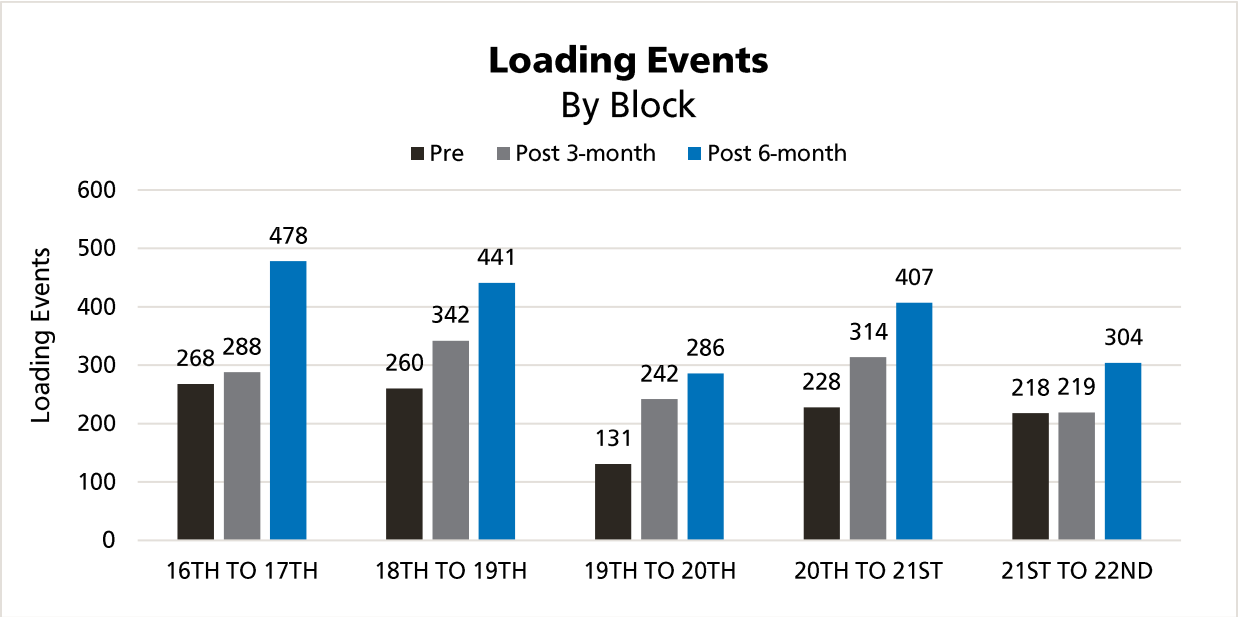
Vehicle Loading by Location on the Street

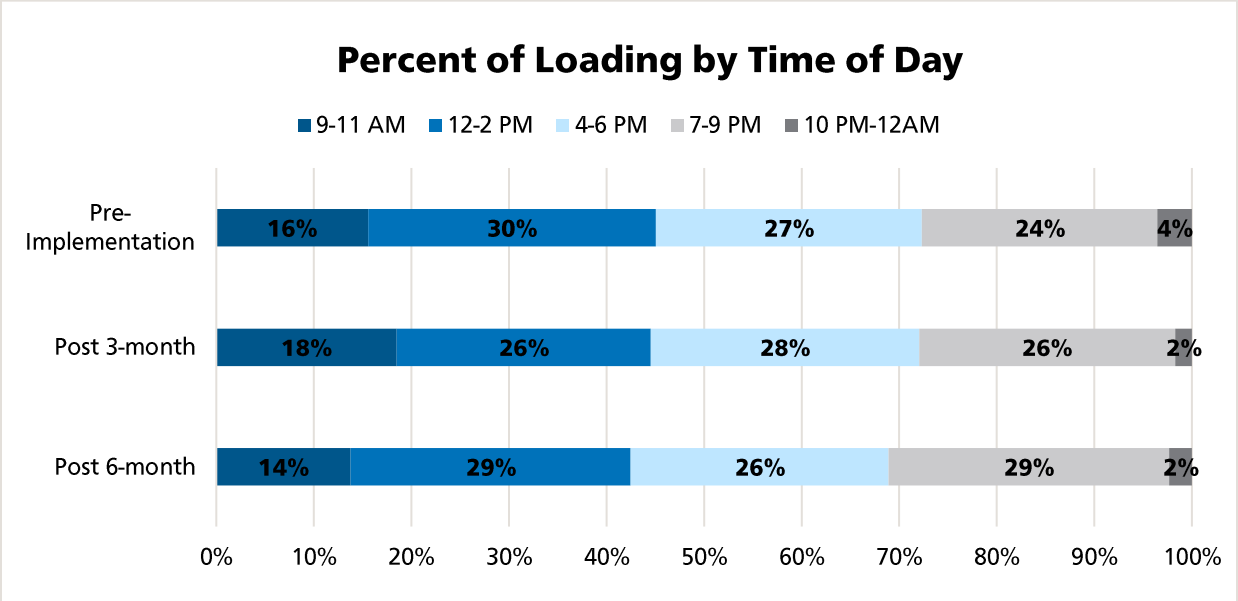
Loading Location	Pre-Implementation	Post 3-month	Post 6-month
Double-Parking	66.7%	12.8%	14.0%
Bike Lane	40.0%	0.1%	0.1%
In Vehicle Travel Lane	8.9%	12.7%	13.9%
In Center Lane	17.8%	0.0%	0.0%
At Curb	33.3%	87.0%	86.0%
Sidewalk	0.0%	0.1%	0.0%

Note: Loading data does not show events of vehicles entering the center-running protected bikeway to bypass double parked vehicles or to make illegal U-turns mid-block. The events recorded in this metric are only events where a vehicle stops to unload or load goods and passengers. Please refer to metric 4 for bikeway encroachment events that do not involve dwelling in the bikeway facility.

Metric 4 – Review of Vehicle Loading Activity and Loading Characteristics

Loading events increased by 73% between the 6-month evaluation period and pre-pilot conditions, with 86% of all loading taking place legally at the curb. In the 6-month evaluation, temporal distribution of loading, meaning the amount of loading that occurs at different times of day, remained fairly consistent to pre-pilot conditions. This is similar to the finding in the 3-month evaluation.





In the 6-month evaluation period, there was 93% increase in ride hail, autonomous vehicle, and taxi passenger pick-up and drop-offs (3-month: +58% from pre-pilot conditions).

With vehicle dwell times, the time it takes to complete the loading activity, there was a very slight change in vehicle loading dwell times when comparing the pre-implementation to the 3 or 6-month post-implementation conditions. The latter two are essentially the same. In post-implementation conditions, a very slight amount of additional vehicles are loading in the five to 30 minute loading time range (approximately 2-3% more).

Note: A calculation error for vehicle loading dwell time was discovered in the 3-month evaluation summary after it was published. The findings in the 3-month evaluation for dwell times are incorrect and the table below shows the correct values for proportion of loading by the three time groups.

Time Group	Pre-Implementation	3-Month Post-Implementation	6-Month Post-Implementation
Less than 5 min	70%	66%	67%
5 to 30 min	27%	30%	29%
Greater than 30 min	3%	4%	4%

Metric 5 – Frequency of Vehicle Encroachment into the Bikeway

Since the vehicle loading metric only recorded bikeway encroachment from vehicles that were loading goods or people, other incursions, such as for U-turns (not at the intersection), slight/full encroachment to bypass a double-parked vehicle in the travel lane, full encroachment to bypass congestion, or other reasons, were also observed. Data was collected during 2-hour AM, midday, and PM periods.

The hourly incursion rate (number of vehicles compared against total through volume of that hour) was calculated to determine the bikeway encroachment frequency. **On average, and similar to the 3-month evaluation findings, about 1% of vehicles, or about 3 to 4 vehicles, encroach the bikeway per hour** for the incursion reasons stated above**.** The max observed number of vehicles per hour at any location or period for the 6-month evaluation was 10 vehicles (PM period – Valencia between 21st and 22nd streets). There's a weak relationship between time of day and vehicle encroachment rate. Generally, the higher the vehicle volumes, which is typically during the PM-peak period, the more likely vehicles are to encroach the bikeway.

The most common reason for bikeway encroachment (51% of the time) is to cross the street. There has also been a slight increase in encroachment to bypass congestion (11 percentage point increase from the 3-month evaluation period). The previous reason for encroachment reason (to make a U-turn mid-block) has decreased from 54% of the time to 26% of the time.

Vehicle Encroachment - Reason

Location	Post 3-month				Post 6-month			
	Bypass a double-parked vehicle	Bypass congestion	To cross the street	U-turn	Bypass congestion	To cross the street	U-turn	Other
16TH TO 17TH	46%	0%	31%	23%	12%	16%	66%	6%
18TH TO 19TH	0%	8%	23%	69%	10%	77%	13%	0%
21ST TO 22ND	0%	13%	50%	38%	41%	39%	20%	0%
Corridor Estimate	11%	7%	28%	54%	22%	51%	26%	1%

Note: U-turns made mid-block on any street in a business district are illegal and dangerous.

Metric 6 – Bicycle Signal Compliance Rate

Bicycle signal compliance is an important metric in measuring design effectiveness at the intersection, especially since signal separation is an important component in the center-running bikeways design. The intersection is the place along a roadway that experiences numerous user conflicts since it is the point where multiple modes of transportation and directions of travel must meet and negotiate right-of-way to continue their trip.

The metric bicycle signal compliance refers to two forms of compliance:

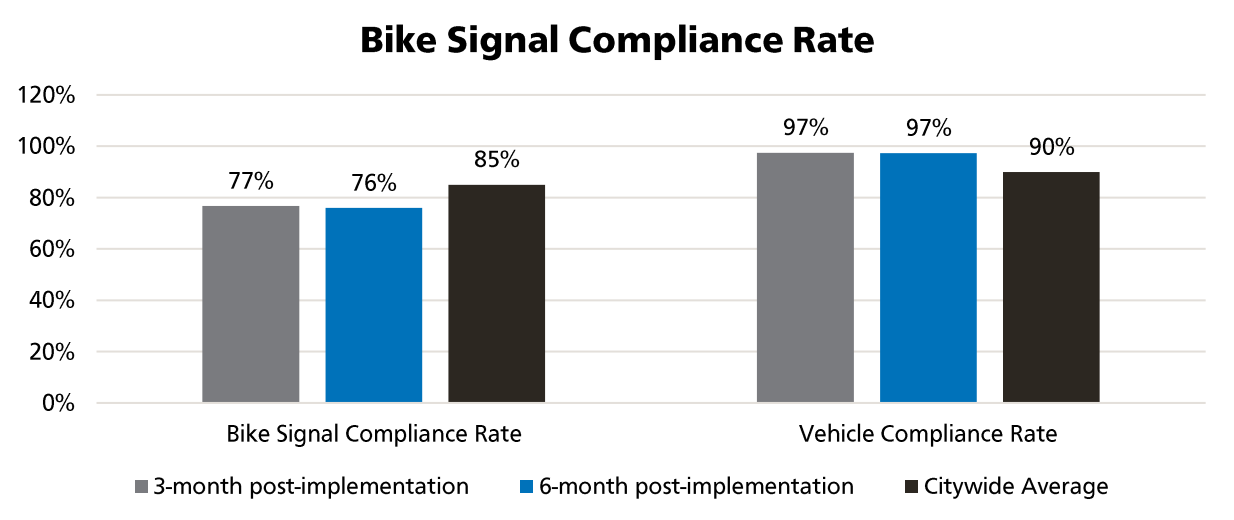
1. People on bicycles obeying a separate bicycle signal at an intersection that gives them the right-of-way.
2. Compliance of vehicles obeying the traffic signals or restrictions when bicycles are given a separate green signal.

Observations were conducted during 2-hour AM peak, midday and PM peak periods along several blocks in the project area. Both terminus points (Valencia at 15th Street and Valencia at 23rd Street) where bike signal separation exists, were observed. Additionally, two intersections where people on bicycles utilize the vehicle signal (Valencia at 16th Street and Valencia at 18th Street), were also observed to account for the slightly different traffic control device.

Note: Previously, the 3-month evaluation showed a 79% compliance from people on bikes with the bicycle signal. Since the conclusion of that evaluation and the publication of the summary, new data for an additional intersection (Valencia at 18th Street) was obtained. An updated analysis that includes this additional intersection reduced the compliance bike compliance rate to 77% and vehicle compliance rate to 97%. The chart below shows the most up to date data on bike signal and vehicle compliance rate from the 3-month and 6-month evaluations.

With the 6-month evaluation, of all observations of people on bicycles passing through the intersections, **76% complied with the traffic control device that gave them the right-of-way**. This means that about almost a quarter of the time, a person bicycles through an intersection, they are doing so without having the legal right-of-way and potentially creating an interaction and conflict with another mode of traffic. The citywide average at other intersections with bike signal separation is about 85% compliance. So, the compliance rate on this section of Valencia is below average.

In contrast, **vehicles complied with the traffic control device or no left turn and no right turn on restrictions 97% of the time,** which is seven percentage points higher than the citywide average for vehicle compliance at other intersections with bike signal separation. The data does not indicate whether the noncompliance is because of noncompliance with the traffic signal, a vehicle makes a restricted left-turn, or because they make a restricted right turn. It is possible that the violation is more likely from noncompliance with the turn restriction, since the compliance rate is similar to the frequency of vehicle left turn metric.



From the user noncompliance by either party (bicycle or vehicle), 54 total interactions were observed (62 interactions in the 3-month findings) and five of those resulted in a close call between a vehicle and bicycle. Zero collisions were observed from the vehicle-bike interactions due to non-compliace by either party.

Metric 7 – Frequency of Bicycle-Pedestrian Interactions and Close Calls at the Intersection

Bicycle-pedestrian intersection interactions and close calls were observed to determine the pilot designs impact on bicycle and pedestrian conflicts at the crosswalk. If all users obeyed the right-of-way, bicycle and pedestrian interactions should be minimal with the pilot design.

Observations were conducted during the 2-hour AM and PM peak periods. The data does not indicate whether an interaction happened because one of the parties violated the right-of-way (I.e., crossing or proceed through when they do not have a green light or walk signal).

On average, 3.6% of pedestrians crossing at the crosswalk are expected to interact with a person bicycling through the intersection or making a turn from or to a cross street per hour, which is a 1.7 percentage point decrease from the 3-month finding (5.3%).

When compared against the northern Valencia design, it was estimated that in post-implementation conditions a person crossing is expected to interact with a through bicyclist 4% of the time per hour. **The current center-running bikeway pilot design did not more negatively impact the pedestrian-bicycle interaction experience than a curbside bikeway configuration.**

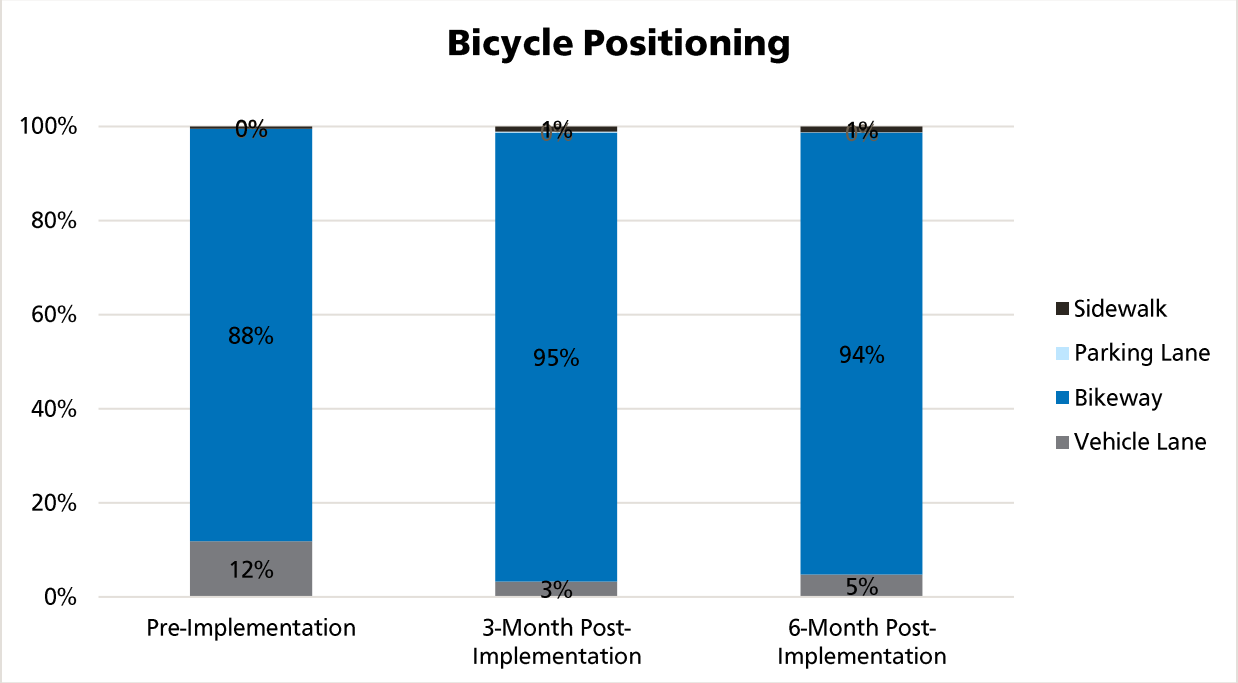
Result of Bicycle-Pedestrian Interactions at the Crosswalk

Result of Interaction	Post 3-month	Post 6-month
Pedestrian Yield	26%	25%
Bike Yield	59%	57%
Close Call	15%	18%
Collision	0%	0%

Metric 8 – Bicycle Positioning

Bicycle positioning refers to the location of a bicyclist within the cross section of the street (i.e., within a bike facility, in a vehicle lane, in the curb lane, on the sidewalk, etc.). Bicycle position can be an indicator for the effectiveness of a bikeway in safety, comfort, and sizing. The ideal condition is a high proportion of people on bikes on the street to be bicycling in the lanes of a bikeway. Bicycle positioning observations were conducted on several blocks along the project area during the 2-hour AM peak and PM peak periods.

94% of people bicycling in the mid-Valencia pilot project area are doing so in the center-running protected bikeway. Compared to pre-implementation conditions, bicycling in the bikeway improved by 6 percentage points (88% versus 94%), and a one percentage point decrease from the 3-month finding (95% versus 94%).



The center-running protected bikeway has reduced a vast majority of bicycling in the vehicle travel lane between pre-to-post implementation conditions. In pre-pilot conditions, about 88% of people on bikes were bicycling in the Class II bike lanes, and 12% were in the travel lane. Bicycling in the travel lane was more prevalent, approximately almost twice as likely, in the sections of Valencia where there was not a center turn lane between 15th and 19th streets. Since the center turn lane between 19th Street and Cesar Chavez was frequently used by large commercial vehicles for loading and there are less instances of loading in the bikeway on this section of Valencia, it is most likely that bicycling in the travel lane in pre-implementation conditions was due to a blocked bike lane from vehicle loading. The bike positioning metric findings from both the 3-month and 6-month findings indicate that the center-running protected bikeway further support that the bikeway is less blocked than before and creating a more comfortable traveling environment for people on bikes.

Metric 9 – Typical Daily Vehicle Speed

Typical daily vehicle speed was determined to evaluate safety along the project area. Vehicle speed is a major contributing factor to traffic collisions and severity. Managing vehicle speeds to an appropriate level is a key goal of traffic safety projects. Daily vehicle speeds were calculated at the 50th percentile (median), 85th percentile and the mean.

Compared to pre-implementation conditions, most drivers are driving at a safe speed and all speed metrics show at least a 2 mph decrease. Additionally, most drivers are driving at or below the speed limit (20 mph).

Typical Daily Vehicle Speeds

Speed Statistic	Pre-Implementation	3-Month Post-Implementation	6-Month Post-Implementation
Median	19	18	17
85th Percentile	24	23	22
Mean	19	18	17

Metric 10 – Average Daily Vehicle Volume

Change in vehicle volume was measured to evaluate mobility changes along the mid-Valencia pilot project area. Average daily vehicle volume was determined by taking the average 24-hour volume of several locations along the project area.

The corridor's estimated average daily vehicle volume change between pre- to 6-month post-implementation is a 23% decrease (3-month: -26%). Based on the threshold for typical daily variation (i.e., the daily change in volume that constitutes normal deviations unaffected by seasonality or other variables), this change is considered significant.

Average Daily Vehicle Volumes

Valencia Between	Pre-Implementation	3-Month Post-Implementation	6-Month Post-Implementation	%Δ *(Pre to 6-mo)*
15th St and 16th St	9,300	5,400	7,300	-22%
18th St and 19th St	8,600	6,800	5,800	-33%
21st St and 22nd St	8,200	6,900	7,100	-13%

To compare and using the same parameters, the average daily vehicle volume changes on surrounding neighborhood streets decreased or increased by an insignificant magnitude (Guerrero Street: -8% and Mission Street: +1%).

Metric 11 – Average Daily Bicycle Volume

Change in bicycle volume was measured to evaluate mobility changes along the mid-Valencia pilot project area. Academic literature has shown that daily bicycle volume can be an indicator of safety and comfort. Typically, the more comfortable or safe a facility is perceived to be by users or potential users, the more people are on it.

Average daily bicycle volume was determined by taking the average 24-hour volume of several locations along the project area. **The average daily bicycle volume is estimated to have decreased by 2% from pre- to 6-month post-implementation conditions.** Based on the threshold for typical daily variation (i.e., the daily change in volume that constitutes normal deviations unaffected by seasonality or other variables), this change is considered not significant. The level of users between pre- and post-implementation conditions are about the same.

Average Daily Bicycle Volumes

Valencia Between	Pre-Implementation	3-Month Post-Implementation	6-Month Post-Implementation	%Δ *(Pre to 6-mo)*
15th St and 16th St	3,400	3,300	3,200	-6%
18th St and 19th St	3,500	3,900	3,600	+3%
21st St and 22nd St	3,400	3,400	3,300	-3%

Metric 12 – Average Daily Pedestrian Volume (2-Hr AM and PM Peak Periods)

Change in pedestrian volume was measured to evaluate mobility changes along the mid-Valencia pilot project area. Using 2-hour turning movement counts during the AM and PM peak periods, total pedestrian volume was compared between pre- to post-implementation conditions.

Overall, it is estimated that the 2-hour pedestrian volumes during the AM and PM peak periods have increased by 4% between pre-to 6-month post-implementation. Based on the threshold for typical daily variation (i.e., the daily change in volume that constitutes normal deviations unaffected by seasonality or other variables), this change is considered not significant.

To compare and using the same parameters, the 2-hour pedestrian volumes during the AM and PM peak periods decreased on surrounding neighborhood streets like Guerrero Street (-12%) and Mission Street (-11%).

Average Pedestrian Volumes (2-Hr AM and PM Peak Periods)

Location and Time Period	Pre-Implememtation	3-Month Post-Implementation	6-Month Post-Implementation	%Δ *(Pre to 6-mo)*
Valencia Street at 15th Street	1,800	1,400	1,800	0%
AM	600	400	600	0%
PM	1,200	1,000	1,200	0%
Valencia Street at 16th Street	3,500	3,800	3,900	11%
AM	1,100	1,100	1,100	0%
PM	2,400	2,700	2,800	17%
Valencia Street at 17th Street	2,300	2,100	2,400	4%
AM	600	600	600	0%
PM	1,700	1,500	1,800	6%
Valencia Street at 18th Street	2,900	2,700	3,000	3%
AM	800	700	800	0%
PM	2,100	2,000	2,300	10%
Valencia Street at 19th Street	2,400	2,300	2,400	0%
AM	400	500	500	25%
PM	1,900	1,700	1,900	0%
Valencia Street at 20th Street	2,300	2,400	2,400	4%
AM	500	500	600	20%
PM	1,800	1,800	1,900	6%
Valencia Street at 21st Street	2,100	1,700	2,000	-5%
AM	500	400	500	0%
PM	1,700	1,300	1,500	-12%
Valencia Street at 22nd Street	2,000	1,700	1,800	-10%
AM	500	500	600	20%
PM	1,400	1,300	1,200	-14%
Valencia Street at 23rd Street	1,400	1,500	1,800	29%
AM	400	500	500	25%
PM	1,000	900	1,300	30%

Metric 13 – Traffic Impacts on Adjacent Streets

Traffic impacts were measured on various metrics to evaluate possible increase in congestion on parallel neighboring streets from the pilot design. Each metric compared pre-to 6-month post-

implementation conditions. **Overall, the findings from each metric show that the mid-Valencia pilot design has not negatively impacted traffic on adjacent neighboring streets.**

Daily Vehicle Speeds

Vehicle speeds can provide insight on congestion impacts since flow is a function of speed and density. The more vehicles there are on a road at the same time, the lower the speed one can expect to travel through a route. An increase or decrease in vehicle speeds is a better indicator than vehicle volume, because roadways may have the capacity to absorb additional users.

Based on data collected on other streets, **vehicle speeds on neighboring streets remained about the same between pre- to post-implementation conditions**. Therefore, pilot design features like the no vehicle left turn on Valencia Street have not impacted the speed at which a vehicle travels through the adjacent streets or have led to increased delay.

Additionally, average daily vehicle volumes decreased or have not changed significantly on most of the streets observed between pre- to 6-month post-implementation conditions.

Average Speed and Daily Vehicle Volume on Neighboring Streets

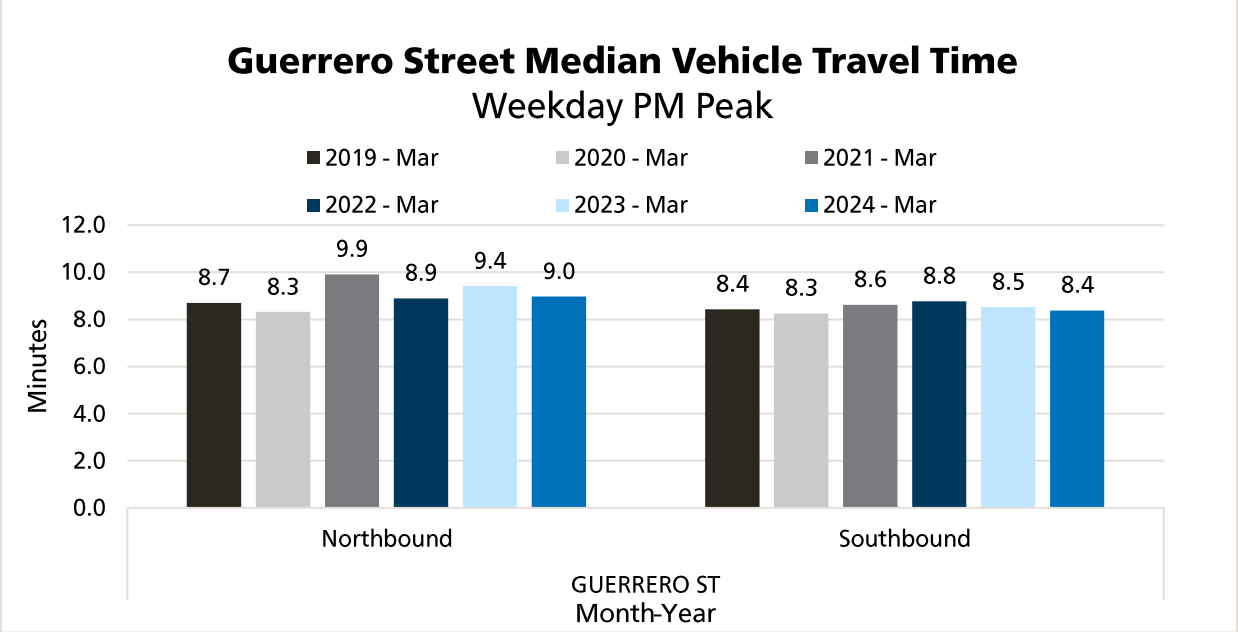
Location	Average Speed			Average Daily Vehicle Volume Change
	Pre-Implementation	6-Month Post-Implementation	Speed Difference	
16th Street	18	19	1	-2%
20th Street	18	19	1	-13%
22nd Street	21	22	1	-13%
Capp Street	16	16	0	-29%
Guerrero Street	25	24	-1	1%
Hill Street	17	20	3	-20%
Liberty Street	15	14	-1	-20%
Mission Street	20	20	0	-4%
South Van Ness Avenue	22	23	1	2%
Sycamore Street	14	14	0	0%

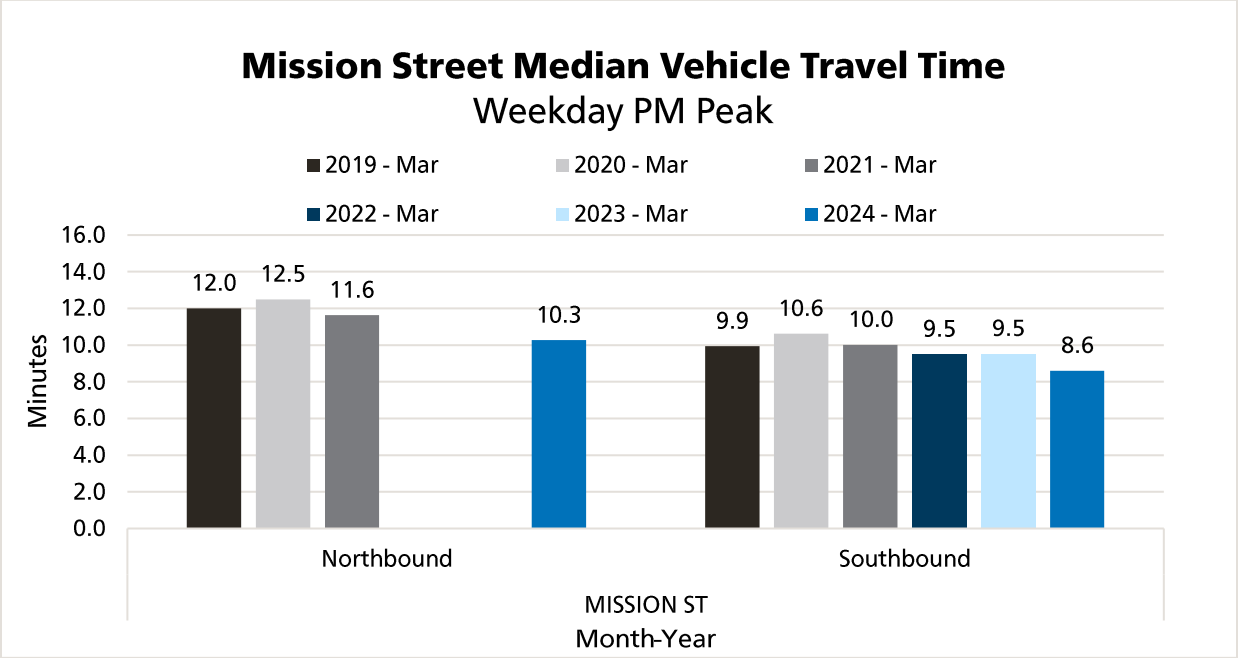
Median Vehicle Travel Time

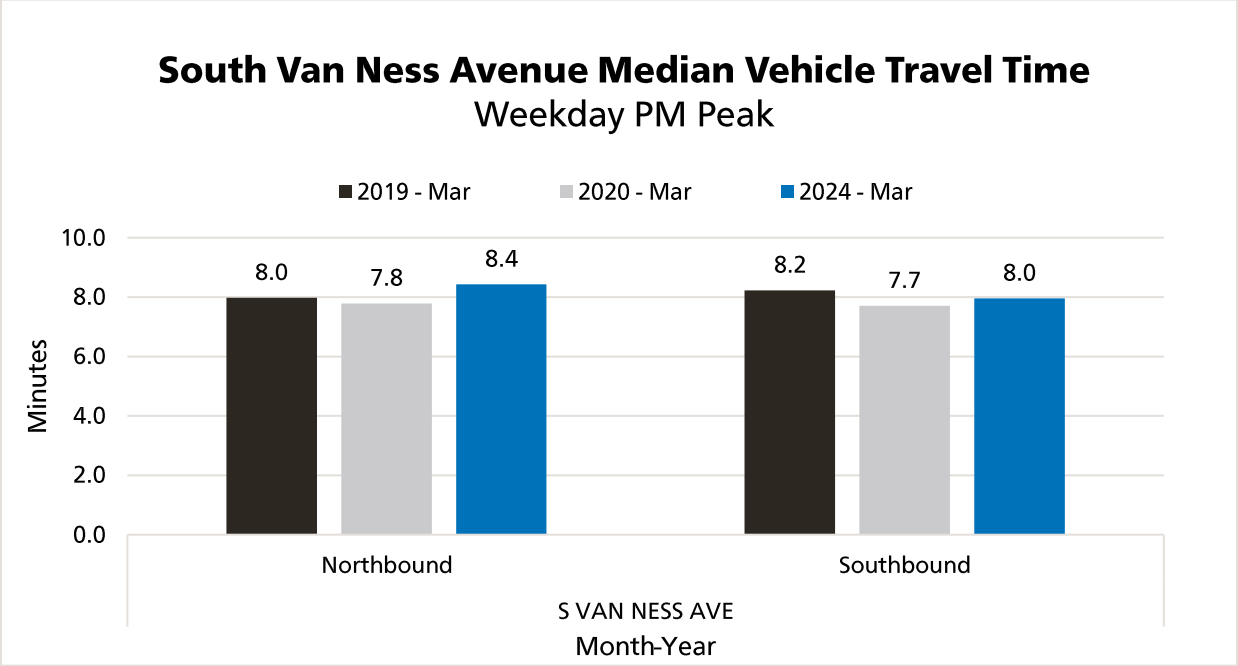
Using mobile phone and GPS data, vehicle travel time was also measured to evaluate potential congestion impacts from the Valencia Street pilot design on adjacent streets between 15th and 23rd streets. If the pilot design had negative impacts, it is expected travel time would have significantly increased from potentially diverted traffic that no longer desired to travel on

Valencia Street or because of the vehicle no left turn restrictions that caused additional movements on adjacent streets to get off Valencia Street. Median vehicle travel time was calculated to measure vehicle travel time changes and potential added delay. The 6-month evaluation looked at median vehicle travel time in March during the weekday PM-peak period on Guerrero Street, Mission Street and South Van Ness Avenue. Data for all years were not available for some streets

Based on the findings, **vehicle travel time changes were insignificant or decreased when compared against previous years**. Guerrero Street. which had the most available data, experienced about a 5 to 25 second decrease in median travel time when comparing conditions in March 2023 (pre-pilot) to March 2024 (post-pilot). Mission Street (southbound only), experienced about a 55 second decrease in median vehicle travel time. South Van Ness Avenue, which only had pre-data in 2019 and 2020, experienced about a 20 to 35 second increase in vehicle travel time when comparing March 2020 to March 2024.

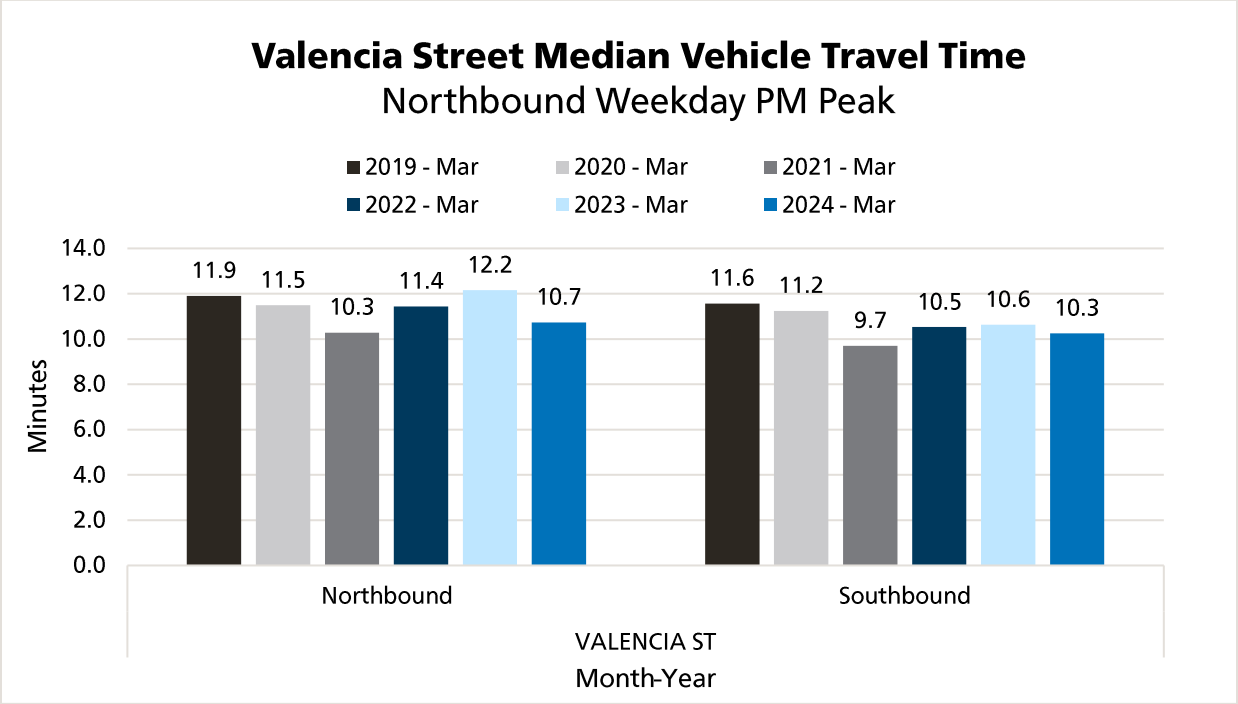






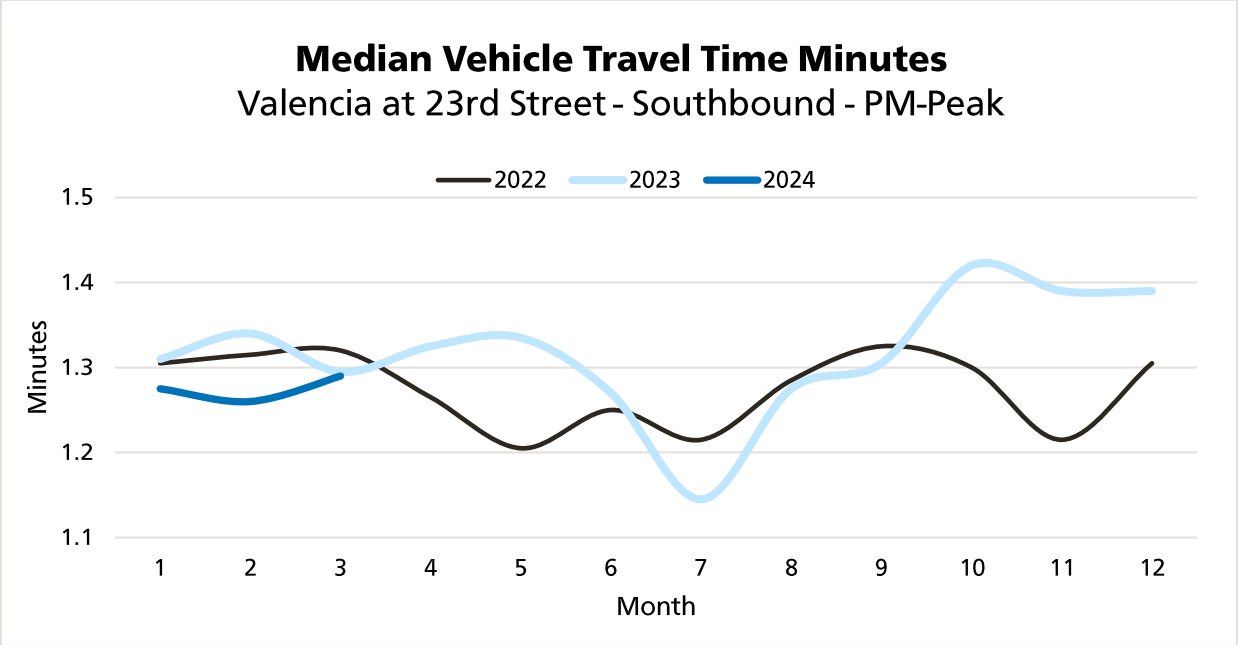
Metric 14 – Traffic Impacts on Valencia Street

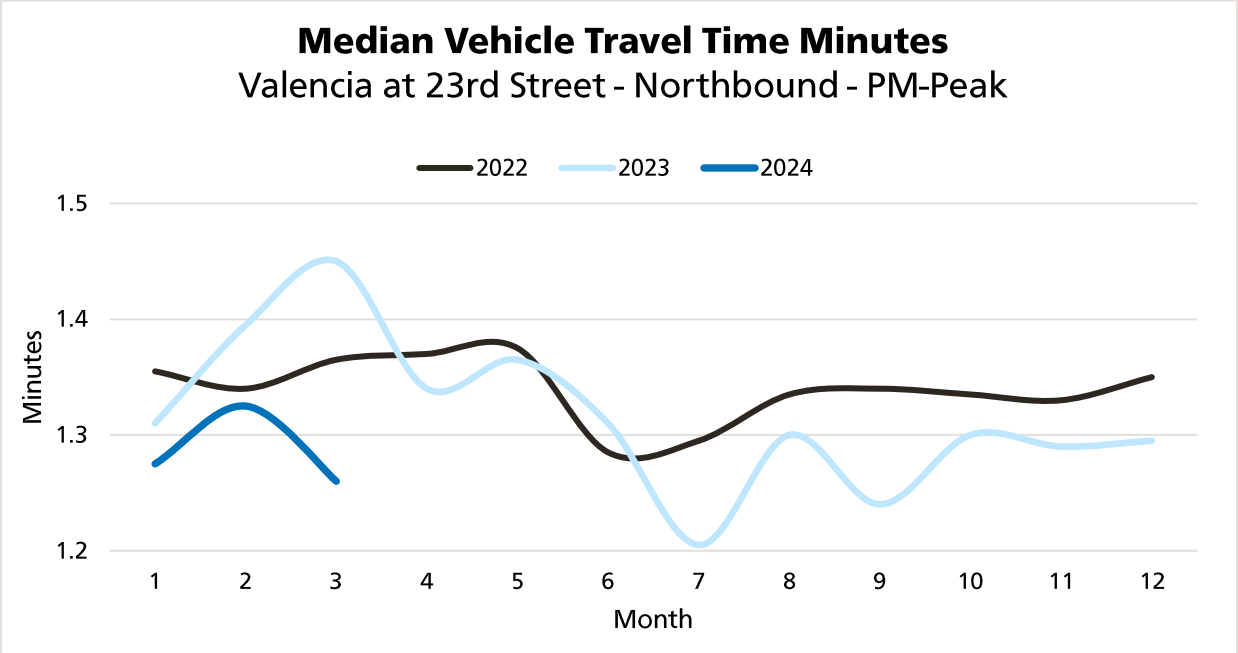
Vehicle travel time was also measured on Valencia Street between 15th to 23rd streets to determine if the pilot design impacted vehicle congestion on the street. Using the same data as the previous metric, median travel time was compared through several years during the month of March.



Based on the findings, **vehicle travel time changes were insignificant or decreased when compared against previous years**. When comparing March 2023 (pre-pilot) to March 2024 (post-pilot) the northbound direction showed a minute and a half decrease and the southbound direction showed a 20 second decrease in median vehicle travel time.

Additionally, the intersection of Valencia at 23rd Street was also analyzed, because of feedback from the community about increased delays due to the new bike signal and signal retiming. For the southbound direction, through the pilot period thus far (August 2023 – March 2024), the vehicle travel time increased to as much as 85 seconds with an average of about 80 seconds to pass through. Using the same time period for comparison, but in the prior years (August 2022 – March 2023), the average time required to travel past this point was about 77 seconds, two seconds less than current conditions. Furthermore, although vehicle travel time increased during the initial months of the pilot, the latest data shows that it has decreased to levels similar to pre-pilot conditions. In the northbound condition, median travel time minutes decreased from 81 seconds to 77 seconds (August 2022 – March 2023 versus August 2023 – March 2024).





Metric 15 – Intercept Survey

An intercept survey was also deployed in the month of April 2024 to measure attitudes and perceptions of users and visitors of Valencia Street toward the pilot design. Various aspects were measured, such as:

- Travel mode (which form of travel to location used) and identification of respondent as resident or visitor/shopper

- Comfort level with corridor layout and perceptions and opinions related to traffic safety
- Origin and destination of travel and reasoning for using Valencia corridor
- Parking distance to destination
- Purpose/objective of visit to Valencia corridor (reason for visiting area)

The major findings from the surveying effort include:

- People on bikes feel much safer due to street changes, mainly because of the separation from cars and fewer instances of double-parking/blocked bike lanes
- Of respondents who drove to Valencia, they typically parked two blocks from their destination and took five minutes to find parking
- 56.2% of respondents live or work near Valencia Street, and 28.1% patronize local establishments (shopping and dining)

Please visit the project webpage, **SFMTA.com/Valencia**, to read the full summary report from the surveying effort.