Government of **Western Australia**
Department of **Transport**

Safe Active Streets Program:

BAYSWATER

Interim Evaluation Report – 2023

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WHAT IS THE SAFE ACTIVE STREETS PILOT PROGRAM?

The Department of Transport's (DoT) Safe Active Streets Pilot Program commenced in 2015, and since that time has seen the construction of 12 safe active streets across Perth and regional WA, with eight completed within the program period that will form part of the evaluation of the pilot program.

Developed in partnership with local government, safe active streets are active travel routes on quiet local streets, where speeds have been reduced to 30 km/hr to allow for a safer shared street space.

Other treatments such as narrowing road widths, slow points and intersection changes on the streets can help to create low speed residential precincts. With lower vehicle speeds, the streets aim to improve amenity for the community and are much safer for all users, such as people walking, bike riders of all ages and abilities and people driving.

Safe active street routes are also chosen as they form part of wider bicycle networks, connecting to off-road shared paths and linking community amenities such as schools, railway stations or shops.

WHY WE COLLECT DATA

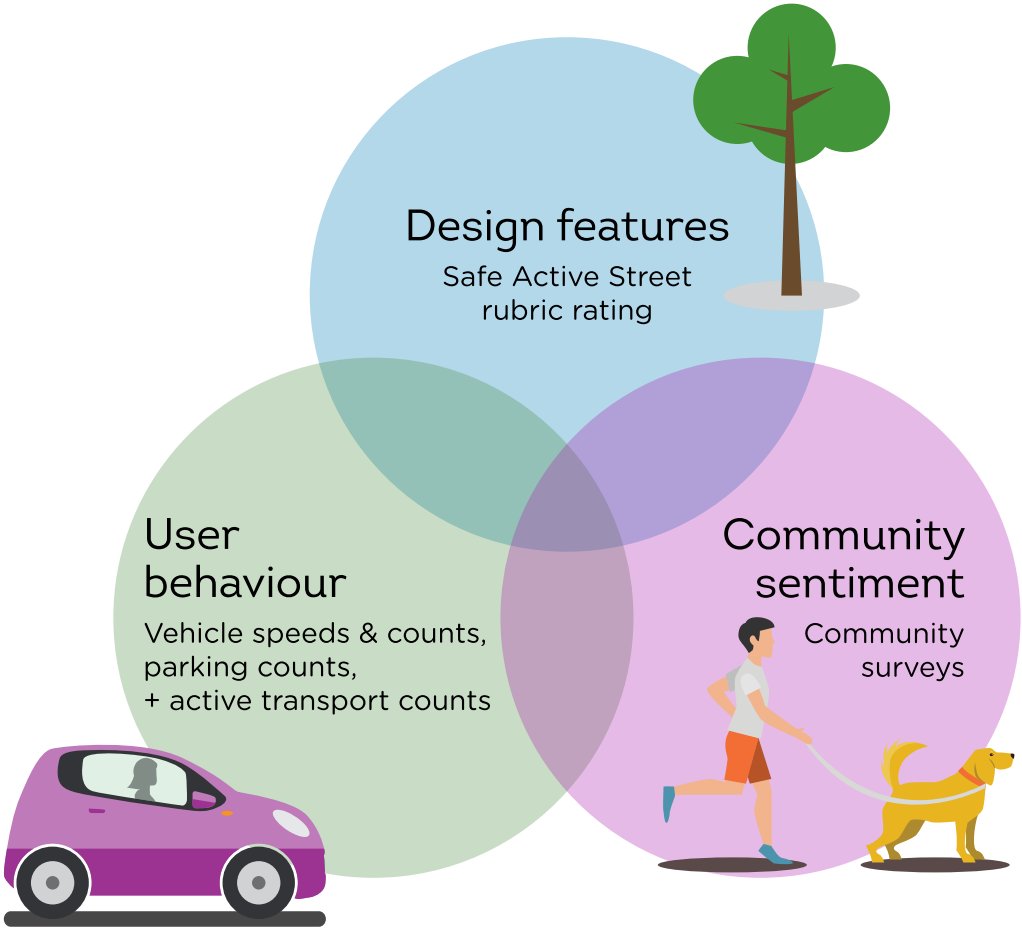
Collecting transport data helps us to better understand transport choices and behaviours. This insight assists us to guide infrastructure investment in local communities to support the growth of active transport.

Evaluation of the Safe Active Streets Pilot Program is being undertaken, including each of the eight projects involved.

Due to the complexity and differing treatments applied to each of the projects, the evaluation has been designed to collect and analyse data on three key components:

1. Design features
2. User behaviour
3. Community sentiment

The data presented in this interim evaluation report for the Bayswater Safe Active Street discusses initial insights of the available data on design features and user behaviour. Community surveys are being undertaken which will provide additional insights on community perceptions about the safe active street. Further analyses of all data will also be undertaken and incorporated into the final evaluation report due in 2024.



CITY OF BAYSWATER, SAFE ACTIVE STREET

The Leake Street and May Street Safe Active Street is a 2.54 km route that provides a link between the Bayswater Riverside Foreshore Park at the Swan River and Adelphi Street.

The route follows the river's recreational shared path along Leake Street through to a pelican crossing installed on Guildford Road. The route connects to the Principal Shared Path (PSP) on the Midland rail line and up May Street.

The project commenced in October 2016 and was completed in September 2017.

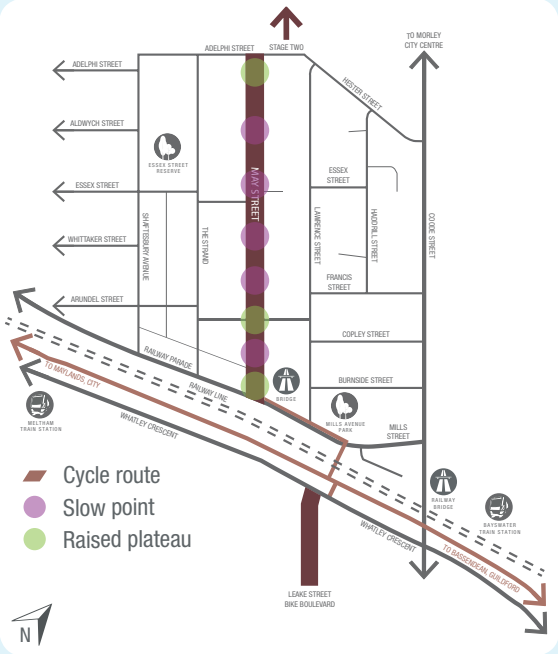
SAFE ACTIVE STREET MAP

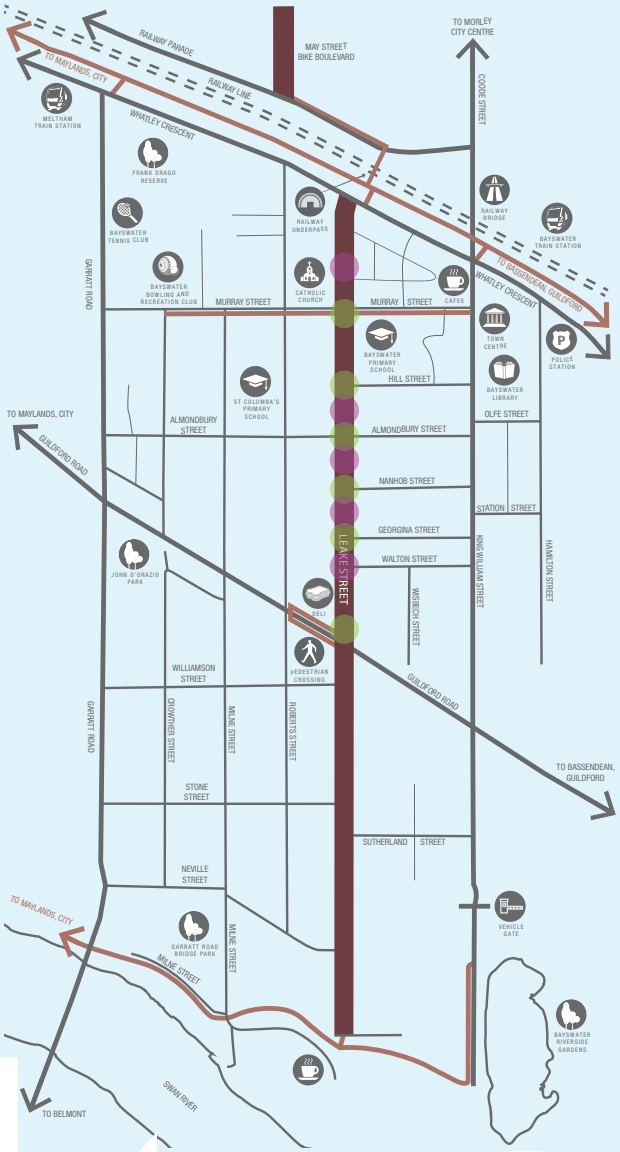
Unique design features

- Rainbow school crossing
- Raised plateaus
- Priority change at intersections
- On street parking
- Slow points
- Road humps (speed cushions)
- Landscape enhancements

Key route destinations

- Riverside Foreshore Park (Swan River)
- Bayswater Primary School
- St Columba's School
- Bayswater Train Station
- Mills Avenue Park





EVALUATION PROCESS

Video surveys and pneumatic tube counters were used to collect pre and post construction measures of:

- Bike rider movements
- Vehicle traffic counts
- Vehicle traffic speeds
- Vehicle parking counts

Data collection on the Bayswater Safe Active Street was undertaken in:

- June 2016 (pre-construction)
- June 2021 (post-construction)

VIDEO SURVEYS

Video surveys were conducted on the Bayswater Safe Active Street, over different three-day periods between 6.00 am and 6.00 pm.

Video surveys involve placing video cameras at strategic locations to detect the movements of bike riders and pedestrians. Survey footage is then analysed to extract pedestrian and bike rider activity.

These surveys were conducted on the safe active street route and on adjacent intersections off-route to detect area wide trends. There are three comparable pre and post construction sites along the route shown in this report.

PNEUMATIC TUBE COUNTS

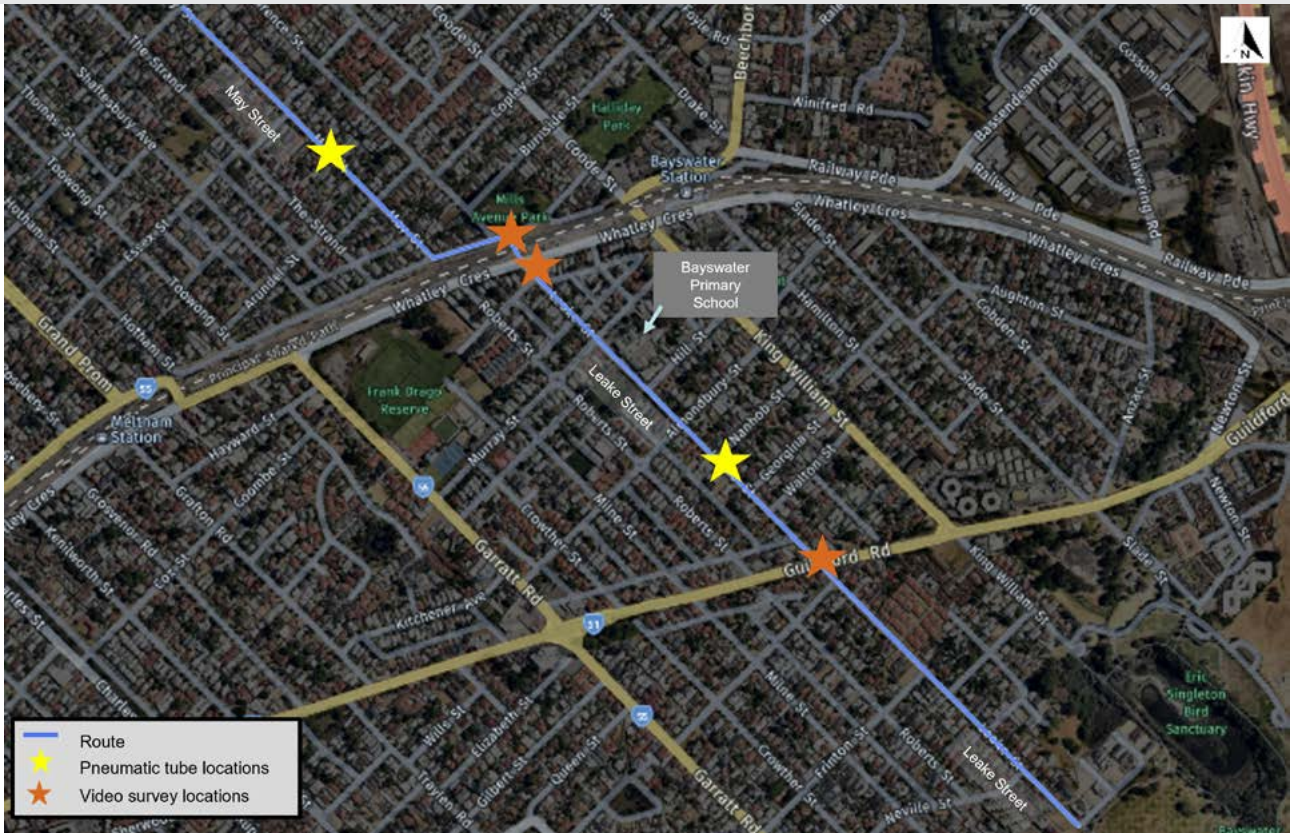
Pneumatic tube counters were placed at specific mid-block sections of road and at adjacent locations off-route to detect area wide trends.

Pneumatic tube counters involve rubber hoses being stretched across the road and connecting at one end to a data logger. Tube counters were used to detect vehicle traffic volumes and speeds. Vehicle volumes reflect the 85th percentile speed which is the speed at or below which 85 percent of vehicles are travelling.

Tube counters were in place over a specified period in June 2016 and again in June 2021 to capture the pre and post construction counts. There are two comparable pre and post construction sites along the route shown in this report and include the vehicle volumes and speeds as an average across both weekdays and weekends.

Both data collection methods enable DoT to observe changes in activity pre and post construction.

Route map with pneumatic tube counter and video survey locations



KEY INSIGHTS

Walking and bike riding activity

The number of people walking increased at all sites, on weekdays and weekends.

- Large increases were observed at the Railway Parade underpass and at the site on Leake Street at the Whatley Crescent intersection. These two sites saw high numbers across weekdays and weekends, possibly due to the activity centres located around this section of the route, including Bayswater Primary School, Bayswater Train Station and the town centre nearby.
- There was lower walking activity on Leake Street at the Guildford Road intersection, particularly during the week.

Bicycle riding observed increases at two (out of three) sites during the week and across all sites over the weekend

- The largest increases were observed at the Whatley Crescent intersection on Leake Street, with a high number of bike riders using this section during the week and over weekends.
- An increase in bike riders was observed at the Railway Parade underpass, particularly during the week, although smaller increases were also seen over the weekend.
- Towards the southern end of the route on Leake Street at the Guildford Road intersection, bike rider activity remained largely unchanged.

The following two tables indicate the additional number of people walking and bike riders post construction.

Average weekday user behaviour

Increase in usage (additional numbers post construction)

Comparable sites	Additional people walking	Additional bike riders
Railway Parade underpass	123	74
Leake Street and Whatley Crescent	121	673
Leake Street and Guildford Road	1	0

Average weekend user behaviour

Increase in usage (additional numbers post construction)

Comparable sites	Additional people walking	Additional bike riders
Railway Parade underpass	72	37
Leake Street and Whatley Crescent	100	731
Leake Street and Guildford Road	12	27

Vehicle volumes and speeds

Vehicle volumes have declined along the May Street section of the route.

- Vehicle volumes significantly decreased at the site located along May Street at Arundel Street and Essex Street.
- An increase in vehicle volumes was observed along Leake Street at the Nanhob Street and Georgina Street site, possibly attributed to school traffic around Bayswater Primary School.

A reduction in (85th percentile) vehicle speeds was observed at both sites, however, speeds could be further reduced along Leake Street.

- The 85th percentile vehicle speeds were reduced at the northern end of the safe active street, along May Street at Arundel Street and Essex Street.
- Along Leake Street at Nanhob Street and Georgina Street, vehicle speeds have been reduced, however, could be further reduced to achieve an 85th percentile speed of 37 km/hr or below.
- The length of the route could be contributing to higher vehicle speeds along Leake Street. Traffic entering the route may be unaware of the change in traffic conditions or are not recognising/ registering the speed restriction pavement markings.
- The vehicle speeds further south along Leake Street, between Sutherland Street and Neville Street, where only post construction data is available, had an 85th percentile speed of 41 km/hr in 2021, which would also need to be further reduced to achieve an 85th percentile speed of 37 km/hr or below. The route could benefit from reduced speeds particularly around the bus stop.

Daily average vehicle volumes (both weekdays and weekends)

Comparable sites	Pre-construction	Post-construction
May Street: Arundel Street and Essex Street	317	197
Leake Street: Nanhob Street and Georgina Street	438	452

Daily average (85th percentile) vehicle speeds

Comparable sites	Pre-construction	Post-construction
May Street: Arundel Street and Essex Street	52 km/hr	37 km/hr
Leake Street: Nanhob Street and Georgina Street	53 km/hr	43 km/hr

SUMMARY

- The Bayswater Safe Active Street has seen positive growth in the number of people using the route for bike riding and walking. Increases are seen over both weekends and weekdays, particularly at the Railway Parade underpass, where the route connects to the PSP on the Midland rail line and on Leake Street and the Whatley Crescent intersection.
- Lower active transport activity around Guildford Road could be attributed to difficulties in crossing this section of the route, or due to the path alignment, as the deflection in the path of travel to access a safe crossing option may be contributing to users opting to avoid this section.
- Activation through events or community engagement activities could be used to encourage use of the full safe active street. Once the train station relocation work is completed the repromotion of the route could increase awareness, particularly towards the southern end of the route around the Guildford Road intersection.
- Vehicle speeds and volumes have been reduced along the May Street section of the route, however along Leake Street, volumes and speeds remain high. Higher volumes along Leake Street may be attributed to school traffic around Bayswater Primary School and while vehicle speeds have been reduced, they are still above the recommended target. Additional speed restriction signage may need to be considered to further reduce 85th percentile speeds.
- The safe active street blue patches should be reapplied to enhance their visibility and stand-out and the full length of the route would benefit from upgrading to the new Main Roads WA safe active street pavement markings standards, eg. updating existing yellow diamond cycle symbols to the 30 km/hr roundels on intersecting streets.
- Bayswater Primary School is a participating school in the Your Move Schools Program (since 2018). Leveraging the walking and riding activity generated through the school's Behaviour Change Program could also help encourage further use.
- Community perception data will help to ascertain the breadth and depth of positive or negative community sentiment for the Bayswater Safe Active Street.
- The Safe Active Streets Pilot Program Evaluation Report will include statistical analyses of the full dataset and will be available in 2024.

FURTHER INFORMATION

More information on the Safe Active Streets Program can be found on the DoT website: www.transport.wa.gov.au

APPENDIX

Chart 1

Average weekday and weekend walking activity

Pre and post construction (raw counts)

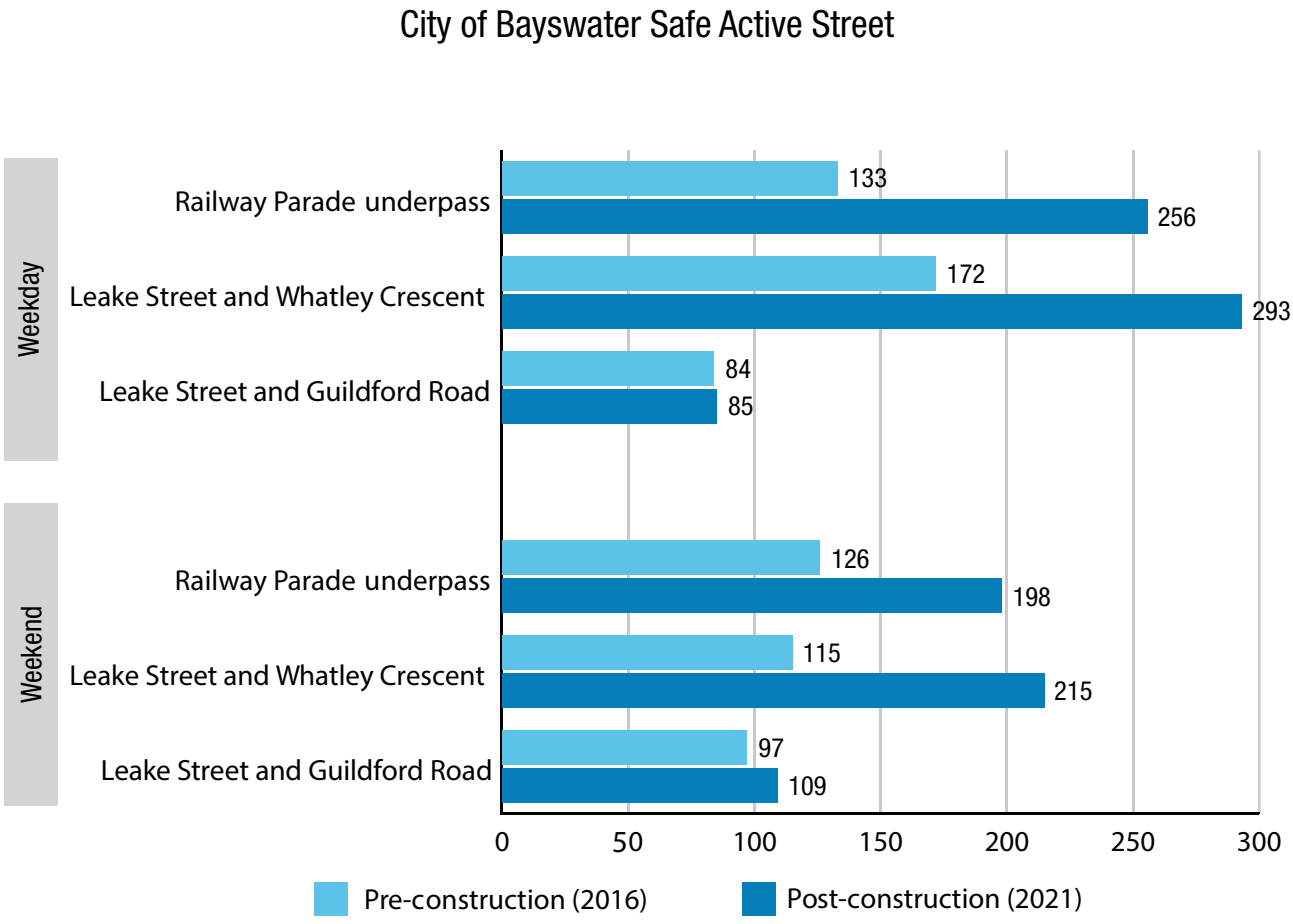


Chart 2

Average weekday and weekend bike riding activity

Pre and post construction (raw counts)

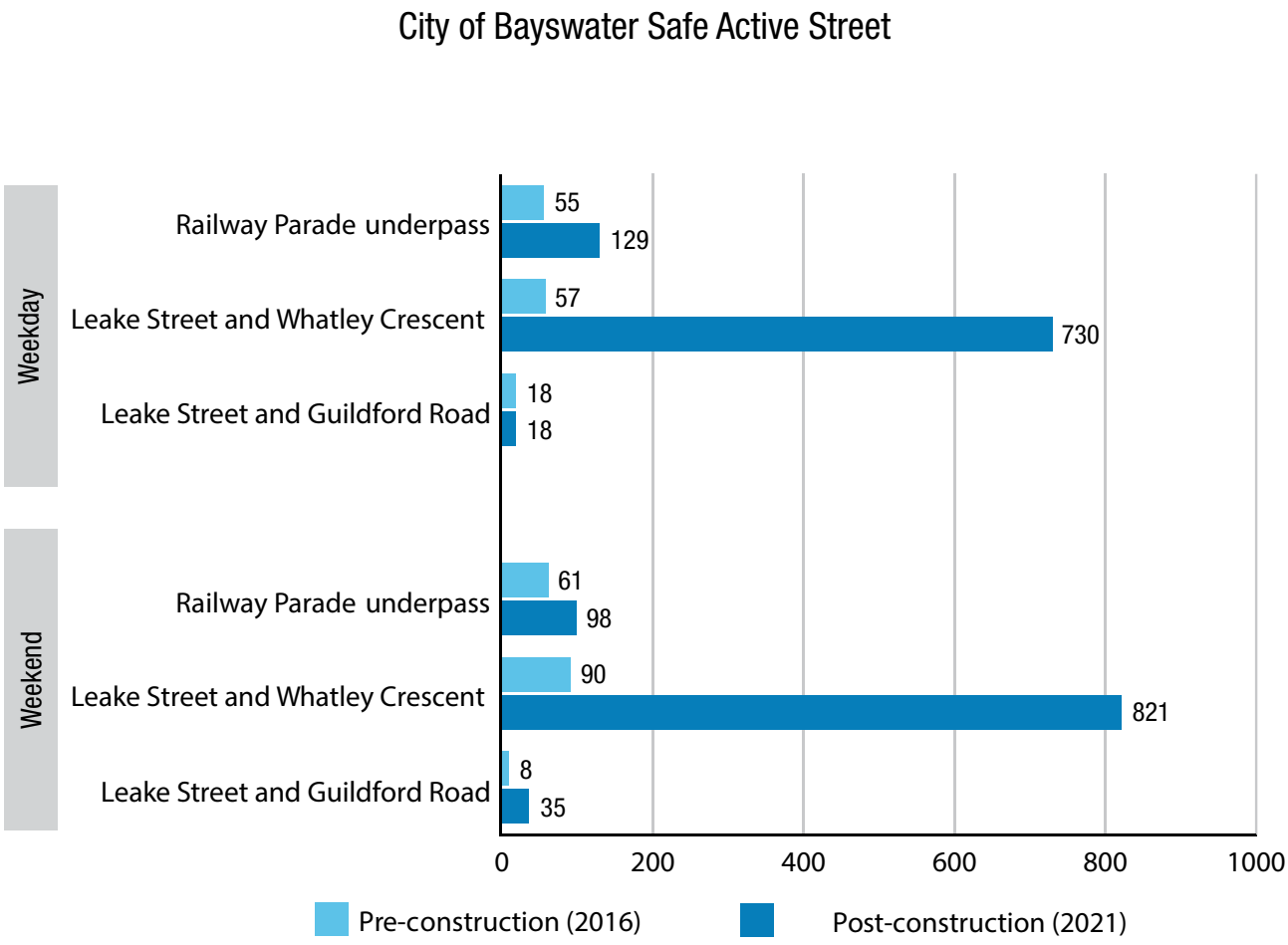


Chart 3

Daily average vehicle volumes

Number of vehicles pre and post construction
(across both weekends and weekdays)

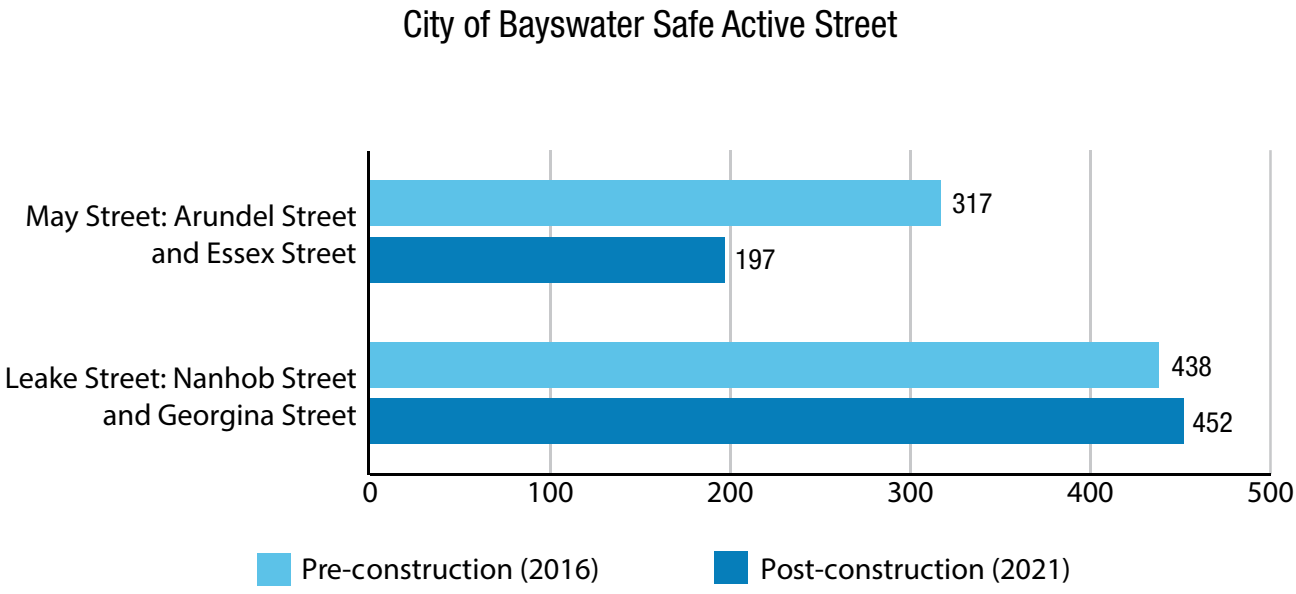
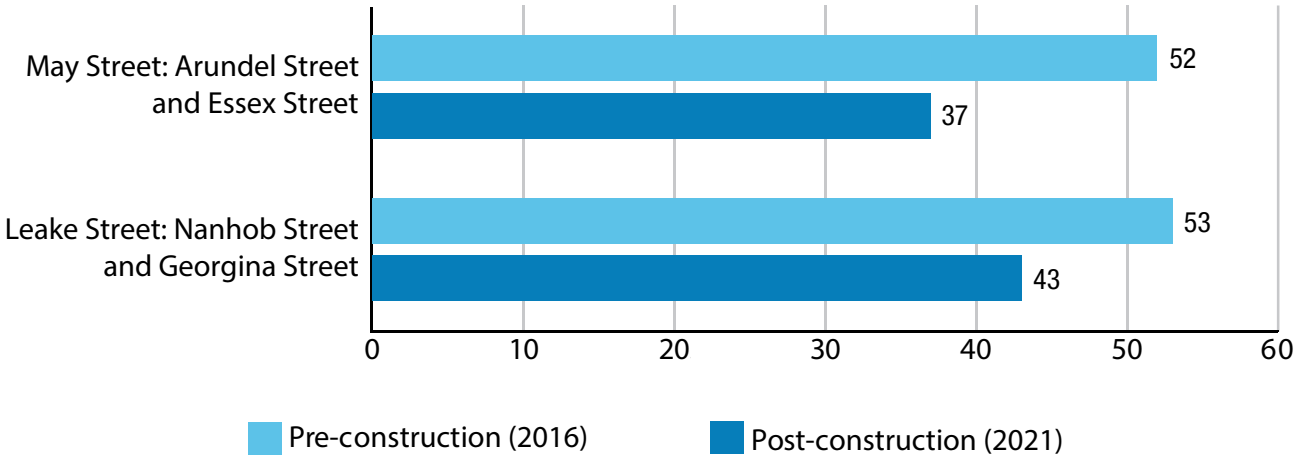


Chart 4

Daily average vehicle speeds

85th percentile speeds pre and post construction



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