WELLER STREET BICYCLE ROUTE PROJECT REVIEW
(MITCHELL STREET TO ALBERT STREET)

THE CITY of Unley

Purpose

The Wood-Weller Street Bicycle Route is a key north-south route in the Unley area that links the City of Mitcham to the south at Cross Road, Charles Walk / Glen Osmond Trail to the east, and Mike Turtur Bikeway to the north. The bicycle route has been delivered in stages, with the Wood Street section being delivered in 2017 and the Weller Street section between Mitchell and Albert Street being delivered in July 2020.

The next stage on Weller Street (north of Albert Street) and Simpson Parade is planned for construction in the 2021/22 financial year. Noting the bicycle route is about 75% complete, and prior to implementing the next section, it is considered important that a review of the recently constructed section on Weller Street between Mitchell and Albert Street is undertaken to assess its impacts, particularly noting the series of concerns raised during consultation and a subsequent petition.

The Weller Street section between Mitchell and Albert streets comprised of the installation of seven slow points with bicycle bypass, as well as an upgrade of Mitchell Street intersection to improve safety and access for people walking and bike riding.

The goal of the project was to create a low speed (< 40 km/h) and low trafficked (< 1,500 vehicles per day (vpd)) environment to support a mixed traffic arrangement where less confident bike riders would feel comfortable to ride.

Best practice suggests that a review should not be take place until at least 6 to 12 months post project completion to provide adequate time for people to adjust to the new environment. The review will consider the Design Intent and Review Criteria summarised below.

Design Intent

The project design intent included the following:

- Reduce traffic speeds along Weller Street between Mitchell Street and Albert Street through the placement of seven single lane slow points with bicycle bypass at about 100m spacing (typically).
- Maintain local vehicle access and reduce rat-running.
- Ensure sufficient on-street parking, appropriate to local needs, noting a loss of 24 parking spaces was required to safely install the required slow points.
- Enhance the amenity of the local street.
- Improve safety and accessibility for people walking and bike riding across Mitchell Street between Wood Street and Weller Street.

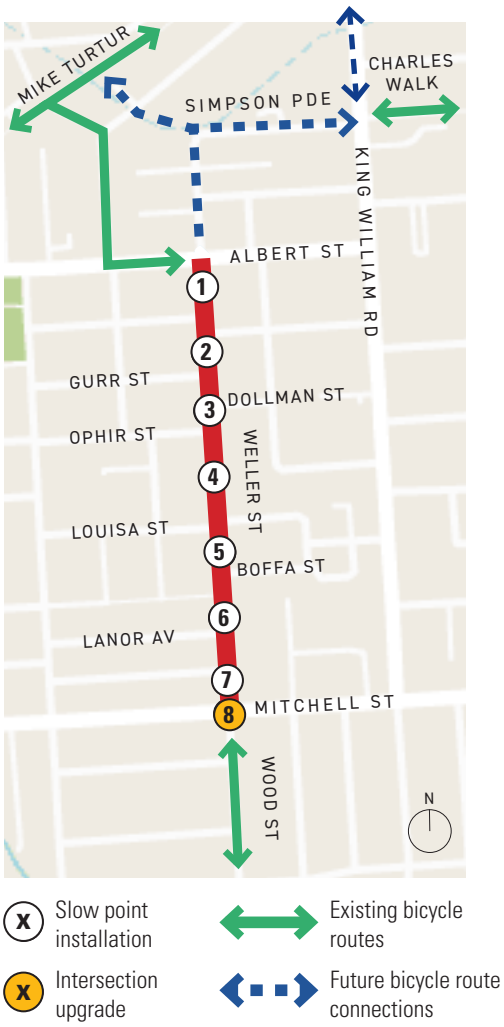


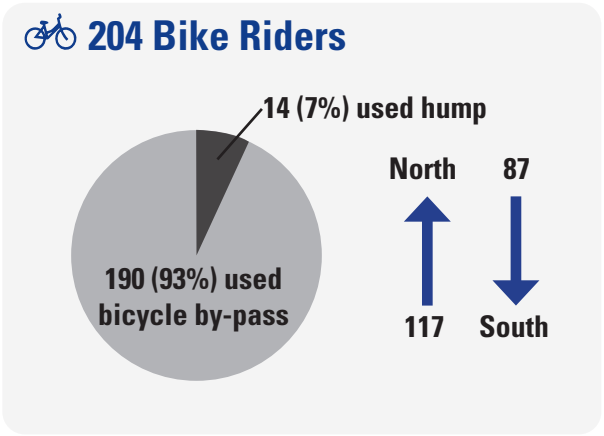
Figure 1: Project context

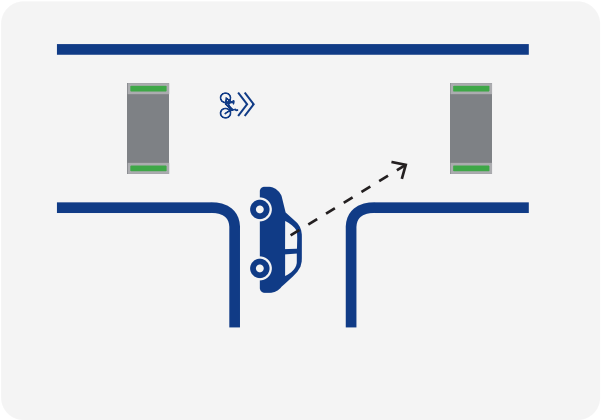
Review Criteria

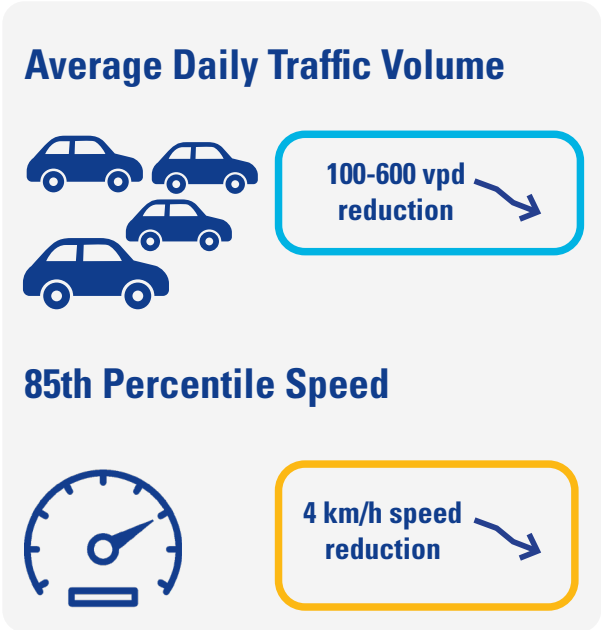
A series of review criteria have been developed based on the project goals and local resident concerns. These include:

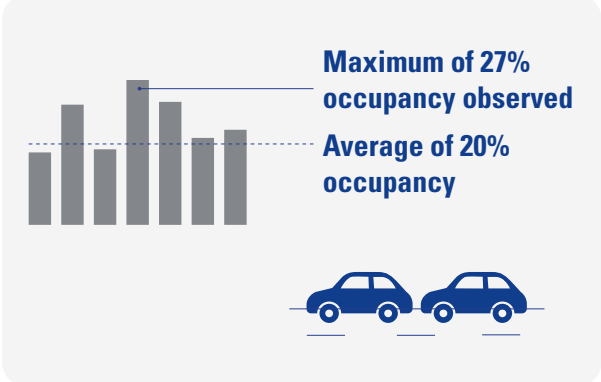
- **Bike Riders** - Are more bike riders using the street and are they using the bicycle by-pass area.
- **Slow Point Performance** - Do opposing motorists interact with the devices and each other in an orderly manner.
- **Traffic Changes** - Has the traffic volume and speed reduced on Weller Street to the desired extent, and has this increased traffic volumes in other surrounding streets.
- **Parking Changes** - Has the loss of parking, which was a significant resident concern prior to implementation, impacted access to on-street parking.
- **Asset Review** - Have the installations been constructed as designed, and have they successfully integrated into the existing streetscape.
- **Customer Experience** - What feedback has been received following implementation.

KEY FINDINGS









Bike Riders

Data shows that use of the bicycle route is high, with **over 200 daily bike riders** observed and an even split between northbound and southbound movements (58% and 42% respectively). 15% were observed to be female bike riders.

The March 2021 Super Tuesday Bicycle Count also showed a **6% increase in people bike riding** along the bicycle route compared to 2014.

The bicycle bypasses within the slow points have worked well with bike riders observed to use them 93% of the time. However, if vehicles are parked at the allowable 6m from the by-pass, use of them reduced.

Overall, by creating a safe and low stress environment for people riding bikes, more people bike riding will be observed.

Slow Point Performance

Video observation indicate that the slow points are performing as intended and in accordance with standards. The **frequency of two vehicles interacting at a slow point is low** and generally vehicles will give way to one another in an orderly manner.

In the future, we should set back slow points further from intersections where possible. If unavoidable, it is preferred to locate to the right of a t-intersection as motorists will more likely look right when undertaking a left turn.

Sharrows should also be located on the departure of slow points to guide bike riders and highlight to motorists the likely presence of bike riders.

Traffic Changes

The slow-points have successfully **reduced the traffic volumes and speeds** in Weller Street to below 40km/h and generally below 1500vpd, which is appropriate for a mixed traffic 'low-traffic bike route'.

Parking Changes

Notwithstanding the loss of 24 on-street parks associated with the project, parking occupancy is still low with an **average occupancy of 20% and maximum occupancy of 27%** along the street. The parking loss has generally only impacted access to on-street parking for people living directly adjacent a device, who now have to walk a short distance.

Figure 2: Key findings info-graphic

REVIEW CRITERIA OUTCOMES

1. Bike Riders

A total of 204 bike riders used the street from 7am-7pm on 17 March 2021, with 58% of bike riders observed to travel northbound (and 42% southbound), and 15% of bike riders obsrevd to be female (and 85% male). Data from June 2020 recorded 108 bike riders using the street, but as this was winter the data isn't directly comparable. Super Tuesday bike counts undertaken in March 2014 and March 2021 from 7-9am showed that use of the route has increased by approcimately 6% during that period. In terms of the overall network, regional bike routes in the City of Unley carry up to 300 bike riders during the 7-9am period, whereas this route carries approximately 70 bike riders. This suggests that, although not as highly utilised as a major regional route, this route plays an important role in the City of Unley bikeways network.

From video observations, it was assessed whether bike riders rode through the slow-point / over the hump or used the by-pass area. Generally use of the by-pass instead of the hump was high, at 93%, which suggests that it is a useful inclusion in the design. Parking data indicates that there were no vehicles parked adjacent the slow point on this day until 6:20pm. After this time, four bike riders used the by-pass and three chose to ride over the hump. Although acknowledging this is based on only seven bike riders, the data suggests that use of the by-pass likely decreases when a car is parked adjacent to the by-pass area.

2. Slow Point Performance

Video observations were undertaken on Wednesday 17 March 2021 (7am-7pm) at the slow point between Kneebone Street and Mansfield Street. Interactions were observed in the scenario where two motorists reach the slow point at the same time. From the 21 instances where this occurred, there were no reported issues (i.e. vehicles not giving way to one another in an orderly manner). With only 21 instances where two motorists concurrently negotiated the device, from 1035 vehicles observed, no congestion occurred.

3. Traffic Changes

Traffic data was collected in the area during 2018 and 2019, and again in 2021 after the project was implemented. Note that the 2018-19 data was collected prior to the King William Road upgrade, which may have changed traffic volumes in nearby local streets. The data suggests that following installation of the slow points, the traffic volumes have decreased on Weller Street by amounts ranging from 100-600 vehicles per day (refer to Table 1 and Figure 3). The reason this varies significantly is likely because sections of Weller Street are used as part of an east-west route between King William Road and streets further west (e.g. Ophir -> Weller -> Union). Reduced traffic volumes have also been experienced on Weller Street and Simpson Parade north of Albert Street, suggesting that it has discouraged some motorists from using the street as a north-south alternative to King William Road.

Traffic speeds have also been measured along the street. To understand the change in speed, we consider the 85th percentile speed, which represents the speed at which 85% of drivers travel at or below. This provides guidance on how fast people generally drive down the street. Speeds have reduced by about 4km/h midblock, and by 15km/h in close proximity to the slow points. Traffic speeds are now <40km/h, which is suitable for bikes and cars sharing the road, and was one of the primary project goals.

Traffic changes on Weller Street have however, coincided with an increase in traffic on Hardy Street of approximately 150-350 vehicles per day (15-30% increase). In the 2016 Local Area Traffic Management Study, traffic volumes along Hardy Street were identified to be above the desired threshold of 1500 vpd for a residential street. The option to close Hardy Street was proposed at this time to reduce traffic volumes, but this was not supported by the community. Council will continue to monitor traffic volumes along Hardy Street for a further six months, and should volumes remain above 2000 vpd, further investigations may be required, in consultation with local residents.

Street	Section	2018/19 Volume (vpd)	2021 Volume (vpd)	Volume Change (vpd (%))	2018/19 85th %ile Speed (km/h)	2021 85th %ile Speed (km/h)	Speed Change (km/h (%))
Weller Street	Albert to Union	893	774	-119 (13%)	42	27	-15 (36%)
Weller Street	Dollman to Ophir	2381	1753	-628 (26%)	42	26	-16 (38%)
Weller Street	Kneebone to Lanor	1909	1515	-394 (21%)	41	37	-4 (10%)
Hardy Street	Albert to Owen	1149	1307	+158 (14%)	39	39	0 (0%)
Hardy Street	Gurr to Ophir	1164	1524	+360 (31%)	44	44	0 (0%)
Hardy Street	Louisa to Angus	1919	2242	+323 (17%)	42	42	0 (0%)
Louisa Street	Hardy to Blackett	398	361	-37 (9%)	43	39	-4 (9%)
Lanor Avenue	Hardy to Weller	661	600	-61 (9%)	47	46	-1 (2%)

Table 1: Traffic volume and speed data

4. Parking Changes

During consultation there was significant concern over the loss of 24 parking spaces along the street (out of a total of 116 parking spaces prior to the project). To understand the impact this has had on parking, data was collected on 39 occasions across 28 weekdays, as well as observations undertaken on two weekend days. The data indicates that the maximum occupancy observed was 27%, with 25 vehicles parked in the street (on two occasions). Generally, occupancy ranged from 15-25 vehicles parked on the street.

Figure 4 shows the parking occupancy on the day when the highest number of vehicles were present. Although the occupancy percentage in each individual section may occasionally exceed this, it shows that generally there is a high level of parking availability along the street.

The project has had an impact on parking, but only in the sense that residents who previously had access to parking directly outside their property, where a slow point has been placed, may now need to walk slightly further to obtain parking.

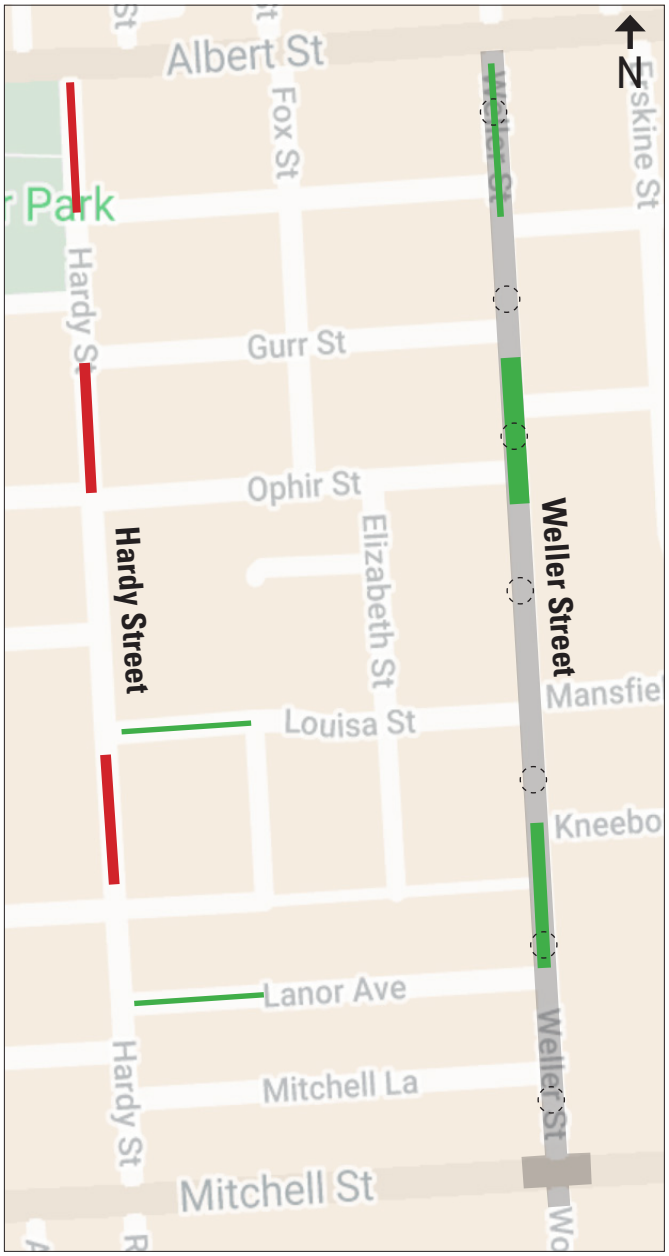


Figure 3: Traffic data extent of change map

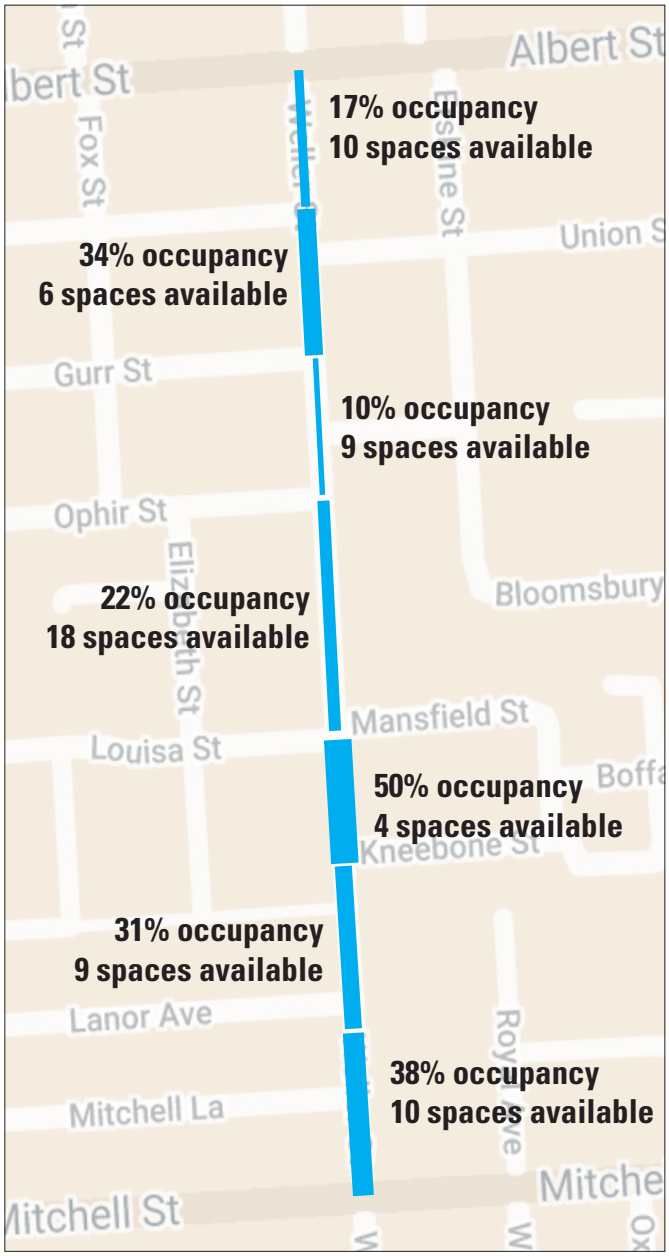


Figure 4: Parking data map

5. Asset Review

An inspection was undertaken on Friday 7 May 2021 to assess the condition of the slow points, line marking, and landscaping. Table 2, below, highlights whether any maintenance is required and helps inform future designs and plant selection.

	Comment	Action
1.	Retro-reflective white paint is flaking off at all concrete islands as they were painted shortly after construction.	These require repainting. Note for future projects to repaint 1-2 months after construction.
2.	Sharrows (advisory bicycle pavement symbols) along the street are faded. These have also not been repositioned with respect to the new slow points and are not positioned to maximise their benefit.	Relocate sharrows in accordance with the Department for Infrastructure and Transport's Operational Instruction 9.4 and as detailed in Figure 5 on the next page. To reinforce Weller Street as a bicycle route, bicycle symbols will also be installed in the bicycle bypasses.
3.	Debris (mainly leaves) is present in the by-pass area at several of the slow-points. The street sweeper is unable to access this area.	The street sweeping team will manually sweep any debris away from the slow points prior to the street sweeper servicing the street.
4.	A section of kerb was reconstructed (prior to the project) adjacent the slow point north of Kneebone Street. The replaced bitumen is rough and results in a surface with a slight level change within the bicycle by-pass area. The surface level change is only about 5mm and within the tolerances suggested in Austroads of 10mm for a bicycle path.	Note for future projects to check for areas of pavement that are not ideal for bike riders and improve as part of the project. Consider resurfacing this particular location kerb to kerb in 6-12 months.
5.	Some evidence of vehicles scraping the road hump and on the approaches to the road hump. However, this is fairly minor and likely due to abnormally low vehicles or vehicles negotiating at an inappropriate speed, rather than the design speed of 20km/h.	No action necessary.
6.	Line marking at the Mitchell Street intersection is in good condition (except painted island). Two pavement bars on the eastern approach require replacing.	Two pavement bars to be replaced.
7.	There is some evidence of vehicles cutting the north-eastern corner at Mitchell Street where we have installed an atypical ramp, however this appears to only be a minor issue.	Note for future designs.
8.	Plants are generally surviving and growing except the Dampiera rosmarinifolia (present in three slow points and the Mitchell Street island), which have not grown since they were planted. The islands at the slow points beneath trees collect debris which may affect growth.	Note for future plant selection along Weller Street (north) and Simpson Parade.

Table 2: Asset review findings

6. Customer Experience

Community interest in this project has been high. There was significant feedback during the consultation phases, including a petition in opposition to the project. This feedback has been reflected in the review criteria, with consideration of traffic congestion along the street due to the slow point devices, parking congestion due to a loss of parking, and ultimately whether the project will provide a meaningful benefit to encourage more people bike riding. These concerns have been largely unfounded as discussed under review headings 1-4 on the preceding pages.

After implementation, the following feedback was received:

- Four compliments were recorded including:
    - Appreciation for the work undertaken and stated that it is a great addition to the area.
    - Complimented the native plant choices.
    - Commented that the devices make the street safer and classier (than previously), and that they are really happy that they moved into the area.
    - Commended Council on the project and that the "cycling/walking upgrade agenda is the future for this awesome city fringe ward".
    - Expressed how important it is to slow down traffic as there are young kids in the street.
    - Commented that the construction work was undertaken very quickly.
- Concerns have been received over the slow-point positioned directly north of Lanor Avenue and north of Ophir Street. The concern was that motorists look to the right when turning from these streets onto Weller Street, and do not necessarily look to their left to see whether a vehicle is about to drive through the slow point. A 'Slow Point - On Side Road' sign has been installed at both locations. This feedback has also been considered in locating the slow point on Weller Street north of Grace Street in the next stage of the bike route implementation.
- Concerns were received over the loss of parking near the slow-point north of Kneebone Street (evident in data with 50% occupancy of parking near the device). Slow points are regularly spaced along a street to manage local speeds. The feedback reinforces the importance of local observations in carefully planning the location of each installation to suit local conditions, including vicinity to on-street parking, as well as minimising loss at each location.
- Concerns were received over access to/from the by-pass area when vehicles are (legally) parked adjacent the slow points. Although evidence suggests high use of the by-pass areas, it also suggests that use of the by-pass reduces when cars are parked the allowable 6m from the devices. It is important to provide a balance between clear access and loss of parking, which was of high concern for local residents. The 6m distance could be reviewed in future projects when the bike buffer is placed adjacent the kerb in narrow streets, and potentially increased if this aligns with the parking needs of local residents. The parking south of the slow point just north of Lanor Avenue (western side) will be reviewed, as two complaints have been received regarding safety concerns both from a bike rider and motorists perspective when a vehicle is parked there.
- Concerns were received over potential conflict between drivers and bike riders when they reintegrate with traffic after using the by-pass. This relates to positioning and awareness of bike riders as they approach and depart the by-pass area. There are sharrows located along the street, however these have not been reviewed in relation to the slow points. Ideally these would encourage bike riders to move into a prominent position after departing the by-pass area. These should be located on the departure side of each slow point as show in Figure 5 below.

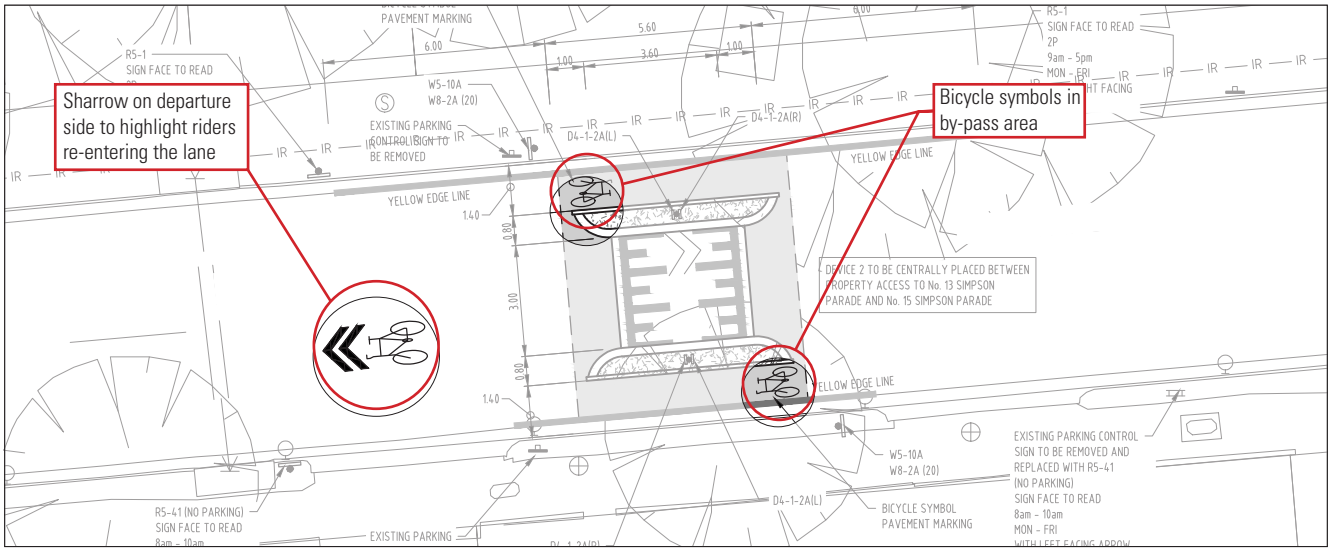


Figure 5: Typical bicycle symbol placement