



Planning and development consultants
Traffic and transportation engineers
Urban designers

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Coordinator Project Management
City of Darebin
PO Box 91
PRESTON VIC 3072

Attention: Arthur Pitsas

Ratio Consultants Pty Ltd
ABN 93 983 380 225
Riverwalk first floor
649 Bridge Road
Richmond VIC 3121
Australia
T +61 03 9429 3111
F +61 03 9429 3011
E mail@ratio.com.au
www.ratio.com.au

Dear Arthur,

RESERVOIR COMMUNITY AND LEARNING CENTRE REDEVELOPMENT ROW BETWEEN EDWARDES STREET AND CLEELAND STREET, RESERVOIR REVIEW OF THE TRAFFIC IMPACTS OF THE PROPOSED ROW CLOSURE

Introduction

As requested, Ratio Consultants has conducted an assessment of the expected traffic impacts of the possible closure to vehicular traffic of the northern section of the ROW that runs between Edwardes Street and the Council public car park adjacent to the Reservoir Community and Learning Centre Redevelopment, in the Reservoir Major Activity Centre.

The new Reservoir Community and Learning Centre Redevelopment is expected to attract in the order of 11,000 visitors per month as part of the proposed relocation of the current Reservoir Library from nearby Ralph Street.

As part of this assessment we have conducted the following background tasks:

- Reviewed the correspondence raised by objectors to the proposed closure of the northern section of the ROW, primarily associated with abutting property owners/tenants.
- assessed the traffic and pedestrian movement surveys conducted by Ratio Consultants in November 2012 (as attached in Appendix A).
- inspected the operation of the ROW, assessed the nature of the surrounding properties, and reviewed the nearby on and off-street car parking areas and the surrounding road network.

On the basis of the above assessments it is apparent that the main issues to be addressed are:

- The potential impacts of the loss of direct vehicular access to the rear of abutting commercial properties for parking and/or deliveries for both property owners and tenants, including the potential loss of future access to the ROW for any redevelopment of some or all of this land.
- The potential to increase traffic activity onto Cleeland Street and Olive Street as a result of the closure of the northern section of the ROW, in association with reduced convenience for motorists accessing car parking at the centre from the north via Spring Street.

Existing Conditions and Road Network

The ROW is located within the Reservoir Major Activity Centre comprising a range of retail, commercial, community and restaurant uses, including the adjacent Reservoir Civic Centre, which is currently undergoing redevelopment.

Figure1: Aerial View of the Site and Surrounds



Source: www.nearmap.com

Spring Street is a VicRoads' road and functions as a Primary State Arterial Road that essentially runs in a north-south alignment. In the vicinity of Cleeland Street, it is a divided road with two traffic lanes in each direction. Spring Street is flared and widened on the approach to the signalised intersection at Edwardes Street to provide additional lane capacity for turning vehicles. It has a posted speed limit of 60km/h. Kerbside parallel parking is permitted on the west side of Spring Street outside the PM Clearway period. No right turns are permitted into Cleeland Street from Spring Street at any time.

Edwardes Street is a Major Road under the management of Council and in the vicinity of the ROW it has a 50 km/h speed limit and a divided carriageway, that essentially caters for one lane of traffic in each direction with kerbside parallel parking on both sides, including bus stops on both sides opposite and to the east of the ROW and bicycle lanes to the west of the ROW. There is a break in the median of Edwardes Street opposite the ROW to cater for right turns direct into the ROW. A signalized pedestrian crossing is provided opposite the library.

Cleeland Street is a local access road with a carriageway width of approximately 7.3 metres. It incorporates 'No Parking 8:30am to 6:30pm' on the north side and '2P 8:00am to 6:30pm Monday to Friday, 8:00am to 12:30pm Saturday' restrictions on the south side and has a 50km/h speed limit. The presence of No Parking restrictions on the north side during weekday business hours enhances the traffic capacity of the street.

Olive Street is also a local access road with a carriageway width of approximately 8.5 metres and it has a permanent 40 km/h speed limit. It incorporates 'No Stopping' restrictions on the west side and '1P 8:00am to 6:30pm Monday to Friday, 8:00am to 12:30pm Saturday' restrictions on the east side, which also creates uninterrupted traffic conditions for opposing two-way traffic flow.

The **ROW** operates from Edwardes Street to Cleeland Street and operates one-way southbound between Edwardes Street and the central car park access point and then two-way to/from Cleeland Street.

ROW facing south from Edwardes Street



ROW facing north from the Council Car Park



Crash Analysis

A review has been conducted of VicRoads 'Crashstats' data base for the most recent five year period of available data between 1 July 2007 and 30 June 2012 for any reported casualty crashes in the vicinity of the ROW and at the key intersections of Spring Street/Edwardes Street, Spring Street/Cleeland Street, the ROW/Edwardes Street and Olive Street/Edwardes Street.

This analysis shows that there were six casualty crashes at the Spring Street/Edwardes Street intersection, two of which were classified as 'serious' and four as 'other' type crashes. There is no apparent trend between the crash types.

One casualty crash was recorded at the Spring Street/Cleeland Street intersection, and was classified as an 'other' type crash. There were no casualty crashes recorded at the other two intersections, including the ROW junction.

Given the road classifications and the minimal number of crashes recorded, it is considered that the surrounding road network is operating in a safe manner.

Traffic and Parking Data

The Ratio Traffic and Pedestrian Movement Survey of November 2012 (refer to Appendix A) revealed some relevant data, as highlighted below:

- The overall peak hour for pedestrian movements along Edwardes Street across the ROW junction occurred between 12:15pm and 1:15pm on the Thursday with 117 pedestrians and between 12:00 noon and 1:00pm on the Saturday with 133 pedestrians walking across the junction of the ROW. It was also noted that there was a significant pedestrian demand crossing the ROW junction on the Saturday evening after 6:00pm, with many of the pedestrians walking to/from restaurants and take away food premises located to the east of the ROW.
- 12.8% of vehicles on the Thursday and 19.2% of vehicles on the Saturday were observed travelling along the ROW from Edwardes Street through to Cleeland Street, essentially utilizing the ROW as a through route.
- Vehicles approaching the ROW from the right turn lane in Edwardes Street enter the ROW at higher speeds in comparison to left turning vehicles.
- Pedestrian walking across the ROW junction tend to give way to turning vehicles even though pedestrians have priority.

Potential Positive Impacts of the ROW Closure

The main positive impacts of the possible closure of the northern section of the ROW are:

- Enhanced pedestrian safety and accessibility along the northern section of the ROW and the southern footpath of Edwardes Street due to absence of vehicular traffic.
- The removal of through traffic along the ROW between Edwardes Street and Cleeland Street.
- The removal of any delivery vehicles propped in this section of the ROW.

The above benefits, in association with the creation of a newly paved full width ROW with activated frontages to the proposed library and potential for improved interfaces with the commercial properties on the eastern side of the ROW, will create potential for a significant enhancement of the visual and functional role of this section of the ROW as a desirable pedestrian space for the benefit of nearby community and commercial uses at the centre.

Potential Negative Impacts of the ROW Closure

The main potential adverse traffic impacts of the possible closure of the northern section of the ROW to all vehicular traffic are summarised below:

- The loss of access to on-site car parking and direct on-site deliveries for abutting commercial properties.
- The loss of future site access options to any potential redevelopment of the amalgamation of sites at 281, 283 and 285 Spring Street, which are currently under the one ownership.
- The potential to increase traffic activity onto Cleeland Street and Olive Street as a result of the closure of the northern section of the ROW, in association with reduced convenience for motorists accessing car parking at the centre from the north via Spring Street.

A discussion of these issues is presented below:

Loss of Access to On-Site Car Parking and Direct On-Site Deliveries

A number of the abutting commercial properties with direct vehicular access to the ROW currently park staff and/or delivery vehicles on-site. Some of these properties also have direct access for loading with trucks/vans propped within the ROW for this purpose. The closure of the ROW would prevent future vehicular access to these properties.

This is considered a valid concern and in order to be able to satisfactorily address this matter Council should compensate for the loss of access to on-site parking by providing permanent access to dedicated parking spaces in the nearby Council car park for both staff and delivery vehicles to match the loss in the number of spaces for the respective commercial properties. Council has already arranged for these parking and loading facilities to be created in the Council car park.

It would also be desirable for Council to consider the installation of at least one 'accessible' parking space in the Council public car park for the benefit of library users and other nearby commercial properties. It is understood that at least two 'accessible' spaces will be conveniently positioned near the new Council community and learning centre.

Loss of Future Site Access Options to any Potential Redevelopments of Commercial Land

It is understood that there is a potential redevelopment of the amalgamation of sites at 281, 283 and 285 Spring Street (which are currently under the one ownership) to create a multi-level mixed use development. The closure of the ROW would also prevent future vehicular access to this site via the ROW, with the only other options being via Edwardes Street or Spring Street. Given the Road Zone Category 1 status of Spring Street (under the management of VicRoads) it is expected that VicRoads will require that site access be via Edwardes Street. The Edwardes Street option has been assessed and it is considered that there is scope to create a double width crossover to service on-site car parking, located to the west of the existing Bus Stop. It is understood that Council's Traffic Engineers accept this as a matter of principle (subject to a more detailed assessment of any planning application).

Increase of Traffic Activity onto Cleeland Street and Olive Street

Some concern has been raised about the potential to increase traffic activity along Cleeland Street and Olive Street as a result of the closure of the northern section of the ROW, in association with reduced convenience for motorists accessing car parking at the centre from the north via Spring Street.

Both Cleeland Street and Olive Street have spare traffic capacity to accommodate additional traffic in a safe and satisfactory manner. The current permanent 'No Right Turn' restriction from Spring Street into Cleeland Street will be retained to enhance safety and operation along Spring Street. Therefore any motorists approaching the centre from the north seeking to park within the Council car park south of the library will continue to turn right into Edwardes Street and will then need to travel along Edwardes Street to access Olive Street and Cleeland Street before entering the car park. This represents an increased travel distance of approximately 370 metres, which is not significant. In addition motorists approaching from the south can continue to access the car park via Cleeland Street, whilst motorists approaching from the west can turn right into Olive Street from Edwardes Street (an extra travel distance of approximately 60 metres) or turn left into Olive Street via Henty Street. Motorists travelling from the east have the option of using Regent Street to access Spring Street and Cleeland Street, or travel through the busy High Street/Spring Street intersection to access Edwardes Street and then travelling to the car park via Olive and Cleeland Streets.

These are all considered suitable alternative routes to access the car park and motorists will quickly adapt to the available access points.

Conclusion

It is considered that the proposed closure of the northern section of the ROW will create improved pedestrian safety and accessibility, remove through traffic along the length of the ROW, and avoid the need for any delivery vehicles to prop in this section of the ROW. This action will create the potential for a significant enhancement of the visual and functional role of this section of the ROW as a desirable pedestrian space for the benefit of nearby community and commercial uses at the centre.

These net community benefits are considered to outweigh the potential adverse traffic and parking impacts to abutting businesses, surrounding properties and the wider community and there are opportunities for Council to compensate abutting businesses for the future lack of rear access through the provision of dedicated parking and loading areas in the nearby Council car park, as discussed in this letter.

We trust that this addresses the matters raised.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Russell Fairlie', with a long horizontal flourish extending to the right.

Russell Fairlie
Director
Ratio Consultants Pty Ltd

Attachment



Planning and development consultants
Traffic and transportation engineers
Urban designers

12 December 2012
Our Ref. 11306Let01.doc

Coordinator Project Management
City of Darebin
PO Box 91
PRESTON VIC 3072

Ratio Consultants Pty Ltd
ABN 93 983 380 225
Riverwalk first floor
649 Bridge Road
Richmond VIC 3121
Australia
T +61 03 9429 3111
F +61 03 9429 3011
E mail@ratio.com.au
www.ratio.com.au

Attention: Artur Pitsas

Dear Arthur,

**RESERVOIR LIBRARY LANEWAY TRAFFIC ASSESSMENT:
ROW BETWEEN EDWARDES STREET AND CLEELAND STREET, RESERVOIR**

As requested, Ratio Consultants conducted traffic movement surveys between 6am - 10pm, on Thursday 15 and Saturday 17 November 2012. A total of five cameras were used during the survey period, the video footage will be posted to you. The findings of the survey and our observations are outlined below.

Thursday 15 November 2012

During the survey period, a total of 390 vehicles were observed travelling along the ROW. Refer to the attached Figure 1 for a summary of the observed movements. In particular:

- 221 vehicles (56.7%) were observed travelling from Edwardes Street to the Car Park;
- 83 vehicles (21.3%) were observed travelling from the Car Pak onto the ROW to exit onto Cleeland Street;
- 50 vehicles (12.8%) were observed travelling from Edwardes Street through to Cleeland Street, essentially utilizing the ROW as a through route;
- 10 vehicles (2.6%) were observed travelling from Edwardes Street to the shops to the east of the ROW;
- 9 vehicles (2.3%) were observed travelling from the Car Park across the ROW to the shops;
- 11 vehicles (2.8%) were observed travelling from the shops to the east of the ROW to Cleeland Street;
- 4 vehicles (1.4%) were observed travelling from the shops to the Car Park across the ROW; and
- 2 vehicle (0.51%) were observed travelling from Cleeland Street to the Car Park.

A detailed count of pedestrian movements at the intersection of Edwardes Street and the ROW has been undertaken. A total of 971 pedestrians were observed during the same survey period.

In particular, it is noted that east-west movement across the ROW at Edwardes Street accounted for 49% of the pedestrian movements recorded. The overall peak hour for pedestrian movements occurred between 12:15pm - 1:15pm when 117 pedestrians were detected at this intersection, with the AM peak hour between 9:30am - 10:30am when 90 pedestrians were detected, and the PM peak hour between 3:00pm - 4:00pm when 99 pedestrians were detected.

It is noted that during the evening period, after 5:30pm, pedestrian activity at the Edwardes Street / ROW intersection decreased, whilst increased pedestrian movements between the car park and various shops fronting the ROW increased.

Saturday 17 November 2012

During the survey period, a total of 407 vehicles were observed travelling along the ROW. Refer to the attached Figure 2 for a summary of the observed movements. In particular:

- 207 vehicles (51.5%) were observed travelling from Edwardes Street to the Car Park;
- 77 vehicles (19.2%) were observed travelling from Edwardes Street through to Cleeland Street, essentially utilizing the ROW as a through route;
- 72 vehicles (17.9%) were observed travelling from the Car Pak onto the ROW to exit onto Cleeland Street;
- 16 vehicles (4%) were observed travelling from Edwardes Street to the shops to the east of the ROW;
- 16 vehicles (4%) were observed travelling from the shops to the east of the ROW to Cleeland Street;
- 6 vehicles (1.5%) were observed travelling from the Car Park across the ROW to the shops;
- 5 vehicles (1.2%) were observed travelling from the shops to the Car Park across the ROW; and
- 1 vehicle (0.25%) was observed travelling from the shops to Edwardes Street, which is an illegal movement.

A detailed count of pedestrian movements at the intersection of Edwardes Street and the ROW has been undertaken. A total of 1007 pedestrians were observed during the same survey period.

In particular, it is noted that east-west movement across the ROW at Edwardes Street accounted for 52.9% of the pedestrian movements recorded. The overall peak hour for pedestrian movements occurred between 12:00pm - 1:00pm when 133 pedestrians were detected at this intersection. This was higher than the Thursday peak hour movement of 117 pedestrians. The level of pedestrian activity at this intersection was around 80 pedestrians per hour between 10am - 3:30pm on the day of the survey, reflecting the peak daytime trading period of the area.

It is noted that during the evening period, after 6pm, pedestrian activity at the Edwardes Street / ROW intersection increased, with many of the pedestrians walking to/from restaurants and take away premises located to the east of the ROW.

Other observations and potential impact of closure of northern section of the ROW

Based on the surveys and observations undertaken, we have noticed:

- Vehicles approaching the ROW from the right turn lane along Edwardes Street enter the ROW at higher speeds in comparison to left turning vehicles;
- Pedestrian walking across the ROW tend to give way to turning vehicles even though pedestrians have priority;
- A relatively small percentage of vehicles uses the ROW as a through route to Cleeland Street. The majority of traffic entering the ROW used the ROW to access the car park.

If the proposed discontinuation of the ROW from Edwardes Street is to proceed the proposal may have the following impact to the road network which should be considered:

- Positive impact to pedestrian and cyclist connectivity and safety;
- Increase to traffic using Olive Street to access the car park, as it will be more convenient for vehicles travelling from the west of the car park to turn right into Olive Street in comparison to turning from Edwardes Street into Spring Street, then turning right from Spring Street into Cleeland Street;
- It is expected that vehicles that currently approach the ROW from the east will also use Olive Street to access Cleeland Street instead of Spring Street / Cleeland Street intersection. Traffic that originates from the south are likely to access the car park and shops from Cleeland Street and will not rely on Olive Street.
- The current intersection of Edwardes Street and Olive Street is configured as a conventional T-intersection with no left or right-turn facilities. Additional left and right turning movement from Edwardes Street into Olive Street as a result of the discontinuation of the ROW may result in an impact to through movement capacity along Edwardes Street;
- It is recommended that intersection capacity modeling be undertaken at the following intersections:
 - Edwardes Street / Olive Street;
 - Olive Street / Cleeland Street; and
 - Cleeland Street / Spring Street.

The modeling can inform whether intersection upgrade works are warranted and/or required immediately.

If you require any additional information or clarification, please contact Dora Choi on 9429 3111.

Yours sincerely,



Dora Choi
Associate Director
Ratio Consultants Pty Ltd

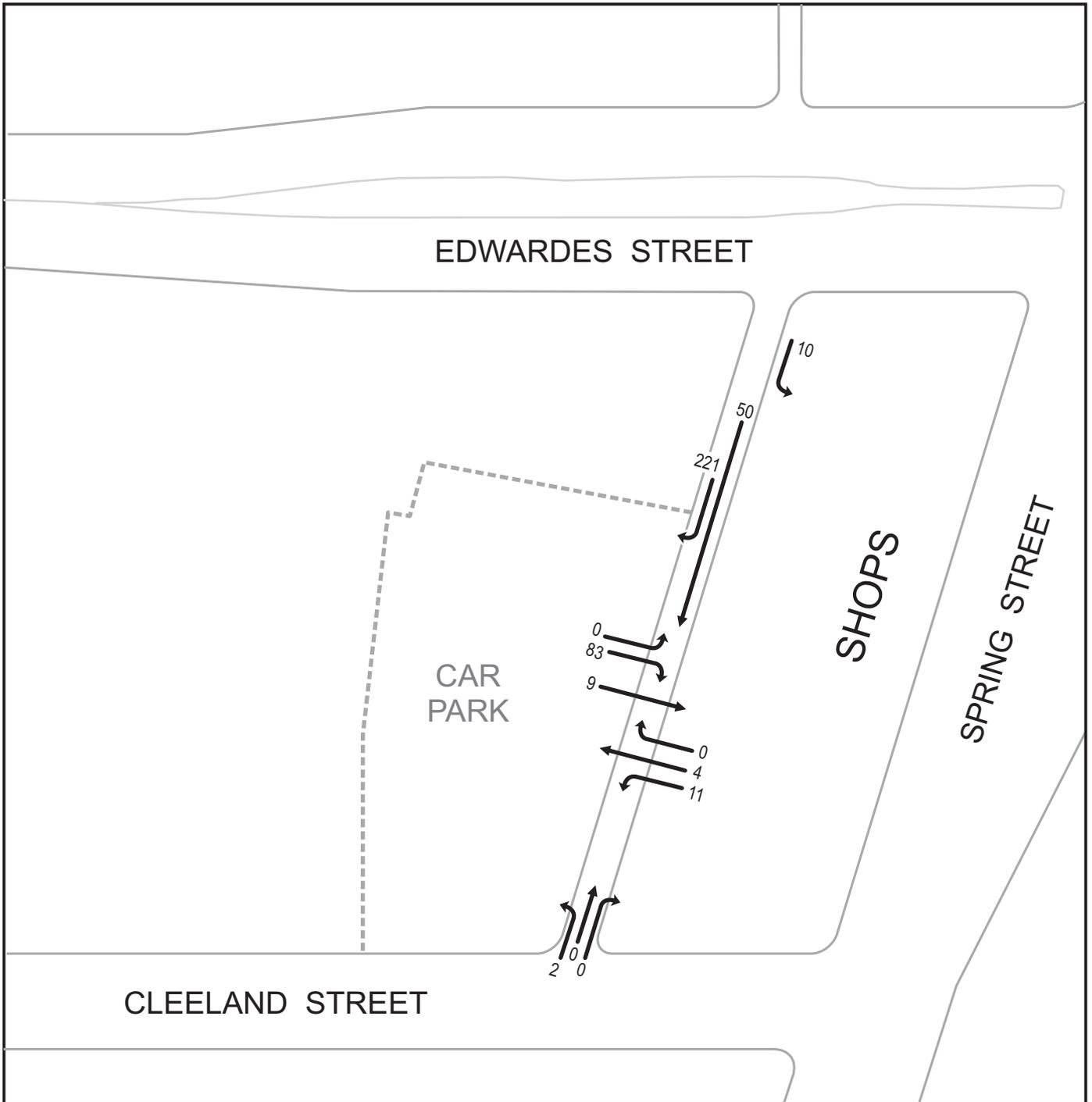


FIGURE 1
 TURNING MOVEMENT COUNTS - 6:00am to 10:00pm
 THURSDAY 15 NOVEMBER, 2012



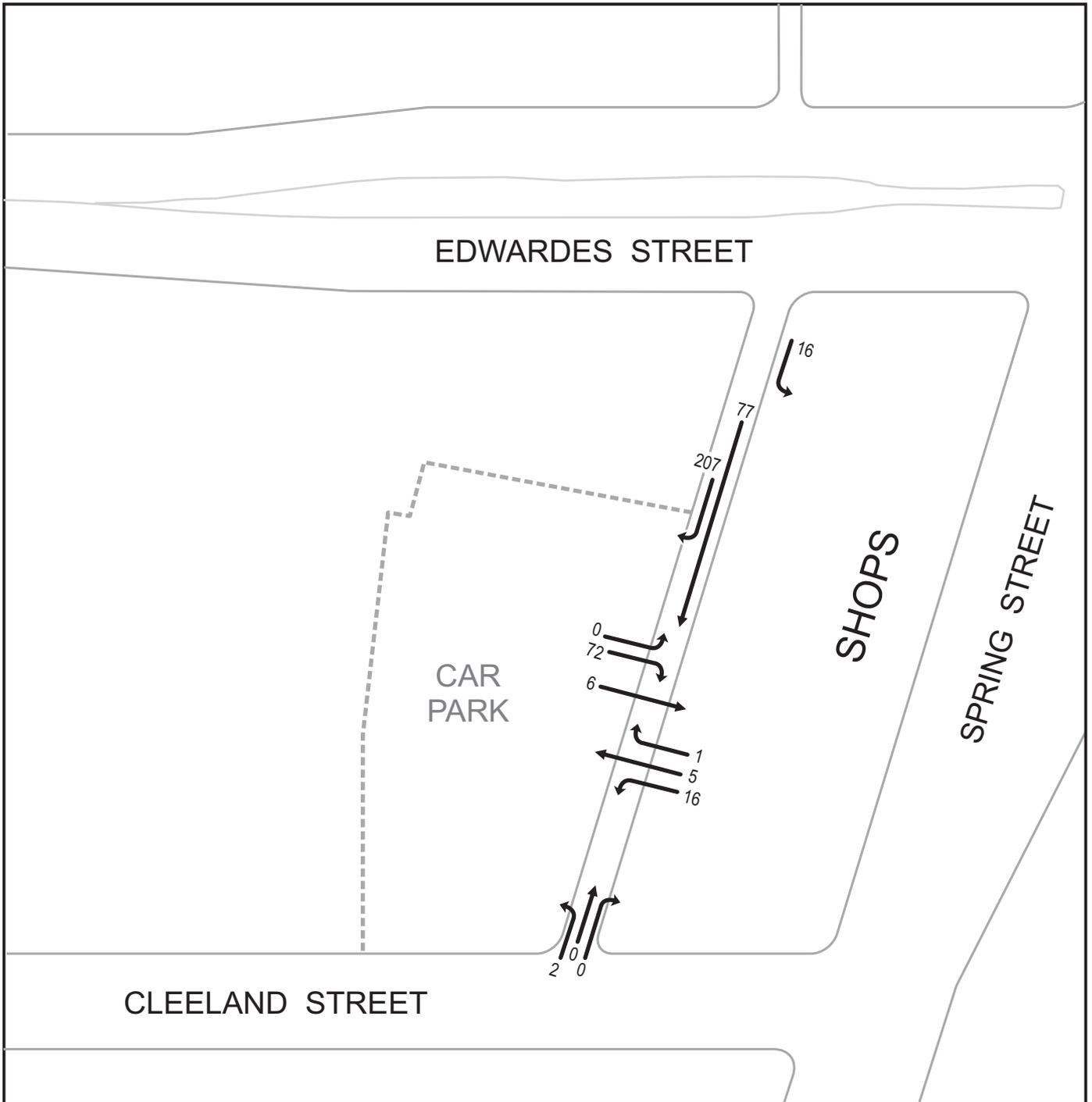


FIGURE 2
 TURNING MOVEMENT COUNTS - 6:00am to 10:00pm
 SATURDAY 17 NOVEMBER, 2012



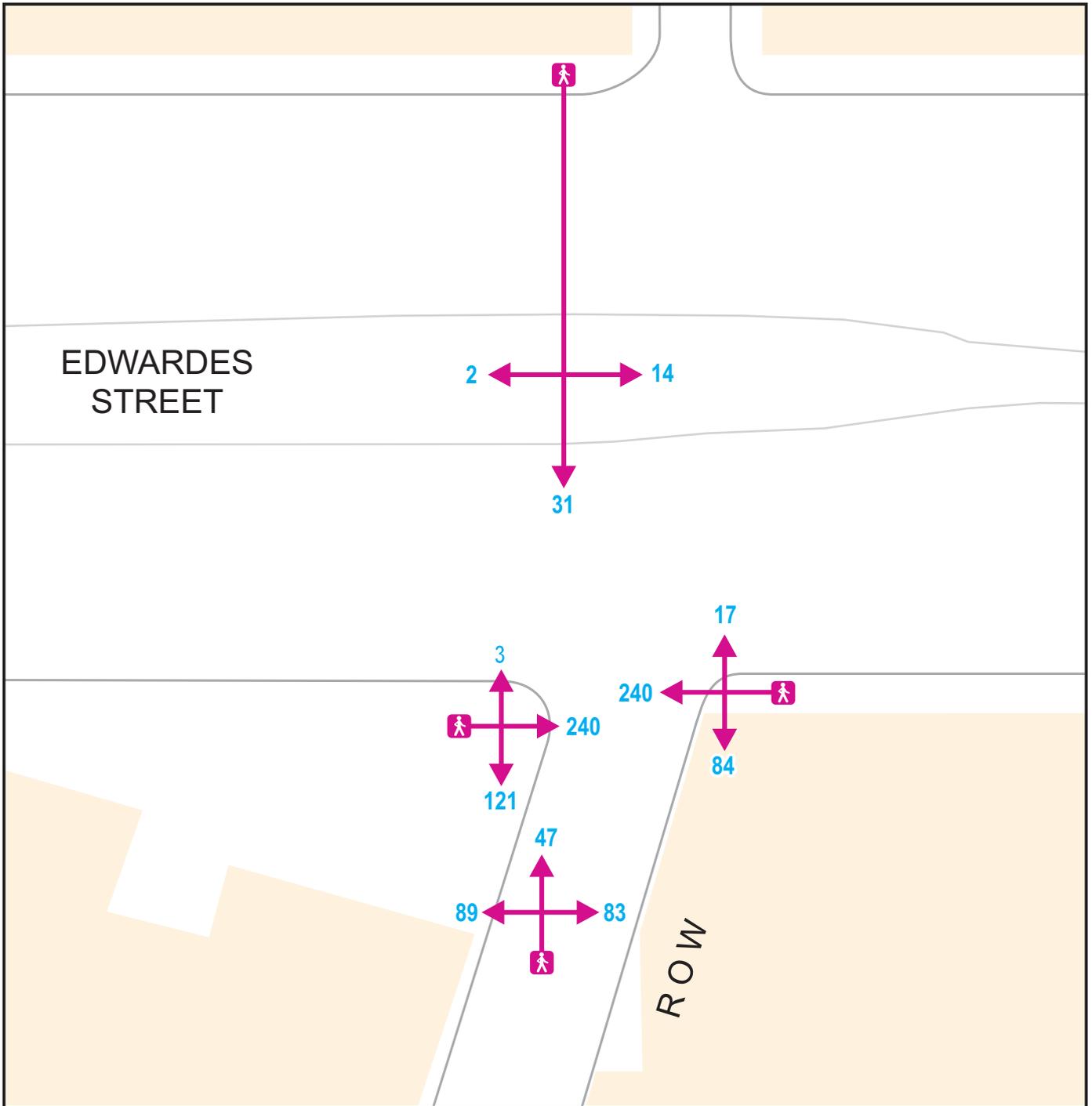


FIGURE 3
 PEDESTRIAN MOVEMENTS - 6:00am to 10:00pm
 THURSDAY 15 NOVEMBER, 2012



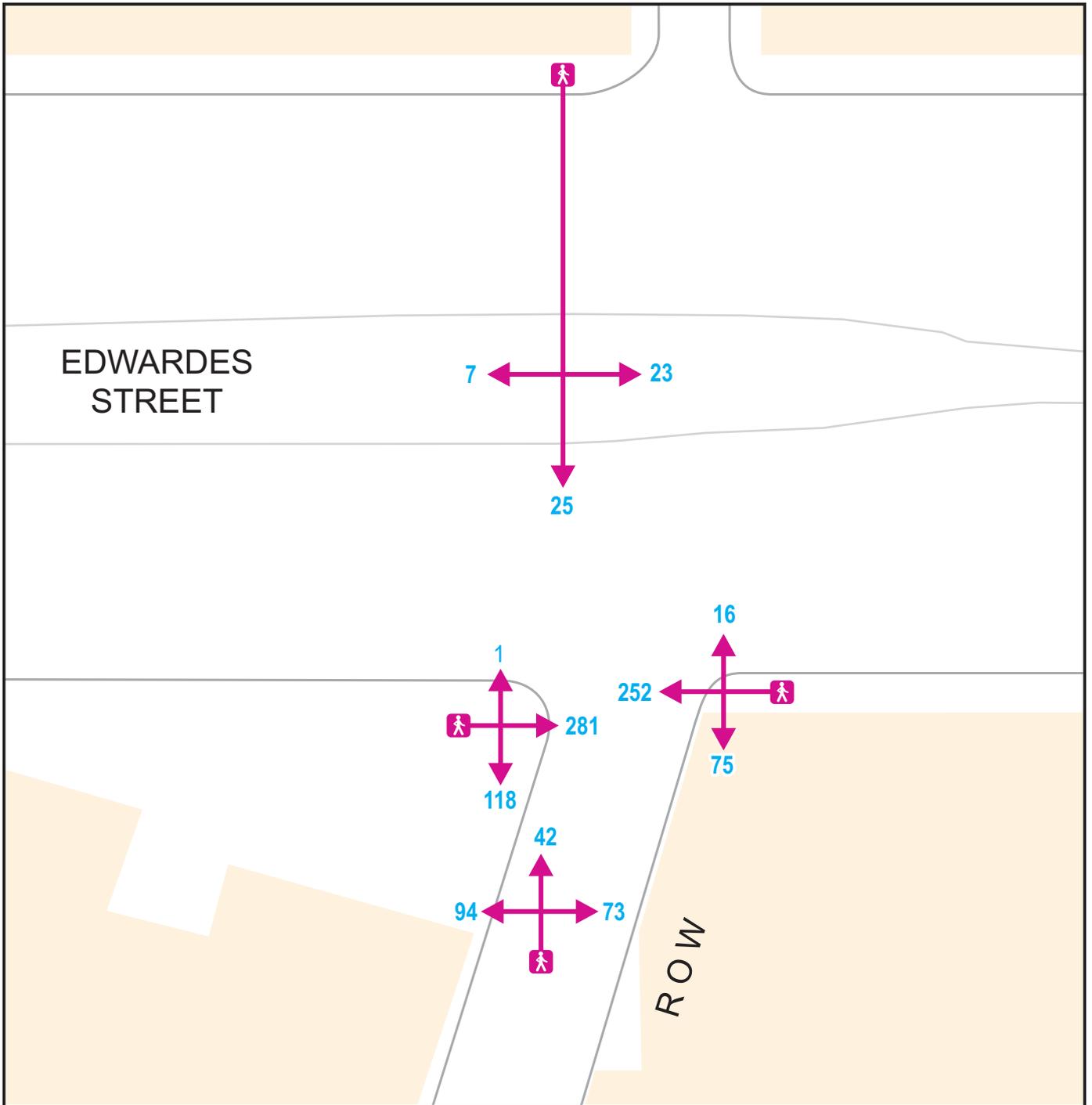


FIGURE 4
 PEDESTRIAN MOVEMENTS - 6:00am to 10:00pm
 SATURDAY 17 NOVEMBER, 2012

