12. 2000/01 SAFETY WORKS PROJECT - DEANS AVENUE, RICCARTON ROAD AND RICCARTON AVENUE ROUNDABOUT

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Corporate Plan Output: Safety Capital Works $90,000	

The purpose of this report is to advise the Board of the Safety Capital Works Project proposed for Deans Avenue, Riccarton Road and Riccarton Avenue Roundabout and to obtain approval to seek community views regarding the project. This report has been referred to the City Services Committee and is referred to the Community Board for its information.

BACKGROUND

This intersection was the subject of a Crash Reduction Study in January 1999. It is the site of the most reported crashes in the city. A total of 114 injury and non injury crashes have been reported to the police over a 5 year period. The crashes are concentrated at the Riccarton Road and Riccarton Avenue approaches. Further analysis reveals that most of these crashes involved traffic entering the roundabout in the left lane with the visibility to circulating traffic blocked by vehicles immediately alongside waiting to enter the roundabout from the right lane (11 out of 15 injury crashes).

A further problem identified in the crash data for traffic entering from west on Riccarton Road is the unexpected speed of traffic approaching from south on Deans Avenue at less congested times of the day. The speed for this approach is unconstrained by either geometry or visibility.

An evaluation of traffic signals for this intersection has been undertaken. The results showed estimated crash benefits, over 25 years, of around $2 million and disbenefits due to vehicle operating costs and increased travel times of around $5 million. This yields a negative B/C of –16. For this reason the signals option is not recommended.

THE PROPOSAL

See Figure Site 1b attached. It is proposed to nearly double the size of the central island. In addition it is proposed to improve median island deflections on three approaches. A dense visual barrier is proposed with landscape planting in South Hagley Park to balance driver visibility on all approaches. Advance and Intersection Direction signs will be upgraded as part of the project along with realigning the road markings, continuity lines and directional lane arrows. Replacing ivy plantings on the central island with a dished berm and low planting to improve visibility across the roundabout will be undertaken. The footpath will be removed from around the eastside of the roundabout to direct pedestrians to safer crossing locations. Providing cut downs and a median island refuge area on the Riccarton Road approach is planned to improve pedestrian access across Riccarton Road.

DISCUSSION

The proposed layout still does not comply with the Austroads Roundabout Design Guide. This is because the available road reserve does not permit the construction of a 24m diameter central island with two circulating lanes 5.15m wide. No road widening designations exist at this intersection.

A total reduction of 12 injury crashes from the original 27 is anticipated as a result of the proposed improvements. A corresponding reduction of 38 non-injury crashes out of 87 is also anticipated. The BC of the project is 10.9

There is high pedestrian and cycle activity at this intersection with Riccarton Avenue being the most direct link between the western suburbs and the City through Hagley Park. Traffic signals or a larger roundabout would better provide for these users. Before these alternatives can be persued additional road space will need to be obtained.

The Riccarton Road (Buses, 8-21-B-G), Riccarton Avenue (Buses, 8-21-24-25-A-B-G) and Deans Ave North approach (Bus 24) are Bus Routes using this roundabout. Any reduction in traffic capacity would effect these services.

The scheme has been approved by relevant City Streets officers for presentation to the City Services Committee.

CONCLUSION

The Riccarton Road, Riccarton Avenue and Deans Ave roundabout has a poor safety record. Significant safety improvements are expected to be achieved by enlarging the central circular island to around 20m diameter thus increasing vehicle path deflections through the intersection. Improved signage and landscape plantings are also expected to assist safety. A more appropriate treatment such as traffic signals or a 24m diameter central circular island can only be achieved by obtaining land from adjacent properties. These options will need to be considered at a future date. To progress the project the committee's support for seeking community views on the proposal is required.

Recommendation to the City Services Committee: That the Committee approve public consultation proceeding on the proposed Roundabout Improvements at the Riccarton Road, Riccarton Avenue and Deans Ave intersection.

Chairman's Recommendation: That the information be received.