

10. ORCHARD ROAD/WAIRAKEI ROAD INTERSECTION IMPROVEMENTS

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Corporate Plan Output: Traffic Signs and Markings	

The purpose of this report is to consider traffic management improvements at the Orchard Road/Wairakei Road intersection.

BACKGROUND

Both Orchard Road and Wairakei Road (within the environs of Christchurch International Airport) are local roads. Wairakei Road west of Orchard Road leads into the main industrial area and Orchard Road provides a link between the Airport Roundabout at Memorial Avenue and Harewood Road. The Road Controlling Authority for Orchard Road (between Wairakei Road and Harewood Road) is Christchurch International Airport Ltd.

Improvements have recently been carried out along Wairakei Road between Orchard Road and Russley Road (SH1) where the roadway has been widened, new kerbs and channels installed and a link made with the new airport road (Peter Leeming Road) which runs between Wairakei Road and Memorial Avenue. In June 1998 traffic islands were installed on the Wairakei Road approaches to the Orchard Road intersection as a safety measure aimed at reducing the number of right of way crashes that had been occurring up until that time.

Unfortunately, the crash rate did not drop significantly during 1999. However, only 1 crash was recorded during the year 2000. The continuing problem with this intersection and the T-junction at Harewood Road were recently brought to the attention of the City Streets Unit by Christchurch International Airport Ltd staff.

STUDY

Crash data for all three intersections along Orchard Road (at Memorial Avenue, Wairakei Road and Harewood Road) were analysed along with intersection counts taken over three periods of the day at the Orchard Road/Wairakei Road junction.

All but two of the 17 crashes (including 8 injury collisions) at the Orchard Road/Wairakei Road intersection involved drivers failing to give way to through traffic on Orchard Road. Right of way is also a problem at the Orchard Road/Harewood Road intersection which also requires some minor works. Only two crashes have been recorded at the Memorial Avenue/Orchard Road roundabout during the same five year period.

Traffic volumes along Orchard Road are high with between 700 and 800 vehicles an hour using the Orchard Road/Wairakei Road junction. Orchard Road acts as a distributor for traffic travelling to the airport from the north and from the airport into the city. Volumes are high for a "local" road. Cross traffic on Wairakei Road (both east bound and west bound) is steady and the main turning movement at the intersection is to and from Wairakei Road east linking with the roundabout at Memorial Avenue.

MEMORIAL AVENUE

The Board will recall an earlier project that was approved by the Council late last year. Parking along both sides of Memorial Avenue between the roundabouts at Orchard Road and Russley Road is to be banned. New lane lines are to be installed with a "widened" median and cycle facilities. One of the reasons for these changes is a desire to improve the streetscape by planting the berms along both sides of the roadway.

This work was to be carried out before the end of last year. Unfortunately, sufficient plants weren't available at the time to plant the berms. It is understood that plants have been selected and are being matured before transplanting. It is anticipated that planting out will occur during July or August 2001.

Rather than wait for the planting to be completed it is considered desirable that the traffic management plan be implemented as soon as practicable.

MEMORIAL AVENUE/ORCHARD ROAD ROUNDABOUT IMPROVEMENTS

Although few traffic conflicts occur at this particular roundabout, road markings for circulating traffic can be improved and linked with road marking proposals for Orchard Road and Memorial Avenue.

Some confusion occurs due to the close proximity of three of the five legs of the roundabout – a matter that can be readily addressed by adjusting the markings within the roundabout itself.

TRAFFIC MANAGEMENT IMPROVEMENTS

Road markings along Memorial Avenue northwest of Russley Road (SH1) and along Orchard Road between the Memorial Avenue roundabout and Harewood Road need improving. Studies of traffic flow, crash rates and existing intersection controls suggest that improvements can be made by upgrading signs and markings along these two roads. The following works are proposed:

- The road marking plan (previously approved) for the section of Memorial Avenue between the roundabouts at Orchard Road and Russley Road is to be implemented.
- Improvements to the road markings within the Orchard Road/Memorial Avenue roundabout will provide better guidance for drivers using this junction.
- A centreline and road edge lines are to be installed along Orchard Road between Memorial Avenue and Wairakei Road.
- Right turn lanes are to be introduced at the Orchard Road/Wairakei Road intersection.
- Kerbside parking bans in the vicinity of the Memorial Avenue roundabout and on the approaches to the Wairakei Road intersection are recommended.
- A change from “Give Way” to “Stop” controls against Wairakei Road at its intersection with Orchard Road is recommended.
- Options to improve traffic safety at the Harewood Road/Orchard Road intersection are being considered and will be implemented in due course.
- New advance direction signs are to be installed in Memorial Avenue on the south east approach to the Orchard Road roundabout and in Orchard Road on the southwest approach to the Wairakei Road intersection.

A plan of the Orchard Road/Wairakei Road intersection improvements is attached to this report.

CONCLUSION

The planned improvements along Memorial Avenue and at the various junctions along Orchard Road will provide for the safer distribution of traffic within the airport environs. The crash study carried out at the Orchard Road/Wairakei Road intersection indicates that a change in control from “Give Way” to “Stop” in conjunction with the installation of dedicated right turn bays in Orchard Road will slow traffic and guide drivers carrying out manoeuvres at this junction.

Controlling kerbside parking in the vicinity of the Orchard Road/Wairakei Road intersection, along Memorial Avenue and on the Orchard Road approach to the Memorial Avenue roundabout will improve visibility and provide more space for turning and merging traffic.

Christchurch International Airport Ltd has been kept informed of progress on the safety issues that require addressing on the “main” roads leading into the airport. CIAL staff concerns about safety at the Orchard Road/Wairakei Road intersection have been addressed; further work is required before improvements can be carried out at the Harewood Road/Orchard Road junction.

- Recommendations:**
1. That the “Give Way” signs against Wairakei Road at its intersection with Orchard Road be removed.
 2. That “Stop” signs be installed against Wairakei Road at its intersection with Orchard Road.
 3. That the parking of vehicles be prohibited at any time in the following areas:
 - (a) On the west side of Orchard Road commencing at its intersection with the roundabout at Memorial Avenue and extending in a north easterly direction for a distance of 75 m.

- (b) On the east side of Orchard Road commencing at the roundabout at Memorial Avenue and extending in a north easterly direction for a distance of 70 m.
 - (c) On the west side of Orchard Road commencing at its intersection with Wairakei Road and extending in a south westerly direction for a distance of 100 m.
 - (d) On the east side of Orchard Road commencing at its intersection with Wairakei Road and extending in a south westerly direction for a distance of 50 m.
 - (e) On the south side of Wairakei Road commencing at its intersection with Orchard Road and extending in an easterly direction for a distance of 50m.
 - (f) On the north side of Wairakei Road commencing at its intersection with Orchard Road and extending in an easterly direction for a distance of 50m.
 - (g) On the south side of Wairakei Road commencing at its intersection with Orchard Road and extending in a westerly direction for a distance of 100m.
 - (h) On the north side of Wairakei Road commencing at its intersection with Orchard Road and extending in a westerly direction for a distance of 100m.
4. That existing kerbside parking restrictions in the aforementioned areas be revoked.

Chairman's

Recommendation: That the foregoing recommendations be adopted.