

8. MCFADDENS ROAD TRAFFIC CALMING

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The purpose of this report is for the Board to consider a proposal in response to a petition relating to problems associated with speeding vehicles in McFaddens Road between Cranford Street and Croziers Road.

BACKGROUND

The Board received the following petition at its meeting on 24 October 2002 signed by 41 residents of McFaddens Road, Jameson Avenue, Magnolia Lane and Croziers Road.

The petition requested that:

“We, the undersigned residents of McFaddens Road (east), that section between Cranford Street and Croziers Road hereby petition the Christchurch City Council to implement vehicle speed control measures in our area of McFaddens Road. We also seek to input to the design and location of any measures proposed for the purpose of speed control.”

INVESTIGATION

It is believed that the three most important issues to be addressed prior to the development of proposals are:

- Traffic flows
- Traffic speeds
- Traffic safety

The section of McFaddens Road under consideration is a local road 250 metres long. It links directly with Croziers Road. McFaddens Road is 14 metres wide with deep channels on both sides. It is not in the City Council 5 year plan for reconstruction. Croziers Road has been partially reconstructed between McFaddens Road and Ranger Street. This was done when the enhancement of Dudley Creek was undertaken. The enhancement included buildouts on the corners, deep channel replacement with flat channel, naturalisation of the creek, realigning of the creek and a path installed alongside it, and extensive landscaping. The roadway was narrowed to 9.0 metres.

Traffic Flows

Traffic flows were determined by a 7 day automatic traffic count from 29 October – 4 November 2002. The 7 day average daily total was 1,385 vehicles. Heavy vehicles were recorded at less than 1%. The peak volumes of around 110 vehicles per hour were recorded during the periods 8.00 am – 9.00 am and 4.00 pm - 5.00 pm. Local roads typically carry less than 1,500 vehicles per day.

Traffic Speeds

Traffic speeds were determined simultaneously with the traffic volumes.

85 th speed	= 57 km/h
Average speed	= 49 km/h
% exceeding 50 km/h	= 47%
% exceeding 60 km/h	= 8.5%

Maximum speed (Cranford Street to Croziers Road)	= 89 km/h
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Number exceeding 80 km/h during 7 day survey	= 25
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The recorded speeds for this street have become relatively common place for many Christchurch local streets. Of major concern are the high maximum speeds.

ACCIDENT REPORT

The LTSA provides precise details of the location of all reported crashes on Christchurch roads. These crashes are also analysed by the LTSA and the social costs calculated.

Excluding the intersection with Cranford Street there are no reported crashes for the section of McFaddens Road under consideration.

PROJECT ASSESSMENT

The Council receives many applications to address safety or speeding on city roads. Resolution of these problems invariably requires capital funding. Because funding for these projects is very limited, it is critical that the Council spends money in the most cost effective manner in the locations where the greatest benefits can be obtained.

For this reason, a technical prioritisation process has been adopted by the Council to rank the projects. This is independent of capital requirements. New projects are rated against eight factors giving a score out of 100. The factors are weighted to reflect the severity of the situation ie traffic speed and volume account for 45% of the final score.

New projects are then entered onto the list of existing projects with placement determined by the rating score.

The score obtained for this project was 38 points.

Projects achieving a total rating of less than 40:

- Indicates that the work is of a low priority.
- Is not shown schematically on LATMS.
- Project is reassessed within 10 years.

However to meet the request from the petitioners a possible solution is developed below.

SOLUTION DEVELOPMENT

Various traffic calming measures have been developed worldwide to address residents' concerns over speeding in local streets.

Vertical shifts in the roadway have a greater impact on vehicle speed than any other measure.

The chart below shows the performance rating of the various options. It is based on European experience and gives an indication of the relative speed reductions achievable where the "before" situation refers to a road with 50 km/h speed limit.

	Upper Limit of Maximum Speed (km/h)		Upper Limit of 85 Percentile Speed (km/h)		Range of Average Speed (km/h)	
	Before	After	Before	After	Before	After
Vertical shifts in the carriageway	100	40	75	30	45 - 65	18 - 25
Lateral shifts in the carriageway	100	65	75	45	45 - 65	22 - 35
Road narrowing to a single lane	100	65	75	45	45 - 65	22 - 35
Roundabout	100	65	75	45	45 - 65	22 - 35
Road narrowing to a reduced width	100	95	75	70	45 - 65	40 - 55
Central islands	100	95	75	70	45 - 65	40 - 55

Experience within the Shirley/Papanui Board area can be drawn from Hoani Street. Five low profile 75 mm high speed humps were installed in response to a petition from residents to the Shirley/Papanui Board to address speeding. Analysis of a 7 day automatic speed count showed that high speeds were almost eliminated following their installation.

NUMBERS OF VEHICLES EXCEEDING 55 KM/H OUTSIDE NO 90 HOANI STREET FOLLOWING THE INSTALLATION OF THE SPEED HUMPS

Date	Number of Vehicles
Wednesday 20 November 2002	2
Thursday 21 November 2002	4
Friday 22 November 2002	7
Saturday 23 November 2002	10
Sunday 24 November 2002	5
Monday 25 November 2002	3
Tuesday 26 November 2002	7

In view of the above experience a scheme incorporating the placement of similar low profile speed humps is suggested for McFaddens and Croziers Roads.

This is also appropriate as the residents of these streets are in favour of achieving a definitive reduction in speeds.

Placement of the individual speed humps are at an average spacing of 65 metres, and are adjacent to power poles with street lighting where possible (an important safety feature at night). This spacing will achieve a good even speed distribution, with a theoretical average speed of 32 km/h, and the minimisation of the existing extreme speeds.

PROJECT COSTING

Estimated cost based on previous installations of this type. Consultation, design, and project fees not included.

4 of low profile speed humps	\$24,000
1 of fluorescent light on power pole	\$2,500
Total capital	<u>\$26,500</u>

PROJECT FUNDING

There are three possible sources of funding for projects of this type.

- Kerb and channel renewals.
- Neighbourhood improvement works.
- Community Board Discretionary funds.

Kerb and Channel Renewal Programme

McFaddens Road and Croziers Road feature kerb and dished channels. In this respect they will eventually be programmed for replacement. Upgrading the kerb and dished channel can involve full roadway reconstruction, an opportunity for streetscape improvements, and the incorporation of other features that may be identified.

A traffic calmed road would be the objective. These roads do not appear on the 5 year programme for kerb and channel renewal.

Neighbourhood Improvement Works

Because of the low rating determined during project assessment this project will not be entered onto the Council Neighbourhood Improvement Budget.

Community Board Project Funds

There could be an opportunity for funding from the Shirley/Papanui Community Board for this project.

Staff**Recommendation:**

1. That City Streets continue to monitor speeding and safety concerns for McFaddens Road to ensure that the proposed scheme is actioned within the Neighbourhood Improvement Works budget when the required ranking is met.
2. That in view of the low priority currently given to this project that the Board consider making Board Project funding available.

Chairperson's**Recommendation:**

1. That the staff recommendations be adopted.
2. That the speed trailer be placed in McFaddens Road over a seven day week, if possible.