Procedure for Installing Speed Humps on Local Residential Streets
File ST-5 (Vol. 24)

8. The Standing Policy Committee on Public Works has been advised that approximately three years ago, a group of residents from Thatcher Drive between Pembina Highway and University Crescent approached the Public Works Department about high vehicle speeds on their block and motorists using this section of Thatcher Drive to "short-cut" between Pembina Highway and University Crescent. This Department conducted speed studies and confirmed the existence of a speeding problem at this location and worked with the residents and area councillor through a series of public meetings and a mail-in survey to come up with possible solutions to address the speeding problem.

Installation of a speed hump was proposed as a possible traffic calming measure to reduce vehicle speeds on Thatcher Drive. The proposal for installation of a speed hump on a trial basis received overwhelming support from the residents of this block and was also supported by the area councillor.

The installation was considered experimental, as this was the first installation of a speed hump on a public street in Winnipeg. (Speed humps have been used successfully on many of Winnipeg's public lanes since 1986.) As such, this experimental speed hump has been closely monitored since its installation on September 30, 1999, through appropriate traffic studies and feedback from residents, the general public, Winnipeg Police Services, Emergency Response Services, Transit and Streets Maintenance. A report to the Standing Policy Committee on Public Works dated June 16, 2000, provided a preliminary review of this installation.

"A speed hump is a raised area of a roadway, which deflects both the wheels and frame of a traversing vehicle" (Transportation Association of Canada, Canadian Guide To Neighbourhood Traffic Calming: December, 1998). Speed humps are installed to reduce vehicle speeds and are accepted by the Transportation Association of Canada (TAC) as a traffic calming measure appropriate for residential streets. TAC provides a recommended design and installation guideline for speed humps on residential streets in its "Canadian Guide to Neighbourhood Traffic Calming".

Thatcher Drive Experimental Speed Hump Project

A single speed hump was installed on Thatcher Drive on September 30, 1999, at an approximate mid-block location between Pembina Highway and University Crescent. This installation served two main objectives:

1. To address speeding on this local residential street; and

2. To test the effectiveness and operating characteristics of this type of traffic calming measure for public residential streets in Winnipeg.

Since this was the first installation of a speed hump on a public street in Winnipeg and to fulfill Objective No. 2 above, the installation was carefully monitored through appropriate traffic studies and feedback from residents, the general public, Winnipeg Police Services, Emergency Response Services, Transit and Streets Maintenance.

Through this monitoring, it was determined that reduced vehicle speeds were achieved without significant impact to the residents of Thatcher Drive or the services provided to them by Winnipeg Police Services, Emergency Response Service, Transit and Streets Maintenance Departments. The 85th percentile speed (the speed at which 85% of drivers were travelling at or below) before the speed hump was installed was 57 km/hour and has continued to drop from 50 km/hour shortly after the hump was installed to 45 km/hour in a study conducted in Spring, 2001. Reductions in speed were most significant at the location of the speed hump.

It is noted that, with only one speed hump installed on Thatcher Drive, residents reported, and this Department observed, motorists speeding up to the speed hump, slowing to traverse the speed hump and then speeding away from the speed hump. In a survey, residents reported increased engine and tire noise associated with this activity. Such activity also creates concerns for the safety of pedestrians and other motorists. Because of this and because the maximum benefits with respect to reduced vehicle speeds occurred immediately adjacent to the speed hump, it was concluded that for maximum effectiveness and safety, proper spacing of speed humps in series is necessary for blocks longer than 300 metres. It is noted that TAC's "Canadian Guidelines To Neighbourhood Traffic Calming" recommend speed humps be installed in series with appropriate spacing in-between each speed hump.

Proposed Procedure for installing Speed Humps on Residential Streets

In creating a procedure for determining when and where speed humps are appropriate for addressing problems of speeding on residential streets, a set of specific warrant criteria and installation guidelines is necessary. Using the results of the detailed assessment of the experimental speed hump on Thatcher Drive and a review of TAC's guidelines and the practices of other jurisdictions, the following set of warrant criteria and installation guidelines was developed for speed humps on public residential streets in Winnipeg.

The proposed Warrant Criteria and Installation Guidelines for Speed Humps on Residential Streets is identified as follows:

WARRANT CRITERIA:

1. Submission of a petition representing a minimum 70% of the residents on both sides of the street in the block in question supports the installation of speed humps.

2. 85th percentile speeds (the speed at which 85% of vehicles are travelling at or below) of 60 km/hour or more.

3. Minimum street length of 200 metres.

4. The street is a residential street with an urban cross-section (curb and gutter) and is not a Transit route, snow route or a residential collector street.

5. The speed limit is not in excess of 50 km/hour.

INSTALLATION GUIDELINES:

1. Speed humps shall be placed in series for blocks longer than 300 metres in length and where placed in series, shall be spaced at approximate 100 metre intervals.

2. There shall be a minimum distance of 50 metres between a speed hump and an intersecting street or public lane.

3. Hazard markers shall accompany each speed hump and a "bump ahead" sign and advisory speed tab (30 km/hour) shall be placed in advance of each series of speed humps in a block (in both directions).

4. Speed humps should not be placed in front of driveways or installed over, or contain, manholes or water valves or be located adjacent to fire hydrants.

5. In locating speed humps, existing street lighting should be taken advantage of as much as possible to increase nighttime visibility.

6. Speed humps should not be located in horizontal or vertical curves.

7. Speed humps should be placed at higher elevation points to accommodate proper drainage.

8. If possible, speed humps should be placed in line with property lines for noise abatement and aesthetic reasons.

9. Speed humps should not be placed on major emergency vehicle response routes.

Speed humps meeting all warrant criteria shall be installed following the installation guidelines identified above on the basis of the date of receipt of the petition, subject to the availability of funding.

In preparing the report, there was consultation with and concurrence by the following departments:

Winnipeg Police Services:
Winnipeg Police Services reported that they did not have any concerns with the speed hump installation.

Winnipeg Transit:
Winnipeg Transit commented that they had no concerns with speed humps but indicated that speed humps should not be installed on bus routes due to the longer wheelbase of buses.

Emergency Response Service:
Emergency Response Service had concerns with respect to possible response time delays and potential damage to their vehicles but suggested that to minimize any delay to responding units or possible damage to the undercarriage of their vehicles, speed hump locations should be clearly marked with highly visible signage.

Public Works:
Streets Maintenance reported that the speed hump resulted in the need for some special attention in snow clearing operations and suggested that speed humps be located at high elevation points to avoid potential drainage problems.

A copy of the Financial Impact Statement is on file in the office of the City Clerk.

The Standing Policy Committee on Public Works recommends:

I. That the warrant criteria and installation guidelines outlined in this report for installing speed humps on local residential streets be approved.

II. That the Proper Officers of the City be authorized to do all things necessary to implement the foregoing.

The Executive Policy Committee recommends that this policy be reviewed in two (2) years.