

Right Design for Right Response: Using the Built Environment to Calm Traffic



Why This Matters

Traffic calming devices (infrastructure techniques to slow down motorists) modify the built environment, forcing vehicles to **reduce speed**, practice **attentive driving**, and **yield** more readily to pedestrians. In sections of roadway where speeding often occurs and pedestrian safety is a concern, the failure to introduce any type of traffic calming measures can result in tragedy.



Traffic calming devices are physical modifications to the road that communities can use reduce speed and enhance safety.

What the Research Says

- ❖ Excessive speed is a top contributing factor to road fatalities in British Columbia.
- ❖ A 2001 meta-analysis of 33 studies reported that urban traffic calming projects reduced the number of injury accidents by about 15% once implemented. The largest reduction of accidents was found in residential areas, about 25%; a smaller reduction of 10% was found on main roads (Elvik, 2001).
- ❖ A California study found that children living within one block of a traffic calming device had significantly lower odds of being hit or injured by a vehicle (Tester et al., 2004).
- ❖ Physically altering the shared road network to actively and passively calm traffic ensures the safety of motorists and pedestrians alike.

Examples of Traffic Calming Devices

Raised Pedestrian Crosswalk
(Vertical Deflection)



Speed Zoning



Reduced Corner Radii (Horizontal Deflection)



“U.S. studies ... show that traffic calming measures can reduce travel speeds by up to 23 percent and lower traffic volumes by more than 30 percent” (Buehler, 2011).

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What You Need To Know

- ❖ There exist four broad categories of engineered traffic calming devices: vertical deflections, horizontal deflections, road narrowings and speed zoning.
- ❖ Safer pedestrian and cycling zones encourage more active transportation, which impacts community levels of physical activity with the added benefit of reducing their ecological footprint.
- ❖ Some devices can be implemented by retrofitting the existing roadway, but costs may be prohibitively high. Communities must be engaged to support traffic calming measures to provide support for projects.
- ❖ Despite the barriers to implementation, these changes to infrastructure are likely to have lasting positive effects on the communities

Buehler, R. (2011). Traffic Calming. In N. Cohen & P. Robbins (Eds.), *Green Cities: An A-to-Z Guide*. (422-424). Thousand Oaks: Sage Publications, Inc.

Elvik, R. (2001). Area-wide urban traffic calming schemes: a meta-analysis of safety effects. *Accident Analysis Prevention*, 33: 327-336.

Tester, J.M., Rutherford, G.W., Wald, Z. & Rutherford, M.W. (2004). A Matched Case-Control Study Evaluating the Effectiveness of Speed Humps in Reducing Child Pedestrian Injuries. *American Journal of Public Health: Vol. 94, No. 4*: 646-650. DOI: 10.2105/AJPH.94.4.646

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