

Saanich Council Speed Limit Establishment Policy

1.0 PURPOSE

This Council Policy sets guidelines for appropriate speed limits on all streets under the jurisdiction and control of the Municipality of Saanich. It will be used to guide staff's recommendation to Council for enacting amendments to speed limits, which are regulated through the Streets and Traffic Regulation Bylaw.

The Council Speed Limit Establishment Policy is informed by the National Association of City Transportation Officials (NACTO) and their guide *City Limits - Setting Safe Speed Limits on Urban Streets*. The NACTO guide is intended for use on urban streets, however given that there are both urban and rural streets in Saanich, the principles for establishing safe speed limits based on the guide will apply. In some cases, staff may seek additional input from the *BC Active Transportation Design Guidelines (BCATDG)*, Saanich Official Community Plan (OCP) and the District's Engineering Specifications. The Urban Containment Boundary (UCB) will be used to determine if a street is urban or rural.

2.0 RATIONALE

The District of Saanich is committed to Vision Zero and a Safe Systems Approach to road safety. Managing motor vehicle speeds is an important way to reduce the number and severity of collisions to work towards zero traffic-related fatalities or serious injuries. Establishing appropriate speeds for motor vehicle drivers can improve safety for all users, especially pedestrians and cyclists, which can assist in the achievement of the District's target to increase the number of trips made by active transportation, as well as key priorities related to reducing greenhouse gas emissions and improving the livability in neighbourhoods.

3.0 SETTING SPEED LIMITS

Establishing speed limits for the safety of all users is an important piece in creating a safe and accessible transportation system. The speed limits on Saanich streets will be recommended by staff as follows:

3.1 Type A Street

3.1.1 Streets in this category are defined as:

- Streets without a continuous yellow centre line; and/or
- Streets where a Neighbourhood Bikeway¹ exists, or is proposed, in the Active Transportation Plan.

3.1.2 The maximum speed limit on Type A streets is 30km/h.

¹ A neighbourhood bikeway is defined in the *BC Active Transportation Design Guide (BCATDG)* as a street that have been enhanced to varying degrees to prioritize bicycle traffic that has low motor vehicle volumes and speeds.

3.2 Type B Street

3.2.1 Streets in this category are defined as:

- Streets with a continuous yellow centre line; and/or
- Streets not captured in Street Type A.

3.2.2 The maximum speed limits on Type B streets shall be set in accordance with the Safe Speed Study process outlined in Section 4.0.

4.0 SAFE SPEED STUDIES

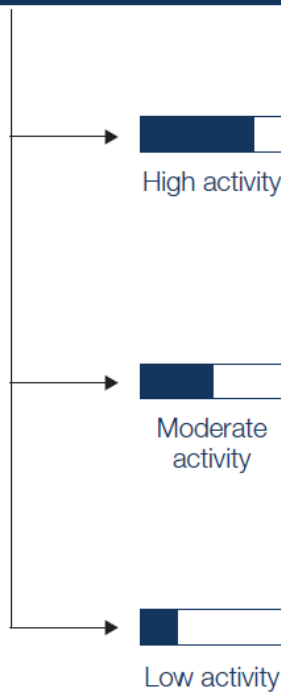
A safe speed study will be conducted for Type B streets. The study will take place along segments of a corridor that have similar conditions and land use. A safe speed study will not be completed on individual blocks except inside a Major Centre or directly in front of a school or park. If a corridor changes significantly at a specific point, it will be divided into two or more segments. Where a corridor has multiple recommended speed limits along its length or additional considerations beyond this policy are required, engineering judgement will be used to manage both safety and legibility for users. It is generally assumed that speed limits within the UCB will not increase once lowered since activity levels will increase over time with increased density. If the nature of a street has changed significantly modifications to a speed limit may be considered.

4.1 RISK ANALYSIS

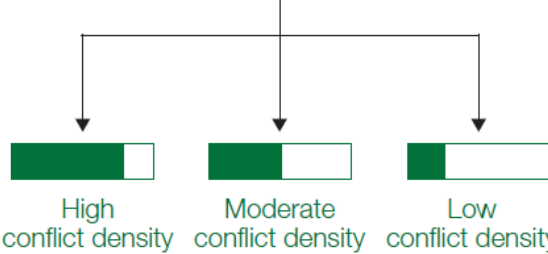
The framework described below summarizes Saanich's method for determining maximum safe speed limits. It is risk-based and depends on a number of factors including the amount of separation between road users, presence of vulnerable road users and density of potential points of conflict over a defined length of roadway. Conflict Densities and Activity Levels are evaluated using the matrix in Figure 1 to determine an appropriate maximum speed to manage the risk to all users on the street.

Speed Limit Determination Matrix

Based on the Activity Level Analysis, the street has...



Based on the Conflict Density Analysis, the street has...



Activity Level	High conflict density	Moderate conflict density	Low conflict density
High activity	MAXIMUM 30 km/h	MAXIMUM 40 km/h	MAXIMUM 40 km/h
Moderate activity	MAXIMUM 40 km/h	MAXIMUM 40 km/h	MAXIMUM 40 km/h
Low activity	MAXIMUM 40 km/h	MAXIMUM 40 km/h	MAXIMUM 50 km/h

Figure 1 – Speed Limit Determination Matrix

4.2 CONFLICT DENSITY

Two primary factors determine how frequently potential conflicts between motor vehicles, and cyclists, pedestrians and other vulnerable road users occur: 1) Modal Mixing; and 2) Crossing Point Frequency.

On a street, modal mixing refers to how separated different modes are and crossing point frequency refers to how closely spaced intersections and other crossing locations are. These factors are evaluated using the matrix in Figure 2 to determine the Conflict Density.

CONFLICT DENSITY		CROSSING POINT FREQUENCY		
		HIGH	MODERATE	LOW
MODAL MIXING	HIGH	High	High	Moderate
	MODERATE	High	Moderate	Low
	LOW	Moderate	Low	Low

Figure 2 – Conflict Density Matrix

4.2.1 Modal Mixing

The following conditions will be used to determine if a segment of street has high, moderate or low modal mixing. If a segment meets any of the conditions of more than one mixing level, the higher level of mixing should apply. Streets that run along or cross the UCB will be considered as being outside of the UCB.

High Modal Mixing (Little or no separation)

a. Streets located inside the UCB

- No Sidewalk or a sidewalk only on one side.
- Sidewalks (<2.0 m wide) on both sides of the street directly adjacent to a vehicle travel lane.
- Sidewalks (<1.8 m wide) on both sides of the street separated from a vehicle travel lane by a bike lane or on-street parking.
- No cycling facilities on a Major or Collector Street.
- Narrow on-street parking and loading (<2.4 m wide) that is short-term and occurs directly adjacent to a vehicle travel lane and/or a bike lane.

b. Streets located outside the UCB

- No sidewalk or paved shoulder.
- No cycling facility where one is recommended in the BC Active Transportation Design Guide.
- On-street parking occurs regularly during peak hours.

Moderate Modal Mixing

a. Streets located inside the UCB

- Sidewalks (≥ 2.0 m wide) on both sides of the street directly adjacent to vehicle travel lanes.
- Sidewalks (≥ 1.8 m wide) on both sides of the street separated from vehicle travel lanes by a bike lane or on-street parking.

- A cycling facility exists, but does not meet the recommended facility type established in the *BCATDG*.
- On-street parking and loading (≥ 2.4 m wide) that is short-term and occurs directly adjacent to the vehicle travel lane.

b. Streets located outside the UCB

- Narrow paved shoulder (≤ 1.2 m wide) on one or both sides of the street.
- A cycling facility exists, but it does not meet the recommendations in the *BCATDG*.
- On-street parking occurs infrequently during peak hours.

Low Model Mixing

a. Streets located inside the UCB

- Sidewalks (minimum 1.5 m wide) on both sides separated from vehicle travel lanes by a boulevard and/or parking bays.
- A cycling facility exists and it meets the recommendations in the *BCATDG*.
- Parking (≥ 2.5 m wide) directly adjacent to a vehicle travel lane.

b. Streets located outside the UCB

- Paved shoulder or sidewalk on one or both sides of the street (≥ 1.2 m wide).
- A cycling facility exists and it meets the recommendations in the *BCATDG*.
- On-street parking is prohibited.

4.2.2 Crossing Point Frequency

Intersections and driveways are areas where pedestrians, cyclists, and drivers can be expected to cross a street. They are also points where different users, even when separated, are likely to cross paths. For the purposes of this policy, private roads will be considered as driveways.

Driveways classified as Major Driveways are applicable to this policy. Major driveways provide access to 25 or more residential parking stalls and/or service mixed-use sites that generate more than 15 vehicle trips / peak hour.

It will be determined if a segment of street has high, moderate or low crossing point density based on the following thresholds:

High Frequency

- The average spacing between intersections and/or major driveways is ≤ 125 m.

Moderate Frequency

- The average spacing between intersections and/or major driveways is between 125 m and 200 m.

Low Frequency

- The average spacing between intersections and/or major driveways is > 200 m.

4.3 Activity Level

Crashes leading to fatalities or serious injuries are generally the result of conflicts happening at speeds that are too high for a human body to endure. Therefore, streets with a greater number of potentially serious conflicts and a higher level of activity will have lower speed limits.

Pedestrian and cyclist counts will be the primary method of determining the activity level on a street. Intersection-based counts are widely available throughout Saanich and will be used to establish activity levels. Recognizing the daily variability in traffic and that intersection-based counts are a snapshot in time of that particular day's traffic. The thresholds described below will be considered as a guide and volumes within 15% of those values may be considered to meet the intention of the guideline.

In the absence of recent data and in areas outside the UCB, land uses that generate pedestrian activity can be used to approximate the expected level of pedestrian activity.

A segment of street will be determined to have a high, moderate or low activity level based on the following thresholds. If a street meets criteria in two different activity levels the higher level will be selected.

High Activity

- Generally the busiest streets within Major Centres, Neighbourhood Centres, and Villages will be considered to have high activity.
- > 240 pedestrians or cyclists in either peak hour at an intersection or along a segment **AND** > 480/4hr period (This ensures there is consistently high activity throughout the day).
- > 60 pedestrians or cyclists on either side of a street per peak hour.

Moderate Activity

- Generally streets leading to recreation centres, and schools or along popular transit, walking and cycling routes will have moderate activity.
- > 120 pedestrians or cyclists in either peak hour at an intersection or along a segment **AND** > 240/4 hr period.
- > 30 pedestrians or cyclists on either side of a street per peak hour.
- For streets outside the UCB, segments of streets located within 750 m of a school, developed park access point or Village.

Low Activity

- Generally streets that access predominantly single family homes and rural neighbourhoods will have low activity.

5.0 SIGNAGE

Speed limits will be signed in accordance with the provisions of the *Motor Vehicle Act* [RSBC 1996] C. 318, as may be amended or replaced from time to time.