

Objective

To provide a framework for Administration to follow in order to (1) investigate approaches to reducing vehicle travel speeds in residential areas, and (2) develop an implementation plan for an approved approach.

Background

Speeding is an issue in residential areas today. **Figure A** (attached) shows locations where speed studies have been conducted on residential or collector streets in Calgary. Regular speeding has been detected in locations all across the city.

At the same time, evidence from around the world has demonstrated that even travelling at Calgary's current unposted speed limit of 50km/h represents a real danger to pedestrians (see **Figure B**). Reduced speeds result in fewer collisions and reduced severity of impact when collisions do occur.

Vehicle speeds and speeding has also been identified as a key issue for the public, through engagement conducted for STEP FORWARD. Separately, a number of community associations have approached the City requesting lower speed limits in their communities.

Preliminary investigation of the impact of reducing speed limits has shown that while many streets are affected, there is little impact to the travel time for a typical driving trip (see **Figures C – F**). Further work is required to develop specific criteria for which roads would be impacted.

At a strategic level, reducing vehicle speeds in residential areas is a significant part of STEP FORWARD's approach to reducing pedestrian collisions and fatalities. Based on preliminary research, best practices, and practical considerations, the final draft STEP FORWARD document recommended pursuing a city-wide reduction to 40 km/h for the unposted speed limit. During presentation to Council on January 25, 2016, a number of questions were raised regarding the supporting science, whether 40 km/h or 30 km/h speeds should be pursued, and how such a change could be implemented effectively.

Administration proposes to review this Action in more detail by completing the work outlined in this framework. The final version of the STEP FORWARD document will be revised to reflect this modified approach.

Stage 1 – Investigate Alternatives

In order to respond to Council concerns and investigate alternatives to achieve reduced vehicle speeds in residential areas, administration will prepare the following deliverables by November 2016:

1. Research Summary (including scientific literature review, results of efforts in other jurisdictions, best practice review)
2. Engagement Results (including but not limited to: public attitude to reduced speeds in residential areas, key stakeholder levels of support)

Framework for Residential Speed Reduction

3. Cost/benefit Analysis (including direct City costs and benefits, societal costs and benefits, travel time impact assessment)
4. Summary of research findings, public attitude and cost/benefit implications of pursuing 40 km/h versus 30 km/h.
5. Presentation of findings and a recommended approach

Allowing that additional approaches may be identified through research or engagement, at least the following approaches to reducing vehicle speeds in residential areas will be investigated:

- Approach A: Amend Alberta's Traffic Safety Act (through collaboration with Province) to allow for a reduction in the unposted speed limit (province-wide).
- Approach B: Create a City bylaw (supported by new City Charter) to allow for a reduction in the unposted speed limit in Calgary (city-wide).
- Approach C: Post a reduced speed limit on all affected roads (physical signage, city-wide).
- Approach D: Pilot speed reduction in one or more communities.

The findings and recommended approach will be presented to Committee and Council in Q4 2016, providing an opportunity for Council to give further guidance on this issue at a strategic level.

Stage 2 – Implementation Plan

After the Stage 1 Deliverables (as noted above) have been provided and discussed at Committee and Administration receives clear direction from Council, the project will move to a second stage. In this stage of the project a detailed plan will be developed for how to implement the direction provided by Council.

The implementation plan will include:

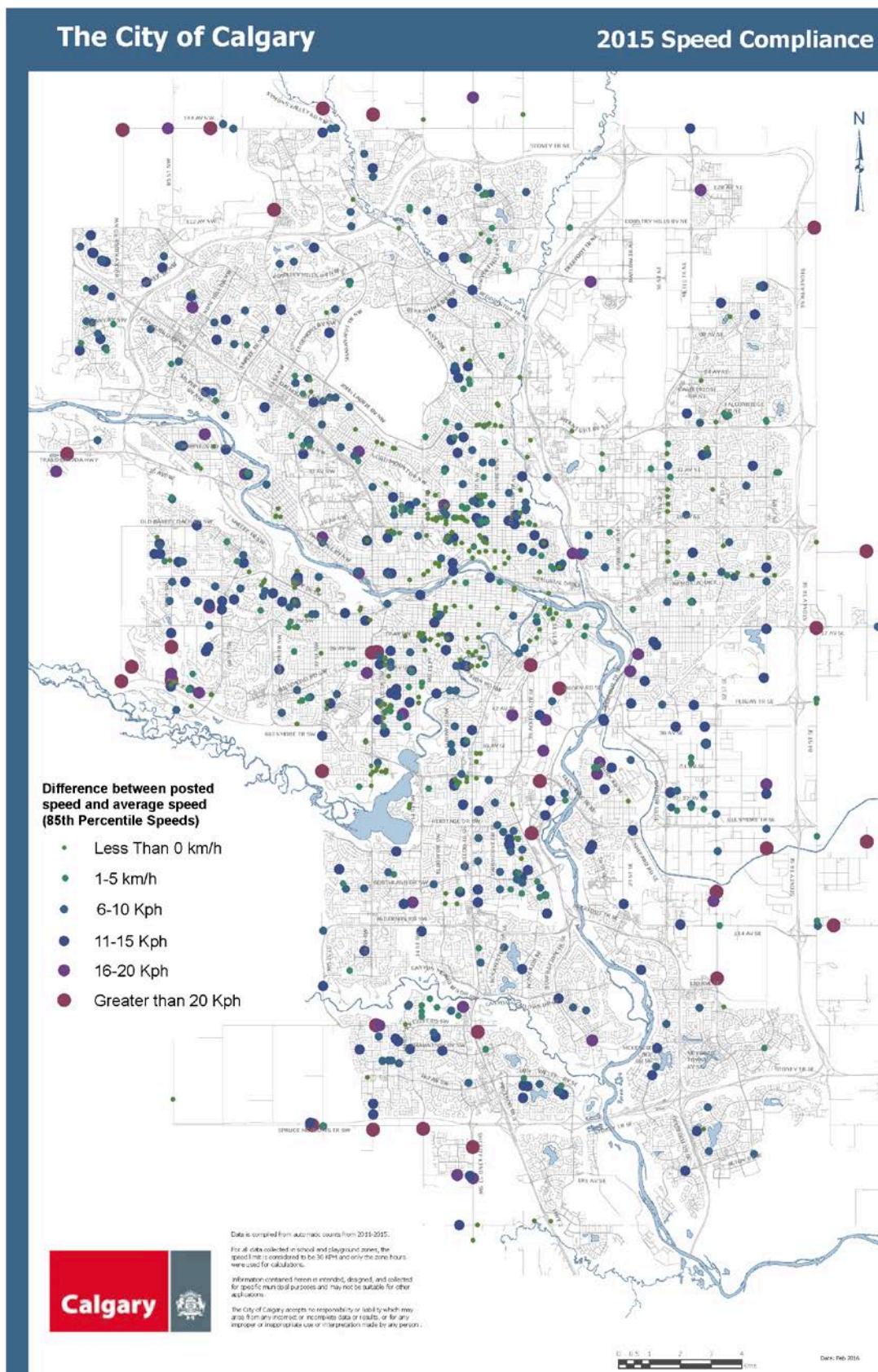
1. Criteria for speed limit reduction and a revised speed limit and street classification map for the City of Calgary (or for affected areas in the case of a pilot approach).
2. A communication and education plan.
3. An enforcement plan (in collaboration with the Calgary Police Service).
4. A plan to update road design standards (where appropriate) to reflect new design speeds.
5. A tool-kit of physical measures to apply to existing roadways where required to support implementation.
6. A budget to carry out the implementation plan.

These items will be specific to the approach approved by Council in Stage 1 of the project. Committee will be updated on Stage 2 of the project in Q2 2017, providing a second opportunity for oversight prior to implementation.

An assessment plan will also be developed to observe before/after speeds and collision trends to evaluate the effectiveness of the program. Reporting on the implementation and assessment results will be included in the Pedestrian Strategy monitoring reports which commence in Q1 2018.

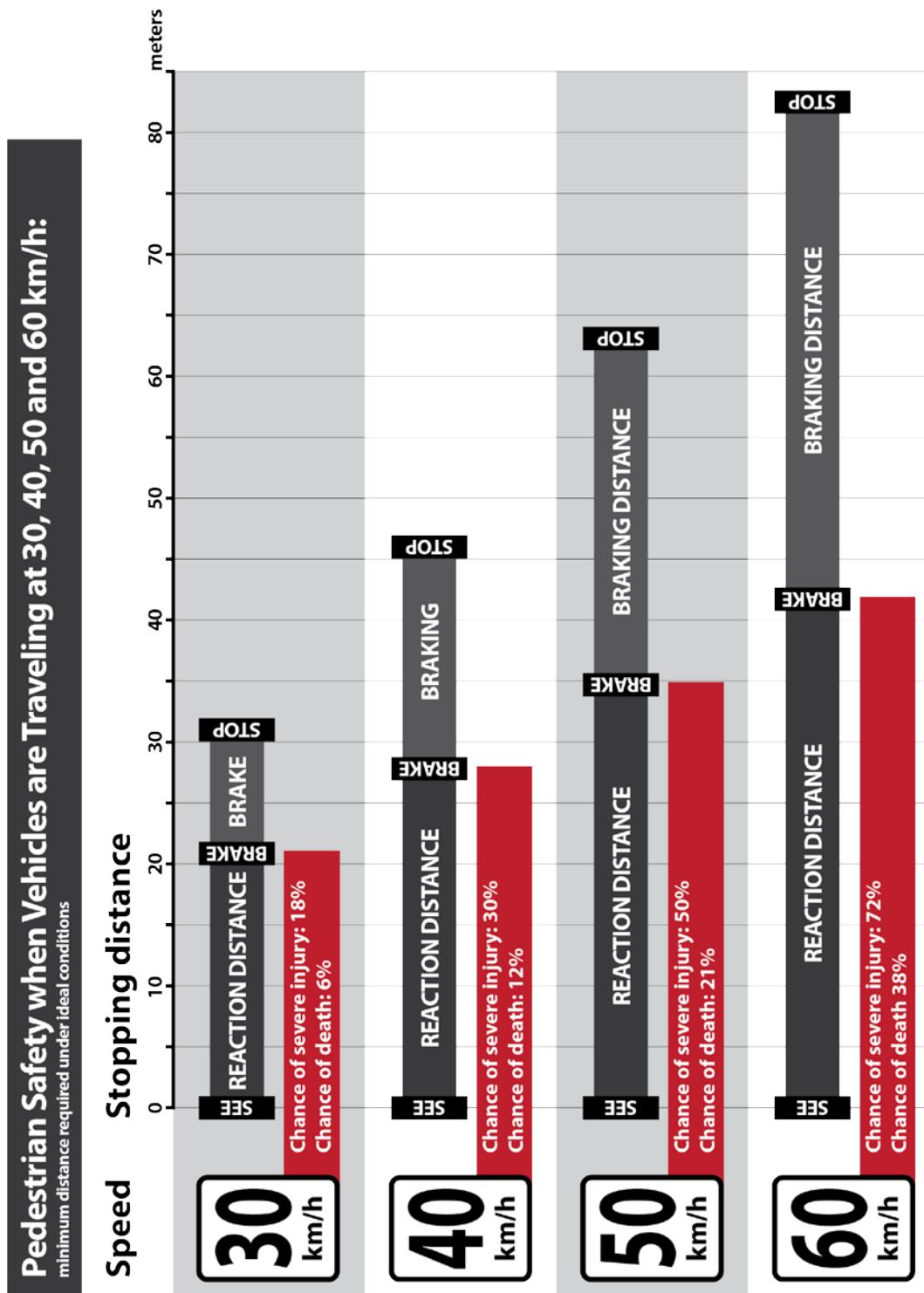
Framework for Residential Speed Reduction

FIGURE A



Framework for Residential Speed Reduction

FIGURE B Pedestrian Survival Rates

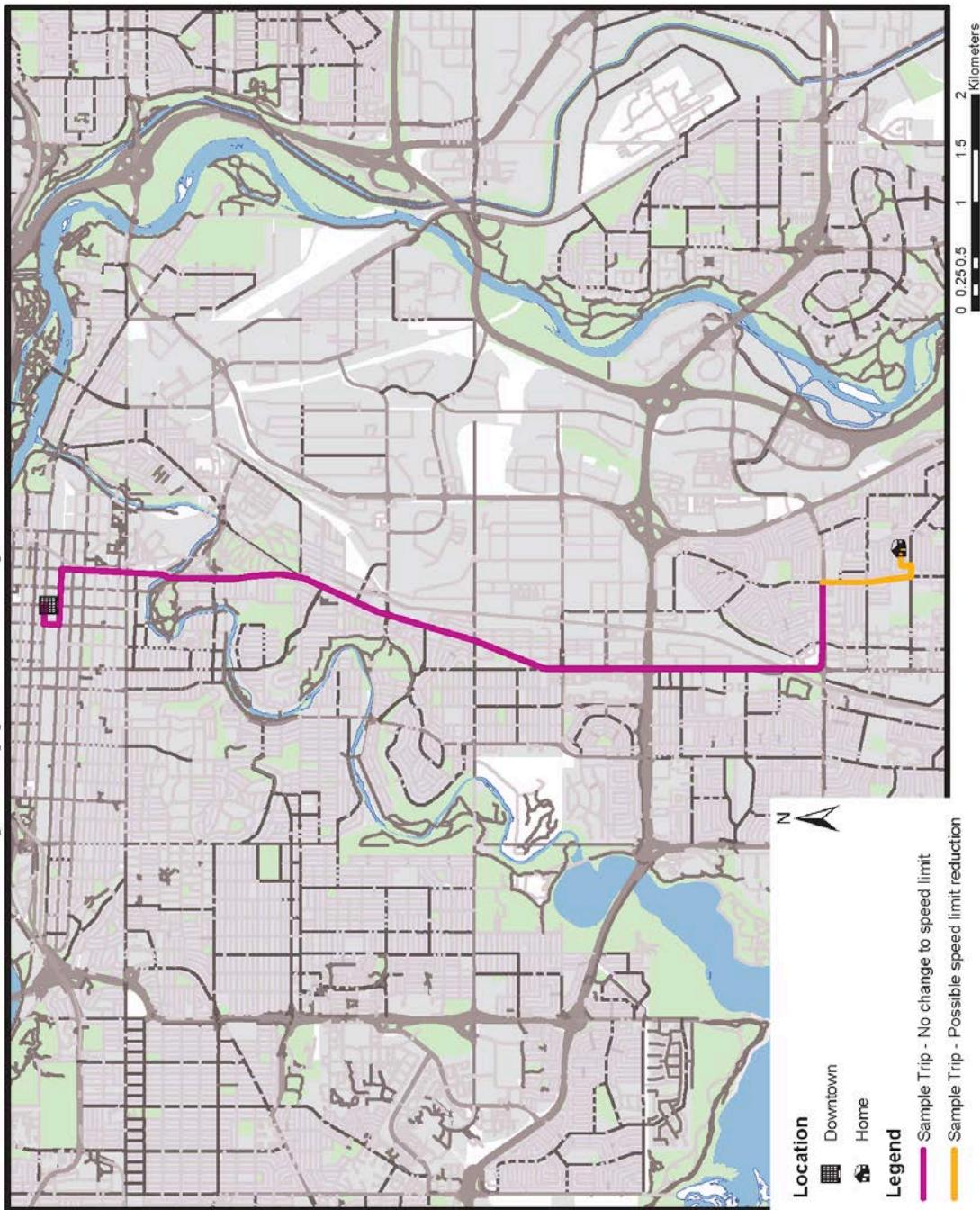


References:
Fambro, Daniel B., Kay Fitzpatrick, and Rodger Koppa. "A new stopping sight distance model for use in highway geometric design." Transportation Research Circular E-C003 (1998)
Tefft, Brian C. "Impact Speed and a Pedestrian's Risk of Severe Injury or Death." AAA Foundation for Traffic Safety (2011)

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FIGURE C Acadia Sample Trip

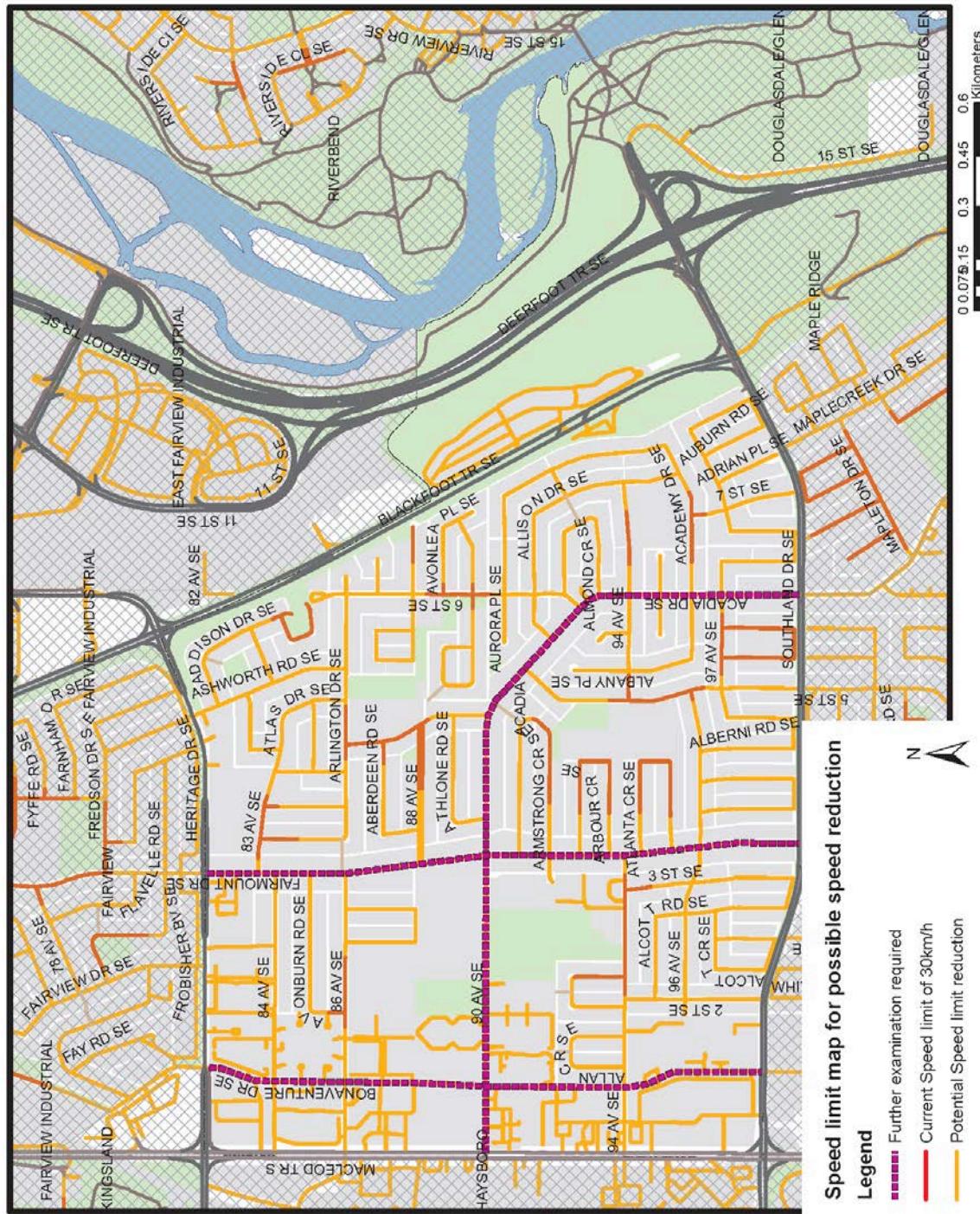
**Sample trip from Acadia to downtown
11% of 10Km trip on potentially reduced speed roads
delayed approximately 30 - 60 seconds**



Framework for Residential Speed Reduction

FIGURE D Acadia Sample Map

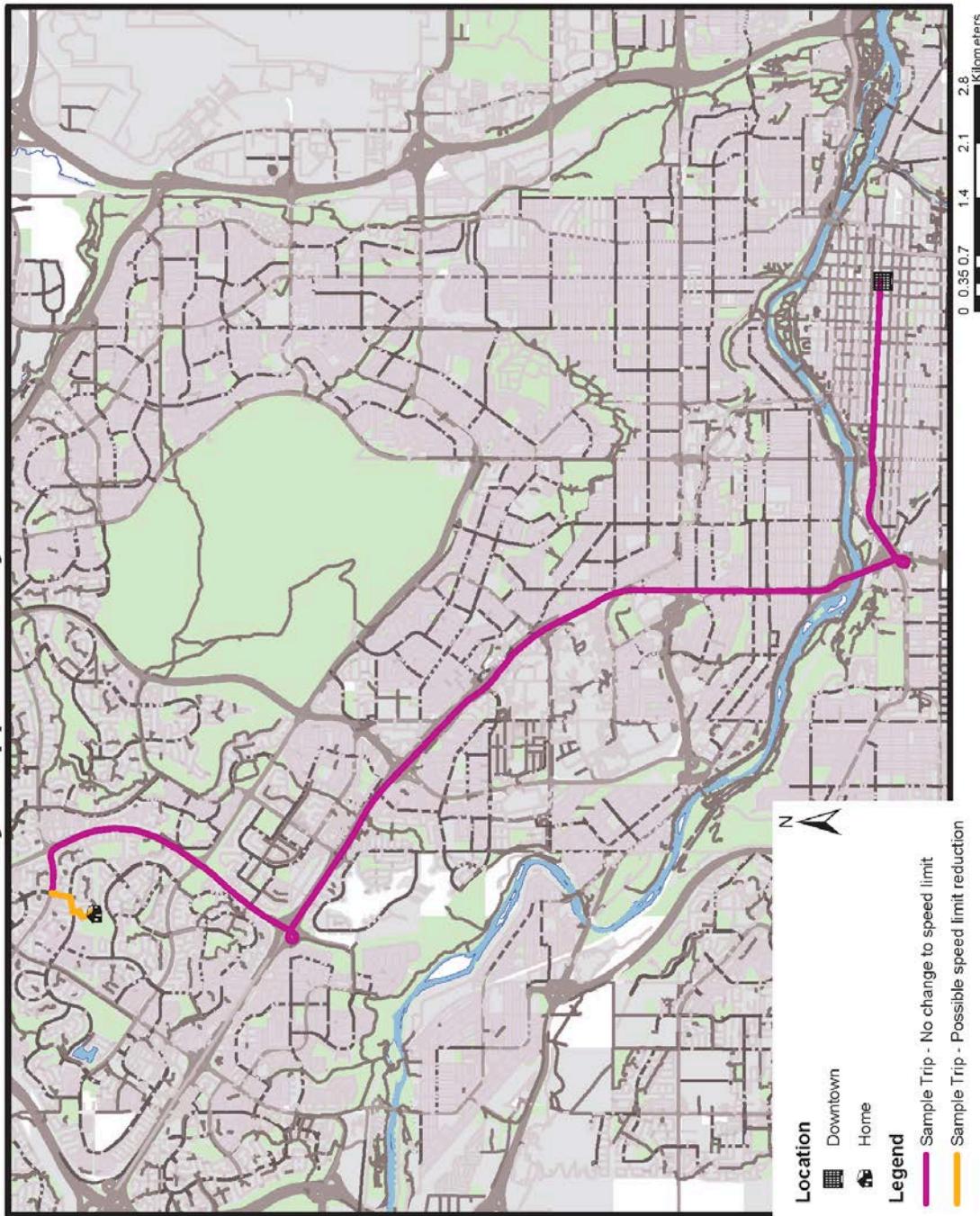
ACADIA



Framework for Residential Speed Reduction

FIGURE E Hawkwood Sample Trip

**Sample trip from Hawkwood to downtown
4% of 18Km trip on potentially reduced speed roads
delayed approximately 15 - 30 seconds**



Framework for Residential Speed Reduction

FIGURE F Hawkwood Sample Map

