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SAANICH ROAD SAFETY ACTION PLAN

February 2024





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Acknowledgement

The District of Saanich is within the territory of lək'wəŋən peoples known today as Songhees and Esquimalt Nations, and the W̱SÁNEĆ peoples, represented today by Tsartlip, Pauquachin, Tsawout, Tseycum, and Malahat Nations. The First Peoples have been here since time immemorial and their history in this area is long and rich.

The District of Saanich is proud that our name is derived from the W̱SÁNEĆ peoples. Saanich Council is committed to taking a leadership role in the process of healing wounds of the past and becoming a more just, fair, and caring society.

The District would also like to acknowledge the Road Safety Action Plan's steering committee for their input and efforts throughout the development of the District's first ever Road Safety Action Plan.

Message from the Mayor

Our neighbourhoods are the places where we put down roots and build a life. They're places where we see friends and familiar faces and create daily routines for ourselves. We travel through these spaces daily — whether it's to run errands, get ourselves to work or take our children to school or the park. We regularly trace the same streets and pathways, and these predictable movements from point 'A' to point 'B' should feel safe and comfortable for everyone.

Unfortunately, this isn't always the reality — and we know there is more work to be done to help people feel safer and more confident navigating our roadways.

More than 40% of the 11,000 reported crashes in Saanich between 2017 and 2021 resulted in a serious injury or fatality. Nearly half of these crashes involve a person walking, cycling, or operating a motorcycle. These are our loved ones and neighbours. The impacts of these incidents on victims, their families and their communities can be significant and long-lasting.

We have heard your concerns about road safety and addressing them is a top priority for Council. In 2022, the District of Saanich adopted *Vision Zero* and through implementation of this *Road Safety Action Plan* (RSAP) we are seeking to eliminate traffic fatalities and serious injuries while ensuring safe, healthy, and equitable mobility for everyone.

Our efforts become even more pressing as we work to implement our *Active Transportation Plan* and encourage Saanich residents to take more trips using sustainable modes of transport. If we want more people to make that shift, it's vital they feel at ease on our roads.

I sincerely thank the many Saanich residents who provided valuable insights and direction for the actions identified in the RSAP.

I also wish to acknowledge the many agencies and road safety partners who worked with us to develop this plan and who will be valuable partners as we seek to implement the actions to improve road safety.

No matter how you get around town — whether you're a driver, cyclist, motorcyclist or pedestrian — let's all work together to make Saanich safer for everyone.

Dean Murdock
Mayor, District of Saanich

Message from the Police Chief

Each day there are crashes and near misses on Saanich streets involving drivers, pedestrians, cyclists, and motorcyclists. Many of these result in serious injuries that forever change the lives of Saanich residents and their families and friends. In some cases, crashes have tragic outcomes and the impacts on families and communities are devastating.

Road safety is a top priority of the Saanich Police Department (SPD), which is why we continue to dedicate specialized resources to keep our roads, and those who use them, safe. We continue to work to reduce the frequency and severity of motor vehicle collisions through strategic road safety initiatives, education, enforcement, and stakeholder collaboration. This includes pro-active enforcement to combat impaired, distracted, and dangerous driving, as well as working to protect the safety of vulnerable road users through targeted road safety initiatives and public safety campaigns.

We support the development of this *Road Safety Action Plan* and welcome the opportunity to play an active role in its implementation. Through the on-going activities of the SPD's Traffic Safety Unit and the many specific actions contained in the Action Plan, we believe that this is a strong step forward toward achieving the goal of Vision Zero.

Dean Duthie
Chief Constable, Saanich Police Department

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1. Introduction

We saw 12 fatal crashes in Saanich between 2016 and 2020, and there's an injury crash every 10 hours on our roads. Nearly half of all serious crashes in Saanich involve vulnerable road users such as pedestrians, cyclists, or motorcyclists.

In 2022 Saanich adopted Vision Zero as its approach to road safety, and by applying systems thinking — called the Safe System Approach — the District is working to improve road safety through an integrated process that recognizes the vulnerability of people and aims to develop a transportation system that prevents errors from having devastating outcomes.

Substantial investments have been made in recent years to improve safety on Saanich roads. An *Active Transportation Plan* (ATP) was developed to prioritize construction of facilities for safe walking, rolling, cycling, and transit. More recently, Saanich adopted the *Speed Limit Establishment Policy* and has begun implementing speed limit reductions on roads across the District.

The *Road Safety Action Plan* (RSAP) is another important initiative that prioritizes road safety and improve the lives of Saanich residents. The plan aligns with key District priorities, including building compact and complete communities, developing more affordable housing, and reducing transportation related GHG emissions. If services, education, and employment are closer to home, people will drive less or not at all, which means fewer cars on the road and safer conditions for people who must drive, as well as people who walk, roll, cycle, and take transit. It will also mean less congestion and improved air quality for everyone.

Through the RSAP, the District is focused on delivering effective actions over a 10-year period that will improve the livability and safety of our community. Working with our road safety partners and the community, Saanich is committed to taking action to eliminate deaths and serious injuries on our roads, bringing more people home safely each day.

Every
4 hours

a crash occurs in
Saanich

Every
10 hours

an injury-causing crash
occurs in Saanich

12
Fatal
Crashes

Occurred in Saanich
between 2016 and 2020
(TAS Data)

48%

of Serious Crashes
Involve Vulnerable
Road Users

What Is Vision Zero?

The philosophy that road fatalities and serious injuries can and should be eliminated while providing safe, healthy, and equitable mobility for all road users.

Safe System Approach

An integrated and comprehensive process to improve the safety performance of the transportation system that makes allowance for errors and eliminates predictable and preventable serious injuries and fatalities.



¹ Vision Zero and Safe System Approach definitions are based on the Transportation Association of Canada's (TAC) *Vision Zero and the Safe System Approach: A Primer for Canada*, March 2023, accessed online at: www.tac-atc.ca/sites/default/site/doc/publications/2023/prm-vzss-e.pdf

1.1 Vision Zero + The Safe System Approach

The foundation of Saanich’s first-ever Road Safety Action Plan (RSAP) is Vision Zero and the Safe System Approach (SSA).

Vision Zero is a philosophy that frames death or serious injuries as an unacceptable consequence of crashes and establishes the goal to eliminate them. Vision Zero prioritizes human life and health in the transportation system and asserts that deaths and serious injuries are unacceptable and preventable.

The Safe System Approach refers to an integrated and comprehensive process to improve the safety performance of the transportation system that makes allowances for errors and eliminates predictable and preventable serious injuries and fatalities. The Safe System Approach specifically seeks to achieve safe speeds, safe road users, safe vehicles, safe road design, post-crash care and safe land use planning.

Key to the SSA are the following principles:

- Deaths and serious injuries on roads are unacceptable
- People make mistakes and they are inherently vulnerable
- Responsibility is shared among system designers and road users
- A systematic approach that includes overlapping measures is necessary
- Improvements to safety are proactive

The belief that people have the right to travel safely on Saanich roads regardless of what mode they use is an underlying assumption of the RSAP. Our goal is to ensure that roads are safe for everyone – no matter who they are, where they are going, or how they are getting there.

1.2 What is the RSAP?

The RSAP is Saanich's plan to achieve Vision Zero. It is based on evidence and grounded in a comprehensive analysis of crash data that has been compiled by the Insurance Corporation of British Columbia (ICBC) and the Saanich Police Department (SPD). It is also based on the results of a network screening which identified locations where crash frequency and severity is highest in Saanich and highlighted factors contributing to crashes at these locations.

In total, 31 actions are outlined in the plan to guide policy, engineering (infrastructure design and construction), education and awareness, enforcement, and equity. The plan also provides direction on advocacy work to be undertaken alongside partners, as well as data requirements to inform decision-making. The RSAP will guide decisions and investment for the next 10 years.

Implementation of the RSAP will require Saanich to work closely with road safety partners from across the sector. It is important to note that Saanich does not control all aspects of the transportation system within its boundaries. Some of the highest volume roads and trails in the District, as well as key transportation services such as transit, are outside the District's jurisdiction. Collaboration with partners, including provincial and regional governments, and BC Transit will be essential to making meaningful progress on the RSAP.

The RSAP establishes a baseline from which Saanich will start to measure progress towards eliminating traffic fatalities and serious injuries. While it is an "action plan", it marks only the start of Saanich's commitment to road safety. Effective implementation of the actions in this document will depend on long-term support from Council, Saanich staff, and the community. It will also require input from government and agency partners involved in developing and maintaining the transportation system in the Greater Victoria Region, and across the province and country.

MAXIMUM
40
km/h



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2. Plan Framework

2.1 Vision + Mission

The vision statement describes the desired future state of road safety in Saanich. It has helped guide development of the RSAP and will continue to be referenced as implementation of road safety improvements occurs in Saanich.

Vision

Saanich is leading the way as a community with a safe and accessible transportation system for all our residents and visitors, free of transportation-related fatalities and serious injuries.

Mission

We will work towards our ultimate vision of zero fatalities and serious injuries by aiming for a 50 percent reduction by 2030.

To achieve this goal, we will work together with our partners and other levels of government and the public to prioritize, fund, implement and evaluate road safety initiatives using the Safe System Approach and a defined set of Guiding Principles.

2.2 Guiding Principles

A series of 8 guiding principles set the foundation for the RSAP and for all future decisions and investments around road safety. The principles align with the District's established policy directions and were developed through engagement with stakeholders and the community.

Data + Evidence

Data and evidence will be used as the primary sources of information. Saanich will work towards establishing reliable and enhanced data sources and conducting regular monitoring and analysis to gather evidence to inform decision-making regarding the transportation system.

Collaboration + Partnerships

Due to the multi-disciplinary nature of road safety, the District and its partners will work together to achieve common goals, leverage resources and expertise, and bring a strong and united voice to the public and higher levels of government. Physical changes to the network must be complemented by effective education, engagement, enforcement, and emergency response.

Protect the Most Vulnerable

The majority of fatalities involve the most vulnerable modes, including those who walk, cycle, and roll. Priority will be given to the safe accommodation of these modes within the transportation system.

Speed + Conflict Management

Evidence shows that speeds and conflicts are contributing factors in most injury and fatal crashes. Safer speeds are emphasized to maximize the chance of survival in a crash, and the reduction of conflict points to prevent the types of encounters that lead to serious crashes. Effective land use and transportation planning and road design will build these safeguards into the system.

Shift to Safer Vehicles

A shift to safer vehicles will play a major role in eliminating fatal and serious injury crashes. This includes shifting to public transit, and other safe forms of travel, and away from the most risk-prone modes.

Equity

All activities will be conducted with an equity lens, to ensure all road users have fair access to the transportation system. This includes groups that are already known to be socially or economically disadvantaged as well as other groups that emerge from the data as being more prone to injury and fatality.

Sustainable Funding

Changes cannot be implemented or sustained without reliable long-term funding. This will require leadership, the allocation of existing funds as well as the securement of additional funding sources.

Support a Growing Culture of Safety

Success of the RSAP will depend on a collective desire for a safer society, a belief that it can be achieved, and a willingness to make changes, both individually through behaviors and collectively through effective legislation, enforcement, and community building.



30
km/h
8 AM - 5 PM
SCHOOL DAYS

SCHOOL ZONE

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3. Our Community

3.1 Population, Mobility + Geography

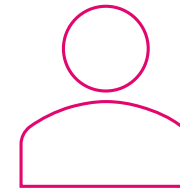
Demographics and geography influence transportation choices and travel patterns, and by extension road safety. In addition, knowledge of factors such as population growth and diversity, age, income, mode share, and land use characteristics inform the decisions of policy makers and will inevitably shape implementation of Vision Zero and this RSAP. The following section summarizes some of Saanich's key demographic, mobility, and geographic characteristics that have informed development of this RSAP.

Population

Saanich is home to approximately 118,000 residents and has the highest population of all municipalities in the Capital Region. Approximately 4% of residents (4,675 people) live in Rural Saanich.

Between 2016 and 2021, the District's population grew by 3.1%. This represents moderate growth compared to most other municipalities and the regional average growth rate of 8.4%.

Despite this trend, new development and projected population growth in Saanich along with regional transportation demand will continue to increase pressure on the District's transportation system.



118,000

Saanich Residents

3.1%

Five-Year Population Growth

Population Identity

According to the 2021 Census, 25% of Saanich's population are visible minorities. Approximately 3.5% of Saanich residents identify as Indigenous.

A further 22,045 people are immigrants (22.5% of the population), of which approximately 6,300 have immigrated in the past 10 years.

Approximately 1.6% of Saanich's population does not have knowledge of English.



Age

Saanich's median age is 44.4 years old, slightly younger than the regional median (45.2) and older than the provincial average (42.8).

Roughly 34% of Saanich residents are under 30 years of age, a decrease of around 6% from the 2016 Census. People in this age group tend to rely more on transit, walking, and cycling to access schools, work, and services.

Residents over 60 years of age also make up a significant, and growing, segment of the population, approximately 31% of the total population. The needs and travel patterns of older residents are also unique and providing a range of mobility options is important to ensure that an aging population can participate in their community.



Income

Saanich's median household after-tax income is \$83,000, higher than the regional median of \$75,000. In Rural Saanich median household income is higher, between \$100,000 and \$125,000 after tax.

Based on the low-income cut-offs, after tax (LICO-AT), 5.3% of households in Saanich are low-income compared to 4.5% in the Capital Region.



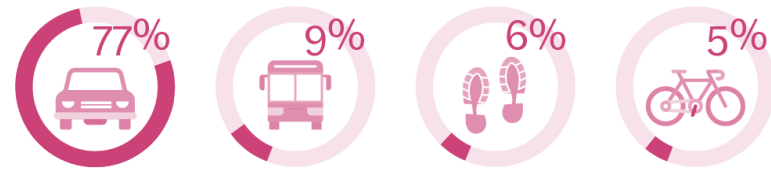
Mode Share

The 2021 Census indicates that approximately 20% of commute trips to work and school in Saanich are made by walking (6%), cycling (5%), and transit (9%). 77% of commute trips are made by vehicle. This understanding of travel mode share relates to the number of crashes involving each travel option, and ultimately the likelihood and severity of crashes occurring on Saanich roads.

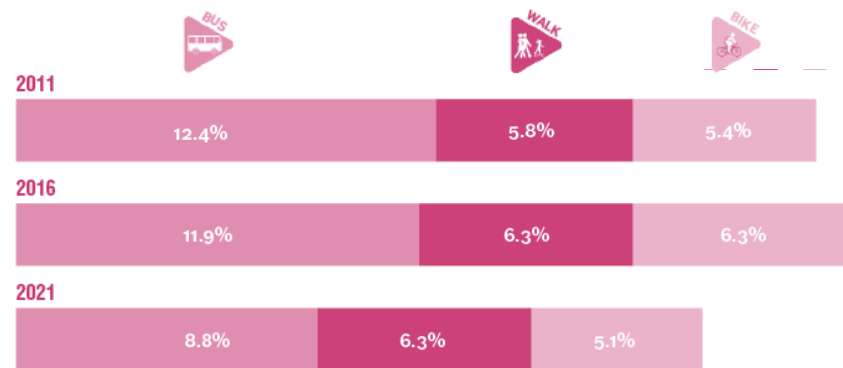
While the percentage of commute trips made by walking, cycling, and transit in Saanich has steadily increased over the past 25 years, the rate dropped from approximately 24% in 2016 to 20% in 2021 which may be due to changed behaviours related to the COVID-19 pandemic.

The CRD's 2017 *Origin-Destination Household Travel Survey* provides data regarding all trip types and found that approximately 23% of all trips in Saanich are made by walking, cycling and transit, including approximately 10% by transit, 8% made by walking, and 5% made by bicycle.

Through the Climate Plan, Saanich has established a target of 36% all trips being made by active modes (walking, cycling, transit) by 2030 which is also reflected in the District's 2023 Active Transportation Plan update.



Travel Mode Share, Commute Trips (2021 Census)



Historic Travel Mode Share, Commute Trips (Census)

Land Area + Growth Centres

At approximately 107 km² in land area, Saanich is the largest municipality in the Capital Region. This represents an overall population density of approximately 1,137 people per km², and greater if considered for the areas inside the Urban Containment Boundary (UCB). Rural Saanich makes up 47 km², or about 43%, of Saanich's total land mass.

In the Official Community Plan (OCP) several Primary Growth Areas are identified that encompass the Centres, Corridors, and Villages where growth and development has, and will continue to be focused. The Primary Growth Areas include:

Uptown Core

Centres

Cedar Hill	Quadra-McKenzie
Hillside	Tillicum-Burnside
Royal Oak	University

Primary Corridors

McKenzie Avenue	Tillicum Road
Quadra Street	Shelbourne Street
Burnside Road West	

Villages

Broadmead	Four Corners
Cadboro Bay	Gorge
Cordova Bay	Strawberry Vale
Feltham	

Saanich's rural area is characterized by agricultural land use, natural areas, and mostly single-family housing on large lots. The road network that services this area consists of Major, Collector and Residential roads that typically have narrow pavement widths and are not constructed to the standard set by Saanich's road classification system. They are also heavily lined with vegetation, and tend to have more hills, curves and rough surfaces compared to urban roads.

Additional information on the policy and planning context supporting the RSAP, as well as key national and provincial road safety directions are highlighted in **Appendix A**.



3.2 Road Safety Partners

Collaboration is essential to the development and implementation of the actions in the RSAP and achievement of Vision Zero. Accountability for road safety is spread across different levels of government, private and public agencies, and partner organizations. Each partner has its own mandates and priorities for road safety, but when brought together, their individual programs and services can lead to significant improvements for the sector and the District. This section highlights the different governments, agencies, and organizations that have played a role in developing the RSAP and will be crucial to implementation.

Ministry of Transportation & Infrastructure (MOTI)

MOTI has jurisdiction over Highway 1, Highway 17, and McKenzie Avenue between these highways, which are major roads and have among the highest vehicle crash rates.

Capital Regional District (CRD)

The CRD has jurisdiction over regional trails in Saanich, including the Galloping Goose and Lochside Trails, and plays a key role in coordinating action between local municipalities and promoting regional traffic safety.

Neighbouring Municipalities

Saanich shares boundaries with Victoria, Oak Bay, Esquimalt, View Royal, Central Saanich, and Highlands. Ensuring that transportation infrastructure, safety programming, and enforcement across these governments will allow for a stronger approach to achieving Vision Zero.

Saanich Police Department (SPD)

The SPD plays an important role in enhancing the safety of all road users through their traffic enforcement efforts, with particular emphasis on speeding, distracted driving, and impaired driving offences. The SPD is committed to the application of new technologies, participation in road safety campaigns, and working with partner organizations to support improvements to transportation infrastructure.

Vancouver Island Health Authority (VIHA)

Local health professionals see the impacts of unsafe roads firsthand, delivering primary and long-term care to injuries and fatalities. Collaborating with VIHA will help to achieve the highest standard of response to incidents and efficient data collection.

BC Transit

As the regional transit service provider, BC Transit supports safe travel on Greater Victoria's transit network. Further collaboration with BC Transit will help identify safe connections to transit routes, while also working to increase transit uptake.

Infrastructure Canada

The Government of Canada is supporting improvements to safe and sustainable mobility through funding for improved transit and active transportation in communities across the country. Saanich will continue to work with Infrastructure Canada to build new infrastructure that will support mode shift and improve road safety outcomes.

Transport Canada

Transport Canada establishes many of the legislative and regulatory parameters for the vehicles that may operate on roads in Canada. The District will look to Transport Canada to continue to promote safer vehicles on Saanich roads.

Insurance Corporation of British Columbia (ICBC)

ICBC plays a multi-faceted role in road safety in B.C., both in collecting crash data and funding local safety improvements. Saanich will continue to engage ICBC to obtain up-to-date data on crashes on Saanich roads, while also seeking out funding to support infrastructure improvements identified in the RSAP.

RoadSafetyBC

RoadSafetyBC governs drivers in B.C., implements road safety policies, and works with local governments and other partners to reach a goal of zero traffic fatalities. The District will work with RoadSafetyBC to help realize safer road users and improve safety on Saanich roads.

School District No. 61 & 63

School District No. 61 and 63 collaborate with Saanich on the Safe Routes to School program, identifying opportunities to improve safety in schools for children and youth of all ages. By continuing to work together to educate on and develop safe travel options, more children and families will choose these modes for their daily use.

BC Highway Patrol | CRD Integrated Road Safety Unit

The BC Highway Patrol's Capital Regional District Integrated Road Safety Unit (CRD IRSU) is an integrated traffic enforcement unit staffed by the Royal Canadian Mounted Police and Municipal police agencies. CRD IRSU provides additional traffic enforcement across the region that supplements the efforts of individual police agencies to enhance road safety in their respective communities.

BC Emergency Health Services & BC Ambulance Service

The BC Ambulance Service provides public ambulance service in British Columbia, including emergency pre-hospital treatment, transportation by ambulance, and ambulance dispatch. Working with emergency service providers like BCAS will enhance post-crash care and response and provide valuable information to inform the RSAP.

3.3 Community Equity + Road Safety

The District is committed to improving its programs and practices as they relate to Diversity, Equity, and Inclusion. It is guided by the principle that embracing diversity enriches the lives of all people and enhances the cultural fabric of the community².

Transportation equity is focused on seeking fairness in the transportation system. It includes the fair distribution of transportation resources, inclusive participation in decision-making processes and recognition of the prevailing injustices that shape different levels of need and power within transportation systems³.

Saanich envisions a transportation system that is safe, accessible, and free from traffic-related fatalities and serious injuries for all road users. However, to achieve this vision it is first important to recognize the disparities that currently exist in the transportation system that highlight the need for a stronger focus on equity.

The following information highlights some of the challenges that people face when they travel in Saanich depending on where they live, what their level of income is, how old they are, and their ability to use different modes of travel. It also highlights how a lack of infrastructure and/or poor infrastructure condition can lead to safety issues in the transportation network. Through future engagement, Saanich will endeavour to connect with more people, including equity-deserving individuals to learn more about the barriers that different people face and the opportunities to work towards a more equitable transportation system.

² District of Saanich Diversity, Equity, and Inclusion Strategic Framework, 2023.

³ Williams T, Sones M, Poirier Stephens Z, Fischer J, Barr V, Winters M. Practices and Inspiration for sustainable transportation equity: Case studies from Canadian cities. Interventions, Equity, Research, and Action in Cities Team, 2023.

Housing + Transportation Costs

Affordability is a significant and ongoing concern for many households. In 2020, the Capital Regional District conducted a study of the combined housing and transportation costs as a measure of affordability and found that the average annual household cost in Saanich was one of the highest of the core municipalities in the Capital Region. The study concluded that the fixed costs of housing and vehicle ownership are significant and household affordability is impacted by several factors including where people live, whether they need to own a vehicle to access employment, education, and services, and if they have access to different transportation options. While housing costs are fixed, transportation costs (excluding vehicle ownership) can be lowered by living in areas with greater density and access to more transportation options.

The relationship between housing and transportation costs was explored through conversation with a group of new immigrants. Several people in the group explained that they live in communities outside Saanich where housing is more affordable, but because of the distance to commute to Saanich to access required services and education, they need a vehicle. They also explained that transit was not a reliable option and that the cost to take the bus, on top of owning a vehicle, was not affordable.

Rural + Semi-Rural Areas

A lack of safe walking and cycling infrastructure, limited transit service and basic transit facilities, greater distances between destinations, and rural road design that makes direct travel

difficult, are all factors that contribute to the challenges that people in rural and semi-rural areas encounter when they try to travel on roads using different modes.

Saanich policy supports development and infrastructure investments inside the Urban Containment Boundary. Centres for employment, education, and recreation are generally located in urban areas, which means rural residents must commute longer distances to access jobs and services. Perhaps not surprisingly, rural and semi-rural areas have some of the highest rates of vehicle ownership in the District, and overall, 90% of commuting trips from Rural Saanich are in a vehicle or as a vehicle passenger.

Accessibility

As of 2021, an estimated 22% of Saanich residents are living with one or more disabilities. The nature and severity of their disabilities varies and can include physical disabilities, as well as sensory and cognitive impairment. Through conversations with individuals with disabilities we have learned that it can be difficult for them to move safely and independently for a variety of reasons. Examples of some of the challenges that people face include difficulties accessing bus stops that are separated from the sidewalk by a bike lane (called island or floating bus stops) and difficulties navigating intersections that may or may not be signalized and may have different types of controls depending on where they are located. Several individuals expressed a need for consistent and predictable infrastructure, as well as more measures in place to accommodate their diverse needs.

Non-Drivers

Due to age or ability, some people cannot drive a car. Others can drive but choose not to for ethical or moral reasons. For these people, navigating the transportation system to access employment, school, and services can be challenging. Seniors, people with disabilities, and children and young people regularly use Saanich's walking, cycling, and transit networks to meet their daily needs, yet the data shows that people using these modes are more vulnerable and face a higher risk of death or serious injury when involved in a crash on roads. Non-drivers are also exposed to all the challenges of navigating a road network that prioritizes personal vehicles. This includes many residential roads without sidewalks.

Saanich is making important investments in road safety, active transportation, and e-mobility. Interest in sustainable transportation modes is growing, and there is greater awareness now that a more equitable transportation system is necessary to ensure that everyone is free to travel using the modes they choose. A lack of transportation options should not result in other forms of social and economic disadvantage.

Improving road safety and providing more transportation options for residents across the District to reach destinations in their communities and beyond requires a systematic approach and careful consideration of residents' diverse needs.



Addressing Equity in Road Safety

What is Equity in the Context of Road Safety?

A fundamental assumption of Vision Zero is that all people have the right to move about Saanich safely. To create a safe transportation system, improvements to road safety must recognize that transportation resources have not always been fairly distributed across communities and space, and not all social groups and neighbourhoods start from the same place in terms of road safety investments and practices. In addition, discrimination, and exclusion from systems of power has meant that the voices and needs of marginalized people have been overlooked in decisions about transportation.

Addressing Equity in the RSAP

Steps have been taken to ensure that the processes and outcomes of the RSAP serve all Saanich residents, including people of all ages, abilities, backgrounds, and identities.

A spatial analysis developed using Census data shows the distribution of equity-deserving populations (called “factors” in the analysis) across the District. The areas of highest need are in the Saanich Core (around Uptown), Eastern Tillicum and Southern Carey, as well as in parts of Shelbourne and Gordon Head, near the University of Victoria.

The analysis was used in the planning process to identify locations for engagement events and outreach. It was also used to develop the actions in Section 7 and identify priority locations in the network screening correctability analysis. Going forward the information from the analysis will help to inform future locations for priority road safety projects.

More information about the equity analysis is available in **Appendix C**.

What Factors are Included in the Equity Analysis?

- Income
- Number of Seniors
- Number of Youth
- Indigenous People
- Recent Immigrants
- Non-English Speakers
- Visible Minorities
- Rent-Burdened Households
- Single Parent Households



Strategies to Address Equity in Road Safety

Inspired by work undertaken by the Vision Zero Network, four (4) broad strategies have been established to address equity in road safety in Saanich.

1. Continue to Invest in Sustainable Transportation Modes

Investing in sustainable transportation modes, including infrastructure to support active travel and transit, ensures that all people can exercise their right to travel safely in Saanich and participate in the social and economic life of our communities.

2. Invest Where Needs are Greatest

Road safety improvements are often focused in locations experiencing the highest number of crashes. While this should continue to be a key approach, consideration should also be given to how priorities are identified in consideration of the need to support equity-deserving people and neighbourhoods. This will ensure our most vulnerable are supported and road safety concerns are better addressed in under-served areas.

3. Engage with Saanich Residents

Data is important, but it does not tell the full story. Assessing which needs are greatest requires data combined with conversations with Saanich residents. If done well, both the District and the community will better understand needs, uncover new information, and be empowered to continue supporting road safety improvements.

4. Re-Think the Role of Enforcement

Vision Zero does not necessarily call for more traffic enforcement. Instead, the focus is much broader and supports of the SSA by considering not only traditional enforcement of safe road users and appropriate speeds, as examples, but also ensuring supportive land use planning and post-crash patient care.



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4. Current State of Road Safety

4.1 Overall Crash Trends

Between 2016 and 2020, 12 fatal crashes occurred on Saanich roads (TAS data). Approximately 4,600 non-fatal injury crashes were reported in Saanich through ICBC claims data. Crashes resulting in injury represent 43% of all reported crashes over the same period (almost 11,000 total claims).

To put this in perspective, on average once every...

4 hours
a crash occurs in Saanich

10 hours
an injury-causing crash occurs in Saanich

6 months
a crash resulting in a fatality occurs in Saanich

While these figures highlight the large number of crashes occurring each year and the need for action, it is noted that Saanich is experiencing an approximately 30% lower crash rate per population as compared to other peer communities.

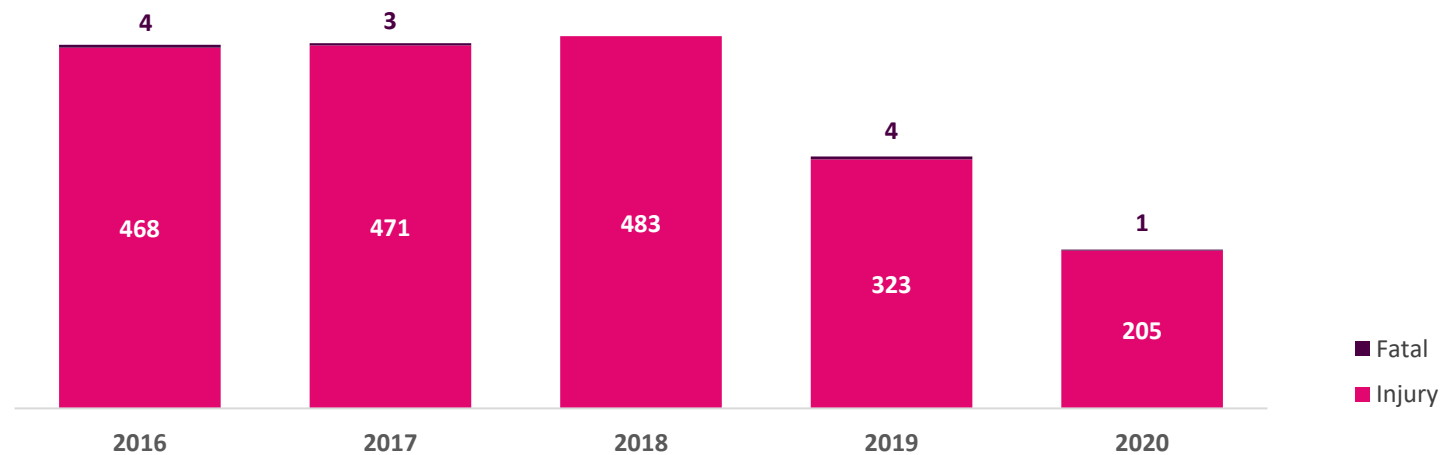
4.2 Annual Crash Trends

The TAS database indicates that a modest increase in crash occurrence took place between 2016 and 2018, before decreasing significantly in 2019 and 2020. The reduced total number of crashes in 2020 corresponds with the decrease in total trips being taken during this period due to public health measures. There is no clear reason for the reduction in crashes by almost one-third between 2018 and 2019.

Fatal crashes were highest in 2016 and 2019, with 4 fatal crashes occurring each year. 2018 experienced the most total crashes but no fatalities.

Year over year trends in crashes for Saanich between 2016 and 2020 are shown in **Figure 1** below.

Figure 1. ANNUAL CRASH TRENDS IN SAANICH (TAS, 2016-2020)



What is the Network Screening?

Network screening refers to the technical process used to identify crash-prone locations within the transportation network.

By factoring for crashes resulting in fatalities and involving vulnerable road users, the network screening process identifies locations where the crash rate and severity is highest, with the end goal of strategically identifying where to focus efforts to mitigate road safety issues.

4.3 Crash Trends by Location

Crashes occur across Saanich's road network. Crashes occurring between 2017 and 2021 were mapped using ICBC claims data, as shown in **Figure 2**. The crash data demonstrates that some of the greatest concentrations occur along high-volume corridors such as Douglas Street and Blanshard Street, McKenzie Avenue, Shelbourne Street and Tillicum Road, along with several locations along or intersecting with Highway 1 and Highway 17, such as the Highway 1 / McKenzie Avenue and Highway 17 / Sayward Road intersections.

Through subsequent analysis referred to as a network screening study, the ICBC crash data was refined to identify where the greatest concentrations of crashes resulting in serious injuries and fatalities occur. This analysis focused on roads under Saanich's jurisdiction, excluding highways under the jurisdiction of MOTI and crashes occurring on private property. Locations were selected using the total number of crashes over the five (5) year period, with weightings applied where crashes resulted in a fatality or involved a vulnerable road user.

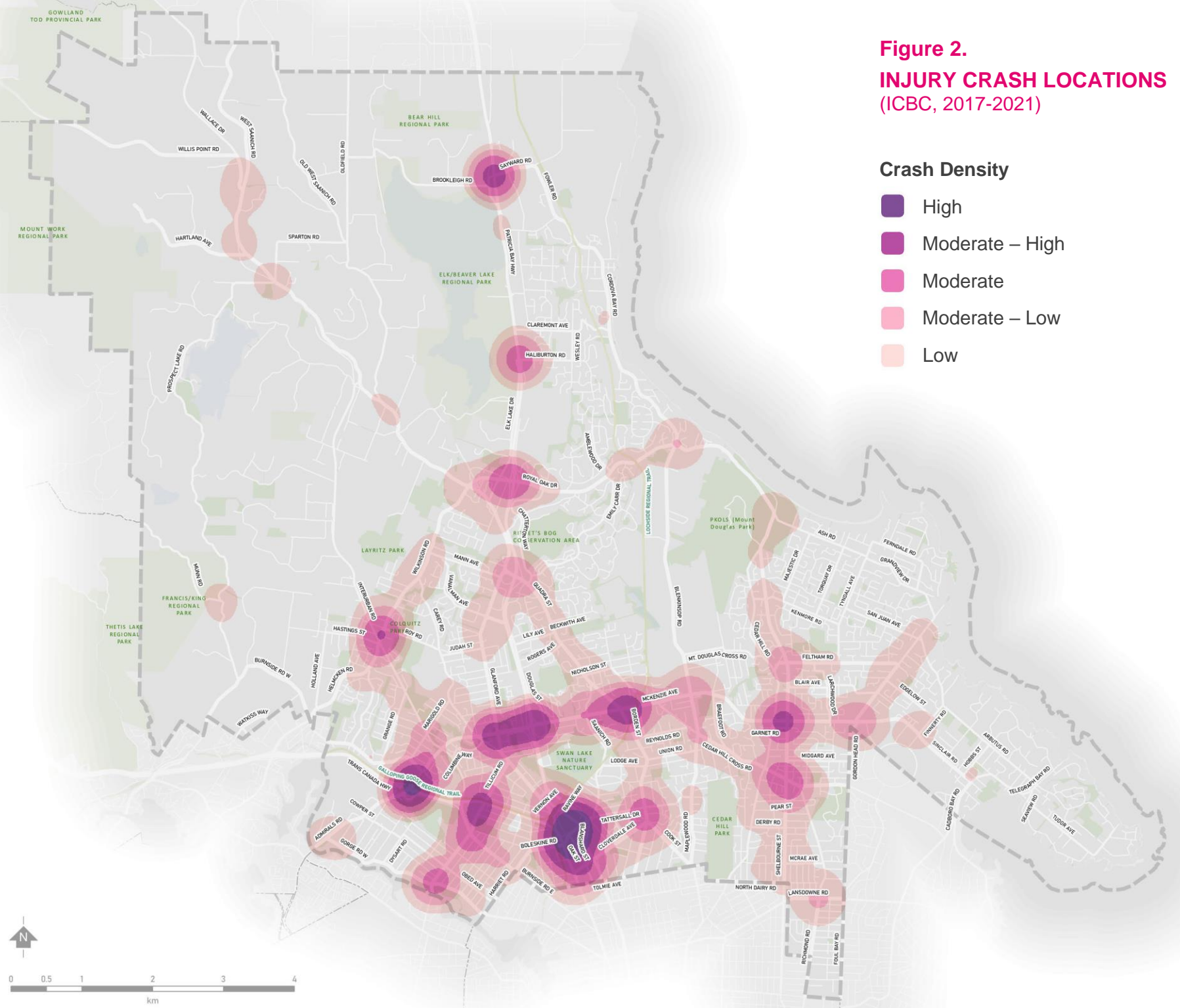
Using the results of the initial network screening analysis, twenty (20) high-crash locations were selected (including intersections and corridors) that will be priority locations for road safety improvements. The District intends to focus investments in road safety on these locations, as well as to update the network screening analysis in future to reflect progress and changes in crash trends.

More information on the network screening process and the locations chosen for correctability analysis is provided in **Appendix B**.

Figure 2.
INJURY CRASH LOCATIONS
 (ICBC, 2017-2021)

Crash Density

- High
- Moderate – High
- Moderate
- Moderate – Low
- Low





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5. Main Crash Factors

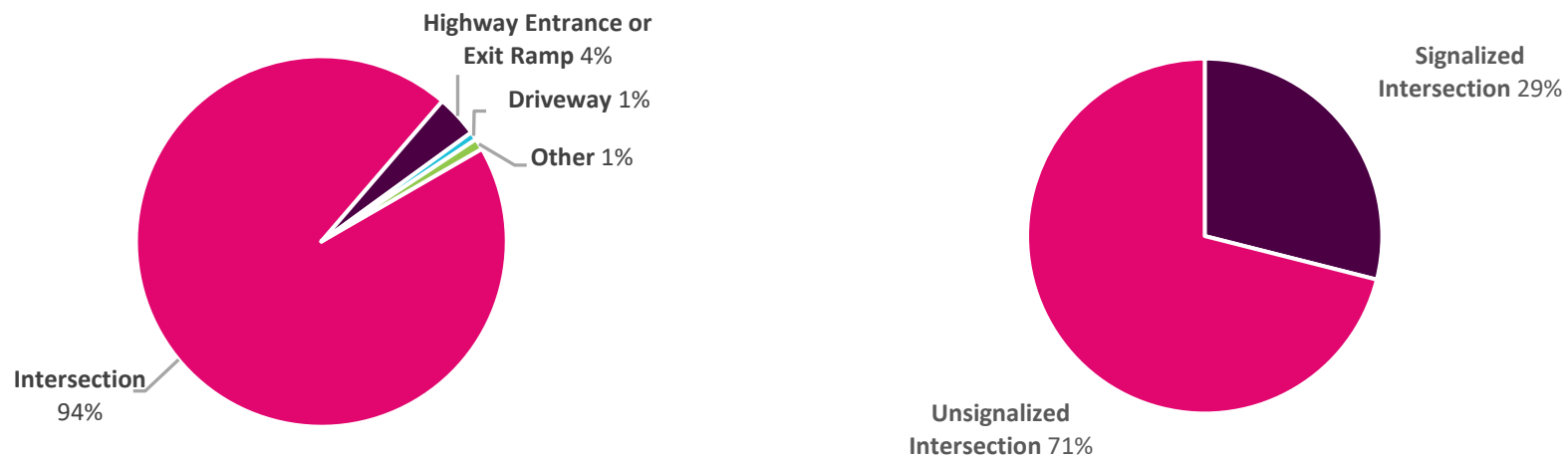
5.1 Location Characteristics

Not surprisingly, most crashes occur at intersections where complex interactions between various travel modes can lead to conflict. Approximately 19 of every 20 crashes in Saanich occur at intersections (per TAS data), which is much higher than the proportion of crashes occurring at intersections in most other communities.

The vast majority of crashes occur at intersection, nearly three-quarters (71%) of which occur at unsignalized intersections. The high proportion of crashes at unsignalized locations reflects the large number of unsignalized intersections in Saanich but is perhaps also a result of driver indecision and/or confusion where explicit traffic control (i.e., signalization, stop signs) is not present.

Crashes by road location characteristics are shown in **Figure 3**.

Figure 3. CRASHES BY LOCATION (LEFT), CRASHES BY TRAFFIC CONTROL TYPE (RIGHT) (TAS, 2016-2020)



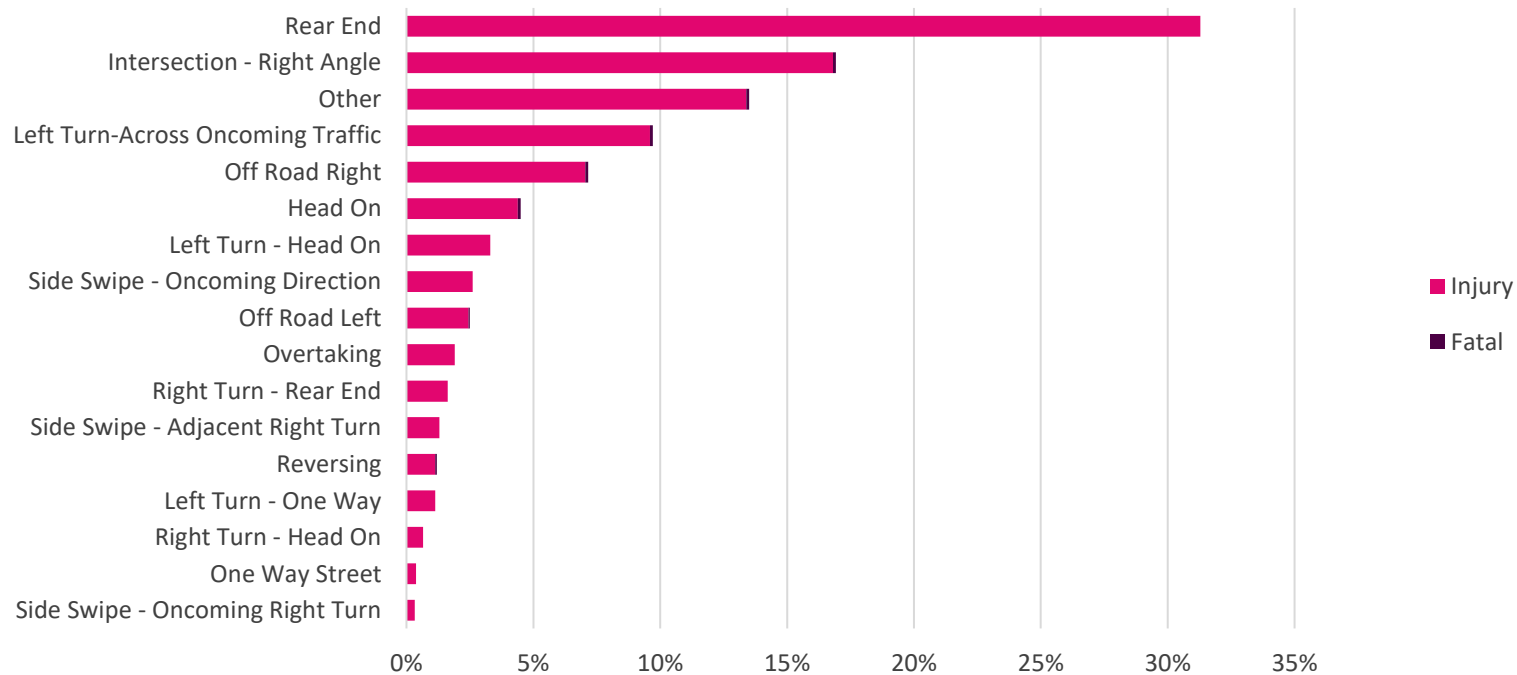
5.2 Top Crash Patterns

Rear-end crashes are the most common crash type, representing over 30% of all crashes in Saanich. None of the rear-end crashes were found to be fatal, suggesting a lower overall severity among these crashes.

Other common crash patterns include intersection right angle, left turn-across oncoming traffic, and off-road right. Each of these configurations typically leads to more serious impacts, with crashes involving head-on patterns and/or left turn movements often resulting in the most severe outcomes. Crash types where the greatest proportion result in a fatality include head on, left turns across on-coming traffic, intersection right angle, and off-road right turn.

A full account of crash patterns and configurations is presented in **Figure 4** below. Please note, fatalities are shown in the chart but are difficult to identify given the small number compared to injuries.

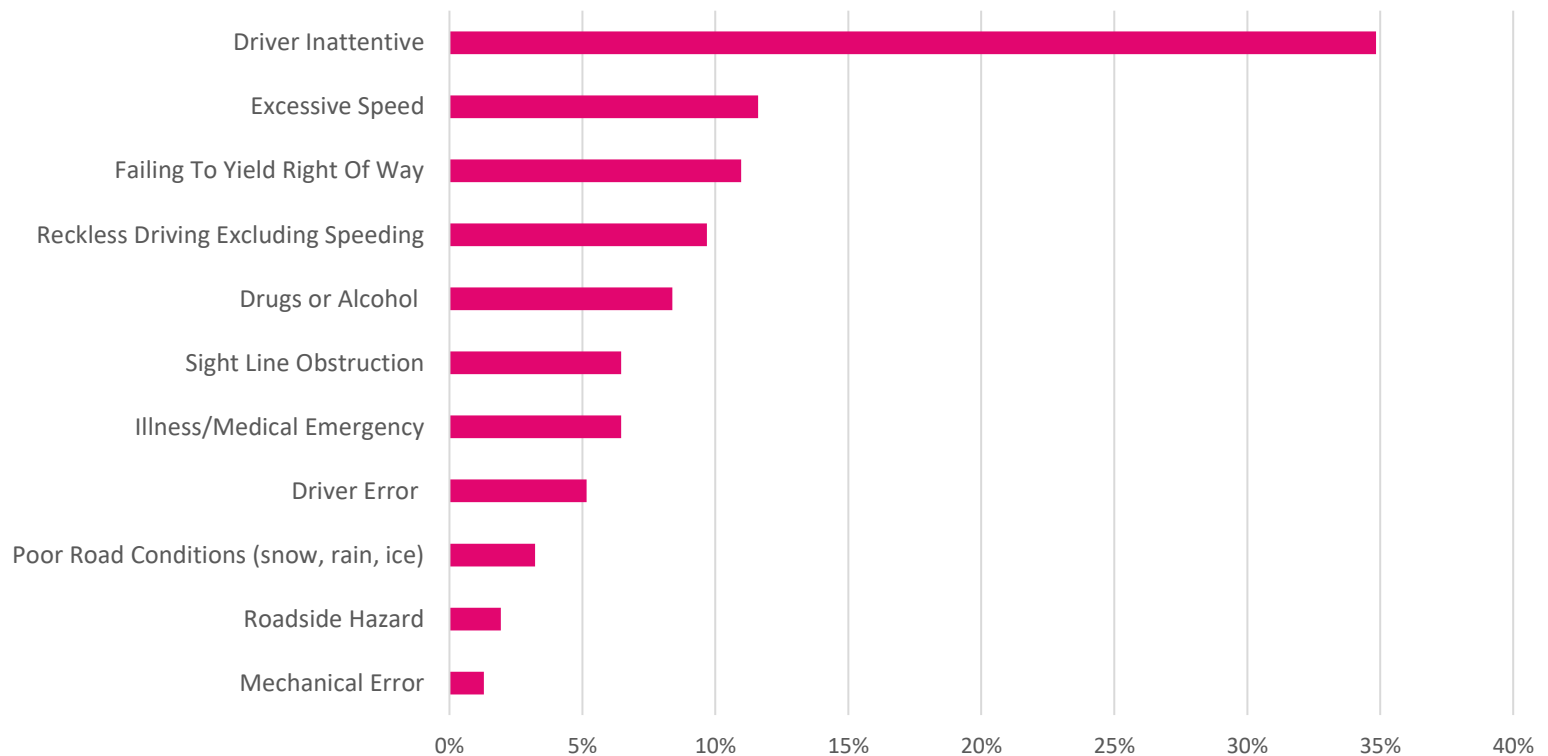
Figure 4. CRASHES BY TYPE (TAS, 2016-2020)



5.3 Top Contributing Factors

As shown in **Figure 5**, the most common contributing factor as reported by SPD was “driver inattentiveness” which was a contributing factor in over 50% of crashes where causes are known. This percentage could be misrepresented, however, due to drivers not admitting fault or culpability when questioned by police (e.g., a driver may deny that they were texting while driving).

Figure 5. CONTRIBUTING FACTORS TO CRASHES (TAS, 2016-2020)



5.4 Importance of Age + Gender

Age and gender demographics were also shown to be significant factors in serious crashes. As shown in **Figure 6**, younger road users were involved in most serious crashes, with people ages 15-24 accounting for 24% of all serious crashes and the highest number of fatal crashes (4). The 25-34 age group accounted for the second most serious crashes at 22%.

Men were found to be more involved than woman in crashes, especially fatal or serious crashes, with men accounting for 70% of all recorded fatal or serious crashes, per **Figure 7**.

Figure 6. CRASH TRENDS BY AGE GROUP (TAS, 2016-2020)

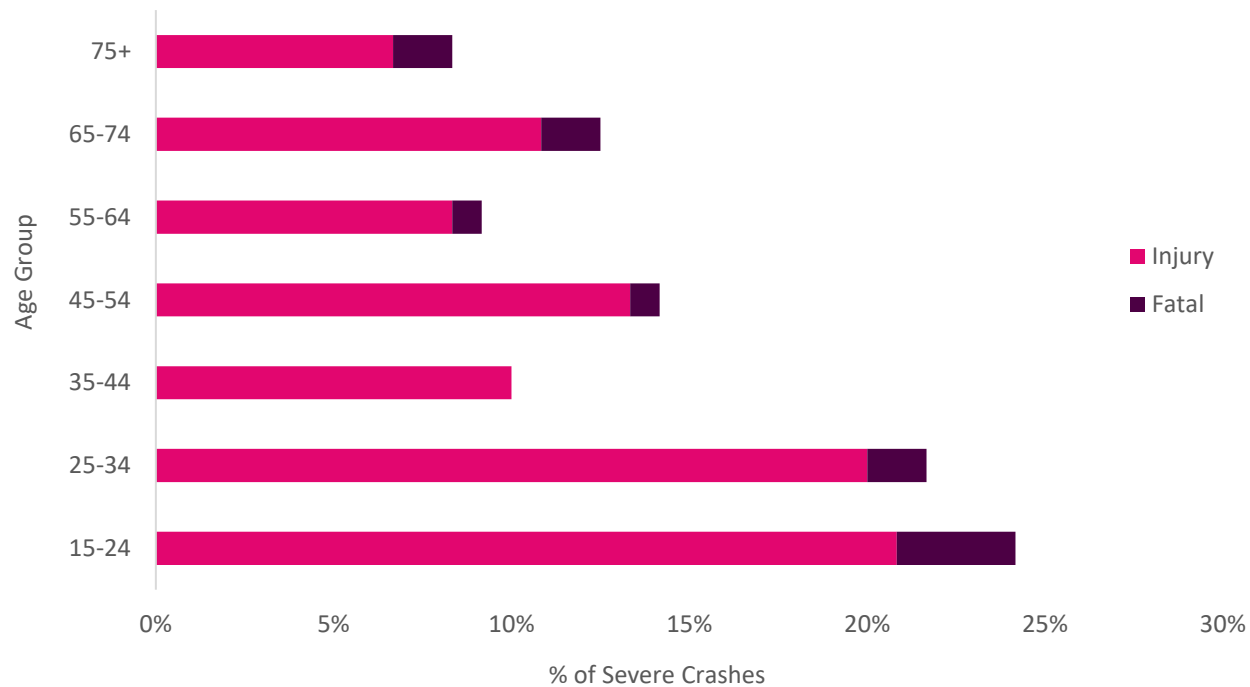
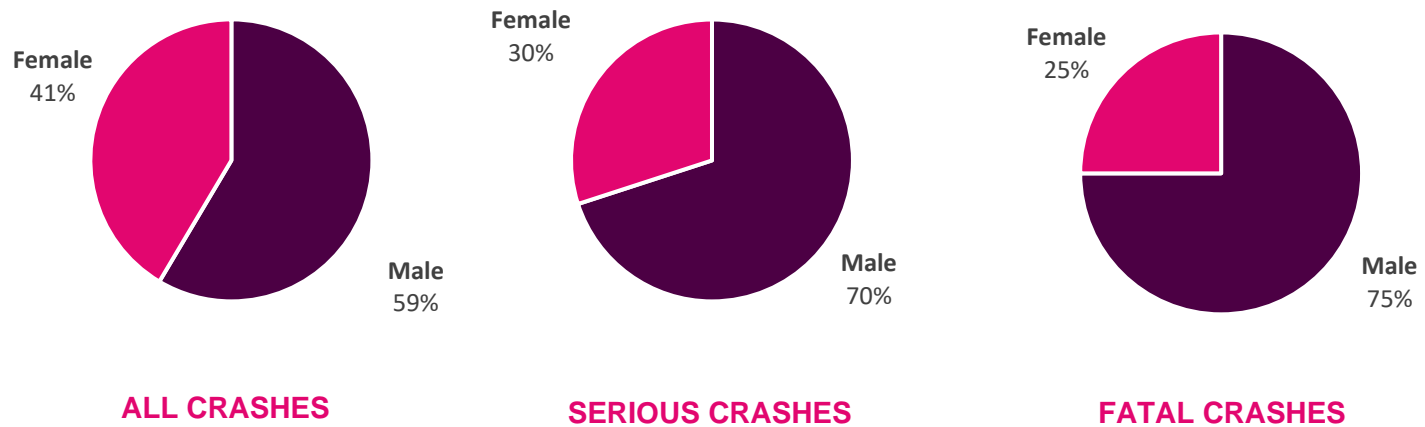


Figure 7. CRASH TRENDS BY GENDER (TAS, 2016-2020)



5.5 Vehicle Type

It is also important to understand the types of vehicles involved in crashes, as different vehicle sizes and models can affect the likelihood of a fatal or serious crash occurring. Most serious crashes involved cars (63%), followed by trucks and SUVs at 13% and 12% respectively.

New vehicles on the road are increasingly trucks and SUVs as they made up 73% of all new vehicle registrations between 2020-2021. SUVs have significantly increased in the share of new vehicle registrations over time, reaching 54% of all new registrations in 2021, up from 35% of new registrations between 2011-2016. Larger vehicles like trucks and SUVs typically have more serious consequences when involved in crashes due to their size and mass.

5.6 Crashes Involving Vulnerable Road Users

Increasing the number of trips made by active transportation is a key goal of the District's ATP, and is something that improved comfort and safety walking, cycling, and other self-propelled travel options can help to address. Pedestrians and cyclists are more likely to suffer serious injuries or death than crashes involving only motor vehicles due to the lack of protection for these modes compared with motor vehicle occupants. Not only are the consequences of pedestrian and cyclist crashes generally more serious, but the safety concerns many Saanich residents feel may also limit the number of trips made by active transportation.

Crashes involving these modes were analyzed to understand overall trends and locations of concern. Detailed analysis of trends is based on TAS data, except for crash mapping which is based on ICBC data.⁵

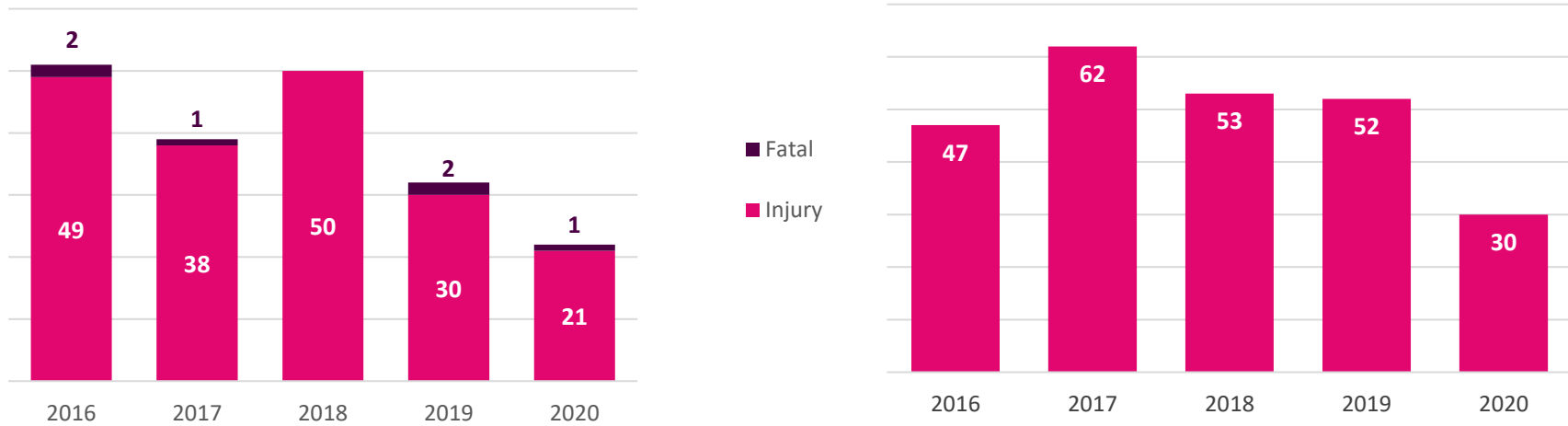
Pedestrian + Cyclist Crashes

Each year, approximately 40 crashes occur in Saanich involving pedestrians. Annual trends have shown upwards of 50 pedestrian crashes (2018), with a decline in 2019 and 2020. Refer to **Figure 8**). Crashes involving pedestrians often occur at intersections and involve one or more vehicles. The crash severity is typically high where pedestrians are involved, with 6 fatalities occurring between 2016 and 2020 (per TAS data).

Each year, approximately 50 crashes occur in Saanich involving people on bicycles. Annual trends have shown between 47 and 62 cyclist crashes each year between 2016 and 2019, with a significant drop in the number of occurrences in 2020 presumably as a result of the fewer number of trips made during the COVID-19 pandemic. The TAS data indicates that despite the approximately 50 crashes each year involving cyclists, none over the past five years have resulted in a fatality. Despite this, crashes involving cyclists commonly result in serious injuries.

⁵ Inconsistencies in the recording of ICBC's data on crashes involving pedestrians and cyclists in 2021 resulted in crash totals for these modes being underrepresented. It is assumed that the same data discrepancy does not affect TAS data.

Figure 8. ANNUAL TREND IN PEDESTRIAN CRASHES (RIGHT) AND CYCLIST CRASHES (LEFT) (TAS, 2016-2020)



Motorcycle Crashes

Trends in motorcycle crashes showed upwards of 15 crashes in each of 2016 and 2017, with a significant reduction during the period of 2018 to 2020 (8 in 2018, 4 in 2019, 7 in 2020). Two (2) motorcycle crashes between 2016 and 2020 resulted in fatalities, representing approximately 4% of all crashes involving a person on a motorcycle.

Most motorcycle crashes in Saanich (92%) occurred on roads under the District’s jurisdiction. The remainder were on corridors such as Highway 1, Highway 17 and McKenzie Avenue that are under MOTI’s jurisdiction.



5.7 Community Equity + Road Safety

An equity analysis developed using Census data establishes a composite equity score for each census tract in Saanich (23 total) that is comprised of nine criteria generally factoring for age, income level, and race and ethnicity. A description of the analysis is available in **Appendix C**. The locations of crashes in relation to equity-deserving areas in Saanich is explored here. It is important to note, however, that crash data compiled by ICBC and SPD does not include demographic information on victims, so it cannot be determined if crashes in equity-deserving areas involve equity-deserving people.

Equity Analysis of Total Crashes

An analysis of the composite equity score against ICBC crash data provides insight into the density of crashes in equity deserving areas in Saanich. The highest concentrations of crashes occur in areas of moderate-high or high equity need including around Uptown Core, and along Shelbourne Street and McKenzie Avenue. This may be partially the result of areas of high equity need being located along busy corridors with higher traffic volumes where crashes occur at greater frequency. Areas of lower equity need are generally located in the northern, eastern, and rural sections of Saanich, away from major corridors, where traffic volumes are lower.

Equity Analysis of Pedestrian and Cyclist Crashes

Looking at the locations of pedestrian and cyclist crashes, it appears that pedestrian crashes are focused near areas of higher density and mixed land uses, such as the Uptown Core, Shelbourne Street, and Tillicum Road. Each of these areas borders at least one area of high equity need. These areas generally include corridors and intersections with high traffic volumes, making them good candidate locations for improvements to address safety concerns and provide safe infrastructure for pedestrians.

It is important to note that areas with lower equity need also experience concentrated pedestrian crashes, including in Royal Oak (near the Highway 17/Royal Oak Drive intersection) and along Interurban Road near McKenzie Avenue.

Cycling trips are generally longer distance and less confined to one geographic area. Crashes involving cyclists tend to be concentrated along key corridors such as Douglas Street, McKenzie Avenue, and Shelbourne Street, as well as in intersections along key cycling corridors such as the Lochside and Galloping Goose Regional Trails and along McKenzie Avenue leading to the University of Victoria. Many of these locations also border on at least one area of high equity need. Cycling crashes are generally less frequent in areas of low equity need, including in areas such as the northern sections of the Lochside Regional Trail and along West Saanich Road.



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6. What We Heard

6.1 Engagement Process

Road safety cannot be fully understood without first listening to the experiences and perspectives of Saanich residents. Community engagement for the RSAP took place in 2023, through a process designed to seek input from a diverse spectrum of community voices and partner organizations. To offer multiple opportunities for participation throughout the project, two rounds of engagement were offered - one in the spring and the other in the fall.

The first round of engagement was in Spring 2023 and it focused on understanding the issues and opportunities for road safety in Saanich. In some of the engagement activities, the Road Safety Action Plan was presented alongside the Active Transportation Plan Update project, to allow participants the opportunity to consider the objectives of both projects together. During this period, the District also consulted with stakeholder organizations in a collaborative workshop. Activities from the spring engagement and a summary of what we heard is documented in the Engagement Summary.

The second round of engagement will take place in Winter 2024. During this time the draft RSAP will be presented to the community for review and feedback. Suggestions and comments received during this period will inform development of the final RSAP.



Figure 10. SURVEY DEMOGRAPHICS BY LOCATION AND AGE

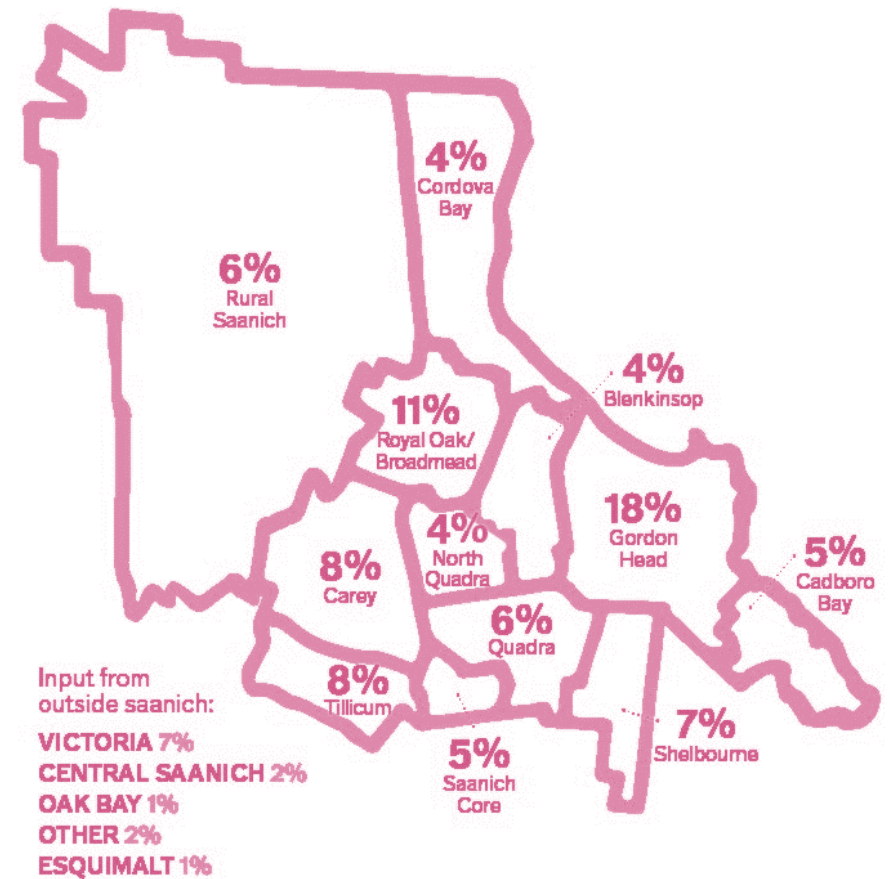
6.2 Participation Levels

In the first round of engagement, the District designed a joint survey for the Active Transportation Plan Update and Road Safety Action Plan projects. In total, 600 people completed the survey with **547** opting to answer questions about road safety in Saanich.

As shown in **Figure 10**, survey participation came from all twelve Saanich neighbourhoods, with the highest response rate coming from Gordon Head and Royal Oak/Broadmead. The largest number of survey participants were between the ages of 40 and 49 years old, representing 20% of all participants.

The survey also contained a digital mapping exercise, where participants could provide location-based feedback on a virtual map of Saanich. In total, participants placed 2,926 points showing their concerns.

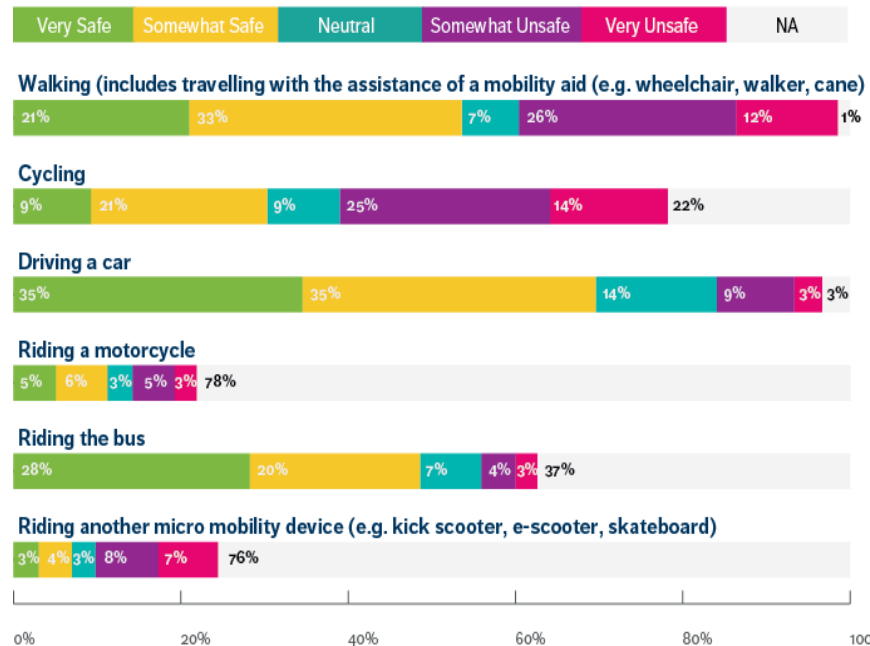
The full results from the online survey can be found in the Road Safety Action Plan Engagement Summary, September 2023.



6.3 Survey Feedback

With a response rate in excess of 600 people, the online survey provided a number of key take-aways that broadly represent Saanich residents' views on road safety. The following are some of the highlights from the survey.

“How safe do you feel doing the following in Saanich?”



“If there is one thing that would make you feel more comfortable travelling around, what would it be?”

1. **Bike Lanes** (109)
2. **Sidewalks** (107)
3. **Road Improvements** (79)
4. **Enforcement** (66)
5. **Traffic Calming** (48)



6.4 Key Findings

Through the engagement process, community members shared their experiences travelling in Saanich, along with ideas to make its roads safer. Engagement participants indicated what they felt would have the biggest influence on achieving Vision Zero. The following are the top three themes that emerged.



Enhanced Road Design

Participants mentioned better separation between motor vehicles and active travel users, implementation of traffic calming to reduce speeds, and providing appropriate road widths for all user groups.



More Police or Automated Enforcement

Participants observed unsafe road behaviours, such as speeding and failure to yield, and noted that more visible enforcement could lead to safer driving conditions.



Improved Road Maintenance

Beyond new infrastructure projects, survey participants recommended that Saanich maintain its existing road network well, noting specific locations where there are potholes and faded paint lines.

“Lack of safe walking or cycling facilities” (60%) and “speeding” (37%) were the greatest perceived contributors to injuries or deaths on Saanich roads

84%

Believe it is Important that Saanich Aim for Vision Zero

43%

Disagree or Strongly Disagree that Saanich Streets are Safe

53%

Of People Who Cycle Feel Somewhat or Very Unsafe When Cycling in Saanich

6.5 Stakeholder Workshop

The Spring 2023 workshop invited key stakeholders to provide input at the early stage of the RSAP's development. In total, 38 participants attended, representing the following groups:

- Active Transportation Advisory Committee
- BC Ministry of Public Safety & Solicitor General
- BC Transit
- Broadmead Area Residents Association
- Cadboro Bay Residents Association
- Capital Bike
- Capital Regional District
- City of Victoria
- Cordova Bay Community Association
- Falaise Community Association
- Gordon Head Community Association
- Greater Victoria Placemaking Network
- Livable Roads for Rural Saanich
- Mount Tolmie Community Association
- Mount View Colquitz Community Association
- Planning Transportation and Economic Development Advisory Committee
- Prospect Lake District Community Association
- Quadra Cedar Hill Community Association
- Road Safety BC
- Royal Oak Community Association
- Saanich Police Department
- St. Andrew's High School
- Walk On, Victoria

A key take-away from the event was that participants support the RSAP process and the importance of improving road safety in Saanich. Participants indicated support for the Vision, Mission and Guiding Principles that were presented, and highlighted improved sidewalks, traffic calming and reduced vehicle travel speeds as key opportunities to improve road safety in Saanich.



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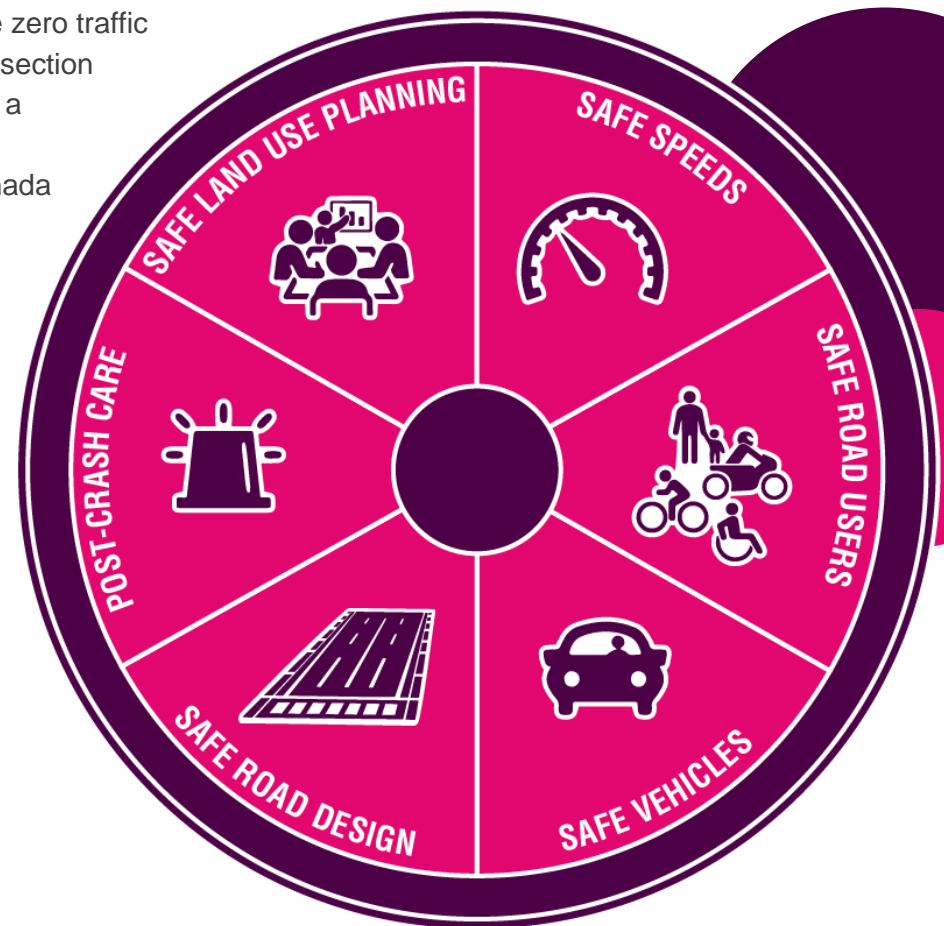


7. Action Plan

7.1 Taking Action to Eliminate Traffic Fatalities and Serious Injuries (Getting to Zero)

Over the next 10 years Saanich will take steps to achieve zero traffic fatalities and serious injuries. The actions outlined in this section are based on an analysis of crash data and the results of a comprehensive network screening. They also reflect a review of best practices from leading communities in Canada and from around the world, as well as discussions with Saanich residents, road safety partner, and District staff.

The approach taken to implementing the RSAP will centre on the Safe System Approach. This includes a series of 31 actions, each helping the District achieve at least one of the elements of the Safe System. A description of each of the elements is provided below and information is included on how actions taken by the District and its partners will help to achieve zero traffic fatalities and serious injuries on Saanich roads.





Safe System Element no.1

Safe Speeds

Research shows that higher speeds increase the risk of a crash and the likelihood that a crash will result in a serious injury or fatality. At higher speeds, drivers have a narrower field of vision and they have less time to react to unexpected occurrences. Crashes at higher speeds have worse outcomes for people. In addition, the faster a vehicle is moving the longer the stopping distance and the greater the force of impact will be.

In Saanich, excessive speed is the second leading cause of serious crashes, accounting for over 10% of the total.

Roads with higher posted speed limits are riskier, regardless of whether drivers exceed those limits. Most of the crashes reported in Saanich occur on Major or Collector roads, such as Shelbourne Street, McKenzie Avenue, Blanshard Street, and Douglas Street. Notably, several of these roads (or sections of these roads) fall within MOTI's jurisdiction. As well, many of these roads are within equity-deserving areas.

Engagement results indicate that speeding was one of the leading perceived contributing factors to serious injuries and deaths on Saanich roads.

The actions that address safe speeds focus on implementing the *Speed Limit Establishment Policy* and achieving reduced speeds throughout Saanich using speed limit reductions, traffic calming, and enforcement to minimize the risks of speed and allow the safe movement of all road users.

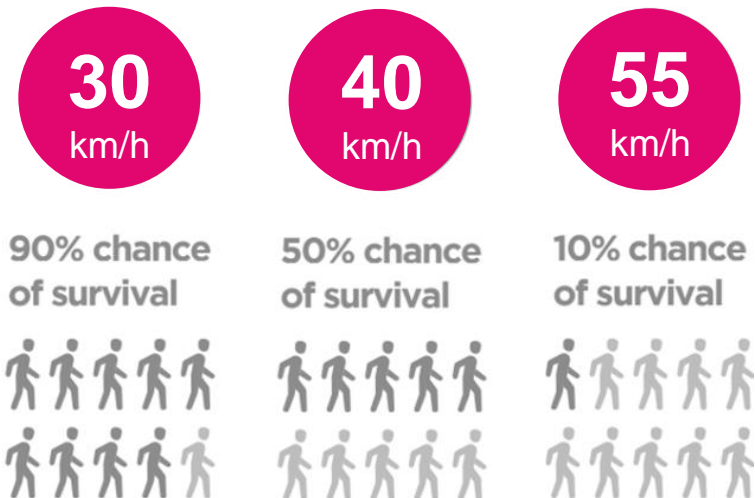


Key Actions to Improve Road Safety

Develop a Traffic Calming Policy & Program (Action 5)

Review Speed Limits to Support Reduced Speeds (Action 6)

Risk of pedestrian injury or death during a crash, based on vehicle travel speed (Vision Zero Surrey)





Safe System Element no.2 **Safe Road Users**

Individuals play an important role in road safety. While people may be responsible road users, mistakes happen, and sometimes poor decisions can have devastating consequences. Vision Zero recognizes that human error is inevitable. A focus of the SSA is to identify behaviours that contribute to crashes and enact changes that minimize the consequences of mistakes and poor decisions when they happen.

Being safe road users means individuals doing their part to understand and follow the rules, thinking about safety when they travel, and acting in accordance with their abilities and limitations. Working together to be responsible road users is critical to supporting a culture of safety and building equity within our transportation system. It is also an important step to addressing current road safety challenges.

Safe road users pay attention to their surroundings and travel with care in areas where different modes share the road. In Saanich this may include people walking, rolling, or riding. In Rural Saanich it may also include people riding horses or driving farm equipment.

Actions to encourage safe road users include investments in education to build awareness. They also identify include opportunities to strengthen enforcement of laws to safeguard all road users.



Key Actions to Improve Road Safety

Enforce Impaired & Distracted Driving Laws
(Action 7, 8)

Work with Partners to Implement Intersection
Safety Cameras (Action 16)





Safe System Element no.3
Safe Vehicles

The types of vehicles involved in a crash can have a significant impact on the outcomes. While speed is a major factor, other critical factors in crash severity include the size, weight, and design of a vehicle. Current trends are moving towards larger, heavier vehicles that are more impactful to people when they are involved in a crash. This is particularly important when considering vulnerable road users, who do not have the same level of protection as vehicle drivers. Research shows that as the share of SUVs and trucks on roads increases, so to does the number of fatal crashes involving pedestrians⁶. Across North America, larger passenger vehicles have consistently resulted in higher fatality rates for pedestrians⁷.

Many of the actions relating to vehicle safety are beyond Saanich's direct control. As a result, the District's primary role will be to advocate to higher levels of government about safe vehicle standards. Advocacy is considered in **Section 7.3**.



Key Actions to Improve Road Safety

Transition to Safer Fleet Vehicles (Action 20)

Conduct Inspections to Ensure Vehicles are Safe to Operate (Action 22)

Advocate for Changes to Support Enhanced Road Safety (Action 30)



⁶ Pedestrian Deaths and Large Vehicles (2021) Retrieved from https://www.justintyndall.com/uploads/2/8/5/5/28559839/tyndall_pedestrian.pdf

⁷ Effects of large vehicles on pedestrian and pedalcyclist injury severity (2022) Retrieved from <https://www.sciencedirect.com/science/article/abs/pii/S0022437522000810?via%3Dihub>



Safe System Element no.4
Safe Road Design

Safe road design was a key theme raised by survey respondents. Roads should be designed to be forgiving and reduce the severity of crashes when they occur. Interventions that contribute to safe roads include physical infrastructure to separate users and slow travel speeds, removing hazards and improving sight lines and upgrading traffic control.

ICBC data and the results of the network screening provide valuable insight into crash conditions and the types of crashes that are most common at different locations. The information presented in this data will be used to design infrastructure and implement counter measures to improve safety where needed.

In addition, the community-wide equity analysis will allow Saanich to prioritize actions to improve safety through road design in areas where there is a higher equity need and the rates of serious injuries and fatalities are highest.

In Rural Saanich where the pavement width is narrow and vegetation and topography affect visibility and sightlines in many locations, road design will be an important focus to improve safety.

Action to address safe roads focus on designing and building infrastructure, including protected bike lanes and separated sidewalks to encourage safe behaviour and reduce conflicts between different users. They also emphasizes the need to analyse and modify existing roads and intersections to ensure there are safe travel conditions for everyone, regardless of their travel mode.



Key Actions to Improve Road Safety

Prioritize Road Safety Investments in High Priority Locations (Action 1)

Build Multi-Modal Streets that Include Transit Priority & Infrastructure for Walking, Rolling and Cycling (Action 2)





Safe System Element no.5
Post-Crash Care

A key focus of this plan is primary prevention – stopping injuries from happening and minimizing the severity when they do occur. However, providing adequate emergency response treatment can minimize harm. Post-crash care actions include ensuring that when injuries occur on Saanich streets, excellent care is available to the injured, regardless of who they are, the type of road users they might be or where the crash occurs. It also includes efficient movement of injured persons to hospital where they can receive care to improve their long-term outcomes. Research shows that a significant number of fatalities on roads are preventable with improved post-crash care⁸. In Canada, vehicle crashes and the resulting traumas place a significant burden on health care and emergency services and have other societal costs. In 2007, it was estimated that these costs were approximately \$100 million per day⁹.

By enhancing post-crash care, we can further reduce the risk that crashes will result in serious or life-threatening injuries, thus working towards a safe transportation system. Continuing to improve the emergency response system and engaging with service providers are ways that Saanich can support those who need care, when they need it.

To successfully promote high-quality post-crash care, Saanich will collaborate with health care and emergency service providers to learn and share valuable information that could save time and lives.

Post-crash care actions focus on supporting emergency service providers in providing improved response times and services closer to Primary Growth Areas.



⁸ A National Trauma Care System. (2016) Retrieved from: <https://nap.nationalacademies.org/catalog/23511/a-national-trauma-care-system-integrating-military-and-civilian-trauma#:~:text=The%20National%20Academies%20of%20Sciences,of%20zero%20preventable%20deaths%20after>

⁹ Medical interventions to reduce motor vehicle collisions (2014) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3903738/>



Safe System Element no.6
Safe Land Use Planning

The District’s community planning framework supports development along transit corridors and in Centres and Villages inside the UCB where future density is envisioned. In turn, this facilitates a reduction in the total kilometres travelled by private vehicles, as well as safer conditions for people who walk, roll, and cycle. In addition, transit is the safest mode of travel and planning for more dense and compact form and complete communities supports efficient transit services, which is a key strategy to improve road safety.

An integrated approach to land use and transportation planning is necessary to ensure that future policies, plans, and regulations that guide land development and transportation align with the overarching goal to achieve zero traffic fatalities and serious injuries on Saanich roads. This includes focused consideration during the development of community plans, as well as in the formulation and review of development applications.

The safe land use planning actions focus on reducing conflict between different modes and prioritizing road safety in land use and transportation planning. This includes minimizing the number of driveways on to high volume streets, prioritizing road safety as new plans and policies are developed, ensuring off-street facilities, like parking lots, are regulated appropriately to allow for safe travel regardless of mode and working with BC Transit to increase transit ridership.



Key Actions to Improve Road Safety

Prioritize Road Safety in Community Plans and Policy Documents (Action 23)

Reduce the Density of Driveway Accesses on Major and Collector Roads (Action 13)



7.2 Actions

Strategies for implementing the actions identified in the RSAP are outlined in this section, including a description of the importance of each and a table summarizing the actions the District is committed to carrying out over the next ten (10) years. These tables provide guidance with respect to the following:

Priority

Each action is assigned a priority rating that corresponds with the anticipated road safety benefit and potential to support Saanich's goal of zero traffic fatalities and serious injuries:

- Primary Actions are the actions with the greatest potential to achieve Vision Zero. These will be the focus for implementation by the District
- Supporting Actions are actions to implement in the pursuit of Vision Zero. These will be undertaken by the District and its partners.

It is important to note that these priorities may change over time. For example, if an opportunity arises to implement a supporting action ahead of a primary action through a redevelopment opportunity or a capital project, Saanich will accelerate the timeline of the supporting action to maximize the opportunity.

Safe System Element(s)

For each action, the safe systems element(s) it will help achieve have been identified.

Method

A description is provided for each action to identify how it will be implemented. Actions may be implemented as capital projects, through on-going operations and maintenance, as a policy or programming initiatives, as a technical study, or through advocacy done in coordination with road safety partners.

Responsibility

Responsibility (primary or secondary) is assigned to the governments, agencies, organizations, departments, or divisions who are working with Saanich to implement this plan. Many actions are the primary responsibility of Saanich (including the Engineering, Planning, and Finance Departments, Communications Division or SPD), while other actions will be led by different road safety partners.

Primary Actions

		SSA Elements	Method	Responsibility	
				Primary	Secondary
1. Install Safe Infrastructure at Priority Locations Identified by a Network Screening	To develop this plan, a network screening process was undertaken using ICBC crash data and factoring for crash severity by accounting for crashes resulting in a fatality and/or involving a vulnerable road user. The results were used to identify a series of twenty intersections and corridors with a heightened risk of crashes resulting in serious injury or fatality. These locations (identified in Appendix B) will be the highest priority for future resources and funding by the District.	1,4	Capital	Saanich Engineering	Saanich Finance
2. Build Multi-Modal Streets that Include Transit Priority and Infrastructure for Walking, Rolling, and Cycling	The District will continue to explore opportunities to reallocate road space to better accommodate a range of travel options and improve safety for different travel modes. This may include transit priority treatments to improve service efficiency and/or active transportation facilities to improve safety for people walking, rolling, and cycling. Past examples of multi-modal streets implemented in Saanich include Shelbourne Street, Tillicum Road and Cedar Hill X Road.	4	Capital	Saanich Engineering	Saanich Planning
3. Pursue Infrastructure Solutions with Demonstrated Positive Safety Performance	Through long-term planning, capital projects, and proactive changes to standards and guidelines, Saanich will continue to pursue innovative road safety treatments and applications, proven in other communities to reduce crash frequency and severity, and support goals for modal shift. Emphasis will be on the high priority locations identified through the network screening. Sample treatments are identified below this action table.	4	Capital	Saanich Engineering	MOTI Neighbouring Municipalities

		SSA Elements	Method	Responsibility	
				Primary	Secondary
4. Conduct a Saanich-Wide Crosswalk Safety Review	There are hundreds of crosswalk locations in Saanich with varying treatments in-place to support safe crossings. In a pro-active effort to better understand the level of safety at existing crosswalks, the District will conduct a comprehensive review of all mid-block and uncontrolled crosswalk locations to assess any underlying safety concerns and identify enhancements that may be used to provide safer crossing conditions. This may include signs, markings, flashing beacons (including RRFBs), or signals.	4	Technical Study	Saanich Engineering	--
5. Develop a Traffic Calming Policy & Program	Accompanying speed limit changes, the District will develop a Traffic Calming Policy and Program, and implement measures proven to lower design speeds. The emphasis will be on high priority locations identified through the network screening and in Rural Saanich. Traffic calming measures may include narrower lane widths, adding bike lanes, smaller curb radii, raised crossings, curb bulb-outs, speed feedback signs, speed humps, chicanes, planting trees and/or adding landscaping, and coordinated signal timing.	1,4	Policy + Programs	Saanich Engineering	Saanich Communications Neighbourhood Associations
6. Review Speed Limits to Support Reduced Speeds	Research shows that higher speeds increase the risk of a crash and the likelihood that a crash will result in a serious injury or fatality. Given the above, the District will review speed limits annually on 50 kms of streets and implement speed limit reductions, where warranted. Locations in proximity to schools, parks, recreation centres and seniors' facilities will be prioritized, as will high priority locations identified through the network screening process.	1	Policy + Programs	Saanich Engineering	

		SSA Elements	Method	Responsibility	
				Primary	Secondary
7. Continue to Enforce Impaired Driving Laws	Driving while under the influence of alcohol or drugs greatly increased a person's risk of crashing and hurting or killing themselves or others. In BC, on average, 64 people die every year in crashes involving impaired driving. SPD will continue to enforce impaired driving laws.	2	Policy + Programs	SPD	
8. Continue to Enforce Distracted Driving Laws	Enforcement is essential to reducing risky behaviours that result in visual, manual, or cognitive distractions. Continued enforcement by SPD as well as increased enforcement in strategic locations will reduce distracted driving and will be carried out in combination with awareness and education efforts.	2	Policy + Programs	SPD	
9. Carry Out Road Safety Audits	<p>A road safety audit is an independent review of a proposed transportation project that is aimed at identifying and addressing potential safety issues that could lead to serious crashes.</p> <p>The District will carry out road safety audits on proposed major transportation projects that are large, complex, and/or involve high volumes of vulnerable road users. Reviews will be based on sound engineering and human factor principles and will consider all road users.</p>	1,4	Technical Study	Saanich Engineering	ICBC



Safe Street Design Features to Protect All Road Users

A key action to be carried out by Saanich and its partners is to continue to pursue infrastructure solutions with demonstrated positive safety performance through long-term planning, capital projects and pro-active changes to standards and guidelines. Below are street design treatments and applications proven to reduce crash frequency and severity that will be pursued in Saanich.

Protected Intersections

Protected intersections include design features that minimize conflict between drivers and vulnerable road users by separating movements through space and time. Protected intersections include raised corner islands that physically protect cyclists from right-turning vehicles, pedestrian refuge areas, and signal phases for pedestrians and cyclists.

Protected Left-Turns

Protected left-turns occur where a left-turn lane is provided and left-turn movements are made during a protected signal phase to eliminate conflicts with on-coming traffic and crossing pedestrians. The protected left-turn phase may occur first, or it may be delayed to prioritize pedestrians and vehicle through movements.

No Right-Turn on Red

Where right-turns are permitted at a red light, drivers must look for pedestrians crossing and for cyclists approaching from the rear, while simultaneously trying to find a gap in the vehicle and cyclist stream in the intersection. This is a highly complex scenario that leads to greater risk of driver error. By prohibiting right-turns on red light, drivers can only turn right when the light is green. This strongly reduces the likelihood of conflict.

Roundabouts

Roundabouts are proven to reduce the frequency and severity of crashes compared to stop-controlled and signalized intersections, a result of the reduced number of conflict points and slower entry and circulation speeds. The District will consider roundabouts when intersection redesign occurs and/or when traffic control changes are contemplated.

Removal of Right-Turn Channels

Right-turn channels and multi-lane four-way stops negatively impact safety by facilitating higher-speed right turns and increased pedestrian crossing distances. They also create conflicts and introduce a higher driver workload. The District will continue to prioritize right-turn channel removals as part of street network improvements and replacement efforts.

Narrowed Travel Lanes

Narrower lanes encourage slower travel speeds, increasing the driver margin of error while also making crashes less severe. The District will seek to narrow travel lanes where possible to support slower speeds, while retaining sufficient width for goods movement, transit, and emergency services to operate safely on Saanich streets.

Supporting Actions

		SSA Elements	Method	Responsibility	
				Primary	Secondary
10. Improve Regional Trail Crossings	Regional Trail crossings experience some of the highest rates of pedestrian and cyclist crashes in Saanich. To address safety concerns at these locations and continue to support more people using active modes, the District will work with the CRD to improve high crash crossing locations along the Lochside Regional Trail and Galloping Goose Regional Trail.	4	Capital	Saanich Engineering	CRD
11. Improve Safety at High Crash Locations on Highways	Provincial highways, including Highway 1, Highway 17, and sections of McKenzie Avenue are consistently among the highest crash locations in Saanich. To improve safety outcomes at locations under MOTI jurisdiction, Saanich will pro-actively engage with and support MOTI to make investments in infrastructure that improves road safety.	1,4	Collaboration + Advocacy	MOTI	Saanich Engineering
12. Improve Access and Safety of Bus Stops	Work with BC Transit to identify existing transit stop locations that are operationally unsafe for buses and/or functionally unsafe for transit riders. Saanich will work with BC Transit to improve access and safety at identified bus stops.	4	Policy + Programs Capital	Saanich Engineering	BC Transit
13. Reduce the Density of Driveway Accesses on Major and Collector Roads	Driveways result in increased conflict points for road users and transit. As on-street or roadside cycling facilities and bus lanes are installed along more corridors in Saanich, the issue becomes more acute. Over time, the District will seek to reduce the number and frequency of driveways on Major and Collector streets as corridor improvements are made and/or as land development and lot consolidation occurs. Bylaw updates may also be required to facilitate this.	4,6	Policy + Programs	Saanich Engineering	Saanich Planning

		SSA Elements	Method	Responsibility	
				Primary	Secondary
14. Improve Sight Lines at Intersections and Driveways	It is important to have a clear view of people, activities, and objects near intersections and driveways to reduce the risk of conflicts between road users. Policy updates, bylaw amendments, and increased enforcement will be undertaken to address issues of obstructed sight lines.	4,6	Policy + Programs	Saanich Engineering	Saanich Planning
15. Require Traffic Management Plans to Reflect Current Provincial Legislation for Worker Safety	Undertaking work on roads puts workers in close contact with vehicles and/or mobile equipment. Saanich will require Traffic Management Plans for road projects to meet or exceed current provincial legislation for worker safety.	2,4	Operations + Maintenance	Saanich Engineering	--
16. Work with Partners to Implement Intersection Safety Cameras	Automated speed enforcement encourages safe speeds and driver behaviours in areas of concern such as high collision intersections, school zones, and playground zones. Saanich will work in collaboration with RoadSafetyBC through the Intersection Safety Camera (ISC) program, which supports installing speed and red-light cameras at major intersections and provides funding for these devices across the province.	1,2	Operations + Maintenance	RoadSafetyBC	Saanich Engineering MOTI CRD
17. Install Dynamic Speed Detection Devices Along High Priority Corridors	<p>The District has installed speed detection devices (SDDs) that display and provide feedback to drivers on their travel speeds in several school zones on Major and Collector roads. SDDs are shown to reduce average speeds in areas where they are installed, and are therefore an effective measure to encourage safer speeds.</p> <p>The District will continue to evaluate candidate locations to install new devices for SDDs along high priority corridors identified through the network screening process, as well as in proximity to schools, parks, recreation centres and seniors' facilities. This work will be done in coordination with a future Traffic Calming Policy and Program.</p>	1,2	Capital	Saanich Engineering	CRD

		SSA Elements	Method	Responsibility	
				Primary	Secondary
18. Encourage Increased Transit Ridership to Reduce Private Vehicle Use and VKT	Transit is a safe travel option for Saanich residents and the District will continue to support transit-oriented land use planning and development, invest in transit priority infrastructure on roads, and work with BC Transit to implement initiatives and programs to encourage increased transit ridership such as contactless fare payment systems that reduce barriers to using the bus and trip-planning software that provides reliable trip information to riders.	2,3	Policy + Programs Capital	Saanich Engineering	Saanich Planning
19. Explore Legalization of Electric Kick Scooters in Saanich	Thirteen municipalities are currently participating in the Provincial Electric Kick Scooter Pilot Project to test and evaluate use of these devices on public streets. The materials and outcomes from pilot communities will inform the District as it explores legalization of electric kick scooters on Saanich roads.	2	Policy + Programs	Saanich Engineering	Saanich Sustainability
20. Transition to Safer Fleet Vehicles	The District will demonstrate leadership in transitioning to safer fleet vehicles. This includes seeking smaller, lighter vehicles wherever possible, ensuring all mandated safety features are present, and implementing pro-active inspections for any fleet vehicles that are over 10 years old.	3	Policy + Programs	Saanich Engineering	--
21. Enforce Other Laws that Promote Safe Behaviours on Saanich Roads	In addition to on-going enforcement of traffic laws, including a focus on impaired and distracted driving, SPD will undertake enforcement of laws that promote safe behaviour for all road users, including cyclists, pedestrians, people using micromobility devices.	1,2	Policy + Programs	SPD	Saanich Engineering ICBC
22. Continue to Conduct Vehicle Safety Inspections to Ensure Vehicles are Roadworthy and Safe to Operate	The SPD will continue their efforts to enforce the relevant provisions of the <i>Motor Vehicle Act</i> and <i>Regulations</i> to ensure that vehicles on the roads are mechanically fit and in compliance with existing legislation. Enforcing these standards enhances the safety framework of Saanich's transportation infrastructure for all road users.	3	Policy + Programs	SPD	Saanich Engineering

		SSA Elements	Method	Responsibility	
				Primary	Secondary
23. Prioritize Road Safety in Community Plans and Policy Documents	Vision Zero is a goal to eliminate traffic fatalities and serious injuries for people travelling on Saanich roads. Eliminating the risk to human safety will require a reduction in the total vehicle kilometres travelled (VKT). The principles and actions in this plan align the District's policies to focus future growth and development along established, high-volume corridors and in areas of existing and future density, including Centres and Villages. Road safety will be a key consideration in future land use and transportation plans, as well as corridor studies and street design policies that focus on shifting travel demand away from private vehicles, towards safer modes such as walking, rolling, biking and transit.	4,6	Policy + Programs	Saanich Planning	Saanich Engineering Saanich Sustainability
24. Ensure Emergency Service Facilities are Located to Allow Efficient Response	By reducing travel distances between emergency facilities and high-population areas, emergency response times can be maintained and/or improved, which can lead to better outcomes for victims when crashes occur on Saanich roads. Working with Saanich Fire, SPD, VIHA, and emergency service providers, Saanich will continue to ensure that emergency response time and routes are considered in the location of emergency service facilities, and that consideration is given to facilities in Primary Growth Areas to support future growth.	5	Capital Policy + Programs	Saanich Engineering Saanich Planning	Saanich Fire BC Ambulance Service BC Emergency Health Services SPD VIHA

		SSA Elements	Method	Responsibility	
				Primary	Secondary
25. Develop and Implement Awareness and Education Campaigns on Road Safety	<p>Work with road safety partners to develop and implement awareness and education campaigns as part of the Road Safety Campaign Calendar. The campaigns may focus on different topics such as distracted driving, high-risk and impaired driving, speeding, and winter driving.</p> <p>Saanich will explore different methods to communicate these messages including social media, radio, bus shelter advertising, print media, and online/website content.</p> <p>Where possible, messages will be designed to reach specific demographics including school-aged kids, youth, young men, and seniors.</p>	1,2	Policy + Programs	SPD CRD ICBC	Saanich Communications RoadSafety BC
26. Develop and Implement an Education Program Focusing on Transportation Options for Non-Drivers	<p>Saanich has a growing population of older adults who are no longer able to drive and are learning to live without a license. Similarly, newcomers, people with disabilities, and youth and other marginalized populations may not have driver's licenses. Saanich will work with partners, including the CRD, SPD and BC Transit to develop and deliver educational programs to support people to move around safely using transit or active modes.</p>	2	Collaboration + Advocacy	CRD	SPD BC Transit Saanich Engineering RoadSafetyBC
27. Develop Strategies to Engage with Equity-Deserving Populations	<p>People have the right to move around safely, yet many people face challenges accessing safe, convenient, and affordable mobility options. As part of Saanich's commitment to improving programs and practices relating to diversity, equity, and inclusion, engagement strategies will be developed that include focused communication methods and tools to allow Staff to reach equity-deserving populations. The goal is to engage more people in discussions about transportation to understand the barriers that different people face and work towards a more equitable transportation system.</p>	2	Collaboration + Advocacy	Saanich Engineering	ICBC SPD Saanich Communications

		SSA Elements	Method	Responsibility	
				Primary	Secondary
28. Improve Media Crash Reporting	Using appropriate terminology in road safety communications is critical to ensuring a complete understanding of the impacts of crashes on all road users. The District will work with media partners to build awareness about the importance of using correct terminology and incorporating messaging that aligns with Vision Zero and the Safe System Approach in media reporting.	1,2	Policy + Programs	Saanich Communications	SPD CRD
29. Create a Reporting Format for Correctability Analyses	The District will establish a reporting format to record observations and data collection related to road safety. A standardized format will ensure a consistent approach that will lead to better outcomes as part of future correctability analyses.	4	Policy + Programs	Saanich Engineering	--
30. Advocate for Changes to Support Enhanced Road Safety	The District will work collaboratively with other municipalities and partner agencies to lead and support advocacy efforts for systems changes to achieve improve road safety. Specific opportunities are identified in Section 7.3 and include advocating for vehicle safety.	1,3	Collaboration + Advocacy	Saanich Engineering	Other Municipalities Partner Agencies
31. Work with Partners to Improve Crash Data	The RSAP was developed using crash data compiled by ICBC, SPD, VIHA, and the Province. Through the analysis of various data sets it became clear that there are gaps and inconsistencies that make it difficult to provide a complete and accurate accounting of crashes in Saanich. For this reason, Saanich will work with its partners to improve the data collected and to address issues of integration across data sets, as well as access to data for municipal governments. Specific opportunities to improve crash data are identified in Section 7.4 .	2,4,5	Collaboration + Advocacy	Saanich Engineering	SPD ICBC VIHA CRD

Advocacy + Collaboration

In addition to the actions identified in **Section 7.2**, there are several opportunities relating to vehicle safety that are not within Saanich’s direct control but are necessary to help make progress towards Vision Zero. By working collaboratively with other partners, Saanich will lead and support advocacy efforts for changes to achieve safer vehicles. While each item below has been identified as an opportunity to support Saanich’s own safety goals and objectives, they will also have broader positive impact for communities in the Capital Region and elsewhere.

Expanded Intersection Safety Camera Program

To reduce the number of fatal and severe injury crashes, the Province has a program to install intersection safety cameras (ISCs) at intersections with high crash rates. Saanich is one of many municipalities in the province trying to secure ISCs for different locations of concern, but the application process is not well known and there is no set schedule for the province to make decisions about future locations. Because of these issues, municipalities like Saanich have difficulties accessing the program. In collaboration with municipal and regional government partners, Saanich will advocate to the Union for BC Municipalities (UBCM) for the province to develop a more transparent and predictable process for new cameras.

Safety Inspections for Older Vehicles

Most vehicles experience decreasing performance in critical safety features as they age, including braking power and responsiveness, and headlights and running lights. To ensure vehicles meet basic safety requirements, Saanich will

advocate to the province to establish a program requiring safety inspections for older vehicles.

Mandate Vehicle Safety Features

Saanich will work with partners to advocate to Transport Canada to make proven safety features a requirement for new vehicles in Canada. Desirable safety features will support improved motorist behaviours and compliance with regulations. They will also help to reduce crash frequency and severity.

Desired safety features to be included on new vehicles may include the following (not an exhaustive list):

- Autonomous braking to avoid impending crashes
- Speed limiters to improve compliance with posted speed limits
- Safe exit assist to sense cyclists and avoid “dooring”
- Limitations on in-vehicle dashboard and entertainment functions
- Requisite bumper heights to improve motorist visibility

7.3 Crash Data

The RSAP was created using evidence derived from an analysis of available crash datasets. While helpful in understanding the magnitude and nature of crashes occurring in Saanich, the process highlighted several gaps and inconsistencies in the available crash data. As a result of this, Saanich will work closely with SPD, ICBC, VIHA and other partners to expand the types of crash data collected, enhance collection methods, and achieve better integration across datasets to support future RSAP updates and analyses.

Improve Crash Reporting

Enhancements to the data collection form and process completed by SPD when responding to a crash will ensure that more consistent and reliable data is provided on fatal and serious injury crashes, and it will support more robust and accurate analyses in the future. Enhancements may include:

- More spatial data (i.e., coordinates)
- Standardized crash descriptions / descriptors
- Demographic information on people involved in crashes
- Data on micromobility devices involved in crashes

Increase Data on Distracted Drivers & Impaired Driving

Working with SPD, Saanich will seek to increase data collected on distracted and impaired driving. While some information is captured in the current TAS reporting, a more systematic and thorough approach that captures specific instances of distracted and impaired driving will allow for improved technical study and more opportunities for safety improvements.

Improve Data on Crashes Involving Active Transportation

Crashes involving pedestrians and cyclists are currently under-represented in crash data. The District will work with VIHA and other partners to collect crash data for crashes involving pedestrians and cyclists. Saanich will also work with VIHA to include specific reference to crashes involving micromobility users to provide insight into the rate of crashes, as well as locations, and the individuals involved.

Integrate Crash Data + Make Available to Municipalities

ICBC, SPD, and VIHA all maintain separate datasets that serve the mandate of the organizations collecting the information, but they include different crash and post-crash information making it challenging to analyse factors among the different datasets.

In an effort to make better use of available data for future analyses, the District will collaborate with SPD, ICBC, VIHA, and other partners to identify opportunities to integrate the various crash datasets, as well as to make the resulting information more readily available to local governments to support road safety initiatives and decision making.



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8. Implementation

Vision Zero is a priority for Saanich and this RSAP represents the District's commitment to take action on the key safety issues with the goal of eliminating traffic fatalities and serious injuries over time. Implementing these actions will require partnerships and collaboration with different levels of government, private and public agencies, and organizations identified in Section 3.2 and listed throughout Section 7. It will also require the support and input of those who live and work in Saanich.

Other steps essential to implementation of this Plan include securing funding, adding new staff resources, and continuing to work with the Transportation Advisory Committee.

In addition, the steps that Saanich will take to ensure accountability and track progress towards Vision Zero are also discussed.



8.1 How Will We Implement the RSAP?

Realizing the vision of the RSAP and achieving Vision Zero is an ambitious pursuit. It will require a dedicated and consistent approach to implementing the actions contained in the RSAP. This includes not only the allocation of funding and staff time to carry out capital improvements and support new programs and study, but it will also require successful collaborations with the District's road safety partners. The following are some of the primary ways the RSAP will be implemented.

Dedicated Funding

Realizing the vision of the RSAP does not come without costs. The District will work to establish new funding sources to support the timely and effective implementation of infrastructure, programs, and supporting activities. External funding from other levels of government, partnerships with other organizations and the development industry, and integration of road safety enhancements with other plans and projects are some of the ways that funding will be sought to support implementation.

Staff Resources

Staff dedicated to road safety initiatives will be essential to ensuring accountability for implementation of the RSAP. Saanich staff will endeavour to align implementation of the various initiatives within the RSAP over the next five years, collaborating with the Transportation Advisory Committee, coordinating inter-departmental projects, working to develop and maintain multi-level partnerships, and reporting to Council on progress.

Transportation Advisory Committee (TAC) Guidance

As a committee of Council, the TAC directly advises Saanich Council and staff on a variety of transportation-related topics, including road safety. The TAC will maintain an active role in implementing the RSAP and complementary initiatives such as the ATP. This will maintain dialogue between a diversity of community representatives which will positively shape the current and future directions of the RSAP and help to support and champion successful implementation.

8.2 Monitoring

Saanich is committed to implementing the RSAP over a 10-year timeframe. The following steps will be taken to monitor progress with implementation.

Annual Reporting

Saanich will carry out annual reports on progress toward the actions identified in the RSAP. Reporting will include progress towards zero traffic fatalities and serious injuries. It may also include capital investments in road safety, policy and program initiatives, technical studies, partnerships, and collaborations, along with areas of upcoming focus or where further work is required.

Progress Reporting

A five-year implementation review will be undertaken to identify actions that have been completed, prioritize remaining actions, and assess the overall success and impact of progress to-date. Updates to the RSAP and course corrections may be pursued to ensure Saanich remains on-track to complete the RSAP action items and achieve the Vision Zero target on a 10-year timeframe.





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9. Conclusions

The importance of ensuring our roads are safe for all users cannot be understated. Everyday the lives of Saanich residents are forever impacted by crashes on our roads. The RSAP is the roadmap to achieving the District's goal of Vision Zero, which seeks to eliminate all traffic fatalities and injuries while promoting safe, healthy, and equitable mobility for everyone. It is a statement that one traffic fatality or serious injury is too many.

The vision for the RSAP is as follows:

Saanich is leading the way as a community with a safe and accessible transportation system for all our residents and visitors, free of transportation-related fatalities and serious injuries.

Saanich residents, stakeholders, elected officials, staff and various road safety partner agencies all played an important part in developing this plan. The many perspectives and broad representation reflect the importance of improving road safety and a collective desire to achieve Vision Zero.

The BC Road Safety Strategy 2025 creates a collaborative framework for making B.C. a better and safer place to live. It is only by working together as a sector and inspiring safer choices on the road that B.C. will realize the continuous downward trend in fatalities and serious injuries that will lead to our success in reducing road traffic deaths and injuries by 50% by 2030. Together, we can make progress toward the vision of eliminating motor vehicle crash fatalities and serious injuries in B.C.

The District is committed to implementing the actions of the RSAP over the next ten (10) years. Successful implementation will take dedication and funding to support a positive change in Saanich. Not only will this help address road safety, but it will also support other District aspirations to create an equitable and inclusive community, allow more people to travel using sustainable transportation options, and encourage a greater sense of community and personal well-being.



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Acronyms

AAA	All Ages & Abilities	RSAP	Road Safety Action Plan
AADT	Average Annual Daily Traffic	SPD	Saanich Police Department
ATP	Active Transportation Plan	SSA	Safe System Approach
CRD	Capital Regional District	TAC	Transportation Association of Canada
EV	Electric Vehicle	TAS	Traffic Accident System
ICBC	Insurance Corporation of British Columbia	TDM	Transportation Demand Management
IRSU	CRD Integrated Road Safety Unit	TWSI	Tactile Warning Surface Indicator
MOTI	Ministry of Transportation & Infrastructure	UCB	Urban Containment Boundary
MVA	Motor Vehicle Act	VIHA	Vancouver Island Health Authority
OCP	Official Community Plan	VKT	Vehicle Kilometres Travelled
RRFB	Rectangular Rapid Flashing Beacon		

Terminology

Countermeasure	A physical measure that can be implemented at a location to counter the risk of crashes on the road network.
Crash	A road incident in which injury or property damage is sustained. Crashes usually involve one vehicle colliding with a second vehicle or another road user but can also involve a vehicle colliding with a fixed object or a roadside feature.
Micromobility	Micromobility refers to human-powered (e.g., bicycles, skateboards, etc.) and electric assist mobility devices (e.g., e-bikes, electric kick scooters, etc.). Micromobility is a sustainable alternative to driving that provides public health benefits and helps reduce traffic congestion and greenhouse gas emissions.
Network Screening	The process undertaken to identify crash-prone locations within the transportation network. Several approaches may be taken to carry this process, including accounting for crash severity and other factors, with the end goal of strategically identifying where to focus efforts to mitigate road safety issues.
Traffic Calming	The combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behaviour and improve conditions for non-motorized street users.
Transportation Demand Management (TDM)	Initiatives that reduce emissions and other negative impacts of vehicle travel by encouraging use of other modes, reducing the number and length of vehicle trips, and shifting trips to less congested times and routes

**Vehicle Kilometres
Travelled (VKT)**

Vehicle kilometres travelled (VKT) refers to the total number of kilometres travelled by a vehicle or group of vehicles over a defined period of time and is used to support measures such as fuel consumption, emissions, and environment quality.

Vulnerable Road User

A road user that is more prone to sustaining injury by not having the benefit of protective features. Practically speaking, vulnerable users include pedestrians, cyclists, motorcyclists, and users of other mobility devices.

APPENDIX A.

Road Safety Context

Road Safety in Context

In 2020, the UN General Assembly proclaimed the Decade of Action for Road Safety 2021-2030, with the ambitious target of preventing at least 50% of road traffic deaths and injuries by 2030. The WHO and the UN regional commissions, along with other partners, have developed a Global Plan for the Decade of Action, which was released in October 2021.

The Global Plan emphasizes the importance of a holistic approach to road safety and calls for improvements in road and vehicle design; enhancement of laws and enforcement; and provision of timely, life-saving emergency care, while also promoting walking, cycling, and public transport as inherently healthy and sustainable. Progress made during the previous Decade of Action for Road Safety 2011-2020 has laid the foundation for this accelerated action in the years ahead.

Canada's Road Safety Strategy 2025 (CRSS 2025) presents a national framework for reducing traffic injuries and fatalities in Canada. The long-term vision is "Making Canada's roads the safest in the world", builds upon previous iterations of the strategy by integrating Towards Zero. This vision will persist beyond the RSS 2025's timelines and highlights the desire for optimal road safety outcomes across Canada. Building from this vision, RSS 2025's principles are aligned with international best practices in road safety, including the adoption of the Safe System Approach and a 10-year time frame. The strategy continues to be flexible which allows Canadian jurisdictions to implement road safety programs that meet their own specific needs.

British Columbia's Road Safety Strategy 2025: A Collaborative Framework for Road Safety (BCRSS 2025) provides a provincial structure for achieving road safety goals. The strategy is also guided by Vision Zero and targets continuous downward trends in fatalities and serious injuries across B.C. and supports the global goal to reduce road traffic deaths and injuries by 50% by 2030. BCRSS 2025 emphasizes the need to work collaboratively to achieve these goals, integrating enforcement, infrastructure, data, and other tools, and changing behaviours through education and information.

The RSAP aims to align with this global, national, and provincial direction to make sure Saanich is doing its part to create safer transportation for all.

Strategies + Policies

The RSAP is informed by the District's established strategies and policy directions. A summary of pertinent documents is provided below.

Strategic Plan (2019 – 2023)	The Strategic Plan prioritizes long-term planning, strengthening road safety, and promoting active transportation to create a convenient, affordable, accessible, and efficient transportation system.
Official Community Plan	The OCP sets out policy to create pedestrian and cycling-friendly neighbourhoods, traffic calming, multi-modal travel, and accommodating people with disabilities.
Active Transportation Plan	The Active Transportation Plan addresses the District's commitment to Vision Zero and reflect the key multi-modal safety directions established through the RSAP.
Climate Plan	Establishes a goal of 22% of trips to be completed by active modes by 2030 and 30% by 2050. Ensuring active transportation facilities are safe, connected, and physically separated from motor vehicles will be key to shifting mode share and meeting these goals.
E-Mobility Strategy	The E-Mobility Strategy recognizes safety as a major barrier to e-bike adoption – including an individual's safety and the safety concerns of other active transportation users. Recommendations include education programs and speed reduction on residential streets to support active transportation and e-bikes.
Speed Limit Establishment Policy	This policy sets guidelines for appropriate speed limits on all streets. This policy uplifts the District's commitment to Vision Zero and applying a Safe System approach to road safety.
Corridor, Centre and Village Plans, and Action Plans	The District recently completed local area plans for Uptown-Douglas, Cordova Bay and Cadboro Bay. A Corridor Plan is currently being developed for the Quadra-McKenzie Area. The Shelbourne Valley Action Plan was adopted in 2017. Collectively, these plans contain specific actions related to land use, transportation and mobility, sustainability, and safety.
Urban Forest Strategy	The urban forest is a major component of Saanich's green infrastructure and natural areas. It supports biodiversity, clean air and water, and improved quality and livability in neighbourhoods. The Urban Forest Strategy is guiding document for management of the urban forest over time in the context of other important District priorities such as active transportation.

APPENDIX B.

Network Screening Overview

Overview

What is Network Screening?

A network screening is a process undertaken to identify crash-prone locations in the transportation network. A key objective of a network screening is to identify road infrastructure deficiencies and traffic operational/control features that may contribute to crashes and to determine appropriate mitigation measures.

This process is critical in supporting the RSAP with location-specific analysis and solutions to achieve improved road safety performance, and ultimately to help realize the District's Vision Zero objective of eliminating all serious injuries and fatalities in the transportation network.

Purpose

The network screening analysis enables the District to:

- Provide a more scientific assessment of crash causes and future risks at specific locations in the transportation network by considering geometric and exposure-related factors;
- Identify high-priority and candidate locations for the infrastructure investment and supporting actions for inclusion in the RSAP;
- Identify locations for detailed in-service road safety reviews as a key action in the RSAP; and
- Monitor progress towards zero serious injuries and fatalities on a location-by-location basis in support of the RSAP.

Methodology

Overview / Assumptions

- ICBC claims data for a five-year period (2017-2021) was the basis for the analysis (represents a total of approximately 4,000 crashes);
- Only crashes that occurred on public roadways were considered. Crashes that occurred on private property including in parking lots were removed from consideration;
- Only crashes that resulted in an injury or fatality were included in the analysis and ultimately, they were used to determine locations where review and improvement are needed to support Vision Zero;
- Only road segments and intersection under District of Saanich jurisdiction were considered. MOTI roads including Highway 1, Highway 17, and sections of McKenzie Ave were not considered; and
- A data cleaning process was undertaken to attribute locational data where none was provided. The process also captured all crashes involving people walking and cycling (a deficiency in the 2021 data) and excluded incorrectly logged crashes outside the District's boundaries.

Spatial Analysis

A GIS-based mapping exercise was undertaken to understand the locations of crashes. Every intersection and corridor in Saanich was demarcated and an offset was established (typically 30 m for intersections and 10 m for corridors), within which any logged crash was associated with a corridor or intersection.

Weightings

Weightings were established and applied to each crash occurrence to reflect the severity of the crash and the District's priority on protecting VRUs. The following weightings were applied:

Fatality

Crashes resulting in a fatality were weighted by a **factor of ten (10)**; and

Vulnerable Road User (VRU)

Crashes involving a person walking, cycling or using a motorcycle were weighted by a **factor of five (5)**.

Normalization (Corridors Only)

An additional step was applied to all corridor locations to normalize the number of crashes occurring based on the total length of the segment (expressed as a function of total weighted crashes per 100 m). This helped account for the varying lengths of the individual corridor segments considered in the network screening so that each can be compared at a standard distance.

Preliminary Results + Refinement

The top-40 locations for Major / Collector and Local intersections and corridors were identified. District staff and the consulting team undertook a process to refine the preliminary results based on the following criteria:

- Locations with recent infrastructure or operations improvements (past three years) were removed, with a recommendation to monitor over the next five years to determine the impact of recent improvements;
- Locations identified as priority in the Active Transportation Plan (ATP) that will be a focus for investment over the next ten (10) years were removed from consideration for investment through the network screening and correctability analysis;
- Identified location were filtered to align with the level of effort identified in the correctability analysis task e.g., a corridor segment between 500 m and 1,000 m is equivalent to one major intersection);
- Local / residential locations generally did not emerge as top priorities and have been excluded, to be given further consideration through the District's future Traffic Calming Framework (refer to *Section 7.2, Action 1.2*)

Recommended Locations for Correctability Analysis

Applying the process above, a list of recommended locations for the correctability analysis was refined to 20 locations and confirmed through conversations with District staff. The top-20 locations that are the focus of the correctability analysis and will be the focus of the District's investments in infrastructure to improve road safety are summarized on the following pages.

Summary of Top-20 Locations for Correctability Analysis

Intersections

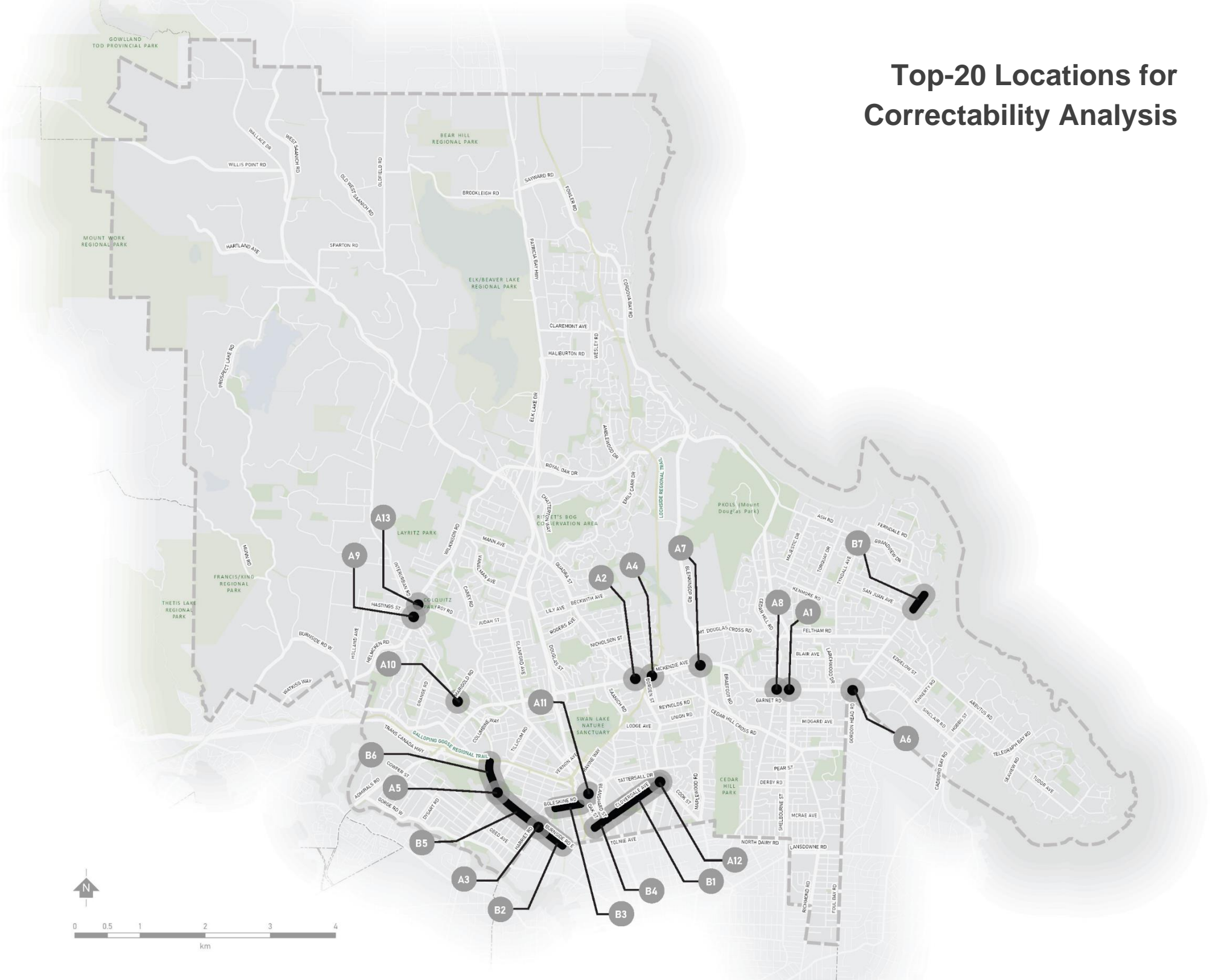
	Crashes		Geographic Equity Score	Crash Trend
	Total	Weighted		
A1. McKenzie Avenue / Shelbourne Street	71	176	Moderate/High	Single vehicle and right turn are common crash types High number of crashes in wet conditions
A2. McKenzie Avenue / Quadra Street	99	124	Moderate/High	Rear-end is the most common crash type High speeds noted on southbound Quadra Street approach (58 km/h 85 th % speed)
A3. Burnside Road / Harriet Road	60	110	High	Side swipe and right angle are common crash types High speeds noted on southbound Harriet Road approach (57 km/h 85 th % speed)
A4. McKenzie Avenue / Borden Street	48	98	Low/High	Side swipe and right turn rear-end are common crash types High speeds on westbound McKenzie Avenue approach (60 km/h 85 th % speed) High number of crashes in wet conditions
A5. Tillicum Road / Burnside Road	65	95	Moderate/High	Rear-end is the most common crash type High number of crashes in wet conditions
A6. McKenzie Avenue / Gordon Head Road	45	90	Moderate	Rear-end and left-turn are common crash types High number of crashes (50%) at dawn or in dark conditions
A7. McKenzie Avenue / Blenkinsop Road	45	85	Moderate/High	Right turn rear-end and side swipe are common crash types High speeds on Blenkinsop Road (northbound and southbound approach, 58-60 km/h 85 th % speed)

A8. McKenzie Avenue / Cedar Hill Road	39	84	Moderate/High	Head-on, right angle and single vehicle are common crash types High number of crashes (50%) at dawn or in dark conditions
A9. Wilkinson Road / Interurban Road	62	82	Low/Moderate	Head-on, rear-end and right angle are common crash types Large number of crashes (50%) at dawn or in dark conditions High speeds on Interurban Road (northbound and southbound approach, 57-61 km/h 85 th % speed)
A10. Interurban Road / Marigold Road	31	71	Moderate	Single vehicle and right-angle are common crash types
A11. Saanich Road / Oak Street	48	68	High	Side swipe, rear-end and left turn are common crash types High number of crashes in wet conditions
A12. Quadra Street / Cloverdale Avenue	35	50	Moderate	Side impact, side swipe, head-on and left turn / head-on are common crash types
A13. Wilkinson Road / Roy Road	39	44	Low/Moderate	Side swipe and right-angle are common crash types

Corridors

Location	Street Class	Length	Crashes		Geographic Equity Score	Crash Trends
			Total	Weighted		
B1. Cloverdale Avenue Inverness Road – Douglas Street	Major	600m	54	89	High	Side swipe, side impact and single vehicle are common crash types
B2. Burnside Road E Victoria Border – Harriet Road	Major	450m	35	45	High	Side impact and side swipe are common crash types
B3. Boleskine Road Douglas Street – Harriet Road	Major	450m	13	43	High	Side impact is the most common crash type 85 th percentile speed (51 km/h) higher than posted 40 km/h speed limit
B4. Cloverdale Avenue Inverness Road – Quadra Street	Major	600m	13	43	High	Side impact, single vehicle and side swipe are common crash types
B5. Burnside Road W Harriet Road - Tillicum Road	Major	800m	42	47	High	Rear-end is the most common crash type
B6. Burnside Road W Tillicum Road – Interurban Road	Major	500m	13	23	Moderate	Side impact and side swipe are common crash types
B7. Gordon Head Road San Juan Avenue – Ferndale Road	Collector	300m	3	18	Low/Moderate	All recorded crashes were single vehicle incidents High speeds noted (57 km/h 85 th % speed)

Top-20 Locations for Correctability Analysis



APPENDIX C.

Community Equity Analysis

Overview

The District of Saanich is committed to improving its programs and practices as they relate to Diversity, Equity, and Inclusion. It is guided by the principle that embracing diversity enriches the lives of all people and enhances the cultural fabric of the community¹⁰.

A fundamental assumption of Vision Zero is that people have the right to travel safely in Saanich regardless of their age, ability, background and/or identity. Transportation resources have not always been distributed fairly to all parts of Saanich and not all people are starting from the same place when it comes to accessing different modes of transportation. In addition, exclusion from systems of power has meant that the needs of disadvantaged and marginalized people have been overlooked in past decisions. Transportation equity is focused on seeking fairness in the transportation system and through the RSAP, Saanich is working towards a system that allows all people to travel with relative ease and efficiency, regardless of the mode they use.

Who is equity deserving in Saanich?

Equity-deserving groups refer to communities that face significant collective challenges participating in society because of barriers to equal access, opportunities, and resources due to historic and on-going disadvantage and discrimination. This could include attitudinal, historic, social, and environmental barriers based on age, ethnicity, disability, economic status, gender, nationality, race, sexual orientation, and transgender status.

Equity-deserving groups include, but are not limited to:¹¹

- Racialized people
- Indigenous people
- Women
- Gender diverse people
- LGBTQ2S+ people
- People with disabilities
- Children
- Youth
- People with low income
- Religious minorities
- Older adults
- Immigrants
- People who speak minority languages

¹⁰ District of Saanich Diversity, Equity, and Inclusion Strategic Framework, 2023.

¹¹ Williams T, Sones M, Poirier Stephens Z, Fischer J, Barr V, Winters M. Practices and Inspiration for sustainable transportation equity: Case studies from Canadian cities. Interventions, Equity, Research, and Action in Cities Team, 2023.

This list was reviewed by Community Services. It is important to note that these groupings are not necessarily exclusive, and that people may belong to more than one equity-deserving group (intersectionality). Also, the above is not an exhaustive list of those who may identify as belonging to an equity-deserving community.

Equity Analysis

A quantitative analysis was undertaken for Saanich based on similar analyses undertaken in other municipalities and by other transportation agencies. Using population data from the 2021 Census, nine (9) factors, each generally representing an equity-deserving community or population was identified. The factors were then applied to 23 Census tracts in Saanich and a composite score (reflecting the scoring across all factors) was established for each tract. A map showing the distribution of equity scores across Saanich is provided below.

The nine (9) factors used in the equity analysis are summarized in the table below. While the factors generally represent characteristics of equity-deserving populations, there are some populations, such as people with disabilities and gender diverse people that are not well-represented in the available Census data and were not been included in the analysis. Rent burdened and single-parent households were added to the list of factors based on input from Saanich staff.

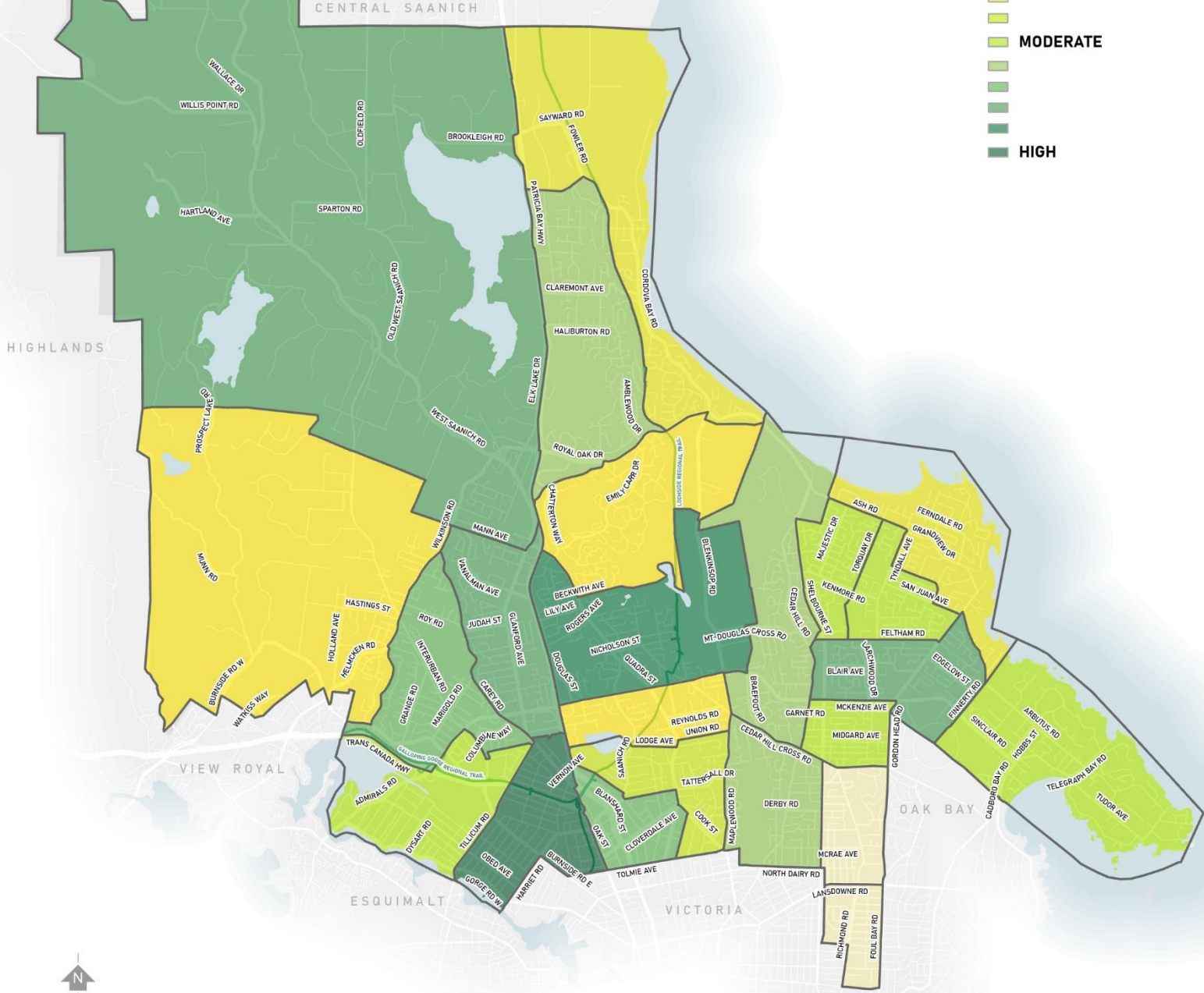
When reviewed in the context of ICBC crash data, it is possible to see the density of crashes in or near equity-deserving areas. However, it is important to note, that crash data compiled by ICBC and SPD does not include demographic information on victims involved in crashes, so it cannot be determined if crashes in equity-deserving areas involve people who identify as equity-deserving.

The analysis was used to inform the engagement approach for the RSAP by helping to identify event locations that would be accessible and convenient to equity-deserving populations. It was also used to inform aspects of the plan including specific actions (identified in Section 7) and as an input for the list of locations to undergo correctability analysis through the network screening process (**Appendix B**).

Using quantitative data to analyse the distribution of equity-deserving groups across Saanich provides important insights into where people live and where they likely travel and spend time, but the needs and challenges of any given community cannot be captured using this approach. Focused engagement is necessary to understand different peoples' experiences using the transportation system. Opportunities for engagement with equity-deserving groups was a priority in the development of this plan and it is identified as an on-going action to be addressed through implementation.

Factor	Census Characteristic	Census Description
Visible Minorities	Total Visible Minority Population	(118): In 2021 Census analytical and communications products, the term "visible minority" has been replaced by the terms "racialized population" or "racialized groups", reflecting the increased use of these terms in the public sphere.
Indigenous People	Indigenous Identity	Indigenous Identity (45): This category includes persons who identify as First Nations (North American Indian), Métis and/or Inuk (Inuit) and/or those who report being Registered or Treaty Indians (that is, registered under the <i>Indian Act</i> of Canada), and/or those who report having membership in a First Nation or Indian band.
Youth	People Ages 0 to 14 Years	Age Characteristics (4): Total - Age groups and average age of the population - 100% data
Low Household Income	Prevalence of Low Income based on the Low-income Measure After Tax (LIM-AT)	Income of Households: Total - Household after-tax income groups in 2020 for private households - 100% data
Seniors	People Aged 65 Years and Over	Age Characteristics (4): Total - Age groups and average age of the population - 100% data
Recent Immigrants	Immigrant Status and Period of Immigration is 2016-2021	Immigrants (2016-2011) (82): Includes immigrants who were admitted to Canada on or prior to May 11, 2021.
People with Limited Knowledge of English	Knowledge of Official Languages is Neither French nor English or French Only	Knowledge of Official Languages (36): Knowledge of official languages refers to whether the person can conduct a conversation in English only, French only, in both or in neither language. For a child who has not yet learned to speak, this includes languages that the child is learning to speak at home.
Rent-Burdened Households	Average Percent of Household Income Spent on Shelter	Household Characteristics: % of owner households spending 30% or more of its income on shelter costs
Single Parent Households	Total Lone-parent Census Families in Private Households	Household Type: One-parent-family households

Equity Score



Source: Stats. Can Census (2022), also contains information licenced under the Open Government Licence - District of Saanich



ROAD
SAFETY
ACTION
PLAN



