Capital Regional District

625 Fisgard St.,
Victoria, BC V8W 1R7

Notice of Meeting and Meeting Agenda
Transportation Committee

Wednesday, June 16, 2021 | **10:00 AM** | **6th Floor Boardroom, 625 Fisgard St., Victoria, BC V8W 1R7**

D. Screech (Chair), J. Loveday (Vice Chair), S. Brice, B. Desjardins, F. Haynes, D. Howe, B. Isitt, C. McNeil-Smith, R. Martin, J. Olsen, R. Mersereau, L. Seaton, M. Tait, N. Taylor, C. Plant (Board Chair, ex officio)

The Capital Regional District strives to be a place where inclusion is paramount and all people are treated with dignity. We pledge to make our meetings a place where all feel welcome and respected.

1. Territorial Acknowledgement

2. Approval of Agenda

3. Adoption of Minutes

3.1. 21-379 Minutes of the April 21, 2021 Transportation Committee Meeting

Recommendation: That the minutes of the Transportation Committee meeting of April 21, 2021 be adopted as circulated.

Attachments: Minutes - April 21, 2021

4. Chair's Remarks

5. Presentations/Delegations

In keeping with directives from the Province of BC, this meeting will be held by Live Webcast without the public present.

To participate electronically, complete the online application for "Addressing the Board" on our website. Alternatively, you may email the CRD Board at crdboard@crd.bc.ca.

5.1. 21-506 Delegation - Eric Doherty; Representing Greater Victoria Acting Together: Re: Agenda Item 6.1.: Transportation Priorities Implementation Strategies

5.2. 21-511 Delegation - Philip Symons: Representing First Unitarian Church of Victoria: Re: Agenda Item 6.1.: Transportation Priorities Implementation Strategies

5.3. 21-512 Delegation - Savannah Barratt: Representing Climate Justice Victoria: Re: Agenda Item 6.1.: Transportation Priorities Implementation Strategies

6. Committee Business

6.1. 21-500 Transportation Priorities Implementation Strategies

Recommendation: The Transportation Committee recommends to the Capital Regional District (CRD) Board:
1. That staff be directed to form a Transportation Advisory Committee, reporting through the Transportation Committee, with senior staff representation from CRD, municipal, electoral area and agency partners to advise on regional transportation matters requiring coordination;
2. That staff be given the mandate to develop a region-wide approach to transportation demand management, safety policy and implementation of a connected and consistent regional trail network, working through the Transportation Advisory Committee; and
3. That staff be directed to advance advocacy and other implementation actions, as set out in Appendix B.

Attachments:
- Staff Report: Transportation Priorities Implementation Strategies
- Appendix A: Transportation Priority Area Impact Analysis
- Appendix B: Transportation Priority Area Implementation Strategies
- Appendix C: Transportation Governance Structure Scan

6.2. 21-469 CRD Electric Vehicle Infrastructure Roadmap

Recommendation: The Transportation Committee recommends to the Capital Regional District Board: That this report be received for information.

Attachments:
- Staff Report: CRD Electric Vehicle Infrastructure Roadmap
- Appendix A: CRD Electric Vehicle Infrastructure Roadmap - Dunsky Consulting
- Appendix B: Regional Electric Vehicle Infrastructure Roles

6.3. 21-462 Previous Minutes of Other CRD Committees and Commissions for Information

Recommendation: That the following minutes be received for information:
a) Traffic Safety Commission minutes - April 13, 2021
b) Traffic Safety Commission minutes - May 11, 2021

Attachments:
- Minutes: CRD Traffic Safety Commission - April 13, 2021
- Minutes: CRD Traffic Safety Commission - May 11, 2021

7. Notice(s) of Motion

8. New Business

9. Adjournment

The next meeting is October 20, 2021.

To ensure quorum, please advise Tamara Pillipow (tpillipow@crd.bc.ca) if you or your alternate cannot attend.

Capital Regional District

625 Fisgard St.,
Victoria, BC V8W 1R7

Meeting Minutes

Transportation Committee

Wednesday, April 21, 2021 **10:00 AM** **6th Floor Boardroom**
625 Fisgard St.
Victoria, BC V8W 1R7

PRESENT
Directors: D. Screech (Chair), J. Loveday (Vice Chair) (EP), S. Brice, B. Desjardins (EP), Z. de Vries (for F. Haynes) (EP), P. Brent (for D. Howe) (EP), B. Isitt (EP), C. McNeil-Smith (EP), R. Martin, R. Mersereau, L. Seaton, J. Bateman (for M. Tait) (EP), M. Tait (10:30 am) (EP), N. Taylor, C. Plant (Board Chair, ex officio)

Staff: R. Lapham, Chief Administrative Officer; L. Hutcheson, General Manager, Parks and Environmental Services (EP); K. Lorette, General Manager, Planning and Protective Services; E. Sinclair, Senior Manager, Regional and Strategic Planning; J. Hicks, Senior Transportation Planner, Regional and Strategic Planning; M. Lagoa, Deputy Corporate Officer; T. Pillipow, Committee Clerk (Recorder)

EP – Electronic Participation

Guest: Y. Williams, Uber Western Canada

Regrets: Directors F. Haynes, D. Howe

The meeting was called to order at 10:00 am.

1. Territorial Acknowledgement

Chair Screech provided a Territorial Acknowledgement.

2. Approval of Agenda

MOVED by Director Seaton, SECONDED by Director Mersereau,
That the agenda for the April 21, 2021 Transportation Committee meeting be approved.
CARRIED

3. Adoption of Minutes

3.1. 21-312 Minutes of the February 17, 2021 and February 24, 2021 Transportation Committee Meeting

MOVED by Director Brice, SECONDED by Director Mersereau,
That the minutes of the Transportation Committee meeting of February 17, 2021 and February 24, 2021 be adopted as circulated.
CARRIED

4. Chair's Remarks

5. Presentations/Delegations

5.1. 21-308 Presentation: Yanique Williams, Uber Western Canada re Update on Uber's Plans to Launch in Victoria

Y. Williams presented the Update on Uber's Plans to Launch in Victoria

Discussion ensued on the following:
- Uber's labour structure for drivers
- cost to changing governmental regulatory framework
- the impact to bus ridership and other modes of transportation
- inter-municipal business licenses

5.2. 21-318 Delegation - Eric Doherty: Representing Greater Victoria Acting Together: Re: Agenda Item 6.1. Identification of Regional Transportation Priorities

Eric Doherty spoke in favour of Item 6.1.

5.3. 21-319 Delegation - Beatrice Gentili-Hittos: Representing Climate Justice Victoria: Re: Agenda Item 6.1.: Identification of Regional Transportation Priorities

Beatrice Gentili-Hittos spoke in favour of Item 6.1.

5.4. 21-322 Delegation - Todd Litman: Representing Cities for Everyone: Re: Agenda Item 6.1. Identification of Regional Transportation Priorities

Todd Litman spoke of concerns with Item 6.1.

6. Committee Business

6.1. 21-306 Identification of Regional Transportation Priorities

K. Lorette spoke to Item 6.1.

Discussion ensued on the following:
- the content to be shared with the province, and the process of informing them of our changing priorities
- developing sub regional priorities
- advocating for funding through various authorities
- equity and climate considerations factored into the recommendations
- a Westshore ferry feasibility study
- mode share targets of the Capital Regional District
- clarification of highway safety improvements
- E & N rail consideration
- method of sharing information with municipalities

Director Tait joined the meeting at 10:30 am.

MOVED by Director Seaton, SECONDED by Director Martin,
That Alternate Director Bateman may participate in the meeting without vote.
CARRIED

MOVED by Director Plant, SECONDED by Director Tait,
The Transportation Committee recommends to the Capital Regional District Board:
1. That the categorized priority areas listed in Appendix A be confirmed;

MOVED by Director Isitt, SECONDED by Director Mersereau,
That the motion be amended by adding the following wording after "confirmed", "subject to clarification of the description of the 'Highway Safety Improvements' priority to ensure alignment with the Mode Share targets in this report".
CARRIED
OPPOSED: Desjardins, McNeil-Smith, Seaton, Tait

MOVED by Director Plant, SECONDED by Director Seaton,
That this item be tabled until the motion that has been referred to by Director Desjardins is considered.
CARRIED
OPPOSED: Brice, de Vries, Screech

MOVED by Director Desjardins, SECONDED by Director Plant,
That the committee recommend to the Board:
That we move to the advocacy options that the Province proceed with 1) a feasibility study of the Westshore ferry; and 2) for the maintenance and upgrade of the rail corridor.
CARRIED
OPPOSED: de Vries

MOVED by Director Plant, SECONDED by Mersereau,
That we raise from the table the previous motion as amended, and call the question.
CARRIED

MOVED by Director Plant, SECONDED by Director Tait,
The Transportation Committee recommends to the Capital Regional District Board:
1. That the categorized priority areas listed in Appendix A be confirmed as amended, subject to clarification of the description of the 'Highway Safety Improvements' priority to ensure alignment with the Mode Share targets in this report.
CARRIED
OPPOSED: Tait

MOVED by Director Mersereau, SECONDED by Director Tait,
The Transportation Committee recommends to the Capital Regional District Board:
2. That the list of confirmed regional transportation priority areas be shared with the Minister of Transportation and Infrastructure, all CRD municipalities, CRD electoral areas and agency partners; and

MOVED by Director McNeil-Smith, SECONDED by Director Plant,

That the motion be amended with the removal of page two (2), The Summary of Partner Input, from Appendix A when it is sent to the Province.
DEFEATED
OPPOSED: Brent, Brice, Desjardins, de Vries, Loveday, Mersereau, Plant, Screech, Seaton, Tait, Taylor

MOVED by Director Mersereau, SECONDED by Director Tait,
The Transportation Committee recommends to the Capital Regional District Board:
2. That the list of confirmed regional transportation priority areas be shared with the Minister of Transportation and Infrastructure, all CRD municipalities, CRD electoral areas and agency partners; and
CARRIED

MOVED by Director Plant, SECONDED by Director Tait,
3. That staff be directed to develop implementation strategies for each of the approved transportation priority areas and report back to the Board on the findings, including a consideration of cooperation mechanisms.

MOVED by Director Mersereau, SECONDED by Director Plant,
That the motion be amended to replace the word "Board" with the word "Committee"
CARRIED

MOVED by Director Plant, SECONDED by Director Tait,
3. That staff be directed to develop implementation strategies for each of the approved transportation priority areas and report back to the Committee on the findings, including a consideration of cooperation mechanisms.
CARRIED

6.2. 21-227 Previous Minutes of Other CRD Committees and Commissions for Information

Mersereau/Martin

MOVED by Director Mersereau, SECONDED by Director Martin,
That the following minutes be received for information:
a) Traffic Safety Commission minutes - February 9, 2021
b) Traffic Safety Commission minutes - March 9, 2021
CARRIED

7. Notice(s) of Motion

There were no Notice(s) of Motion.

8. New Business

There was no new business.

9. Adjournment

MOVED by Director Martin, SECONDED by Director Seaton,
That the April 21, 2021 Closed Session of the Transportation Committee meeting be adjourned at 12:51 pm.
CARRIED

_____
Chair

_____
Recorder

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REPORT TO TRANSPORTATION COMMITTEE
MEETING OF WEDNESDAY, JUNE 16, 2021

SUBJECT Transportation Priorities Implementation Strategies

ISSUE SUMMARY

To consider implementation strategies for each of the confirmed transportation priority areas and provide direction on next steps.

BACKGROUND

On May 12, 2021, the Capital Regional District (CRD) Board confirmed regional transportation priorities and directed staff to develop implementation strategies for each, including a consideration of cooperation mechanisms. These priorities seek to advance regional objectives to reduce congestion, improve mode share and take action on climate.

The approved priorities relate to:

Advocacy:

- Bus mass transit (RapidBus)
- Multi-modal and safe highways
- SSI/SGI connectivity
- General transit
- E&N corridor (protection, maintenance and upgrades)
- Westshore passenger ferry feasibility study

Action:

- Active Transportation
- Transportation Demand Management (TDM)
- Safety policy
- Strengthening land use
- Parking and access upgrades

Pivot:

- Governance (long-term authorities)
- Non-bus mass transit (light rail, passenger ferry)

Level of Impact and Implementation Strategies

The priorities reflect the urban, suburban, rural and remote makeup of the region and include a combination of large scale, region wide initiatives and smaller scale local serving initiatives. An analysis of the relative impact of each priority to achieve regional objectives is provided in Appendix A. Priorities could be advanced simultaneously without detracting from achieving regional objectives, as shown in the implementation strategies in Appendix B.

Equity

Staff have reviewed each of the priorities with a lens to social equity and accessibility and have identified throughout the report where known barriers to participation exist. Available data indicates that low income and visible minorities within the region generally have good access to transportation options. Additionally, there are numerous programs available to provide affordable or free transportation options for those in need particularly in relation to transit. A more fulsome investigation to barriers to access, along with the development of actions to improve equity, would be best addressed at the project, facility or service level with input from affected communities. Further analysis is difficult given the lack of data.

Governance – Short Term Coordination

Much of the Board's previous transportation work has been focused on the establishment of a regional transportation service. Consensus for such a service was not achieved. The existing transportation governance structure gives strategic and operational decision-making authority to the jurisdiction responsible for a particular transportation mode and/or corridor. Each jurisdiction

has the mandate, expertise and service delivery capacity to advance the regional transportation priorities under their authority. Each implementation strategy identifies a lead and the potential role that the CRD could have under the existing governance structure and within the CRD's authority. This approach allows for the CRD to take action on impactful priorities before the end of the current Board term. Within the context of these current authorities, the most impactful first step would be to create a Transportation Advisory Committee (TAC) to support the significant levels of coordination required to progress work on the gaps.

The immediate gaps are: TDM, safety policy and implementation of a connected and consistent active transportation network. These are gaps as there is no clear mandate or lead authority. As shown in the implementation strategies, the CRD could take a leading role to fill these gaps.

Governance – Long Term Authorities
A review of governance structures suggests that metropolitan regions are most successful at achieving their goals when strategic and operational decisions about transportation and land use sit with one jurisdiction. Outside of consolidating authorities, the next best option is to formalize coordination at the technical and policy levels. Coordination mechanisms include staff-led technical advisory committees and multi-party agreements negotiated through funding at the time of major project planning. The governance structure scan is provided in Appendix C.

Recommended Actions
The implementation strategies identify the following CRD actions to advance the priority areas:
1. Advocate for senior government investment in infrastructure and delivery of high-quality transit service and develop all required materials to support this advocacy work.
2. Continue to provide data and technical expertise on individual infrastructure projects.
3. Prioritize the development of shovel-ready regional trail improvement projects to leverage spending within transit and highway corridors.
4. Amplify and encourage mode shift in partnership with municipalities, electoral areas, agencies and stakeholders.
5. Seek opportunities for funding, incentives and pilot projects to achieve regional growth management and transportation objectives.
6. Establish a TAC to:
   a) prioritize planning and coordination to support development of a safe, connected and consistent active transportation network.
   b) develop options, in coordination with municipal, electoral area and agency partners, to deliver region-led TDM and safety policy.

ALTERNATIVES

Alternative 1
The Transportation Committee recommends to the Capital Regional District (CRD) Board:
1. That staff be directed to form a Transportation Advisory Committee, reporting through the Transportation Committee, with senior staff representation from CRD, municipal, electoral area and agency partners to advise on regional transportation matters requiring coordination;
2. That staff be given the mandate to develop a region-wide approach to transportation demand management, safety policy and implementation of a connected and consistent regional trail network, working through the Transportation Advisory Committee; and
3. That staff be directed to advance advocacy and other implementation actions, as set out in Appendix B.

Alternative 2
That the Transportation Priorities Implementation Strategies report be referred back to staff for additional information based on Transportation Committee direction.

IMPLICATIONS

Environmental & Climate Implications
The CRD Board has declared a climate emergency. All priorities have been considered against climate criteria, measured as the priority's potential to decrease greenhouse gas emissions. Per senior government policy frameworks, emissions reductions will be realized by increasing the use of zero-emission vehicles, greening fuel sources and improving multi-modal transportation.

Leveraging multi-modal infrastructure spending within highway corridors is a cost-effective way for the region to achieve its climate objectives. Unless required through a demonstrable safety warrant, transit and active transportation investment within highway corridors will be prioritized over the construction of new general purpose travel lanes.

Intergovernmental Implications
Coordination through a TAC would allow for all jurisdictions to retain existing authorities. As shown in the governance structure scan, this approach ensures that technical and policy matters related to the proper functioning of a multi-modal transportation network are consistently evaluated and advanced at the senior staff level. This is the approach being used in the Regional District of Central Okanagan to implement their recently approved regional transportation plan. It is also the approach used to ensure alignment between TransLink and Metro Vancouver. The scope and terms of reference for a TAC reporting through the CRD would be informed by the findings of the governance scan and the specific contextual needs of the region. Coordination on matters requiring immediate action – TDM, safety policy and implementation of a connected, consistent active transportation network – would be a strong first step to build trust in this governance approach.

Significant legislative changes would be needed should the region wish to consolidate authorities. New authorities that further split strategic and operational decisions in the region would be at cross-purposes with the Board's priorities, as shown in the governance scan. It is important to note that although TransLink has authority over transit, emerging mobility technologies and second-tier roads, significant coordination is still required with Metro Vancouver. TransLink, reporting through both its Board and to the Mayors' Council, does not consolidate transportation authorities; strategic, long-range land use and transportation planning sits with Metro Vancouver through its authority for the Regional Growth Strategy (RGS).

Regional Growth Strategy Implications
Land use patterns that support transit and active transportation – the densification of designated centres and corridors – are needed to achieve mode share and climate change targets. The RGS sets out a settlement concept in Map 3(b) and policies to support such land use patterns. Realizing the desired land use patterns requires that growth be directed to designated locations and ongoing monitoring to track progress against objectives. The CRD will continue to provide monitoring and will explore opportunities to incent implementation of the RGS policy framework. The CRD does not have authority over local land use decisions.

Social Implications
A multi-modal transportation network supports equitable access to transportation options across the region. Different approaches, from infrastructure investment to TDM, are critical to delivering affordable and readily available transportation options. The regional priority areas reflect that different communities have different transportation needs.

In many large centres across Canada, there is a distinct disparity in access to quality multi-modal transportation infrastructure for residents with low income levels. This is not generally the case in the capital region where a majority of low income residents reside in areas where multi-modal transportation options are strongest.

Both the Province and BC Transit provide programs and policies aimed to remove barriers to transportation access. Programs such as heavily discounted or free transit passes target low income transit users, people with disabilities and more recently students and youth. Services such as dedicated handyDART and Taxi Saver programs are available for elder adults and residents with disabilities.

There are fewer policies and programs aimed at reducing barriers to access active transportation options. Consideration of accessibility needs is increasingly integrated in facility design, and is a principle driving the development of an all ages and abilities cycling network.

Financial Implications
Advancing the priority areas per the implementation strategies would increase service levels, requiring new staff and financial resources. Staff will identify resourcing requirements and seek approval through the annual service and financial planning process.

Service Delivery Implications
The impact analysis shows that the priority areas target interventions at different levels of action, from behaviour change at the individual level to investment and improvements at the policy and infrastructure levels. Action at each level is necessary to achieve regional objectives for reducing congestion, improving mode choice and taking action on climate. The impact analysis also shows that the CRD can be the most impactful by providing regional leadership on priority areas that do not currently fall under the authority of any one municipality or agency.

Infrastructure alone, which falls under the authority of municipal and agency partners, will not be sufficient for people to choose to make trips by walking, cycling or transit. The CRD is well positioned to add immediate value by focusing on TDM and safety policy initiatives that complement existing municipal, electoral area and agency streams of work, delivered within existing authorities. While options for such a program of work need to be developed in partnership, preliminary research through the implementation strategies suggest:

a) Take an active travel planning approach for TDM, by working with key trip generators (e.g., Department of National Defense, universities, major retail centres); and
b) Undertake an operational review of the Traffic Safety Commission to determine how it can best support CRD staff with development of safety policy.

In terms of advocacy, the most effective results will occur if the region can speak with one voice to secure senior government investment in active transportation and transit infrastructure, and accelerate delivery of high quality transit service. Such advocacy needs to happen in a coordinated and focused manner, through multiple channels. As set out in the Board's advocacy strategy, this includes taking formal action through the Board and Committee Chair as well as working with individual Directors and at senior staff levels.

Alignment with Board & Corporate Priorities
The implementation strategies identify actions that will continue to advance the 2019-2022 Board priorities for transportation – to work with government/community partners to increase use of public transit, walking and cycling and to plan for and deliver an effective, long-term regional multi-modal transportation system.

Alignment with Existing Plans & Strategies
The regional transportation priorities are largely based on existing plans, strategies and bylaws at local, regional and provincial levels. At the regional level, priorities align with the RGS, Regional Transportation Plan and the Regional Trails Management Plan. The priorities also align to plans and policies from other agencies and senior governments, including the BC Transit Future Plan, BC Transit's RapidBus Strategy, the South Island Transportation Strategy and CleanBC.

CONCLUSION

Advancing the regional transportation priorities will take ongoing collaboration amongst the CRD and all municipal, electoral area and agency partners. Implementation strategies have been developed for each priority area and have identified a series of actions for the CRD. Actions related to advocacy, provision of technical expertise, optimization of regional trail infrastructure, partnership-based service delivery and exploration of options to incent plan implementation can be undertaken within existing service authorities and current operational mandate. Actions to deliver TDM, safety policy and improved coordination of active transportation infrastructure require a clear Board-endorsed mandate and a new coordination mechanism. With the creation of a TAC, additional governance authorities could be explored in the long term. Staff will report back to the Committee on budget implications through the annual service and financial planning processes. Recommendations support impactful actions that can be initiated prior to the end of the Board's term.

RECOMMENDATION

The Transportation Committee recommends to the Capital Regional District (CRD) Board:

1. That staff be directed to form a Transportation Advisory Committee, reporting through the Transportation Committee, with senior staff representation from CRD, municipal, electoral area and agency partners to advise on regional transportation matters requiring coordination;
2. That staff be given the mandate to develop a region-wide approach to transportation demand management, safety policy and implementation of a connected and consistent regional trail network, working through the Transportation Advisory Committee; and
3. That staff be directed to advance advocacy and other implementation actions, as set out in Appendix B.

Submitted by:	Emily Sinclair, MCIP, RPP, Senior Manager, Regional & Strategic Planning
Concurrence:	Kevin Lorette, P. Eng., MBA, General Manager, Planning & Protective Services
Concurrence:	Larisa Hutcheson, P. Eng., General Manager, Parks & Environmental Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

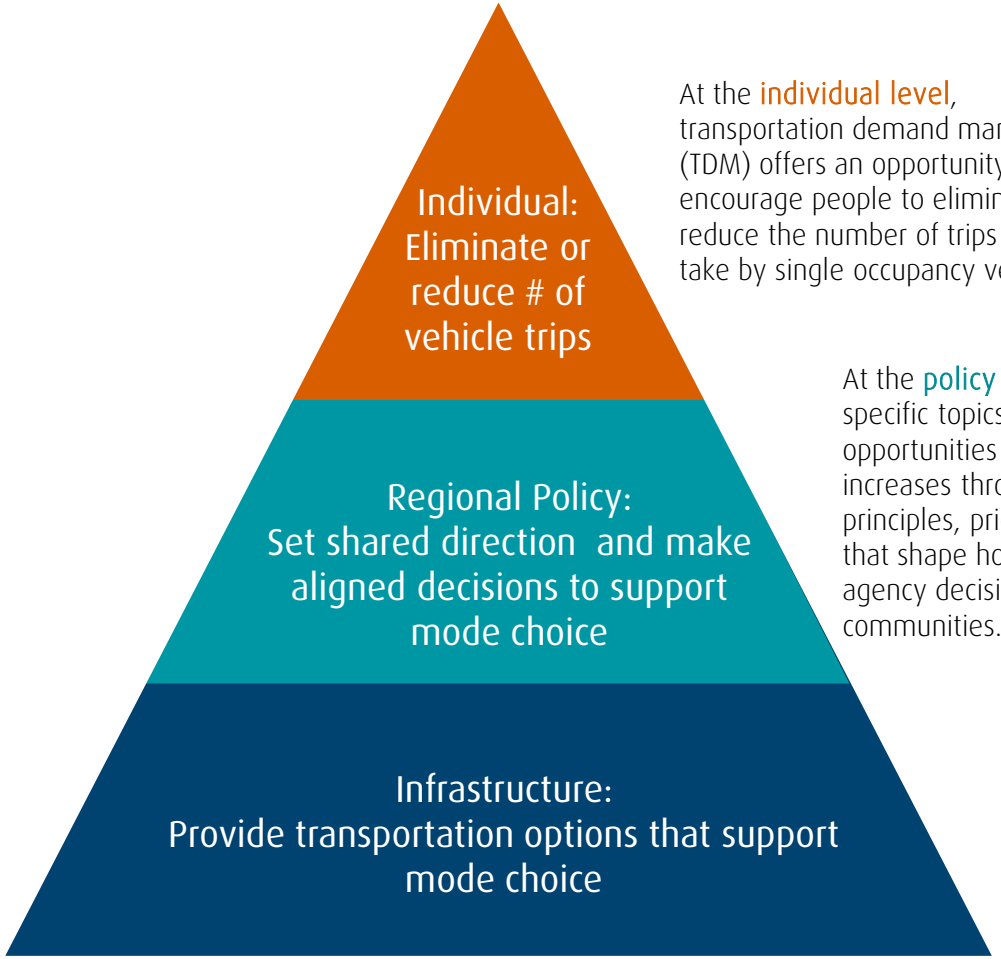
ATTACHMENTS

Appendix A: Transportation Priority Area Impact Analysis
Appendix B: Transportation Priority Area Implementation Strategies
Appendix C: Transportation Governance Structure Scan

Levels of Action by Transportation Priority Area

Infrastructure alone is not enough for people to choose to walk, wheel or take transit more often to get to the places they want to go. Interventions are needed at the individual level so that people know how to use the infrastructure and at the policy level so that the infrastructure is safe, consistent and connected in a network.

The pyramid below shows the nested opportunities for interventions to achieve regional objectives for reducing congestion, improving mode choice and taking action on climate, based on the regional transportation priority areas.



At the individual level, transportation demand management (TDM) offers an opportunity to encourage people to eliminate or reduce the number of trips they may take by single occupancy vehicle.

Priority Areas:
- ✓ TDM

At the policy level, partners identified specific topics where there are opportunities to target mode share increases through the guiding principles, priorities and approaches that shape how government and agency decisions build and operate communities.

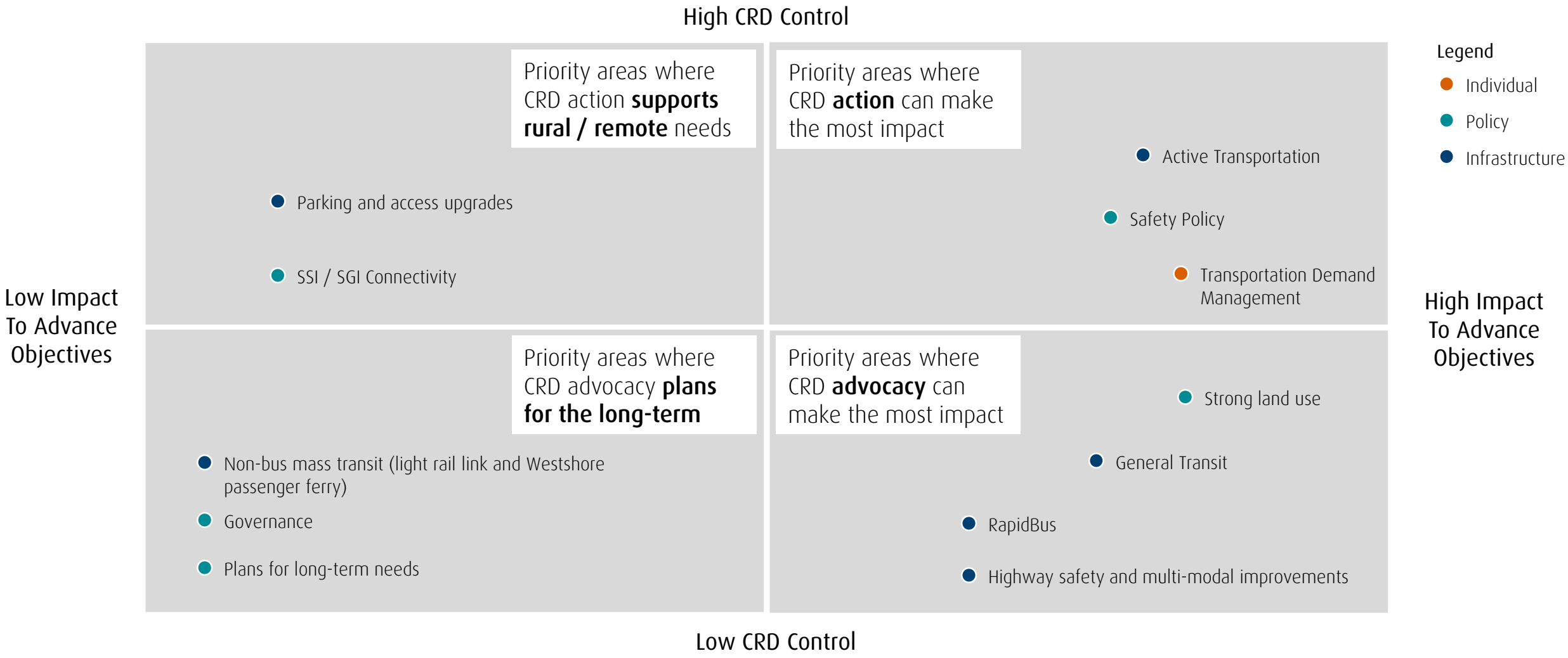
Priority Areas:
- ✓ Strong land use
- ✓ Safety policy
- ✓ SSI / SGI connectivity
- ✓ Governance

At the infrastructure level, improvements across all modes were identified as necessary to achieve regional objectives. Note that the level of impact is the most variable at this level.

Priority Areas:
- ✓ Active transportation
- ✓ General transit
- ✓ RapidBus
- ✓ Parking and access upgrades
- ✓ Highway safety & multi-modal improvements
- ✓ Westshore passenger ferry feasibility study
- ✓ E&N Corridor protection, maintenance and upgrades

Levels of Impact by Transportation Priority Area

The table below shows the results of the impact analysis for each priority area, grouped in relation to how much control the CRD has to affect change.



Evaluation Methodology

Notes on Methodology

The evaluation methodology is high-level as the priority areas are at the problem definition level rather than project design or facility / service option development. The evaluation methodology was chosen based on the following considerations:

- It is not possible to assign costing, trip volumes, travel time, vehicle kilometres travelled or safety warrant values in a consistent manner across all the priority areas at the problem definition level.
- Industry best practice (e.g., MoTI Multiple Account Evaluation Framework) is to undertake high-level analysis for evaluation at the problem definition level.
- The intent of the analysis is not to evaluate the specific project merits associated with each priority area, but rather to identify the relative impact of each priority toward achieving regional objectives.
- Priority areas related to policy are compared against each other and priority areas related to infrastructure are compared against each other to recognize that each of these interventions require different actions.

When results of infrastructure priority areas are compared against each other, active transportation and general transit perform the best given their broad regional reach and potential to increase the most number of trips by walking, cycling or transit. When results of policy priority areas are compared against each other, TDM and land use perform the best given that they provide a regionally-based approach to addressing all the criteria.

Performance Score

Each priority area was evaluated against five criteria. The criteria measurements relate directly to the region's transportation objectives. Each criteria is scored out of three, to give a total out of 15.

How does the priority area achieve regional outcomes?		
Criteria	**Measure**	**Scoring: High (3/3), Medium (2/3), Low (1/3)**
Mode Shift	Potential to increase # of trips by walking, cycling or transit	✓ Highest scores to priorities that have the potential to convert the largest number of vehicle trips. Dependent on the pool of new potential mode users, facility or service quality and network connectivity.
Climate Action	Potential to decrease GHG emissions toward regional targets	✓ Highest scores to priorities that can decrease GHG emissions. Dependent on degree to which priority supports fuel switch and mode shift.
Congestion	Potential to reduce travel time in AM / PM peak	✓ Highest scores to priorities that remove or mitigate the need for peak hour trips. Dependent on predominant frequency and timing of mode use.
Safety	Potential to increase safety	✓ Highest scores to priorities that improve mode, service or facility safety. Dependent on ability to increase a mode's safety relative to existing.
Affordability	% income spent on transportation	✓ Highest scores to priorities that offer the potential to decrease percentage income spent on transportation. Dependent on comparison to cost of single occupancy vehicle ownership, operation and maintenance.
Total Performance Score		**Sum total / 15**

Population and Cost Factors

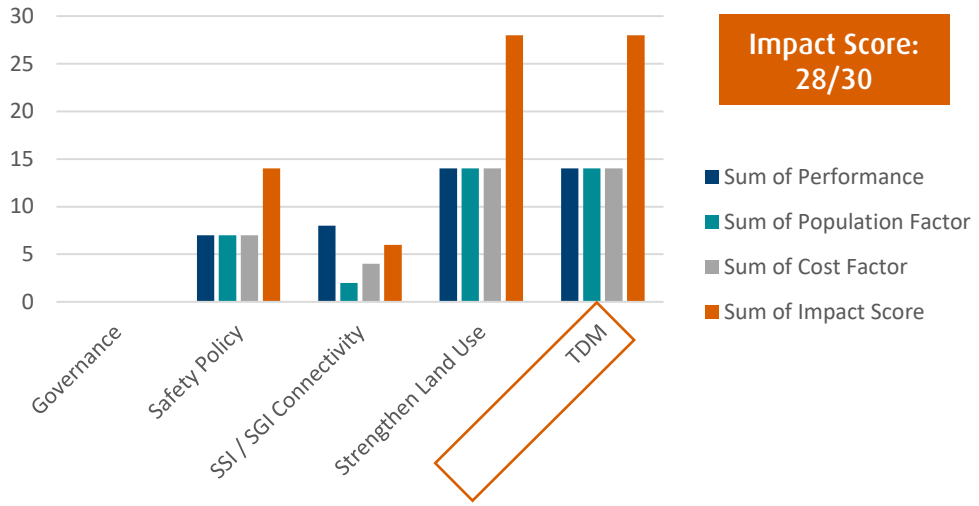
Population and cost factors were then applied to the performance score and added together for a total score out of 30.

What is the scale of impact, based on population served and relative cost?			
Multiplier	**Population** **Total x multiplier / 15**	**Cost** **Total x multiplier / 15**	**Scoring: Sum total of both multipliers / 30**
1 .5 .25	Regional Sub-regional EA / Local	Low Medium High	Sum total of performance score x population multiplier + Sum total of performance score x cost multiplier

Summary of Implementation Actions

Priority Area	Lead	CRD Implementation Role	CRD Implementation Actions
Transportation Demand Management (TDM)	No Regional Lead	**ESTABLISH LEAD:** Set clear mandate for regional action on TDM.	Take an active travel planning approach to TDM, working with key trip generators (e.g., DND, major retail centres, universities).
Safety Policy	No Regional Lead	**ESTABLISH LEAD:** Set clear mandate for regional approach to safety policy.	Complete an operational review of the Traffic Safety Commission to determine how it can support CRD staff with safety policy development.
Active Transportation	CRD Local Governments	**IMPLEMENT:** Complete a connected, consistent regional trail network and upgrade heavily used urban sections. **ADVOCATE:** Secure funding for local and regional infrastructure improvements.	Complete the E&N trail and upgrade heavily used urban sections. Advocate to the provincial and federal governments. Develop a policy framework and partnership agreements for the long-term build out of consistent, connected cycling facilities.
Governance	CRD	**IMPLEMENT:** Use a Transportation Advisory Committee (TAC) to provide a coordination mechanism.	Establish a TAC to advance regional TDM and safety policy and coordinate implementation of a complete, connected active transportation network.
Parking Upgrades	CRD / Province / Local Governments	**IMPLEMENT:** Upgrade parking at Regional Parks. **ADVOCATE:** Upgrade parking at Provincial Parks.	Undertake a parking and safety access study and identify possible funding sources.
Strengthen Land Use	Local Governments	**COORDINATE:** Through the Regional Growth Strategy (RGS), direct growth to centres and corridors along transportation network.	Seek opportunities for funding, incentives and pilot projects to implement the RGS land use concept.
SSI / SGI Connectivity	MoTI / BC Transit	**ADVOCATE:** Prioritize active travel modes in terminal design and ferry operations, active transportation in roadwork projects and accelerate BC Ferries fleet electrification.	Advocate to MoTI and BC Ferries. Provide data and technical expertise to projects. Administer transportation commissions.
General Transit Investments	BC Transit	**ADVOCATE:** Improve local transit service in suburban and rural areas, including provision of Park and Rides.	Advocate to BC Transit, MoTI and local governments. Provide data and technical expertise to projects.
Buss Mass Transit (RapidBus)	BC Transit	**ADVOCATE:** Accelerate implementation, link directly to growth centres, secure funding, locate density near nodes.	Advocate to BC Transit, MoTI and local governments. Leverage transit spending on regional trail improvements. Provide data and technical expertise to projects.
Multi-Modal and Safe Highways	MoTI	**ADVOCATE:** Prioritize safety and multi-modal improvements that will advance regional climate action and mode shift targets.	Advocate to BC Transit, MoTI and local governments. Leverage highway spending on regional trail improvements. Provide data and technical expertise to projects.
Westshore Passenger Ferry Feasibility Study	MoTI	**ADVOCATE:** Complete a feasibility study to plan for long-term transportation alternatives.	Advocate to BC Transit, BC Ferries and MoTI. Provide data and technical expertise.
E&N Corridor (Protect, Maintain and Upgrade)	MoTI	**ADVOCATE:** Invest in corridor upgrades and maintenance to preserve a rail-based transportation option in the long-term.	Advocate to MoTI and the Island Corridor Foundation. Provide data and technical expertise.

Transportation Demand Management (TDM)	
Priority Description	Confirm CRD as lead agency and develop TDM policy and planning
Level of Action	Regional Policy – Set shared direction and make aligned decisions
Level of Impact	CRD action makes the most impact to advance mode shift



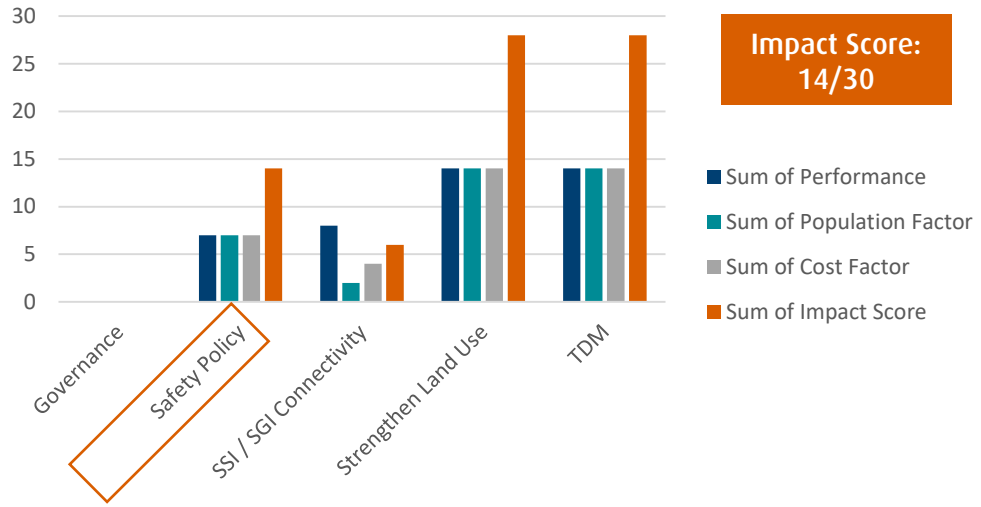
Region's readiness to deliver the priority	
Delivery Partner & Authority	**Key Actions, Timing & Commitment**
No Lead Agency	A lead agency is needed to explore how to capture ongoing benefits from pandemic travel patterns and develop TDM options to incentivize active transportation, transit and high occupancy vehicle use and discourage single occupancy vehicle travel.
Local Governments (*LGA*, Climate Plans)	Provide various policy, regulatory and program streams (e.g., parking fees, street use policy, provision of bike parking).
Province / BC Transit (Operating mandate)	Provide various policy, regulatory and program streams (e.g., discounted fares, subsidized transit passes).
Employers / Businesses (Internal policy)	Mitigate need for travel through flexible workforce policies (e.g., work from home, flex days, virtual meetings, staggered work hours). Support mode choice for customers / employees through on-site investments (e.g., secure bike parking, change facilities, bus fare discount program).
CRD (*LGA*)	Provide active travel planning service for schools and school communities. Provide education and encouragement campaigns to support mode choice. Previously piloted successful active transportation encouragement initiatives.

CRD Actions to Implement the Priority	
Action	**Description**
Establish Lead	CRD Board to give staff the mandate to work with municipal, electoral area and agency partners, reporting through a Transportation Advisory Committee (TAC), to develop TDM options that can be delivered within the scope of the CRD's current authorities.
Develop & Implement (if directed)	Prepare a scope of work to develop TDM options. Pending input from the TAC, take an active travel planning approach to TDM, working with key trip generators (e.g., Department of National Defense, major retail centres and universities).

Transportation Demand Management (TDM)			
How does the priority achieve regional outcomes?			
Criteria	**Measure**	**Description**	**Score**
Mode Shift	Potential to increase # of trips by walking, cycling or transit	Medium Potential: Focus on consistent, region-wide education, encouragement, policy and on-site improvements complements investment in active transportation infrastructure and can support people in choosing not to take trips or to make trips by active modes.	2/3
Climate Action	Potential to decrease GHG emissions	High Potential: Many trip generators – businesses, institutions and employers – are committed to mitigating the effects of climate change. There is high potential to work with these groups to develop solutions to support people in choosing to make trips by active modes and to mitigate the need for trips.	3/3
Congestion	Potential to reduce need for peak period travel	High Potential: Focus on flexible work and school arrangements offers greatest potential to mitigate the need for travel / trips, particularly during peak travel periods in the morning and afternoon.	3/3
Safety	Potential to increase safety	High Potential: TDM measures are developed by trained experts prioritizing safety of all road users. Potential to remove vehicles from the road, reducing risk of injury. Potential to remove the need for trips thereby eliminating the chance of being involved in a crash.	3/3
Affordability	% income spent on transportation	High Potential: Mitigating or minimizing the need for travel creates significant savings for users across all modes and shift to active modes offers less costly travel options.	3/3
		Total Score	14/15

What is the scale of impact, based on population served and relative cost? (Multiplier of Base Score)				
Factor	**Measure**	**Description**	**Multiplier**	**Score**
Population	Relative population reach	Has potential to benefit all residents of the region.	1 = rgn .5 =sub-rgn .25 = EA	1 = rgn
Cost	Relative cost to deliver	Affordable options when compared to capital and operational costs of expanding roads and transit to accommodate demand for limited peak travel periods.	1 = low .5 = med .25 = high	1 = low
			Total Multiplier	2
			TOTAL SCORE WITH FACTORS	28/30

Safety Policy	
Priority Description	Confirm CRD as lead agency and develop a "Vision Zero" policy approach that aims to keep all road users safe from risks of injury or death on the road
Level of Action	Regional Policy – Set shared direction and make aligned decisions
Level of Impact	CRD action makes the most impact to advance mode shift



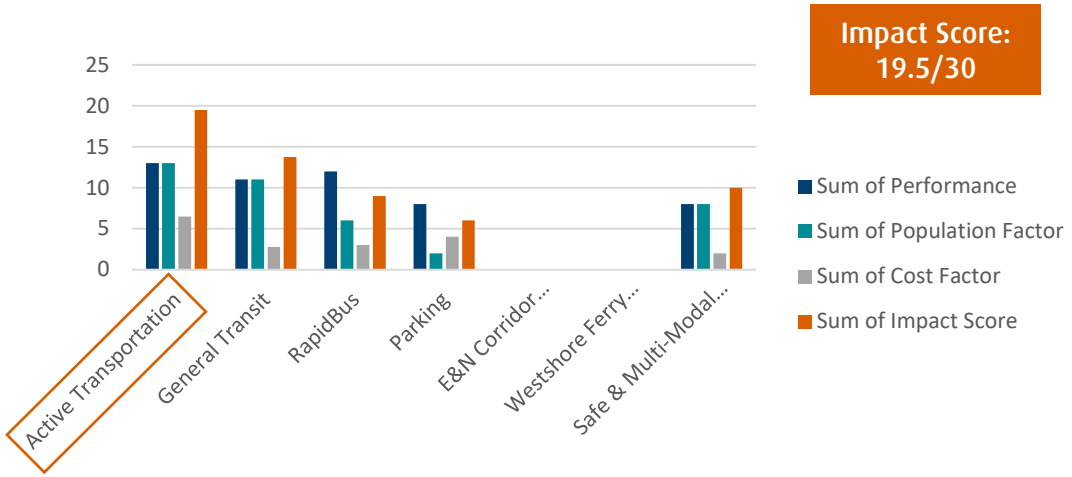
Region's readiness to deliver the priority	
Delivery Partner & Authority	**Key Actions, Timing & Commitment**
No Lead Agency	A lead agency is needed to explore how municipal, electoral area and agency partners can consistently operationalize a Vision Zero approach to land use and infrastructure design.
Local Governments (*LGA*, Climate Plans)	Provide various safety-focused policy, regulatory and program streams.
Province / BC Transit (Operating mandate)	Provide various safety-focused policy, regulatory and program streams.
CRD (*LGA*)	Through the Traffic Safety Commission (TSC), develop education campaigns and support research to improve traffic safety. TSC has authority to bring forward policy recommendations.

CRD Actions to Implement the Priority	
Action	**Description**
Establish Lead	CRD Board to give staff the mandate to work with municipal, electoral area and agency partners, reporting through a Transportation Advisory Committee (TAC), to develop safety policy options that can be delivered within the scope of the CRD's current authorities.
Develop & Implement (if directed)	Prepare a scope of work to develop traffic safety options. Review the TSC operating model to determine how it can best support CRD staff with development of safety policy.

Safety Policy			
How does the priority achieve regional outcomes?			
Criteria	**Measure**	**Description**	**Score**
Mode Shift	Potential to increase # of trips by walking, cycling or transit	High Potential: Sets the decision-making framework that prioritizes the creation of walking and cycling environments that support people choosing to use active modes. If consistently applied, has the potential to influence a large number of trip choices.	3/3
Climate Action	Potential to decrease GHG emissions	N/A – GHG emission reductions is not the focus of this initiative. Emission reductions would be an indirect outcome of mode share changes.	0/3
Congestion	Potential to reduce need for peak period travel	N/A – travel time reduction is not the focus of this initiative. Reduction in congestion would be an indirect outcome of mode share changes.	0/3
Safety	Potential to increase safety	High Potential: Vulnerable road users (e.g., motorcyclists, pedestrians and cyclists) are at a higher risk of injury and death, particularly in mixed traffic situations. This measure prioritizes the needs of these road users in planning and design and has significant potential to increase safety.	3/3
Affordability	% income spent on transportation	Low Potential: This measure would have limited impact on the user costs of transportation.	1/3
		Total Score	7/15

What is the scale of impact, based on population served and relative cost? (Multiplier of base score)				
Factor	**Measure**	**Description**	**Multiplier**	**Score**
Population	Relative population reach	Has potential to benefit all residents of the region.	1 = rgn .5 =sub-rgn .25 = EA	1 = rgn
Cost	Relative cost to deliver	Cost to prepare and support application of safety policy is relatively low. Implementation costs would be absorbed in development and infrastructure projections. The potential increase in costs are offset by the health and safety benefits realized by fewer accidents and deaths.	1 = low .5 = medium .25 = high	1 = low
			Total Multiplier	2
			TOTAL SCORE WITH FACTORS	14/30

Active Transportation	
Priority Description	Complete a connected, consistent regional trail network and seek dedicated funding for active transportation infrastructure
Level of Action	Infrastructure – Provide transportation options that support mode choice
Level of Impact	CRD action and advocacy makes the most impact to advance mode shift



Region's readiness to deliver the priority	
Delivery Partner & Authority	**Key Actions, Timing & Commitment**
LEAD: CRD (Regional Trails) (Agreements, Service Bylaws)	Provide policy, planning and design work to complete the E&N Rail Trail and to improve the Galloping Goose and Lochside trails. Trails provide both recreation and active transportation functions. There is opportunity to leverage planned highway and transit improvements adjacent to the regional trail corridors to fund some of this work. The CRD also provides data and technical expertise to support cycling improvements across the region.
LEAD: Local Governments (Local Roads) (*LGA / Community Charter*)	Lead for local active transportation projects. Plan for and complete a connected pedestrian and cycling network that provides a consistent walking and cycling experience for users. Plan for and implement land uses that are located in proximity to existing cycling facilities.
Provincial & Federal Governments (Operating mandate)	Provide funding for active transportation planning and infrastructure. Create and maintain policy frameworks that prioritize investments that shift from higher to lower emitting modes of transportation.

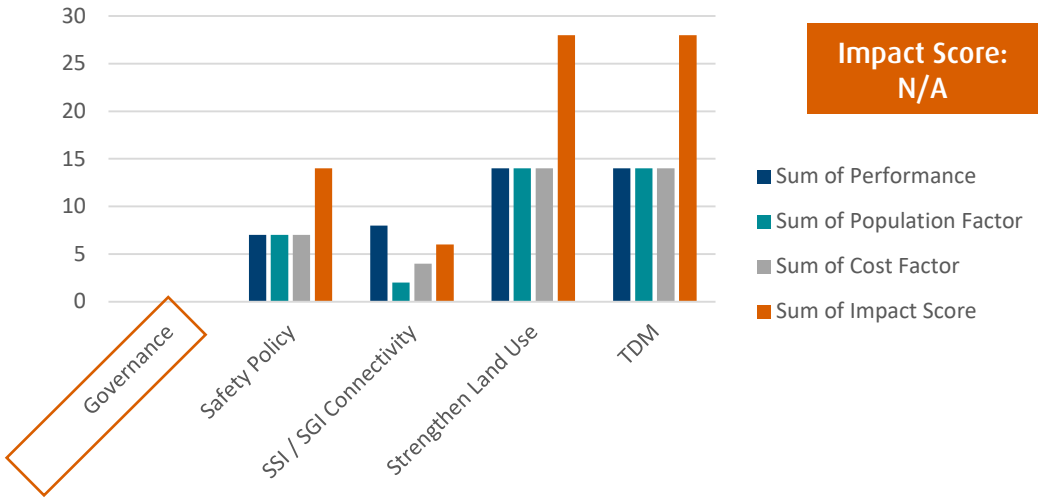
CRD Actions to Implement the Priority	
Action	**Description**
Build Infrastructure	Complete E&N Rail Trail and complete trail widening and lighting on designated sections of the Galloping Goose and Lochside trails. Look for opportunities to leverage highway and transit corridor projects for active transportation improvements. Plan, design and complete active transportation in collaboration with partners in the electoral areas (e.g., Mayne Island Demonstration Project).
Advocate	To the **provincial and federal governments** for dedicated and secure funding for local and regional active transportation infrastructure.
Plan & Coordinate	Continue to provide data and technical expertise to projects. Develop a policy framework and partnership agreements, through a Transportation Advisory Committee, for the long-term build out of a consistent, connected cycling network (e.g., standardized trail crossings, use conflict mitigation).

Active Transportation			
How does the priority achieve regional outcomes?			
Criteria	**Measure**	**Description**	**Score**
Mode Shift	Potential to increase # of trips by walking, cycling or transit	High Potential: Dedicated, connected and convenient walking and cycling infrastructure appeals to non-captive users. The pool of potential new users continues to grow as new technologies make active modes more attractive.	3/3
Climate Action	Potential to decrease GHG emissions	High Potential: Lowest emitting of all existing transportation options. Will help reduce the number of vehicle trips if the infrastructure improvements can successfully attract new users.	3/3
Congestion	Potential to reduce need for peak period travel	Medium Potential: Reduce travel time for cyclists through connected infrastructure that prioritizes active modes. Improve travel time for goods and service movement if the infrastructure reduces the number of vehicle trips.	2/3
Safety	Potential to increase safety	Medium Potential: Trail improvements and the build out of an all ages and ability cycling network will improve safety for users.	2/3
Affordability	% income spent on transportation	High Potential: Offers the most affordable transportation option per trip when compared to other modes.	3/3
		Total Score	13/15

What is the scale of impact, based on population served and relative cost? (Multiplier of base score)				
Factor	**Measure**	**Description**	**Multiplier**	**Score**
Population	Relative population reach	Has potential to benefit all residents of the region.	1 = rgn .5 =sub-rgn .25 = EA	1 = rgn
Cost	Relative cost to deliver	Capital and operational costs are significantly less expensive than transit and highways. Still requires significant annual capital and operational costs.	1 = low .5 = med .25 = high	.5 = med
			Total Multiplier	1.5
			TOTAL SCORE WITH FACTORS	19.5/30

Governance	
Priority Description	Consider the need for new or adjusted decision-making authorities to advance regional transportation priorities
Level of Action	Regional Policy – Set shared direction and make aligned decisions
Level of Impact	CRD action and advocacy plans for long-term regional needs

Region's readiness to deliver the priority	
Delivery Partner & Authority	**Key Actions, Timing & Commitment**
CO-LEAD: CRD (*LGA*)	In relation to current regional transportation priorities, the governance gap is that there is no lead agency or Board-endorsed mandate to deliver region-wide transportation demand management (TDM) initiatives, safety policy or the implementation of a consistent, connected cycling network. A Transportation Advisory Committee (TAC) could address this immediate governance gap. Separate from the delivery of the transportation priorities, determine – if directed – whether there is a need to change who is responsible for making strategic and operational decisions about transportation in the region. Previous Board direction was to stop working on a new service authority.
CO-LEAD: Local Governments (*LGA* / *Community Charter*)	Local governments have the authority to make decisions about local roads and land use. A TAC would provide a collaborative approach to governance that maintains existing authorities. As the jurisdictional scan shows, the most successful governance structures consolidate authorities under one jurisdiction. Consolidation would require a change to local government authority.
MoTI and BC Transit (Operating mandate, *BC Transit Act*)	MoTI funds transit infrastructure and funds and builds highway infrastructure in the service of people and goods movement. BC Transit operates transit service. Each is governed according to legislation.



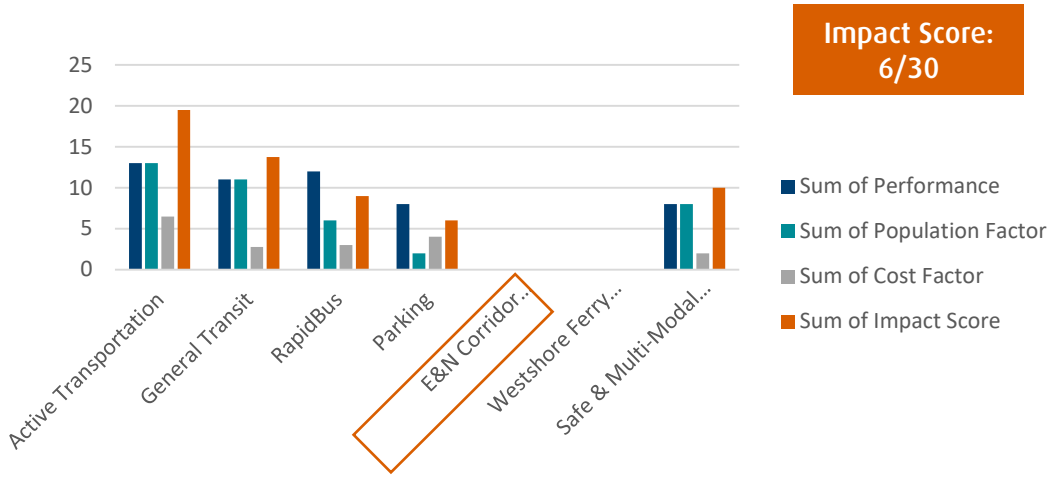
Impact Score: N/A

Note on Score: No score is available as this is a study for a long-term priority. No direct impacts can be attributed to the criteria in the short-term.

CRD Actions to Implement the Priority	
Action	**Description**
Establish a Transportation Advisory Committee	Establish a TAC with the mandate to advise on matters requiring regional coordination. Based on the regional priorities, the initial TAC scope of work should focus on matters requiring immediate regional coordination relate to TDM, safety policy and connected, consistent cycling network.
Problem Definition (long-term)	Determine if there is a need to change the current multi-jurisdictional governance model and clearly identify which jurisdictions should be making strategic and operational decisions about the region's transportation system and services. Current analysis shows that the existing governance framework allows for projects to progress in alignment with the objectives in the Regional Transportation Plan and could be augmented through the TAC. Prepare governance options, if directed.

Governance			
How does the priority achieve regional outcomes?			
Criteria	**Measure**	**Description**	**Score**
Mode Shift	Potential to increase # of trips by walking, cycling or transit	No direct impact	0/3
Climate Action	Potential to decrease GHG emissions	No direct impact	0/3
Congestion	Potential to reduce need for peak period travel	No direct impact	0/3
Safety	Potential to increase safety	No direct impact	0/3
Affordability	% income spent on transportation	No direct impact	0/3
		Total Score	0/15
What is the scale of impact, based on population served and relative cost? (Multiplier of base score)			
Factor	**Measure**	**Description**	**Multiplier**	**Score**
Population	Relative population reach	Any authority changes would impact all regional residents.	1 = rgn .5 =sub-rgn .25 = EA	1 = rgn
Cost	Relative cost to deliver	Cost would be determined by the scope of service. If the scope includes infrastructure, it has the potential to be significantly higher than if focussed on policy.	1 = low .5 = med .25 = high	.5 = med
			Total Multiplier	1.5
			TOTAL SCORE WITH FACTORS	0/30

Parking and Access Upgrades	
Priority Description	Improve parking and access at regional and provincial park locations to address safety and reduce congestion resulting from parking on roadway shoulders
Level of Action	Infrastructure – Provide transportation options that support mode choice
Level of Impact	CRD action and advocacy supports rural and remote needs



Region's readiness to deliver the priority	
Delivery Partner & Authority	**Key Actions, Timing & Commitment**
CO-LEAD: CRD (Service Bylaw)	CRD Regional Parks operates parks in many of the CRD's smaller, more rural communities. Access to these areas is often only possible through vehicle travel and in some instances by bicycle. There is significant pressure on the small parking lots that provide park access. Often, available parking is full and users are forced to park on the edge of roads or highways that offer no pedestrian infrastructure creating safety and access issues. Parks staff are reviewing this issues as part of its revenue strategy review and strategic planning process.
CO-LEAD: Ministry of Environment (BC Parks mandate)	As with CRD Regional Parks, additional pressure on park access points is resulting in congestion and safety concerns on local roads.
Local Governments & EAs (*LGA* / *Community Charter*)	Participate in parking access study and contribute input on local impacts of vehicle parking and congestion on roads.

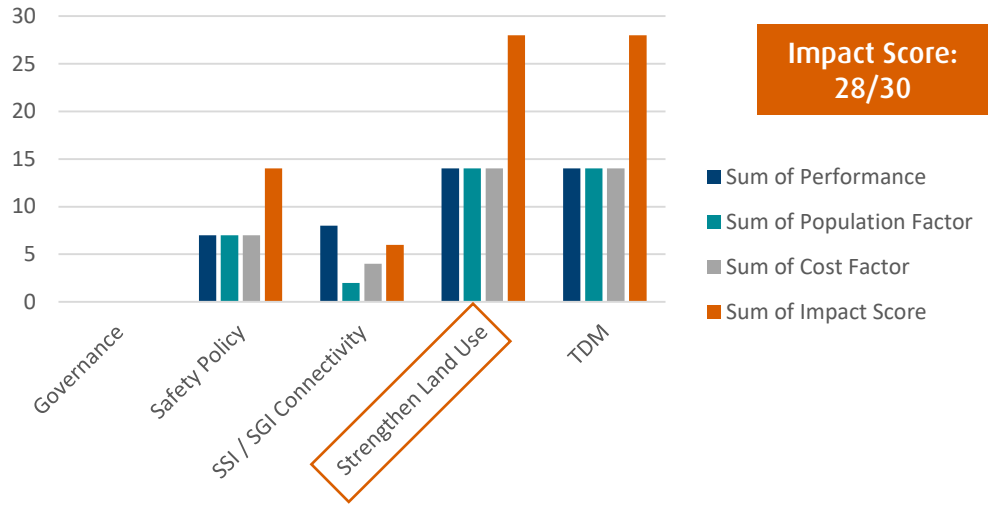
CRD Actions to Implement the Priority	
Action	**Description**
Parking Study	Undertake a parking and access study of regional parking and access points in conjunction with local governments and EAs. Once complete, initiate a capital planning process to prioritize expenditures based on safety and overflow.
Advocate	To **BC Ministry of Environment – BC Parks** to undertake a parking and access study of regional parks and invest in upgrades.

Parking and Access Upgrades			
How does the priority achieve regional outcomes?			
Criteria	**Measure**	**Description**	**Score**
Mode Shift	Potential to increase # of trips by walking, cycling or transit	Low Potential: New Park and Ride station locations could result in localized transit trip increases. Upgraded parking at regional and provincial parks will not increase trips by walking, cycling or transit.	1/3
Climate Action	Potential to decrease GHG emissions	Medium Potential: Park and Rides encourage use of transit and shorten and lessen average vehicle kilometres travelled. Park and rides may offer the only viable option for people in outlying areas to use transit. In some cases charging stations could be provided for electric vehicles particularly at Park and Rides.	2/3
Congestion	Potential to reduce need for peak period travel	Medium Potential: Park and Rides offer a viable option to remove vehicles from the major road networks during peak periods.	2/3
Safety	Potential to increase safety	Medium Potential: Improved parking at regional and provincial parks would remove the need for users to park on highway shoulders and arterials – decreasing likelihood of crashes and serious injury.	2/3
Affordability	% income spent on transportation	Low Potential: While parking costs may be slightly offset, does not reduce the cost of owning and operating a personal motor vehicle.	1/3
		Total Score	8/15

What is the scale of impact, based on population served and relative cost? (Multiplier of base score)				
Factor	**Measure**	**Description**	**Multiplier**	**Score**
Population	Relative population reach	Benefits people living outside of core population centres. Improves access to parks for all recreation users.	1 = rgn .5 =sub-rgn .25 = EA	.25 = EA /local
Cost	Relative cost to deliver	The costs for Park and Ride stations are considered as part of transit infrastructure improvements and are less costly than expanding road networks or operating transit service in less developed parts of the region. Parking and safety upgrades at targeted regional and provincial parks is more cost effective than providing dedicated transit to sparsely populated parts of the region.	1 = low .5 = med .25 = high	.5 = medium
			Total Multiplier	.75
			TOTAL SCORE WITH FACTORS	6/30

Strengthen Land Use	
Priority Description	Continue to implement the RGS settlement concept by directing growth to places that encourage walking, cycling and efficient use of public transit
Level of Action	Regional Policy – Set shared direction and make aligned decisions
Level of Impact	CRD advocacy makes the most impact to achieve mode shift

Region's readiness to deliver the priority	
Delivery Partner & Authority	**Key Actions, Timing & Commitment**
LEAD: Local Governments (*LGA / Community Charter*)	Continue to align to the Regional Growth Strategy (RGS) vision by developing land use policy and plans that support transit oriented development. Achieve the RGS vision by approving development that locates new growth in areas that can be efficiently served by transit and active transportation. Leverage provincial and federal investments in housing and transportation to achieve land use objectives.
CRD (*LGA*)	Continue to monitor and report on RGS indicators. Identify opportunities to incent rapid implementation of the RGS, official community plans and context statements. Provide research, data and analysis that supports partners to develop settlement patterns that minimize the use of automobiles and encourage walking, cycling and the efficient use of public transit.
MoTI and Ministry of Municipal Affairs (Operating mandate)	Build local government capacity to implement land use policy and plans through funding and programming (e.g., UBCM conferences, grant programs, partnerships). Amend legislation to ensure outcomes are being met.

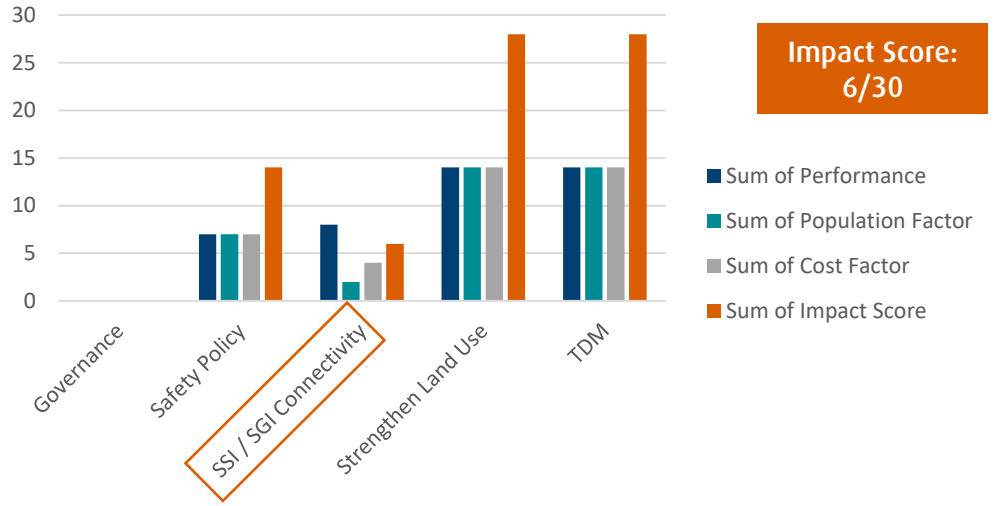


CRD Actions to Implement the Priority	
Action	**Description**
Seek Partnership Opportunities	Explore partnership opportunities to incent RGS implementation by working closely with provincial, local government and EA partners on land use and transportation projects, as appropriate.
Plan and Coordinate	Continue to conduct research and analysis on RGS indicators and report on findings annually. Continue to respond to requests for support on RGS implementation and amendments, as needed.

Strengthen Land Use			
How does the priority achieve regional outcomes?			
Criteria	**Measure**	**Description**	**Score**
Mode Shift	Potential to increase # of trips by walking, cycling or transit	**High Potential:** Sets the decision-making framework that prioritizes the development of complete, connected communities that support people choosing to use active and public transit modes. If consistently applied and implemented, has the potential to influence a large number of trip choices.	3/3
Climate Action	Potential to decrease GHG emissions	**High Potential:** RGS policies for climate action explicitly recognize the need to create low-carbon communities by planning for transportation systems and buildings that reduce reliance on high-emitting fuels.	3/3
Congestion	Potential to reduce need for peak period travel	**High Potential:** RGS policies to direct new growth to areas that can be served by transit and active transportation can help mitigate potential congestion increases associated with population growth.	3/3
Safety	Potential to increase safety	**Medium:** Integrated transportation and land use can enable specific attention to be centred on safety of all road users through design. Allows for shorter distances between home and services resulting in less vehicle kilometres travelled and therefore less opportunity for crashes and injury.	2/3
Affordability	% income spent on transportation	**High Potential:** Land uses that place people in close proximity to services and employment can reduce costs associated with single occupancy vehicle ownership.	3/3
		Total Score	14/15

What is the scale of impact, based on population served and relative cost? (Multiplier of base score)				
Factor	**Measure**	**Description**	**Multiplier**	**Score**
Population	Relative population reach	Has potential to benefit all residents of the region.	1 = rgn .5 =sub-rgn .25 = EA	1 = rgn
Cost	Relative cost to deliver	This initiative is policy based and can be implemented relatively cost effectively. Integrated transportation and land use can result in significant infrastructure and ongoing service and maintenance savings.	1 = low .5 = med .25 = high	1 = low
			Total Multiplier	2
			TOTAL SCORE WITH FACTORS	28/30

SSI / SGI Connectivity	
Priority Description	Seek multi-modal safety improvements to enhance connectivity to Salt Spring Island (SSI) and the Southern Gulf Islands (SGI)
Level of Action	Regional Policy – Set shared direction and make aligned decisions
Level of Impact	CRD advocacy supports rural and remote needs



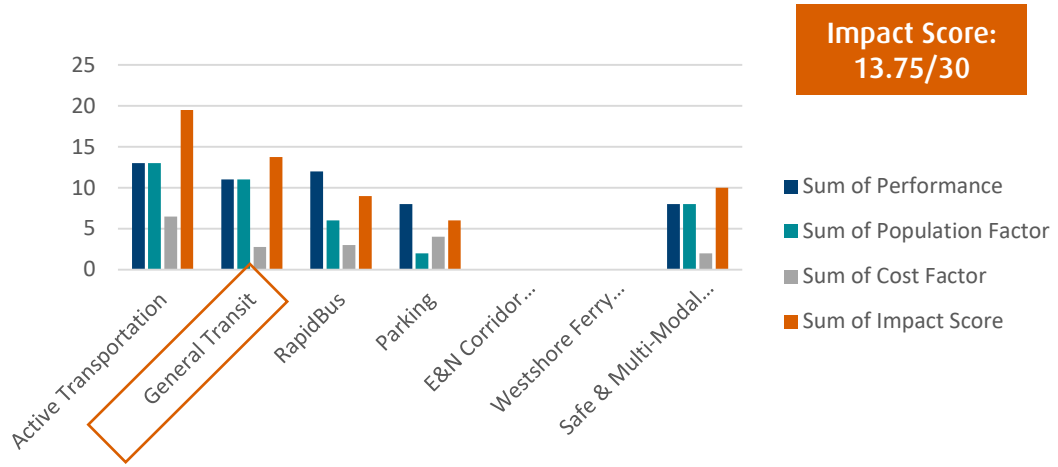
Region's readiness to deliver the priority	
Delivery Partner & Authority	**Key Actions, Timing & Commitment**
CO-LEAD: MoTI / BC Ferries (Operating Mandate and agreements)	MoTI mandates ferry service requirements and sets climate action objectives. MoTI also plans and maintains the road network and sets road-related infrastructure policies. BC Ferries sets operational policy to meet the scope of services set by the Province.
CO-Lead BC Transit (*BC Transit Act*)	Provides transit service on SSI.
CRD / Electoral Areas (*LGA*)	Plan, construct and maintain regional and local trails. Develop integrated transportation plans to identify and deliver transportation in partnership with key agencies. Seek funding for projects. Approve transit service and confirm local funding.
Islands Trust (*Islands Trust Act*)	Authority over land use policy direction under a provincial mandate of preserve and protect.

CRD Actions to Implement the Priority	
Action	**Description**
Advocate	To **MoTI** and **BC Ferries** to prioritize active travel modes in terminal design and ferry operations, adopt policy to include paved shoulder / bike lanes as part of roadwork projects, and accelerate BC Ferries fleet electrification.
Plan and Coordinate	Continue to provide data and technical expertise to projects. Report on lessons learned from Mayne Island regional trail network project and seek opportunities to replicate if successful. Consider how to leverage active travel tourism as an economic development opportunity.
Implement	Administer SSI Transportation Commission and any future transportation service on the SGI.

SSI / SGI Connectivity			
How does the priority achieve regional outcomes?			
Criteria	**Measure**	**Description**	**Score**
Mode Shift	Potential to increase # of trips by walking, cycling or transit	Low: Infrastructure improvements to roadways and prioritizing active modes and transit to/from/on ferry service will help improve travel mode choices for SSI and SGI residents and visitors.	1/3
Climate Action	Potential to decrease GHG emissions	Medium: Gradual shift to electric and hybrid fleets per the BC Ferries Clean Futures Plan. Transition to electric buses in line with BC Transit policy. Current focus is on vehicular movement with secondary focus on passengers.	2/3
Congestion	Potential to reduce need for peak period travel	Low: Improved internet connectivity and remote work could reduce the need to commute for some island residents. Improving visitor travel mode choice could incrementally decrease travel times in busy periods. Removing the need for personal vehicles mitigates congestion on peak ferry trips.	1/3
Safety	Potential to increase safety	High: Ferry and bus travel is a very safe mode and is facilitated by trained safety teams.	3/3
Affordability	% income spent on transportation	Low: Ferry travel using a vehicle can be expensive.	1/3
		Total Score	8/15

What is the scale of impact, based on population served and relative cost? (Multiplier of base score)				
Factor	**Measure**	**Description**	**Multiplier**	**Score**
Population	Relative population reach	Limited population reach. Ferry travel is an essential service linking residents to Vancouver Island.	1 = rgn .5 =sub-rgn .25 = EA	.25 = EA
Cost	Relative cost to deliver	High infrastructure delivery costs and ongoing permanent operational costs.	1 = low .5 = med .25 = high	.5 = med
			Total Multiplier	.75
			TOTAL SCORE WITH FACTORS	6/30

General Transit Investment	
Priority Description	Improve local transit service in suburban and rural areas, including provision of Park and Rides
Level of Action	Infrastructure – Provide transportation options that support mode choice
Level of Impact	CRD advocacy supports rural and remote needs



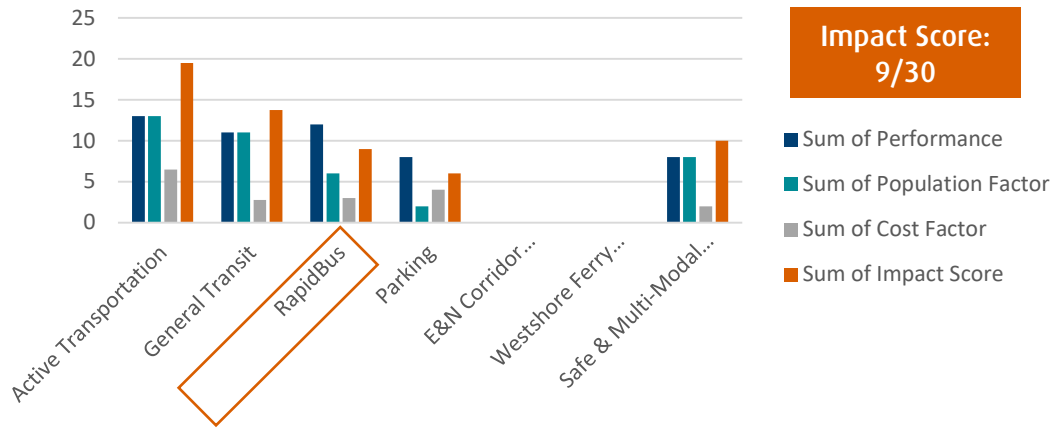
Region's readiness to deliver the priority	
Delivery Partner & Authority	**Key Actions, Timing & Commitment**
LEAD: BC Transit (*BC Transit Act*)	Complete local area transit plans, adjust operations (e.g., adjusting hours of service, route planning), coordinate operating agreements and coordinate fleet replacement.
MoTI (Operational mandate)	Provide funding contribution. Approve new service hours. Set provincial policy framework (e.g., CleanBC)
CRD (*LGA*)	Provide data and technical expertise to planning projects.
Local Governments & EAs (*LGA* / *Community Charter*)	Provide local share of funding. Confirm desired routing and hours of service. Integrate transit in to land use and transportation plans.

CRD Actions to Implement the Priority	
Action	**Description**
Advocate	To the **BC Transit** to ensure fleet greening program proceeds on schedule, adjust operations to implement recommendations of Local Area Transit Plans and consider active modes and accessibility in infrastructure projects. To the **provincial and federal governments** to access the region's fair share of funding. To **municipal governments** to locate new housing developments in proximity to local-serving transit.
Plan / Coordinate	Continue to provide data and technical expertise to projects. Build support during local transit planning for consistency in span and frequency of services and park and rides. Explore partnership opportunities to leverage provincial spending to achieve Regional Growth Strategy objectives.
Amplify / Encourage	Consider how to encourage transit ridership in CRD education campaigns.

General Transit Investment			
How does the priority achieve regional outcomes?			
Criteria	**Measure**	**Description**	**Score**
Mode Shift	Potential to increase # of trips by walking, cycling or transit	Medium Potential: Improved service will appeal to non-captive users (i.e., people who have capacity to choose other modes). Significant trip increases depend on attracting new transit users and regaining ridership lost through the pandemic.	2/3
Climate Action	Potential to decrease GHG emissions	High Potential: 10 year plan to transition fleet per the Low Carbon Fleet Program. Reduce the number of trips taken by single occupancy vehicles. Success for this pathway depends on attracting new riders.	3/3
Congestion	Potential to reduce need for peak period travel	Low Potential: Proposed improvements focus on off-peak travel times in lower density areas. Uses existing general purpose lanes meaning that it can only travel as fast as general purpose traffic moves.	1/3
Safety	Potential to increase safety	High Potential: A very safe mode facilitated by trained safety teams.	3/3
Affordability	% income spent on transportation	Medium Potential: Offers an affordable alternative when compared to single occupancy vehicles with limited requirement for dedicated infrastructure.	2/3
		Total Score	11/15

What is the scale of impact, based on population served and relative cost? (Multiplier of base score)				
Factor	**Measure**	**Description**	**Multiplier**	**Score**
Population	Relative population reach	General transit has the capacity to serve large tracts of the region far more than dedicated RapidBus, rail or ferries.	1 = rgn .5 =sub-rgn .25 = EA	1 = rgn
Cost	Relative cost to deliver	Capital costs are comparatively moderate but ongoing significant operational costs required to be met by both the Province and local tax base.	1 = low .5 = med .25 = high	.25 = high
			Total Multiplier	1.25
			TOTAL SCORE WITH FACTORS	13.75/30

Bus Mass Transit / RapidBus	
Priority Description	Accelerate RapidBus implementation
Level of Action	Infrastructure – Provide transportation options that support mode choice
Level of Impact	CRD advocacy makes the most impact to secure investment and implement service



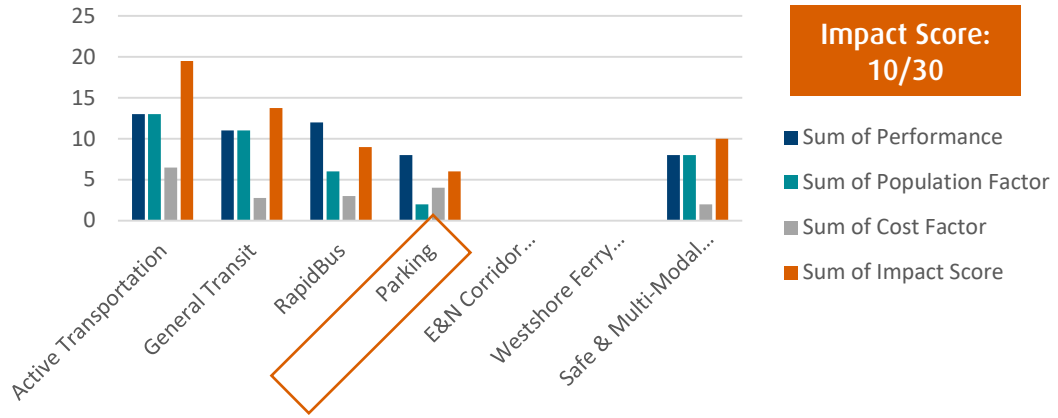
Region's readiness to deliver the priority	
Delivery Partner & Authority	**Key Actions, Timing & Commitment**
LEAD: BC Transit (*BC Transit Act*)	As the lead agency, key actions include planning, engineering / design, seeking funding approvals and seeking confirmation of phased construction timing. RapidBus is a priority project for BC Transit and forms a component of their work plan. Fast tracking may require reallocation of resources from other projects.
MoTI (Ministerial mandate)	Provide funding through provincial transfers. Owns the key corridors.
Federal Government (Ministerial mandate)	Provide capital funding for transit projects.
CRD (*LGA*, Bylaws, Agreements)	Provide data and technical expertise to planning projects. Identify and plan for parallel improvements to the Regional Trail System that runs parallel to key corridors.
Local Governments (*LGA, Community Charter*)	Identify and plan for parallel improvements to the RapidBus corridors including Trail Systems, pedestrian infrastructure and local road connections. Plan for and implement high density land use in proximity to RapidBus stations.

CRD Actions to Implement the Priority	
Action	**Description**
Advocate	To the **Victoria Regional Transit Commission** to accelerate implementation, to the **provincial and federal governments** to access the region's fair share of funding and with **municipal governments** to locate higher density housing in proximity to designated rapid transit nodes. Staff to develop materials and provide administrative support to advance advocacy with key audiences, and track and report on progress.
Plan / Coordinate	Continue to provide data and technical expertise to projects. Prioritize planning and development of shovel-ready regional trail projects along the key corridors to leverage advancements for active transportation improvements.
Amplify / Encourage	Consider how to encourage transit ridership in CRD education campaigns.

Bus Mass Transit / RapidBus			
How does the priority achieve regional outcomes?			
Criteria	**Measure**	**Description**	**Score**
Mode Shift	Potential to increase # of trips by walking, cycling or transit	Medium Potential: Improved speed, reliability and frequency appeals to non-captive users (i.e., people who have capacity to choose other modes). Significant trip increases depend on attracting new transit users, rather than transferring existing users to a new service format. Long-term impacts of pandemic ridership loss is a large unknown.	2/3
Climate Action	Potential to decrease GHG emissions	High Potential: 10 year plan to transition fleet per the Low Carbon Fleet Program. Will help reduce the number of vehicle trips if the service improvements can successfully attract new riders.	3/3
Congestion	Potential to reduce need for peak period travel	Medium Potential: Reduce travel time for transit users through improved trip speed, reliability and frequency. Improve travel time for goods and service movement if the service reduces the number of single occupancy vehicles.	2/3
Safety	Potential to increase safety	High Potential: Removes single occupancy vehicles from road, by a very safe mode facilitated by trained safety teams.	3/3
Affordability	% income spent on transportation	Medium Potential: Offers an affordable alternative when compared to single occupancy vehicles but high capital and operating costs to be met by local tax base and the Province. Could lead to increase in rents and purchase prices for real estate in close proximity to stations.	2/3
		Total Score	12/15

What is the scale of impact, based on population served and relative cost? (Multiplier of base score)				
Factor	**Measure**	**Description**	**Multiplier**	**Score**
Population	Relative population reach	Incremental reach that focuses on growing population on the Westshore. Biggest benefit to people residing near RapidBus corridors.	1 = rgn .5 =sub-rgn .25 = EA	.5 =sub-rgn
Cost	Relative cost to deliver	High infrastructure costs and ongoing permanent operational costs.	1 = low .5 = med .25 = high	.25 = high
			Total Multiplier	.75
			TOTAL SCORE WITH FACTORS	9/30

Multi-Modal and Safe Highways	
Priority Description	Prioritize safety and multi-modal improvements that will advance regional climate action and mode shift targets.
Level of Action	Infrastructure – Provide transportation options that support mode choice
Level of Impact	CRD advocacy makes the most impact to secure investment and implement service



Impact Score: 10/30

Region's readiness to deliver the priority	
Delivery Partner & Authority	**Key Actions, Timing & Commitment**
LEAD: MoTI (Ministerial mandate)	MoTI has identified potential highway upgrades through the South Island Transportation Strategy. MoTI has work plans which allocate resources for planning and design and makes budget requests for implementation of key projects.
BC Transit (*BC Transit Act*)	BC Transit works very closely with MoTI to develop and implement the phased expansion of RapidBus.
CRD (*LGA*)	Provide data and technical expertise to planning projects. Identify and plan for parallel improvements to the Regional Trail System that runs parallel to the highway corridors.
Local Governments (*LGA, Community Charter*)	Identify and plan for connections to the highway system.

CRD Actions to Implement the Priority	
Action	**Description**
Advocate	To **MoTI** to ensure that all highway projects deliver multi-modal and safety improvements that will advance regional mode share and climate targets, to progress projects that in a timely manner and to prioritize projects that improve the Regional Multi-Modal Transportation Network. To **gateway areas** to build relationships that will support regional connectivity.
Plan / Coordinate	Continue to provide data and technical expertise to projects. Prioritize planning and development of shovel-ready regional trail projects along the key corridors in order to leverage spending on active transportation improvements.

Multi-Modal and Safe Highways

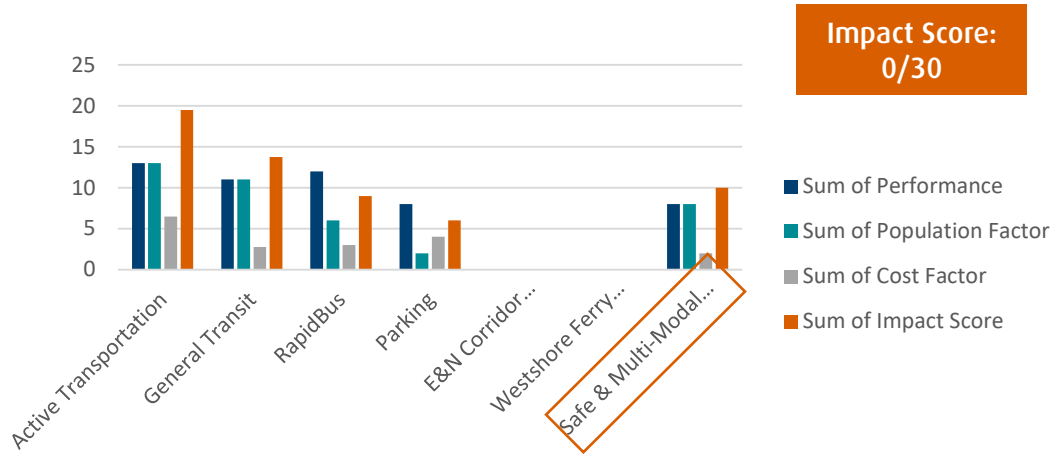
How does the priority achieve regional outcomes?

Criteria	Measure	Description	Score
Mode Shift	Potential to increase # of trips by walking, cycling or transit	**Medium Potential:** Infrastructure improvements (e.g., pedestrian bridges, dedicated bus-only travel lanes) support the provision of multi-modal options. Increased focus on inclusion of transit and active transportation whenever making changes. Upgrades do not equate to new general purpose travel lanes. E.g., RapidBus is dependent on utilizing the highway system.	2/3
Climate Action	Potential to decrease GHG emissions	**Low Potential:** Installation of electric vehicle charging stations at designated mobility hubs along highway corridors will support the gradual shift to zero-emission vehicles. The inclusion of dedicated transit and active transportation infrastructure on highways assists towards getting more people out of cars and decreasing the associated GHG.	1/3
Congestion	Potential to reduce need for peak period travel	**Medium Potential:** Potential to reduce queuing / idling through improved traffic flow. Multi-modal infrastructure improvements reduce the number of single occupancy vehicles, improves travel time for goods and service movement.	2/3
Safety	Potential to increase safety	**Medium Potential:** MoTI takes a Vision Zero approach to infrastructure planning and design. Provides a moderately safe mode or combination of modes of transportation. Focus on inclusion of active transportation and transit safety improvements when undertaking highway changes. Prioritizes safety improvements in high crash locations such as at busy intersections and along the Malahat.	2/3
Affordability	% income spent on transportation	**Low Potential:** Does not change costs associated with vehicle ownership. May attract greater use of more affordable options such as transit and active transportation as multi-modal projects are built.	1/3
		Total Score	8/15

What is the scale of impact, based on population served and relative cost? (Multiplier of base score)

Factor	Measure	Description	Multiplier	Score
Population	Relative population reach	Reach of the highway system is expansive and complimented by structured network of connector roads.	1 = rgn .5 =sub-rgn .25 = EA	1 = rgn
Cost	Relative cost to deliver	Very high infrastructure costs and ongoing permanent operational costs.	1 = low .5 = med .25 = high	.25 = high
			Total Multiplier	1.25
			TOTAL SCORE WITH FACTORS	10/30

Westshore Passenger Ferry Feasibility Study	
Priority Description	Complete a passenger ferry feasibility study to plan for long-term transportation alternatives
Level of Action	Infrastructure – Provide transportation options that support mode choice
Level of Impact	CRD advocacy plans for long-term regional needs



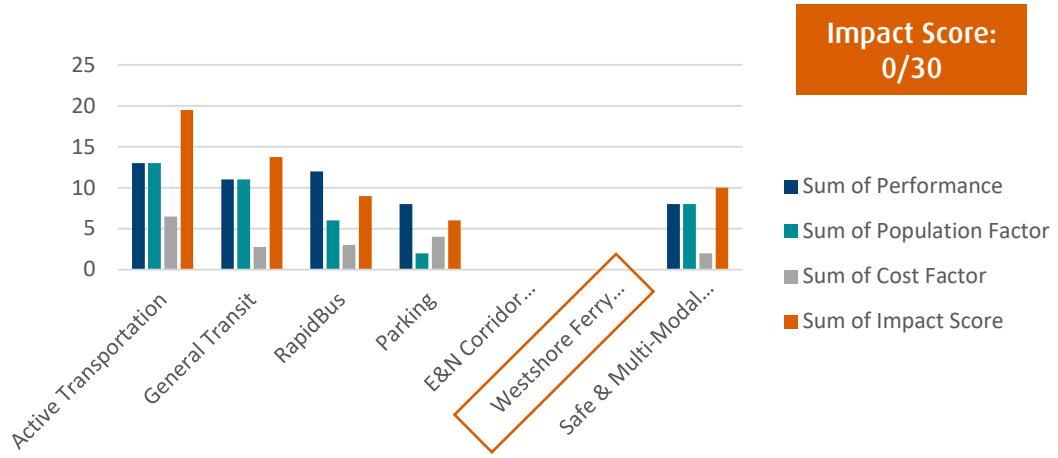
Impact Score: 0/30

Region's readiness to deliver the priority	
Delivery Partner & Authority	**Key Actions, Timing & Commitment**
LEAD: BC Ferries / MoTI (Operational mandate)	Undertake and fund a full feasibility study on a passenger ferry from Colwood to Downtown Victoria.
CRD / Local Governments (*LGA*)	Seek dedicated ferry service between Royal Bay in Colwood and Downtown Victoria with a possible stop in Esquimalt. Royal Bay is a developing low to mid density suburban area on the western fringe of Colwood and adjoining rural lands in Metchosin. The long-term desired output is to provide an alternative transportation option that is not reliant on a congested and limited road network. In the short-term, the CRD Board and several local governments have indicated support for a full feasibility study identifying whether there is a business case for the project or not. It is acknowledged that any potential for introducing passenger ferry would be a longer term plan.

CRD Actions to Implement the Priority	
Action	**Description**
Advocate	To the **BC Ferries and MoTI** to undertake and fund a full feasibility study on a passenger ferry from Colwood to Downtown Victoria.
Plan / Coordinate	Provide data and technical expertise, if requested.

Westshore Passenger Ferry Feasibility Study				
How does the priority achieve regional outcomes?				
Criteria	**Measure**	**Description**		**Score**
Mode Shift	Potential to increase # of trips by walking, cycling or transit	No short-term potential to impact mode shift. Priority relates to a feasibility study not implementation.		0/3
Climate Action	Potential to decrease GHG emissions	No short-term potential to impact mode shift. Priority relates to a feasibility study not implementation.		0/3
Congestion	Potential to reduce need for peak period travel	No short-term potential to impact mode shift. Priority relates to a feasibility study not implementation.		0/3
Safety	Potential to increase safety	No short-term potential to impact mode shift. Priority relates to a feasibility study not implementation.		0/3
Affordability	% income spent on transportation	No short-term potential to impact mode shift. Priority relates to a feasibility study not implementation.		0/3
			Total Score	0/15
What is the scale of impact, based on population served and relative cost? (Multiplier of base score)				
Factor	**Measure**	**Description**	**Multiplier**	**Score**
Population	Relative population reach	Sub-Regional: Only two or possibly three stops in its entirety, serving the Westshore and downtown.	1 = rgn .5 =sub-rgn .25 = EA	.5 =sub-rgn
Cost	Relative cost to deliver	Relatively low cost to undertake study. No ongoing financial commitments.	1 = low .5 = med .25 = high	1 = low
			Total Multiplier	1.5
			TOTAL SCORE WITH FACTORS	0/30

E&N Corridor – Protect, Maintain, Upgrade	
Priority Description	Invest in corridor upgrades and maintenance to preserve a rail-based transportation option in the long-term
Level of Action	Infrastructure – Provide transportation options that support mode choice
Level of Impact	CRD advocacy plans for long-term regional needs



Impact Score: 0/30

Region's readiness to deliver the priority	
Delivery Partner & Authority	**Key Actions, Timing & Commitment**
LEAD: Island Corridor Foundation (Operational mandate)	Work collaboratively with partners to maintain and upgrade the E&N corridor for future transportation use.
MoTI	Possible funding source for rail maintenance and upgrades.
CRD / Local Governments (*LGA*)	Seek upgrades and maintenance to the E&N corridor to preserve the viability of the corridor as a long-term alternative transportation option that is not reliant on a congested and limited road network. In the short-term, the CRD Board and several local governments have indicated support for protecting the corridor through investments. It is acknowledged that any potential for introducing rail service – whether commuter rail or passenger rail – would be a longer term plan.

CRD Actions to Implement the Priority	
Action	**Description**
Advocate	To the Island Corridor Foundation and MoTI to maintain and upgrade the corridor and enshrine the long-term protection of the corridor in planning and policy documents.
Plan / Coordinate	Provide data and technical expertise, as needed. Protect the corridor for future use through planning and policy documents.

E&N Corridor – Protect, Maintain, Upgrade				
How does the priority achieve regional outcomes?				
Criteria	**Measure**	**Description**		**Score**
Mode Shift	Potential to increase # of trips by walking, cycling or transit	Policy based action not resulting in short-term transportation options.		0/3
Climate Action	Potential to decrease GHG emissions	Policy based action not resulting in short-term transportation options.		0/3
Congestion	Potential to reduce need for peak period travel	Policy based action not resulting in short-term transportation options.		0/3
Safety	Potential to increase safety	Policy based action not resulting in short-term transportation options.		0/3
Affordability	% income spent on transportation	Policy based action not resulting in short-term transportation options.		0/3
			Total Score	0/15
What is the scale of impact, based on population served and relative cost? (Multiplier of base score)				
Factor	**Measure**	**Description**	**Multiplier**	**Score**
Population	Relative population reach	Future potential to serve defined population along a single corridor connecting the Westshore and Downtown.	1 = rgn .5 =sub-rgn .25 = EA	.5 =sub-rgn
Cost	Relative cost to deliver	Maintenance and upgrade costs to be determined but far below those of operational transit. Resources to maintain and upgrade may result in other projects not being funded.	1 = low .5 = med .25 = high	.5 med
			Total Multiplier	1
			TOTAL SCORE WITH FACTORS	0/30

ANALYSIS

Responding to a Board request, staff examined five different transportation governance structures and four key observations were identified in the subsequent tables:

1. Those jurisdictions with one level of authority have the greatest ability to align plans with implementation practices.
2. The more levels of governance involved the more complexities and grey areas there are around responsibilities and mandate.
3. There is a clear need for dedicated funding sources for all modes of transportation otherwise some modes are unlikely to capitalize on their potential. This is particularly likely to disproportionately negatively impact the active modes that are traditionally more reliant on competitive grants from higher levels of governments.
4. Federal or provincial highway networks fall outside of the scope of all these governance structures and as such there is a loss of decision making control along key corridors.

	VRTC	TransLink	Central Okanagan	Halifax	Auckland
Approximate Population Covered	400,000	2,600,000	190,000	450,000	1,700,000
Governing Body	BC Transit Board and Victoria Regional Transit Commission (VRTC)	TransLink Board (Operational) and Mayors' Council (Strategic)	Sustainable Transportation Partnership of the Central Okanagan (STPCO)	Regional Municipality of Halifax - Standing Committee. Active Transportation and transit advisory committees report back to it.	Auckland City Council under banner of Auckland Transport
Municipal make up	13 municipalities and one EA	21 municipalities, one EA and one First Nation	Regional District, four municipalities and Westbank First Nations	Single municipality. (amalgamated)	Single municipality
Authority	Provincially Legislated	Provincially Legislated	Formal Partnership Agreement	Local Administrative Order	Federally Legislated
Modes of Transportation	Transit only – bus only at present	All modes but focus predominately on transit. TDM	All modes but transit and active transportation focused. TDM.	All modes and TDM	All modes and TDM

There are advantages and limitations for each of the governance models highlighted. However, none of the governance models would complement the particular makeup of the CRD. The CRD does not operate as a singular municipal government and as such does not have the capacity or authority to oversee implementation of regional policy in relation to land use and transportation integration for instance. Unlike the Central Okanagan, the CRD does not have a single partner such as Kelowna who accounts for an exponentially higher and growing and disproportionate population and employment base. Having one municipal partner in the CRD taking on a lead role would not be appropriate as the CRD is more decentralized and as such a more nodal approach to transportation is required. The CRD does not have access to dedicated transportation funding as is the case in Metro Vancouver and the Victoria Regional Transit Commission (VRTC) mandate limits its role to transit.

Governance Entity	Relationship of Land Use & Transportation	Advantages	Disadvantages
VRTC (status quo)	Limited ability to directly impact land use decisions or incentivize mixed use and higher density developments.	• Relatively small decision making body. • Clear authority as laid out in legislation. • Ability to pivot and align to changes in provincial policy. • Funding secured through agreement with the Province and local fuel tax.	• Membership is not fully representative of all paying participants. • Decision making not done in conjunction with land use and broader priorities. • Focused purely on transit. • Staff are not independent as work for BC Transit as opposed to VRTC or municipal partners – focus on corporate as opposed to local priorities. • Fuel tax levy is charged in the region which results in lower percentage of provincial funding than is received in other BC Transit jurisdictions.
TransLink	Some ability to incentivize mixed use and higher density development through agreements when introducing new high order transit.	• Centralized skills base. • Board compromised of appointed professionals with specific expertise removing a political layer. • Access to 95% of areas gas tax funding providing a predictable and stable funding source. • Stable funding base from the Province.	• Confusion over role of Mayors' Council and Board. • Focus very heavily skewed to transit even though other areas in mandate. • Priorities do not always align with the local municipalities and regional district. • Decisions made operationally by the appointed Board are worn by politicians. • Juggling of major infrastructure projects and needs for smaller communities to access basic transit. • Major projects are decades in the making, often with a very large turn over in Mayors during the project lifecycle. Changes in direction can shift with political cycles, resulting in years of lost work and resources or project inertia. • Still needs high levels of coordination with Metro Vancouver on matters related to long-term land use and transportation needs.

Governance Entity	Relationship of Land Use & Transportation	Advantages	Disadvantages
Central Okanagan	Allows for greater flexibility and cooperation over integration of modes and land use.	• Provides for strong levels of voluntary support involving compromise and prioritizing regional travel needs. • Recognizes that there is one major employment and service centre that all residents need to access. • Staff-led technical role allowing for integration in to local plans. • All partners have representation at the table.	• Significant disparity in population and employment base of membership – Kelowna by far the most populous partner and key service and employment centre. • Voluntary in nature so no regulated structure to resolve impasses.
Halifax Regional Municipality	Allows for greater control over integration of modes and land use as same body making both decisions.	• Integrated planning aligning with municipal priorities. • Strong interdepartmental working relationships - all in house. • Consideration given to how best to integrate all modes.	• Too urban focused. • Covers a massive geographic area including large portions of rural lands. • While one standing committee there are numerous operating entities and advisory committees which adds complexities.
Auckland	Allows for greater control over integration of modes and land use as same body making both decisions.	• Integrated planning aligning with municipal priorities. • Appointed members have varying backgrounds and specializations, allowing for transit planning to include multiple expert perspectives. • Direct relationship with federal government.	• Rapidly growing population and employment base. • Increasingly technical in nature. • Challenges meeting growth demands. • Numerous advisory committees reporting back adding complexities and blurring responsibilities. • Local community level decision making is reduced making it more challenging to contest controversial local projects.

Making a difference...together

EEP 21-28

REPORT TO TRANSPORTATION COMMITTEE
MEETING OF WEDNESDAY, JUNE 16, 2021

SUBJECT **CRD Electric Vehicle Infrastructure Roadmap**

ISSUE SUMMARY

To provide the results of the Capital Regional District (CRD) Electric Vehicle Infrastructure Roadmap project (Roadmap).

BACKGROUND

Working with Dunsky Energy Consulting, staff recently completed the CRD Electric Vehicle (EV) Infrastructure Roadmap (Appendix A). The purpose of this initiative was to understand future charging station needs and identify the opportunities for regional collaboration. The Roadmap considered municipal EV adoption targets and utilized modelling to identify a regional target of 25% of light duty vehicles to be EVs by 2030. The project team held two workshops and one-on-one interviews with local and provincial governments, BC Hydro, EV Tech companies, potential site hosts, EV infrastructure builders, and large fleet owner representatives.

The Roadmap estimates that, on the region's current adoption trajectory, EVs are expected to reach 11% of total vehicles by 2030, well below capital region and municipal targets. To meet regional targets, charging infrastructure needs to be in place to promote and attract EV vehicle uptake.

The Roadmap focuses on EV charging infrastructure for battery-electric and plug-in hybrid electric light-duty passenger vehicles, including those for businesses and commercial fleets within the capital region. Light-duty passenger vehicles make up more than 90% of vehicles in the capital region and transitioning these vehicles to electric is a key strategy in local and senior government climate plans and related policies. Funded in part from a BC Hydro Sustainable Communities grant, the Roadmap will be used as an input for the CRD Climate Action Strategy update. Results will also be shared with local governments and other regional stakeholders.

The Roadmap identifies that approximately $31 million of investment is needed for public EV infrastructure to enable the region to achieve 25% of EV ownership relative to the total vehicle fleet by 2030. The 25% target reflects the EV adoption goals set by the region's local governments to date, and a moderate level of EV ownership in the region. While it is expected that most future EV drivers will plug in predominantly at home, many other drivers will only have access to public charging. Many fleet vehicles, such as taxis and car-share services, are also expected to rely on the public network. The following table outlines the number of EV public charging ports and their cost to support the region to an EV target of 25% of the light duty fleet by 2030.

Table 1: Forecast number of charging ports and investment needed by port type

Level 2	Direct Current Fast Charging
770 new ports by 2030	132 new ports by 2030
$7.7M total investment	$23.1M total investment

Most of the investment needs to go to DCFC or "Fast Chargers," which are energy and capital intensive. Few non-Tesla fast chargers exist in the region today. Fast chargers are typically "on-the-go" or top-up chargers, but can be the primary mode of charging for those without access to home charging (i.e., residents of multi-unit residential buildings (MURBs)). DCFCs are currently being installed in corridors by BC Hydro but not at commercial community hubs, like grocery stores, or designated "mobility hubs" identified in the CRD Regional Transportation Plan.

A number of public level 2 chargers currently exist in the region (i.e., malls, recreation centres and municipal halls). These are less expensive and the Roadmap envisions these to be installed in greater numbers in long-term (i.e., multi-hour) parking areas that are close to homes, community hubs and recreation sites. The Roadmap also envisions level 2 installations at workplaces to support charging for employees who do not have access to home charging.

Overall, the total number of public charging ports will need to more than quadruple by 2030, according to the Roadmap modelling. While the Roadmap does not recommend that the CRD specifically own and operate an EV network in the region, it can contribute to the EV infrastructure initiative. See Appendix B for regional stakeholder roles.

The Roadmap recommendations include investing in additional coordination support focusing on charger site selection, education and capacity building, data tracking, and the creation of policy and guideline documents (see pages 24-31 of Appendix A). While the Roadmap does not focus on private charging, the recommendations do include supporting and tracking comprehensive EV charging retrofits in MURBS.

ALTERNATIVES

Alternative 1

The Transportation Committee recommends to the Capital Regional District Board:

That this report be received for information.

Alternative 2

That this report be referred back to staff for additional information.

IMPLICATIONS

Environmental and Climate Implications

On-road transportation accounted for 46% of emissions in the capital region in 2018, with light-duty vehicles accounting for more than 90% of that. Transitioning the region's fleet of light-duty vehicles to EVs displaces fossil fuel use and is a key climate priority for the federal and provincial governments and the capital region's municipalities. Achieving regional and municipal targets related to mode-shifting to transit and active transportation are also climate priorities.

Intergovernmental Implications

As per Appendix B, senior levels of government play major funding and policy roles. The provincial government has created the Zero Emission Vehicle Regulation, which supports the EV supply for

the region, as well as the Go Electric BC program that funds publicly accessible EV infrastructure. The federal government has established a national zero emission vehicle target and the Zero Emission Vehicle Infrastructure Program, which also supports publicly accessible EV infrastructure. The Roadmap recommendations are in line with previous regional and municipal governments' responses and create a coordinated infrastructure program instead of the implementation piecemeal projects, which has been the approach to date. The recommendation to create guidelines and policies supports existing authorities of local governments, many of which have created EV-ready development provisions for public charging and residential construction.

Alignment with Board & Corporate Priorities

The CRD embedded the climate emergency declaration and leadership intentions to accelerate the reduction of GHG (greenhouse gas) emissions while working with local governments in the 2019-2022 CRD Board priorities.

Alignment with Existing Plans & Strategies

The Roadmap was created to align with the 2018 Regional Growth Strategy, which would set the region up well to achieve the goal of a 61% emission reduction by 2038. The Roadmap also aligns with the 2014 *Regional Transportation Plan* mobility hub concept and the multi-modal transportation planning context. The Roadmap will also align with the renewed CRD Climate Action Strategy (in development).

CONCLUSION

Transportation is a key component of regional greenhouse gas emissions. The CRD Electric Vehicle (EV) Infrastructure Roadmap identifies that approximately $31 million of investment will be needed for public EV infrastructure to set the region up to achieve 25% of EV ownership relative to the total vehicle fleet by 2030 and support the Regional Growth Strategy target of 61% total greenhouse gas emission reduction by 2038. The Roadmap indicates that the CRD can support regional collaboration and infrastructure investment through coordination, education, tracking, and policy support.

RECOMMENDATION

The Transportation Committee recommends to the Capital Regional District Board:

That this report be received for information.

Submitted by:	Glenn Harris, Ph.D., R.P.Bio., Senior Manager, Environmental Protection
Concurrence:	Larisa Hutcheson, P.Eng., General Manager, Parks & Environmental Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

ATTACHMENTS

Appendix A: CRD Electric Vehicle Infrastructure Roadmap – Dunsky Energy Consulting
Appendix B: Regional Electric Vehicle Infrastructure Roles

APPENDIX A

Electric Vehicle Infrastructure Roadmap

Transportation electrification for a connected region

Prepared for:

Capital Regional District

Making a difference...together

March 22, 2021

dunsky

Submitted to:

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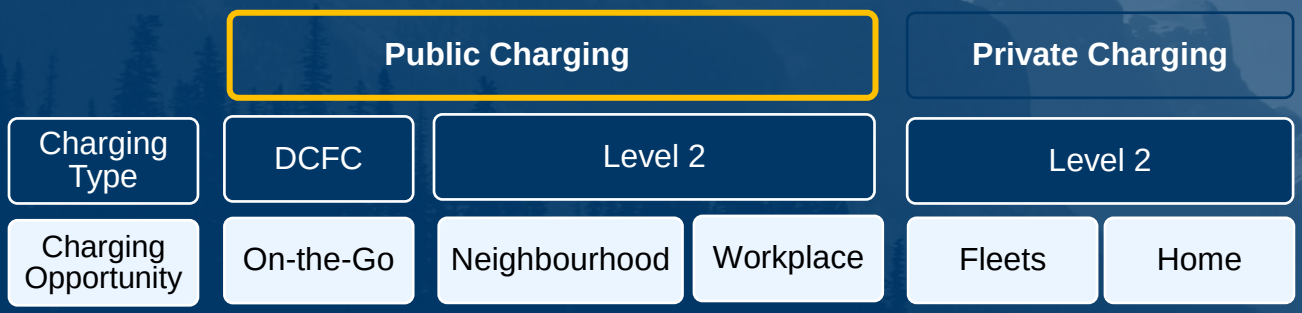
Cover image provided by Plug-in BC

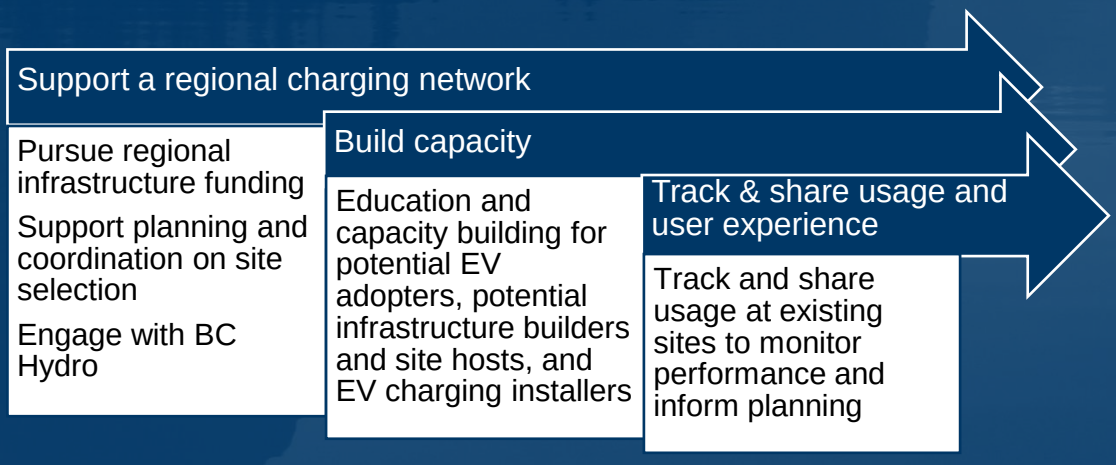
EXECUTIVE SUMMARY

The capital region has experienced record-breaking EV sales over the past several years and has a range of policies and plans in place to support EV adoption. However, to achieve a regional EV goal of 25% of all vehicles, additional charging infrastructure will be required.

Although charging at home in a garage or driveway is typically the most convenient option, not all EV drivers can plug in at home. Therefore, investment in public charging, including DCFC on-the-go, and Level 2 chargers in neighbourhoods and workplaces, is critical to ensuring equitable access to charging. This Roadmap estimates that 770 new public Level 2 ports and 132 new DCFC ports will be required by 2030 to accelerate adoption and support EV user needs.



The ramp-up of EV charging represents a significant investment of time and resources by a wide variety of different actors. There are significant opportunities to collaborate and ensure a coordinated approach to infrastructure deployment. The CRD has a vital role to play in leading collaboration opportunities, expanding its role as a trusted reference, and acting as the region's EV infrastructure advocate. To achieve this goal, the CRD should pursue the following collaboration opportunities:



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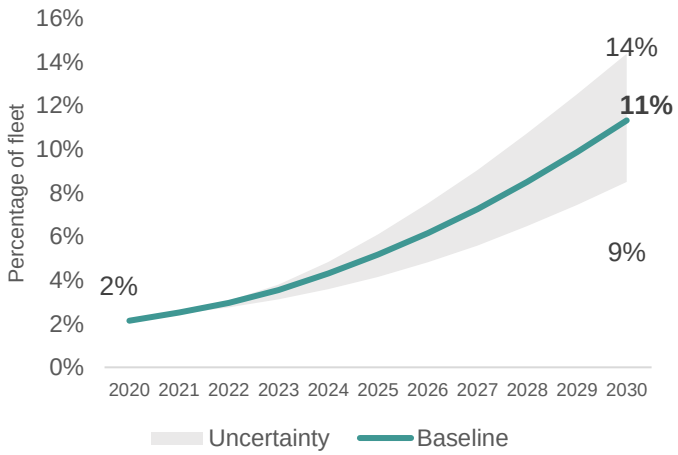
1. Introduction

The capital region of British Columbia's transportation landscape is in transition. The urgency of climate change and the imperative to create healthy, vibrant communities have brought sustainable transportation options like biking, transit, and walking to the forefront.

For remaining trips that can only be served by passenger vehicles, switching to electric vehicles (EVs) offers a significant opportunity for emission reductions. Thanks to supportive provincial, local and regional policies and incentives, and a community committed to climate action, EVs are taking off: in 2020, the region had the highest percent of EV sales in the country.[1] Capital region residents support electrification, with 93% of respondents in the 2018 CRD EV + E-Bike survey indicating it was important or very important that local or regional government promote EVs to reduce community emissions.

To support the acceleration of EVs, more investment in charging infrastructure is required. While some current and future EV drivers can plug in at home, for many drivers, access to public charging may be the only option. If the capital region's EV charging infrastructure remained as it is today, EVs are expected to reach 11% of total vehicles by 2030, which is well below many local EV targets.[2]

Figure 1: Forecast of EV Adoption Based on Current EV Infrastructure



Significant efforts are already underway to plan and invest in more charging infrastructure in the region by local governments, utilities and the private sector. Other key players are also involved in planning and deploying EV charging, such as utilities, building and landowners, large fleet owners, and EV tech and manufacturing companies.

Given the scale of investment required, the diversity of stakeholders involved, and the tight timelines to meet climate targets, deliberate and coordinated charging infrastructure investment is critical. Regional leadership is needed to support the acceleration of EV adoption in the region and address user needs, while supporting complementary priorities around affordability, equity and modal shift.

[1] Statistics Canada. (2021). *Zero-emission vehicles in British Columbia, first half of 2020*. Available online: https://www150.statcan.gc.ca/n1/pub/11-627-m/11-627-m2020076-eng.htm

Purpose

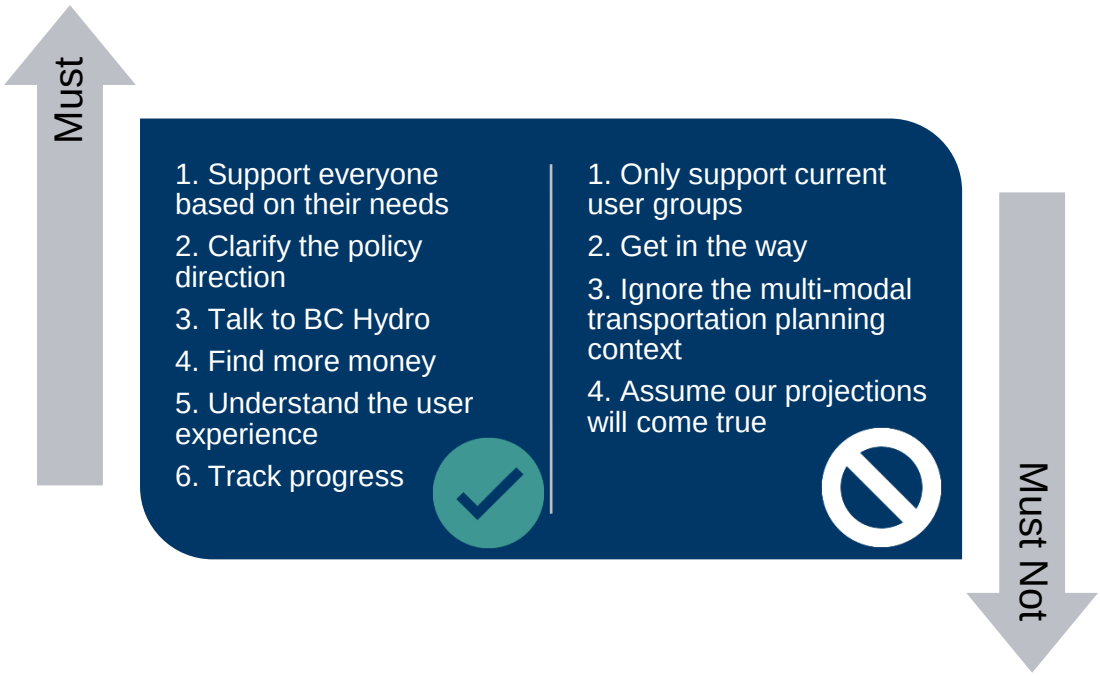
The purpose of this Roadmap is to provide:

- A high-level indication of the scale of EV charging infrastructure required to accelerate the transition to EVs in the capital region,
- An overview of the types of charging opportunities needed to support current and future EV drivers, and
- A summary of collaboration opportunities between key players and actions to support a coordinated approach to charging infrastructure deployment in the region.

The focus of this Roadmap is EV charging infrastructure for battery-electric vehicles (BEV) and plug-in hybrid electric vehicles (PHEV), given that the market is more advanced compared to other internal combustion engine alternatives. In addition, this Roadmap focuses on light-duty passenger vehicles, including those for businesses and commercial fleets within the capital region.

Guiding Principles

The Roadmap is guided by the following principles developed by stakeholders during this project's engagement process. Each opportunity has been developed to conform to these principles.



Methodology

The Roadmap was developed by engaging with regional stakeholders, modeling regional EV adoption, and incorporating the on-going work of the regional and local governments on EV policy and infrastructure. The **stakeholder engagement** process included a series of one-on-one interviews led by the CRD and two online workshops. The first defined guiding principles to ensure the Roadmap meets regional needs. The second event assessed regional collaboration opportunities. A summary of the stakeholder engagement process is presented in Appendix A.

Look out for ***stakeholder insights***

Dunsky's **Electric Vehicle Adoption (EVA) model** was used to assess EV charging infrastructure needs and costs required to accelerate regional EV adoption.

2. Current EV Charging Landscape

As of February 2021, there were 240 Level 2 and 28 Direct Current Fast Charging (DCFC) ports located across the capital region (Figure 2). Level 2 chargers are distributed widely, while DCFC ports are located primarily in Victoria, Saanich, and along major routes[3]. Detailed explanations of infrastructure types can be found in the *Capital Region Local Government Electric Vehicle (EV) + Electric Bike (E-Bike) Infrastructure Planning Guide.*

Figure 2: EV Charging Stations in the capital region (by census subdivision), February 2021

Local Government Policy and Infrastructure Plans

Local governments are taking an active role in supporting and deploying EV charging infrastructure by installing many of the charging stations across the region. Furthermore, local governments have been supporting EVs adoption more generally through their policies and planning activities. Many have identified collaboration opportunities with business, community organizations, and other local governments as an important component in public charging infrastructure funding and development in their climate and transportation plans.

Table 1 highlights EV-ready charging policies and municipal EV infrastructure plans as of March 2021.

Table 1: CRD and Local Government EV Policy and Infrastructure Plans

Government	EV Infrastructure Plan

[3] Natural Resources Canada.(2018) *Electric Charging and Alternative Fueling Stations Locator.* Available online: https://www.nrcan.gc.ca/energy-efficiency/energy-efficiency-transportation-and-alternative-fuels/electric-charging-alternative-fuelling-stationslocator-map/20487#/analyze.

City of Colwood	The City is considering 100% EV Ready requirements for multi- and single-family homes within its Parking By-law Update.
City of Langford	The City is considering an EV Ready requirement.
City of Victoria	In its 2018 Climate Leadership Plan, the City set a goal of renewable energy powering 30% of passenger vehicles by 2030. The City is currently developing its EV Strategy, which will outline its infrastructure plans. The City of Victoria has adopted 100% EV Ready standards for new multi-family and commercial buildings.
District of Central Saanich	The District outlined that one pathway to meet accelerated Climate Plan is to have 25% of vehicles on the road be zero emissions by 2030, and 100% by 2050.In its 2020 *Electric Vehicle and Electric Bike Strategy*, staff propose the installation of 3 Level 2 charging stations for public use on District properties.
District of Highlands	The District's Climate Leadership Plan outlines a vision where vehicle owners switch to zero-emission vehicles before 2030.
District of Saanich	The District's 2020 *Climate Plan* sets out to expand its municipally-owned Level 2 stations from 24 by 2025, with an interim goal in its 2020 *Electric Mobility Strategy* of 20 stations by the end of 2021. These actions aim to meet their Climate Plan target of 36% of all personal vehicles electrified by 2030, and 100% of personal and commercial vehicles are renewably powered by 2050. The District of Saanich has adopted 100% EV Ready standards for new residential, institutional, commercial and industrial buildings.
District of Sooke	The 2020 Transportation Master Plan indicates that the District has pending plans for 6 additional Level 2 charging stations, but there is no installation timeline. The *Plan* also suggests EV-Ready requirements for new residential and commercial buildings.
Town of Sidney	The Town is in the process of implementing an EV-Ready by-law for new multi-family and single-family homes.
Town of View Royal	The Town Council adopted a Zoning By-law amendment to require EV and E-bike Infrastructure residential and non-residential buildings.
Township of Esquimalt	The Township is in the process of implementing an EV-Ready by-law for new multi-family and single-family homes.
Capital Regional District	The *Capital Region Local Government Electric Vehicle (EV) + Electric Bike (E-Bike) Infrastructure Planning Guide* was developed to inform EV infrastructure planning and design in the region. The CRD also worked with AES Engineering to produce technical standards for a zoning requirement of 100% EV-ready MURB parking stalls, which facilitated a model by-law. The CRD also developed load management best practices.

Key Players

Key stakeholders for the Roadmap include senior and local governments, First Nations and other organizations that are planning and deploying EV charging infrastructure that is wholly or partially available to the public. In addition, there are industry players focused on private fleets and charging (e.g. corporate fleets, taxi companies, and development industry).

Companies involved in EV equipment, installation and engineering also play an important supporting role, such as equipment manufacturers and charging station operators. Some play a key role in supporting EVs through policy and incentives (e.g. federal government) and the EV market (e.g. vehicle manufacturers). BC Hydro is another key player, both as an owner and operator of EV charging infrastructure, as well as through their role in electricity system planning and identifying where future EV infrastructure can be accommodated.

Equity is a critical factor in public charging infrastructure by making EVs more accessible to all residents. Deliberate efforts are required to ensure the infrastructure reduces, not reinforces, inequities for people who have a low-to-moderate income[4]. For example, public charging can support residents without at-home charging or residents for whom upfront infrastructure costs are a barrier to adoption. A strong public network can enable all residents to choose electric if choosing a vehicle.

Table 2 provides an overview of the key stakeholder roles, and example organizations, in EV infrastructure deployment. Understanding and integrating these stakeholders' plans and needs is essential to developing a cohesive regional charging network. The next chapter outlines key collaboration opportunities as well as the role of the CRD in supporting a regional approach.

Table 2: Key players roles and example organizations

Key Player	Role	Example organizations
Infrastructure Builders	Actively deploying charging infrastructure	Local governments, First Nations, utilities, institutions, building developers, private companies
Site hosts	Willing to host but not necessarily own or operate infrastructure	Governments, crown corporations, First Nations, campuses, major transit hubs (e.g. ferry terminals), parking companies, retailers, fuel stations
Financial & policy supporters	Deciding or administrating EV supports	Governments, First Nations, utilities, provincial and federal governments
Utilities	Supplying electricity or building infrastructure	BC Hydro, Fortis
Technology companies	Supplying or operating charging stations or cars	Infrastructure manufacturers, EV software and data companies
Drivers	Fleet owners or EV users	Capital region residents and businesses
Ecosystem influencers	Advocate with or to industry or communities	Academia, business organizations, EV groups, NGO's

[4] ACEEE. (2021). *The State Transportation Electrification Scorecard.* Available online: https://www.aceee.org/research-report/t2101

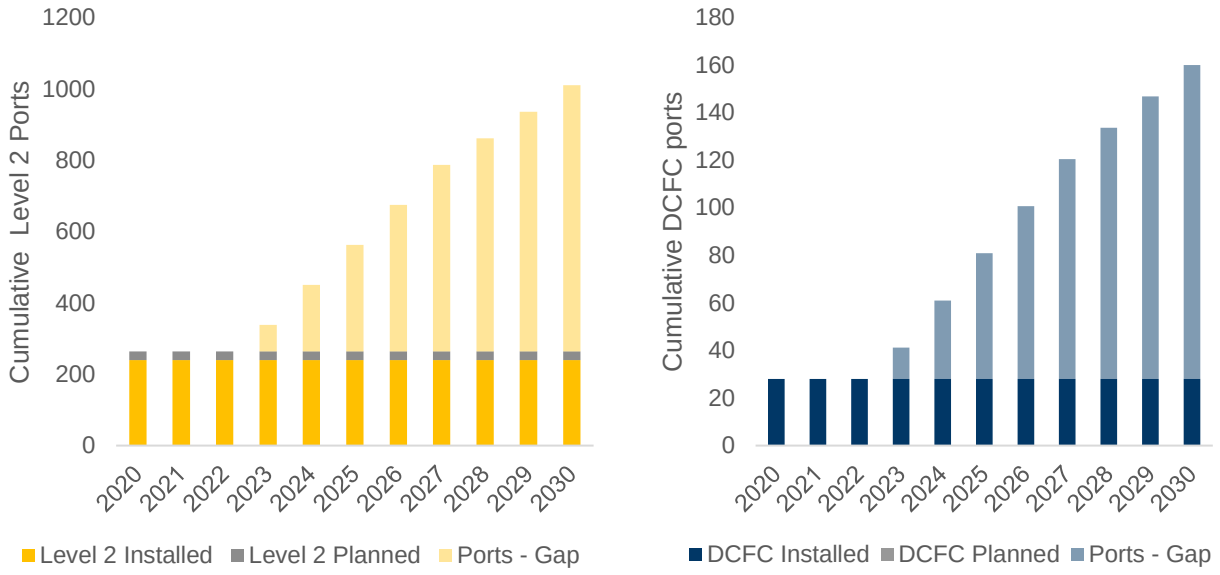
3. Regional Charging Needs

To accelerate the pace of EVs in the region and support municipal EV planning, new investment in private (e.g., at home) and public charging infrastructure is required. The following table outlines the public charging infrastructure that should be deployed by 2030 for EVs to reach 25% of the light duty fleet. This target reflects the EV adoption goals set by local governments to date, and a moderate level of ambition for the capital region.

Level 2	DCFC
770 new ports by 2030	132 new ports by 2030[5]
$7.7M total investment	$23.1M total investment

The **cumulative number of public ports** required for the capital region to accelerate EV adoption is outlined in Figure 3. The graphs show the infrastructure currently installed, the planned infrastructure that has been publicly announced, and the remaining infrastructure gap that needs to be filled. Infrastructure deployment does not start until 2023 to reflect the time required to plan, fund and execute regional charging. A detailed description of the modeling methodology is provided in Appendix C.

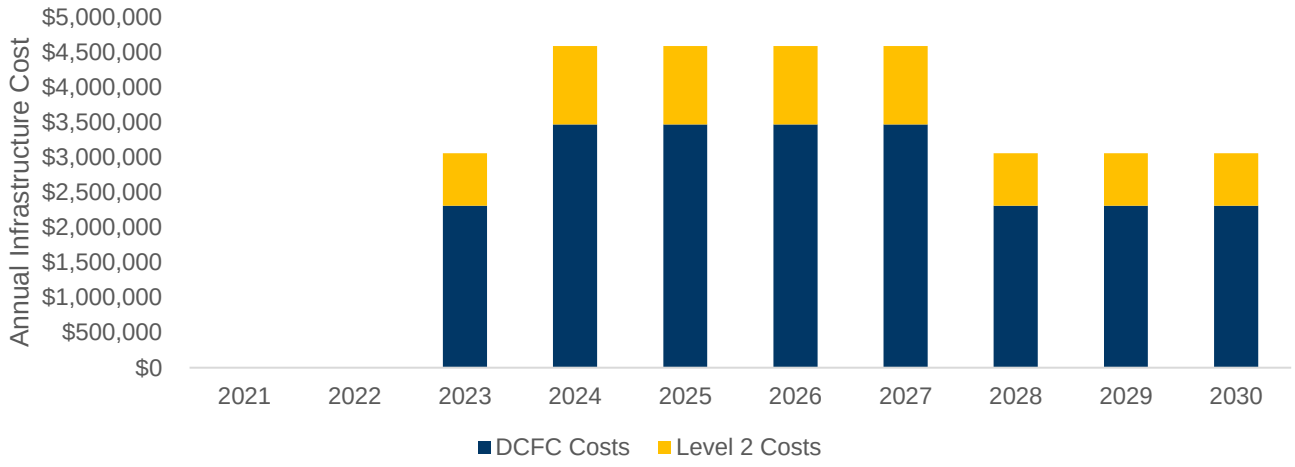
Figure 3 Cumulative infrastructure ports required to accelerate EV adoption in the capital region



[5] The DCFC port number has been updated and refined since Dunsky's 2020 *Contextual Assessment.*

The total cost to deploy the required charging infrastructure is provided in Figure 4.[6] Funding for EV infrastructure can come from both private and public sources.

Figure 4 Annual Infrastructure cost for EV infrastructure



[6] Level 2 and DCFC installations costs vary by location. Level 2 installations in parkades are assumed to be $5,000, while curbside installations are assumed to be $15,000, more expensive due to the complexity of construction in the curbside environment. The average cost used for Level 2 chargers in this analysis is assumed to be $10,000. DCFC installation costs are assumed to be $175,000 per port. Actual installed costs can vary depending on individual site conditions and the installed power capacity. Our analysis assumes an average of 150kW capacity per DCFC port.

4. Roadmap

Ensuring that EV drivers have reliable access to charging is critical to accelerating the pace of adoption. Charging at home is typically the preferred option and relies on **private** infrastructure. However, a complete and equitable charging network should provide a robust **public** charging network with **Level 2 and DCFC infrastructure** to provide options to drivers who cannot easily plug in at home, have long distances to travel, or who are looking for a quick top-up while on-the-go.

This Roadmap outlines **five charging opportunities** that consider the needs of current and future EV users:

"Match charging type with user need"

	Public Charging			Private Charging	
Charging Type	DCFC	Level 2		Level 2	
Charging Opportunity	On-the-Go	Neighbourhood	Workplace	Fleet	Home

For each charging opportunity, we provide guidance on **where and how** they should be installed, as well as technical and design needs. We identify the actions that key players can take to **collaborate** on deployment.

Private charging at home and for fleets is also a critical component of the EV charging infrastructure landscape. Workplaces may also have charging stalls for employees that are not open to the public. However, since the focus of the Roadmap is primarily on regional coordination of public charging infrastructure, we have not included infrastructure costs and targets for private charging.

A. On-the-Go

Charging type: **DCFC**
Access: **Public**

"Standards, transparency and support for potential site hosts"

"Install L3 [DCFC] chargers at locations with amenities"

	2025	2030
Cumulative New DCFC Ports Required	53	132

Charging Need Description

DCFC fast charging can support drivers traveling between communities, as well as drivers within the community who are looking for a quick top up while 'on the go.' Fast charging can be the primary option for residents without at-home charging who do not drive very far or often and as a result only need to charge up occasionally.

Location type	Technical considerations
Commuter corridors	Residents or visitors who are traveling between communities in the region may need a quick top-up while on a longer trip, similar to the way highway rest-stops offer gas station refueling with convenient access from highways. These routes could include Highway 17 or the capital region portion of the Trans-Canada
Community hubs	Fast-charging can be located in community hubs with short-stay activities or appointments. These locations could include retail, services or other short-stay locations. Six of the eight DCFC locations currently outlined in the *Capital Region Local Government Electric Vehicle (EV) + Electric Bike (E-Bike) Infrastructure Planning Guide* identified this type of short-stay, highly trafficked public spaces, including parks, libraries, and municipal halls across the region. The California Energy Commission[7] statewide infrastructure usage assessment identified that the majority of DCFC installations should be within communities where residents spend most of their time. While charging along highway corridors is crucial to enabling longer trips, fast charging sites within communities see more frequent usage. DCFC stations generally require a three-phase 480 V supply. The cost of a new electrical service for the high power necessary for DCFC hubs can vary substantially from site to site. The cost of different locations should be considered, and utilities engaged early when selecting suitable sites for DCFC hubs.

[7] California Energy Commission. (2021). *Assembly Bill 2127: Electric Vehicle Charging Infrastructure Assessment.* Accessed online: https://www.eenews.net/assets/2021/01/22/document_ew_04.pdf

Typical parking duration	Dwelling time varies, but in general, around 20-40 minutes.
Example sites	• Grocery stores, libraries, recreation centers (short stays) • Gas stations, rest stops • Retail and dining establishments
User experience and design	To make this charging opportunity attractive to EV drivers, availability and charging time needs to be reliable. Locating multiple chargers in a single hub, providing high charging power levels, as well as parking time limits or time-based usage fees to encourage turnover, can support a larger volume of EV drivers as adoption increases.
Equity	Equity is an important consideration in all charging siting, but especially due to the limited numbers of DCFC stations installed in any charging network. In addition to geographic coverage, the socio-economic conditions of the communities should be assessed when siting DCFCs to ensure equitable access. For example, DCFC ports can be distributed such that there is access across neighbourhoods and communities with varying income levels. Charge station operators should also consider the impact of usage fees on different types of users. In areas with a high percentage of MURBs where DCFC sites are intended to provide a substitute for home charging, typical DCFC usage fees would significantly reduce the opportunity for annual savings compared to a gas-powered vehicle. Alternative fee structures, such as a subscription-based monthly fee with a reduced per-session fee, may be necessary to ensure those who cannot charge at home can benefit from the same financial savings as those who can.
Operations	Due to the high cost of demand charges, the business model for on-the-go fast charging operations may not be profitable in the short-term, despite the high value they provide to the community.

Mobility Hubs

Mobility hubs, as defined in CRD's 2014 *Regional Transportation Plan*, are key locations of regional activity and regional destinations where transportation modes integrate seamlessly and efficiently, and where both the traveler environment and urban form will encourage transit, active transportation, and other alternatives to driving alone. To accommodate a diversity of transportation choice, mobility hubs include access to activity and public transport, and integrate new technologies, such as EV infrastructure. This infrastructure can support vehicle access or integration, including car share and on-the-go fast charging.

"Engage with other transit authorities (transit, ferries, etc.)"

B. Neighbourhood

Charging type: **Level 2**
Access: **Public**

"Lead with a if you build it they will come approach"

	2025	2030
Cumulative New Neighbourhood Level 2 Ports Required	158	394

Charging Need Description

Within a neighbourhood, Level 2 charging can provide an important replacement or supplement to at-home charging. Residents who do not have access to home charging may benefit from long-term (multi-hour) charging **close to home** or at **community hubs**. In the 2018 CRD EV + E-Bike public survey, access to a public charging network was described as very important to owning or purchasing an EV to 51% of respondents and important to 40% of respondents.

Location type	Technical considerations
Close to home: On-street curbside parking	Curbside charging infrastructure can be installed on residential streets using standalone, street-light based, or privately-powered electrical services. Standalone systems can be costly due to the installations requirements. Leveraging streetlighting infrastructure can help to minimize installation costs and reduce the physical footprint in the curbside environment. Streetlight systems must be evaluated for spare capacity, which may already exist or could be made available from LED retrofits. Private residence-powered systems are less common, but some jurisdictions allow them where there is no off-street space in the private lot for infrastructure (e.g. no drive-way). Electricity is fed from the residence and the homeowner owns and operates the infrastructure. This option requires clear policies on allowed uses and payment structures of privately-powered and -owned infrastructure on public curbside, which can including future infrastructure planning and multi-modal considerations.
Community hubs Public parking with longer duration parking (e.g., schools, recreation centres, parks, places of worship, etc.)	Installations can be located on curbsides or in public parking lots (either owned by the municipality or by other entities) at neighbourhood community hubs like schools and rec centres. Local government could invest in level 2 charging at local government-owned parking lots or reach agreements with the owners of privately owned lots to install local government-owned charging infrastructure. Private sector EV charging network operators can also invest in charging infrastructure at these locations, which could be supported by local governments through financial, permitting, or other support.

Typical Parking Duration	Close to Home: 8-12 hours; or Community Hubs: 1-4 hours
Example Sites	• Local services providers (e.g., recreation centres, libraries, parks) (long stay) • Institutions (e.g. schools, health care providers) • Private homeowners (if charging sites are on-street)
User experience and design	*Close to Home* Accessing EV charging close to home, ideally on the same block, can encourage residents without home charging to consider EV adoption. Residents are expected to use these chargers on a regular basis – for some it may be their primary mode of charging. The total availability of both parking spaces and charge ports relative to demand will have a significant impact on the user experience. If there is uncertainty that an EV driver will be able to access a charger when needed due to competition for parking from other users, this can impact the overall convenience of EV ownership and can impede uptake. *Community Hubs* Residents may stay parked for longer periods of time within their neighbourhood, for example when visiting parks, or recreation facilities. Residents are expected to use these chargers on an occasional basis when it is convenient to them but are less likely to rely on them as a primary means of charging. When placed in high visibility locations, these chargers can also raise awareness of EVs and public charging options. The 12 Level 2 locations outlined in the *Capital Region Local Government Electric Vehicle (EV) + Electric Bike (E-Bike) Infrastructure Planning Guide* represent this charging need. The identified locations cover recreation centres, parks, libraries, and municipal hall sites across the region.
Equity	Close to home neighbourhood charging can increase equitable access to EV ownership as it creates options for EV drivers who don't have a garage or driveway. On-street infrastructure should be focused on residential streets with lower curbside activities and demand. It is more challenging to install in urban centres or commercial areas due to the competition for on-street space from transit, active transportation, and vehicle congestion. Pedestrian and bicycle traffic flow should not be impeded by infrastructure. EV infrastructure is one element of a complete street: one which is safe, comfortable and convenient for users of all ages and abilities. The curbside design should take into account current use and any future plans (e.g. bike lanes).

Operations	Standalone systems may be costly due to the installations requirements but service can be provided in areas that rely heavily on on-street parking while ensuring equal access to any residents in the area. Once installed, stations require a dedicated party responsible for operations and maintenance, which may be provided by the municipality, the private business or homeowner where the station is located, a parking management company, or another party. The appropriate party will depend on the context of the specific installation. These stations will be accessible to the public and with high volume, and therefore may require additional maintenance than private or limited access stations. Timely and regular maintenance of the infrastructure and the site should be integrated into operation plans and budgets to ensure reliability and convenience for the user.

C. Workplace

Charging type: **Level 2**
Access: **Public**

"Do make it easy for drivers to use"

"Ensure safety on roads and lots"

	2025	2030
Cumulative New Workplace Level 2 Ports Required	141	352

Charging Need Description:

Workplace charging is an important component of the infrastructure landscape because, second to a residence, vehicles spend most of their time parked at work. This charging access can be the primary charging point that enables EV ownership, or it can supplement home charging. In the 2018 CRD EV + E-Bike public survey, at work charging was described as very important to owning or purchasing an EV to 33% of respondents and important to 39% of respondents.

Location type	Technical considerations
Public or private parkades or parking lots	Parkades likely require electrical system upgrades before infrastructure can be installed. Recent analysis by AES Engineering has determined that the most cost-effective approach for existing buildings is to perform a comprehensive EV-ready retrofit, where energized circuits are provided to parking stalls during a single renovation. EV charging stations can then be easily installed when required. Given that not all EV drivers are likely to depend on workplace charging, not every parking stall is likely to require access to charging. The appropriate target for the percentage of stalls with access to charging will vary by building type, but recent analysis suggests targets of 40% of parking stalls for areas serving as employee parking, and 15% for areas providing visitor parking. Electric vehicle energy management can minimize demand charges and building-side electrical infrastructure costs. This approach – where charging power to each vehicle is reduced during periods of high demand – can minimize electrical system upgrades and is appropriate given that vehicles are expected to stay parked for extended periods of time at the workplace.

Typical parking duration	This charging access should allow for a full charge over the typical employee shift, meaning that the vehicle would be charging between 5 to 8 hours.
Example sites	• Commercial cores with commuter parking • Academic and health care campuses • Park & Rides
User experience and design	Workplace charging includes: • **Public access:** Accessible parking in a commercial area that is open to any EV driver. Use is targeted to commuters because the chargers are in urban centres and commercial areas where workers typically park while at work. • **Limited access:** Infrastructure is only available to employees with permission, which is provided by an employer or building owner. Alternatively, some infrastructure access is limited to the employees within a building. This case supports fewer EV drivers, but the restricted access may provide more certainty of charging access to employees. Parking spaces can be reserved specifically for EV charging, and policies and related signage can be installed to clearly communicate the requirements for charger use (e.g. time limits). Reserving spaces for EV drivers ensures that costly charging infrastructure is utilised. Some users will rely on workplace charging as their primary charging source. Therefore, consistent access to charging stations will require redundancy in the station design to ensure sufficient access.
Equity	Early adopters may drive infrastructure installation in select workplaces. A range of workplace types (e.g. beyond the traditional office building) and geographic locations should be considered for support and/or guidance on charging infrastructure.
Operations	Once installed, stations require a dedicated party responsible for operations and maintenance. This service can be provided by the infrastructure builder, site host, or another party. The appropriate party will depend on the context of the specific installation.

D. Fleets

Charging type: **Level 2**
Access: **Private**

Charging Need Description

Companies and individuals operating light duty EVs for business purposes may need to develop private charging. This section addresses fleets that use private charging on public and private land. For example:

- **Companies** that use EVs in their operations, such as taxis and delivery companies, will typically deploy infrastructure at the fleet's main parking facility.
- **Round-trip carsharing** (e.g. Modo) relies on a home base for the vehicle to park – typically a reserved spot on private or public land. This designated stall creates a natural location for Level 2 infrastructure.
- **Ride sharing and ride hailing** vehicles are individually-owned without a corporate 'home base'. These vehicles rely on the private residential infrastructure of the vehicle owner.

Sometimes fleets also rely on public charging. This is addressed in the text box below.

Location type	**Technical considerations**
Fleet main parking facility	Private facilities will have unique technical considerations due to the diversity of fleet facilities and charging needs based on the fleet make-up and size. Fleets typically have a large number of vehicles charging in one facility, sometimes with similar usage patterns that can exacerbate peak charging loads. EV energy management can be crucial to ensure charging loads are managed in a way that minimizes peak demand, reducing both installation and operating costs.
On-street charging	This style of infrastructure is typically powered from dedicated power sources or by streetlights
Typical parking duration	4 to 8 hours
Example sites	• An EV fleet's main parking facility • On-street parking on public or private land with reserved dedicated parking stalls only accessible to fleet vehicles
User experience and design	Private fleets will generally rely on charging infrastructure in their own facilities and this can be designed to meet their specific needs (e.g. power levels and energy management, usage fees and/or access control). Private charging on public lands (e.g. for round-trip carsharing) needs to be balanced with other user needs and parking types.

Equity	Car sharing, ride sharing, and ride-hailing can all contribute to a mobility ecosystem that relies less heavily on personal vehicles. Cost-effective approaches to charging infrastructure (Level 2 charging instead of DCFC where possible to minimize usage fees and infrastructure costs) can help to ensure these services can transition to an electric fleet while minimizing costs and ensure these services remain affordable for community members that rely on them.
Operations	Private fleets relying on charging infrastructure in their own facilities are responsible for operations and maintenance of the charging equipment. Charging infrastructure on public lands that are intended to support private fleets (e.g. curbside Level 2 chargers for round-trip carsharing) can be installed and owned by the local government and reserved for use by a specific fleet. The fleet owner can compensate the local government through an agreement that may include usage fees. Operations can be managed similarly to other public charging infrastructure, although the agreement between the local government and the fleet may include specific requirements such as minimum response time for repairs and minimum uptime.

Public DCFC charging for fleets

In some cases, fleets will seek to utilise public charging. For example:

- While **business fleets** will generally rely on Level 2 charging infrastructure at dedicated fleet facilities, some particularly high utilization vehicle fleets may also rely on public fast charging infrastructure (e.g., taxis).
- **One-way car sharing** without dedicated parking spots (e.g. a system similar to Evo) rely on fast charging stations for top-ups since they do not typically have dedicated parking areas where Level 2 charging infrastructure can be installed.
- For **ride hailing and ride sharing**, higher than average daily driving distances can require occasional visits to a fast-charging station to have sufficient range for a full shift, especially during winter. Ride hailing drivers are likely to rely on chargers located at airports, ferry terminals, and the downtown core, given that many of their rides are expected to start or end in these locations.

Short charging times will be a priority for these users. Charging stations should aim to provide enough power to allow for a significant charge within the typical visit time.

The use of public charging infrastructure by fleets may create a need for dedicated infrastructure to ensure public stations are not overloaded. For example, in California, the high per day mileage of ride hailing drivers led to increased reliance on public charging infrastructure by these drivers as compared to personal light-duty vehicles [8]. Usage by these types of vehicles should be monitored to ensure proper levels of public access can be maintained.

[8] California Energy Commission. (2021). *Assembly Bill 2127: Electric Vehicle Charging Infrastructure Assessment.* Accessed online: https://www.eenews.net/assets/2021/01/22/document_ew_04.pdf

E. Home

Charging type: **Level 2**
Access: **Private**

Charging Need Description

Home charging is the primary charging option preferred by most EV drivers. Therefore, understanding and enabling residential infrastructure for all housing types is important in the development of an integrated regional network. In the 2018 CRD EV + E-Bike public survey, future-proofing new developments for EV charging was described as very important by 69% of respondents and important to 23% of respondents.

Dunsky estimates that the majority of **single-family dwellings** in the capital region who have home parking (e.g. a garage or driveway) could install a charging station on their own property with relatively simple and inexpensive changes to existing electrical infrastructure. Therefore, most single-family residents can manage their own charging needs. However, fifty-five percent of capital region residents live in **multi-family dwellings**, which generally require more substantial and challenging upgrades to provide access to home charging.

Location type	Technical considerations
Single-family *(garage or driveway)*	Some residents may require more extensive upgrades to electrical systems than others (including panel upgrades).
Multi-family existing buildings *(retrofits)*	Existing buildings require EV Ready retrofits to upgrade the electrical infrastructure to enable installation of charging infrastructure at parking stalls. The cost of retrofitting all stalls at once is significantly less expensive on a per stall basis than retrofitting one or two stalls at a time. EV Energy Management Systems can help to minimize the peak charging load in a building and the cost of the supporting electrical infrastructure.
Multi-family new construction	New construction offers an opportunity to ensure EV Readiness for all parking stalls, enabling charging access and future-proofing developments. 100% EV Ready policies for new construction are implemented or soon to be in some capital region municipalities. As with retrofits, costs can be minimized through the use of EV Energy Management Systems.

User experience and design	Early efforts to support EV charging in existing multi-family buildings has focused on the installation of a limited number of charger(s) to be shared by all EV residents, commonly in short-stay visitor parking. As demand increases, this approach will cause inconveniences and may limit adoption. EV Ready electrical retrofits should be installed at each stall to provide an improved user experience. For new buildings, once EV ready new construction requirements have been put in place, EV drivers will be able to seamlessly install a charging station at their parking stall and plug in with the same convenience of a driver in a single family home with a garage or driveway.
Equity	Accessing EV charging infrastructure has an additional challenge due to the limited control over the building operations and upgrades. Permission and cost-sharing will need to be discussed between the renter and landlord. Targeting rental buildings for EV Ready infrastructure support programs will support equitable access to home charging among capital region residents. In strata buildings, infrastructure planning requires discussion and clarity on of how retrofit and electrical costs are recovered.

5. Regional Collaborations & Actions

Reaching EV targets to meet climate goals requires significant investment of time and money in regional EV infrastructure. During the Roadmap development process, stakeholders indicated an interest and willingness to collaborate on building a regional network but identified a lack of clarity on who should lead EV infrastructure planning and deployment. Many organizations have a 'wait and see' approach and are looking to others to take the first step. The traditional leaders in the space, such as the provincial government and utilities, are not necessarily stepping into this role.

"Everyone wants to do it, but no one has the answers"

"Resources can't keep up with momentum"

Education and capacity building among players involved in charging deployment was also identified by stakeholders as a critical need. Within organizations, particularly local governments, new knowledge bases and skillsets are required across multiple departments to support and build EV infrastructure. However, there is limited funding to support the skills and time required to meet the ramp-up.

The CRD has an opportunity to step into the leadership gap by driving forward collaboration opportunities, working with stakeholders to create a network to share best practices, policy, and planning information and filling gaps in education tools and resources.

The CRD should focus on the following types of collaboration opportunities:

- Coordinate and financially-support a regional charging network
- Build capacity through education
- Track and share usage and user experiences to meet evolving infrastructure needs

In each collaboration, the key players are identified **in bold text**.

Collaboration Opportunities

Coordinate and financially-support a regional charging network

As described earlier in this report, a significant number of Level 2 and DCFC charging ports need to be installed over the decade to meet regional EV adoption targets. This significant ramp-up of infrastructure requires thoughtful placement of charging sites within and between capital region communities to ensure that user needs are met, and access is provided equitably across the region.

"There's a need for regional coordination"

To develop a regional network of Level 2 and DCFC, the CRD should lead a collaboration with other players including **infrastructure builders**, **site hosts**, and **EV tech companies,** who are interested in owning, hosting, and/or operating charging stations. In parallel, local governments may be actively involved in supporting and investing in charging infrastructure within their own communities. The CRD can play a critical role by taking the regional view of infrastructure planning and to use that lens to support coordination.

The key collaboration opportunities that the CRD should pursue in this area are:

1. Pursue regional infrastructure funding

There is significant funding available from the federal and provincial governments to invest in EV infrastructure, including DCFC and L2 charging. The CRD should collaborate with **local governments, infrastructure builders, ecosystem influencers** and other actors to define funding needs and pursue regional funding applications, using the Roadmap as a guideline. Where matching funds are required, the CRD and/or local governments should contribute funding to support the application.

The CRD should apply to the Natural Resources Canada (NRCan) Zero Emission Vehicle Infrastructure Program (ZEVIP) as a regional delivery agent. Funding can cover up to 50% of total costs of Level 2 and DCFC charging in public places, on-street, in multi-family residential buildings, at workplaces or for light duty vehicle fleets. In addition, the delivery organization can spend up to 15% of the funding to cover the cost of managing and delivering the ZEVIP funding.

ZEVIP's "Third Party Delivery" stream is intended to support collaboration between third party "delivery agents" and "ultimate recipients" who receive funding from the delivery agents and are responsible for the actual infrastructure deployment. CRD should apply to this fund to become a delivery agent, securing funding from NRCan and then working with local partners who would become the ultimate recipients of funding responsible for deployment of charging infrastructure. By playing this role, CRD can facilitate greater overall uptake of available NRCan funding in the region, and NRCan allows delivery agents to set their own requirements for minimum project size for ultimate recipients (direct applicants to ZEVIP's other streams must commit to a minimum of 20 ports for each application). NRCan is expected to launch a new RFP for the Third Party Delivery stream in August

2021 with applications due in November 2021[9]. The CRD should aim to submit an application in 2021, whereby confirmation from NRCan would be provided in early 2022, and CRD could begin working with local partners to apply as ultimate recipients.

The BC government has partnered with NRCan to provide additional funding for DCFC projects deployed through ZEVIP for an additional 25% of project costs. Successful applicants to NRCan's program are automatically eligible for funding from the Government of British Columbia. Separately, the CleanBC Go Electric Public Charger Program also offers funding for the deployment of public fast charging infrastructure, although this program is not eligible for stacking with NRCan's program.

2. Support planning and coordination on site selection

Currently, site selection and planning are fragmented and pursued by various actors in silos. This creates a risk of duplication of efforts and gaps in infrastructure deployment, including geographic distribution, charging type and number of chargers required to meet targets. In addition, there is no formal process or structure for infrastructure builders to connect with potential site hosts. Using the CRD Roadmap as a guideline for how many and what types of charging stations are required to support user needs, the **CRD** should collaborate with **local governments**, **site hosts and EV infrastructure builders** to support planning and coordination on site selection.

This could include identifying and working with potential site hosts to develop EV infrastructure plans or form partnerships with EV infrastructure builders. The CRD should focus on strategic site hosts, for example those that have locations across the region or serve as major transportation hubs (e.g. ferry terminals). By playing this role, the CRD can accelerate EV infrastructure deployment, help build knowledge and capacity across the region, and reduce the risk that infrastructure gaps will emerge. For example, the CRD and local governments could provide financial or other support to encourage charging infrastructure in locations with poor business cases but high value due to geographic or equity factors.

To support this collaboration, the CRD should consider establishing an advisory committee or other formal network that would include key players such as local governments, infrastructure builders and site hosts. As part of this network, the CRD could support the site selection and planning process and address current information gaps in EV infrastructure planning by tracking and sharing information related to:

- Planned charging infrastructure in the capital region;
- Infrastructure builders looking for site hosts; and
- Prospective site hosts, including on-street and MURBs, who have expressed an interest in hosting charging infrastructure (but not deploying it)

[9] Timeline of expected future RFP's under NRCan's ZEVIP: https://www.nrcan.gc.ca/energy-efficiency/energy-efficiency-transportation-alternative-fuels/electric-and-alternative-fuel-infrastructure/request-for-proposals-calendar/22821

3. Engage with BC Hydro on infrastructure planning

BC Hydro has an important role to play in EV infrastructure collaborations. As an EV infrastructure builder, BC Hydro's mandate is to focus on filling gaps in DCFC fast charging across the province and support regional connectivity. BC Hydro also has a key role in planning the regional charging network because collaborators will seek guidance on potential sites, power demand considerations, and rate structures that enable strong business cases.

The **CRD** should collaborate with **BC Hydro** to highlight and address the needs of **infrastructure builders** and **local governments**, including power capacity, rate structure, and utility infrastructure plans. The CRD can work with regional stakeholders, particularly the leading local governments, to bring regional needs to the utility.

Build capacity through education

"People are looking for best practices"

Education and capacity building among players involved in charging deployment is a critical need. EV infrastructure can be a complex process for residents, businesses, contractors and trades. There is a major opportunity to build capacity across the region to enable any interested party to participate in transportation electrification and the EV infrastructure industry that develops alongside. The CRD can play an important role by acting as a central resource that can leverage best practices tested across the region and avoid duplication. While each community is unique, residents and business will have some common questions, and the CRD can develop regional resources that can be locally adapted.

The CRD should also engage with provincial actors such as BC Hydro and Plug-in BC to coordinate and develop shared education and capacity building materials.

These opportunities include:

4. Education and capacity building with potential EV adopters

Many residents and businesses may be considering EVs, but may not know how to get charging installed at their home or workplace, especially in rental or condo buildings. This group includes employees, homeowners and tenants. The **CRD** and **local governments** can collaborate with **EV ecosystem influencers** and **EV tech companies** to develop educational materials and resources for enable these potential adopters to navigate their infrastructure needs, enabling better adopter advocacy, and increase ease of infrastructure access.

5. Education and capacity building with potential infrastructure builders and site hosts

Regional businesses and organizations may be interested in developing or hosting EV infrastructure. However, for organizations like property management companies, fleet owners and large employers, building EV infrastructure is outside of their expertise. These actors would benefit from capacity building and education on the benefits and the process to seek infrastructure as a site host. The **CRD** should collaborate with **local governments, infrastructure builders** and **EV tech companies** to

develop resources on charging needs and site selection to ensure this interest can be converted in new infrastructure development.

6. Education and capacity building with engineers, electricians, and other trades

There is significant opportunity to grow the workforce involved with this ramp-up of EV infrastructure deployment. As the industry grows to meet the demand, there is an opportunity build the capacities on the technical and design requirements for EV infrastructure across the construction industry. The **CRD** should collaborate with industry, **infrastructure builders, EV technology companies** and **local governments** to encourage or develop guidance and educational materials to ensure quality and reliability across diverse installation sites. Industry stakeholders may develop standards or best practices to support the nascent sector.

Track and share usage and user experiences to meet evolving infrastructure needs

Building out infrastructure is essential to promoting adoption. In early years, charger utilization may be low as infrastructure installations initially outpace demand. Charger utilization is expected to increase over time as adoption and EV driver awareness grows. Infrastructure build out should be informed by regional needs and trends. Leveraging infrastructure data can support future siting and design decisions, to continuously assess and improve the regional network.

"Data integration and information access"

7. Track and share usage at existing sites to monitor performance and inform planning

The **CRD** should facilitate data sharing by acting as regional data repository and defining data needs needed to benchmark the Roadmap. In addition, the CRD should lead or support analysis and share findings to support future infrastructure site planning and design decisions and best practices. Data collection and use is a collaboration because it requires the data owners, whether it be **infrastructure builders, site hosts, EV tech companies**, or **utilities**, to share the data and to design stations to facilitate sharing (e.g. networked stations).

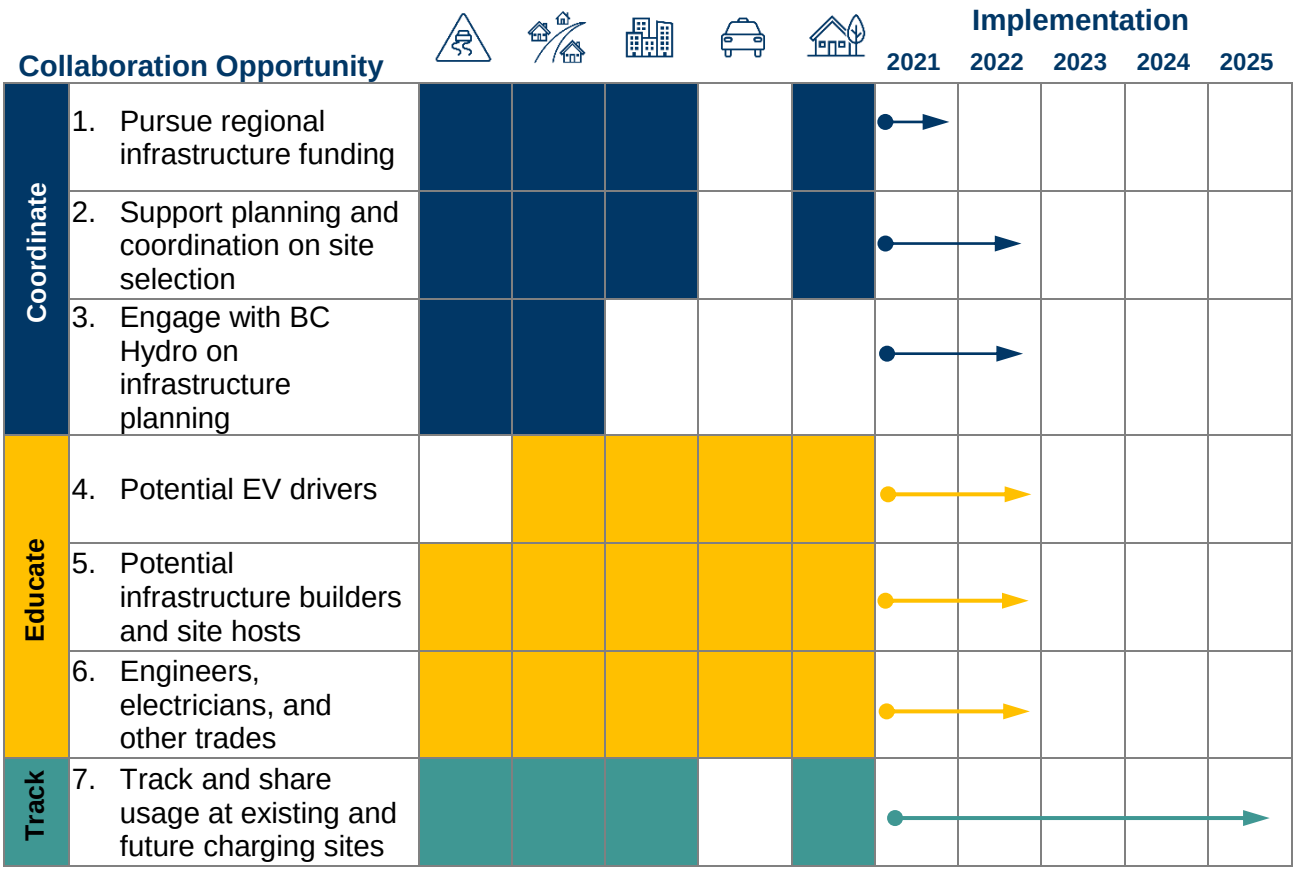
Types of data that should be collected by CRD and regional collaborators includes:

- Site locations, date of installation, port types
- Number of MURB units with EV-Ready spots
- Number of EV-Ready commercial buildings
- For public charging sites, utilization metrics:
    - Total number of charge events and total energy delivered
    - Time-of-use statistics (usage by day of week, hour of day)
- EV adoption metrics: percent of new vehicle sales, percent of fleet, percentage of BEVs vs PHEVs.
- User experience metrics, including trends in timing and geographic use of public infrastructure

The CRD should also explore the option to enhance data collection by conducting a regular (annual or semi-annual) EV user survey to get feedback on wait time, reliability, and convenience of charging locations to inform future infrastructure deployment.

Summary of Regional Collaboration Opportunities

The following chart provides a summary of collaboration opportunities. It identifies the relevant charging opportunities that it supports, as well as the implementation timeline.



Collectively, these actions will support infrastructure deployment across the region. The CRD can take a leadership role by taking a regional perspective and ensuring that deployment planning and siting is coordinated, that education is minimized as a barrier to infrastructure deployment, and that a 'systems' approach is taken to infrastructure usage and data across the whole region, for benefit of all.

Actions

There are key actions that the CRD should take to develop the guidance needed to support local governments and other EV infrastructure players to build out a connected and coordinated regional infrastructure network. While infrastructure actors can provide input, the CRD can independently lead the development of these tools and resources to support regional infrastructure efforts. Alternatively, the CRD could advocate for provincial actors such as BC Hydro or the province to undertake these guidelines to ensure that local governments across B.C. can benefit.

In addition, there are a number of actions that local governments should take to accelerate infrastructure deployment, including planning for and investing in charging infrastructure. Local governments can play varying roles, including hosting, owning, and operating charging stations. Local governments can also introduce or expand EV-Ready requirements for EV ready new construction and support for comprehensive retrofits to shift the market to support an EV network.

The CRD should develop the following guidelines and/or technical standards to address information gaps and encourage consistency across the capital region. Guidelines should be revisited every five years, or more frequently as the regional context evolves. For example, the CRD developed load management guidelines, which should be reviewed and updated in the next several years as technologies evolve.

A. Comprehensive EV Ready retrofits

These guidelines and standards enable local governments and other stakeholders to navigate the process, requirements, and value of comprehensive EV-Ready retrofits.

B. Curbside installations

On-street charging presents a unique opportunity and challenge due to the specified use of this public, multi-use space. Guidelines with regional context can enable local governments and infrastructure builders to navigate the process and ensure long-term, equitable planning in the development process.

C. Site Agreements between charging hosts and owners

Site agreements are critical tools to define how infrastructure collaborations work because they define responsibilities of each actor and define the site access. The **CRD** should develop templates or best practices for site agreements to support the negotiation process.

D. Data sharing, user experience, infrastructure deployment

BC Hydro has developed valuable guidelines to support organizations in the deployment of both DCFC and Level 2 charging infrastructure[10], providing guidance on identifying charging sites, designing the installation, selecting contractors and vendors, and operation and maintenance of

[10] BC Hydro. (2021). *EV resources for industry*. Available online: https://www.bchydro.com/powersmart/electric-vehicles/industry.html

charging equipment. The CRD can build on these documents by establishing regional guidelines to encourage local partners to converge towards common design elements. For example, while the BC Hydro guidelines present a wide variety of options for charging equipment vendors and customer interfaces, the CRD can encourage local partners to agree on a harmonized payment system to ensure that EV drivers in the capital region have a consistent user experience from one charging station to the next. These guidelines can also establish requirements for data collection and sharing for local partners to support ongoing tracking of the regional charging network.

Summary of Actions

The following is a summary of actions that the CRD should pursue in the near term to support EV deployment in the capital region.

Guidelines for:					
A. Comprehensive EV Ready retrofits					
B. Curbside installations					
C. Site Agreements between charging hosts and owners					
D. Data sharing, user experience, infrastructure deployment					

Appendix A. Stakeholder Engagement Summary

Overview

The core focus of the CRD's EV Roadmap is to identify collaboration opportunities to ensure the effective deployment of charging infrastructure in the capital region. Therefore, engaging with stakeholders to understand various actors' interests, needs, and plans for EV infrastructure was a critical part of the Roadmap's development. The CRD led the stakeholder engagement strategy and implementation with support from Dunsky.

This memo summarizes the key themes and takeaways from the two workshops that Dunsky supported. The CRD also held a series of in depth one on one interviews with key stakeholders to gain initial insights. Dunsky will present the final results of the Roadmap in a webinar on March 30. The list of stakeholder organizations is presented in Appendix A.

Our stakeholder engagement plan was structured around four phases:

For each of these phases, we answered the following questions:

- **Participants**: Who is targeted by / included in the engagement strategy?
- **Approach**: When and how groups will be engaged (e.g. format and timing of meetings)
- **Objective**: Why is this group engaged, what are the expected outcomes?

Workshop 1: Developing the Roadmap's Guiding Principles

Feb 4

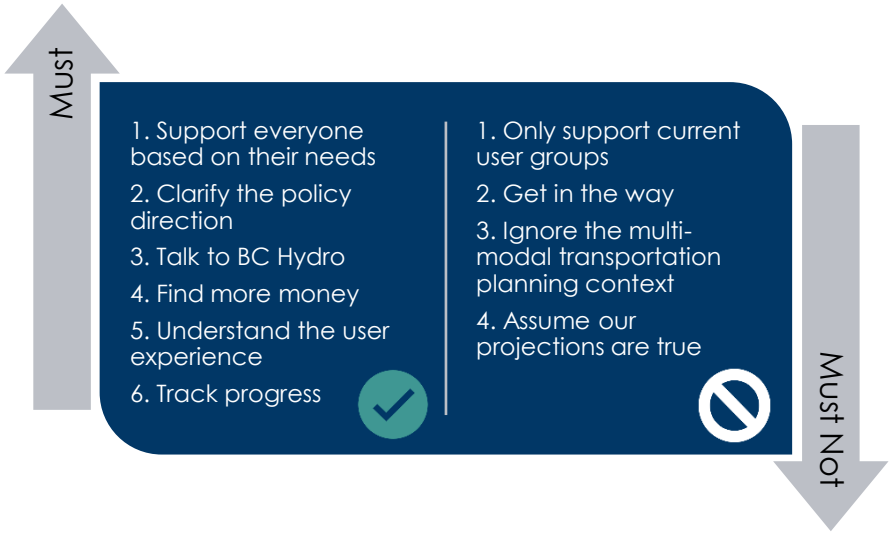
35 Participants
Target: **Infrastructure influencers, builders, & users**
CRD members, provincial government, utilities, institutions, EV and transportation companies, NGOs

Mural, Zoom

Identify the principles by which the Roadmap will be developed.

Key Findings

The main takeaway was the principles that define the Roadmap. These ten principles were developed through the workshop and summarized by Matt Greeno. These principles have and continue to be used to create the Roadmap and shape its recommendations.



As identified in the principles, several key themes emerged:

1. Ensure a data-driven approach

Data should drive decisions in EV infrastructure planning and deployment. Stakeholders highlighted that there is little data available right now and that it will be critical for informed decision-making, defining collaboration opportunities and understanding the region's evolving activity and needs. For example, current EV charging station usage and electricity system capacity to support new infrastructure.

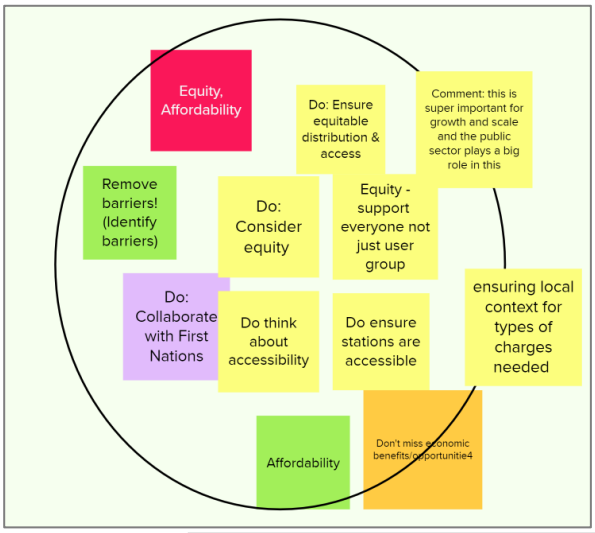
2. An equity lens needed

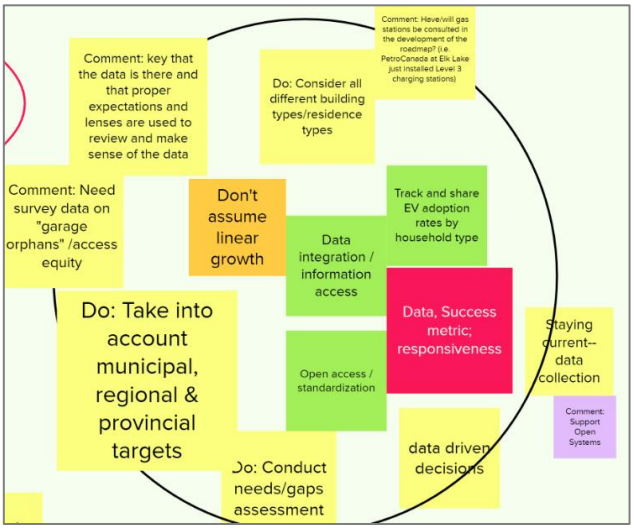
To be successful and gain broad support, stakeholders identified the need to apply an equity lens to infrastructure decisions. This approach will ensure user needs are met (e.g., accessibility, affordability) and that all communities are covered.

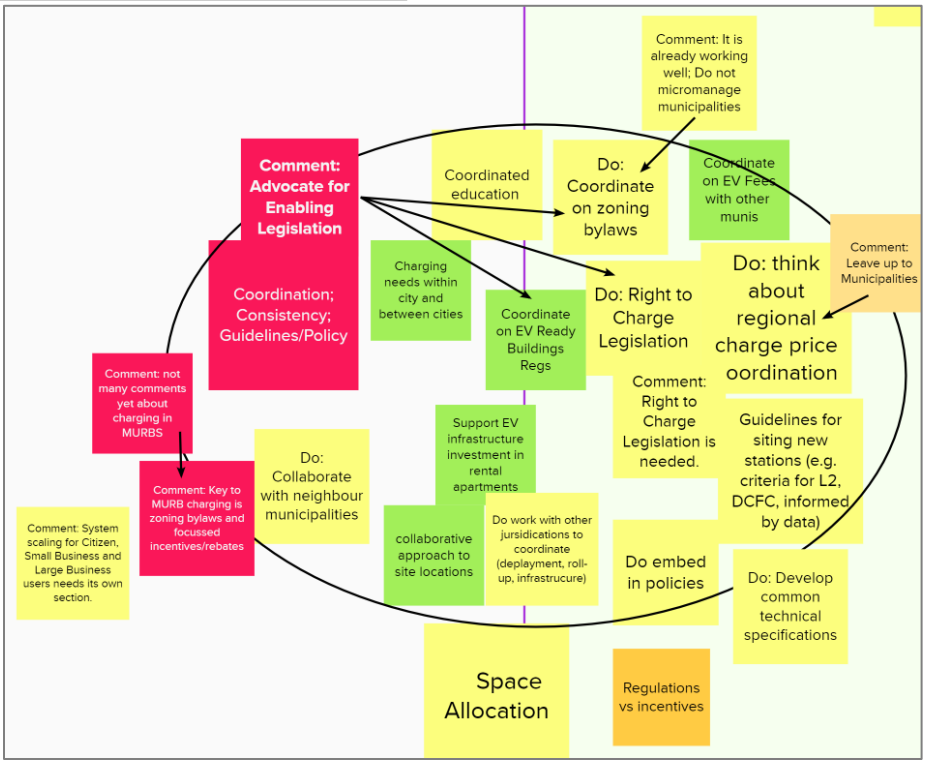
3. A supportive, but not prescriptive, policy landscape

Stakeholders indicated that they need supportive policy and policy supports from all levels of government. At the municipal level, sharing best practices and technical specifications can help move the region forward. However, each local government wants to determine their own policies and infrastructure plans.

Stakeholders expressed their views on guiding principles through an exercise on Mural, an online visual collaboration tool. Here are a few snapshots of sticky notes added to the mural:







Workshop #2: EV Charging Needs and Collaboration Opportunities

Mar 1

17 Participants
Target: **Infrastructure influencers and builders**
CRD members, institutions, school districts, EV and transportation companies

Mural, Zoom

Explore and identify **collaboration opportunities** for public EV infrastructure deployment.

Key Findings

The core exercise was to surface interdependencies by making clear requests to other stakeholders and collecting simple responses ("Yes", "No", "I will try", or "whatever" indicating the request was not clear enough to respond). The majority of responses are positive, either "Yes" or "I will try", indicating a broad willingness to collaborate and meet the needs of other stakeholders. However, not all desired stakeholder groups were represented at the session, which limited the applicability of some requests/responses.

1. An infrastructure leadership gap exists

Stakeholders identified that there was a lack a leadership on EV infrastructure planning and deployment. Many organizations have a 'wait and see' approach and look for others to take the first step. The traditional leaders in the space, such as the provincial government and utilities, are not necessarily stepping into this role. This gap presents an opportunity for the CRD to provide regional leadership.

"Everyone wants to do it, but no one has the answers"

2. Capacity building is required

Education and capacity building among players involved in charging deployment is a critical need. Within organizations, particularly local governments, new knowledge bases and skillsets are required across multiple departments to support and build EV infrastructure. Staff time and resources are needed across organizations to facilitate collaboration, recognizing that different organizations are at different stages. This capacity gap has been identified, but there is limited funding to support the skills and time allocation to meet the ramp-up.

Stakeholders identified a need for regional guidance and other resources to cross the capacity gap. This resource discussion included the following concepts:

"Resources can't keep up with momentum"

- A network to share best practices, policy, and planning information, collaboration opportunities. This network could address silos between infrastructure stakeholders across the region.
- Actor-specific guidance on assessing infrastructure opportunities. This guidance would ensure infrastructure aligns with site and user needs (e.g. why are we building it and who is it for?). This guidance could be tailored by the stakeholder's general role and mandate. For example, a school district's infrastructure decisions will look different from those of a local government.
- A holistic approach to transportation decisions. Active transportation, transit, and EV's are not either-or options but rather all part of the transportation ecosystem.

3. A strong interest was expressed in collaboration and clarified roles

Stakeholders identified EV infrastructure deployment is a new an innovative field. While there is a lot of enthusiasm to collaborate, there is not a lot of experience with roles, responsibilities and deployment approaches, making collaboration opportunities more challenging.

"Innovation / turnkey solutions - make the process easier and reduce costs."

To tackle these challenges, stakeholders identified the following concepts:

- Guidance on potential collaboration roles: outlining business models and the roles within them (e.g., who builds, who pays, who operates, etc.).
- Develop a list of businesses and their potential sites interested in being a site host.
- Encouragement to current infrastructure leaders and to spur demand by developing a list of EV-Ready stratas and businesses.

Key themes were identified through an idea board and are noted in the following screenshot:

Stakeholder List

The following stakeholders were engaged during the development of this Roadmap. We sincerely thank them for their input and collaboration.

Organizations interviewed prior to workshops	
BC Ferries	Landlord BC
BC Hydro	Malahat Nation
BC Transit	Modo
Geotab	Robbins Parking
Hansbraun Investments	University of Victoria
Island Health	Westshore Town Centre

Organizations represented at the February 4 workshop	
BC Climate Action	Greater Victoria Harbour Authority
BC Ferries	Greenlots
BC Hydro	Island Health
BC Transit	Leading Ahead Energy
BCSEA	Landlord BC
Capital Regional District	Malahat Nation
ChargePoint	Mogiletech
City of Victoria	Plug n' Drive
Current Taxi	Suncor EnergyTesla
District of Central Saanich	Township of Esquimalt
District of Highlands	Transition Salt Spring
District of Oak Bay	University of Victoria
District of Saanich	Vancouver Island Strata Owners Association
Geotab	Victoria EV Association
Government of British Columbia	

Organizations represented at the March 1 workshop	
Capital Regional District	School District 61
Chargepoint	School District 62
City of Victoria	School District 63
District of Central Saanich	Town of Sidney
District of Saanich	Town of View Royal
Greenlots	Township of Esquimalt
Island Health	University of Victoria
Modo	

Appendix B. Funding Opportunities

Fund Name	Technology	Support Available	Eligible organizations
CleanBC Go Electric Public Charger Program	DCFC	Range: up to $20,000 per <50 kW DCFC, to $130,000 per >100 kW DCFC (for Indigenous communities).	business, not-for-profit, local government, Indigenous community, or public sector organizations
CleanBC Go Electric Public Charger Program	Level 2	up to 50% of purchase and installation costs of Level 2 charging stations (to a maximum of $2,000 per station). Indigenous communities are eligible for rebates of 75% (to a maximum of $4,500). Five hours of an EV advisor for advice and planning assistance from an expert in EV charging and equipment is also available	business, not-for-profit, local government, Indigenous community, or public sector organizations
CleanBC Go Electric Fleets Program	Level 2	zero emissions vehicle fleet advisor support and ZEV training sessions along with financial rebates for fleet assessments, electrical assessments, electrical work, and charging infrastructure	companies registered in B.C, non-profit organizations, and public entities.
CleanBC Go Electric BC Single-Family Home Charging Installation	Level 2	up to 50% of costs, to a maximum of $350.	Single family homes
CleanBC Go Electric BC EV Charger Rebate	Level 2	• For buildings looking to become EV Ready, up to $3,000 or 75% of costs to prepare EV Ready plan by a licensed professional. To implement, buildings can receive a rebate of up to 50% of the infrastructure and installation costs to a maximum of $600 per stall (total maximum of $80,000). Once EV-Ready, there is a rebate of up to 50% to a maximum of $1,400 per charger (and a building maximum of $14,000). • For buildings or individuals looking to install standalone chargers, up to 50%, to a maximum of $2,000 per charging (and a building maximum of $14,000)	Multi-family buildings

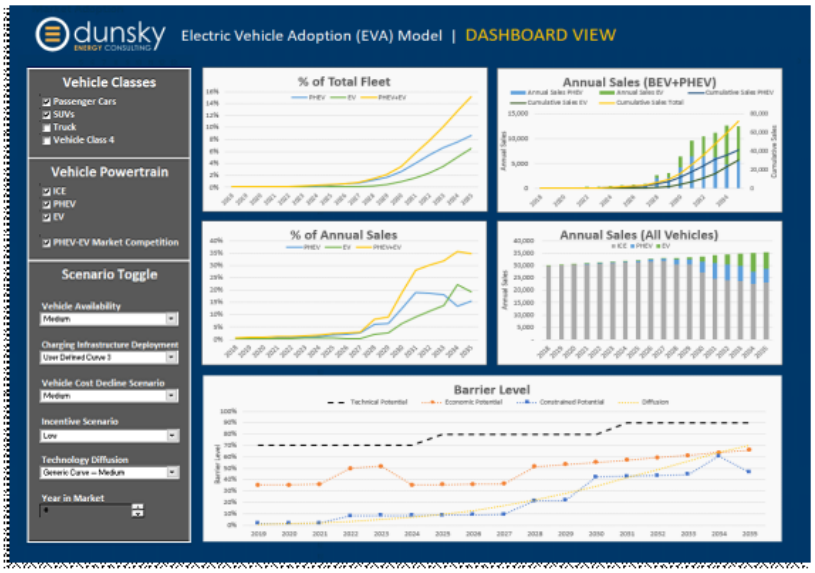
		• Five hours of an EV advisor for advice and planning assistance from an expert in EV charging and equipment is also available.	
Natural Resources Canada Zero Emission Vehicle Infrastructure Program	DCFC	of up to 50% of total project costs , to a maximum of $15,000 per fast-charger for 20kW to 49kW, and up to 50% of total project costs, to a maximum of $50,000 per fast-charger for 50kW and above.	not-for-profit and for-profit organizations
Natural Resources Canada Zero Emission Vehicle Infrastructure Program	Level 2	up to 50% of total project costs, to a maximum of $5,000 per Level 2 connector.	not-for-profit and for-profit organizations with funding for on-street and public places and workplaces, including fleets, multi-family buildings

Appendix C. Modelling Approach

EVA Methodology

Dunsky's Electric Vehicle Adoption (EVA) Model was developed in-house to address a growing need to understand the adoption of electric vehicles in specific jurisdictions. Based on a rigorous review of research from academia and industry, EVA assesses the likely penetration of electric vehicle technology based on several key factors, grouped according to the following four categories:

A. **Technical potential:** The theoretical potential for EV adoption based on the size and composition of the overall vehicle market, as well as availability of different powertrain types (e.g. plug-in hybrid, battery electric) in different vehicle classes (e.g. cars, SUVs, trucks)



Sample EVA Dashboard View

B. **Customer economics:** The unconstrained economic potential based on incremental total cost of ownership of electric vehicles over conventional vehicles, taking into account forecasted energy costs, annual vehicle kilometers travelled, and forecasted battery and vehicle costs

C. **Market constraints:** Accounting for EV-specific barriers including range limitations and access to both public and home charging infrastructure

D. Market dynamics: Incorporating technology diffusion theory and other market factors to determine rate of adoption and competition between vehicle types

By quantifying the impact of these various factors, EVA allows the development of jurisdiction-specific forecasts for EV adoption and the assessment of the relative effectiveness of a range of policy and program options for accelerating EV adoption, such as home retrofits and public charging infrastructure deployment.

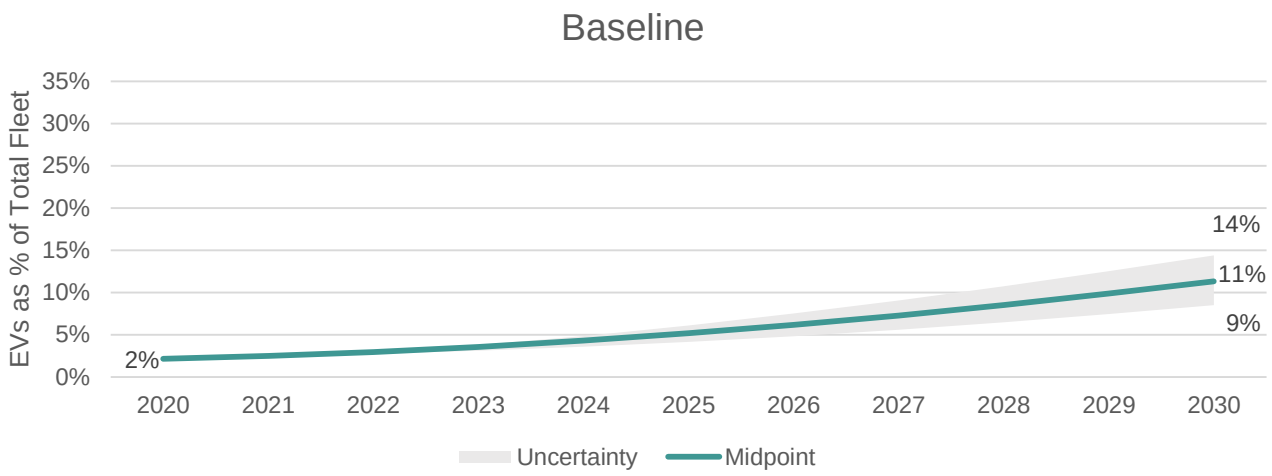
High-Level Results

This study assessed EV adoption in the capital region over the 2021-2030 period and the infrastructure required to support this adoption. First, a baseline forecast was developed to estimate adoption in the absence of further charging infrastructure investments and supporting policies. Next, a scenario forecast was developed by adding public charging infrastructure and increased home charging access to the model such that the adoption forecast reached approximately one quarter of the total vehicle fleet by 2030. The charging infrastructure required to reach this target is the basis for the infrastructure recommendations included in this roadmap.

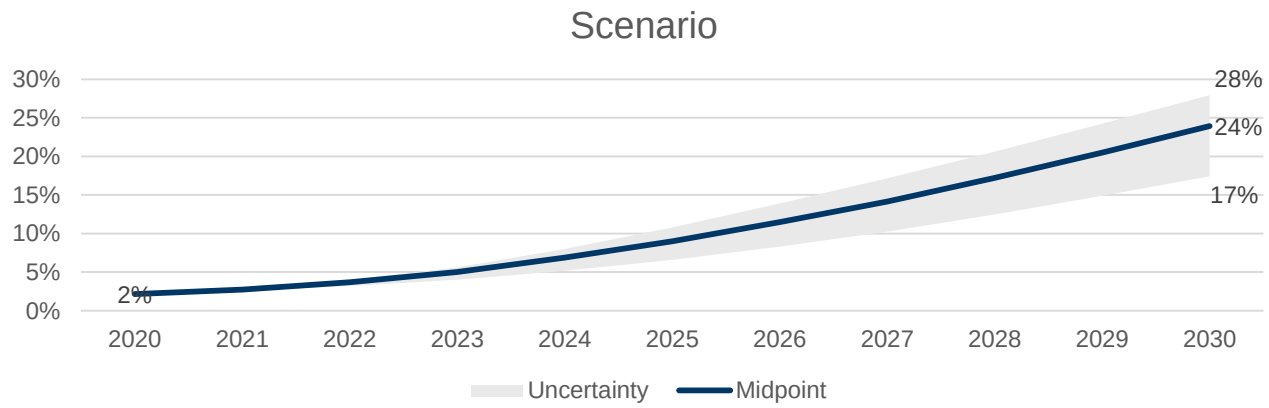
This study includes an aspirational target that approximately one quarter of the light-duty vehicles in the capital region will be EVs by 2030 (with adoption ranging from 17-28%, with a midpoint of 24%). Our modelling shows that this corresponds to a trajectory reaching an annual midpoint EV sales rate of 68% in 2030, which is considerably higher than the provincial government target of 30%. Although the focus of this project was on the public infrastructure required to support this adoption in the capital region, other policies and programs will also be required. The modeling includes the assumptions that upfront purchase incentives are sustained throughout the course of the study (albeit at decreasing levels over time), and that home charging access increases over time as a result of financial and other support for multi-unit home charging retrofits (see 'Other Program and Policy Assumptions' section below). The costs associated with incentives and home charging retrofits are not included in this analysis.

Adoption is also influenced by broader market conditions, including vehicle prices, vehicle model availability, electricity rates, and gasoline prices. In both the baseline and scenario forecasts, high and low bounds were developed for each of these factors and were applied to the scenario to generate a range of uncertainty around the forecast.

Below, high-level results are provided for the baseline and scenario forecasts. Detailed results are provided in the Detailed Adoption Results section that follows.



		2025	2030
% Annual Sales	Baseline – Upper bound	25%	37%
	Baseline – Midpoint	17%	29%
	Baseline – Lower bound	12%	21%
	Provincial target	10%	30%



		2025	2030
% Annual Sales	Scenario – Upper bound	54%	74%
	Scenario – Midpoint	42%	68%
	Scenario – Lower bound	28%	50%
	Provincial target	10%	30%

Market Assumptions

Vehicle Assumptions

Vehicle Market Total Fleet and New Sales Assumptions[11]

		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Cars	Total fleet	144,483	143,261	141,950	140,549	139,059	137,480	135,811	134,053	132,206	130,269
	New sales	6,498	6,443	6,384	6,321	6,254	6,183	6,108	6,029	5,946	5,859
SUVs	Total fleet	84,577	88,352	92,198	96,115	100,104	104,165	108,297	112,500	116,775	121,121
	New sales	4,840	5,056	5,276	5,500	5,729	5,961	6,197	6,438	6,683	6,931
Trucks	Total fleet	41,353	42,579	43,822	45,084	46,363	47,660	48,975	50,308	51,659	53,028
	New sales	2,873	2,958	3,045	3,132	3,221	3,311	3,403	3,495	3,589	3,684

Electricity and Fuel Price Assumptions

Electricity Price Assumptions ($/kWh)

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
High	0.122	0.125	0.128	0.132	0.135	0.138	0.142	0.146	0.149	0.153
Mid	0.123	0.127	0.130	0.134	0.138	0.142	0.145	0.149	0.154	0.158
Low	0.124	0.128	0.131	0.135	0.139	0.143	0.147	0.152	0.156	0.161

Gasoline Price Assumptions ($/L)

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
High	$1.13	$1.16	$1.17	$1.18	$1.19	$1.21	$1.23	$1.25	$1.27	$1.29
Mid	$1.36	$1.38	$1.40	$1.42	$1.44	$1.46	$1.48	$1.51	$1.54	$1.56
Low	$1.58	$1.62	$1.66	$1.69	$1.70	$1.72	$1.74	$1.78	$1.81	$1.83

Building Stock Assumptions[12]

Forecasted Number of Dwelling Units by Housing Type

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Single detached	70,693	70,709	70,725	70,741	70,757	70,773	70,789	70,804	70,820	70,836
Semi-detached	7,195	7,368	7,546	7,728	7,915	8,106	8,301	8,502	8,707	8,917
Row	11,043	11,216	11,391	11,568	11,749	11,932	12,118	12,308	12,500	12,695
Apartment and other	89,282	91,035	92,823	94,646	96,505	98,400	100,332	102,302	104,311	106,360

Forecasted Cumulative New Construction Units by Housing Type

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030

[11] Total light duty vehicle forecasts were provided by the CRD. To capture the split of cars, SUVs, and trucks within the light-duty vehicle population, historic 2017-2019 ICBC registration data market share trends were extrapolated out over the study period. Annual sales were forecasted using province-wide sales as a percent of fleet data from the Canadian comprehensive energy use database.

[12] To forecast the building stock, growth rate trends were taken from the 2011 and 2016 census. The rate of new construction (as a percent of existing buildings) was developed using the CMHC 'Housing Starts, Completions and Units Under Construction' publication.

Single detached	317	633	950	1,267	1,584	1,901	2,218	2,535	2,852	3,169
Semi-detached	73	148	224	302	383	465	549	635	723	814
Row	51	103	156	209	264	319	375	432	490	548
Apartment and other	1,275	2,575	3,900	5,252	6,630	8,035	9,468	10,929	12,418	13,937

Infrastructure Assumptions

Infrastructure Targets (Cumulative Ports)

	Level 2		DCFC	
	2025	**2030**	**2025**	**2030**
Infrastructure Required	562	1010	81	160
Installed	240	240	28	28
Planned	24	24	0	0
Total Gap	298	746	53	132

Level 2 Charging Infrastructure Assumptions (Number of Ports)

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Baseline	240	240	240	240	240	240	240	240	240	240
Scenario	240	240	339	451	562	674	786	861	935	1010

DCFC Charging Infrastructure Assumptions (Number of Ports)

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Baseline	28	28	28	28	28	28	28	28	28	28
Scenario	28	28	41	61	81	101	120	134	147	160

Infrastructure Cost Assumptions

Level 2 curbside ($ per port)	$15,000
Level 2 in parkade ($ per port)	$5,000
DCFC ($ per port)	$175,000

Other Program and Policy Assumptions

Upfront Vehicle Purchase Incentive Assumptions (combined federal and provincial)

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
PHEV	$5,000	$5,000	$5,000	$5,000	$5,000	$2,500	$2,500	$1,250	$1,250	$1,250
BEV	$8,000	$8,000	$8,000	$8,000	$8,000	$4,000	$4,000	$2,000	$2,000	$2,000

Public charging infrastructure serves as more than just a substitute for home charging access. For PHEVs it can maximize the use of EV mode vs. internal combustion engine vehicles, and DCFCs provide additional flexibility for BEVs for longer trips or days where they need a top up for any other

number of reasons. Public chargers also support travellers from out of region. Even if home charging access nears 100%, public chargers still have an important role in a charging network.

The modeling assumes considerable retrofits across the whole region, however there are a number of reasons the following retrofits may not be achieved on the schedule included here. For example, these retrofits require cooperation of building owners and tenants, an adequate workforce, and other factors.

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Single Family % Home Charging Access	77%	78%	80%	82%	83%	86%	89%	92%	96%	100%
Multifamily % Home Charging Access	25%	29%	35%	41%	46%	54%	63%	73%	83%	94%

Annual Investment

Annual Total Investment, 2021-2025

	2021	2022	2023	2024	2025
Level 2	$0	$0	$746,000	$1,119,000	$1,119,000
DCFC	$0	$0	$2,310,000	$3,465,000	$3,465,000
Total	$0	$0	$3,056,000	$4,584,000	$4,584,000

Annual Total Investment, 2026-2030

	2021	2022	2023	2024	2025
Level 2	$1,119,000	$1,119,000	$746,000	$746,000	$746,000
DCFC	$3,465,000	$3,465,000	$2,310,000	$2,310,000	$2,310,000
Total	$4,584,000	$4,584,000	$3,056,000	$3,056,000	$3,056,000

This report was prepared by Dunsky Energy Consulting. It represents our professional judgment based on data and information available at the time the work was conducted. Dunsky makes no warranties or representations, expressed or implied, in relation to the data, information, findings and recommendations from this report or related work products.

REGIONAL ELECTRIC VEHICLE INFRASTRUCTURE ROLES

June 2021

The table below provides an overview of the potential key stakeholder roles, and example organizations, in electric vehicle infrastructure deployment as envisioned in the CRD Electric Vehicle Infrastructure Roadmap. Organizations can take on many roles within the infrastructure ecosystem. Understanding and integrating these stakeholders' plans and needs is essential to developing a cohesive regional charging network.

Key players' roles and example organizations

Key Player	Role	Example organizations
Infrastructure Builders	Actively deploying charging infrastructure	Local governments, First Nations, utilities, other institutions, building developers, private companies (including EV manufacturers)
Site hosts	Host but not necessarily own or operate infrastructure	Governments, crown corporations, First Nations, campuses, major transit hubs (e.g., ferry terminals), parking companies, retailers, fuel stations
Financial & policy supporters	Deciding or administrating Electric Vehicle (EV) supports	Local governments, First Nations, utilities, provincial and federal governments
Utilities	Supplying electricity and/or building infrastructure	BC Hydro, Fortis
Technology companies	Supplying and/or operating charging stations or cars	Infrastructure manufacturers, EV software and data companies
Drivers	Fleet owners or EV users	Capital region residents and all other stakeholders
Initiative influencers	Advocate with/to industry or communities	Academia, business organizations, EV groups, NGO's, local governments

CRD TRAFFIC SAFETY COMMISSION
MINUTES OF MEETING
Tuesday, April 13, 2021

Members: Ron Cronk, Vancouver Island Safety Council (EP)
Chris Foord, Community Member (EP)
Dr. Frederick Grouzet, Centre for Youth and Society, UVic (EP)
Fred Haynes, CRD Director (Chair) (EP)
Sgt. Jereme Leslie, CRD Integrated Road Safety Unit (EP)
Joe Perkins, Media (EP)
Dr. Paweena Sukhawathanakul, Institute of Aging and Lifelong Health, UVic (Vice-Chair) (EP)
Colleen Woodger ICBC Road Safety and Community Involvement (EP)

Associates: John Hicks, CRD
S/Sgt. Andy Walsh, Saanich Police (EP)

Regrets: Erin Anderson, RoadSafetyBC
Hailey Bergstrom-Parker, Child Passenger Safety Program, BCAA Community Impact
Corey Burger, Greater Victoria Cycling Coalition
Shawn Haley, Ministry of Transportation and Infrastructure
Todd Litman, Walk On, Victoria
Rudi Wetselaar, Commercial Vehicle Safety and Enforcement
Jade Yehia, Island Health

Recording Secretary: Arlene Bowker

EP – Electronic Participation

The meeting was called to order at 12:15 pm., with Vice-Chair Sukhawathanakul acting as Chair. Chair Haynes joined the meeting later.

1. **Approval of Agenda**

   MOVED by Colleen Woodger, **SECONDED** by Chris Foord, that the agenda be approved as distributed. **CARRIED**

2. **Approval of Minutes – March 9, 2021**

   MOVED by Jereme Leslie, **SECONDED** by Ron Cronk, that the minutes of the meeting held on March 9, 2021 be approved as distributed. **CARRIED**

3. **Chair's Remarks**

   No remarks

4. **Business Arising from the Previous Minutes**

   - **Commission membership/vacancies**
     John Hicks reported that it has been challenging to get representation from some of the member agencies. There has been no representative from BC Ambulance for a long time as their operational capacity has shifted and they have put a lot of their staff back into the field. Also, with the pandemic, the Island Health medical health officer position will remain vacant this year, although it is anticipated it will be filled again in 2022. John has been in contact with the school districts about a representative and is hoping to hear back soon. The Chair will reach out to some of the other groups to see about their participation.

   - **Update on Advertising**
     Frederick Grouzet reported that he is currently working with CHEK news on ads for the two topics as identified at our last meeting, i.e., driving with cyclists on the road and distraction by vehicle passengers. Joe Perkins commented that the CHEK creative team is working on scripts and they should be finished later today. They will be meeting with Frederick Grouzet tomorrow to get approval and then shooting can move ahead.

Chris Foord suggested that we should have one concise message from each of the ads put on a vinyl board for the side or back of a vehicle. Colleen Woodger asked for the creative to be made available in digital format so it can be used by member agencies through their own channels and Joe Perkins advised that once the ads are shot and edited, they can be put in an MP4 format and sent out to members for their use. It has always been the intent that members use their channels to help get the message out, particularly those with networks that are engaged with youth.

5. **Priority Business**

- **Budget Update**

John Hicks reported there has been little change in the budget. The grant that was approved in February has been paid out. We are in a healthy financial position and if some of the non-profits, etc., are looking for funding to do education campaigns, we are in a good position this year to move forward with that.

Also, on that topic, there has been some discussion on how we deal with smaller non-profits through the grant application process so they are not discouraged from applying. They may not have the resources, background or staffing to enable them to be as detailed in their analysis but we don't want to discourage them from doing important hands-on safety work. As chair of the grant application sub-committee, Vice-Chair Sukhawathanakul said that we do encourage ongoing consultation with applicants, work with organizations to narrow the scope of their project and provide feedback. We can let some of the smaller groups know that there is assistance available.

- **Cst. Sarah Beckett Memorial Scholarship**

The updated 2021 scholarship application has been posted on our website. Members are asked to get the word out about this scholarship to their networks. An inclusion/equity statement has been added to the application this year. John Hicks said that he will contact the community associations and school districts. It was suggested that a flyer be made up and distributed.

The question was raised of awarding more than one scholarship, however, according to our bylaw, we are only able to award one and the bylaw would need to be changed if we wanted to give out more. Last year we were able to present a second scholarship because of money that was donated by a different group. If we were to get additional donations this year, we may be able to award a second one again.

Action: John Hicks will investigate options and report back

- **Update on the MVA Pilot Project Study move to 30 km/h from 40 km/h**

This item has been brought back for information with the change from the original proposal of 40 km/h to 30 km/h. The Board received the motion from the Commission saying there was general support for the pilot project. The approved motion referred to a speed limit of 40 km/h, however, the Transportation Committee adjusted it to take out the speed reference and make it more general in nature as Victoria had already approved their 30 km/h pilot. Although the Commission gave some support to this pilot project, it is being led by Saanich.

Discussion was held on this issue with comments as follows.

- Why was this brought forward to the TSC in the first place as it is not a traffic safety issue and is based on livability, not crash data.
- It is fraught with issues that were brought forward by the BC Association of Chiefs of Police traffic safety committee. They are provincial experts in traffic safety, and they see a major issue with this project going forward. Driver confusion throughout the CRD is one of the main issues of concern. By legislation, municipalities can post their own speed limit signs as they feel are appropriate so why muddy the waters with driver confusion. This does not create public safety and will erode public trust and confidence in the Commission if the public believe we have supported it.
- Speed reader boards have shown that 90% of people overestimate speed of vehicles going by, and it is often perception vs reality. Could have unintended consequences.
- Police have had concerns from beginning of discussion at this table when this was brought as an information item. They have provided statistics to show there isn't a problem on these

roads with speeding and their resources are better utilized in high crash zones. Enforcement experts at the table are not being listened to.

- The Commission relies on statistical and evidence-based work but with this issue, things seem to have changed.
- Engineers set speed limits and we are not qualified to make engineering decisions.
- Seems like this was rushed. Many members were missing when the vote was taken at the January meeting, but this reflects on every member of the Commission. If we had all the information that was received this week, would the voting have been different? There should have been more time for members to consider all the information.
- IRSU was not represented at that meeting, so there was no police vote. It is not a true reflection of the Commission. The statement needs to reflect that it was not unanimous support.
- For future recommendations, we need to be sure that we have heard each piece and we're working together on a recommendation that truly reflects what the Commission's position is.
- The proposal did have an outline of how statistics are going to be investigated. The numbers will come and this is a pilot project for that reason. The engineering/infrastructure piece is out of our jurisdiction.
- When it came to the January meeting, it was time sensitive to fit in with the Board schedule. The City of Victoria approach has been to say they will collect the data, see if there is a change in statistics and report back on that. In terms of the engineering piece, it is something we haven't traditionally been involved with.
- We have only ever taken two recommendations through to the Board. The CRD Board Chair has asked that the Commission bring forward more recommendations. There are still some grey areas as to what the Commission is. Our core focus is on education and the media and getting messaging across from our partners. We need to be strong with our evidence-based work otherwise there is a concern about credibility. Something to consider as we move forward is whether we should be looking at engineering or whether we should really get back to the TSC core purpose.
- We could look at making some recommendations for approaches to potential challenges that we see regarding traffic safety.
- A simplistic approach for all road users is best. In favour of speed reduction, but the main solution is simply having municipalities erect their speed limit signs as they are allowed to do. Much less confusing for drivers and it can be enforced.
- The education piece might be somewhat helpful but ultimately looking at a complete revamp of the Motor Vehicle Act. If this was a problem like the Malahat where people were dying, then we could weigh in, but this has nothing to do with traffic safety.
- Concern expressed regarding conflict of interest and ability to have an open and informed discussion.
- The motion has already gone forward as part of package re support for pilot project and it would be challenging to go backwards. We should look at the process and have information come a month in advance when a decision is required. Members should recuse themselves if needed so decisions can be made on merit. We should think about a plan and process for making future recommendations with a timeline so that everyone has the information.

Action: Add process for making future recommendations to May agenda

6. **Member Updates**

- **RoadSafetyBC – Erin Anderson**
  No update

- **ICBC – Colleen Woodger**
  - Had a successful distracted driving campaign with much support from local enforcement.
  - Much of ICBC focus is moving towards enhanced care model which starts on May 1. It is a big piece of work that consistently kept moving through the pandemic as changes were made to the day-to-day organization.
  - Planning the speaker tour to try and get speakers into the schools. It has been difficult this year but grateful to the schools that are able to host a speaker. Hopeful this will get back to full participation next year.

- Making plans in the coming weeks for the high-risk driving campaign taking place in May which addresses speed and high-risk behaviour.
- Working on staying engaged with volunteers.

- **Youth and Children – Hailey Bergstrom-Parker**
  No update

- **Seniors – Dr. Paweena Sukhawathanakul**
  No update

- **CRD – John Hicks**
  No update

- **Integrated Road Safety Unit - Sgt. Jereme Leslie**
  - A successful distracted driving and occupant restraint campaign has been completed. A lot of enforcement took place in 12 different communities within the CRD.
  - Currently working towards the May high-risk driving campaign.

- **Commercial Vehicle Safety Enforcement – Rudi Wetselaar**
  No update

- **Vancouver Island Safety Council – Ron Cronk**
  - May is their province-wide motorcycle awareness month. Will be reaching out to some TSC partners to assist with messaging. Registration is moving quickly and is packed so there will be some new riders on the road. There has been a high number of motorcycle fatalities in the CRD in the last few years so will be striving to let people know they are out there.

- **Greater Victoria Cycling Coalition – Corey Burger**
  No update

- **Walk On, Victoria – Todd Litman**
  No update

- **Municipal Police Forces – S/Sgt. Andy Walsh, Saanich Police**
  - Have been spending a fair amount of time in school zones since spring break and focusing on that right now.

- **BC Transit – Dallas Perry**
  No update

- **Ministry of Transportation and Infrastructure – Shawn Haley**
  - John Hicks advised that Highway 14 projects are coming to completion right now, with some safety improvements as part of that project. The final drawings for the Highway 17 project have just been received and that work is moving forward.

- **Working Group for UVic Centre on Youth and Society Joint Project – Dr. Frederick Grouzet**
  Update on ads already given

- **Island Health - Jade Yehia**
  No update

7. **Other Business**
   No additional business

8. **Next Meeting**

The next meeting will be held on May 11, 2021 at noon. On motion, the meeting adjourned at 1:27 pm.

CRD TRAFFIC SAFETY COMMISSION
MINUTES OF MEETING
Tuesday, May 11, 2021

Members: Erin Anderson, RoadSafetyBC (EP)
Corey Burger, Capital Bike (EP)
Chris Foord, Community Member (EP)
Dr. Frederick Grouzet, Centre for Youth and Society, UVic (EP)
Fred Haynes, CRD Director (Chair) (EP)
Sgt. Jereme Leslie, CRD Integrated Road Safety Unit (EP)
Todd Litman, Walk On, Victoria (EP)
Dr. Paweena Sukhawathanakul, Institute of Aging and Lifelong Health, UVic (Vice-Chair) (EP)
Colleen Woodger ICBC Road Safety and Community Involvement (EP)

Associates: John Hicks, CRD
S/Sgt. Andy Walsh, Saanich Police (EP)

Regrets: Hailey Bergstrom-Parker, Child Passenger Safety Program, BCAA Community Impact
Ron Cronk, Vancouver Island Safety Council
Shawn Haley, Ministry of Transportation and Infrastructure
Joe Perkins, Media
Rudi Wetselaar, Commercial Vehicle Safety and Enforcement
Jade Yehia, Island Health

Recording Secretary: Arlene Bowker

EP – Electronic Participation

The meeting was called to order at 12:05 pm.

1. **Approval of Agenda**

   MOVED by Todd Litman, **SECONDED** by Colleen Woodger, that the agenda be approved as distributed. **CARRIED**

2. **Approval of Minutes – April 13, 2021**

   MOVED by Chris Foord, **SECONDED** by Colleen Woodger, that the minutes of the meeting held on April 13, 2021 be approved as distributed. **CARRIED**

3. **Chair's Remarks**

   Chair Haynes thanked Vice-Chair Sukhawathanakul for chairing the last meeting and noted comments regarding improving the processes we are involved with.

4. **Business Arising from the Previous Minutes**

   - **Commission membership/vacancies**
     We currently have the following vacancies on the Commission: BC Ambulance, BC Coroners Service, Island Health (Medical Health Officer), School Districts, and a second media representative. We have been unable to get a member from BC Ambulance and there has been past discussion about having the bylaw changed to remove them from the membership. The Island Health Medical Health Officer had to step back from the Traffic Safety Commission this year due to the demands of dealing with the pandemic but hopes to be able to return next year. The Coroner's Service are still restructuring and moving staff and working out what their roles are. The best contact for them has always been through Island Health as they have a more direct relationship. John Hicks has reached out to one of the school districts and will contact the other two and believes it is probable that we will get a school district member later this year.

   - **Update on advertising**
     Frederick Grouzet said they are facing some challenges in getting the next ad ready because of restrictions related to COVID. He has talked to Island Health about what they would recommend

and are trying to be creative in the way that some of the filming will be done. The script is still being finalized.

Frederick Grouzet will contact CHEK regarding a timeline so we can start to get messaging out through social media.

As discussed previously, it was recommended that the Commission should be aligning messaging with the annual provincial enforcement campaign schedule. The calendar will be distributed to members and added to the agenda.

Action: Add provincial enforcement campaign schedule as a standing agenda item

- **Update on information re the effectiveness of red-light cameras in the region**
  This item is in response to a request from the Transportation Committee. John Hicks noted that Erin Anderson has provided some data, however, more work is needed to move forward with getting information to the Committee. It was suggested that we work with our university partners and provide some funding for a student to get the material into a format that could be presented to the Committee. The particular interest is seeing how the rollout of the cameras has been going and trying to get an indication of how the program is running.

  Discussion was held on how to proceed. Chair Haynes commented that data shows there is more risk to people at intersections so if we want to help address residents' safety, the red-light camera piece should be given more attention and should be a priority for us. Having this work done as a university project is a good idea.

  Information giving data on intersection crashes is available online and it would not be difficult to come up with a list of the most dangerous intersections. It would be helpful to have a series of suggestions to help the Committee to take it to the Board for recommendations. Ultimately, it would have to go to the province.

  Once the scope of the work is determined, a timeline can be established, and a budget allocated.

  Action: John Hicks, Paweena Sukhawathanakul and Erin Anderson will meet to define the scope of the study and bring this information to the June meeting

- **Update on near miss data for vulnerable road users**
  Todd Litman said that he is familiar with the issue and the information Corey Burger was sharing which was based on a program in the UK where police tracked near misses. Todd will send out the link which will provide some background.

  Action: Carry forward to the June meeting

- **Process for putting forth recommendations**
  John Hicks discussed this with CRD Legislative Services. There are two pieces to the process. One is how the Commission brings forward items to the Committee keeping within the general framework. There is an understanding that anyone advocating for an item they have brought forward needs to recuse themselves from voting. The second piece is how we bring forward recommendations and John is working with CRD Legislative Services and the Corporate Department on this. It will likely require an introductory staff report giving key recommendations, attaching the motions and some background information. We will have to formalize things to bring forward recommendations.

  Action: John Hicks to provide information on formal process for June meeting

5. **Priority Business**

- **Budget Update**
  John Hicks reminded members that we are in a healthy financial position and are ready to assist community groups with project funding.

6. **Member Updates**

- **RoadSafetyBC – Erin Anderson**
  - The BC Road Safety strategy is about to be launched and more information will be coming next week which Erin will share with the Commission.

- **ICBC – Colleen Woodger**
  - The new Enhanced Care model is in place as of May 1.
  - May is high risk driving month and the focus is more on smaller communities in this campaign.
  - The speaker program has gone virtual this year. Colleen sat in on the presentation at Parkland Secondary. They had a number of cohorts in on a question-and-answer session and it was an amazing experience. More schools coming on board.
  - Working with the CRD active school travel program and "Think of Me" packages have been sent to all the elementary schools for teachers to deliver in the schools on behalf of ICBC. Will be working with local police re increased awareness about speeds in school zones.
  - Spent an afternoon with Saanich Police summer students. Great group of leaders. Colleen informed them about the Sarah Beckett scholarship.
  - Impaired driving campaign will take place in July.

  Chris Foord commented that CFAX has done a good job in promoting the Sarah Beckett scholarship.

- **Youth and Children – Hailey Bergstrom-Parker**
  - BCAA is starting a pilot project on the mainland in July for car seat recycling and hoping to bring it to the island this fall. It will be free for members, with a small fee for non-members. This is an exciting program as there are many seats that get picked up at dump sites, or from online free ads, and reused past expiry leading to unsafe child seats being used on local roads.

- **Seniors – Dr. Paweena Sukhawathanakul**
  No update

- **CRD – John Hicks**
  - The trails widening and lighting public engagement is coming forward shortly. The terms of separated use and initiatives to improve safety for users will be a large part of that.
  - Bike counts are on next week so volunteers will be out in the streets.
  - CRD regional priorities transportation priorities are going to the Board for approval tomorrow. Several safety initiatives were identified, e.g., Vision Zero and standardization of regional trails across municipalities so the same bylaws and regulations would be in place.
  - The proposed speed reduction pilot project was fed through municipal and electoral area partners and is being framed as a report that is going to the Board tomorrow.

- **Integrated Road Safety Unit - Sgt. Jereme Leslie**
  - The provincial enforcement high risk driving campaign is in full swing. In a few hours on the Malahat, three officers issued approximately 50 violation tickets including one for travelling 148 km/h in an 80 km/h zone. The Malahat continues to be a major problem for the CRD.

- **Commercial Vehicle Safety Enforcement – Rudi Wetselaar**
  No update

- **Vancouver Island Safety Council – Ron Cronk**
  No update

- **Greater Victoria Cycling Coalition – Corey Burger**
  - Capital Bike is the new name for the merger between the Greater Victoria Cycling Coalition and the Greater Victoria Bike to Work Society. Go By Bike Week is coming up at the end of month.
  - A volunteer is currently working on bike maps 2020 data and seeing what the trends are.
  - BC lacks a safe passing law so looking into what can be done in terms of signage and education to help safety.

- **Walk On, Victoria – Todd Litman**
  No update

- **Municipal Police Forces – S/Sgt. Andy Walsh, Saanich Police**
  - Motorcycles have been moved to a new platform. Four new motorcycles have been purchased and training is taking place for new and existing riders to transition to the new platform. With the warmer weather, there are some good enforcement opportunities that motorcycles allow over cars and trucks.

- **BC Transit – Dallas Perry**
  No update

- **Ministry of Transportation and Infrastructure – Shawn Haley**
  No update

- **Working Group for UVic Centre on Youth and Society Joint Project – Dr. Frederick Grouzet**
  No update

- **Island Health - Jade Yehia**
  No update

7. **Other Business**
   No additional business

8. **Next Meeting**

   The next meeting will be held on June 8, 2021 at noon. On motion, the meeting adjourned at 12:52 pm.