DISTRICT OF OAK BAY

PREPARED FOR:	Council
FROM:	Steve Rennick, Deputy Director of Engineering and Public Works
MEETING DATE:	March 25, 2024
SUBJECT:	2023 Oak Bay Active Transportation Strategy Review and Implementation Options

---

RECOMMENDATION(S)

THAT the report titled “2023 Oak Bay Active Transportation Strategy Review and Implementation Options”, authored by Steve Rennick, Deputy Director of Engineering and Public Works, dated March 25, 2024 be received.

And that Council provide direction on the preferred implementation option.

EXECUTIVE SUMMARY OF REPORT

This report presents an update to the Active Transportation Strategy refresh, and seeks Council direction on an implementation strategy, including a timeline for constructing the priority projects and a funding source.

BACKGROUND/HISTORIC CONTEXT

The draft 2023 refresh of Active Transportation Strategy was presented to Committee of the Whole on July 17, 2023 and resulted in the following resolutions being adopted at the July 24, 2023 Council meeting:

Resolution: 2023 - 356:
"THAT the review of the Oak Bay Active Transportation Strategy be endorsed as amended as follows:

1. Detailed designs and network planning use AAA design as a default.
2. That the strategy include end of trip facilities.
3. That maze gates be reviewed."

Resolution: 2023-358:
"THAT staff provide an implementation plan and options to undertake subsequent consultation for the implementation of the Active Transportation Strategy."

ANALYSIS

Approach:
The July 24, 2023 Resolution #2023-356 (in part) required that All Ages and Abilities (AAA) design be used as a default for network planning. Using this direction, the consultant limited the analysis to the projects contained in the "Multi-Use Trail Network" and the "Commuter Cycling Network." This approach excluded the "Laneway Network" as these projects do not constitute conventional cycling facilities and are more intended

to serve pedestrians. This also excluded the "Scenic Route" on Beach Drive, as the road right of way is too narrow to support a AAA bike lane without significant costs, tree removal, relocation of hydro poles, and potential property acquisition.

Of note, the 2011 Active Transportation Plan was incorporated into the District's Official Community Plan which preserves the Laneway Network and Scenic Route as part of the District's official plans; however, they are not included in this round of project prioritization. The implications of delivering these routes could be examined at a later time.

End of trip facilities and maze gates are addressed in full by the consultant in the revised report and are commented on later in this staff report.

The consultant was asked to prepare several possible implementation strategies, each based on a budget of approximately $1M per year in capital project costs; those strategies are included in Section 5.3 of the consultant's report, "Review of Oak Bay Active Transportation Strategy," as attached.

It should be noted that while the consultant report references the Pedestrian and Sidewalk Master Plan, that report has not yet been presented to Council. A draft copy of the report was provided to the Consultant for their comment as part of this exercise, but they were not asked to include recommendations for the prioritization of pedestrian projects. The Pedestrian and Sidewalk Master Plan will be presented to Council in Q2 of 2024, when it can be considered in context with the Sidewalk and Curb Condition Assessment that is nearing completion. Considering the two documents together will provide Council with the full picture and enable deliberations that consider the current deficiencies in the sidewalk network alongside recommendations for new construction. This approach will allow Council to determine the appropriate balance between repairing existing facilities and constructing new ones.

Funding Levels:

In considering the request for options to build out the network over five years at a cost of $1,000,000 per year, the consultant report provides three implementation plans at an approximate annual cost of $1M for 5 years, and a fourth implementation plan at a total cost of $557,000. The implementation plans, when considered individually, cannot deliver all 9 priority projects identified in the Strategy.

As an alternative to the three options that deliver less than a full implementation of the Active Transportation Strategy, the report suggests that all 9 of the priority projects could be completed in 8 years at a cost of $1M per year, or could be completed in 5 years at a cost of $1.6M per year. Of note, these are direct capital costs only and do not factor in the additional staff time that would be required to oversee consultants/contractors for design, public consultation and construction.

Staff recommend Council consider an expanded option to see the network fully built out and, as such, is recommending two potential implementation and funding models:

1. Deliver the 9 priority projects over the course of 10 years at an approximate annual cost of $810,000 per year, or

2. Deliver the 9 priority projects over the course of 5 years at an approximate annual cost of $1,600,000 per year.

Given the complexity of designing active transportation projects, the high degree of public consultation required, and the need to align these projects with utility replacement plans, additional staff with transportation specific skills will be required. Should Council direct that the projects be delivered over the course of 10 years, one additional staff member will be required. Should Council direct that the projects be delivered over the course of 5 years, two additional staff members will be required. The proposed Active Transportation Coordinator position(s) will be at the Senior Engineering Technologist level; costs for wages and benefits are in addition to the costs per year stated above.

Implementation Plans:

Because the consultant report was based on an assumption of a total spend of $5M, it does not reflect the two options (above) that Staff is recommending for Council's consideration. A review of the consultant's implementation plans is below, along with some high level commentary on some of the challenges with a few of these plans.

To develop implementation plans, Staff and the consultant worked together on a priority scoring system. The routes were scored on a total of 7 criteria, which are outlined in Table 8 of the attached report. The consultant worked on the first 6 criteria, and the Engineering division provided the scores for "Underground utility complexity." The consultant then took the scores, and the cost estimates for each project, and developed 4 possible options which are summarized as follows:

Option 1 - Low-hanging Fruit - This option consists of a total of 4 projects that are less complex, have more simple designs, and have significant portions of neighbourhood bikeway sections in their design. The total cost estimate for these projects is $557,000. Council could direct that Staff start with these projects, and then allocate funds to more complex projects in future years. It is anticipated that these projects could be delivered in one year with existing staffing levels, but given current workloads these projects may not be delivered until 2025.

Options 2a and 2b - Prioritize based on scoring results with a single big ticket project. Options 2a and 2b each consist of 5 projects, and have total cost estimates of approximately $5M. The difference between the two options is which high cost project is the centerpiece of the plan. In Option 2a it is Cadboro Bay Road Commuter Route at an estimated cost of $2.7M, and in Option 2b it is Henderson Road/Foul Bay Road Commuter Route at an estimated cost of $2.2M. Some of the projects in Options 2a and 2b have underground utility complexities to address. It is also worth noting that Option 2b requires alignment/coordination with District of Saanich, because a significant portion of the route is along the municipal boundary highway. The Oak Bay Avenue Commuter Route, which is in Options 2a and 2b, will need the design process to be coordinated with the future Oak Bay Village Area Plan. It is anticipated that this option could be delivered within the next five years and with one additional staff member.

Option 3 - Build the top two scoring projects first. This option consists of two projects, Cadboro Bay Road Commuter Route and Henderson Road/Foul Bay Road Commuter Route. Because each of these projects has a high price tag, there are only two projects

in this option. It is anticipated that this option could be delivered within the next five years and with one additional staff member.

Staff will continue to seek grant funding where possible for whichever implementation plan(s) Council chooses. In order to obtain grant funding, projects must be designed to a construction-ready state, and consultation must have been carried out. Carrying out detailed designs and public consultation early in the implementation will allow Oak Bay to respond to grant intake deadlines, or will allow Council to direct that the projects proceed without grant funding. Detailed designs will also allow for more refined cost estimates, as the estimates contained within the attached report are Class D. This is consistent with the recommendation in Section 5.4 of the attached report, where it is recommended that the District undertake detailed design for all the priority cycling facilities within two years following the adoption of the strategy. If Council directs that the priority projects be constructed over 10 years, Staff will break the projects into two groups, and prioritize detailed design for the projects in 2024-2025 that will be constructed earlier in the 10 year window and schedule the balance for the mid point of the implementation plan. This will also prevent designs from becoming stale as best practices in active transportation approaches evolve.

Risks to Project Implementation:

The project prioritization was based on District policies and utility improvement plans as they exist today. The Provincial government is requiring all municipal governments to undertake a review of their Official Community Plan by the end of December, 2025 which could change policy direction for active transportation in the District. Furthermore, Oak Bay is developing changes to the Zoning Bylaw to allow for small-scale multi-unit housing as directed by the Province. Oak Bay is also undertaking an analysis of where development is likely to occur, and reviewing the possibility of creating a Development Cost Charges bylaw. All of these legislative and regulatory changes could result in new pressures on underground utilities, which could have impacts on project prioritization. Periodic reviews of the implementation plans will be required to ensure that they remain consistent with Oak Bay's strategic direction.

Maze Gates:

Section 4.3 of the report recommends that the maze gates be removed from the District of Oak Bay. Staff will undertake a review of each maze gate location to determine whether it is best replaced by signage, or by a single fence panel (which Section 4.3 of the report refers to as a “bed sted gate.” Unless otherwise directed, this review and implementation will be conducted over the course of 2024 as an operational matter.

End of Trip Facilities:

The report addresses end of trip facilities at three locations - Oak Bay Municipal Hall, Monterey Centre, and Oak Bay Recreation Centre. There are short term actions recommended such as replacing the "coat hanger" style bike racks with a different style. Medium term actions would be providing short-term cargo bike parking areas with access to electrical outlets, and longer term actions would be adding shower and change room facilities.

Staff will undertake the bike rack replacement review and implementation as an operational matter. Should Council wish to have the medium and longer term actions implemented, direction could be given to incorporate those into a future Facilities workplan.

OPTIONS

OPTION 1

Direct Staff to proceed with an implementation plan to deliver the nine AAA projects over the course of 10 years, including the addition of one full-time staff member. Should Council chose this option, the following resolution would be in order:

> **THAT a ten-year implementation strategy for the nine cycling facilities prioritized in the 2023 Oak Bay Active Transportation Strategy Review be approved and funded through *(insert funding source here*);**
>
> **AND THAT the addition of a full time Active Transportation Coordinator be approved to support active transportation generally and the implementation of the priority projects identified in the 2023 Active Transportation Strategy Review;**
>
> **AND THAT, staff undertake detailed designs and consultation for all nine priority cycling routes identified in the 2023 Review of Oak Bay Active Transportation Strategy Report in two phases, with one half completed in 2024/2025 and the balance at the midpoint of the implementation strategy;**
>
> **AND FURTHER THAT staff report back with a prioritized construction schedule over the ten year period based on an assessment of the underground infrastructure replacement program.**

OPTION 2

Direct Staff to proceed with an implementation plan to deliver the nine AAA projects over the course of five years, including the addition of two full-time staff members. Should Council chose this option, the following resolution would be in order:

> **THAT a five-year implementation strategy for the nine cycling facilities prioritized in the 2023 Oak Bay Active Transportation Strategy Review be approved and funded through *(insert funding source here*);.**
>
> **AND THAT the addition of two full time Active Transportation Coordinator positions be approved to support active transportation generally and the implementation of the priority projects identified in the 2023 Active Transportation Strategy Review.**
>
> **AND THAT, staff undertake detailed designs and consultation in 2024 and 2025 for all nine priority cycling routes identified in the 2023 Review of Oak Bay Active Transportation Strategy Report;**

AND FURTHER THAT staff report back with a prioritized construction schedule over the five year period based on an assessment of the underground infrastructure replacement program.

OPTION 3
Direct staff to proceed with one of the three options contained within the report and the associated staffing needs. Should Council chose this option, the following resolution would be in order:

THAT Option (Choose 1, 2a, 2b or 2c) from the 2023 Review of the Active Transportation Strategy be approved for implementation and funded through *(insert funding source here*); (note staff will insert a text description of the option chosen in the resolution)

AND THAT (*insert staffing needs associated with the selected option*) be approved to support active transportation generally and the implementation of the selected option.

OPTION 4
Council to Provide alternative direction.

COUNCIL PRIORITY SUPPORTED
Transportation, Climate Change & Environment

FINANCIAL IMPACT
The current Financial Plan includes 2 budgets for Active Transportation:

1. $700,000 – intended for active transportation and transportation safety improvements that are improving existing infrastructure in conjunction with infrastructure replacement. This budget is funded by the Infrastructure Renewal Reserve (IRR)
2. $800,000 – grant contingent Active Transportation funding. This funding can only be spent if offset with grant revenue. It should be noted that grant funding is not guaranteed on an ongoing basis. The primary source of grant funding for Active Transportation projects is the BC Government Active Transportation Infrastructure Grants program, which provides 60% of eligible project costs up to a maximum of $500,000 per project.

The Active Transportation spending proposed in this report does not align well with either capital funding program as it is mainly new infrastructure. Thus, it does not align well with using the IRR. The IRR is technically unrestricted, meaning Council may choose to use it for any spending they wish. However, the IRR balance is forecast to be almost completely utilized for other projects and core infrastructure by 2028.

Council has four options for financing the implementation of the 9 priority cycling facility projects, and the impacts would vary depending on whether the 5 or 10 year option is chosen. The four options are summarized below:

	Tax increase required		Comment
	5-Year	10-Year	
1. Use current IRR-funded AT Program Budget for 10 years	N/A	$0	Note this would use existing budget funded by IRR which is a misalignment of reserve use intention
2. Issue debt to create tax funded AT Program budget	2.50%	2.50%	Tax increase could be phased in over 1-3 years
3. Deprioritize core infrastructure replacement in Five Year Financial Plan	0.00%	0.00%	This would reduce a Core Infrastructure replacement program such as Road, Water, Sanitary Sewer, Storm, sidewalk, or streetlight replacement
4. Fund Active Transportation Program with Property tax increase	5.75%	2.90%	Tax increase could be phased in over 1-3 years

IAP2 FRAMEWORK ENGAGEMENT

☒ INFORM ☐ CONSULT ☐ INVOLVE ☐ COLLABORATE

TIMELINE/PROCESS/NEXT STEPS

Depending on the implementation options chosen, Staff will

- undertake a recruitment process for the Active Transportation Coordinator(s) as noted in the options,
- prepare a timeline schedule for the priority list of projects based on an evolving understanding of the underground infrastructure for Council's consideration,
- engage design consultants to carry out detailed design,
- engage communications consultants to carry out engagement on the projects as needed.

Design and consultation would take place in 2024 and 2025 (and again at the midpoint should the 10-year implementation be selected), with the goal of having more detailed project budgets ready ahead of 2025-2029 Financial Plan deliberations.

Respectfully submitted,

Steve Rennick, Deputy Director of Engineering and Public Works

With respect to the Financial Impact described in this report, I concur with the staff recommendation.

Christopher Paine

_____

Christopher Paine, Director of Financial Services

Reviewed and approved by the Director of Corporate Services.

Dianna Plouffe

_____

Dianna Plouffe, Director of Corporate Services

I have read and consider staff's recommendation to be supportable for Council's consideration.

Selina Williams

_____

Selina Williams, Chief Administrative Officer

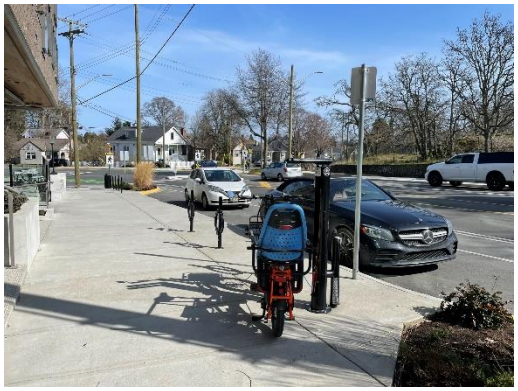
ATTACHMENTS(S):

Review of Oak Bay Active Transportation Strategy_2024-03-18

REVIEW OF OAK BAY ACTIVE TRANSPORTATION STRATEGY

Final Report






Prepared For: District of Oak Bay
Date: March 18, 2024
Our File No: 3482.B01

WATT VICTORIA
302 – 740 Hillside Ave
Victoria, BC V8T 1Z4
250-388-9877

TABLE OF CONTENTS

1.0 INTRODUCTION 1

1.1 Existing Policies, Plans, and Industry Guidelines 1

1.2 Neighbouring Municipalities Active Transportation Networks 4

2.0 ACTIVE TRANSPORTATION FACILITY INVENTORY 9

2.1 Pedestrian Facilities 9

2.2 Cycling Facilities 11

3.0 PRIORITY PROJECTS 17

3.1 Pedestrian Facilities 17

3.2 Cycling Facilities 20

3.3 Cycling Facility Design Guidance 35

3.4 Maintenance of Cycling Facilities 37

4.0 SUPPORTING POLICIES & PROGRAMS 39

4.1 Modernize End-Point Facilities on District-owned Properties 39

4.2 Update the Parking Facilities Bylaw 45

4.3 Remove Maze Gates 46

5.0 IMPLEMENTATION STRATEGY 48

5.1 Cycling Facility Costing 48

5.2 Priority Projects 49

5.3 Project Phasing 51

5.4 Project Delivery 54

5.5 Funding Sources 55

6.0 CONCLUSION & NEXT STEPS 57

FIGURES

Figure 1. Map of Victoria's AAA Cycling Network 5
Figure 2. Saanich's Bicycle Network Priority Projects 8
Figure 3. Long-Term Cycling Network - District of Saanich 8
Figure 4. Recommended Trail and Bicycle Network - Oak Bay 2011 ATS 12
Figure 5. Priority Cycling Facilities 24

TABLES

Table 1. ATS 2011 Pedestrian Facility Improvements 10
Table 2. Cycling Facility Inventory 13
Table 3. Summary of Pedestrian Priority Projects 18
Table 4. Priority Cycling Facility Projects 21
Table 5. Technical Summary of Cycling Priority Projects 23
Table 6. Cycling Facility Design Guidance 36
Table 7. Cost Estimates for the Cycling Facility Projects 48
Table 8. Project Prioritization Criteria 49
Table 9. Cycling Facility Project Prioritization 50
Table 10. Summary of Project Phasing Options 53

APPENDICES

Appendix A – Review of 2011 Oak Bay Active Transportation Strategy i
Appendix B – Project Prioritization Scoring Rubric vi

1.0 INTRODUCTION

The District of Oak Bay's Active Transportation Strategy (ATS) was completed in 2011. As 13 years have passed since the Strategy's adoption, this report serves as a review of what has been done so far and what remains to be implemented in terms of active transportation planning and infrastructure in Oak Bay. More specifically, the objective of this review is to identify—and prioritize—which of the incomplete projects in the 2011 Strategy should be advanced so the District could apply for funding and grant applications in the immediate future. Further, this report also references the District's Pedestrian and Sidewalk Master Plan, which informed the list of priority pedestrian facility projects.

The active transportation networks in the District of Saanich and City of Victoria are also considered within this review to understand opportunities for connections to existing facilities in adjacent communities.

1.1 Existing Policies, Plans, and Industry Guidelines

1.1.1 BC Active Transportation Design Guide

The BC Active Transportation Design Guide (BCATDG)[1] is a comprehensive set of planning and engineering guidelines that offers recommendations for the planning, selection, design, implementation, and maintenance of active transportation facilities across the province. It contains engineering principles and best practices from the municipal, provincial, national, and international levels.

The BCATDG was used as a reference for evaluating and recommending facilities in this review. Therefore, the recommendations provided in **Section 3.0: Priority Projects** align with provincial guidelines and industry standards.

[1] Ministry of Transportation and Infrastructure. (2019). BC Active Transportation Design Guide. Available online at: https://www2.gov.bc.ca/gov/content/transportation/transportation-infrastructure/engineering-standards-guidelines/traffic-engineering-safety/active-transportation-design-guide

1.1.2 Oak Bay Active Transportation Strategy (2011)

The 2011 Oak Bay ATS identifies routes, facilities, programs, and regulations that can help facilitate an increase in active transportation and work toward creating a safer, healthier, more sustainable community. It focuses on pedestrian networks, multi-use trails, commuter bike routes, neighbourhood bikeways and wayfinding improvements with recommended accessibility considerations for each. The strategy includes an implementation plan that indicates priorities for each facility type, in addition to funding opportunities, policies and regulations to move forward with.[2]

Cycling facilities that had already been developed prior to the adoption of the 2011 ATS are outlined in the Strategy, as follows:

- Foul Bay Road bike lanes on both sides from Lansdowne Road to Fort Street / Cadboro Bay Road
- Foul Bay Road signed as a shared roadway from Fort Street / Foul Bay Road to McNeill Avenue
- Cadboro Bay Road bike lanes that are approximately 100m north and south of the Cadboro Bay Road / Bowker Avenue intersection
- Cedar Hill Cross Road bike lane on the north side between Henderson Road and Gordon Head Road (District of Saanich border)
- Beach Drive signed as a shared roadway from Crescent Road to the City of Victoria border. Beach Drive is identified as a scenic route throughout Oak Bay (and beyond), but does not include dedicated cycling facilities
- There are many major roadways identified as appropriate bike routes using signage, but do not include specific on-street cycling facilities
- Bowker Creek Walkway used as a off-road cycling route; however, it is not intended for cycling per the Recreational Use of Oak Bay Parks & Open Spaces: Report of the Parks Vision Committee (2011)

[2] District of Oak Bay. (2011). Active Transportation Strategy. Available online at: https://www.oakbay.ca/sites/default/files/municipal-hall/Reports/Oak%20Bay%20Active%20Transportation%20Strategy_FINAL_Sept12-11.pdf.

In addition, the ATS identifies the types of pedestrian facilities that existed in Oak Bay prior to its adoption including sidewalks, trails, and walkways. In particular, the following walking trails are referenced:

- The Bowker Creek Walkway that runs along the "day lighted" portions of Bowker Creek, between Monterey Avenue and the east of Oak Bay High School
- The Willows Beach Walkway that follows Willows Beach from Cattle Point to Bowker Avenue, and includes a wide walkway with lighting and benches
- The Shoal Bay Walkway that follows the waterfront adjacent to Oak Bay Marina
- Former laneways that have been designated and designed as trails throughout Oak Bay, including Camas Lane and Centennial Trail

The improvements undertaken by the District since the 2011 ATS are summarized in **Section 2.0.**

1.1.3 Pedestrian and Sidewalk Master Plan (2023)

In 2023, the District completed its Pedestrian and Sidewalk Master Plan (PSMP). The PSMP will guide the development of the sidewalk network and identify additional strategies to improve the pedestrian experience for residents, visitors, and people working in Oak Bay. It will provide an opportunity to build an inclusive and connected pedestrian network that strengthens the quality of life for the community. The aim is to ensure connections that are meaningful and provide continuous and direct routes that are safe, comfortable, enjoyable, and navigable for users of all ages and abilities.[3]

The Pedestrian and Sidewalk Master Plan outlines the baseline conditions of pedestrian facilities in the District, identifies issues, opportunities and improvement strategies, and provides several concept designs throughout the District to represent the application of potential design solutions to address the identified issues.

As the PSMP has been completed, this report does not include a comprehensive summary of the District's current and planned pedestrian facilities. It is, however, important that the District ensure that pedestrian and cycling infrastructure improvements are coordinated and integrated to ensure safe and accessible connectivity across the entire active transportation network in Oak Bay.

[3] District of Oak Bay. (2023). Pedestrian and Sidewalk Master Plan. Available online at: https://connect.oakbay.ca/pedestrian-sidewalk-masterplan

1.2 Neighbouring Municipalities Active Transportation Networks

1.2.1 City of Victoria

The City of Victoria is building an All Ages and Abilities (AAA) cycling network throughout the city. AAA facilities are intended to be designed in such a way that they are safe, comfortable, and equitable for all cyclists, regardless of age or ability.[4] Adopted in 2016, the City's AAA cycling network plan is aimed to be completed by 2024. Once the network is complete, 95% of the municipality will be within 500m of an AAA cycling route, providing safe and convenient access to village centres, parks, recreation centres and schools.[5] The plan includes cycling facilities on three roads that connect to Oak Bay:

- **Haultain Street –** completed in 2022, the Kings – Haultain corridor is a shared use neighbourhood bikeway that extends to Richmond Road, approximately 500 metres from the Oak Bay border. This corridor provides signage and traffic calming facilities intended for people cycling. Haultain Street continues into Oak Bay, eventually turning into Eastdowne / Estevan Road.
- **Fort Street** – completed in 2023, the AAA cycling facilities on Fort Street from Cook Street to Foul Bay Road include road paving, protected bike lanes, pedestrian crossing upgrades, accessibility enhancements, and new traffic signals. East of Foul Bay Road, Fort Street continues into Oak Bay as Cadboro Bay Road.
- **Richardson Street** – From Cook Street to Foul Bay Road, Richardson Street is designed as a shared-use neighbourhood bikeway, similar to Haultain Street. Richardson connects into Oak Bay after Foul Bay Road as McNeill Avenue, terminating at Newport Avenue.

Figure 1 shows Victoria's AAA Cycling Network map.

[4] National Association of City Transportation Officials. (2023). Designing for All Ages & Abilities. Available online at: https://nacto.org/publication/urban-bikeway-design-guide/designing-ages-abilities-new/
[5] City of Victoria. (2024). Victoria's AAA Cycling Network. Available online at: https://www.victoria.ca/EN/main/residents/streets-transportation/walk-roll-transit/cycling/victoria-s-aaa-cycling-network.html

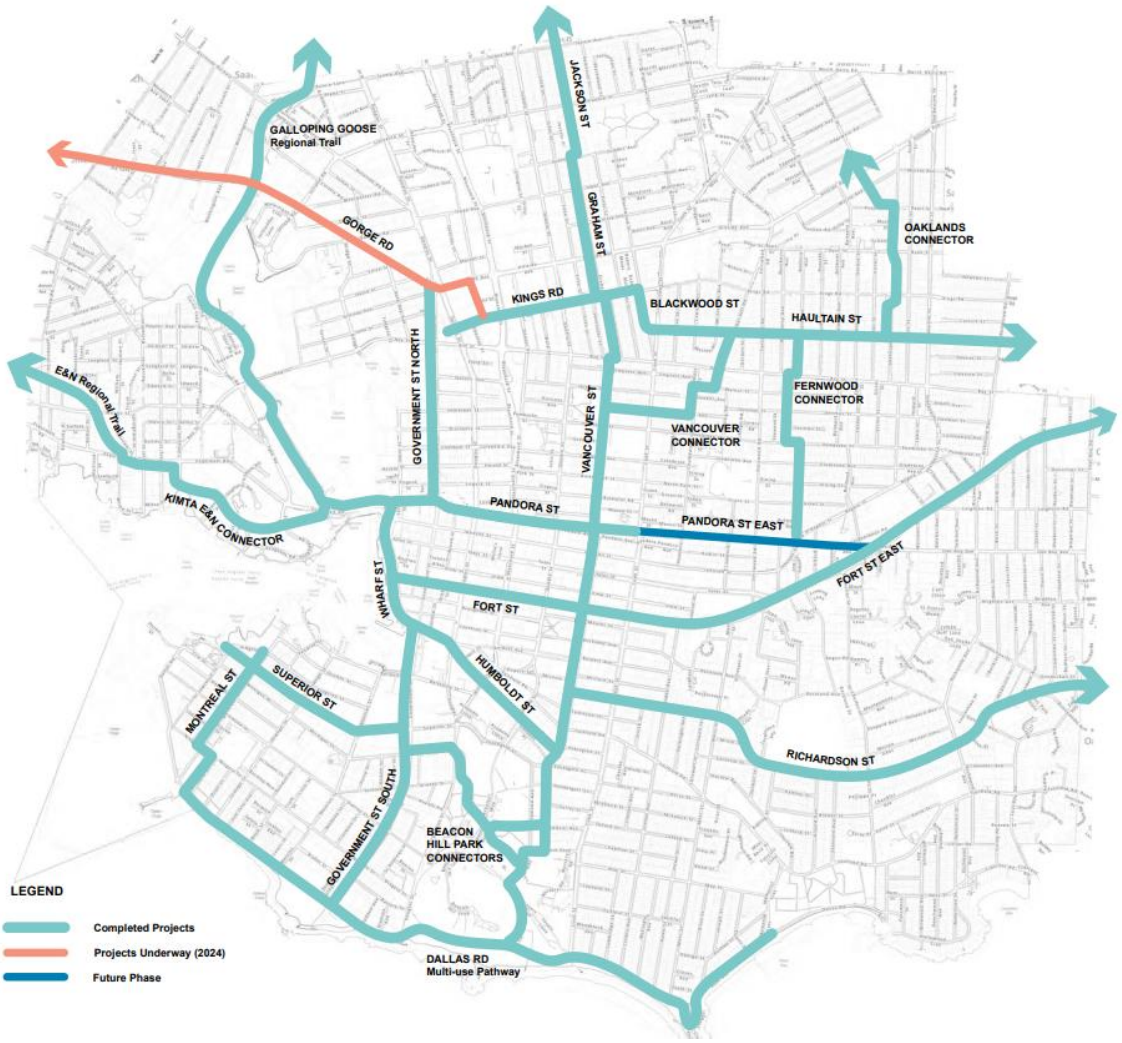


Figure 1. Map of Victoria's AAA Cycling Network

1.2.2 District of Saanich

The District of Saanich first completed its Active Transportation Plan in 2018. The District implemented several of the recommendations in its ATP from 2018 to 2023. Beginning in late 2022, the District undertook a 5-year update to ensure the Active Transportation Plan accounted for progress made over the past five years. The updated ATP was released in January 2024.[6]

Some of the key updates include reflecting new active transportation facilities and alignment with recent District initiatives such as the Official Community Plan (OCP) strategic update, 2020 Climate Plan, updated Urban Forest Strategy, Electric Mobility Strategy, and Road Safety Action Plan. It also contains priorities around road safety, traffic calming, e-bikes, and micromobility and trees.

The ATP contains several sidewalk and cycling network priority projects that are in proximity to the District of Oak Bay. As shown in **Figure 2**, there are a few priority projects that present opportunities for Saanich and Oak Bay to coordinate on project planning, design, and engineering. These include:

- Project #61 (Cedar Hill Cross Road) – Pedestrian and cycling improvements on Cedar Hill Cross Rd between Ascot Drive and Ophir Street. Changes to Cedar Hill Cross Road will also be explored through the Cedar Hill Cross Road Safety Review
- Project #81 (Cadboro Bay Road) – Cycling and pedestrian improvements on Cadboro Bay Road between Hibbens Close and Arbutus Road, including connections to existing sidewalks in Cadboro Bay Village, as well as cycling improvements between Hibbens Close and Sinclair Road
- Project #93 (Foul Bay Road) – Cycling improvements on the south end of Foul Bay Road between Lansdowne Road and Fort Street

[6] District of Saanich. (2024). Moving Saanich Forward: Active Transportation Plan. Available online at: https://www.saanich.ca/assets/Local~Government/Documents/Engineering/Active%20Transportation%20Plan%20FINAL%202024%20(Web).pdf

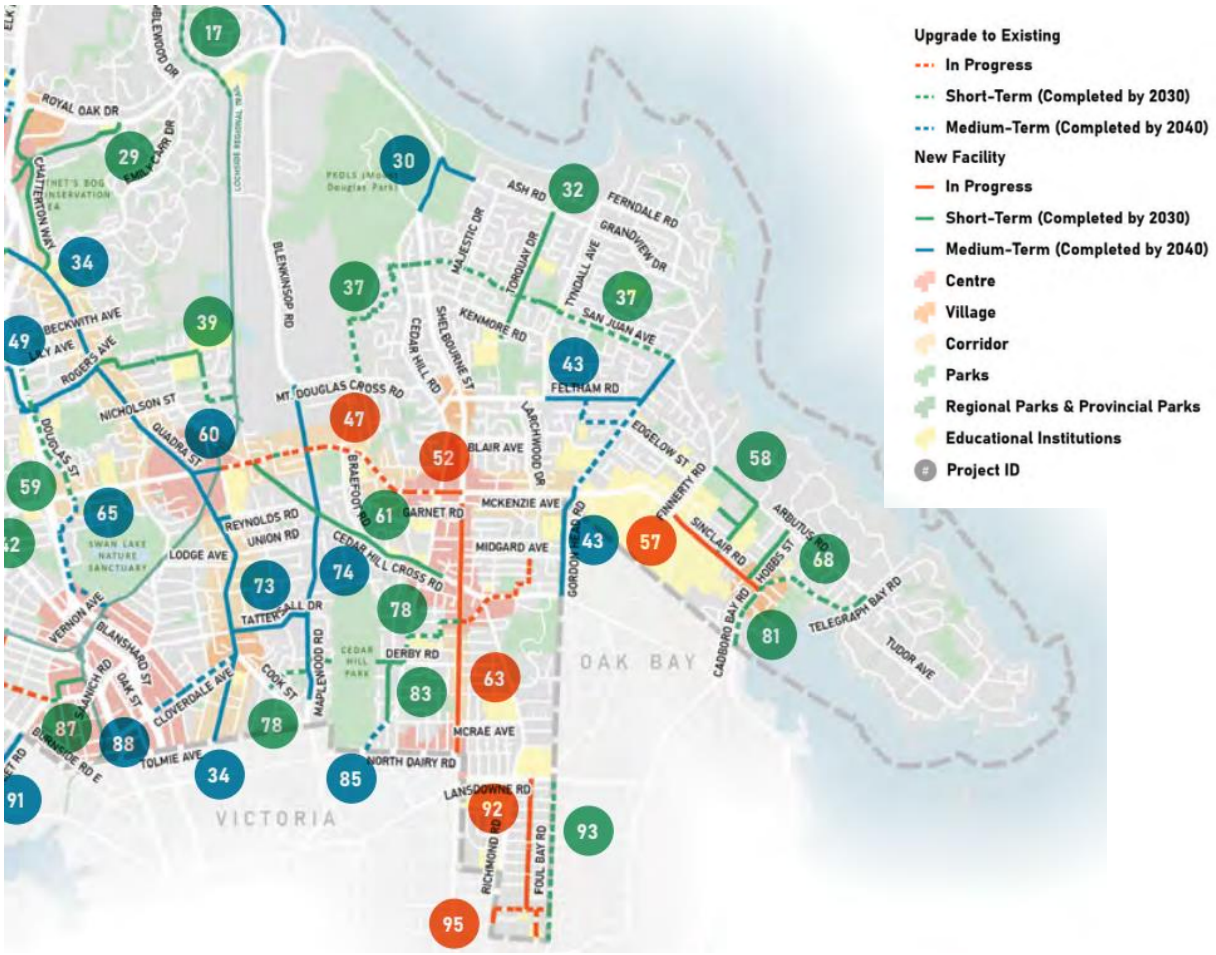


Figure 2. Saanich's Bicycle Network Priority Projects in Proximity to Oak Bay

2.0 ACTIVE TRANSPORTATION FACILITY INVENTORY

2.1 Pedestrian Facilities

The 2011 ATS recommended three specific locations for improved pedestrian facilities:

1. Oak Bay High School
2. Elgin Avenue / Public Works Walkway
3. Henderson Recreation Centre / Uplands Campus Trail.

Other recommendations for pedestrian facilities include walkway signage and safe routes to schools. The recommended improvements for Oak Bay High School have been completed, and the District is now looking more comprehensively at its pedestrian network through its PSMP to identify other areas for improvement.

The Pedestrian and Sidewalk Master Plan provides a detailed assessment of pedestrian facilities in Oak Bay and their associated conditions. The recommended pedestrian improvements identified in the 2011 ATS are outlined in **Table 1** below, along with their level of completion.

Table 1. ATS 2011 Pedestrian Facility Improvements

ATS Project Number / Location		Project Status	ATS Facility / Program Description
4.1a	**Oak Bay High School Connections**	Complete	Extension of Bowker Creek multi-use trail along the south of the school site, and north-south connections from Cadboro Bay Road and Epworth Street to the north end of Elgin Street.
4.1b	**Elgin Avenue / Public Works Walkway**	Complete	Add a sidewalk on the east side of Elgin Street; widen sidewalk to the north side of Oak Bay Avenue immediately east of Elgin Street; improve walkway aesthetics adjacent to the public works yard (new lighting and murals on large adjacent wall).
4.1c	**Henderson Recreation Centre / Uplands Campus Trail**	Incomplete	Walking trail to connect the north end of Woodburn Avenue to Henderson Recreation Centre and Cedar Hill Cross Road (direct trail route at the east edge of the property and trailhead signage at each entrance that identify the trail).
4.1d	**Walkway Signage**	Partial	Include trailhead markers on walkways that are already constructed to an appropriate standard: Carnarvon Park (Townley St to Harlow Dr); Kendal Ave (west end); University Woods (west end); Woodburn Ave (south end).
4.1e	**Safe Routes to Schools**	Partial (Willows Elementary School, 2018)	Work with the School District, Parent Advisory Groups and schools to improve active transportation networks to schools; improve crosswalks at mid-block and intersection locations near Monterey School, along Cadboro Bay Road, and in school zones.

2.2 Cycling Facilities

Oak Bay's Active Transportation Strategy includes 19 different locations for cycling facilities to be implemented, categorized within four network types:

- Multi-use Trail Network
- Commuter Cycling Network
- Neighbourhood Bikeway Network
- Laneway Network

Figure 4 identifies the recommended trail and bicycle network in locations in the ATS with a corresponding project number (note: the laneway network is not shown in the figure). **Table 2** summarizes the status of the identified cycling projects in the ATS.

To review the status of the network, a matrix was created to compare the ATS recommendations for each project with what has been implemented to date. **Appendix A** includes a high-level overview of what remains to be completed for each facility recommendation, in comparison to what has been done so far. The WATT team completed a cycling tour of the identified locations over two days, (March 2 and March 16, 2023) to review the status of completion for each project. The cycling tour confirmed that three of the 19 projects are partially completed with only one project completed.

- **MULTI-USE TRAILS** are typically paved off-road routes for all non-vehicular travel modes, including walking and cycling.
- **COMMUTER BIKE ROUTES** are typically major roadways with either bike lanes or wide shoulder lanes.
- **SCENIC BIKE ROUTES** are signed touring routes that follow pleasant cycling scenery and include limited dedicated cycling facilities.
- **NEIGHBOURHOOD BIKE ROUTES** include signs and paint markings along continuous routes, typically with limited vehicle traffic.



Figure 4. Recommended Trail and Bicycle Network - Oak Bay 2011 ATS

Table 2. Cycling Facility Inventory

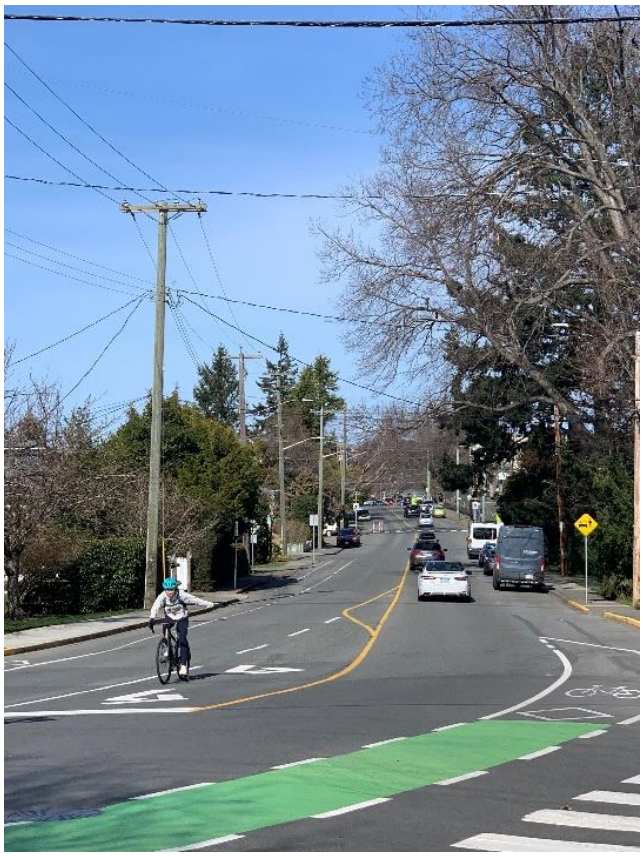
Project Number / Location		Project Status	Facility Provided
Multi-use Trail Network			
4.2a	**Bowker Creek Multi-use Trail**	Complete	Multi-use trail connecting from Bowker Creek Walkway through Oak Bay High School to Cadboro Bay Rd.
4.2b	**Cedar Hill Cross Road Multi-use Trail**	Incomplete	N/A
Commuter Cycling Network			
4.3a	**Cadboro Bay Road Commuter Route**	Partial	Painted bike lanes are available on both sides of the road from Foul Bay Rd to Bowker Ave.
4.3b	**Henderson Road/Foul Bay Road Commuter Route**	Partial	Painted bike lanes are available on both sides of the road from Fort Street to Cedar Hill Cross Rd.
4.3c	**Oak Bay Avenue Commuter Route**	Incomplete	An adaptive sidewalk[7] was installed during the pandemic on the north side of the road from Wilmot Place to Elgin Road. It is currently used by people walking and cycling. It was removed in 2023.
4.3d	**Lansdowne Road Commuter Route**	Incomplete	N/A
4.3e	**McNeill Avenue Commuter Route**	Incomplete	N/A
4.3f	**Bowker Avenue Commuter Route**	Incomplete	N/A

[7] An adaptive sidewalk is an at-grade pedestrian facility within the roadway that is usually separated by a vehicle travel lane. These facilities typically have protection from a vehicle travel lane in the form of a barrier (e.g., bollard, delineator post, etc.).

Project Number / Location		Project Status	Facility Provided
4.3g	**Beach Drive Scenic Route**	Incomplete	N/A
Neighbourhood Bikeway Network			
4.4a	**Central Oak Bay Neighbourhood Bikeway**	Incomplete	Bicycle route signage and pavement markings were installed on Monterey Avenue between Oak Bay Avenue and Cranmore Road. The pavement markings have not been maintained and have started to fade as a result.
4.4b	**Henderson Road Neighbourhood Bikeway**	Partial	Multi-use pathway between Kings Rd – Carrick Rd.
4.4c	**Haultain-Estevan Neighbourhood Bikeway**	Partial	Bicycle route signage has been installed.
4.4d	**McNeill Avenue-Beach Drive Neighbourhood Bikeway**	Incomplete	N/A
4.4e	**Oak Bay Ave-Beach Drive Neighbourhood Bikeway**	Incomplete	N/A
Laneway Network			
4.5a	**Hampshire Road-Windsor Park Connection**	Incomplete	N/A
4.5b	**Victoria Avenue-Byng Street Connection**	Incomplete	N/A
4.5c	**Ripon Road – Beach Drive Connection**	Incomplete	N/A
4.5d	**Dunlevy Street – Beach Drive Connection**	Incomplete	N/A



Wayfinding at Oak Bay High School



Cadboro Bay Road



McNeill Avenue



Henderson Road Multi-use Trail from Kings Road - Carrick Road & Maze Gate



End of Bike Lane on Cadboro Bay Road



Bowker Creek Multi-use Trail



Cadboro Bay Commuter Route



Beach Drive Scenic Route

3.0 PRIORITY PROJECTS

3.1 Pedestrian Facilities

The Pedestrian and Sidewalk Master Plan includes a proposal for five "missing links" that have high potential for pedestrian improvements as follows:

- **McNeill Avenue** – issues of high vehicle speeds, high vehicle volumes and poor visibility. Potential improvements could include traffic calming devices.
- **Musgrave Street** – issues of high vehicle speeds, high traffic volumes, and traffic control compliance. Potential improvements could include crossing guards to enforce vehicle stopping at crosswalks.
- **Cadboro Bay Road** – a pedestrian crossing control analysis identified that a special crosswalk would be suitable for the intersection of Epworth Road and Cadboro Bay Road.
- **Oak Bay Avenue** – improvements could include more street furniture, reduced crossing distances, wider sidewalks, raised crosswalks, pedestrian-only zones, improved street lighting, more signalized crossings, and additional traffic crossing measures.
- **Beach Drive** – improvements could include improved sidewalks and crosswalks and additional traffic calming measures.

The PSMP includes improvement strategies and concept designs that can be applied to various locations throughout Oak Bay to improve safety, comfort, enjoyment, and navigability around the community.

Based on the missing links identified in the PSMP and alignment with the cycling facility priorities (see **Section 3.2**), three pedestrian improvements have been identified as high priority based on two broad criteria: (1) overall alignment with the PSMP and (2) opportunity to be integrated with a priority cycling facility improvement project. The design measures and recommended facility types align with what is outlined in the PSMP. The three projects, their specific locations, rationale, and recommended improvements are shown in **Table 3**. Note, the recommendations are derived from the PSMP.

Table 3. Summary of Pedestrian Priority Projects

Project / Location	Rationale	PSMP Recommendation
McNeill Avenue (Hampshire Road – Island Road) **Focus Intersections:** • McNeill Avenue & Hampshire Road • McNeill Avenue & Transit Road • McNeill Avenue & Monterey Avenue	• The McNeil project is in the 2024/2025 capital program • Located near a school and lacks crossing opportunities at several intersections • High vehicle speeds, high vehicle volumes, poor visibility • Identified as a high priority for cycling improvements	• Speed humps, to reduce vehicle speeds and alert drivers that they are approaching a crosswalk • Pedestrian activated flashers, to reinforce pedestrian priority and warn drivers to slow down and stop for pedestrians • Curb bulges and curb extensions to slow down vehicles and improve sightlines • Tactile mats, to indicate where crossing is safe for those with visual impairments
Cadboro Bay Road (Bee Street – Cranmore Road) **Focus Intersection:** • Cadboro Bay Road & Epworth Street	• Located near a high school that extends through a shopping area • Right-turn lane into Oak Bay High School is frequently misused to pass vehicles before the traffic lanes along Cadboro Bay Road merge • Safety concerns for students crossing Cadboro Bay Road at Epworth Street to access the westbound bus stop located across from the school • Identified as a high priority for cycling improvements	• Curb extension to make use of unused residual space; reinforce pedestrian priority; and provide a physical barrier encouraging drivers to slow down and merge where existing pavement markings are confusing • Raised bike lane and crossing to encourage people cycling to slow down before crossing the pedestrian zone • Bollards/planters, to serve as a visual queue for oncoming traffic and to indicate where crossing is

Project / Location	Rationale	PSMP Recommendation
		safe for pedestrians with visual impairments
Oak Bay Avenue (Yale Street – Oliver Street) **Focus Intersection:** • Oak Bay Avenue & Hampshire Road	• Main commercial village • Public has expressed an interest in improving the pedestrian realm and overall pedestrian connectivity • Identified as a high priority for cycling improvements • Note: the District will be undertaking an Oak Bay village planning exercise in the future, which presents an opportunity to improve the conditions of the pedestrian infrastructure	• Restricted left turns to reduce pedestrian-vehicle conflicts that arise from the off-set of Hampshire Road • Widened sidewalks to provide more space for pedestrians and improve accessibility for those using mobility aids • A raised pedestrian plaza to reinforce pedestrian priority and encourage walking within the Oak Bay Village • Parklets to encourage the pedestrian realm, improve business opportunities, and provide space for street furniture and pedestrian refuge • Planters to serve as visually appealing barriers between the pedestrian and vehicle zones

3.2 Cycling Facilities

Following the completion of the cycling facility inventory, projects that were identified as incomplete or partially complete were evaluated further to determine the feasibility of achieving an "all ages and abilities" design, as defined below. Some projects were also removed from the list as the District has already begun design work. These projects include:

- McNeill Avenue Commuter Route (Project 4.3e)
- Henderson Road Neighbourhood Bikeway (Project 4.4b)
- Haultain-Estevan Neighbourhood Bikeway (Project 4.4c)

In addition, the Beach Drive Scenic Route (Project 4.3g), was not included in the evaluation. There are no cycling facilities along this corridor. As a scenic route (classified as a special road within the road network) with few commercial / employment destinations, it is not a major corridor for commuting cyclists. The existing pavement width is constrained for most of the corridor and the width changes throughout. For most sections of the corridor, additional ROW would be required to fit a AAA cycling facility. This would, however, result in significant impacts including utility pole relocation and tree / hedge removal. In addition, the shoreline presents a significant geographic constraint to any road widening or ROW dedication. Even with the removal of on-street parking for most sections of the corridor, there is still not enough space to design a AAA facility without additional ROW. Further study is recommended to determine the feasibility of adding dedicated cycling facilities along this corridor, and to ascertain the surrounding community's priorities.

Lastly, all the projects identified in the "laneway network" were also removed from the analysis as they do not constitute conventional cycling facilities and are more intended to serve people walking and rolling. Therefore, a total of 9 projects were included in the evaluation and project prioritization process, as shown in **Table 4** below.

Note: this section does not include the overall prioritization of each project; ***Section 5.0*** *(Implementation Strategy) includes project costing, evaluation, prioritization, project phasing, project delivery, and funding opportunities.*

Table 4. Priority Cycling Facility Projects

Project Number / Location		Project Status	Facility Provided
4.2b	**Cedar Hill Cross Road Multi-use Trail**	Incomplete	Painted bike lanes are available for a portion of the corridor between Henderson Road and Gordon Head Road.
4.3a	**Cadboro Bay Road Commuter Route**	Partially complete	Painted bike lane on both sides of road from Foul Bay Rd to Bowker Ave
4.3b	**Henderson Road/Foul Bay Road Commuter Route**	Partially complete	Painted bike lanes are available on both sides of the road from Fort Street to Cedar Hill Cross Rd.
4.3c	**Oak Bay Avenue Commuter Route**	Incomplete	N/A
4.3d	**Lansdowne Road Commuter Route**	Incomplete	N/A
4.3f	**Bowker Avenue Commuter Route**	Incomplete	N/A
4.4a	**Central Oak Bay Neighbourhood Bikeway**	Incomplete	Bicycle route signage and pavement markings were installed on Monterey Avenue between Oak Bay Avenue and Cranmore Road. The pavement markings have not been maintained and have started to fade as a result.
4.4d	**McNeill Avenue-Beach Drive Neighbourhood Bikeway**	Incomplete	N/A
4.4e	**Oak Bay Ave-Beach Drive Neighbourhood Bikeway**	Incomplete	N/A

The following sections include a description of each of the cycling facility projects including their recommended designs to achieve an all ages and abilities (AAA) standard. For the purposes of this report, all ages and abilities is defined as follows:

Cycling facilities that are designed to provide a safe, convenient, comfortable, and fun experience for all users, especially those who are more vulnerable including families with children, seniors, and new riders. AAA facilities are those that are either on local roads with low motor vehicle speeds and volumes and/or on busier roads with physical separation from motor vehicle traffic.

Achieving a AAA standard is not practical for certain segments / sections of the corridors as additional right-of-way (ROW) would be required and would result in significant costs / impacts. These are noted, where applicable, and include the following criteria:

- **Tree removal** – the cycling facility would result in the loss of a larger number of protected trees (e.g., garry oaks) and/or vegetation due to trenching and construction.
- **Private property acquisition** – the additional ROW required for the cycling facility would result in the District having to acquire private property.
- **Complex slope / topography** – the slope and topographical conditions would present higher design and engineering costs to implement the cycling facility.
- **Utility pole relocation** – the cycling facility would result in the relocation of utility pole(s) along most of the corridor.

Table 5 below indicate the location of each priority cycling facility along with the recommended facility types. This is also illustrated in **Figure 6**. A detailed description of each project is provided in the following sections.

Table 5. Technical Summary of Cycling Priority Projects

Project Location / Description		Recommended Facility Type(s)
A	Cedar Hill Cross Road Multi-use Trail (4.2b)	Multi-use Pathway
B	Cadboro Bay Road Commuter Route (4.3a)	Protected bike lanes (uni-directional)
C	Henderson Road/Foul Bay Road Commuter Route (4.3b)	Protected bike lanes (uni-directional)
D	Oak Bay Avenue Commuter Route (4.3c)	Protected bike lanes (bi-directional)
E	Lansdowne Road Commuter Route (4.3d)	Multi-use Pathway; Neighbourhood Bikeway (Level 1)
F	Bowker Avenue Commuter Route (4.3f)	Neighbourhood Bikeway (Level 2)
G	Central Oak Bay Neighbourhood Bikeway (4.4a)	Protected bike lanes (uni-directional); Neighbourhood Bikeway (Level 1); Neighbourhood Bikeway (Level 2)
H	McNeil Avenue – Beach Drive Neighbourhood Connection (4.4d)	Neighbourhood Bikeway (Level 1)
I	Oak Bay – Beach Drive Neighbourhood Connection (4.4e)	Neighbourhood Bikeway (Level 1)

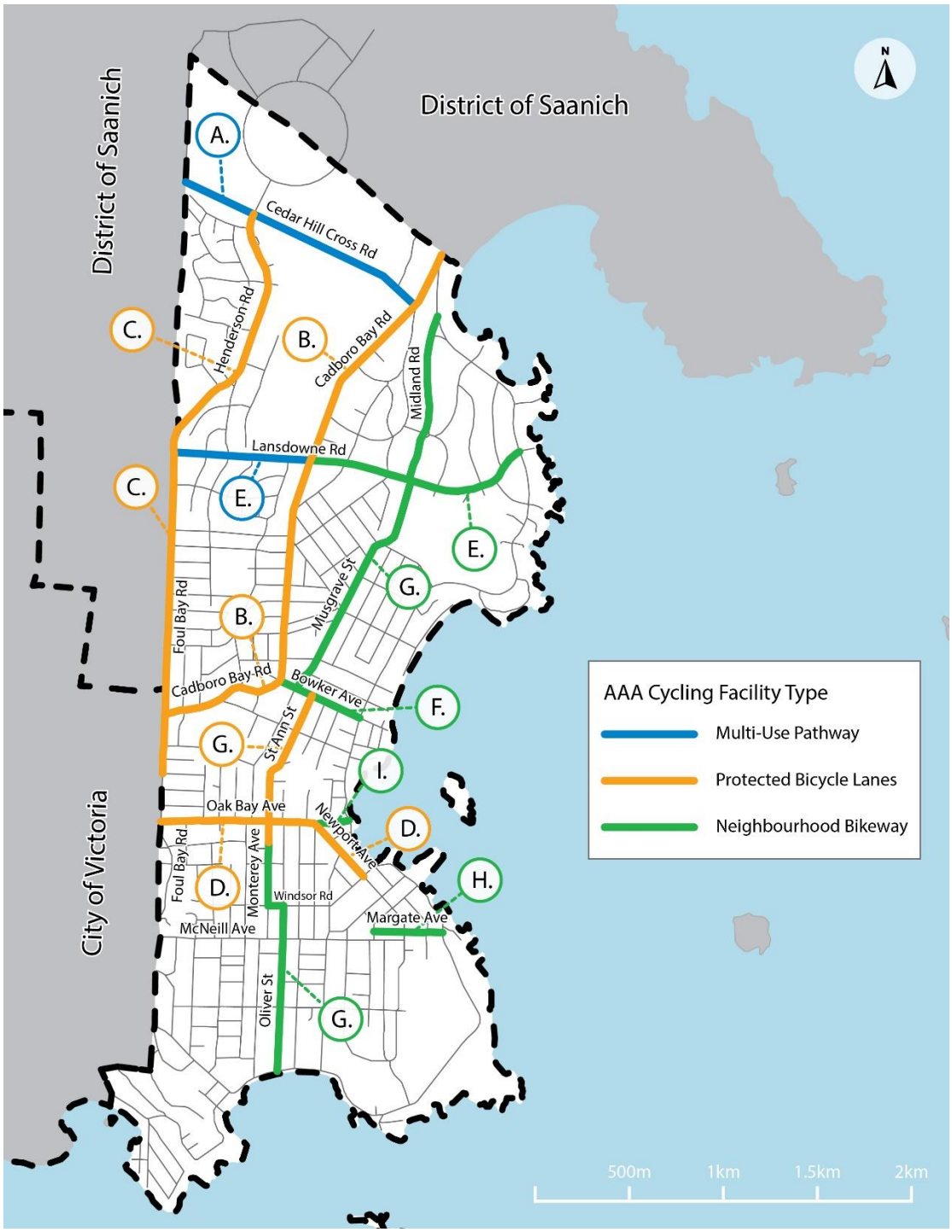


Figure 5. Priority Cycling Facilities

3.2.1 Cedar Hill Cross Road Multi-use Trail (4.2b)

Location: Cedar Hill Cross Road (Gordon Head Road to Cadboro Bay Road)

Length: 1,500 metres

Facility Type: Multi-use pathway

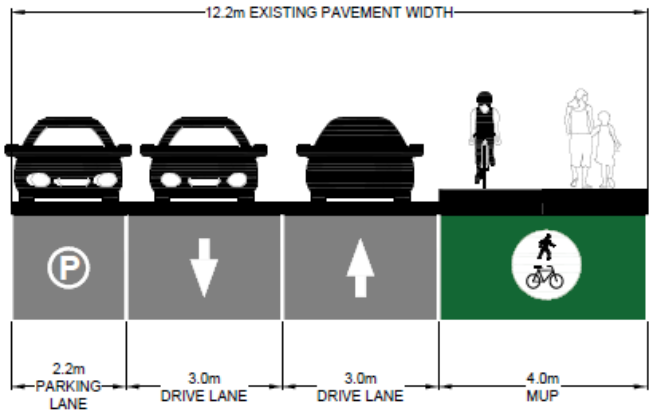
What is there Today?

The existing corridor (Gordon Head Road to University Drive) has sidewalks on both sides of the road along with a painted bicycle lane. The University Drive / Cadboro Bay Road section has on-street parking on both sides and a sidewalk on the south side. Cedar Hill Cross Road is classified as an arterial road. Cedar Hill Cross Road is a transit route west of University Drive only.

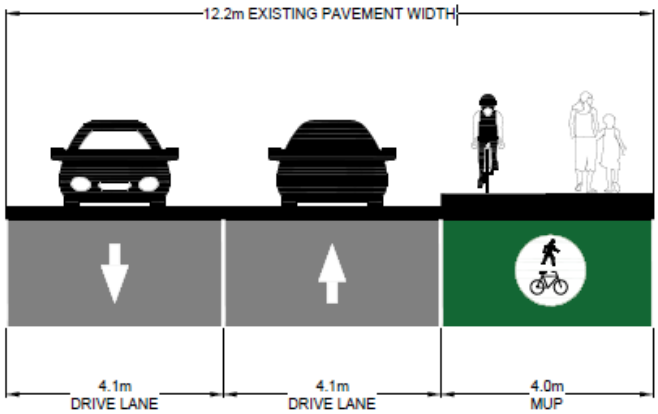
What is Recommended?

A multi-use pathway is recommended for the entire corridor, which would provide a safe, comfortable, and direct connection to people walking and cycling to Henderson Recreation Centre, the University of Victoria, and other destinations along the corridor. It would also connect to a future cycling facility within the District of Saanich, which is identified in Saanich's Active Transportation Plan.

There are two options for the University Drive / Cadboro Bay Road section, as shown below. **Option 2** is recommended as the drive lanes would remain at a sufficient width for the corridor. There would be a loss in on-street parking; however, most of the uses along the corridor already have off-street parking available.



Option 1



Option 2 (recommended)

3.2.2 Cadboro Bay Road Commuter Route (4.3a)

Location: Cadboro Bay Road (Saanich border to Fort Street / Foul Bay Road (Victoria border))

Length: 3,515 metres

Facility Type: Protected bike lanes (uni-directional)

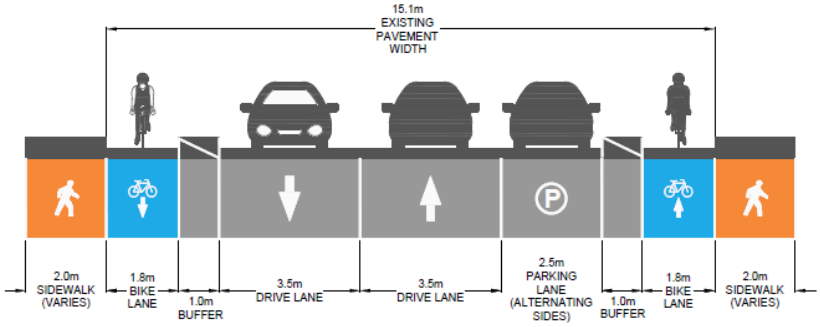
What is there Today?

There are painted (buffered) bike lanes on Cadboro Bay Road from Fort Street / Foul Bay Road to Bowker Avenue. Protected bike lanes are also available on the City of Victoria side just west of the Foul Bay / Fort Street intersection. Beyond the Fort Street / Foul Bay Road to Bowker Avenue section, there are no cycling facilities for the entirety of the corridor. As an arterial road, the corridor sees approximately 6,500 vehicles per day. It is also a transit corridor with the route 11.

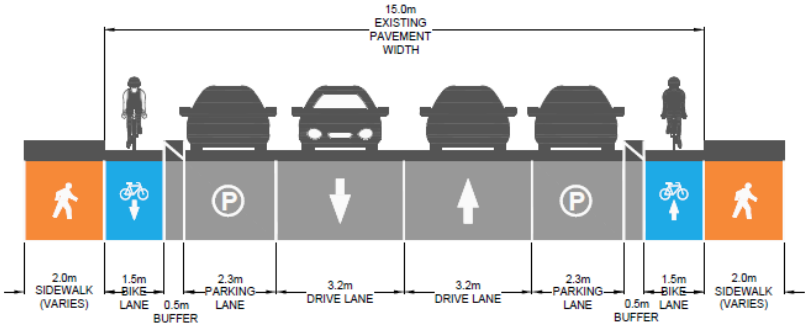
What is Recommended?

Uni-directional protected bike lanes (i.e., both sides of the road) are recommended for the entire corridor. The cycling facilities can fit within exiting road width and therefore additional right-of-way would not be required. However, the provision of cycling facilities would result in the loss of on-street parking at various sections of the corridor including from Bowker Avenue to Neil Street.

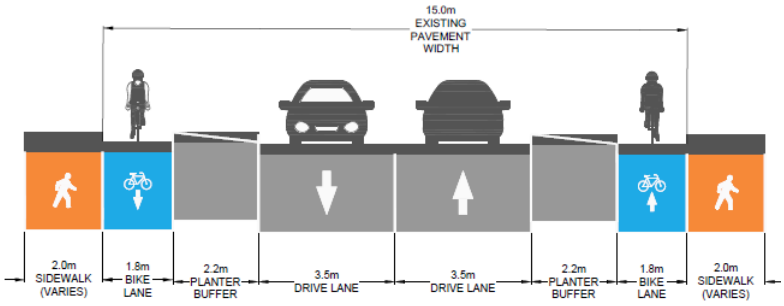
There are three options for the Neil Street to Lansdowne Road section, as shown below. **Option 1** is recommended as it would retain on-street parking on one side of the street. This would narrow the drive lanes to 3.5m, which is sufficient for transit vehicles and larger trucks. The larger buffer for the cycling facilities shown in option 3 could allow for various barrier types including planter boxes.



Option 1 (recommended)

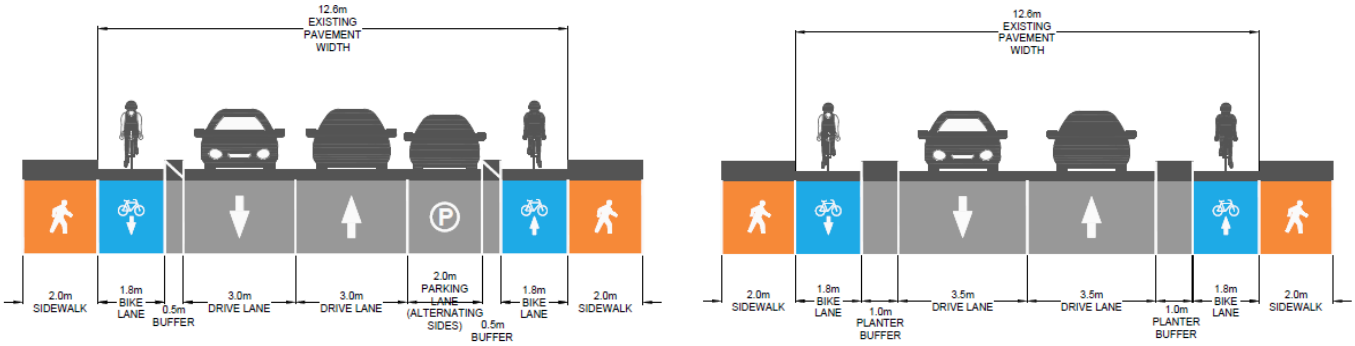


Option 2



Option 3

There are also two options for the Lansdowne Road to Cardigan Road section, as shown below. **Option 2** is recommended as the removal of on-street parking on one side of the street would allow for larger buffer between the drive lanes and the cycling facilities.



Option 1 on the left vs option 2 (recommended) on the right

3.2.3 Henderson Road/Foul Bay Road Commuter Route (4.3b)

Location: Henderson Road (Cedar Hill Cross Road to Foul Bay Road); Foul Bay Road (3463 Henderson Road to McNeill Street)

Length: 5,530 metres

Facility Type: Uni-directional protected bike lanes

What is there Today?

This corridor has existing cycling facilities for some sections. Painted bike lanes are available on Henderson Road from Cedar Hill Cross Road to Foul Bay Road; however, the bike lanes are only "part-time" in nature as vehicles are permitted to park in them at certain times of the day. The painted bike lanes continue along Foul Bay Road and terminate at Fort Street. Most of the corridor is classified an arterial road, resulting in higher volumes of motor vehicle traffic and operating speeds. *Note, the District of Saanich has jurisdictional responsibility for the west side of Foul Bay Road south of Lansdowne Road.*

What is Recommended?

Uni-directional protected bike lanes are recommended for this corridor and they fit for most sections within the existing pavement width. The one exception is the section on Foul Bay Road between University Woods and 3463 Henderson Road. For this section, the District would need to widen the pavement, which would result in the relocation of

some utility poles and smaller street trees. As indicated above, any future improvements to Foul Bay Road south of Lansdowne Road will require coordination with the District of Saanich.

There are also some sections where an AAA design is not feasible including:

- Leighton Road to Oak Bay Avenue
- Oak Bay Avenue to Granite Street
- Granite Street to McNeill Avenue

Additional ROW is required for the Leighton Road / Oak Bay Avenue section, which would result in the narrowing of the existing sidewalk and loss of on-street parking spaces. The Oak Bay Avenue to Granite Street section is not wide enough for protected bike lanes; however, painted bike lanes would fit. Lastly, the Granite Street to McNeill Avenue section is even more constrained; additional ROW would be required to fit a protected cycling facility, which would result in tree loss, sidewalk removal (west side), and relocation of utility poles.

3.2.4 Oak Bay Avenue Commuter Route (4.3c)

Location: Oak Bay Avenue (Foul Bay Road to Newport Avenue); Newport Avenue (St. David Street to Windsor Road)

Length: 1,425 metres

Facility Type: Bi-directional bike lanes

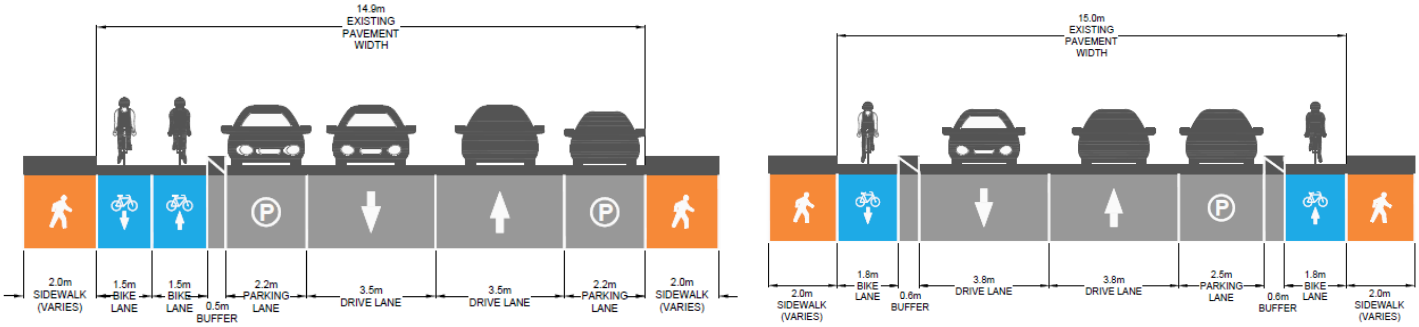
What is there Today?

There are no cycling facilities along this corridor. Oak Bay Avenue / Newport Avenue are classified as 'special roads' and collector roads, respectively, with approximately 5,700 vehicles per day. While there are wide sidewalks and crossings in Oak Bay village, the lack of cycling facilities make this corridor not comfortable—or safe—for most users.

What is Recommended?

There are two options for this corridor. Option 1 includes bi-directional bike lanes on one side of the street. This would retain on-street parking on both sides of the street along Oak Bay Avenue. The bi-directional facilities would continue on Newport Avenue but would result in the loss of on-street parking on one side.

Option 2 includes uni-directional bike lanes, which would result in the loss of on-street parking on one side of Oak Bay Avenue and both sides of Newport Avenue. **Option 1** is recommended due to the commercial activity in the village and the highly sought after on-street parking. While option 1 is recommended, the District should explore both options in more detail through the Oak Bay Village planning exercise that will be undertaken in the near future.



Option 1 (recommended) on the left vs option 2 on the right

3.2.5 Lansdowne Road Commuter Route (4.3d)

Location: Lansdowne Road (Foul Bay Road to Beach Drive)

Length: 2,155 metres

Facility Type: Multi-use pathway and neighbourhood bikeway (level 1)

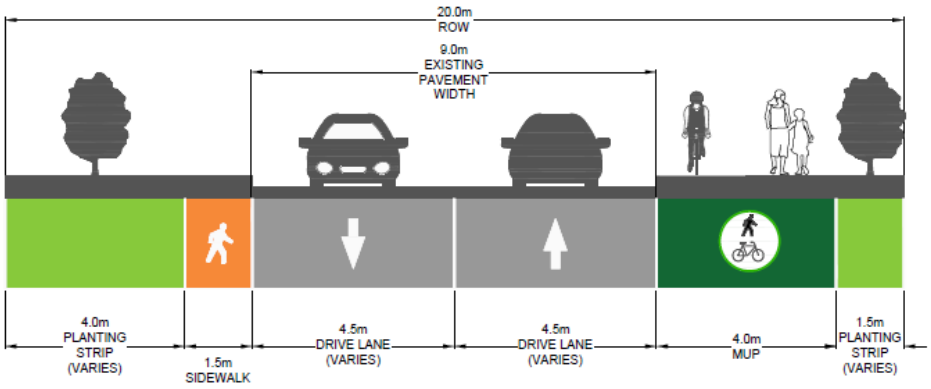
What is there Today?

There are no cycling facilities along this corridor. As a collector road with approximately 7,100 vehicles per day, Lansdowne Road is a busy vehicle corridor from Foul Bay Road to Cadboro Bay Road.

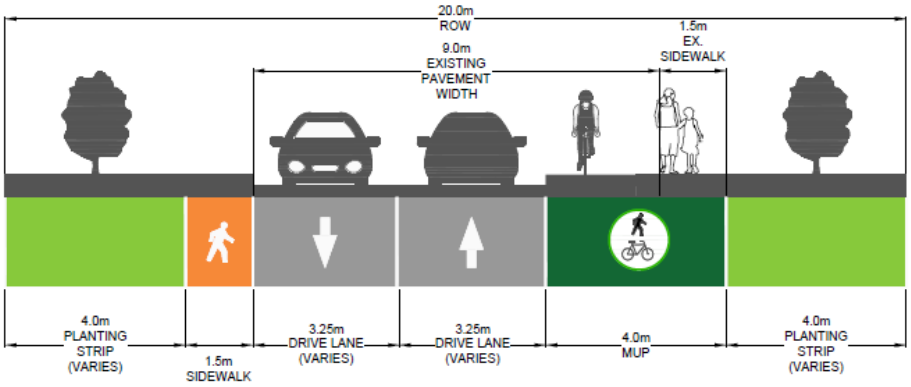
What is Recommended?

A multi-use pathway, which would act as an extension of the MUP on the Saanich side, is the recommended facility. Due to the constraints within the existing pavement, there are two options. Option 1 maintains the drive lanes at 4.5m, but requires additional ROW, which would result in significant tree removal, the relocation of utility poles, and removal of retaining walls. Option 2 includes narrowing the drive lanes to 3.25m to fit a 4.0m multi-use pathway, which would utilize the existing 1.5m sidewalk. **Option 2** is

recommended as it would provide an important facility along this corridor and a connection to the multi-use pathway on the Saanich side.



Option 1



Option 2 (recommended)

A neighbourhood bikeway (level 1) is recommended for the Cadboro Road / Beach Drive section, which would include pavement markings, signage, and a 30 km/h posted speed limit.

3.2.6 Bowker Avenue Commuter Route (4.3f)

Location: Bowker Avenue (Cadboro Bay Road to Beach Drive)

Length: 520 metres

Facility Type: Neighbourhood bikeway (Level 2)

What is there Today?

There are no cycling facilities along this corridor. As a collector road in a mostly residential area, Bowker Avenue serves as one of the primary routes in and out of the neighbourhood.

What is Recommended?

A neighbourhood bikeway (level 2) is recommended. This would retain parking on both sides of the road. Pavement markings, signage, a 30 km/h posted speed limit, and traffic calming devices would be required to make the corridor suitable as a AAA facility.

3.2.7 Central Oak Bay Neighbourhood Bikeway (4.4a)

Location: Midland Drive (Beach Drive to Dorset Road & Dorset Road to Lansdowne Road); Musgrave Street (Dorset Road to Dalhousie Street); Hampshire Road (Dalhousie Street to Bowker Avenue); St Ann Street (Bowker Avenue to Cranmore Road); St Ann Street / Monterey Avenue (Cranmore Road to Hampshire Terrace); Monterey Avenue (Hampshire Terrace to Windsor Road); Oliver Street (Windsor Road to Beach Drive)

Length: 4,820 metres

Facility Type: Neighbourhood bikeway (Level 1 and Level 2) and uni-directional bike lanes

What is there Today?

This corridor includes a mix of collector and local roads. There are no formal cycling facilities for most of the corridor except for St. Ann Street where an informal neighbourhood bikeway is available with limited signage and faded pavement markings.

What is Recommended?

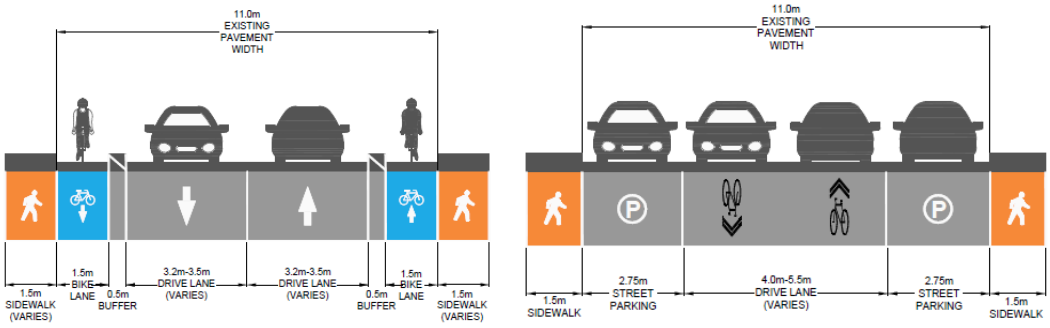
Neighbourhood bikeways are recommended for most of the corridor. In most cases, a level 1 neighbourhood bikeway is sufficient, which would include pavement markings, signage, and a 30 km/h posted speed limit. However, for some segments, a level 2 neighbourhood bikeway is required to meet the definition of being suitable for ages and abilities.

There are two sections of the corridor where two options are available to the District:

- Musgrave Street / Hampshire Road (Estevan Avenue to Bowker Avenue)
- St. Ann Street / Monterey Avenue (Bowker Avenue to Hampshire Terrace)

For the Musgrave Street / Hampshire Road (Estevan Avenue to Bowker Avenue) section, option 1 is to provide uni-directional protected bike lanes (both sides). This would provide a safer cycling facility for children attending Willow Elementary School but result in the loss of on-street parking spaces including those spaces used for school drop-off and pick-up. Option 2 is to provide a level 2 neighbourhood bikeway, which would include pavement markings, signage, a 30 km/h posted speed limit, and traffic calming devices. **Option 2** is recommended as the loss of on-street parking in this location may impact pick-up and drop-off activity at Willow Elementary School.

Per the BC Active Transportation Design Guide, for a neighbourhood bikeway to be suitable for all ages and abilities, the desired average daily traffic should 500 motor vehicles per day or less with the maximum average daily traffic is 1,000 motor vehicles per day. While Musgrave Street is signed at 30 km/h along the school frontage, there may be over 1,000 vehicles per day due to the busier nature of this corridor. As such, the District may need to consider traffic calming and/or traffic diversion treatments if it pursues a neighbourhood bikeway (i.e., option 2) for this section of the corridor.



Option 1 on the left vs. option two (recommended) on the right

For the St. Ann Street / Monterey Avenue (Bowker Avenue to Hampshire Terrace) section, the recommendation is to provide uni-directional protected bike lanes (both sides), which would result in the loss of on-street parking spaces. The corridor functions like a collector road and the provision of protected bike lanes would provide a safer and more comfortable experience for all ages and abilities.

3.2.8 McNeill Avenue-Beach Drive Neighbourhood Bikeway (4.4d)

Location: Margate Avenue Drive (St. Louis Street to Beach Drive)

Length: 410 metres

Facility Type: Neighbourhood bikeway (level 1)

What is there Today?

Margate Avenue is a local residential road. On-street parking is only permitted on one side of the road for sections of this corridor. There are no cycling facilities today.

What is Recommended?

A neighbourhood bikeway (level 1) is recommended. This would retain on-street parking and require pavement markings, signage, a 30 km/h posted speed limit.

3.2.9 Oak Bay Ave-Beach Drive Neighbourhood Bikeway (4.4e)

Location: Oak Bay Avenue (Prospect Place to Beach Drive)

Length: 140 metres

Facility Type: Neighbourhood bikeway (level 1)

What is there Today?

This section of Oak Bay Avenue is a local residential dead-end road, which means that vehicle volumes are low and vehicles are not travelling at high speeds. There are no sidewalks or cycling facilities; people walking, rolling, and cycling share the road with cars.

What is Recommended?

A neighbourhood bikeway (level 1) is recommended with bicycle signage indicating that it is part of the overall cycling network. Further, bicycle channels and stroller push ramps are recommended for the existing stairway, which would make the staircase more accessible for strollers and dismounted bicycle users.



Example of a bicycle channel from the BCATDG

3.3 Cycling Facility Design Guidance

There are four cycling facilities recommended for the District's cycling network. A description of each one is provided below. **Table 6** summarizes the key design parameters for each cycling facility with more detailed design guidance provided in Chapter D of the BC Active Transportation Design Guide.



Multi-use Pathway

Multi-use pathways (MUPs) are typically off-street pathways that are separated from motor vehicle traffic and can be used by any active transportation user. MUPs typically accommodate bi-directional travel and are commonly shared spaces.



Protected Bike Lane (Uni-directional)

A designated lane for people cycling and other active transportation users that is physically separated from motor vehicle traffic.



Protected Bike Lane (Bi-directional)

A bi-directional protected facility is when both bike lanes are on the same side of the street.



Neighbourhood Bikeway

On local roads with low motor vehicle volumes and low speeds, bicycle boulevards aim to share the roadway safely between motor vehicles and people cycling.

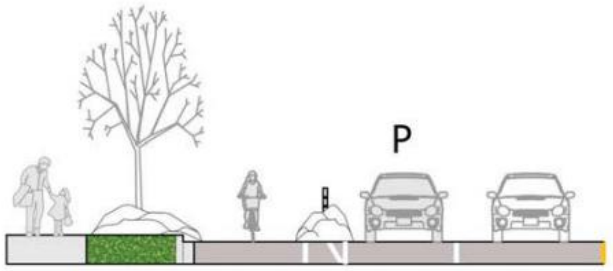
Table 6. Cycling Facility Design Guidance

Facility Type	Design Details
Multi-use Pathway	**Pathway Width** – 4.0m (desirable), 3.0m (constrained) **Street Buffer Zone Width** – 2.0m (desirable), 0.6m (constrained) **Surface Material** – Asphalt (where possible), which provides a smooth continuous surface that is accessible for all user groups. For some contexts, other materials could be considered such as compact aggregate or gravel, for example. **Pavement Marking** – There are several pavement marking options for a multi-use pathway. A simple pathway marking is appropriate, which can supplement signage and enhance awareness of the shared-use function of the pathway. They should be used at pathway entrances and on the far side of crossings. **Signage** – Shared pathway sign (MUTCDC RB-93), which indicates that both people walking and cycling are allowed to use this facility. In some cases, the yield to pedestrian sign (RB-39) can be used, which indicates that people cycling are required to cross or share a facility used by a pedestrian and must yield to pedestrians.
Protected Bike Lanes	**Width** – 2.0-4.0m (depends on whether it is uni or bi-directional) **Street Buffer Zone** – 0.9m (desirable), 0.3-0.6m (constrained) **Separation Treatment** – Flexible delineator posts, precast concrete curbs, extruded curbs, modular plastic curbs. **Signage –** Reserved bicycle lane sign (MUTCDC RB-90, RB-91) should be placed along protected bike lanes. The reserved bicycle lane ends sign (MUTCDC RB-92) should be placed where bike lanes end.
Neighbourhood Bikeway	**Width** – 5.5m-6.0m **Signage & Pavement Marking** – The bicycle route sign (MUTCDC IB-23) should be used. Shared use lane pavement markings should be used to indicate the desired positioning of people cycling within the roadway. Within the roadways that a neighbourhood bikeway is established there should not be a painted centre line. All neighbourhood bikeways should have a posted speed limit of 30 km/h. A level 1 neighbourhood bikeway includes signage and pavement markings. A level 2 neighbourhood bikeway includes traffic calming whereas level 3 includes traffic diversion to minimize vehicles and improve comfort for all ages and abilities.

3.4 Maintenance of Cycling Facilities

As with all transportation infrastructure, cycling facilities need to be properly maintained over time to ensure that they are functional and useable throughout the year. This is especially critical in the winter months as snow can be a major impediment to active transportation.

Chapter I.3 of the BC Active Transportation Design Guide[8] provides detailed guidance on how active transportation facilities can be maintained in all seasons. Some of the considerations for the District include:



Recommended design for snow storage in a protected bike facility
(Source: BC Active Transportation Design Guide)

- **Snow clearing prioritization** – this refers to the process and overall priority of snow clearing the road network during the winter season. Even though snowfall is less common in the capital region, the District will need to consider snow clearing treatment for its highest demand cycling facilities.
- **Snow storage** – when designing its protected bike lanes, the District will need to consider snow storage. Storage locations could include the furnishing zone between the cycling facility and the sidewalk and/or within the buffer directly as long as there is minimal encroachment into the cycling facility.
- **Bicycle Route de-icing** – there are several de-icing materials utilized in different communities including road salt, pre-wetted salt, sand and gravel, beet juice additive, and cheese brine additive, among others. The pros and cons with each are provided in detail within chapter I.3 of the BC Active Transportation Design Guide.
- **Snow clearing vehicles** – there are different vehicles and equipment available. Most importantly snow clearing vehicles for the active transportation network need to be small and narrow enough to physically enter the protected bike lanes and/or multi-use pathways to clear snow.

[8] Ministry of Transportation and Infrastructure. (2019). BC Active Transportation Design Guide, Chapter I.3: Post Implementation (Maintenance). Available online at: https://www2.gov.bc.ca/assets/gov/driving-and-transportation/funding-engagement-permits/grants-funding/cycling-infrastructure-funding/active-transportation-guide-low-res/2019-06-14_bcatdg_section_i_rfs.pdf

In addition to snow clearance, the District will need to ensure there is a scheduled inspection and maintenance program in place so there is regular maintenance of its facilities. This is important for cycling facilities to ensure that broken glass, leaves, and other debris are removed as quickly as possible to minimize hazards for people cycling.



Example of snow clearing in a protected bike lane. Image credit: Seattle Department of Transportation

4.0 SUPPORTING POLICIES & PROGRAMS

In addition to the provision of appropriate infrastructure, a high-quality active transportation network must be supported by policies and programs to help facilitate culture change and community uptake of utilizing active transportation facilities. This also includes changes to the network to improve accessibility and the overall user experience. This section provides recommendations on three specific policy changes that the District should consider:

1. End-point facilities to support cycling to/from work
2. Amendments to the Parking Facilities bylaw to include bicycle parking requirements
3. Creating a policy to remove and no longer allow maze gates to improve accessibility in the active transportation network

4.1 Modernize End-Point Facilities on District-owned Properties

The District has the opportunity to provide upgraded end-point facilities for bicycles at District-owned properties. End-point facilities[9] refer to short-term and long-term bicycle parking, showers, change rooms, and repair facilities that accommodate active modes of travel for everyday trip.

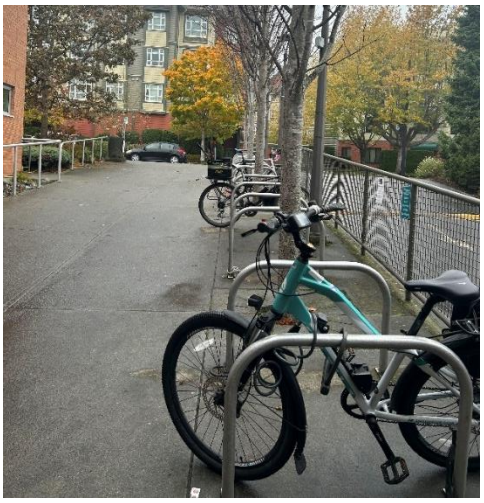
More specifically, the District should consider end-point facilities at three locations: (1) Oak Bay Recreation Centre, (2) Monterey Recreation Centre and (3) the District of Oak Bay Municipal Hall.[10] These three locations are accessed by both staff and members of the public on a daily basis.

All three locations currently have some form of end point facilities; however, it is recommended that these facilities be upgraded to meet BCATDG standards. Currently, the Oak Bay Recreation Centre has both uncovered and covered short-term bicycle parking facilities, as shown in the images below. The uncovered bicycle parking facilities provided are an inverted U type (also called loop or staple rack), whereas the covered facilities provided are a coat hanger type rack.

[9] Government of BC. (2019). BC Active Transportation Design Guide. Chapter H.2: End-point Facilities. Available online at: https://www2.gov.bc.ca/assets/gov/driving-and-transportation/funding-engagement-permits/grants-funding/cycling-infrastructure-funding/active-transportation-guide-low-res/2019-06-14_bcatdg_section_h_rfs.pdf

[10] The inclusion of this recommendation is based on feedback from a District of Oak Bay Council meeting (July 17, 2023) Resolution #2023 – 368.









Existing short-term (covered) bicycle parking at Oak Bay Recreation Centre

Similarly, both uncovered and covered short-term bicycle parking is currently provided at Monterey Recreation Centre. The same coat hanger rack type is provided for both uncovered and covered facilities, as shown in the images below.



Existing short-term bicycle parking at Monterey Recreation Centre

The District of Oak Bay Municipal Hall provides uncovered short-term bicycle parking facilities at two different entrances of the building. The facilities provided are an inverted U rack type (also referred to as loop or staple rack types). See images below. There is also a 5-space bike rack outside of the lower level entrance to the building.



Existing short-term bicycle parking at Municipal Hall

The BCATDG standards identify that coat hanger type racks (such as the bicycle racks provided at Monterey Recreation Centre and in the covered bicycle parking at Oak Bay Recreation Centre) should be avoided due to performance concerns including but not limited to:

- The top bar limits the height of bicycles that can be accommodated.
- Thin coat hanger loops are less durable than the thicker posts on other rack types.

The BCATDG recommends two rack types, shown in the figure below. The uncovered bicycle parking at Oak Bay Recreation Centre and the Municipal Hall meets the suggested inverted U design type.

RACK TYPE	NOTES
Inverted U (Also called loop or staple rack) 	•Can support two bicycles per rack. •Can be installed alone or in a series on rails. •Many variations are available. •Can be efficiently located within the Furnishing Zone of a public right-of-way.
Post and Ring 	•Can support two bicycles per rack. •Products exist to retrofit certain parking metres to create custom post and ring racks. •Can be efficiently located within the Furnishing Zone of a public right-of-way.

Bicycle racks for all applications from the BCATDG

In addition to end-point facilities for standard-sized bicycles, all locations should also provide short-term non-standard (oversized) bicycle parking with access to electrical outlets to be used for electric and/or oversized bicycles. Currently, none of the three focus locations provide oversized bicycle parking or access to electrical outlets. The images above illustrates an example of the type of rack that could be considered for oversized bicycle parking and how paint can be used to better delineate these spaces.



Example of short-term (non-standard) oversized bicycle parking in Dublin, which provides extra space for larger bikes and are delineated with paint to make it easier for users to find. Image credit: Dublin City Council

To align with BCATDG standards, it is recommended that short-term non-standard bicycle parking be installed in covered shelters or off-street areas that are located at grade or accessible via a ramp so that cyclists do not need to lift their bicycles. Non-standard bicycle parking should be marked with signage and/or pavement markings to differentiate from standard bicycle parking. The image below outlines design guidelines as per the BCATDG.

RACK TYPE		NOTES
Half-Height Stand	 Source: Kevin Hickman	•Low enough that it will not support a standard bicycle, helping to reserve it for non-standard bicycles. •No lower than half height (40 centimetres tall), as some users may have difficulty bending down to access the rack. •Can be a tripping hazard; therefore, racks should be clearly marked with signage and/or pavement markings and installed in groups, preferably in a well-lit and sheltered location.
Ground Fixings	  Source (both images): VelopA	•Parking bracket that can be flipped up by foot up to provide a secure place to attach a lock. •When not in use, the bracket retracts into the ground, so it is not a tripping hazard. •May not be accessible for people with limited leg or foot control or people with difficulties bending down.
Copenhagenize Bar	 Source: Mikael Colville-Anderson	•An emerging technology in Denmark; still in design phase, not in widespread use. •Consists of a movable bar that flips down to secure the bicycle; moving parts would require maintenance. •Could feature a built-in locking mechanism active through a swipe card for subscribers.

Bicycle racks for non-standard bicycles from the BCATDG

4.2 Update the Parking Facilities Bylaw

The District of Oak Bay's Parking Facilities Bylaw does not contain any bicycle parking requirements. There is one reference of bicycle parking within the bylaw, with respect to electric bikes:

- Section A.1 (e) - Where a building contains a secondary suite it must provide an outdoor, labelled energized outlet capable of providing at least Level 1 (110 v) charging for an electric vehicle, scooter or bike.

Therefore, the District should review and update the Parking Facilities Bylaw to include bicycle parking requirements.[11] The specific rates for number and type of spaces (short-term or long-term) for land uses should be determined through a more detailed, comprehensive review of the bylaw. The review should identify the following topics:

- The short-term and long-term bicycle parking space ratios for all land uses within the bylaw.
- Design details for bicycle parking spaces including dimensions for bike stall sizes, guidelines for bike parking rooms, types of shelter required, and locational standards for short- and long-term spaces.
- Non-standard (oversized) bike parking requirements and associated design details. This typically includes the percentage of spaces that should be designed as oversized, the stall dimensions, the type of racks to use, and the allocation of how many spaces should have access to electrified outlets.

[11] The inclusion of this recommendation is based on feedback from a District of Oak Bay Council meeting (July 17, 2023) Resolution #2023 – 368.

4.3 Remove Maze Gates

The District currently has maze gates on cut-through pathways and multi-use pathways in three locations across the community, as follows:

- Henderson Road & Kings Road
- Hampshire Road at Bowker Creek
- Brighton (trail) at Foul Bay Road

A maze gate is a type of access restriction that can be installed on a pathway to [a] prevent motor vehicles from accessing them and [b] force a person cycling to slow down before crossing the intersecting road. In the Oak Bay context, maze gates were installed at these locations to prevent people cycling from travelling at high speeds onto the road.



Example of a maze gate at Kings Road and Haultain Avenue

While maze gates have served a purpose in achieving the two loose objectives noted above, best practices and current trends have indicated that they may do more harm than good. Chapter G of the BC Active Transportation Design Guide (Intersections + Crossings) indicates that access restriction devices such as maze gates and bollards can make cut-through pathways more difficult for people cycling to use, especially for a wide range of types of bicycles (e.g., cargo bikes).[12] The guide notes that to improve accessibility and ensure that pathways are for people of all ages and abilities, maze gates are not recommended. They should only remain in place if there is a demonstrated history of motor vehicle encroachment and/or collision history.

Based on best practices and general feedback from active transportation users, different communities in BC have started or are considering removing maze gates from their pathways. For example, in 2023, the City of Coquitlam removed maze gates from their design guidelines and removed 17 out of 150 maze gates as of July 2023. The City

[12] Government of BC. (2019). BC Active Transportation Design Guide. Chapter G.6: Additional Crossings + Conflict Areas. Available online at: https://www2.gov.bc.ca/assets/gov/driving-and-transportation/funding-engagement-permits/grants-funding/cycling-infrastructure-funding/active-transportation-guide-low-res/2019-06-14_bcatdg_section_g_rfs.pdf

indicated that removing maze gates improves accessibility for all users as they can be challenging to navigate for those who use mobility aids, strollers, and bicycles.[13]

In summary, it is recommended that the District remove maze gates from the three locations noted above. The District could consider the following treatments to replace the maze gates:

- **Signage** – to encourage people cycling to slow down in advance of a street crossing, signage such as "cyclists stop and dismount (B-R-101-2)" could be considered.
- **Bed sted gates** – bed sted gates could be installed as a measure to slow to people cycling and prevent them from entering a busy road. A bed sted gate would be most applicable to the Brighton (trail) at Foul Bay Road location where a gate could be installed on the down slope in advance of the pedestrian crossing.

Lastly, the Capital Regional District (CRD) is considering removal of bollards at regional trail crossings. It is recommended that the District coordinate and follow-up with the CRD to determine if the bollard treatment replacement is suitable in Oak Bay for the three maze gate locations noted above.



"Cyclists stop and dismount" sign



Example of a bed sted gate
(Image credit: City of Coquitlam)

[13] Shepherd, J. (2023). De-mazed: Coquitlam removes maze gates from trails. *Tri-Cities Dispatch*. Available online at: https://tricitiesdispatch.com/cycling-gates-coquitlam/

5.0 IMPLEMENTATION STRATEGY

The implementation strategy includes cost estimates for the nine cycling facility projects. It also includes recommendations around project phasing based on prioritization criteria and outlines various funding sources that are available to help pay for the infrastructure.

5.1 Cycling Facility Costing

Table 7 below includes an order of magnitude (Class D) cost estimate for each of the cycling facilities outlined in **Section 3.2**. Note, the cost estimates are based on concept level information using unit rates for linear works and intersection improvements. Cost estimates include 20% engineering, 15% for inflation, and a 10% contingency. Costs do not include property and other significant impacts. The actual costs for implementation for each project could vary and will be confirmed through additional engagement and the detailed design stage. The total cost for the nine cycling facility projects is estimated at **$8,106,800**.

Table 7. Cost Estimates for the Cycling Facility Projects

Project Location		**Class D Cost Estimate (2024 $)**
A	Cedar Hill Cross Road Multi-use Trail (4.2b)	$1,095,700
B	Cadboro Bay Road Commuter Route (4.3a)	$2,702,100
C	Henderson Road/Foul Bay Road Commuter Route (4.3b)	$2,254,100
D	Oak Bay Avenue Commuter Route (4.3c)	$647,600
E	Lansdowne Road Commuter Route (4.3d)	$850,000
F	Bowker Avenue Commuter Route (4.3f)	$36,900
G	Central Oak Bay Neighbourhood Bikeway (4.4a)	$499,400
H	McNeil Avenue – Beach Drive Neighbourhood Connection (4.4d)	$19,600
I	Oak Bay – Beach Drive Neighbourhood Connection (4.4e)	$1,200
Total		**$8,106,800**

5.2 Priority Projects

The estimated Class D cost for each cycling facility ranges significantly. But cost alone should be not the driving factor in determining which project should be pursued first. Rather, it is recommended that the District follow a more holistic approach when deciding which project to pursue based on a suite of prioritization criteria per **Table 8**.

Table 8. Project Prioritization Criteria

Criteria	Definition
Existing Facility	A facility already exists, which indicates that some cycling trips may already be occurring. However, there is an opportunity to upgrade the facility to a higher AAA standard, which would result in more cycling.
Inter-Municipal Project Coordination	A neighbouring municipality has an existing or planned cycling facility that connects to Oak Bay's network, which provides an opportunity to enhance regional connectivity.
Proximity to School	The recommended active transportation facility connects to elementary and/or high schools, providing safe travel options for children and their parents.
Connection to Trip Generator / Key Destination	Connection to a trip generator and/or key destination can facilitate more active transportation trips. Trip generators include parks, recreation centres, libraries, a commercial village, multi-family residential buildings, post-secondary institutions.
Capital + Maintenance Cost	The anticipated capital and maintenance costs based on the Class D cost estimate. Higher cost projects may be harder to construct due to funding constraints, construction feasibility, and operations.
Safety & Comfort	A critical factor influencing the use of active modes of transportation is motor vehicle speed and volume. Busier roads in Oak Bay including arterial and collectors may not be as comfortable and safe for people cycling due to their higher speeds and volumes. These roads often provide the most direct connection to a key destination. Therefore, cycling facilities on the busier roads should be given higher priority over local / residential roads.
Underground Utility Complexity	This refers to a series of factors such as inter-municipal coordination, infrastructure complexity, the presence of asbestos cement pipe, undersized or damaged pipes, old infrastructure, tree-related issues (root infiltration), and alignment with Master Plans.

Each criteria had a scoring classification where “1” indicated low score and “5” indicated a high score. For example, for the criteria “Proximity to School”, a project scored “1” if no schools are found along the corridor and a “5” if the project connects to one or more schools along the corridor. The project prioritization criteria scoring rubric is available in **Appendix B**. Projects were classified as follows:

- **High** (22-30)
- **Moderate** (16 to 21)

Each project’s score is shown below with the four highest scoring projects shaded grey.

Table 9. Cycling Facility Project Prioritization

Project Location		Raw Score	Scoring Group Rating
A	Cedar Hill Cross Road Multi-use Trail (4.2b)	17	Moderate
B	Cadboro Bay Road Commuter Route (4.3a)	23	High
C	Henderson Road/Foul Bay Road Commuter Route (4.3b)	22	High
D	Oak Bay Avenue Commuter Route (4.3c)	18	Moderate
E	Lansdowne Road Commuter Route (4.3d)	20	Moderate
F	Bowker Avenue Commuter Route (4.3f)	20	Moderate
G	Central Oak Bay Neighbourhood Bikeway (4.4a)	17	Moderate
H	McNeil Avenue – Beach Drive Neighbourhood Connection (4.4d)	16	Moderate
I	Oak Bay – Beach Drive Neighbourhood Connection (4.4e)	16	Moderate

5.3 Project Phasing

Based on the results above, the highest scoring projects are as follows:

- Cadboro Bay Road Commuter Route (4.3a)
- Henderson Road/Foul Bay Road Commuter Route (4.3b)
- Lansdowne Road Commuter Route (4.3d)
- Bowker Avenue Commuter Route (4.3f)

Ultimately, the District will need to determine which project(s) to pursue first and in practice, funding availability and overall budget may be the determining factor. The purpose of this section is to answer two specific questions from Oak Bay Council and outline different options for how the District could move forward with project implementation. Specifically, Council asked for responses to the following questions:

1. Based on a $1 million per year budget, how many years would it take to complete the priority projects?
2. If the District wishes to accelerate the ATS and complete all the priority projects in 5 years, what would be the required funding each year?

Based on a $1 million per year budget, it would take 8 years to complete all nine priority cycling facility projects. Further, it would cost $8.1 million to complete all priority projects within 5 years at $1.6M per year.

Based on the class D cost estimates presented in **Table 7**, and assuming no additional external funding is secured, the District would be able to design and build several projects including those with a “high” and “moderate” score. The District could approach project phasing in at least four ways, as follows:

- **Option 1** – **pick at the low-hanging fruit first**. This means undertaking the low-cost projects that are less complex, have more simple designs, and may not require as much public consultation. These would include the projects that have a neighbourhood bikeway design for most or all of the corridor, including:
  - McNeil Avenue – Beach Drive Neighbourhood Connection (4.4d) – $19,600
  - Oak Bay – Beach Drive Neighbourhood Connection (4.4e) – $1,200
  - Bowker Avenue Commuter Route (4.3f) – $36,900
  - Central Oak Bay Neighbourhood Bikeway (4.4a) – $499,400

The cost estimate for these projects is approximately $557,000. They could all be achieved within one year with a $1,000,000 budget, with funding still available for other projects. This would result in about $4.4M available for years 2-5, which could be allocated to other cycling facility projects based on Council priority. It would then take 3-4 years to complete the remaining projects.

- **Option 2a – prioritize based on the scoring results with Cadboro Bay Road as the big-ticket item**. Another option is for Council to prioritize the projects based on the scoring results in **Table 9**. By selecting this option, the District would be able to pay for several projects including:
    - Cedar Hill Cross Road Multi-use Trail (4.2b) – $1,095,700
    - Cadboro Bay Road Commuter Route (4.3a) – $2,702,100
    - Oak Bay Avenue Commuter Route (4.3c) – $647,600
    - Bowker Avenue Commuter Route (4.3f) – $36,900
    - Central Oak Bay Neighbourhood Bikeway (4.4a) – $499,400

  The total price tag—based on a class D cost estimate—for the above projects is just under $5M. And while the costs may be higher once a more detailed cost estimate has been prepared following detail design, a budget allocation of $1M per year indicates that the District could build several projects and work toward a more complete cycling network. Assuming the District continued to allocate $1M per year for cycling facilities following the 5-year period, then it would take 3-4 years to complete the remaining projects.

- **Option 2b – prioritize based on the scoring results with Henderson Road/Foul Bay Road as the big-ticket item**. This option is identical to option 2a except for one critical difference: the Cadboro Bay Road Commuter Route project (4.3a) would be substituted for the Henderson Road/Foul Bay Road Commuter Route project (4.3b). This would give the District the option to pursue its other highest scored—and most expensive—project first. Note: any future improvements to Foul Bay Road south of Lansdowne Road will require coordination with the District of Saanich. The list of projects would include:
    - Cedar Hill Cross Road Multi-use Trail (4.2b) – $1,095,700
    - Henderson Road/Foul Bay Road Commuter Route (4.3b) – $2,254,100
    - Oak Bay Avenue Commuter Route (4.3c) – $647,600
    - Bowker Avenue Commuter Route (4.3f) – $36,900
    - Central Oak Bay Neighbourhood Bikeway (4.4a) – $499,400

- **Option 3 – build the top two scoring projects first**. Another option is for Council to design and build the top scoring projects first, including:
    - Cadboro Bay Road Commuter Route (4.3a) – $2,702,100
    - Henderson Road/Foul Bay Road Commuter Route (4.3b) – $2,254,100

  The class D cost estimate for both projects is just under $5M. While both could be achieved within 5 years with a budget allocation of $1M per year, both projects may require a longer timeline due to more complex detailed design and public consultation. Assuming funding was allocated for both projects and that they were completed within five years, then it would take 3-4 years to complete the remaining projects.

Council will ultimately need to determine which option(s) it wishes to pursue. However, based on the technical analysis and project evaluation that was completed as part of this review, WATT recommends option 2a, which would allow the District to design and build a mix of projects with a high and moderate score and work toward a more complete cycling network within 5 years.

Table 10. Summary of Project Phasing Options

Project Phasing Option		Recommended?
1	Pick at the low-hanging fruit first	No
2a	Prioritize based on the scoring results with Cadboro Bay Road as the big-ticket item	Yes
2b	Prioritize based on the scoring results with Henderson Road/Foul Bay Road as the big-ticket item	No
3	Build the top two scoring projects first	No

The following sections outline a strategy for project delivery and the funding opportunities that are available to the District for its cycling network including both internal and external sources.

5.4 Project Delivery

The overall delivery of each project will take significant time and effort—from functional and detailed design, applying for grant funding, and overseeing the construction of the cycling facilities. To manage project delivery as efficiently as possible, the District should consider two specific strategies:

1. The District may want to consider hiring additional staff such as an active transportation coordinator, who can assist with the following:
    a. Coordinate overall improvements to both the pedestrian and cycling networks
    b. Coordinate the design process for all recommended pedestrian and cycling facilities
    c. Apply for active transportation grant funding
    d. Oversee bike parking improvements and bylaw updates
    e. Oversee education and program efforts to promote active transportation
    f. Oversee monitoring and deliver progress updates to Council
    g. Coordinate active transportation planning and improvements with neighbouring jurisdictions
    h. Project manage active transportation improvements

2. To maximize opportunities to apply for grants including the BC Active Transportation Infrastructure Grant Program (see Section 5.5.3), the District should consider undertaking detailed design for all the priority cycling facilities within two years following the adoption of the strategy. This is something that could be overseen by a dedicated active transportation coordinator. Completing the design work for all projects upfront would not only improve opportunities to obtain grant funding but could also expedite overall implementation.

5.5 Funding Sources

5.5.1 Private Development

In 2023, the provincial government introduced the Housing Supply Act, which included specific housing targets for several communities around the province including Oak Bay. As a result, the District now has a target order for a minimum of 664 net new housing units to be completed within 5 years.

One of Council's key priorities for the 2022-2026 term is to enable the creation of more diverse and affordable housing. Further, the District will be undertaking an update of its Official Community Plan in 2024, which will identify areas for higher density multi-family residential, village areas, and commercial areas.

As a result of both the provincial housing target and Council's priority to see more growth, there is an opportunity to leverage active transportation investments during the planning of new development projects. Specifically, the District could utilize Amenity Cost Chargers (ACC), which are the new development-financial tools that have been introduced by the province. While the province has not released the full details of the ACC program at the time of writing this report, it does present an opportunity to pay for some of the active transportation projects outlined in this report.

5.5.2 Local Government Climate Action Program

The Local Government Climate Action Program (LGCAP), which launched in 2022, provides predictable, long-term funding for communities to support local climate action to reduce emissions and prepare for the impacts of a changing climate. The program has several eligibility requirements including the need for a specific project to be linked to one more objectives outlined in the CleanBC Roadmap to 2030 and/or the Climate Preparedness and Adaptation Strategy.

The CleanBC Roadmap to 2030 is more relevant to the Active Transportation Strategy; specifically the LGCAP supports several different transportation infrastructure / policy changes including "active transportation plan or investments, secure bike parking, commute reduction programs, transit/pedestrian-oriented development regulation, electric vehicle charging infrastructure plans or number of public installations, trip reduction programs, mode shift targets in Official Community Plan and/or Regional Growth Strategy."

A total of $24.456 million will be available annually and will be allocated to local governments and Modern Treaty Nations under the new LGCAP program. The annual funding allocation varies depending on the community's population size. The LGCAP

website provides more detail on the eligibility requirements but in general, several of the cycling facilities project would be eligible for funding.

5.5.3 BC Active Transportation Infrastructure Grant Program

The B.C. Active Transportation Infrastructure Grants Program offers two grant options for Indigenous governments and local governments, including municipalities, regional districts, and Islands Trust. Specifically, the Active Transportation Infrastructure Grant allows eligible governments to apply for a maximum of two grants if they satisfy the following criteria (based on the 2023 intake):

- Projects previously funded prior to 2022/23, or prior to 2021/22 for projects with budgets over $1M, must be completed by application submission date.
- Project is part of an active transportation network plan or equivalent
- Project can begin construction once provincial funding has been announced
- Projects will be completed by March 2025 (projects under $1 million) or by March 2026 (projects over $1 million)
- Projects are open to the public

The grant program typically requires that projects be “shovel-ready”. If the District acts quickly on moving forward with the priority projects, it can position itself to apply for funding for the next grant intake (2024-2025), which opens September 1, 2024.

5.5.4 Green Municipal Funds

The Green Municipal Fund (GMF) is a program administered by the Federation of Canadian Municipalities intended to help Canadian communities expand their sustainability initiatives. Since 2000, the GMF has deployed $900M in financing to 1,250+ sustainability initiatives and a further $1 billion has been committed to the fund through the Federal 2019 budget.

The specific GMF initiative that is relevant to Oak Bay is the “Capital Project Transportation Networks Commuting Options”, which is a combined loan and grant funding program for capital projects that reduce pollution by improving transportation systems and networks. This program covers several topics including bike paths, walking and cycling networks that promote accessibility and safety, and evaluation of active transportation infrastructure, among others.

6.0 CONCLUSION & NEXT STEPS

The purpose of this report was to identify which of the pedestrian and cycling facilities originally proposed in the 2011 ATS should be advanced to the detailed design stage, and—eventually—toward construction. Ultimately, the District will need to determine which pedestrian facilities it is going to prioritize based on the Pedestrian and Sidewalk Master Plan. Based on the review of cycling facilities and the project prioritization exercise, the following AAA cycling projects are recommended in the short-term (5-year time horizon):

- Cedar Hill Cross Road Multi-use Trail (4.2b)
- Cadboro Bay Road Commuter Route (4.3a)
- Oak Bay Avenue Commuter Route (4.3c)
- Bowker Avenue Commuter Route (4.3f)
- Central Oak Bay Neighbourhood Bikeway (4.4a)

In addition to new cycling infrastructure, it is recommended that the District also update and adopt new policies/bylaw regulations to support active transportation including:

- Modernizing end-point facilities on District-owned properties to align bicycle parking with best practices and current trends.
- Updating the Parking Facilities Bylaw to include bicycle parking requirements.
- Introducing a policy order to remove all maze gates in the District.

Lastly, to achieve success in building its pedestrian and cycling networks, it is recommended that the District adopt a robust project delivery approach that includes the following:

- Hire additional staff such as an active transportation coordinator.
- Undertake detailed design for all the priority cycling facilities within two years following the adoption of the strategy.

The recommended infrastructure improvements, policy changes, and following a robust approach to project delivery are anticipated to help Oak Bay improve its cycling network and help change the culture of cycling for all ages and abilities for many years to come.



Appendix A – Review of 2011 Oak Bay Active Transportation Strategy

ATS Project / Location		Network Type	ATS Facility Type / Route	Project Status	ATS Recommended Facility	Facility Provided
4.2a	Bowker Creek Multi-Use Trail	Multi-use Trail Network	Multi-use trail	Complete	Route from Willows (esplanade) through community gardens, baseball diamond, onto existing Bowker Creek Walkway, through Oak Bay High School / Rec Centre to Cad Bay Rd; consider widening to 4m; existing road crossing at Hampshire Road may require further study for safe design	Multi-use path connecting from Bowker Creek Walkway through Oak Bay High School to Cadboro Bay Rd
4.2b	Cedar Hill Cross Road Multi-use Trail	Multi-use Trail Network	Multi-use trail	Incomplete	Roadside 3m multi-use trail north side of Cedar Hill Cross Road adjacent to Uvic or install bike lanes the length of Cedar Hill Cross Road	N/A
4.3a	Cadboro Bay Road Commuter Route	Commuter Cycling Network	Commuter Route	Partial	1.8m bike lanes along entire length of Cadboro Bay Road, with 0.5m buffer between bike and vehicle lanes where width permits	Painted markings Foul Bay Rd - Bowker Ave; East side- "bike lane ends" north of Bowker; west side - starts Dalhousie - ends Foul Bay
4.3b	Henderson Road / Foul Bay Road Commuter Route	Commuter Cycling Network	Commuter Route	Incomplete	Eliminate time restriction on Henderson - lanes should be made available to cyclists at all times (currently only reserved for cyclists Mon-Fri 7am-7pm)	N/A
4.3c	Oak Bay Avenue Commuter Route	Commuter Cycling Network	Commuter Route	Partial	Short term - signage and paint markings for cycling awareness; long term - alter road cross-section to include 1.5m bike lanes	Bike Route sign, bollard-separated walking path
4.3d	Lansdowne Road Commuter Route	Commuter Cycling Network	Commuter Route	Partial	Portion west of Cad Bay Rd to include 1.5m bike lanes with consideration for a buffer b/w bike and vehicle lanes	Separated bike lane south side Shelbourne-Richmond; paint markings north side

ATS Project / Location		Network Type	ATS Facility Type / Route	Project Status	ATS Recommended Facility	Facility Provided
4.3e	McNeill Avenue Commuter Route	Commuter Cycling Network	Commuter Route	Incomplete	Sharrows, signage directing to Beach Drive	N/A
4.3f	Bowker Avenue Commuter Route	Commuter Cycling Network	Commuter Route	Partial	Paint markings and signage	"Bike route" signage
4.3g	Beach Drive Scenic Route	Commuter Cycling Network	Scenic Route	Incomplete	Portion b/w Dorset Rd and Broom Rd - signage and paint markings to encourage cyclists to use middle of travel lane and for vehicles to travel single file with cyclists	N/A
4.4a	Central Oak Bay Neighbourhood Bikeway	Neighbourhood Bikeway Network	Neighbourhood bikeway	Incomplete	Three sections: 1. Musgraves St southbound to Estevan Ave intersection - minor improvements (minimal traffic calming, intersection treatments, signs, paint markings) 2. Musgrave St / Hampshire Rd (Estevan Ave-Oak Bay Ave) - village to village portion, requires more significant bikeway design features including traffic calming, paint markers, intersection treatments and signs 3. Monterey Ave and Oliver St (Oak Bay Ave-Beach Drive) - minor bikeway improvements (signs, road surface improvements, minor traffic calming)	N/A

ATS Project / Location		Network Type	ATS Facility Type / Route	Project Status	ATS Recommended Facility	Facility Provided
4.4b	Henderson Road Neighbourhood Bikeway	Neighbourhood Bikeway Network	Neighbourhood bikeway	Partial	1. Henderson Rd (Foul Bay Rd-Kings Rd) - minor improvements (traffic calming, intersection treatments, signs, paint markings) 2. Henderson Rd (Kings Rd-Haultain St) - develop right-of-way to a multi-use pathway standard per the PCMP design guidelines 3. Epworth St - design similar to Henderson Rd and Elgin Rd 4. Multi-use route through Oak Bay high school site and adjacent to the District's public works yard 5. Elgin Rd should be designed similar to Henderson Rd and Epworth St	2. Henderson Rd (Kings Rd-Haultain St) - multi-use trail between Kings Rd - Carrick Rd 4. Multi-use route through Oak Bay High School site and adjacent to the District's public works yard
4.4c	Haultain-Estevan Neighbourhood Bikeway	Neighbourhood Bikeway Network	Neighbourhood bikeway	Incomplete	Connects Willows Beach, Beach Drive, Estevan Village, and Cadboro Bay Road, while allowing for connection to the greenway priority route on Haultain Road in the City of Victoria - should be designed with minor improvements (traffic calming, intersection treatments, signs, paint markings)	N/A
4.4d	McNeill Avenue - Beach Drive Neighbourhood Connection	Neighbourhood Bikeway Network	Neighbourhood connection	Incomplete	Eastward extension of McNeill Ave cycling route to Beach Drive can be achieved along St Louis Street and Margate Ave, connecting to Oak Bay Beach Hotel (signage and pain markings to be included along St Louis St and Margate Ave as wayfinding and indicating the presence of cyclists)	N/A

ATS Project / Location		Network Type	ATS Facility Type / Route	Project Status	ATS Recommended Facility	Facility Provided
4.4e	Oak Bay Ave - Beach Drive Neighbourhood Connection	Neighbourhood Bikeway Network	Neighbourhood connection	Incomplete	Cyclists can't access Beach Dr from Oak Bay Ave b/c of steep embarkment with staircase - Establish a connection at the eastern end of Oak Bay Ave (provide ramps adjacent to the existing pathway that accommodate cyclists/wheelchairs, or retrofit the staircase to include a bicycle channel)	N/A
4.5a	Hampshire Road - Windsor Park Connection	Laneway Network	Laneway Enhancements	Incomplete	Trailhead signs should identify laneway routes and destinations along the route; Surface conditions should be maintained to a reasonable walking condition; Crossing points should include warning signage for motorists; General safety should be assessed using CEPTED criteria	N/A
4.5b	Victoria Avenue - Byng Street Connection	Laneway Network	Laneway Enhancements	Incomplete	Trailhead signs should identify laneway routes and destinations along the route; Surface conditions should be maintained to a reasonable walking condition; Crossing points should include warning signage for motorists; General safety should be assessed using CEPTED criteria	N/A
4.5c	Ripon Road - Beach Drive Connection	Laneway Network	Laneway Enhancements		Trailhead signs should identify laneway routes and destinations along the route; Surface conditions should be maintained to a reasonable walking condition; Crossing points should include warning signage for motorists; General safety should be assessed using CEPTED criteria	N/A

ATS Project / Location		Network Type	ATS Facility Type / Route	Project Status	ATS Recommended Facility	Facility Provided
4.5d	Dunlevy Street - Beach Drive Connection	Laneway Network	Laneway Enhancements		Trailhead signs should identify laneway routes and destinations along the route; Surface conditions should be maintained to a reasonable walking condition; Crossing points should include warning signage for motorists; General safety should be assessed using CEPTED criteria	N/A

Appendix B – Project Prioritization Scoring Rubric

		Criteria Scoring (the higher the score the better)				
		(Low)		(Medium)		(High)
	Criteria	**1**	**2**	**3**	**4**	**5**
A.	Existing Facility	No cycling facility present		Part of corridor has cycling facility		Cycling facility available for most of the corridor
B.	Inter-Municipal Project Coordination	Does not connect to an existing or future bike facility in neighbouring jurisdiction		Connects to at least one existing or future bike facility in neighbouring jurisdiction		Connects to more than one existing or future bike facility in neighbouring jurisdiction
C.	Proximity to School	No schools found along the corridor		Connects to at least one school along the corridor		Connects to more than one school along the corridor
D.	Connection to Trip Generator / Key Destination	No key destinations or multi-family residential dwellings along corridor	Low number of destinations or multi-family residential dwellings along corridor	Moderate number of destinations or multi-family residential dwellings along corridor	High number of destinations or multi-family residential dwellings along corridor	Very high number of destinations or multi-family residential dwellings along corridor
E.	Capital + Maintenance Cost	>$2,000,000	$1,000,000-$2,000,000	$500,000-$1,000,000	$100,000-$500,000	<$100,000
F.	Safety & Comfort	The corridor is a local road and/or has low motor vehicle volumes and speeds		The corridor is a collector road and/or has moderate levels of AADT		The corridor is an arterial road and/or has the highest levels of AADT
G.	Underground Utility Complexity	Worst Case: Total score < 25		Moderate Case: 25 ≤ Total score ≤ 28		Best Case: Total score > 28